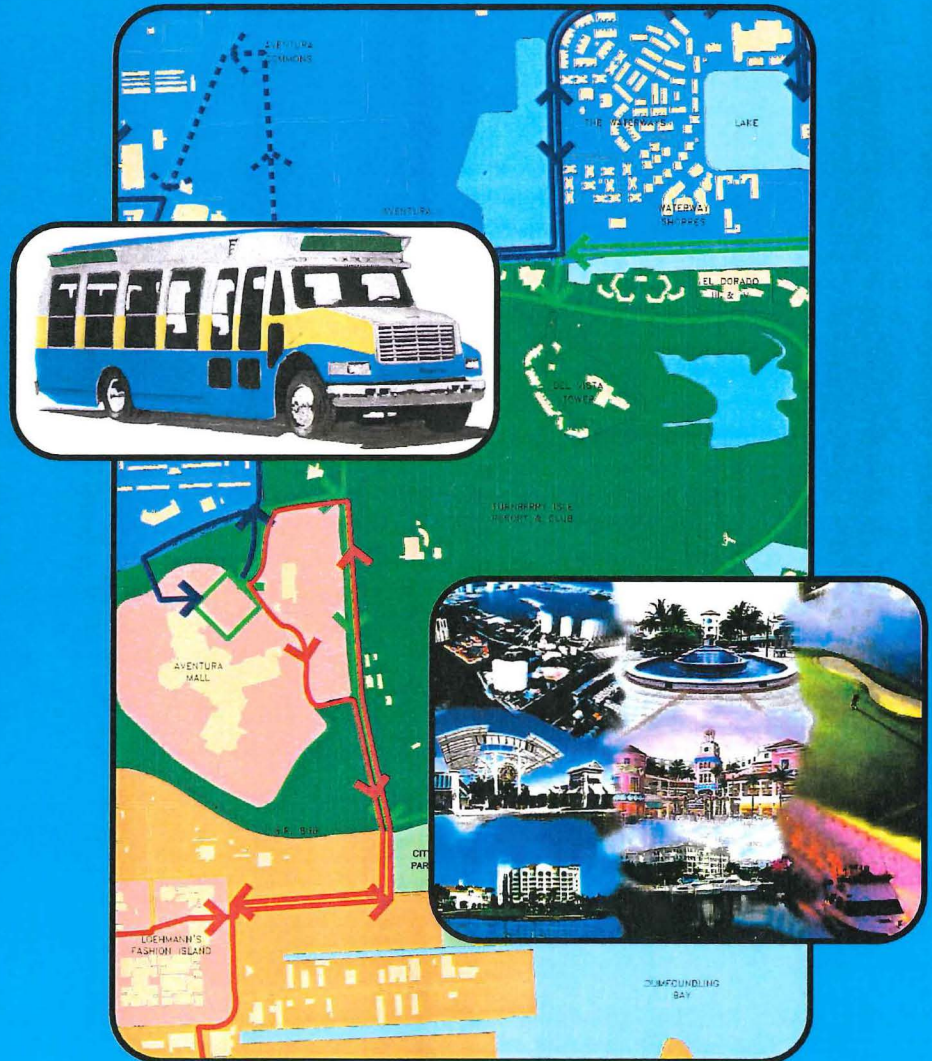




CITY OF AVENTURA



MUNICIPAL TRANSIT STUDY

JUNE 1998



BERMELLO-AJAMIL
& PARTNERS, INC.

**MUNICIPAL TRANSIT STUDY
For The
CITY OF AVENTURA**

June 1998

**Mayor Arthur I. Snyder
Vice Mayor Ken Cohen**

City Commission

**Arthur Berger
Jay R. Beskin
Harry Holzberg
Jeffrey M. Perlow
Patricia Rogers-Libert**

City Manager: Eric M. Soroka

Director of Community Services: Robert M. Sherman

Prepared By:

**Bermello, Ajamil & Partners, Inc.
In cooperation with the
University of South Florida Center
for Urban Transportation Research (CUTR)
and URS Greiner, Inc.**



BERMELLO•AJAMIL
& PARTNERS•INC

ARCHITECTURE • ENGINEERING • PLANNING • INTERIOR DESIGN • LANDSCAPE ARCHITECTURE

July 30, 1998

Via: Hand Delivery

Mr. Robert M. Sherman
Director, Community Services Department
City of Aventura
2999 NE - 191st Street
Suite 500
Aventura, FL 33180

Re: Municipal Transit Study

Dear Mr. Sherman:

Enclosed herewith for your review is a copy of Addendum Number 1 to our Municipal Transit Study, dated June 1998.

This Addendum incorporates the route operations presented as "Option II - Six Routes (Skip-Stop Service) with Three Buses", at the July 13th City Commission meeting.

Please review this Addendum and incorporate it into our previous report or call me to discuss any questions you may have.

Very truly yours,

Fernando Alonso
Director of Civil Engineering

FA/rt

Enclosure

cc: Joel Volinsky
File no. 9815.000

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**Municipal Transit Study
for the
City of Aventura**

**Addendum No. 1
July 29, 1998**

As a refinement of the "Fixed Route" service with the three different routes, we recommend that the transit system be implemented as "Skip-Stop Service", in which each condominium will be directly served on alternate trips. This service will still only require three minibuses, its cost will remain basically the same as projected in the report and there will still remain three main routes within the City (north, central and south).

The goal of the "Skip-Stop Service" is to shorten, in most cases by half, the travel time of the passengers. This is accomplished by having the minibuses enter each condominium property once every other trip, so that the total travel time of each minibus-trip will be 30 minutes instead of 1 hour. A proposed route map is attached herewith, showing the alternate service to the condominiums. The frequency of service for each condominium in the north and central portions of the City, will remain at 60 minutes. The frequency of service in the southern portion of the City will be every 80 minutes.

In summary, the advantages of this service are as follows:

1. Actual travel time is considerably faster (shorter) for each passenger to reach major destinations. The average trip time on one route is 13 minutes, plus 10 to 25 more minutes if the passenger transfers to another route to complete their trip.
2. Minimal communications are required. There are fixed routes and standard schedules.
3. It is relatively easy to understand. In the north and central service areas, there will be clockface headways with 60 minute frequency of service. Every location will be served at the same time every hour of the day. In the southern portion of the city, every residential location will be served every hour and 20 minutes.
4. A shorter layover (five minutes) at the Aventura Mall minimizes congestion at the Mall.
5. It effectively provides 30 minutes service to Country Club Drive (for those who can walk to it).

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I. EXECUTIVE SUMMARY

In order to recommend to the City the most efficient municipal public transit system, the study team reviewed the existing transit systems presently serving the City; conducted a public survey and public hearings to evaluate the needs of the residents; and completed a physical study of the City's roadways and traffic patterns.

As a result, the recommendations for the start-up of Aventura's Municipal Transit System are as follows:

- 1) The system should consist of a "Fixed Route" service, on which the transit vehicles run on a strict schedule and always follow the same route. This is a traditional method, familiar to everyone, which provides passengers a time-flexible access to vehicles that are available all day long.
- 2) There should be three different routes within the city: a north route, a central route and a southern route. (See Appendix G). Although the City's area is relatively small, its road system is discontinuous and lacks main collector roadways which could serve as main transit spines. All three routes will start and end at the Aventura Mall area which will serve as the main transfer point within the City's system or to transfer to other transit systems such as Metrobus or Broward County Transit.
- 3) To start, the system should operate between the hours of 9:00 A.M. and 5:00 P.M., on a Monday thru Friday basis; with Saturday service from 9:00 A.M. to 1:00 P.M. as an option the City may consider. The frequency of service should be on an hourly basis, which will allow for a 10-minute layover for all three routes at Aventura Mall to allow for ease of transfers. Hourly service is also easy to become familiar with, because each bus will pass the same point on its route at the same time each hour.
- 4) The City should contract out the entire service to a public or private transit service provider. The City will not only avoid any major initial capital investment by contracting the service, but also it immediately will have an entity operating its transit system.
- 5) The type of equipment to be utilized may then depend in part on the equipment which the transit service providers presently operate. However, in requesting responses to competitive proposals, the City should include the following options:
 - Minibuses with between 14 and 20 seats
 - All vehicles must be accessible by wheelchairs
 - Low floor buses with no steps which are easier to board
 - Space for people to place packages
 - Using alternate fuel systems with reduced emissions
 - Emphasis on reliability
- 6) Based on the information from one local transit company the annual costs of contracting for these services would be approximately \$211,000.00. In addition, the City could have other continuous expenses such as supervisory or monitoring personnel, plus an initial cost of printing schedules, signage, etc. These costs could range from \$20,000

to \$35,000, depending on the City's choices.

- 7) It is intended that the minibuses will enter each condominium property within its route. In order to accomplish this, each condominium will have to enter into an agreement with the City to allow the transit system to go past its guardhouse or security facility.

II. INTRODUCTION

The newly incorporated City of Aventura wishes to implement a municipal public transit system to serve its 3.2 square miles of land area and its estimated population of 21,000 people. Bermello, Ajamil & Partners, Inc. was retained by the City to analyze their current public transit needs and recommend the most effective and efficient methods of providing the municipal public transit system.

The City is currently serviced by the Metro-Dade Transit Agency bus system, Broward County Transit and private shuttle systems. However, none of the existing transit systems serves the entire City and even when combined they exclude large portions of the City, where the residents have no easy access to public transit. One of the main goals of this study is to recommend a system that will provide "universal" access to all residents of Aventura.

In addition, this transit study had the following goals:

- Determine the most appropriate service and a proposed route structure.
- Integrate the new Municipal System with the already existing routes.
- Establish days and times and frequency of service..
- Determine the type of equipment and the quantity of circulators required for optimum service.
- Estimate both the capital and annual maintenance costs of the system.
- Study the availability of alternate funding sources.
- Compare the feasibility of privatization vs. a City operated system.
- Recommend the most effective means of marketing and advertising the new system.
- Determine if implementing a fee for this service is possible.

Our methodology to accomplish the above tasks consisted of:

- 1) Conducting a City wide survey to determine the level of interest in using a municipal transit system.
- 2) Conduct a thorough study of the road system, traffic patterns, and land uses within the City.
- 3) Investigate alternate types of equipment and method of operation for the transit system.
- 4) Conduct a financial analysis to optimize the City's investment and minimize its risks.

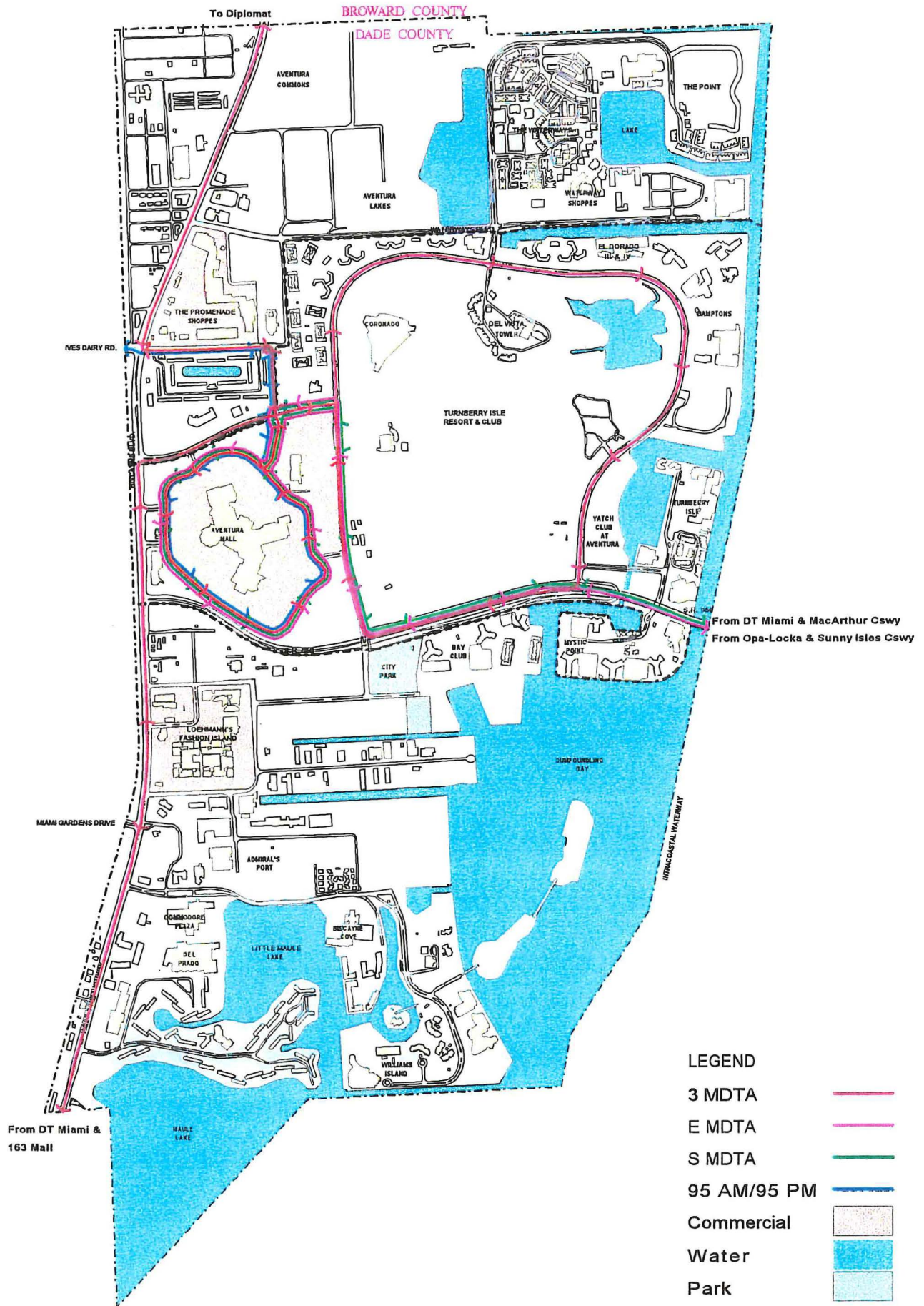
This report describes our findings and recommendations, while reviewing the different options that were studied and that are available to the City in the future.

III. EXISTING SERVICES

Existing Transit Services

The City of Aventura is currently served by both public transit service providers and private transit service providers. The public transit service providers include Metro-Dade Transit Agency (MDTA), Broward County Transit (BCT), and the City of North Miami Beach transit service line. MDTA runs routes E, S, 3, 9, 95, and Biscayne Max that go through the municipal areas of the City of Aventura. MDTA's route V runs in the vicinity of the City of Aventura, and provides indirect transit service. MDTA has a total of 75 bus stops among these routes. The frequencies vary from every 15 minutes to every hour. **Appendix A** shows the layout of these routes. MDTA does not maintain boardings/alightings data by each stop. Therefore, it is not possible to know the exact utilization of the MDTA transit service in the City of Aventura. However, MDTA does maintain this same data on a route basis. This data for November 1997 is shown in **Appendix B**. According to this data, Route S carries 13,027 boardings for the entire Route on a weekday, Route 3 carries 13,378 boardings, Route 9 carries 4,584 boardings, route E carries 906 boardings, route V carries 145 boardings, Route 95 carries 1,297 boardings, and the Biscayne Max carries 2,129 boardings per day. **Appendix C** shows all MDTA bus stops.

