

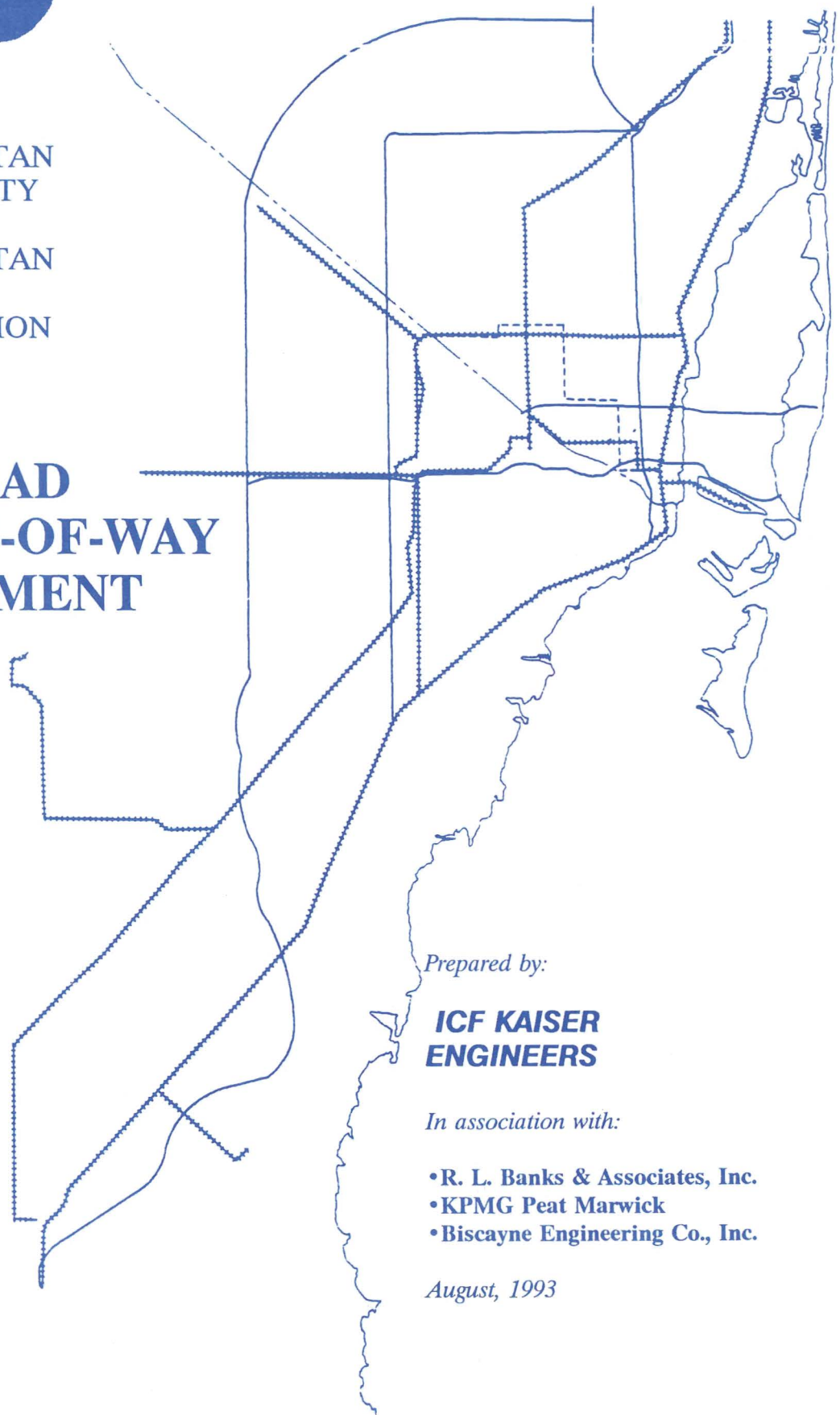


METROPOLITAN
DADE COUNTY

METROPOLITAN
PLANNING
ORGANIZATION

RAILROAD RIGHTS-OF-WAY ASSESSMENT

EXECUTIVE
SUMMARY



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EXECUTIVE SUMMARY

In 1992, the Dade County Metropolitan Planning Organization (MPO) selected the firm ICF Kaiser Engineers to study the existing railroad network in the County, with an overall goal of determining which alignments might be useful for future development as transportation corridors, with particular emphasis on transit applications.

