NORTHEAST MIAMI DADE TRAFFIC FLOW STUDY

MIAMI-DADE MPO

THE CORRADINO GROUP
2007

UNDERTAKING THE PLAN

Quality transportation planning can be characterized as a combination of art and science. This report accomplishes both. ***The art is in deciphering the aspirations of a community through intensive public involvement. The science determines what is required through detailed analysis of data.*** The intermingling of these important components results in the list of projects developed to address the most significant and impactfull issues and concerns in the study area.

The Northeast area of Miami-Dade County, as a joint effort with its participating communities, has been studied to help reduce the ever growing problem of traffic congestion in the area. These municipalities are interested in the development of a sub-regional plan to identify short and long term multi-modal solutions to transportation issues. By working as a whole, these communities can better resolve traffic issues than by working alone.

This study has been conceptualized as a result of the Northeast Miami-Dade Mayors' Joint Task Force, which was formed as a regional transportation/traffic evaluation committee. The study area consists of the boundaries of Aventura, Bal Harbour, Bay Harbor Islands, Golden Beach, North Miami, North Miami Beach, Sunny Isles Beach and Surfside.

All aspects of the mobility system were examined, including the pedestrian and bicycle network, transit, the physical capacity of the roadway system and policy initiatives.

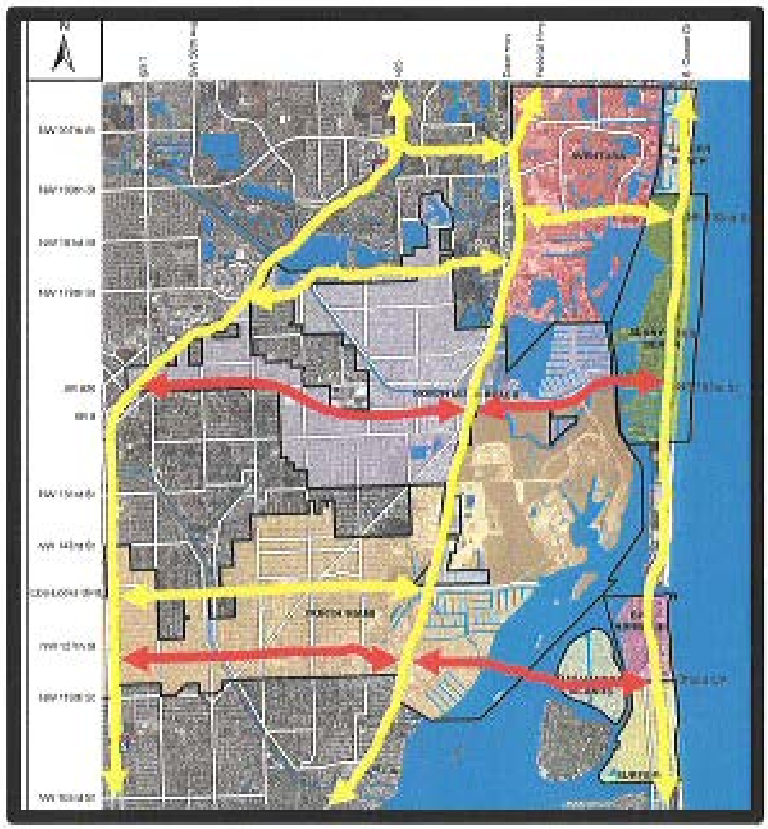
This effort strives to set an example as a targeted sub-regional attempt at transportation planning which is multi-modal in nature

UNDERSTANDING THE SYSTEM

Several levels of analysis have been undertaken, including a review of roadway links and intersections, as well as transportation corridors.

It is important to understand the physical structure of the transportation system. The study area is made up of a series of east/west and north/south corridors. ***The roadway network is best described as an interrupted grid. Few corridors traverse the entire study area.*** From a north/south perspective, three corridors carry the bulk of the system traffic and traverse the entire area. These are:

- I-95
- Biscayne Boulevard
- Collins Avenue



East / West mobility is characterized by five, corridors which connect I-95 and Biscayne Boulevard:

- Ives Dairy Road
- Miami Gardens Drive
- 167/163rd Street
- 135th Street
- 125th Street

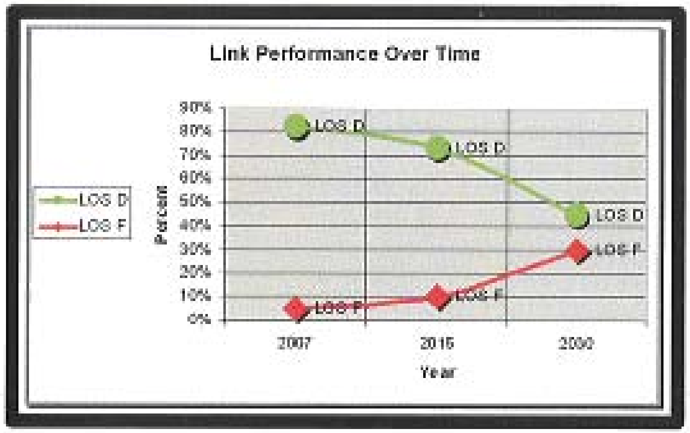
The mainland and barrier islands are connected by three causeways:

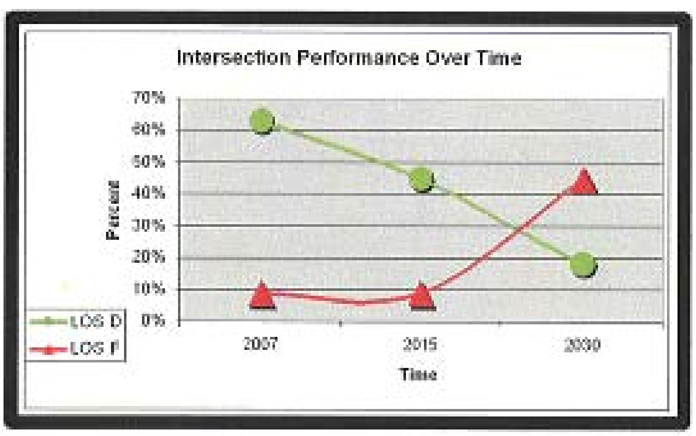
- William Lehman
- Sunny Isles
- Broad

Of these east/west corridors only two connect the barrier islands directly with I-95:

- 167/163rd Streets – Sunny Isles Blvd
- 125th Street – Broad Causeway

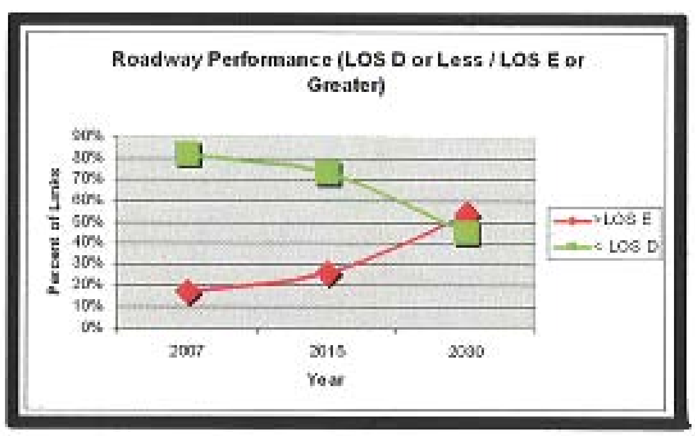
The interrupted grid network functions well now, but will deteriorate significantly through the planning horizon. Roadway segments, intersections and corridors will exhibit heightened congestion as time goes by. The ability to mitigate the situation lies in the development of a diverse array of multimodal projects which address physical capacity, alternative modes and transportation and land use policy. From the perspective of physical capacity the needs to be addressed are focused on individual roadway segments, and intersections as well as the examination of new corridor development by connecting missing links in the system, or by more efficiently using the existing corridors to accommodate flow.





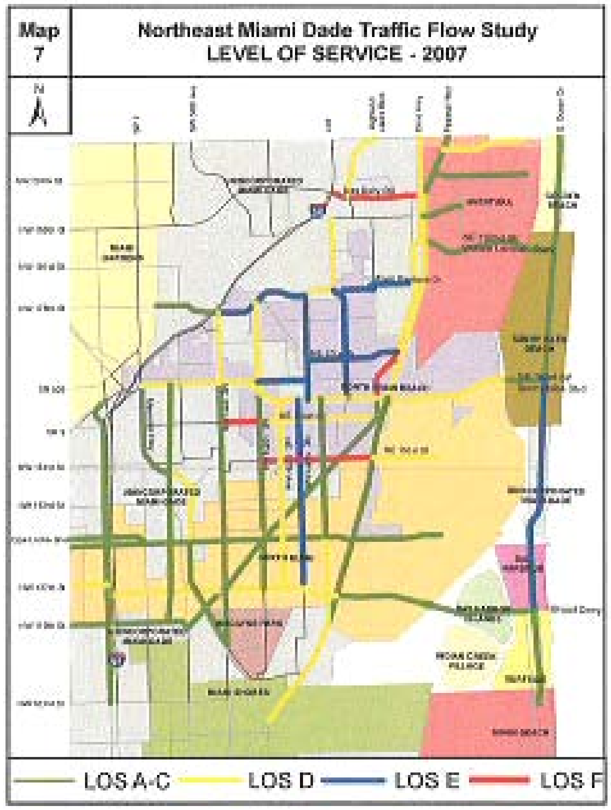
Relative to alternative modes, a higher use of transit and transit incentives needs to be examined, located and provided. Policies that link transportation and land use, as well as attempt to make positive impacts on how and when people travel are going to be needed. As these efforts are developed some will be easier to implement, either by having greater support, requiring less study, requiring less money or being less intrusive.

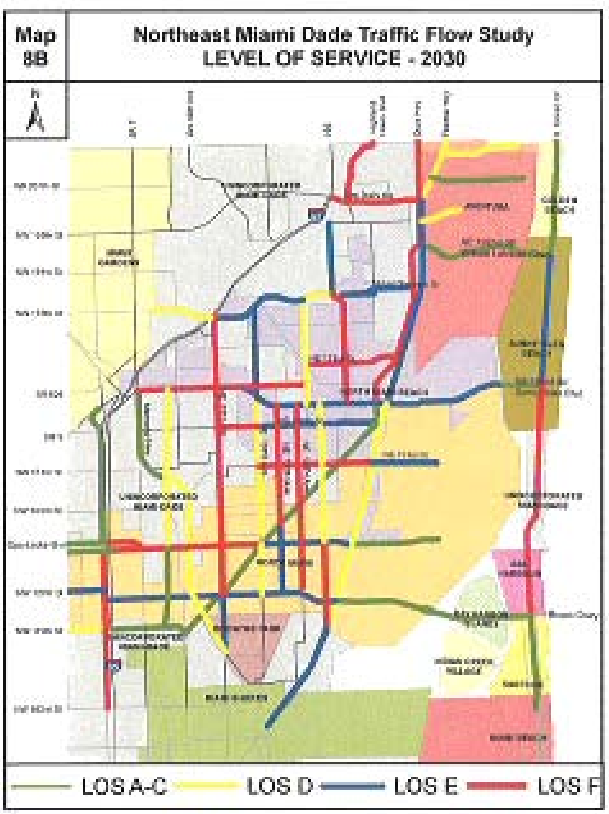
A phased approach is needed, organizing projects into short and long term implementation categories. The next task: Identification of Multimodal Projects, will address these needs with individual projects stemming from the public involvement and analysis portions of the study.



Links

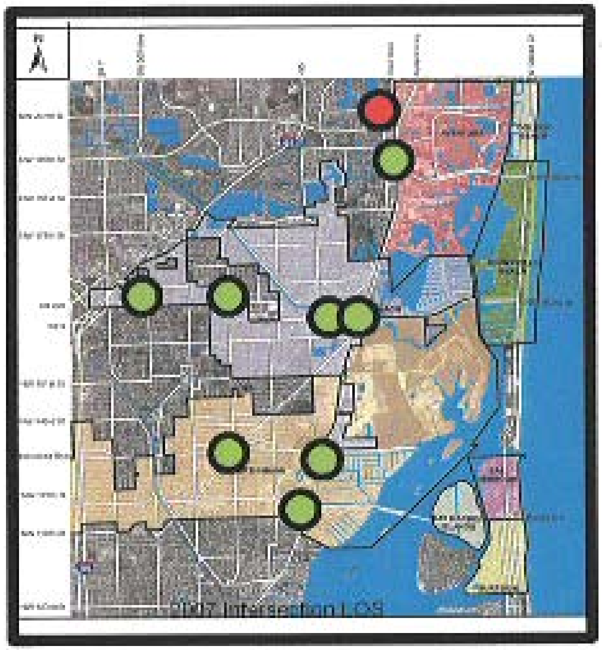
Today the roadway links operate relatively well. Of the 75 roadway links analyzed, four links or five percent operate in a failing condition (LOS F). The vast majority of the links, (62 of 75), or 82 percent operate at an acceptable LOS D or better. This situation will be reversed within the planning horizon. By 2015, the number of failing links will double. The number of acceptable links will shrink to 55 links (73%). By 2030 the number of failing links will increase to 23, going from six percent to 30 percent. Acceptable links will shrink to 34 or from 82 percent to 45 percent of all links.

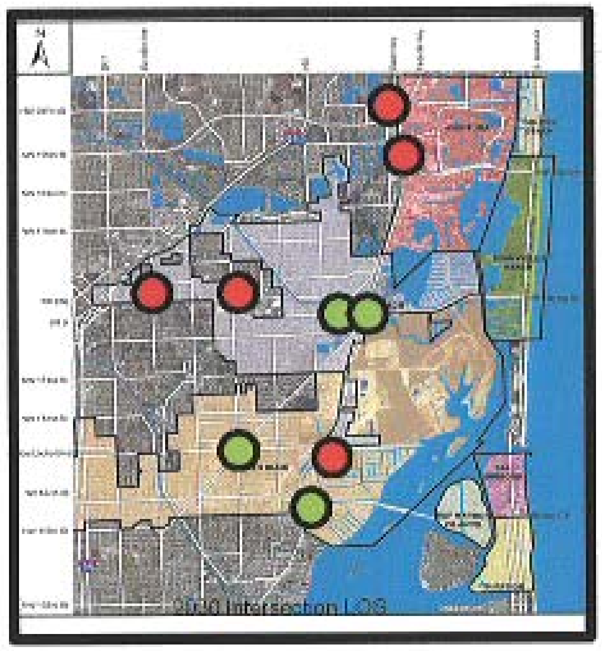




Intersections

The intersections within the study area are in the same condition. Often it is the intersections which govern the overall feel of constriction in a network because they create the bottlenecks where traffic begins to slow. Eleven intersections were studied as part of this project. The worst conditions were in the PM peak hours. In 2007 all but one intersection (US-1 & Miami Gardens Drive) operated better than LOS F, with seven of 11 or 63 percent operating at LOS D or better. By 2015 there is still one LOS F, but five of 11 or 45 percent will operate at LOS D or better. By 2030, the numbers will be reversed with 45 percent of the intersections operating at LOS F and only 18 percent (2 of 11) operating at LOS D or better.





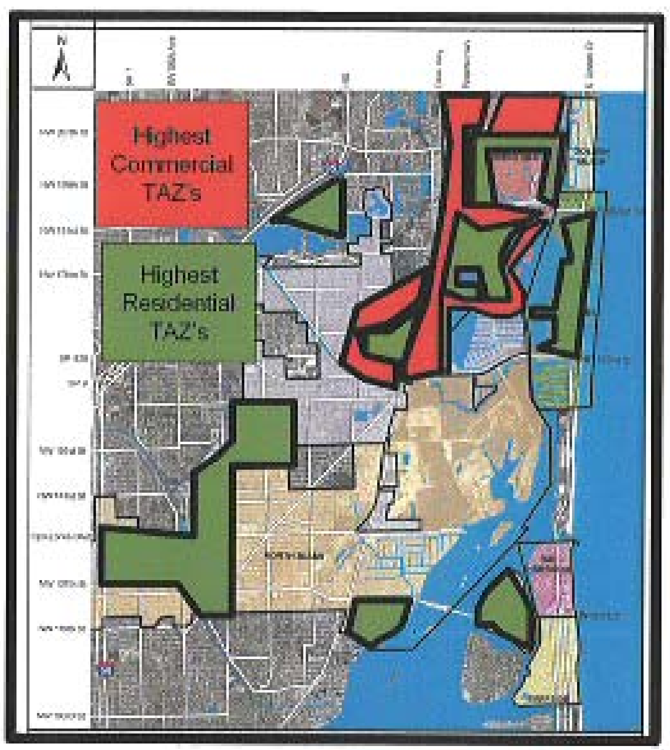
Corridor Flow

Overall the Northern part of the study area is carrying much more volume than the southern part. As an example Ives Dairy Road carries over 4,500 trips in the PM peak hour, while 135th Street, the southern most east/west corridor carries less than 1000 trips.

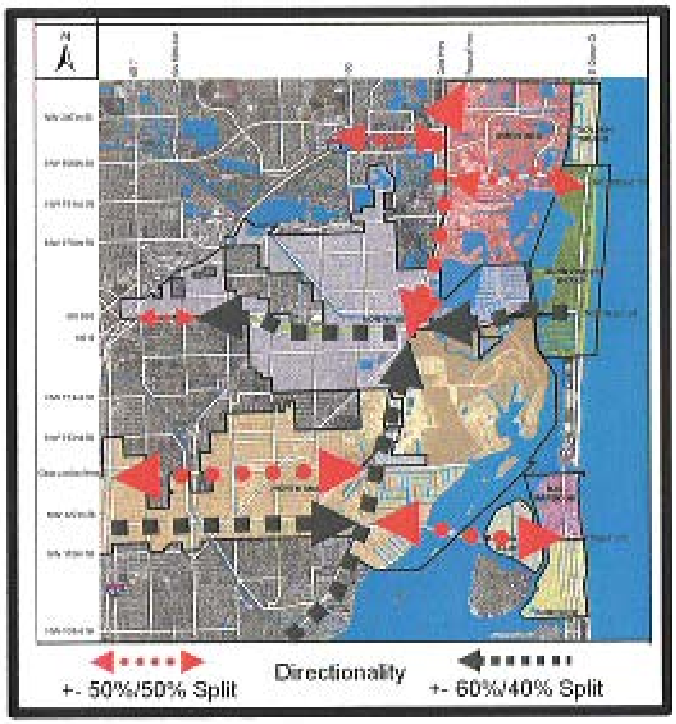
Each corridor connecting I-95 and Biscayne Boulevard has volumes that are less than the corridor to its north. The same is true on Biscayne Boulevard. The volume on Biscayne Boulevard south of Ives Dairy Road is about 6,400 trips. This volume decreases by 65 percent at 125th Street south of Broad Causeway to 2,300 trips

The analysis of the links, intersections and corridors shows several interesting characteristics relative to overall traffic flow. The bulk of the traffic volume is in the northern part of the study area. This can partially be explained by the fact that the northern roads have more lanes, and more capacity, therefore more volume. Further analysis of vehicles per lane as an indicator of congestion shows that the northern roads are also most congested. Ives Dairy Road carries nearly 750 vehicles per lane, while the highest total number of vehicles per lane is on 135th Street at 445 vehicles per lane.

The intersection of 163rd Street and Biscayne Boulevard is the epicenter of traffic congestion in the area. All roadway flows seem to maximize in this general area. It provides the most access and most ability to distribute to the regional network, similar to the Julia Tuttle Causeway in Miami Beach.



Directional flow is generally balanced through the study area except in a few key locations. The nexus of transportation and land use dictates why. The area in Aventura and along Biscayne Boulevard has the highest concentrations of both residential and commercial intensity. While there is a mix of uses, there is not a mix of users. There is a home/work imbalance, creating cross flow of traffic each day. Because of this cross flow of drivers, the northern part of the study area exhibits a relatively balanced directional split. Biscayne Boulevard at William Lehman Causeway is balanced 47% north bound / 53% South Bound. The Causeway itself is a 50/50 split.



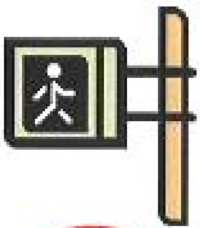
Directionality can be seen on a few corridors. For east/west corridors, there is a predominant PM westbound flow on the 167/163rd Street / Sunny Isles Boulevard corridor. This is +-60 percent westbound, +-40 percent eastbound between AIA and NE 2nd Avenue, where it balances. Conversely, there is a +- 60 percent eastbound, +-40 percent westbound PM flow on 125th Street. For north/south flow, Biscayne Boulevard is highly directional +-60 percent northbound, +-40 percent southbound PM flow between the Broad Causeway, and the 151st Street area. Traffic seems to be converging on the center of the area on Biscayne Boulevard. North of 163rd Street the predominant flow is southbound. While the flow at the 163rd Street, Biscayne Boulevard intersection is basically split evenly north and south, with the largest movement being from the barrier islands to the west. Where this directional flow is taking place provides the best opportunity to enhance the corridors, without invasive projects which may require infrastructure where none exists. Today163rd Street, the predominant flow, is north.

Like the results of the coastal communities study, it is clear that traffic does not distribute either on AIA or Biscayne Boulevard. It distributes on I-95. Traffic generally enters and exits the Study Area on the I-95 connected corridor closest to their Study Area origin or destination.

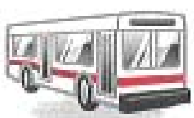
The ability to mitigate the situation of deteriorating service lies in the development of a diverse array of multimodal projects in a phased approach which address physical capacity, alternative modes and transportation policy.

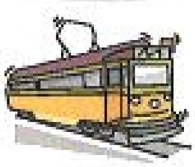
PROJECT DEVELOPMENT

Not enough capacity exists in any one mode of transportation to satisfy all needs alone. However if a variety of modes were effectively utilized, the system would function in an improved manner. ***The ability to implement greater physical capacity is limited.*** There are however opportunities to make major gains in the area of transit.



The development of projects stemmed from the analysis and began by looking at the roadway issues, and attempts to maximize the potential that exists within the existing rights of way. It explored where new linkages could be made and where efficiencies in the existing utilization could be taken advantage of. Bottlenecks in the form of intersections were addressed either by operational or signal improvements.





From a mass transit perspective, project development began with the existing bus transit system by re-evaluating and then restructuring it. Over time, it will look and behave like the future system it will eventually become. It is not enough to focus on the future development of rail projects, but to build to that through the incremental reformation of the existing system. Initially, route consolidation being planned by Miami Dade Transit will be important. The route structures need to be simplified, creating linear routes more similar to that of rail transit. This improved operational efficiency is important so that the bus routes function as a reaction to the local needs. As the increased functional efficiency and effectiveness of the route system is enhanced, a major emphasis should be placed on attracting more "choice" riders. In that sense transit amenities need to be put on the buses, stops and stations. Additionally the marketing of the system needs to be enhanced. Over time the system needs to present a more state of the art, polished rail-like look, feel and customer interface. This plan encourages governments to be open to reevaluating and potentially reprioritizing mass transit needs county wide to more accurately service the need, and to manage growth by actively measuring the impact of various types of development and coordinating land use policies with neighboring jurisdictions.

Policy initiatives focused on Transportation Demand Management techniques, such as ride sharing, car sharing, flexible work hours, intelligent transportation systems, and other methods by which to more flexibly use the mobility system and encourage the use of alternative modes should be put in place. It is incumbent on each community to focus on measurable goals, such as modal split. These should be evaluated in their current state, and periodically measured to track performance. The ultimate goal of a more balanced mode split can be achieved by lessening the dependence on the automobile, through the provision of viable alternatives.

The transportation system, left un-treated will create economic consequences, symptoms of which are already being experienced. Transportation is but one aspect, yet cumulatively, the lack of mobility, lack of affordable housing, deteriorating water quality and quantity, as well as skyrocketing property taxes and insurance rates, are fast draining the viability from our communities

Project types have been developed in the three categories and are organized into short term or long term efforts in order to address the entire transportation system:

- Physical Capacity
- Alternative Mode
- Policy

Project Lists

Physical Capacity Projects

1. Intersection Level of Service Improvements (Short Term, 1-5 years if no ROW is needed)

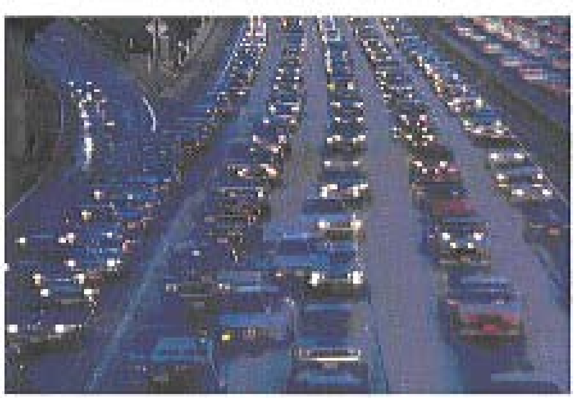
   1.1 West Dixie Highway @ Miami Gardens Drive
   1.2 Biscayne Boulevard @ William Lehman Causeway
   1.3 2nd Avenue @ 167th Street
   1.4 163rd Street/Biscayne Boulevard grade separated interchange

2. Traffic Signal Operations (Short Term, 1 – 5 years)

   2.1 Biscayne Boulevard @ 163rd Street
   2.2 West Dixie Hwy @ 163rd Street
   2.3 10th Avenue @ 167th Street
   2.4 10th Avenue @ 163rd Street
   2.5 Biscayne Boulevard @ 125th Street
   2.6 Biscayne Boulevard @ 135th Street
   2.7 West Dixie Hwy @ 135th Street
   2.8 Signal Coordination
   2.9 Traffic Loop Detector Repair

3. Link Level of Service Improvements (Short Term, 1-5 years if no ROW is needed) (Long Term 5 – 15 years if ROW is needed)

   3.1 10th Avenue between 151st Street and Miami Gardens Drive
   3.2 16th Avenue between US-1 and 135th Street
   3.3 14th Avenue between 163rd Street and 135th Street
   3.4 151st Street between 10th Avenue and US-1
   3.5 159th Street between 6th Avenue and West Dixie Highway
   3.6 171st Street between 15th Avenue and US-1
   3.7 19th Avenue between 103rd Street and Miami Gardens Drive
   3.8 Collins Avenue between Harbor Way and Bay View Drive
   3.9 West Dixie Hwy between 163rd Street and County Line Road
   3.10 Highland Lakes Boulevard between Ives Dairy Road and 125th Street



4. New Corridor Connections (Long Term 5 – 15 years)

   4.1 159th Street
   4.2 151st Street

5. Reversible Lane Studies (Short Term, 1-5 years)

   5.1 167/163rd Streets
   5.2 135th Street
   5.3 Biscayne Boulevard between 125th Street and 151st Street

6. School Board Coordination (Short Term, 1-5 years)

   6.1 Relief of Congestion Related to School Loading on Ives Dairy Road and Miami Gardens Drive
   6.2 Work with school board to minimize traffic impact to Sunny Isles Beach School on BB-1

7. Direct Connection Between William Lehman Causeway and Aventura Mall (Long Term, 5-15 years)

8. Improved Directional Signage Throughout Area (Short Term, 1-5 years)

9. North Miami Avenue Consistent 4 Lane Section North and South of 105th Street (Long Term, 5-15 years)

10. Implement Aventura Biscayne Boulevard Intersection Modifications (Short Term, 1-5 years)

Alternative Mode Projects

1. Study Biscayne Boulevard Corridor for Higher Level Transit Potential (Short Term, 1-5 years)
2. Reformation of Transit Routes in the Study Area Based on MDT Comprehensive Bus Operations Analysis and Coastal Communities Transportation Master Plan (Short Term, 1-5 years)

   2.1 Decrease bus headways

3. Support I-95 Bus Rapid Transit (Managed Lanes) (Short Term, 1-5 years)

4. Link Municipal Shuttles (Immediate)

5. Adopt Mode Split Goals in Comprehensive Plans (Short Term, 1-5 years)

6. BRT on Collins Avenue (Long Term, 5-15 years)

7. Coordinate Municipal Circulator Transit Routes with MDT (Short Term, 1-5 years)

8. 163rd Street/Biscayne Boulevard Intermodal Center (Long Term, 5-15 years)

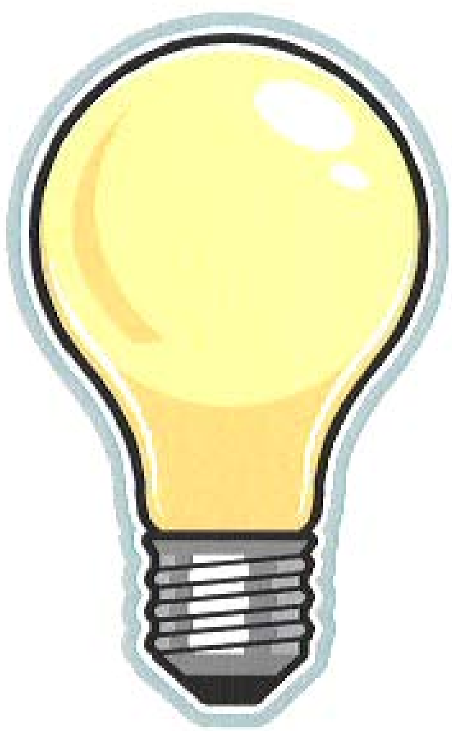
9. Ensure Appropriate MDT Bus Operations to Sustain Pedestrian Friendly Environment on West Dixie Highway and 15th Street (Short Term, 1-5 years)

10. Attract Choice Transit Riders (Short Term, 1-5 years)

    10.1 Special use lanes evaluation
    10.2. Enhanced transit amenities
    10.3. Fuel efficient buses
    10.4. Better transit marketing
    10.5. Use smaller buses

Policy Projects

1. Shift County Transit Priorities to Biscayne Boulevard Corridor (Short Term, 1-5 years)
2. Develop Northeast Miami-Dade Traffic Impact Fee (Short Term, 1-5 years)
3. Provide Incentives for Transportation Demand Management Participation (Short Term, 1-5 years)
4. Municipal Transportation Coordinator (Immediate)
5. Further Develop Intelligent Transportation Systems (Short Term, 1-5 years)
6. Coordinate Municipal Land Use Policies Along West Dixie Highway and Biscayne Boulevard (Short Term, 1-5 years)
    a. West Dixie Highway Charrette



IMPLEMENTATION

Key factors to the implementation of any plan is the ability to systematically approach the further development of the individual projects. In general, from a technical perspective, transportation efforts have several phases; planning, design and construction. They must seek funding for each phase, whether from the municipal budgeting cycle or at the State or Federal levels. From a practical perspective, each effort also needs an advocate to drive the process forward. Aspects of this vision are relatively simple to implement, in as much as they are purely local issues. Other aspects become increasingly complex, as they require multi-jurisdictional coordination and funding, beyond the scope of any municipality. The implementation process is built from a pragmatic perspective.

The plan seeks to advocate for these projects, and first attempt to implement the ones that present the greatest opportunity to have the most impact at the lowest cost. It progresses through the list to projects of greater complexity, controversy and coordination. Essentially all of the policy initiatives can begin to be implemented in the short term, as can the physical capacity improvements that don't require additional right of way. Similarly, many of the alternative mode projects that require the support of the local community can be done in the short term, as can the initiation of many of the higher intensity transit studies, and route modifications. Long term projects are those that require additional right of way, federal funding matches, or inclusion in the Long Range Transportation Plan or Transportation Improvement Program. The most limiting aspect of this effort is the funding to move the plan forward.

The first step is the creation of a position that can oversee the process, further developing project parameters, seeking funding sources, and moving projects through their respective funding, planning, design and implementation phases with various municipalities and agencies. An immediate step would be to coordinate the municipal shuttles. Working with the Citizen Independent Transportation Trust (CITT), and each of the communities that offer shuttles, an evaluation of opportunities and willingness to contribute can be undertaken. Concurrently conversations with MDT about the route consolidations and realignments can take place as they relate to coordinating with shuttle activity.

Policy initiatives such as the support of the I-95 BRT/Managed Lanes concept is a short term activity. More consistent effort will need to occur in getting local businesses to not only support, but implement transportation demand management techniques. The same goes for advocating a reprioritization of transit policies at the county level. From this consistent communication and advocacy with FDOT and the MPO, the longer term efforts that must go on the LRTP or TIP can begin to be moved forward. While this is on going, the physical capacity projects can be evaluated and moved forward. Those projects not requiring additional right of way can move first depending on municipal funding availability and other coordinative issues. Those projects determined to need additional right of way can be scrutinized from the technical and political perspectives to ascertain the cost/benefit of each. With consistent advocacy in the short term horizon, longer term projects such as the development of the connection from the Lehman Causeway to Aventura Mall and other more intensive projects requiring right of way, can make their way onto requisite plans and begin design and implementation phases by the 5th through 10th years. If individual local funds are available the ability to implement with less coordination is easier.

PROJECT PRIORITIE		
	PROJECT	
		IMMEDIAT
		2008
Physical Capacity Projects		
#		
1	Intersection Level of Service Improvements (No ROW Needed)	
1a	Intersection Level of Service Improvements (ROW Needed)	
2	Traffic Signal Operations	
3	Link LOS Improvements (No ROW Needed)	
3a	Link LOS Improvements (ROW Needed)	
4	New Corridor Connections	
5	Reversible Lane Studies	
6	School Board Coordination	
7	Direct Connection Between WM Lehman Causeway and Aventura Mall	
8	Improved Directional Signage	
9	North Miami Avenue; Consistent 4 Lane Cross Section	
10	Implement Aventura's Biscayne Boulevard Intersection Modifications	
11	Cross Access Easements On Commercial Property	
Alternative Mode Projects		
	Study Biscayne Boulevard Corridor For Higher Level Transit Potential	
	Reformation of Transit Routes In Study Area	
	Support I-95 Bus Rapid Transit	
	Link Municipal Shuttles	
	Adopt Mode Split Goals	
	BRT on Collins Ave	
	Coordinate Municipal Circulators with MTD Routes	
	163rd Street/Biscyane Boulevard Intermodal Center	
	Ensure Appropriate MDT Bus Operations to Sustain Pedestrian Friendly Environment On West Dixie Hwy	
	Attract Choice Transit Riders	
	Develop Complete Streets Program	
Policy Projects		
	Shift County Transit Priorities to Biscayne Boulevard	
	Develop Northeast Miami- Dade Traffic Impact Fee	
	Provide Incentives for Transporation Demand Management Participation	
	Municipal Transporation Coordinators	
	Further Development of Intellegent Transporation System	
	Coordinate Municipal Land Use Policies	

TIME HORIZION

TIME FRAME	
HORT TERM (1-5 YEARS)	LONG TERM (5-15 YEARS)
2009 - 2013	2014 -2023

THE CORRADINO GROUP 2007

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NORTHEAST MIAMI DADE TRAFFIC FLOW STUDY

Task 1 : Public Involvement
Task 2 : Data Collection

THE CORRADINO GROUP

JULY, 2007

Introduction

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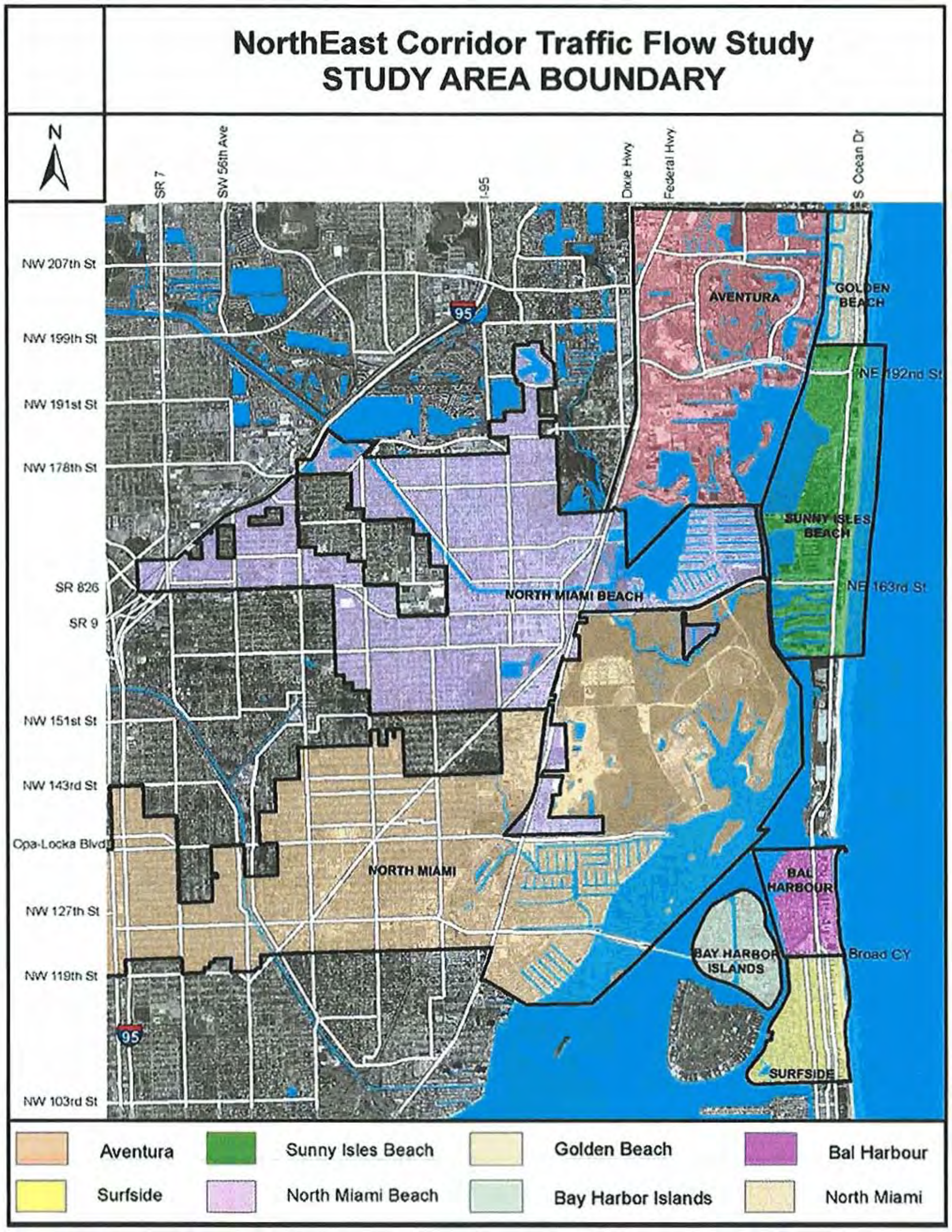
This study has been conceptualized as a result of the Northeast Miami-Dade Mayors' Joint Task Force, which was formed as a regional transportation/traffic evaluation committee. The study area consists of the boundaries of Aventura, Bal Harbour, Bay Harbor Islands, Golden Beach, North Miami, North Miami Beach, Sunny Isles Beach and Surfside (See Figure I-1).

Figure I-1



The purpose is to provide the information needed by local, county and state governments to improve traffic flow along the Miami-Dade Northeast Corridor. The objective is to help define improvements that would accommodate future growth while protecting and enhancing mobility, economic prosperity and quality of life, through the examination of traffic flow within the study area, in the hopes of attaining a free-flowing traffic system and minimal congestion. This will help the municipalities identify areas of congestion and provide viable options to relieve the congestion now and in the future. All aspects of the mobility system were examined, including the pedestrian and bicycle network, transit, the physical capacity of the roadway system and policy initiatives.

This project was focused on studying the sub-regional transportation network. In its preparation existing studies and plans to assess future conditions were examined and additional data was collected in order to develop a coordinated multi-modal list of projects designed to address identified needs. The planning level cost of these projects was quantified, relative to their planning, design and construction. The list of projects will be prioritized into an Implementable 10 year North-East Area Transportation Master Plan.

This effort strives to set an example as a targeted sub-regional attempt at transportation planning which is multi-modal in nature. Issues arrived through accepted methodologies are being supported through an extensive public involvement process. The study will portray existing conditions and project conditions in the future, and will provide a clear picture of the movement of traffic affecting the north/east area and the coastal communities. Recommendations that will focus coordinated improvements will be made. The study has involved local decision makers in the process, through the following tasks:

Task 1: Public Involvement
Task 2: Data Collection and Analysis
Task 3: Needs Assessment
Task 4: Development of Potential Projects
Task 5: Implementation Plan

Efforts to Date

At this time several initial stakeholder meetings have been held with interested parties in each city to set the parameters of the study. Previous planning documents from each and relevant county and state agencies have been reviewed, and new data has been collected and analyzed relative to:

- MPO Long Range Transportation Plan Model,
- Traffic Counts
- Origin/Destination Study
- Transit Ridership

It is clear from a review of previous planning efforts, conversations with the communities, and a thorough data collection and analysis effort, that we live in a series of diverse communities, all linked by the transportation network, yet all independent with differing definitions of quality of life. These complexities are exacerbated by our position at the edge of the county, bound by the Atlantic Ocean and split by Biscayne Bay. Traffic congestion is getting worse, and will continue to do so over the planning horizon. By 2030 few roads on the system will be functioning below the appropriate level of service. Each community has realized that the way we address transportation should change to have maximum impact.

The roadway system is capacity constrained, as there are limited opportunities to expand horizontally. Additions of physical capacity are expensive, time consuming and often politically unpalatable. As a result, they are often not worth their cost in these respects if they are simply to carry single occupancy vehicles. Therefore it becomes important to utilize the existing capacity in a more efficient and effective manner. This effort helps define the parameters of this new transportation program.

Next Steps

The intensive research, analysis and public out reach, in the first two tasks have been concluded according to the schedule. This report details those efforts. Further conversations regarding this analysis shall result in the development of a multimodal mobility plan focused on three main project areas. These include:

- **Roadway**
  The enhancement of operations and physical capacity of the roadway system.
  Transit
  The existing bus transit routing, operations and amenities. Focused on developing a viable system that attracts choice riders and can be built on to achieve more substantial transit in the future
  Policy
  Strategies to effect the way that travelers use the mobility system, and the way the system interacts with the travelers.

These projects will be costed and prioritized into various planning horizons, including: short term (1-5 years); mid term (6-10 years); and long term (11-15 years).

The plan may be used as a tool for the Cities to seek funding from State and Federal sources including the Metropolitan Planning Organization and Federal Transit Administration, in order to implement the policies and projects. This will demonstrate that the Cities have joined together in a sub regional manner to present comprehensive vision toward providing multimodal transportation opportunities. The Traffic Flow Study is a document to be used over the long term. As with any planning tool, it should be evaluated and updated to determine the status of its implementation. Most importantly, it is believed that as the strain on the transportation increases, the mitigation of the existing issues and the implementation of future multi-modal projects and policies are integral in maintaining the quality of life in the region.

Figure I-2

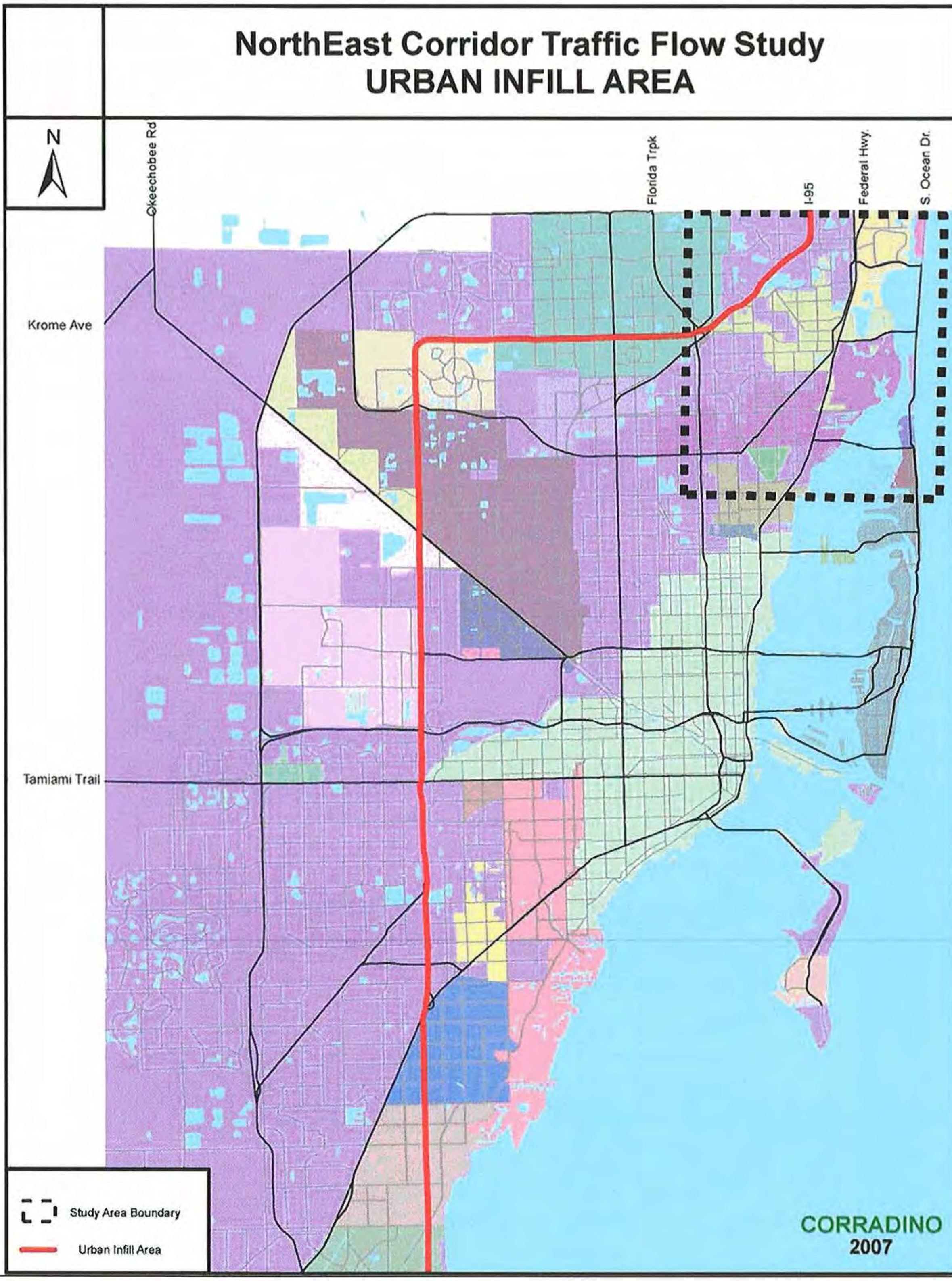
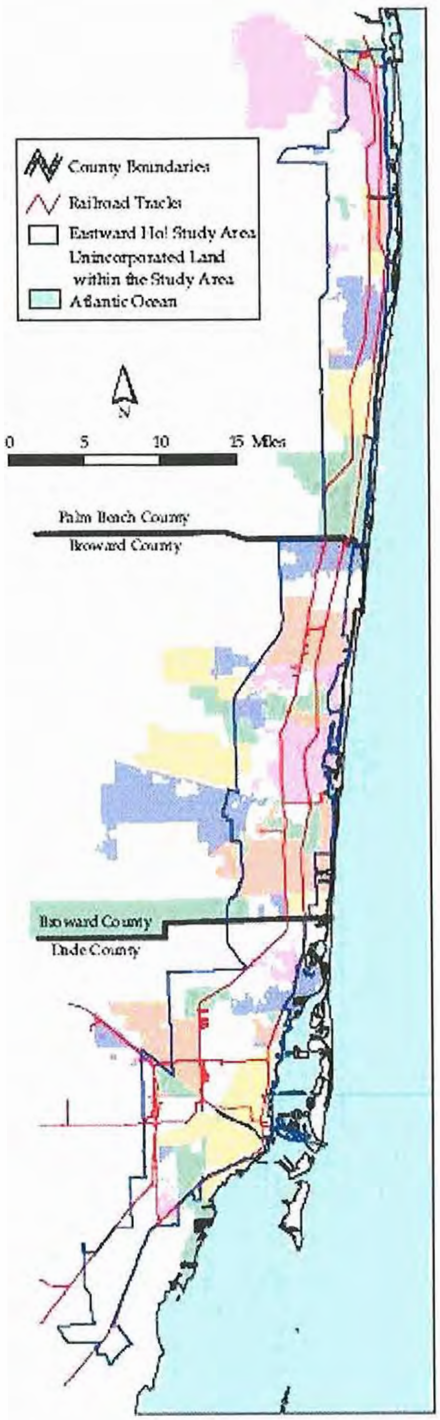

NorthEast Corridor Traffic Flow Study
URBAN INFILL AREA
N
Okeechobee Rd
Florida Trpk
I-95
Federal Hwy.
S. Ocean Dr.
Krome Ave
Tamiami Trail
Study Area Boundary
Urban Infill Area
CORRADINO
2007

Figure I-3
Eastward Ho!



