FINAL REPORT

FOR

I-95 DUPONT PLAZA RAMPS

ALTERNATIVE FEASIBILITY STUDY

Prepared By:

CARR SMITH
ASSOCIATES
ENGINEERS ARCHITECTS PLANNERS

For:

DDA
DOWNTOWN DEVELOPMENT AUTHORITY

SEPTEMBER 1993

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INTRODUCTION

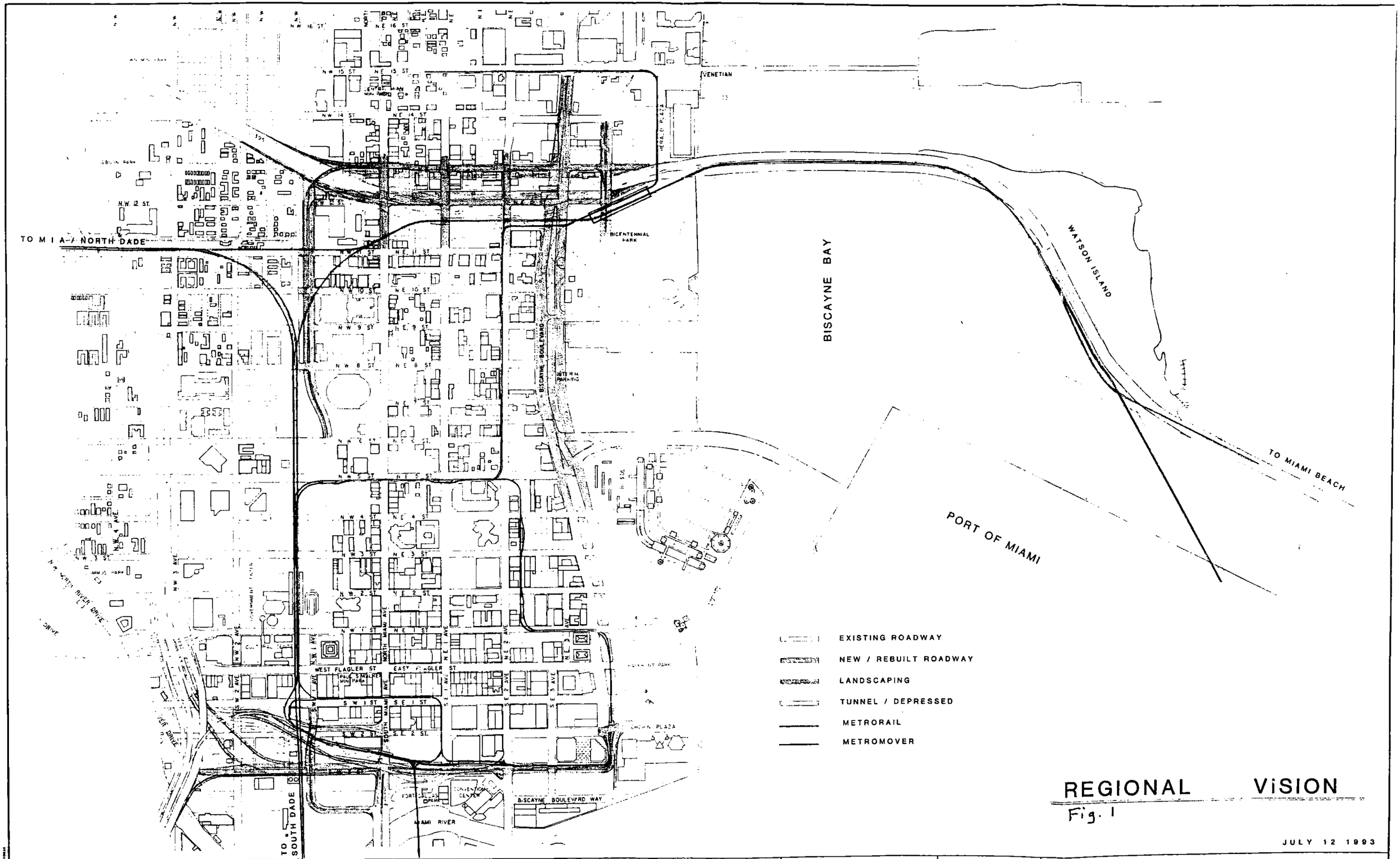
The I-95 Distributor Ramps located in the southern end of the Downtown Miami, also known as the Dupont Plaza area, were designed and constructed in the 1960's. These ramps provided access between the Dupont Plaza area and I-95. Approximately 20 years later, in the mid 1980's, modifications to these distributor ramps, also known as the Bifurcated Ramps project, were designed to provide access to and from I-95 further east at S.E. 3rd Avenue. There were also provisions for future ramps to and from anticipated parking garages located between S.E. 2nd Avenue and S.E. 3rd Avenue and S.E. 4th Street and S.E. 2nd Street if and when they were needed. To date no improvements have been made in these area of Downtown Miami and the bifurcated ramp project has not been constructed.

The objective of the I-95 Dupont Plaza Alternative Feasibility Study was to develop a preliminary Boulevard concept, similar to Biscayne Boulevard located on the eastern edge of the downtown area, and determine the feasibility of reconstructing the existing I-95 Distributor Ramps that currently access Downtown Miami via the Dupont Plaza area. This study represents an opportunity to evaluate the existing and proposed traffic patterns into and out of Downtown Miami in this area and to determine how these patterns can be improved. This study will not focus only on the local Dupont Plaza area but also on the Downtown Miami region as a whole, thereby improving traffic patterns throughout the downtown area.

Several construction projects, some of which have already begun, will change and improve traffic patterns as they exist today. The S.R. 836 exit at N.W. 8th Street will provide an additional point of access to Downtown Miami. The Brickell Avenue Bridge, and soon to follow the Second Avenue Bridge, will provide better access between the Dupont Plaza area and the Brickell area.

Considering the regional impacts to Downtown Miami, Carr Smith Associates(CSA) has recommended a concept alternative that will compliment Biscayne Boulevard and encircle the downtown area, leaving no destination more than a few blocks from a major arterial. This alternative will include S.W. 1 Avenue and S.W. 3rd Street into the downtown street grid system, creating an arterial loop surrounding Downtown Miami, making it possible for traffic to travel along N.W./S.W. 1st Avenue between I-395 and S.W. 3rd Street; to travel along S.W./S.E. 3rd Street between S.W. 1st Avenue and Biscayne Boulevard and to travel along Biscayne Boulevard from S.E. 3rd Street north. See Figure 1 for an illustration of this Regional Vision.

From a local perspective, this study has determined the feasibility of reconstructing the existing I-95 Distributor Ramps that are currently located between the J.L. Knight Convention Center and International Place and, instead, to construct S.W. 3rd Street as



REGIONAL VISION

Fig. 1

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a landscaped boulevard. The configuration of the ramps, as they exist today, visually blocks the views of the downtown area and Biscayne Bay; creates dark nooks and crannies; blocks future development in the Dupont Plaza area and impedes smooth traffic flow throughout the downtown area. For function and beautification, as many I-95 Distributor Ramps as possible will be realigned and reconstructed or removed.

To date, virtually no development has taken place south of these distributor ramps. Much of the current traffic to and from I-95 uses South Miami Avenue, which is a narrow street and not sufficient to handle the traffic volumes at an acceptable level of service. Additionally, two major assets in the Dupont Plaza area are not being utilized properly, they are the recently constructed Miami Avenue Bridge and widened N.W. 1st Avenue. A major benefit of this study will be to maximize these two assets and improve traffic flow in this area by eliminating funnels and routing traffic to larger arterials that can better handle the volumes. Several additional topics were also be addressed as part of this study. A critical consideration aside from construction costs was the feasibility of maintaining traffic while the existing ramps are being reconstructed or removed; traffic to and from I-95 must be maintained at all times. Consideration was also given to the impacts of the Boulevard within this area. Pedestrian facilities are a critical element in any downtown area and were addressed in this study.

Many alternatives were initially considered. While several alternatives were refined others were discarded as they were not as functional or had "fatal flaws". The two most viable alternatives as well as the No Build Alternative were presented to and evaluated with representatives of the Florida Department of Transportation (FDOT), the City of Miami, the Downtown Development Authority (DDA) and the DDA Study Steering Committee. These three alternatives were described in detail in the Milestone 1 Technical Memorandum previously submitted to DDA, and are include in Appendix A of this report. As a result of the coordination and evaluation by representatives of the above agencies, the Concept Alternative was finalized and refined.

BOULEVARD CROSS-SECTION

Several boulevard cross-sections were developed for this study. Due to the complexities and constraints of right-of-way, grade separation, I-95 ramps and Metromover piers, no one cross-section can be defined. This project has been subdivided into three segments to allow for some length of "typical" roadway as well as to provide DDA flexibility in choosing alternatives which provide improved traffic flow within these sections. These segments are defined as follows. ***Segment 1*** *begins at Biscayne Boulevard and Chopin Plaza and ends at S.E. 2nd Avenue and S.E. 3rd Street.* ***Segment 2*** *begins at S.E. 2nd Avenue and continues along S.E. 3rd Street to S. Miami Avenue.* ***Segment 3*** *begins at S. Miami Avenue and continues west S.W. 2nd Avenue.* ***Segment 4*** *includes the I-95 Distributor Ramps west of S.W. 2nd Avenue to I-95.*

The cross-section within this study area includes travel lanes measuring twelve feet in width with raised medians measuring twenty-six feet in width. This median width provides for required future dual left turn lanes with approximately four feet remaining as a traffic separator. Also included is two foot curb and gutter with approximately ten feet of sidewalk. Due to the constraints within this downtown area, no separate bicycle facilities have been included.

DESIGN GUIDELINES:

The following design guidelines were used for development of the alternatives for this study and are consistent with criteria used by FDOT and Dade County Public Works Department.

- *Boulevard Design Speed - 35 MPH*
- *Ramp Design Speed - 30 MPH to 35 MPH*
- *Travel Lanes Width - 12 feet*
- *Median Width - 26 feet*
- *Curb and Gutter - Type F; Type E (median)*
- *Sidewalks - 10 feet*
- *Corner Radii - 35 feet*
- *Clear Recovery Zone - 4 feet from face of curb (desirable); 1.5 feet (minimum)*
- *Maximum grade - 5.5 %*
- *Vertical Clearance - 16.5 feet (minimum)*
- *Vertical Curvature - K_{CREST} = 50 to 160 (desirable) (various speeds)*
- *Vertical Curvature - K_{SAG} = 40 to 70 (desirable) (various speeds)*

CONSTRAINTS:

As previously mentioned, this study was subdivided into three segments. The physical constraints identified within each segment are described below.

Segment 1

The physical constraints in this segment consist of Metromover piers located along the south and east sides of the First Union Financial Center. The straddle bent at Metromover pier #P191, which was not constructed according to design plans. This bent will have to be modified to provide for the Concept Alternative. There is also restricted right-of-way between the Interamerican Building and the First Union Financial Center; this right-of-way measures approximately 100' in width.

Segment 2

The physical constraints in this segment consist of Metromover piers and the restricted right-of-way between the J.L. Knight Center and the International Place. Both of these buildings have service roads and are currently connected with an at-grade access roadway and pedestrian crossing.

Segment 3

The physical restraints in this area consist of existing I-95 ramps to remain, Metromover piers, Metrorail maintenance building and line, and Florida Power and Light buildings.

Segment 4

The physical restraints in this area consist of existing I-95 ramps to remain.

CONCEPT ALTERNATIVE

The concept alternative includes ramp realignment/reconstruction while providing the boulevard theme envisioned by DDA. See Figure 2 for an overview of the Concept Alternative.

Beginning at Biscayne Boulevard on the east, this alternative includes a four-lane divided roadway to the south of the First Union Financial Center and Metromover piers. A signalized intersection will be developed at S.E. 3rd Street and Biscayne Boulevard where three northbound lanes from Biscayne Way join two eastbound lanes and four

N.W. 3 ST.
LUMMUS PARK
N.W. NORTH RIVER DRIVE
DRIVE
N.W. 3 AVE
GOVERNMENT CENTER
N.W. 2 AVE
CULTURAL CENTER
S.W. 5 AVE
S.W. NORTH
RIVER DRIVE
MIAMI RIVER
JOSE MARTI RIVERFRONT PARK
N.W. 3 ST.
N.E. 3 ST.
N.W. 2 ST.
N.E. 2 ST.
N.W. 1 ST.
N.E. 1 ST.
N.W. 1 AVE
NORTH MIAMI AVE.
N.E. 1 AVE.
N.E. 2 AVE
N.E. 3 AVE
WEST FLAGLER ST.
EAST FLAGLER ST.
S.W. 1 AVE
PAUL S. WALKER MIN. PARK
S.E. 1 AVE
S.E. 2 AVE
S.E. 3 AVE
S.W. 1 ST.
S.E. 1 ST.
SOUTH MIAMI AVE.
S.W. 2 ST.
S.E. 2 ST.
S.W. 3 ST.
BAYFRONT PARK
CHOPIN PLAZA
FORT DALLAS PARK
CONVENTION CENTER
BISCAYNE BOULEVARD WAY
MIAMI RIVER
S.E. 6 ST.
BRICKELL PARK
S.W. 7 ST
S.E. 7 ST
CLAUGHTON
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lanes continue north on Biscayne Boulevard. From S.E. 2nd Avenue to S. Miami Avenue a six-lane divided at-grade roadway is proposed along S.E. 3rd Street. A signalized intersection will be developed at S.E. 1st Avenue where two northbound lanes from South Miami Avenue continue northbound and access Occidental Parc Hotel. Both the J.L. Knight Center and the International Place will have one-way service access. As part of this alternative, the existing pedestrian walkway between the J.L. Knight Center and International Place will be relocated to the third level of the J.L. Knight Center and one level below the Metromover line along S.W. 3rd Street. The staircase located on the north side of the J.L. Knight center will be redesigned to provide for access road and pedestrian walkway along S.W. 3rd Street. S.W. 1st Court will not have direct access to S.W. 3rd Street. The ramps will be partially realigned/reconstructed to provide I-95 southbound ramps from South Miami Avenue at both S.W. 2nd Street and S.W. 3rd Street, I-95 northbound ramps from S.W. 1st Avenue at both S.W. 2nd Street and S.W. 3rd Street. The northbound I-95 exit ramp will end at South Miami Avenue and S.W. 3rd Street and the I-95 southbound exit ramp will end at S.W. 1st Avenue and S.W. 3rd Street. In other words, I-95 Distributor ramps to and from the south are accessed at South Miami Avenue and the I-95 Distributor ramps to and from the north are accessed at S.W. 1st Avenue. This alternative also includes extending S.W. 1st Avenue south to S.W. 4th Street. S.W. 4th Street will be constructed from S.W. 2nd Avenue to South Miami Avenue. This alternative provides a feasible and desirable controlled access "boulevard" along S.W./S.E. 3rd Street from Biscayne Boulevard to S.W. 2nd Avenue. See Figures 3 through 6 for detailed illustrations of the Concept Alternative by segment.

TRAFFIC ANALYSIS

To establish the feasibility of this project with respect to its ability to accommodate anticipated traffic volumes, estimates of future traffic were developed and intersection capacity analyses were performed. This section briefly describes the elements of this task, and provides preliminary results. For a detailed description of this task see Appendix B of this report.

Existing traffic volume data is generally the seed for developing future traffic estimates. Although requests were made of several agencies, no existing traffic volume data for the facilities in question were found. CSA therefore arranged to have AM and PM peak period turning movement counts performed at five intersections to develop a basis for traffic estimates. Once the existing traffic volumes and patterns were established, traffic volumes were assigned to the proposed configuration, providing an estimate of traffic conditions if the proposed project was in place today.

Future traffic estimates were based on the existing traffic volumes and traffic assignments from the Dade County FSUTMS model. Traffic assignments for the years

I - 95 SOUTHBOUND

I - 95 NORTHBOUND

S W N RIVER DRIVE

S W 1 ST STREET

S W 2 ND AVENUE

S W 4 TH STREET

S W 3 RD STREET

S W 2 ND STREET

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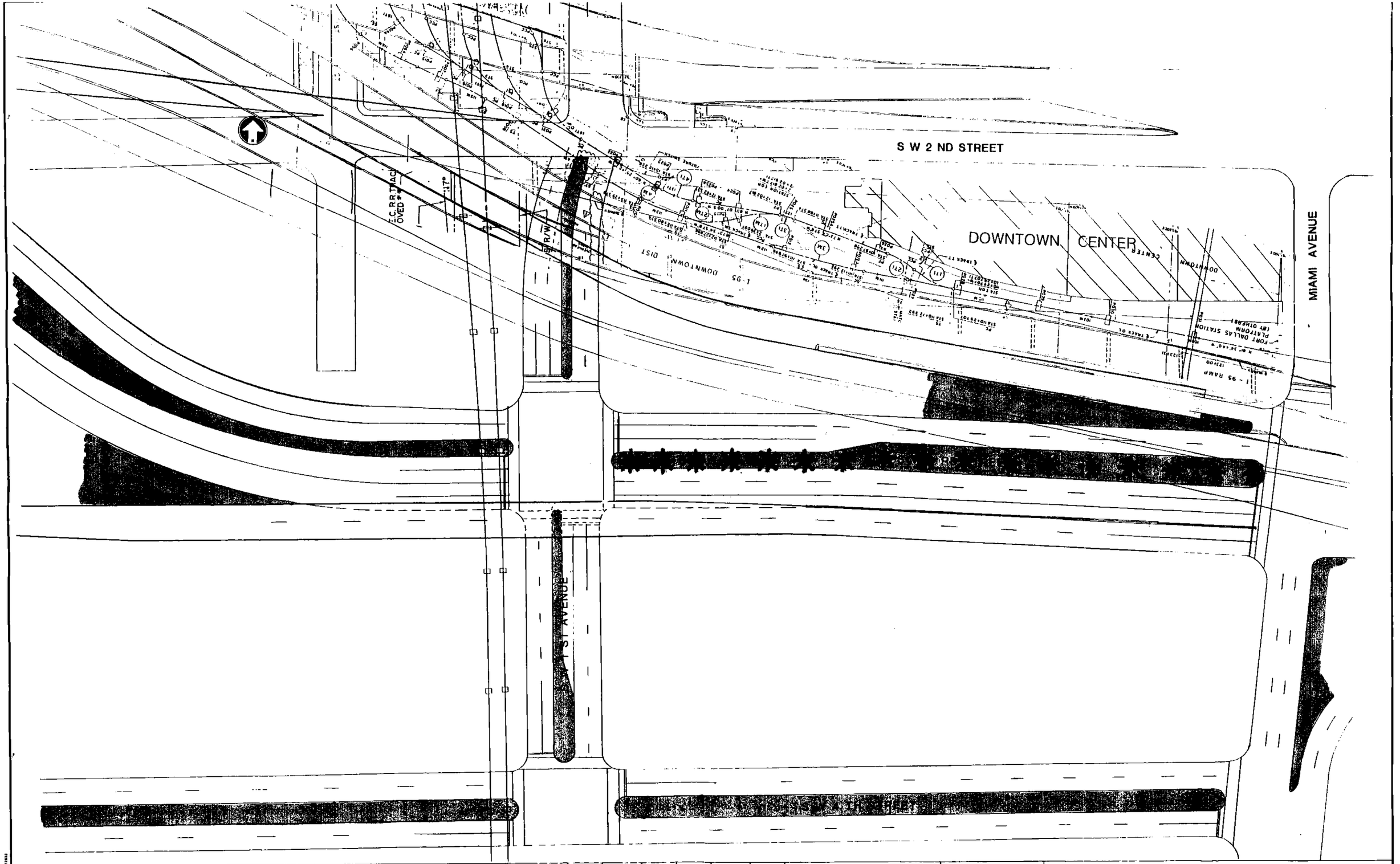