Study Goals

- Inventory all existing railroad rights-of-way in Dade County.
- Examine these rights-of-way for their potential use in public transportation.
- Develop recommendations for which right-of-way corridors to study in more detail.

Assumptions

- The South Corridor Busway from Cutler Ridge to Metrorail Dadeland South Station will have been constructed.
- The north terminus of Metrorail will have been extended to a new station near the Palmetto Expressway.
- An Intermodal Facility (IMF) will have been established near the Miami International Airport. Tri-Rail will have been extended to that terminal.
- For the purpose of ridership projection, each corridor studied would be independent, and not presume the installation of transit service in any of the other corridors under study. Ridership projections are based on those developed for the 1993 Transit Corridors Transitional Analysis.
- Rail freight service may continue on those lines now carrying freight.

As part of the Dade County Railroad Rights-of-Way (ROW) Study, a field examination of all railroad ROW was made. From that examination, and detailed maps and information from railroad owners and operators, an itemized inventory of the complete ROW system in Dade County was completed.

Nineteen distinct ROW segments were identified. For purposes of this study, a rail segment is defined as a portion of Dade County railroad ROW which has logical or distinctive end points and potentially useful or unique characteristics that can be identified. These segments are shown on Table E-1 and Figure E-1.

The segments were joined into logical "corridors" for focused analysis and assessment. These were developed in concert with the Dade County MPO and members of the study's Steering Committee, and are identified in Table E-1 and Figure E-2.

The following are brief descriptions of the technologies considered in this study.

Busway

A busway, as defined in the study report, is a system of express buses which run on their own exclusive lanes. A busway usually is developed near or adjacent to an existing roadway, but can be on lanes that are completely separate and distant from existing highways. Stops are infrequent in order to offer fast travel times, and park-ride facilities are a typical feature. Such a system is under design for South Dade which will connect Metrorail Dadeland South Station with the Cutler Ridge area.

Metrorail

The Metrorail technology is usually termed a "heavy rail" system, or "rail rapid transit". Such technology usually has long trains, and high passenger capacity, is grade separated (aerial, as in Miami, or in tunnels, as in New York City), operates with high-level platforms at stations, and has high capital cost. As the system is usually powered by a "third rail" near ground level, neither vehicles nor passengers can travel or walk across its tracks.

Light Rail Transit

Light rail transit vehicles operate in flexible arrangements. They can offer service to both high and low platform stations, are powered by an overhead wire, are designed to operate on exclusive guideways or in mixed traffic, and have one or two car trains that stop frequently.

[Note: The following technologies, Metrorail Hybrid, and Light Rail Hybrid, have been defined in the study recently completed for Dade County, Dade County Transit Corridors Transitional Analysis. Due to their potential application for this analysis, they are adopted here.]

Metrorail Hybrid

Metrorail hybrid refers to Metrorail-type vehicles which, in addition to their third-rail power pick-up systems, would also be equipped with roof-top pantographs. This would enable such vehicles to be powered alternatively from an overhead wire. Thus, while providing high passenger capacity, rail extensions employing such a technology could also cross streets at grade, and most importantly, run on existing Metrorail tracks.

Light Rail Hybrid

Similar to the Metrorail Hybrid system, Light Rail Hybrid would consist of light rail vehicles equipped to operate on the Metrorail system. The hybrid light rail vehicle would be equipped with a pickup arm near track level, employing the third rail for power.

Commuter Rail

This technology utilizes conventional railroad tracks and systems, usually employs a diesel-electric locomotive pulling passenger cars that may have either one or two levels, and has low-level station platforms and at-grade street crossings. (A few high-capacity commuter railroads are all electric, have high-level platforms, and exclusive rights-of-way, and therefore resemble rail rapid transit systems.) Of all technologies, commuter railroads typically have the longest distances between stations, and generally serve longer-distance travel. The Tri-Rail technology is typical of modern commuter rail systems.

