
EAST-WEST MULTIMODAL CORRIDOR

DESCRIPTION OF PROJECT

Dade County, Florida

Florida Department of Transportation



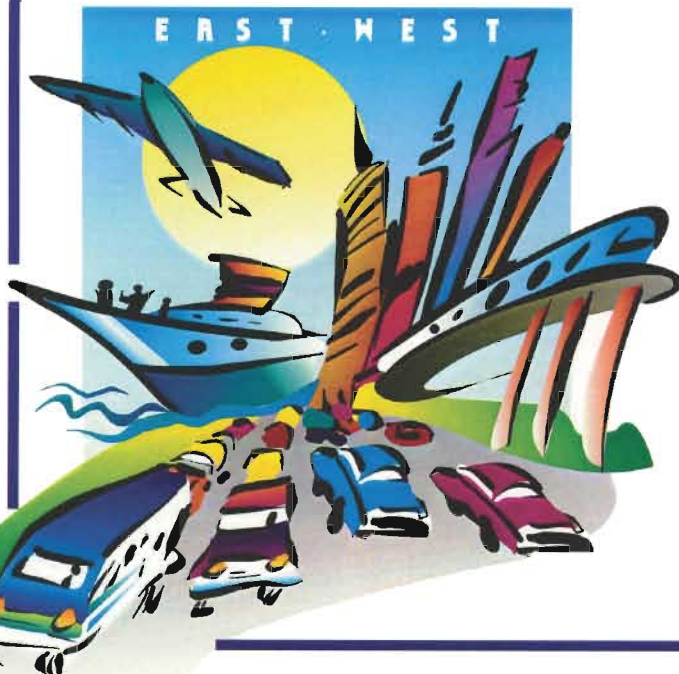
District VI

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

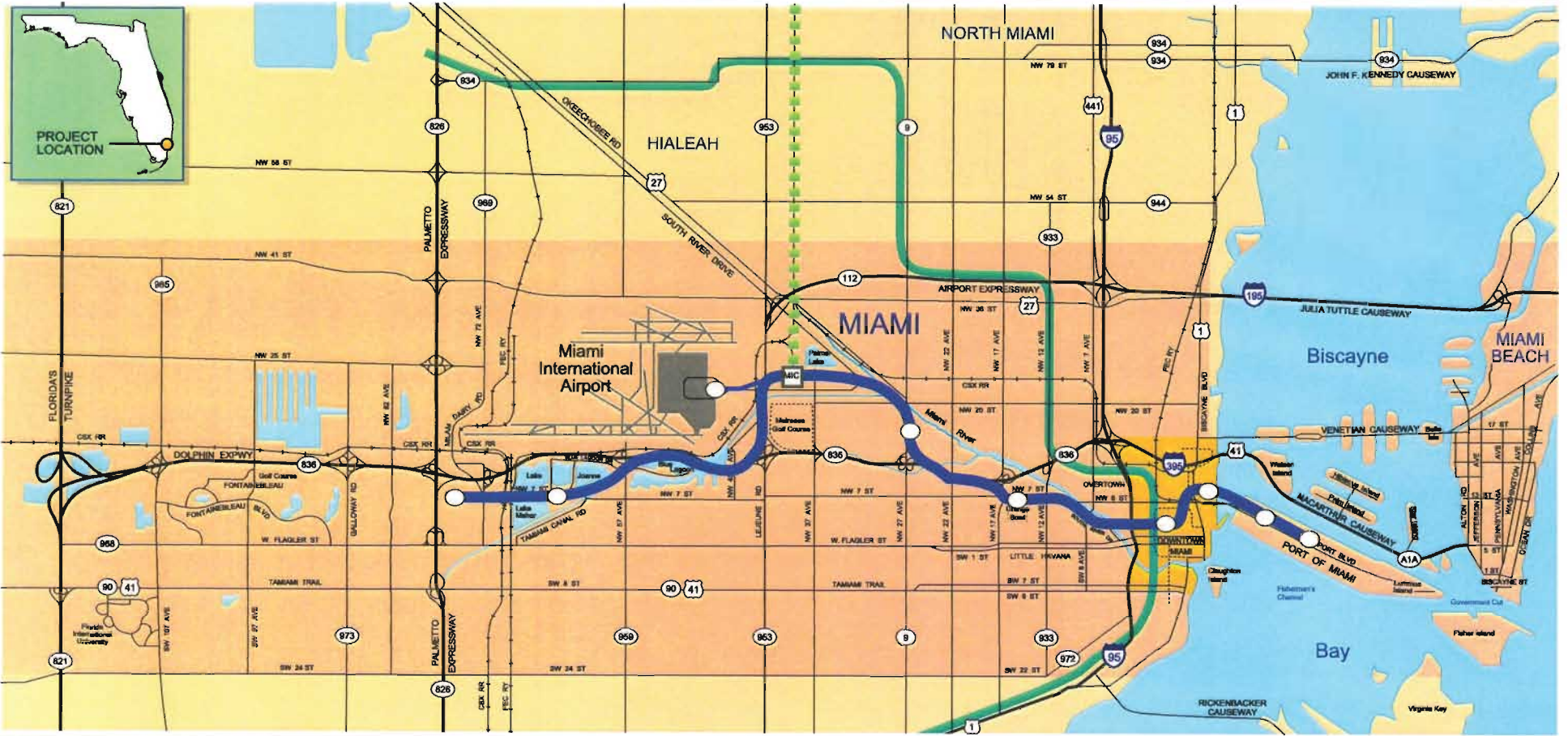
in cooperation with:
**Federal Transit Administration
Federal Railroad Administration
Federal Aviation Administration
Maritime Administration
U.S. Coast Guard**