Local Governments within the Study Area:

PALM BEACH COUNTY
Atlantis
Boca Raton
Boynton Beach
Cloud Lake
Delray Beach
Glen Ridge
Golf
Golf View
Gulfstream
Haver Hill
Hypoluxo
Lake Clarke Shores
Lake Worth
Lantana
Mangonia Park
Palm Springs
Riviera Beach
West Palm Beach

BROWARD COUNTY
Dania
Davie
Deerfield Beach
Fort Lauderdale
Hallandale
Hollywood
Indian Reservation
Lauderdale Lakes
Lauderhill
Lazy Lake
Miramar
North Lauderdale
Oakland Park
Pembroke Park
Plantation
Pompano Beach
Tamarac
Wilton Manors

DADE COUNTY
Biscayne Park
Coral Gables
El Portal
Hialeah
Medley
Miami
Miami Shores
Miami Springs
North Miami
North Miami Beach
Opa Locka
Pinecrest
South Miami
Virginia Gardens
West Miami

It has been noted that continued growth in the region, particularly the area east of I-95, which has been heavily incentivized by state and local policy since the mid 1980's is placing a strain on each cities, the county and state transportation systems, which are all completely integrated, yet managed by the various jurisdictions. Most in the study area, feel that the rapidly degenerating service levels and ability to move through the community by automobile, are resulting in a deteriorated quality of life. There is a definite desire to understand the transportation problems on a system wide level, and to work not only locally, but as a sub regional group to mitigate those issues that are within the sub regions control, and to further advocate for projects or policies that must be taken to the higher level.

Roadway

The roadway network in the study area is characterized as over capacity. Most communities strive to achieve a Level of Service E. This is greatly surpassed in the existing condition and almost totally surpassed in the future. Limited opportunities exist to return the roadway network to the operating characteristics it enjoyed 30, 20 or even 10 years ago. To do so the physical disruption to the community and the cost would be comparable to Urban Renewal policies of the 1950's and destroy the fabric of the community. Therefore roadway capacity projects will be chosen on a selective basis, mainly looking at opportunities to mitigate the effect of bottlenecks in the existing system, enhance flow through the optimization of traffic signals and intersection operations, as well as undertake coordinated corridor wide efforts.

Transit

While limited opportunities exist to substantially bolster physical capacity, it is acknowledged that the existing bus transit system must more adequately service the transit dependant population and be made more desirable to the choice rider. This is a basic yet interim step of system development and necessary before the implementation of more costly, dedicated rail projects. Doing so is integral to the development of an attractive and usable transit system that provides capacity to the transportation network. At its most elementary the transit routes in the area should be examined and reformed of necessary to operate at peak efficiency, with appropriate headways and linkages to key origins, Intermodal facilities and destinations. Physical aspects of the system such as the buses and stops need to include reliable schedules, convenient headways, and comfortable facilities to attract the choice riders. Basic bus stops should include shelters, benches, trash cans, and schedules. More substantial transfer stops should include transfer route schedules and headway information. Intermodal facilities should also include water fountains, bike racks, restrooms and even commercial facilities. Overall, the facilities, including the bus stops and the buses, should be clean and comfortable. A public transit service will be successful when it has the necessary amenities and services to attract a diverse population of riders.

The main premise of this concept is to attract choice riders to utilize transit instead of their vehicles. The burgeoning density of some of the neighborhoods in the study area shows that the area is appropriate for that type of use. Choice transit riders are sensitive to the operational efficiency of the system, and will tend to opt for the most convenient, least expensive, more attractive mobility option.

In the near term, rail modes in the study area may not be practical or prioritized. It is suggested that an interim step be considered. Bus Rapid Transit (BRT) is a mode of transit that utilizes an enhanced or separated roadway, matches with new technologies, and sophisticated buses to operate like rail, at a fraction of the cost, thereby making it realistic. Further efforts can then be pursued with the County and MPO relative to the implementation of rail transit in the area.

Policy

Physical capacity limitations, traffic congesting and a lack of attractive transit options are major concerns within the community. This, coupled with the unintended consequences of past growth management policies, have served to push development further west in our community. An attempt to ameliorate this condition was tried through the implementation of the Transportation Concurrency Exception Area, which covers much of the County South and East of the Palmetto Expressway. This policy, incentivized development, yet did not require additional capacity to be built into the system to service the development. Today the study area has to react to that situation, and efforts to relieve traffic congestion have been mainly focused on building new roadways. The opportunity to increase roadway capacity is limited due to the lack of physical space, and the cost for right-of-way and construction. The solution of widening the roadways to provide for additional capacity needs to be used selectively as it is not necessarily appropriate or practical. Often further widening would be particularly disruptive to the surrounding community, and would not furnish the impact to warrant it. It is acknowledged that the existing right-of-way and remaining roadway network capacities need to be more adequately utilized through improved management and operations of the system, in order to make the most efficient use of infrastructure already in place. These Transportation Demand Management strategies, (TDM) and Transportation Systems Management strategies (TSM) are less expensive and quicker to implement than new infrastructure projects and can be very effective in relieving traffic congestion and improving system performance. It is important to balance these strategies that affect demand and ultimately achieve more efficient use of the system, with the roadway and transit efforts. The existing conditions in the area indicate that several of the major roadways experience significant congestion during peak hours.

Task 1: Public Involvement

Engaging the public and incorporating public input is a multi-level process that takes place consistently throughout the duration of the plan development. The goal shall be community consensus, resulting in approval from each of the governing bodies involved. Consistent involvement and direction will be supplied by a project steering committee. Input will be collected through stakeholders meetings. Potential solutions will be developed and discussed as part of more formal workshops. Approvals will be gained from local governments. Sixty eight meetings are scheduled as part of this project. Additional meetings will be provided on an hourly basis. The following are key aspects to this task.

- Steering Committee
- Stakeholders
- Community Workshops
- Agency Meetings

Steering Committee

It is anticipated that this body consisting of managers or mayors from each participating north/east area municipality, which will meet as milestones dictate to review study activity and approve future direction.

Stakeholders

This group of meetings is designed to solicit initial input, introduce the study and be the first step in solid consensus building and communication. Meetings will be scheduled for participants from each of the governments. This can include council members, mayors, county commissioners, or other local decision makers. Other meetings will be held with individuals or groups as necessary during the process, including private citizens, community activists, homeowners groups or any other interested parties. Each meeting addressed the particular interests of the local municipality, and the stakeholder.

Community Workshops

Workshops will be held at different locations in the Study Area. These will be designed to present initial findings and refine alternatives, and will be scheduled afterwards, as the potential project list is being developed.

Approvals and Agency Presentations

One meeting will be held with each municipal government to gain formal approval or denial of the study. In addition three meetings will be held with the MPO and its various committees.

Task 2: Data Collection and Analysis

Recently there was an origin/destination study completed for the Coastal Communities Transportation Master Plan. Though this study could not be repeated or redone, the results of this study were evaluated within this project to assist with the technical decisions analysis regarding traffic in the region. The original study was undertaken to determine the magnitude of trip movements between the barrier islands and the mainland of Miami-Dade County. Some of the participating communities are also involved in this study, and therefore will make the results very useful.

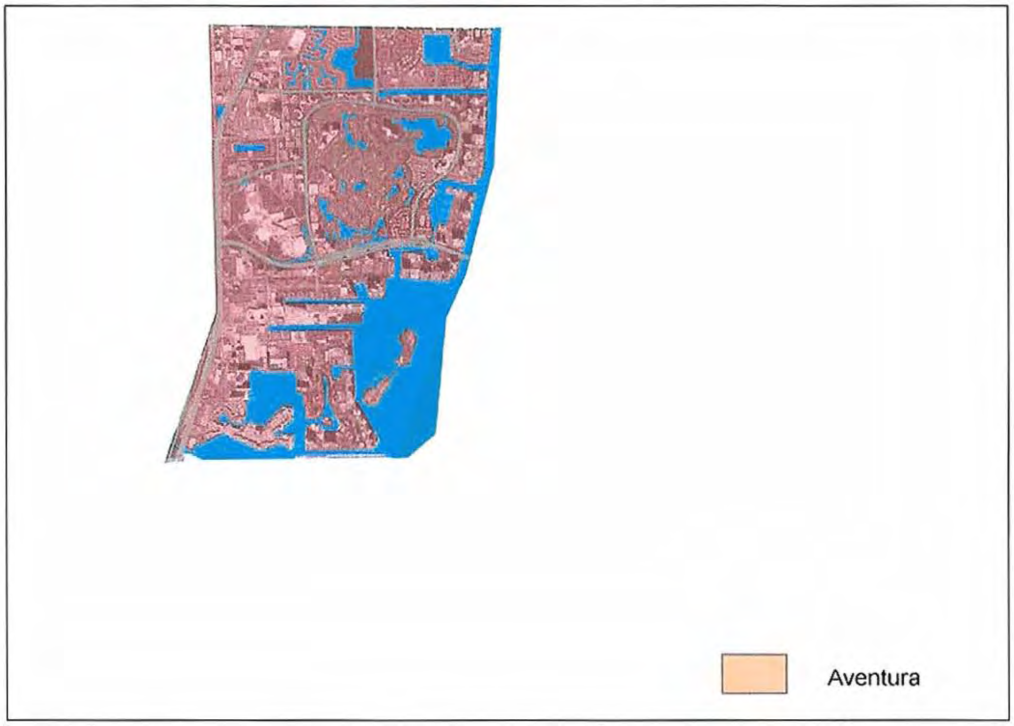
Prior to new data collection, previous reports and technical documents were reviewed and incorporated into the data collection and analysis process. Previous work was used as a background to the assignment of data collection efforts. Other technical documents and surveys at the county and regional level will be used to justify presumptions and conclusions, and to confirm that gaps in current plans are addressed. Further, planning work will be done in conjunction with currently ongoing studies and projects that will have both direct and indirect impacts on the pertinence and effectiveness of the Master Plans recommendations.

What Plans Were Reviewed:

- Coastal Communities TMP
- Aventura Comprehensive Plan/Transportation Element
- Bal Harbour Comprehensive Plan /Transportation Element
- Golden Beach Evaluation and Appraisal Report
- City of North Miami TMP and Transportation Element
- Miami-Dade LRTP
- Several Traffic Studies in Aventura
- Bal Harbour Transportation element
- Sunny Isles Beach Comprehensive Plan/Transportation Element
- Surfside Comprehensive Plan/Transportation Element
- North Miami Beach TMP and Transportation Element
- Miami-Dade County Comprehensive Development Master Plan
    - Evaluation and Appraisal Report
    - Mass Public Transit Sub-element
    - Traffic Circulation Sub-element
- People's Transportation Plan

Existing Conditions - City Plans

Aventura



The City of Aventura is roughly 3 square miles in area and has a population slightly under 30,000. Thus, making the population density of the community, at or near 10,000 people per square mile. The population is generally of middle age. More than half of all people in Aventura are between the ages of 18 and 65. Another 35 percent of the people are over the age of 65, making Aventura's median age Approximately 53 years old.

Aventura has an average household size of approximately 1.8 people. With an average household income of around $45,000. That number is more than $5,000 above the state of Florida average. Still though, slightly below 10 percent of the people still live at or below the poverty threshold.

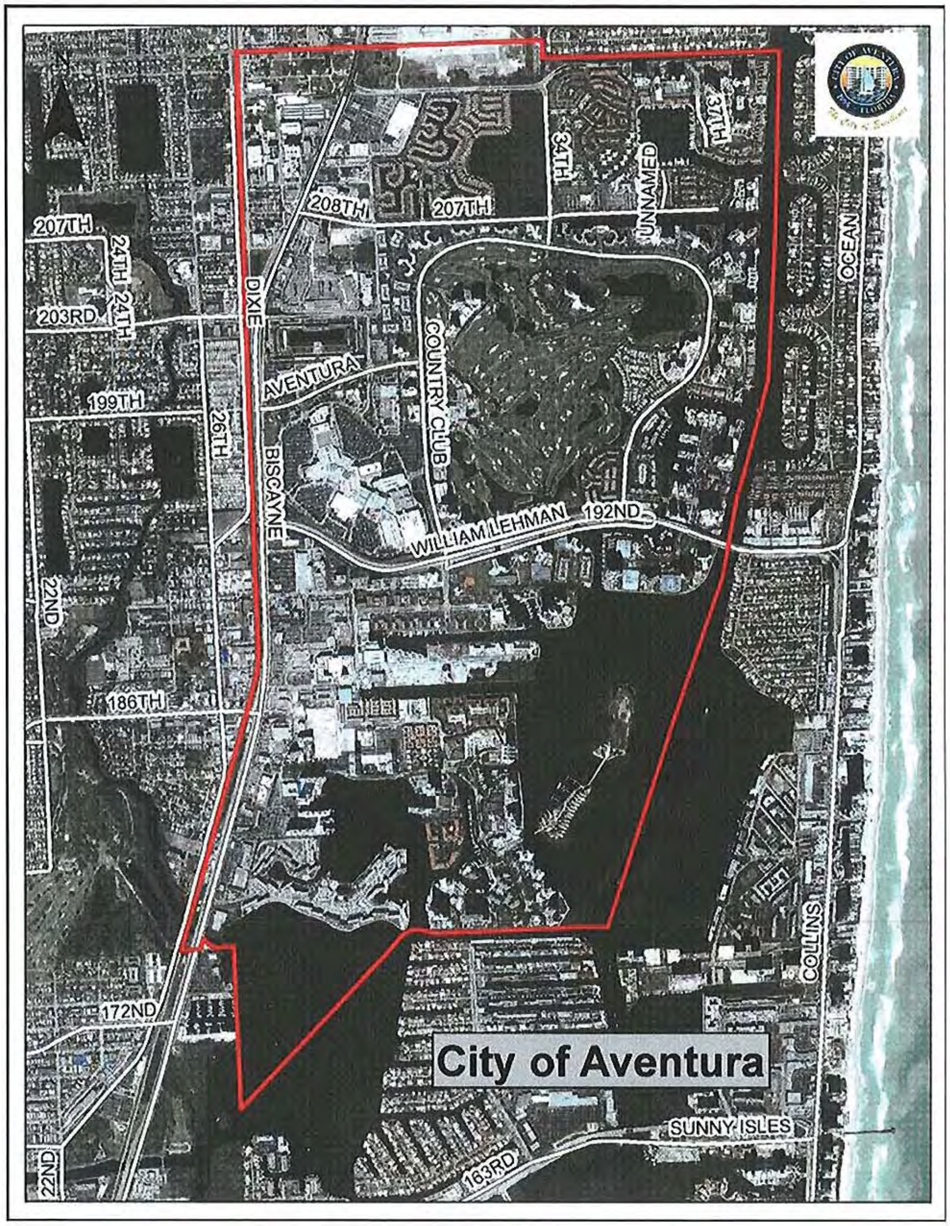
The population of Aventura is almost entirely white or Caucasian, about 95 percent of all citizens are Caucasian. This does not however, mean that they are all natural born citizens. Actually close to 37 percent of the total population of the city is foreign born. The city is also well educated as nearly 40 percent -of the residents have a bachelor's degree or higher level degree. The citizens drive, on average, 28.3 minutes to work every morning. Which, is also very close to the time it would take to get from Aventura to downtown Miami.

Most of what is now the City of Aventura was initially developed during the late 1970's and into the 1980's as a high-rise residential area. This was done when the area was still mostly swampland known as Biscayne Gardens. Some of the regions tallest and most prestigious condominium towers are now stationed there.

Aventura is home to the Aventura Mall, a high-end regional mall. The enormous success of the mall facilitated explosive growth in the area and saw the closure of stores at the competing mall at 163rd Street, which only recently has been revitalized.

On November 7, 1995, the City of Aventura was incorporated. The city is bound on the east by the Intracoastal Waterway and on the west by US-1. The southern limits extend to meet the northern boundary of North Miami Beach which is approximately NE 174th Terrace. The northern limits end at the Broward County Line. In total Aventura has 3.5 square miles of boundary, 0.8 square miles of which is water. The total population is around 25,000 (See Figure 2-1).

Figure 2-1
City of Aventura



The City of Aventura supports five circulator routes that cover all areas of the city. The Blue route generally serves the north portion of the city. It travels as far west as US-1 and goes to the eastern edge of the city on the intercoastal waterway. The Red route services the central western area of Aventura. It travels on West Country Club Drive up to Delvista Court. It has several stops on the western side of the Turnberry Isle Golf Course. The Green route is generally the other half of the golf course. It travels on East Country Club Drive and goes south all the way down Mystic Point Drive. It serves the central eastern part of the city. The Yellow route travels along US-1 in the south-western portion of Aventura. It eventually turns east bound on both Point East Drive and Marcos Drive. The Purple route serves the southeastern portion of the city. It travels on roads such as Marina Del Ray Boulevard, NE 188th Street, and Williams Island Boulevard. All five of the routes have stops at the Aventura mall as it is both a central location for the city, but also its transit system. The system however, does not cross into any other municipality or into Broward County to the North.

Figure 2-2
Aventura Express

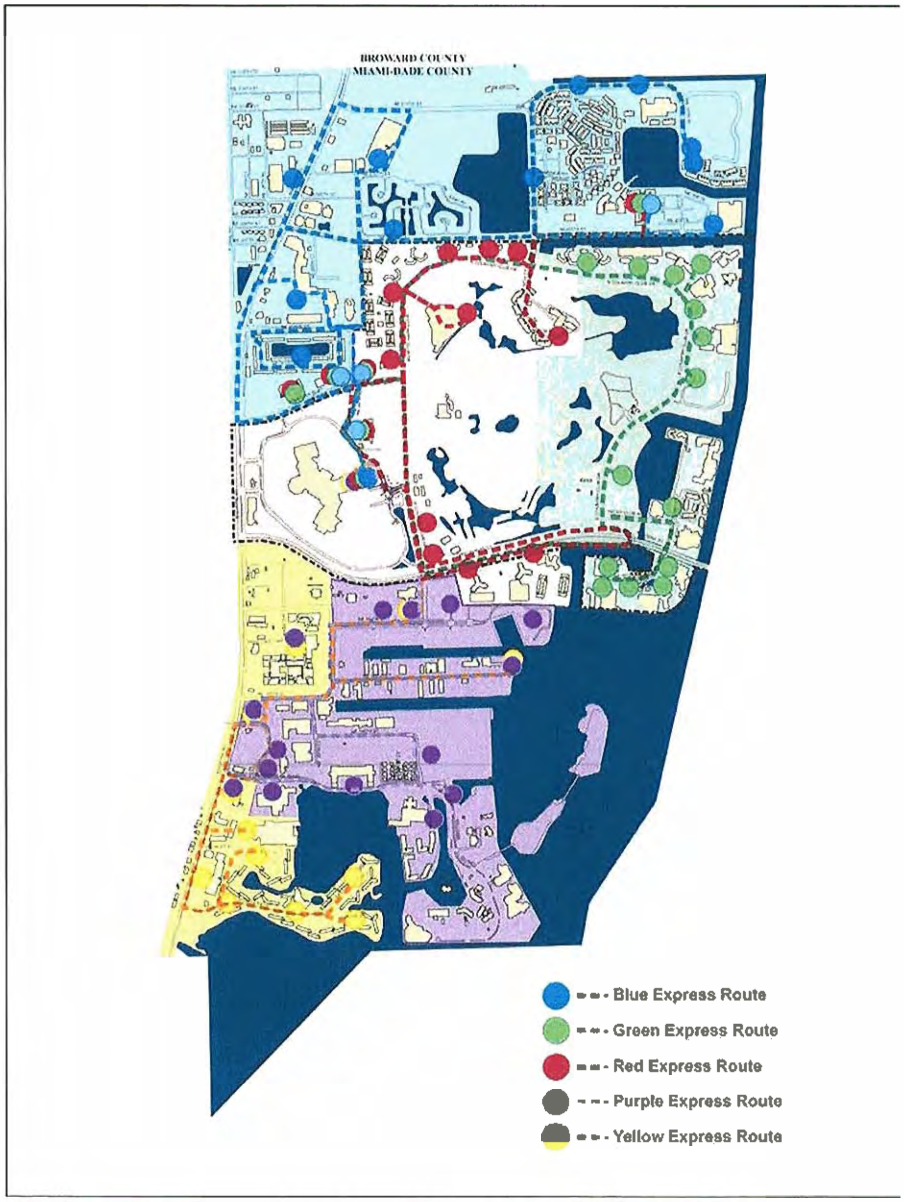


Figure 2-3
Express Routes

Blue Express Route

Aventura Mall/Macy's	Publix	Walgreens	Biscayne Lake Gardens	Promenade Shops	34th and Mariner Way	Harbor Village	Portsview	The Point North Tower	The Point	One Island Place	Waterways Shoppes	Aventura Lakes	Aventura Commons/ Target	Aventura Hospital	Publix	Aventura Mall/Macy's
7:45 AM	7:47 AM	7:50 AM	7:54 AM	7:58 AM	8:02 AM	8:04 AM	8:06 AM	8:08 AM	8:09 AM	8:14 AM	8:16 AM	8:21 AM	8:23 AM	8:28 AM	8:35 AM	8:37 AM
8:45	8:47	8:50	8:54	8:58	9:02	9:04	9:06	9:08	9:09	9:14	9:16	9:21	9:23	9:28	9:35	9:37
9:45	9:47	9:50	9:54	9:58	10:02	10:04	10:06	10:08	10:09	10:14	10:16	10:21	10:23	10:28	10:35	10:37
10:45	10:47	10:50	10:54	10:58	11:02	11:04	11:06	11:08	11:09	11:14	11:16	11:21	11:23	11:28	11:35	11:37
11:45	11:47	11:50	11:54	11:58	12:02 PM	12:04 PM	12:06 PM	12:08 PM	12:09 PM	12:14 PM	12:16 PM	12:21 PM	12:23 PM	12:28 PM	12:35 PM	12:37 PM
1:45 PM	1:47 PM	1:50 PM	1:54 PM	1:58 PM	2:02	2:04	2:06	2:08	2:09	2:14	2:16	2:21	2:23	2:28	2:35	2:37
2:45	2:47	2:50	2:54	2:58	3:02	3:04	3:06	3:08	3:09	3:14	3:16	3:21	3:23	3:28	3:35	3:37
3:45	3:47	3:50	3:54	3:58	4:02	4:04	4:06	4:08	4:09	4:14	4:16	4:21	4:23	4:28	4:35	4:37
4:45	4:47	4:50	4:54	4:58	5:02	5:04	5:06	5:08	5:09	5:14	5:16	5:21	5:23	5:28	5:35	5:37
5:45	5:47	5:50	5:54	5:58	6:02	6:04	6:06	6:08	6:09	6:14	6:16	6:21	6:23	6:28	6:35	6:37
6:45	6:47	6:50	6:54	6:58	7:02	7:04	7:06	7:08	7:09	7:14	7:16	7:21	7:23	7:28	7:35	7:37
7:45	7:47	7:50	7:54	7:58	8:02	8:04	8:06	8:08	8:09	8:14	8:16	8:21	8:23	8:28	8:35	8:37
8:45	8:47	8:50	8:54	8:58	9:02	9:04	9:06	9:08	9:09	9:14	9:16	9:21	9:23	9:28	9:35	9:37

Green Express Route

Aventura Mall/Macy's	Publix	400	500	Mystic Pointe 300	200	100	Turnberry Gatehouse	Yacht Club	Porta Vita	Landmark/ Terraces	West Hamptons	Waterview	Flamenco	Eldorado	Ensenada	Waterways Shoppes	Walgreens	Mount Sinai	Publix	Aventura Mall/Macy's
7:45 AM	7:47 AM	7:52 AM	7:54 AM	7:56 AM	7:57 AM	7:58 AM	7:59 AM	8:01 AM	8:02 AM	8:05 AM	8:08 AM	8:10 AM	8:12 AM	8:14 AM	8:17 AM	8:20 AM	8:24 AM	8:26 AM	8:29 AM	8:31 AM
8:45	8:47	8:52	8:54	8:56	8:57	8:58	8:59	9:01	9:02	9:05	9:08	9:10	9:12	9:14	9:17	9:20	9:24	9:26	9:29	9:31
9:45	9:47	9:52	9:54	9:56	9:57	9:58	9:59	10:01	10:02	10:05	10:08	10:10	10:12	10:14	10:17	10:20	10:24	10:26	10:29	10:31
10:45	10:47	10:52	10:54	10:56	10:57	10:58	10:59	11:01	11:02	11:05	11:08	11:10	11:12	11:14	11:17	11:20	11:24	11:26	11:29	11:31
11:45	11:47	11:52	11:54	11:56	11:57	11:58	11:59	12:01 PM	12:02 PM	12:05 PM	12:08 PM	12:10 PM	12:12 PM	12:14 PM	12:17 PM	12:20 PM	12:24 PM	12:26 PM	12:29 PM	12:31 PM
1:45 PM	1:47 PM	1:52 PM	1:54 PM	1:56 PM	1:57 PM	1:58 PM	1:59 PM	2:01	2:02	2:05	2:08	2:10	2:12	2:14	2:17	2:20	2:24	2:26	2:29	2:31
2:45	2:47	2:52	2:54	2:56	2:57	2:58	2:59	3:01	3:02	3:05	3:08	3:10	3:12	3:14	3:17	3:20	3:24	3:26	3:29	3:31
3:45	3:47	3:52	3:54	3:56	3:57	3:58	3:59	4:01	4:02	4:05	4:08	4:10	4:12	4:14	4:17	4:20	4:24	4:26	4:29	4:31
4:45	4:47	4:52	4:54	4:56	4:57	4:58	4:59	5:01	5:02	5:05	5:08	5:10	5:12	5:14	5:17	5:20	5:24	5:26	5:29	5:31
5:45	5:47	5:52	5:54	5:56	5:57	5:58	5:59	6:01	6:02	6:05	6:08	6:10	6:12	6:14	6:17	6:20	6:24	6:26	6:29	6:31
6:45	6:47	6:52	6:54	6:56	6:57	6:58	6:59	7:01	7:02	7:05	7:08	7:10	7:12	7:14	7:17	7:20	7:24	7:26	7:29	7:31
7:45	7:47	7:52	7:54	7:56	7:57	7:58	7:59	8:01	8:02	8:05	8:08	8:10	8:12	8:14	8:17	8:20	8:24	8:26	8:29	8:31
8:45	8:47	8:52	8:54	8:56	8:57	8:58	8:59	9:01	9:02	9:05	9:08	9:10	9:12	9:14	9:17	9:20	9:24	9:26	9:29	9:31

Red Express Route

Aventura Mall/Macy's	Publix	Parc Central Aventura	Mystic Pointe 600	Classic Residence by Hyatt	Turnberry on the Green	Coronado	Del Vista	Waterways Shoppes	Bonavista	Bravura	Biscaya	Villa Dorado	Coronado	Bonavida	Walgreens	Mount Sinai	Publix	Aventura Mall/Macy's
7:45 AM	7:47 AM	7:50 AM	7:53 AM	7:56 AM	7:58 AM	8:01 AM	8:03 AM	8:08 AM	8:12 AM	8:14 AM	8:16 AM	8:18 AM	8:20 AM	8:23 AM	8:25 AM	8:27 AM	8:30 AM	8:32 AM
8:45	8:47	8:50	8:53	8:56	8:58	9:01	9:03	9:08	9:12	9:14	9:16	9:18	9:20	9:23	9:25	9:27	9:30	9:32
9:45	9:47	9:50	9:53	9:56	9:58	10:01	10:03	10:08	10:12	10:14	10:16	10:18	10:20	10:23	10:25	10:27	10:30	10:32
10:45	10:47	10:50	10:53	10:56	10:58	11:01	11:03	11:08	11:12	11:14	11:16	11:18	11:20	11:23	11:25	11:27	11:30	11:32
11:45	11:47	11:50	11:53	11:56	11:58	12:01 PM	12:03PM	12:08 PM	12:12 PM	12:14 PM	12:16 PM	12:18 PM	12:20PM	12:23 PM	12:25 PM	12:27 PM	12:30 PM	12:32 PM
1:45 PM	1:47 PM	1:50 PM	1:53 PM	1:56 PM	1:58 PM	2:01	2:03	2:08	2:12	2:14	2:16	2:18	2:20	2:23	2:25	2:27	2:30	2:32
2:45	2:47	2:50	2:53	2:56	2:58	3:01	3:03	3:08	3:12	3:14	3:16	3:18	3:20	3:23	3:25	3:27	3:30	3:32
3:45	3:47	3:50	3:53	3:56	3:58	4:01	4:03	4:08	4:12	4:14	4:16	4:18	4:20	4:23	4:25	4:27	4:30	4:32
4:45	4:47	4:50	4:53	4:56	4:58	5:01	5:03	5:08	5:12	5:14	5:16	5:18	5:20	5:23	5:25	5:27	5:30	5:32
5:45	5:47	5:50	5:53	5:56	5:58	6:01	6:03	6:08	6:12	6:14	6:16	6:18	6:20	6:23	6:25	6:27	6:30	6:32
6:45	6:47	6:50	6:53	6:56	6:58	7:01	7:03	7:08	7:12	7:14	7:16	7:18	7:20	7:23	7:25	7:27	7:30	7:32
7:45	7:47	7:50	7:53	7:56	7:58	8:01	8:03	8:08	8:12	8:14	8:16	8:18	8:20	8:23	8:25	8:27	8:30	8:32
8:45	8:47	8:50	8:53	8:56	8:58	9:01	9:03	9:08	9:12	9:14	9:16	9:18	9:20	9:23	9:25	9:27	9:30	9:32

Purple Express Route

Aventura Mall/Macy's	Aventura Government Center	Founders Park	Hidden Bay	North Summit	Loehmann's/ Publix	Biscayne Cove	Williams Island	Veterans Park	Admiral's Port	Commodore Plaza	Imperial Club	Sterling	Fresh Market	Walgreens/ Pier I	Community Center	Loehmann's/ Publix	Hidden Bay	Aventura Mall/Macy's
7:45 AM	7:49 AM	7:51 AM	7:53 AM	7:56 AM	8:00 AM	8:04 AM	8:06 AM	8:07 AM	8:10 AM	8:13 AM	8:16 AM	8:17 AM	8:20 AM	8:22 AM	8:25 AM	8:29 AM	8:33 AM	8:37 AM
8:45	8:49	8:51	8:53	8:56	9:00	9:04	9:06	9:07	9:10	9:13	9:16	9:17	9:20	9:22	9:25	9:29	9:33	9:37
9:45	9:49	9:51	9:53	9:56	10:00	10:04	10:06	10:07	10:10	10:13	10:16	10:17	10:20	10:22	10:25	10:29	10:33	10:37
10:45	10:49	10:51	10:53	10:56	11:00	11:04	11:06	11:07	11:10	11:13	11:16	11:17	11:20	11:22	11:25	11:29	11:33	11:37
11:45	11:49	11:51	11:53	11:56	12:00 PM	12:04 PM	12:06 PM	12:07 PM	12:10 PM	12:13 PM	12:16 PM	12:17 PM	12:20 PM	12:22 PM	12:25 PM	12:29 PM	12:33 PM	12:37 PM
1:45 PM	1:49 PM	1:51 PM	1:53 PM	1:56 PM	2:00	2:04	2:06	2:07	2:10	2:13	2:16	2:17	2:20	2:22	2:25	2:29	2:33	2:37
2:45	2:49	2:51	2:53	2:56	3:00	3:04	3:06	3:07	3:10	3:13	3:16	3:17	3:20	3:22	3:25	3:29	3:33	3:37
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4:45	4:49	4:51	4:53	4:56	5:00	5:04	5:06	5:07	5:10	5:13	5:16	5:17	5:20	5:22	5:25	5:29	5:33	5:37
5:45	5:49	5:51	5:53	5:56	6:00	6:04	6:06	6:07	6:10	6:13	6:16	6:17	6:20	6:22	6:25	6:29	6:33	6:37
6:45	6:49	6:51	6:53	6:56	7:00	7:04	7:06	7:07	7:10	7:13	7:16	7:17	7:20	7:22	7:25	7:29	7:33	7:37
7:45	7:49	7:51	7:53	7:56	8:00	8:04	8:06	8:07	8:10	8:13	8:16	8:17	8:20	8:22	8:25	8:29	8:33	8:37
8:45	8:49	8:51	8:53	8:56	9:00	9:04	9:06	9:07	9:10	9:13	9:16	9:17	9:20	9:22	9:25	9:29	9:33	9:37

Yellow Express Route

Aventura Mall/Macy's	Loehmann's/ Publix	Walgreens/ Pier I	M, N, and P	R, S, and T	Point East E, D, C B, and A	L, K and Clubhouse	J, H, G, and F	Aventura Plaza	Del Prado	Fresh Market	Walgreens/ Pier I	Community Center	Loehmann's/ Publix	Aventura Government Center	Aventura Mall/Macy's
8:45 AM	8:50 AM	8:53 AM	9:01 AM	9:04 AM	9:08 AM	9:12 AM	9:16 AM	9:18 AM	9:21 AM	9:24 AM	9:26 AM	9:29 AM	9:32 AM	9:36 AM	9:39 AM
9:45	9:50	9:53	10:01	10:04	10:08	10:12	10:16	10:18	10:21	10:24	10:26	10:29	10:32	10:36	10:39
10:45	10:50	10:53	11:01	11:04	11:08	11:12	11:16	11:18	11:21	11:24	11:26	11:29	11:32	11:36	11:39
11:45	11:50	11:53	12:01 PM	12:04 PM	12:08 PM	12:12 PM	12:16 PM	12:18 PM	12:21 PM	12:24 PM	12:26 PM	12:29 PM	12:32 PM	12:36 PM	12:39 PM
1:45 PM	1:50 PM	1:53 PM	2:01	2:04	2:08	2:12	2:16	2:18	2:21	2:24	2:26	2:29	2:32	2:36	2:39
2:45	2:50	2:53	3:01	3:04	3:08	3:12	3:16	3:18	3:21	3:24	3:26	3:29	3:32	3:36	3:39
3:45	3:50	3:53	4:01	4:04	4:08	4:12	4:16	4:18	4:21	4:24	4:26	4:29	4:32	4:36	4:39
4:45	4:50	4:53	5:01	5:04	5:08	5:12	5:16	5:18	5:21	5:24	5:26	5:29	5:32	5:36	5:39
5:45	5:50	5:53	6:01	6:04	6:08	6:12	6:16	6:18	6:21	6:24	6:26	6:29	6:32	6:36	6:39
6:45	6:50	6:53	7:01	7:04	7:08	7:12	7:16	7:18	7:21	7:24	7:26	7:29	7:32	7:36	7:39
7:45	7:50	7:53	8:01	8:04	8:08	8:12	8:16	8:18	8:21	8:24	8:26	8:29	8:32	8:36	8:39
8:45	8:50	8:53	9:01	9:04	9:08	9:12	9:16	9:18	9:21	9:24	9:26	9:29	9:32	9:36	9:39

SATURDAY EVENING SERVICE IS SHADED IN GRAY

Routes from both Miami-Dade and Broward County Transit Systems also service Aventura. MDT route 3 is a major north south route in their network. It travels north along US-1 through Aventura and into Broward County. It also travels around Turnberry Golf Course along Country Club Drive while in Aventura. Routes E and S of the MDT network travel through Aventura as well, as they move along NE 192nd Street / William Lehman Causeway. Both routes have an eastern end at the Aventura Mall. The main purpose of the routes is to connect Aventura with the neighboring communities on the barrier islands. Several other MDT routes travel along US-1 / Biscayne Boulevard in the southern portion of Aventura.

Broward County Transit has three routes that enter Miami-Dade County in the City of Aventura. Routes 1 and 28 come into the city from the north on US-1 and have stops at the county border as well as at the Aventura Mall, where both routes end. Broward County Transit, Route 4 also enters Aventura. It travels along NE 192nd Street / William Lehman Causeway. Just like the other two routes in this network, Route 4 also ends at the Aventura Mall. Route 4 is also called the Aventura Mall Breeze.

Aventura's Comprehensive Plan focuses on providing a safe, efficient multi-modal transportation system. They strive to promote all modes of transit and encourage pedestrian and bicycle friendly facilities, as well as public transit. The transportation and land use elements are coordinated so as to become more effective. The city seeks to maintain a comparable level of service with Miami Dade County and surrounding communities. It supports a LOS E where no mass transit exists, LOS E+120 percent where mass transit headways are 20 minutes, and LOS E +150 percent where extraordinary transit exists. The entire city is within the Transportation Concurrency Exception Area, and is therefore under no obligation to mitigate transportation deficiencies, as some areas in Miami-Dade County are.

All new development goes through the access management review procedures as specified by the Florida Department of Transportation. The city is highly focused on the provision of Transportation Management Strategies, relative to traffic calming, traditional neighborhood development and safety for bicycles and pedestrians.

Aventura is also interested in developing parking strategies and bicycle and pedestrian amenities. The City wants to reduce the number of vehicle miles traveled by modifying travel demands, and increasing transit ridership by 10 percent from the writing of the comprehensive plan. Their shuttle is integral in achieving this policy. They have encouraged public transit use in their town center area, and link local streets to provide residents with alternative routes of travel, while they assist in protecting the functionality of the States highway system. Additionally the sidewalk network has been designed to link residential developments with the transit stops.

In achieving these goals, Aventura has coordinated with Miami Dade County, the MPO and FDOT.

In 2006 the Aventura Traffic Advisory Board recommended 13 **Biscayne Boulevard Corridor Projects.** These included projects between NE 180 Street and NE 213 Street, and suggested projects related to signal timing, new approach lanes, dual right turn lanes, intersection operational improvements, direct access to Aventura Mall, raised curbs, re-striping, and additional signage.

In discussing the concerns of Aventura, the City would be most satisfied if it could refocus regional priorities to include funding for regional transit along Biscayne Boulevard, had a direct connection to William Lehman Causeway to Aventura Mall, and could alleviate congestion caused by school loading both on Miami Gardens Drive, and Ives Dairy Road.

Bal Harbour

Bal Harbour has a population of approximately 3,500 residents. It has a land mass of less than half of a square mile, giving it a population density of around 6,000 per square mile. The average household size is 1.73 persons per household, and the median family size is 2.49 persons per family.

The residents of the village have a mean age of 55.2 years old, making it the oldest relative community in the study area. Around 90 percent of the population is above the age of 18. Nearly half of that 90 percent is also above the age of 65. The population is about 95 percent white or Caucasian. 40 percent of the population is foreign born. Most of which is Hispanic in origin.

The local citizens are well educated. Close to half of all residents have a college degree, bachelor's or higher. Near 90 percent of all citizens of working age have a professional level occupation or office type job. The average income of a household in Bal Harbour is almost $48,000. This still leaves 9.2 percent of the people at or below the poverty threshold for the area. Roughly 92 percent of the residents are of legal age to get married, and around 55 percent of those, are currently married. Mean travel time to work for citizens is about 27 minutes.

Bal Harbour Village, situated on the Barrier Islands covers about 30 percent of a square mile, and is home to 3,300 people. Founded in 1946, by Robert C. Graham, the city needed 25 male voters to become incorporated. So Graham had 25 families move in to an apartment building he had constructed in order to get corporation status. The original name chosen for Bal Harbour was Bay Harbour. However, the planning committee didn't think that was proper for a city that was on the beach and not just on the bay. A name was created to describe a community that ran from the bay to the Atlantic Ocean. Hence the word Bal was chosen.

The City boundaries are 96th Street / Broad Causeway on the south, and Haulover Beach County Park to the north, Biscayne Bay on the west and the Atlantic Ocean to the east. The Village has focused on strict managed growth, with a philosophy based on quality not quantity.

Figure 2-4
Bal Harbour

As such Bal Harbour's Express Bus is operated exclusively for its residents with ridership, averaging 280 riders weekly. The Express operates on 90-minute headways between Monday and Saturday.

Monday-Thursday, 9:00 a.m. - 5:00 p.m.
Friday-Saturday, 9:00 a.m. - 9:00 p.m.

The route includes stops along Bay Harbor, Surfside, Sunny Isles and Aventura. Sundays, the Express takes residents to South Beach's Lincoln Road 9:00 a.m. - 5:00 p.m.

Figure 2-5
Bal Harbour Express Bus Schedule

BAL HARBOUR

Express Bus Schedule

	Monday through Friday					F/S	F/S	F/S
Majestic	9:00	10:20	11:40	1:45	3:15	5:00	6:50	8:10
Sheraton Hotel Bus Stop	9:01	10:21	11:41	1:46	3:16	5:05	6:52	8:12
Bal Moral	9:02	10:22	11:42	1:47	3:17	5:08	7:00	8:13
Sea View Hotel	9:03	10:23	11:43	1:48	3:18	5:10	7:02	8:15
Bal Harbour Tower	9:05	10:25	11:45	1:50	3:20	5:12	7:04	8:16
Palace	9:06	10:26	11:46	1:51	3:21	5:14	7:06	8:17
Bal Harbour 101 Curbside	9:07	10:27	11:47	1:52	3:22	5:16	7:07	8:18
Tiffany	9:09	10:29	11:49	1:54	3:24	5:18	7:08	8:20
Plaza	9:11	10:31	11:51	1:56	3:26	5:20	7:09	8:22
Carlton Terrace	9:13	10:33	11:53	1:58	3:28	5:22	7:11	8:24
Harbour House	9:15	10:35	11:55	2:00	3:30	5:25	7:13	8:26
Bal Bridge North	9:18	10:38	11:58	2:03	3:33	5:28	7:16	8:29
Harbour Way Bus Stop	9:19	10:39	11:59	2:04	3:34	5:30	7:18	8:31
Bal Harbour Collins Apts	9:20	10:40	12:00	2:05	3:35	5:32	7:19	8:32
Bal Harbour Shops Bus Stop	9:21	10:41	12:01	2:06	3:36	5:35	7:20	8:34
Bal Harbour Village City Hall/Park	9:22	10:42	12:02	2:07	3:37	N.S	N.S	N.S
Bay Harbor/96th Street City Hall	9:25	10:43	12:03	2:08	3:39	N.S	N.S	N.S
Bay Harbour Terrace Deli's	9:27	10:45	12:05	2:10	3:41	N.S	N.S	N.S
Surfside Publix	9:31	10:49	12:09	2:14	3:45	5:39	7:25	8:39
169th Street Einstein's/GNC/Pizza Hut	9:41	11:05	12:25	2:30	4:00	5:54	7:35	8.49
Aventura Mall Macy's	9:51	11:15	12:35	2:45	4:15	6:10	7:45	8:59
170th Street Driver's License	10:01	11:25	12:45	2:55	4:30	6:25	7:55	N.S
Harbour Way Bus Stop	10:11	11:35	12:55	3:10	4:45	6:35	8:05	N.S
Bal Harbour Collins Apts	10:13	11:36	12:57	3:12	4:47	6:40	8:07	N.S

* No service available on Memorial Day, Labor Day, Thanksgiving, Christmas or New Year's.

The Village's transportation goal is to preserve and maintain its existing transportation network, and its lighting, signing and marking.

To do so they have identified several objectives including:

- To provide for a safe and efficient motorized system
- To coordinate traffic circulation with future land uses
- To coordinate with other agencies
- To protect rights of way from building encroachment
- To coordinate with Miami-Dade County for the provision of transit

The Village has two main thoroughfares, Collins Avenue and 96th Street. Access in and out is limited to these. Several local roads enable internal circulation to the residential area north of Bal Harbour Shops. There are three access points from those neighborhoods to Collins Avenue, and only one on to 96th Street. Congestion on these State facilities has a definite affect on the ability for citizens to ingress and egress from the community.

Bay Harbour Islands

In 1947, the Town of Bay Harbor Islands was incorporated. In 1953, the Florida Legislature chartered the present municipality. Bay Harbor Islands has a population density of just over 10,000 people per square mile. The actual size is just under half of a square mile, with a population of 5,146 people. 55 percent of the people being female and 45 percent being male. 80 percent of the population is over the age of 21, with almost 24 percent being over 65 years of age. The median age for Bay Harbor Islands is around 42 years old.

There are 2 islands that make up the town. The western island is almost completely single family homes while the eastern island has more high density development along with commercial development. Average household population is 1.97 persons per household, while the average family size is 2.71 persons per family.

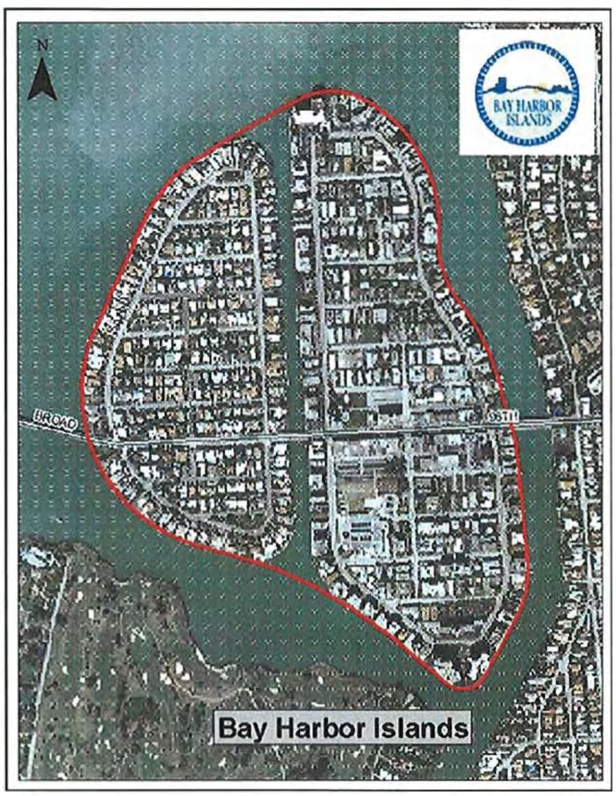
The town mostly consists of White or Caucasian residents. 92 percent approximately are white or Caucasian. It also has 39.3 percent of its population from foreign born citizens. Of this 39.3 percent, nearly three quarters of them were born in Latin America, and another 20 percent being born in Europe.

Bay Harbor Islands has one third of its residents with a bachelor's degree or higher level of education. This leads to a median income level of $38,514. That number is slightly higher than the state average. The poverty level residents are made up of 13.1 percent of the towns population. The town's residents travel an average of 26.6 minutes on the daily commute to work (one way).

The Town is operated under a Council-Manager form of government with seven elected Council members each serving for $1 a year. Shepard Broad was elected the first mayor of the Town and served in that position for 26 consecutive years until his retirement from office in 1973. The municipality consists of two islands both between the mainland and the barrier islands. Bay Harbor Islands has a total area of 1 square mile, less than half of which is land. The current population of the town is just over 5,000 people.

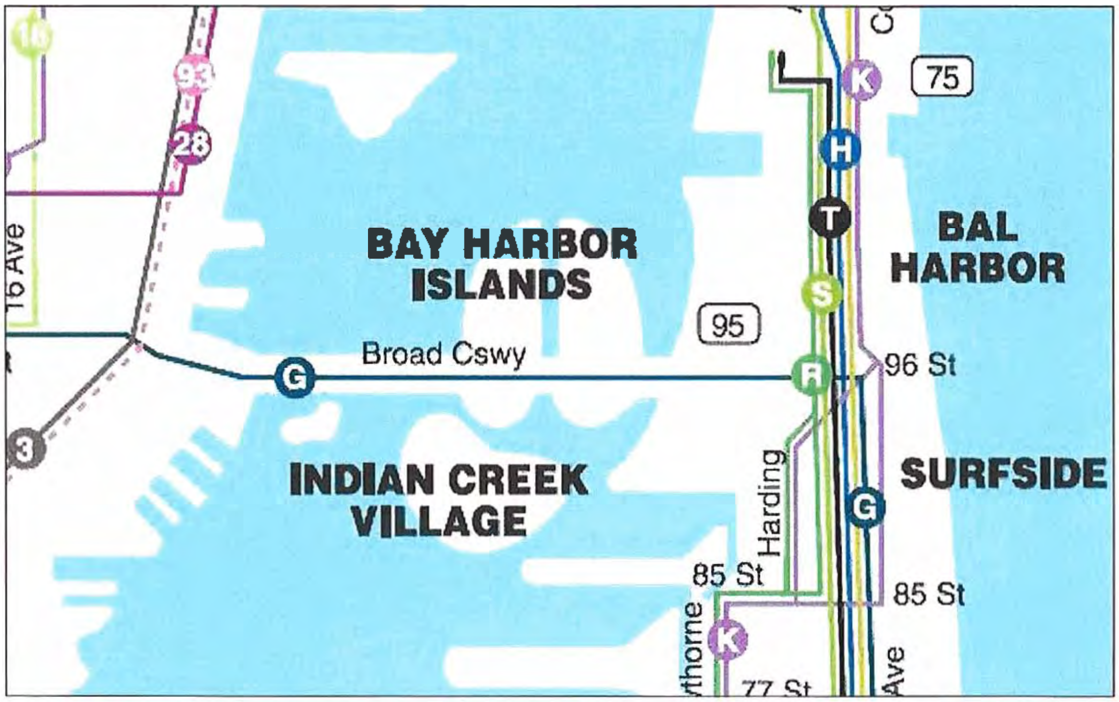
The Town has owned Broad Causeway since it opened in the 1950's. A toll of $1.00 is charged either with cash or through the electronic "Bay Pass" system. It does not, however, accept the more widely used "SunPass" system. The revenues from the tolls are used to pay for the 1989 bond and for causeway maintenance. It is the only way to enter or exit the islands.