Broward County Transit serves the Aventura municipal area Routes 1 and 9. The City of North Miami Beach started two routes in November 1997. These routes are shown in **Appendix D**. The private transit services are provided by various condominium owners. Appendix E includes the services from Del Prado Condominium, and from the Joint Council of Aventura.



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BERMELLO AJAMIL & PARTNERS INC.
Architects Engineering Planning Landscape Architecture Interior Design

CITY OF AVENTURA

EXISTING TRANSIT ROUTES



IV. MUNICIPAL TRANSIT SERVICES SURVEY

A Transit Survey was conducted within the City of Aventura to ensure that the recommendations contained in this report will lead to establishment of a transit system which will be as useful as possible to the residents. The survey was prepared to be able to identify the present public transportation needs of the citizens of Aventura by asking specific questions about trip destinations, hours of operation and desired frequency of service. A sample survey form is included, as Appendix F, in this report.

In addition to the written surveys, two public hearings were held on Wednesday, April 8th, 1998, to solicit comments from the public in regards to the Municipal Transit System. One meeting was held at 4:00 p.m. at the Coronado Condominium to facilitate attendance from the North and North-Central areas of the City. The second meeting was held at the Commodore Plaza Condominium for ease of accessibility for the South and South-Central portion of the City. Over 100 residents attended both meetings combined.

The written surveys were distributed through the condominium associations within the City. Fifty questionnaires were mailed to each association, for a total of 2,500, of which over 300 were completed and returned. The findings and results of the surveys are shown diagrammatically in the following pages.

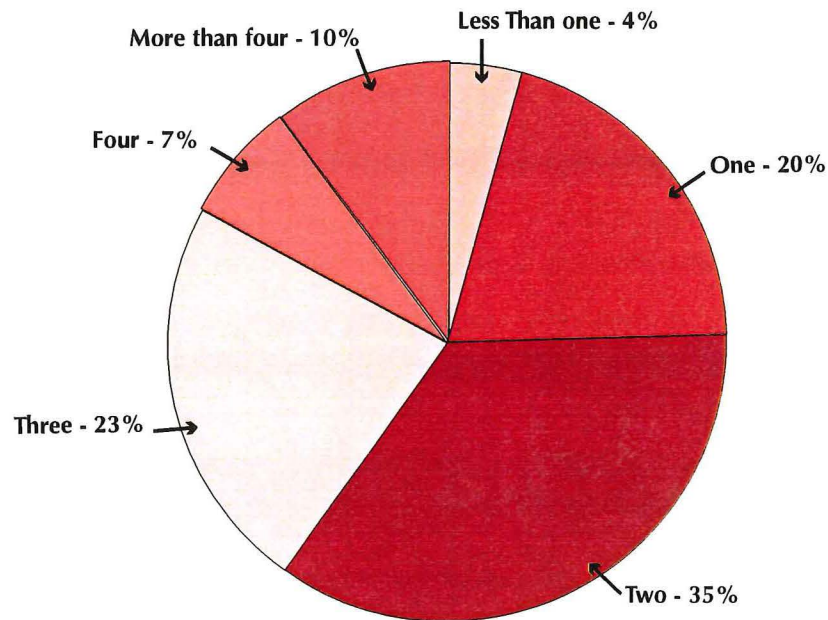
While all the questions had a particular function in defining the mobility needs of the residents of Aventura; it is interesting to note that 30% of the respondents to question number 2, depend on some form of transportation other than their own automobile. Those modes of transportation include rides from family and friends, private shuttles and existing MDTA bus routes. That 30% appears consistent with the number of respondents who said in question number 7 that they would use public transit even if the frequency of service was once an hour.

The answers to question number 8 about destinations was of particular assistance in designing the proposed routes, by providing that each route visit at least two of the preferred destinations. The most popular destination by far, is the Aventura Mall, which is proposed to serve as the transfer point between routes.

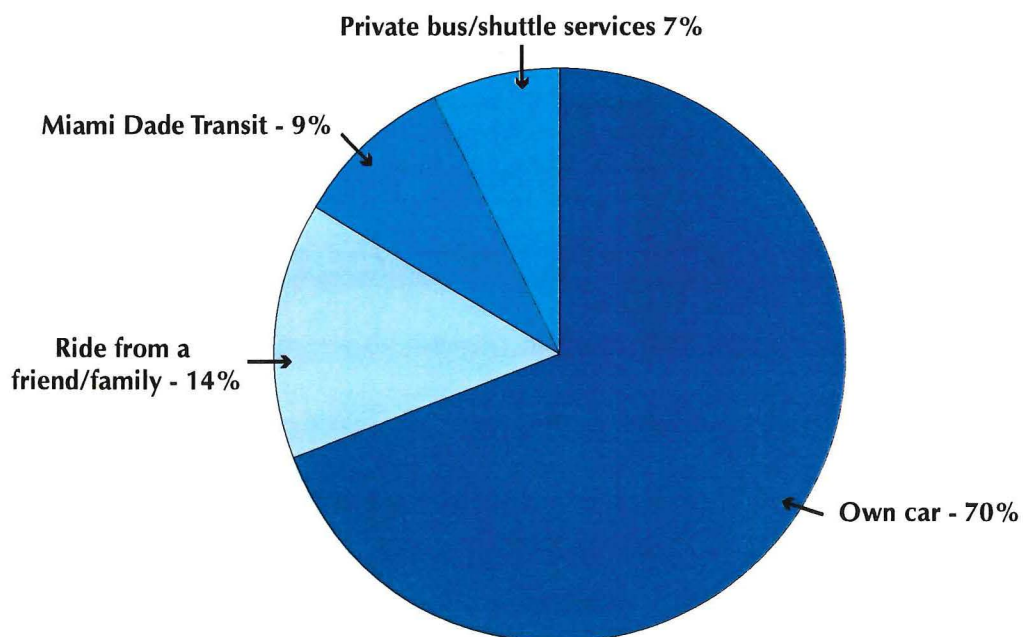
City of Aventura Transit Survey

1_ How many trips per day do you make within the City of Aventura?

Other - 0% (one person)

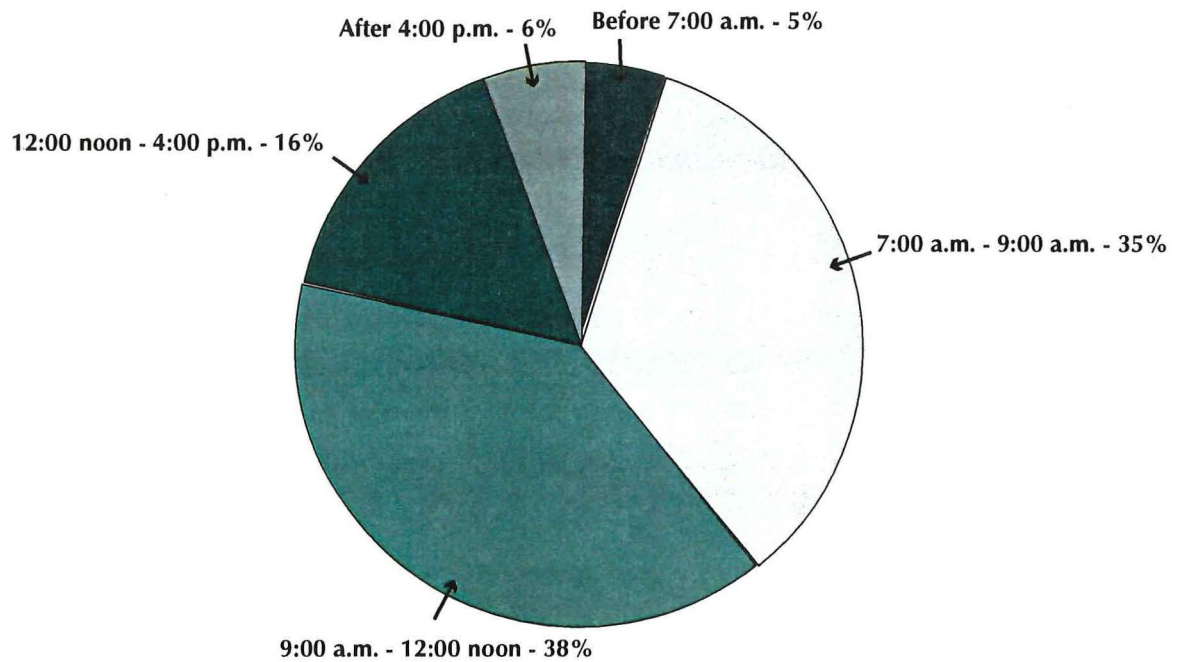


2_ What mode of transportation do you use to make those trips?

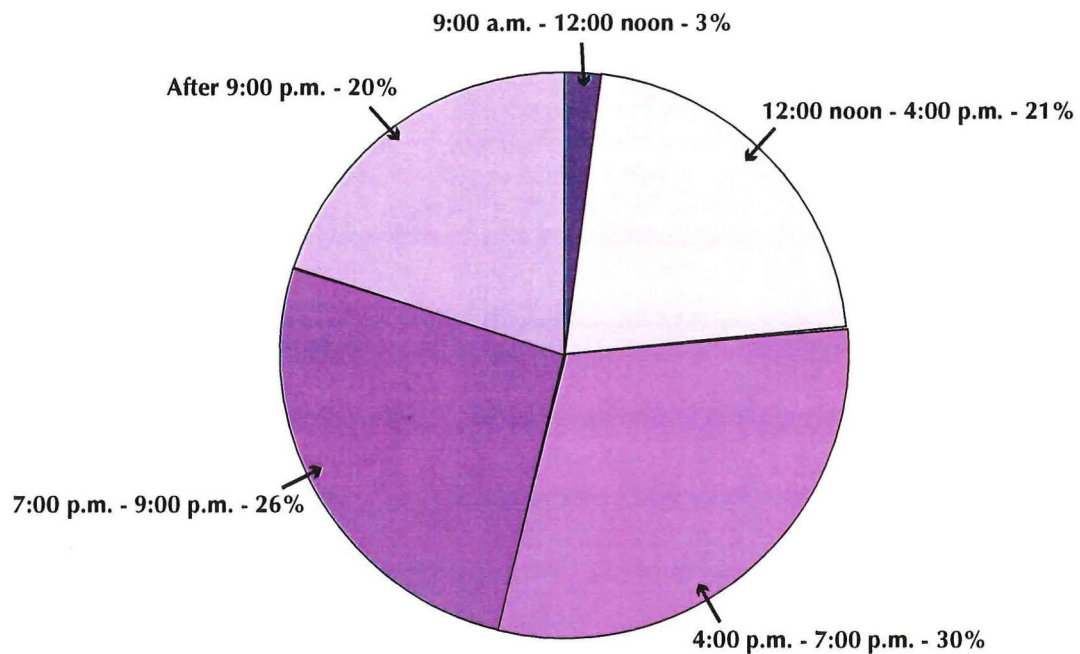


City of Aventura Transit Survey

3_ What time do you leave on your earliest trip(s)?

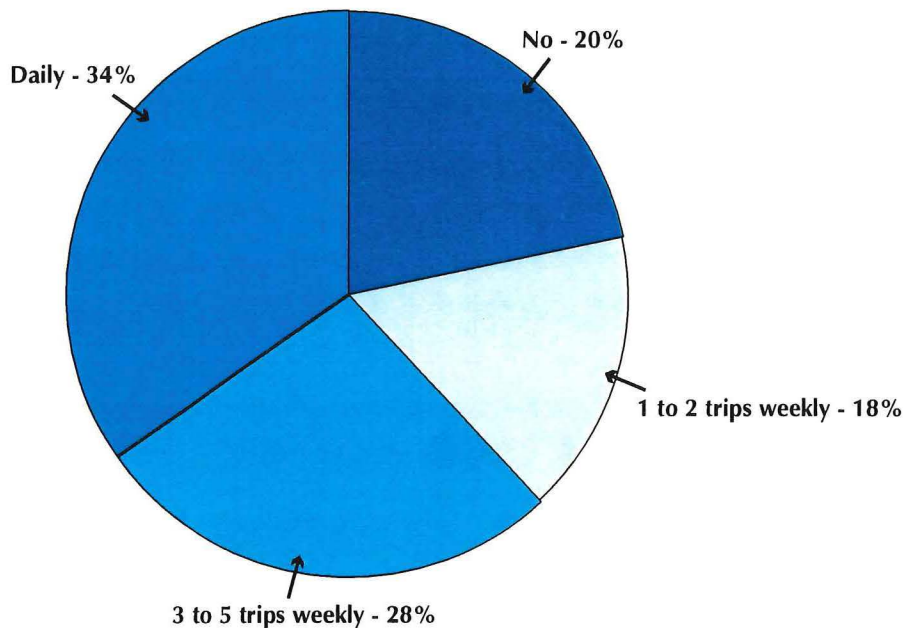


4_ What time do you return from your last trip ?

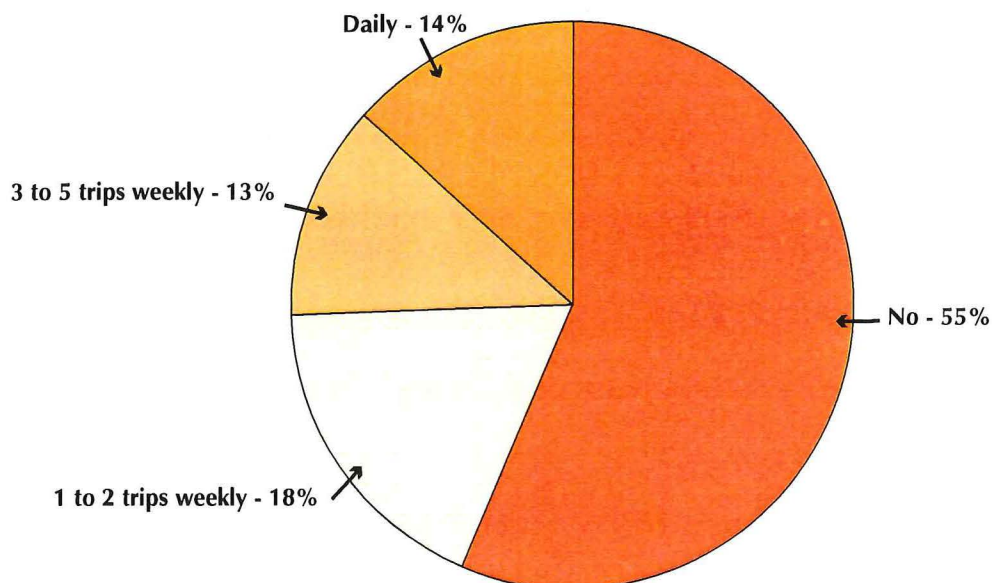


City of Aventura Transit Survey

5_ Would you use a reliable and friendly city transit service if the fare was 25¢ and the service was provided on a fixed route that served all major destinations within the city every 30 minutes?

