



DADE COUNTY PARK & RIDE LOT PLAN

WPI No. 6810187

State Job No. 87000-1845

JUSTIFICATION REPORT

NORTH DADE COUNTY NW 27TH AVENUE CORRIDOR PARK AND RIDE LOTS

Prepared for the

FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT 6



By
FREDERIC R. HARRIS, INC.
MIAMI LAKES, FLORIDA

In Association With
Avino and Associates, Inc.
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I. INTRODUCTION

This Justification Report has been prepared to assist in the implementation of the **Dade County Park and Ride Lot Plan**. The Park and Ride Lot Plan provided a generic analysis of potential park and ride lot locations identifying site(s)/system(s) with the best potential for immediate and short range implementation and documenting future park and ride lot locations for integration into the long range planning process.

This Report is based on the development of a park and ride lot system to serve the Northwest 27th Avenue corridor. The proposal includes the development of park and ride lots as ancillary facilities to existing "MAX", express bus, and Metrorail service. The proposal is based on interfacing with the Metrorail system at the Martin Luther King Jr. Station. The report provides sufficient data and explanation to show the need and purpose of this proposal. The analysis includes: a presentation of alternatives with associated costs and benefits; the relation of the proposal to other plans and existing projects in the area; the impacts on the local transportation system; and the needs required by the improvement. Conceptual design plans have been also been prepared as a general outline of site and system needs.

The Report is formatted into four (4) sections. Following this Section is Section II: Plans, Projects and Proposals which provides a background discussion of the corridor proposed for park and ride implementation followed by a discussion of future plans. Section III includes the analysis of alternative lot and corridor treatments and estimations of costs. A benefit/cost analysis based on system implementation is also provided in this section. The Final Section summarizes the need and benefits of the proposed improvement.

Note, the analyses provided in this document are more specific than those provided in the Park and Ride Lot Plan. Where the Park and Ride Lot Plan performed impact, cost/benefit and effectiveness analyses for the purposes of comparing all of the potential sites, this document is directed to determining the specific impacts of the proposed Park and Ride Lot treatments to the North Dade County: NW 27th Avenue Corridor.

II. PLANS, PROJECTS and PROPOSALS

Introduction

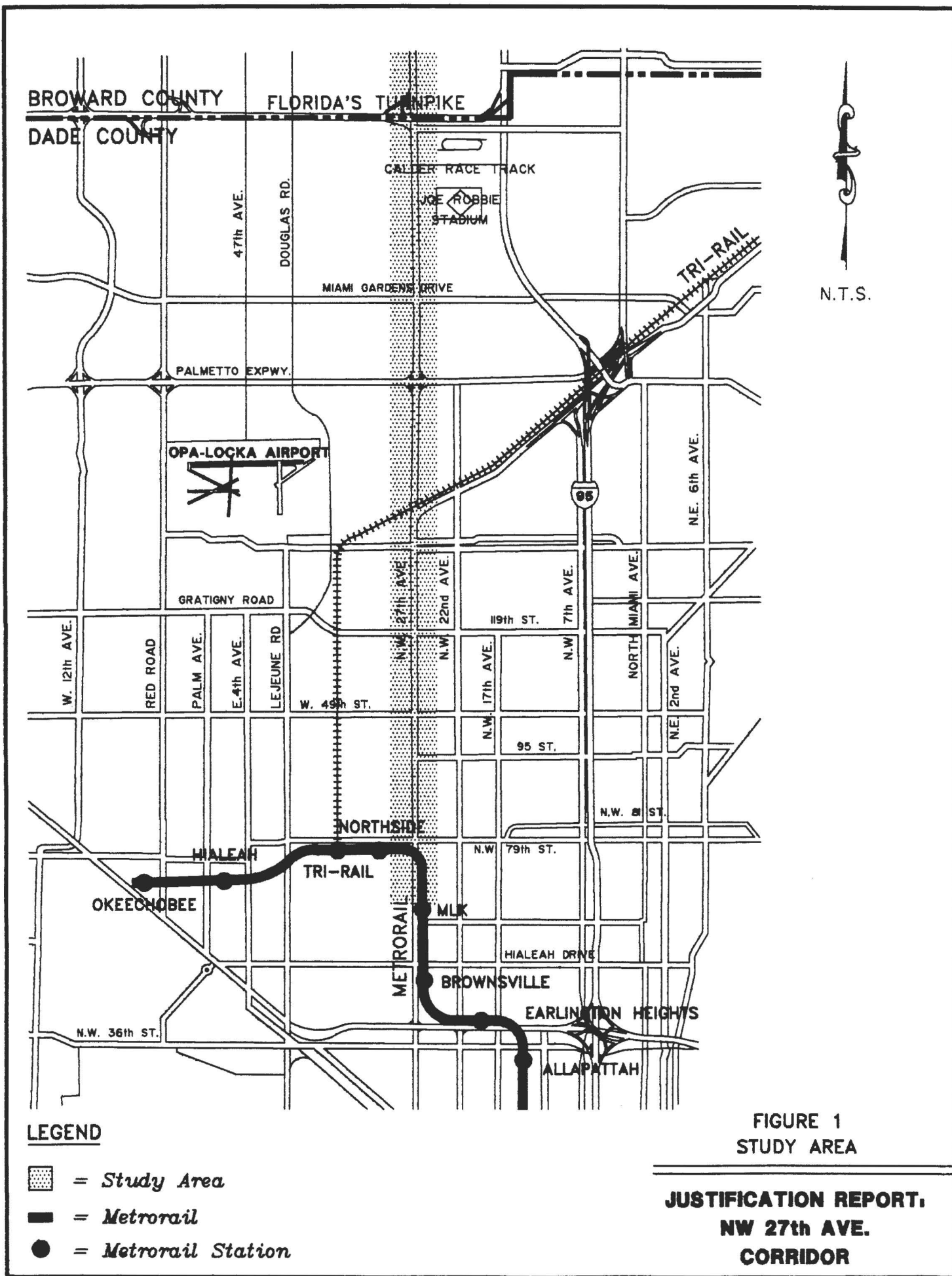
The study area for the North Dade County proposal generally includes the NW 27th Avenue Corridor between the Broward County Line and the Martin Luther King, Jr. Metrorail Station just north of NW 62nd Street. Figure 1 shows the corridor, however, analyses within this report are not limited to the NW 27th Avenue Corridor. Traffic analyses and transit routing may be expanded to include SR 826, I-95, Tri-rail, NW 22nd Avenue.

Existing Transportation System

The area is well served by the local bus transportation network with a number of north/south routes providing direct connections between North Dade County and the Hialeah, Tri-Rail, Northside and Martin Luther King, Jr. (MLK) Metrorail Stations. Figure 2 shows an excerpt from the Dade County Transit Map provided by Metro-Dade Transit Agency (MDTA) indicating the availability of bus routes on most arterials and major collectors. The map does not show the NW 27th Avenue MAX service which is provided on Figure 3. The MDTA MAX routes, in general, provide limited stop express service at minimum headways for the local \$1.25 fare. The 27th Avenue MAX provides this type of service during the AM and PM peak hours service between Joe Robbie Stadium/Calder Race Track and the MLK Metrorail Station exclusively on NW 27th Avenue. There are 12 stops, buses operate on 15 minute headways and a complete one-way trip takes approximately 30–35 minutes. Dade County has also recently entered into agreement with MDCC to develop a park and ride lot facility to serve the 27th Avenue MAX.

The northwest extension of the 95X express bus route also serves in the study area. The route provides service along NW 183rd Street from NW 52nd Avenue to NW 22nd Avenue, to the Golden Glades facility and then Downtown via the I-95 HOV lanes. Express service is provided for a \$1.50 fare.

