MIAMI-DADE MPO

South Miami-Dade Transit Corridor Alternative Analysis

South Link

Summer | August, 2005 Vol. 2

Citizen's Advisory Committee CAC Members Serving You

MARLENE K. PORTER
Chairperson

CHARLEY MCGAREY
Vice Chairperson

REV. ERNEST ANDREWS
JULIO BREA
BEN GILBERT
DEE DEE HEACOCK
RENE INFANTE
CURTIS LAWRENCE
EUGENE LEON
BENNIE LOVETT
ERNESTO MARTINEZ JR.
DR. BARRY MATERSON
PAUL NIEDHART
JEFF PORTER
ALAN ROSENTHAL
BENJAMIN SPARKS
DR. PAT WADE
ROBERT WILCOSKY
RON WILLIAMS

IN THIS ISSUE

Transit Alternatives

Transit Costs

Travel Time Between Stations

Citizen's Advisory Committee In Action

WILL IT BE ?

- **Heavy Rail/Metrorail**
- **Light Rail Transit**
- **Bus Rapid Transit or...**

In late August, a recommendation of five (5) alternative modes of travel, from seven (7) different modes, is being presented to the Metropolitan Planning Organization (MPO), a governmental board comprised of county and city elected officials to guide transit development in Miami-Dade County. By December of this year, the MPO will decide on only one alternative.

Currently, the Citizen's Advisory Committee (CAC) is reviewing alternative modes of travel which will best serve the community and transit users for the 21-mile alignment from the Dadeland-South Station to Florida City, along or near the US 1-South Dixie Highway. In reaching consensus, the CAC will meet on Wednesday, August 10th, 6:30 pm, at the South Dade Government Center, Conference Room 203, 10710 SW 211th Street. The public is invited to attend.

A number of community concerns have been raised during public outreach to organizations and communities. These concerns have been presented to the CAC for input and consideration.

The CAC is comprised of 19 business leaders, homeowner associations and community activists. Its mission is to articulate community concerns for committee members to share project issues and milestones with their respective constituencies and make project recommendations to the MPO.

Public Involvement A Right and A Privilege

South Dade is my community. It is my right as a citizen to say what works and what does not work. It is my privilege to plan for my needs and the desires of my neighbors. We will make transportation move for our community. So here I am! Because I know government listens and government responds!

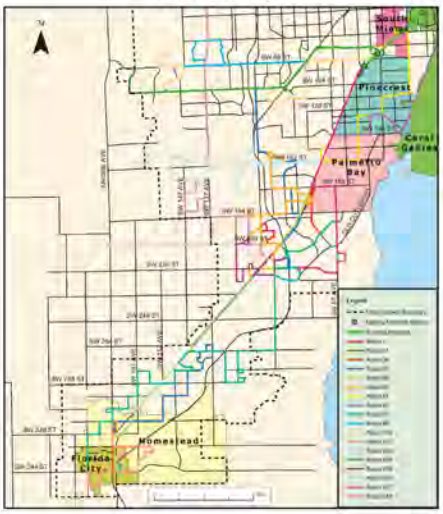
THE PUBLIC IS INVITED!

Citizen's Advisory Committee (CAC) MEETING
Wednesday, August 10th
6:30 pm
South Dade Government Center
10710 SW 211th Street
Room 203

THE 7 TRANSIT ALTERNATIVES CURRENTLY UNDER CONSIDERATION

For the South Dade Corridor – South Dixie (US1) Highway from Kendall to Florida City

Alternative 1
No-Build



Alternative 2
TSM/Baseline

Alternative 1: No-Build

This alternative is required for environmental comparisons of impacts. It measures the impact of growth on the area if nothing beyond what is programmed occurs in the corridor. It provides a benchmark for impacts caused or lessened by building a project. Thus the No-Build Alternative will be analyzed against 2030 population and employment projections and the transportation network that is programmed (funded) to be in place by the year 2030. The No-Build Alternative includes the completion of the busway along US 1 to SW 344th Street in Homestead, the operation of the busway routes on the busway to Florida City, the addition of several additional park and ride lots, the implementation of several community circulators and a minimum of 15 minute peak hour headways on most bus routes.

