

Memorandum



Date: October 13, 2015

To: Honorable Chairman Jean Monestime
and Members, Board of County Commissioners

From: Carlos A. Gimenez
Mayor 

Subject: Status of 1995 East/West Corridor Study-Directive #151386

The information below is provided in response to a request from the Strategic Planning and Government Operations Committee on June 15, 2015 requesting the status of a 1995 study that was conducted on the East/West transportation needs.

Attached is Florida Department of Transportation (FDOT) Executive Summary for the referenced report. The following hyperlink can be used to access the report directly from the Metropolitan Planning Organization's (MPO) website: <http://miamidademipo.org/library/studies/east-west-multimodal-corridor-recommendation-report-1996-01.pdf>.

By way of background, the original East/West Multimodal Corridor study was completed in 1995 by the FDOT and analyzed various alternatives for improving the transportation capacity of the corridor. The Locally Preferred Alternative consisted of 8.2 miles of aerial guideway and 3.6 miles of bored tunnel from the SR 826 to the Miami Intermodal Center (MIC), and from the MIC to the Port of Miami. In 1998, a Record of Decision was issued to Miami-Dade County; however, the project was abandoned due to lack of funding.

In 2005, with the passage of the People's Transportation Plan in 2002 and the identification of an East West alignment (branded as the Orange Line Phase 3: East West Corridor) as a priority corridor, Miami-Dade Transit (MDT) began the East West Corridor Study. This study consisted of a 10 to 13 miles elevated fixed guideway extension of the existing Metrorail System, from the MIC at the Miami International Airport to Florida International University and points west to SW 137 Avenue. Due to insufficient funding, the project was placed on hold in 2009.

The 2010 Near Term Transportation Plan for the County recommended a multi-phase approach to move towards developing the initial plan for the full implementation of a Bus Rapid Transit (BRT) system and eventually Heavy Rail Transit. The County is studying rapid transit options and exploring feasible solutions to develop these projects. For the East-West Corridor, MDT is pursuing Express Bus Service along the SR 836 and a BRT along Flagler Street. The estimated completion date for the initial infrastructure needed to support the 836 express bus service is 2017 and the FDOT study for Flagler BRT implementation is currently underway.

For more information on Flagler Street BRT implementation, which closely parallels the East-West Corridor, please refer to the following link: <http://www.miamidade.gov/transit/library/pdfs/misc/bus-rapid-transit-implementation-plan-along-transit-corridors-executive-summary-2015-04.pdf>.

Per Ordinance 14-65, this Memorandum will be placed on the next available Board of County Commissioner's meeting agenda.

If additional information is required, please contact Alice N. Bravo, P.E., Director of Miami-Dade Transit, at (786) 469-5307.

c: Alina T. Hudak, Deputy Mayor and Director, Public Works and Waste Management
Alice N. Bravo, P.E., Director, Miami-Dade Transit
Eugene Love, Agenda Coordinator

EAST-WEST MULTIMODAL CORRIDOR STUDY

**Draft
Environmental Impact Statement
Major Investment Study
Dade County, Florida**

Florida Department of Transportation



District VI

**U.S. Department of Transportation
Federal Highway Administration**

In cooperation with:
**Federal Transit Administration
Federal Railroad Administration
Federal Aviation Administration
Maritime Administration
U.S. Coast Guard**

October 1995

CONNECTING PEOPLE

EAST WEST



SUMMARY

S.1 Need for Action

S.1.1 Purpose of the Major Investment Study/Draft Environmental Impact Statement (MIS/DEIS)

The East-West Multimodal Corridor Study is a Major Investment Study/Draft Environmental Impact Statement (MIS/DEIS). The MIS/DEIS analyzes various alternatives for improving the transportation capacity of the corridor and proposes the best transportation improvements from the alternatives evaluated. It assesses various highway and transit alternatives, such as widening of existing State Road (SR) 836, measures to correct current operational problems, elevated express lanes, high occupancy vehicle (HOV) lanes, heavy rail, light rail and/or a combination of transportation measures. Specific elements of the proposed alternative transportation improvements are described in detail in Chapter 2, Alternatives Considered.

The purpose of this East-West Multimodal Corridor MIS/DEIS, prepared by the Florida Department of Transportation (FDOT), is to provide decision makers with all relevant information to select the best multimodal transportation improvements for the SR 836 East-West Corridor from the alternatives evaluated. Following completion of the DEIS, the document will be circulated for review by interested and concerned parties, including private citizens, community officers, and public agencies. Public hearing(s) will be held to encourage any further comments on the document before a preferred investment strategy is selected by the Metropolitan Planning Organization (MPO).