October 1998

CONNECTING PEOPLE



East - West Multimodal Corridor



LEGEND

- East-West Corridor
- Miami Central Business District
- Metrorail
- Tri-Rail
- Miami Metromover
- Locally Preferred Alternative

EAST-WEST CORRIDOR



East-West Multimodal Corridor Project

Foreword

The East-West Multimodal Corridor Project is sponsored by the Florida Department of Transportation. The Department's prime consultant, Parsons Brinckerhoff, lead the preliminary engineering and design efforts, and prepared environmental impact documents for the project.

Introduction

Ask any motorists in the Miami area and you'll find that congestion, delays, and accidents are too frequently part of the daily commute on most major arterials and expressways in the Miami area—even on weekends! Residential development continues its southwestward expansion, which will only add more cars on already congested routes. East-west freeway travel is limited to SR 112 and SR 836, plus a few four to six lane arterials. SR 836 is the only major east-west expressway that spans the full distance between Florida's Turnpike and I-95.

As the longest east-west expressway, SR 836 plays a significant role for Miami-Dade County by providing:

- Accessibility to and from downtown Miami and to Miami Beach
- Accessibility to major activity centers in south Miami-Dade, such as the Civic Center, Miami International Airport (MIA), shopping malls, major office and residential complexes, Florida International University (FIU), etc.
- Mobility in case of an emergency, such as a hurricane, when safe and orderly evacuation of life-threatening storm impact areas on Miami Beach is vital
- Accessibility to and from Florida's Turnpike and I-95

Project Need

Most of SR 836 and its interchanges with local arterials are functionally obsolete and cannot accommodate current traffic volumes. A number of deficiencies exist at all interchanges, along the main line and at the toll plaza near NW 17th Avenue. Major delays are caused by merging lanes in locations such as eastbound approaching NW 72nd Avenue and westbound approaching LeJeune Road. Operational improvements to SR 836 would improve traffic safety and increase capacity, but would do little to reduce congestion. The only way SR 836 could be improved to carry the increasing growth of the county would be by widening SR 836 to eight lanes in each direction! The expanded roadway would encroach upon adjacent residential, commercial and recreational developments, not to mention the airport, and therefore is not a viable solution.

With the population of Metro-Dade growing at such a rapid pace, associated economic growth will significantly impact the regional transportation system. At the same time, our sub-tropical climate and many world-famous recreational activities attract more tourists each year. In 1995, 13.2 million people visited Greater Miami and the Beaches, 9.4 million of whom stayed at least one night.