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S E 2 ND STREET

SOUTH MIAMI AVENUE

S E 1 ST AVENUE

INTERNATIONAL PLACE

HOWARD JOHNSONS

S E 2 ND AVENUE

I-95 RAMP

OCCIDENTAL PARC HOTEL

JAMES L KNIGHT CONVENTION CENTER

HYATT HOTEL

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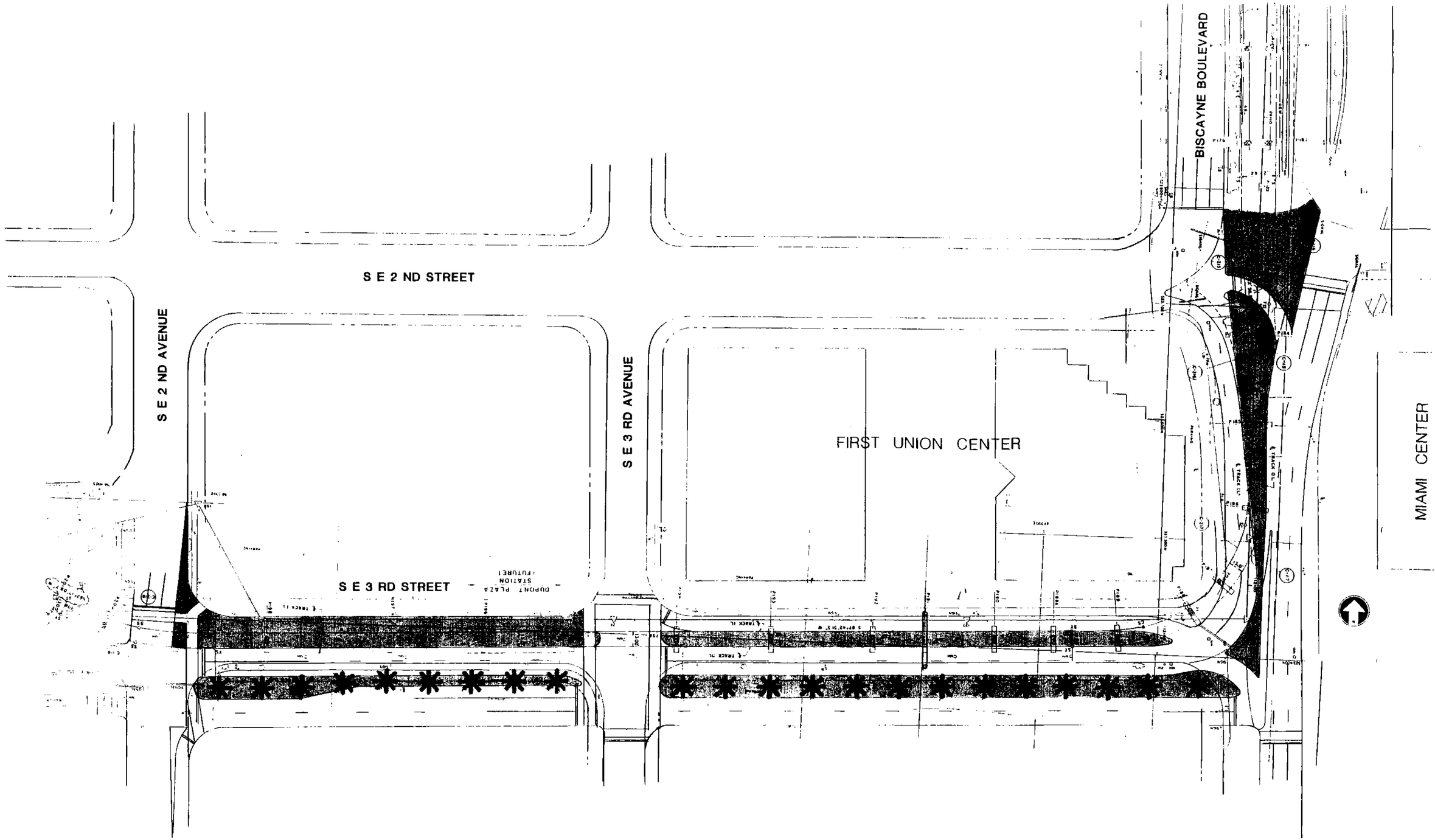

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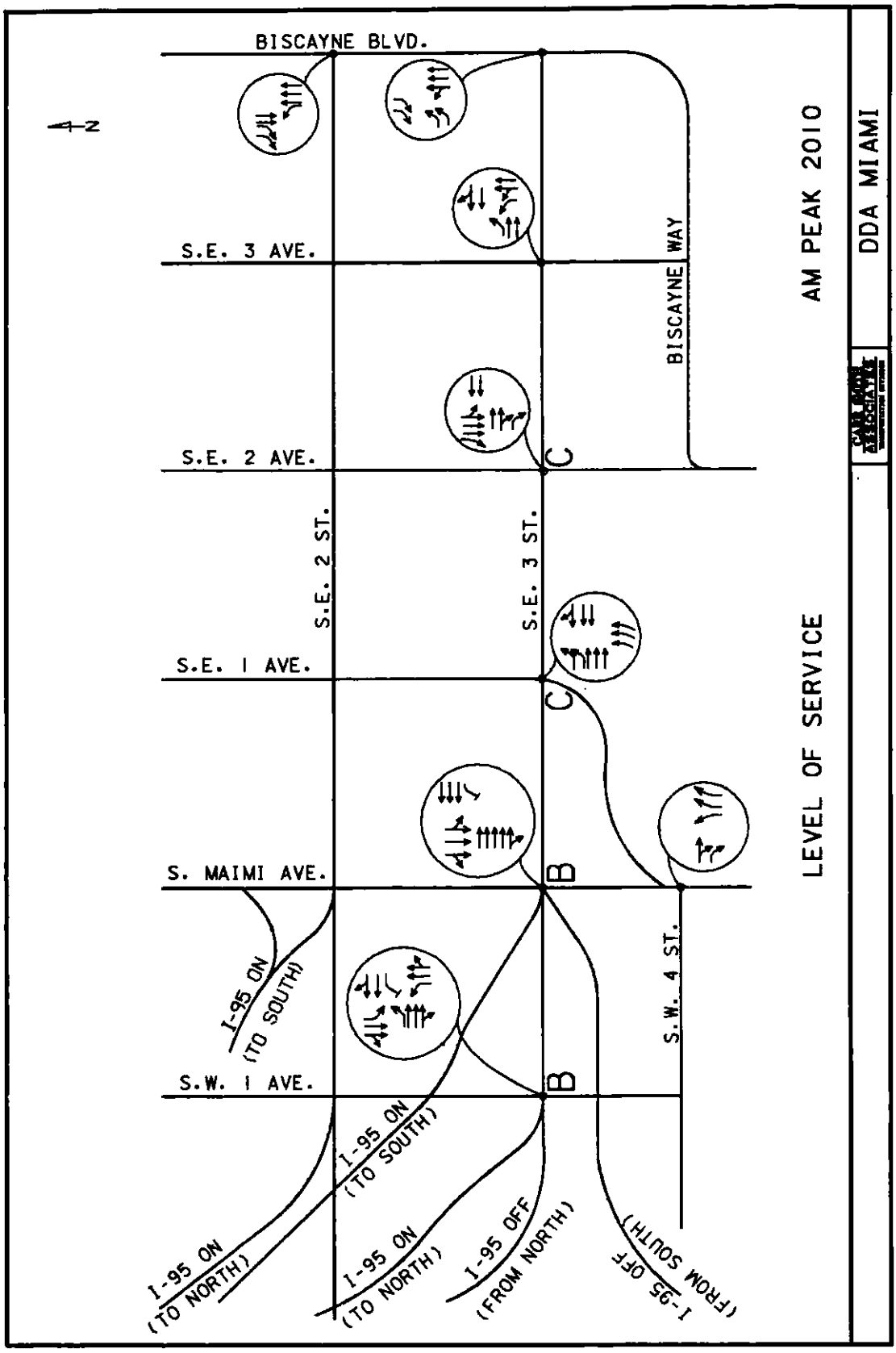
1986 and 2010 were obtained from the Dade County Metropolitan Planning Organization (MPO). Based on these assignments, a growth rate was established and applied to the existing volume estimates for the proposed configuration to develop year 2010 AM and PM peak-hour turning movement projections at critical intersections. In general, existing I-95 ramp traffic volumes were increased by 50 percent to/from the north and 20 percent to/from the south.

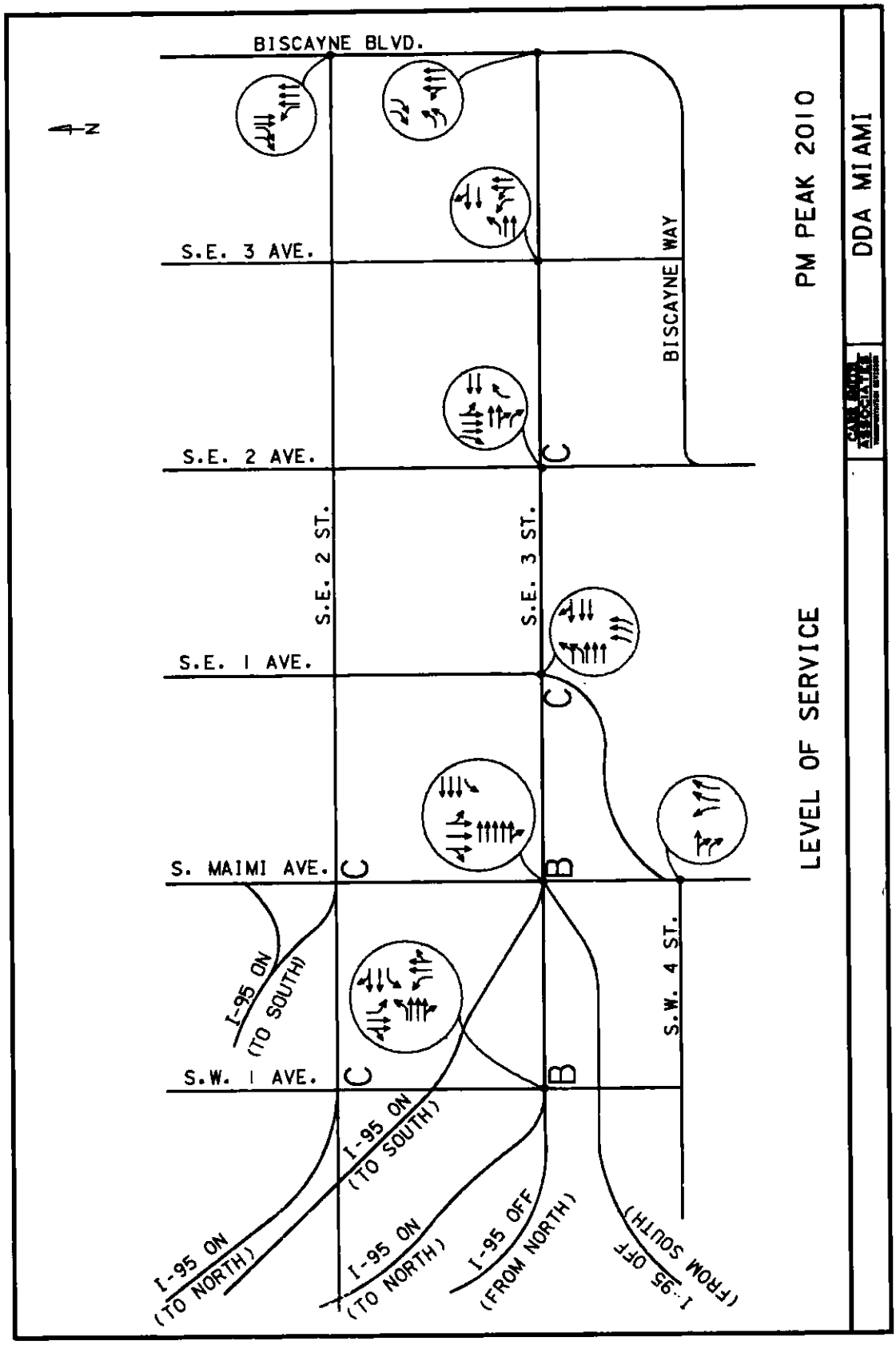
Signalized intersection analyses were performed at several critical project intersections to establish the operational capabilities of the project under future traffic conditions. The operational analyses was performed per the 1985 Highway Capacity Manual procedures for signalized intersection analysis. The results indicate that all of the intersections analyzed operate at Level Of Service "C" or better, well within the acceptable level of service "D". The analysis of these intersections was performed with sensitivity to pedestrian considerations and operation within the context of the downtown signal system. See Figure 7 for the AM Peak Level Of Service and Figure 8 for the PM Peak Level of Service at these intersections.

It should be noted that the level of effort required to develop future traffic estimates on which to base the final design of such a project can be quite extensive. The effort for this project was less extensive and heavily reliant upon available data. However, the general conclusion that this project could accommodate substantially greater traffic volumes than exist today is indicative of the project's feasibility. Furthermore, a cursory evaluation of the surrounding roadway system tends to suggest that this facility's capacity to accept traffic would exceed the capacities of the surrounding roadway to feed traffic. This further solidifies the conclusion that the project is feasible.

CONCEPT ALTERNATIVE FEASIBILITY

The horizontal and vertical requirements for the Concept Alternative were evaluated to ensure the absence of any "fatal flaws". This alternative was developed and evaluated using the previously described physical constraints, plans for existing I-95 Distributor Ramps, plans for proposed Bifurcated Ramps, plans for J.L. Knight Center, plans for Metrorail and Metromover lines. FDOT and American Association of State Highway and Transportation Officials (AASHTO) desirable design criteria were also used to develop and evaluate the feasibility of this alternative. CSA has determined that horizontal and vertical geometry can be designed to provide this alternative and meet appropriate design criteria. See Appendix C for ilustrations of horizontal and vertical alignments for the concept alternative.


BISCAYNE BLVD.
S.E. 3 AVE.
S.E. 2 AVE.
S.E. 1 AVE.
S. MAIMI AVE.
S.W. 1 AVE.
S.E. 2 ST.
S.E. 3 ST.
S.W. 4 ST.
BISCAYNE WAY
I-95 ON (TO SOUTH)
I-95 ON (TO NORTH)
I-95 OFF (FROM NORTH)
I-95 OFF (FROM SOUTH)
C
C
B
B
LEVEL OF SERVICE
AM PEAK 2010
DDA MIAMI


BISCAYNE BLVD.
S.E. 3 AVE.
BISCAYNE WAY
S.E. 2 AVE.
S.E. 2 ST.
S.E. 3 ST.
S.E. 1 AVE.
S. MAIMI AVE.
S.W. 4 ST.
S.W. 1 AVE.
I-95 ON (TO SOUTH)
I-95 ON (TO NORTH)
I-95 ON (TO SOUTH)
I-95 ON (TO NORTH)
I-95 OFF (FROM NORTH)
I-95 OFF (FROM SOUTH)
LEVEL OF SERVICE
PM PEAK 2010
DDA MIAMI

Right-of-way will be required to construct the Concept Alternative. Proposed ramps B, C and D will require some acquisition of right-of-way while the removal of existing ramps 1, 2, 5 and 6 will provide additional right-of-way for development. Some swapping of this right-of-way may be possible with the FDOT and City of Miami. Right-of-way will also be required along S.E. 3rd Street from the J.L. Knight Center to Biscayne Boulevard. The J.L. Knight Center is owned by the City of Miami. The property east of S.E. 2nd Avenue is currently privately owned and development incentives may be constructive for developing the boulevard in this area. Acquisition of right-of-way is also needed for construction of S.W. 4th Street.

A major factor used to determine the feasibility of the Concept Alternative was constructability with regard to traffic control during construction. Once CSA began additional study concerning constructability it became clear that this was not a "fatal flaw" and was workable. See Figure 9 for the traffic control concept. The following is a description of the Traffic Control Concept for construction.

Phase I

Construct Ramp D and majority of Ramps B and C.
Construct S.W. 4th Street and S.W. 1st Avenue extension south of existing Ramp 1.
Construct S.E. 3rd Street east of S.E. 2nd Avenue.

Phase IA

Maintain one-lane of traffic on existing Ramp 2 while completing one-lane of Ramp C.
Construct two-lanes of temporary pavement between South Miami Avenue and S.E. 2nd Avenue.

Phase II

Open Ramps D and one-lane Ramp C to traffic from I-95. Maintain westbound traffic to I-95 on existing Ramps 4 and 5.
Remove existing Ramps 1, 2, 6 and Dupont Plaza ramps.
Complete Ramps B and remaining lane of Ramp C.
Construct S.E. 3rd Street from South Miami Avenue to S.E. 2nd Avenue.

N.W. 3 ST.
N.W. NORTH RIVER DRIVE
DRIVE
LUMMUS PARK
N.W. 3 AVE.
GOVERNMENT CENTER
N.W. 2 AVE.
CULTURAL CENTER
N.W. 1 AVE.
N. W. 3 ST.
N. E. 3 ST.
N. W. 2 ST.
N. E. 2 ST.
N. W. 1 ST.
N. E. 1 ST.
NORTH MIAMI AVE.
N.E. 1 AVE.
N.E. 2 AVE.
N.E. 3 AVE.
WEST FLAGLER ST.
EAST FLAGLER ST.
S.W. 5 AVE.
S.W. NORTH RIVER DRIVE
S.W. 2 AVE.
S.W. 1 AVE.
PAUL S. WALKER MIN. PARK
S.E. 1 AVE.
S.E. 2 AVE.
S.E. 3 AVE.
S. W. 1 ST.
S. E. 1 ST.
SOUTH MIAMI AVE.
S.W. 2 ST.
S.E. 2 ST.
MIAMI RIVER DRIVE
JOSE MARTI RIVERFRONT PARK
S.W. 3 ST.
BAYFRONT PARK
CHOPIN PLAZA
CONVENTION CENTER
FORT DALLAS PARK
BISCAYNE BOULEVARD WAY
S W 4 STREET
MIAMI RIVER
S.E. 6 ST.
BRICKELL PARK
S.W. 7 ST.
S.E. 7 ST.
CLAUGHTON

PHASE 1
PHASE 2
PHASE 3

TRAFFIC CONTROL CONCEPT
Fig. 9

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Phase III

Construct Ramps A and E.
Remove Ramp 5.
Construct S.W. 1st Avenue between S.W. 2nd Street and ramps.
Remove temporary pavement and construct access roads.

The preliminary construction cost was estimated with information gathered from FDOT and Dade County for the Concept Alternative. The cost estimate included the following.

Removal of existing ramps -	*$ 6,660,000*
Construction of proposed ramps -	*$ 16,783,291*
Construction of proposed roadway -	*$ 2,968,749*
Signalization -	*$ 750,000*
Modification to J.L. Knight Center exterior stairway -	*$ 400,000*
Construction of pedestrian walkway -	*$ 500,000*
Subtotal -	*$ 28,062,040*
5 % Contingency -	*$ 1,403,102*
TOTAL -	***$ 29,465,142***

Other impacts which were evaluated include developability of area properties, accessability to area properties, accessability to Downtown Miami, urban planning, pedestrian safety, and finally image and views.

After meeting with representatives of FDOT, City of Miami, J.L. Knight Center and DDA it became clear that the possibility of developing a controlled access "boulevard" in the Dupont Plaza received very positive and encouraging feedback. Most of these representatives stated that this type of improvement has been needed for a very long time. To date this area has not developed as the rest of Downtown Miami has, primarily due to accessibility and the fact that this area has been cutoff from the rest of the city by the "wall" of existing ramps. With the creation of the "boulevard" along S.W./S.E. 3rd Street this area will become part of Downtown Miami. Drivers and pedestrians will be encouraged to circulate in this area as well, increasing developability of several vacant and underutilized properties. See Summary Matrix in Table 1 for comparison of Concept Alternative to No Build Alternative and Bifurcated Ramp Alternative.

SUMMARY MATRIX

	NO BUILD ALTERNATIVE	CONCEPT ALTERNATIVE	BIFURCATED RAMP ALTERNATIVE
Provide Boulevard	*Low*	*High*	*Low*
Acceptable Horizontal Ramp Alignment	*Low*	*Medium*	*Medium*
Acceptable Vertical Ramp Alignment	*Low*	*Medium*	*High*
Acceptable Boulevard Capacity	*Low*	*High*	*Low*
Acceptable Ramp Capacity	*Medium*	*Medium*	*High*
Provide for I-95 Traffic	*Low*	*High*	*High*
Improve Downtown Circulation	*Low*	*High*	*Low*
Urban Compatibility	*Low*	*High*	*Low*
Pedestrian Compatibility	*Low*	*High*	*Low*
Transit Compatibility	*Low*	*High*	*Low*
Increased Developablity	*Low*	*High*	*Low*
Area Support	*Low*	*High*	*Low*
Reconstruction Impacts	*Low*	*Medium*	*Medium*
R/W Acquisition	*Low*	*Medium*	*Medium*
Estimated Construction Cost	*Low*	*Medium*	*High*
Required Maintenance of Traffic	*Low*	*High*	*High*

CONCLUSION

As a result of this study it has been illustrated that the controlled access Concept Alternative is feasible. It is Carr Smith's recommendation that a corridor analysis study be conducted in conjunction with the regional loop that was described earlier in this report. This study should include corridor analysis, detailed traffic analysis and urban design issues. The inclusion of the I-395 depressed roadway and the SW/SE 3rd Street boulevard in the corridor study will ensure all traffic in the downtown region is addressed and improved.

Both community and agency support should also be organized and development initiatives will also be important to the development of this concept. As stated earlier, all representatives involved in either the development or evaluation of this concept were strongly supportive. The FDOT and City of Miami will be very involved in the further development of this concept. Carr Smith would like to thank the Downtown Development Authority, the City of Miami and the Florida Department of Transportation for their involvement and assistance to make this study both beneficial and positive for the people of Dade County.

APPENDIX A

MILESTONE 1
ALTERNATIVES:

Once CSA began developing alternatives, it became clear that rebuilding the I-95 ramps to provide totally new ramps would be prohibitively expensive; traffic control during total reconstruction would also create numerous problems. Therefor, the alternatives proposed include some degree of partial ramp reconstruction.