Figure 2-6
Bay Harbor Islands

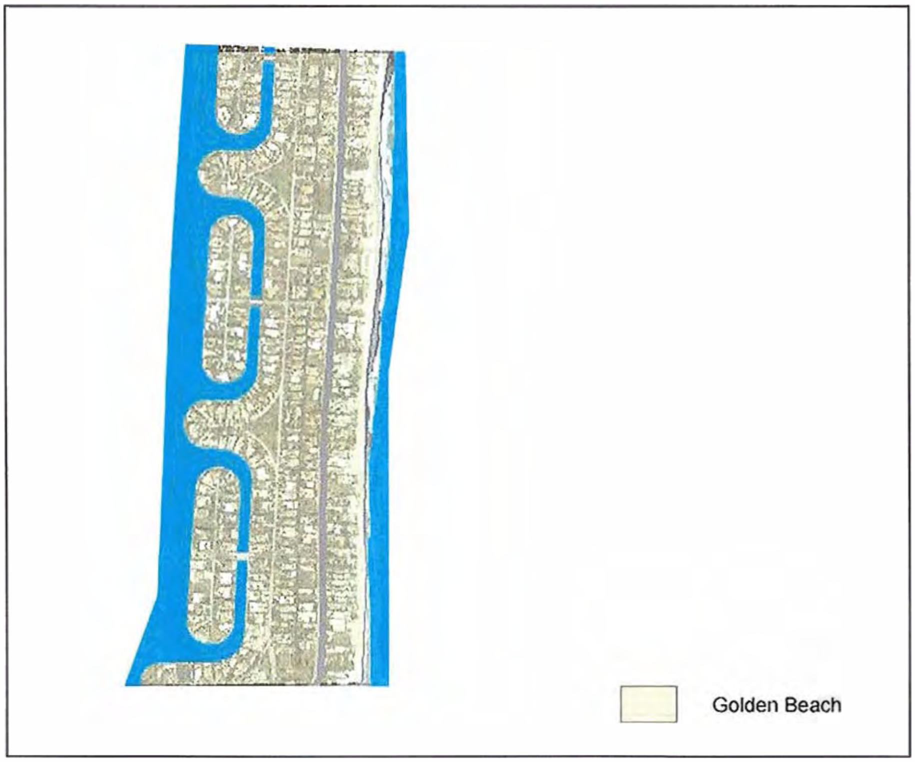


MDT buses have a number of stops along Kane Concourse (96th Street). These stops are on Route G of the MDT network. Route G connects Bay Harbor Islands, as well as the barrier islands, with the mainland. It also allows Bay Harbor Islands residents to travel south bound on the barrier islands directly, or if a transfer is made, to travel northbound on the barrier islands as well. Route G also connects to several other MDT routes on the mainland.

The Town of Bay Harbor Islands also provides a mini-bus service, which acts as a shuttle between the East Island, the Town of Surfside, and North Miami. The mini-bus travels from Bay Harbor Islands to Surfside daily Monday through Friday, with an additional stop in North Miami on Mondays and Thursdays before traveling to Surfside. The mini-bus operates Monday through Friday from 9:00 a.m. until 4:00 p.m. Additionally, there are several municipal parking lots located around Town. Decals for these lots are sold at the Town Hall office on the first day of the Month.



Golden Beach



The ocean front Town of Golden Beach sits on 1.8 miles along the northernmost portion of State Road A1A. The town is bounded by the Atlantic Ocean to the East, the Intracoastal Waterway to the West, and the coastal municipalities of Hallandale Beach (Broward County) to the North and Sunny Isles Beach to the South.

With a population just under 1,000 residents, Golden Beach is the smallest community in the study area in terms of population. The town has a very low population density, because of its town policies which prohibit any form of high rise construction as well as any form of commercial development.

The median age of the community is 38.6. 65 percent of its residents are above the age of 18. The average household has 3.26 persons in it, while the average family size is just over three and a half. Almost 96 percent of the residents are white or Caucasian, with around 20 percent of those being Hispanic in origin. Almost one third of the Golden Beach residents are also foreign born.

Sixty percent of the population that is 25 or older holds some form of a college degree that is either a bachelors degree or higher. This leads to an average household income that is more than three times the state average. Keeping in mind that the average income ($136,686) does not take into account all of the wealth of Bill Gates as he owns multiple homes and his income can only be reported at his primary place of residency for Census purposes. The citizens enjoy a 24 minute average commute to work. Making Golden Beach not only the shortest average commute in the study area, but also the only one in the study area below the state average commute.

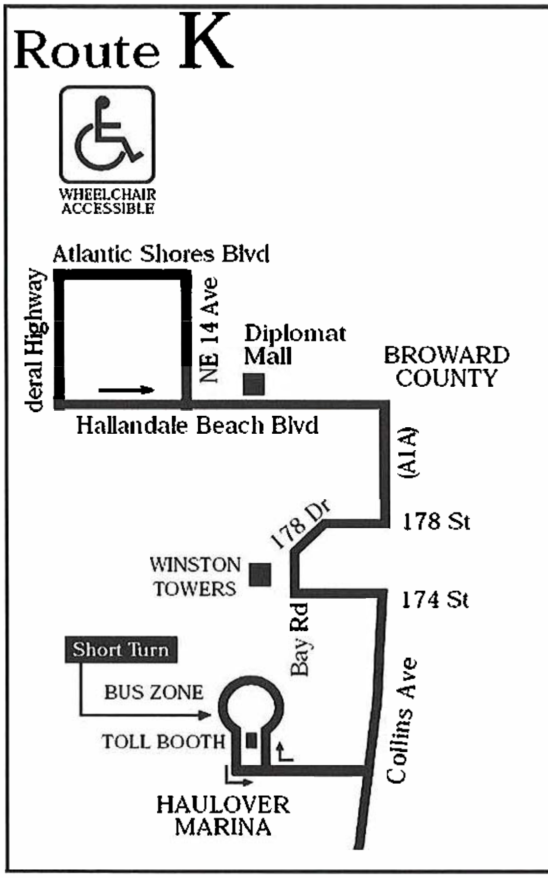
Since its incorporation in 1929, Golden Beach has become one of the most desirable places to live in all of South Florida. This small community has maintained its single-family appeal in a mile-long sanctuary of 370 single-family homes that are generally located on the Intracoastal and its waterways or right on the Atlantic Ocean. The Town Charter protects the Town from commercial activity of any kind and refuses to allow the construction of high-rise condominiums.

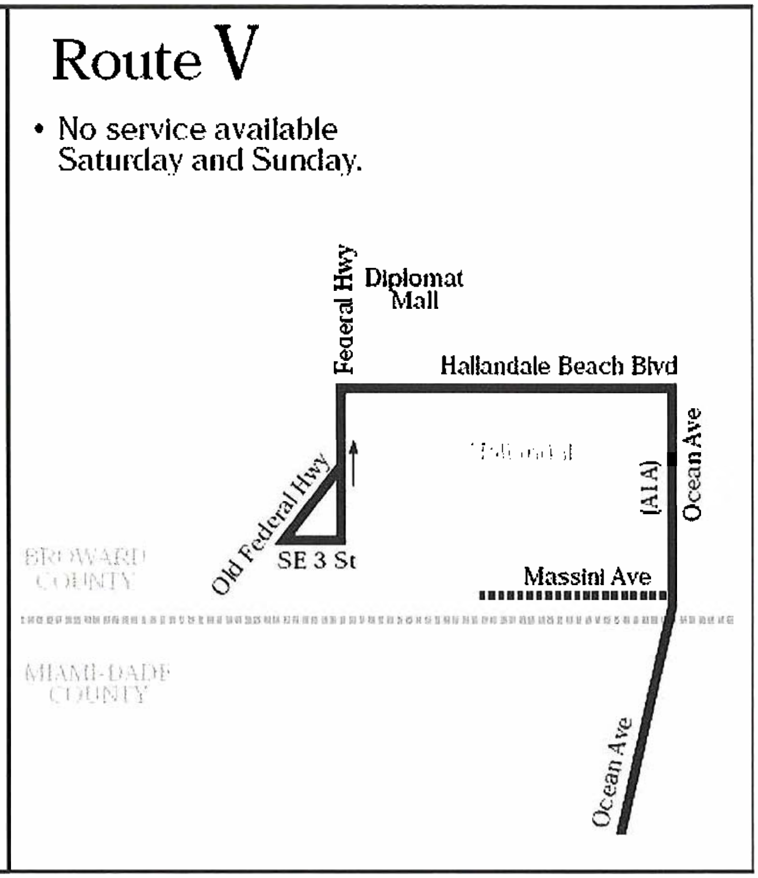
Figure 2-7
Golden Beach

The City of Golden Beach does not have its own transit system. It is however serviced by other local transit systems including the MDT system and the BCT System (see Aventura map for Broward County).

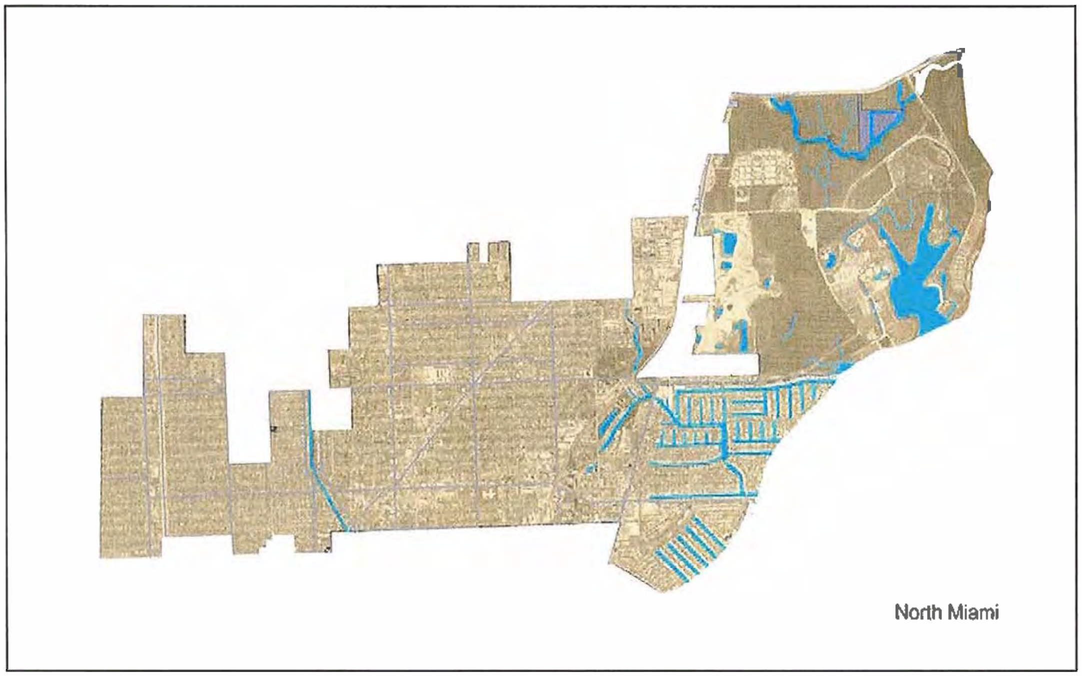
The MDT routes K and V both service the Golden Beach Community. Route K travels along A1A / Collins Avenue. It links Golden Beach with all of the other barrier island communities as well as with Broward County. Route V also travels along A1A / Collins Avenue. It also connects with the surrounding communities and Broward County. Both routes also have stops at the Diplomat Mall, and they both tie in to the Broward County Transit Systems. Route V however, does not operate on weekends, nor does it have wheelchair accessibility.

The Broward County Transit system has a single route that operates in Golden Beach. Route 4 or the Aventura Mall Breeze, moves along the same A1A / Collins Avenue corridor that the MDT routes do. It allows residents to have easy access to the Aventura Mall as well as Young Circle in Broward County.





North Miami



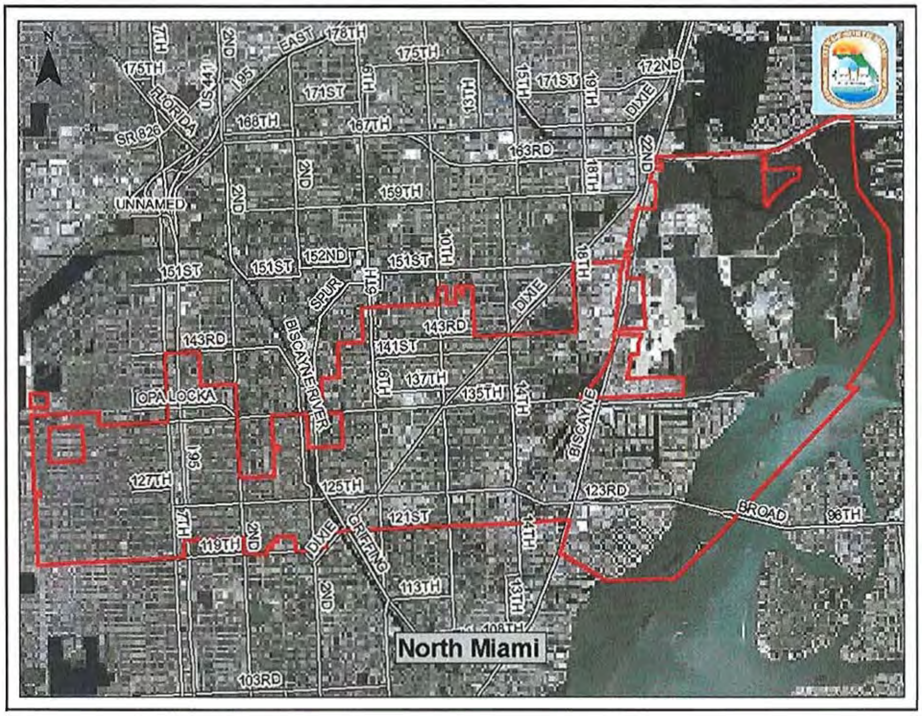
On February 5, 1926, 38 out of the 47 registered voters showed up and voted to incorporate into the City of North Miami. Between 1926 and 1931, the city was named "Town of Miami Shores". Late in 1926 a bond issue of $287,000 was passed to build streets, sidewalks, a town hall, a water system, and fire protection. It is bordered on the East by the Biscayne Bay. The Southern boundary stretches down to approximately 119th Street, to the North it is bound by both North Miami Beach and an unincorporated area most commonly known as Golden Glades. And the Western edge is 17th Avenue.

The City of North Miami has a population of near 60,000. It also has an area of 8 square miles. Thus, making it the largest in both terms of population as well as land mass, of all the municipalities in this study. It has a relatively mixed population in terms of race. 55 percent Black or African American, 35 percent White or Caucasian, and 2 percent Asian. Also, of the 35 percent white or Caucasian population, more than half are of Hispanic origin. 48.5 percent of the citizens are foreign born.

North Miami is a relatively young community. In fact it is the youngest city in terms of average age of all cities within the study boundaries. It's citizens have an average age currently of around 32 years old. It has almost two thirds of the residents being between the ages of 18 and 65, and with less than 10 percent of all the citizens of North Miami over the age of 65.

Approximately 16 percent of the residents over the age of twenty five have a bachelor's degree or higher level of education. This is below the state average of near 22 percent of college educated citizens per municipality. The median household income is $29,778 which is also significantly lower than the state average. Thus, causing almost a quarter of its residents to be living at or below the poverty level as defined by the US Census Bureau. Citizens have an average work commute of 31.1 minutes.

Figure 2-8
North Miami



The City proactively implemented the North Miami Express in July 2004 with funding assistance from FDOT. The North Miami Express service area includes areas not currently served by Miami-Dade Transit with limited destinations outside of the City limits. The service consists of four circulator routes that divide the City into four districts. The North Miami Express operates during the weekdays from 7:00 a.m. to 9:00 p.m. The major destinations of this service include schools, community centers, shopping centers, and public parks.

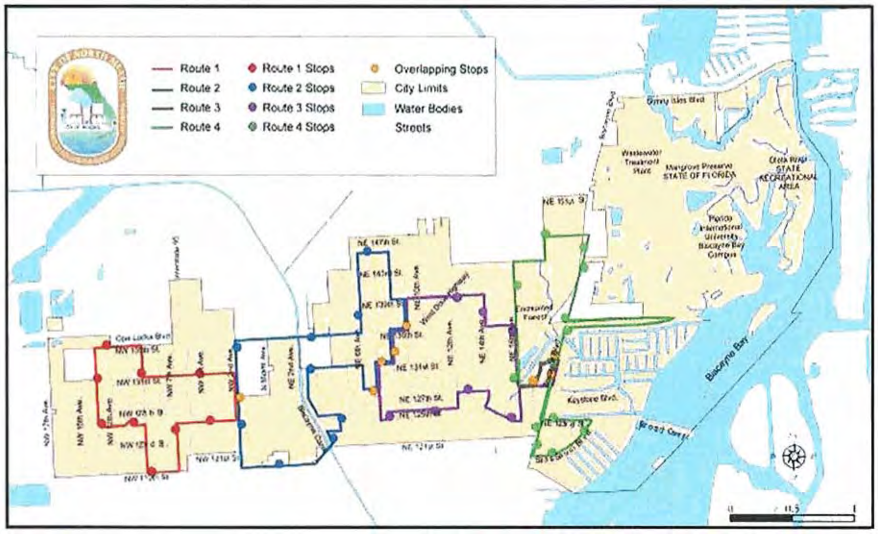
Route 1 serves the western portions of the City and runs along NW 131st Street, NW 135th Street, NW North Miami Boulevard, NW 119th Street, NW 13th Avenue, NW 10th Avenue, and NW 2nd Avenue. The major destinations along the route include Claude Pepper Park, NW 131st fire station, Sunkist Grove Community Center, Thomas Sasso Pool, St. James Catholic School, Benjamin Franklin Elementary School, Premiere Elgise Baptiste School, and the Gratigny Post Office. Route 1 operates with headways of 30 minutes.

Route 2 runs to the east of Route 1 along NW 2nd Avenue, NE 119th Street, West Dixie Highway, NE 135th Street, Griffing Boulevard, NE 131st Street, NE 6th Avenue, and NE 8th Avenue. The major destinations along the route are North Miami Elementary School, North Miami Senior High School, Thomas Jefferson Middle School, North Miami Community Center, Breeze Swept Tot-Lot, Griffing Adult Center, North Miami Library, and Gratigny Elementary School. Route 2 has 45- minute headways and overlaps Route 1 along NW 2nd Avenue.

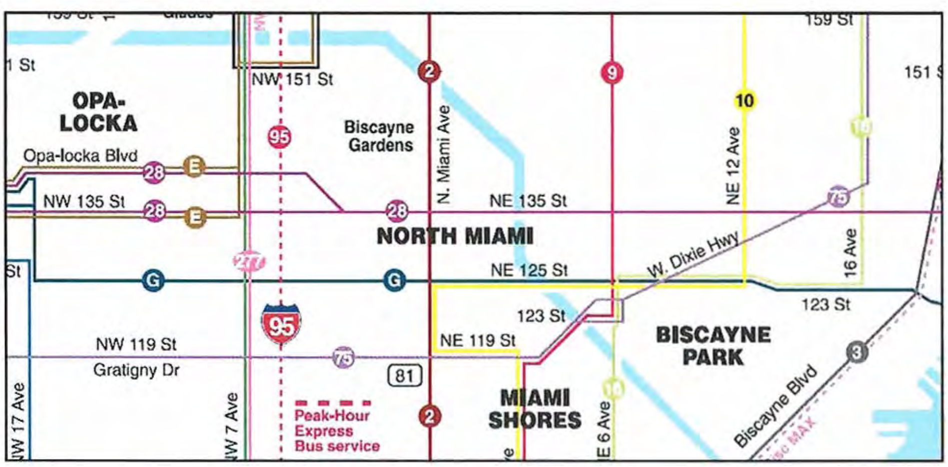
Route 3 runs to the east of Route 2 along NE 7th Avenue, NE 8th Avenue, NE 9th Avenue, NE 139th Street, NE 14th Avenue, NE 16th Avenue, and NE 125th Street. The major destinations along the route include North Miami Senior High School, Publix Supermarket on Biscayne Boulevard, Johnson & Wales University, William J. Bryan Elementary, Villa Maria Nursing & Rehab, City Hall Plaza/MoCA, and North Miami Library. Route 3 operates with 45- minute headways and overlaps Route 2 along NE 7th, NE 8th, and NE 9th Avenues.

Route 4 runs on the eastern portions of the City along NE 16th Avenue, Biscayne Boulevard/US-1, Natural Bridge

Road, Sans Souci Boulevard, NE 146th Street, and NE 12th Avenue. The major destinations along the route include Target on Biscayne Boulevard, Publix Supermarket on Biscayne Boulevard, Johnson & Wales University, Walgreens/ Office Max on NE 125th Street, Home Depot on Biscayne Boulevard, Penny Sugaman Tennis Center, and the Sans Souci Neighborhood. Route 4 operates with 60-minute headways and overlaps Route 3 along NE 16th Avenue. The City currently contracts with a private company to provide the service. The contract covers all aspects of the service including vehicles, personnel, and operations.



Miami-Dade Transit also has routes running through North Miami. Route 28 is a major east west link in the MDT network. It runs along NE 135th Street. It connects North Miami to both the barrier islands and to the communities on the west side of I-95. Routes 22, 9, and 10 are similarly important links in the MDT network, except they are north and south connectors. They link the city to both Downtown Miami and to Broward County and its transit network.



The main purpose of the North Miami Transportation Master Plan (TMP) is to set the vision for the City's future transportation system and to establish the framework to guide the transportation system investments for the future. It establishes the strategies and priorities for short- and long-term transportation decisions and investments by the City.

The plan recommends a multimodal transportation system that provides more transportation choices for all residents of North Miami. It calls for investing in more non-automobile transportation systems as a means to address travel and mobility issues in the City. Providing viable strategies which do not require expansion of the street network or expensive roadway widening will maintain the City's quality of life, preserve the existing community, and manage the existing transportation system.

On September 22, 2003, the City of North Miami adopted a Transportation Concurrency Exception Area (TCEA) to ensure that the City's redevelopment efforts were not hindered by transportation concurrency. As part of the TCEA, the City adopted several policies in the Transportation Element of its Comprehensive Plan to address the mitigation of traffic issues associated with the concurrency exception. Specifically, Policy 1.3.6 of the Transportation Element states the City's commitment to developing a Transportation Master Plan (TMP) and to integrate the plan into the City's Comprehensive Plan. The City has also designated the North Miami Community Redevelopment Area (CRA) and adopted a Community Redevelopment Plan to guide future redevelopment within the CRA. The transportation goals of both the Transportation Element, including the TCEA, and the CRA Redevelopment Plan include increasing the transportation choices for residents and visitors, addressing the City's traffic issues, and enhancing the streets for all users. In addition, growth in the region continues to place a strain on the City of North Miami's transportation system, resulting in recurring periods of automobile traffic congestion compromising the quality of life for residents and adversely impacting the residents and business communities. The TMP is a response to the TCEA requirements as well as an increased need to evaluate existing conditions and better coordinate land use and transportation plans to address local mobility issues.

The main objective of this Transportation Master Plan is to set the framework for the transportation system that will address future travel and mobility challenges with an approach that strives to manage traffic congestion with a multimodal transportation system. This framework is proposed to be achieved by providing more travel options while investing wisely in its existing transportation system. The plan aims to provide a multimodal system of transportation that will reduce the impact of automobile traffic congestion within the City. The future transportation conditions will be addressed by a set of transportation demand and multimodal strategies. The approach presented in the TMP to manage the transportation system involves the following:

- Provision of a wider range of travel choices
- Investment in public transit
- Adoption of measures that manage traffic demand rather than a continued supply of transportation infrastructure
- Operational improvements and traffic management on the existing roadway network
- Selective improvements to the roadway network that efficiently utilize the existing infrastructure to its fullest potential

This study recommended providing multiple transit hubs and a higher level of transit amenities to attract more choice riders, as well as to just boost overall ridership.

The Transportation Element of the City's Comprehensive Plan was adopted in September 2003 and establishes North Miami's goals, objectives, and policies toward meeting the community's transportation system needs. The main purpose of the Transportation Element is to plan for a multimodal transportation system that emphasizes multiple transportation mode choices, including walking, bicycling, and public transit. As part of the new Transportation Element, the City of North Miami adopted a Transportation Concurrency Exception Area (TCEA). The intent of the

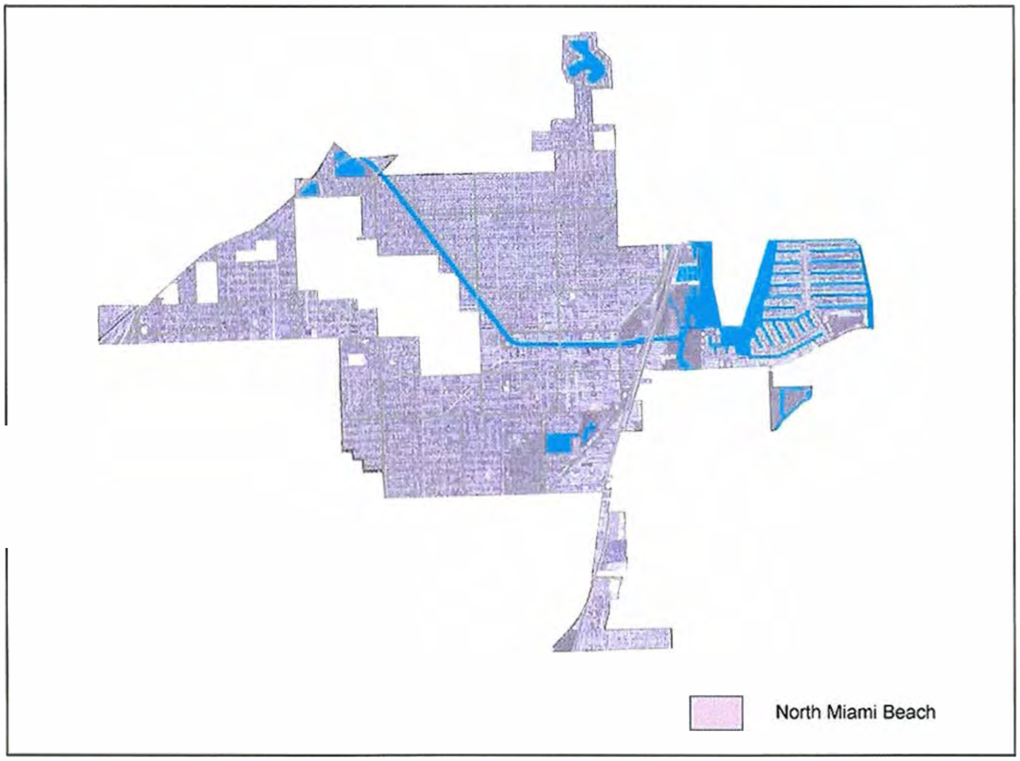
TCEA is to reduce the adverse impact transportation concurrency may have on potential urban infill and redevelopment within the City, particularly the recent Community Redevelopment Plan (discussed in the next section). In exchange for eliminating the concurrency requirements, the City agreed to actively pursue transportation strategies aimed at increasing transportation choices. Specifically, the Transportation Element states that the City should develop a transportation master plan to accommodate local mobility needs as stated in Policy 1.3.6. This policy is being achieved through development of this master plan. The Element also includes several other objectives and policies to support a multimodal transportation system including:

- Complete a citywide pedestrian facilities study
- Complete a citywide bicycle facilities study
- Work with Miami-Dade Transit (MDT) to increase the number of MDT routes in North Miami that accommodate bicycles
- Provide incentives for inclusion of public transit facilities in future development
- Perform a public transit oriented development feasibility study (completed May 2005)

The City's Future Land Use Element was adopted in April 1991. It is expected to change significantly by the end of 2005. The changes are primarily to incorporate the Community Redevelopment Plan created by the Community Redevelopment Agency (CRA). A summary of the CRA Redevelopment Plan is included in the next section. The current Future Land Use Element and its development potential are part of the 2025 traffic projections discussed earlier. The traffic analysis for the CRA Redevelopment Plan will be completed as part of the amendment to the Future Land Use Element and the updates to the Transportation Element.

Generally, people in North Miami are concerned with traffic on 7th Avenue. This facility appears to be the main alternative for I-95 traffic through the City, and its flow is limited. Of particular concern is the ability to coordinate with FDOT, so the City has a voice and an awareness of those projects within their boundaries, or as they peripherally affect the community. Additionally North Miami Avenue is becoming very congested as it moves through Miami Shores, where the typical section is 4 lanes south of 105th Street and 2 lanes north of 105th Street. The City desires that this facility be 4 lanes in its entirety. Constant congestion has been noted on 125th Street between I-95 and the Intercoastal Waterway, particularly at the intersection of 6th Avenue. This City suffers from a lack of east-west corridors, because only two streets (125 Street / 135 Street) move across the canals. North/South traffic is hampered by the diagonal flow of West Dixie Highway. The City would like to see 135th Street opened up from I-95 to Biscayne Boulevard. General consensus is that higher quality transit service needs to be provided in the area. Biscayne Boulevard is a key location for that service whether it is Bus Rapid Transit and or eventually rail improvements.

North Miami Beach



Originally named "Fulford" in 1926 after Captain William H. Fulford of the United States Coast Guard. The city was incorporated in 1927 as Fulford and the city changed its name to North Miami Beach in 1931. Although the North Miami Beach boundaries once stretched to the Atlantic Ocean, this city is now on the Intracoastal Waterway, and no longer has any beaches within its city limits, although it is just a short distance away across the inlet.

The City of North Miami Beach is located just north of North Miami. It has a population of over 40,000. It also has a land mass of around 5 square miles and a density of around 8,250 people per square mile. It has a median age of 34.5 years old, with over 60 percent of its citizens being between the ages of 18 and 65. More than a quarter of its residents are under the age of 18. Making the City's residents fairly young when compared to state averages.

The community is relatively diverse when it comes to race. 46 percent of the people are White or Caucasian, 39 percent are Black or African American, 4 percent are Asian, and of the 46 percent White or Caucasian, two thirds are Hispanic or Latino in origin. Nearly half of all residents are foreign born.

The City has an average household number of 2.89 persons per household. The average household has an income of $31,377, which is well below the state average. More than one fifth of the citizens live at or below the poverty threshold. The citizens have an average travel time to work of just over half an hour.

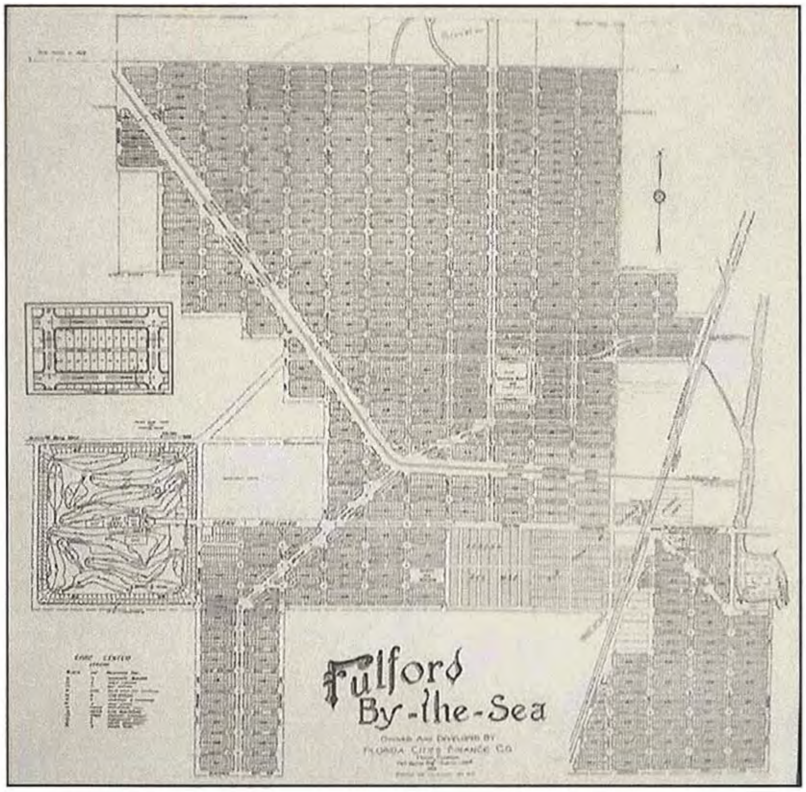
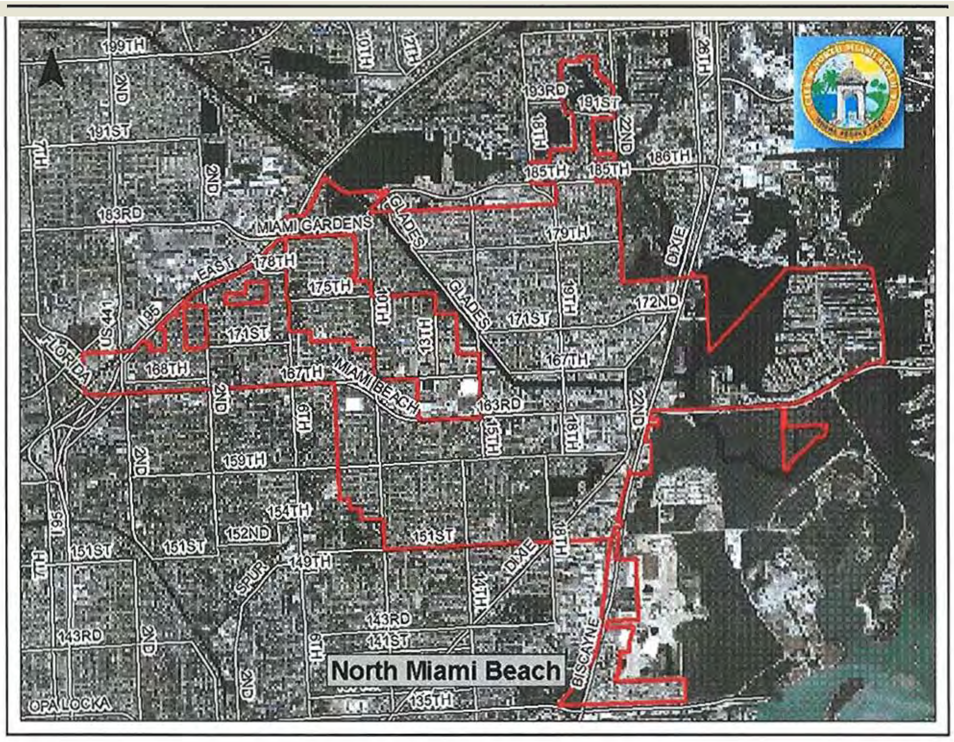


Figure 2-9
North Miami Beach



Today the boundaries are roughly, NW 178th Street to the north, and NW 151st Street to the south. I-95 to the west and the intercoastal waterway to the east. These are general boundaries as the city is, for the most part, surrounded by unincorporated areas within Miami-Dade County. It also completely surrounds an area of unincorporated land. Overall 5 of the cities 5.3 square miles are land, and the city has a population nearly 40,000.

The City of North Miami Beach has both its own transit system as well as a substantial portion of the MDT network. Together it makes the city one of the most convenient places in all of south Florida to navigate without the use of a car.

The **NMB-LINE** is a **free** transportation service in the North Miami Beach Community that operates on weekdays, weekends and evenings. It is for North Miami Beach residents only. It has both a scheduled route that connects to all areas of the city, as well as to the Aventura Mall, and it also has a call and ride system. The scheduled route travels mostly along North Miami Beach Boulevard, and NE 35th Avenue. It has stops at such places as Wal-Mart, the library, and the Intercoastal Mall. The stop at the mall also allows for connections to both the MDT network as well as many other municipal circulators like Sunny Isles Beach's. The stop at Wal-Mart allows connections to MDT and BCT systems. The NMB-LINE runs on a 60-minute headway, with some stops actually being shorter than 60 Minute Headways.

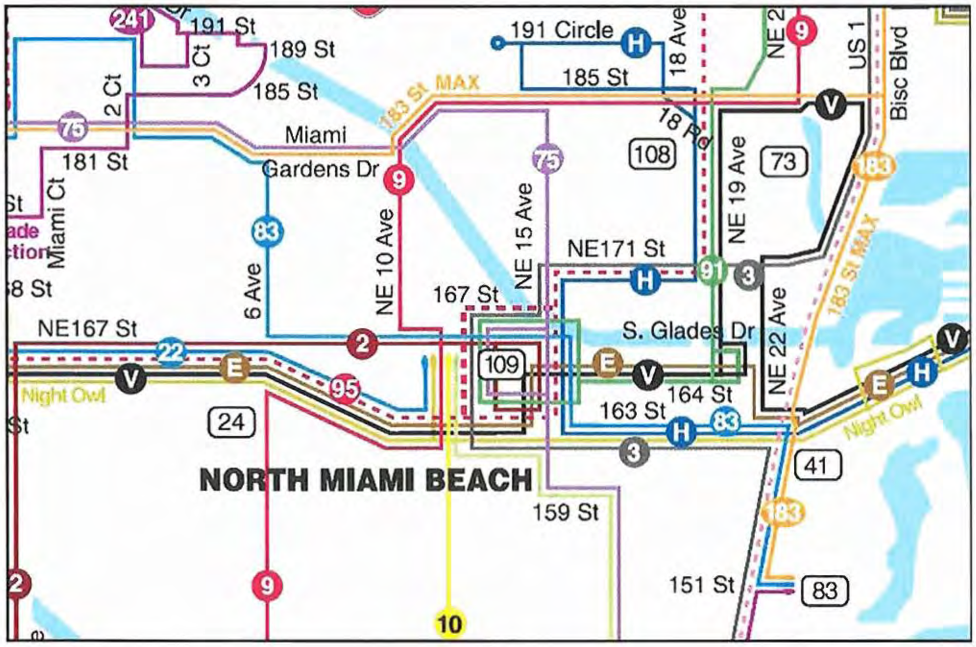
Figure 2-10

NMB-LINE Shuttle Route & Schedule

A Intracoastal Mall	B 35th Ave. NE 168th Street	C 35th Ave. NE 169th Street	D 35th Ave. NE 170th Street	E 35th Ave. & NE 171st Street	A Intracoastal Mall ARRIVAL	A Intracoastal Mall DEPARTURE	F Stratford	G Laurenzo's Market	H Inland Tower	I NMB Library / Three Seasons	J Walmart	I NMB Library / Three Seasons	H Inland Tower	G Laurenzo's Market	F Stratford	A Intracoastal Mall
8:30 AM	8:32 AM	8:36 AM	8:41 AM	8:45 AM	8:48 AM	8:53 AM	8:56 AM	9:01 AM	9:04AM	9:06 AM	9:10 AM	9:12 AM	9:15 AM	9:18 AM	9:23 AM	9:30 AM
9:30 AM	9:32 AM	9:36 AM	9:41 AM	9:45 AM	9:48 AM	9:53 AM	9:56 AM	10:01 AM	10:04 AM	10:06 AM	10:10 AM	10:12 AM	10:15 AM	10:18 AM	10:23 AM	10:30 AM
10:30 AM	10:32AM	10:36 AM	10:41 AM	10:45 AM	10:48AM	10:53 AM	10:56 AM	11:01 AM	11:04 AM	11:06 AM	11:10 AM	11:12 AM	11:15 AM	11:18 AM	11:23 AM	11:30 AM
11:30 AM	11:32 AM	11:36 AM	11:41 AM	11:45 AM	11:48 AM	11:53 AM	11:56 AM	12:01 PM	12:04 PM	12:06 PM	12:10 PM	12:12 PM	12:15 PM	12:18 PM	12:23 PM	12:30 PM
12:30 PM	12:32 PM	12:36 PM	12:41 PM	12:45 PM	12:48 PM	NO Service					2:10 PM	2:12 PM	2:15 PM	2:18 PM	2:23 PM	2:30 PM
2:30 PM	2:32 PM	2:36 PM	2:41 PM	2:45 PM	2:48 PM	2:53 PM	2:56 PM	3:01 PM	3:04 PM	3:06 PM	3:10 PM	3:12 PM	3:15 PM	3:18 PM	3:23 PM	3:30 PM
3:30 PM	3:32 PM	3:36 PM	3:41 PM	3:45 PM	3:48 PM	3:53 PM	3:56 PM	4:01 PM	4:04 PM	4:06 PM	4:10 PM	4:12 PM	4:15 PM	4:18 PM	4:23 PM	4:30 PM
4:30 PM	4:32 PM	4:36 PM	4:41 PM	4:45 PM	4:48 PM											

Miami-Dade Transit's northeast Miami-Dade County transit hub for bus service is located at the Mall at 163rd Street. This allows the city to be well covered by bus routes, both local and countywide routes.

Because of the hub being in North Miami Beach, a large number of MDT routes go through the area. Many of the largest routes in the system, such as 95 Express, the Night Owl, and 183 Street MAX, pass through the city. There are approximately 10 east-west routes and just as many north-south routes. Just about every main thoroughfare in North Miami Beach has an MDT route on it.



North Miami Beach's main transportation goal under its comprehensive plan is to maintain a financially feasible, multimodal, urban transportation system that meets the mobility needs of the residents in a safe and effective manner, and that operates in harmony with the existing and future land use pattern that has been developed, as well as protecting the environment.

To do so they have set Level of Service (LOS) standards that are the same as those set by Miami Dade County. These include:

1. Florida Intrastate Highway System (FIHS) – Inside the UDB, limited access State highways shall operate at LOS D or better. Where exclusive through lanes exist, such as high occupancy vehicle (HOV) lanes, roadways may operate at LOS E.
2. Arterials and Collectors – Within the UIA:
   (a) Where no public mass transit service exists, roadways shall operate at or above LOS E;
   (b) Where mass transit service having headways of 20 minutes or less is provided within ½ mile distance, roadways shall operate at no greater than 120 percent of their capacity;
   (c) Roadways parallel to and within ½ mile distance of I- 95/Tri-Rail, US 1, or any other corridors where extraordinary transit service such as commuter rail or express bus service exists, shall operate at no greater than 150 percent of their capacity.
3. Local Roads – Within the City limits, local roads shall operate at LOS C.

While the City is in a Transportation Concurrency Exception Area, and is not required to measure for concurrency, it contends that no new development or redevelopment project will be approved if the projected impacts of the project would reduce service levels of any roadway on the traffic circulation system below the stated LOS standards unless the total design capacity of any new facilities that will become available concurrent with the impact of the development. This is defined as: At the time a development order or permit is issued, the necessary improvements to provide the adopted LOS are in place or under construction; The necessary improvements to provide the adopted LOS are the subject of a binding executed contract for the construction of those facilities; The necessary improvements to meet the adopted LOS have been included in the first three years of the adopted City, County or State five-year schedule of transportation improvements, and the applicable government entity makes a determination that a binding contract for the implementation of said improvements will be executed no later than the final day of the third fiscal year of the original schedule; The necessary facilities and services for the adopted LOS are guaranteed in an enforceable development agreement.

The concurrency management system only allows a development order or permit to be issued when a roadway exceeds its adopted level of service standard only if one of those conditions are met.

Safety and efficiency are very important to the City, which is focused on coordinating and cooperating with other government agencies. Additionally the City supports the implementation of Transportation System Management (TSM) and Transportation Demand Management (TDM) strategies. They continue to protect existing and future street rights-of-way from encroachment by new development and redevelopment.

The City strives to coordinate with the County and private transit providers to ensure the availability of adequate service to meet the needs of the City's residents, including the transportation disadvantaged and in the development of multi-modal transit facilities along the Biscayne Boulevard/ US-1. To that end they will not allow a development order to be issued for development within a transit corridor, which will negatively affect the adopted Miami-Dade County peak-hour mass transit level-of-service.

Transportation and land use are inextricably linked. North Miami Beach makes sure that its Transportation Element is compatible with the Future Land Use Element and other elements of its Comprehensive Plan, ensuring that the transportation system meets the current and future needs of the population and land use patterns. To do this the City promotes sufficient densities along major roadway corridors to support transit where appropriate. The City will cooperate with Miami-Dade County in the development of multimodal transit facilities along the Biscayne Boulevard/ US-1 Corridor. The City also provides conditions that are conducive to redevelopment of the area around these transit facilities that will enhance and encourage transit usage.

Like most cities in the study, North Miami Beach feels that traffic flow is becoming more sluggish with each passing year. They have recognized the necessity to look at issues from a regional perspective, and have been a leader in this respect. They feel their most dangerous intersection is the one at Biscayne Boulevard and 163rd Street, and with the many ongoing developments this may only get worse. Ideas for this intersection involve a potential grade separation, and further out the location of an Intermodal facility, as it is seen as a central transit users location. Additionally the intersection of Biscayne Boulevard and Miami Gardens Drive is an issue. Several other intersections and streets have been recognized by the Police and other departments as problematic areas. These included: Miami Gardens Drive, west bound at 6th Avenue to the I-95 ramp, where only two lanes exist. Ives Dairy Road at Biscayne Boulevard has no north bound movement. Both Ives Dairy Road and Miami Gardens Drive have schools located on them, which create congestion at various times of the day. 163rd Street is perceived to need coordinated signalization. The intersection of 163rd Street at West Dixie Highway is said to have a left turn lane that is not long enough, both east and west bound.

As with the other cities, more east west access is desired, particularly on 151st Street and 159th Street. Currently the lack of connectivity on local streets forces drivers to use the major corridors. Because most traffic must use a few roads, congestion on these roads is exacerbated. Officials feel that a connected grid would provide shorter trips and the ability to move within the city without having to use the major corridors. This may relieve congestion on the more regional corridors. The general congestion and lack of adequate connectivity at the Golden Glades intersection is frustrating to many drivers. It is widely held, that traditional physical capacity is going to be difficult to attain. Progressive measures to achieve capacity are advocated for, such as the concept of grade-separated intersections or the use of reversible lanes. The City strongly desires Bus Rapid Transit amenities along Biscayne Boulevard, and in general a higher level of transit is desired.

Sunny Isles Beach

Sunny Isles Beach has a current population of over 15,000 residents. This number is expected to dramatically increase with all of the new high rise development going on in the area. It has a land area of 1 square mile, making it the most densely populated city in the study area.

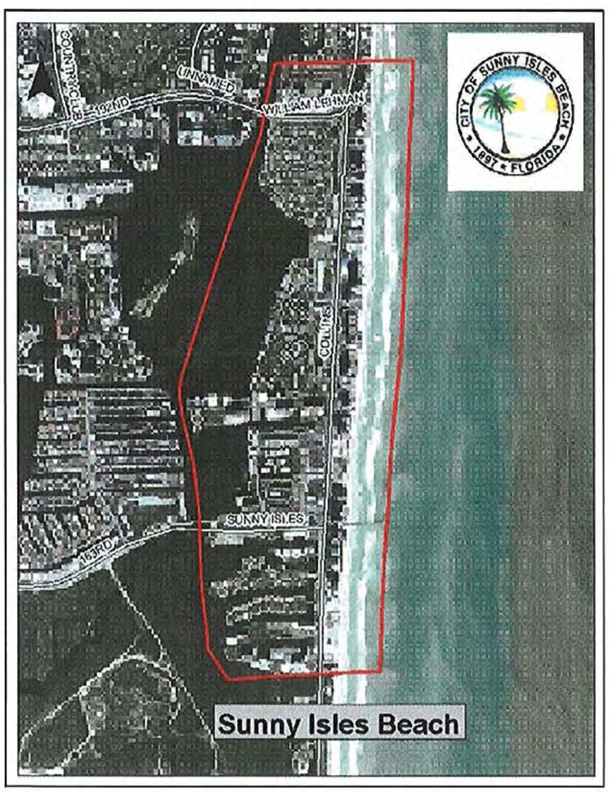
The residents are much like that of the communities just to the south. They have an average age of 50.4 years old. 87 percent of its citizens are above the age of 18, and one third of the citizens are over the age of 65. White or Caucasian people make up the vast majority of the population at 92 percent. With 36 percent of those being Hispanic or Latino in origin. Black or African American also makes up 2 percent of the population. Nearly 57 percent of the total population is foreign born.

The median household income is $31,627. This is below the state average. The average household size is 1.87 persons, while the average family size is 2.55 persons. Approximately 30 percent of the citizens have a bachelor's degree or higher level of education, and the residents drive an average of 34 minutes one way in daily commute to work.