After the official 45-day public comment period for the DEIS, FDOT will recommend a preferred alternative to the MPO Board who will then select the preferred investment strategy. A Final Environmental Impact Statement (FEIS) will be prepared on the selected alternative and commitments to mitigate environmental impacts will be made. FDOT will then request that the Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) consent to begin preliminary engineering and design on the major capital investment.

S.1.2 Description of the Study Corridor

The study area is located in Dade County which is part of the south Florida region. The project corridor begins at the Tamiami Campus of Florida International University (FIU), extends the length of SR 836, past Miami International Airport (MIA), through downtown Miami to the Port of Miami, and ends at the Miami Beach Convention Center (see Figure S.1). Figures S.2.1 through S.2.4 indicate the location of major activity centers in the project corridor. Details of the socioeconomic background of the study corridor are presented in Chapter 1 of the MIS/DEIS document.

Dade County is served by numerous transportation modes, including heavy rail (Metrorail), people mover (Metromover), commuter rail (Tri-Rail), bus (Metrobus), and an extensive regional highway system. The county is also served by a large international airport and seaport/cruise ship facilities. There is, however, a lack of connectivity between these travel modes.

The transportation network between downtown Miami and the western part of the region has not kept pace with the population growth and development occurring in the western and southern portions of Dade County. Although operational improvements to SR 836, the only east-west expressway in south Dade, would improve traffic safety and capacity, they would have little effect on improving accessibility to and from downtown Miami and to the major activity centers in south Dade that are located in the East-West Corridor. The existing bus network cannot solve the problem, even with expanded routes and additional equipment, because it must operate in mixed traffic, on the same constrained roadway network, in the same congestion as the single occupant automobile. Without improved accessibility or severe automobile disincentives instituted by public mandate, the effectiveness of carpooling and vanpooling could be limited by the same problems.

Project need is based on the transportation issues listed below:

- A 30-percent projected population growth between 1995 and 2020 in permanent residents in Dade County, and 28 percent growth in jobs in the same time period
- Increased traffic between MIA and the Port of Miami based on a projected 200 percent growth in cruiseship passengers and 100 percent growth in MIA passengers between 1994 and 2015
- Travel to Miami Beach, a growing tourist attraction, on a limited number of Biscayne Bay crossings
- Operational deficiencies causing capacity, safety, and merging problems at a number of locations along SR 836

As a result of federal and state initiatives, FDOT is examining the SR 836 East-West Corridor as a multimodal corridor. Examples of federal and state regulations that encourage multimodalism, connectivity, congestion management systems, and intermodal systems include: the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA); U.S. Department of Transportation (USDOT) Statewide Planning and Metropolitan Planning Rules; USDOT Management and Monitoring Systems Interim Final Rules; and Florida Intrastate Highway System (FIHS) policies.

S.1.3 Transportation Goals and Objectives

The objectives of the East-West Multimodal Corridor MIS are consistent with those described in the Dade County Comprehensive Development Master Plan (1992), the Year 2010 Metro-Dade Transportation Plan developed by the Metro-Dade County Metropolitan Planning Organization (MPO), and other adopted policies for transportation improvements. In particular, the following statement summarizes the goals and objectives that are addressed by the East-West Multimodal Corridor Study:

Provide for a safe, efficient, economical, attractive, and integrated multimodal transportation system that offers convenient, accessible, and affordable mobility to all people and for all goods, conserves energy, and protects both the natural and social environments. Steps to accomplish this include:

- Develop a multimodal transportation system
- Improve the efficiency and safety of existing highway and transit facilities
- Preserve the social integrity of urban communities

