



THE
CORRADINO
GROUP

IBUS

Comprehensive
Operations Analysis

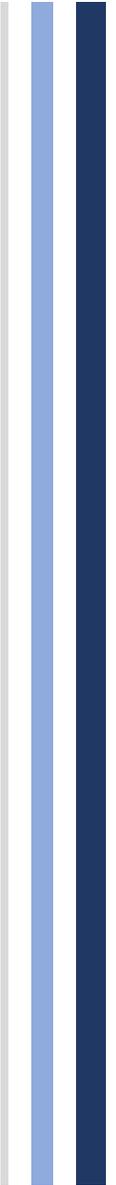


AGENDA

- 1 Introduction
- 2 Transit, What's the Point
- 3 This Report
- 4 Existing Conditions
- 5 Who Rides Transit
- 6 Service Options
- 7 Alternatives 0-3
- 8 Recommendations

|The Take Away

- Palmetto Bay Has A Solid Transit System
- Minor Adjustments Can Get It Running Optimally
- Policy Decisions Need To Be Made Regarding
 - Service Market and
 - Operations
- Confidence Issue Must Be Overcome, Internally and Externally



Options

- Multiple Service Options Per Route
 - Rt A
 - Modified
 - Schools
 - Demand Response
 - Rt B
 - Modified
 - Weekend Special
- 4 Alternative Combining Various Options
- Capital Options
 - Buses
 - Marketing
 - Technology



Recommendations

- Reconfigure Existing Service, With New Buses and Marketing immediately (Similar Cost)
- Review Ridership, Customer Satisfaction, and Financial Metrics in 12 Months.
- Then Consider, Increasing Service with Either Alternatives 1, 2 or 3.
- Market the System
- Purchase Buses
- Provide Service In House
- If You Continue Next Year, Purchase Tracking Equipment

INTRODUCTION



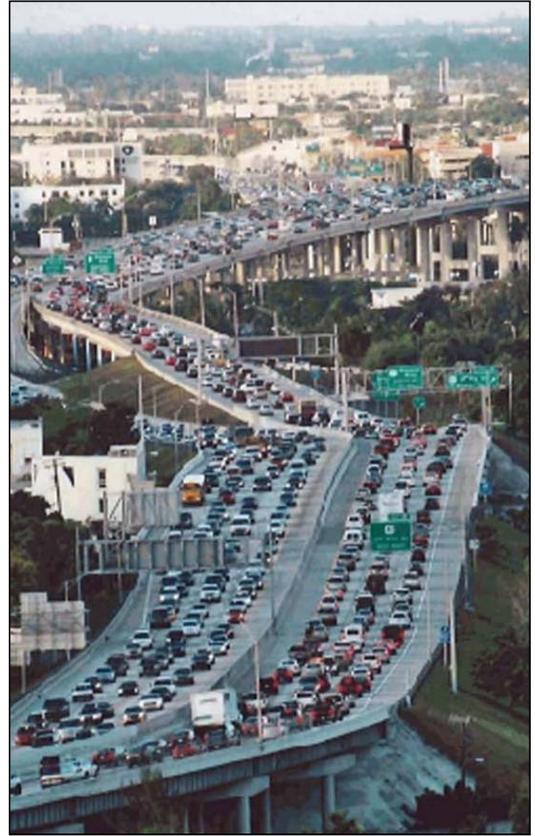
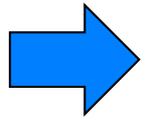
TRANSIT WHAT'S THE POINT?

- Miami Dade County is Young
- Flagler's Railway – 100 Years
- Florida is One of The Fastest
- Immature Transportation System Almost Completely Reliant on Roadways
- But....People NEED Transit
- We Are Out Of Capacity. Transit Can Contribute to the Solution

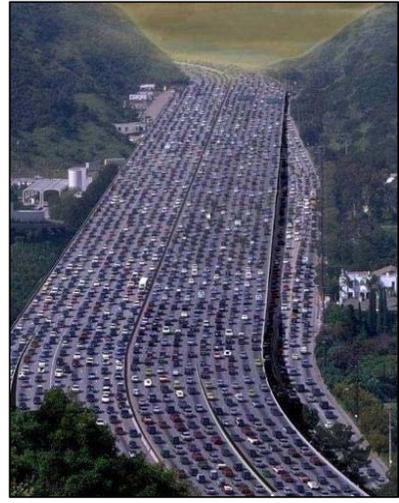
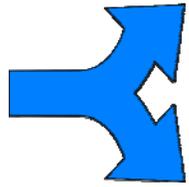
INTRODUCTION WHAT DO WE WANT TO BE?



Yesterday



Today



Tomorrow

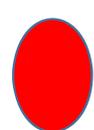
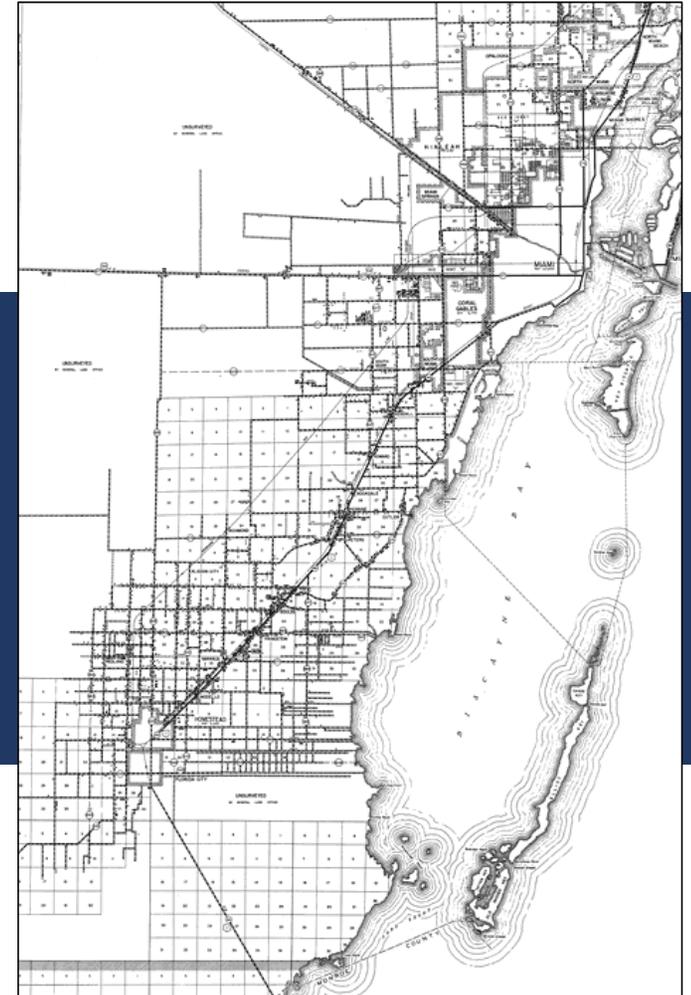


IT'S ALL ABOUT CAPACITY



TRANSIT, WHAT'S THE POINT?

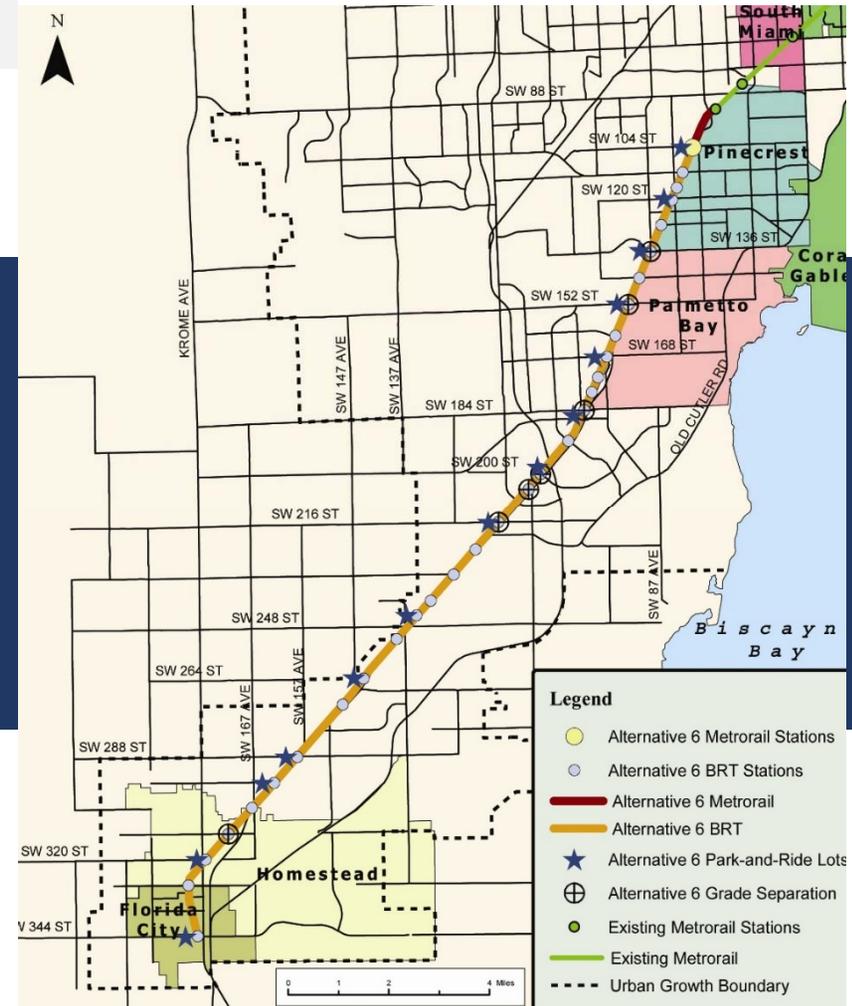
- ✓ Post-World War II Development Style, (The Car Dominates)
- ✓ The transit systems that developed in the Northeast of the United States, never worked here – Won't here
- ✓ Development is going to continue, and as we can clearly see, the roads can't handle additional travel demand
- ✓ South Dade is relatively uncongested compared to other locations in the region



TRANSIT, WHAT'S THE POINT?

WE ARE FORTUNATE

- ✓ Flagler's Railway has been repurposed. Metrorail and Busway
- ✓ We have the beginnings of high level transit already, while other communities, like Miami Beach do not
- ✓ The Palmetto Bay Circulator is a progressive, forward thinking concept, fitting of one of the most desirable, well run places to live in our region
- ✓ Investment in the future

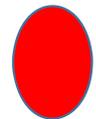


TRANSIT, WHAT'S THE POINT?

COMMON IN URBAN AREAS

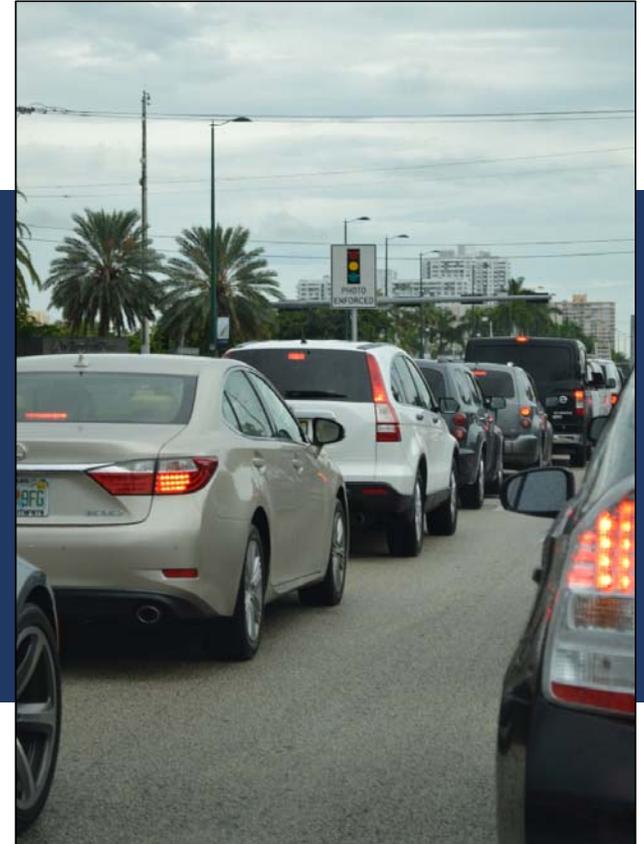
It is an essential public service:

- ✓ Increases capacity on heavily traveled routes when physical capacity is no longer available
- ✓ Reduces reliance on car trips
- ✓ Supports and fosters densities
- ✓ Provides mobility for transit dependent (elderly, handicapped, kids)



TRANSIT, WHAT'S THE POINT?

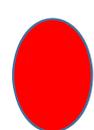
- ✓ Miami-Dade County is representative marginal development for transit
- ✓ It is typified by not dense but congested (less than 12 du/acre) development spread over a broad area, on an interrupted grid, with few pockets of intense use
- ✓ It forces people to use cars
- ✓ Transit is only built for Transit Dependent (except for Metrorail, busway, I-95 HOT lanes)



TRANSIT, WHAT'S THE POINT?

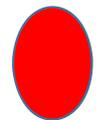


- ✓ Miami-Dade County has a 3-5% mode split
- ✓ Typical Metropolitan Areas have 6% modes split
- ✓ Suburbs have about 3% mode split
- ✓ Palmetto Bay is at about 3% - But Less Than Pinecrest and Cutler Bay



|TRANSIT, WHAT'S THE POINT?

- ✓ Typically transit cost about \$45/hr. to run + a capital investment
- ✓ We are Currently a bit higher (\$66/hr.)



TRANSIT, WHAT'S THE POINT?

CATEGORIES



TRANSIT

Carrying passengers on fixed routes, schedules with prescribed stops and schedules

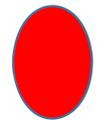


PARATRANSIT

Fills gaps between public and private transportation: van pools, school buses, taxis, rental cars

|TRANSIT, WHAT'S THE POINT?

- ✓ Nationally, work trips make up 65%
- ✓ Miami-Dade Work = 65%, School = 15%
- ✓ Nationally transit use has declined between 1950 and 2000, but new federal initiatives have focused on this and use is on the rise in central cities



|TRANSIT, WHAT'S THE POINT?

THE MAIN LESSON

To make transit attractive to choice riders it must be:

- ✓ As fast as door-to-door trip times and as expensive as an automobile
- ✓ It must compete with the car
- ✓ The community must be willing to tolerate the subsidy

|TRANSIT, WHAT'S THE POINT?