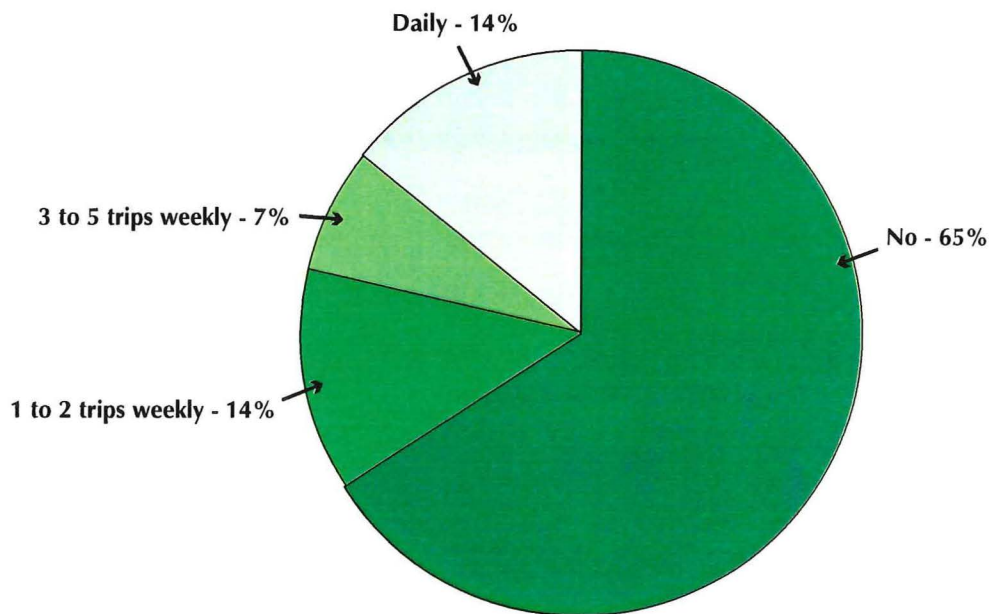


6_ Would you use this transit service if it ran every 45 minutes instead of every 30 minutes?

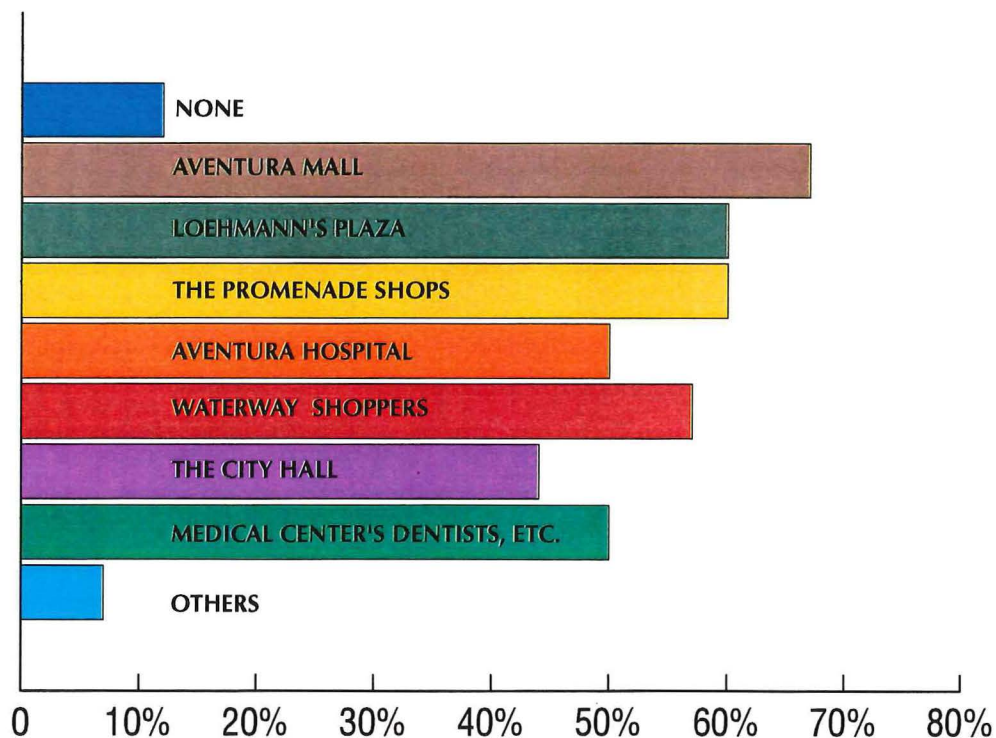


City of Aventura Transit Survey

7_ Would you use this transit service if it ran every 60 minutes instead of every 30 to 45 minutes?

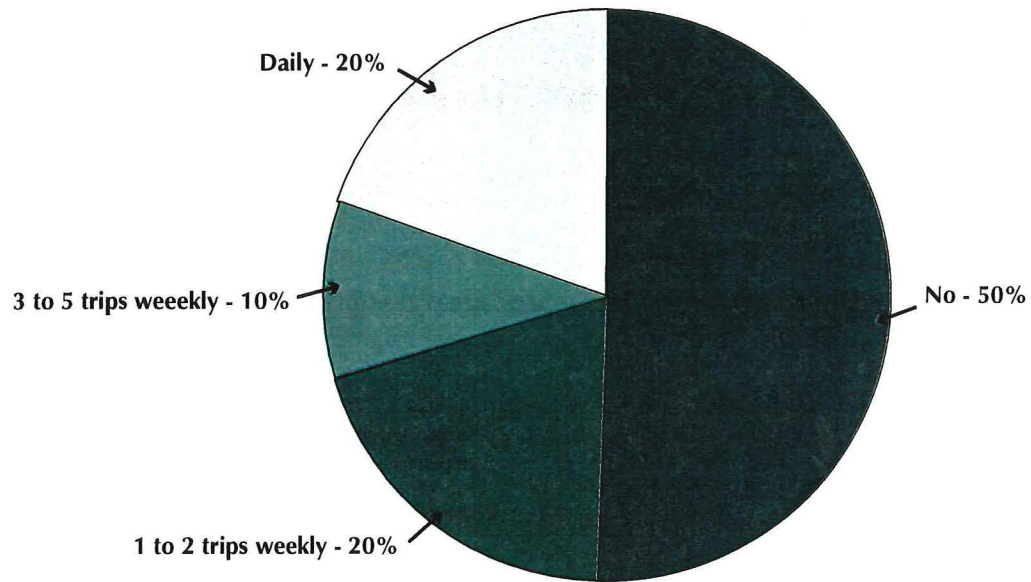


8_ Fill in all the destinations within the City of Aventura you would like to reach using transit service.



City of Aventura Transit Survey

9_ Do you anticipate your domestic assistance will use this transit services?



V. RECOMMENDED SERVICES

A. Type of Service Delivery

Early in the planning process, the project team discussed the different ways transit services could be provided by the City of Aventura. "Fixed route" service is by far the most traditional method of providing transit service throughout the nation. In a fixed route service system, transit vehicles run according to a strict schedule, and always follow the same route throughout the day. The advantages of this type of service is its reliability, consistency, and relative simplicity. A passenger simply needs to understand where a route goes, and then learn how to read the route schedule to determine when they can access the service on the route. One of the disadvantages to fixed route service is the actual travel time. On fixed route service, passengers at the beginning of a route might need to travel over 30 minutes to reach their destination for a trip that could take less than 10 minutes by automobile. The longer travel time is due to the need to make multiple stops to accommodate all other passengers on the entire route. The advantage of fixed route service is that passengers can travel whenever they please within the parameters of the route schedule without needing to make any advanced reservations.

There are other methods of providing transit such as demand responsive service (sometimes called door-to-door paratransit service). The advantage of this method is that each passenger receives a direct trip from their origin to their destination, with few or no stops in between. In essence, it is similar to taxi service given its high level of customization and personalized service. The advantage, particularly in relatively compact areas like Aventura, is that once a person starts their trip, they can reach their destination in approximately 10 minutes. The disadvantage is that passengers need to make reservations well in advance (usually 24 hours or more) to ensure they can be transported to and from their destination when they want to travel. They might not be able to travel when they want to because other passengers might have already reserved the vehicle for that time. In some instances, "multi loading" or shared trips might be possible, but there is no assurance of that. Another shortcoming of demand responsive service is that a passenger needs to allow some time in case the vehicle arrives before or after the scheduled time of pick-up. This additional wait time, when combined with travel time, makes the total travel-plus-wait time almost equivalent to travel time on fixed route.

Another disadvantage to demand response service is the uncertainty associated with the return trip from certain destinations. For instance, it is usually impossible to predict when a doctors appointment will be finished. If such an appointment takes longer than expected, the vehicle will arrive before the passenger is ready to leave. The vehicle will need to go on to its next reserved trip. The passenger will end up stranded and scrambling for alternatives.

Given the strengths and weaknesses of each approach, it was determined that fixed route service would be the best to utilize in Aventura. Even though actual travel time for passengers might be longer, and the routing is rigid, passengers enjoy more flexible access to a service that is consistently available all day long. If for some reason a

passenger misses a bus, another will be coming by within a reasonable time. In Aventura, most residents are already familiar with scheduled bus service. Miami-Dade Transit provides fixed route, regularly scheduled service on Country Club Drive throughout the day. A number of condominium associations also provide fixed route, regularly scheduled service, although such services are limited and inconvenient in terms of frequency.

B. Proposed Routes

The project team spent many hours driving through Aventura to become familiar with the road system and the land uses in the city. It became clear quite quickly that even though Aventura is relatively small, it is interrupted by canals and has its own unique road system that makes traditional grid-like transit service impossible to provide. Hence, it didn't appear any single route could efficiently "unite" the entire city, or serve as a "spine" route. Yet one of the city's goals in providing transit service is to help unite the city. In addition, the city wants to ensure that transit service is equally available to all residents.

Given these parameters and local goals, the project team is recommending the establishment of three fixed routes to serve Aventura. One would serve the north portion of the city, another would serve the central portion of the city, while the third would provide service in the southern portion of the city. Each route would operate during the same hours (9 a.m. to 5 p.m.). In virtually all cases, service would be available within easy walking distance to residents of all parts of the city. Service would therefore be equally available throughout the entire city.

To help "unite" the city, each route is designed to start and end at the Aventura Mall. There should be at least 10 minutes at the end of each hour for all three buses to "layover" at the Aventura Mall. This will allow passengers to easily transfer from one city route to another, allowing them to access all parts of the city with one easy, brief transfer. This route design also allows passengers the ability to easily transfer to transit services provided by Miami-Dade Transit and Broward County Transit. From Aventura Mall, passengers can travel to virtually anywhere in Miami-Dade or Broward Counties via public transit.

The north route would start at the Aventura Mall, go past the Publix on 29th Place, travel through the Promenade Shoppes, then serve the Aventura Hospital and Medical Center as well as the Aventura residents on the west side of Biscayne Boulevard. Service would continue through Aventura Commons (the new shopping area north of Waterways Boulevard on the east side of Biscayne Boulevard), and proceed east on Waterways Boulevard to serve the Waterways Shoppes, the condominiums east of those shoppes, The Waterways residential area and The Point condominiums. The north route would return to the Aventura Mall via Waterways Boulevard and NE 30th Street, finally serving the medical offices on Aventura Boulevard before pulling into the Aventura Mall.

The central route is perhaps the easiest route to understand. It also starts and ends at the Aventura Mall and basically serves all the residences near Country Club Drive.

Starting from the Aventura Mall, the route would exit past the Publix on 29th Place, turn east on Aventura Boulevard, go south on Country Club Drive and go under the William Lehman Causeway. It would then go east to serve Bay Club, South View, Mystic Point and Turnberry Isle to the guard house (without going all the way to the end of Turnberry Way). The route would return to Country Club Drive and serve the following residential developments:

- Aventura yacht Club
- Landmark
- Terraces of Turnberry
- Hamptons
- Waterview
- Flamenco
- El Dorado
- Ensenada
- Delvista Towers
- Bonavista
- Bravura I and II
- Viscaya
- Coronado
- Bonavida

The central route would then go east on Aventura Boulevard to serve the medical offices before ending at the Aventura Mall.

The southern route would start at the Aventura Mall, go past the Publix on 29th Place and east to Country Club Drive. It would go south on Country Club Drive to 190th Street, and proceed east to serve the Loehman's Fashion Island. The southern route would return to 29th Avenue (avoiding Biscayne Boulevard) and proceed south to NE 28th Court and 185th Street. The route would stop in front of, but not enter, Williams Island and Biscayne Cove. Williams Island has its own internal transit service and would prefer that the Aventura bus not serve the development. The route would proceed east on 183rd Street serving Admirals Point and Commodore Plaza before heading south on Biscayne Boulevard to the condominiums of Point East. After serving Point East, the southern route would go north to serve Del Prado, and the Loehman's Fashion Island before returning to the Aventura Mall.

The survey that was completed by almost 300 Aventura residents indicated the major destinations they wished to reach (in order of priority) were the Aventura Mall, Loehman's Fashion Island, The Promenade Shoppes, the Waterway Shoppes, the Aventura Hospital, and the medical offices on Aventura Boulevard. Each route provides access to at least two of the major shopping areas, while all attractions can be reached with one transfer. The average travel time to the most popular destinations will be 25 minutes if no transfer is required, and 45 minutes if a transfer is required. It should be noted that these routes were deliberately designed to avoid traveling on Biscayne Boulevard as much as possible to avoid the congestion, delays, and dangerous driving conditions on that road.

C. Frequency of Service

Clearly, the more frequently transit service is available, the more attractive it is and the more likely it will be used. This was evident from the answers Aventura residents provided to the survey developed by the project team. Only 20% said they would never use the municipal transit service if it is available every 30 minutes. However, 56% of all respondents said they would never use it if it was available only every 60 minutes.

While this argues for service no worse than every 30 minutes, that information must be balanced against the cost of providing more frequent service. It appears that the cost of providing the service will be borne primarily by the city (limited state and federal dollars are expected to be available to pay for operating expenses). It should also be noted that many of the residents of the city can access already existing service provided by MDTA that runs every 20 minutes on Country Club Drive.

The project team suggests that the city initially provide service on a once-an-hour basis (60 minute headway). Some areas of the city (north and south) have virtually no service now. The central area of the city has MDTA service and bus service provided through the Aventura Joint Council of Condominiums. The Joint Council provides fixed route service Mondays through Fridays from 9 a.m. to 3 p.m. This service is provided once every two hours, resulting in only four trips per day.

The project team's suggested once-an-hour service will be far superior to any existing service (with the exception of MDTA which serves only one-third of the city). Although hourly service is not considered premium transit, it is extremely easy to understand. Each bus will operate on what is known as "clockface headways". That means each bus will pass every point on its route at the exact same time of each hour. All residents of Aventura can rely on having a bus go near them at the same time every hour.

Hourly service is an appropriate level for a brand new system where there is no accurate way to predict ridership. It will allow the city staff and residents to gain some experience in how well transit services are being received at half the expense of providing 30 minute service. The City of Margate (in Broward County) has been providing its own municipal transit service for a number of years with once-an-hour frequency. It has proven to be very reliable and popular. The system in Margate carries about one passenger per mile, which is very good for a small, local system. It is hoped that with proper operation, promotion, and marketing, Aventura's municipal transit service can achieve that level of ridership. If experience shows the service is growing in popularity, the city can increase the frequency of buses at a later date if it determines the service should receive higher priority within the city's budget.