There are two local routes operating on NW 27th Avenue including Route 27 and Route 21. Route 21 provides service from SR 826 to Downtown Miami with direct access to Miami Dade Community College (MDCC), the Northside Metrorail Station, the Allapattah Metrorail Station and the Downtown Bus Terminal. The northern leg of the route operates on NW 27th Avenue and provides service between the Palmetto Expressway (SR 826) and the Northside Station in approximately 30 minutes. Route 27 serves both northern and southern Dade County providing service between Carol City and Coconut Grove. The northern leg of the route operates on NW 27th Avenue providing direct access to Calder Race Track, MDCC, MLK Metrorail Station and the Brownsville Metrorail Station. The route operates on 10 and 20 minute headways and requires approximately 50 minutes to travel from NW 207th Street to the MLK Station. Standard fares apply to the MAX and local service routes at \$1.25, express services is \$1.50 and all transfers are \$0.25.



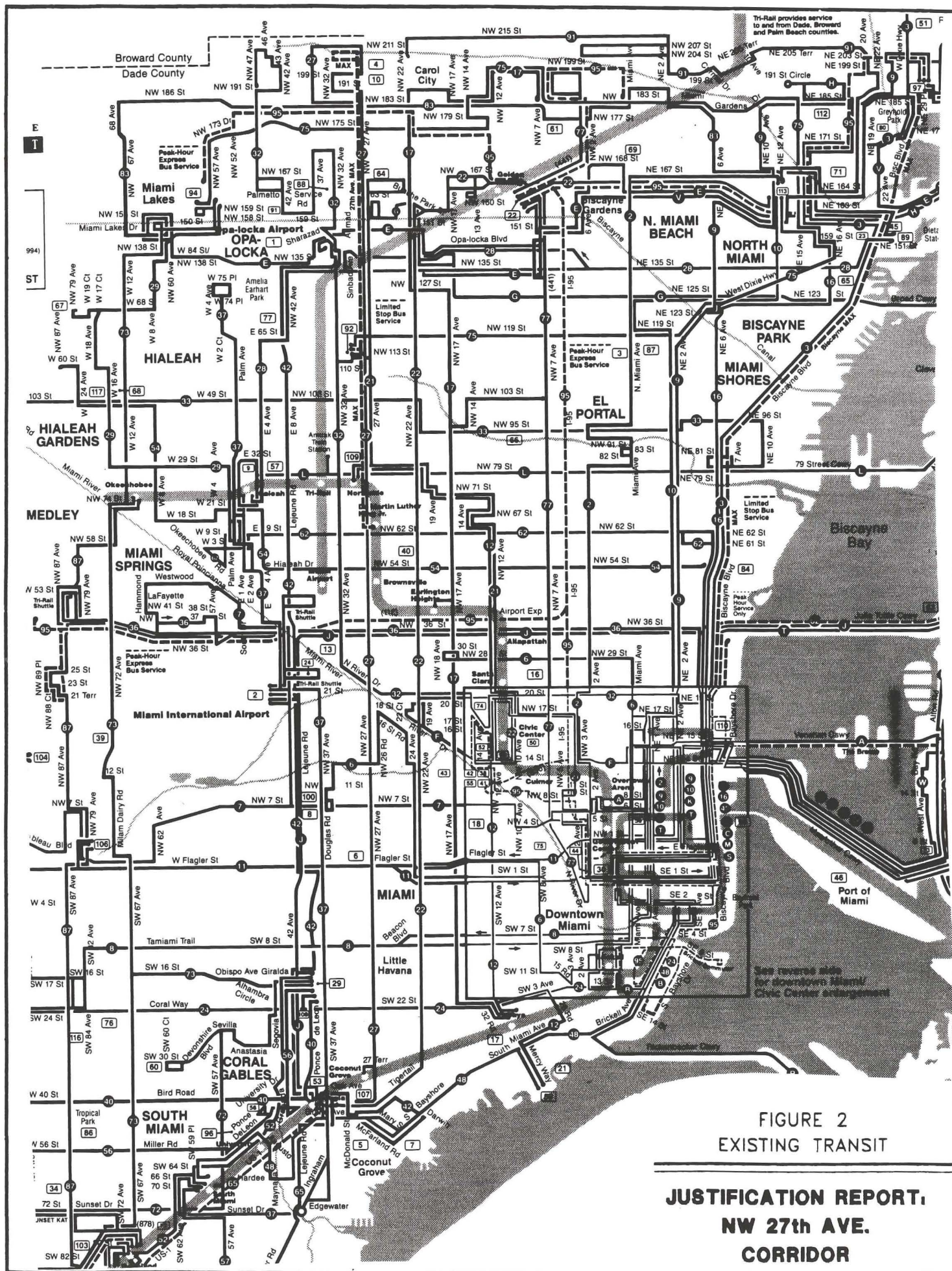
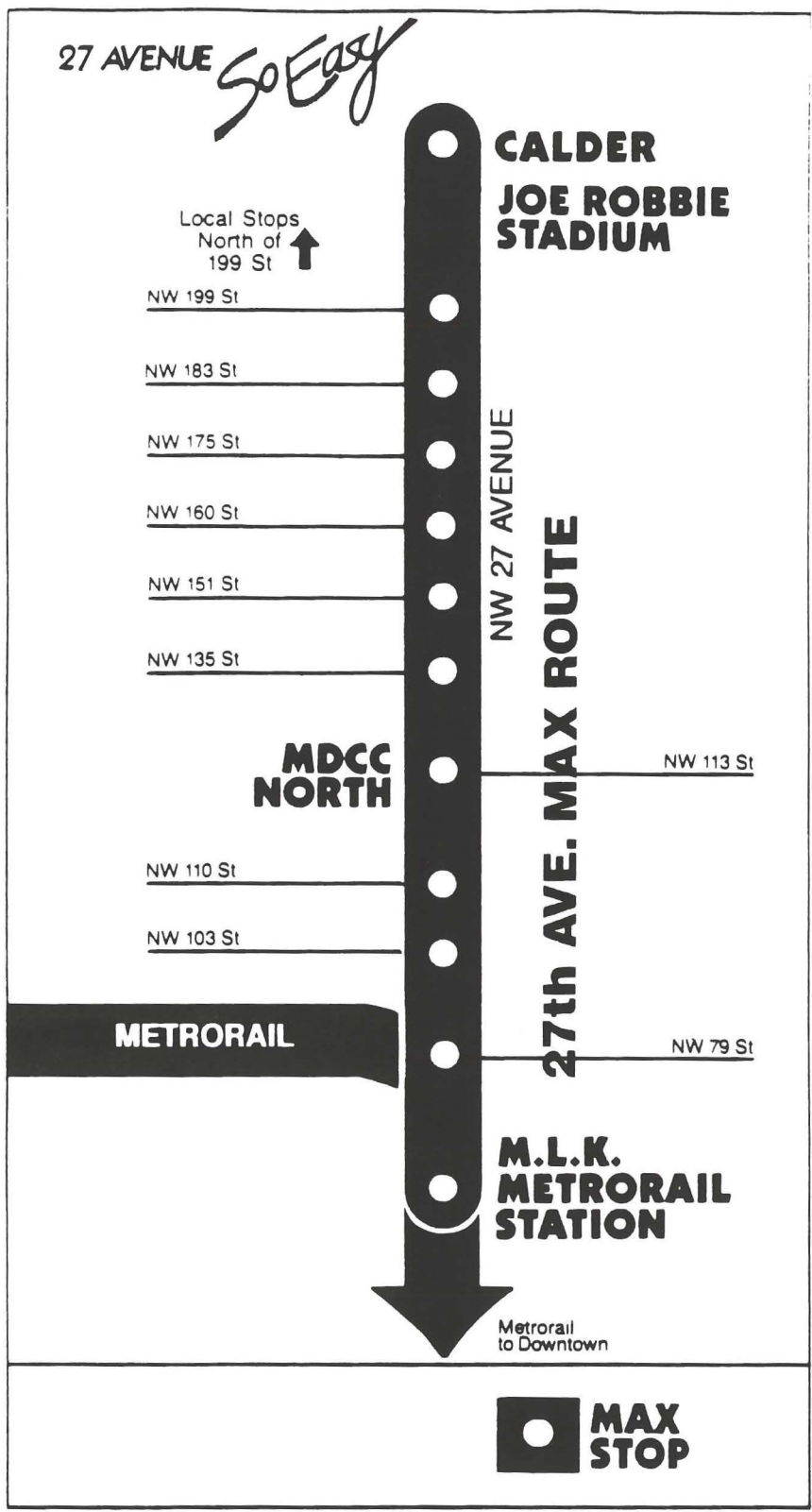


FIGURE 2
EXISTING TRANSIT

**JUSTIFICATION REPORT,
NW 27th AVE.
CORRIDOR**



N.T.S.