And That's Why We Are Here

|TRANSIT, WHAT'S THE POINT?

- ✓ Target the correct populations
- ✓ Implement a service that is efficient, effective and affordable.

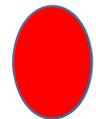
|WHAT IS THE PURPOSE OF THIS REPORT

- ✓ Put issues into context
- ✓ Exploring the current state of the service
- ✓ Benchmark it, so we can manage our expectations.

|WHAT IS THE PURPOSE OF THIS REPORT

More Specifically:

- ✓ Explore the demography of the Village
- ✓ Suggest potential service population's
- ✓ Suggest Route Modifications
- ✓ Suggest Service Options
- ✓ Explore Operational Characteristics
- ✓ Combine Options into Suggested Alternatives
- ✓ Provide the Village with quality information in order for it to make the best decision possible



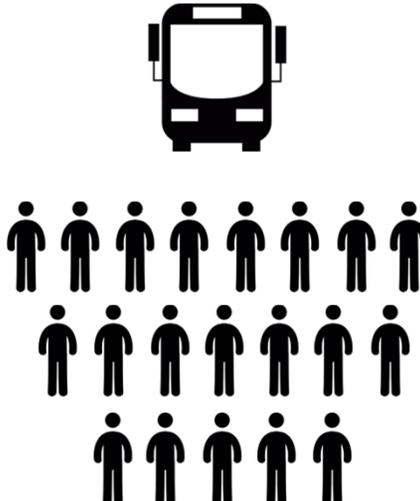
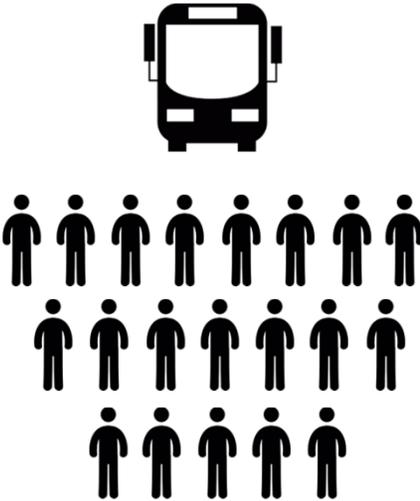
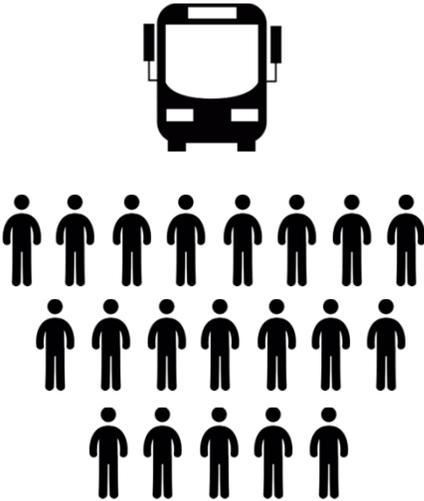
WHAT IS THE PURPOSE OF THIS REPORT

YOU SPECIFICALLY ASKED US TO

- ✓ Determine whether its two existing routes should be reconfigured, discontinued, or consolidated
- ✓ Evaluate the current operating model in light of fiscal and market needs
- ✓ Explore expanded transit populations
 - ✓ One targeted population is younger residents

EXISTING CONDITIONS

- ✓ Palmetto Bay owns three functioning buses, each with a capacity of 20 seated passengers
- ✓ **IBUS** service is now provided on Routes A and B



EXISTING CONDITIONS

The Buses

- ✓ 3 vehicles
- ✓ 20 seats each
- ✓ wheelchair lift equipped
- ✓ bike racks on the front
- ✓ Two buses are available for service and one is used as a spare
- ✓ Having a spare is a necessity under any circumstance; however, the spare does not serve its function adequately, as it sometimes breaks down itself when put into service
- ✓ Drivers are employed by the Village of Palmetto Bay and work part time



EXISTING CONDITIONS

The Buses
Life Span
EXCEEDED (5 yrs.)

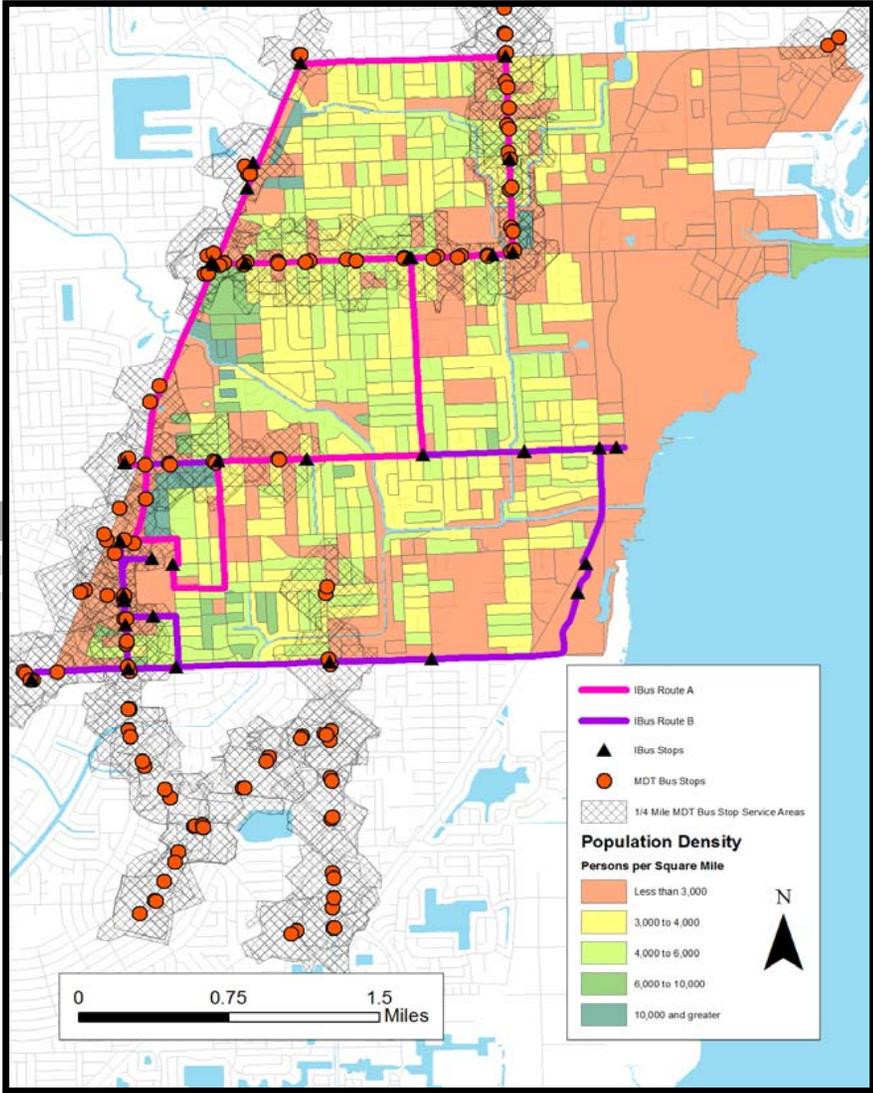
Table 1: Minimum Service-Life categories for Buses and Vans

Category	Typical Characteristics			Minimum Life (Whichever comes first)	
	Length	Approx. GVW	Seats	Years	Miles
Heavy-Duty Large Bus	35 to 48 ft /80 ft artic.	33,000 to 40,000	27 to 40	12	500,000
Heavy-Duty Small Bus	30 ft	26,000 to 33,000	26 to 35	10	350,000
Medium-Duty and Purpose-Built Bus	30 ft	18,000 to 26,000	22 to 30	7	200,000
Light-Duty Mid-Sized Bus	25 to 35 ft	10,000 to 16,000	16 to 25	5	150,000
Light-Duty Small Bus, Cutaways, and Modified Van	18 to 28 ft	8,000 to 14,000	10 to 22	4	100,000

Source: Useful Life of Transit Buses and Vans,
[http://www.fta.dot.gov/documents/Useful Life of Buses Final Report 4-26-07 rv1.pdf](http://www.fta.dot.gov/documents/Useful%20Life%20of%20Buses%20Final%20Report%204-26-07%20rv1.pdf)

EXISTING CONDITIONS

The Routes
A & B



EXISTING CONDITIONS



Route A

Operates only during the midday (10 AM to 2 PM), making four one hour runs, each comprised of two loops:

- 1) a northern counter-clockwise loop



Route B

Operates in the morning (7 AM to 9 AM) prior to the beginning of Route A service and in the afternoon (2 PM to 5 PM) after Route A service ends for the day.

EXISTING CONDITIONS

RIDERSHIP

- ✓ Historical ridership data indicate a decline from approximately 12,000 in 2008 to 5,376 in 2013.
- ✓ Recent ridership reports indicate a daily average of 25 for April through June 2015.
- ✓ Route A's ridership ranged from a high of 69 persons in April 2015 (3.4 riders per day) to 12 (fewer than 1 rider per day) for the month of June 2015.
- ✓ Route B garners more riders, ranging from 511 in April 2015 (over 25 riders per day) to 549 for the month of June 2015 (over 27 riders per day).

EXISTING CONDITIONS

- ✓ Low Ridership
- ✓ Cost Per Rider comparable with Pinecrest – Higher End
- ✓ Cost Per Hour, Comparable with North Miami Beach – Higher End

	Doral Trolley	North Miami - NOMI Express	Aventura Express	Pinecrest	North Miami Beach - NMB LINE	Palmetto Bay – I-Bus	Coral Gables Trolley
Annual Service Hours	17,827	9,750	16,250	3,370	2,125	2,134	3,659
Annual Service Miles	206,501			NA		4,342	101
Annual Ridership	362,891	216,000	204,000	26,592	4,800	7,200	1,200,000
Annual Cost	\$ 361,000	\$ 429,000	\$ 715,000	\$ 171,950	\$ 130,000	\$ 140,000	\$ 1,357,512
Cost Per Rider	\$1	\$2	\$4	\$6	\$27	\$19	\$1
Cost Per Hour	\$20	\$44	\$44	\$51	\$61	\$66	\$371

But There is Hope!

Numbers Are Much Better Removing Rt A

|TRANSIT, WHO RIDES

TWO PRIMARY MARKETS

1

Those Who Have A Choice
(Choice Riders)

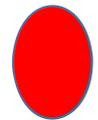
2

Those Who Do Not Have A Choice
(Transit Dependent)

- ✓ Who Do We Want To Serve?
- ✓ Who Should We Serve?
- ✓ We Have Opportunities For Both

|TRANSIT, WHO RIDES

- ✓ Nationally, work trips make up 65%
- ✓ Miami-Dade Work = 65%, School = 15%
- ✓ Nationally transit use has declined between 1950 and 2000, but new federal initiatives have focused on this and use is on the rise in central cities



|TRANSIT, WHO RIDES

THE CHOICE RIDE : The Main Lesson

To make transit attractive to choice riders it must be:

- ✓ As fast as door-to-door trip times and as expensive as an automobile
- ✓ It must compete with the car
- ✓ The community must be willing to tolerate the subsidy

TRANSIT, WHO RIDES

TRANSIT THRESHOLDS FOR USE



BUS

- ✓ Minimum Service = 4du/acre
- ✓ Frequent Service = 15 du/acre
- ✓ (Palmetto Bay @ +/- 3du/acre)



FREQUENCY

- ✓ 1 bus/hr = 4-6du/acre (500k sf Commercial)
- ✓ 2 bus/hr = 7-8du/acre

|TRANSIT, WHO RIDES

TRANSIT DEPENDENT

- ✓ What transit in this region is focused on
- ✓ Typically bus, not rail

TRANSIT, WHO RIDES

TRANSIT DEPENDENT

- ✓ The Young
- ✓ The Old
- ✓ Commuters Without Cars

VILLAGE OF PALMETTO BAY

At a glance:

Population: 23,863 Area: 8.8 sq. miles

Elderly Population: 12.2% of population (2,905)

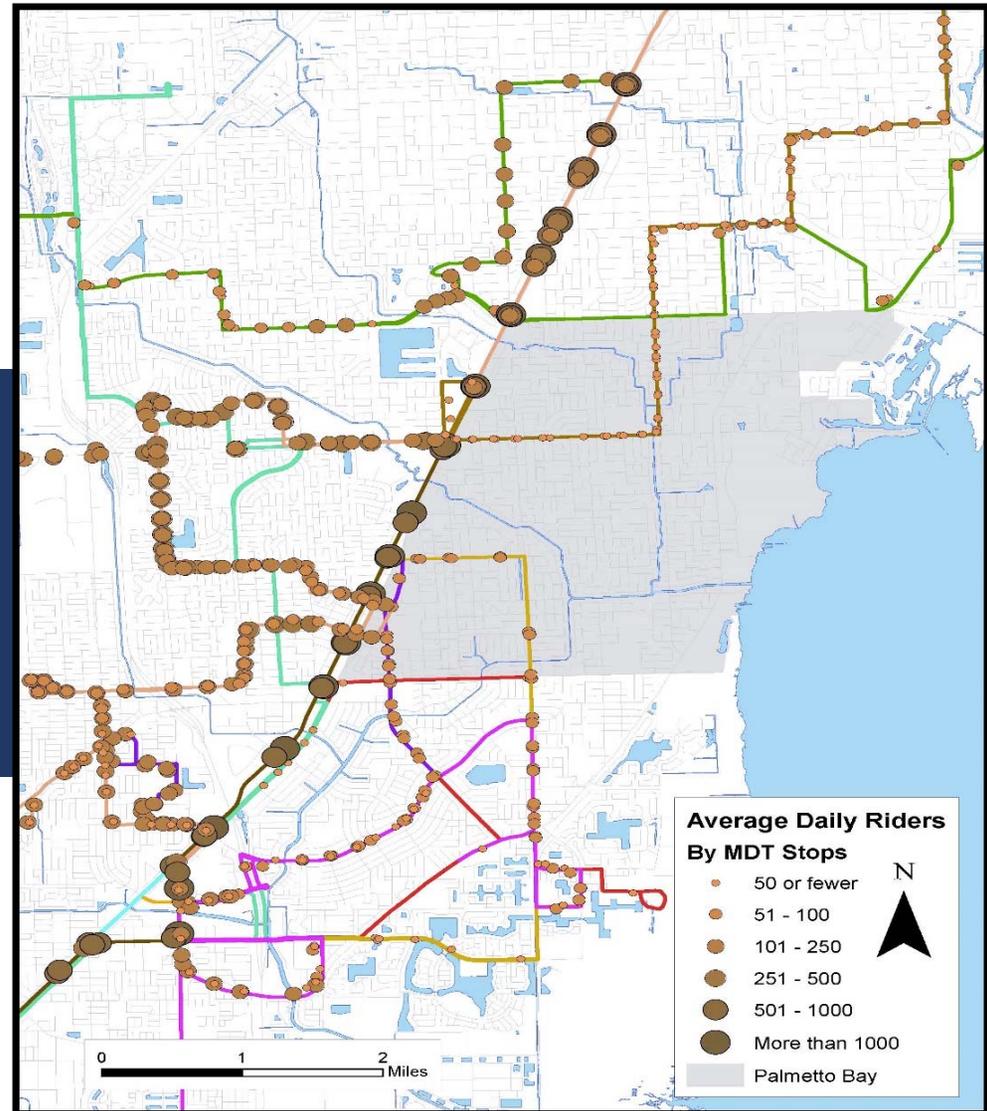
Youth Population: 27.7% of population (6,509)