East - West Multimodal Corridor Study

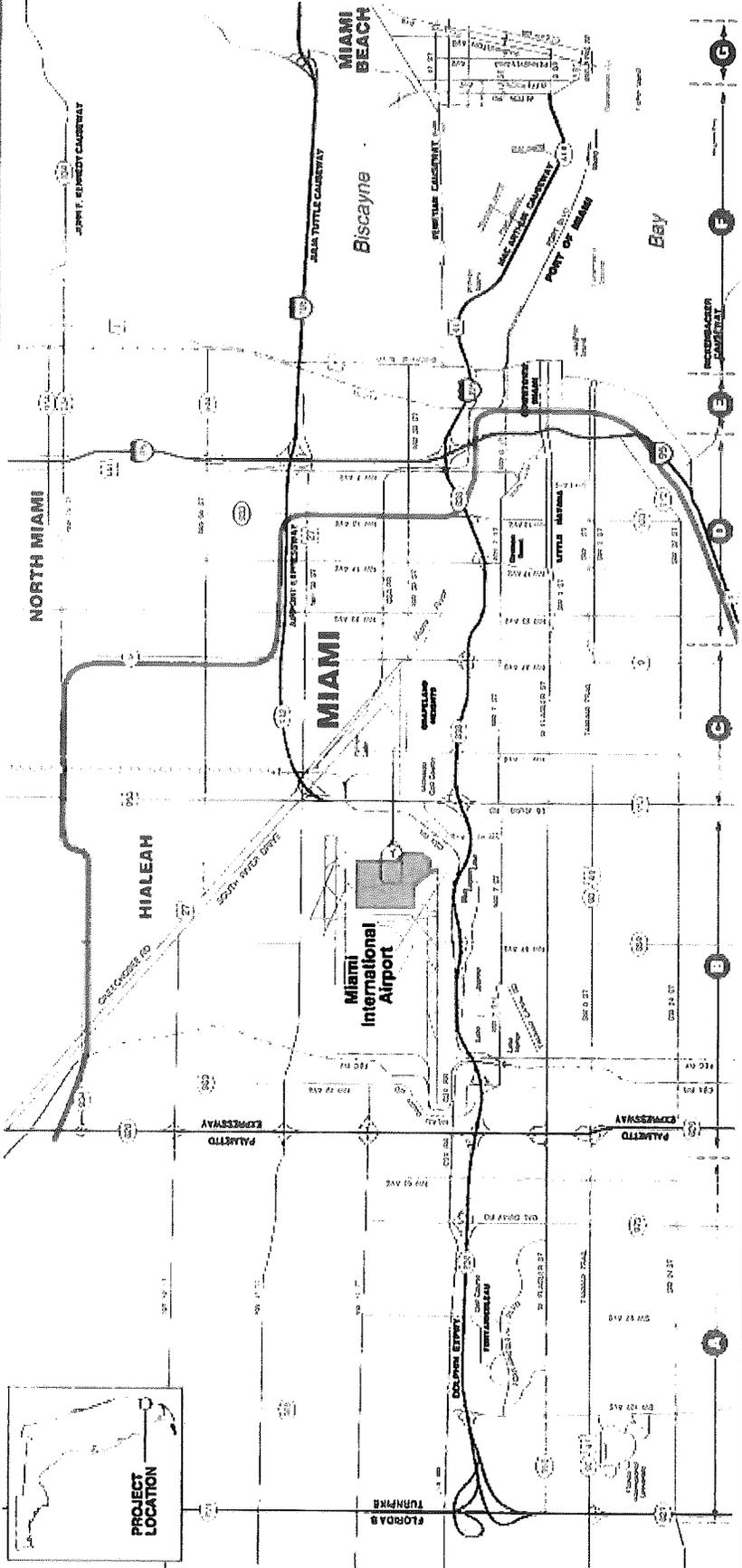


Figure S.1
EAST-WEST CORRIDOR

- LEGEND**
- East-West Corridor
 - Miami Central Business District
 - Miami Metrolover
 - Miami Metro
 - Metrolover
 - Tri-Rail
 - Segments



- Plan for transportation projects that enhance the quality of the environment
- Define a sound funding base
- Provide for and enhance the efficient movement of freight

The East-West Multimodal Corridor MIS is also consistent with and complements the existing local government transportation project studies, all of which articulate specific goals to develop safe, efficient, and integrated transportation connections for pedestrian, public transportation, and private vehicular movements in the study corridor.

S.1.4 Specific Transportation Problems in the Corridor

Transportation Capacity

Activity centers have clustered around SR 836 because there are few other major east-west roads in south Dade County. Roadway and transit facilities in the region are inadequate to accommodate current traffic, much less anticipated growth in the corridor. There is traffic congestion during peak periods in the East-West Multimodal Corridor on major routes such as SR 836, Flagler Street, SW 8th Street, and MacArthur Causeway. These east-west routes are also busy throughout the day and on weekends. Traffic congestion on SR 836, consisting of long delays and extensive traffic back-ups in both directions throughout the day, has increased over the years due to the number of activity centers that have located along or near this freeway, of which the airport and the civic/medical center complex are the two largest employers in the county, providing almost 25 percent of the county's jobs.

The results of the operational and capacity analyses show that SR 836 is operating at acceptable levels of service (LOS) only on main line links at the extreme ends of the project area. Projected development and land use changes in the western end of the corridor, the lack of existing parallel corridors, and a projected increase in Airport-Seaport traffic are the main factors contributing to an expected 25-percent increase in peak-hour traffic demand by the year 2020. In general, based on the increased travel demand within the corridor, SR 836 is expected to operate at an LOS F in 2020 throughout the project study area. Near capacity would be reached at LOS F, commonly referred to as "bumper to bumper" traffic. At LOS F, speeds would be substantially reduced and freedom to maneuver within the traffic stream would be extremely difficult.