ALTERNATIVE 1 - Existing Conditions (No Build Alternative)

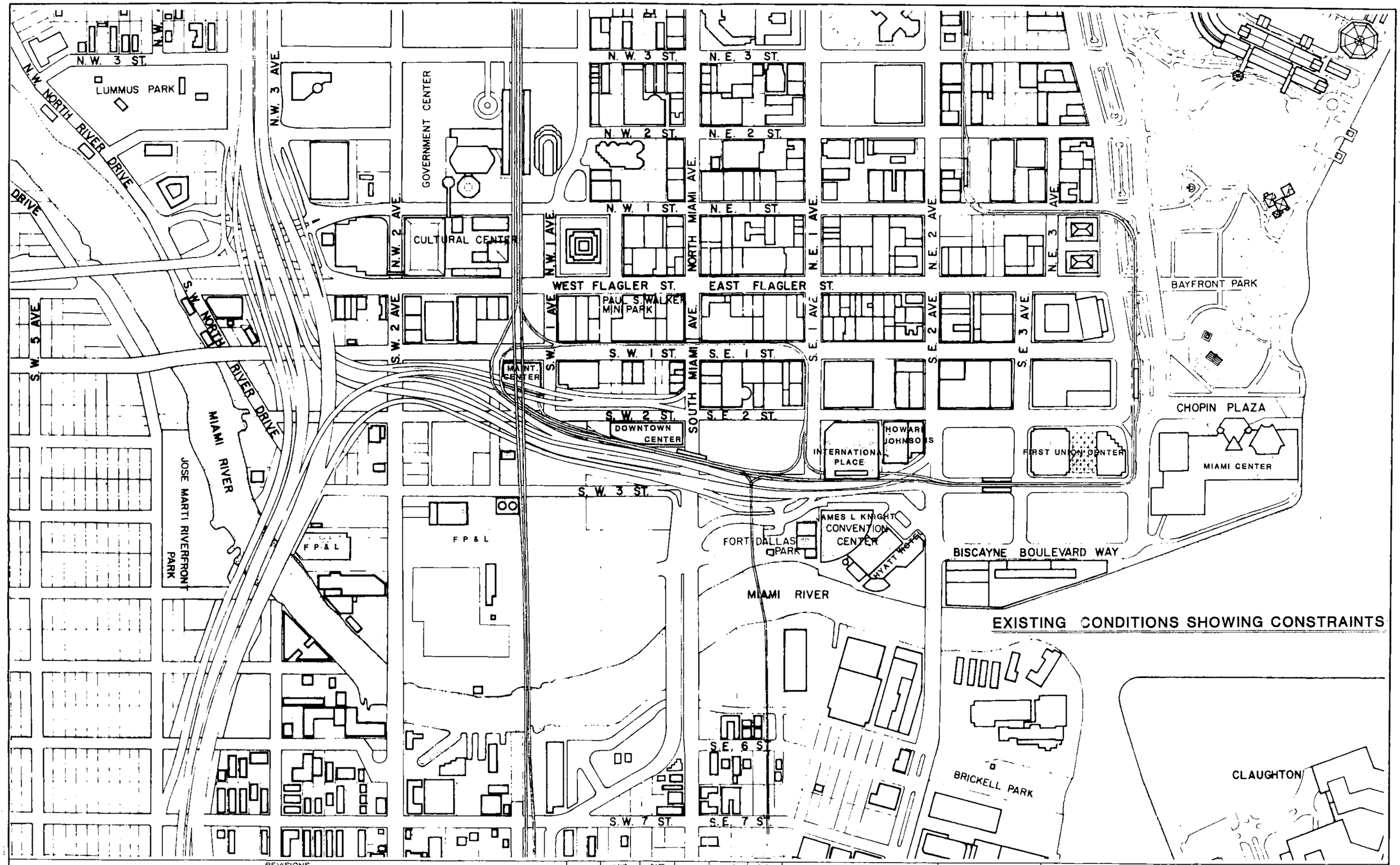
This alternative will leave traffic patterns as they exist today and allow the patterns to evolve, possibly negatively, as individual projects are constructed. This alternative will not improve the access in the Dupont Plaza area or improve development possibilities in this area. Regionally, traffic patterns in and around Downtown Miami will not be improved either.

ALTERNATIVE 2 - Minimum Alternative

This alternative includes a minimum amount of ramp reconstruction needed to improve traffic circulation and provide a considerable length of boulevard along S.W./S.E. 3rd Street. Beginning at Biscayne Boulevard on the east, this alternative includes a one-way pair from Chopin Plaza to S.E. 2nd Avenue providing five westbound lanes north of the First Union Financial Center and two eastbound lanes south of both the First Union Financial Center and the Metromover piers. The existing service road along the south side of the building will remain, although traffic will be reversed to westbound traffic only. Portions of the staircase and mechanical room located on the north side of the J.L. Knight Center will be relocated to provide for a six-lane divided roadway along S.W. 3rd Street at approximately same grade as existing ramps. The intersection at S. Miami Avenue will remain at-grade and maintain access to the Occidental Parc Hotel as well as the existing at-grade pedestrian crossing. The I-95 ramps will be realigned to provide access to and from both northbound and southbound I-95 at S. Miami Avenue and S.E. 3rd Street. The existing northbound and southbound entrance ramp at S.E. 2nd Street and S. Miami Avenue will remain. S.W. 1st Avenue will be improved to create a thru movement to S. Miami Avenue south of S.W. 3rd Street. This will provide increased and improved access to the newly constructed S. Miami Avenue Bridge.

ALTERNATIVE 3 - Ultimate Alternative

This alternative includes the more ramp reconstruction while providing the boulevard theme envisioned by DDA. Again beginning at Biscayne Boulevard on the east, this alternative includes a four-lane divided roadway to the south of the First Union Financial Center and Metromover piers. Just west of Chopin Plaza a northbound lane from Biscayne Way joins the two eastbound lanes up Biscayne Boulevard. From S.E. 2nd Avenue to S. Miami Avenue a six-lane divided at-grade roadway is proposed along S.E. 3rd Street. A signalized intersection will be developed at S.E. 1st Avenue. Both the J.L. Knight Center and the International Place will have one-way service roads. The intersection at S. Miami Avenue will be regraded while maintaining access to the Occidental Parc Hotel. A pedestrian overpass will be constructed between the J.L. Knight Center and the International Place. The ramps will be partially reconstructed to provide I-95 southbound ramps from S. Miami Avenue at both S.W. 2nd Street and S.W. 3rd Street, I-95 northbound ramps from S.W. 1st Avenue at both S.W. 2nd Street and S.W. 3rd Street. The northbound I-95 exit ramp will end at S. Miami Avenue and S.W. 3rd Street and the I-95 southbound exit ramp will end at S.W. 1st Avenue and S.W. 3rd Street. This alternative includes extending S.W. 1st Avenue to S.W. 4th Street. This alternative provides a "boulevard" along S.W./S.E. 3rd Street from Biscayne Boulevard to S.W. 2nd Avenue.



EXISTING CONDITIONS SHOWING CONSTRAINTS

REVISIONS								
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY			DESIGNED BY		
CHECKED BY			CHECKED BY		
SUPERVISED BY					

APPROVED BY

DATE

CARR SMITH ASSOCIATES

DDA Miami
DOWNTOWN DEVELOPMENT AUTHORITY

N.W. 3 ST.
N.W. NORTH RIVER DRIVE
LUMMUS PARK
N.W. 3 AVE.
GOVERNMENT CENTER
N.W. 2 AVE.
CULTURAL CENTER
N.W. 1 AVE.
N.W. 3 ST.
N.E. 3 ST.
N.W. 2 ST.
N.E. 2 ST.
N.W. 1 ST.
N.E. 1 ST.
NORTH MIAMI AVE.
N.E. 1 AVE.
N.E. 2 AVE.
N.E. 3 AVE.
WEST FLAGLER ST.
EAST FLAGLER ST.
PAUL S. WALKER MINI PARK
S.W. 2 AVE.
S.W. 1 AVE.
MIAMI AVE.
S.E. 1 AVE.
S.E. 2 AVE.
S.E. 3 AVE.
BAYFRONT PARK
S.W. 1 ST.
S.E. 1 ST.
S.W. 2 ST.
S.E. 2 ST.
SOUTH MIAMI AVE.
CHOPIN PLAZA
S.W. 5 AVE.
S.W. NORTH RIVER DRIVE
MIAMI RIVER
JOSE MARTI RIVERFRONT PARK
S.W. 3 ST.
CONVENTION CENTER
FORT DALLAS PARK
BISCAYNE BOULEVARD WAY
MIAMI RIVER
S.E. 6 ST.
BRICKELL PARK
S.W. 7 ST.
S.E. 7 ST.
CLAUGHTON

LEGEND

- NEW ROADWAY
- LANDSCAPING
- EXISTING ROADWAY TO REMAIN
- PIER FOR METROMOVER
- DIRECTION OF TRAFFIC

ALTERNATIVE 2

REVISIONS															
DATE		DESCRIPTION	DATE	BY	DESCRIPTION	DESIGNED BY		NAME	DATE	DESIGNED BY		NAME	DATE	APPROVED BY	
						DRAWN BY				CHECKED BY					

CARR SMITH ASSOCIATES

DDA Miami
DOWNTOWN DEVELOPMENT AUTHORITY

N.W. 3 ST.
LUMMUS PARK
N.W. NORTH RIVER DRIVE
DRIVE
N.W. 3 AVE.
GOVERNMENT CENTER
N.W. 2 AVE.
CULTURAL CENTER
N.W. 1 AVE.
N. W. 3 ST.
N. E. 3 ST.
N. W. 2 ST.
N. E. 2 ST.
N. W. 1 ST.
N. E. 1 ST.
NORTH MIAMI AVE.
N.E. 1 AVE.
N.E. 2 AVE.
N.E. 3 AVE.
WEST FLAGLER ST.
EAST FLAGLER ST.
S.W. 5 AVE
S.W. NORTH RIVER DRIVE
S.W. 2 AVE
PAUL S. WALKER MINI PARK
S.W. 1 AVE
AVE
S.E. 1 AVE
S.E. 2 AVE
S.E. 3 AVE
BAYFRONT PARK
S. W. 1 ST.
S. E. 1 ST.
S.W. 2 ST.
SOUTH MIAMI
S. E. 2 ST.
CHOPIN PLAZA
MIAMI RIVER
JOSE MARTI RIVERFRONT PARK
S.W. 3 ST
FORT DALLAS PARK
CONVENTION CENTER
BISCAYNE BOULEVARD WAY
MIAMI RIVER
S.E. 6 ST.
BRICKELL PARK
S.W. 7 ST
S.E. 7 ST

LEGEND

- NEW ROADWAY
- LANDSCAPING
- EXISTING ROADWAY TO REMAIN
- PIER FOR METROMOVER
- DIRECTION OF TRAFFIC

CLAUGHTON

ALTERNATIVE 3

REVISIONS

DATE	NO.	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE
DESIGNED BY		
DRAWN BY		
CHECKED BY		
QUANTITIES BY		

	NAME	DATE
ISSUED BY		
CHECKED BY		

APPROVED BY

DATE

CARR SMITH ASSOCIATES

CD Miami
DOWNTOWN DEVELOPMENT AUTHORITY

APPENDIX B

OPERATIONAL ANALYSIS

This Appendix describes in detail the work performed to assess the traffic operation capability of the proposed project. Specifically, the project's ability to accommodate future traffic volumes was assessed. The following paragraphs, figures and printouts provide complete detail regarding the estimating of future traffic volumes and the operational analysis performed.

To provide a basis from which to estimate peak-hour turning movements at critical project intersections, A.M. and P.M. turning movement counts were conducted at five intersections. The resulting peak-hour turning movements at these intersections are shown.

Based on the configuration of the proposed project, the existing traffic volumes were reassigned, establishing an estimate of current traffic volumes using the proposed project. These estimated traffic volumes are shown in Figure 2. The following assumptions were made for this reassignment process:

- *68% of traffic is to/from the north (based on comparison of S. Miami Ave. and SE 1st Ave. I-95 off-ramp volumes).*
- *Some traffic currently making a right turn from the I-95 off-ramp intersection at SE 2nd Avenue and then turning left at SE 4th Street shifts to the through movement due to improvements to SE 3rd Street.*
- *The majority of traffic travelling south on S. Miami Ave. and turning right onto the I-95 on-ramp at SE 2nd Street to go north, is shifted to travelling south on SW 1st Ave., then turning right on SE 2nd Street to access the new ramp to northbound I-95.*
- *Some northbound traffic on SE 1st. Ave. will turn right at the new SE 3rd Street.*
- *Most of the traffic currently exiting I-95 at the S. Miami Avenue exit then making a "U-turn" to travel west on SE 3rd Street will turn left at SW 1st Ave. in the proposed configuration, and the remainder will turn right.*

- *Traffic travelling south on Biscayne Blvd. to I-95 will continue south at SE 2nd Street as a through movement, and follow the roadway to become westbound through's at SE 3rd Street and SE 2nd Ave.*

To provide a basis for developing future traffic estimates, FSUTMS traffic assignments for the years 1986 (base year) and 2010 were obtained from the Dade County MPO. Those assignments were closely examined in the area of the I-95 downtown distributor ramps. Limited comparisons were made to AADT counts, due to the unavailability of such data. Compared to the traffic counts conducted for the study, the 1986 assignment volumes on the various ramp sections appeared to range from reasonable to very high. Due to the lack of ability to develop an adequate assignment-to-count comparison for the base year, and the model's apparent lack of validity on the downtown distributor ramps, the decision was made to use a comparison of 2010 and 1986 data, to develop growth factors which could be applied to the existing traffic counts, as the methodology for developing future traffic estimates.

A thorough comparison of 2010 and 1986 traffic assignments was made including comparison of ramp volumes and cutlines surrounding the project area, defined as SW 2nd Ave. on the west, N. 5th Street on the north, and the Miami River on the south. These comparisons are documented in the following table. It should be noted that the 2010 assignment included the bifurcated ramp project improvements, so the relative increase of ramp traffic is based not only on an increase in demand, but also an increase in supply.

The cutline comparisons indicate a general growth in CBD traffic of roughly 50% from 1986 to 2010. A review of the FSUTMS land use files for 1986 and 2010 indicate an employment growth in the study area of 50 percent, supporting the traffic growth figure. The ramp traffic comparisons indicate on 87% increase in traffic to and from the north, and only an 11% increase in traffic to and from the south. The separate comparison of volumes to and from the north stands out as a source of concern with respect to the validity of the increase. Traffic from the north increases by 139% while traffic to the north increases by 52%, resulting in the overall increase of 87%. Investigation of the 2010 network and assignment revealed possible flaws in the network's representation of future improvements that could cause the high increase in traffic from the north. Nevertheless, because of the nature of this study feasibility, not design, the overall volume increase of 87% to and from the north was used for analysis.

TRAFFIC ASSIGNMENT COMPARISON - 1986 TO 2010

I-95 DOWNTOWN DISTRIBUTOR RAMPS	*1986*	*2010*	*PERCENT INCREASE*
From north	*19,374*	*46,311*	
to north	*28,436*	*43,188*	
from/to north	*47,810*	*89,499*	*87%*
From south	*17,956*	*19,381*	
to south	*22,792*	*25,745*	
from/to south	*40,748*	*45,126*	*11%*
CUTLINE	*1986*	*2010*	
West	*165,000*	*242,000*	*47%*
North	*143,000*	*218,000*	*52%*
South	*90,000*	*136,000*	*51%*

To develop a factor for projecting year 2010 volumes from the existing counts, the assumption was made that traffic would increase from 1986 to 2010 in a linear fashion. The magnitude of 1993 traffic relative to 1986 traffic was calculated through linear interpolation as 1.25 (with 1.0 representing 1986 volumes and 1.87 representing 2010 volumes). The factor to increase 1993 volumes to 2010 volumes was then calculated as 1.87/1.25, equalling 1.50, or a 50 percent increase.

The 1993 to 2010 increase to and from the south was calculated in the same manner, as well as some cross-street volumes. The resultant increase to and from the south was only 8 percent. This number seemed unrealistically low and may result from both distribution and assignment inaccuracies that encourage more traffic from the north and less from the south. Also, the existing traffic distribution pattern may be shifted to the north as a result of Hurricane Andrew impacts.

For the purposes of this analysis the decision was made to assess the facility's capabilities on the basis of a 50 percent increase in traffic to and from the north and 20 percent increase to and from the south. Most cross street volumes were increased by 30 percent.

It should be noted that these increases result in volumes that likely reach or exceed the volumes that can exit I-95 in the A.M. peak at their respective diverge points, particularly the 3747 vehicles per hour from the north. The southbound diverge is a two-lane diverge

with an exit-only lane and a shared exit-through lane. For this reason and the others previously discussed, it is felt that the increases assumed for this analysis are conservative.

Based on these increases, the traffic volumes developed representing existing condition if the project was in place today, previously shown in Figure 2, were adjusted to represent year 2010 project traffic. Most of the volumes were simply expanded by these factors, but some were increased more or less based on the relative location of the traffic zones where future development is expected to occur. The following statements reflect some of these adjustments:

- *In the AM peak, the traffic destined for SE 1st Ave. is increased by less and the through's by more, since more new development is anticipated east of SE 2nd Ave.*

- *At the intersection of SE 3rd St. and SE 2nd Ave, more of the eastbound traffic increase is distributed to the right turn due to the anticipated development of the two parcels north of DuPont Plaza.*

- *In the PM peak, due to additional development east of SE 2nd Ave. and the extension of southbound Biscayne Blvd. to SE 3rd St., more I-95 bound traffic is distributed to SE 3rd St. than SE 2nd St.*

The resulting estimated intersection turning movements for the year 2010 are shown in the following section.

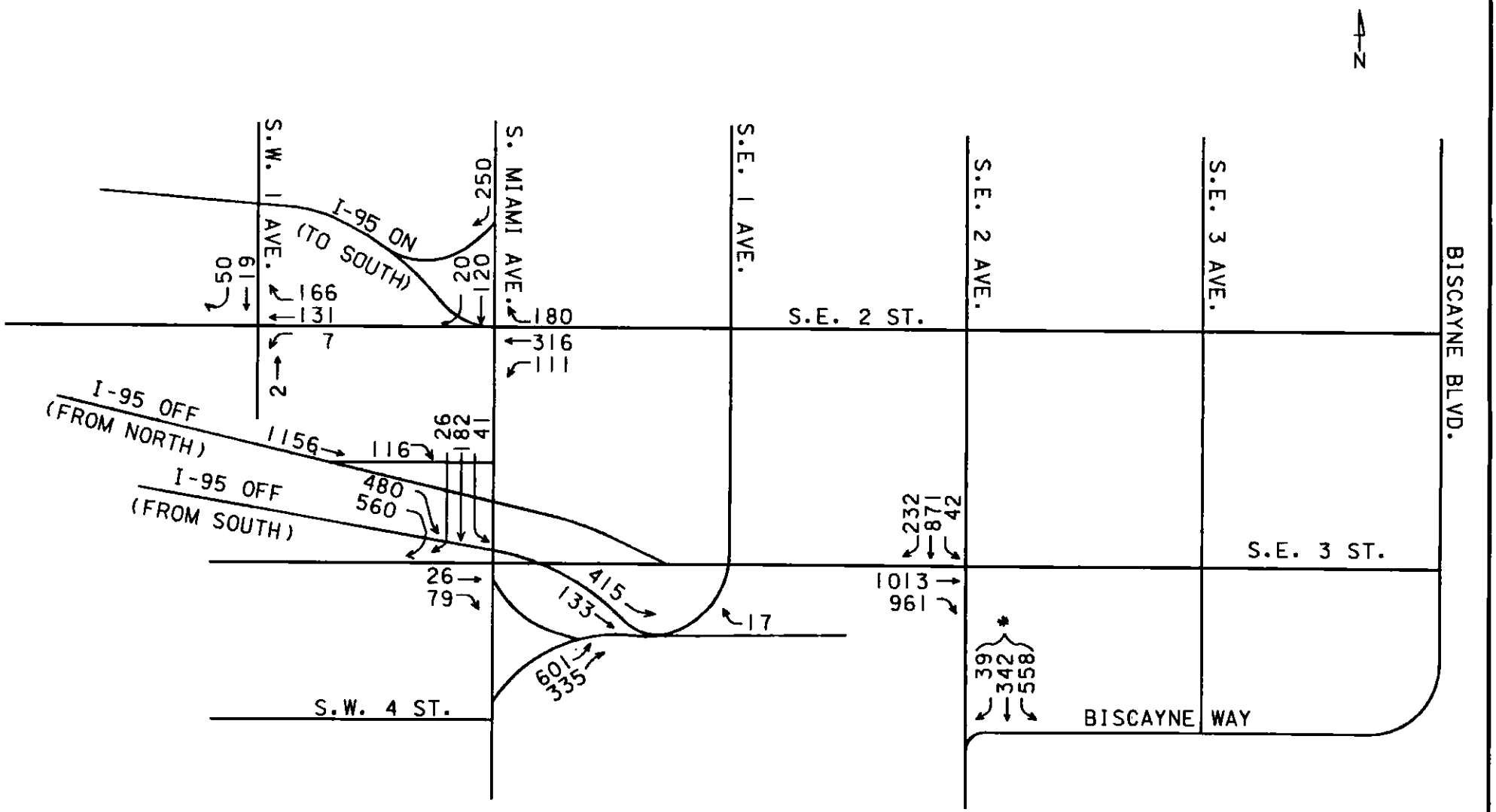
To evaluate the operational performance of the proposed project, the project intersections were analyzed with the estimated 2010 intersection volumes using the Highway Capacity Software. The resulting levels of service for AM and PM peak conditions were shown in Figures 7 and 8. Briefly, these analyses included the following assumptions:

- *A 90 second cycle length.*

- *Adequate time for pedestrian crossings on all cycles, including the assumption of 2-cycle pedestrian crossings across SE 3rd St. with median refuge where necessary.*

- *The CBD area type factor was not applied to those intersections along SE 3rd St. due to the controlled access arterial nature of the proposed design, not typical of streets for which the CBD factor was intended.*

Detailed printouts of the HCS analysis input and results follow in the Appendix.