Transit Dependent: +/-40%

1.85 Cars Per Household

TRANSIT, WHO RIDES

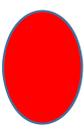
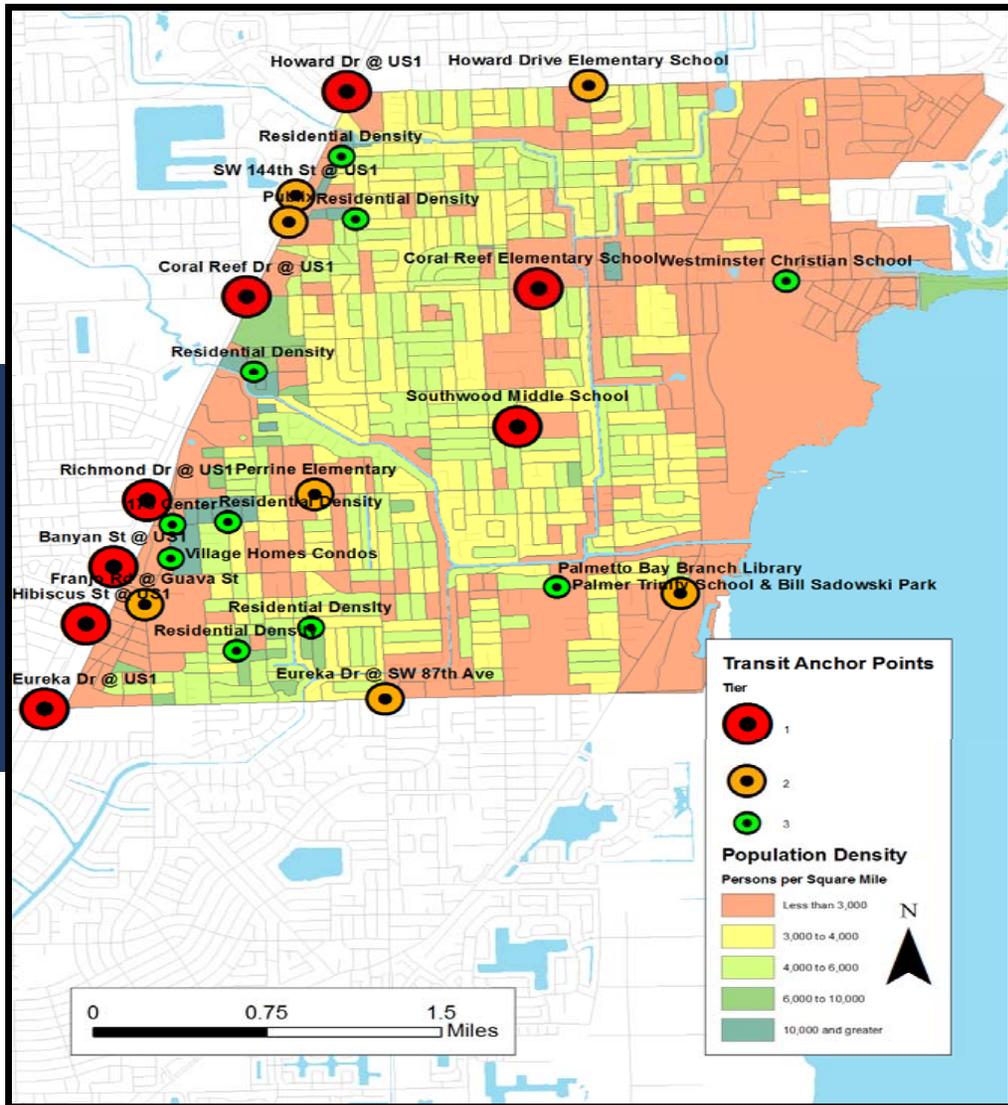
✓ Average Daily Riders Per Stop



TRANSIT, WHO RIDES

✓ Population Density

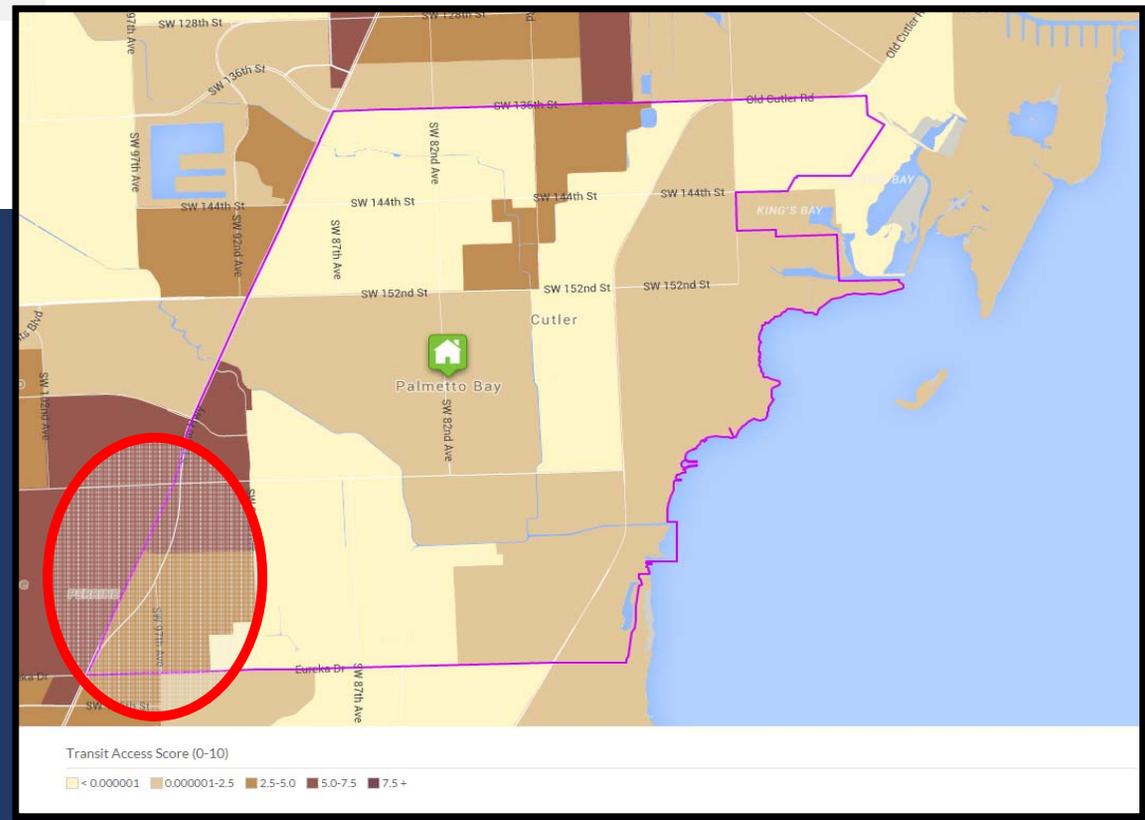
✓ Transit Oriented Density = ?



TRANSIT, WHO RIDES

ACCESS TO TRANSIT

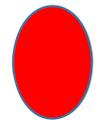
- ✓ Palmetto Bay 1.85 Cars/House
Transit Access Score 1.1
- ✓ Pinecrest 1.77 Cars/House
Transit Access Score 5.7
Pinecrest - 7x more likely
- ✓ Cutler Bay 1.79 Cars/House
Transit Access Score 1.5
Cutler Bay – 2.5x more likely



|TRANSIT, WHO RIDES

BETTER SERVICE COVERAGE

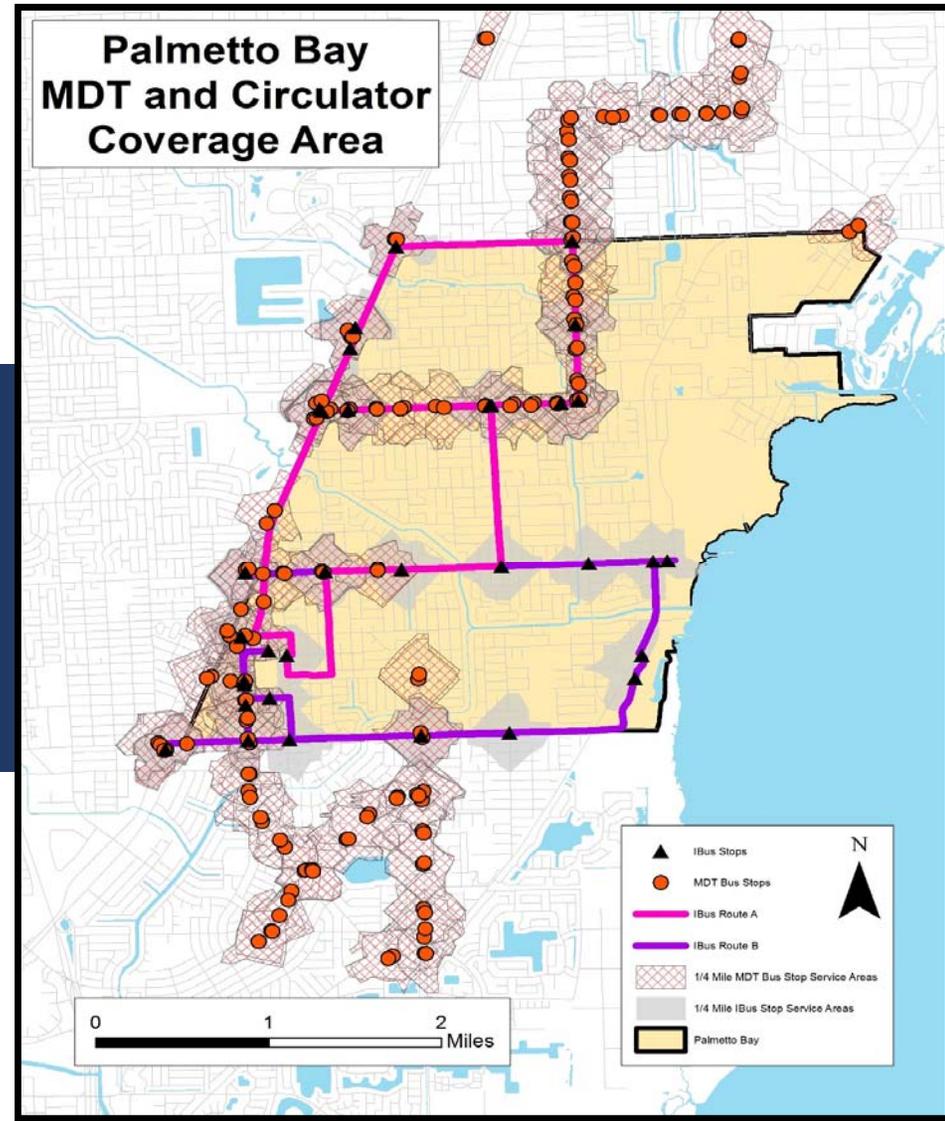
✓ Communities with better accessibility have higher ridership



TRANSIT, WHO RIDES

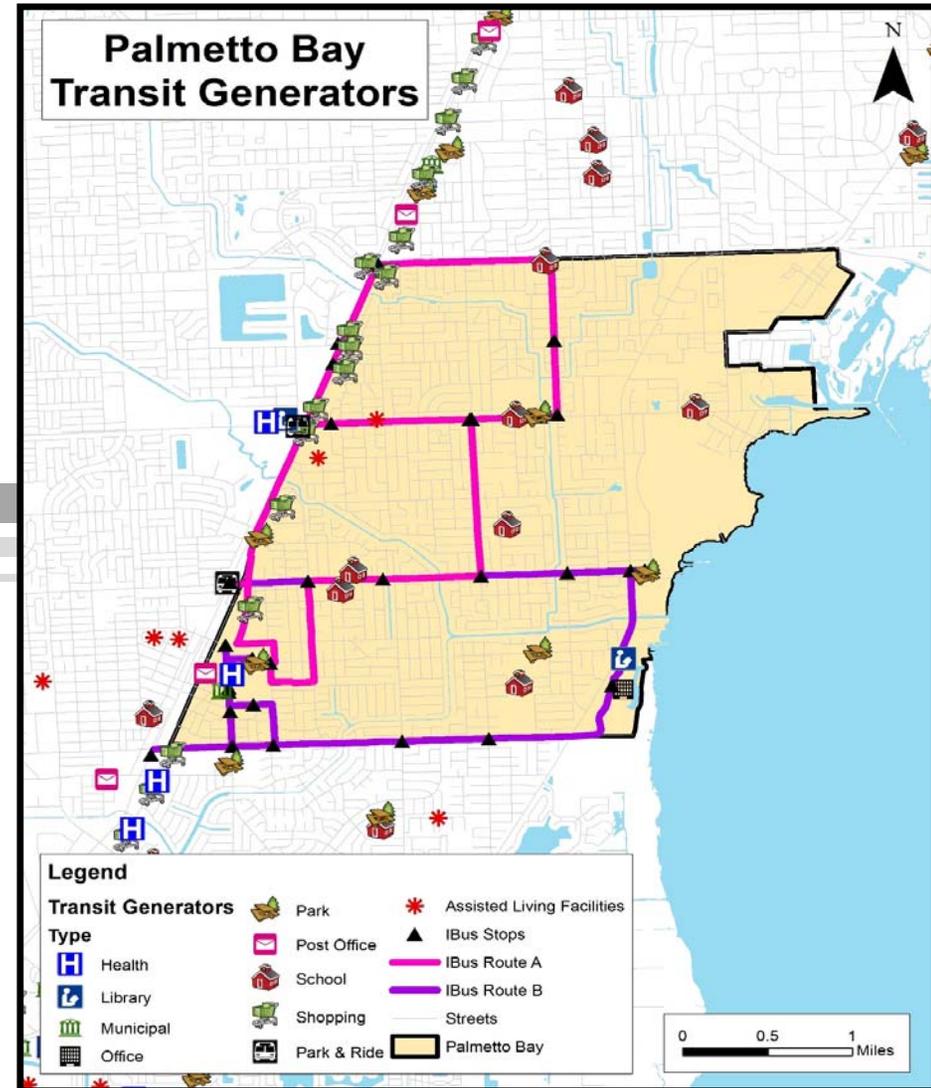
WHAT'S THE PROBLEM?