LEGEND

-  = MAX Route With Stops
-  = Metrorail

FIGURE 3
NW 27th AVE
MAX ROUTE

Major roadway facilities include NW 27th Avenue, Florida's Turnpike and I-95. NW 27th Avenue is a six (6) lane divided arterial from the Broward County Line to NW 141st Street in Opa Locka where it tapers to a four lane divided facility for about 1000' to the intersection with SR 9. Roadway design is six lane divided from SR 9 to NW 103rd Street and four (4) lane divided from NW 103rd Street to the MLK Station. NW 27th Avenue has been constructed with a restrictive median throughout and includes the elevated Metrorail structure from NW 75th Street to the MLK station.

Florida's Turnpike and I-95 provide an alternative route to the Downtown area. The Turnpike is a six (6) lane toll expressway providing two access points in the area including NW 199th Street and at the Golden Glades interchange. The Turnpike/I-95 route provides for a park and ride lot at the Golden Glades interchange, interfaces with 95X express bus and Tri-Rail service, and provides HOV lanes from the Golden Glades interchange to SR 836. It would be difficult for the proposed NW 27th Avenue system to compete with such without major transit improvements. Service area and market emphasis has been placed on the surrounding residential concentrations in the study area and in Southern Broward County.

Previous Transit Programs

There have been no past transit programs on the NW 27th Avenue corridor except for the existing 27th Avenue MAX and standard local bus service. Dade County has had experience, however, in the application of Travel Demand Management (TDM) programs prior to the development of capital intensive improvements. These experiences are similar to this proposal because the north corridor is being considered for major transit improvements in the **MPO Transit Corridors Study**

The two projects include the Orange Streaker on NW 7th Avenue in northern Dade County and the Blue Dash on South Dixie Highway in South Dade. The Orange Streaker was implemented prior to the construction of HOV lanes on I-95 and operated as an exclusive bus lane within the NW 7th Avenue median. Once the HOV lanes were completed, the route was converted to the 95X as described earlier. The Blue Dash operated on South Dixie Highway prior to the construction of the Metrorail. The project provided a contra-flow bus lane in the AM and PM peak hours. The project was very expensive to operate because of the man hours involved in setting up and dismantling the lane for each peak period.

The County now operates a reversible lane system on NW 199th Street in northwest Dade County. The system is located on the south side of Joe Robbie Stadium, however, it is utilized only for special events at the stadium and does not relate to commuter applications.

Past park and ride lot experience in Dade County in general, however, has seen its successes and failures. There are four active park and ride sites, outside of the Metrorail system, that operate at relatively high levels of success. These include the Golden Glades Lot, Hammocks Town Center, West Lakes Plaza, and Miami-Dade-South Campus. The **MDTA Park and Ride Lots Facilities Plan, 1989** indicates the success of these lots can be attributed to:

- Frequent Metrobus Service
- Availability of Off-Peak Service
- Competitive Cost in Comparison to Automobile
- Competitive Travel Time in Comparison to Automobile
- Clear Lot Identification, lighting and sheltered waiting areas
- High, visible security

There are also a number of park and ride lot facilities with and without Metrorail service that have failed and are currently inactive. The Dade County **Congestion Management Plan** indicates the inactive lots outside of the Metrorail system have failed because of low transit frequencies. The failure of the Metrorail facilities namely the Brownsville, Earlington Heights and Martin Luther King, Jr. facilities may be attributed to locations too close to major destinations and perceptions of security.

Programmed and Planned Improvements

Several improvement projects in the study area are scheduled for construction in the next five years. Table 1 documents those improvements as provided in the Metro-Dade Metropolitan Planning Organization's (MPO) Transportation Improvement Program (TIP). The Table indicates widening projects programmed for NE 135th Street, NW 37th Avenue, NW 95th Street and several projects programmed for I-95.

The NE 135th Street and NW 95th Street include improvement to cross street sections and will have little impact on the proposal. NW 37th Avenue is a parallel facility and the improvement will serve to assist NW 27th Avenue in carrying traffic between Broward and Dade Counties. The I-95 project between NW 151st Street and Miami Gardens Drive will provide the "missing link" in the I-95 HOV system. The project includes the completion of the lanes over the Golden Glades interchange. Combined with the I-95 improvements underway between Broward Boulevard and I-595 in Ft. Lauderdale, I-95 will provide continuous HOV lanes from Palm Beach County to Downtown Miami. The Incident and Freeway Management programs can be used to benefit park and ride modes by deferring motorists to the proposed NW 27th Ave park and ride lots to avoid congestion and/or incidents on I-95.

The North Dade Corridor is also part of the MPO **Dade County Transit Corridors Transitional Analysis**, where long range multi-modal corridor treatments are being analyzed. Alternative improvements include Busway, "Hybrid" LRT, "Regular" LRT and extensions of the Metrorail. There are two alignments under consideration including a "direct" alignment within the NW 27th Avenue right of way and a second alignment which begins on NW 27th Avenue, veers east to the Golden Glades interchange and then back west to NW 27th Avenue to Joe Robbie Stadium. Potential stations in the corridors include:

Table 1 – Programmed Improvements

Roadway	From	To	Improvement	Constr FY
NW 135th St	NW 27th Ave	I-95	+2L,(6LD)	'92-'93
NW 37th Ave	SR 826	Broward Co Line	Widen to 5L	'92-'93
NW 95th St	NW 27th Ave	NW 7th Ave	Reconstruct 4L Add Turn Lanes	'96-'97
I-95	NW 129th St	NW 151st St	+2L(8LX/2HOV)	Complete
	US 1	West Palm Beach	Incident Mngmnt	'94-'96
	at Golden Glades Interchange Apprchs		IVHS	Underway
	NW 151st St	S of Miami Gardens Dr	HOV Flyover +2L(8LX/2HOV)	Underway

Source: Frederic R. Harris, Inc.
Metro-Dade MPO

Direct Alignment

NW 103rd Street
NW 113th Street
NW 119th Street
NW 135th Street
NW 151st Street
NW 166th Street
NW 183rd Street
NW 199th Street

Golden Glades Alignment

NW 103rd Street
NW 113th Street
NW 135th Street
Golden Glades
NW 183rd Street
Joe Robbie Stadium
NW 215th Street