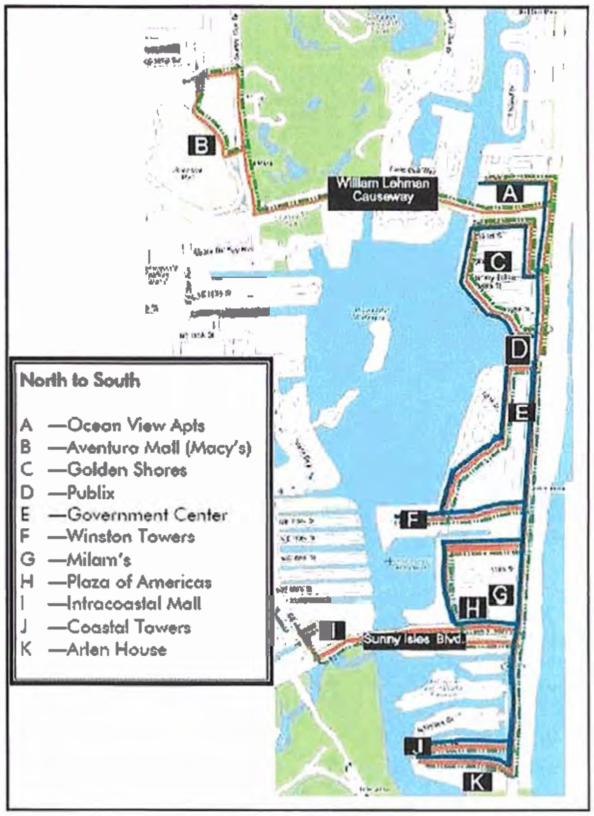
In 1920 a private investor purchased a 2.26-square mile tract of land for development as a tourist resort. He named it Sunny Isles — "The Venice of America." When the Haulover Bridge was completed in 1925, the area became accessible from Miami Beach, thus attracting developers who began widening streams, digging canals and inlets and creating islands and peninsulas for building waterfront properties on Biscayne Bay. In 1936 the Sunny Isles Pier was built and soon became a popular destination. In 1982 the ½- mile-long pier was designated a historic site. It is still used by fishing enthusiasts and sightseers today. Sunny Isles developed slowly until the 1950's when the first single-family homes were built in the Golden Shores area. During the 1950's and 1960's more than 30 motels sprang up along Collins Avenue including the Ocean Palm, the first two-story motel in the U.S.

Incorporated in June of 1997, Sunny Isles Beach boasts a population of nearly 18,000 residents in an area of less than two square miles. The population has been slowly increasing over the last several years, and with the construction of many new high-rise units, this intensification is expected to continue. Sunny Isles Beach is located on a barrier island in northeast Miami-Dade County. The City is bounded by the Atlantic Ocean on the east and the Intracoastal Waterway on the west. With two and one-half miles of beach, the City attracts nearly one million vacationers annually. The City also has a large number of transient or seasonal residents.

Figure 2-11
Sunny Isles Beach



Sunny Isles Beach has a municipal circulator, which operates on three routes, the Orange, Blue and Green. The Orange line operates Monday through Friday, between 7:30am and 7:30 pm. It connects various locations between the Aventura Mall and Arlen House. The Green Line closely mirrors the orange Line Route, yet operates Monday through Sunday, 7:30 am through 7:30 pm. The Blue Line operates strictly on the barrier island and never crosses the intercoastal waterway. It operates Monday through Saturday between 8:00 am and 4:00 pm between The Ocean View Apartments and Arlen House. This is a free community shuttle that makes frequent stops on +- 10-minute headways. It moves between various generators such as Coastal Towers and the Arlen House. It goes to destinations like Publix, the Intercoastal Mall and the Aventura Mall, and links with both the North Miami Beach and Aventura services. Shuttle buses are handicapped accessible and are available for such use when a reservation is made at least 24 hours in advance.



The MDT network also services the City of Sunny Isles Beach. It has multiple routes connecting it with its surrounding communities as well as allowing for local movement.

Routes E, V, and 246 all go east from Sunny Isles Beach across the causeway connecting the community to the mainland. Route 246 then turns south, which allows for connectivity to all of the municipalities south of Sunny Isles Beach and on the barrier island. Routes E, and V then turn north and connect the City with Golden Beach, Broward County and the BCT network. Route K stays on A1A for its duration in Sunny Isles Beach. It connects all of the barrier island communities, both north and south.

The Town has an comprehensive plan, completed in 2000, which focused on future development through the Urban Village Concept. This strategy attempts to unify and preserve the distinct neighborhood characteristics of the community while acknowledging its need for a town center as the focal point of city life.

The overriding goal of the Transportation Element is to provide a balanced multi-modal transportation system that supports the land use element, and is safe and efficient and meets the needs of the City's residents, workers and visitors in an aesthetically pleasing manner.

The first objective was to strive for multi-modalism. The City is completely within the Transportation Concurrency Exception area and is therefore exempt from measuring concurrency. It was acknowledged that use of transit would assist in the maintenance of mobility. Other notable objectives were the City's focus on pedestrian and bicycle linkages, and their advocacy of a higher level of transit service, including a waterborne service. Transit is to operate at 30 minute or better headways.

The level of service set by the City as part of its Transportation Concurrency Exception Area (TCEA) status, are the same as the other communities in the study area. These are the LOS E, LOS E+20 percent, LOS E+50 percent. Roadway cross sections were to be modified, to provide streetscape improvements and to reserve future right of way for needed capacity. Through the plan the City committed to looking for Transportation System Management techniques to enhance mobility. FDOT, the MPO and Miami Dade County have also been coordinated with.

Generally, town leadership believes that it would be beneficial to the mobility system of transit headways were reduced. Several projects are coming on line that will impact traffic flow. Of concern is the new school, BB-1, located at 183rd Street and North Bay Road. As far as development and redevelopment is concerned, town planners feel that the east side of Collins Avenue is almost completely redeveloped. There are only three vacant lots, and a total of eight parcels to be redeveloped. The west side of Collins Avenue should begin its major redevelopment in the future. It is scheduled for an RMF-1 designation, which is between 13 and 25 Dwelling Units per acre. Occupancy rates at any given time are projected at 30 percent to 45 percent. This is a marked change from what was estimated at 10 percent occupancy rates previously. It is expected that condo units will reach an occupancy rate of 75 percent in the next decade. Each unit is having a greater impact on mobility as the composition of the community changes from primarily vacation homes to more full time residents. Additionally, several major hotels are coming on line, which will impact traffic differently. Observers feel that the total volume in the community has picked up over the years. What used to be described as seasonal traffic, causing major impacts to the community for 6 months of the year, has worsened. Now each month is generally bad, yet not described as unbearable. Northbound flow is described as most troublesome, with a major congestion points at Collins Avenue at 163rd Street and 170th Street. A corridor study of Collins Avenue is called for, with people asking for Bus Rapid Transit amenities.

Surfside

Founded on May 18, 1935, Surfside was incorporated through the signatures of only 35 people, members of the Surf Club, a private club in Town. Surfside began to grow after World War II and by 1957, had outgrown its original Town Hall, which was in the middle of the current business district. The Town Hall is the center of municipal operations. In 1962, Surfside built the Community Center, on the ocean at 93rd Street. This multi-purpose facility houses the Surf-Bal-Bay Library, the Tourist Bureau and the Recreation Department.

The town of Surfside has a population near 5,000 residents. It has land mass of approximately half of a square mile. Surfside is mostly single family homes, and much like Golden Beach it has an ordinance against high rise construction.

The population is comprised of 94 percent White or Caucasian residents. 43.5 percent of the population is Hispanic or Latino in Origin and just over half of the towns people are foreign born. The median age is 44.9 years old. 82 percent of the residents are 21 or older, with 26 percent being over the age of 65.

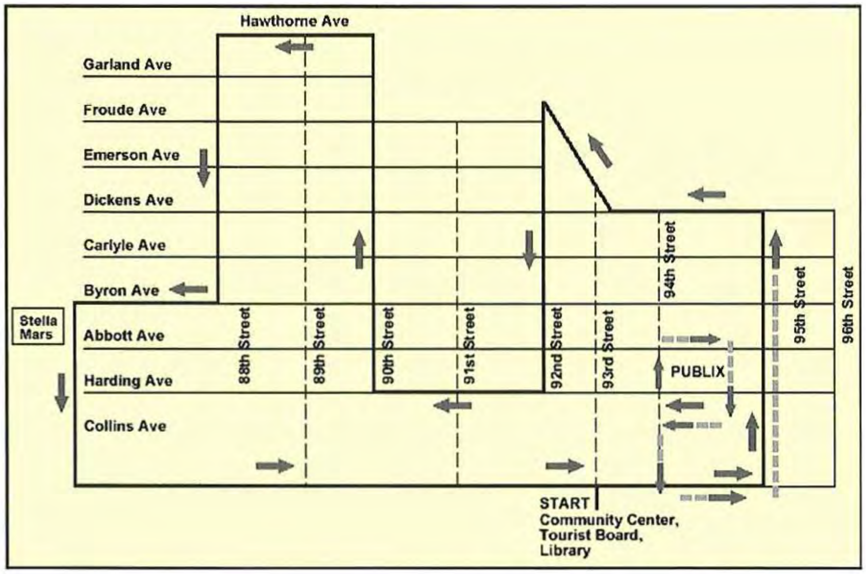
The average household in Surfside is 2.18 persons with an average income of around $51,000. This leaves 11.5 percent of the population living at or below the poverty threshold. The average Family size is 2.75 persons per family. Approximately 47 percent of the population that is of legal age is married. 41 percent of the citizens have a college degree that is bachelor's or higher. The mean travel time one way to or from work is just over thirty one minutes.

While all of these community assets stand out on their own, the thing that makes Surfside most impressive is its strong and consistent commitment to the quality of life of its residents. Old and new houses are mixed together in a quiet, peaceful and relaxed neighborhood setting. The condominiums and hotels along the oceanfront on A1A are not permitted to exceed 12 stories in height.

Today, The Town of Surfside is an oceanfront community located just north of Miami Beach on the barrier island. The Town contains 5,600 residents, in a community combining residential neighborhoods with a traditional "home town" shopping district and a number of resorts and hotels which host tourists and other visitors all year around.

Figure 2-12
Surfside

Surfside also has a public Transit system in the form of a mini-bus route. This route serves the entire community as well as the neighboring community of Bay Harbor Islands. The bus goes in a circular route with multiple stops. It starts in the morning at the community center, and returns every hour, as it operates on a 60 minute headway. It does also have a connection with the shuttle bus operation in Bay Harbor Islands. Other stops include Publix, and Stella Mars.



Miami Dade County Comprehensive Development Master Plan (CDMP)

Miami-Dade County CDMP is the adopted comprehensive plan for the County that provides the goals, objectives, and policies for the plan elements for Miami-Dade County. The Miami-Dade County CDMP was revised April 2001 and an Evaluation and Appraisal Report (EAR) was completed and adopted in October 2003. The EAR assesses the achievement of goals, objectives, and policies included in the CDMP. The Transportation Element of the CDMP was the focus of the review for this Transportation Master Plan. The main goal of the Transportation Element of the CDMP is to: Develop and maintain an integrated multimodal transportation system in Miami-Dade County to move people and goods in a manner consistent with overall countywide land use and environmental protection goals. The CDMP objectives to achieve this goal include:

- Provide an integrated multimodal transportation system for the circulation of motorized and non-motorized traffic by enhancing the CDMP and its transportation plans and implementing programs to provide competitive surface transportation mode choice, local surface mode connections at strategic locations, and modal linkages between the airport, seaport, rail and other intercity and local transportation facilities. The Miami Dade County CDMP Transportation Element consists of five sub elements:
    1. Traffic Circulation
    2. Mass Public Transit
    3. Aviation
    4. Port of Miami River
    5. Port of Miami Master Plan

Traffic circulation and mass public transit sub-elements are the most relevant sections for this study and, hence, were reviewed in greater detail.

Traffic Circulation Sub-element

The Traffic Circulation Sub-element provides an overview of the current and future transportation needs within the County. The Sub-element analyzes the existing roadway capacities and existing traffic volumes in order to identify deficiencies on the roadway network and makes recommendations to address the deficiencies. The goal of the County's Traffic Circulation Sub-element is to: Develop, operate and maintain a safe, efficient and economical traffic circulation system in metropolitan Dade County that provides ease of mobility to all people and for all goods, is consistent with desired land use patterns, conserves energy, and protects the natural environment.

The objectives of the Traffic Circulation Sub-element to achieve this goal include:

Objective 1: It is desirable that all roadways in Dade County operate at level of service (LOS) C or better.

- Objective 2: Rights-of-way and corridors needed for existing and future transportation facilities will be designated and reserved.
- Objective 3: The County's transportation system will emphasize safe and efficient management of traffic flow.
- Objective 4: The Traffic Circulation Sub-element will continue to be coordinated with the goals, objectives, and policies of the Land Use Element and all other elements of the CDMP.
- Objective 5: The traffic circulation system will protect community and neighborhood integrity.
- Objective 6: Plan and develop a transportation system that preserves environmentally sensitive areas, conserves energy and natural resources, and promotes community aesthetic values.
- Objective 7: Miami-Dade County's Traffic Circulation Sub-element, and the plans and programs of the State, region, and local jurisdictions will continue to be coordinated.

The achievements of the above-mentioned objectives were evaluated in the Evaluation and Appraisal Report (EAR). The existing LOS analysis included in the EAR shows NE 135th Street between NE 6th Avenue and NE 10th Avenue as operating below the adopted LOS. The roadway capacity improvements identified in the EAR do not indicate any programmed widening of area roadways. An important fact to note is that none of the high accident locations identified in the CDMP EAR are located within the study area.

Mass Public Transit Sub-element

The purpose of the County Mass Public Transit Sub-element is to provide a basis for the development of mass public transit facilities as a major component of the overall transportation system to enhance mobility in Dade County. It is recommended that highway improvements be complemented with public transit improvements in order to achieve a balanced transportation system. The goal of the Mass Public Transit Sub-element is: Maintain, operate and develop a mass public transit system in Metropolitan Dade County that provides efficient, convenient, accessible, and affordable service to all residents and tourists.

The objectives included in the Mass Public Transit Sub-element to achieve this goal include:

- Objective 1: By the year 2005, the mass public transit system shall not operate at a LOS lower than the adopted standard.
- Objective 2: Coordinate the provision of efficient public transit service and facilities with the location and intensity of designated future land use patterns as identified on the Land Use Plan Map.
- Objective 3: Provide a sound funding base utilizing public and private sources that will assure maintenance of existing service operations and timely implementation of needed transportation improvement projects and services.
- Objective 4: Provide convenient, accessible, and affordable mass public transit services and facilities.
- Objective 5: Provide equitable transportation services to all groups in the metropolitan population.
- Objective 6: Continue to coordinate Dade County's Mass Public Transit Sub-element, as well as the plans and programs of the State, regional, and local jurisdictions.

The achievement of the above-mentioned objectives was evaluated in the EAR. The existing public transit LOS analysis included in the EAR shows that all areas of Miami-Dade County have met or exceeded adopted LOS standards for mass public transit. It is also mentioned that with the available People's Transportation Plan (PTP) funds, the existing bus headways will be improved. The existing bus routes will provide 15-minute or better peak hour headways and 30-minute or better off-peak hour headways. Additionally, 24- hour service will be provided on certain major corridors. No specific public transit improvements within the study area have been identified.

Miami-Dade Metropolitan Planning Organization (MPO) 2025 Long Range Transportation Plan (LRTP)

The purpose of the LRTP is to guide transportation investments in Miami- Dade County over a long-term planning horizon to achieve the best possible mobility options within the transportation system. The LRTP is comprehensive in nature and includes improvements to pedestrian, bicycle, greenways and trails facilities, public transit, and roadways. The transportation improvements are included in the 2030 Cost Feasible Plan that is developed based on the projected revenue for the plan period. The Miami-Dade LRTP Update to the Year 2030 was reviewed to identify mobility improvements within the City of North Miami. The projects in the 2030 Cost Feasible Plan are grouped into priorities based on the funding availability and are described as follows:

Priority I — Projects scheduled to be funded through 2009
Priority II — Projects scheduled to be funded between 2010 and 2015
Priority III — Projects scheduled to be funded between 2016 and 2020

Priority IV — Projects scheduled to be funded between 2021 and 2030
Priority V — Unfunded projects that have been identified in the Needs Plan

Miami-Dade MPO Transportation Improvement Program (TIP)

The Miami-Dade MPO Transportation Improvement Program (TIP) for fiscal years 2005–2009 is technically the capital improvements plan of the Miami-Dade County LRTP. The TIP serves as the functional document for implementing the LRTP goals, objectives, and policies. It is a staged, multi-year program that prioritizes transportation projects for federal, state, and local funding.

Miami Dade County People's Transportation Plan (PTP)

On November 5, 2002, the citizens of Miami-Dade County approved a half-cent sales tax increase to be the dedicated source of revenue to support transportation improvements and to fund the People's Transportation Plan (PTP). The Plan calls for implementation of improvements to bus service including increases in number of buses, service miles, and operating hours. The PTP is projected to provide an additional $7.26 billion (in 2003 dollars) for public transit and transportation projects over the next 30 years.

Concurrency

There are three ways the State of Florida provides for the measurement of transportation concurrency.

- Conventional (Link by Link Vehicle Level of Service)
- Transportation Concurrency Exception Areas (TCEA)
- Transportation Concurrency Management Areas (TCMA)

The conventional method is what Miami Dade County currently uses to measure concurrency. It is utilized outside of the Urban Infill Area. Concurrency inside the Urban Infill Area (TCEA) is not measured. The conventional method measures the impacts to existing capacities of specific roadway links, or in individual transportation analysis zones. When the capacity of an individual roadway has diminished the roadway must be exempted or must achieve more capacity through widening, or alternative means, or development must stop. This situation has hampered several municipalities' ability to grow over the past several years.

The Transportation Concurrency Exception Area is a method by which the state allows individual communities to exempt themselves from the measurement of transportation concurrency. These have been designed to promote infill in areas with less than 10 percent developable vacant land where the predominant use is at least 60 percent residential, by requiring 5 units per gross residentially developed acre or in areas where the FAR is 1.0 per gross nonresidential developed acre. These are best used when an area is considered built out relative to multimodal transportation options.

Local governments comprehensive plans initially had to prove that their TCEA was in an urban infill area and that it did not contain more than 40 percent developable vacant land. As a result, links, intersections and whole zones are allowed to exceed their capacities. No monitoring has been required. In almost all cases the extent of the Level of Service deficiencies or the status of remaining capacities goes unknown. New monitoring of these has been put in place through SB 360 the most recent growth management legislation.

Transportation Concurrency Management Areas are an alternative method by which to measure concurrency, which encourages infill development or continued development in particular areas where transportation (primarily roadway) infrastructure capacities are becoming inadequate. By developing methodologies that often convert vehicle trips into person trips, then measuring these trips against capacities on an area wide basis, the capacities can be shared over the broader network as opposed to the Transportation Analysis Zone or single roadway segment, thereby pooling capacities and opening up development opportunities.

Since capacity is measured in people over a well defined area, it can be attained through the use of physical enhancements to the actual roadway or the implementation of various levels of transit. Encouragement of alternative modes of transportation becomes necessary in maintaining capacity, and thereby assisting in the development of a multimodal transportation infrastructure well suited for the more dense and vibrant urban areas that infill produces over time.

The Purpose of Transportation Concurrency Management Areas is to promote infill development and redevelopment, one or more transportation concurrency management areas may be designated in a local government comprehensive plan. A Transportation Concurrency Management Area must be a compact geographic area with an existing network of roads where multiple, viable alternative travel paths or modes are available for common trips. A local government may establish an area wide level-of-service standard for such a transportation concurrency management area based upon an analysis that provides for a justification for the area wide level of service, how urban infill development or redevelopment will be promoted, and how mobility will be accomplished within the Transportation Concurrency Management Area.

The TCMA concept was first used in the early part of this decade in Miami Beach, to avoid the looming development moratorium in South Beach. Three TCMA's were developed. The City of Hialeah faced a development moratorium in recent years and developed five TCMA's. The City of Sarasota is currently in the development of its first TCMA. In all cases TCMA's were an attractive alterative to the TCEA, for primarily two reasons. (1) Management areas would continue to measure concurrency as opposed to exempting development from it as Transportation Concurrency Exception Areas would. (2) This measurement was seen as necessary from a political perspective, by showing that the community was focused on controlled quality development.

It is required that programs be developed by which capacity would be maintained. The progressive nature of the method of examining concurrency allowed transit programs to be incorporated as well as roadway capacity projects. This effectively led to measurement of capacities in terms of people, not vehicles. High capacity and frequent transit could then replace the multiple lane roadway as a means for attaining capacity for an entire area.

As high rates of growth continue to put pressure on Florida communities, new ways of managing growth will need to be developed. It is clear that the way concurrency is measured now is inadequate in many situations, particularly in maturing areas.

The logical progression of the use of these tools is to begin with conventional concurrency measurement. As capacity runs out and the need to incentivize future development in the area is acknowledged, TCMA's would be used. These allow additional capacity, which allows development only if alternative modes are developed. Finally, when all alternatives have been maximized TCEA's would be used.

Concurrency Management Systems (CMS)

The State of Florida asks that all transportation concurrency be monitored by a Concurrency Management System. In its most basic form a CMS would identify the ultimate capacity of a facility or area, it would subtract the current utilization and identify the remaining available capacity. Hand calculations of extensive systems can be cumbersome and difficult to maintain. Automated systems are much more convenient. One such local tool, developed by The Corradino Group, enables users in Miami Beach, Hialeah, and Coral Gables to instantly measure concurrency, track development and monitor remaining capacities. The evolution of these tools has lead to extremely simple systems, which are very efficient, very effective, and necessary to achieve quality planning. This is a windows based GIS program that maps and tracks concurrency instantly. It provides development reports and consistently measures capacities and levels of service.

How it works in each case is the concurrency administrator simply enters the developments address into the appropriate fields. Next they enter the projects programming, (units, seats, and square feet of restaurant, retail, and commercial). The program locates the development on a map, and provides a statement with concurrent or nonconcurrent determination for each of the concurrency categories. This system is scaleable to any municipality, and provides a simple tracking and reporting tool for use by DCA and FDOT. In addition it is easily programmed to provide a variety of analysis tools, as capacities are tracked.

Senate Bill 360

Transportation Concurrency Exception Areas shall be re-justified by July 2006 as mandated by Senate Bill 360. The purpose of a TCEA is to provide a flexible transportation concurrency option approach to reduce the adverse impact that transportation concurrency may have on urban infill development and redevelopment and the achievement of other goals and policies of the comprehensive plan, such as the promotion of the development of public transportation. These allow for exceptions to the transportation concurrency requirement in specifically defined areas of a jurisdiction. The exceptions provide flexibility in order to encourage the application on a wide range of planning strategies that correspond with local circumstances. Currently this area exists inside of the Palmetto Expressway. Concurrency is currently not tracked within these boundaries. TCEA's are best suited for areas that have built out all alternative transit options.

Each local government within a Transportation Concurrency Exception or Management Area must re-justify the area. In Miami-Dade, Collier and Palm Beach Counties, this must be done during 2006. In addition a Long Term Concurrency Management System must be developed. This is essentially a list of projects and policies, which when implemented will maintain concurrency capacity. A proportionate share ordinance is required as a method by which the development community can contribute to the funding of such projects.

Parallel to addressing transportation, each local government will be required to adopt a cost feasible Capital Improvements Element to their Comprehensive Plan during 2007. This will entail detailed master planning to develop, cost and prioritize transportation projects to satisfy existing and projected needs, and will be required to be updated annually.

Communities' wishing to develop and adopt individual visioning processes and the adoption of a 10-year urban service boundary will be exempted from state review of land use amendments within the boundary for 10 years. This can be initiated at any time and is voluntary, but has the potential to provide remarkable freedom to local governments in the planning process, by ending the need to have comprehensive plan amendments approved by the state.

Each local government will be required to evaluate water needs over a 20-year period, and identify alternative projects to meet demand. This shall be done during 2007 and 2008.

A new comprehensive plan element is now required. This School Facilities Concurrency Element must be adopted during 2008. These must be financially feasible and updated annually, and will require an update of the Intergovernmental Coordination Element and Inter-local Agreement.

Traffic Counts

Existing State, County and Local traffic counts were collected to determine the level of existing data. Information from these counts, as well as additional counts were evaluated. Traffic splits between the facilities to determine paths, directional splits during the peak periods, as well as volumes for levels of service and other traffic issues. These counts provide an understanding of when and where traffic issues tend to arise.

Figure 2-13
Traffic Counts

Roadway	Limits	Facility Type	Function Classification Jurisdiction	Available Count	Year	Annual Growth Factor		Year 2007	Source
						2000-2015	2015-2030	AADT	
Ocean Blvd. / Collins Ave. / A1A	Miami Dade/ Broward Line to William CSWY	4LD	Principal Arterial / State	25500	2006	1.014	1.009	25857	FDOT
	William CSWY to Sunny Isles Blvd	6LD	Principal Arterial / State	51500	2006	1.014	1.009	52221	FDOT
	Sunny Isles Blvd to Broad CSWY/96 St	4LD	Principal Arterial / State	49750	2006	1.013	1.012	50397	FDOT
	Broad CSWY/96 St to 77 St	3L One Way	Principal Arterial / State	24000	2006	1.012	1.007	24288	FDOT
Harding Ave / A1A	Broad CSWY/96 St to 77 St	3L One Way	Principal Arterial / State	24000	2006	1.014	1.009	24336	FDOT
Biscayne Blvd. / US 1 / SR 5	NE 213 St to Ives Dairy Rd.	8LD	Principal Arterial / State	51000	2006	1.014	1.009	51714	FDOT
	NE 203 St to William Lehman CSWY	8LD	Principal Arterial / State	65304	2000	1.014	1.009	71982	MPO
	William Lehman CSWY to Sunny Isles Blvd	8LD	Principal Arterial / State	64500	2006	1.014	1.009	65403	FDOT
	Sunny Isles Blvd to NE 135 St	8LD	Principal Arterial / State	53599	2006	1.014	1.009	54349	FDOT
	NE 135 St to NE 16 Ave	6LD	Principal Arterial / State	46250	2006	1.014	1.009	46898	FDOT
	NE 16 Ave to NE 108 St	6LD	Principal Arterial / State	51000	2006	1.014	1.009	51714	FDOT
West Dixie HWY / SR 909	County Line Rd. to Ives Dairy Rd.	2LU	Collector / State	11750	2000	1.043	1.011	15783	MPO
	Ives Dairy Rd. to Miami Gardens Dr.	2LU	Minor Arterial / State	15290	2000	1.024	1.007	18093	MPO
	Miami Gardens Dr. to NE 171 St	2LU	Minor Arterial / State	17482	2000	1.013	1.011	19119	MPO
	NE 171 St to NE 163 St	2LU	Minor Arterial / State	18397	2000	1.030	1.014	22557	MPO
	NE 163 St to NE 151 St	4LD	Minor Arterial / State	18100	2006	1.023	1.011	18516	FDOT
	NE 151 St to NE 125 St	4LD	Minor Arterial / State	24500	2006	1.023	1.011	25064	FDOT
Highland Lakes Blvd	County Line Rd. to Ives Dairy Rd.	2LU	Collector	8564	2000	1.026	1.019	10263	MPO
NE 18 Ave	NE 199 St to Miami Gardens Dr.	4LD	Collector	23812	2000	1.006	1.012	24757	MPO
NE 19 Ave	Miami Gardens Dr. to Sunny Isles Blvd.	4LD	Collector	26354	2000	1.020	1.012	30345	MPO

Roadway	Limits	Facility Type	Function Classification Jurisdiction	Available Count	Year	Annual Growth Factor 2000-2015	Annual Growth Factor 2015-2030	Year 2007 AADT	Source
NE 16 Ave	Sunny Isles Blvd. to West Dixie Hwy	2LU	Collector	7558	2000	1.023	1.015	8834	MPO
	West Dixie HWY to Opa Locka Blvd	2LU	Collector	9936	2000	1.023	1.011	11684	MPO
	Opa Locka Blvd to Biscayne Blvd	2LU	Collector	12273	2000	1.019	1.016	14049	MPO
NE 15 Ave	Miami Gardens Dr. to Sunny Isles Blvd.	2LU	Collector	10562	2000	1.037	1.021	13579	MPO
NE 14 Ave	Sunny Isles Blvd. to Opa Locka Blvd.	2LU	Local	19561	2007	1.017	1.016	19561	Richard Garcia
NE 12 Ave	Sunny Isles Blvd. to West Dixie Hwy	2LU	Collector	10888	2000	1.017	1.016	12226	MPO
	West Dixie HWY to NE 125 St	2LU	Collector	7003	2000	1.035	1.016	8930	MPO
NE 10 Ave	Miami Gardens Dr. to Sunny Isles Blvd.	2LU	Collector	12328	2000	1.017	1.015	13918	MPO
	Sunny Isles Blvd. to West Dixie Hwy	2LU	Collector	6162	2000	1.029	1.020	7544	MPO
	West Dixie HWY to NE 125 St	2LU	Collector	5514	2000	1.048	1.014	7678	MPO
NE 6 Ave / SR 915	Miami Gardens Dr. to Sunny Isles Blvd.	4LD	Minor Arterial / State	30500	2006	1.050	1.019	32025	FDOT
	Sunny Isles Blvd. to Opa Locka Blvd.	4LD	Minor Arterial / State	21372	2007	1.084	1.019	21372	Richard Garcia
	Opa Locka Blvd. to NE 125 St	4LD	Minor Arterial / State	18700	2006	1.084	1.019	20271	FDOT
	NE 125 St to Griffing Blvd.	4LD	Minor Arterial / State	20000	2006	1.084	1.011	21680	FDOT
N. Miami Ave	Sunny Isles Blvd. to Memorial HWY.	2LU	Minor Arterial	9721	2000	1.017	1.014	10904	MPO
	Memorial HWY. to Opa Locka Blvd.	2LU	Minor Arterial	5972	2000	1.055	1.014	8663	MPO
	Opa Locka Blvd. to NE 125 St	2LU	Minor Arterial	2751	2000	1.055	1.019	4002	MPO
	NE 125 St to NW 119 St	2LU	Minor Arterial	3910	2000	1.055	1.011	5688	MPO

Roadway	Limits	Facility Type	Function Classification Jurisdiction	Available Count	Year	Annual Growth Factor 2000-2015	Annual Growth Factor 2015-2030	Year 2007 AADT	Source
NW 2 Ave / Griffing Blvd / Memorial HWY	Sunny Isles Blvd. to N. Miami Ave	4LD	Collector	8554	2000	1.050	1.016	12032	MPO
	N. Miami Ave to NE 135 St.	2LU	Collector	11988	2000	1.011	1.016	12911	MPO
	NE 135 St to W. Dixie HWY	2LU	Collector	9832	2000	1.019	1.005	11237	MPO
	W. Dixie HWY to NE 6 Ave.	2LU	Collector	8924	2000	1.017	1.005	10015	MPO
NW 7 Ave / US 441 / SR 7	Golden Glades Int. to Opa Locka Blvd.	6LD	Minor Arterial	30000	2006	1.015	1.012	30450	FDOT
	Opa Locka Blvd. to NW 119 St	6LD	Minor Arterial	32000	2006	1.033	1.015	33056	FDOT
	NW 119 St to NE 103 St.	6LD	Minor Arterial	31250	2006	1.033	1.015	32281	FDOT
NW 17 Ave	Opa Locka Blvd. to NW 119 St	2LU	Collector	13228	2000	1.015	1.012	14639	MPO
	NW 119 St to NW 111 St	4LD	Collector	17841	2000	1.033	1.015	22343	MPO
Ives Dairy Rd. / NE 203 St	I-95 to Highland Lakes Blvd.	6LD	Minor Arterial	71939	2000	1.016	1.011	80498	MPO
	Highland Lakes Blvd. to Biscayne Blvd.	6LD	Minor Arterial	65107	2007	1.000	1.011	65107	Richard Garcia
NE 213 St	Biscayne Blvd. to NE 34 Ave	4LD	Local	13908	2000	1.010	1.016	14943	MPO
Waterway Blvd.	Biscayne Blvd. to NE 34 Ave	4LD	Collector	6108	2000	1.036	1.015	7834	MPO
Aventura Blvd.	Biscayne Blvd. to W Country Club Dr.	4LD	Collector	4450	2000	1.076	1.015	7423	MPO
William Lehman CSWY / SR 856 / NE 192 St	Biscayne Blvd. to Ocean Blvd.	6LD	Urban Principal Arterial Freeways & Expressways	34000	2006	1.008	1.026	34284	FDOT
Miami Gardens Dr / NE 186 St / SR 860	NW 2 Ave to I-95	6LD	Minor Arterial / State	42500	2006	1.018	1.015	43283	FDOT
	I-95 to NE 15 Ave	4LD	Minor Arterial / State	50000	2006	1.018	1.015	50921	FDOT
	NE 15 Ave to NE 18 Ave	4LD	Minor Arterial / State	42703	2007	1.018	1.015	42703	Richard Garcia
	NE 18 Ave to Biscayne Blvd.	4LD	Minor Arterial / State	48500	2006	1.018	1.015	49393	FDOT

Roadway	Limits	Facility Type	Function Classification Jurisdiction	Available Count	Year	Annual Growth Factor		Year 2007	Source
						2000-2015	2015-2030	AADT	
NE 171 St	NE 15 Ave to Biscayne Blvd.	2LU	Collector	13057	2000	1.017	1.011	14659	MPO
NE 167 St / SR 826	I-95 to NE 10 Ave	6LD	Principal Arterial / State	57992	2000	1.010	1.013	62123	MPO
	NE 10 Ave to NE 15 Ave	2LU	Collector	12656	2000	1.014	1.024	13942	MPO
NE 163 St / Sunny Isles Blvd. / Ocean Beach Blvd. / SR 826	NE 10 Ave to Biscayne Blvd.	6LD	Principal Arterial / State	51000	2006	1.014	1.013	51703	FDOT
	Biscayne Blvd. to NE 35 Ave.	8LD	Principal Arterial / State	66500	2006	1.014	1.013	67416	FDOT
	NE 35 Ave. to Ocean Blvd./Collins Ave.	8LD	Principal Arterial / State	41500	2006	1.014	1.013	42072	FDOT
NE 159 St	NE 6 Ave to NE 10 Ave	2LU	Collector	18409	2007	1.027	1.006	18409	Richard Garcia
	NE 10 Ave to W. Dixie HWY	2LU	Collector	10007	2000	1.027	1.006	12058	MPO
NE 151 St	NE 10 Ave to Biscayne Blvd.	2LU	Collector	14310	2000	1.027	1.008	17255	MPO
	Biscayne Blvd. to Bay Vista Blvd.	2LU	Collector	8017	2000	1.027	1.016	9661	MPO
Opa Locka Blvd. / NE 135 St / SR 916	NW 17 Ave to NW 7 Ave	6LD	Minor Arterial / State	30500	2006	1.024	1.016	31232	FDOT
	NW 7 Ave to W. Dixie HWY	4LD	Minor Arterial / State	53000	2006	1.024	1.016	54272	FDOT
	W. Dixie HWY to Biscayne Blvd.	4LD	Minor Arterial / State	26500	2006	1.024	1.016	27136	FDOT
	Biscayne Blvd. to Bay Vista Blvd.	2LD	Minor Arterial / State	3562	2000	1.024	1.016	4209	MPO
NW 127 St	NW 22 Ave to NW 7 Ave	2LU	Collector	10459	2000	1.007	1.011	11014	MPO
NE 125 St / NE 123 St / Broad CSWY / SR 922	NW 7 Ave to W. Dixie HWY	4LD	Minor Arterial / State	36000	2006	1.004	1.015	36155	FDOT
	W. Dixie HWY to Biscayne Blvd.	4LD	Minor Arterial / State	36000	2006	1.004	1.015	36155	FDOT
	Biscayne Blvd. to Collins Ave.	4LD	Minor Arterial / State	24000	2006	1.004	1.015	24104	FDOT
NW 119 St / SR 924	NW 22 Ave to NW 7 Ave	6LD	Principal Arterial / State	43000	2006	1.005	1.014	43232	FDOT
	NW 7 Ave to NE 2 Ave	4LD	Principal Arterial / State	20100	2006	1.005	1.014	20208	FDOT

Analysis

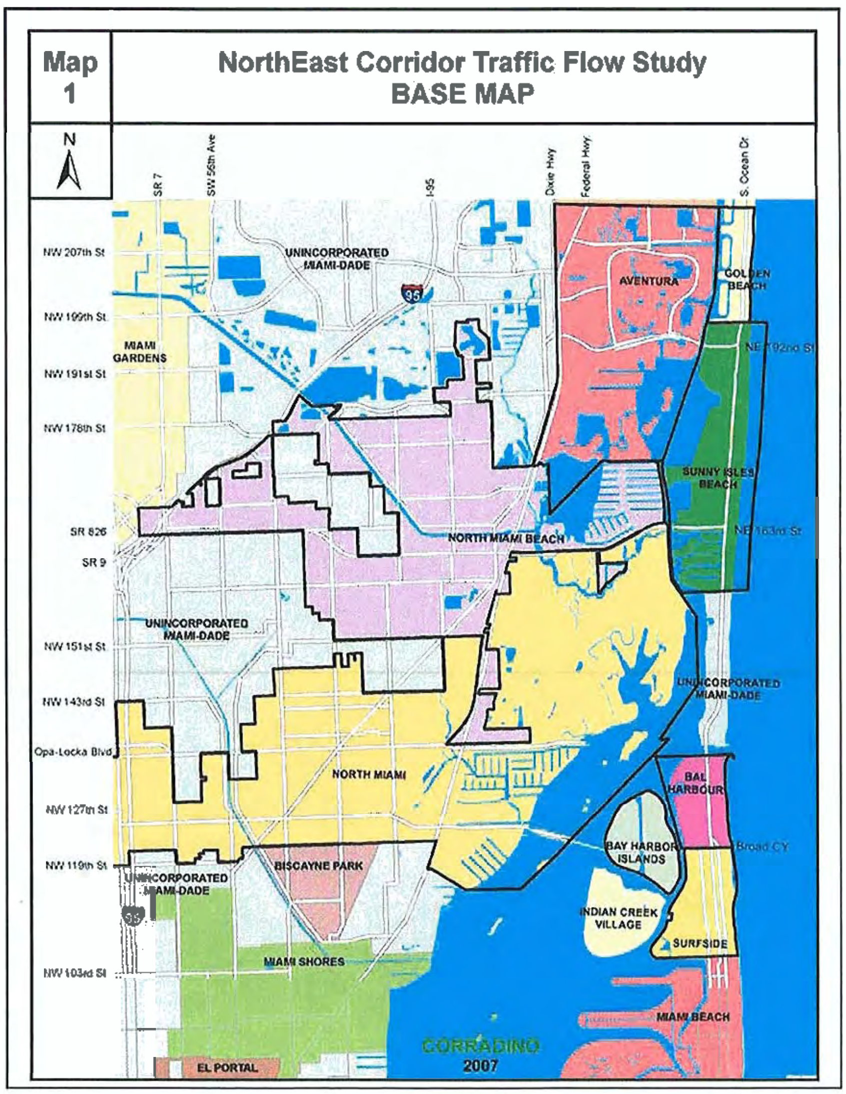
This section of the report uses the data collected in the section above to provide analysis of existing and future conditions relative to transportation. This has been done in five segments:

- Baseline Conditions
- MPO Model Data
- Traffic Counts at Specified Intersections
- Origin and Destination Study
- Transit

Baseline Conditions

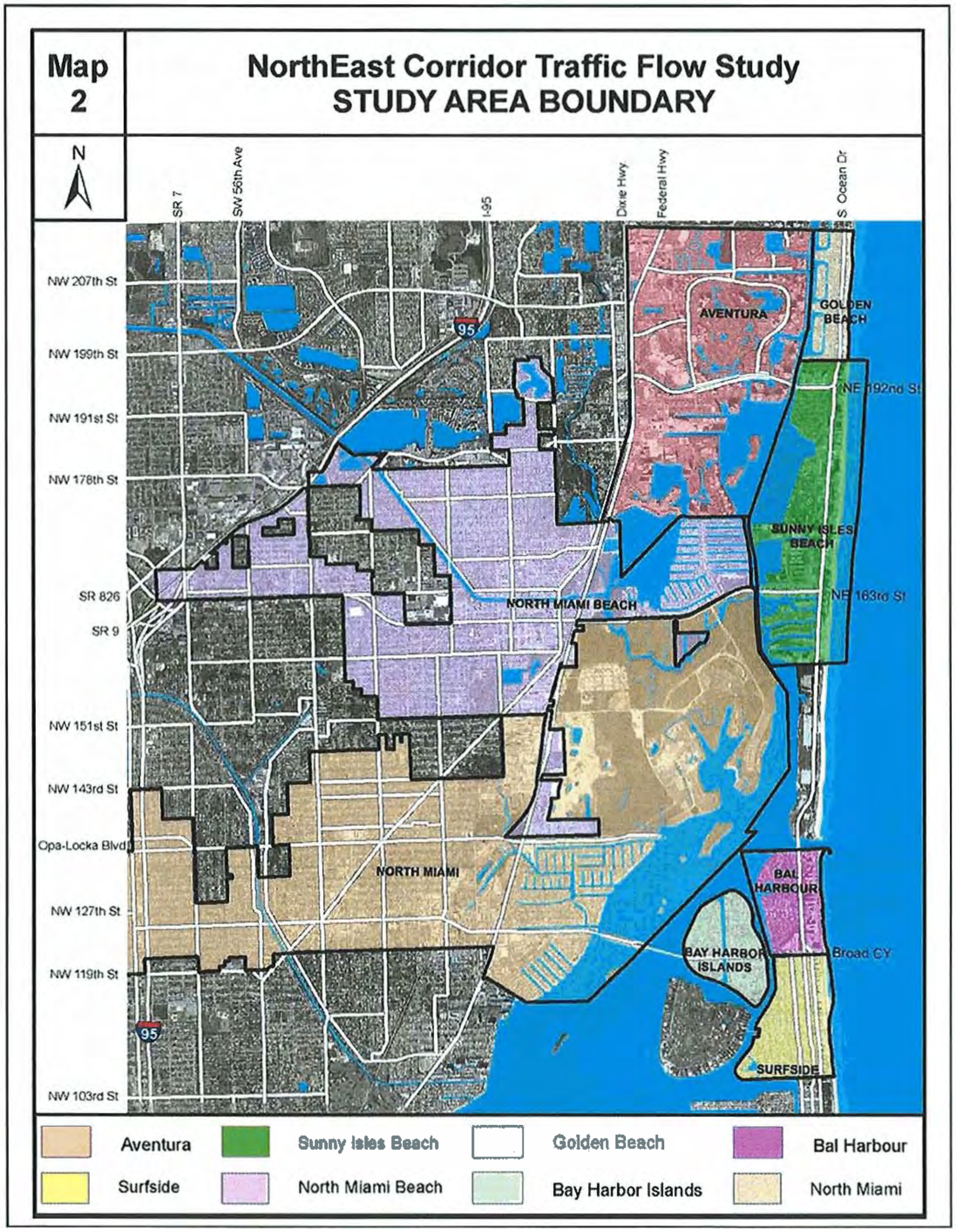
The area for this project is in the North East corner of Miami-Dade County. It is between, roughly, the Atlantic Ocean and I-95 on the east and west respectively. It is bound on the north by Broward County and on the south by NW 119th Street on the mainland and NW 88th Street on the barrier islands at the southern edge of Surfside.

Figure 2-14



The study area for this project contains 8 municipalities. They are Aventura, Bal Harbour, Bay Harbor Islands, Golden Beach, North Miami, North Miami Beach, Sunny Isles Beach, and Surfside. The area also contains many major thoroughfares. Major not just to the area, but major in terms of the whole South Florida region. A few of these roadways are I-95, A1A, US-1/ Biscayne Boulevard, and West Dixie Highway. The area also has several miles of beaches, which bring in millions of tourists every year. Several canals and docks are also in the area making the boating industry very large. The study area population is approximately 160,000.

Figure 2-15



The primary land use in the study area is residential. There is however a large amount of open space that is being utilized by parks, golf courses, and things of that nature. Along with the high amount of residential land, there is a large amount of commercial land use especially along the major arterials, such as US-1 / Biscayne Boulevard, and NE 163rd Street. There are also a few select pocket areas with Industrial land use.