TRAFFIC VOLUMES

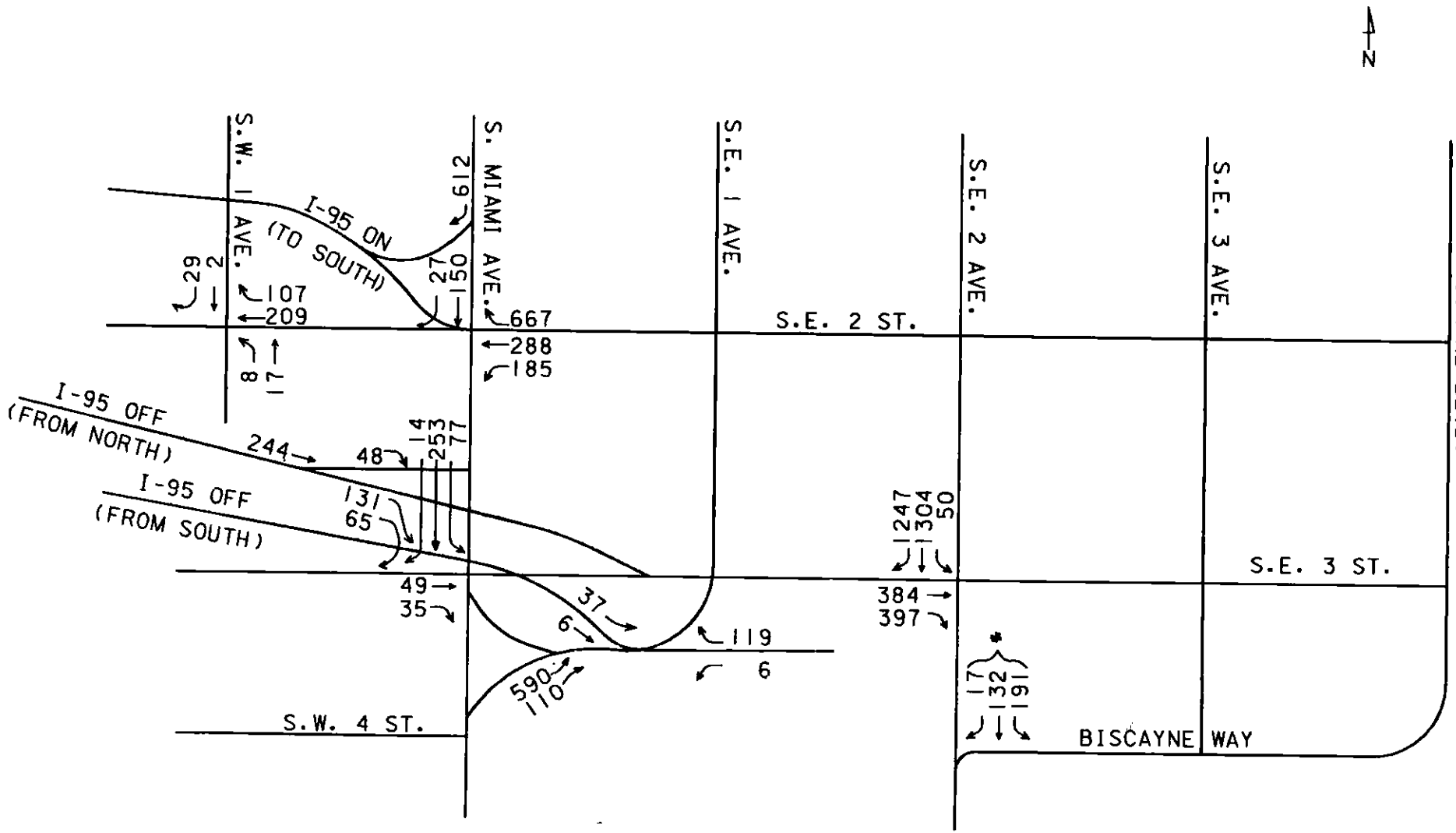
* DISTRIBUTION OF TRAFFIC FROM EBR FROM I-95

AM PEAK COUNTS

PAGE

CARR SMITH ASSOCIATES TRANSPORTATION DIVISION

DDA MIAMI



TRAFFIC VOLUMES

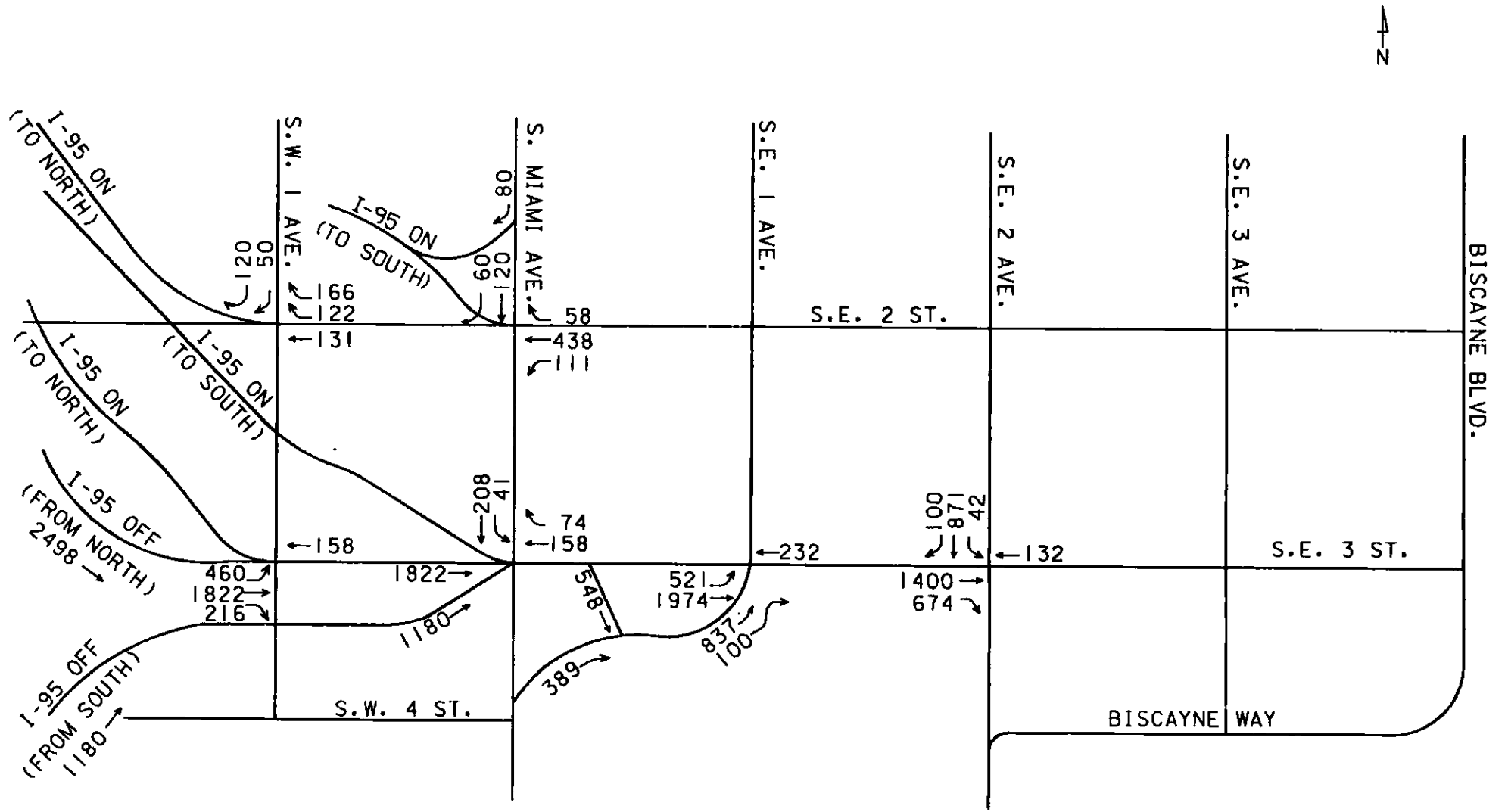
* DISTRIBUTION OF TRAFFIC FROM EBR FROM I-95

PM PEAK COUNTS

PAGE

CARR SMITH ASSOCIATES TRANSPORTATION DIVISION

DDA MIAMI



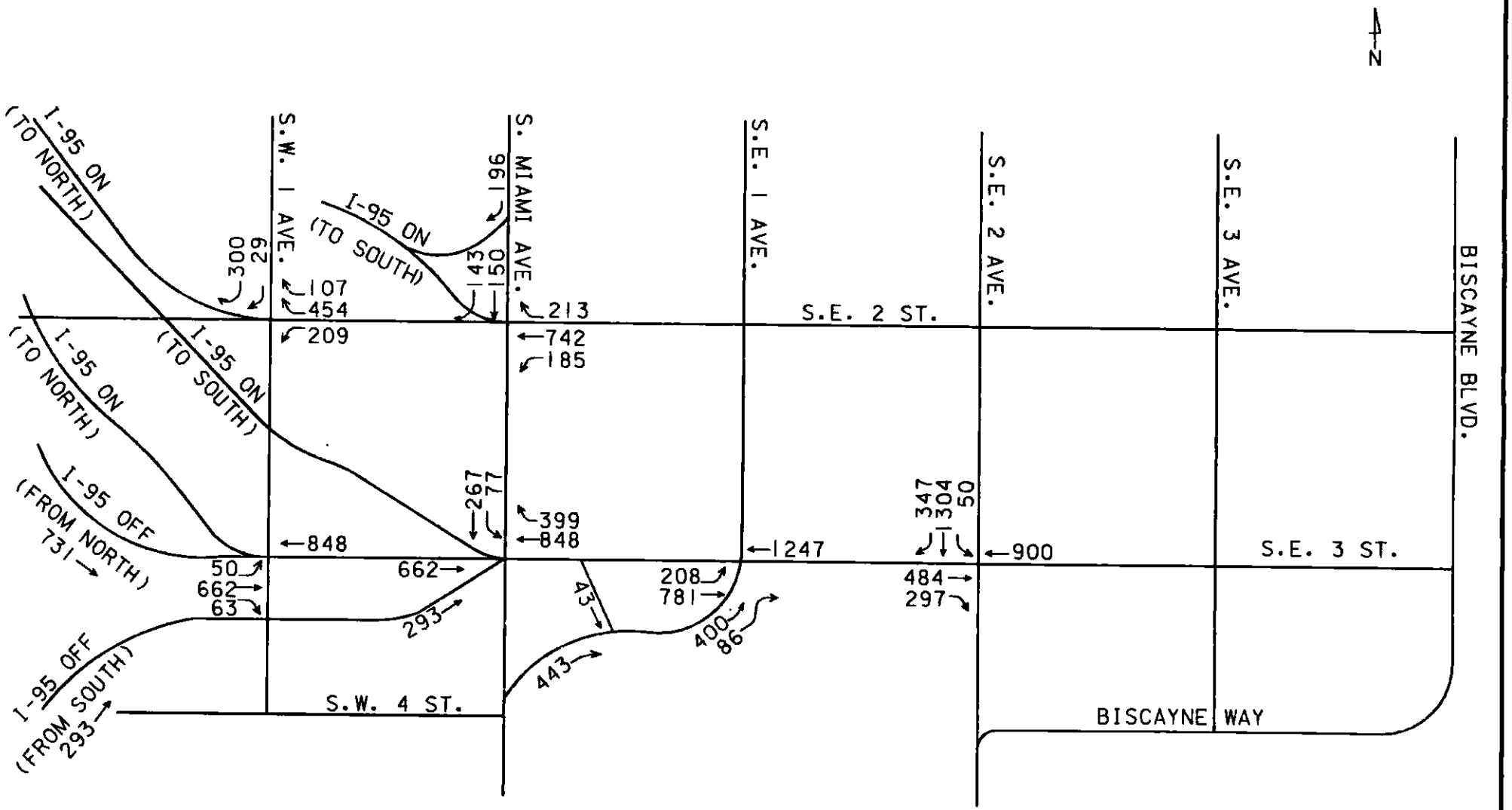
TRAFFIC VOLUMES

AM PEAK REDISTRIBUTION

CARR SMITH ASSOCIATES TRANSPORTATION DIVISION

DDA MIAMI

PAGE

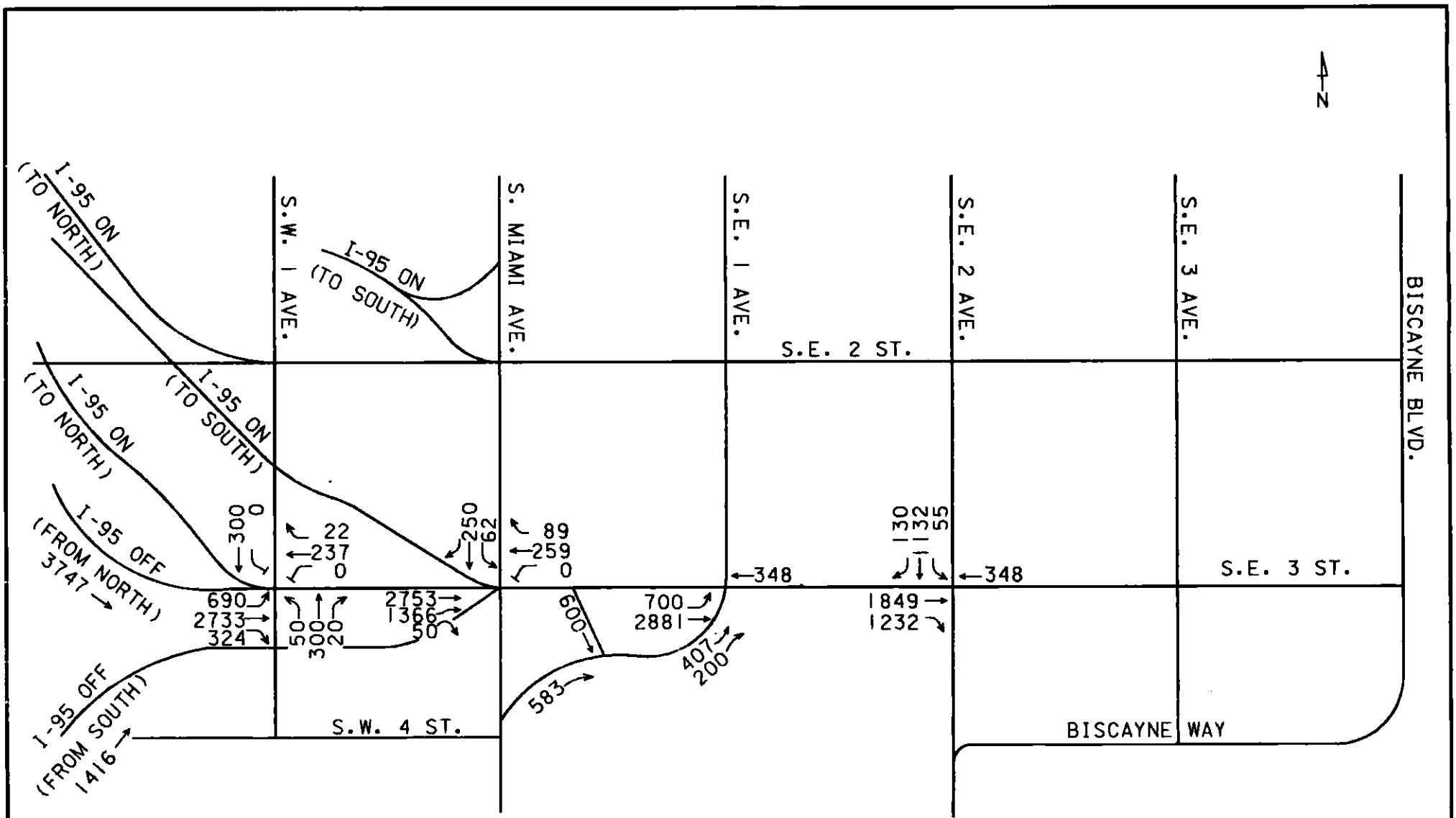


TRAFFIC VOLUMES

PM PEAK REDISTRIBUTION

CARR SMITH ASSOCIATES
TRANSPORTATION DIVISION

DDA MIAMI



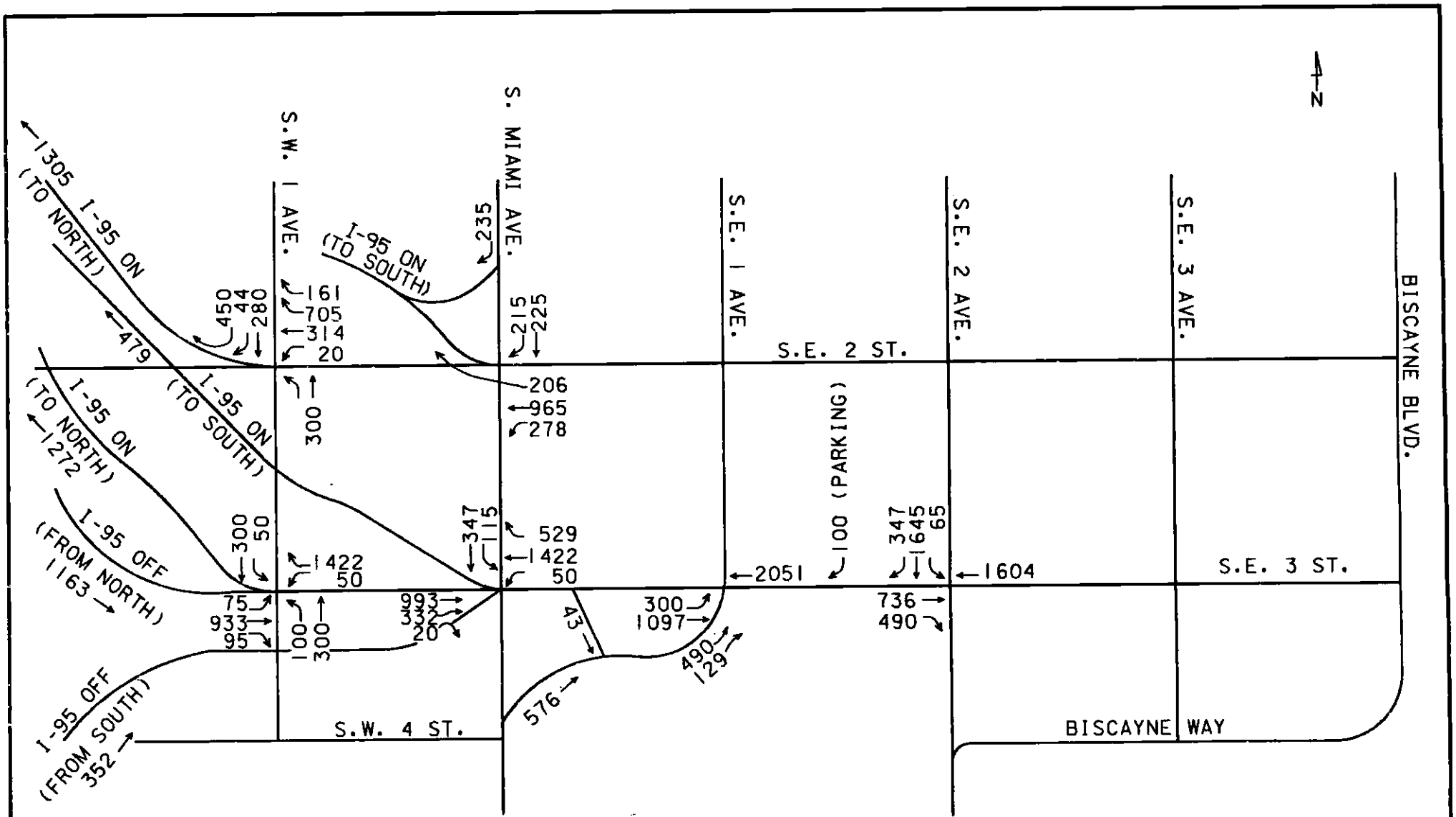
TRAFFIC VOLUMES

AM PEAK 2010

CARR SMITH ASSOCIATES TRANSPORTATION DIVISION

DDA MIAMI

PAGE



TRAFFIC VOLUMES

PM PEAK 2010

CARR SMITH ASSOCIATES
TRANSPORTATION DIVISION

DDA MIAMI

1985 HCM: SIGNALIZED INTERSECTIONS
SUMMARY REPORT

****

INTERSECTION..SE 3RD ST/SW 1ST AVE
AREA TYPE.....OTHER
ANALYST.....BCF
DATE.....08-25-1993
TIME.....AM PEAK
COMMENT.....YEAR 2010 PROJECTIONS