Alternative 2: TSM/Baseline

This alternative would modify existing bus service in the southern half of Miami-Dade County. The Transportation System Management Alternative (TSM) is required by the Federal Transit Administration. The TSM Alternative includes all of the non-major capital projects that can be implemented in the corridor. It must provide the same quantity of transit service in the corridor that a major build alternative would provide. It forms the "Baseline" for measuring the performance of all the other alternatives. Transit ridership on a major capital project is measured only in terms of above and beyond the ridership estimated for the TSM. The TSM Alternative, like all alternatives, must use the 2030 population and employment projections as the basis for estimating total travel demand. The TSM network completely reorganizes the existing bus network in South Miami-Dade and is composed of east-west transit routes that directly access the US 1 Busway. Every major section-line arterial would have a bus route. Most routes offer a "one-seat" ride from their origin to the Metrorail Station at Dadeland South. The TSM Alternative uses all of the existing busway stations, more park-and-ride lots than are available in the No-Build Alternative and signal prioritization along the busway to accelerate the trip.

Alternative 3: Light Rail Transit

This alternative would provide light rail transit (LRT) service from existing Dadeland South Metrorail station to Florida City. The Light Rail Transit (LRT) Alternative offers the conversion of the busway from Florida City to the Dadeland South Metrorail Station. LRT vehicles draw their power from an overhead power source and operate at-grade. Rail and overhead power lines would be installed for the train. The existing stations, which occur every 6-blocks, would serve as the light rail stations. This alternative would utilize the same feeder bus service, however, none of the routes would get on the busway so passengers would have to transfer from the bus to the LRT. A second transfer would be required from the LRT to the Metrorail at Dadeland South. Since the LRT operates at-grade, transit vehicles still interact with automobiles at the intersections. Signal prioritization would be an important part of the project so that the LRT can make acceptable time along the corridor. Finally, the same park-and-ride system that is available for the TSM Alternative would be a part of this alternative as well.

Alternative 4: Metrorail Extension from Dadeland South Station to the vicinity of 211th Street

(Southland Mall)

The key element of this alternative is the extension of Miami-Dade Transit's Metrorail (heavy rail) service from the existing southern terminus at the Dadeland South station to the Southland Mall area. Heavy rail service would provide a fast, reliable service to downtown Miami and other areas of Miami-Dade County currently served by Metrorail. Stations would be located at approximately one-mile intervals, where feasible park-and-ride facilities would be developed to increase accessibility to the proposed heavy rail service. The remainder of the corridor would be served with express bus routes operating on the busway as extended to Florida City. Park-and-ride facilities would also be developed in this portion of the corridor (Southland Mall to Florida City). Bus routes north of Southland mall would be modified as appropriate to facilitate transfers to Metrorail service. Transit signal priority technology would be deployed on the busway to enhance performance of routes using the busway that would feed the heavy rail service.

Alternative 5: Metrorail Extension from Dadeland South Station to Florida City

(the vicinity of Palm Drive)

The key element of this alternative is the extension of Miami-Dade Transit's Metrorail (heavy rail) service from the existing southern terminus at the Dadeland South station to the City Hall area, Palm Drive, in Florida City. Heavy rail service would provide a fast, reliable service to downtown Miami and other areas of Miami-Dade County currently served by Metrorail. Stations would be located at approximately one-mile intervals, where feasible park-and-ride facilities would be developed to increase accessibility to the proposed heavy rail service. Bus routes would be modified as appropriate to facilitate transfers to Metrorail service.

Alternative 6 for the South Link corridor consists of two primary components as described below.

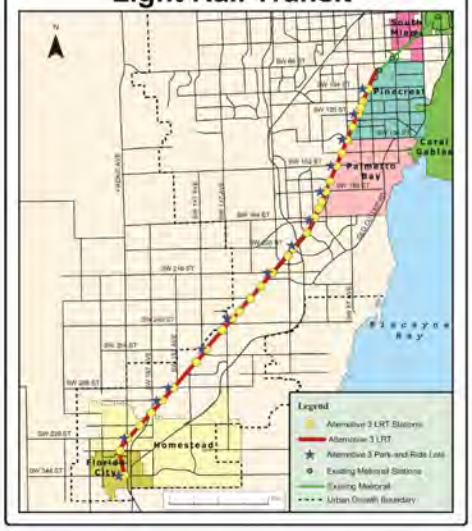
- A Metrorail extension (approximately 4500 ft.) from Dadeland South to SW 104th Street
- A Bus Rapid Transit (BRT) system from SW 104th Street to Florida City