Figure 2-16

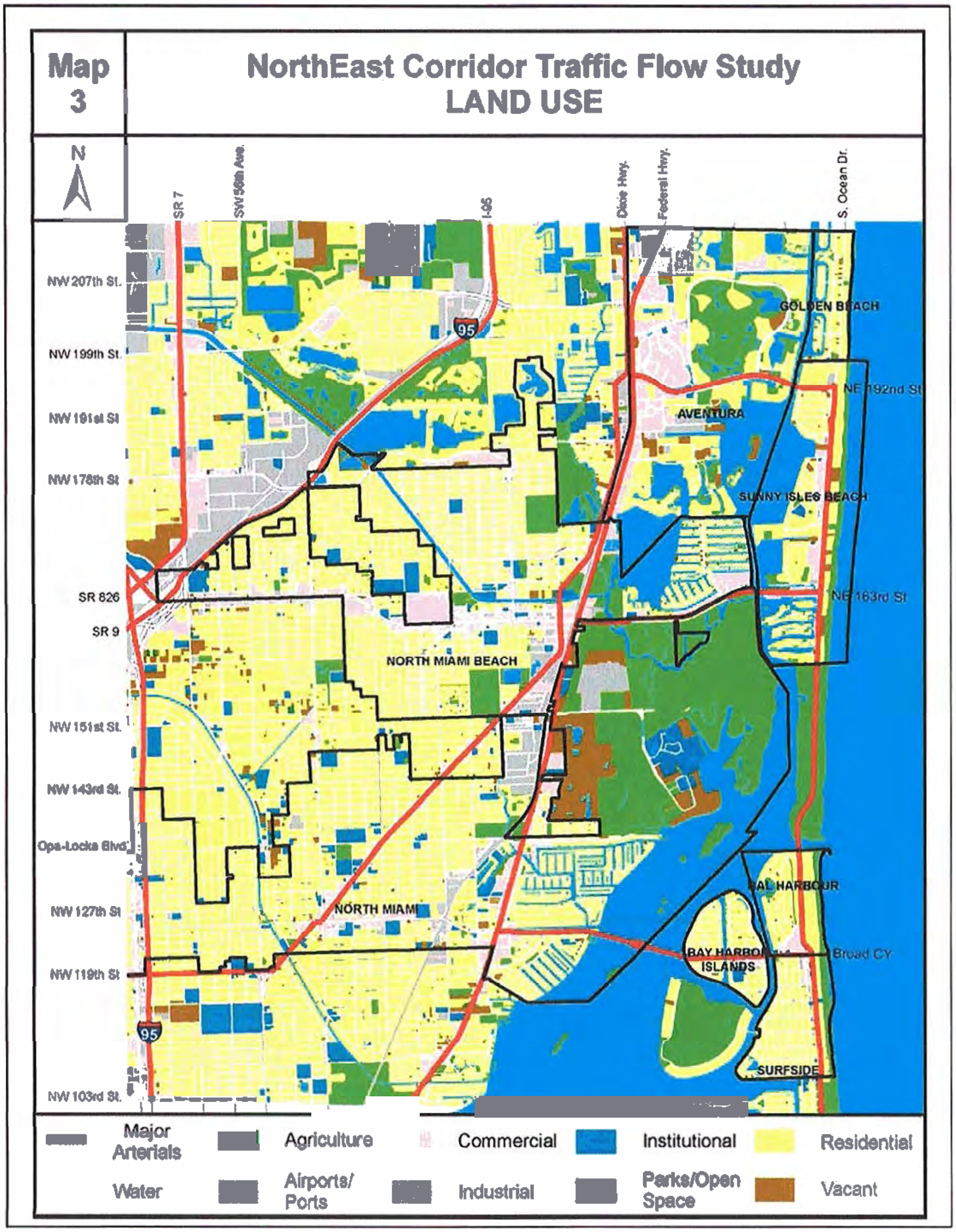


Figure 2-17
Demographics, Population, and Employment

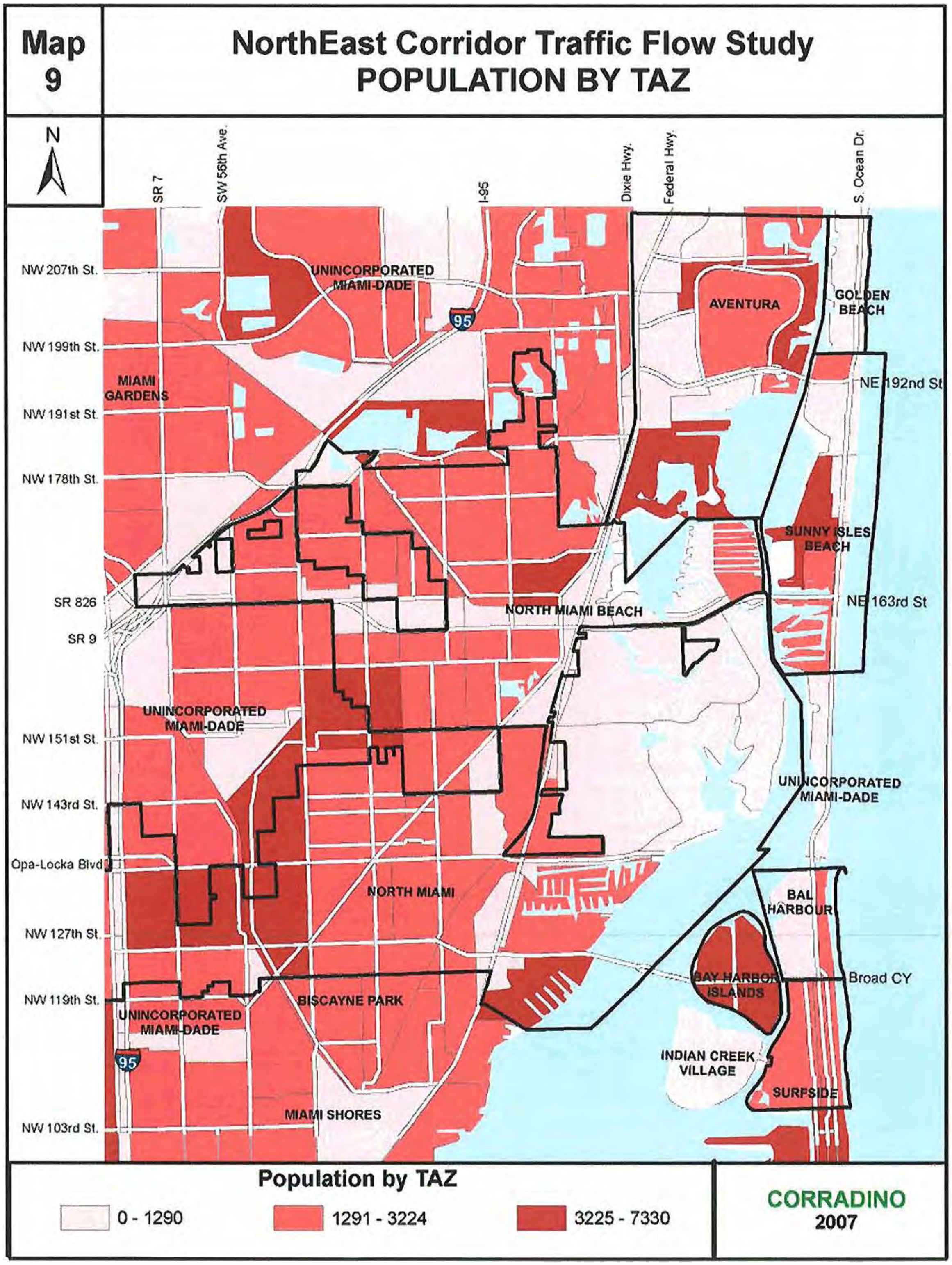
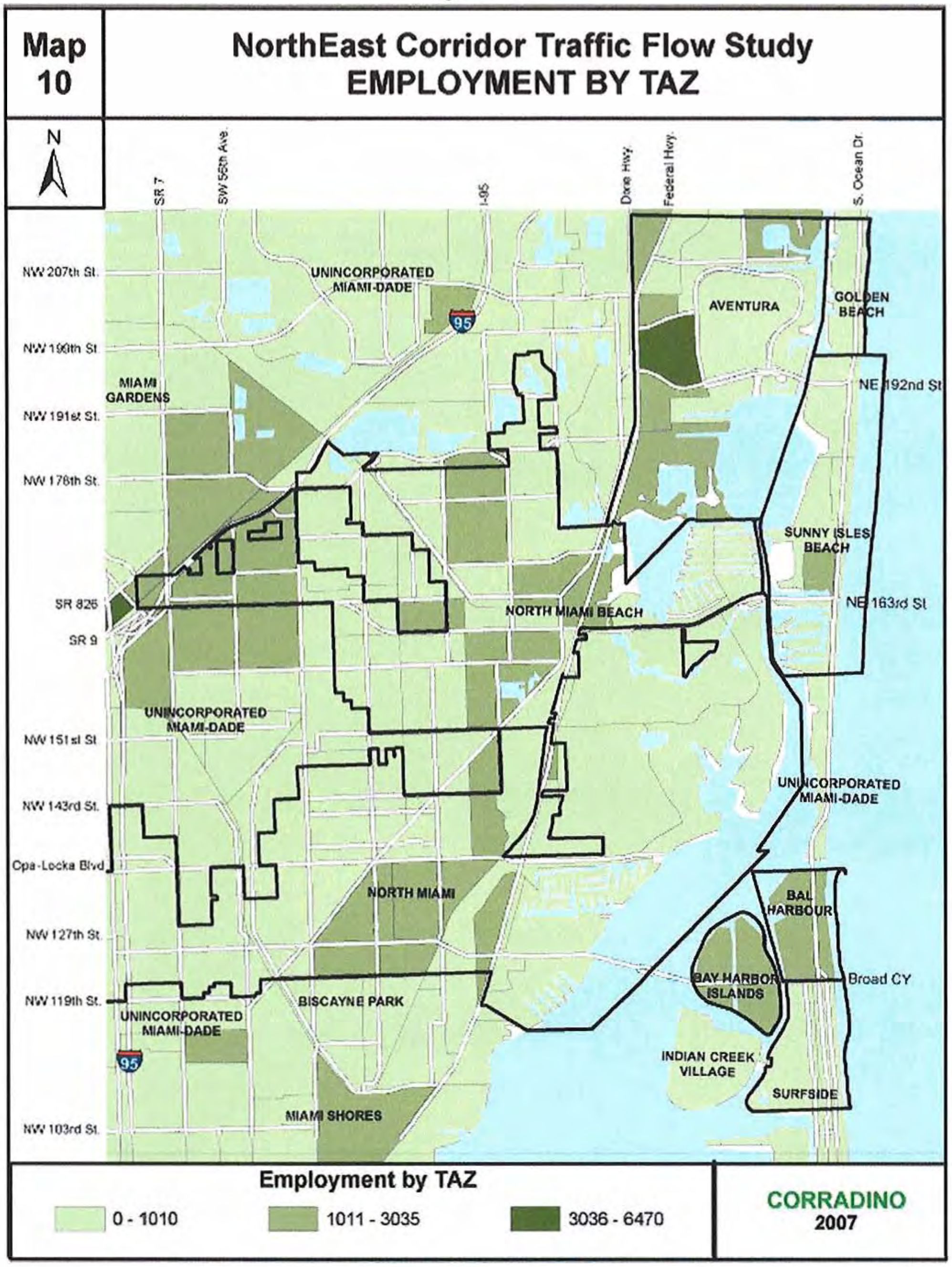


Figure 2-18



The communities in the study area range widely in almost every demographic category. The populations range from over 80,000 to under 1,000. Some communities are predominantly white, while others have more than 50 percent of the population listed in minority categories. Some communities are relatively young with a median age in the lower thirties, while others have an average age in the mid fifties. Average family income is much the same as average age, the communities in the upper tier have a median income more than 4 times higher than other cities. This intern, makes one community have no poverty while another has almost one quarter of its residents below the poverty threshold. The largest municipality has over 8 square miles of land mass while more than one has a land area of less than one square mile.

The area does however, have a few characteristics in common amongst the municipalities. All communities have roughly a half an hour daily commute to work. All communities also have large numbers of foreign born population. What this says about the area, is that there are many vastly different communities placed right next to one another. These cities have very different people with very different goals and values. Some enjoy high rise living while others are exclusively single family homes. Yet, they all share the same thoroughfares as they drive to work, to the grocery store, or to the beach.

When broken down by Transportation Analysis Zone (TAZ) many patterns develop when trying to analyze employment and population numbers. Areas or clusters of high population TAZ's are spread out fairly well within the area. They are generally not right adjacent to, but very nearby major thoroughfares. These are generally not the same TAZ's that have high employment. Meaning, most people have to leave their home TAZ every day for work.

In terms of the barrier island communities, the majority of the population lives in Sunny Isles Beach. While the largest employment center, Bal Harbour Mall, is located in Bal Harbour. In fact the total employment in Bal Harbour is larger than the total Population. This type of arrangement is also very evident in Aventura. The TAZ's with high population levels are almost completely the opposite as the TAZ's with high employment numbers. Especially in the TAZ with the Aventura mall, there is not a single resident, but there are close to 6,000 jobs, and with the mall ever expanding, that number is sure to climb. Model numbers indicate that it will approach 8,000 jobs by 2030. Much of the employment comes from outside of the study area.

This type of land use is fairly obvious up and down US-1 / Biscayne Boulevard throughout the study area. When looking at the TAZ's that are right along the US-1 / Biscayne Boulevard Corridor, the employment to population numbers are near 1 to 1, with year 2000 data, there were 27,314 jobs with 33,462 people. By 2030 the model shows that it will be closer to roughly 37,000 jobs to 41,000 people. Keeping in mind that not all 41,000 of those people are old enough to legally work, most likely, there is now or will be in the near future, more jobs than people to work them. Which means there will be a increase in traffic levels as more and more people will be entering the study area from other parts of Miami-Dade County or Broward County, and probably even the occasional trips from Palm Beach County.

When looking further inland, away from the intercoastal, the population numbers rise significantly, while the employment numbers drop off sharply. In this area, which is mainly North Miami, North Miami Beach, and Unincorporated Miami-Dade County, there are just a few quasi major employment hubs. These being things such as Villa Maria Nursing & Rehab Center, Walmart/HomeDepot, and the North Miami Beach Public Services Building Area. For the most part, it is all residential with commercial operations such as gas stations and other convenience type services located along major roads such as North Miami Boulevard, NE 163rd Street, West Dixie Highway, A1A/Ocean Drive, and Ives Dairy Road.

Other major employment centers in the area include the Aventura Hospital and Medical Center in Aventura. Several Hotels, Condos, and Apartments in Sunny Isles Beach and Bal Harbour along A1A/Biscayne Boulevard. Metro Bus-Metro Transit Agency and Commercial office centers in Unincorporated Miami-Dade County. And just south of the study area there is a large employment destination in Miami Gardens with several Warehouse facilities. However, most likely, more than any of the above listed employment centers, Downtown Miami has more of a pull than any of these. In general, People in this area work south of where they live.

Figure 2-19
U.S. Census Data

	Aventura	Sunny Isles Beach	Bal Harbour	North Miami Beach	North Miami	Golden Beach	Surfside	Bay Harbor I
Population, 2000	25,267	15,315	3,305	40,786	59,880	919	4,909	5,146
City	3.5 sqmi	2.4 sqmi	0.6 sqmi	5.0 sqmi	10.0 sqmi	0.3 sqmi	1.0 sqmi	0.6 sqmi
Land	2.7 sqmi	1.4 sqmi	0.3 sqmi	8.5 sqmi	8.5 sqmi		0.5 sqmi	0.4 sqmi
Water	0.4 sqmi	1.0 sqmi	0.2 sqmi	0.3 sqmi	1.5 sqmi	0.0 sqmi	0.5 sqmi	0.2 sqmi
Households	14,000	8,169	1,908	13,987	20,541	282	2,248	5,146
Families	6,691	3,994	812	9,804	13,577	234	1,330	2,612
Population density	9,344.7/mi^2	15,231.1/mi^2	9,791.4/mi^2	8,230.6/mi^2	7,080.0/mi^2	2,692.7/mi^2	9,721.8/mi^2	13,875.4/r
Housing Units	20,020	12,946	3,150	15,350	22,281	341	3,059	3,103
Housing Density	7,404.2/mi^2	12,875.1/mi^2	9,332.2/mi^2	3,097.6/mi^2	2,634.4/mi^2	999.1/mi^2	6,058.1/mi^2	8,366.8/mi^2
Racial Makeup								
White	60.10%	91.85%	94.46%	24.80%	34.80%	95.43%	93.50%	60.10%
Black or African Ameircan	1.70%	2.03%	1.63%	39%	54.90%	0.33%	1.28%	1.79%
Native American	0.07%	0.16%		0.29%	0.32%	0.11%	0.04%	0.08%
Asian	1.22%	1.36%	0.82%	4%	1.92%	1.41%	1.16%	1.22%
Pacific Islander	0.02%	2.34%	0.09%	0.07%	0.05%		0.02%	0.06%
Other races	1.45%	2.34%	1.12%	4.61%	3.16%	0.87%	1.51%	2.84%
Two or more races	1.77%	2.25%	1.88%	5.34%	4.85%	1.85%	2.49%	2.80%
Hispanic or Latino	20.70%	36.61%	2.30%	30%	23.20%	21.76%	43.53%	35.30%
Children unde the age of 18	10.10%	11.30%	10.20%	27.30%	28.10%	34.60%	16.30%	18%
From 18 to 24	4.60%	5.40%	3.70%	9.40%	11.30%	3.50%	4.50%	5%
From 25 to 44	26.50%	26.90%	24%	30.90%	31.80%	24.50%	29.30%	32.10%
From 45 to 64	23.60%	24.30%	24.70%	21.10%	19.60%	26.20%	24%	21.70%
65 yrs old and older	35.20%	32.20%	37.50%	11.30%	9.20%	11.20%	25.90%	23.30%
Median Income for a houshold	$44,526	$31,627	$47,148	$31,337	$29,778	$136,868	$50,927	$38,514
Median income for a family	$59,507	$40,309	$83,570	$35,047	$31,760	$141,557	56327	$43,939
Males median income	$50,791	$36,893	$51,227	$26,278	$25,388	$81,193	$47,147	$38,750
Females median income	$37,682	$28,207	$44,500	$22,110	$20,712	$58,750	$39,181	$31,044
Per capita income	$41,092	$27,576	$67,680	$14,699	$14,581	$73,053	$38,375	$29,261
Families below poverty line	5.60%	11.20%	5.60%	18.40%	20.70%	4.70%	6.70%	8%
Population below poverty line	9.10%	14.70%	9.20%	20.50%	23.90%	0%	11.50%	13.10%
Median Age	53	50	55	34	32	39	45	42
Mean travel time to work (minutes)	28.3	34	26.7	30.2	31.1	24.8	31.1	26.6

Source: (http://en.wikipedia.org/wiki/Miami-Dade_County,_Florida)
Source: (U.S. Census Bureau, Census 2000)

Functional Classification of Roadway System

The roadway network is generally broken up into 5 categories. These categories are as follows:

Limited Access Facilities

Limited access facilities are roadways utilized for regional trips with limited access points. It typically carries heavy traffic volumes at high speeds. They are more commonly referred to as Interstates or Freeways/Highways. In this area an example would be I-95.

Principal Arterials

A principal arterial serves primarily through movements between commercial centers and serves the urban core. Principal arterials are typically used for longer trips. A principle Arterial in the study area would be something similar to US1/Biscayne Boulevard or A1A/Collins/Ocean Drive.

Minor Arterials

A minor arterial connects and augments the principal arterial system. It provides mobility with greater property access than the principal arterial. An example in this case would something similar to Opa-Locka Boulevard, Broad Causeway, or Ives-Dairy Road.

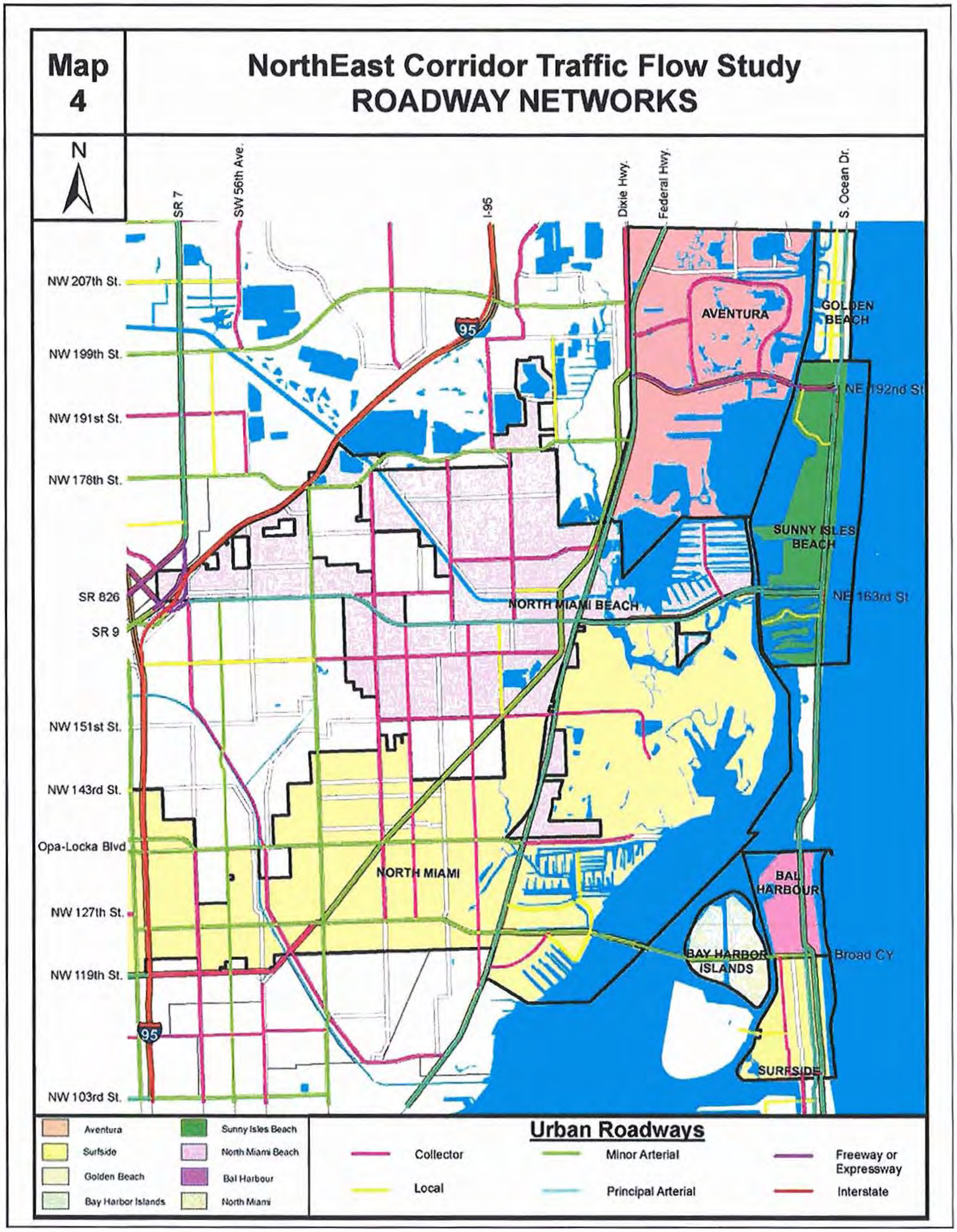
Collectors

Collector streets provide both access and traffic circulation within residential, commercial, and industrial areas. They are generally in areas that are mostly residential but do have some commercial or industrial type land use. Good examples found in this area are Golden Beach Drive and Surfside Boulevard.

Local Streets

All other streets are considered local streets that provide access to properties and connect to collector roads. Most local streets would have signage about parking on the street. Most local streets are also under the jurisdiction of the local municipality, unless it is located in an unincorporated area.

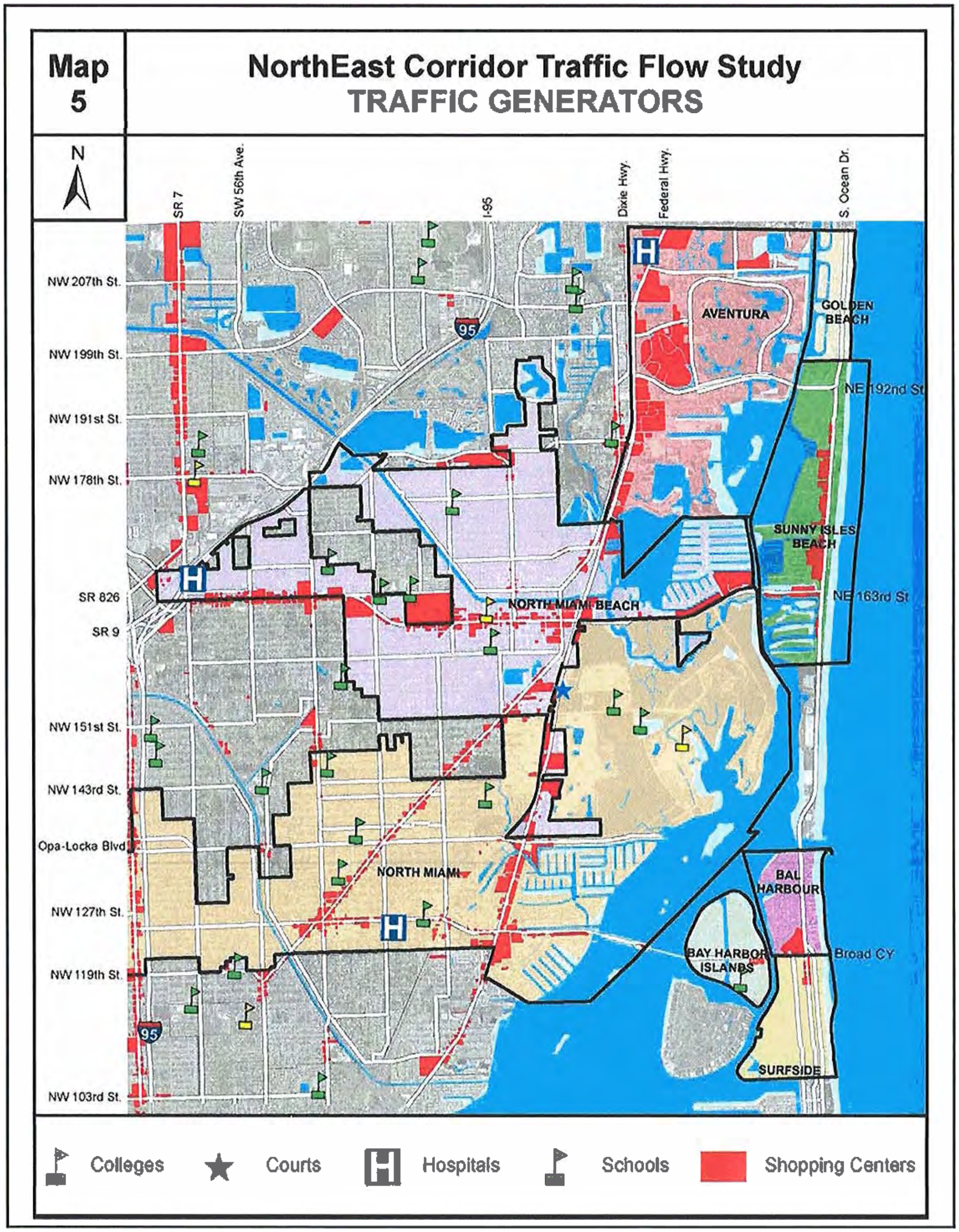
Figure 2-20



Map 4
NorthEast Corridor Traffic Flow Study
ROADWAY NETWORKS
N
SR 7
SW 56th Ave.
I-95
Dixie Hwy.
Federal Hwy.
S. Ocean Dr.
NW 207th St.
NW 199th St.
NW 191st St.
NW 178th St.
SR 826
SR 9
NW 151st St.
NW 143rd St.
Opa-Locka Blvd
NW 127th St.
NW 119th St.
NW 103rd St.
95
AVENTURA
GOLDEN BEACH
NE 192nd St
SUNNY ISLES BEACH
NE 163rd St
NORTH MIAMI BEACH
NORTH MIAMI
BAL HARBOUR
BAY HARBOR ISLANDS
Broad CY
SURFSIDE
Aventura
Surfside
Golden Beach
Bay Harbor Islands
Sunny Isles Beach
North Miami Beach
Bal Harbour
North Miami
Urban Roadways
Collector
Local
Minor Arterial
Principal Arterial
Freeway or Expressway
Interstate

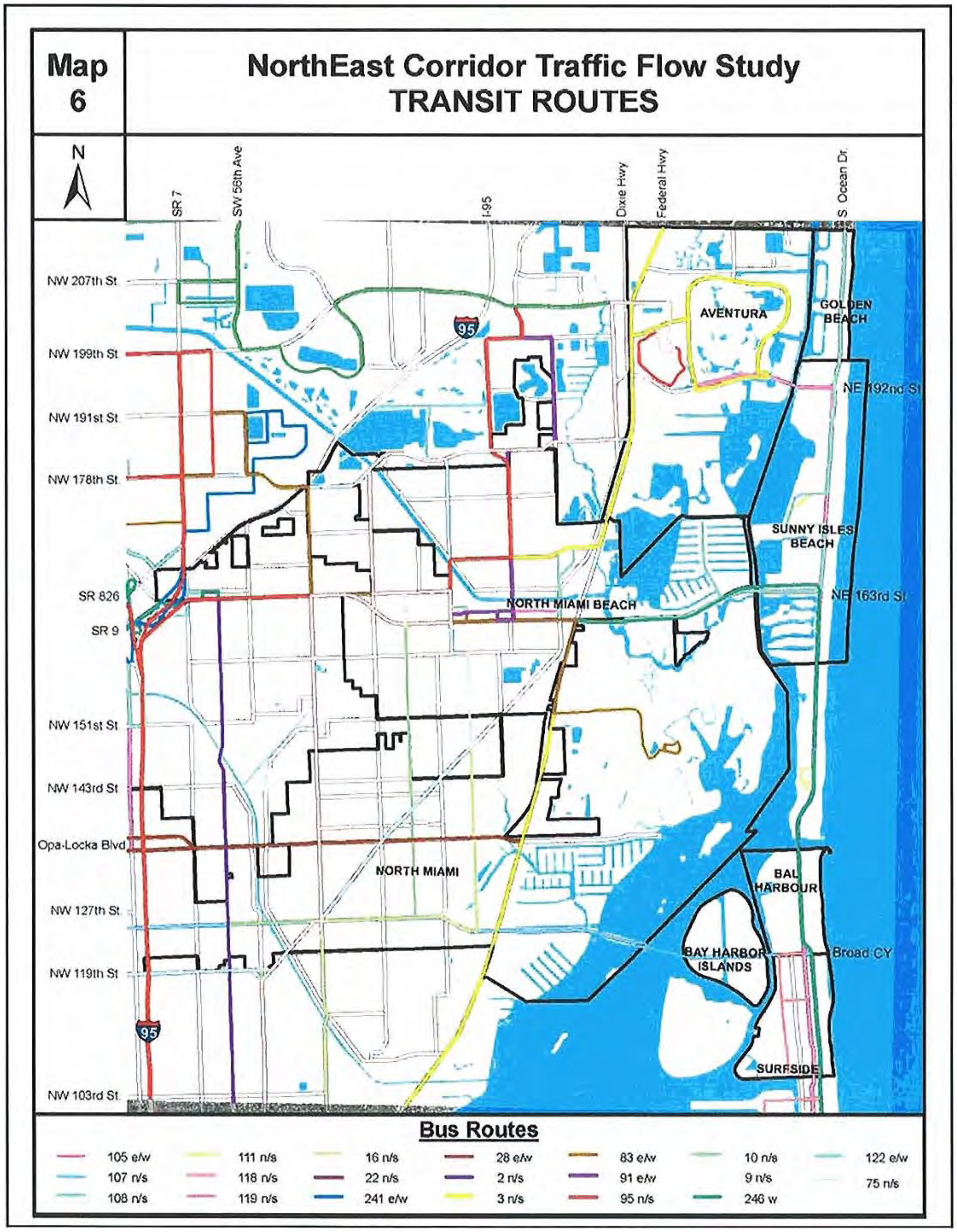
There are a great deal of traffic generators or trip attractions in this study area. Most of which are commercial areas. There are 3 hospitals located in the communities involved in this study, as well as large numbers of schools ranging from elementary through high school. Another attraction to the area is the large shopping centers like the Aventura Mall, Intercoastal Mall, and the Shops at Bal Harbour. The miles of beaches and the numerous golf courses also surely add to the amount of traffic in the area.

Figure 2-21



MDT has many routes in the area, most of which were previously discussed. Once you look at them as a whole, it becomes very clear the level of connectedness that the area has in terms of transit. It also shows how connected this area is with the surrounding areas. The northeast area is connected with all of Miami-Dade County as well as Broward County.

Figure 2-22



MPO Model Data

The adopted levels of service for the roadways were obtained from the Miami-Dade Comprehensive Development Master Plan (CDMP). The CDMP contains the following traffic circulation level of service standards applicable to the study area. Non-FIHS Roadways (for locations within the urban infill area) adhere to the following adopted levels of service. This applies to all roadways in the study area (except Interstate 95) because the City lies within the urban infill area:

LOS E (100 percent of capacity), if no public transit service is available.
LOS E+20 (120 percent of capacity), if public transit service exists within ½-mile with less than 20-minute headways.
LOS E+50 (150 percent of capacity), if extraordinary (commuter rail or express bus) public transit service exists.

– FIHS Roadways (within the Transportation Concurrency Exception Area)

LOS E, when exclusive through lanes exist. This will apply to Interstate 95 because it has exclusive high-occupancy vehicle (HOV) lanes.

The first level of transportation analysis is an examination of the MPO's Long Range Transportation Plan Model, which uses the demographic data as taken by the US Census and predicts trip making patterns at the Transportation Analysis Zone (TAZ) level. Generally this model shows traffic is bad and will worsen by 2030.

The model shows that most traffic is east-west. People don't generally cross over to the barrier islands until they are as close as possible to their barrier island origin or destination, With that in mind, drivers in this study area rarely use either the MacArthur or the Tuttle Causeway. The primary access points the barrier islands for east-west traffic for this study area are the William Lehman Causeway, Broad Causeway, Sunny Isles Boulevard/163rd Street, and the JFK Causeway.

The Causeway with the most volume is Sunny Isles Boulevard. It also has the most capacity for traffic. It has 4 lanes in each direction, and no toll. Many people may choose this route to avoid paying a toll. It also has a direct connection with Sunny Isles Beach which is where the largest population of all cities on the barrier islands that is in the study area. Most of the people who live in Sunny Isles Beach, do not work there. Therefore, they take the closest causeway westbound, out of the system and attempt to get on either US-1/Biscayne Boulevard or I-95. As a result of this, the LOS on this causeway has suffered.

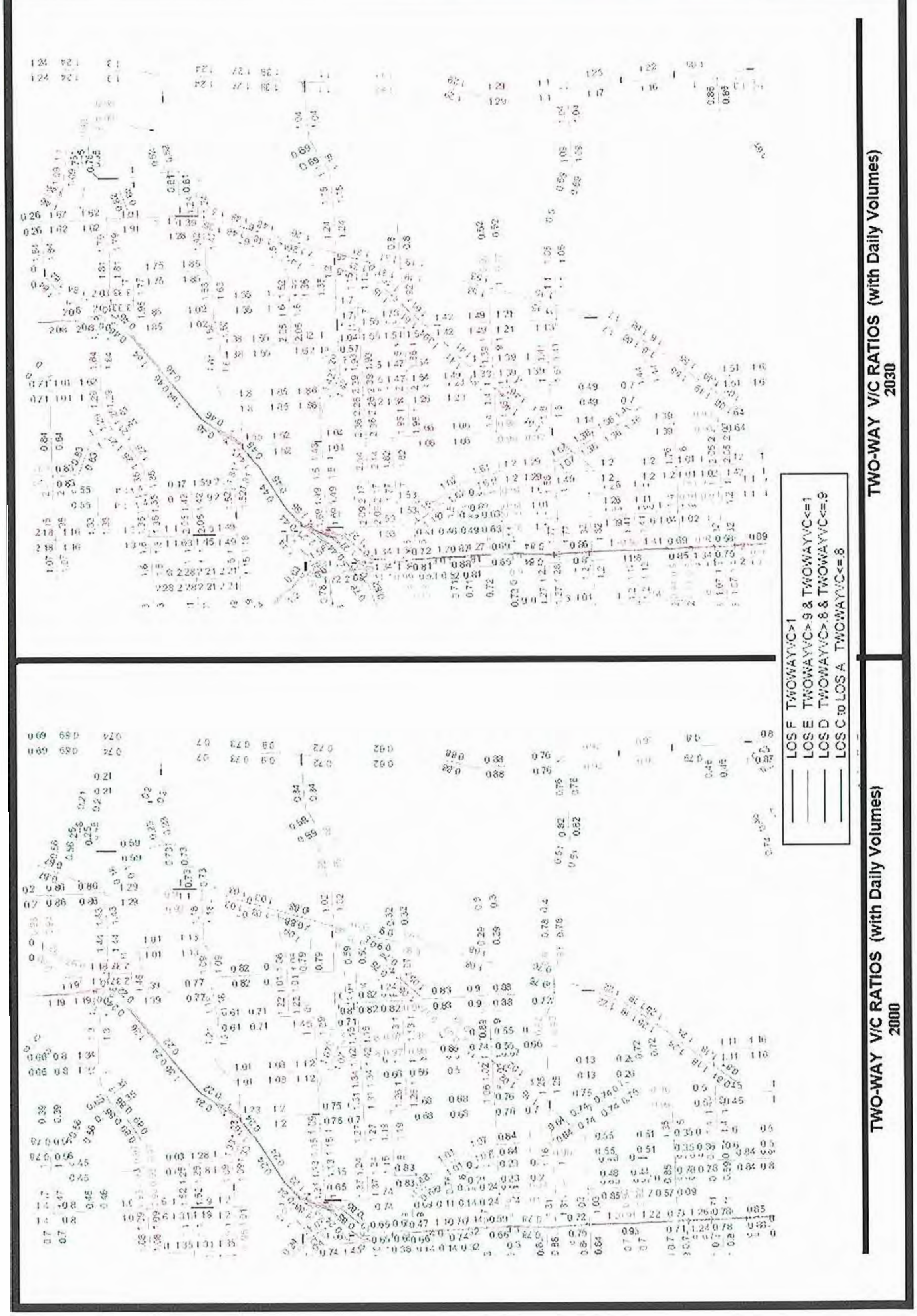
The William Lehman Causeway has the second largest capacity for traffic. But it has the lowest volume. This keeps the LOS well below acceptable thresholds. This roadway is not generally being utilized to its potential. This is most likely due to the fact that William Lehman Causeway effectively terminates at US-1, with no direct connection west. Traffic ends up on a north-south road that runs at a level of service F. This causeway is geared toward very local traffic.

The JFK Causeway has the second highest volume and the second lowest capacity. Yet, it still runs fairly efficiently. It has 3 lanes in each direction, but it does split into one way pair at the eastern end. It also splits on the western side to form quasi one way pair as it connects to I-95. It runs similar to a freeway, but does not quite have the controlled access feel that many drivers look for. It has multiple stop lights as well as a draw bridge in 2 separate locations that may cause delays. It does however, connect to I-95, which adds to its practicality for use.

The Broad Causeway has 2 lanes in each direction. It has the lowest capacity for traffic but it does get more volume than the William Lehman Causeway. It does connect all the way between A1A/Ocean Drive and I-95. It operates at an acceptable LOS, but it has a toll. The causeway does not accept SunPass, which is the widely accepted form of express tolling not only in Miami-Dade County, but in the entire state of Florida. Accepting SunPass alone, would most likely put a much larger volume on the Broad Causeway, as well as allow traffic to move more efficiently if they can pay the toll in an express fashion.

Major north-south movement that does occur in the study area is generally restricted to 3 routes, A1A/Ocean Drive, US-1/Biscayne Boulevard, and I-95. The results of the origin destination study show that most sub-regional trips for north-south driving are done on the mainland. Both US-1/Biscayne Boulevard and I-95 flow better than A1A/Ocean Drive. Though the LOS of A1A/Ocean Drive is better than that of the other two routes people still avoid it at all cost. One of the major reasons would be all of the stop lights. On A1A/Ocean Drive, between the JFK Causeway and the Broward County line, there are 59 signalized intersections. In the same area on US-1/Biscayne Boulevard there are only 44. In a roughly 8 mile stretch on roadway, A1A/Ocean Drive has 15 more stop lights. That's almost 2 signalized intersections per mile.

Figure 2-23
Twp-Way V/C Ratios for 2000 and 2030



Detailed Traffic Analysis

A more precise measure of mobility is to use more recent data collected by the County, State or Municipalities in the last two years. With this data an extensive analysis has been performed to attain more specific level of service figures.

Level of Service

The analysis was performed in accordance with the standard guidelines for traffic studies. Traffic operations were analyzed using the capacity analysis methodology published in the 2000 Highway Capacity Manual (HCM). Capacity analysis is a set of procedures for estimating the traffic-carrying ability of facilities based on operational conditions. The efficiency of traffic operations is commonly measured by traffic engineers and planners with a grading system called Level of Service (LOS).

The analysis of street systems is based upon the concept of LOS. The presentation of LOS is indicated by the letters "A" through "F" with LOS A representing the best operating conditions and LOS F the worst. When the LOS is presented it generally represents the ratio of *volume* to *capacity* (V/C). Volume is the number of vehicles that actually pass a given point on the road in a given time. Capacity is the maximum number of vehicles that can pass a given point on the road in a given time.

From an engineering standpoint, every roadway has a design capacity that is a maximum number of cars per lane that can cross through a segment of roadway. This varies based on several factors, including lane width, number of lanes, number and location of intersections, number and location of signals, etc. Each roadway segment is given a "functional classification" based on these factors.

Essentially the capacity of a roadway is represented as 1.0. or 100 percent. The LOS of the roadway represents a percentage of that capacity. LOS A is between 0 and .6, or 60 percent of capacity. The generally acceptable LOS for roadways in Miami-Dade County is LOS D, which is between .81 and .9 (81 percent - 90 percent) of capacity. LOS F is anything over 1.0 or 100 percent of capacity. Table 2-1 shows the volume capacity ratio for each LOS category. Level of service is provided for "links" (segments) of roadway, and "nodes" (intersections). This analysis primarily examined roadway level of service.

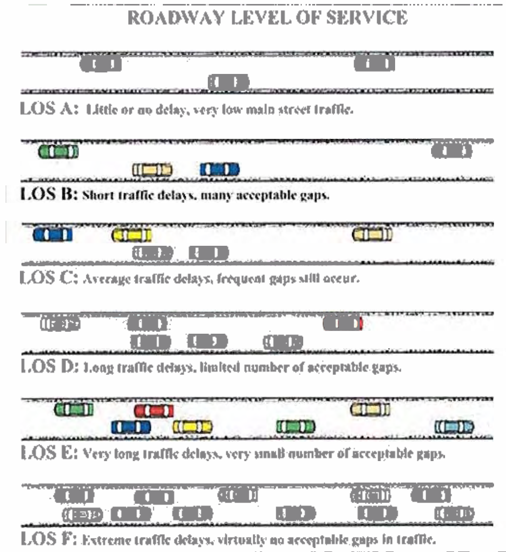
Table 2-1
Level of Service

LOS	Volume/Capacity
A	<.60
B	.61 to 0.70
C	.71 to 0.80
D	.81 to 0.90
E	.91 to 1.00
F	>1.00

LOS = Level of Service

INTERSECTION LEVEL OF SERVICE

Level of Service	Seconds Delay/Vehicle	Description
LOS A	≤ 10	Most vehicles do not stop at all
LOS B	> 10 and ≤ 20	More vehicles stop than for LOS A
LOS C	> 20 and ≤ 35	The number of vehicles stopping is significant, although many pass through without stopping
LOS D	> 35 and ≤ 55	Many vehicles stop
LOS E	> 55 and ≤ 80	Considered being the limit of acceptable delay
LOS F	> 80	Unacceptable delay



These LOS standards represent a range of operating conditions and the driver's perception of those conditions, as described below.

- LOS A describes free-flow operations at average travel speeds, usually at about 90 percent of the free flow speed. Vehicles are unimpeded in their ability to maneuver within the traffic stream. Distance between vehicles is +- 30 car lengths. On most of Study Area's roads (speed limit of 30 mph) this is represented by a speed of 25 mph or greater.

- LOS B describes reasonably unimpeded operation at an average travel speed, usually about 70 percent of the free flow speed. The ability to maneuver is only slightly restricted. Distance between vehicles is about 20 car lengths. On most of Study Area's roads (speed limit of 30 mph) this is represented by a speed of between 20mph and 25mph.

- LOS C describes stable operating conditions with some restrictions of driver ability to maneuver and change lanes in mid-block locations. Longer queues and signal coordination will contribute to a lower average speed of about 50 percent of free flow speed. The distance between vehicles is about 15 car lengths. On most of the Study Area's roads (speed limit of 30 mph) this is represented by a speed of between 13mph and 20mph.

- LOS D borders on a range in which small increases in flow may cause substantial increases in delay in travel speed. LOS D may be caused by poor signal progression, inappropriate signal timing or high volumes. Average travel speed is about 40 percent of the free flow speed. The distance between vehicles is about 10 car lengths. On most of the Study Area's roads (speed limit of 30 mph) this is represented by a speed of between 9mph and 13mph.

- LOS E is characterized by significant delays and average travel speed of 33 percent or less of the free flow speed. LOS E is caused by a combination of high traffic volumes, high signal density, adverse signal progression, and inappropriate signal timing, all of which result in extensive delays at critical intersections. The distance between vehicles is minimal. On most of the Study Area's roads (speed limit of 30 mph) this is represented by a speed of between 7mph and 9mph.

- LOS F is characterized by urban street flow at extremely low speeds, typically 25 percent of the free flow speed. Intersection congestion exists at critical signalized intersections with high delay, high volumes and extensive queuing. There is generally less that one car length distance between vehicles. On most of the Study Area's roads (speed limit of 30 mph) this is represented by a speed of less than 7mph.

On urban streets with traffic signals, LOS is directly related to the free flow speed found on each type of street.

Table 2-2
Average Travel Speeds

Urban Street Class	I	II	III	IV
Range of free-flow speeds (FFS)	55-45 MPH	45-35 MPH	35-30 MPH	35-25 MPH
Typical FFS	50 MPH	40 MPH	35 MPH	30 MPH
LOS	Average Travel Speed (MPH)			
A	>42	>35	>30	>25
B	>34-42	>28-35	>24-30	>19-25
C	>27-34	>22-28	>18-24	>13-19
D	>21-27	>17-22	>14-18	>9-13
E	>16-21	>13-17	>10-14	>7-9
F	<16	<13	<10	<7

Analysis Methodology

The level of service analysis was performed using the HCS+ analysis software program. The HCS+ program is a Windows based traffic analysis computer program employing the HCM analysis procedures to evaluate traffic operations at signalized intersections. It is one of the most widely used computerized highway capacity method. The HSC+ software is very effective at evaluating traffic conditions at individual intersections using the HCM methodology. It reports control delay and performs the capacity analysis. The detailed intersection level of service calculation sheets are provided in the Appendix of this report.

Signalized Intersections

Traffic conditions at signalized intersections were evaluated using the 2000 HCM operations methodology for signalized intersections, which evaluates capacity in terms of the volume-to-capacity (v/c) ratio and evaluates LOS based on controlled delay per vehicle. Controlled delay is defined as the portion of the total delay attributed to the traffic signal operation including deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The relationship between controlled delay per vehicle and LOS for signalized intersections is summarized in Table 2-3.

Table2- 3

Level of Service (LOS) for Signalized Intersections		
LOS	Controlled Delay (sec/veh)	Description of Traffic Conditions
A	≤ 10	Insignificant delays: no approach phase is fully utilized and no vehicle waits longer than one red indication. Progression is extremely favorable, and most vehicles arrive during the green phase.
B	> 10 to 20	Minimal delays: an occasional approach phase is fully utilized. Drivers begin to feel restricted. Good progression occurs. More vehicles stop than for LOS A, causing higher levels of average delay.
C	> 20 to 35	Acceptable delays: major approach phase may become fully utilized. Most drivers feel somewhat restricted. Higher average delays result from fair progression. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level although many still pass through the intersection without stopping.
D	> 35 to 55	Tolerable delays: drivers may wait through more than one red indication. Queues may develop but dissipate rapidly, without excessive delays. Longer delays may result from unfavorable progression and/or high traffic volumes as compared to the roadway capacity. Individual signal cycle failures, where all waiting vehicles do not clear the intersection during a single green time, are noticeable.
E	>55 to 80	Significant delays: volumes approaching capacity. Vehicles may wait through several cycles and long vehicle queues from upstream. Higher delay values generally indicate poor progression, long cycle lengths, and high traffic volumes. Individual cycle failures are frequent occurrences.
F	> 80	Excessive delays: represents conditions at capacity, with extremely long delays. Queues may block upstream intersections. This condition is unacceptable to most drivers. Traffic arrives at a flow rate that exceeds the capacity of the intersection. It may also occur at high volumes with many individual cycle failures. Poor progression and long cycle lengths may also contribute to such delays.
Source: Highway Capacity Manual, Transportation Board, 2000		

Project Study Intersections

Eleven intersections within the study boundary were selected for evaluation. The study area consists of the boundaries of Aventura, Bal Harbour, Bay Harbour Islands, Golden Beach, Sunny Isles Beach and Surfside. The intersections are listed in Table 2-4 below and located in Figure 2-24.