These technologies have been matched to the selected corridors to estimate potential ridership demand. For example, if one end of a corridor adjoins a Metrorail station, Metrorail-compatible systems have been included in the analysis. If a corridor adjoins a busway, a busway is at least one of the technologies considered.

Table E-1 summarizes corridor descriptions, assumptions made for each, and the recommended technologies.

Travel demand forecasts were prepared for each of the technologies in the selected corridors. A total of 15 alternatives in 9 different corridors were examined against a baseline transportation systems management (TSM) alternative. The estimates were prepared using the Dade County travel forecasting models used in the Transitional Analysis, and input data from Metro Dade and FDOT. All forecasts were made for a 2010 time horizon.

In a methodology frequently used in planning studies, we have displayed the potential transportation corridors and arrayed applicable characteristics opposite them in a matrix table. We evaluated them first in abbreviated narrative form, and then in summary form to select the most attractive corridors and technologies. This information is portrayed in Tables E-2 and E-3.

**TABLE E-1
DADE COUNTY
RAILROAD RIGHTS-OF-WAY STUDY**

RAILROAD CORRIDORS						
Map Label	Name	From	To	Segments Included	Assumptions	Potential Technologies
A	East-West	Florida's Turnpike	Metrorail ROW near Miami CBD	11, 6, 18	Airport Intermodal Terminal Airport Peoplemover Tri-Rail Extension to Terminal	Metrorail (MRL) Hybrid
B	Homestead	Cutler Ridge	City of Homestead/ Florida City	2	Busway from Dadeland South MR Station to Cutler Ridge	Busway
C	Southwest	Miami Airport East	Coral Reef Drive/Zoo	6, 8	Same as A	Commuter Rail
D	Okeechobee	Florida's Turnpike	New Metrorail Palmetto Station	17	Extension of Metrorail to new Palmetto Expressway Station	MRL Hybrid
E	West	Miami Airport Southwest	New Metrorail Palmetto Station	13	Same as D	LRT Hybrid
F	Northwest	Miami Airport Southwest	Florida's Turnpike	13, 17	Same as D	LRT Hybrid
G	Northeast	Broward C/L	Miami CBD	14	None	MRL Hybrid Busway Commuter Rail
H	Ludlam	Miami Airport East	Metrorail Dadeland North Station	6, 7	Same as A plus B, plus Busway Connection between MRL Dadeland North & South	Commuter Rail LRT
I	Dadeland North to Okeechobee	MRL Dadeland North Station	MRL Okeechobee Station; Miami Airport East	6, 7, 13	Same as D plus H	LRT