East-West Multimodal Corridor Project

East-West Multimodal Corridor

East-West

The Dolphin Expressway (SR 836) is a six-lane, limited-access, divided freeway that is more than 13 miles in length. It extends from Florida's Turnpike near the western edge of Dade County to I-395 and MacArthur Causeway, connecting the mainland to the Beaches. A toll plaza for eastbound traffic only is located between NW 27th and 17th Avenues, near the eastern limits of the freeway. In addition to providing a vital transportation thoroughfare to Miami Beach, these roads are also the primary evacuation routes during hurricanes or other civil emergencies.

Multimodal

Throughout the region, land use planning has traditionally favored travel by car, and access to land uses and activities is geared predominantly to the automobile. Ample parking is usually available at destinations throughout the corridor. Alternative modes of transportation—including mass transit, carpooling, bicycling, and walking—have not competed on a level playing field with the private automobile. As more people continue to live and work throughout the entire region, these alternative modes need to be addressed—and they are in this project.

Without including additional modes, such as rail transit, SR 836 would have to be widened to at least eight lanes in each direction to accommodate 15,000 to 16,000 vehicles per hour, the projected traffic volume for the year 2020. By comparison, a rail transit line could provide

capacity for 18,000 to 20,000 passengers per hour, allowing commuters a safe and efficient alternative to driving.

Corridor

The full project corridor, 22 miles long, begins at the Tamiami Campus of FIU, extends the length of SR 836, past MIA, through downtown Miami to the Port of Miami, across Biscayne Bay to South Beach, and ends at the Miami Beach Convention Center.

Project

The East-West Multimodal Corridor analyzed various highway and transit alternatives to improve transportation capacity in the corridor and proposed the best transportation improvement. The LPA is a multimodal alternative that combines the best solutions to moving people along the East-West Corridor. It provides rail service to neighborhoods including Grapeland Heights, Huntington, Grove Park, and Little Havana, that are not currently served by rail transit. The proposed highway improvements add 43.8 lane miles—23.4 at-grade, 18.1 on retained fill and 2.3 on aerial structures—creating a continuous eight-lane highway. A new toll facility near NW 17th Avenue will replace the existing one with a fully automated system that allows vehicles to pass through much faster. The rail line is 11.8 miles long—0.3 miles on retained fill, 8.3 miles on aerial structures and 3.2 miles in a tunnel. There are ten stations, six aerial and four underground, and five park-and-ride lots with approximately 5,000 parking spaces provided.

East-West Multimodal Corridor Project

Proposed Highway Services

Highway improvements were designed to address the roadway's existing deficiencies, such as the lack of continuous lanes and substandard median shoulder widths, and best solve our congestion problems given the right-of-way restraints. The addition of on-and-off lanes is planned, along with improvements at all interchanges. Other improvements, not part of this project, are planned and have been coordinated with this study, including: interchange improvements at the Palmetto Expressway (SR 826) and LeJeune Road; a new freeway interconnector from SR 836 to SR 112; and construction of the Miami Intermodal Center (MIC) just east of the airport.

The LPA includes a combination of highway improvements along the entire length of SR 836 and a new rail transit line. The first part of the transit line to be built is a minimum operable segment (MOS) from the Palmetto Expressway (SR 826) to the Port of Miami. Extensions to FIU and to Miami Beach will be considered after construction has begun on the first phase (MOS) because of funding constraints. However, all of the proposed highway operational improvements are part of the first phase. Other proposed improvements in the corridor include:

- High occupancy vehicle (HOV) lanes located in the median of SR 836 between Florida's Turnpike and LeJeune Road
- Pedestrian and bicycle facilities at various locations along the transit line
- A rail branch line into MIA
- Bus system improvements to integrate bus and rail transit services

Proposed Transit Services

Construction of the East-West rail line will complement existing transit services (rail and bus) in Miami-Dade County, providing improved mobility and connectivity. Connections with existing and proposed bus routes will be available at transit stations; some stations, like Government Center Station and Maritime Park Station, will provide transfers to Metrorail and/or Metromover. At the Miami Intermodal Center (MIC) Station, passengers will be able to connect to Tri-Rail, Amtrak, shuttle trains to MIA terminals, and future high speed rail trains to Orlando and Tampa.

The new East-West rail line will have similar operating hours as Metrorail, Metromover and Metrobuses, from approximately 5:30 am until after midnight seven days a week. Trains will operate every 3 minutes during peak periods and 10 minutes at other times from the Palmetto Expressway to the Port of Miami, with a trip duration of about 18 minutes.