	VOLUMES					GEOMETRY							
	EB	WB	NB	SB		EB		WB		NB		SB	
LT	690	0	50	0	L	12.0	T	12.0	L	12.0	L	12.0	
TH	2733	237	300	300	T	12.0	TR	12.0	T	12.0	T	12.0	
RT	324	20	20	0	T	12.0		12.0	TR	12.0	TR	12.0	
RR	0	0	0	0	TR	12.0		12.0		12.0		12.0	
						12.0		12.0		12.0		12.0	
						12.0		12.0		12.0		12.0	

ADJUSTMENT FACTORS

	GRADE (%)	HV (%)	ADJ Y/N	PKG Nm	BUSES Nb	PHF	PEDS	PED. Y/N	BUT. min T	ARR. TYPE
EB	0.00	2.00	N	0	0	0.95	50	Y	14.5	3
WB	0.00	2.00	N	0	0	0.95	50	Y	14.5	3
NB	0.00	2.00	N	0	0	0.95	50	Y	20.5	3
SB	0.00	2.00	N	0	0	0.95	50	Y	20.5	3

SIGNAL SETTINGS — CYCLE LENGTH = 90.0

		PH-1	PH-2	PH-3	PH-4			PH-1	PH-2	PH-3	PH-4
EB	LT	X				NB	LT	X			
	TH	X	X				TH	X			
	RT	X	X				RT	X			
	PD						PD				
WB	LT					SB	LT	X			
	TH		X				TH	X			
	RT		X				RT	X			
	PD						PD				
GREEN		44.0	16.0	0.0	0.0	GREEN		18.0	0.0	0.0	0.0
YELLOW		4.0	4.0	0.0	0.0	YELLOW		4.0	0.0	0.0	0.0

LEVEL OF SERVICE

	LANE GRP.	V/C	G/C	DELAY	LOS	APP. DELAY	APP. LOS
EB	L	0.813	0.500	18.5	C	10.8	B
	TR	0.883	0.722	9.2	B		
WB	TR	0.404	0.189	24.6	C	24.6	C
NB	L	0.235	0.211	22.5	C	23.6	C
	TR	0.450	0.211	23.8	C		
SB	L	0.000	0.211	22.6	C	23.6	C
	TR	0.418	0.211	23.6	C		

INTERSECTION: Delay = 13.3 (sec/veh) V/C = 0.785 LOS = B

	MVT. VOL.	PHF	ADJ. VOL.	LANE GRP.	LANE GRP. VOL.	NO. LN	LANE UTIL. FACT.	GROWTH FACT.	ADJ. GRP. VOL.	PROP LT	PROP RT
EB											
LT	690	0.95	726	L	726	1	1.000	1.000	726	1.00	0.00
TH	2733	0.95	2877	TR	3218	3	1.100	1.000	3540	0.00	0.11
RT	324	0.95	341								
WB											
LT	0	0.95	0								
TH	237	0.95	249	TR	271	2	1.050	1.000	284	0.00	0.08
RT	20	0.95	21								
NB											
LT	50	0.95	53	L	53	1	1.000	1.000	53	1.00	0.00
TH	300	0.95	316	TR	337	2	1.050	1.000	354	0.00	0.06
RT	20	0.95	21								
SB											
LT	0	0.95	0								
TH	300	0.95	316	TR	316	2	1.050	1.000	332	0.00	0.00
RT	0	0.95	0								

* Denotes a Defacto Left Turn Lane Group

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... SW 1ST AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; AM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

INPUT VARIABLES	EB	WB	NB	SB
Cycle Length, C (sec)			90.0	
Effective Green, G (sec)			19.0	
Number of Lanes, N			1	
Total Approach Flow Rate, Va (vph)			389	
Mainline Flow Rate, Vm (vph)			337	
Left-Turn Flow Rate, Vlt (vph)			53	
Proportion of LT, Plt			1.000	
Opposing Lanes, No			2	
Opposing Flow Rate, Vo (vph)			316	
Prop. of LT in Opp. Vol., Plto			0.000	

COMPUTATIONS	EB	WB	NB	SB
Sop=(1800No)/(1+Plto((400+Vm)/(1400-Vm)))			3600	
Yo=Vo/Sop			0.088	
Gu=(G-C*Yo)/(1-Yo)			12.173	
Fs=(875-0.625Vo)/1000			0.678	
Pl=Plt(1+((N-1)G)/(Fs*Gu+4.5)))			1.000	
Gq=G-Gu			6.827	
Pt=1-Pl			0.000	
Gf=2Pt(1-(Pt**0.5Gq))/Pl			0.000	
El=1800/(1400-Vo)			1.66	
Fm=Gf/G+(Gu/G)(1/(1+Pl(El-1)))+(2/G)(1+Pl)			0.596	
Flt=(Fm+N-1)/N			0.596	

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... SW 1ST AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; AM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

		IDEAL SAT. FLOW	NO. LNS	f W	f HV	f G	f p	f BB	f A	f RT	f LT	ADJ. SAT. FLOW
EB												
	L	1900	1	1.000	0.990	1.000	1.000	1.000	1.000	1.000	0.950	1787
	TR	1900	3	1.000	0.990	1.000	1.000	1.000	1.000	0.984	1.000	5553
WB												
	TR	1900	2	1.000	0.990	1.000	1.000	1.000	1.000	0.988	1.000	3718
NB												
	L	1800	1	1.000	0.990	1.000	1.000	1.000	1.000	1.000	0.596	1063
	TR	1900	2	1.000	0.990	1.000	1.000	1.000	1.000	0.991	1.000	3727
SB												
	L	1800	1	1.000	0.990	1.000	1.000	1.000	1.000	1.000	1.000	1782
	TR	1900	2	1.000	0.990	1.000	1.000	1.000	1.000	1.000	1.000	3762

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... SW 1ST AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; AM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

	ADJ. FLOW RATE (v)	ADJ. SAT. FLOW RATE (s)	FLOW RATIO (v/s)	GREEN RATIO (g/C)	LANE GROUP CAPACITY (c)	v/c RATIO	
EB							
L	726	1787	0.406	0.500	893	0.813	
TR	3540	5553	0.637	0.722	4011	0.883	*
WB							
TR	284	3718	0.076	0.189	702	0.404	
NB							
L	53	1063	0.050	0.211	224	0.235	
TR	354	3727	0.095	0.211	787	0.450	*
SB							
L	0	1782	0.000	0.211	376	0.000	
TR	332	3762	0.088	0.211	794	0.418	

Cycle Length, C = 90.0 sec. Sum (v/s) critical = 0.732
Lost Time Per Cycle, L = 6.0 sec. X critical = 0.785

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... SW 1ST AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; AM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

	v/c RATIO	g/C RATIO	CYCLE LEN.	DELAY d 1	LANE GROUP CAP.	DELAY d 2	PROG. FACT.	LANE GRP. DELAY	LANE GRP. LOS	DELAY BY APP.	LOS BY APP.
EB											
L	0.813	0.500	90.0	14.4	893	4.1	1.00	18.5	C	10.8	B
TR	0.883	0.722	90.0	7.3	4011	1.9	1.00	9.2	B		
WB											
TR	0.404	0.189	90.0	24.4	702	0.2	1.00	24.6	C	24.6	C
NB											
L	0.235	0.211	90.0	22.4	224	0.1	1.00	22.5	C	23.6	C
TR	0.450	0.211	90.0	23.5	787	0.3	1.00	23.8	C		
SB											
L	0.000	0.211	90.0	22.4	376	0.1	1.00	22.6	C	23.6	C
TR	0.418	0.211	90.0	23.3	794	0.2	1.00	23.6	C		

Intersection Delay = 13.3 (sec/veh) Intersection LOS = B

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... SW 1ST AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; AM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

1985 HCM: SIGNALIZED INTERSECTIONS
SUMMARY REPORT

****

INTERSECTION..SE 3RD ST/S MIAMI AVE
AREA TYPE.....OTHER
ANALYST.....BCF
DATE.....08-25-1993
TIME.....AM PEAK
COMMENT.....YEAR 2010 PROJECTIONS

	VOLUMES					GEOMETRY						
	EB	WB	NB	SB		EB		WB		NB		SB
LT	0	0	0	62	T	12.0	T	12.0		12.0	LT	12.0
TH	2753	259	0	250	T	12.0	T	12.0		12.0	T	12.0
RT	0	0	0	0	T	12.0		12.0		12.0	TR	12.0
RR	0	0	0	0		12.0		12.0		12.0		12.0
						12.0		12.0		12.0		12.0
						12.0		12.0		12.0		12.0

ADJUSTMENT FACTORS

	GRADE (%)	HV (%)	ADJ Y/N	PKG Nm	BUSES Nb	PHF	PEDS	PED. Y/N	BUT. min T	ARR. TYPE
EB	0.00	2.00	N	0	0	0.95	50	Y	14.3	5
WB	0.00	2.00	N	0	0	0.95	50	Y	14.3	3
NB	0.00	2.00	N	0	0	0.95	50	Y	22.8	3
SB	0.00	2.00	N	0	0	0.95	50	Y	22.8	4

SIGNAL SETTINGS — CYCLE LENGTH = 90.0

		PH-1	PH-2	PH-3	PH-4			PH-1	PH-2	PH-3	PH-4
EB	LT					NB	LT				
	TH	X					TH				
	RT						RT				
	PD						PD				
WB	LT					SB	LT	X			
	TH	X					TH	X			
	RT						RT	X			
	PD						PD				
GREEN		60.0	0.0	0.0	0.0	GREEN		22.0	0.0	0.0	0.0
YELLOW		4.0	0.0	0.0	0.0	YELLOW		4.0	0.0	0.0	0.0

LEVEL OF SERVICE

	LANE GRP.	V/C	G/C	DELAY	LOS	APP. DELAY	APP. LOS
EB	T	0.833	0.678	7.7	B	7.7	B
WB	T	0.112	0.678	3.8	A	3.8	A
SB	LTR	0.259	0.256	14.6	B	14.6	B

INTERSECTION: Delay = 8.1 (sec/veh) V/C = 0.676 LOS = B

	MVT. VOL.	PHF	ADJ. VOL.	LANE GRP.	LANE GRP. VOL.	NO. LN	LANE UTIL. FACT.	GROWTH FACT.	ADJ. GRP. VOL.	PROP LT	PROP RT
EB											
LT	0	0.95	0								
TH	2753	0.95	2898	T	2898	3	1.100	1.000	3188	0.00	0.00
RT	0	0.95	0								
WB											
LT	0	0.95	0								
TH	259	0.95	273	T	273	2	1.050	1.000	286	0.00	0.00
RT	0	0.95	0								
NB											
LT	0	0.95	0								
TH	0	0.95	0								
RT	0	0.95	0								
SB											
LT	62	0.95	65								
TH	250	0.95	263	LTR	328	3	1.100	1.000	361	0.20	0.00
RT	0	0.95	0								

* Denotes a Defacto Left Turn Lane Group

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... S MIAMI AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; AM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

		IDEAL SAT. FLOW	NO. LNS	f W	f HV	f G	f p	f BB	f A	f RT	f LT	ADJ. SAT. FLOW
EB												
	T	1900	3	1.000	0.990	1.000	1.000	1.000	1.000	1.000	1.000	5643
WB												
	T	1900	2	1.000	0.990	1.000	1.000	1.000	1.000	1.000	1.000	3762
NB												
SB												
	LTR	1900	3	1.000	0.990	1.000	1.000	1.000	1.000	1.000	0.965	5448

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... S MIAMI AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; AM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

	ADJ. FLOW RATE (v)	ADJ. SAT. FLOW RATE (s)	FLOW RATIO (v/s)	GREEN RATIO (g/C)	LANE GROUP CAPACITY (c)	v/c RATIO	
EB							
T	3188	5643	0.565	0.678	3825	0.833	*
WB							
T	286	3762	0.076	0.678	2550	0.112	
NB							
SB							
LTR	361	5448	0.066	0.256	1392	0.259	*

Cycle Length, C = 90.0 sec. Sum (v/s) critical = 0.631
Lost Time Per Cycle, L = 6.0 sec. X critical = 0.676

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... S MIAMI AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; AM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

	v/c RATIO	g/C RATIO	CYCLE LEN.	DELAY d 1	LANE GROUP CAP.	DELAY d 2	PROG. FACT.	LANE GRP. DELAY	LANE GRP. LOS	DELAY BY APP.	LOS BY APP.
EB											
T	0.833	0.678	90.0	8.2	3825	1.2	0.82	7.7	B	7.7	B
WB											
T	0.112	0.678	90.0	3.8	2550	0.0	1.00	3.8	A	3.8	A
NB											
SB											
LTR	0.259	0.256	90.0	20.3	1392	0.0	0.72	14.6	B	14.6	B

Intersection Delay = 8.1 (sec/veh) Intersection LOS = B

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... S MIAMI AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; AM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

1985 HCM: SIGNALIZED INTERSECTIONS
SUMMARY REPORT

****

INTERSECTION..SE 3RD ST/SE 1ST AVE
AREA TYPE.....OTHER
ANALYST.....BCF
DATE.....08-25-1993
TIME.....AM PEAK
COMMENT.....YEAR 2010 TRAFFIC PROJECTIONS

	VOLUMES					GEOMETRY							
	EB	WB	NB	SB		EB		WB		NB		SB	
LT	700	0	0	0	: L	12.0	T	12.0	LT	12.0		12.0	
TH	2881	348	933	0	: T	12.0	T	12.0	T	12.0		12.0	
RT	0	0	200	0	: T	12.0	TR	12.0	TR	12.0		12.0	
RR	0	0	0	0	: T	12.0		12.0		12.0		12.0	
					:	12.0		12.0		12.0		12.0	
					:	12.0		12.0		12.0		12.0	

ADJUSTMENT FACTORS

	GRADE (%)	HV (%)	ADJ Y/N	PKG Nm	BUSES Nb	PHF	PEDS	PED. Y/N	BUT. min T	ARR. TYPE
EB	0.00	2.00	N	0	0	0.95	50	Y	14.3	5
WB	0.00	2.00	N	0	0	0.95	50	Y	14.3	3
NB	0.00	2.00	N	0	0	0.95	50	Y	28.8	3
SB	0.00	2.00	N	0	0	0.95	50	Y	28.8	3

SIGNAL SETTINGS — CYCLE LENGTH = 90.0

		PH-1	PH-2	PH-3	PH-4			PH-1	PH-2	PH-3	PH-4
EB	LT	X				NB	LT	X			
	TH	X	X				TH	X			
	RT	X	X				RT	X			
	PD						PD				
WB	LT					SB	LT				
	TH		X				TH				
	RT		X				RT				
	PD						PD				
GREEN		40.0	15.0	0.0	0.0	GREEN		23.0	0.0	0.0	0.0
YELLOW		4.0	4.0	0.0	0.0	YELLOW		4.0	0.0	0.0	0.0

LEVEL OF SERVICE

	LANE GRP.	V/C	G/C	DELAY	LOS	APP. DELAY	APP. LOS
EB	L	0.905	0.456	27.0	D	12.6	B
	T	0.887	0.667	9.4	B		
WB	TR	0.402	0.178	25.0	D	25.0	D
NB	LTR	0.896	0.267	29.6	D	29.6	D

INTERSECTION: Delay = 17.3 (sec/veh) V/C = 0.889 LOS = C

	MVT. VOL.	PHF	ADJ. VOL.	LANE GRP.	LANE GRP. VOL.	NO. LN	LANE UTIL. FACT.	GROWTH FACT.	ADJ. GRP. VOL.	PROP LT	PROP RT
EB											
LT	700	0.95	737	L	737	1	1.000	1.000	737	1.00	0.00
TH	2881	0.95	3033	T	3033	3	1.100	1.000	3336	0.00	0.00
RT	0	0.95	0								
WB											
LT	0	0.95	0								
TH	348	0.95	366	TR	366	3	1.100	1.000	403	0.00	0.00
RT	0	0.95	0								
NB											
LT	0	0.95	0								
TH	933	0.95	982	LTR	1193	3	1.100	1.000	1312	0.00	0.18
RT	200	0.95	211								
SB											
LT	0	0.95	0								
TH	0	0.95	0								
RT	0	0.95	0								

* Denotes a Defacto Left Turn Lane Group

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... SE 1ST AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; AM PEAK
OTHER INFORMATION:
YEAR 2010 TRAFFIC PROJECTIONS

		IDEAL SAT. FLOW	NO. LNS	f W	f HV	f G	f p	f BB	f A	f RT	f LT	ADJ. SAT. FLOW
EB												
	L	1900	1	1.000	0.990	1.000	1.000	1.000	1.000	1.000	0.950	1787
	T	1900	3	1.000	0.990	1.000	1.000	1.000	1.000	1.000	1.000	5643
WB												
	TR	1900	3	1.000	0.990	1.000	1.000	1.000	1.000	1.000	1.000	5643
NB												
	LTR	1900	3	1.000	0.990	1.000	1.000	1.000	1.000	0.974	1.000	5494
SB												

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... SE 1ST AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; AM PEAK
OTHER INFORMATION:
YEAR 2010 TRAFFIC PROJECTIONS

	ADJ. FLOW RATE (v)	ADJ. SAT. FLOW RATE (s)	FLOW RATIO (v/s)	GREEN RATIO (g/C)	LANE GROUP CAPACITY (c)	v/c RATIO	
EB							
L	737	1787	0.412	0.456	814	0.905	
T	3336	5643	0.591	0.667	3762	0.887	*
WB							
TR	403	5643	0.071	0.178	1003	0.402	
NB							
LTR	1312	5494	0.239	0.267	1465	0.896	*
SB							

Cycle Length, C = 90.0 sec. Sum (v/s) critical = 0.830
Lost Time Per Cycle, L = 6.0 sec. X critical = 0.889

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... SE 1ST AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; AM PEAK
OTHER INFORMATION:
YEAR 2010 TRAFFIC PROJECTIONS

	v/c RATIO	g/C RATIO	CYCLE LEN.	DELAY d 1	LANE GROUP CAP.	DELAY d 2	PROG. FACT.	LANE GRP. DELAY	LANE GRP. LOS	DELAY BY APP.	LOS BY APP.
EB											
L	0.905	0.456	90.0	17.3	814	9.8	1.00	27.0	D	12.6	B
T	0.887	0.667	90.0	9.3	3762	2.1	0.82	9.4	B		
WB											
TR	0.402	0.178	90.0	24.9	1003	0.1	1.00	25.0	D	25.0	D
NB											
LTR	0.896	0.267	90.0	24.2	1465	5.5	1.00	29.6	D	29.6	D
SB											

Intersection Delay = 17.3 (sec/veh) Intersection LOS = C

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... SE 1ST AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; AM PEAK
OTHER INFORMATION:
YEAR 2010 TRAFFIC PROJECTIONS

1985 HCM: SIGNALIZED INTERSECTIONS
SUMMARY REPORT

****

INTERSECTION..SE 3RD ST/SE 2ND AVE
AREA TYPE.....OTHER
ANALYST.....BCF
DATE.....08-25-1993
TIME.....AM PEAK
COMMENT.....YEAR 2010 PROJECTIONS

	VOLUMES					GEOMETRY					
	EB	WB	NB	SB		EB		WB	NB		SB
LT	0	0	0	55	T	12.0	T	12.0	12.0	LT	12.0
TH	1849	198	0	1132	TR	12.0	T	12.0	12.0	T	12.0
RT	1232	0	0	130	R	12.0		12.0	12.0	TR	12.0
RR	0	0	0	0		12.0		12.0	12.0		12.0
						12.0		12.0	12.0		12.0
						12.0		12.0	12.0		12.0

ADJUSTMENT FACTORS

	GRADE (%)	HV (%)	ADJ Y/N	PKG Nm	BUSES Nb	PHF	PEDS	PED. Y/N	BUT. min T	ARR. TYPE
EB	0.00	2.00	N	0	0	0.95	50	Y	14.3	5
WB	0.00	2.00	N	0	0	0.95	50	Y	14.3	3
NB	0.00	2.00	N	0	0	0.95	50	Y	22.8	3
SB	0.00	2.00	N	0	0	0.95	50	Y	22.8	4