D. Operations

The City of Aventura has a number of options to consider in terms of how service should be provided. The basic options available to most cities are to:

- operate and maintain all service with its own staff;
- operate the service with their own staff of bus drivers and contract out the maintenance function;
- contract out the entire service to a public or private transit service provider

The first option is not realistically available to Aventura. A number of cities in south Florida (such as Margate and Sunrise in Broward County) provide transit service with their own personnel. However, they are regarded as “full service” cities with their own public works departments and fleet repair facilities. Aventura could pursue this, but the city would have to invest fairly heavily in purchasing vehicles, building a maintenance facility, and hiring staff. It is the project team’s understanding that the city’s management philosophy is to minimize the size of its total personnel. This is a particularly appropriate philosophy when the public service being considered is essentially a “pilot” project. While it is assumed a municipal transit service will be successful, there is no need to make permanent investments until there is a clear demonstration of the service’s viability and acceptance. This is even more true when other public and private agencies are available to perform the service in question.

The second option of operating the buses with city personnel while contracting out the maintenance function is a viable alternative. In this scenario, the city avoids the capital expense of building a maintenance facility and hiring maintenance personnel. The maintenance of the vehicles could be contracted to the City of North Miami or to a private vehicle maintenance company. However, this option would still require the city to hire and supervise bus operators and become somewhat accomplished and responsible for the provision of transit services. It also divides the total responsibility for the service between two different entities causing possible conflicts between parties over who is responsible for what.

While the second option is feasible and might be considered more seriously in the future, the project team recommends the third option at this time. There are a number of private companies that specialize in the provision of transportation services. (Of course, Miami-Dade Transit also provides such service).

Preliminary research revealed there are companies prepared to provide municipal transit services for Aventura at a reasonable cost. One local company currently provides mini-bus services to MDTA at a cost of \$30 per hour. That same company is providing services to another city in Dade County, and is therefore familiar with the type of service Aventura is interested in implementing.

Contracting the service to another entity provides the city with a number of benefits. Since another entity would be responsible for all operations and maintenance functions, it would also be completely accountable for the performance of the service. There can be no finger pointing between two different entities if something goes wrong with the service. Contracting out the entire service should result in having the service provided by an entity with considerable experience and expertise. The city avoids any initial capital investment by contracting for the service. It is also assured of the maximum flexibility in increasing or decreasing the service as “cleanly” as possible (no layoffs of

city employees, and faster provision of increased service if desired).

The city should note that if it proceeds with seeking competitive bids for services, it must make Miami-Dade Transit aware of its interests and allow MDTA to respond to requests for bids or proposals.

E. Technology and Equipment

Aventura is not a large city, and it does not attract many tourists within its residential areas. The proposed hourly service and the relatively short routes should not require the city to utilize large vehicles to carry the probable passenger loads (approximately eight passengers per trip). A review of the passenger activity on MDTA's route and the bus sponsored by the Joint Council confirm that minibuses should provide adequate capacity. A number of private transportation providers have minibuses available in their fleets, and can provide competitive bids with such vehicles. The city should specify that vehicles should have not less than 14 seats, but need not have more than 20. All vehicles *must* be accessible by passengers in wheelchairs.

Given the many elderly people who live in Aventura, it is likely that a fairly large percentage of passengers will be elderly. If possible, it would be beneficial for the contracted service provider to use low floor buses. Low floor buses have no steps inside. This makes boarding easier for everyone, but particularly for the elderly and disabled. They also are 100% reliable for those in wheelchairs, who would not need to rely on a mechanical lift to board the bus. Low floor buses also decrease the time it takes for any passengers to board, thereby permitting faster travel time for everyone and better schedule adherence for the route.

Low floor minibuses are not as common as other minibuses. Private companies might not have them in their fleet. When seeking competitive proposals, the city might wish to ask respondents to quote how much they would charge for providing the service with low floor buses versus regular buses, and give preference to those respondents who can provide the low floor vehicle.

The City should also request those companies responding to competitive proposals to determine if space can be made available for people to place their packages (primarily from grocery shopping).

In terms of alternative fuels, the city might also ask respondents to provide separate quotes for proposals that include buses that run on fuels such as propane or CNG. CNG vehicles could be fueled at the City of North Miami's Public Works Department. These alternative fuels have fewer and less noticeable emissions than diesel buses, and may prove more popular with residents. Using alternative fuels also provides a "selling point" for the service simply by enhancing the service's image as being different, more interesting, and more environmentally sensitive.

If these type of vehicles prove to be considerably more expensive (though they shouldn't), the city should also advise respondents that bio-diesel fuel would be acceptable. Bio-diesel requires absolutely no new technology. It simply requires diesel

fuel to be mixed with a bio-mass derived petroleum substitute resulting in an alternative energy source that also reduces emissions. (In Florida, waste cooking oil from fast food restaurants is used in bio-diesel fuel). Bio-diesel fuel does cost approximately 20% more, but helps reduce emissions with no capital expense.

The project team reviewed the electric bus program operating in Miami Beach. That program is achieving great success in terms of visibility and ridership. No doubt, the electric vehicles themselves help promote the service and attract more riders. However, the service owes much of its success to the fact that it is provided in one of America's great tourist meccas where parking is limited and residents are used to using transit service. It is also heavily promoted with permanent city staff dedicated full time to the service. It is heavily funded by state grants since the project has clear public objectives of reducing congestion and eliminating cruising drivers looking for parking in front of the restaurant or nightclub they wish to visit. The project is costing the city approximately \$1.7 million per year. Each vehicle costs over \$200,000 and the fleet requires a specialized maintenance facility that cost \$400,000 to construct. There are no similar facilities near enough to Aventura to make using electric vehicles practical at this time.

It is the project team's opinion that the most important element of the city's municipal transit service will be its reliability, not the technology used in the minibuses. If the service runs on schedule and takes people where they want to go, the type of fuel in the vehicle will be of minor consequence to the success and acceptance of the service. However, it is appropriate for the city to contribute to the "Clean Cities" effort by encouraging the use of alternative fuel vehicles. This might also make the city eligible for grants to acquire buses in the future. The city could then allow the contractor to use the vehicles which should reduce the hourly costs for the service.

F. Costs

There should be at least two local transportation companies responding to requests for proposals. One local company has already indicated it would provide complete service to the city for \$30 an hour with standard body-on-chassis 22 foot minibuses that seat 20 passengers. This company has indicated it also needs to be paid one hour for "deadhead" mileage associated with getting the vehicles to Aventura and returned to their home base in the evening. Assuming the city would like service to be available from 9 a.m. to 5 p.m., Mondays through Fridays, the costs to the city would be as follows:

8 hours of revenue service (9-5) x \$30=	\$240
1 hour deadhead travel x \$30=	<u>\$ 30</u>
	\$270 per bus per day
	<u>x3 buses</u>
	\$810 per day
	<u>x5 days per week</u>
	\$4,860 per week
	<u>x52 weeks</u>
	\$210,600 per year

If the city wishes to provide additional service on Saturdays from 9:00 A.M. to 1:00 P.M., it will represent an additional amount of \$23,400 for a total of \$234,000.

Other costs associated with providing municipal transit service involves staff time to monitor the service contract and to promote the service. Such expenses should be minimal, but someone from the city should check the contractor's schedule adherence on a regular basis. The city might wish to ask its police department to serve as monitors of the contractor's schedule adherence since the police will already be in the field. The city might ask for volunteers at various condominiums to check on the contractor's performance, or it might hire an intern to do field checks in conjunction with other assignments for the city. The city could also hire field supervisors from the contractor for \$15 per hour. Assuming the city wanted supervision for at least half a day every day, the costs would increase \$60 a day, or \$15,000 per year for service that is provided five days a week. The City might also consider contracting with a retired private transit supervisor who might enjoy performing such service on a part time basis.

The city should also budget for the provision of bus benches at a few locations such as Yacht Club Drive and 34th Avenue on the northern route where the buses are not expected to enter the Waterways residential area. The same would apply to the area outside of Williams Island (since the bus will not be pulling into that development). In almost all other cases, the buses will be pulling into residential or commercial buildings where passengers can wait under cover. Since the buses are scheduled to layover at the mall near Macy's for the last ten minutes of each hour, passengers can wait inside the mall until the last part of the hour and walk directly to the bus. Transferring passengers can simply move from one bus to another. One way to encourage the mall to agree to allow these vehicles to layover near Macy's (in the event of an objection from the mall) is to promote the mall in the bus schedules that will be produced by Aventura.

In regards to schedules, the city needs to anticipate the costs associated with designing, producing, and distributing schedules during the course of a year. This should cost approximately \$20,000. Distribution costs can be minimized with the help of condo associations, shopping centers, and other frequently visited facilities throughout the city.

Finally, the city will want to produce about a dozen bus stop signs for those stops not located within residential areas. They could also be placed at the areas where the buses will stop within shopping centers, near medical offices, or on Biscayne Boulevard.

In conclusion, the use of a contractor to provide the service makes budgeting for transit considerably easier than if the city were to provide the service itself. The total annual cost to the city for service five days a week and schedules would be approximately \$225,000.

G. Funding Sources

There are relatively few sources of funding for Aventura's municipal transit service, but they are important. The Federal Transit Administration's Urbanized Area Formula

Program provides for the distribution of federal operating and capital funding on a formula basis to eligible recipients. These federal funds are distributed on the basis of a formula that takes into account population, population density, and revenue miles of service provided. Currently, Miami-Dade County is the eligible recipient for such funds. Aventura probably doesn't want to go through the trouble of trying to become a direct grant recipient, and the FTA would rather not have multiple recipients to correspond with in the same area. However, Aventura can certainly make a case that the revenue miles it will be providing in the city will contribute to the formula that will determine how many federal transit dollars Miami-Dade County will receive. If the anticipated level of service in Aventura is approximately 300 miles of service per day, that amount of service would generate an additional \$26,000 per year in federal formula funds for Miami-Dade County. Aventura should approach the county and request these funds be transferred to the city when they are made available from the FTA. Aventura needs to realize these funds would not be available until its third year of operation, since the funds are only made available based on ridership statistics that are kept by the county, submitted to FTA, and ultimately finalized by the federal government.

The city should also realize that even though it would not be a direct recipient of funds from the federal government (they would be passed through Miami-Dade County), they would be required to comply with all the federal regulations that govern the federal transit program. While this shouldn't require the city to do anything inconsistent with what it is already doing, it would need to be aware of the fundamental requirements of the Americans with Disabilities Act, Drug Testing requirements for bus operators, Buy America provisions, and other standards that it would need to certify its compliance with.

The city is not eligible for Florida Transit Block Grant funds. Again, the City might consider negotiating with Miami-Dade County to determine if any such funds could be transferred since the funds are allocated throughout the state based on a formula that takes into account population, passenger miles, and revenue miles. It is not clear what level of funds the city might be able to receive from such source. However, that issue needs to be clarified, and the city should determine if it wants to discuss some cooperative resolution of the issue. As with the federal funds noted above, there would be a two year delay in obtaining any funding through this program since it is driven by operating statistics that take a couple of years to gather, review, and operationalize through grants. The city should also realize that it must prepare a Transit Development Plan (TDP) annually in order to be eligible to receive any Block Grant funds. While the report prepared by the project team (this report) might be acceptable to FDOT as a surrogate TDP, they might require refinement and will definitely require updates each year. There is a cost associated with preparing such a plan if it is not done by city staff.

The city would be eligible for FDOT's Service Development Program funds. This program provides approximately \$2,000,000 throughout the state each year to encourage the provision of new services that will help reduce traffic congestion and improve the use of public transportation. This source of funds seems particularly appropriate for Aventura to pursue, and the city is encouraged to do so no later than June 30, 1998. This program provides up to half the cost of new service for up to two years. If the city's application is accepted, funds would not be available until July 1,

1999 (applications must be submitted a year in advance of actual funding). Miami Beach is receiving funds from this program for their new Electro Wave shuttle service. There is no reason Aventura's new service would not stand a good chance of receiving some funding through this program. However, the funds are limited and highly competitive. *Again, the city must get its application for such funds to the FDOT district office by June 30, 1998 if it hopes to receive funds by July 1, 1999.*

Aventura should realize some minor revenues from passenger fares. The project team recommends the city charge a fare of \$.25 per passenger. The revenue generated will be minimal, but charging a fare will discourage vagrants or other undesirable passengers from riding the system. Assuming the transit service carries approximately 200 passengers a day, as much as \$50 per day could be collected through the farebox. This represents only six percent of the costs of providing the service. If seniors are charged half fare (to remain consistent with MDTA fares), then revenues would be approximately \$30 per day or about three percent of the total costs of providing service. The city could advise the contractor to count the money and deduct the amount they collect from the invoices they will send the city for the service they provide.

The city can also use portions of the proceeds from their share of the County's local option gas taxes for this service. These funds can be used for this purpose as long as the transit service it is paying for is new service (these funds can not be used to supplant funds spent on existing service). The city also needs to include in its comprehensive plan that this transit service is part of the city's transportation system improvements.

The remainder (and vast majority) of the revenues needed to operate this new service will come from Aventura's general funds. Although this will be a new expense to the city taxpayers, the service they receive will be highly visible and equally available to all residents. A number of condominiums who currently assess their members for privately provided transit service (such as the Joint Council's bus service mentioned earlier), will be able to discontinue such service and save the dollars they are spending on such service. The municipal transit service is intended to improve the mobility of all residents and improve the quality of life in the city. If done properly, it will be a service that will enhance Aventura's image as an attractive place to live and do business.

H. Coordination with Existing Services

The proposed municipal transit service has been designed for maximum coordination with other existing transit services provided by Miami-Dade and Broward counties. The city's buses will meet at the Aventura Mall where the buses from the other public systems also meet. Transfers between systems should be relatively easy.

The proposed fare of \$.25 is consistent with what MDTA charges for transfers. In essence, Aventura's service will not only serve as an internal circulator service for the residents, but a feeder service for MDTA. It is suggested that the city and the counties not accept each other's transfers. It is also recommended that the city not operate with transfers from one of their buses to another. Passengers should pay the appropriate fare each time they board an Aventura bus.

The city should share information about the availability of their service with MDTA, Broward County Transit, Tri-Rail, and Gold Coast Commuter Services. Each of these agencies have customer information centers, and can advise anyone who wishes to know about the routes and schedules for service within Aventura.

As noted earlier, the city will need to meet with representatives of MDTA to develop an interlocal agreement. The city will not be permitted to provide such service without such an agreement. Two other cities have recently signed such agreements with the county.

The city will also need to address the issue of security at condominiums. That will be served by the municipal transit system. Security is a major issue to condominiums. The city will need to enter into agreements with each condominium group to allow the city's transit vehicles to enter their properties. Allowing the municipal transit vehicles to enter the property will maximize the convenience for the condominium's residents who can wait for the minibus in the comfort of the building foyer. If a condominium group refuses to allow the minibuses to enter the property, residents can still use the service, but will need to talk to the street to access the service.