- ✓ Too much over lap
- ✓ We duplicate 65% of iBUS coverage area
- ✓ Competing with, not complementing MDT routes
- ✓ We are serving the same people (transit dependent commuters) on the same routes.



TRANSIT, WHO RIDES

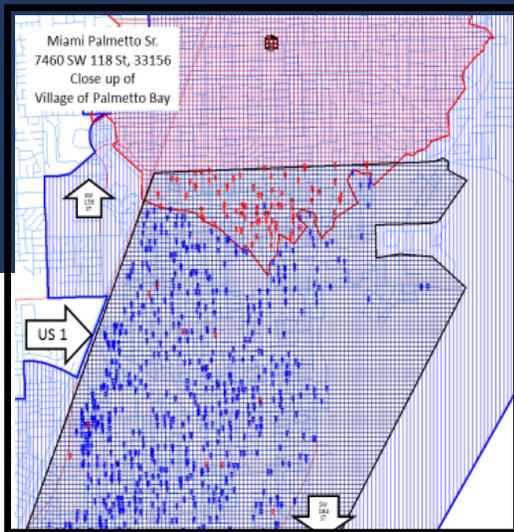
Where are the generators?



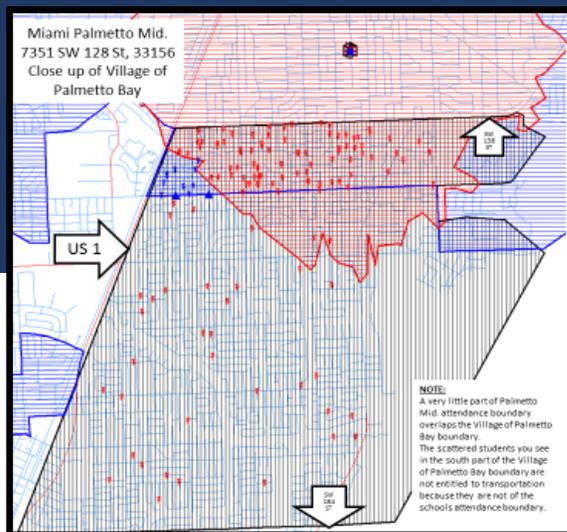
TRANSIT, WHO RIDES

YOUNGER POPULATIONS

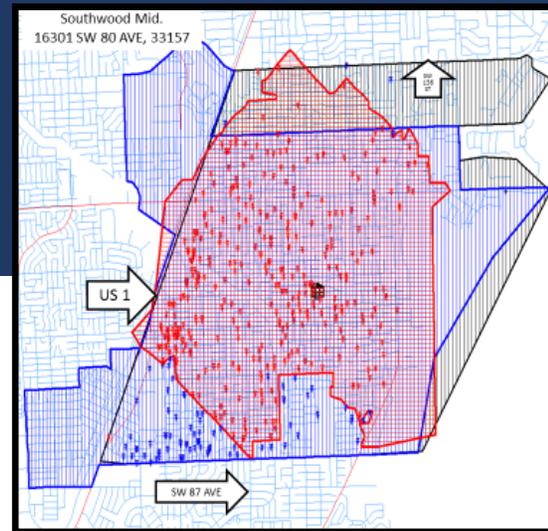
School Children (27% of the population) within 2 miles of a school are not serviced by school buses



Palmetto SR



Palmetto Middle



Southwood Middle

TRANSIT, WHO RIDES

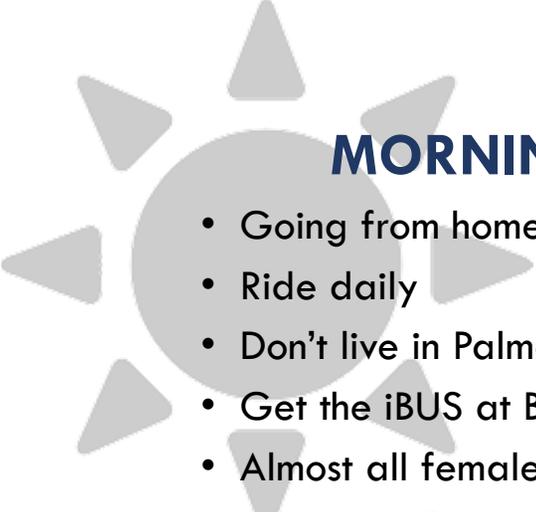
YOUNGER POPULATIONS

- ✓ School children (27% of the population) within 2 miles of a school are not serviced by school buses
- ✓ Don't typically mix well with the general public
- ✓ Significant potential for:
 - ✓ Increased Ridership
 - ✓ Service of an Underserved Market



WHAT THE RIDERS THINK

ON BOARD SURVEY



MORNING

- Going from home to work
- Ride daily
- Don't live in Palmetto Bay
- Get the iBUS at Busway
- Almost all female
- Almost all Spanish speakers
- Almost all have no access to a car



EVENING

- Going from work to home
- 1/2 coming from Village Center

WHAT THE RIDERS THINK

ON BOARD SURVEY

- ✓ These people heavily depend on this service to work
- ✓ If its late or does not show up, they don't work
- ✓ It is their car
- ✓ They want: benches, shelters, sidewalks, info, clean buses, air conditioning, **ON TIME SERVICE**
- ✓ Many have stopped riding due to undependability





SERVICE OPTIONS

- With any service changes, ridership will temporarily drop, but will rebound
- A two bus system continues to be a reasonable approach
- It is essential to purchase new buses
- Marketing is Critical
- Route A is the Major Problem. This gives us flexibility.

SERVICE OPTIONS

ROUTE A

- ✓ Midday Modified
- ✓ School Service, 1 Bus
 - Palmetto HS
 - Southwood Middle
- ✓ School Service, 2 Buses
 - Palmetto HS
 - Southwood Middle
 - Palmetto Middle
- ✓ Optional Midday, On-Demand

ROUTE B

- ✓ Modified

ROUTE C



**Weekend
Specials!**

SERVICE OPTIONS

ROUTE A

- ✓ Continue Basic Function
- ✓ Modify the Route
- ✓ Convert to School Routes
- ✓ Explore On-Demand Service

DESTINATION	SW 152 Street / US1	SW 152 Street / SW 82 Avenue	Coral Reef Park	SW 152 Street / SW 77 AV	SW 144 Street / SW 77 Avenue	SW 136 Street / SW 77 Avenue	SW 136 Street / US1	SW 144 Street / US1	Publix Shopping Plaza / SW 146 Street	SW 152 Street / US1 Busway	SW 152 Street / SW 89 Avenue	SW 152 Street / SW 82 Avenue	SW 168 Street / SW 82 Avenue	SW 168 Street / SW 87 Avenue	SW 168 Street / SW 92 Avenue	SW 176 Street / SW 94 Avenue	SW 168 Street / US1 Busway
A.M. Schedule	10:00 AM	10:04 AM	10:06 AM	10:08 AM	10:10 AM	10:12 AM	10:14 AM	10:18 AM	10:22 AM	10:31 AM	10:35 AM	10:37 AM	10:39 AM	10:41 AM	10:43 AM	10:47 AM	10:51 AM
	10:57 AM	11:05 AM	11:07 AM	11:09 AM	11:11 AM	11:13 AM	11:15 AM	11:19 AM	11:23 AM	11:32 AM	11:36 AM	11:38 AM	11:40 AM	11:42 AM	11:44 AM	11:48 AM	11:52 AM
P.M. Schedule	11:58 AM	12:06 PM	12:08 PM	12:10 PM	12:12 PM	12:14 PM	12:16 PM	12:20 PM	12:24 PM	12:33 PM	12:37 PM	12:39 PM	12:41 PM	12:43 PM	12:45 PM	12:49 PM	12:53 PM
	12:59 PM	1:07 PM	1:09 PM	1:11 PM	1:13 PM	1:15 PM	1:17 PM	1:21 PM	1:25 PM	1:34 PM	1:38 PM	1:40 PM	1:42 PM	1:44 PM	1:46 PM	1:50 PM	

Out of Service @ 1:50 PM

SERVICE OPTIONS

ROUTE B

- ✓ Continue to Provide Transit Dependent Commuters Access from Busway to Palmetto Bay Employment
- ✓ Modify the Route,
- ✓ Extend Service Hours (which will support the Development of the Triangle)

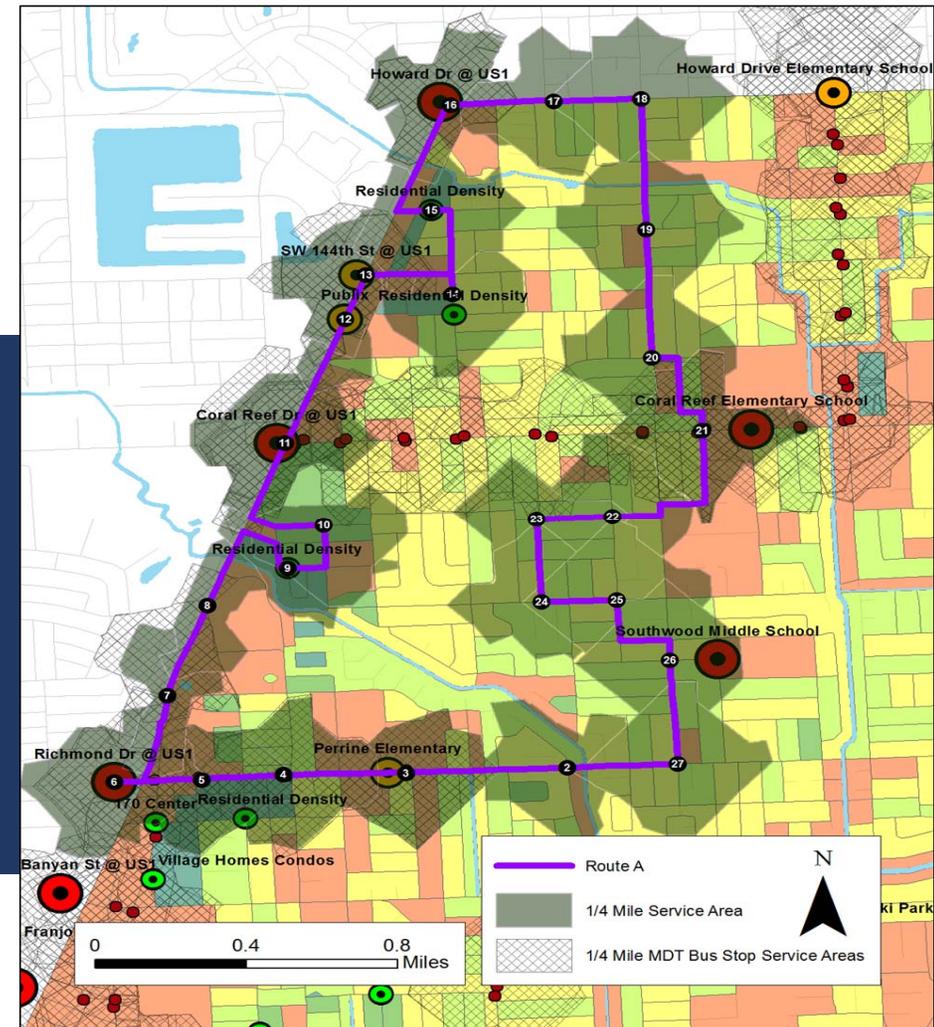
DESTINATION	SW 168 Street / US1 Busway	SW 168 Street / SW 87 Avenue	SW 168 Street / SW 82 Avenue	SW 168 Street / SW 77 Avenue	SW 168 Street / Old Cutler Road	Deering Estate Visitor's Center	Palmetto Bay Branch Library	Palmetto Bay Village Center	SW 184 Street / SW 82 Avenue	SW 184 Street / SW 87 Avenue	SW 184 Street / US1 Busway	SW 184 Street / SW 97 AV	SW 97 Avenue / SW 181 Terrace	SW 97 Avenue / Guava Street	Palmetto Bay Park	Bayan Street / Perrine Avenue	Palmetto Bay Municipal Ctr.	Palmetto Bay Public Works	SW 184 Street / SW 94 Avenue
A.M. Schedule	7:00 AM	7:04 AM	7:06 AM	7:08 AM	7:10 AM	7:12 AM	7:17 AM	7:20 AM	7:22 AM	7:24 AM	7:28 AM	7:30 AM		7:31 AM		7:36 AM	7:40 AM	7:42 AM	7:44 AM
	8:08 AM	8:02 AM	8:00 AM	7:58 AM	7:56 AM	7:52 AM	7:50 AM	7:49 AM	7:48 AM	7:46 AM									
	8:08 AM	8:12 AM	8:16 AM	8:18 AM	8:20 AM	8:23 AM	8:25 AM	8:27 AM	8:30 AM	8:35 AM	8:37 AM						8:42 AM	8:44 AM	8:46 AM
								8:52 AM	8:50 AM	8:49 AM									
P.M. Schedule																	2:10 PM	2:12 PM	2:14 PM
	2:38 PM	2:34 PM	2:32 PM	2:30 PM	2:28 PM	2:26 PM	2:23 PM	2:22 PM	2:20 PM	2:18 PM									
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															3:20 PM	3:18 PM	3:14 PM		
	3:26 PM	3:30 PM	3:32 PM	3:34 PM	3:36 PM	3:38 PM	3:42 PM	3:44 PM	3:46 PM	3:48 PM	3:50 PM	3:54 PM	3:56 PM						4:00 PM
	4:14 PM	4:18 PM	4:20 PM	4:22 PM	4:24 PM	4:26 PM	4:30 PM	4:32 PM	4:34 PM	4:36 PM	4:38 PM	4:42 PM	4:44 PM			4:10 PM	4:06 PM	4:02 PM	4:48 PM
5:20 PM	5:14 PM				5:11 PM			5:08 PM	5:06 PM	5:04 PM	5:03 PM			4:56 PM	4:54 PM	4:50 PM			