SIGNAL SETTINGS — CYCLE LENGTH = 90.0

		PH-1	PH-2	PH-3	PH-4			PH-1	PH-2	PH-3	PH-4
EB	LT					NB	LT				
	TH	X					TH				
	RT	X					RT				
	PD						PD				
WB	LT					SB	LT	X			
	TH	X					TH	X			
	RT						RT	X			
	PD						PD				
GREEN		58.0	0.0	0.0	0.0	GREEN		24.0	0.0	0.0	0.0
YELLOW		4.0	0.0	0.0	0.0	YELLOW		4.0	0.0	0.0	0.0

LEVEL OF SERVICE

	LANE GRP.	V/C	G/C	DELAY	LOS	APP. DELAY	APP. LOS
EB	TR	0.956	0.656	15.0	B	18.2	C
	R	0.990	0.656	25.3	D		
WB	T	0.089	0.656	4.3	A	4.3	A
SB	LTR	0.995	0.278	37.1	D	37.1	D

INTERSECTION: Delay = 23.2 (sec/veh) V/C = 0.992 LOS = C

	MVT. VOL.	PHF	ADJ. VOL.	LANE GRP.	LANE GRP. VOL.	NO. LN	LANE UTIL. FACT.	GROWTH FACT.	ADJ. GRP. VOL.	PROP LT	PROP RT
EB											
LT	0	0.95	0								
TH	1849	0.95	1946	TR	2205	2	1.050	1.000	2316	0.00	0.12
RT	1232	0.95	1297	R	1038	1	1.000	1.000	1038	0.00	1.00
WB											
LT	0	0.95	0								
TH	198	0.95	208	T	208	2	1.050	1.000	219	0.00	0.00
RT	0	0.95	0								
NB											
LT	0	0.95	0								
TH	0	0.95	0								
RT	0	0.95	0								
SB											
LT	55	0.95	58								
TH	1132	0.95	1192	LTR	1386	3	1.100	1.000	1525	0.04	0.10
RT	130	0.95	137								

* Denotes a Defacto Left Turn Lane Group

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... SE 2ND AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; AM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

		IDEAL SAT. FLOW	NO. LNS	f W	f HV	f G	f p	f BB	f A	f RT	f LT	ADJ. SAT. FLOW
EB												
	TR	1900	2	1.000	0.990	1.000	1.000	1.000	1.000	0.982	1.000	3696
	R	1900	1	1.000	0.990	1.000	1.000	1.000	1.000	0.850	1.000	1599
WB												
	T	1900	2	1.000	0.990	1.000	1.000	1.000	1.000	1.000	1.000	3762
NB												
SB												
	LTR	1900	3	1.000	0.990	1.000	1.000	1.000	1.000	0.985	0.993	5519

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... SE 2ND AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; AM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

	ADJ. FLOW RATE (v)	ADJ. SAT. FLOW RATE (s)	FLOW RATIO (v/s)	GREEN RATIO (g/C)	LANE GROUP CAPACITY (c)	v/c RATIO	
EB							
TR	2316	3696	0.627	0.656	2423	0.956	
R	1038	1599	0.649	0.656	1048	0.990	*
WB							
T	219	3762	0.058	0.656	2466	0.089	
NB							
SB							
LTR	1525	5519	0.276	0.278	1533	0.995	*

Cycle Length, C = 90.0 sec. Sum (v/s) critical = 0.925
Lost Time Per Cycle, L = 6.0 sec. X critical = 0.992

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... SE 2ND AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; AM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

	v/c RATIO	g/C RATIO	CYCLE LEN.	DELAY d 1	LANE GROUP CAP.	DELAY d 2	PROG. FACT.	LANE GRP. DELAY	LANE GRP. LOS	DELAY BY APP.	LOS BY APP.
EB											
TR	0.956	0.656	90.0	10.9	2423	7.4	0.82	15.0	B	18.2	C
R	0.990	0.656	90.0	11.6	1048	19.3	0.82	25.3	D		
WB											
T	0.089	0.656	90.0	4.3	2466	0.0	1.00	4.3	A	4.3	A
NB											
SB											
LTR	0.995	0.278	90.0	24.6	1533	16.6	0.90	37.1	D	37.1	D

Intersection Delay = 23.2 (sec/veh) Intersection LOS = C

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... SE 2ND AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; AM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

1985 HCM: SIGNALIZED INTERSECTIONS
SUMMARY REPORT

****

INTERSECTION..SE 3RD ST/SW 1ST AVE
AREA TYPE.....OTHER
ANALYST.....BCF
DATE.....08-25-1993
TIME.....PM PEAK
COMMENT.....YEAR 2010 PROJECTIONS

	VOLUMES					GEOMETRY							
	EB	WB	NB	SB		EB		WB		NB		SB	
LT	75	50	100	50	L	12.0	L	12.0	L	12.0	L	12.0	
TH	993	1422	300	300	T	12.0	T	12.0	T	12.0	T	12.0	
RT	95	20	20	0	T	12.0	TR	12.0	TR	12.0	TR	12.0	
RR	0	0	0	0	TR	12.0		12.0		12.0		12.0	
						12.0		12.0		12.0		12.0	
						12.0		12.0		12.0		12.0	

ADJUSTMENT FACTORS

	GRADE (%)	HV (%)	ADJ Y/N	PKG Nm	BUSES Nb	PHF	PEDS	PED. Y/N	BUT. min T	ARR. TYPE
EB	0.00	2.00	N	0	0	0.95	50	Y	14.8	3
WB	0.00	2.00	N	0	0	0.95	50	Y	14.8	5
NB	0.00	2.00	N	0	0	0.95	50	Y	23.8	3
SB	0.00	2.00	N	0	0	0.95	50	Y	23.8	3

SIGNAL SETTINGS — CYCLE LENGTH = 90.0

		PH-1	PH-2	PH-3	PH-4			PH-1	PH-2	PH-3	PH-4
EB	LT	X				NB	LT	X			
	TH		X				TH	X			
	RT		X				RT	X			
	PD						PD				
WB	LT	X				SB	LT	X			
	TH		X				TH	X			
	RT		X				RT	X			
	PD						PD				
GREEN		8.0	48.0	0.0	0.0	GREEN		22.0	0.0	0.0	0.0
YELLOW		4.0	4.0	0.0	0.0	YELLOW		4.0	0.0	0.0	0.0

LEVEL OF SERVICE

	LANE GRP.	V/C	G/C	DELAY	LOS	APP. DELAY	APP. LOS
EB	L	0.442	0.100	30.1	D	10.5	B
	TR	0.415	0.544	9.2	B		
WB	L	0.295	0.100	28.8	D	9.8	B
	TR	0.780	0.544	9.2	B		
NB	L	0.380	0.256	21.4	C	21.1	C
	TR	0.371	0.256	21.1	C		
SB	L	0.197	0.256	20.0	C	20.8	C
	TR	0.345	0.256	20.9	C		

INTERSECTION: Delay = 12.5 (sec/veh) V/C = 0.629 LOS = B

		MVT. VOL.	PHF	ADJ. VOL.	LANE GRP.	LANE GRP. VOL.	NO. LN	LANE UTIL. FACT.	GROWTH FACT.	ADJ. GRP. VOL.	PROP LT	PROP RT
EB												
	LT	75	0.95	79	L	79	1	1.000	1.000	79	1.00	0.00
	TH	993	0.95	1045	TR	1145	3	1.100	1.000	1260	0.00	0.09
	RT	95	0.95	100								
WB												
	LT	50	0.95	53	L	53	1	1.000	1.000	53	1.00	0.00
	TH	1422	0.95	1497	TR	1518	2	1.050	1.000	1594	0.00	0.01
	RT	20	0.95	21								
NB												
	LT	100	0.95	105	L	105	1	1.000	1.000	105	1.00	0.00
	TH	300	0.95	316	TR	337	2	1.050	1.000	354	0.00	0.06
	RT	20	0.95	21								
SB												
	LT	50	0.95	53	L	53	1	1.000	1.000	53	1.00	0.00
	TH	300	0.95	316	TR	316	2	1.050	1.000	332	0.00	0.00
	RT	0	0.95	0								

* Denotes a Defacto Left Turn Lane Group

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... SW 1ST AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; PM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

INPUT VARIABLES	EB	WB	NB	SB
Cycle Length, C (sec)			90.0	90.0
Effective Green, G (sec)			23.0	23.0
Number of Lanes, N			1	1
Total Approach Flow Rate, Va (vph)			442	368
Mainline Flow Rate, Vm (vph)			337	316
Left-Turn Flow Rate, Vlt (vph)			105	53
Proportion of LT, Plt			1.000	1.000
Opposing Lanes, No			2	2
Opposing Flow Rate, Vo (vph)			316	337
Prop. of LT in Opp. Vol., Plto			0.000	0.000

COMPUTATIONS	EB	WB	NB	SB
Sop=(1800No)/(1+Plto((400+Vm)/(1400-Vm)))			3600	3600
Yo=Vo/Sop			0.088	0.094
Gu=(G-C*Yo)/(1-Yo)			16.558	16.084
Fs=(875-0.625Vo)/1000			0.678	0.664
Pl=Plt(1+((N-1)G)/(Fs*Gu+4.5)))			1.000	1.000
Gq=G-Gu			6.442	6.916
Pt=1-Pl			0.000	0.000
Gf=2Pt(1-(Pt**0.5Gq))/Pl			0.000	0.000
El=1800/(1400-Vo)			1.66	1.69
Fm=Gf/G+(Gu/G)(1/(1+Pl(El-1)))+(2/G)(1+Pl)			0.608	0.587
Flt=(Fm+N-1)/N			0.608	0.587

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... SW 1ST AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; PM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

		IDEAL SAT. FLOW	NO. LNS	f W	f HV	f G	f p	f BB	f A	f RT	f LT	ADJ. SAT. FLOW
EB												
	L	1900	1	1.000	0.990	1.000	1.000	1.000	1.000	1.000	0.950	1787
	TR	1900	3	1.000	0.990	1.000	1.000	1.000	1.000	0.987	1.000	5569
WB												
	L	1900	1	1.000	0.990	1.000	1.000	1.000	1.000	1.000	0.950	1787
	TR	1900	2	1.000	0.990	1.000	1.000	1.000	1.000	0.998	1.000	3754
NB												
	L	1800	1	1.000	0.990	1.000	1.000	1.000	1.000	1.000	0.608	1083
	TR	1900	2	1.000	0.990	1.000	1.000	1.000	1.000	0.991	1.000	3727
SB												
	L	1800	1	1.000	0.990	1.000	1.000	1.000	1.000	1.000	0.587	1046
	TR	1900	2	1.000	0.990	1.000	1.000	1.000	1.000	1.000	1.000	3762

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... SW 1ST AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; PM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

	ADJ. FLOW RATE (v)	ADJ. SAT. FLOW RATE (s)	FLOW RATIO (v/s)	GREEN RATIO (g/C)	LANE GROUP CAPACITY (c)	v/c RATIO	
EB							
L	79	1787	0.044	0.100	179	0.442	*
TR	1260	5569	0.226	0.544	3032	0.415	
WB							
L	53	1787	0.029	0.100	179	0.295	
TR	1594	3754	0.425	0.544	2044	0.780	*
NB							
L	105	1083	0.097	0.256	277	0.380	*
TR	354	3727	0.095	0.256	952	0.371	
SB							
L	53	1046	0.050	0.256	267	0.197	
TR	332	3762	0.088	0.256	961	0.345	

Cycle Length, C = 90.0 sec. Sum (v/s) critical = 0.566
Lost Time Per Cycle, L = 9.0 sec. X critical = 0.629

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... SW 1ST AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; PM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

	v/c RATIO	g/C RATIO	CYCLE LEN.	DELAY d 1	LANE GROUP CAP.	DELAY d 2	PROG. FACT.	LANE GRP. DELAY	LANE GRP. LOS	DELAY BY APP.	LOS BY APP.
EB											
L	0.442	0.100	90.0	29.0	179	1.2	1.00	30.1	D	10.5	B
TR	0.415	0.544	90.0	9.2	3032	0.1	1.00	9.2	B		
WB											
L	0.295	0.100	90.0	28.5	179	0.3	1.00	28.8	D	9.8	B
TR	0.780	0.544	90.0	12.3	2044	1.4	0.67	9.2	B		
NB											
L	0.380	0.256	90.0	21.0	277	0.4	1.00	21.4	C	21.1	C
TR	0.371	0.256	90.0	20.9	952	0.1	1.00	21.1	C		
SB											
L	0.197	0.256	90.0	20.0	267	0.0	1.00	20.0	C	20.8	C
TR	0.345	0.256	90.0	20.8	961	0.1	1.00	20.9	C		

Intersection Delay = 12.5 (sec/veh) Intersection LOS = B

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... SW 1ST AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; PM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

1985 HCM: SIGNALIZED INTERSECTIONS
SUMMARY REPORT

****

INTERSECTION..SE 3RD ST/S MIAMI AVE
AREA TYPE.....OTHER
ANALYST.....BCF
DATE.....08-25-1993
TIME.....PM PEAK
COMMENT.....YEAR 2010 PROJECTIONS

	VOLUMES					GEOMETRY							
	EB	WB	NB	SB		EB		WB		NB		SB	
LT	0	100	0	115	T	12.0	L	12.0		12.0	LT	12.0	
TH	993	1422	0	400	T	12.0	T	12.0		12.0	T	12.0	
RT	0	0	0	0	T	12.0	TR	12.0		12.0	TR	12.0	
RR	0	0	0	0		12.0		12.0		12.0		12.0	
						12.0		12.0		12.0		12.0	
						12.0		12.0		12.0		12.0	

ADJUSTMENT FACTORS

	GRADE (%)	HV (%)	ADJ Y/N	PKG Nm	BUSES Nb	PHF	PEDS	PED. Y/N	BUT. min T	ARR. TYPE
EB	0.00	2.00	N	0	0	0.95	50	Y	14.3	3
WB	0.00	2.00	N	0	0	0.95	50	Y	14.3	5
NB	0.00	2.00	N	0	0	0.95	50	Y	22.8	3
SB	0.00	2.00	N	0	0	0.95	50	Y	22.8	3

SIGNAL SETTINGS — CYCLE LENGTH = 90.0

		PH-1	PH-2	PH-3	PH-4			PH-1	PH-2	PH-3	PH-4
EB	LT					NB	LT				
	TH		X				TH				
	RT						RT				
	PD						PD				
WB	LT	X				SB	LT	X			
	TH	X	X				TH	X			
	RT						RT	X			
	PD						PD				
GREEN		8.0	42.0	0.0	0.0	GREEN		28.0	0.0	0.0	0.0
YELLOW		4.0	4.0	0.0	0.0	YELLOW		4.0	0.0	0.0	0.0

LEVEL OF SERVICE

	LANE GRP.	V/C	G/C	DELAY	LOS	APP. DELAY	APP. LOS
EB	T	0.426	0.478	11.8	B	11.8	B
WB	L	0.589	0.100	33.0	D	8.0	B
	TR	0.684	0.611	6.4	B		
SB	LTR	0.341	0.322	17.7	C	17.7	C

INTERSECTION: Delay = 11.0 (sec/veh) V/C = 0.565 LOS = B

		MVT. VOL.	PHF	ADJ. VOL.	LANE GRP.	LANE GRP. VOL.	NO. LN	LANE UTIL. FACT.	GROWTH FACT.	ADJ. GRP. VOL.	PROP LT	PROP RT
EB												
	LT	0	0.95	0								
	TH	993	0.95	1045	T	1045	3	1.100	1.000	1150	0.00	0.00
	RT	0	0.95	0								
WB												
	LT	100	0.95	105	L	105	1	1.000	1.000	105	1.00	0.00
	TH	1422	0.95	1497	TR	1497	2	1.050	1.000	1572	0.00	0.00
	RT	0	0.95	0								
NB												
	LT	0	0.95	0								
	TH	0	0.95	0								
	RT	0	0.95	0								
SB												
	LT	115	0.95	121								
	TH	400	0.95	421	LTR	542	3	1.100	1.000	596	0.22	0.00
	RT	0	0.95	0								

* Denotes a Defacto Left Turn Lane Group

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... S MIAMI AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; PM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

		IDEAL SAT. FLOW	NO. LNS	f W	f HV	f G	f p	f BB	f A	f RT	f LT	ADJ. SAT. FLOW
EB												
	T	1900	3	1.000	0.990	1.000	1.000	1.000	1.000	1.000	1.000	5643
WB												
	L	1900	1	1.000	0.990	1.000	1.000	1.000	1.000	1.000	0.950	1787
	TR	1900	2	1.000	0.990	1.000	1.000	1.000	1.000	1.000	1.000	3762
NB												
SB												
	LTR	1900	3	1.000	0.990	1.000	1.000	1.000	1.000	1.000	0.961	5424

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... S MIAMI AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; PM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

	ADJ. FLOW RATE (v)	ADJ. SAT. FLOW RATE (s)	FLOW RATIO (v/s)	GREEN RATIO (g/C)	LANE GROUP CAPACITY (c)	v/c RATIO	
EB							
T	1150	5643	0.204	0.478	2696	0.426	
WB							
L	105	1787	0.059	0.100	179	0.589	
TR	1572	3762	0.418	0.611	2299	0.684	*
NB							
SB							
LTR	596	5424	0.110	0.322	1748	0.341	*

Cycle Length, C = 90.0 sec. Sum (v/s) critical = 0.528
Lost Time Per Cycle, L = 6.0 sec. X critical = 0.565

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... S MIAMI AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; PM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

	v/c RATIO	g/C RATIO	CYCLE LEN.	DELAY d 1	LANE GROUP CAP.	DELAY d 2	PROG. FACT.	LANE GRP. DELAY	LANE GRP. LOS	DELAY BY APP.	LOS BY APP.
EB											
T	0.426	0.478	90.0	11.7	2696	0.1	1.00	11.8	B	11.8	B
WB											
L	0.589	0.100	90.0	29.4	179	3.6	1.00	33.0	D	8.0	B
TR	0.684	0.611	90.0	8.9	2299	0.6	0.67	6.4	B		
NB											
SB											
LTR	0.341	0.322	90.0	17.7	1748	0.0	1.00	17.7	C	17.7	C

Intersection Delay = 11.0 (sec/veh) Intersection LOS = B

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... S MIAMI AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; PM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

1985 HCM: SIGNALIZED INTERSECTIONS
SUMMARY REPORT

****

INTERSECTION..SE 3RD ST/SE 1ST AVE
AREA TYPE.....OTHER
ANALYST.....BCF
DATE.....08-25-1993
TIME.....PM PEAK
COMMENT.....YEAR 2010 TRAFFIC PROJECTIONS

	VOLUMES					GEOMETRY							
	EB	WB	NB	SB		EB		WB		NB		SB	
LT	300	0	0	0	: L	12.0	T	12.0	LT	12.0		12.0	
TH	1097	2051	600	0	: T	12.0	T	12.0	T	12.0		12.0	
RT	0	0	129	0	: T	12.0	TR	12.0	TR	12.0		12.0	
RR	0	0	0	0	: T	12.0		12.0		12.0		12.0	
					:	12.0		12.0		12.0		12.0	
					:	12.0		12.0		12.0		12.0	

ADJUSTMENT FACTORS

	GRADE (%)	HV (%)	ADJ Y/N	PKG Nm	BUSES Nb	PHF	PEDS	PED. Y/N	BUT. min T	ARR. TYPE
EB	0.00	2.00	N	0	0	0.95	50	Y	14.3	3
WB	0.00	2.00	N	0	0	0.95	50	Y	14.3	5
NB	0.00	2.00	N	0	0	0.95	50	Y	28.8	3
SB	0.00	2.00	N	0	0	0.95	50	Y	28.8	3

SIGNAL SETTINGS — CYCLE LENGTH = 90.0

		PH-1	PH-2	PH-3	PH-4			PH-1	PH-2	PH-3	PH-4
EB	LT	X				NB	LT	X			
	TH	X	X				TH	X			
	RT	X	X				RT	X			
	PD						PD				
WB	LT					SB	LT				
	TH		X				TH				
	RT		X				RT				
	PD						PD				
GREEN		16.0	40.0	0.0	0.0	GREEN		22.0	0.0	0.0	0.0
YELLOW		4.0	4.0	0.0	0.0	YELLOW		4.0	0.0	0.0	0.0

LEVEL OF SERVICE

	LANE GRP.	V/C	G/C	DELAY	LOS	APP. DELAY	APP. LOS
EB	L	0.936	0.189	50.9	E	13.8	B
	T	0.332	0.678	4.6	A		
WB	TR	0.924	0.456	18.1	C	18.1	C
NB	LTR	0.601	0.256	22.9	C	22.9	C

INTERSECTION: Delay = 17.6 (sec/veh) V/C = 0.835 LOS = C

	MVT. VOL.	PHF	ADJ. VOL.	LANE GRP.	LANE GRP. VOL.	NO. LN	LANE UTIL. FACT.	GROWTH FACT.	ADJ. GRP. VOL.	PROP LT	PROP RT
EB											
LT	300	0.95	316	L	316	1	1.000	1.000	316	1.00	0.00
TH	1097	0.95	1155	T	1155	3	1.100	1.000	1270	0.00	0.00
RT	0	0.95	0								
WB											
LT	0	0.95	0								
TH	2051	0.95	2159	TR	2159	3	1.100	1.000	2375	0.00	0.00
RT	0	0.95	0								
NB											
LT	0	0.95	0								
TH	600	0.95	632	LTR	767	3	1.100	1.000	844	0.00	0.18
RT	129	0.95	136								
SB											
LT	0	0.95	0								
TH	0	0.95	0								
RT	0	0.95	0								