Table 2-4

Table X - Project Study Intersection				
	SAN	**Project Intersection**	**Control**	**Jurisdiction**
1	3469	US 1 & MIAMI GARDENS DR	SA	Aventura
2	2524	M GARDENS DR & W DIXIE HWY	SA	Miami-Dade County
3	2010	SR 826 & US 1	SA	North Miami Beach
4	2019	SR 826 & W DIXIE HWY	SA	North Miami Beach
5	4655	US 1 & SR 856	SA	Aventura
6	3229	NE 10 AVE & 167 ST	SA	North Miami Beach
7	2003	SR 826 & NE 10 AVE	SA	North Miami Beach
8	2537	US 1 & N MIAMI BLVD	SA	North Miami
9	3144	US I & NE 135 ST	SA	North Miami
10	2555	W DIXIE HWY & 135 ST	SA	North Miami
11	2020	SR 826 & NW 2 AVE	SA	North Miami Beach
Abbreviations				
	SAN - SIGNAL ASSET NUMBER SA - Semi-Actauted			

Figure 2-24

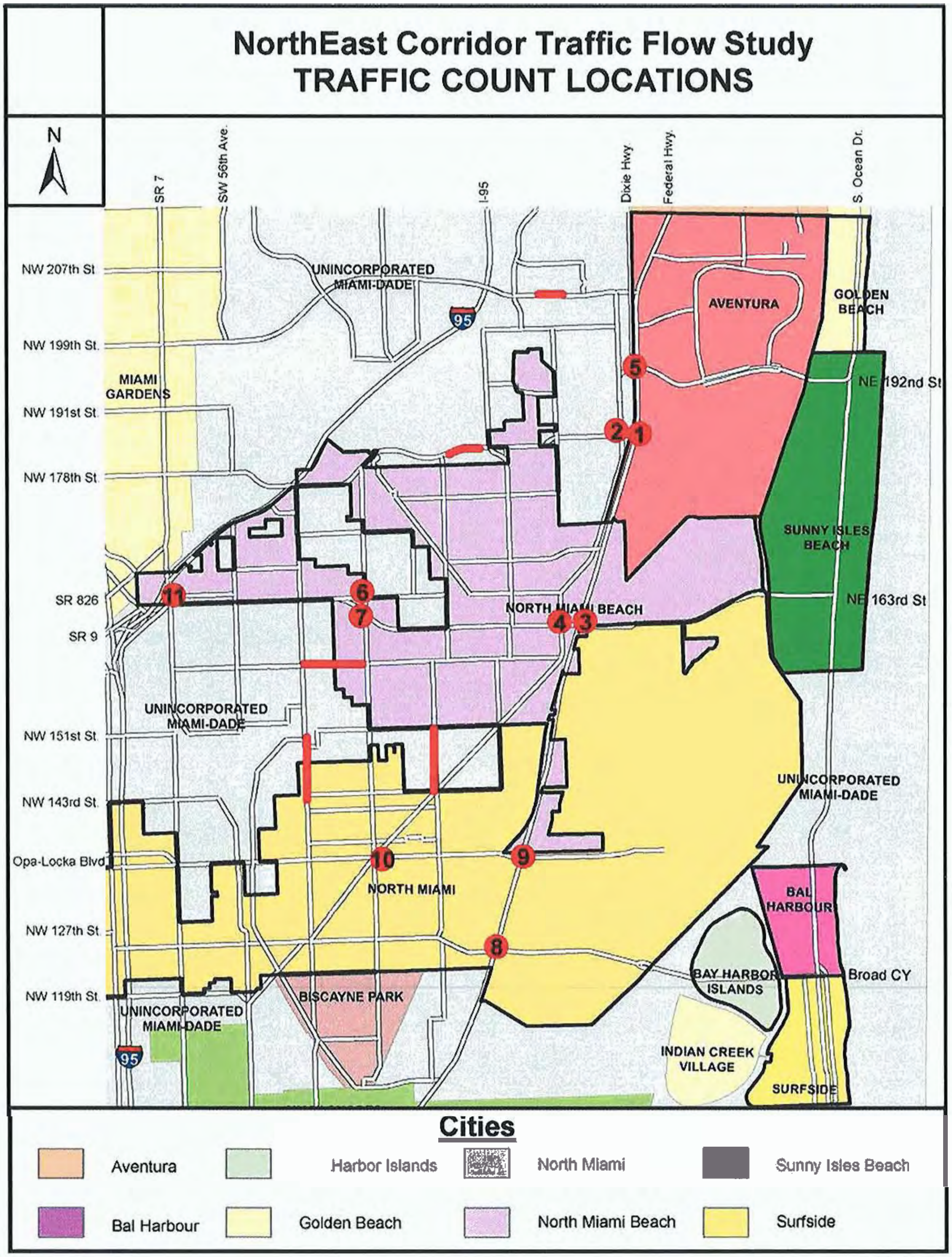
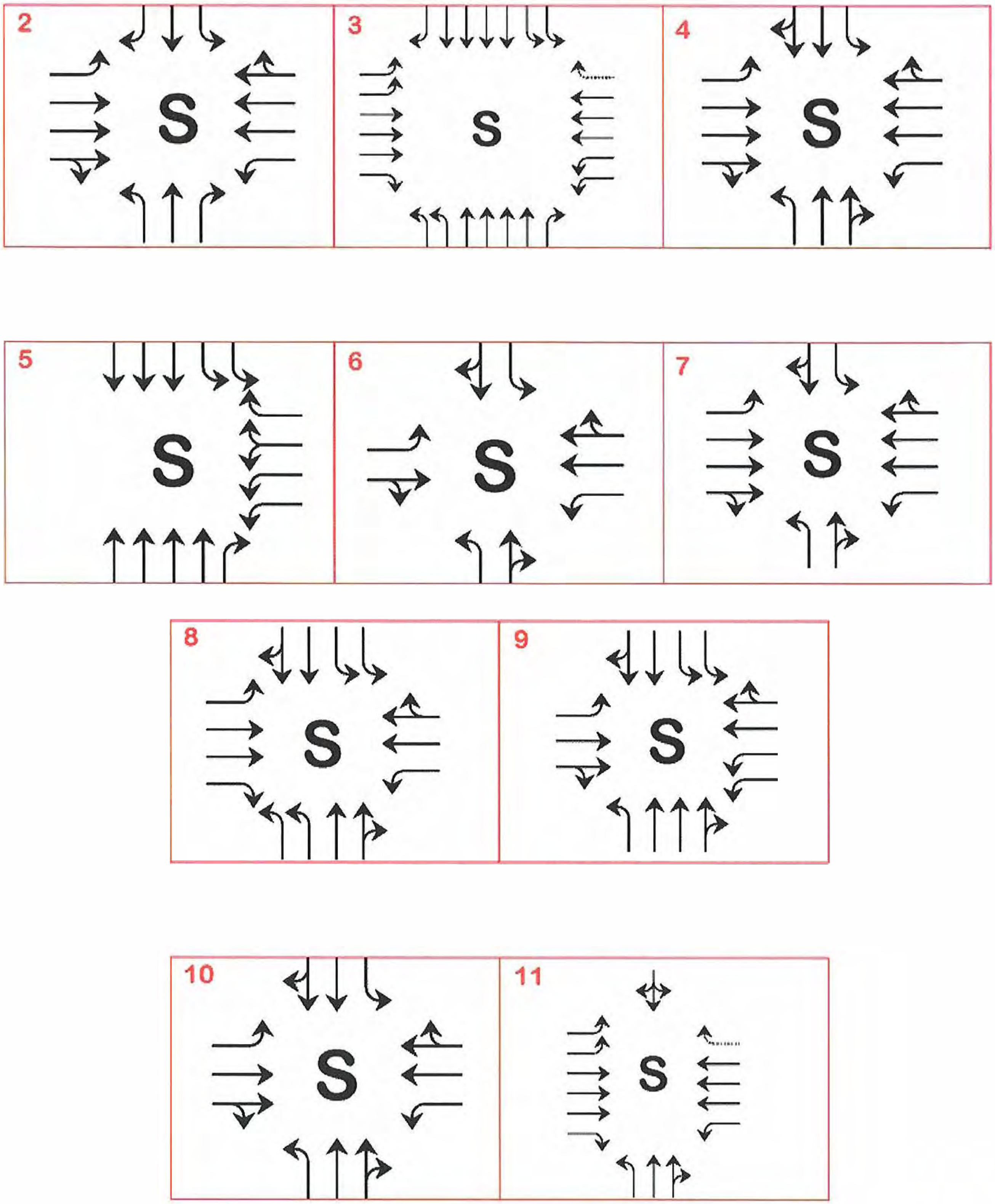

NorthEast Corridor Traffic Flow Study
TRAFFIC COUNT LOCATIONS
N
SR 7
SW 56th Ave.
I-95
Dixie Hwy.
Federal Hwy.
S. Ocean Dr.
NW 207th St
NW 199th St.
NW 191st St.
NW 178th St.
SR 826
SR 9
NW 151st St.
NW 143rd St.
Opa-Locka Blvd
NW 127th St.
NW 119th St.
NE 192nd St
NE 163rd St
Broad CY
UNINCORPORATED MIAMI-DADE
MIAMI GARDENS
AVENTURA
GOLDEN BEACH
SUNNY ISLES BEACH
NORTH MIAMI BEACH
UNINCORPORATED MIAMI-DADE
UNINCORPORATED MIAMI-DADE
NORTH MIAMI
BAL HARBOUR
BAY HARBOR ISLANDS
BISCAYNE PARK
UNINCORPORATED MIAMI-DADE
INDIAN CREEK VILLAGE
SURFSIDE
1
2
3
4
5
6
7
8
9
10
11
Cities
Aventura
Harbor Islands
North Miami
Sunny Isles Beach
Bal Harbour
Golden Beach
North Miami Beach
Surfside

Figure 2-25
Intersection and Geometrics and Lane Designations



Traffic Control

All intersections analyzed within the Study area are semi-actuated with the signals on US-1/Biscayne Boulevard and SR-826/165th Street/163rd Street/Sunny Isles Boulevard coordinated. The existing timing to evaluate the existing performance for these intersections was obtained from Dade County Traffic Control Center. This data was used as baseline to compared proposed timing strategies.

Traffic Volumes

Peak hour vehicular traffic movement counts were taken at the project intersections. All of the traffic data was gathered between the 1st and 3rd of May 2007 and are illustrated in the Appendix. These were projected to the years 2015 and 2030 based on data obtained from the Miami-Dade MPO Maps. The result of the traffic data collected and the projections of these were used to calculate the level of service at each of the intersections using HCS+ software. The analysis inputs and the reports detailing the analysis are provided in the Appendix of this report. The results of the AM and PM analysis are summarized in the table below.

Intersection Geometry

Figures 2-26 to 2-28 show the exiting lane usage at the intersection studied. This data was used as a baseline for comparison to proposed geometric strategies.

Figure 2-26
Project Intersections Lane Geometry and Usage

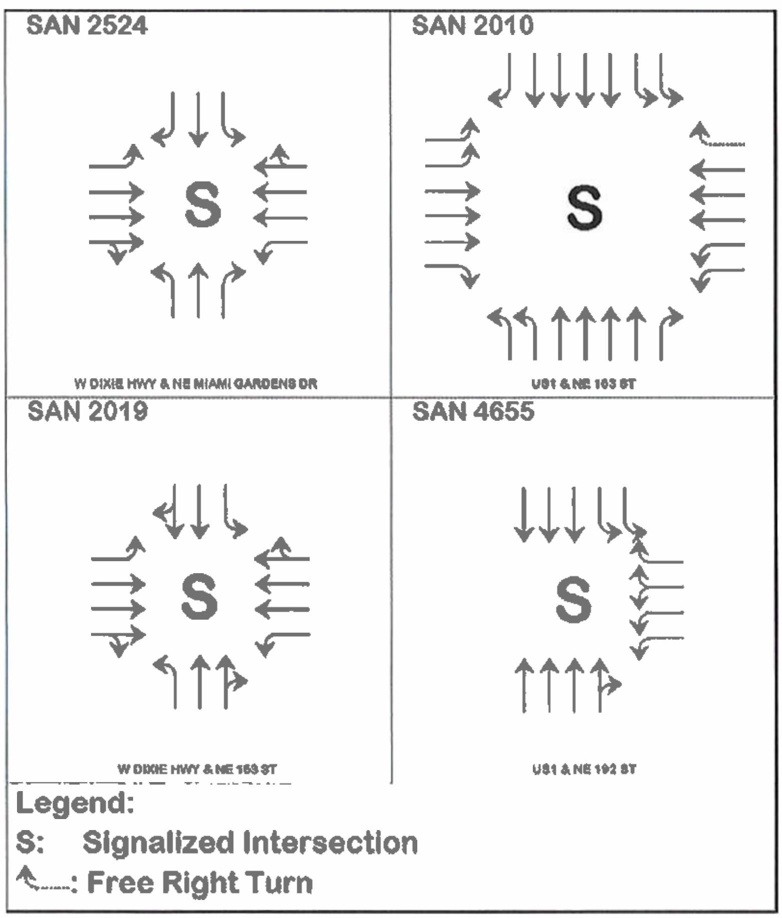
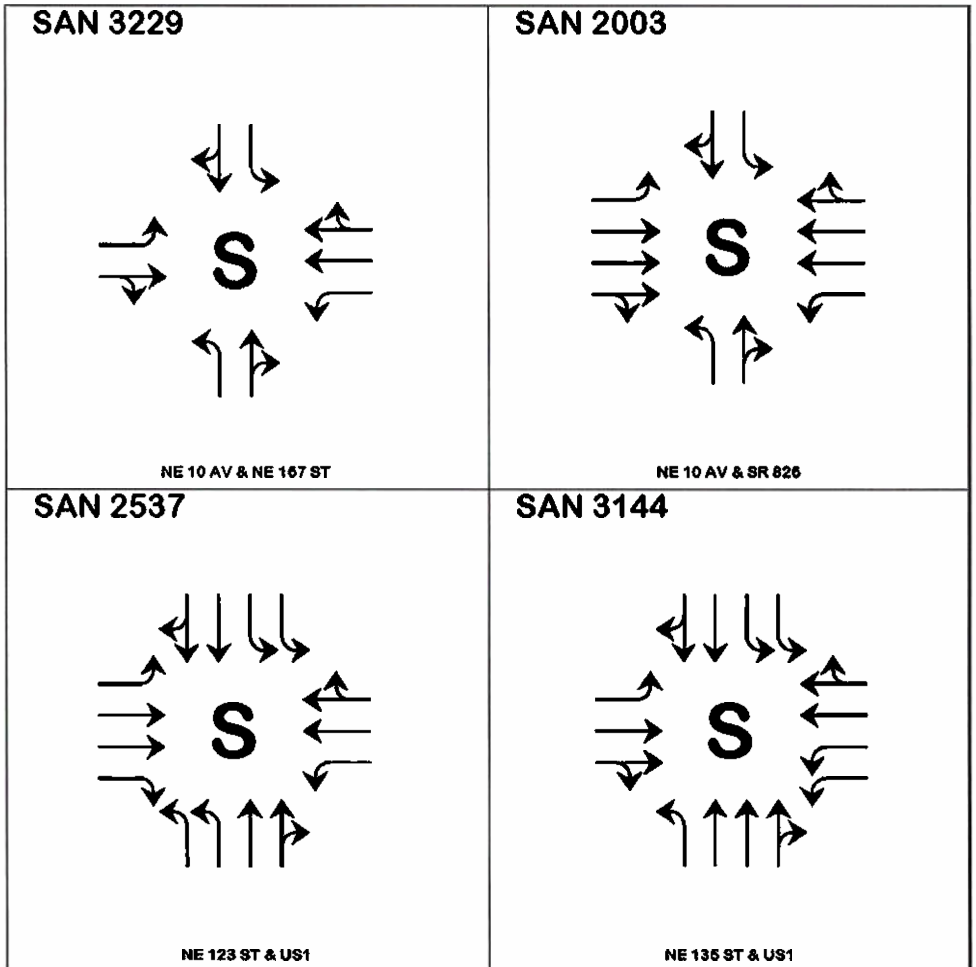
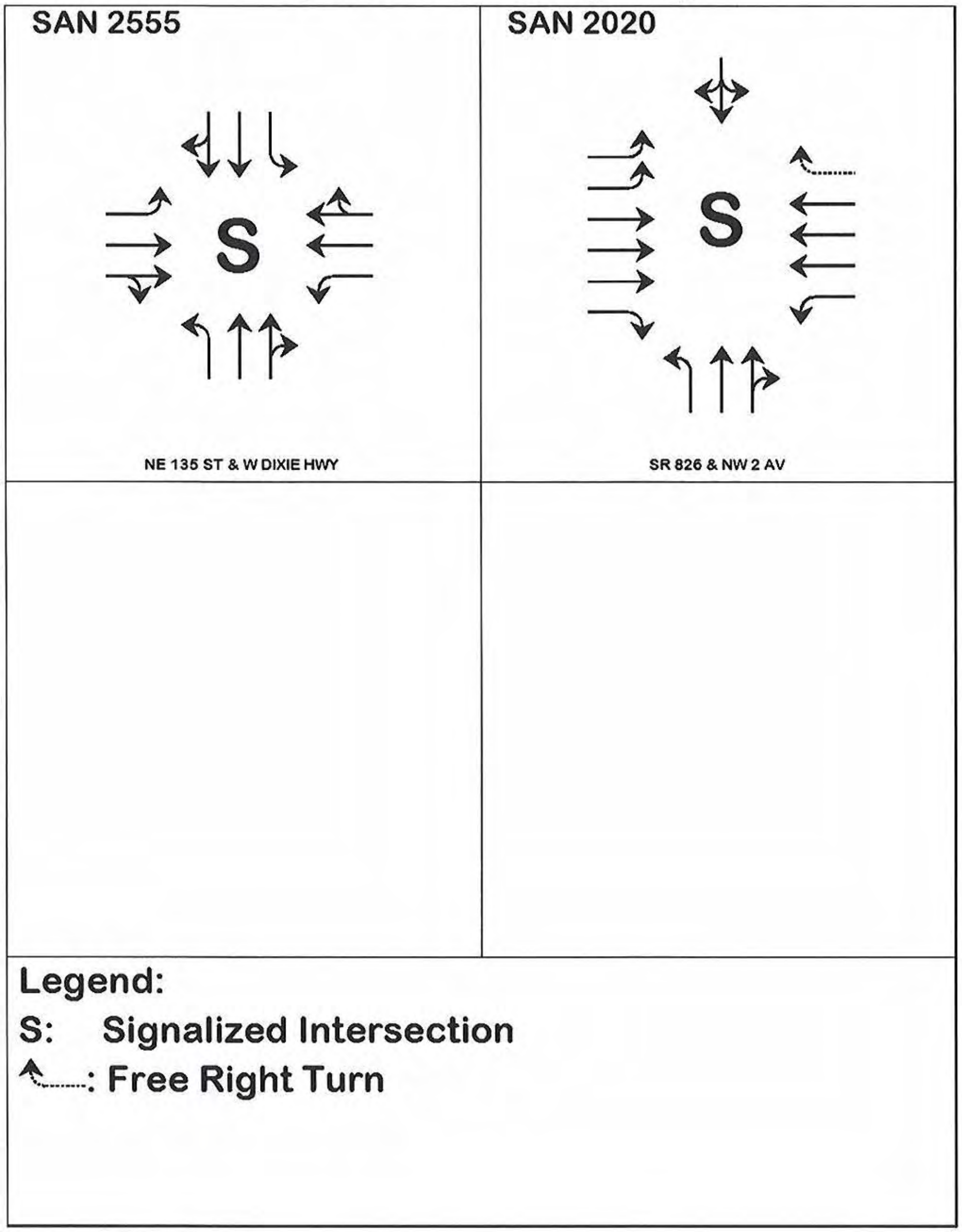


Figure 2-27
Project Intersections Lane Geometry and Usage



Legend:
S: Signalized Intersection
: Free Right Turn

Figure 2-28
Project Intersections Lane Geometry and Usage



Issues

The intersection of US-1 & NE Miami Gardens Drive is under construction. The intersection of US-1 forms a T-intersection with SR 856. Field observations show that the westbound movement is comprised of one westbound right turn lane (WBR), a combined WBR and westbound left turn lane and two WBL lanes. In Table 5 the second option showed for this intersection is to have two WBR and two WBL lanes. The correct signal timing for West Dixie Highway and NE 135th Street has not been procured as intersection has changed from a six-leg to a four-leg.

Roadway Traffic Volumes and Levels of Service (LOS) for Existing and Future Conditions

Vehicular traffic conditions within the study boundaries were analyzed for the current year 2007 and forecasted for the years 2015 and 2030. Specifically traffic volumes were obtained or developed for these years as well as their corresponding Levels of Service (LOS). The future years 2015 and 2030 were selected because they conform to the forecasted years from the Miami Dade Metropolitan Planning Organization (MPO) adopted Long Range Transportation Plan (LRTP) and related roadway networks and documents.

LOS are letter values ranging from A to F which reflect different degrees of vehicular traffic congestion on a roadway, as well as the associated delays, operating speeds, degree of comfort in ability to change traffic lanes, etc. LOS A reflect the best traffic conditions with little or no delays with vehicles being able to travel comfortably at the posted speed limits or slightly above for relatively long distances, whereas LOS F represents the worse traffic conditions with excessive delays, long vehicular queues at signalized intersections and forced vehicular flow at very low or "crawling" speeds. LOS A and B are usually not easy to achieve on arterial and main collectors roadways in large urbanized areas like Miami Dade County during typical high volume peak hour traffic periods. LOS D through E is more typically found in large urbanized areas for these types of roadways, and unfortunately with many roadways operating at LOS F.

Existing Conditions Roadway Links Analysis – Year 2007

For the existing condition analysis, available traffic counts were obtained from the Florida Department of Transportation (FDOT) data base and from the MPO traffic volume networks. Additional 72 hours vehicular traffic counts were taken at some locations throughout the study area and where converted to average annual daily traffic by using the appropriate factors from the FDOT data base. These counts as well as other adjusted traffic volume data available from the MPO highway traffic networks formed the basis for obtaining the traffic volumes and assessing current LOS for both daily and peak hour peak direction of travel on those roadways classified as arterials, collectors and main local roads. LOS thresholds were obtain from the FDOT Level of Service Manual's Generalized LOS Tables.

From the above data and the pertinent analyses, tables were developed which depict traffic volumes, LOS as well as other roadway related data such as number of lanes, functional classification, among other. Maps were also developed which reflect the LOS for the selected roadways.

Examination of the tables and maps indicate the following roadway segments are among those operating at LOS E and F. These are the segments where long vehicular delays are taking place.

- SR A1A/Collins Avenue (Sunny Isles Boulevard to Broad Causeway)
- SR 909/West Dixie Highway (NE 171 Street to 163 Street)
- NE 14th and 15th Avenues
- Ives Dairy Road
- Most of Miami Gardens Drive
- NE 171 Street
- NE 167 Street (10 Avenue to 15 Avenue)
- NE 159 Street
- NE 151 Street (NE 10 Avenue to Biscayne Boulevard)

Forecasted Year 2015 and 2030 Conditions Analysis

The year 2007 traffic volumes were projected to the years 2015 and 2030 using growth factors developed from the MPO adopted LRTP years 2000, 2015 and 2030 traffic volume assignment networks. Specifically, growth factors were obtained using the MPO's year 2000 and 2015 networks and applied to the current year 2007 traffic volumes to obtain the year 2015 volumes. Year 2030 forecasted traffic volumes were computed by using growth factors developed from the MPO's year 2015 and 2030 networks and applied to the previously obtained year 2015 traffic volumes.

Examination of the tables and maps indicate that in general, roadway LOS will deteriorate throughout the study area with some exceptions due to programmed roadway widening or other transportation projects. Most of the above indicated roadway segments LOS will continue to deteriorate as well as more of their segments beginning to operate at LOS E & F. Some of the roadways segments which are currently operating at acceptable LOS will deteriorate to LOS E & F. Some of these roadways are: West Dixie Highway, Biscayne Boulevad, NW 17 Avenue, NE 167 Street, SR A1A, and 123/125 Street.

Roadway Intersection Analyses – Years 2007, 2015 and 2030

Intersections normally operate at worse LOS and with greater vehicular delays when compared with a roadway link between intersections. This is mostly due to the fact that large numbers of vehicles approach the intersection from two different intersecting roadways and the effects from existing traffic control. For instance, if the intersection is controlled by a traffic signal, then during a particular signal phase, certain vehicular movements are required to stop, while others are allowed to go through the intersection; then at a subsequent phase, the movements previously stopped are now allowed to go through, while the others are then required to stop. Obviously, this creates additional delays when compared with a roadway link or segment.

Eleven intersections were selected for analyses covering existing conditions (year 2007) and for the forecasted years 2015 and 2030 to be consistent with the other analyses. The tables below reflect the results of these intersection analyses.

Examination of the tables clearly demonstrates how the LOS will deteriorate from existing conditions to the year 2015 and most notably in the year 2030. It was not surprising to see that during the year 2030, some of the principal intersections will be performing at poor LOS during the AM peak hour. These are US-1/West Lehman Causeway; Miami Gardens Drive/West Dixie, SR-826/10 Avenue; US-1/North Miami Boulevad; US-1/NE 135 Street; NE 135 Street/West Dixie and SR-826/NW 2 Avenue. During the PM peak hour most of the intersections are operating at either LOS E or F in the year 2030.

Figure 2-29
AM and PM Intersection

Location	SAN	INTERSECTION	TPN AM	TPN PM	INT TYPE	CYCLE LENGTH (SEC)	AM PK HR 2007 INT. DEL. (SEC/VEH)	2007 LOS	2015 INT. DEL. (SEC/VEH)	2015 LOS	2030 INT. DEL. (SEC/VEH)	2030 LOS
1	3469	US 1 & MIAMI GARDENS DR	8	6	SA	180	UNDER CONSTRUCTION					
2	2524	M GARDENS DR & W DIXIE HWY	9	6	SA	180	39.8	D	47.9	D	75.7	E
3	2010	SR 826 & US 1	3	3	SA	150	39.5	D	40.4	D	46.6	D
4	2019	SR 826 & W DIXIE HWY	3	3	SA	150	34.9	C	37.1	D	46.3	D
5	4655	US 1 & SR 856	8	6	SA	180	58.0	E	58.4	E	59.1	E
6	3229	NE 10 AVE & 167 ST	17	15	SA	130	29.6	C	35.9	D	79.4	E
7	2003	SR 826 & NE 10 AVE	17	15	SA	130	27.6	C	55.3	E	117.2	F
8	2537	US 1 & N MIAMI BLVD	19	4	SA	150	55.4	E	72.1	E	128.0	F
9	3144	US I & NE 135 ST	19	4	SA	150	42.9	D	51.8	D	76.4	E
10	2555	W DIXIE HWY & 135 ST*	2	5	SA	150	40.1	D	44.4	D	64.7	E
11	2020	SR 826 & NW 2 AVE	17	15	SA	180	46.7	D	52.3	D	69.5	E

AM INTERSECTIONS

SAN - SIGNAL ASSET NUMBER
TPN - TIMING PLAN NUMBER
* SIGNAL TIMING ESTIMATED

Location	SAN	INTERSECTION	TPN AM	TPN PM	INT TYPE	CYCLE LENGTH (SEC)	PM PK HR 2007 INT. DEL. (SEC/VEH)	2007 LOS	2015 INT. DEL. (SEC/VEH)	2015 LOS	2030 INT. DEL. (SEC/VEH)	2030 LOS
1	3469	US 1 & MIAMI GARDENS DR	8	6	SA	180	UNDER CONSTRUCTION					
2	2524	M GARDENS DR & W DIXIE HWY	9	6	SA	180	83.0	F	104.2	F	139.7	F
3	2010	SR 826 & US 1	3	3	SA	150	39.7	D	41.2	D	52.0	D
4	2019	SR 826 & W DIXIE HWY	3	3	SA	150	38.8	D	40.7	D	50.4	D
5	4655	US 1 & SR 856	8	6	SA	180	71.9	E	72.6	E	80.8	F
6	3229	NE 10 AVE & 167 ST	17	15	SA	130	27.8	C	34.4	C	71.6	E
7	2003	SR 826 & NE 10 AVE	17	15	SA	130	36.0	D	57.9	E	140.4	F
8	2537	US 1 & N MIAMI BLVD	19	4	SA	150	55.6	E	59.8	E	79.2	E
9	3144	US I & NE 135 ST	19	4	SA	150	51.7	D	65.7	E	101.3	F
10	2555	W DIXIE HWY & 135 ST*	2	5	SA	150	48.4	D	51.9	D	81.6	F
11	2020	SR 826 & NW 2 AVE	17	15	SA	174	55.1	E	64.7	E	81.0	F

PM INTERSECTIONS

SAN - SIGNAL ASSET NUMBER
TPN - TIMING PLAN NUMBER
* SIGNAL TIMING ESTIMATED

Proposed and Potential Transportation Improvements

Within the study area, there are proposed transportation improvement projects ranging from roadway widening to the NE extension of Metrorail along the US-1 corridor from downtown to northern Miami-Dade County.

These are contained within the MPO's 2007 TIP and their adopted Long Range Transportation Plan to the year 2030.

The roadway widening projects are the 4-laning of NE 14th Avenue (Sunny Isles Boulevard to Opalocka Boulevard); NE 15th Avenue (Miami Gardens Drive to Sunny Isles Boulevard); the 6-laning of Miami Gardens Drive (I-95 to Biscayne Boulevard) and the 6-laning of West Dixie Highway (NE 125th Street to NE 163rd Street).

Although several roadway segments would be operating at poor LOS, it is not generally feasible to add new lanes. Most of the roadways do not have available right-of-way (R/W) to effectively accommodate additional lanes; and are also fully developed with extensive amount of businesses and residential uses. Increasing the number of lane s would not only be very costly in terms of acquiring the R/W, but creating negative impacts to both the residential and business communities.

There is no doubt that the future extension of Metrorail will help to divert many trips from the private vehicle with the associated improvements in congestion and LOS. However, there are many other improvement opportunities such as traffic signalization, transit and Transportation Demand Management (TDM).

Traffic signal operations improvements are typically modifications to the signal phasing and timing. They can also provide for other intersection improvements such as additional turning lanes, increasing the existing length for storing queued turning vehicles, etc. All these improvements either by themselves or combined, are often times very effective in improving LOS and reducing their associated vehicular delays. It is also recommended to analyze a large portion of a roadway facility with the objective of improving traffic signals coordination. Signal coordination/synchronization, if done correctly, can significantly improve the LOS and expedite traffic flow along the arterial.

Another important aspect is the assessment of existing transit service and identifying potential improvements such as increasing transit service frequency, new or modified bus routes, feasibility of providing a local transit circulator among others.

Transportation Demand Management (TDM) is defined as the use of incentives, disincentives, and market management to affect travel behavior to shift to non-motorized and/or higher-occupancy modes, reduce or eliminate the need to travel, and/or shift travel onto less congested routes. TDM is also used to mean the provision or expansion of alternatives to Single Occupancy Vehicle (SOV) travel, such as transit, bicycling, and walking. In recent years TDM has been targeted in federal legislation as potentially important pieces of the overall strategy to address congestion and air quality issues.

Origin and Destination Study
Coastal Communities Transportation Master Plan

As part of the recently completed Coastal Communities Transportation Master Plan, an extensive origin and destination study was completed. While this study could not be replicated, it does have relation to this Traffic Flow Study. The traffic using the causeways to connect this study area with that of the coastal communities affects both study areas, and helps gain an understanding of the regional transportation picture. Because of geography, any vehicle entering the barrier island also must affect the North East Dade study area.

In 2005, the City of Miami Beach, in a joint effort with its neighboring coastal communities in northeastern Miami-Dade County (City of Aventura, City of Sunny Isles Beach, Town of Bal Harbour Village, Town of Bay Harbor

Islands, Town of Surfside, Town of Golden Beach and City of North Bay Village) undertook the development of a transportation master plan that assesses the traffic and transportation issues on the barrier islands. The goal of this plan is to produce short, mid, and long term multi-modal solutions to transportation issues, on a sub-regional basis.

This effort strives to set an example as a targeted sub-regional attempt at transportation planning which is multi-modal in nature. Issues arrived at through accepted methodologies were supported by an extensive public involvement process. The study portrayed existing conditions and provided a picture of the origin and destination of traffic affecting the coastal communities. It made recommendations, which focused on coordinated multimodal improvements, as well as promoted the viability of routes for commuters traveling from the barrier islands throughout the greater Miami area.

It was coordinated with the Coastal Communities Transit Plan developed by the Center for Urban Transportation Research (CUTR).

Data sets from a variety of independent sources were used in this analysis. The main task of this study involved an Origin/Destination Study, an examination long sought by the coastal communities, to reveal the actual travel patterns used by drivers. This study used state of the art camera technology, which increases the accuracy and sample size of the data. For this analysis data is presented on several levels. The origin and destination data was employed, to show actual 6-hour movements. From this, movements at each screenline were examined. Trip length over multiple screenlines and zones was described.

Essentially it was discovered that the trip making patterns on the barrier islands are relatively short. Drivers desire to enter or exit the coastal network close to their origin or destination. This is due to the ambient congestion on the barrier islands, and the fact that the home/work employment distribution is not necessarily north/south, but east/west. It is believed that more regional commutes are made on the main land, where the system presents many more options.

O/D Relation to North East Miami-Dade

Many of the communities represented in the Coastal Communities Transportation Master Plan are also represented in the NE Miami-Dade Traffic Flow Study. The results of this Origin Destination Study are very relevant to this project. Through geographic circumstances, traffic that enters the barrier islands must utilize the North East Dade study area roadway network. The Barrier islands are a major attractant in the system drawing residents who work in other communities, tourists, and workers in the area. The largest contributor of traffic to the barrier islands according to the MPO model is the North East Dade area, with about 21 percent of incoming trips from this area. Next to the Downtown area, the North East Dade is the second most popular destination for trips from the barrier islands at about 10 percent of the total outgoing trips.

The majority of the traffic in the area in regards to the barrier islands is east west traffic. The large grid network on the mainland provides multiple options to get from one point to another. Barrier island trips tend to enter or exit that system on the causeway closest to their barrier island origin or destination. When going either to or from the barrier islands, the trip is generally formatted to drive as little as possible north or south on the island. If a person lives in South Dade but work in a northern area on the barrier islands, generally they do not cross over to the islands until they reach a northern causeway. Only in rare occasions would these people cross at a southern causeway and travel north completely on the islands until reaching their destination.

As a result of the above factor, barrier island trips tend to be short. The overwhelming majority of trips pass only two lines and no further. Traffic distributes on the mainland because there are better options for distribution. Additionally the home to work pattern is no longer north/south as perceived but spatially distributed throughout the county. There are however, sub regional trips being made, but these are not the major cause of congestion. The primary barrier island sub-regional flow is from all causeways, along Collins Avenue and using the Julia Tuttle Causeway. This is so because the Julia Tuttle directly connects with I-95 and the Airport Expressway and provides an easy access and distribution point to all major roadways. It also directly links with Downtown Miami, which is a major commerce center.

The barrier islands are both an origin and a destination. The daily directional split is fairly even. But again, whether it is an origin or a destination, the side of the trip that involves the islands tends to dictate the route taken for the entire trip. People want to get on and off of the traffic network of the barrier islands as quickly as possible which means that trips moving between this major origin and destination must use Northeast Dade roads as a conduit.

Origin/Destination Survey

An origin/destination study attempts to identify where a trip begins and where the trip ends. Because of the isolated nature of this study area, the natural entering and exiting points were along the causeways that connect the barrier islands to the mainland. Therefore, origins and destinations of a trip were determined by which causeway a trip entered and exited the study area. To analyze vehicle movement, screenlines, which are imaginary lines that bisect a planning area, were established on the causeways. Screenlines were also placed on Collins Ave. in key locations to show north/south vehicle movement between the three zones. The study area was divided into three zones so that intra-study area trips could be examined. Local trips that begin and end within a single zone are also reviewed in this study.

Methodology

It was decided that this origin/destination study would be undertaken with the use of cameras filming license plates of the vehicles at a series of screenlines (A through I). The following screen lines were established:

- A – Collins Avenue at the County line *Golden Beach*
- B – William Lehman Causeway east of Biscayne Boulevard *Aventura*
- C – Sunny Isles Boulevard east of Biscayne Boulevard *Sunny Isles Beach*
- D – Collins Avenue at the Haulover inlet *Miami-Dade County*
- E – Broad Causeway east of the toll plaza *Bay Harbor Islands*
- F – Kennedy Causeway west of North Bay Village *North Bay Village*
- G – Indian Creek/Collins Avenue at 65th Street *Miami Beach*
- H – Julia Tuttle Causeway west of the Hospital Complex *Miami Beach*
- I –MacArthur Causeway between Hibiscus Island and Parrot Jungle *Miami Beach*

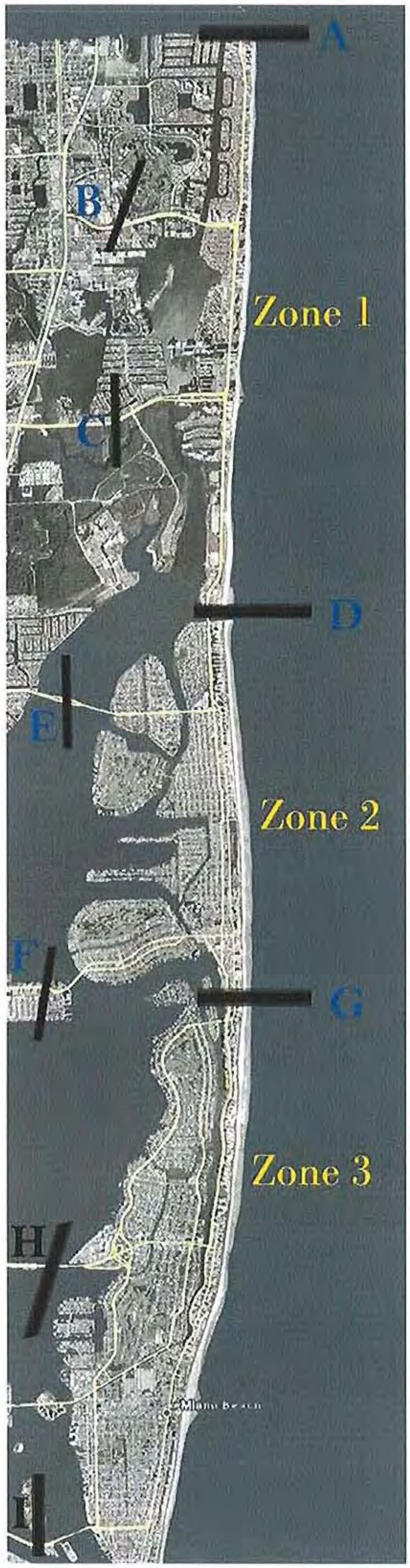
During the month of March, 2006, 52 cameras at 11 different locations throughout coastal northeast Miami-Dade County were installed to record 6 hours of the morning commute. One camera was mounted, per lane, at each of the screen lines in order to record the license plates that passed each screen line. The locations included 7 causeways and 3 key intersections along the A1A. The cameras were mounted on sign posts and traffic light poles. The timing for the camera recordings was carefully chosen. The month of March was used because it is the peak time of the year for seasonal residents (second home-owners or tourists) to be in the community. The middle of the week is significant because most commuters are likely to take a Monday or Friday off to enjoy a longer weekend than on a Tuesday, Wednesday or Thursday. The cameras recorded data during the morning hours from 6:30 to 12:30 to capture traffic during a rush hour period while the sun was up so that the cameras could read the license plates.

A computer program was used to automatically read the license plates and entered them into a database. The data was then entered into a program that automatically matched the license plates as they moved through the screen lines. The resulting information was a database of real life recordation of vehicle movement through the area that could be broken down into meaningful, isolated patterns. Ultimately, all trips could be accounted for by calculating how many screenlines a vehicle passed through.

- Trips that passed through only one screen line
- Trips that passed through two screen lines
- Trips that pass through three screen lines
- Trips that pass through four screen lines

Description of Study Area

The study area was divided into three zones for analysis purposes.

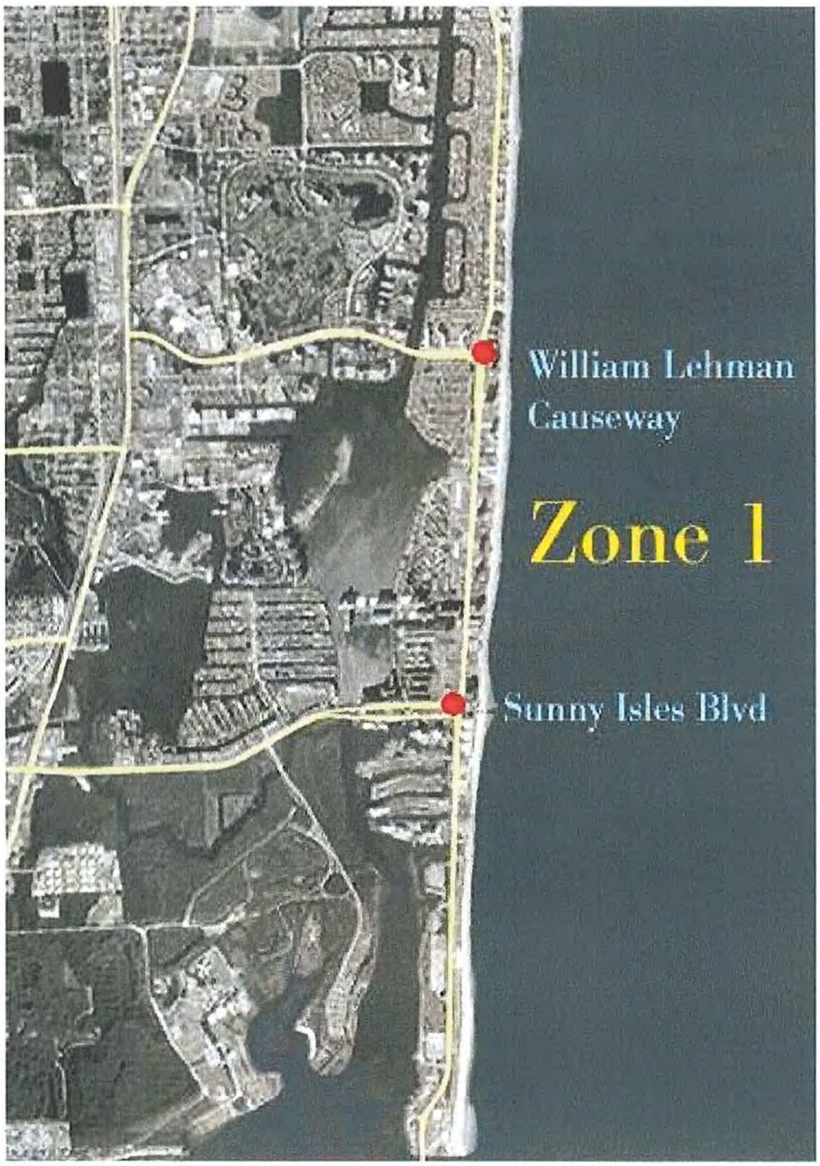


Zone 1 North Coastal Communities

Golden Beach, Sunny Isles Beach, Haulover Beach and Aventura

Zone 1 contains the County property encompassing Haulover Beach, and the communities of Sunny Isles Beach, Golden Beach and Aventura. Zone 1 is connected to the City of North Miami Beach by Sunny Isles Boulevard and to the County by William Lehman Causeway. Zone 1 being the northern most zone in the study area is connected to the City of Hallandale Beach in Broward County by Collins Avenue (A1A) as it crosses 215th Street. County 2000 population and employment projections show that Zone 1 contains 51,800 residents and 19,300 jobs. The employment in the zone is focused in one employment area. The Aventura Mall area has 12,600 employees, which is about 65 percent of the total employment in the zone.

Figure 2-30
Zone 1



Zone 2 Mid Coastal Communities

Bal Harbour, Bay Harbor Islands, Surfside, Miami Beach

Zone 2 contains the area of Miami Beach known as North Beach and the communities of North Bay Village, Indian Creek, Surfside, Bal Harbour, and Bay Harbor Islands. Zone 2 is connected to the Cities of Miami and North Miami by the Kennedy Causeway and the Broad Causeway. The boundary between Zone 2 and 1 is just north of the Haulover Inlet Bridge. County 2000 population and employment projections show that Zone 2 contains 55,500 residents and 11,700 jobs. The employment in the zone is focused in one employment area. Bal Harbour/Bay Harbor Island has 5,400 employees, which is about 46 percent of the total employment in the zone.

Figure 2-31
Zone 2

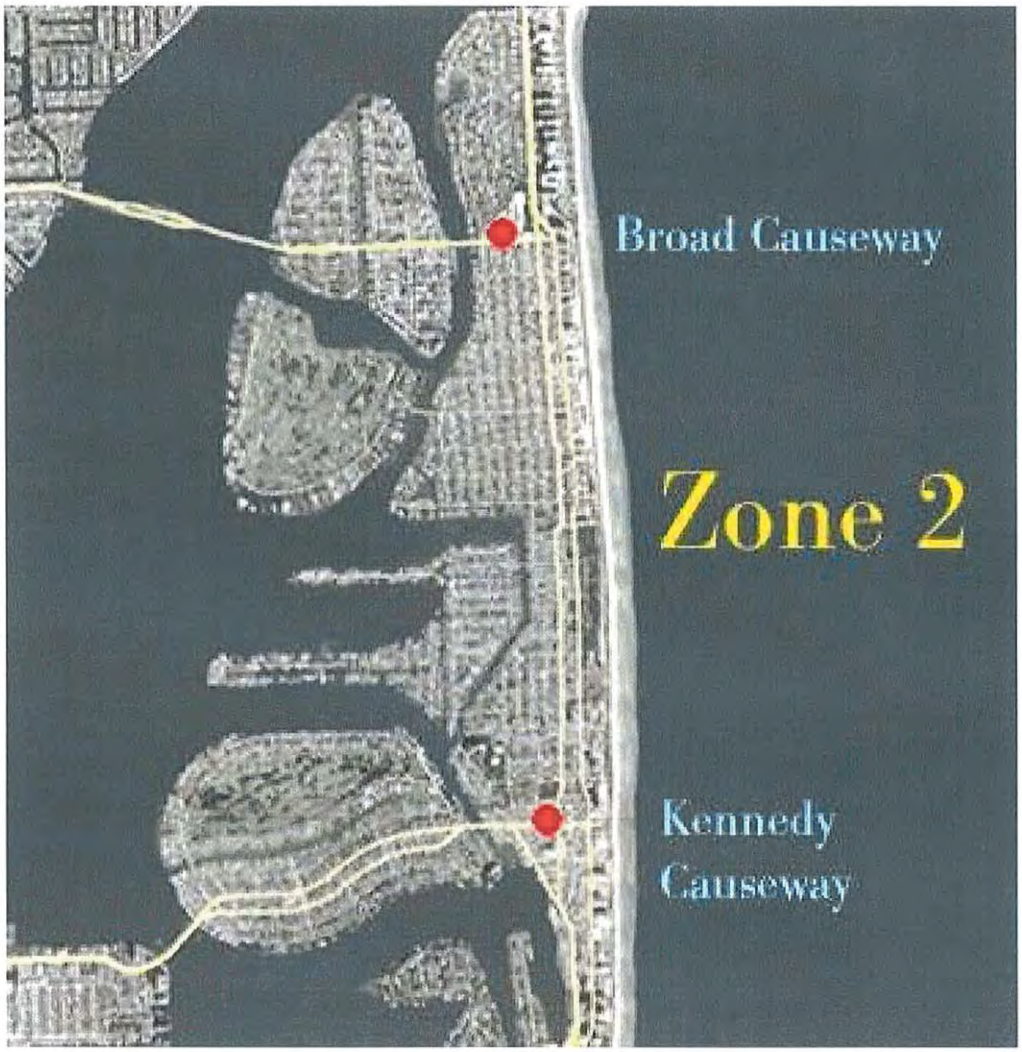
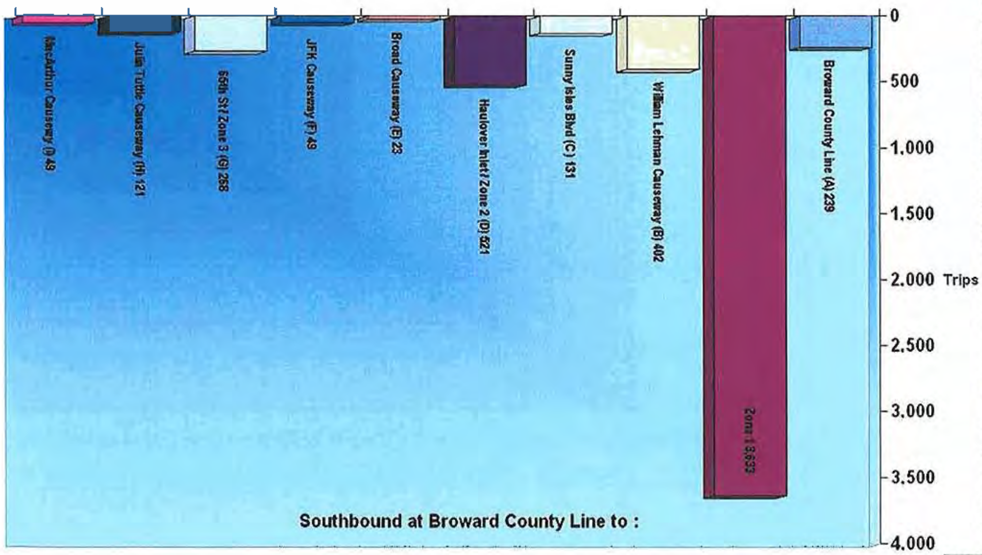
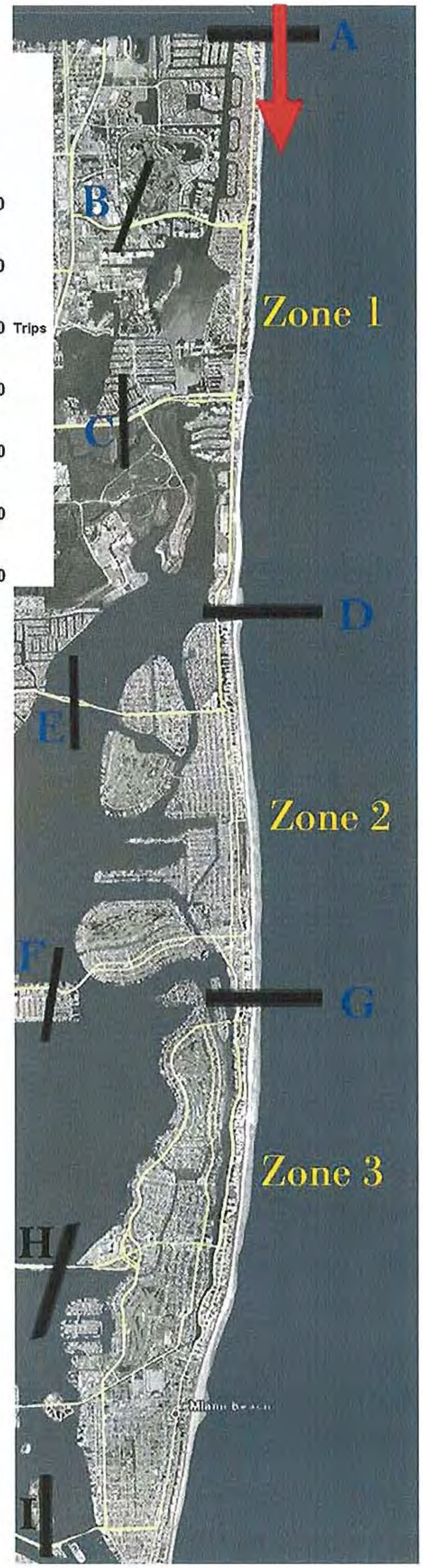


Table 2-5
MPO Regional Model Trip Results
for the Coastal Communities

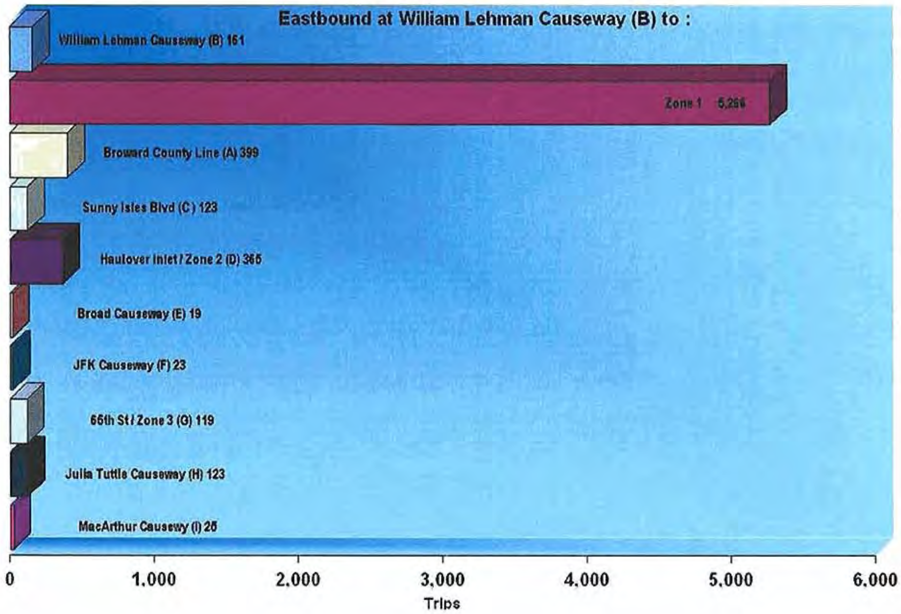
Zone	Trips Attracted to Coastal Communities From Other Areas	Trips Generated Within Coastal Communities Destined for Other Areas
Internal	38.82%	48.31%
Miami Gardens/NE Dade	20.75%	10.06%
Downtown Miami/Brickell	11.38%	16.05%
Civic Center	7.48%	9.25%
North Miami	6.93%	5.99%
Hialeah	3.14%	2.42%
FIU/Sweetwater	2.80%	0.94%
South Miami	1.99%	1.91%
Coral Gables	1.94%	1.35%
Kendall	1.48%	0.33%
Airport West/Doral	0.84%	2.97%
Miami International Airport	0.44%	0.05%
Pinecrest	0.56%	0.17%
Cutler Bay	0.77%	0.11%
Gould	0.40%	0.01%
Homestead	0.25%	0.02%

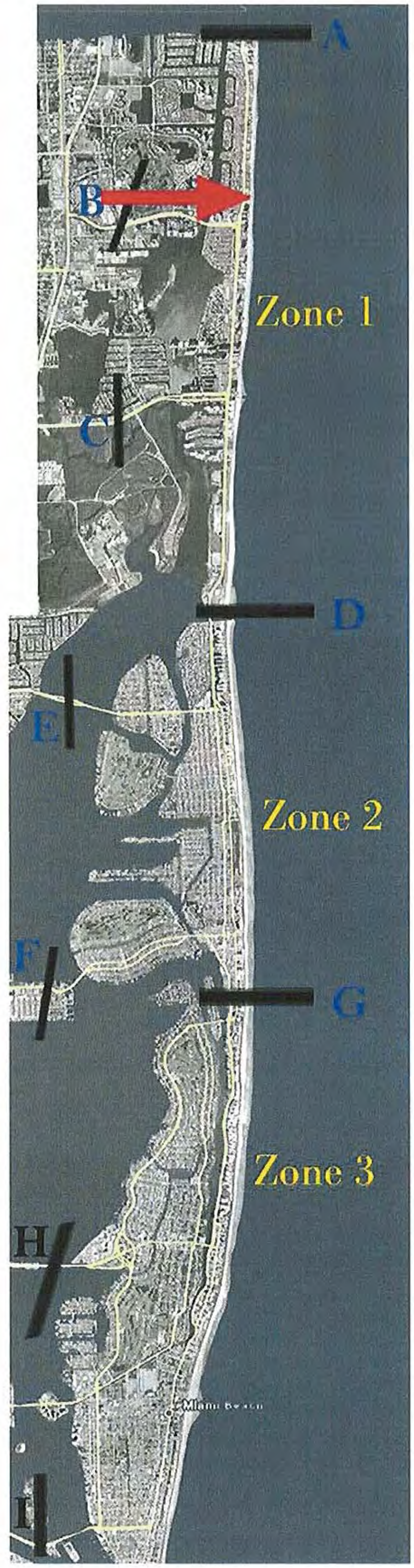
Causeway Analysis



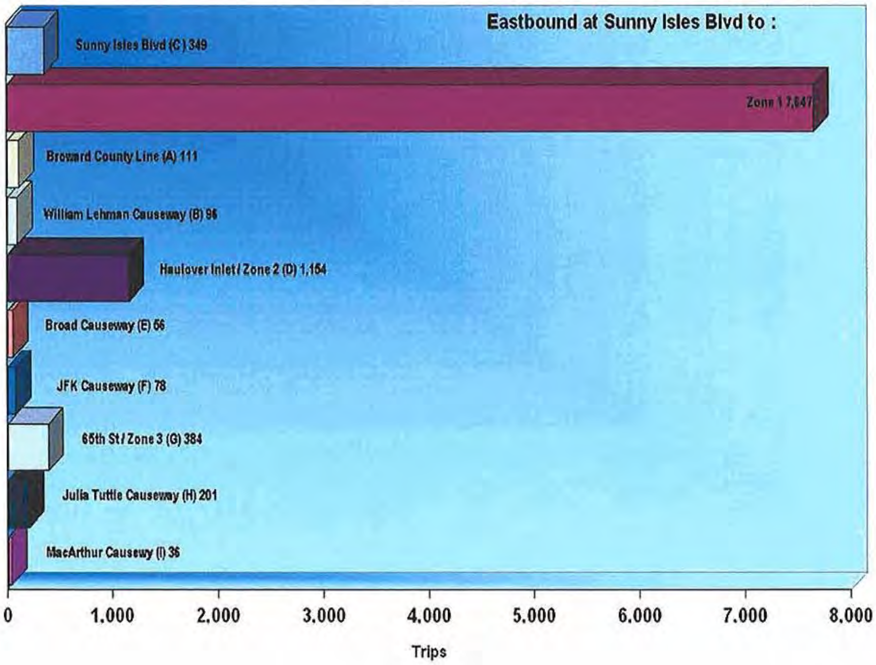


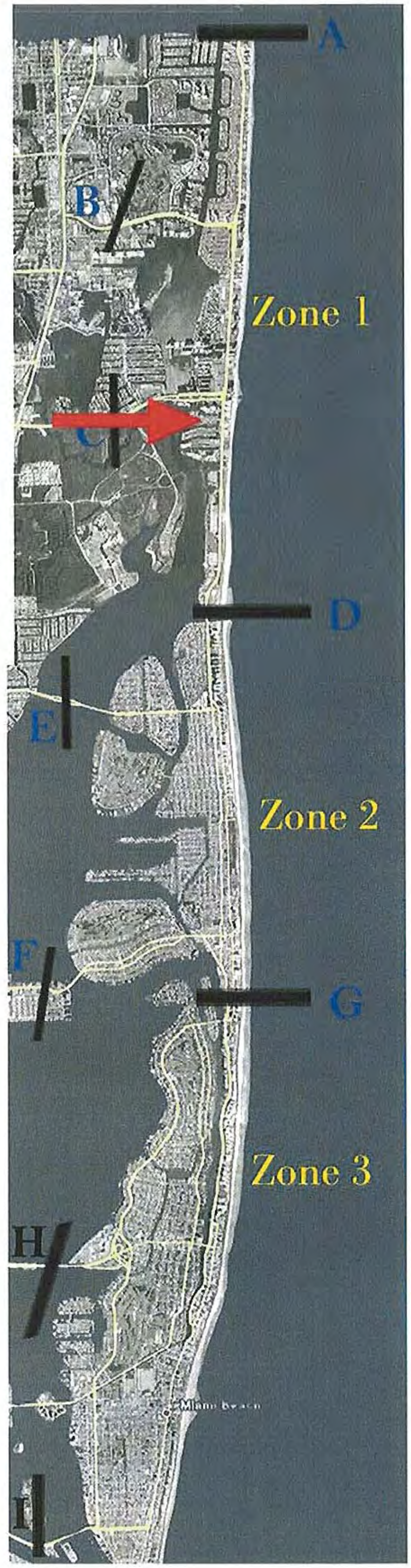
The traffic coming into the system southbound at the Broward County line as compared to the other entrances/causeways was relatively low. The majority of the traffic that does enter at this location stays on the barrier islands. The vast majority stay, and most likely work in Zone 1. The 4 most prevalent destinations were the 3 zones and the William Lehman Causeway, which just happens to be the closest causeway.