Alternative 6: Metrorail Extension / BRT with Grade Separation

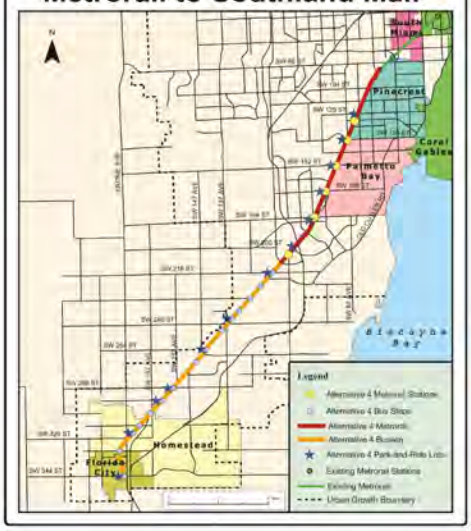
Alternative 6 includes the construction of one new proposed Metrorail station in the vicinity of SW 104th Street near the existing busway. As the new southern terminus for Metrorail, it is expected that park-and-ride demand will be significant at the SW 104th Street station. Therefore, this station should include a significant parking component (approximately 1500 parking spaces) dedicated for Metrorail park-and-ride patrons. An opportunity for a joint development project exists at this station that would ideally include mixed-use retail and office space attached to the Metrorail station.

South of SW 104th Street, Alternative 6 proposes that the existing busway be converted to a bus rapid transit (BRT) corridor. BRT service would run from SW 104th Street in the north to Florida City in the south. BRT encompasses a variety of approaches designed to improve transit travel speed, trip reliability and overall quality of transit service over traditional bus service. These enhancements are achieved through unique components of BRT such as transit signal priority at at-grade intersections, pre-boarding fare collection and low-floor buses with wide doorways and aisles. BRT is generally less expensive to build than heavy rail transit.

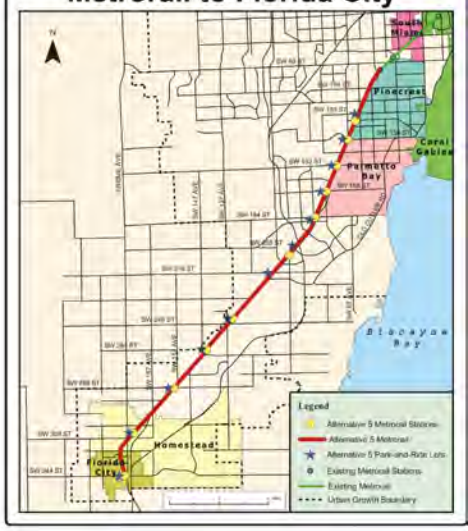
Alternative 3
Light Rail Transit



Alternative 4
Metrorail to Southland Mall



Alternative 5
Metrorail to Florida City



Alternative 6 recommends grade separation for the BRT corridor at several critical roadway crossings to enhance overall system safety, and to achieve greater travel time and trip reliability benefits for BRT users. The grade separation at these roadways will increase the busway's vehicular capacity, which may present an opportunity to allow automobiles to use the busway as express toll lanes. Grade separation is expected to be achieved by elevating the BRT lanes and constructing bridges over the following roadways.

- SW 112th Street
- SW 136th Street
- SW 152nd Street
- SW 184th/186th Street
- Marlin Road
- SW 200th Street
- SW 117th Avenue
- SW 312th Street

Bus station spacing along the BRT corridor is recommended to be approximately every one-half mile, which is about the same as the existing busway. A high level of commuter trips are expected along the BRT corridor; therefore, park-and-ride lots and east-west feeder bus routes are recommended at approximately one-mile spacing. The BRT corridor should be designed such that surface street bus routes should be able to enter the busway and provide connections to the proposed southern terminus of Metrorail at SW 104th Street. This will maintain the bus service frequency within the BRT corridor of at least one bus passing by every 1.8 minutes. Further service improvements could reduce this headway to an even higher service level.

Alternative 7 – Diesel Multiple Unit (DMU) in the CSX Corridor

Alternative 7 for the South Link corridor consists of diesel multiple unit (DMU) commuter rail service in the CSX corridor between Florida City and Dadeland. The DMU technology is a general term for a diesel-powered train in which the traction system is contained under various cars of the train. DMUs can have driving cabs with passenger seating at both ends of the train, which simplifies out-and-back point to point operations. DMUs can generally pull up to two standard commuter coaches for increased capacity.

Approximately eight passenger stations are anticipated along the DMU corridor between Florida City and Dadeland. It would be necessary for the proposed commuter rail line described in Alternative 7 to leave the CSX corridor in the area of Kendall Drive to make its way east toward one of the Dadeland Metrorail stations, which would become a transfer facility between the DMU commuter rail line and Metrorail. DMU stations are anticipated to be located near the following locations.