* Denotes a Defacto Left Turn Lane Group

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... SE 1ST AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; PM PEAK
OTHER INFORMATION:
YEAR 2010 TRAFFIC PROJECTIONS

		IDEAL SAT. FLOW	NO. LNS	f W	f HV	f G	f p	f BB	f A	f RT	f LT	ADJ. SAT. FLOW
EB												
	L	1900	1	1.000	0.990	1.000	1.000	1.000	1.000	1.000	0.950	1787
	T	1900	3	1.000	0.990	1.000	1.000	1.000	1.000	1.000	1.000	5643
WB												
	TR	1900	3	1.000	0.990	1.000	1.000	1.000	1.000	1.000	1.000	5643
NB												
	LTR	1900	3	1.000	0.990	1.000	1.000	1.000	1.000	0.973	1.000	5493
SB												

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... SE 1ST AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; PM PEAK
OTHER INFORMATION:
YEAR 2010 TRAFFIC PROJECTIONS

	ADJ. FLOW RATE (v)	ADJ. SAT. FLOW RATE (s)	FLOW RATIO (v/s)	GREEN RATIO (g/C)	LANE GROUP CAPACITY (c)	v/c RATIO	
EB							
L	316	1787	0.177	0.189	338	0.936	*
T	1270	5643	0.225	0.678	3825	0.332	
WB							
TR	2375	5643	0.421	0.456	2571	0.924	*
NB							
LTR	844	5493	0.154	0.256	1404	0.601	*
SB							

Cycle Length, C = 90.0 sec. Sum (v/s) critical = 0.751
Lost Time Per Cycle, L = 9.0 sec. X critical = 0.835

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... SE 1ST AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; PM PEAK
OTHER INFORMATION:
YEAR 2010 TRAFFIC PROJECTIONS

	v/c RATIO	g/C RATIO	CYCLE LEN.	DELAY d 1	LANE GROUP CAP.	DELAY d 2	PROG. FACT.	LANE GRP. DELAY	LANE GRP. LOS	DELAY BY APP.	LOS BY APP.
EB											
L	0.936	0.189	90.0	27.3	338	23.6	1.00	50.9	E	13.8	B
T	0.332	0.678	90.0	4.6	3825	0.0	1.00	4.6	A		
WB											
TR	0.924	0.456	90.0	17.5	2571	4.6	0.82	18.1	C	18.1	C
NB											
LTR	0.601	0.256	90.0	22.4	1404	0.5	1.00	22.9	C	22.9	C
SB											

Intersection Delay = 17.6 (sec/veh) Intersection LOS = C

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... SE 1ST AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; PM PEAK
OTHER INFORMATION:
YEAR 2010 TRAFFIC PROJECTIONS

1985 HCM: SIGNALIZED INTERSECTIONS
SUMMARY REPORT

****

INTERSECTION..SE 3RD ST/SE 2ND AVE
AREA TYPE.....OTHER
ANALYST.....BCF
DATE.....08-25-1993
TIME.....PM PEAK
COMMENT.....YEAR 2010 PROJECTIONS

	VOLUMES					GEOMETRY					
	EB	WB	NB	SB		EB		WB	NB		SB
LT	0	0	0	65	T	12.0	T	12.0	12.0	LT	12.0
TH	736	1604	0	1695	TR	12.0	T	12.0	12.0	T	12.0
RT	490	0	0	347	R	12.0		12.0	12.0	TR	12.0
RR	0	0	0	0		12.0		12.0	12.0		12.0
						12.0		12.0	12.0		12.0
						12.0		12.0	12.0		12.0

ADJUSTMENT FACTORS

	GRADE (%)	HV (%)	ADJ Y/N	PKG Nm	BUSES Nb	PHF	PEDS	PED. Y/N	BUT. min T	ARR. TYPE
EB	0.00	2.00	N	0	0	0.95	50	Y	14.3	3
WB	0.00	2.00	N	0	0	0.95	50	Y	14.3	3
NB	0.00	2.00	N	0	0	0.95	50	Y	22.8	3
SB	0.00	2.00	N	0	0	0.95	50	Y	22.8	4

SIGNAL SETTINGS — CYCLE LENGTH = 90.0

		PH-1	PH-2	PH-3	PH-4			PH-1	PH-2	PH-3	PH-4
EB	LT					NB	LT				
	TH	X					TH				
	RT	X					RT				
	PD						PD				
WB	LT					SB	LT	X			
	TH	X					TH	X			
	RT						RT	X			
	PD						PD				
GREEN		42.0	0.0	0.0	0.0	GREEN		40.0	0.0	0.0	0.0
YELLOW		4.0	0.0	0.0	0.0	YELLOW		4.0	0.0	0.0	0.0

LEVEL OF SERVICE

	LANE GRP.	V/C	G/C	DELAY	LOS	APP. DELAY	APP. LOS
EB	TR	0.522	0.478	12.7	B	12.8	B
	R	0.540	0.478	13.2	B		
WB	T	0.986	0.478	31.3	D	31.3	D
SB	LTR	0.978	0.456	25.5	D	25.5	D

INTERSECTION: Delay = 24.3 (sec/veh) V/C = 0.982 LOS = C

	MVT. VOL.	PHF	ADJ. VOL.	LANE GRP.	LANE GRP. VOL.	NO. LN	LANE UTIL. FACT.	GROWTH FACT.	ADJ. GRP. VOL.	PROP LT	PROP RT
EB											
LT	0	0.95	0								
TH	736	0.95	775	TR	878	2	1.050	1.000	922	0.00	0.12
RT	490	0.95	516	R	413	1	1.000	1.000	413	0.00	1.00
WB											
LT	0	0.95	0								
TH	1604	0.95	1688	T	1688	2	1.050	1.000	1773	0.00	0.00
RT	0	0.95	0								
NB											
LT	0	0.95	0								
TH	0	0.95	0								
RT	0	0.95	0								
SB											
LT	65	0.95	68								
TH	1695	0.95	1784	LTR	2218	3	1.100	1.000	2440	0.03	0.16
RT	347	0.95	365								

* Denotes a Defacto Left Turn Lane Group

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... SE 2ND AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; PM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

		IDEAL SAT. FLOW	NO. LNS	f W	f HV	f G	f p	f BB	f A	f RT	f LT	ADJ. SAT. FLOW
EB												
	TR	1900	2	1.000	0.990	1.000	1.000	1.000	1.000	0.982	1.000	3696
	R	1900	1	1.000	0.990	1.000	1.000	1.000	1.000	0.850	1.000	1599
WB												
	T	1900	2	1.000	0.990	1.000	1.000	1.000	1.000	1.000	1.000	3762
NB												
SB												
	LTR	1900	3	1.000	0.990	1.000	1.000	1.000	1.000	0.975	0.995	5474

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... SE 2ND AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; PM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

	ADJ. FLOW RATE (v)	ADJ. SAT. FLOW RATE (s)	FLOW RATIO (v/s)	GREEN RATIO (g/C)	LANE GROUP CAPACITY (c)	v/c RATIO
EB						
TR	922	3696	0.249	0.478	1766	0.522
R	413	1599	0.258	0.478	764	0.540
WB						
T	1773	3762	0.471	0.478	1797	0.986 *
NB						
SB						
LTR	2440	5474	0.446	0.456	2494	0.978 *

Cycle Length, C = 90.0 sec. Sum (v/s) critical = 0.917
Lost Time Per Cycle, L = 6.0 sec. X critical = 0.982

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... SE 2ND AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; PM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

	v/c RATIO	g/C RATIO	CYCLE LEN.	DELAY d 1	LANE GROUP CAP.	DELAY d 2	PROG. FACT.	LANE GRP. DELAY	LANE GRP. LOS	DELAY BY APP.	LOS BY APP.
EB											
TR	0.522	0.478	90.0	12.4	1766	0.2	1.00	12.7	B	12.8	B
R	0.540	0.478	90.0	12.6	764	0.6	1.00	13.2	B		
WB											
T	0.986	0.478	90.0	17.6	1797	13.6	1.00	31.3	D	31.3	D
NB											
SB											
LTR	0.978	0.456	90.0	18.3	2494	10.0	0.90	25.5	D	25.5	D

Intersection Delay = 24.3 (sec/veh) Intersection LOS = C

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 3RD ST
NAME OF THE NORTH/SOUTH STREET... SE 2ND AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; PM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

1985 HCM: SIGNALIZED INTERSECTIONS
SUMMARY REPORT

****

INTERSECTION..SE 2ND ST/S MIAMI AVE
AREA TYPE.....CBD
ANALYST.....BCF
DATE.....08-25-1993
TIME.....PM PEAK
COMMENT.....YEAR 2010 PROJECTIONS

	VOLUMES					GEOMETRY				
	EB	WB	NB	SB	EB		WB	NB		SB
LT	0	278	0	0	12.0	LT	12.0	12.0	T	12.0
TH	0	1171	0	225	12.0	T	12.0	12.0	TR	12.0
RT	0	0	0	215	12.0		12.0	12.0		12.0
RR	0	0	0	0	12.0		12.0	12.0		12.0
					12.0		12.0	12.0		12.0
					12.0		12.0	12.0		12.0

ADJUSTMENT FACTORS

	GRADE (%)	HV (%)	ADJ Y/N	PKG Nm	BUSES Nb	PHF	PEDS	PED. Y/N	BUT. min T	ARR. TYPE
EB	0.00	2.00	N	0	0	0.95	50	Y	8.5	3
WB	0.00	2.00	N	0	0	0.95	50	Y	8.5	5
NB	0.00	2.00	N	0	0	0.95	50	Y	8.5	3
SB	0.00	2.00	N	0	0	0.95	50	Y	8.5	3

SIGNAL SETTINGS — CYCLE LENGTH = 90.0

		PH-1	PH-2	PH-3	PH-4			PH-1	PH-2	PH-3	PH-4
EB	LT					NB	LT				
	TH						TH				
	RT						RT				
	PD						PD				
WB	LT	X				SB	LT				
	TH	X					TH	X			
	RT						RT	X			
	PD						PD				
GREEN		60.0	0.0	0.0	0.0	GREEN		22.0	0.0	0.0	0.0
YELLOW		4.0	0.0	0.0	0.0	YELLOW		4.0	0.0	0.0	0.0

LEVEL OF SERVICE

	LANE GRP.	V/C	G/C	DELAY	LOS	APP. DELAY	APP. LOS
WB	LT	0.963	0.678	15.5	C	15.5	C
SB	TR	0.606	0.256	23.4	C	23.4	C

INTERSECTION: Delay = 16.9 (sec/veh) V/C = 0.865 LOS = C

	MVT. VOL.	PHF	ADJ. VOL.	LANE GRP.	LANE GRP. VOL.	NO. LN	LANE UTIL. FACT.	GROWTH FACT.	ADJ. GRP. VOL.	PROP LT	PROP RT
EB											
LT	0	0.95	0								
TH	0	0.95	0								
RT	0	0.95	0								
WB											
LT	278	0.95	293								
TH	1171	0.95	1233	LT	1525	2	1.400	1.000	2135	0.19	0.00
RT	0	0.95	0								
NB											
LT	0	0.95	0								
TH	0	0.95	0								
RT	0	0.95	0								
SB											
LT	0	0.95	0								
TH	225	0.95	237	TR	463	2	1.050	1.000	486	0.00	0.49
RT	215	0.95	226								

* Denotes a Defacto Left Turn Lane Group

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 2ND ST
NAME OF THE NORTH/SOUTH STREET... S MIAMI AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; PM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

	IDEAL SAT. FLOW	NO. LNS	f W	f HV	f G	f p	f BB	f A	f RT	f LT	ADJ. SAT. FLOW
EB											
WB											
LT	1900	2	1.000	0.990	1.000	1.000	1.000	0.900	1.000	0.967	3273
NB											
SB											
TR	1900	2	1.000	0.990	1.000	1.000	1.000	0.900	0.927	1.000	3138

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 2ND ST
NAME OF THE NORTH/SOUTH STREET... S MIAMI AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; PM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

	ADJ. FLOW RATE (v)	ADJ. SAT. FLOW RATE (s)	FLOW RATIO (v/s)	GREEN RATIO (g/C)	LANE GROUP CAPACITY (c)	v/c RATIO
EB						
WB						
LT	2135	3273	0.652	0.678	2218	0.963 *
NB						
SB						
TR	486	3138	0.155	0.256	802	0.606 *

Cycle Length, C = 90.0 sec. Sum (v/s) critical = 0.807
Lost Time Per Cycle, L = 6.0 sec. X critical = 0.865

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 2ND ST
NAME OF THE NORTH/SOUTH STREET... S MIAMI AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; PM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

	v/c RATIO	g/C RATIO	CYCLE LEN.	DELAY d 1	LANE GROUP CAP.	DELAY d 2	PROG. FACT.	LANE GRP. DELAY	LANE GRP. LOS	DELAY BY APP.	LOS BY APP.
EB											
WB											
LT	0.963	0.678	90.0	10.2	2218	8.6	0.82	15.5	C	15.5	C
NB											
SB											
TR	0.606	0.256	90.0	22.4	802	1.0	1.00	23.4	C	23.4	C

Intersection Delay = 16.9 (sec/veh) Intersection LOS = C

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 2ND ST
NAME OF THE NORTH/SOUTH STREET... S MIAMI AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; PM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

1985 HCM: SIGNALIZED INTERSECTIONS
SUMMARY REPORT

****

INTERSECTION..SE 2ND ST/SW 1ST AVE
AREA TYPE.....CBD
ANALYST.....BCF
DATE.....08-25-1993
TIME.....PM PEAK
COMMENT.....YEAR 2010 PROJECTIONS

	VOLUMES				GEOMETRY							
	EB	WB	NB	SB	EB		WB		NB		SB	
LT	0	20	0	0	12.0	LT	12.0	T	12.0	T	12.0	
TH	0	1019	0	280	12.0	TR	12.0	T	12.0	TR	12.0	
RT	0	161	0	494	12.0		12.0		12.0		12.0	
RR	0	0	0	0	12.0		12.0		12.0		12.0	
					12.0		12.0		12.0		12.0	
					12.0		12.0		12.0		12.0	

ADJUSTMENT FACTORS

	GRADE (%)	HV (%)	ADJ Y/N	PKG Nm	BUSES Nb	PHF	PEDS	PED. Y/N	BUT. min T	ARR. TYPE
EB	0.00	2.00	N	0	0	0.95	50	Y	19.8	3
WB	0.00	2.00	N	0	0	0.95	50	Y	19.8	5
NB	0.00	2.00	N	0	0	0.95	50	Y	11.3	3
SB	0.00	2.00	N	0	0	0.95	50	Y	11.3	3

SIGNAL SETTINGS — CYCLE LENGTH = 90.0

		PH-1	PH-2	PH-3	PH-4			PH-1	PH-2	PH-3	PH-4
EB	LT					NB	LT				
	TH						TH	X			
	RT						RT	X			
	PD						PD				
WB	LT	X				SB	LT				
	TH	X					TH	X			
	RT	X					RT	X			
	PD						PD				
GREEN		56.0	0.0	0.0	0.0	GREEN		26.0	0.0	0.0	0.0
YELLOW		4.0	0.0	0.0	0.0	YELLOW		4.0	0.0	0.0	0.0

LEVEL OF SERVICE

	LANE GRP.	V/C	G/C	DELAY	LOS	APP. DELAY	APP. LOS
WB	LTR	0.874	0.633	11.1	B	11.1	B
NB	T	0.000	0.300	34.2	D	0.0	A
SB	TR	0.931	0.300	34.7	D	34.7	D

INTERSECTION: Delay = 18.6 (sec/veh) V/C = 0.893 LOS = C

	MVT. VOL.	PHF	ADJ. VOL.	LANE GRP.	LANE GRP. VOL.	NO. LN	LANE UTIL. FACT.	GROWTH FACT.	ADJ. GRP. VOL.	PROP LT	PROP RT
EB											
LT	0	0.95	0								
TH	0	0.95	0								
RT	0	0.95	0								
WB											
LT	20	0.95	21								
TH	1019	0.95	1073	LTR	1263	2	1.450	1.000	1832	0.02	0.13
RT	161	0.95	169								
NB											
LT	0	0.95	0								
TH	0	0.95	0								
RT	0	0.95	0								
SB											
LT	0	0.95	0								
TH	280	0.95	295	TR	815	2	1.050	1.000	855	0.00	0.64
RT	494	0.95	520								

* Denotes a Defacto Left Turn Lane Group

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 2ND ST
NAME OF THE NORTH/SOUTH STREET... SW 1ST AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; PM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

	IDEAL SAT. FLOW	NO. LNS	f W	f HV	f G	f p	f BB	f A	f RT	f LT	ADJ. SAT. FLOW
EB											
WB											
LTR	1900	2	1.000	0.990	1.000	1.000	1.000	0.900	0.980	0.997	3308
NB											
T	1900	2	1.000	0.990	1.000	1.000	1.000	0.900	1.000	1.000	3386
SB											
TR	1900	2	1.000	0.990	1.000	1.000	1.000	0.900	0.904	1.000	3062

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 2ND ST
NAME OF THE NORTH/SOUTH STREET... SW 1ST AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; PM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

	ADJ. FLOW RATE (v)	ADJ. SAT. FLOW RATE (s)	FLOW RATIO (v/s)	GREEN RATIO (g/C)	LANE GROUP CAPACITY (c)	v/c RATIO	
EB							
WB							
LTR	1832	3308	0.554	0.633	2095	0.874	*
NB							
T	0	3386	0.000	0.300	1016	0.000	
SB							
TR	855	3062	0.279	0.300	918	0.931	*

Cycle Length, C = 90.0 sec. Sum (v/s) critical = 0.833
Lost Time Per Cycle, L = 6.0 sec. X critical = 0.893

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 2ND ST
NAME OF THE NORTH/SOUTH STREET... SW 1ST AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; PM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

	v/c RATIO	g/C RATIO	CYCLE LEN.	DELAY d 1	LANE GROUP CAP.	DELAY d 2	PROG. FACT.	LANE GRP. DELAY	LANE GRP. LOS	DELAY BY APP.	LOS BY APP.
EB											
WB											
LTR	0.874	0.633	90.0	10.3	2095	3.2	0.82	11.1	B	11.1	B
NB											
T	0.000	0.300	90.0	34.2	1016	0.0	1.00	34.2	D	0.0	A
SB											
TR	0.931	0.300	90.0	23.3	918	11.4	1.00	34.7	D	34.7	D

Intersection Delay = 18.6 (sec/veh) Intersection LOS = C

IDENTIFYING INFORMATION

NAME OF THE EAST/WEST STREET..... SE 2ND ST
NAME OF THE NORTH/SOUTH STREET... SW 1ST AVE
DATE AND TIME OF THE ANALYSIS.... 08-25-1993 ; PM PEAK
OTHER INFORMATION:
YEAR 2010 PROJECTIONS

APPENDIX C

N.W. 3 ST.
N.E. 3 ST.
LUMMUS PARK
N.W. NORTH RIVER DRIVE
N.W. 3 AVE
GOVERNMENT CENTER
N.W. 2 ST.
N.E. 2 ST.
N.W. 2 AVE
CULTURAL CENTER
N.W. 1 AVE
N.W. 1 ST.
NORTH MIAMI AVE.
N.E. 1 ST.
N.E. 1 AVE
N.E. 2 AVE
N.E. 3 AVE
WEST FLAGLER ST.
EAST FLAGLER ST.
PAUL S. WALKER MINI PARK
BAYFRONT PARK
S.W. 5 AVE
S.W. 2 AVE
S.W. 1 AVE
S.W. 1 ST.
S.E. 1 ST.
S.E. 1 AVE
S.E. 2 AVE
S.E. 3 AVE
S.W. NORTH RIVER DRIVE
MIAMI RIVER
RAMP A
RAMP 1B
RAMP C
RAMP E
S.W. 2 ST.
S.E. 2 ST.
SOUTH MIAMI AVE.
CHOPIN PLAZA
S.W. 3 ST.
RAMP D
JOSE MARTI RIVERFRONT PARK
CONVENTION CENTER
FORT DALLAS PARK
BISCAYNE BOULEVARD WAY
MIAMI RIVER
S.E. 6 ST.
BRICKELL PARK
S.W. 7 ST.
S.E. 7 ST.