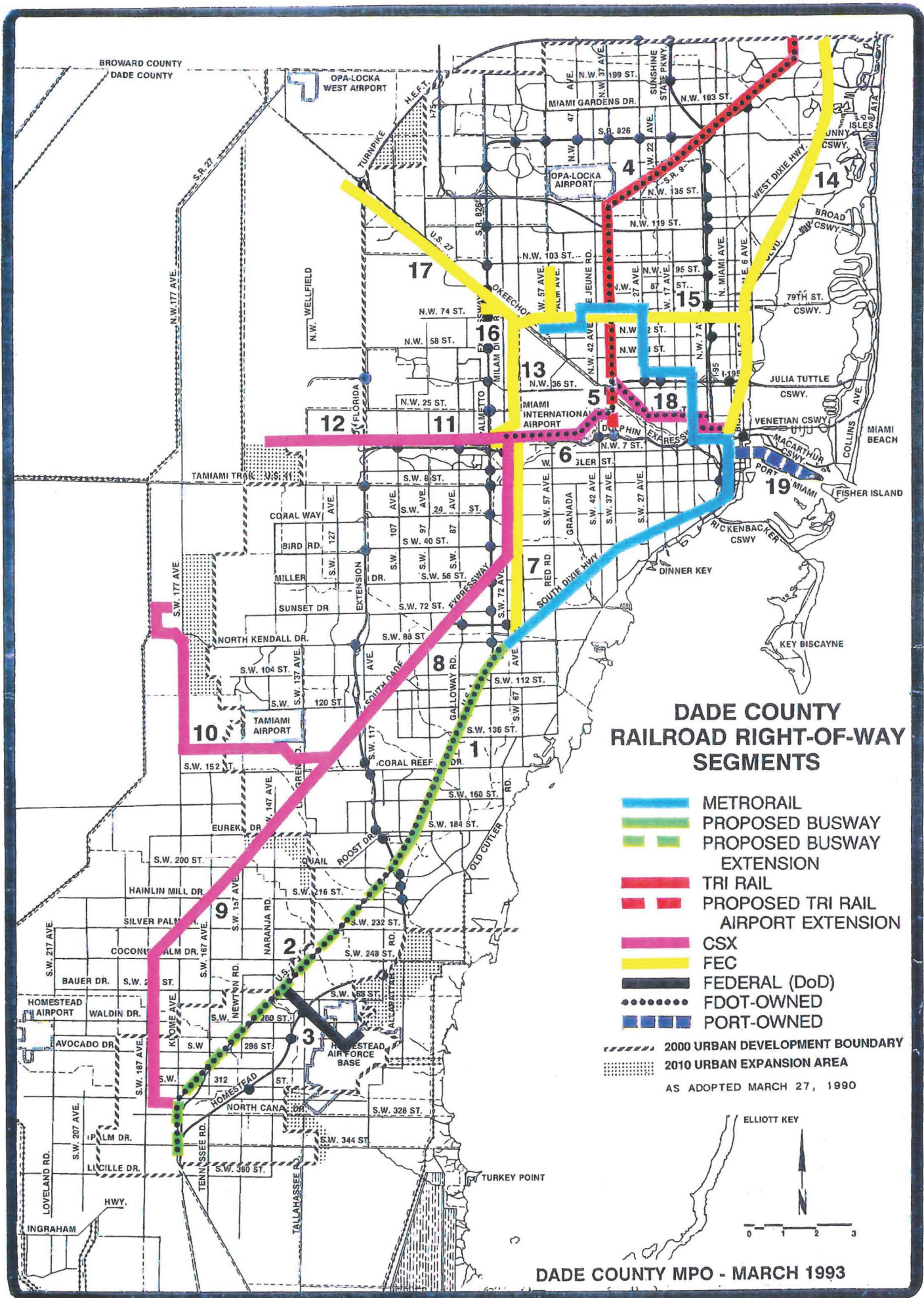


FIGURE E-1

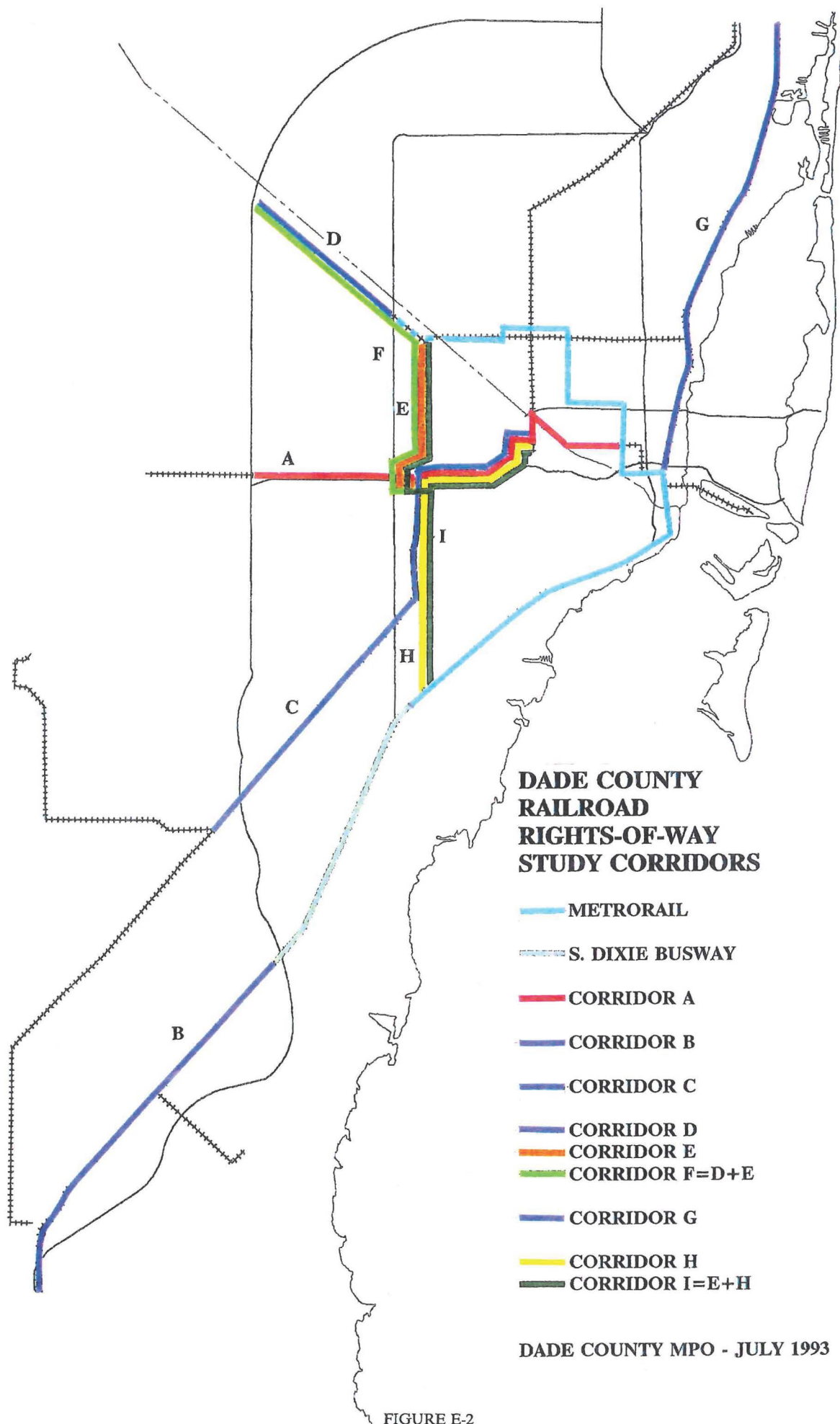


FIGURE E-2

**TABLE E-2
DADE COUNTY
RAILROAD RIGHTS-OF-WAY STUDY**

EVALUATION OF RAILROAD CORRIDORS										
EVALUATION CRITERIA		CORRIDOR MAP LABEL								
Topic	Specific Attribute	A	B	C	D	E	F	G	H	I
Corridor's Physical Characteristics	Encroachment	No	Yes	Some	No	No	No	No	Some	No
	ROW Width	50'	100'	50'	100'	100'	100'	100'	50/100'	100'
	Length of Corridor	12 mi.	11 mi.	16 mi.	5 mi.	5 mi.	10 mi.	14 mi.	10 mi.	15 mi.
Land Use	Commercial	x	x	x	x	x	x	x	x	x
	Residential		x	x				x	x	x
	Agricultural	x		x						
	Nearby unique land use areas	Airport, Intense Commercial	Home-stead AFB	Airport, Zoo	Intense Commercial	Airport, Auto Un-loading	Airport, Auto Un-loading	Active Freight Main Line	Airport	Airport, Auto Un-loading
Roadway Crossing and Traffic Issues	Approx # Xings	11	28	26	3	2	5	35	20	21
	Width Roadway Xings	Wide	Medium	Wide	Wide	Wide	Wide	Wide	Wide	Wide
	ADT @ Xings	High	Medium	High	Medium	Medium	Medium	High	High	High
RR ROW Use/ Ownership Issues	Present Ownership	FDOT/ CSX	FDOT	FDOT/ CSX	FEC	FEC	FEC	FEC	FDOT/ FEC	FEC
	Current RR Usage	Branch	None	Branch	Branch	Main Line	Main, Branch	Main, Branch	Branch	Main, Branch
Technology Suitability	Busway	Low	High	Low	Low	Low	Low	High	Medium	Low
	Commuter Rail	Low	Low	High	Low	Low	Low	Medium	High	Medium
	Metrorail	Medium	Low	Low	Medium	Medium	Medium	Low	Low	Medium
	Light Rail Transit	Medium	Low	Medium	Low	High	High	Medium	High	High
	MRL/LRT Hybrid	High	Low	Medium	High	Medium	Medium	High	Medium	Medium