No Bus Service between 8:52 AM - 2:10 PM • Out of Service @ 5:20 PM

SERVICE OPTIONS

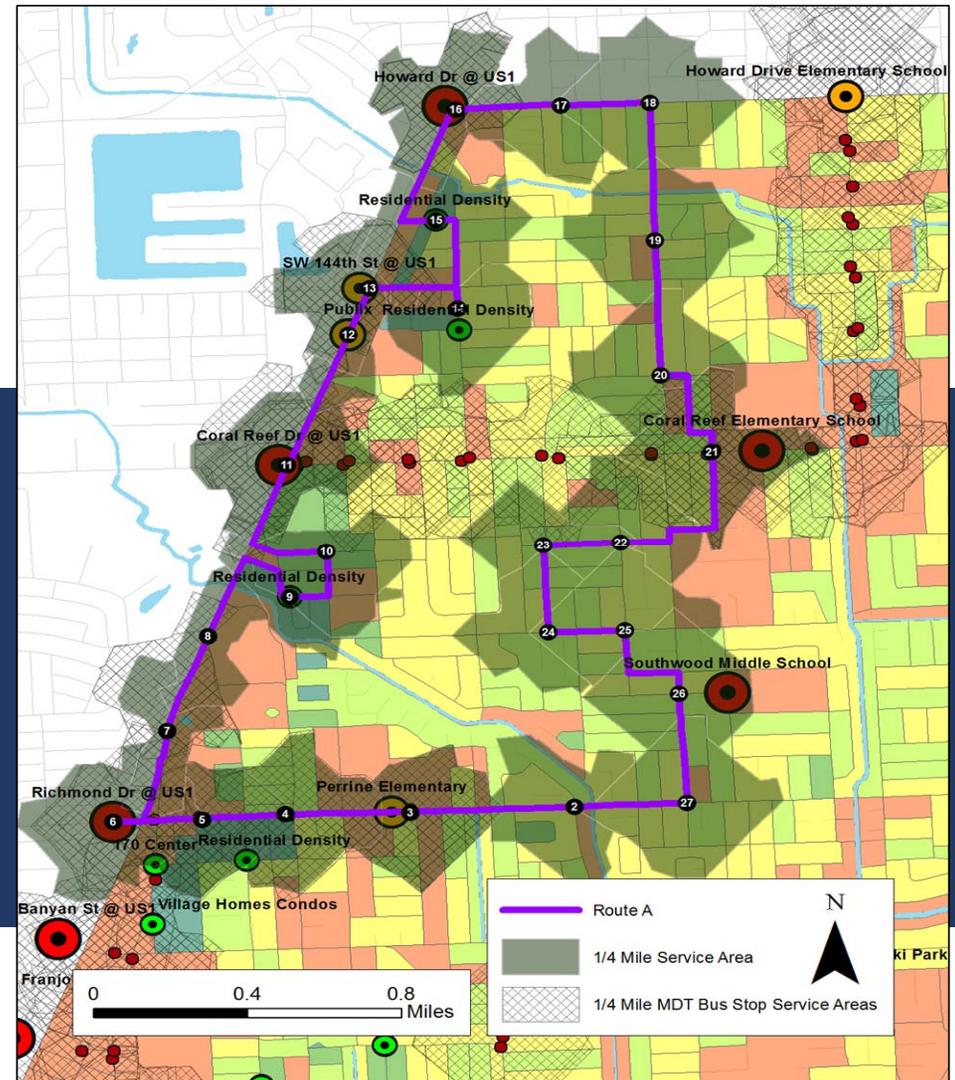
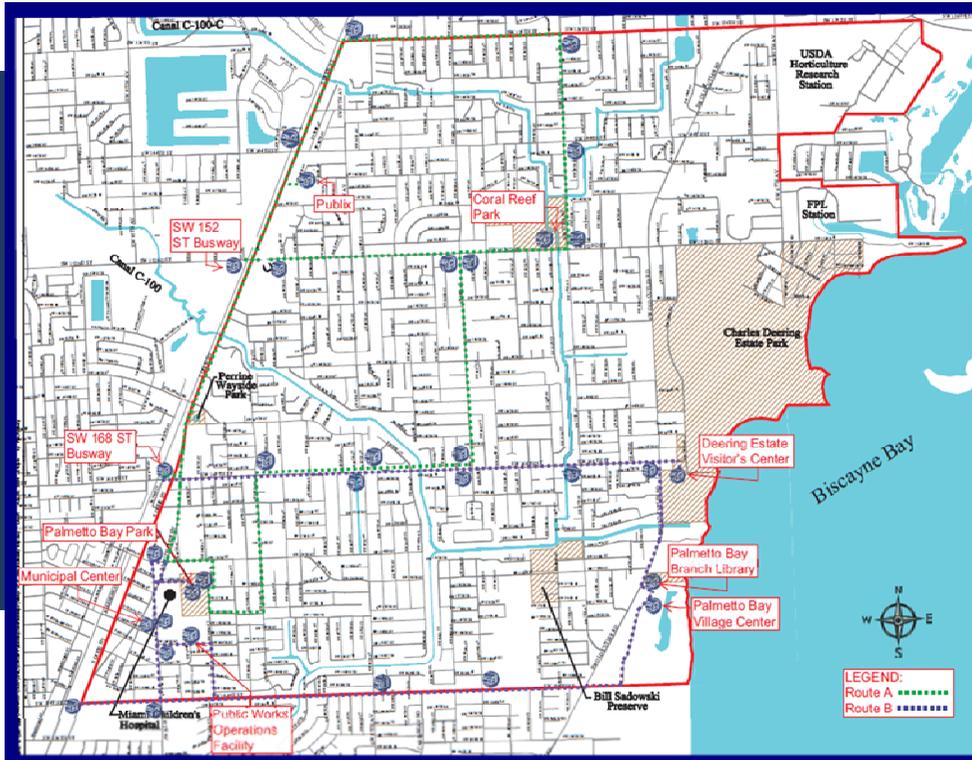
ROUTE A: Midday Modified

- ✓ Reorganize based on generators, and population density
- ✓ Ridership could rise from 24/month to between 200 and 400/month
- ✓ Advertising and marketing is critical
- ✓ Single clockwise loop
- ✓ Shift alignment off MDT Routes, but still integrate
- ✓ Transfer with Rt B at 82 Ave/168 St
- ✓ 50 min headway



SERVICE OPTIONS

ROUTE A: Midday Modified



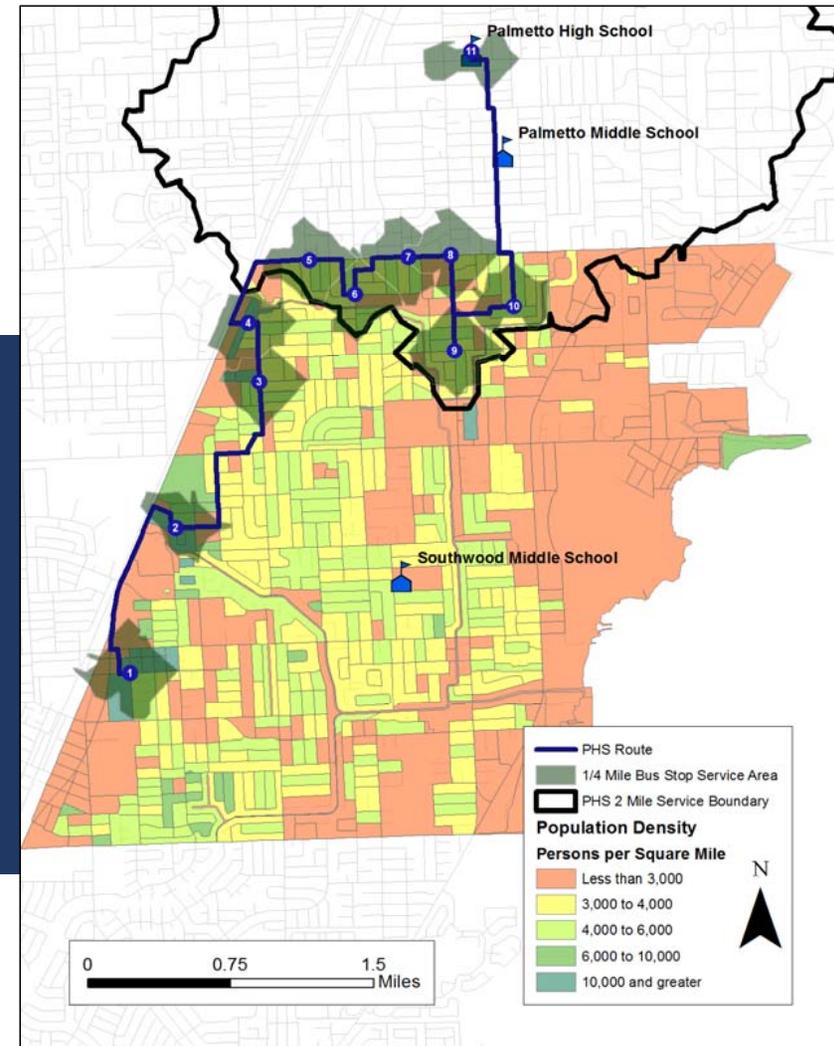
SERVICE OPTIONS

ROUTE A: School Service – 1 Bus

✓ Limitation – 20 seat bus

✓ High School

- 1 run
- 6:25 am – 7:20 am
- 2:30 pm - 3:15 pm

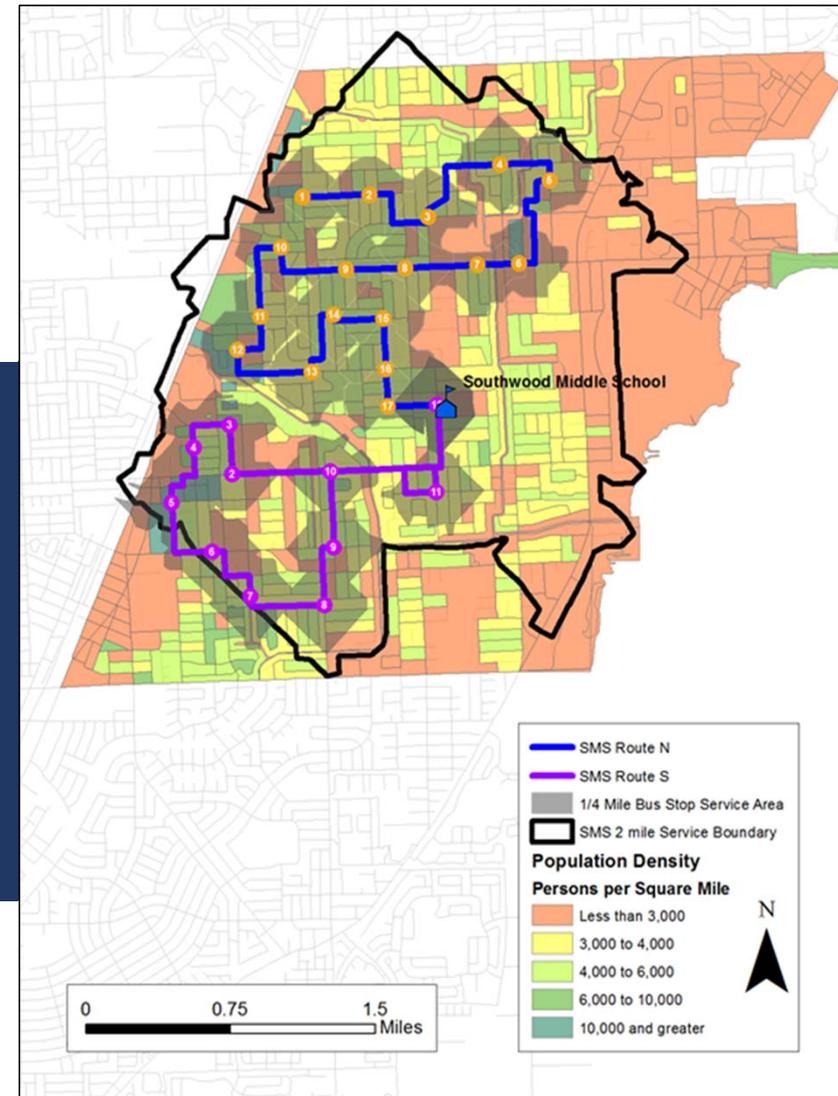


SERVICE OPTIONS

ROUTE A: School Service – 1 Bus

Middle School:

- 2 runs
- 7:40 am – 8:20 am
- 8:25 am – 9:00 am
- 3:50 pm - 4:25 pm
- 4:25 pm - 5:05 pm