To accommodate projected traffic in 2020 (15,000 to 16,000 vehicles per hour) through parts of the SR 836 corridor at a LOS D would require at least 8 lanes in each direction. By comparison, the rail transit systems could provide capacity for 18,000 to 20,000 passengers per hour.

Safety

Accident data for SR 836 collected by FDOT shows a decreasing trend in serious accidents and total economic losses for the period between 1988 and 1992. However, there was an increase in the number of sideswipes, attributable to an increase in weaving and lane change maneuvers brought about by an increase in corridor congestion. Three accident "hot spots" on SR 836 were identified: (1) between NW 72nd Avenue and SR 826; (2) just west of Le Jeune Road in both directions; and (3) on eastbound SR 836 just east of the toll plaza before the NW 17th Avenue off-ramp. These locations are areas of heavy merging and diverging traffic.

Roadway Deficiencies

An analysis of the horizontal and vertical alignments of the roadway system throughout the corridor identified a number of deficiencies at virtually all interchanges, as well as along the main line and at the toll plaza near NW 17th Avenue. These deficiencies contribute to existing congestion and inhibit accessibility to the major activity centers in the East-West Multimodal Corridor. In general, SR 836 exhibits the following deficiencies based on the latest FDOT standards:

- Substandard capacity and operating levels of service
- Excessive S-shaped curves
- Substandard minimum design speeds at all locations with the exception of the area around NW 107th Avenue
- Insufficient distance for transitions between curves
- The number of lanes in one direction varies from as many as six to as few as two as a result of numerous and frequent lane additions and deletions
- Inconsistent ramp configuration with several left-hand entrances and exits that cause confusion and lead to accidents
- Lack of continuous turn lanes throughout the corridor. This is the result of lane transitions, lane drops, exits, and entrances throughout the corridor, including at some extremely high volume locations
- Poor sight distances, particularly for signing purposes, which cause driver confusion, especially for out-of-town motorists utilizing the section of the corridor to the Seaport or to South Miami Beach
- Substandard median shoulder widths, primarily in the section east of SR 826 to NW 17th Avenue

Emergency Evacuation

SR 836, because of its strategic location, plays a crucial role in providing mobility in an emergency event, such as a hurricane, that would require safe and orderly evacuation. It is the longest east-west freeway in Dade County for use by residents leaving life-threatening storm impact areas on Miami Beach and going to local public shelters, hotels/motels, the homes of friends and relatives in inland "dry" areas, and to the airport.

S.2 Alternatives Considered

S.2.1 Tier 1 and Tier 2 Alternatives

Seven alternatives that address ways to solve the corridor's transportation problems, with various options, were identified initially and included in the study scoping document that was distributed at scoping meetings, the public meetings that kicked off the project. As a result of input received from the public and interested agencies, this list was expanded to 27, including Minimum Operable

Segment (MOS) A and B. The MOS is a feasible shorter segment of a longer alternative. The expanded list of alternatives is outlined in Table S.1 by evaluation tier and presented in detail in Chapter 2 of the DEIS.

A three-tier evaluation process was used to select the most promising alternatives. The results of the initial development and evaluation of alternatives was reviewed by the study's Technical and Policy Steering Committees during the Tier 1 process. Preliminary analyses of social, environmental, traffic, and transportation effects of the alternatives were performed, along with transit ridership potential, capital, maintenance and operating costs, and community impacts. The scoping process and public input received during the Tier 1 process contributed to the elimination of three of the seven initial alternatives. Scoping is a formal information exchange for projects requiring an Environmental Impact Statement. Scoping generally involves affected government agencies and interest groups or organizations with specific knowledge about a study area. Scoping is required by the Council of Environmental Quality Regulations (40 CFR Section 1501.7). Upon completion of the Tier 1 scoping process, four alternatives — Alternatives 1, 2, 3 and 6 — were retained and considered further in the Tier 2 evaluation. Thirteen transit options for Alternative 6c were also developed during Tier 1; six of these were retained for Tier 2.

Alternatives that were advanced to the Tier 2 analysis were refined and evaluated in increasing detail by the study's Technical and Policy Steering Committees. Analysis shifted increasingly from qualitative assessments to quantitative impacts. Additional studies and public comments generated during the Tier 2 process further eliminated some of the options. The 12 alternatives that remain are presented in the MIS/DEIS for public review and comment and summarized in Table S.1 in the Tier 2 column.