VI. MARKETING AND CUSTOMER INFORMATION

Promoting transit service in a small city is much easier than promoting a regional system that requires special marketing expertise, large budgets, and dedicated staff and/or consultants. Information about the system in a small city can be distributed far more easily and efficiently through condominium associations and local businesses. Some steps the city should take to promote the service include:

- the development of a catchy name, slogan, and logo that will assist in making the service easily recognizable and remembered;
- utilization of colors on buses, uniforms, signs, and schedules that are consistent with the city's colors (blue, green, and yellow). In fact, the three routes could be called the blue, green, and yellow routes, with colored signs in each bus that clearly indicate which route it serves;
- the development of a single map and that shows all three routes and their schedules, so one document can be all a passenger needs to get around the city with this service;
- making system maps available at locations throughout the community, including restaurants, medical facilities, city hall, the county library, major grocery stores, and any other frequently visited facility in the city;
- the availability of system maps in all major condominiums, to be distributed in ways each condominium regards as most effective;
- the presentation and explanation of the service at meetings held throughout the community;
- the use of media coverage, particularly in any local papers produced primarily for Aventura residents, such as the Aventura News;
- The placement of an information kiosk at the Aventura Mall with the system map in a highly visible location;
- joint promotions with local businesses who will give discounts to anyone who can provide evidence they used the local transit service to get to their store;
- announcements of the availability of the service on cable television
- joint promotions funded by local businesses to celebrate the new service such as making coffee and doughnuts available to passengers on opening day.

VII. FUTURE CONSIDERATIONS

There are a number of things the City of Aventura should keep in mind for the future, assuming the municipal transit service is well received and utilized by residents and employees within the city. The city and county might want to consider the city taking responsibility for the provision of service currently provided by Route 3. The large buses used by the county on the route as it travels on Country Club Drive are incompatible with the residential neighborhoods and biking/jogging trail that characterizes the area. A large bus is not needed to satisfy the level of demand in the area. It costs the county approximately \$200,000 per year to serve Country Club Drive with service through the #3 route. If the County discontinued the #3 route on Country Club Drive, it could provide some of the savings to Aventura who could provide the same level of service less expensively.

If the city does not want the responsibility of providing such service, it should request the county to consider discontinuing serving Country Club Drive with large buses, and replace such service with a smaller vehicle from its "B" Division. This would also save the county money, and provide a service more compatible with the neighborhood.

Of course, the city will gain experience as the new service is implemented. It will be able to determine where the majority of passengers are coming from and going to. There might be some areas that need more service, and some areas that need less. This will allow the city to "fine tune" the service to make it more productive and efficient. It was noted earlier that the city might want to hire an intern or contract with someone to help monitor the contractor's performance. This same individual could deliver system maps, and perform ridership surveys to help determine where service should be changed. The bus operators will be the best source of information on passenger activity. The city might also consider modifying the service to accommodate route deviation for certain condominiums if it becomes clear that certain buildings are not generating consistent ridership.

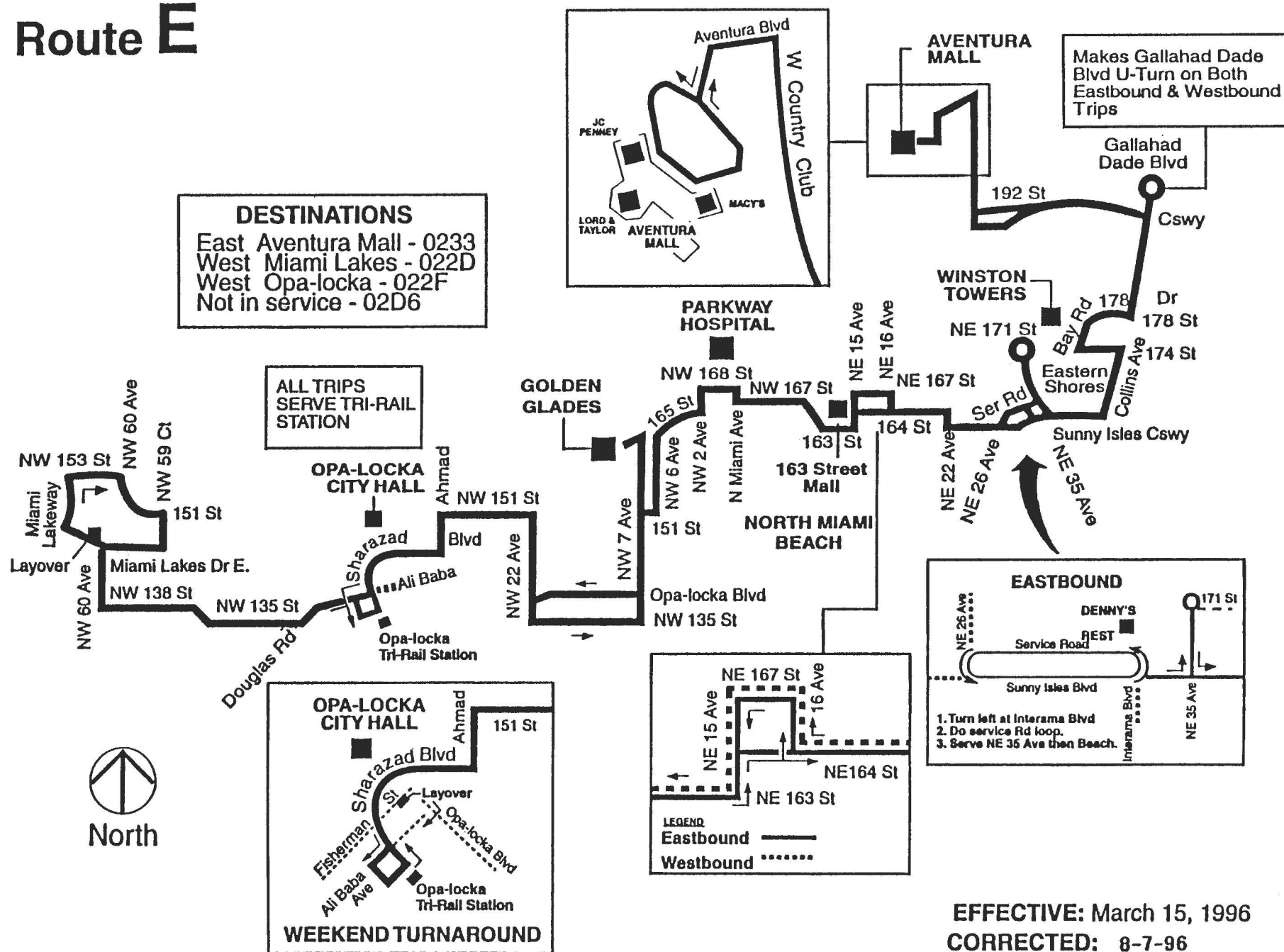
The city should try to stay in tune with what the passengers are requesting and their level of satisfaction. Again, a city intern or contracted individual could survey passengers to determine what they would want to see changed, and how they are enjoying the service. Transit systems throughout the country are beginning to realize the importance of customer service and the need to personalize and customize their services to passenger needs. It is important for the city to remain alert to such concerns, and be ready to respond as quickly as possible. Transit service is extremely important to those who use it, and they will make their feelings known if there are problems. The city can enhance its already excellent image by ensuring they are responsive to passenger concerns.

The city should stay in touch with the Florida Department of Transportation and the South Florida Regional Planning Council to determine if they are eligible for any new grants for service, equipment, or facilities. There is a chance that the "revolving loan" program for alternative fuel vehicles sponsored by the SFRPC could be changed to a grant program, providing opportunities to help the city purchase vehicles, facilities, or fuel.

VIII. APPENDIX

APPENDIX A

Route E



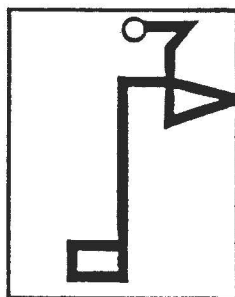
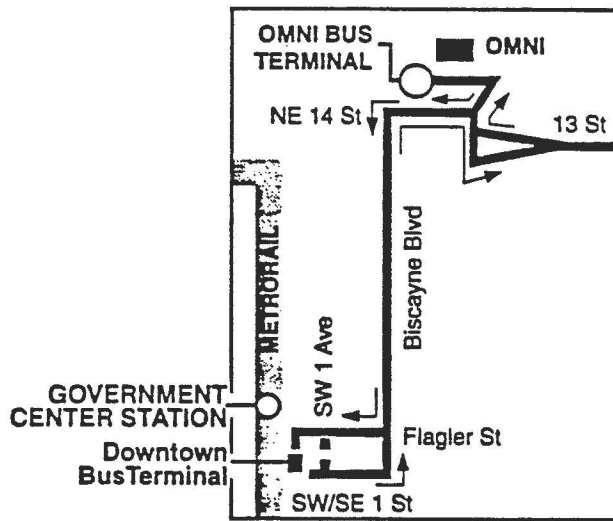
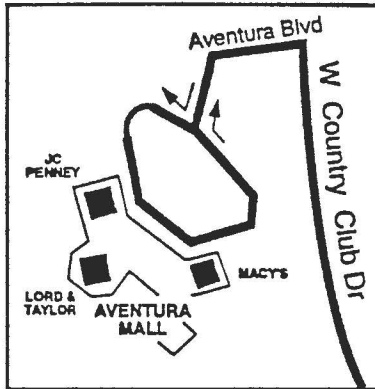
EFFECTIVE: March 15, 1996
CORRECTED: 8-7-96

REISSUED: 8/10/97.

DESTINATION SIGN
 SOUTH - DOWNTOWN - 028C
 NORTH - AVENTURA - 0290
 OUT OF SERVICE - 02D6

Route S

MAKE GALLAHAD
 DADE BLVD U-TURN ON
 BOTH NORTHBOUND &
 SOUTHBOUND TRIPS



13 St
 MacArthur Causeway
 NW 5 St
 Alton Rd
 Washington Ave
 Lincoln Rd
 Indian Creek Dr
 Collins Ave
 44 St
 Abbott Harding
 Collins Ave
 96 St



North

EFFECTIVE: May 27, 1994

CORRECTED: 8-7-96

REISSUED: 8/10/97

Route 3



WHEELCHAIR
ACCESSIBLE

DESTINATION SIGN

North Aventura Mall - 0016
North Diplomat Mall - 0010
North 163 St Mall - 0012
South Downtown Miami - 0014
Out of Service - 02D6

WHEELCHAIRS

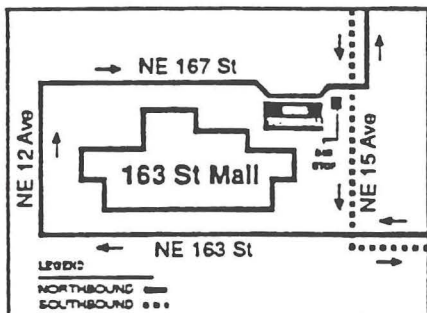
Stop the bus at any location near the stop to allow wheelchairs on or off the bus.

NE 14 AVE
DIPLOMAT MALL
LAYOVER

Hallandale Beach Blvd

Note:

Northbound Enter Mall before making Country Club Dr loop.
Southbound Make Country Club Dr loop before entering Mall.