TABLE E-2 (Continued)

EVALUATION OF RAILROAD CORRIDORS										
EVALUATION CRITERIA		CORRIDOR MAP LABEL								
Topic	Specific Attribute	A	B	C	D	E	F	G	H	I
Effective- ness and Operating Issues	Potential for Travel Time Savings	Low	High	Medium	High	Low	Medium	High	Medium	High
	Improved mobility for transit-dependent	No	Yes	Yes	No	No	No	Yes	Yes	No
	Support for hurricane recovery	No	Yes	Yes	No	No	No	No	No	No
	Intermodal Transfer Opportunity/ Location	Good/ MIA IMF; MR Santa Clara Station	Good/ MR Dade- land Station	Good/ MIA IMF	Good/ MR Palmetto Station	Good/ MR Palmetto Station	Good/ MR Palm- etto Station	Good/ MR Over- town Station	Good/ MR Dadeland Station, MIA IMF	Good/ MR Dadeland, Palmetto Stations
Estimated Right-of-Way Cost (\$M)		7	0	21	9	9	17	24	10	19
Relative Capital Cost, Including Right-of- Way	Busway	na	Low	na	na	na	na	Medium	na	na
	Commuter Rail	na	na	Low	na	na	na	na	Low	na
	Metrorail	na	na	na	na	na	na	na	na	na
	Light Rail Transit	na	na	na	na	Medium	High	na	High	High
	MRL/LRT Hybrid	High	na	na	Medium	na	na	High	na	na
Relative Ridership Potential	Busway	na	Low	na	na	na	na	High	na	na
	Commuter Rail	na	na	Low	na	na	na	na	Low	na
	Metrorail	na	na	na	na	na	na	na	na	na
	Light Rail Transit	na	na	na	na	Medium	Low	na	High	High
	MRL/LRT Hybrid	High	na	na	Low	na	na	Medium	na	na

na = Not Analyzed

**TABLE E-3
DADE COUNTY
RAILROAD RIGHTS-OF-WAY STUDY**

SUMMARY EVALUATION OF RAILROAD CORRIDORS										
EVALUATION CRITERIA		CORRIDOR								
Topic		A	B	C	D	E	F	G	H	I
Corridor's Physical Characteristics		–	+	O	+	+	+	+	O	+
Predominant Land Use		O	+	O	–	–	–	+	O	O
Highway Crossing and Traffic Issues		O	+	–	+	+	+	O	–	O
RR ROW Use/Ownership Issues		O	+	O	O	–	–	–	O	O
Improved Mobility, Transit-Dependent		–	+	+	–	–	–	+	+	O
Hurricane Recovery		–	+	+	–	–	–	–	–	–
Multi-Modal Transfer Opportunity		+	+	+	+	+	+	+	+	+
Right-of-Way Cost		+	+	–	O	O	–	–	+	–
Relative Capital Cost, Including Right-of-Way	Busway		+					O		
	Commuter Rail			+					+	
	Metrorail									
	Light Rail Transit				O	O		–	–	–
	MRL/LRT Hybrid	–					–			
Relative Ridership Increase	Busway		–					+		
	Commuter Rail			–					–	
	Metrorail									
	Light Rail Transit					O	–		+	+
	MRL/LRT Hybrid	+			–			+		
Appropriate for Further Study		+	+	–	–	O	–	+	+	+

+ Generally Favorable - Generally Unfavorable O Neutral

CONCLUSIONS

The investigations previously outlined suggested that five corridors are deserving of additional study. These are corridors A, B, G, H, and I.