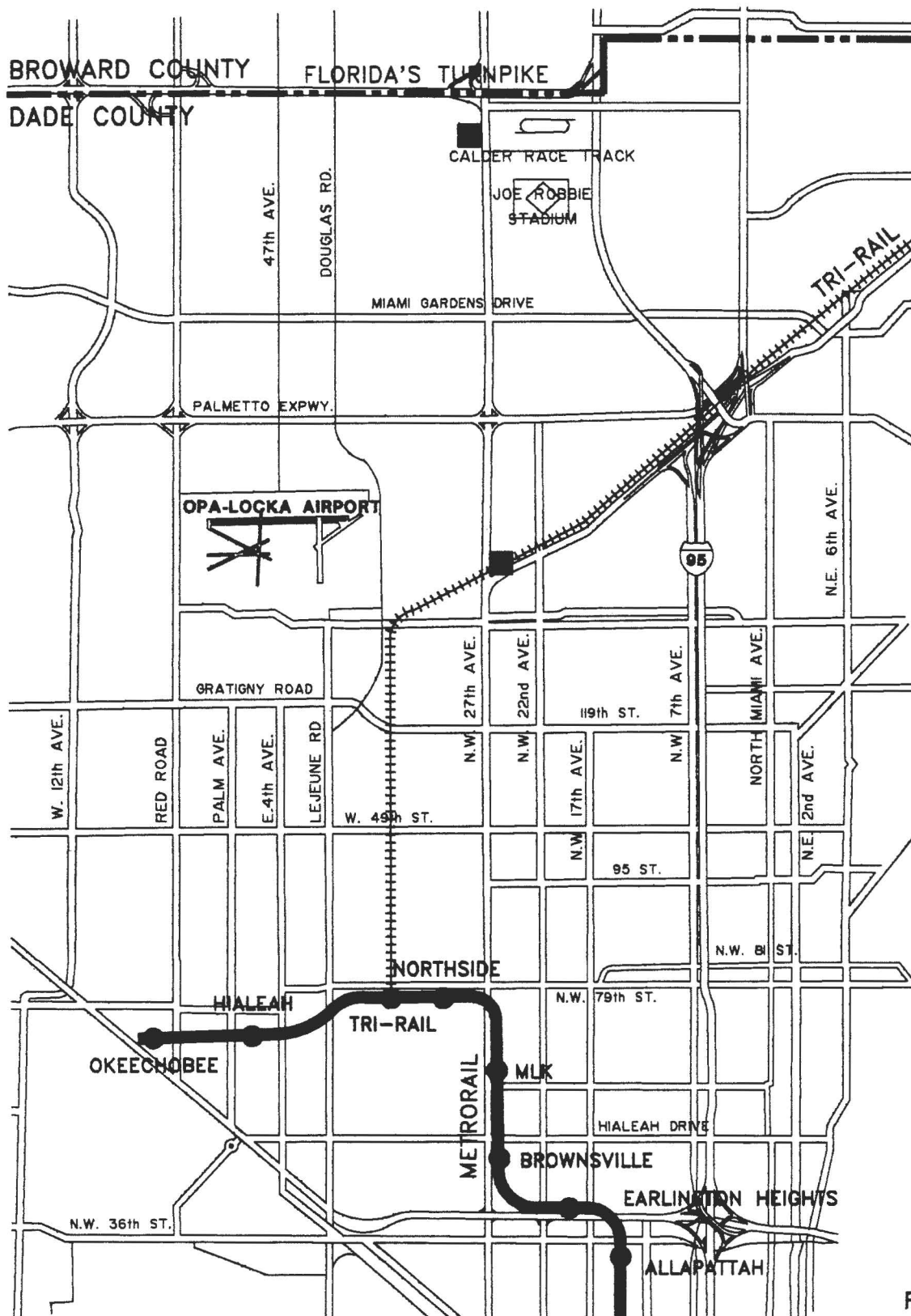
Depending on the recommended mode, some, or most, of these stations will be provided with a park and ride facility of some kind. Bus lane facilities would necessitate two or three park and ride facilities where a Metrorail alternative would provide parking at all stations. Although these are long range considerations that should be justified based on the cost of the overall transportation improvement, note, the NW 199th Street and NW 135th Street lots are consistent with the proposals in this report.

Site Location Analysis

Potential sites for the implementation of Park and Ride Lots were identified based on the results of a Systems Level and Project Level Analysis documented in the **Park and Ride Lot Plan**. The results indicate both the Joe Robbie Stadium (JRS)/Calder Raceway/NW 27th Avenue and the NW 135th Street/NW 27th Avenue Location Areas could support park and ride lot facilities. For each of these areas, Real Estate Data, Inc. (REDI) aerial photographs and plat books were reviewed and field survey performed. Initial review and surveys indicated two (2) sites in the JRS Area and seven (7) sites in the NE 135th Street Area. The original two sites for the JRS/Calder Area included the existing parking facilities at Joe Robbie Stadium and Calder Race Track. Information provided by the MDTA Leasing staff indicates these sites would be very difficult to lease, if it were possible to lease at all. Aerials were reviewed a second time and a vacant site at the southwest corner of the HEFT and NW 27th Avenue was identified.

The Project-Level evaluation for the NW 135th Street sites was inconclusive and is documented in Appendix A of the **Park and Ride Lot Plan**. The rating of the lots based on Park and Ride considerations yielded similar results with no "best" location indicated. A second review was performed and the site within the SR 9 right-of-way was selected for conceptual site development.

Figure 4 shows the location of the sites in relation to the NW 27th Avenue corridor.



LEGEND

■ = Potential Park & Ride Lot

FIGURE 4
POTENTIAL
PARK AND RIDE LOTS

**JUSTIFICATION REPORT,
NW 27th AVE.
CORRIDOR**

III. PARK AND RIDE LOT SYSTEM TREATMENTS AND COSTS

Introduction

Conceptual design details of the recommended plan improvements are presented in this section of the report. The improvements include the development of new park and ride facilities, provision of on-site transit service and Transportation Demand Management (TDM) options. The details are presented at a level which permits the Department to approach private landowners for lease negotiations and the subsequent design of system improvements.

Recommended park and ride lot treatments include:

1. The purchase/development of park and ride lots at
 - SW Corner HEFT/NW 27th Avenue
 - SR 9/NW 27th Avenue intersection
2. Use of existing 27th Avenue MAX and 95X transit service.
3. Potential traffic operations improvements
4. Development, encouragement and involvement in TDM programs and strategies

Park-and-Ride Facilities

Both of the potential park-and-ride lot sites will incur development costs for paving and grading and drainage improvements in addition to bus shelters, passenger amenities, signage and pavement marking improvements. The HEFT/NW 27th Avenue location will also incur purchase costs where the property is privately owned.

Site development cost estimates were analyzed for each site based on parcel size and rounding of 2010 demand to accommodate expansion. The 2010 demand projections are documented in the **Park and Ride Lot Plan** and indicate a need for 125 spaces at the JRS/Calder/NW 27th Avenue Location Area and 214 spaces at the NW 135th Street/27th Avenue Location Area.

Land costs for the HEFT/NW 27th Avenue site were estimated based on information obtained from the FDOT Right-of-Way Office. No land costs are associated with the SR 9/NW 27th Avenue site because it is within public right-of-way. Site development costs are based on \$1,800/space per the Park and Ride Lot Plans. Costs of bus shelters, passenger amenities, signage and pavement markings for each site is provided below. Passenger amenities include two (2) bus shelters, two (2) public phones, newspaper racks, benches and posted bus schedules/routes. Bus shelters are estimated at \$5,000 apiece (MDTA estimate) and amenities, on-site signage and pavement markings are based on estimates from the Justification Report developed for the Kendall Area Transit Park and Ride Lots prepared by Frederic R. Harris, Inc adjusted to 1992 dollars.

• HEFT/27th Ave	Land	\$730,000
	Paving, Grading & Drainage	\$240,000
	Preliminary Eng	\$48,000
	Shelters (2)	\$10,000
	Amenities, Pavement & Marking, On-Site Signs	<u>\$15,000</u>
	Total	\$1,403,000
• SR 9/27th Ave	Paving, Grading & Drainage	\$390,000
	Preliminary Eng	\$78,000
	Shelters (2)	\$10,000
	Amenities, Pavement & Marking, On-Site Signs	<u>\$25,000</u>
	Total	\$503,000

Conceptual design plans for each location are provided on Figures 5 and 6.