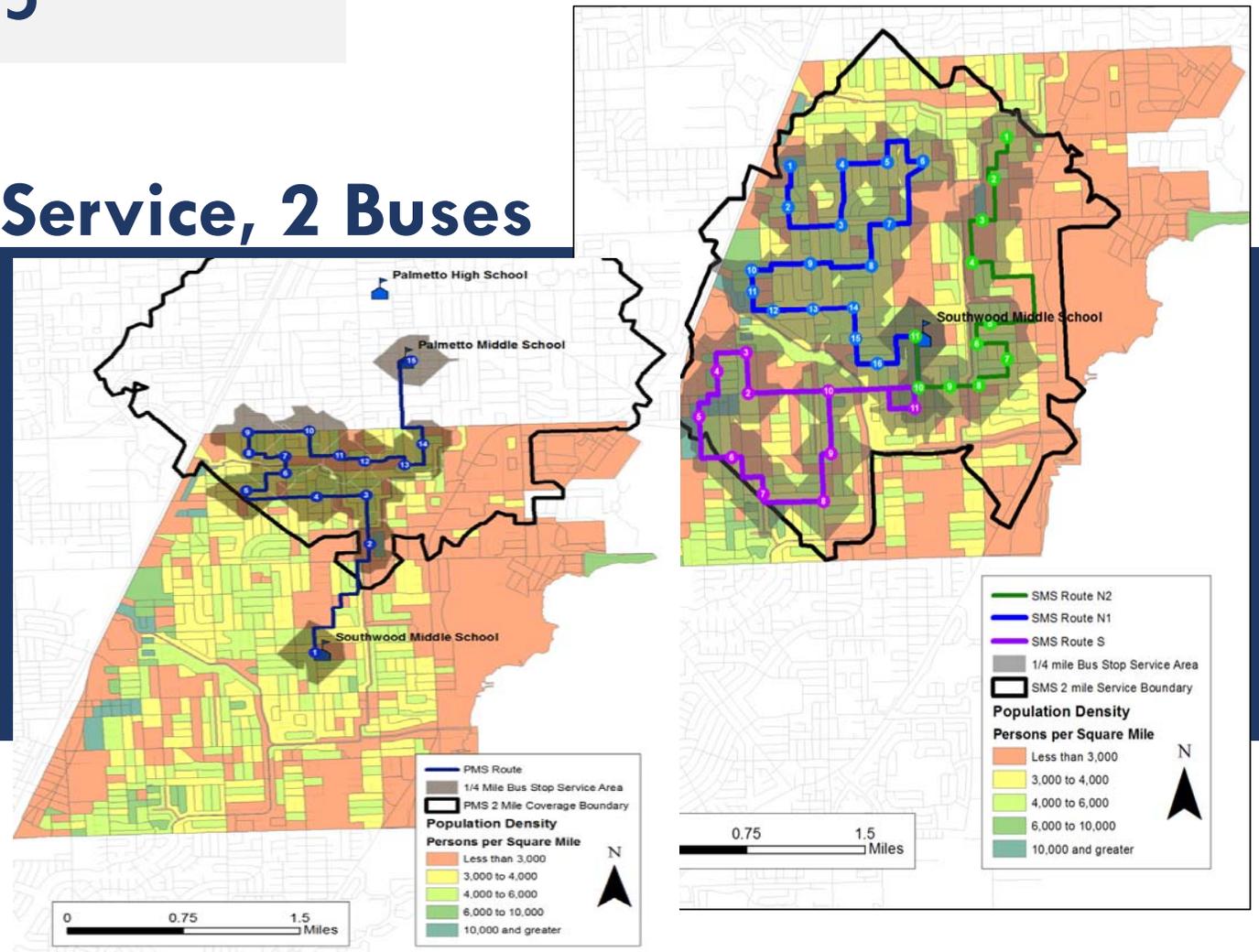
SERVICE OPTIONS

ROUTE A: School Service, 2 Buses

Two Buses in School Service

Service To:

- Palmetto HS
- Southwood Middle
- Palmetto Middle



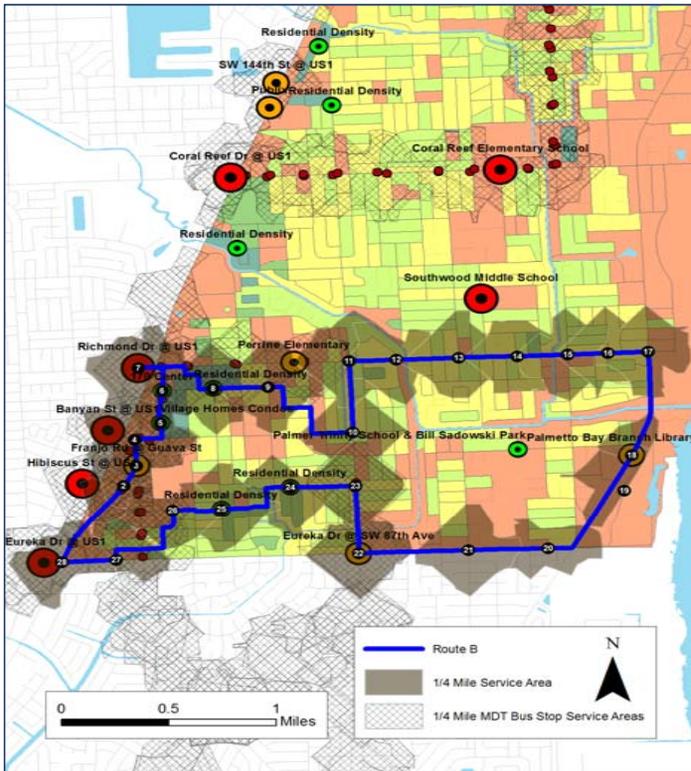
SERVICE OPTIONS

ROUTE A: Optional Midday – On Demand

- Different Advantages to Traditional Service
- Similar Costs
- Could be Restricted to Residents
- Requires Dedicated Administration

SERVICE OPTIONS

ROUTE B



Increase Accessibility

Expand Stops

Better Linkages

Ridership already exceeds appx. 200/Mo. Based on Population estimates

At Little Extra Cost

Clockwise Loop

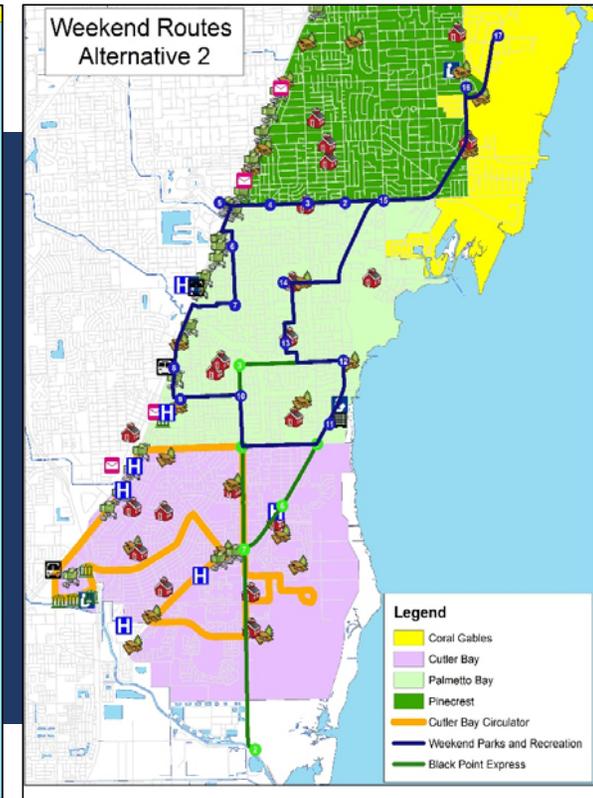
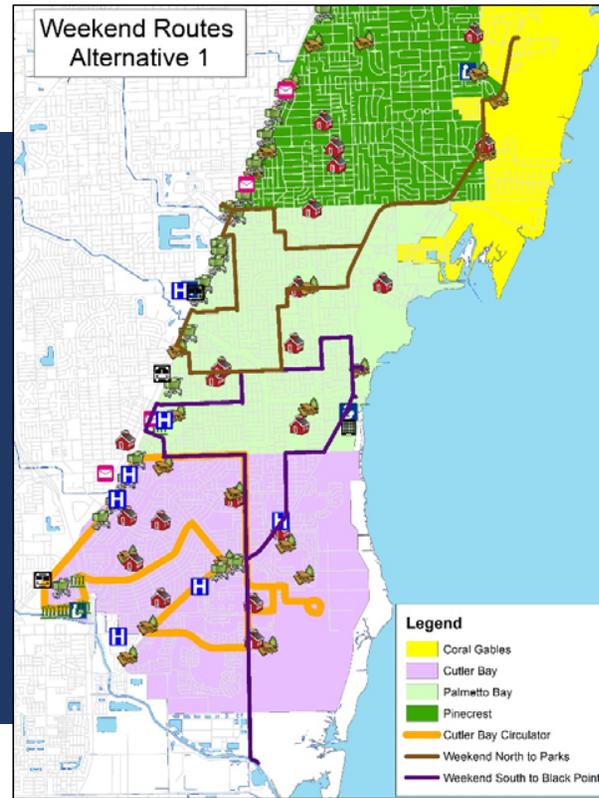
Less Duplication with MDT

Service to the Downtown (Traingle)

SERVICE OPTIONS

WEEKEND SPECIAL

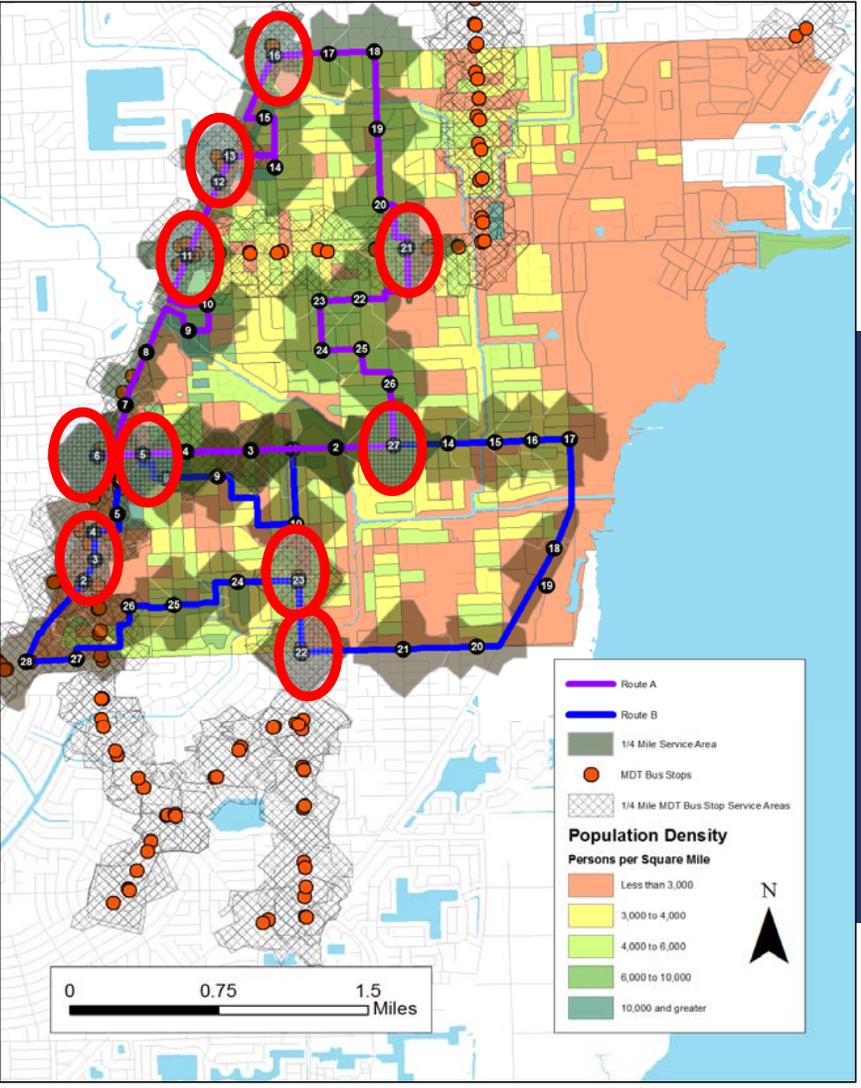
- ✓ There are 10 Local Points of Interest
- ✓ 2 Options Presented



INTERSYSTEM TRANSFERS

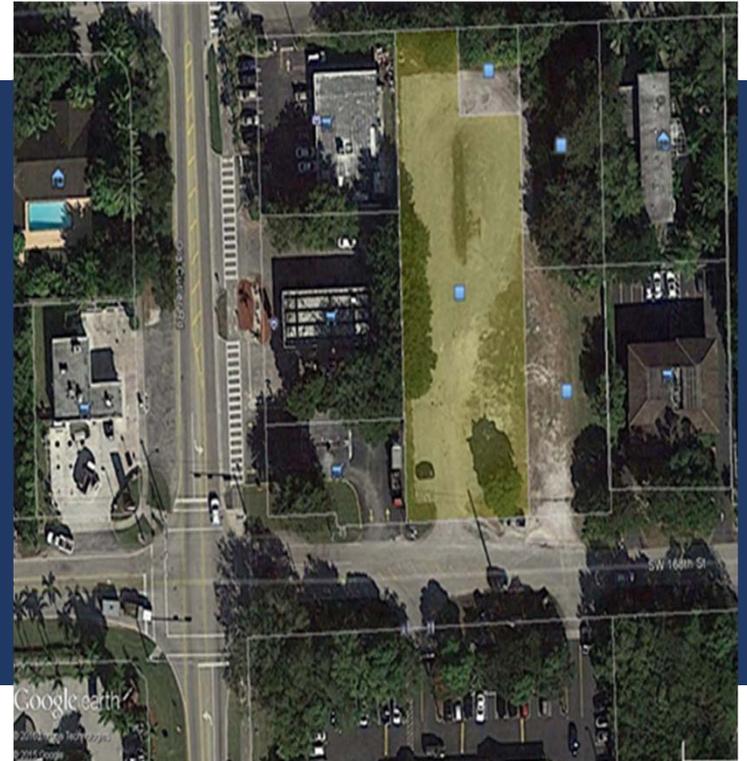
11

Route A / MDT	Route B / MDT
✓ US-1	✓ 168th St
✓ 136th St	✓ 87th Ave
✓ 152nd St	✓ 184th St
✓ 168th St	



PARK AND RIDE

- ✓ Currently @ Busway and 152nd St, 168th St
- ✓ Both Operating Between 97% - 100% Occupancy
- ✓ More Spaces = More Busway Riders
- ✓ Viable Options Do Not Exist For Choice Riders
 - Need to be as Fast and Inexpensive as a Car to be Viable
- ✓ Would Lessen Traffic
- ✓ Feasibility Study Needed
 - 168th St / Old Cutler Road
 - Triangle



IMPLEMENTATION

THE ESSENTIALS

New Buses

Marketing

Preventative Maintenance

THE FUTURE

Park And Ride

New Downtown



OWNERSHIP

TO OWN OR NOT TO OWN THE BUSES

OWNING IS:

- ✓ Marginally Less Expensive
- ✓ Some Tax Advantages
- ✓ Marginally Less Expensive to Operate
- ✓ More Control
- ✓ Premium Cost for so Few Vehicles



OWNERSHIP

TO OWN OR NOT TO OWN THE BUSES

Table 2: Bus Ownership Pros and Cons

Owner	Advantage	Disadvantage
Palmetto Bay	Full control of bus features. Use of existing maintenance workers, if there are such Village staff. Tax advantages through depreciation.	No economy of scale on purchases. Requires dedicated maintenance staff and facilities for bus storage and maintenance, or a reliable outside vendor. Full capital cost is paid up front. Money must be budgeted ahead to allow for future bus purchases.
Vendor	Village responsibilities reduce to managing the vendor contract.	Little control over vehicle selection (if not stipulated in contract, old equipment could be provided) Operating costs could be marginally higher, if buses are housed and maintained at a distance.