Corridor A, the east-west corridor, shows excellent potential ridership. However, the actual railroad corridor is narrow, circuitous, passes through busy industrial areas, and has many street crossings. Although the segments south and east of the airport are owned by FDOT, the segment west of the airport would have to be purchased. Further study of the corridor, transcending this Railroad ROW study, is being undertaken by FDOT.

Corridor B, the continuation of the South Busway to Homestead/Florida City, has relatively low new ridership, but has the lowest capital cost of all the options in the study. It also has the greatest positive impact on hurricane recovery. Because the ROW is already in public ownership, is a continuation of a corridor in which a public transit project will be implemented, would further link under-served areas of South Dade with faster transit services, and would promote hurricane recovery efforts, this corridor warrants the additional consideration now being exhibited by both MDTA & FDOT.

Corridor G is the northeast corridor. The busway alternative in this corridor has the second highest potential for increased ridership of all the options considered. Right-of-way cost would be relatively high, but width is ample for a number of shared uses. Construction cost could be relatively low. An at-grade transitway would cross a number of streets with high ADT. Some of the streets with low ADT could be closed, and traffic could be diverted to the streets with high ADT. These could either be bridged over by the transitway, or the roads elevated to bridge over an at-grade transitway and the railroad, if full separation is warranted at high traffic crossings.

Part of **Corridor H** parallels Ludlum Avenue and traverses some residential neighborhoods. Potential increased ridership is good, with a connection from Dadeland Metrorail to the Airport Intermodal Facility. Light rail transit in this corridor would be more expensive than commuter rail, but demand estimates indicate that ridership would be higher. In addition, the quieter and smaller light rail cars should be more acceptable to nearby residents. Six grade crossings on this corridor have motor vehicle ADT of 20,000 or more; SW 40th St. has 60,000. Corridor H has a unique feature: it connects the FDOT-owned South Florida Rail Corridor with the FDOT-owned South Dixie Highway Corridor. Thus, it has the potential to complete a continuous government-owned corridor from West Palm Beach to Homestead AFB.

Corridor I is T-shaped, and is actually the sum of Corridors H and E (which runs from the new Metrorail Palmetto Station to the Airport Intermodal Facility). Corridor I has the highest potential ridership increase of all the corridors studied. It also has relatively high right-of-way and construction costs. This corridor also has a unique feature: it connects the north and south ends of the existing Metrorail system. In addition, it connects to the Airport Intermodal Facility. The comments above regarding Corridor H apply. Corridor E is comparatively insulated, having practically no residential impact and only three at-grade crossings.

RECOMMENDATIONS

Corridor A is within the general study area and scope of the SR 836 PD&E study currently being conducted by FDOT District Six. The findings of this Railroad ROW study should be communicated to District Six, along with a recommendation that Corridor A be considered as one of the alternative routes/modes in the SR 836 study.

The design of the busway from Dadeland to Cutler Ridge is virtually complete. District Six has recently decided to extend its study of the busway to include **Corridor B**, from Cutler Ridge to Homestead/ Florida City. Considerations of service, hurricane recovery and cost (which is relatively low), may prevail over a low potential ridership.