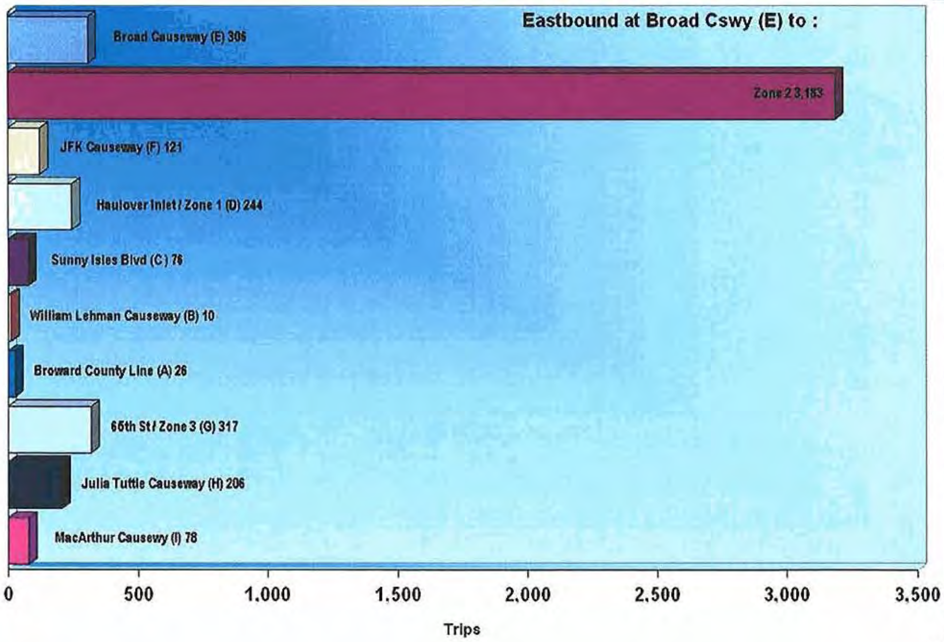


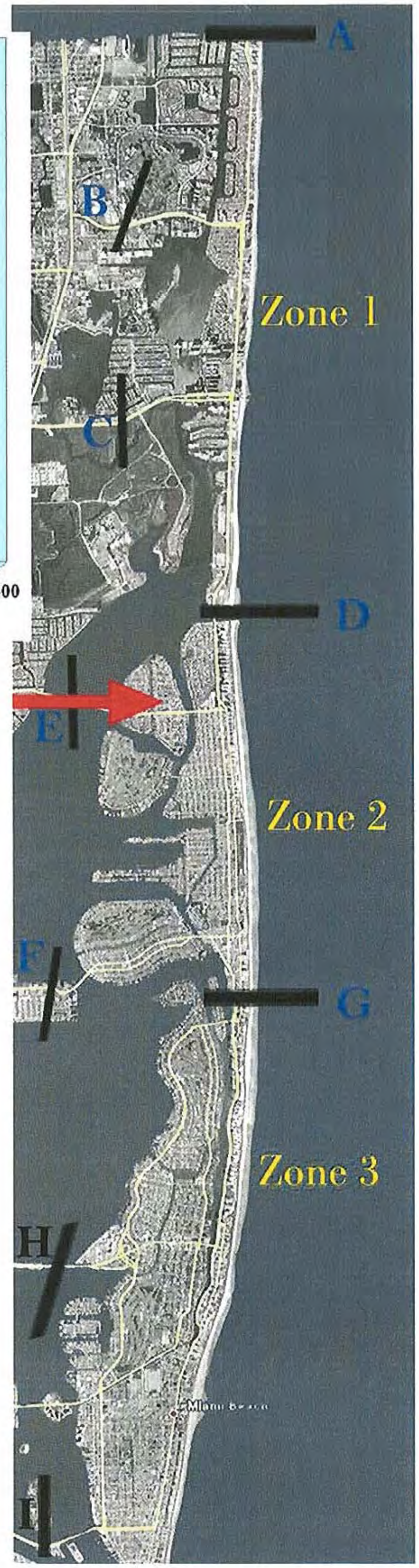
The eastbound vehicles at the William Lehman Causeway generally stop in Zone 1. Approximately 80 percent of all inbound traffic at this location stops in the home zone (Zone 1). The 3 most prevalent movements were to Zone 1, Zone 2 and Screenline A. Meaning most of this traffic enters near their final destination, or leaves the network into Broward County, which is the next closest screenline.



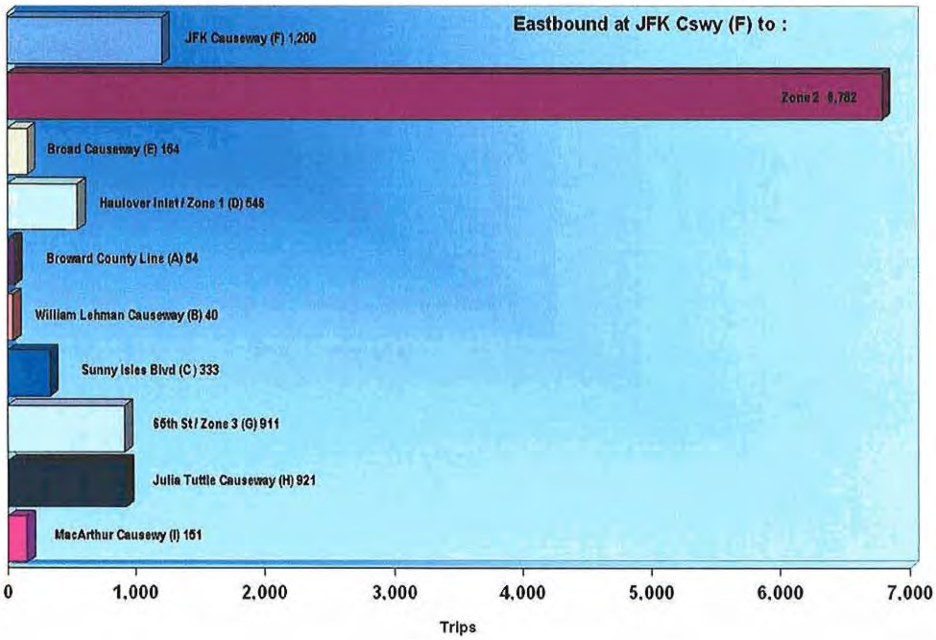


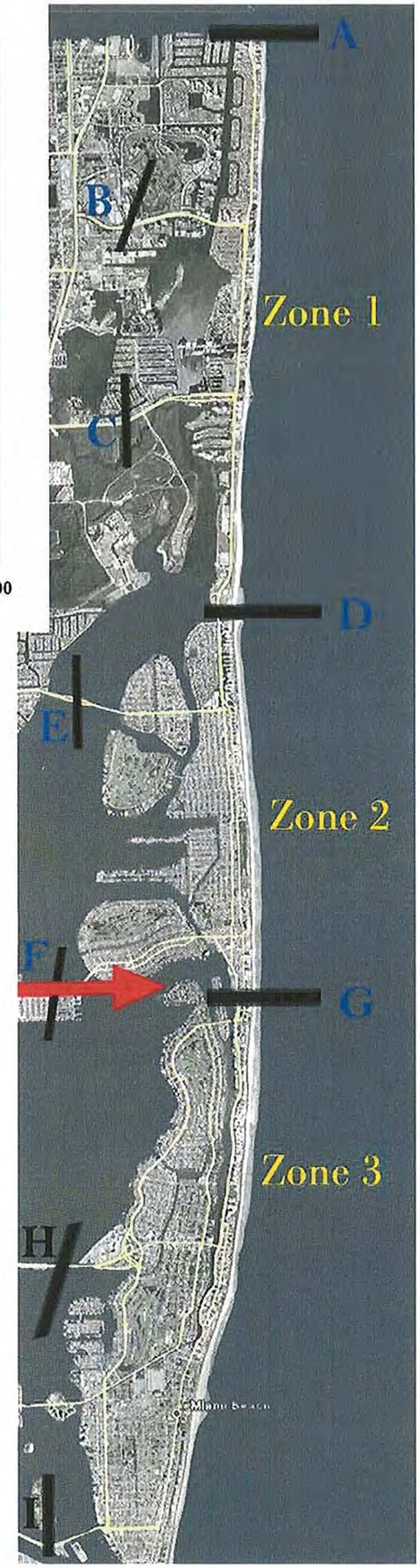
Very similar to the other Zone 1 entrance locations, Eastbound traffic on Sunny Isles Boulevard, generally stays in Zone 1. And yet again, the 4 most common movements end either in one of the three zones, or through Screenline A (Broward County Line). Thus, entering the system as close as possible to its final destination.



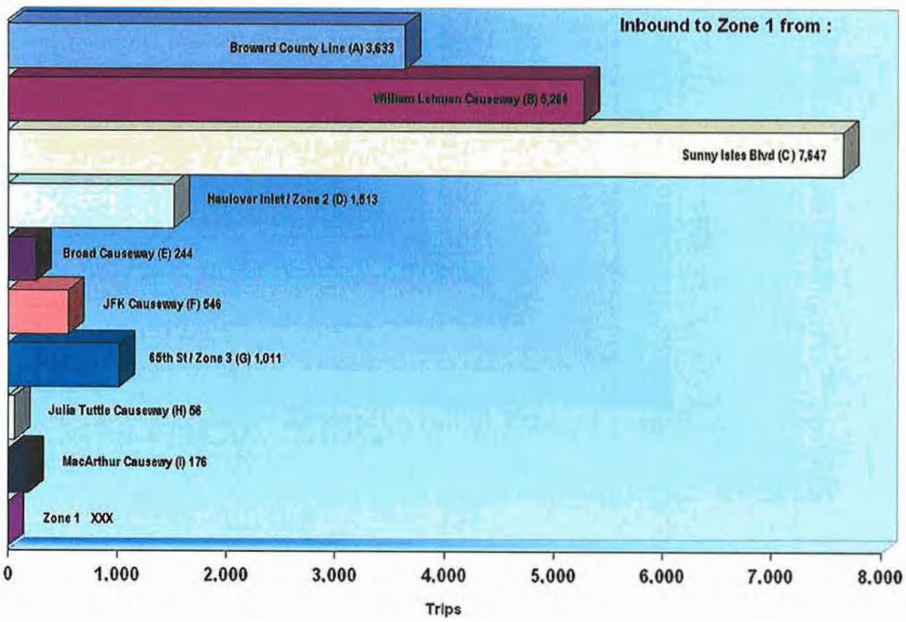


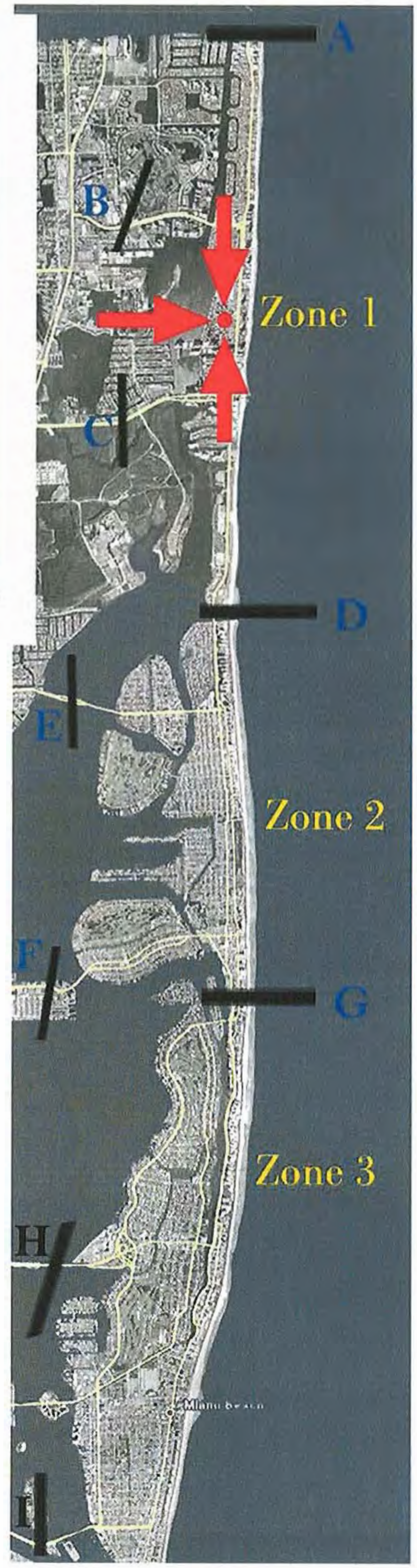
Eastbound traffic on the Broad Causeway follows suit with the previously mentioned Screenlines. The far most common movement is to stop in the home zone. The top movements in the location are Zone 2, one 3, and leaving on the same Broad Causeway. So once again, the traffic seems to be entering the system at the causeway closest to its final destination.



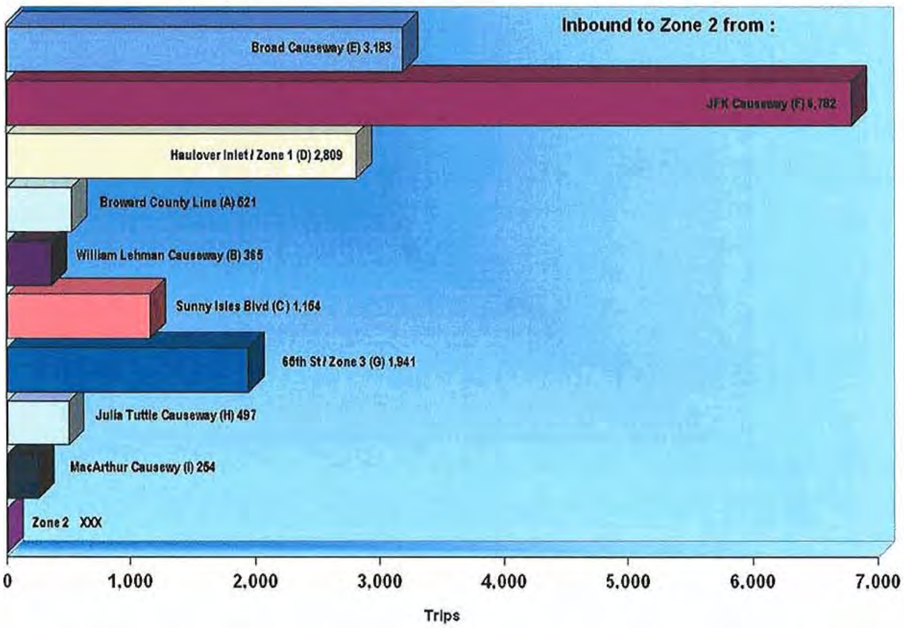


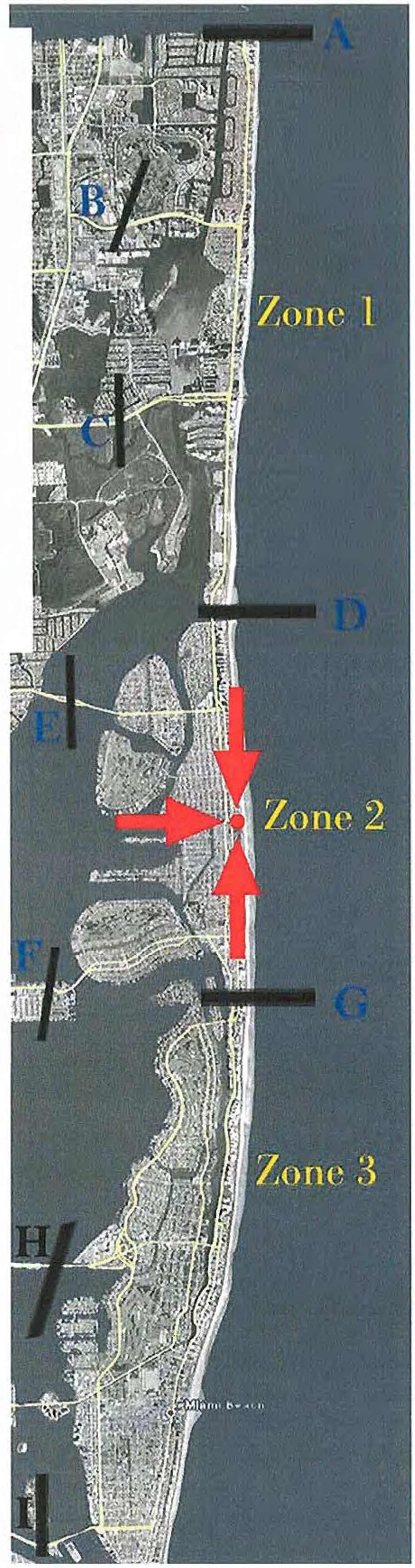
The traffic on the JFK Causeway is similar to all eastbound traffic on causeways to the north of it. The main movement is to stop in Zone 2, or its home zone. The other top movements are to Zone 3, to leave back on the JFK Causeway, and to the Julia Tuttle Causeway. The movements to the Tuttle are most likely done in an effort to utilize a causeway that is more of a freeway style than that of the JFK. These movements are most likely being made by residents living on the islands located on the JFK Causeway and not likely being made by residents from the mainland.



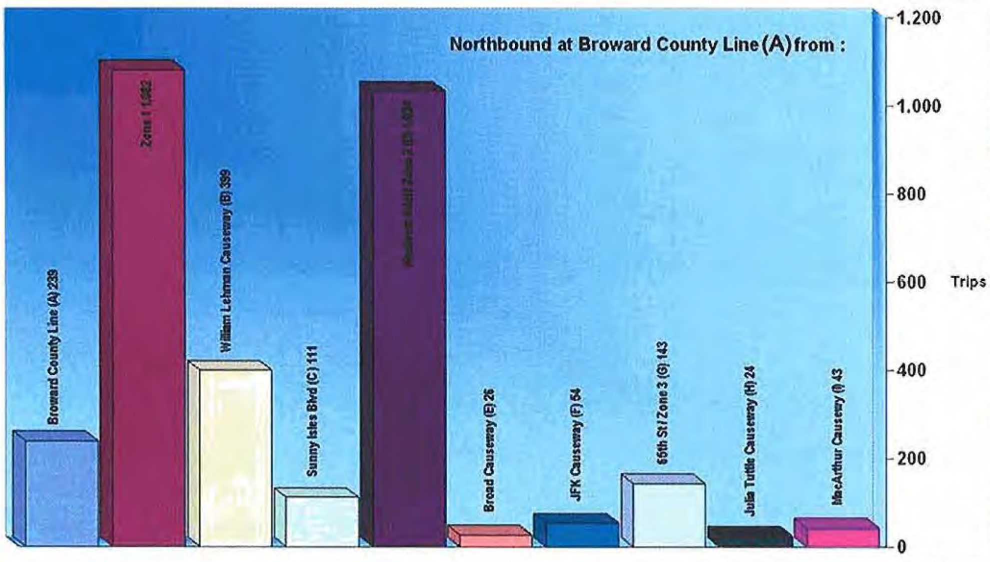


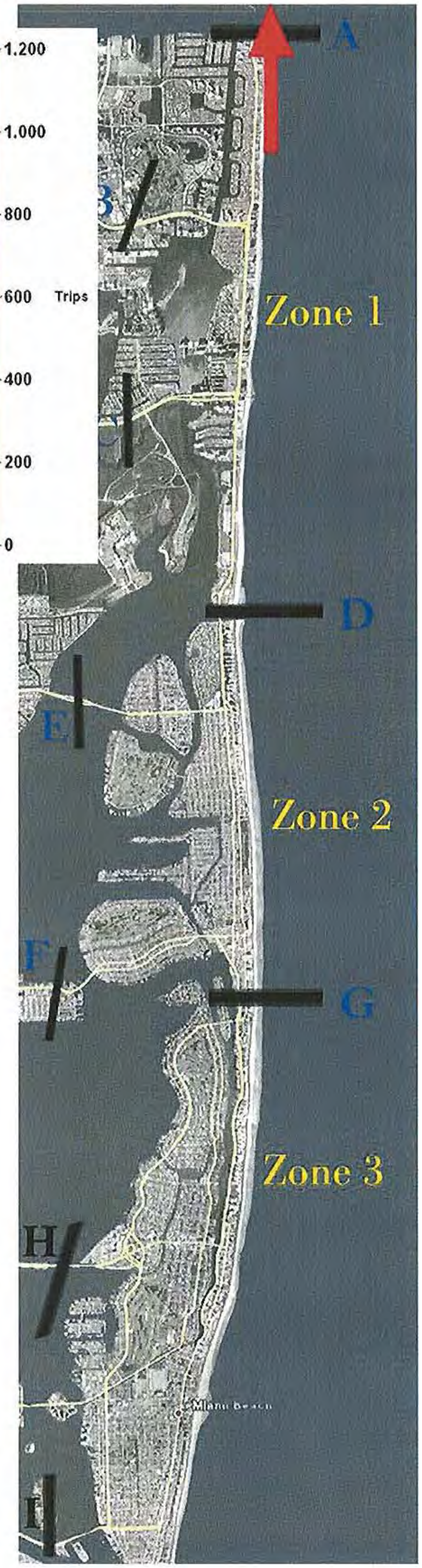
The traffic flowing into Zone 1 is generally from the nearest screenlines. The three screenlines in Zone 1 (A,B,C) are by far the three largest contributors to its traffic and it appeal as a destination. As a second tier of incoming traffic, Zones 1 and **2 are** the next largest contributors. This shows that the majority of the **east** west traffic is from the 3 causeways within the zone. And the north south traffic is mainly due to traffic that starts internally in the network, meaning the other 2 zones.



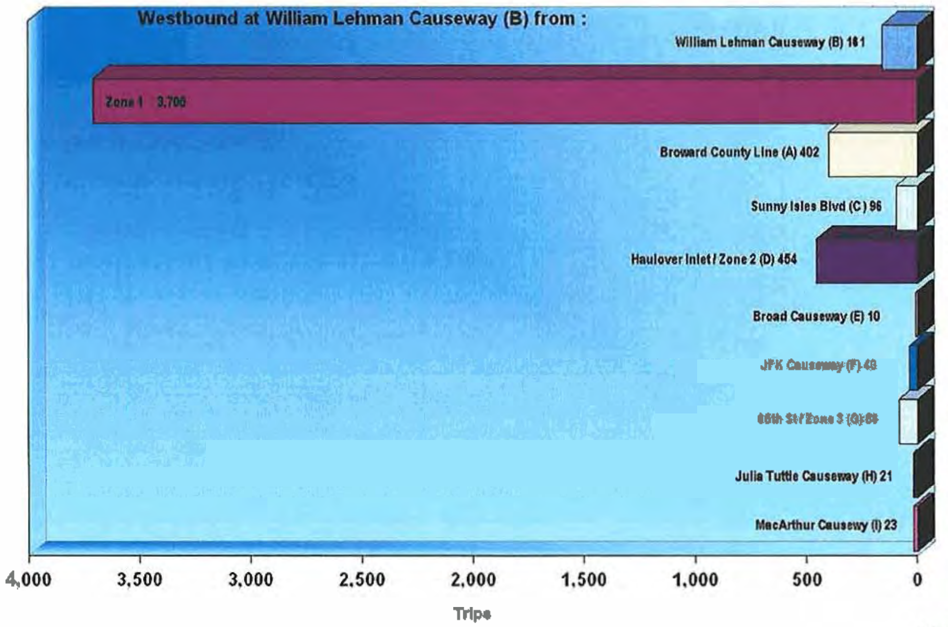


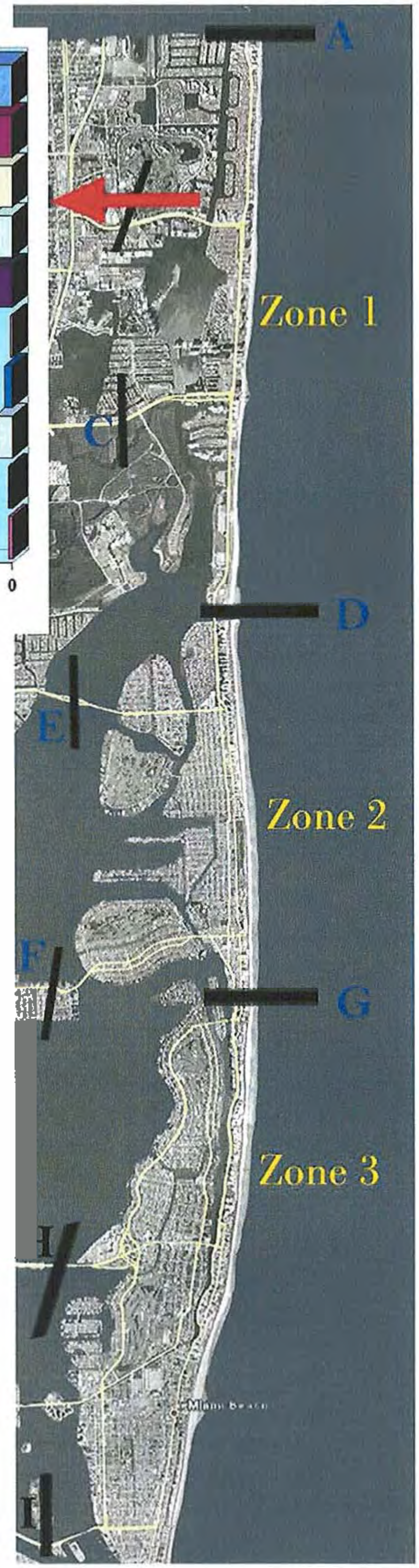
Inbound Zone 2 traffic is generally coming from the 2 causeways located within the zone. Those being the Broad and JFK Causeways. The next level of contribution comes from Zone 1 and Zone 3 as well as somewhat significant traffic coming from Sunny Isles Boulevard. This shows that most east west traffic is from the 2 causeways in the zone, as well as some from Sunny Isles Boulevard which is the nearest causeway outside of the zone. The north south traffic is also again, coming from the other 2 zones, making it internal traffic to the system.



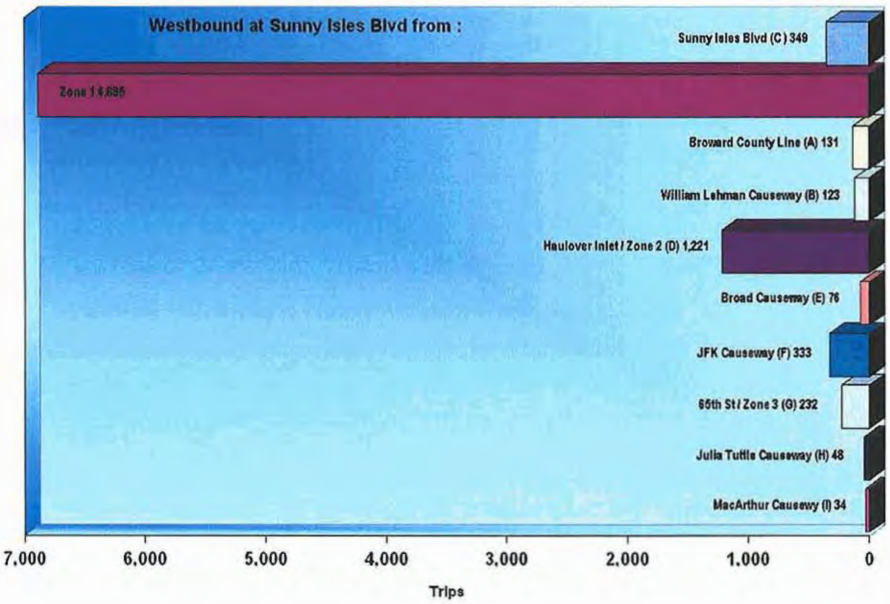


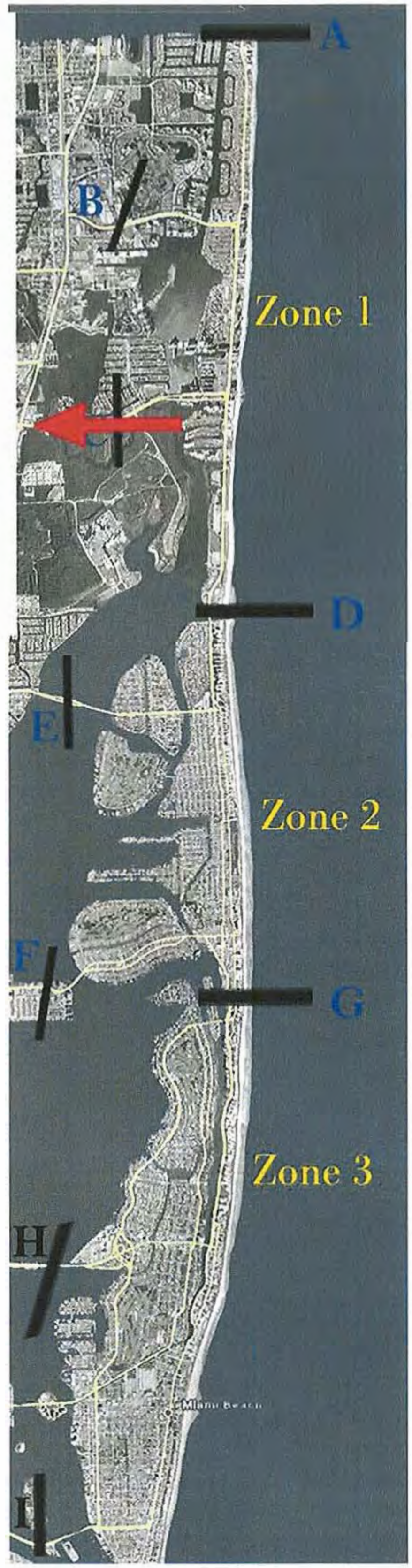
Northbound at the Broward County Line, the trips are mostly internal. Zones 1 and 2 provide large numbers of trips while most of the causeways do not. The 2 causeways that provide the most traffic are the Lehman Causeway and Sunny Isles Boulevard. Those are also the 2 closest causeways.





West bound traffic on the William Lehman Causeway is coming almost exclusively from Zone 1, or the home zone. Near 75 percent of the trips westbound on the Lehman are from Zone 1. The only other origins providing even the slightest bit of traffic are Zone 2 and Broward County. Again showing that traffic is generally dictated by the end of the trip that involves the Barrier Islands.





Approximately 75 percent of the westbound traffic on Sunny Isles Boulevard is originating in Zone 1. The traffic is again choosing to leave the barrier islands at the closest causeway. The next largest contributor is Zone 1 at near 12 percent. Very little traffic westbound on Sunny Isles Boulevard came from another causeway.

THE CORRADINO GROUP

NORTHEAST MIAMI DADE TRAFFIC FLOW STUDY

Task 3 : Needs Assesment

THE CORRADINO GROUP

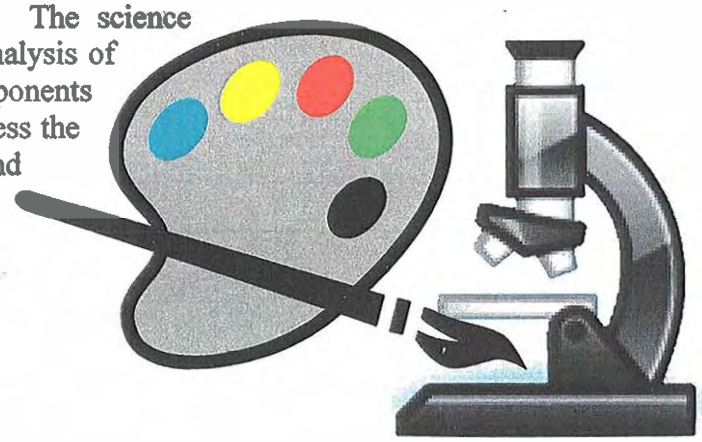
AUGUST, 2007

INTRODUCTION

This task represents an assessment of needs relative to traffic and mobility in the Northeast Miami Dade study area. The needs have been developed from the analysis of the collected data, which was originally presented in the second task of the study. The results of this will be the development of specific multi-modal projects designed to address the identified needs as presented from the analysis and the public involvement.

To perform this task an analysis of individual roadway links, intersections and corridors was undertaken. An explanation of the methodology for each has been provided as well as a detailed overview of the Level of Service concept. Traffic performance was projected to 2015 and 2030 to provide an assessment of future system performance. For each analysis area, a description is provided of planned projects already existing in the Long Range Transportation Plan or Transportation Improvement Program. A description of typical roadway sections is provided, for each roadway. Additionally for links and intersections that fall below LOS standards, where no improvements are currently planned physical improvements that would bring them into compliance are recommended. East/west connectivity is discussed relative to seeking congestion relief either through a new corridor or modification of an existing one.

Quality transportation planning can be characterized as a combination of art and science. This report attempts be accommodate both. The art is in deciphering what is wanted through intensive public involvement and one on one conversations. The science determines what is needed through detailed analysis of data. The melding of these important components results in the list of projects developed to address the most important and impactfull issues and concerns in the study area.

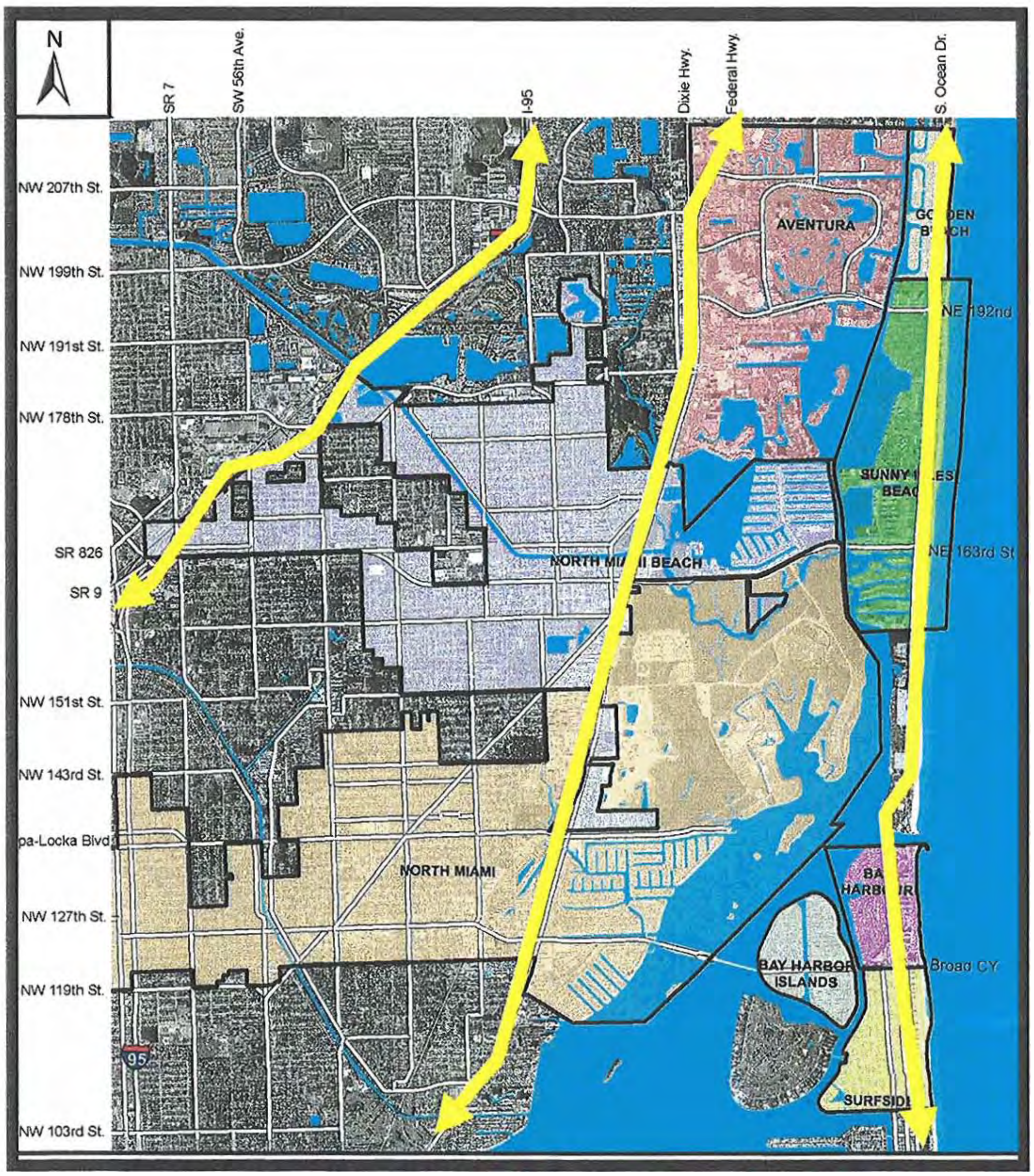


SUMMARY

This project examined general mobility in the Northeast Miami Dade County study area. As such, several levels of analysis have been undertaken, including a review of roadway links and intersections, as well as transportation corridors.