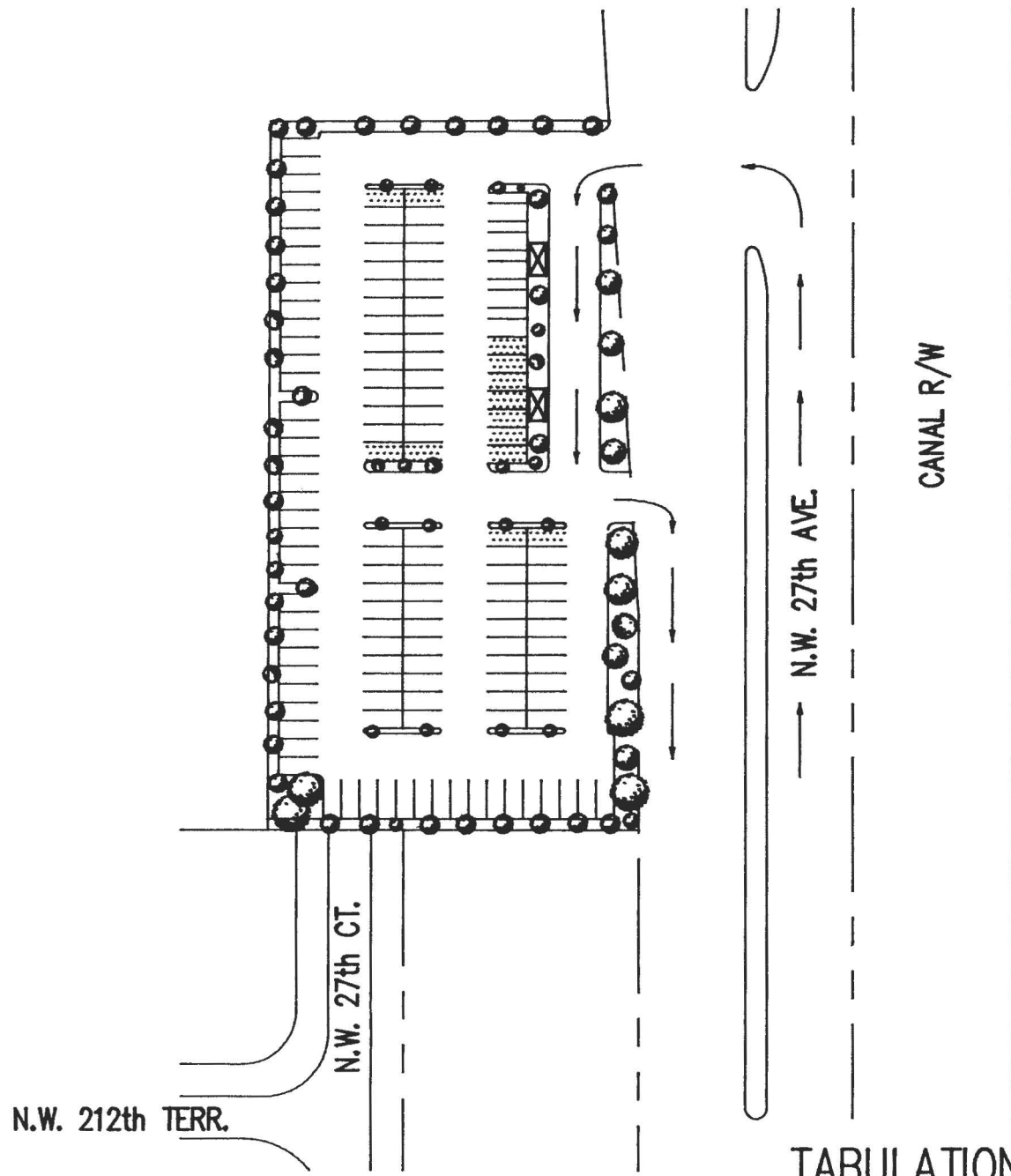
Security

Lot security is a critical element to the success of this proposal. A conceptual plan to provide a secure facility attractive to the commuter includes the installation of gates and a video system at each of the sites and the leasing of a roving security staff. Signage indicating security and video are in use will also be provided. Each lot would also be accessed by automatic gate systems where all vehicles would have to stop before entering or exiting the lot. Strategically placed video cameras would tape the vehicle, passenger and license plate. Additional cameras would be placed to obtain an overall view of the lots. The lots would also be protected by a roving security officer from 6AM to 8PM. The officer would travel between the two lots and inspect each site throughout the day. The cost to implement the video system and the annual cost of providing the security officer and vehicle is shown below.

Video Cameras (10/total)	\$800 /each	\$8,000
Weatherization (per camera)	\$1,000 /camera	\$10,000
VCR (1/lot)	\$1,100 /each	\$2,200
Quad Monitor (1/lot)	\$1,000 /each	\$2,000
Security Officer: Leased		
Mon-Fri 6AM to 8PM (Annual)	\$61,000 /year	\$61,000
Total Security System:		\$81,600

Transit Service

The proposed park and ride lot system would utilize existing NW 27th Avenue MAX and 95X service. Discussions with the MDTA Planning and Scheduling Office indicates there is sufficient capacity to accommodate new riders due to the development of the Park and Ride Lots. These result indicate there are no costs associated with additional transit service.



LEGEND

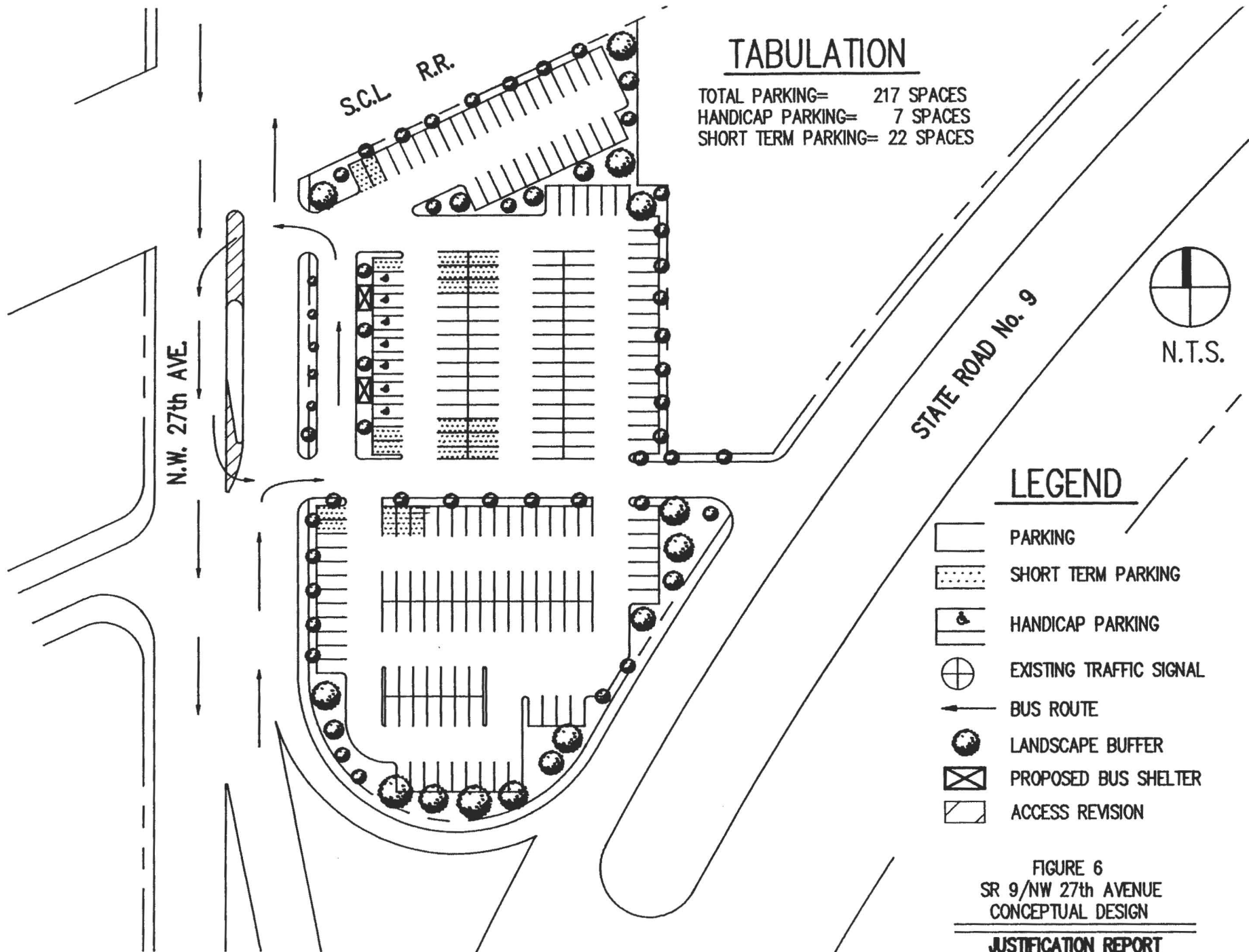
-  PARKING
-  SHORT TERM PARKING
-  HANDICAP PARKING
-  EXISTING TRAFFIC SIGNAL
-  BUS ROUTE
-  LANDSCAPE BUFFER
-  PROPOSED BUS SHELTER