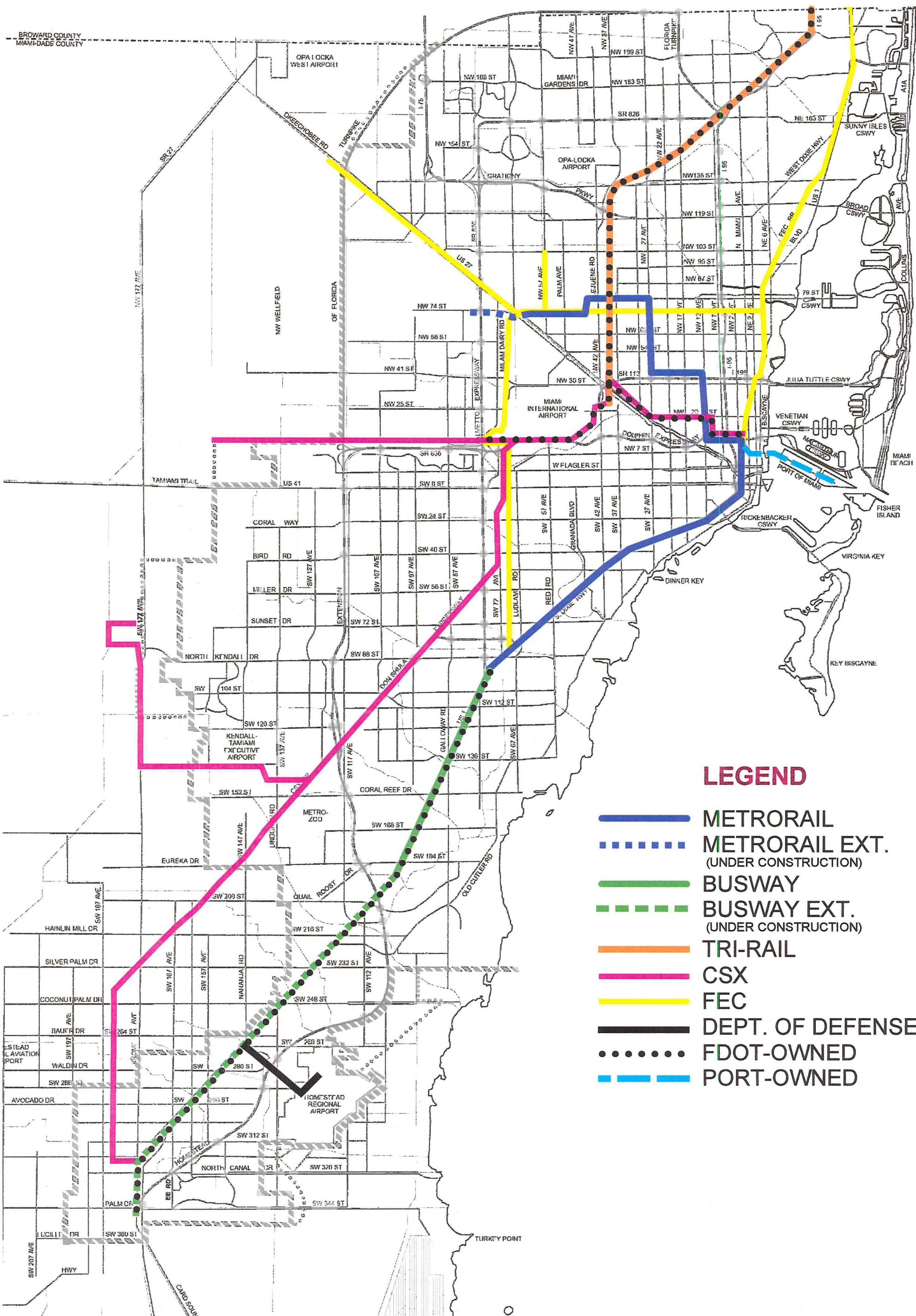
The findings regarding **Corridor G** in this study support those of the Transit Corridors Transitional Analysis. It is recommended that potential funding sources be identified, negotiations with FEC initiated, and discrete projects identified for beginning the development of a public transportation system on the Northeast Corridor.

Corridor H is included in Corridor I. Comments below pertain to both corridors.

Corridor I should be preserved for potential future transportation use, since it has the ability to connect other transit modes and centers. Corridor I is composed of segments 6, 7, and 13. Six is, of course, already in government ownership, and is included in studies being conducted on SR 836. Segment Thirteen is a heavily used property of the FEC Railroad, and is not likely to be converted to other uses soon. Segment Seven, also owned by FEC, is very lightly used. If rail service on the line were to cease, the possibility exists that the right of way could gradually drift into other uses, and be lost as a transportation link.

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MIAMI-DADE RAIL RIGHTS-OF-WAY MAP (UPDATED AUGUST 2001)

METROPOLITAN PLANNING ORGANIZATION for the MIAMI URBANIZED AREA