Source: *The Corradino Group*

OWNERSHIP

Table 3: Operations Pros and Cons

Operator	Advantage	Disadvantage
Palmetto Bay Staff	Full control of routes and flexibility to change. Full control of drivers and courtesy expectations.	Requires dedicated transit staff, including backups. Requires adequate driver and maintenance staff training, and facilities. For future school and demand-response options, someone must take calls and schedule rides.
Vendor	Hands off operations. Reliable spare vehicles and drivers Control of routes and flexibility to change, if in contract provisions. Control of drivers through contract language.	Requires understanding of service negotiations and contracting. Need to manage non-municipal staff. Need to establish performance criteria and monitor same.
MDT	Full integration with MDT system, including Cutler Bay. Elimination of redundancy with MDT routes. Reliable spare vehicles and drivers. User friendly for riders making transfers and using the MDT system.	Potentially higher cost of service. Different system objectives. Lack of control.

Source: *The Corradino Group*

MARKETING

- ✓ For Increased Success, we Must Increase Visibility and Awareness
- ✓ Increase Awareness of Circulators Role in Community
- ✓ Provide Pertinent Information to Potential Riders



ALTERNATIVES COMBINATIONS

ALT 0

Minimal Action

ALT 1

Reconfigure Routes, Same Hours,
On Demand

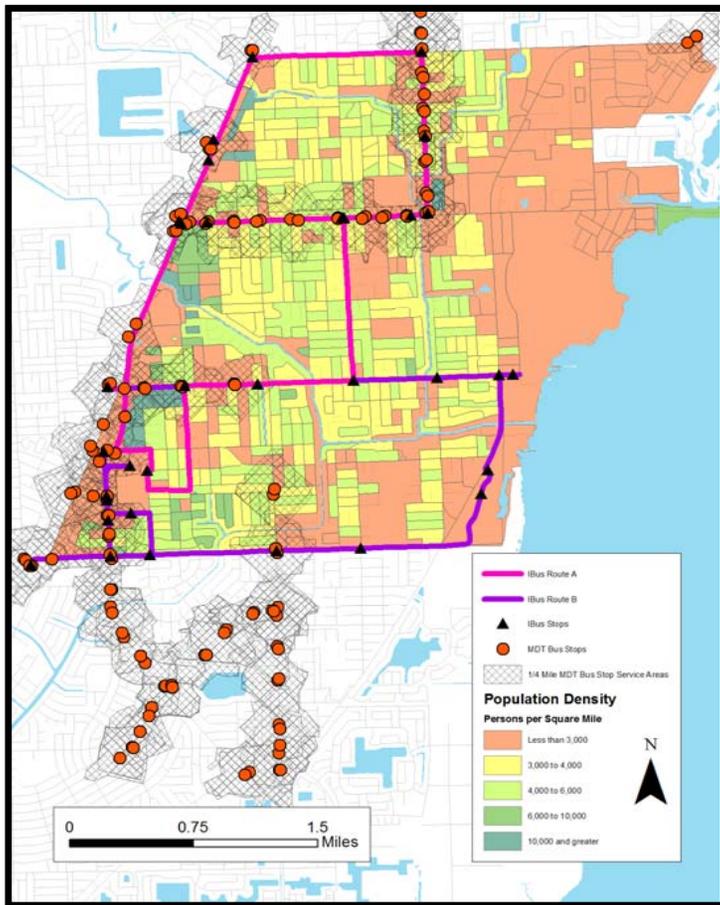
ALT 2

Alt 1 + School Service + More Hours

ALT 3

Alt 2 + 3rd Bus

ALTERNATIVE 0

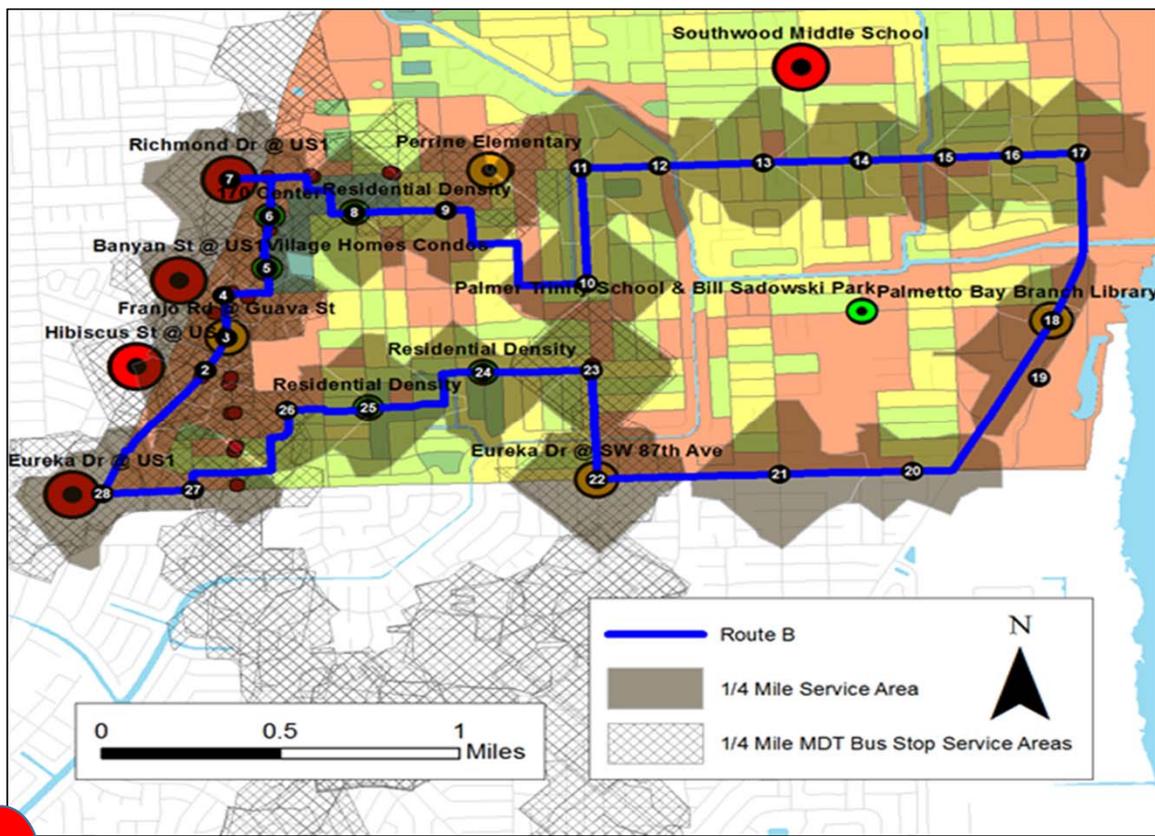


ALT 0

Minimal Action

Route A	✓ Reconfigure 8.3 Miles	\$63,250
Route B	✓ Reconfigure 8.9 Miles	<u>\$75,900</u>
Total		\$145,475
%		
% of Current Bjt	✓ Replace Buses	100%

ALTERNATIVE 1



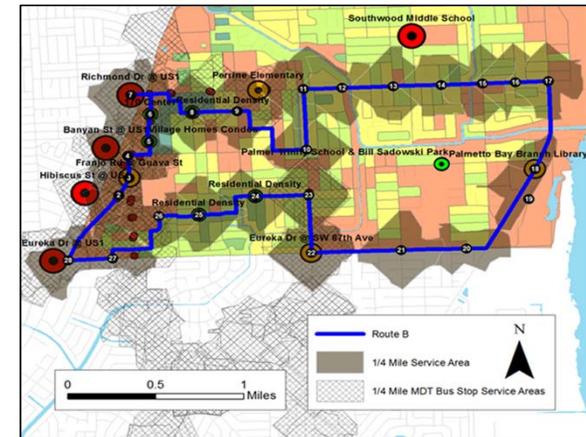
ALT 1

Reconfigure Routes, Same Hours, On Demand

- ✓ Reconfigure Route B, Add On Demand

ALTERNATIVE 1

- ✓ Reconfigured Route B, will Increase Efficiency, and Improve Coverage in the Densest Areas
- ✓ Predictable “Clockwise” Service
- ✓ 1hr Headways
- ✓ All Stops will have Signs, Some Benches and Shelters Added
- ✓ Service Similar to Today (7am – 9am, 2pm – 5pm)
- ✓ Same Ridership (Transit Dependent Commuters)
- ✓ Connecting the Busway with More Service
- ✓ Convert Route A to On-Demand



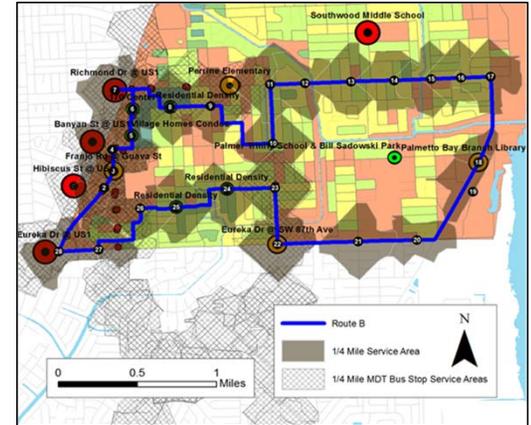
ALT 1

Reconfigure Routes, Same Hours,
On Demand

- ✓ Reconfigure Route B,
Add On Demand

ALTERNATIVE 1

• Route A – On Demand Midday Service	\$56,925
• Route B – Reconfigure	\$75,900
• 8.3 Miles	
• On Demand Administrative Support	\$44,275
• Marketing	<u>\$ 2,500</u>
Total	\$179,600
% of Current Bjt	120%



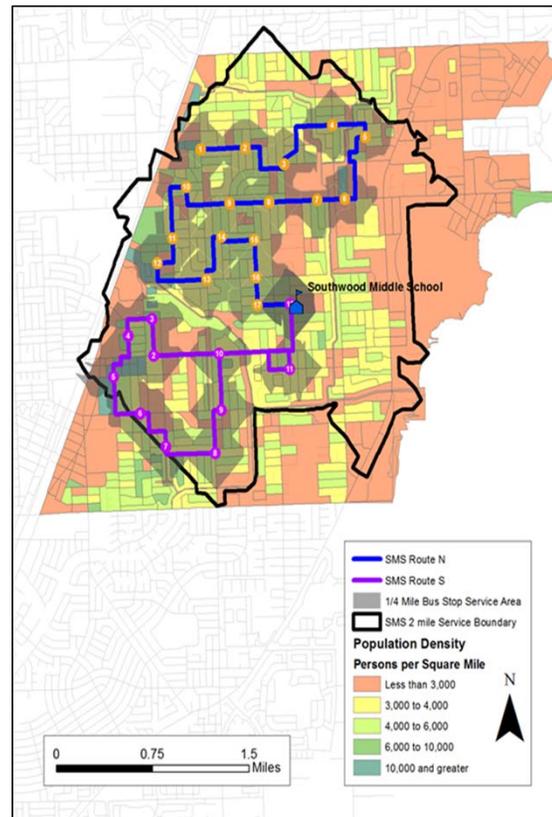
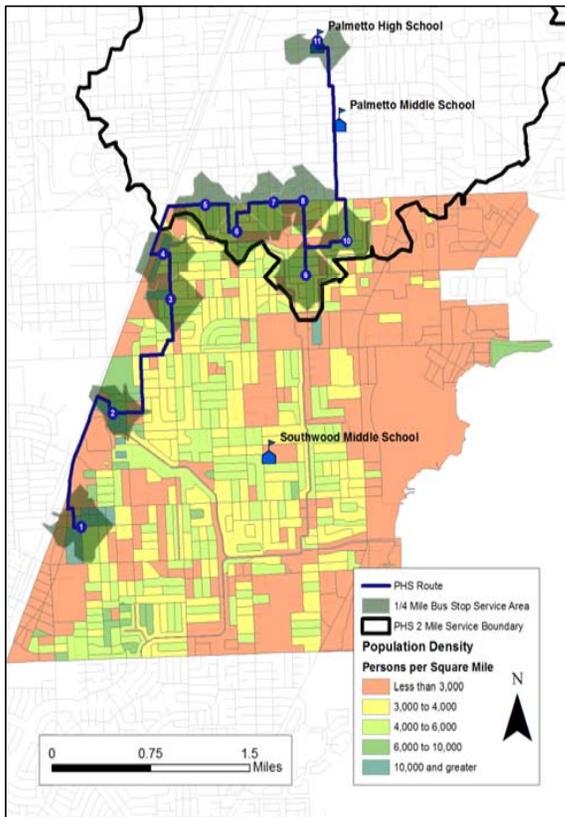
ALT 1

Reconfigure Routes, Same Hours,
On Demand

✓ Reconfigure Route B,
Add On Demand

ALTERNATIVE 2

Alternative 1 + School Service + More Hours



ALT 2

Alt 1 + School Service + More Hours

- ✓ Adds School Service to Route 1
- ✓ More Hours on Route B (12hrs)

ALTERNATIVE 2

Alternative 1 + School Service + More Time

Route A

- AM School Service \$44,275
- On Demand Midday Service \$75,900
- PM School Service \$56,925