Special nonstop Airport-to-Seaport service connecting the airport and the cruiseship terminals will operate primarily from 8:00 am to 4:00 pm Friday through Monday. Service will be coordinated with cruise-ship schedules but generally will be most frequent between 8:30 am and 10:00 am. The trip from MIA to the Seaport will take 12 minutes.

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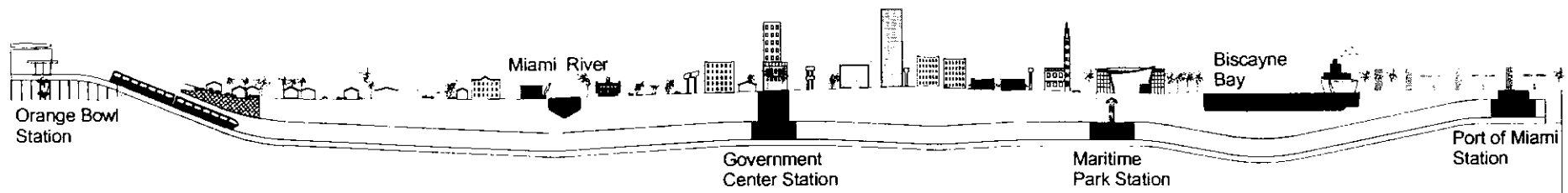
A Tunnel in Miami

The tunnel segment will begin just east of the Orange Bowl along NW 6th Street at NW 12th Avenue and continue underground to the Port of Miami, crossing under the Miami River, downtown Miami, and Biscayne Bay. The figure below illustrates the location of the tunnel with respect to some familiar sites within the area. Most of us are aware of what is involved with the construction of an elevated guideway structure, but many of us are immensely curious about constructing a tunnel in Miami. How can it be done properly and safely when the water table in the vicinity of downtown Miami is so near below the ground surface?

A state-of-the-art tunneling method will be employed, similar to methods used recently to construct the English Channel Tunnel and rail transit tunnels in Washington, DC; Caracas, Venezuela; Lille, France; and Taipei, Taiwan. A tunnel boring machine (TBM) will excavate the earth along the path of the tunnel and, at the same time, install the concrete lining, segment by segment.

The TBM is designed to exert sufficient forward pressure to hold back the water while grinding and removing the soil and rock. Two separate tunnels will be built for eastbound and westbound tracks, each with a diameter of about 21 feet. This is a very efficient, but slow-moving process; about 40 to 50 feet of tunnel will be dug per day. Compared to aerial guideway alternatives through downtown, the tunnel offers some significant advantages:

- Less impact on properties and buildings
- Less disruption of traffic on roadways or waterways
- Less disruption of utilities—the tunnel will be well below utility lines
- Fewer above ground environmental concerns: historic structures, river/bay crossings, etc.
- Avoids the visual impacts of a continuous aerial structure to the cityscape



East-West Multimodal Corridor Project

Budget

The \$1.7 billion capital cost of the project will be funded through a combination of federal, state, and local funds. Local and state officials are working hard to ensure that funding for Miami's transportation needs is included in new surface transportation legislation currently making its way through Congress. Funds for local match are expected to come from toll revenues, seaport charges, and private sources.

Schedule

The East-West Multimodal Corridor MIS/DEIS began in August 1993 and was completed in October 1995. A public hearing on the DEIS was held in early December 1995. The MPO selected a locally preferred alternative in March 1996. A projected schedule for implementing the rest of the project is shown below.

- FEIS Completed August 1998
Receive FHWA/FTA Approval: September 1998
- Begin Design: 1998
- Begin Highway Construction: 1999
- Begin Transit Construction: 2002
- Open New Transit System: 2009

Conclusion

These improvements will play a key role in the regional transportation system by improving circulation, through better highways, a system of interconnected rail lines, expanded bus service, and by providing additional pedestrian and bicycle facilities. A new high-quality service will efficiently move the citizens and visitors of Dade County and help improve our quality of life in the years to come.

More Information

For further information, please contact:

Kouroche Mohandes, Senior Project Manager
East-West Multimodal Corridor Project
Florida Department of Transportation, District VI
602 South Miami Avenue
Miami, FL 331xx

Telephone (305) 349-1200; fax (305) 349-1205