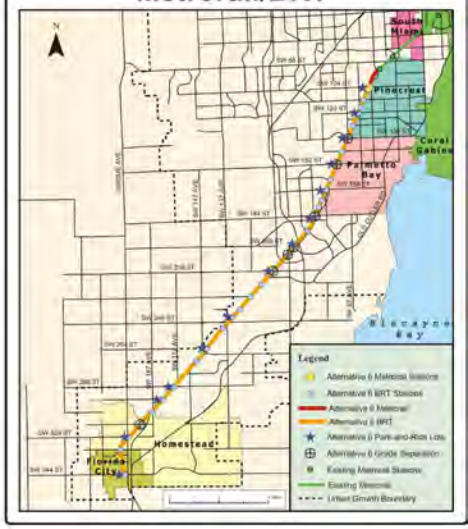
- Dadeland South Metrorail Station
- Kendall Drive / SW 87th Avenue (Baptist Hospital)
- Kendall Drive / SW 97th Avenue
- CSX / SW 104th Street (Miami-Dade College Kendall Campus)
- CSX / SW 152nd Street
- CSX / SW 184th Street
- CSX / SW 232nd Street
- CSX / SW 312th Street
- CSX / SW 328th Street

Train headways along the DMU corridor should be no more than 60 minutes. More frequent headways are preferable; however, single-track operations along the CSX corridor may restrict service levels without further improvements. Park-and-ride lots are proposed to serve commuter traffic at the five stops along the CSX corridor between SW 328th Street and SW 152nd Street and at the stop at Kendall Drive / SW 97th Avenue.

In addition to commuter rail service in the CSX corridor, Alternative 7 proposes that the existing busway corridor retain bus operations similar to what is currently in place. However, feeder routes are proposed for Alternative 7 similar to Alternative 2. In Alternative 7, the busway would extend from the Dadeland South station in the north to SW 344th Street in Florida City. Bus stations would remain in the same location as the no-build alternative. In addition to the existing park-and-ride lots at SW 152nd Street, SW 168th Street and SW 200th Street, new park-and-ride lots would be constructed at the following busway stations to help alleviate overcrowding in existing park-and-ride lots along the busway.

- SW 186th Street
- SW 216th Street
- SW 244th Street
- SW 296th Street
- SW 344th Street

Alternative 6
Metrorail/BRT



Alternative 7
DMU in the CSX Corridor

The seven alternatives will be reduced to five alternatives at the end of August 2005. The Citizen's Advisory Committee will make a recommendation to the Miami-Dade County MPO, who will act on the CAC recommendation.

Information has been developed for the first phase evaluation of the alternatives to support the decision of which alternatives to drop. Below is a summary table of the Tier I Evaluation.

	ALT. 1	ALT. 2	ALT. 3	ALT. 4	ALT. 5	ALT. 6	ALT. 7
	No-Build	**TSM**	**LRT**	**Metrorail/Busway**	**Metrorail**	**BRT**	**DMU**
Transit Riders	224,700	226,000	233,700	228,500	232,600	232,700	228,000
Capital Cost	—	—	$20.6m /mile	$81.4m /mile	$81.4m / mile	$7.2m /mile	$15.5m /mile
Operating Cost	$6.44 /mile	$6.44 /mile	$15.94 /mile	$8.59 /mile	$8.59 /mile	$6.44 / mile	$11.56 /mile
Travel Time	58 min.	53 min.	45 min.	35 min.	29 min.	48 min.	29 min.
System Capacity	2,065	2,065	7,630	10,000	10,000	4,000	3,000
Headway Train/Bus	— /6 min	— /5 min	5 min/5 min	4.5 min/5 min	9 min/ —	— /5 min	60 min/6 min
Transfers to downtown	1	1	1	1	0	1	1

South Link Alternative Analysis

Miami-Dade MPO
111 NW First Street, Suite 910
Miami, Florida 33128

PRSRT STD
U.S. POSTAGE
PAID
PERMIT NO. 2075
MIAMI, FL

Contact Us

Wilson Fernandez
Miami-Dade MPO
111 NW 1st Street, Suite 910
Miami, FL 33128
Phone: 305.375.4507
E-mail: **wilson@miamidade.gov**

Larry Foutz
The Corradino Group
4055 NW 97 Avenue
Miami, FL 33178
Phone: 305.594.0735
E-mail: **lfoutz@corradino.com**

Web site: www.miamidade.gov/mpo