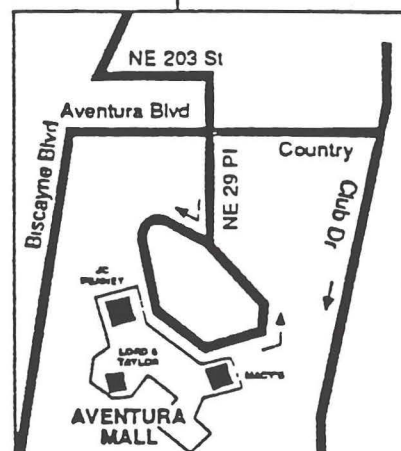
NE 199 ST

Country Club Dr
192 St Cswy

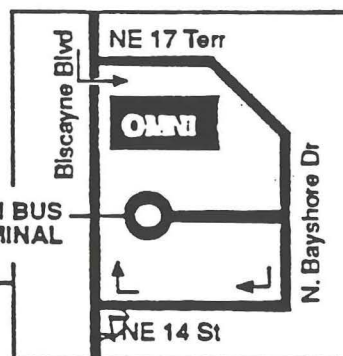
NE 172 ST

NE 171 ST

NE 163 ST



Biscayne Blvd



METROPOLITAN

DOWNTOWN
BUS TERMINAL

Flagler St

1 Ave

SW/SE 1 St

Biscayne Blvd

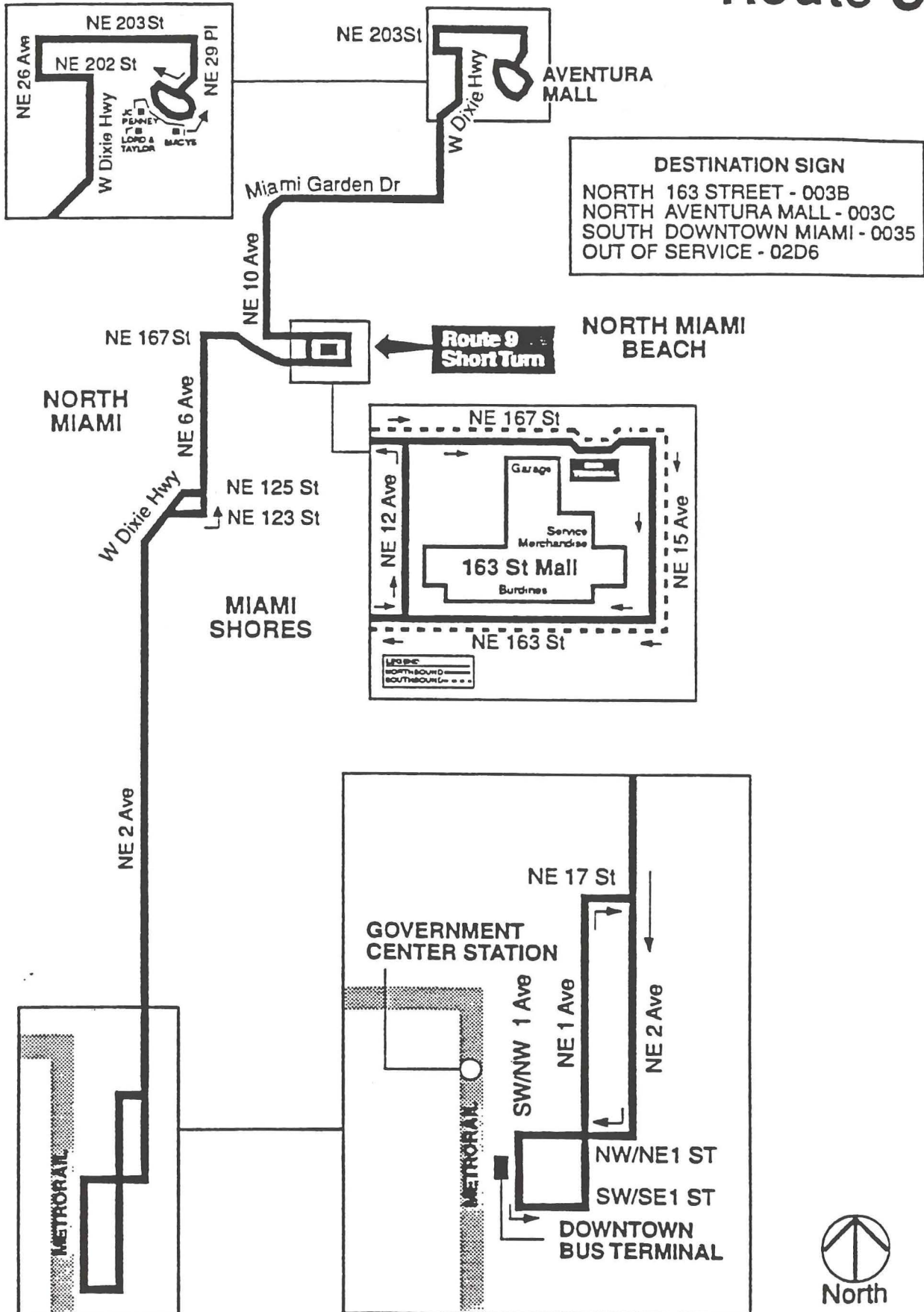


North

EFFECTIVE: May 27, 1994

REISSUED: 8/10/97

Route 9



EFFECTIVE: April 30, 1989

REISSUED: 8/10/97

95 AM

AVENTURA MALL

DESTINATION SIGN

SOUTH DOWNTOWN - 01F8
 NORTH AVENTURA - 01F0
 NORTH GOLDEN GLADES - 01F2
 OUT OF SERVICE - 02D5

AM: FOLLOW
 441 SOUTH
 TO PARKING AREA

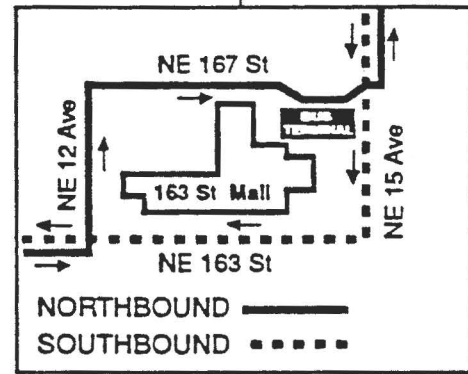
GOLDEN
 GLADES

SKYLAKE
 MALL

NE 171 St

163 STREET
 MALL

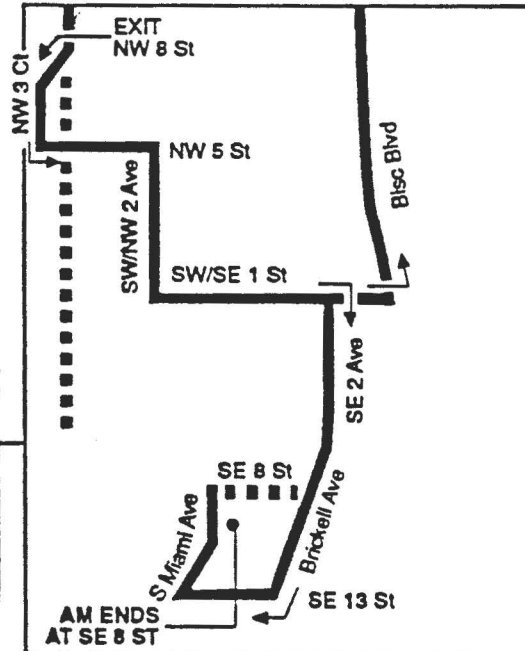
NORTH
 MIAMI
 BEACH



AM ENDS
 HERE

NE 36 St

Bisc Blvd

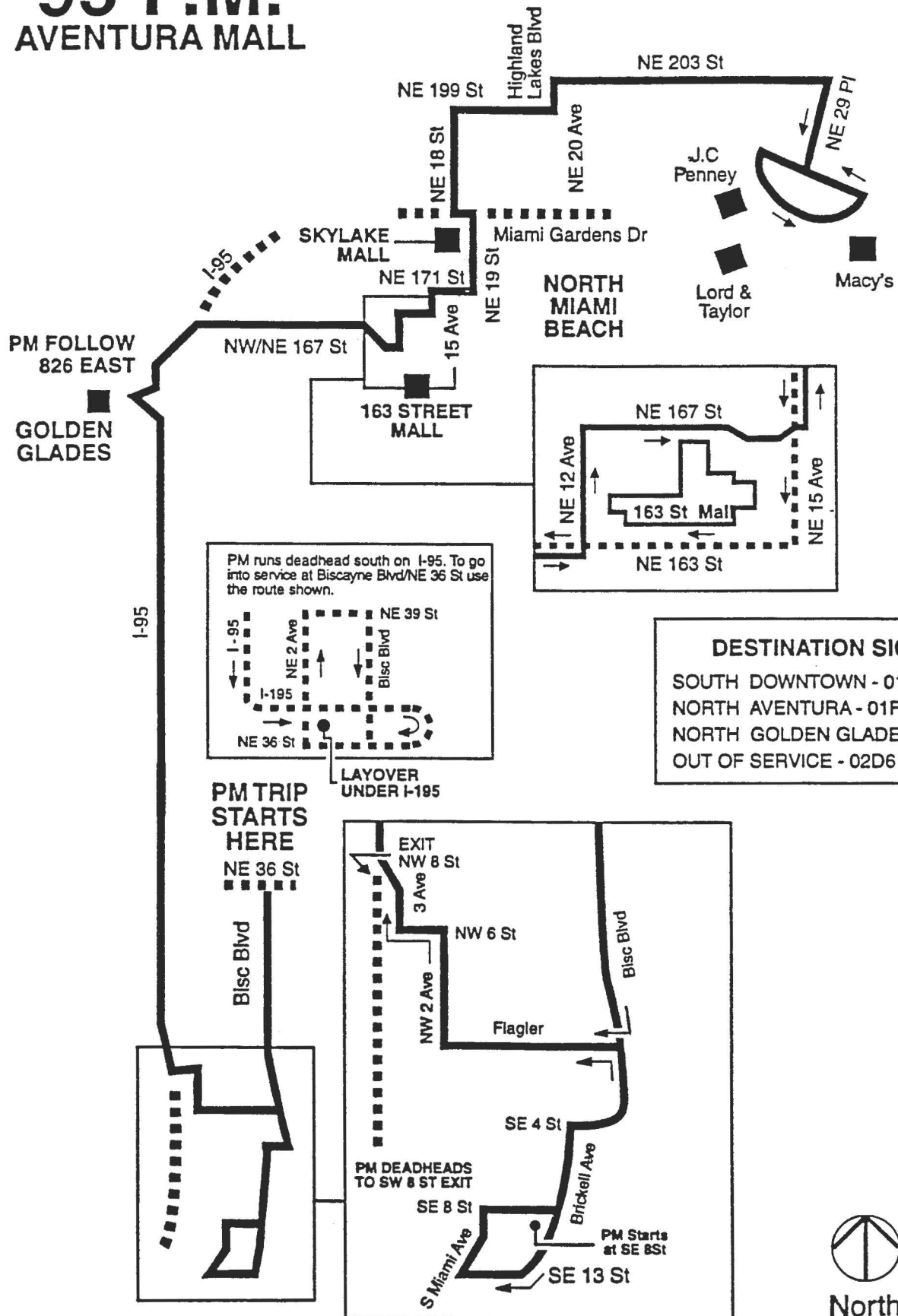


North

EFFECTIVE: Dec. 18, 1995

REISSUED: 8/10/97

95 P.M. AVENTURA MALL



EFFECTIVE: Dec. 18, 1995

CORRECTED: 8-7-96

REISSUED: 8/10/97

Route
**BISCAYNE
 MAX**
 (Rt. 93)

**MAKES ALL LOCAL STOPS
 NORTH OF 163 ST**

Aventura
 Mall

○ - Limited Stop

DESTINATION SIGNS
 Aventura - 001A
 Downtown - 0018
 Not in Service - 02D6

Fare: \$1.25

**MAKE ALL LOCAL STOPS
 SOUTH OF 19 ST**



Downtown
 Bus
 Terminal

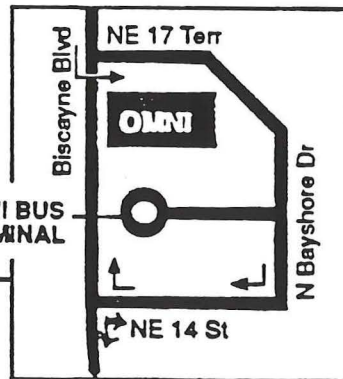
SW 1 Ave

Flagler St

SW/SE 1 St

Biscayne Blvd

OMNI BUS
 TERMINAL



North

EFFECTIVE: Aug. 27, 1995

REISSUED: 8/10/97

APPENDIX B

**METRO-DADE TRANSIT AGENCY
BUS PRODUCTIVITY ANALYSIS
NOVEMBER 1997**

WEEKDAY SERVICE, AM PEAK HEADWAY 0 - 15 MINUTES

ROUTE	REVENUE MILES	TOTAL MILES	REVENUE HOURS	TOTAL HOURS	DIRECT OP. COST	AVERAGE REVENUE	DIRECT OP. REC. RATIO	EST BDGS	NET COST /BDG	BDGS/ REV HR	REV/ T MILE
11	2,515.8	2,801.4	233.4	247.4	\$12,777	\$10,333	80.9%	12,814	\$0.19	54.9	\$3.69
S	3,693.3	4,161.1	275.7	293.5	\$15,687	\$11,878	75.7%	13,027	\$0.29	47.2	\$2.85
L	2,791.6	3,024.9	235.2	246.1	\$13,031	\$8,510	65.3%	11,377	\$0.40	48.4	\$2.81
3/16	3,677.0	3,893.6	299.3	309.1	\$16,732	\$10,499	62.7%	13,378	\$0.47	44.7	\$2.70
77	2,416.4	2,494.3	193.7	198.0	\$11,076	\$6,829	61.7%	9,345	\$0.45	48.2	\$2.74
62	1,330.0	1,439.9	125.4	130.9	\$6,886	\$4,195	60.9%	5,789	\$0.46	46.2	\$2.91
8	2,037.8	2,158.6	179.1	185.5	\$9,919	\$5,721	57.7%	7,002	\$0.60	39.1	\$2.65
88	848.1	1,014.8	67.1	73.2	\$3,943	\$2,197	55.7%	2,804	\$0.62	41.8	\$2.16
27	2,200.3	2,372.9	192.2	199.2	\$10,532	\$5,864	55.7%	8,234	\$0.57	42.8	\$2.47
2	987.1	1,128.2	103.5	111.3	\$5,460	\$2,798	51.2%	3,702	\$0.72	35.8	\$2.48
36	1,159.4	1,288.1	101.1	106.3	\$5,745	\$2,803	48.8%	3,702	\$0.79	36.6	\$2.18
17	1,743.3	1,941.3	135.5	143.9	\$7,873	\$3,773	47.9%	5,307	\$0.77	39.2	\$1.94
9	1,489.6	1,614.4	122.9	129.2	\$7,086	\$3,326	46.9%	4,584	\$0.82	37.3	\$2.06
24	1,825.8	1,899.3	159.5	162.9	\$8,754	\$3,205	36.6%	4,229	\$1.31	26.5	\$1.69
40	1,332.0	1,500.9	97.0	104.6	\$5,779	\$1,682	29.1%	2,225	\$1.84	22.9	\$1.12
B	955.3	1,102.6	60.0	66.8	\$3,786	\$1,000	26.4%	1,288	\$2.16	21.5	\$0.91
TOTAL	31,003	33,836	2,581	2,708	\$145,064	\$84,613	58.3%	108,807	\$0.56	42.2	\$2.50

**METRO-DADE TRANSIT AGENCY
BUS PRODUCTIVITY ANALYSIS
NOVEMBER 1997**

WEEKDAY SERVICE, AM PEAK HEADWAY 31+ MINUTES

ROUTE	REVENUE MILES	TOTAL MILES	REVENUE HOURS	TOTAL HOURS	DIRECT OP. COST	AVERAGE REVENUE	DIRECT OP. REC. RATIO	EST BDGS	NET COST /BDG	BDGS/ REV HR	REV/ T MILE
104	458.0	545.9	31.2	34.1	\$1,843	\$1,100	59.7%	1,345	\$0.55	43.1	\$2.02
71	295.5	360.6	26.8	29.2	\$1,463	\$718	49.1%	818	\$0.91	30.6	\$1.99
28	386.4	432.2	26.3	28.3	\$1,573	\$612	38.9%	736	\$1.31	28.0	\$1.42
6	207.9	242.7	17.9	19.5	\$449	\$160	35.7%	218	\$1.33	12.2	\$0.66
29	303.2	415.8	26.8	30.9	\$669	\$237	35.4%	341	\$1.27	12.7	\$0.57
91	665.1	715.1	45.6	47.6	\$2,693	\$900	33.4%	1,173	\$1.53	25.7	\$1.26
E	725.2	774.2	54.6	56.4	\$3,150	\$740	23.5%	906	\$2.66	16.6	\$0.96
42	777.0	852.8	57.8	60.8	\$3,333	\$702	21.1%	860	\$3.06	14.9	\$0.82
48	424.5	491.1	43.1	45.5	\$2,270	\$446	19.7%	557	\$3.27	12.9	\$0.91
R	431.9	474.8	26.1	27.8	\$1,630	\$274	16.8%	333	\$4.07	12.8	\$0.58
V	382.5	405.3	27.6	28.6	\$1,678	\$115	6.8%	145	\$10.81	5.2	\$0.28
TOTAL	5,057	5,711	384	409	\$20,751	\$6,005	28.9%	7,432	\$1.98	19.4	\$1.05

**METRO-DADE TRANSIT AGENCY
BUS PRODUCTIVITY ANALYSIS
NOVEMBER 1997**

WEEKDAY SERVICE, EXPRESS/SHUTTLE SERVICE

ROUTE	REVENUE MILES	TOTAL MILES	REVENUE HOURS	TOTAL HOURS	DIRECT OP. COST	AVERAGE REVENUE	DIRECT OP. REC. RATIO	EST BDGS	NET COST /BDG	BDGS/ REV HR	REV/ T MILE
KAT - SUNSET	709.8	901.6	42.1	51.0	\$1,173	\$969	82.6%	1,233	\$0.17	29.3	\$1.08
KAT - KENDALL	432.4	551.6	23.2	28.0	\$667	\$542	81.2%	683	\$0.18	29.5	\$0.98
KAT - KILLIAN	1,040.0	1,337.2	50.3	61.6	\$1,501	\$1,004	66.9%	1,391	\$0.36	27.6	\$0.75
BISC MAX	805.2	1,050.0	54.1	64.4	\$3,565	\$1,686	47.3%	2,129	\$0.88	39.3	\$1.61
FLAG MAX	1,059.3	1,588.7	70.1	95.2	\$4,788	\$1,477	30.9%	1,671	\$1.98	23.9	\$0.93
95EX	1,055.2	1,963.0	54.5	86.8	\$4,628	\$1,365	29.5%	1,297	\$2.51	23.8	\$0.70
27 MAX	443.8	559.4	26.7	30.9	\$1,860	\$465	25.0%	676	\$2.06	25.3	\$0.83
141-OMNI	36.0	47.6	2.5	2.9	\$200	\$0	0.2%	22	\$9.17	8.8	\$0.01
TR-36 ST	60.1	87.3	5.7	7.3	\$407	\$0	0.1%	71	\$5.74	12.5	\$0.01
TRI-MIA	124.0	136.2	16.7	17.8	\$813	\$0	0.0%	148	\$5.50	8.9	\$0.00
142-BKL	49.0	76.1	4.9	6.1	\$363	\$0	0.0%	16	\$22.56	3.3	\$0.00
TOTAL	5,815	8,299	351	452	\$19,965	\$7,510	37.6%	9,337	\$1.33	26.6	\$0.90