TABULATION

TOTAL PARKING= 136 SPACES
 HANDICAP PARKING= 5 SPACES
 SHORT TERM PARKING= 13 SPACES

FIGURE 5
 HEFT/NW 27th AVENUE
 CONCEPTUAL DESIGN

JUSTIFICATION REPORT
 NW 27th AVE.
 CORRIDOR



Traffic Operations Improvements

Traffic operations improvements reviewed in this analysis include the provision of HOV facilities, contra flow bus lanes, reversible lanes, signal pre-emption, signal optimization and access and signage improvements. The analysis of providing a *Contra-flow/Reversible* lane is provided on Table 2. The table provides existing V/C ratios in both the peak and off peak direction. The reversible lane scenario is provided in the last two columns which show the revised capacity based on the reservation of one lane in the off peak direction. The V/C results indicate congestion exceeds 1.0 north of NW 103rd Street however is not severe (LOS E). South of NW 103rd Street, however, V/C ratios approach 2.0 which is severe and not a likely alternative.

The analysis of *HOV facilities* is provided on Table 3. The table provides much the same information as the analysis of reversible lanes except the reserved lane is in the peak direction and traffic volumes were adjusted to account for vehicles using the park and ride lots and other potential HOV lane users (vehicles with two (2) or more occupants). The results are similar but the scenario operates with much less congestion. Segments north of NW 103rd Street operate under capacity but the links south of NW 103rd Street operate at LOS F. The V/C ratios indicate far less congestion, however, and this alternative may have some potential. It is recommended no HOV lane be implemented at this date, however, it may be instituted at a later date if lot patronage is low.

Signal pre-emption was not analyzed in detail. Discussions with FTA Office of Mobility Enhancement indicated this type of application has only been successful within exclusive busways which is beyond the scope of this report. Additionally, national experience indicates the impact to shared and cross street traffic offsets any benefits.

Signal optimization improvements were reviewed, and the analysis indicates NW 27th Avenue is already synchronized and on the Dade County computer system. A Traffic Signal Listing provided by the Dade County Public Works Department indicates there are four (4) timing sections between NW 62nd Street and NW 207th Street including 43 traffic signals. The sections include:

Sect #	From	To
57	NW 62nd ST	NW 95th St
58	NW 103rd St	NW 119th St
59	NW 132nd St	NW 135th St
60	NW 151st St	NW 207th St

A review of the results shown on Table 2 and 3 indicate projected 1997 traffic on NW 27th Avenue is for the most part below capacity. The only segment with a V/C ratio over 1.0 is the last segment at 1.03. Considering the proposed plan will remove approximately 150 vehicles/peak hour in 1997 the V/C ratio would be less than 1.0. It is appropriate to assume that no corridor improvements are necessary.

Table 2 – 1997 AM Peak Hour Analysis of Contra-Flow/Reversible Lanes

Roadway	From	To	Total # of Lanes							Impact of Contra/Revers on General Use Lanes in the Off-Peak Dir	
				AM Peak Volum		AM Peak Capacity		V/C	V/C	NB (1)	NB (2)
				SB	NB	SB	NB			GU lanes V/C	GU Lanes V/C
NW 27th Ave	NW 207th St	SR 826	6LD	1,955	1,303	2,330	1,770	0.84	0.74	1,150	1.13
	SR 826	SR 9	6LD	1,963	1,309	2,330	1,770	0.84	0.74	1,150	1.14
	SR 9	NW 103rd St	6LD	1,971	1,314	2,330	1,770	0.85	0.74	1,150	1.14
	NW 103rd St	NW 95th St	4LD	1,469	979	1,520	1,150	0.97	0.85	530	1.85
	NW 95th St	MLK Station	4LD	1,560	1,040	1,520	1,150	1.03	0.90	530	1.96

Source: Frederic R. Harris, Inc.

(1) – Revised General Use (GU) Lanes to reflect a lane dedicated to the SB direction.

(2) – 1997 peak hour, off-peak direction volume divided by revised capacity

Table 3 – 1997 AM Peak Hour Analysis of HOV Lanes

Roadway	From	To	Total #of Lanes	AM Peak Volum AM Peak Capacity						Impact of Contra/Revers on General Use Lanes in the Off-Peak Dir	
				SB	NB	SB	NB	V/C	V/C	SB (1) GU lanes V/C	SB (2) GU Lanes V/C
NW 27th Ave	NW 207th St	SR 826	6LD	1,955	1,303	2,330	1,770	0.84	0.74	1,520	0.76
	SR 826	SR 9	6LD	1,978	1,319	2,330	1,770	0.85	0.75	1,520	0.77
	SR 9	NW 103rd St	6LD	1,971	1,314	2,330	1,770	0.85	0.74	1,520	0.77
	NW 103rd St	NW 95th St	4LD	1,469	979	1,520	1,150	0.97	0.85	690	1.15
	NW 95th St	MLK Station	4LD	1,560	1,040	1,520	1,150	1.03	0.90	690	1.25

Source: Frederic R. Harris, Inc.

(1) – Revised General Use (GU) Lanes to reflect a lane dedicated to the SB direction.

(2) – 1997 peak hour, peak direction volume, less park and ride users, less 25% vehicles
w/2+ occupants, divided by the revised capacity

Access improvements were reviewed at each of the two sites. The proposed site at the HEFT/NW 27th Avenue has been designed to utilize an existing median opening, however, a left turn bay should be provided at an estimated costs of \$20,000. The analysis of 1997 V/C ratios indicates the accessed roadway segment is operating below LOS D capacity and no signalization is warranted.