Route B

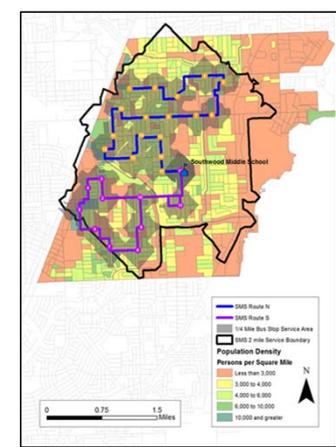
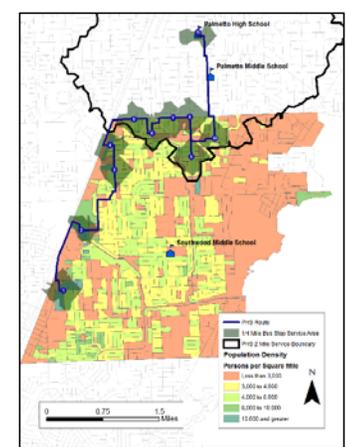
- Reconfigured (7am – 7pm) \$170,775

On Demand Administrative Support \$44,275

Marketing \$ 2,500

Total \$375,676

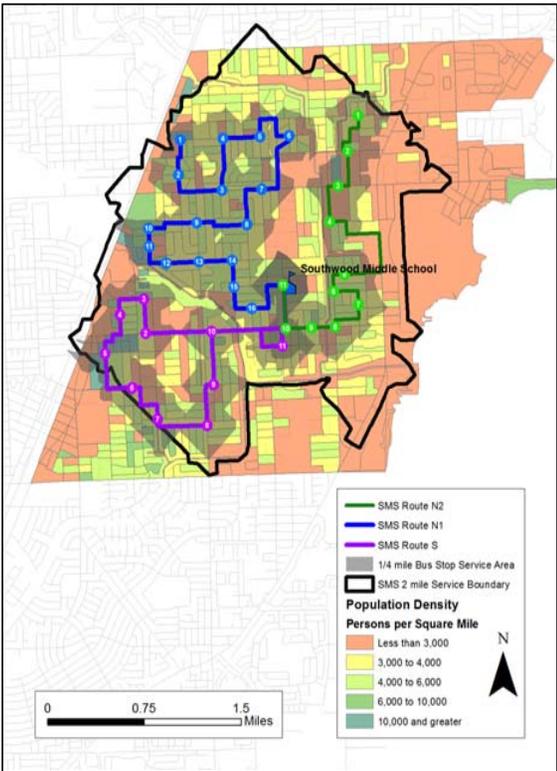
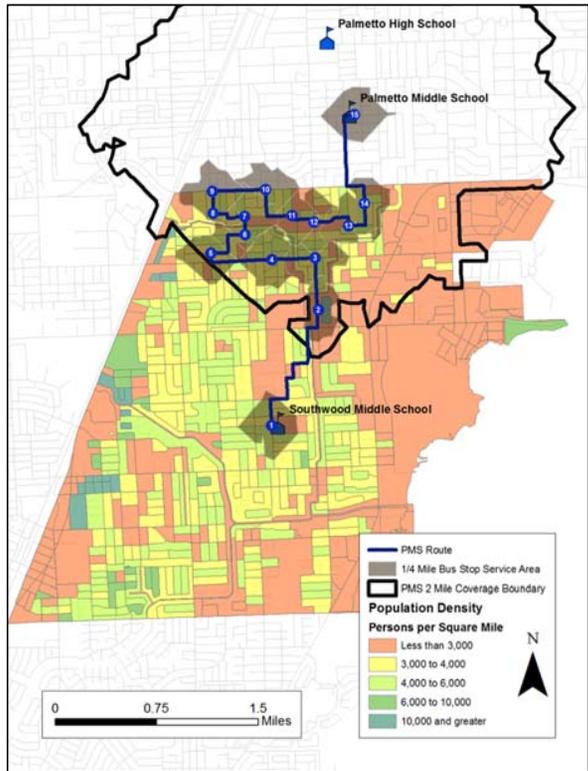
% of Current Budget 260%



ALT 2
Alt 1 + School Service + More Hours

ALTERNATIVE 3

Alternative 2 + 3rd Bus



✓ Builds on Alternative 2, by Adding a Third Bus for the Schools

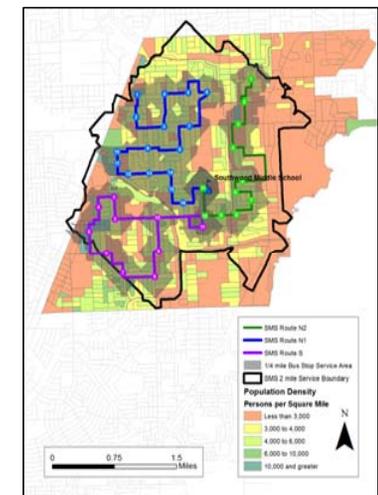
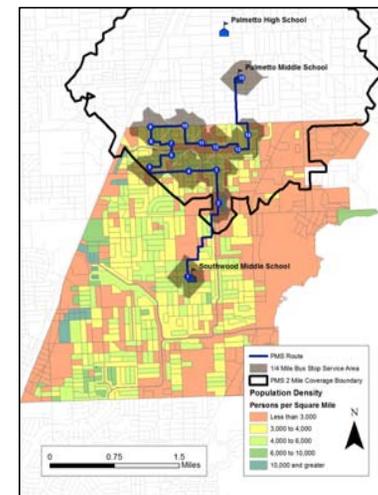
ALT 3

Alt 2 + 3rd Bus

ALTERNATIVE 3

Alternative 2 + 3rd Bus

Route A	
• AM School Service	\$44,275
• On Demand Midday Service	\$75,900
• PM School Service	\$56,925
Route B	
• Reconfigured (7am – 7pm)	\$170,775
On Demand Administrative Support	\$44,275
3 Rd Bus	\$88,550
Marketing	<u>\$ 2,500</u>
Total	\$455,400
% of Current Budget	310%



ALT 3

Alt 2 + 3rd Bus

ALTERNATIVES COMPARISON

Table 4. Alternative Operating Costs

Alt	Rt.		Daily Labor Hours	Annual Labor Hours	Annual Cost @ \$50/hr*	Factor of Exist Budget
0		Existing Service with New Buses				
	A	Reconfigured route (8.3 miles)	5.0	1265	\$ 63,250	
	B	Reconfigured route (8.9 miles)	6.0	1518	\$ 75,900	
		Administration	0.5	127	\$ 6,325	
		Marketing			\$ -	
		Totals	11.5	2910	\$ 145,475	1.0
1		Rcconfigured Routes, Same Hours, On-Demand				
	A	On-demand midday service (10:30-2)	4.5	1138.5	\$ 56,925	
	B	Reconfigured route (AM/PM)	6.0	1518	\$ 75,900	
		On-demand Admin support	3.5	886	\$ 44,275	
		Marketing			\$ 2,500	
		Totals	14.0	3542	\$ 179,600	1.2
2		Alt 2 = Alt 1 + School Service + More Hours				
	A	AM school	3.5	886	\$ 44,275	
	A	On-demand midday service (10:30-2)	4.5	1139	\$ 56,925	
	A	PM school	4.5	1139	\$ 56,925	
	B	Reconfigured route (7 AM/7 PM)	13.5	3416	\$ 170,775	
		On-demand Admin support	4.0	886	\$ 44,275	
		Marketing			\$ 2,500	
		Totals	30.0	7464	\$ 375,675	2.6
3		Alt 3 = Alt 2 + 3rd Bus				
	A	AM school	3.5	886	\$ 44,275	
	A	On-demand midday service (10:30-2)	4.0	1012	\$ 50,600	
	A	PM school	4.5	1139	\$ 56,925	
	B	Reconfigured route (7 AM/7 PM)	13.5	3416	\$ 170,775	
		On-demand Admin support	4.0	886	\$ 44,275	
	A	Second school bus	7.0	1771	\$ 88,550	
		Marketing			\$ 2,500.0	
		Totals	36.5	9108	\$ 455,400	3.1

Source: The Corradino Group

CAPITAL COSTS

The Useful Life of a Bus is 5 yrs.

Recommend:

- | | |
|----------------------------|------------------|
| • 2 Medium Duty Buses: | \$193,000 |
| • 1 Light Duty Bus (Spare) | \$ <u>86,000</u> |
| Total | \$472,000 |

BUSES



CAPITAL COSTS

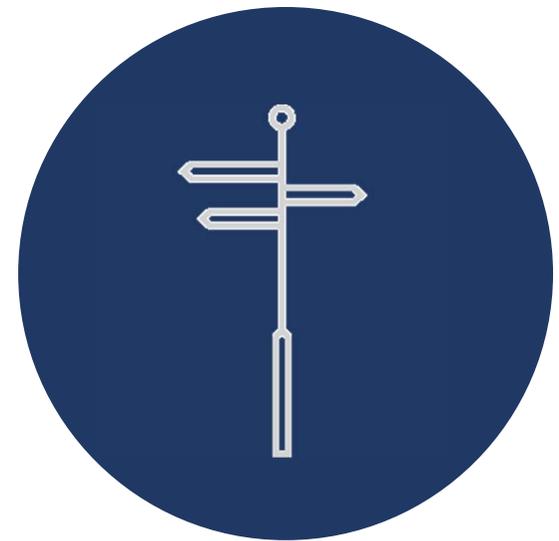
SIGNS/ SHELTERS

Recommend

Signs (27) : \$ 27,000

Shelters (5) : \$ 75,000

Total \$103,000



CAPITAL COSTS

Recommend:

(3 buses): ~\$11,000/bus

(3 buses): ~\$ 100/bus annual upkeep

Total \$12,500 for 5 years, 3 buses

These Costs are Highly Variable

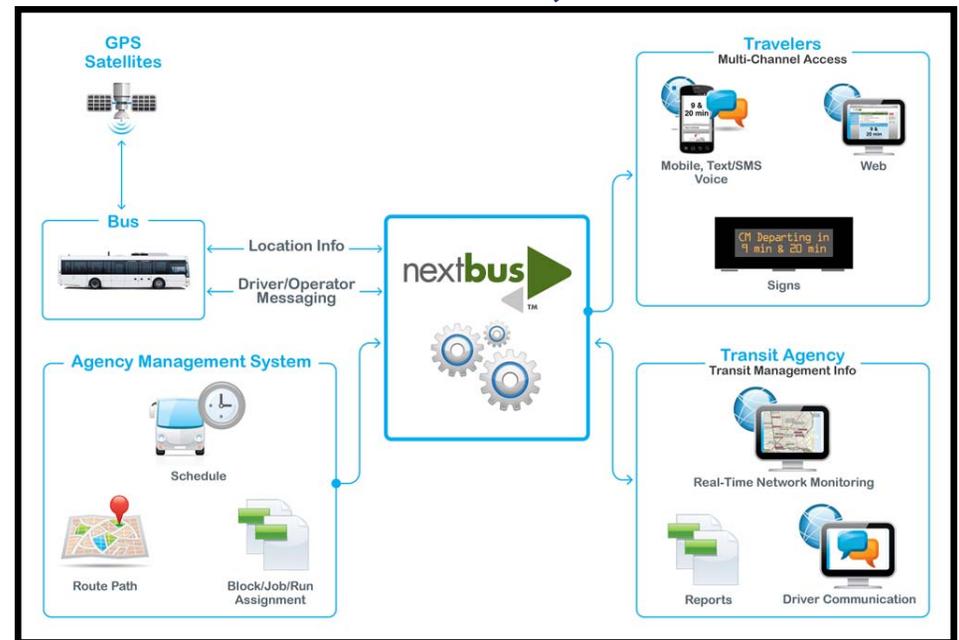
Includes:

SMS messaging

Telephone Information System

Online GPS tracking by public

TRACKING EQUIPMENT



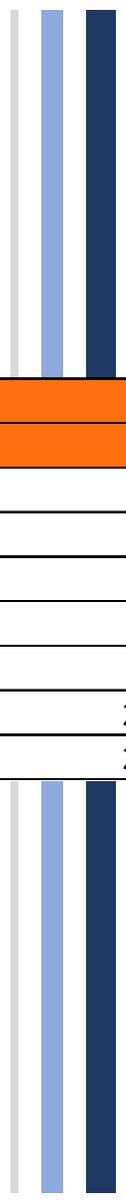
CAPITAL COSTS

By Alternative

Table 5. Capital Cost

Scenario	Capital Cost Item	Service	Size/Number	Unit Cost	Cost
No Action	Replacement buses				
	1	Route A	17/2 Pass.*	\$ 193,000	\$ 193,000
	1	Route B	17/2 Pass.*	\$ 193,000	\$ 193,000
	1	Spare	14/2 Pass.*	\$ 86,000	\$ 86,000
				Total	\$ 472,000
Alt. 1	Replacement buses				
		Rt. B bus stop signs	27	\$ 100	\$ 2,700
		Shelters	5	\$ 15,000	\$ 75,000
					Total
Alt. 2	Replacement buses				
		Rt. B bus stop signs	27	\$ 100	\$ 2,700
		Shelters	5	\$ 15,000	\$ 75,000
					Total
Alt. 3	Replacement buses				
	Additional bus				
		Rt. B bus stop signs	27	\$ 100	\$ 2,700
		Shelters	5	\$ 15,000	\$ 75,000
				Total	\$ 742,700

5-YEAR CASH FLOW



		Year				
		1	2	3	4	5
Capital	Buses	\$ 420,000	\$ 52,000			
	Set Aside for Future			\$ 50,000	\$ 51,500	\$ 51,000
	Shelters		\$ 15,000	\$ 15,000	\$ 15,000	\$ -
	Rt. B Bus Stop Signs	\$ 2,700	\$ 300	\$ 300	\$ 300	\$ -
	Capital Subtotal	\$ 422,700	\$ 67,300	\$ 65,300	\$ 66,800	\$ 51,000
Operating (Alt 1 Example)		\$ 179,600	\$ 184,988	\$ 190,538	\$ 196,254	\$ 202,142
Total		\$ 602,300	\$ 252,288	\$ 255,838	\$ 263,054	\$ 253,142

Recommendations

- Implement Alternative 0 : (Reconfigured Existing Service, With New Buses and Marketing) immediately
- Review Ridership, Customer Satisfaction, and Financial Metrics in 12 Months.
- Then Consider, Increasing Service with Either Alternatives 1, 2 or 3.
- Market the System
- Purchase Buses
- Provide Service In House
- If You Continue Next Year, Purchase Tracking Equipment



THANK YOU

**THE
CORRADINO
GROUP**