APPENDIX C

page 1
Date: Nov. 11, 1997

MDTA Bus Stop Inventory

N - nearside
F - farside
M - middle of blo

Direction

AV - ntura

AV-	2.0000	BISCAYNE BD/# 21280	S-N:	3.
F -	3.0000	BISCAYNE BD/NE 209 ST	S-N:	3.
F -	4.0000	BISCAYNE BD/NE 207 ST	S-F:	3.
AV-	5.0000	BISCAYNE BD/NE 206 ST	S-F:	B1.
AV-	6.0000	BISCAYNE BD/NE 195 ST	S-N:	3, MAXBB.
F -	7.0000	BISCAYNE BD/NE 191 ST	S-N:	3, MAXBB.
A -	7.0100	BISCAYNE BD/# 19000	S-F:	3, MAXBB.
AV-	8.0000	BISCAYNE BD/NE 187 ST	S-N:	3, MAXBB.
F -	9.0000	BISCAYNE BD/NE 186 ST	S-F:	3, V, MAXBB.
A -	10.0000	BISCAYNE BD/APPROX # 18200	S-N:	3, V, MAXBB.
AV-	11.0000	BISCAYNE BD/NE 180 ST	S-F:	3, V, MAXBB.
F -	12.0000	BISCAYNE BD/NE 178 ST	S-N:	3, V, MAXBB.
F -	13.0000	BISCAYNE BD/POINT EAST DR	N-N:	3, V, MAXBB.
AV-	14.0000	BISCAYNE BD/NE 179 ST	N-N:	HUR.
AV-	15.0000	BISCAYNE BD/NE 180 ST	N-N:	3, V, MAXBB.
F -	16.0000	BISCAYNE BD/NE 182 ST	N-N:	3, V, MAXBB.
A -	17.0000	BISCAYNE BD/NE 183 ST	N-F:	3, MAXBB.
AV-	18.0000	BISCAYNE BD/NE 186 ST	N-N:	3, MAXBB.
F -	19.0000	BISCAYNE BD/NE 187 ST	N-F:	3, MAXBB.
F -	20.0000	BISCAYNE BD/# 18999	N-N:	3, MAXBB.
AV-	21.0000	BISCAYNE BD/NE 191 ST	N-F:	3, MAXBB.
A -	22.0000	BISCAYNE BD/NE 195 ST	N-F:	3, MAXBB.
A -	23.0000	BISCAYNE BD/AVENTURA BD	N-F:	B18.
AV-	24.0000	BISCAYNE BD/NE 203 ST (NORTH)	N-F:	3.
AV-	25.0000	BISCAYNE BD/NE 207 ST	N-N:	3.
F -	26.0000	BISCAYNE BD/NE 209 ST	N-N:	3.
A -	27.0000	BISCAYNE BD/OP # 21110	N-F:	3.
AV-	28.0000	BISCAYNE BD/OP # 21280	N-F:	3.
F -	33.0000	NE 29 PL/(ECKERDS) AVENTURA BD	N-N:	3, 9, 95, E, S, r
A -	34.0000	NE 29 PL/AVENTURA BD	N-F:	3, 9, 95.
AV-	35.0000	NE 29 PL/NE 203 ST	N-N:	3, 9, 95.
A -	36.0000	NE 29 PL/NE 203 ST	S-F:	3, 9, 95.
A -	37.0000	NE 29 PL/AVENTURA BD	S-N:	3, 9, 95.
AV-	38.0000	NE 29 PL/AVENTURA BD	S-F:	3, 9, 95, E, S.
AV-	40.0000	W COUNTRY CLUB DR/AVENTURA BD	S-F:	3, S.
A -	41.0000	W COUNTRY CLUB DR/AVENTURA MALL ENT	S-F:	3, S.
A -	42.0000	E COUNTRY CLUB DR/YACHT CLUB WY	N-F:	3.
AV-	43.0000	E COUNTRY CLUB DR/THE YACHT CLUB	N-F:	3.
A -	44.0000	E COUNTRY CLUB DR/NE 37 AV	N-F:	3.
A -	45.0000	E COUNTRY CLUB DR/# 20191	N-N:	3.
AV-	46.0000	N COUNTRY CLUB DR/# 3675	W-N:	3.
AV-	47.0000	N COUNTRY CLUB DR/NE 34 AV	W-N:	3.
A -	48.0000	N COUNTRY CLUB DR/# 3375 (BONAVISTA)	W-F:	3.
A -	49.0000	W COUNTRY CLUB DR/# 20500 (BISCAYA)	S-F:	3.
AV-	50.0000	W COUNTRY CLUB DR/# 20300 (VILLA DORADA)	S-F:	3.
A -	51.0000	W COUNTRY CLUB DR/OP AVENTURA MALL ENT	N-N:	E, S.
A -	52.0000	W COUNTRY CLUB DR/TURNBERRY ISLE RESOR	N-N:	E, S.
AV-	53.0000	W COUNTRY CLUB DR/# 19501	N-F:	E, S.
A -	60.0000	NE 192 ST (LEHMAN CY) /# 3300 (NE 191 ST)	E-N:	3, E, S.
A -	61.0000	NE 192 ST (LEHMAN CY) /# 3350 (SERVICE RD)	E-F:	3, S.
AV-	64.0000	AVENTURA BD/BISCAYNE BD	E-F:	3.
AV-	65.0000	AVENTURA BD/# 2900 (FIRE STATION)	E-F:	3, MAXBB.
A -	66.0000	AVENTURA BD/NE 29 PL.	E-F:	3, E, S.

AV- 65.0000 AVENTURA BD/# 2700 (FIRE STATION)
 AV- 66.0000 AVENTURA BD/NE 29 PL

E-F: 3, MAXBB
 E-F: 3, E, S.

page 2

MDTA Bus Stop Inventory

Date: Nov. 11, 1997

AV- 67.0000 AVENTURA BD/W COUNTRY CLUB DR
 AV- 68.0000 AVENTURA BD/NE 29 PL
 AV- 69.0000 AVENTURA BD/# 2845
 AV- 70.0000 NE 203 ST/BISCAYNE BD
 AV- 71.0000 NE 203 ST/NE 29 CT
 AV- 74.0000 NE 203 ST/NE 29 CT
 AV- 75.0000 NE 203 ST/BISCAYNE BD
 AV-1000.0000 AVENTURA MALL/MACYS
 AV-1001.0000 AVENTURA MALL/J C PENNEYS

W-F: 3, E, S.
 W-F: 3, MAXBB.
 W-F: 3, MAXBB.
 E-M: 3, 9, 95.
 E-N: 3, 9, 95.
 W-F: 3, 9, 95.
 W-N: 3, 9, 95.
 T-T: 3, 9, 95.
 S-N: .

Broward County

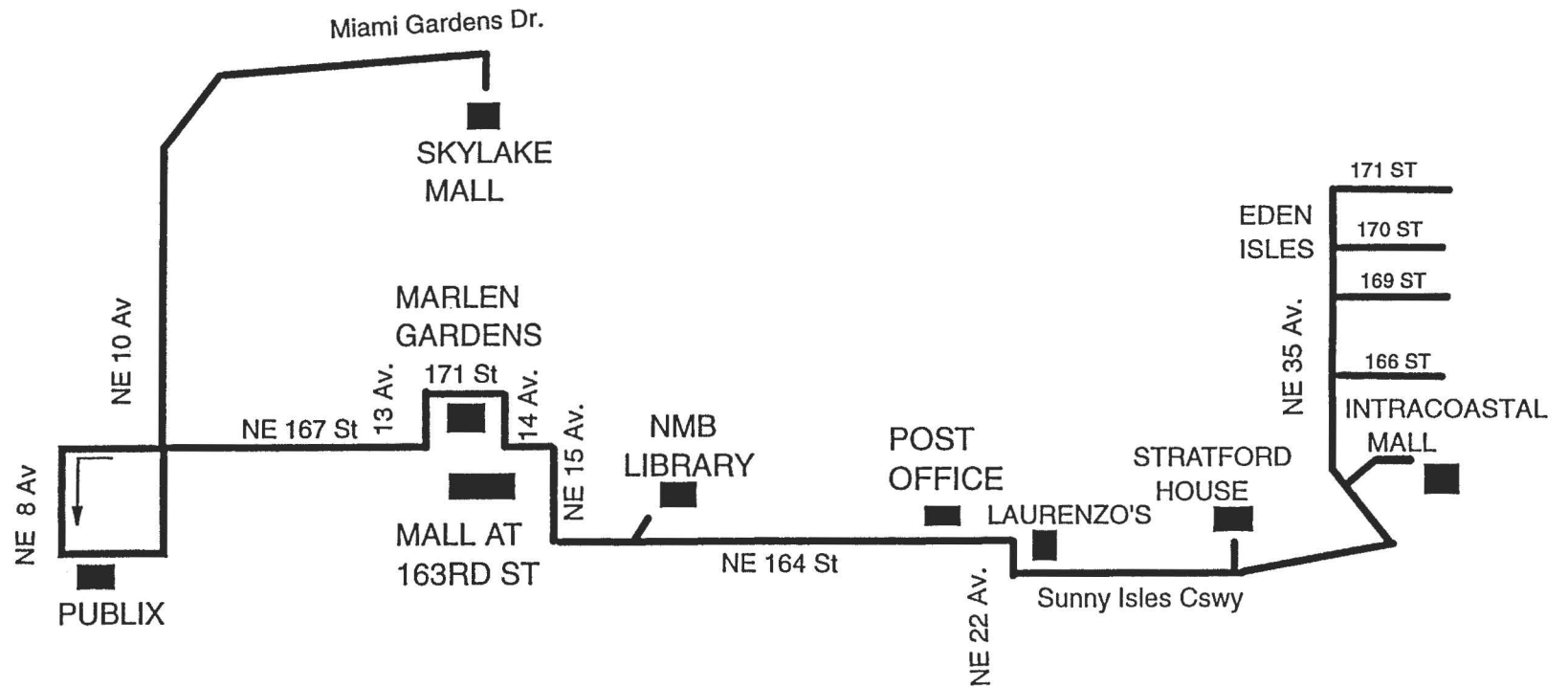
BC- 1.0000 OCEAN BD/# 3140
 BC- 2.0000 OCEAN BD/# 2030
 BC- 3.0000 OCEAN BD/# 1980
 BC- 4.0000 OCEAN BD/# 1920
 BC- 5.0000 OCEAN BD/DP # 1849
 BC- 6.0000 OCEAN BD/# 1849
 BC- 7.0000 OCEAN BD/# 1865
 BC- 8.0000 OCEAN BD/# 1913
 BC- 9.0000 OCEAN BD/# 1965
 BC- 10.0000 OCEAN BD/# 2081
 BC- 11.0000 OCEAN BD/# 3181
 BC- 12.0000 S FEDERAL HY/SE 9 ST
 BC- 13.0000 S FEDERAL HY/SE 7 ST
 BC- 13.0010 S FEDERAL HY/SE 3 ST
 BC- 14.0000 S FEDERAL HY/HALLANDALE BEACH BD
 BC- 15.0000 S FEDERAL HY/HALLANDALE BEACH BD
 BC- 16.0000 S FEDERAL HY/SE 3 ST
 BC- 17.0000 S FEDERAL HY/SE 7 ST
 BC- 17.0100 S FEDERAL HY/SE 9 ST
 BC- 104.0000 NW 215 ST/# 5261
 BC- 105.0000 NW 215 ST/SW 59 TE
 BC- 106.0000 NW 215 ST/US 441
 BC- 107.0000 NW 215 ST/SW 62 AV
 BC- 107.0100 NW 215 ST/NW 7 AV
 BC- 107.0150 NW 215 ST/NW 9 AV
 BC- 107.0300 NW 215 ST/SW 68 LN
 BC- 107.0400 NW 215 ST/1700 BLK
 BC- 107.0500 NW 215 ST/NW 27 AV
 BC- 108.0800 HALLANDALE BEACH BD/A1A (OCEAN DR)
 BC- 109.0000 HALLANDALE BEACH BD/SE 26 AV
 BC- 110.0000 HALLANDALE BEACH BD/THREE ISLANDS BD
 BC- 111.0000 HALLANDALE BEACH BD/NE 16 AV
 BC- 112.0000 HALLANDALE BEACH BD/NE 14 AV
 BC- 113.0000 HALLANDALE BEACH BD/NE 12 AV
 BC- 114.0000 HALLANDALE BEACH BD/NE 10 AV
 BC- 115.0000 HALLANDALE BEACH BD/S FEDERAL HY
 BC- 116.0000 HALLANDALE BEACH BD/SE 8 AV
 BC- 117.0000 HALLANDALE BEACH BD/SE 10 AV
 BC- 117.0100 HALLANDALE BEACH BD/SE 14 AV
 BC- 118.0000 HALLANDALE BEACH BD/SE 16 AV
 BC- 119.0000 HALLANDALE BEACH BD/LAYNE BD
 BC- 120.0000 HALLANDALE BEACH BD/DIPLOMAT PY
 BC- 121.0000 HALLANDALE BEACH BD/THREE ISLANDS BD

N-N: K, V, B1.
 N-F: K, V, B1.
 N-M: K, V, B1.
 N-N: K, V, B1.
 N-M: K, V, B1.
 S-F: K, V, B1.
 S-N: K, V, B1.
 S-M: K, V, B1.
 S-N: K, V, B1.
 S-F: K, V, B1.
 S-F: K, V, B9.
 N-F: 3.
 N-F: 3.
 N-F: 3.
 N-N: 3.
 S-F: 3.
 S-N: 3.
 S-N: 3.
 S-F: 3.
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 W-F: 91.
 W-F: 91.
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 W-F: 91.
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APPENDIX D

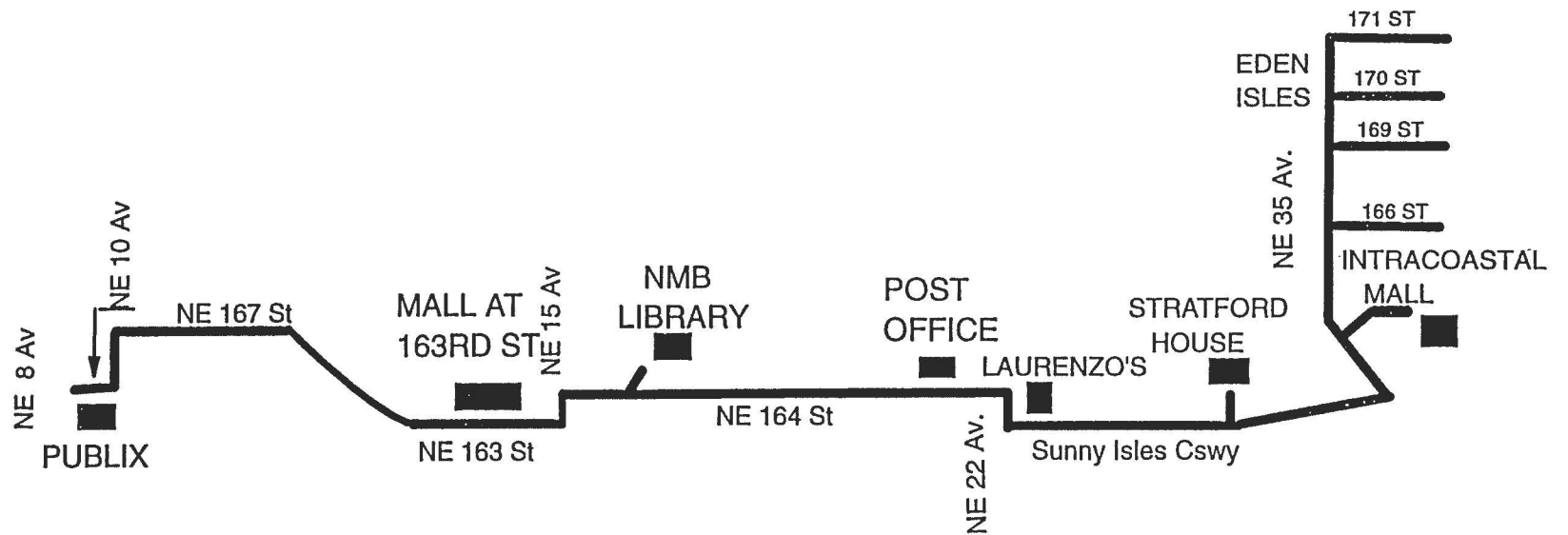
N.M.B. LINE

Monday - Wednesday - Friday



N.M.B. LINE

Eastern Shores to Publix NE 8 Av.