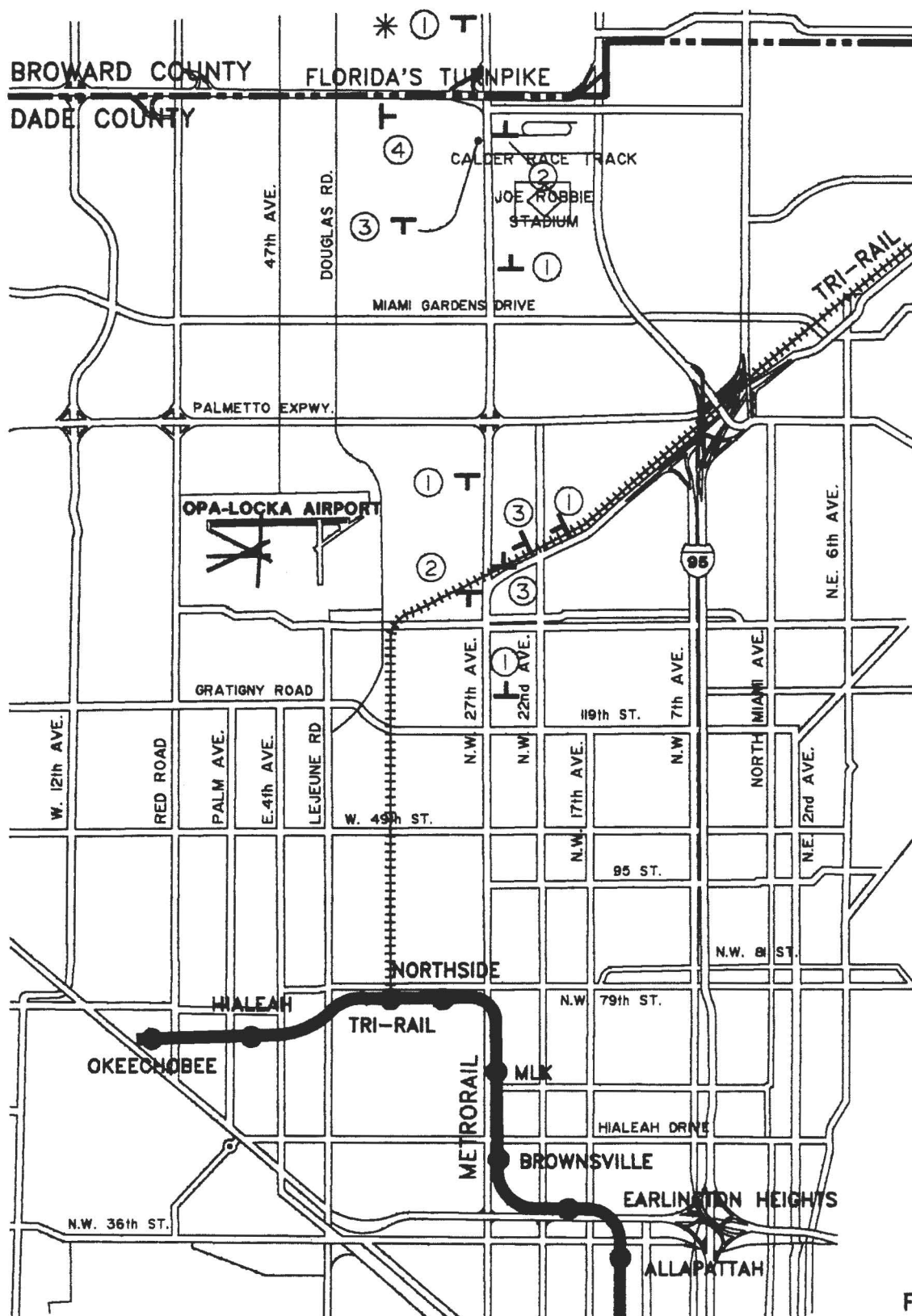
Access to the SR 9/NW 27th Avenue site will require median revisions. A left turn bay should be provided for southbound vehicles approaching the site and the median should be revised to allow westbound lefts out of the lot. Total estimated cost is \$30,000. No signalization is required because the proximity of the site to existing signals at Ali Babba Boulevard and SR 9 will provide sufficient gaps.

Signage improvements for the SW 27th Avenue project include guide signs indicating the location of park-and-ride facilities and amenities. Figure 7 and 8 provide a conceptual corridor signage plan and index. The cost of this plan is estimated at \$5,300.

Congestion Management Plan

Dade County is currently funding a **Transportation Management and Congestion Mitigation Study** to develop a countywide Congestion Management Plan (CMP). A number of recommended approaches to congestion management are now being study including specific applications relating to park and ride facilities. The **Congestion Management Plan Background Report** prepared by Barton-Aschman Associates, Inc. provides a number of Transportation Demand Management (TDM) tools that have the potential of encouraging direct use of park and ride lots or indirect use of the lots as staging areas. The recommended TDM measures include:

- Carpool Programs
- Subsidized or Reduced Transit Costs
- Vanpool Programs in associate with Transportation Management Areas
- Increased Park and Ride Lot Use
- Flextime
- Employee Paid Parking
- Employee Travel Allowances
- Congestion Pricing
- Subscription Bus Service
- Telecommuting
- Incorporate TDM as DIC Alternative
- Negotiated TDM Developer Agreements
- Mixed Use Developments
- Parking Supply Limitations
- Pedestrian Amenities at Suburban Centers
- Bicycle Facilities and Parking



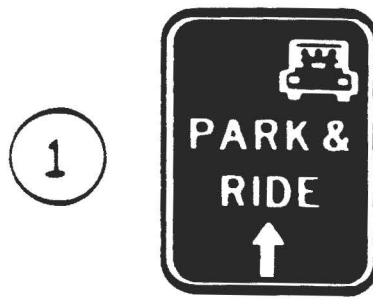
LEGEND

- ⊥ = Park & Ride Signage
- ① = Index

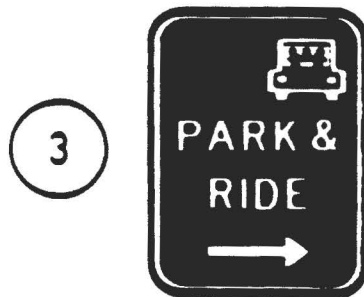
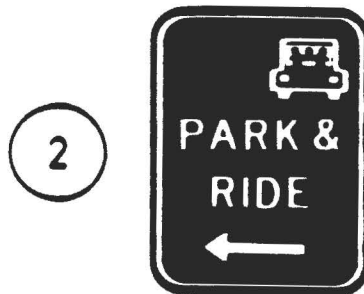
* Note:
Refer to figure 8
for sign detail

**FIGURE 7
CONCEPTUAL
SIGNAGE PLAN**

**JUSTIFICATION REPORT,
NW 27th AVE.
CORRIDOR**



04-2
20' x 20'



LEGEND

① = Index Numbers



1,2 & 3 SIGNAGE PROVIDED BY MUTCD.
SHOULD BE REVISED TO INICATE MULTIMODAL
PROVISIONS RATHER THAN CARPOOL ONLY.

FIGURE 8
CONCEPTUAL
SIGNAGE PLAN INDEX

JUSTIFICATION REPORT:
NW 27th AVE.
CORRIDOR

In addition to these TDM measures, the CMP also recommends required complimentary actions for TDM's that will be beneficial to the success of the proposed park and ride lot system. Marketing of the TDM's is currently funded by the Department through the services of Gold Coast Commuter Services (GCCS). GCCS has developed a marketing scheme for general multi-modal commuting through the use of the "Joe the Chameleon" advertising campaign. This program should be utilized to market the proposed NW 27th Avenue park and ride system. A sample of the advertising campaign is provided on Exhibit A. Other complimentary actions include the designation of Transportation Coordinators to implement and administer TDM's, the development of Transportation Management Areas and Trip Reduction Ordinances.