After refining the cost estimates for each alternative, it became apparent that a reasonable way to finance any of the "build" alternatives would be to construct the alternative ultimately selected in phases. As a result, two start-up components of a larger system were identified and labeled Minimum Operable Segments A and B (MOS A and MOS B). These start-up segments are based on SR 836 Multimodal Alternative 6c Option 1, which can be considered representative of the build alternatives from a financing perspective. MOS A and MOS B, along with the 10 Tier 2 alternatives, are briefly described below and are depicted in Figures S.3.1 through S.3.11. Their physical, operational, and cost characteristics are shown in Table S.2.

Alternative 1: No-Build. Maintains current transit service plus transit and roadway improvements committed for implementation by the year 2020. These projects are assumed in all other alternatives.

Alternative 2: Transportation Systems Management (TSM). Includes relatively low-cost transit and roadway improvements. This alternative is not only a stand-alone alternative, but is also required by the Federal Transit Administration (FTA) as a baseline for cost-effectiveness comparisons against the other build alternatives.

**Table S.1
ALTERNATIVES AND OPTIONS EVALUATED IN EACH TIER**

Alternative	General Description	Initial Set	Tier 1	Tier 2	Tier 3*
1	No-Build	1	1	1	
2	TSM Highway Improvements	2	2	2	
3a	10 general-purpose lanes	3a	3a	-	
3b	4 barrier HOV lanes		3b	-	
3c	2 buffer HOV lanes to I-95		3c	-	
3d	2 buffer HOV lanes to SR 112		3d	3d	
4a	6 elevated express multi-use lanes	4a	4a	-	
4b	4 elevated express HOV lanes		4b	-	
5	Rail transit via Earlington Heights + 2 buffer HOV lanes to I-95 + highway improvements	5	5	-	
6a	Rail transit via SR 836 + highway improvements	6	6a	6a	
6b	Rail transit via SR 836 + 2 buffer HOV lanes to I-95 + highway improvements		6b	-	
6c(1)	SR 836 Multimodal Alternative (Base rail alignment, 2 HOV lanes to SR 112)		6c(1)	6c(1)	
6c(2)	SR 836 Multimodal Alternative (Base rail alignment with through service via downtown connection, 2 HOV lanes to SR 112)		6c(2)	6c(2)	
6c(3)	SR 836 Multimodal Alternative (Base rail alignment with 6th Street Option, 2 HOV lanes to SR 112)		6c(3)	-	
6c(4)	SR 836 Multimodal Alternative (Base rail alignment with Miami River Option, 2 HOV lanes SR 112)		6c(4)	-	
6c(5)	SR 836 Multimodal Alternative (Base rail alignment with Culmer/I-95 Option, 2 HOV lanes to SR 112)		6c(5)	-	
6c(6)	SR 836 Multimodal Alternative (Base rail alignment with 11th Street Option, 2 HOV lanes to SR 112)		6c(6)	-	
6c(7)	SR 836 Multimodal Alternative (Base rail alignment with Civic Center Option, 2 HOV lanes to SR 112)		6c(7)	-	
6c(8)	SR 836 Multimodal Alternative (Base rail alignment with CSX/NW 7th Avenue Option, 2 HOV lanes to SR 112)		6c(8)	6c(8)	
6c(9)	SR 836 Multimodal Alternative (Base rail alignment with CSX/NW 22nd Street/FEC Railway Option, 2 HOV lanes to SR 112)		6c(9)	6c(9)	
6c(10)	SR 836 Multimodal Alternative (Base rail alignment with CBD Tunnel Option, 2 HOV lanes to SR 112)		6c(10)	6c(10)	
6c(11)	SR 836 Multimodal Alternative (Base rail alignment with CSX/CBD Tunnel Option, 2 HOV lanes to SR 112)		6c(11)	-	
6c(12)	SR 836 Multimodal Alternative (Base rail alignment with Government Cut Option, 2 HOV lanes to SR 112)		6c(12)	-	
6c(13)	SR 836 Multimodal Alternative (Base rail alignment with Miami Beach Loop Option, 2 HOV 2 lanes to SR 112)		6c(13)	6c(13)	
7	Rail transit via Flagler Street + 2 buffer HOV lanes + highway improvements	7	7	-	
MOS A	Rail transit via SR 836 from SR 826 to Seaport + 2 buffer HOV lanes + highway improvements			MOS A	
MOS B	Rail transit via SR 836 from MIC to Seaport + 2 buffer HOV lanes + highway improvements			MOS B	

* Preferred alternative to be selected after public hearing on DEIS and to be refined during FEIS.