APPENDIX E

JOINT COUNCIL OF AVENTURA COURTESY BUS SCHEDULE

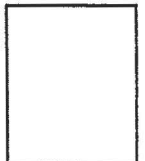
EFFECTIVE 10/3/97

<u>DEPARTS</u>	TIME	TIME	TIME	TIME
Bay Club	8:48	10:28	12:13	1:53
Southview	8:50	10:30	12:15	1:54
Mystic Point	8:57	10:37	12:22	2:01
Turnberry (Guard House)	8:58	10:38	12:23	2:02
Turnberry Isle	9:01	10:41	12:26	2:05
Aventura Yacht Club	9:02	10:42	12:27	2:06
Landmark	9:04	10:44	12:29	2:08
Terraces of Turnberry	9:05	10:45	12:30	2:09
Hamptons	9:07	10:47	12:32	2:11
Waterview	9:09	10:49	12:34	2:13
Flamenco	9:11	10:51	12:36	2:15
El Dorado	9:13	10:53	12:38	2:17
Ensenada	9:15	10:55	12:40	2:19
Delvista Towers	9:19	10:59	12:44	2:23
Bonavista	9:21	11:01	12:46	2:25
Bravura I	9:22	11:02	12:47	2:26
Bravura II	9:23	11:03	12:48	2:27
Biscaya	9:25	11:08	12:53	2:32
Coronado	9:30	11:10	12:55	2:34
Bonavida	9:33	11:13	12:58	2:37
<u>ARRIVES</u>				
Promenade	9:36	11:16	1:01	2:40
First Union	9:39	11:19	1:04	2:43
Mount Sinai	9:40	11:20	1:05	2:44
Aventura Mall	9:43	11:23	1:08	2:47
Publix	9:45	11:25	1:10	2:49
Loehmans Plaza	9:53	11:33	1:18	2:57
Waterways	10:01	11:41	1:26	3:05
<u>DEPARTS</u>				
Promenade	9:36	11:16	1:01	2:40
Aventura Mall	9:43	11:23	1:08	2:47
Publix	9:45	11:25	1:10	2:49
Loehmans Plaza	9:53	11:33	1:18	2:57
Waterways	10:01	11:41	1:26	3:05

NOTE: Please be downstairs at least 5 minutes prior to scheduled time of departure. Bus will operate Monday through Friday, but will not operate on Holidays or Yom Kippur, Thanksgiving, Christmas, New Years and Fourth of July.

THE JOINT COUNCIL of AVENTURA

19355 NE 36 Avenue
Aventura, Florida 33180



ANY QUESTIONS CALL ROBERTS MANAGEMENT
947-3999

JOINT COUNCIL OF AVENTURA
COURTESY BUS SCHEDULE
EFFECTIVE 10/3/97

DEPARTS	TIME	TIME	TIME	TIME
BAY CLUB	8:48	10:28	12:13	1:53
SOUTHVIEW	8:50	10:30	12:15	1:54
MYSTIC POINT	8:57	10:37	12:22	2:01
TURNBERRY (GUARD HOUSE)	8:58	10:38	12:23	2:02
TURNBERRY ISLE	9:01	10:41	12:26	2:05
AVENTURA YACHT CLUB	9:02	10:42	12:27	2:06
LANDMARK	9:04	10:44	12:29	2:08
TERRACES OF TURNBERRY	9:05	10:45	12:30	2:09
HAMPTONS	9:07	10:47	12:32	2:11
WATERVIEW	9:09	10:49	12:34	2:13
FLAMENCO	9:11	10:51	12:36	2:15
EL DORADO	9:13	10:53	12:38	2:17
ENSENADA	9:15	10:55	12:40	2:19
DELVISTA TOWERS	9:19	10:59	12:44	2:23
BONAVISTA	9:21	11:01	12:46	2:25
BRAYURA I	9:22	11:02	12:47	2:26
BRAYURA II	9:23	11:03	12:48	2:27
BISCAYA	9:25	11:08	12:53	2:32
CORONADO	9:30	11:10	12:55	2:34
BONAVIDA	9:33	11:13	12:58	2:37

ARRIVES

PROMENADE	9:36	11:16	1:01	2:40
FIRST UNION	9:39	11:19	1:04	2:43
MOUNT SINAI	9:40	11:20	1:05	2:44
AVENTURA MALL	9:43	11:23	1:08	2:47
PUBLIX	9:45	11:25	1:10	2:49
LOEHMANS PLAZA	9:53	11:33	1:18	2:57
WATERWAYS	10:01	11:41	1:26	3:05

DEPARTS

PROMENADE	9:36	11:16	1:01	2:40
AVENTURA MALL	9:43	11:23	1:08	2:47
PUBLIX	9:45	11:25	1:10	2:49
LOEHMANS PLAZA	9:53	11:33	1:18	2:57
WATERWAYS	10:01	11:41	1:26	3:05

NOTE: Please be downstairs at least 5 minutes prior to scheduled time of departure. Bus will operate Monday through Friday, but will not operate on Holidays or Yom Kippur, Thanksgiving, Christmas, New Years and Fourth of July.

DEL PRADO BUS ROUTE

Bus Hours:

10a.m. - 11 a.m. - 12noon - 1 p.m. - 2p.m. - 3p.m. - 4p.m.

Bus Routes:

Monday & Saturday

- 1] Loehmans Fashion Plaza (*request only*)
- 2] Loehmans Fashion Publix
- 3] Aventura Mall
- 4] Wallgreens (*request only*)
- 5] Winn Dixie & Marshall's (*request only*)

Tuesday & Thursday

- 1] Loehmans Fashion Plaza (*request only*)
- 2] Aventura Mall
- 3] Aventura Publix
- 4] Wallgreens (*request only*)
- 5] Winn Dixie & Marshall's (*request only*)

Friday ONLY

- 1] Lorenzo's Supermarket (*request only*)
- 2] Winn Dixie & Post Office (*request only*)
- 3] Prescription Drugs (*request only*)
- 4] Publix (165th & 15th Ave)
- 5] Beauty Shop (166th Street)
- 6] 163rd Mall (rear - Service Merchandise)
- 7] Skylake Mall (Budget Drugs) - (*request only*)

*Bus riders must sign up for bus before the hour they need.
Bus waits for nobody, be on time. Driver will deliver all
packages. Tipping the driver is permitted.*

City of Aventura's Municipal Transit Plan - Survey

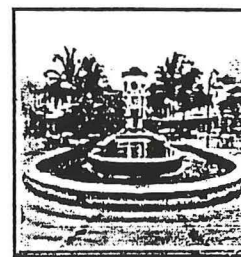
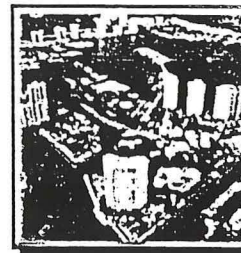


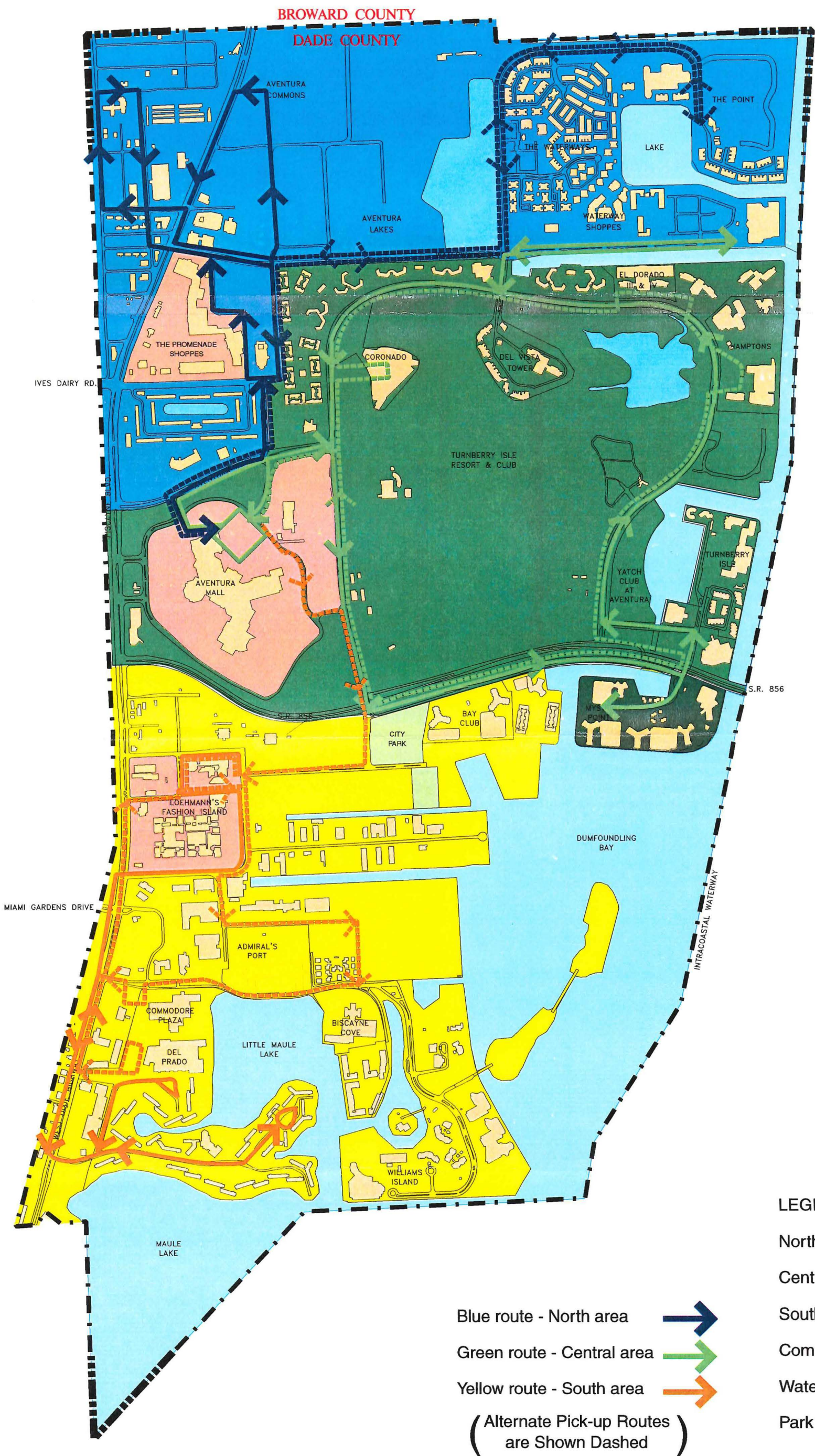
Dear Resident:

The City of Aventura is considering providing additional public transit services within the City. In order to ensure this service is as useful to you as possible, we are seeking information on your transportation needs. Please take a few minutes to answer the questions, and return the completed survey to your condominium management office.

Please fill in your answer to the questionnaire:

1. How many trips per day do you make within the City of Aventura?
☐ Less than One ☐ One ☐ Two ☐ Three ☐ Four ☐ More than Four
2. What mode of transportation do you use to make those trips?
☐ Own Car ☐ Miami-Dade Transit Service ☐ Private bus / shuttle service
☐ Ride from a friend / family member ☐ Other _____
3. What time do you leave on your earliest trip(s)?
☐ Before 7 a.m. ☐ 7:00 a.m.- 9:00 a.m. ☐ 9:00 a.m.- 12:00 noon
☐ 12:00 noon - 4:00 p.m. ☐ After 4:00 p.m.
4. What time do you return from your last trip?
☐ 9:00 a.m. - 12:00 noon ☐ 12:00 noon - 4:00 p.m. ☐ 4:00 - 7:00 p.m.
☐ 7:00 p.m. - 9:00 p.m. ☐ After 9:00 p.m.
5. Would you use a reliable and friendly City transit service if the fare was 25 cents, and the service was provided on a fixed route that served all major destinations within the City every 30 minutes?
☐ No ☐ 1 to 2 trips weekly ☐ 3 to 5 trips weekly ☐ Daily
6. Would you use this transit service if it ran every 45 minutes instead of every 30 minutes?
☐ No ☐ 1 to 2 trips weekly ☐ 3 to 5 trips weekly ☐ Daily
7. Would you use this transit service if it ran every 60 minutes instead of every 30 to 45 minutes?
☐ No ☐ 1 to 2 trips weekly ☐ 3 to 5 trips weekly ☐ Daily
8. Fill in ALL the destinations within the City of Aventura you would like to reach using the transit service:
☐ None ☐ Aventura Mall ☐ Loehmann's Plaza ☐ The Promenade Shops
☐ Aventura Hospital ☐ Waterway Shoppes ☐ The City Hall
☐ Doctors Offices, Medical Centers, Dentists, etc. ☐ Other _____
9. Do you anticipate your domestic assistants will use this transit service?
☐ No ☐ 1 to 2 trips weekly ☐ 3 to 5 trips weekly ☐ Daily





LEGEND

- North area
- Central area
- South area
- Commercial
- Water
- Park

- Blue route - North area
- Green route - Central area
- Yellow route - South area
- (Alternate Pick-up Routes
are Shown Dashed)



BERMELLO AJAMIL & PARTNERS INC.
Architecture Engineering Planning Landscape Architecture Interior Design

CITY OF AVENTURA

TRAFFIC STUDY

Graphic Scale