These types of applications are crucial to the success of the NW 27th Avenue park and ride lots. The analysis of traffic conditions indicates congestion is not a significant problem and drivers will not perceive a benefit from transit use without other incentives. All of the CMP actions, recommendations and programs should be utilized to the fullest in the implementation and operation of the proposed system. This is especially important for the GCCS to extend the marketing of the HEFT/NW 27th Avenue lot to Broward County. The programs are a no cost item to this project.

Facilitating the access of transit at park and ride location by pedestrians and bicyclists. To accomplish this, the accessibility of each station's location and design must be carefully considered. Insuring the safety and accessibility of pedestrian and cyclists may require the improvement of facilities both within and near to park and ride lots. The minimum warrants specified in Section 4c of the Manual on Uniform Traffic Control Devices should be used to guide the placement of pedestrian markings and controls. Secure bicycle parking should be provided through the installation of permanently installed racks (preferably covered) or lockers. Five percent of the automobile parking capacity should be provided in bicycle parking units.

All lots will be developed to meet the requirements of the Americans with Disabilities Act.

Benefit Analysis

A revised analysis of benefits was performed based on the combined impact of the two proposed lot locations. Where the Dade County Park and Ride Lot Plan assessed all of the lots on individual merit, this analysis combines the impacts of the HEFT/NW 27th Avenue and the SR 9/NW 27th Avenue lots. Figure 9 shows the peak hour traffic removed from the system during one hour of the AM peak period.

An analysis of impacts was performed for 1997 based on the volumes shown on Figure 9 and 1997 traffic conditions. The results indicate the proposal would:

Reduce Annual Vehicle Miles of Travel by:	1,810,690	miles
Reduce Annual Fuel consumption by:	69,680	gallons
Reduce Annual Carbon Monoxide Emissions by:	17,440	pounds
Reduce Annual Hydrocarbon Emissions by:	1,360	pounds
Reduce Annual Nitrous Oxide Emissions by:	7,000	pounds
Reduce Annual Vehicle Hours of Travel by:	47,740	hours
Reduce Annual person Hours of Travel by;	17,390	hours

Benefits were also assessed based on financial concerns following the procedures provided in the **FDOT Park and Ride Lot Manual** and the **Dade County Park and Ride Lot Plan** the results indicate a systemwide annual benefit of \$3,128,000. A breakdown of the benefits includes:

	Annual Travel Time Savings	\$145,000
	Annual Vehicle Operating Costs	\$362,000
	Annual Accident Savings	\$2,799,000
less:	Annual User Increased Transit Cost	\$178,000
	TOTAL BENEFIT	\$3,128,000

DADE CO.



**JUSTIFICATION REPORT:
NORTH DADE COUNTY
NW 27th AVE CORRIDOR**

LEGEND

- 35** • PEAK HOUR TRAFFIC REMOVED
-  • NW CORRIDOR



NOT TO SCALE
DATE: 2/08/93



EXHIBIT A



Gold Coast
Commuter Services

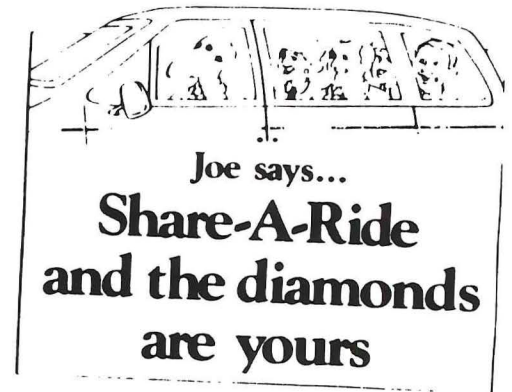
6261 N.W. 6th Way, Suite 100

Fort Lauderdale, FL 33309

Broward: 525-RIDE

Dade/Palm Beach: 1-800-234-RIDE

Fax: (305) 776-7592



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Gold Coast
Commuter Services



A summary of all costs described in this report is provided below. Additional costs for preliminary engineering and site maintenance are also provided.

Land Costs	\$730,000
Site Development Costs	\$630,000
Preliminary Eng On-site	\$126,000
Site Maintenance	\$20,000 (Annual)
Security:Video	\$22,200
Security	\$61,000 (Annual)
Signage	<u>\$5,300</u>
TOTAL STARTUP COSTS	\$1,594,500
ANNUAL COSTS	\$81,000

Based on a 20 year life span, 7% discount rate and residual value on the land the Benefit/Cost Ratio is 15.18.

Revenues

Revenues include farebox revenue expanded ridership on the NW 27th Avenue MAX and the 95X additional revenue will equal \$178,000 annually in 1997 with the potential for \$198,000 annually by 2010. No income is assumed for parking at the Park & Ride lots, from advertising or concessions.

Implementation

The implementation schedule generally includes three timeframes.

- Pre-start activities
- Construction activities
- Post-start activities

Pre-start activities include coordination with landowners to secure a leasing agreement, final design of park-and-ride facilities; construction of traffic operations improvements; and marketing surveys and promotion. It is recommended the Department use in-house resources to provide the necessary services required to negotiate a purchase for the HEFT/NW 27th Avenue site.

Additional functions would include appraisals of recommended park-and-ride sites, assistance during negotiations and/or litigation, and assistance during selection of alternate sites if the recommended sites are substantially higher than preliminary estimates provided by the Department.

The Department should discuss with Gold Coast Commuter Services promotion of the facilities. The development of brochures, surveys, signs, and radio advertisement spots. Door hangers (i.e. brochures and surveys) would be distributed to communities within the service area. Marketing and promotion should also be assisted by MDTA.

Construction activities include development of park-and-ride facilities and traffic operation improvements. It is assumed that all permit approvals and plan reviews would have been obtained during the design or bid procurement phase.

Post-start activities include a continuance of the marketing campaign; monitoring of NW 27th Avenue MAX ridership; detection and resolution of problems; monitoring of the project's success; and planning of future expansion improvements.

Marketing

An active marketing campaign is critical to the success of this proposal and would need to be implemented in both the north Dade County and South Broward County areas. Marketing would need to continue for a minimum of 1-2 months after project start-up in order to maximize public awareness of the project. It is anticipated that subsequent to the initial marketing period, the best method of promotion would be through "word of mouth". Therefore, it is critical that performance standards be high and reliability be maintained – particularly during the formative stages of the project. Follow-up telephone and on-board surveys should be conducted to assess the project's success and to determine how the service could be improved or expanded.

Continued marketing should be utilized through the "Joe the Chameleon: advertising campaign and with MDTA media.

Monitoring of Lot Usage

A continuing monitoring of bus ridership and lot usage should be instituted with results summarized in a monthly report. The monthly report should be inclusive of the following information:

- Summary of project Status
- Express Bus Ridership Levels
- Vanpool Ridership Levels
- Park-and-Ride Facility Usage
- Problem Identification and Proposed Methods to Resolve Such Problems
- Schedule Adherence and Reliability
- Minutes of Meetings
- Cashflow Assessment

IV. SUMMARY

The results of the Justification Report indicate the proposed NW 27th Avenue park and Ride system is a feasible Transportation Demand Management alternative in anticipation of future development of capital intensive transit improvements. The analysis indicates the system will carry as many as 143,000 new transit riders by 1997 and over 158,000 by 2010. Note, these figures are based on the development of a Park and Ride Lot system and TDM measures and do not include the development of capital intensive multi-modal projects.

The lot system would be developed as complementary facilities for the existing NW 27th Avenue MAX and a rerouting of the 95X route to serve the HEFT/NW 27th Avenue lot. The lots should be developed as attractive to the commuter including landscaping, passenger amenities and be secure. The site will be accessed through entrance gates with video cameras recording access activities.

An analysis of site costs indicates the project could be developed for approximately \$1,594,400 with annual maintenance costs of \$20,000 and security costs of \$61,000. Based on these results the project should move forward to the programming and implementation stages.