CONCEPT ALTERNATIVE

CLAUGHTON

REVISIONS

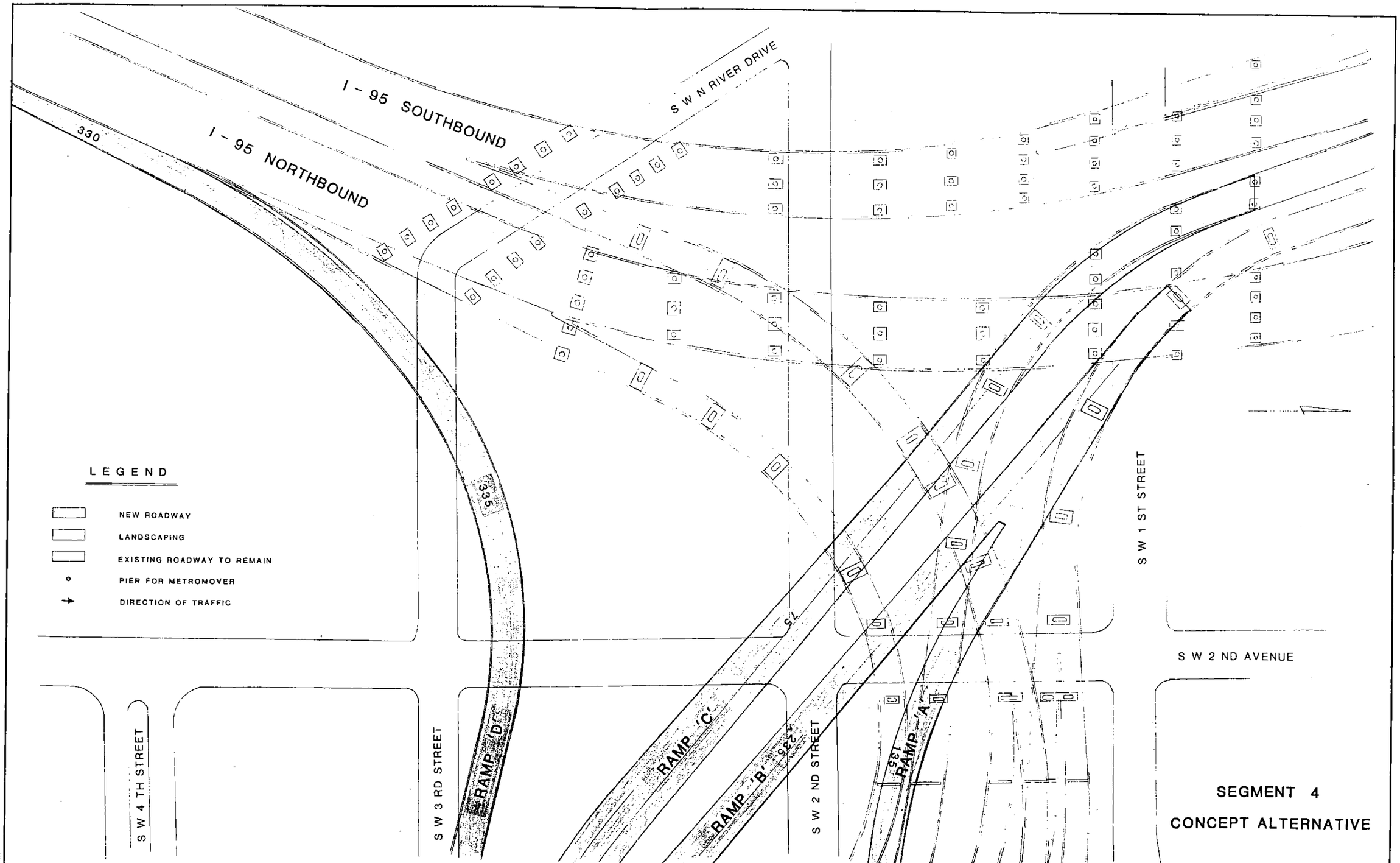
DATE	DESCRIPTION	DATE	BY	DESCRIPTION

DESIGNED BY
CHECKED BY
SUPERVISED BY
DATE
NAME
DATE
APPROVED BY
DATE

CARR SMITH ASSOCIATES

DDA Miami
DOWNTOWN DEVELOPMENT AUTHORITY

Fig.2



SEGMENT 4

CONCEPT ALTERNATIVE

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY			DESIGNED BY		
CHECKED BY			CHECKED BY		
SUPERVISED BY					

APPROVED BY

DATE:

CARR SMITH ASSOCIATES

DDA Miami
DOWNTOWN DEVELOPMENT AUTHORITY

Fig.3

RAMP 'A'

131

S W 2 ND STREET

DOWNTOWN CENTER

MIAMI AVENUE

RAMP 'B'

RAMP 'C'

230

70

RAMP 'E'

170

178

S W 3 RD STREET

340

RAMP 'D'

S.W. 1 ST AVENUE

S.W. 4 TH STREET

LEGEND

- NEW ROADWAY
- LANDSCAPING
- EXISTING ROADWAY TO REMAIN
- PIER FOR METROMOVER
- DIRECTION OF TRAFFIC

SEGMENT 3

CONCEPT ALTERNATIVE

REVISIONS								
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY			DESIGNED BY		
CHECKED BY			CHECKED BY		
SUPERVISED BY					

APPROVED BY

DATE

CARR SMITH ASSOCIATES

DDA Miami

DOWNTOWN DEVELOPMENT AUTHORITY

Fig.4

LEGEND

- NEW ROADWAY
- LANDSCAPING
- EXISTING ROADWAY TO REMAIN
- PIER FOR METROMOVER
- DIRECTION OF TRAFFIC

S E 2 ND STREET

SOUTH MIAMI AVENUE

S E 1 ST AVENUE

S E 2 ND AVENUE

INTERNATIONAL PLACE

HOWARD JOHNSONS

OCCIDENTAL PARC HOTEL

JAMES L KNIGHT CONVENTION CENTER

HYATT HOTEL

SEGMENT 2

CONCEPT ALTERNATIVE

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY			DESIGNED BY		
CHECKED BY			CHECKED BY		
SUPERVISED BY					

APPROVED BY

DATE:

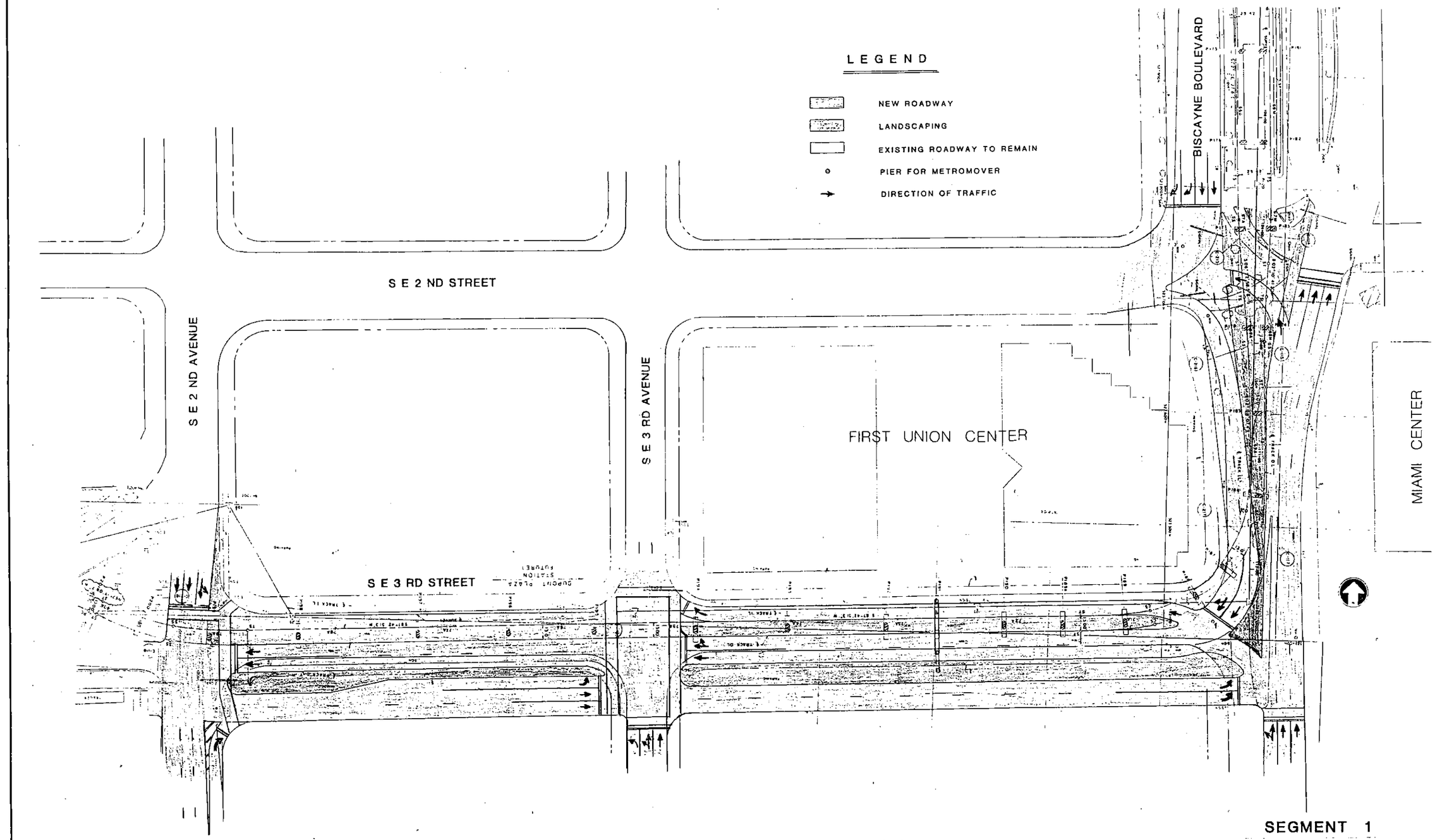
CARR SMITH ASSOCIATES

ENGINEERS ARCHITECTS PLANNER

DDA Miami

DOWNTOWN DEVELOPMENT AUTHORITY

Fig.5



SEGMENT 1

CONCEPT ALTERNATIVE

REVISIONS								
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

	NAME	DATE		NAME	DATE
DESIGNED BY			DESIGNED BY		
CHECKED BY			CHECKED BY		
SUPERVISED BY					

APPROVED BY

DATE:

CARR SMITH ASSOCIATES
ENGINEERS ARCHITECTS PLANNERS

DDA Miami
DOWNTOWN DEVELOPMENT AUTHORITY

Fig.6

EXIST. EAST TO SOUTH RAMP

EXIST. EAST TO SOUTH RAMP

42' ±

32' ±

0.27%

CONNECT TO EXIST RAMP PROFILE

TO I-95 NB ON-RAMP

℄ S.W. 2 AVE.

230' V.C.
30 MPH - MIN 229' V.C.

5.5%

400' V.C.
35 MPH - MIN. 307' V.C.

16.5' ±

℄ S.W. 1 AVE.

1.0%

FROM SW 2 ST.

℄ S.W. 1 CT. TO BE CLOSED

CONNECT TO PROP. RAMP 'B' FROM EAST TO NORTH

44 40 36 32 28 24 20 16 12 8 4 0

129 130 131 132 133 134 135 136 137 138 139 140

PROPOSED PROFILE RAMP 'A'

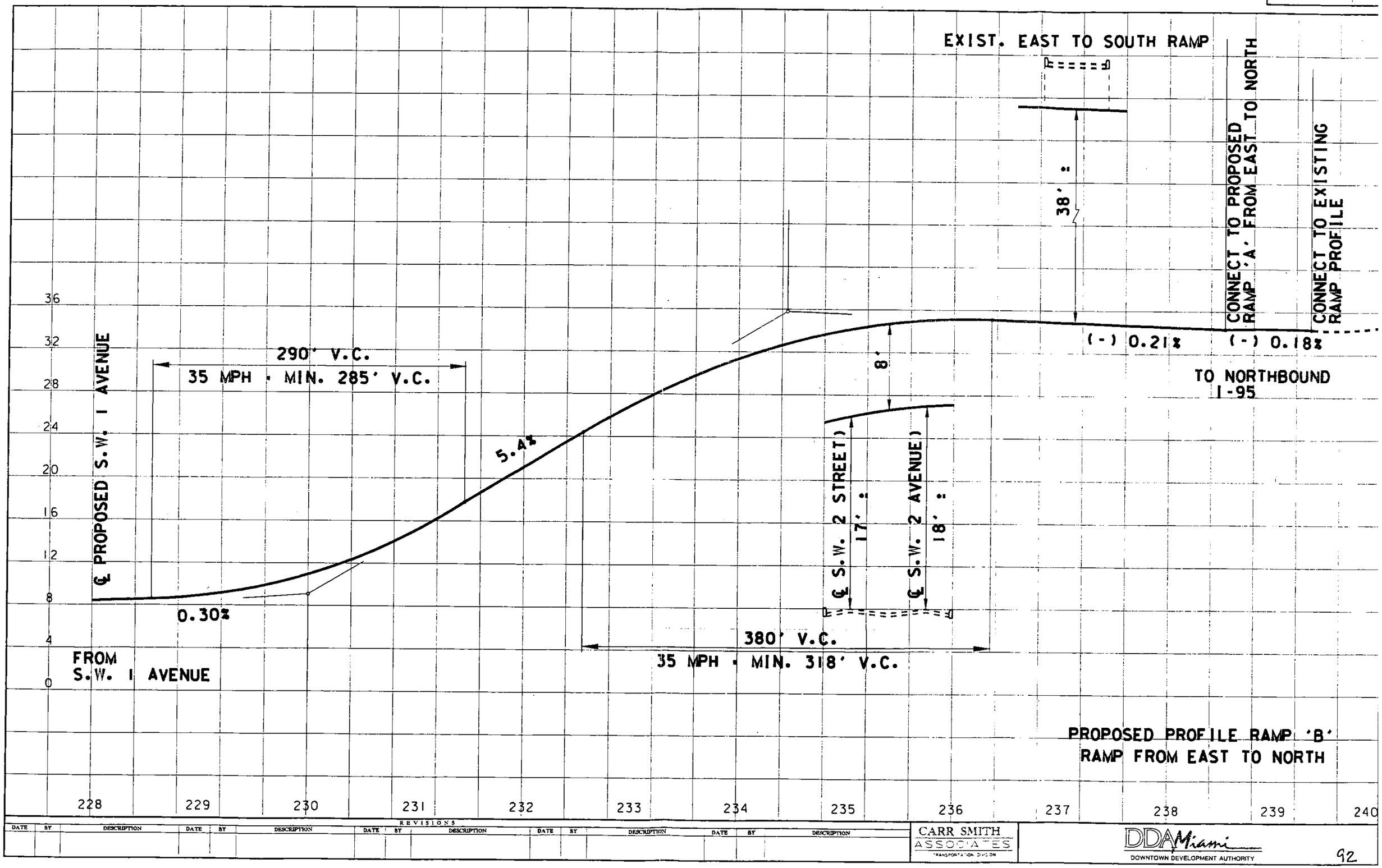
RAMP FROM EAST TO NORTH

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

CARR SMITH ASSOCIATES
TRANSPORTATION DIVISION

DDA Miami
DOWNTOWN DEVELOPMENT AUTHORITY



PROPOSED PROFILE RAMP 'B'
RAMP FROM EAST TO NORTH

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

CARR SMITH ASSOCIATES
TRANSPORTATION DIVISION

DDA Miami
DOWNTOWN DEVELOPMENT AUTHORITY

RAMP FROM EAST TO SOUTH I-95 NORTHBOUND

SHEET NO.

48
44
40
36
32
28

455' V.C.
40 MPH - MIN. 455' V.C.

46'±

19'±

5.6%

(-).90%

CONNECT TO EXIST. I-95 NORTHBOUND

FROM I-95 NORTHBOUND

75 76 77 78 79 80

36
32
28
24
20
16
12
8
4
0

℄ PROPOSED S.W. 1 AVENUE EXTENSION

260' V.C.
30 MPH - MIN. 228' V.C.

400' V.C.
35 MPH - MIN. 345' V.C.

5.5%

0.30%

TO S.W. 3 STREET

8'

℄ S.W. 2 AVE.)
17'±

℄ S.W. 2 ST.)
17'±

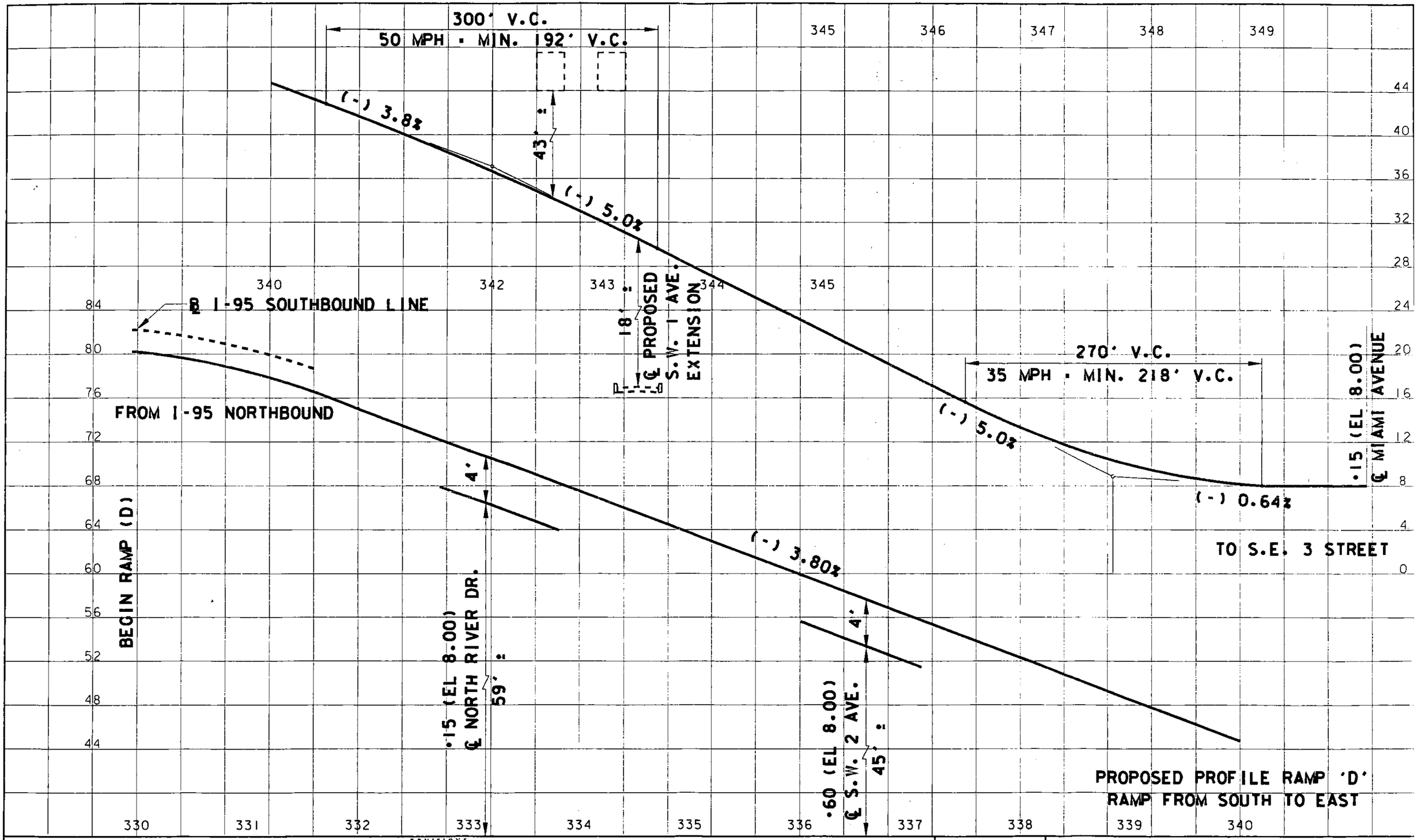
67 68 69 70 71 72 73 74 75 76 77 78

PROPOSED PROFILE RAMP 'C'
RAMP FROM NORTH TO EAST

REVISIONS											
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

CARR SMITH ASSOCIATES
TRANSPORTATION DIVISION

DDA Miami
DOWNTOWN DEVELOPMENT AUTHORITY



PROPOSED PROFILE RAMP 'D'
RAMP FROM SOUTH TO EAST

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

CARR SMITH ASSOCIATES
TRANSPORTATION DIVISION

DDA Miami
DOWNTOWN DEVELOPMENT AUTHORITY

METRO RAIL
TRACK EL. 84.00

40' ±

TO I-95 SOUTHBOUND

CONNECT TO EXIST. RAMP

4'

15' PROP. S.W. 1 AVE. EL 8.00

22' ±

(-) 5.5%

300' V.C.
35 MPH - MIN. 261' V.C.

(-) 0.78%

40' S. MIAMI AVE. EL 8.00

FROM S.E. 3 STREET

PROPOSED PROFILE RAMP 'E'
RAMP FROM EAST TO SOUTH

48 44 40 36 32 28 24 20 16 12 8 4 0

166 167 168 169 170 171 172 173 174 175

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

CARR SMITH ASSOCIATES
TRANSPORTATION DIVISION

DDA Miami
DOWNTOWN DEVELOPMENT AUTHORITY

95