The study area is made up of a series of east/west and north/south corridors. The roadway network is best described as an interrupted grid. Few corridors traverse the entire study area. From a north/south perspective, three corridors carry the bulk of the system traffic and traverse the entire area. These include:

- I-95
- Biscayne Boulevard
- Collins Avenue



East / West mobility is characterized by five, corridors which connect I-95 and Biscayne Boulevard:

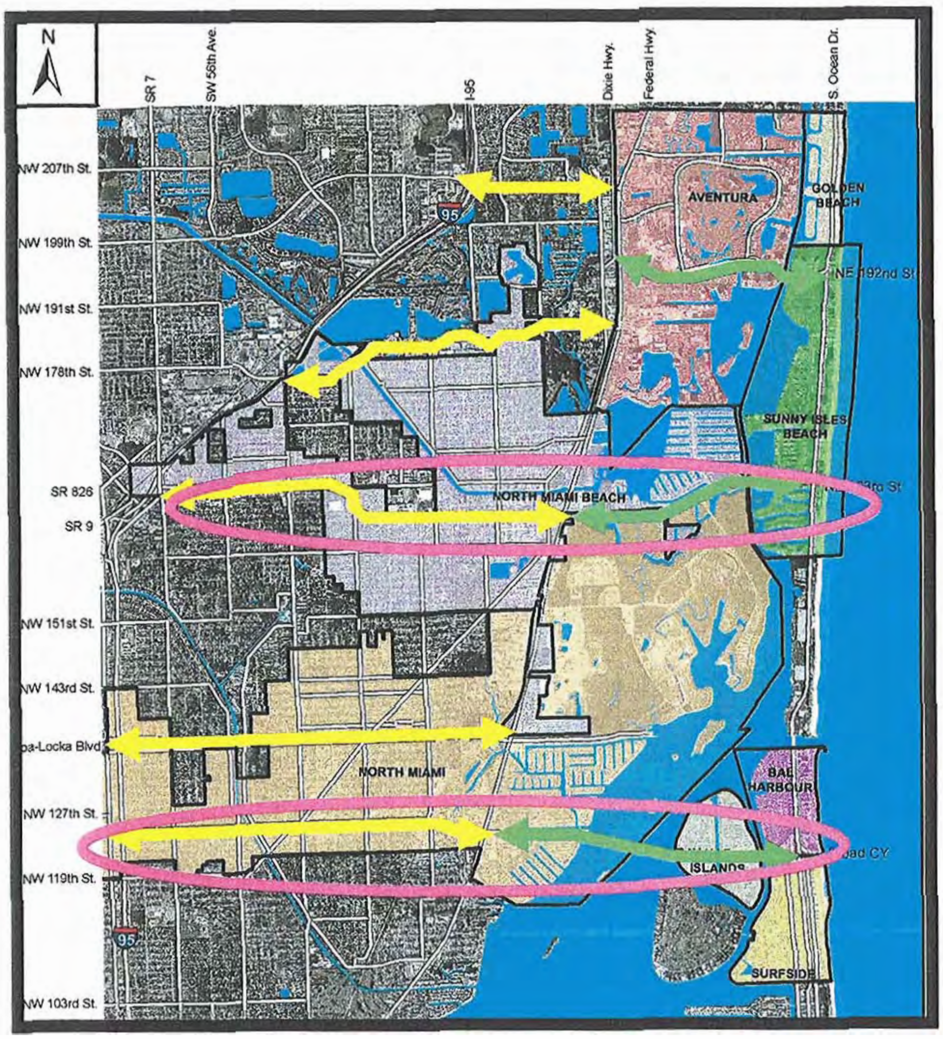
- Ives Dairy Road
- Miami Gardens Drive
- 167/163rd Street
- 135th Street
- 125th Street

The mainland and barrier islands are connected by three causeways:

- William Lehman
- Sunny Isles
- Broad

Of these east/west corridors only two connect the barrier islands directly with I-95:

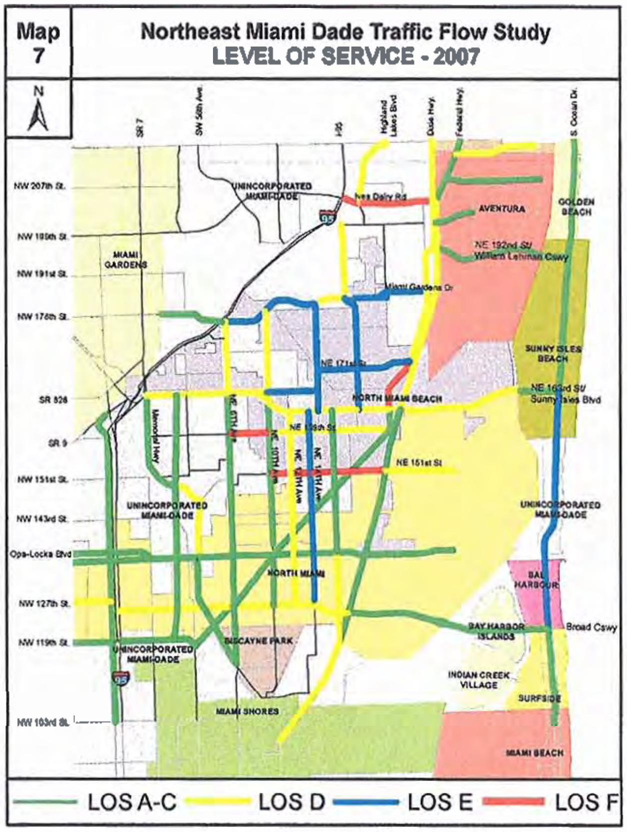
- 167/163rd Streets – Sunny Isles Boulevard
- 125th Street – Broad Causeway

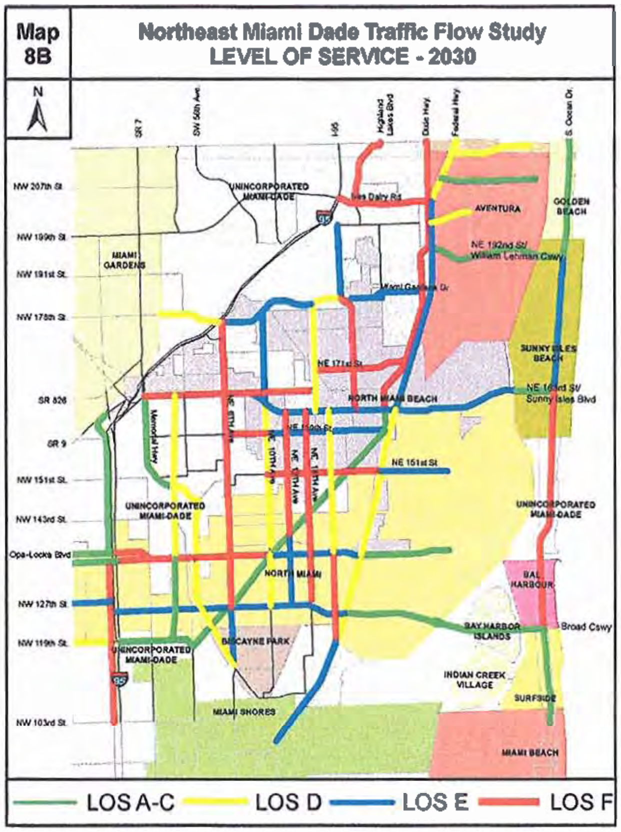


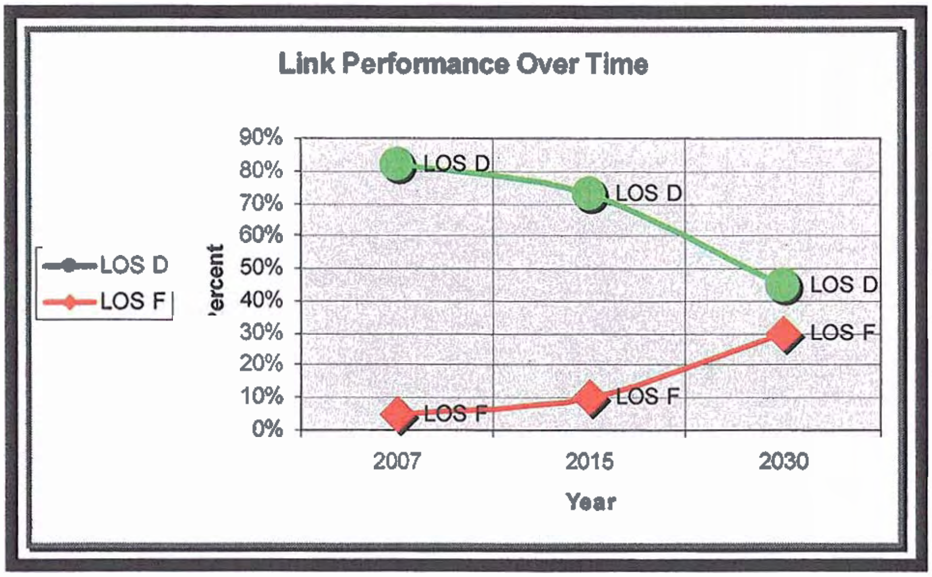
Links

Today the roadway links operate relatively well. Of the seventy-five roadway links analyzed, four links or 5 percent operate in a failing condition (LOS F). These include:

- West Dixie Highway between 171st and 163rd
- Ives Dairy Road between I-95 and Biscayne Boulevard
- 159th Street between 6th Ave and 10th Ave
- 151st Street between 10th Ave and Biscayne Boulevard



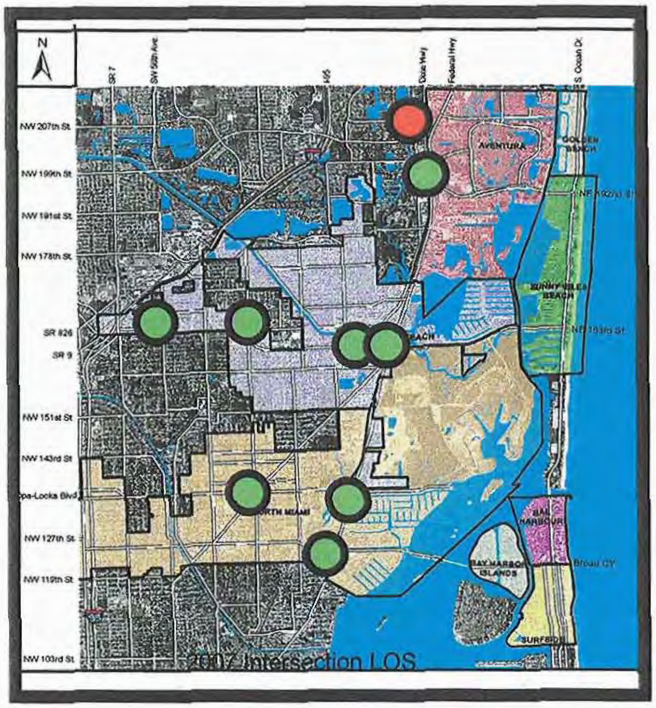


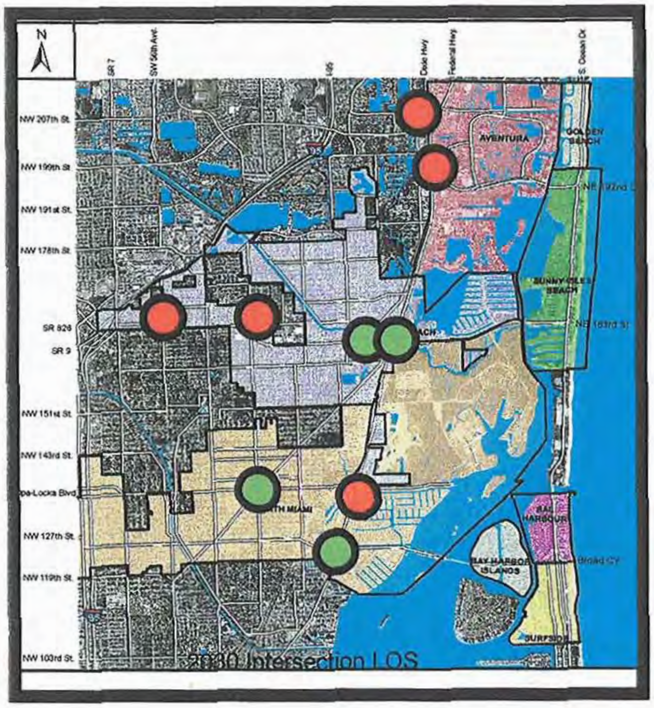


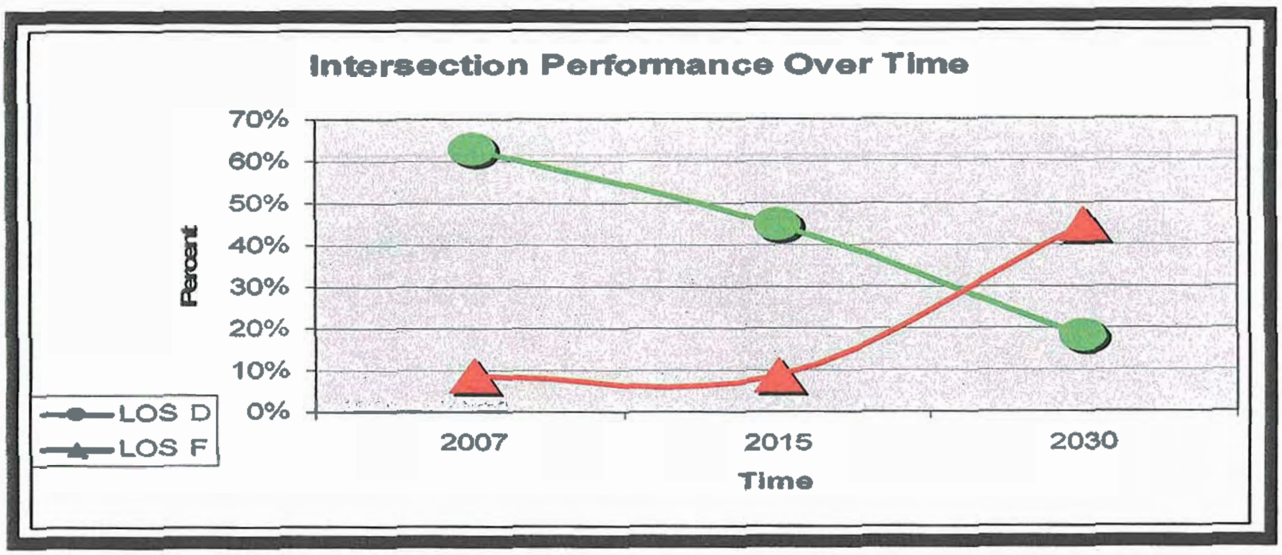
The vast majority of the links, (62 of 75), or 82 percent operate at an acceptable LOS D or better. This situation will be reversed within the planning horizon. By 2015, the number of failing links will double. The number of acceptable links will shrink to 55 links (73%). By 2030 the number of failing links will increase to 23, going from six percent to 30 percent. Acceptable links will shrink to 34 or from 82 percent to 45 percent of all links.

Intersections

The intersections within the study area are in the same condition. Often it is the intersections which govern the overall feel of constriction in a network because they create the bottlenecks where traffic begins to slow. Eleven intersections were studied as part of this project. The worst conditions were in the PM peak hours. In 2007 all but one intersection (US-1 & Miami Gardens Drive) operated better than LOS F, with seven of eleven or 63 percent operating at LOS D or better. By 2015 there is still one LOS F, but five of eleven or 45 percent will operate at LOS D or better. By 2030, the numbers will be reversed with 45 percent of the intersections operating at LOS F and only 18 percent (2 of 11) operating at LOS D or better.

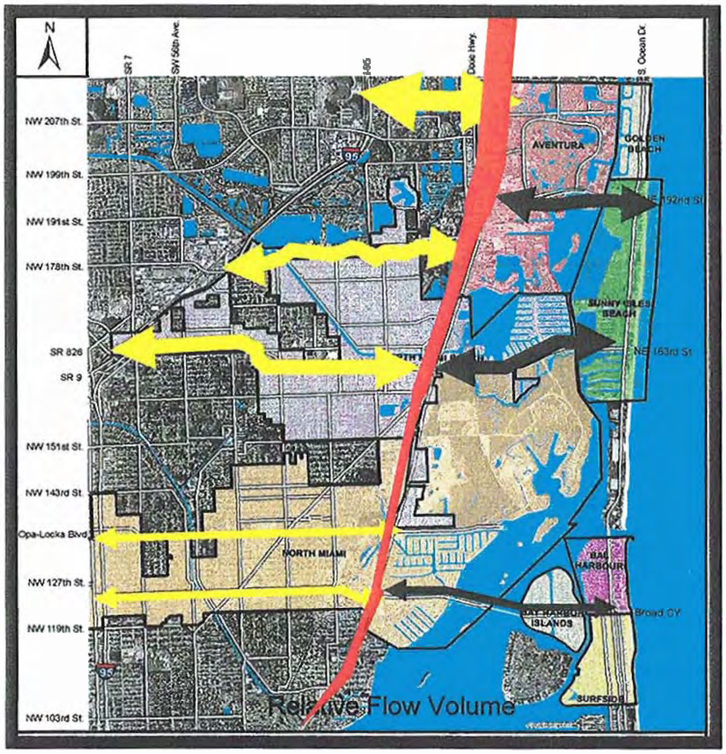






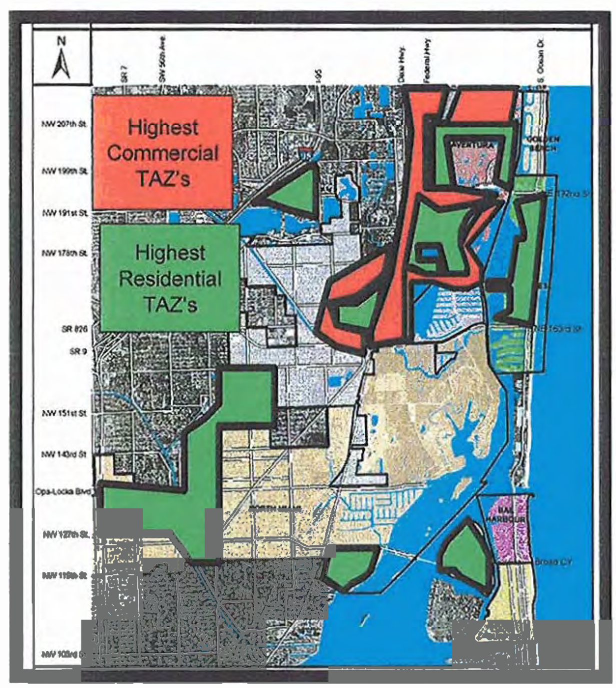
Corridor Flow

Overall the Northern part of the study area is carrying much more volume than the southern part. As an example Ives Dairy Road carries over 4,500 trips in the PM peak hour, while 135th Street, the southern most east/west corridor carries less than 1000 trips.



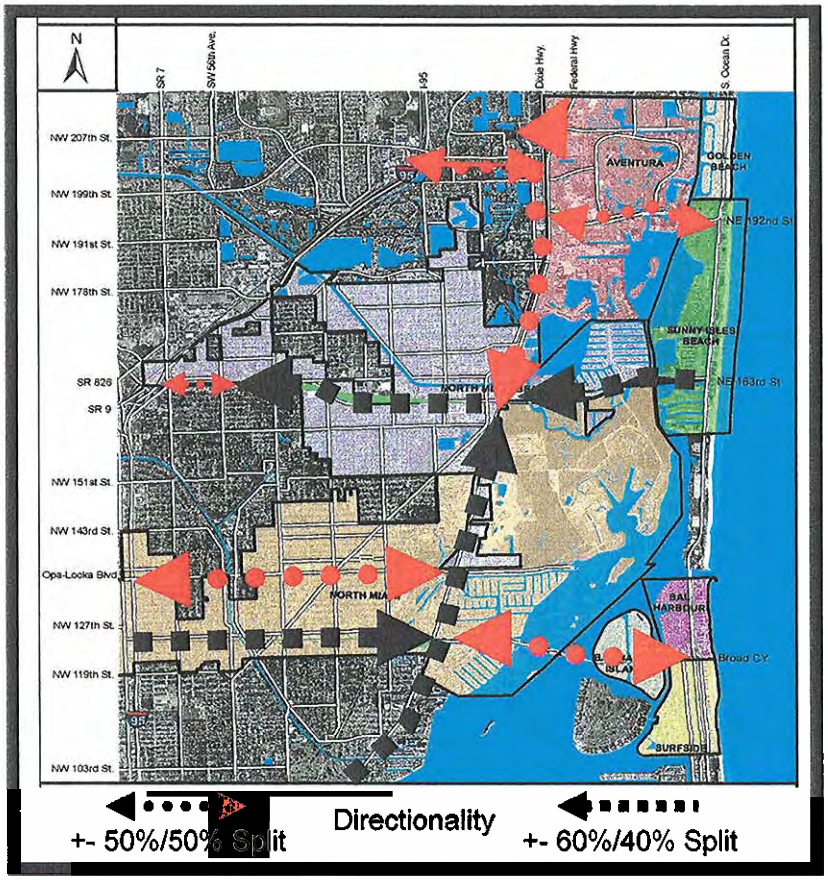
Each corridor connecting I-95 and Biscayne Boulevard has lesser volumes than the corridor to its north. The same is true on Biscayne Boulevard. The volume on Biscayne Boulevard south of Ives Dairy Road is about 6,400 trips. This volume decreased by 65 percent at 125th Street south of Broad Causeway to 2,300 trips.

The analysis of the links, intersections and corridors shows several interesting characteristics relative to overall traffic flow. The bulk of the traffic volume is in the northern part of the study area. This can partially be explained by the fact that the northern roads have more lanes, and more capacity, therefore more volume. While this is true because Ives Dairy Road and Miami Gardens both have six lanes, and 167/163rd Street has eight lanes and both 135th Street and 125th Street have four lanes. Further analysis of vehicles per lane as an indicator of congestion shows that the northern roads are also most congested. Ives Road carries nearly 750 vehicles per lane, while the highest total vehicles per lane is on 135th Street at 445 vehicles per lane. Even the William Lehman Causeway has the highest vehicle per lane of any of the causeways at over 450 vehicles per lane.



The intersection of 163rd Street and Biscayne Boulevard is the epicenter of traffic congestion in the area. All roadway flows seem to maximize in this general area. It provides the most access and most ability to distribute to the regional network.

Directional flow is generally balanced through the study area except in a few key locations. The reasons for this have everything to do with transportation and land use. The area in Aventura and along Biscayne Boulevard has the highest concentrations of both residential and commercial intensity. There is a home/work imbalance. It can be said that for the most part, Aventura residents don't work there and the employees in the area don't live there. There is a tremendous cross flow each day. Because of this cross flow of drivers, the northern part of the study area exhibits a relatively balanced directional split. Biscayne Boulevard at William Lehman Causeway is balanced 47 percent north bound / 53 percent South Bound. The Causeway itself is a 50/50 split.



Directionality can be seen on a few corridors. For east/west corridors, there is a predominant PM westbound flow on the 167/163rd Street / Sunny Isles Boulevard corridor. This is +-60 percent westbound, +-40 percent eastbound between AIA and NE 2nd Avenue, where it balances. Conversely, there is a +- 60 percent eastbound, +-40 percent westbound PM flow on 125th Street. For north/south flow, Biscayne Boulevard is highly directional +-60 percent northbound, +-40 percent southbound PM flow between the Broad Causeway, and the 151st Street area. Traffic seems to be converging on the center of the area on Biscayne Boulevard. North of 163rd Street the predominant flow is south. South of 163rd Street the predominant flow is north, while the flow at that 163rd Street, Biscayne Boulevard intersection is basically split evenly north and south, with the largest movement being from the barrier islands to the west. Half of those trips that approach the intersection from the east continue through in a westbound direction. Where this directional flow is taking place provides the best opportunity to enhance the corridors, without invasive projects which may require infrastructure where none exists today.

Like the results of the coastal communities, it is shown that traffic does not distribute either on AIA or Biscayne Boulevard. It distributes on I-95. Traffic generally enters and exits the Study Area on the I-95 connected corridor closest to their Study Area origin or destination.

The ability to mitigate the situation of deteriorating service lies in the development of a diverse array of multimodal projects which address physical capacity, alternative modes and transportation policy. As these efforts are developed a phased approach is needed. This should organize projects in to short and long term implementation categories.

ANALYSIS

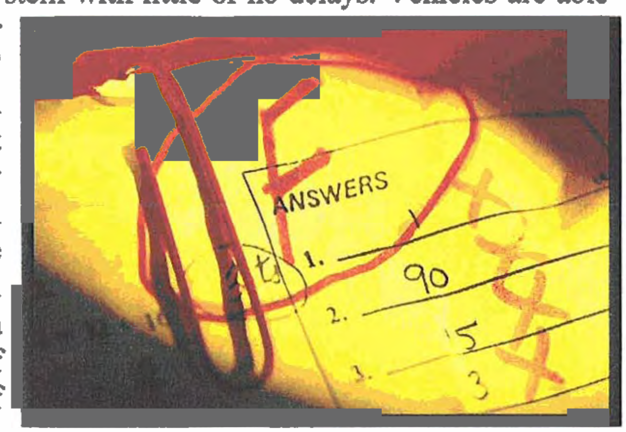
Several aspects of the mobility system have been analyzed in this report. These include the roadway links, (the individual segments of roads between intersections); the intersections, and the corridors. The elemental aspects of the system are the links and intersections, which combine to make corridors. Mobility on these is measured based on Level of Service. From the level of service analysis, overall flow was examined which looked at general origin and destination patterns along with directional splits.

Level of Service

Level of Service (LOS) is the measure describing operational of conditions of traffic based on various parameters.

Roadway Level of Service

The congestion on a roadway is measured using Level of Service (LOS). These values range from A to F and reflect different degrees of vehicular traffic congestion on a roadway, as well as the associated delays, operating speeds, degree of comfort, inability to change traffic lanes, etc. Level of Service A represents the best operating conditions or a free-flow system with little or no delays. Vehicles are able to travel comfortably at the posted speed limits or slightly above for relatively long distances; LOS F represents the worst condition or a congested system with excessive delays, long vehicular queues at signalized intersections and forced vehicular flow at very low or "crawling" speeds. In general, a LOS C on a rural or local roadway is considered acceptable. When the LOS falls below C, the roadway becomes crowded and the mobility of the facility is degraded. A roadway with a LOS D, E or F should be analyzed to determine if improvements to add capacity are necessary. Level of Service A, B and C are usually not easy to achieve on arterial and main collectors roadways in large urbanized areas like Miami Dade County during peak hour traffic periods. Level of Service D and E are more typically accepted in large urbanized areas for these types of roadways.



Level of Service grades are not similar to school grades. Most governments prefer roads to be at LOS C or D. The State of Florida, and Miami Dade County have specific criteria for Level of Service. Acceptable Levels of Service vary from location to location, based on the concept of Concurrency, which dictates that serviceable levels of infrastructure must be in place at the time of development. To provide incentive for infill development on the County's eastern edge an infill area has been designated. Generally in the Infill Area an acceptable Level of Service is +-E with allowances based on proximity to various levels of transit. If a local government wants to have a higher level of service, they must build to maintain it.

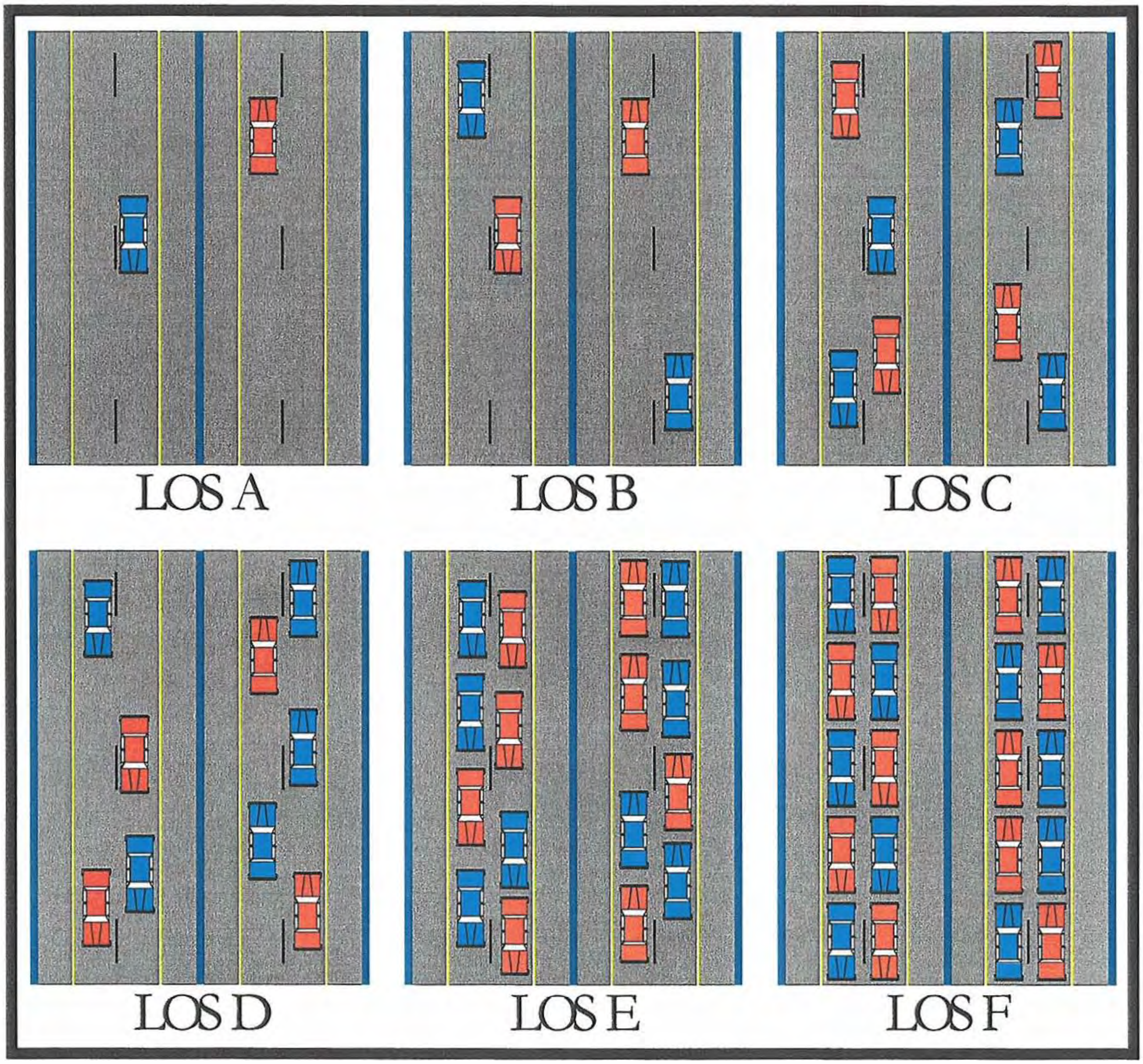
Table 1 – Roadway Level of Service

Roadway Level of Service (LOS)	
A	Free flow conditions. Vehicles are unimpeded in their ability to maneuver within the traffic stream. Incidents and breakdowns are easily absorbed.
B	Flow reasonably free. Ability to maneuver is slightly restricted. General level of physical and psychological comfort provided to drivers is high. Effects of incidents and breakdowns are easily absorbed.
C	Flow at or near Free Flow Speed (FFS). Freedom to maneuver is noticeably restricted. Lane changes more difficult. Minor incidents will be absorbed, but will cause deterioration in service. Queues may form behind significant blockage.
D	Speeds begin to decline with increasing flow. Freedom to maneuver is noticeably limited. Drivers experience physical and psychological discomfort. Even minor incidents cause queuing, traffic stream cannot absorb disruptions.
E	At capacity. Operations are volatile, virtually no usable gaps. Vehicles are closely spaced. Disruptions such as lane changes can cause a disruption wave that propagates throughout the upstream traffic flow. Cannot dissipate even minor disruptions, incidents will cause breakdown.
F	Breakdown or forced flow. Occurs when: traffic incidents cause a temporary reduction in capacity; at points of recurring congestions such as merge or weaving segments; in forecast situations, projected flow (demand) exceeds estimated capacity.

Roadway capacity is defined as the maximum traffic flow on a given roadway using all available lanes. Studies of roadways are used to determine the practical capacity of roads and streets; to provide a basis for changing traffic regulations, to establish priorities for street improvement; and to assist in future planning. A perfect road to a traffic engineer is one which has an excellent surface, zero grades, zero curves and no interference such as intersections, pedestrians or trees. Three factors determine the actual capacity of a road: physical characteristics of the road, characteristics of the traffic using the road and traffic controls used on the road.

In order to perform the roadway capacity analysis utilizing the FDOT Quality/Level of Service Handbook, roadways must be categorized by jurisdiction (state or non-state); type (freeways, collectors, local roads); number of lanes, if they are divided or undivided and the number of signals per mile.

Figure 1 – Roadway Level of Service



Intersection Level of Service

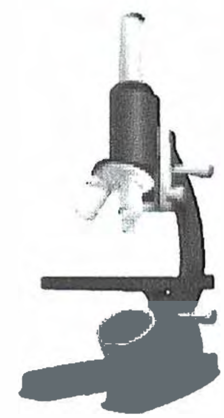
Traffic conditions at signalized intersections are evaluated using the 2000 HCM operations methodology for signalized intersections, which evaluates capacity in terms of the volume-to-capacity (v/c) ratio and evaluates LOS based on control delay per vehicle. Control delay is defined as the portion of the total delay attributed to the traffic signal operation including deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The relationship between control delay per vehicle and LOS for signalized intersections is summarized in the table below.

Table 2 – LOS for Signalized intersections

Level of Service (LOS) for Signalized Intersections		
LOS	Controlled Delay (sec/veh)	Description of Traffic Conditions
A	≤ 10	Insignificant delays: no approach phase is fully utilized and no vehicle waits longer than one red indication. Progression is extremely favorable, and most vehicles arrive during the green phase.
B	> 10 to 20	Minimal delays: an occasional approach phase is fully utilized. Drivers begin to feel restricted. Good progression occurs. More vehicles stop than for LOS A, causing higher levels of average delay.
C	> 20 to 35	Acceptable delays: major approach phase may become fully utilized. Most drivers feel somewhat restricted. Higher average delays result from fair progression. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level although many still pass through the intersection without stopping.
D	> 35 to 55	Tolerable delays: drivers may wait through more than one red indication. Queues may develop but dissipate rapidly, without excessive delays. Longer delays may result from unfavorable progression and/or high traffic volumes as compared to the roadway capacity. Individual signal cycle failures, where all waiting vehicles do not clear the intersection during a single green time, are noticeable.
E	>55 to 80	Significant delays: volumes approaching capacity. Vehicles may wait through several cycles and long vehicle queues from upstream. Higher delay values generally indicate poor progression, long cycle lengths, and high traffic volumes. Individual cycle failures are frequent occurrences.
F	> 80	Excessive delays: represents conditions at capacity, with extremely long delays. Queues may block upstream intersections. This condition is unacceptable to most drivers. Traffic arrives at a flow rate that exceeds the capacity of the intersection. It may also occur at high volumes with many individual cycle failures. Poor progression and long cycle lengths may also contribute to such delays.
Source: Highway Capacity Manual, Transportation Board, 2000		

Analysis Methodology

Vehicular traffic conditions within the study area were analyzed for the current year (2007) and forecasted for the years 2015 and 2030. Traffic volumes and their corresponding Levels of Service were obtained for these years. The future years 2015 and 2030 were selected because they conform to the forecasted years from the Miami Dade Metropolitan Planning Organization (MPO) adopted Long Range Transportation Plan (LRTP) and related roadway networks and documents.



Links

Level of Service for all roadways were obtained from the FDOT Quality/Level of Service Handbook Table 4-7 a copy of which can be seen in the Appendix. Figures 1 through 3 show 2007, 2015 and 2030 roadway projections and their respective level of service, and Table 1 is a summary of the three analyses periods. Further details on analyses can be found in the Appendix of this report. The results show that by 2030 many of roadways in the study area are at or over capacity. Therefore roadway capacity projects should be developed on a selective basis looking mainly at mitigating the worst conditions.

Intersections

The analysis of the intersections was performed in accordance with standard guidelines for traffic studies. Traffic operations were analyzed using the capacity analysis methodology published in the 2000 Highway Capacity Manual (HCM). Capacity analysis is a set of procedures for estimating the traffic-carrying ability of facilities based on operational conditions.

The level of service analysis was performed using the Highway Capacity Software (HCS+) program. This is a Windows based traffic analysis computer program employing the HCM analysis procedures to evaluate traffic operations at signalized intersections. The HCS+ software is very effective at evaluating traffic conditions at individual intersections. It reports control delay and performs the capacity analysis.

ROADWAY LINK ANALYSIS

Existing Conditions Roadway Links Analysis – Year 2007

For the existing condition analysis, traffic counts were obtained from the Florida Department of Transportation (FDOT) data base and from the MPO traffic volume networks. Additional 72 hour counts were taken at several locations. All counts were converted to average annual daily traffic (AADT) by using the appropriate factors from the FDOT data base. These counts as well as other adjusted traffic volume data available from the MPO highway traffic networks formed the basis for obtaining the traffic volumes and assessing current LOS for both daily and peak hour peak direction of travel on those roadways classified as arterials, collectors and main local roads.

Forecasted Year 2015 and 2030 Conditions Analysis

The year 2007 traffic volumes were projected to the years 2015 and 2030 using growth factors developed from the MPO's adopted Long Range Transportation Plan Model.

Roadway Capacity Analysis Results

Analysis tables were developed which depict traffic volumes, LOS as well as other roadway related data such as number of lanes, functional classification, etc. Maps were also developed which reflect the LOS for the selected roadways.

As illustrated in Tables 2 and 3 and Figures 2 through 4, there are changes in the LOS for the majority of the roadways. The complete data sheets for each roadway are included in the appendices of this report. Examination of the tables and maps indicate that in general, roadway LOS will deteriorate throughout the study area with some exceptions due to programmed roadway widening or other transportation projects. Roadways segments currently operating at acceptable LOS yet expected to deteriorate to LOS E & F include:

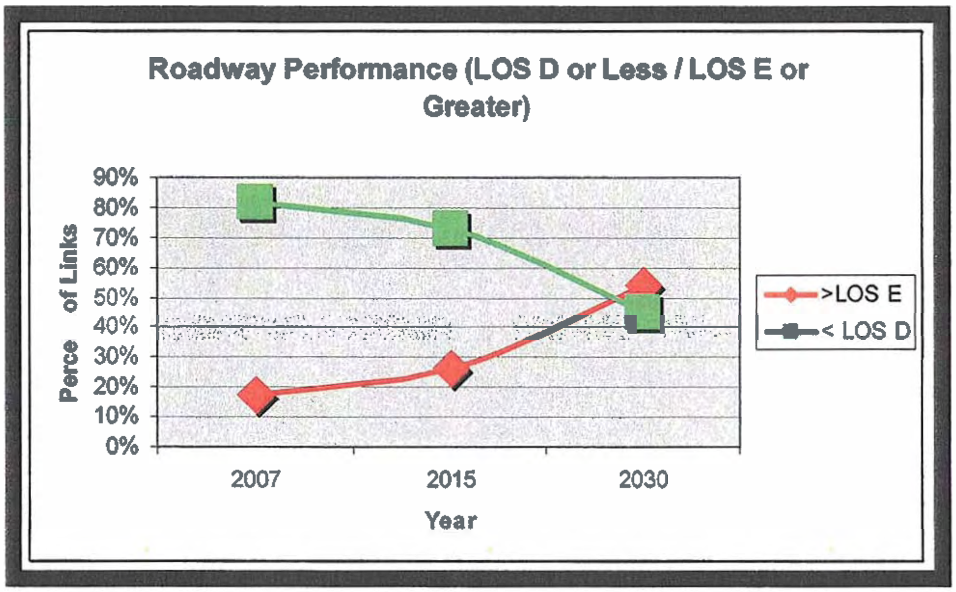
- A1A/Collins Avenue between SR 826/Sunny Isles and Broad Causeway
- SR 909/West Dixie Hwy between County Line Road and SR826/NE 163 Street
- NE 6 Avenue between Miami Gardens Drive and NE 125 Street
- SR 826/NE 167 Street between I-95 and NE 10 Avenue
- NE 167 Street between NE 10 Avenue and NE 15 Avenue
- SR 916/Opa Locka Boulevard between NW 7 Avenue and W Dixie Highway
- NE 12 & 14 Avenue between SR 826/NE 163 Street and W Dixie Highway
- NW 7 Avenue between Opa Locka Boulevard and NE 103 Street
- Highland Lakes Boulevard between County Line Road and Ives Dairy Road
- NE 171 Street between NE 15 Avenue and US-1/Biscayne Boulevard
- NE 159 Street between NE 6 Avenue and W Dixie Highway
- NE 151 Street between NE 10 Avenue and Bay Vista Boulevard
- Ives Dairy Road between I-95 and Biscayne Boulevard

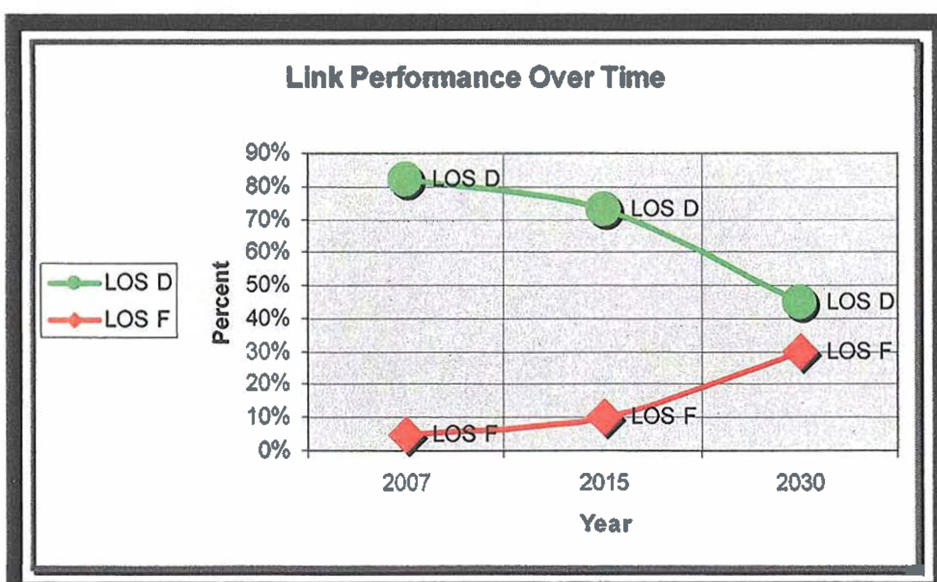
Of the 75 roadway links analyzed, links or five percent of the links operate in a failing condition or LOS F. These include:

- West Dixie Highway between 171st and 163rd
- Ives Dairy Road between I-95 and Biscayne Boulevard
- 159th Street between 6th Avenue and 10th Avenue
- 151st Street between 10th Avenue and Biscayne Boulevard

The vast majority of the links (62 of 75), or 82 percent operate at LOS D or better.

This situation will be reversed within the planning horizon. By 2015, the number of failing links will double. The number of acceptable links will shrink to 55 links of 73 percent. By 2030 the number of failing links will increase to 23 going from six percent to 30 percent. Acceptable links will shrink to 34 or from 82 percent to 45 percent of all links.





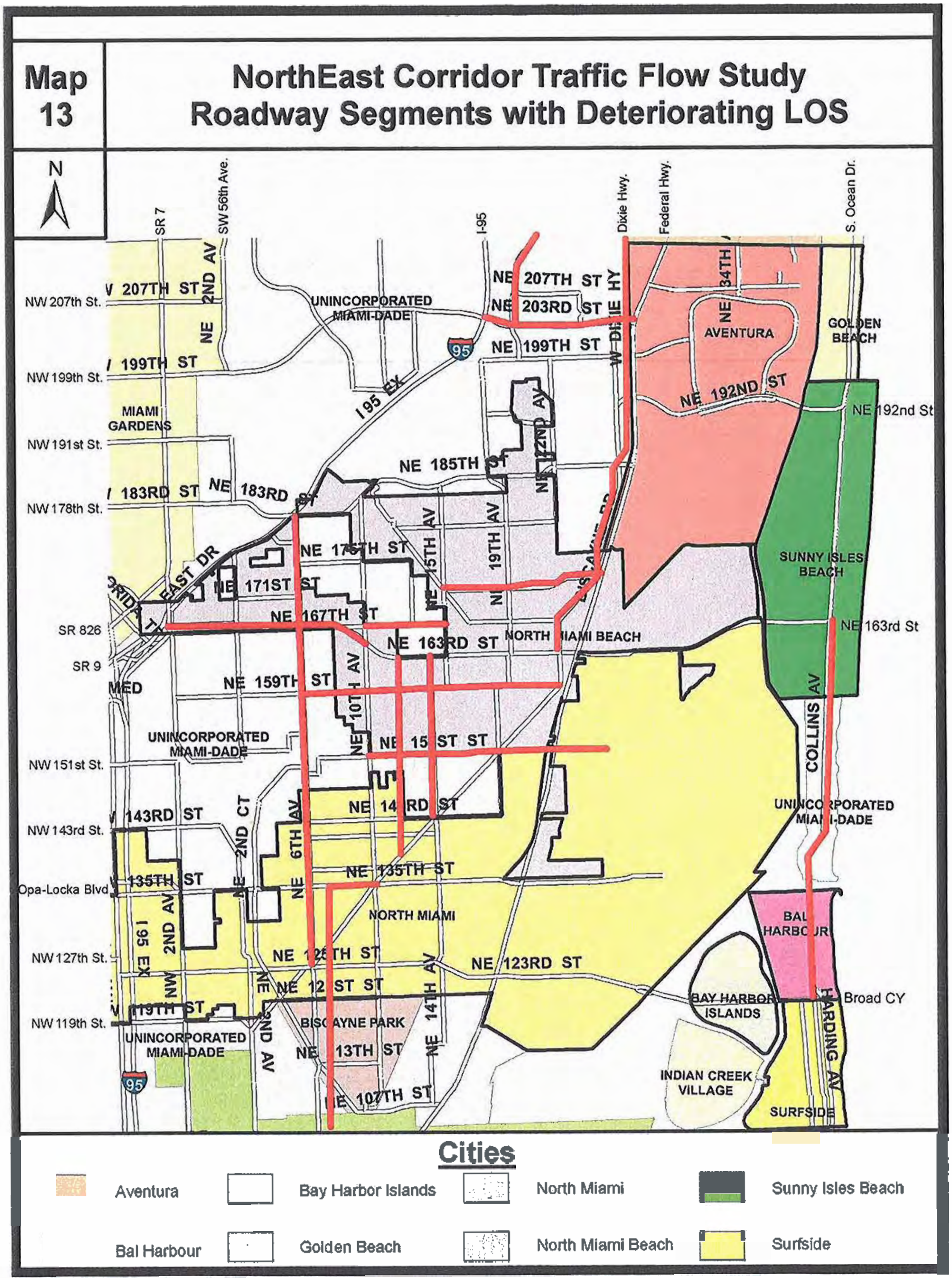


Figure 2 - Critical Roadways

Table 2 – Roadway Capacity Analysis

SUMMARY								
			2007		2015		2030	
Roadway	Limits	Function Classification Jurisdiction	Facility Type	LOS	Facility Type	LOS	Facility Type	LOS
Ocean Blvd. / Collins Ave. / A1A	Miami Dade/ Broward Line to William CSWY	Principal Arterial / State	4LD	C	4LD	C	4LD	C
	William CSWY to Sunny Isles Blvd	Principal Arterial / State	6LD	C	6LD	D	6LD	E
	Sunny Isles Blvd to Broad CSWY/96 St	Principal Arterial / State	4LD	E	4LD	F	4LD	F
	Broad CSWY/96 St to 77 St	Principal Arterial / State	3L One Way	C	3L One Way	C	3L One Way	C
Harding Ave / A1A	Broad CSWY/96 St to 77 St	Principal Arterial / State	3L One Way	C	3L One Way	C	3L One Way	C
Biscayne Blvd. / US 1 / SR 5	NE 213 St to Ives Dairy Rd.	Principal Arterial / State	8LD	C	8LD	C	8LD	D
	NE 203 St to William Lehman CSWY	Principal Arterial / State	8LD	D	8LD	D	8LD	E
	William Lehman CSWY to Sunny Isles Blvd	Principal Arterial / State	8LD	D	8LD	E	8LD	E
	Sunny Isles Blvd to NE 135 St	Principal Arterial / State	8LD	C	8LD	C	8LD	D
	NE 135 St to NE 16 Ave	Principal Arterial / State	6LD	C	6LD	C	6LD	D
	NE 16 Ave to NE 108 St	Principal Arterial / State	6LD	D	6LD	D	6LD	E
West Dixie HWY / SR 909	County Line Rd. to Ives Dairy Rd.	Collector / State	2LU	D	2LU	F	2LU	F
	Ives Dairy Rd. to Miami Gardens Dr.	Minor Arterial / State	2LU	D	2LU	F	2LU	F
	Miami Gardens Dr. to NE 171 St	Minor Arterial / State	2LU	D	2LU	E	2LU	F
	NE 171 St to NE 163 St	Minor Arterial / State	2LU	F	2LU	F	2LU	F
	NE 163 St to NE 151 St	Minor Arterial / State	4LD	C	4LD	C	4LD	C
	NE 151 St to NE 125 St	Minor Arterial / State	4LD	C	4LD	C	4LD	C
Highland Lakes Blvd	County Line Rd. to Ives Dairy Rd.	Collector	2LU	D	2LU	D	2LU	F
NE 18 Ave	NE 199 St to Miami Gardens Dr.	Collector	4LD	D	4LD	D	4LD	E
NE 19 Ave	Miami Gardens Dr. to Sunny Isles Blvd.	Collector	4LD	E	4LD	F	4LD	F
NE 16 Ave	Sunny Isles Blvd. to West Dixie Hwy	Collector	2LU	C	2LU	C	2LU	D
	West Dixie HWY to Opa Locka Blvd	Collector	2LU	C	2LU	D	2LU	D
	Opa Locka Blvd to Biscayne Blvd	Collector	2LU	D	2LU	D	2LU	F
NE 15 Ave	Miami Gardens Dr. to Sunny Isles Blvd.	Collector	2LU	E	4LD	D	4LD	D
NE 14 Ave	Sunny Isles Blvd. to Opa Locka Blvd.	Local	2LU	E	2LU	E	2LU	F
NE 12 Ave	Sunny Isles Blvd. to West Dixie Hwy	Collector	2LU	D	2LD	E	2LD	F
	West Dixie HWY to NE 125 St	Collector	2LU	D	2LU	D	2LU	E
NE 10 Ave	Miami Gardens Dr. to Sunny Isles Blvd.	Collector	2LU	D	2LU	D	2LU	E
	Sunny Isles Blvd. to West Dixie Hwy	Collector	2LU	C	2LU	C	2LU	D
	West Dixie HWY to NE 125 St	Collector	2LU	C	2LU	C	2LU	D
NE 6 Ave / SR 915	Miami Gardens Dr. to Sunny Isles Blvd.	Minor Arterial / State	4LD	D	4LD	E	4LD	F
	Sunny Isles Blvd. to Opa Locka Blvd.	Minor Arterial / State	4LD	C	4LD	E	4LD	F
	Opa Locka Blvd. to NE 125 St	Minor Arterial / State	4LD	C	4LD	D	4LD	F
	NE 125 St to Griffing Blvd.	Minor Arterial / State	4LD	C	4LD	E	4LD	E
N. Miami Ave	Sunny Isles Blvd. to Memorial HWY.	Minor Arterial	2LU	C	2LU	D	2LU	D
	Memorial HWY. to Opa Locka Blvd.	Minor Arterial	2LU	C	2LU	D	2LU	D
	Opa Locka Blvd. to NE 125 St	Minor Arterial	2LU	C	2LU	C	2LU	C
	NE 125 St to NW 119 St	Minor Arterial	2LU	C	2LU	C	2LU	C
NW 2 Ave / Griffing Blvd / Memorial HWY	Sunny Isles Blvd. to N. Miami Ave	Collector	4LD	C	4LD	C	4LD	C
	N. Miami Ave to NE 135 St.	Collector	2LU	D	2LU	D	2LU	D
	NE 135 St to W. Dixie HWY	Collector	2LU	C	2LU	D	2LU	D
	W. Dixie HWY to NE 6 Ave.	Collector	2LU	C	2LU	C	2LU	D
NW 7 Ave / US 441 / SR 7	Golden Glades Int. to Opa Locka Blvd.	Minor Arterial / State	6LD	C	6LD	C	6LD	C
	Opa Locka Blvd. to NW 119 St	Minor Arterial / State	6LD	C	6LD	D	6LD	F
	NW 119 St to NE 103 St.	Minor Arterial / State	6LD	C	6LD	D	6LD	F

Table 3 – Roadway Capacity Analysis Results (Continued)

SUMMARY								
			2007		2015		2030	
Roadway	Limits	Function Classification Jurisdiction	Facility Type	LOS	Facility Type	LOS	Facility Type	LOS
Ives Dairy Rd. / NE 203 St	I-95 to Highland Lakes Blvd.	Minor Arterial	6LD	F	6LD	F	6LD	F
	Highland Lakes Blvd. to Biscayne Blvd.	Minor Arterial	6LD	F	6LD	F	6LD	F
NE 213 St	Biscayne Blvd. to NE 34 Ave	Local	4LD	D	4LD	D	4LD	D
Waterway Blvd.	Biscayne Blvd. to NE 34 Ave	Collector	4LD	C	4LD	C	4LD	C
Aventura Blvd.	Biscayne Blvd. to W Country Club Dr.	Collector	4LD	C	4LD	C	4LD	D
WL CSWY/SR 856/NE 192 St	Biscayne Blvd. to Ocean Blvd.	Urban Principal Arterial Freeways & Expressways	6LD	C	6LD	C	6LD	C
Miami Gardens Dr / NE 186 St / SR 860	NW 2 Ave to I-95	Minor Arterial / State	6LD	C	6LD	C	6LD	D
	I-95 to NE 15 Ave	Minor Arterial / State	4LD	E	6LD	D	6LD	E
	NE 15 Ave to NE 18 Ave	Minor Arterial / State	4LD	D	6LD	C	6LD	D
	NE 18 Ave to Biscayne Blvd.	Minor Arterial / State	4LD	E	6LD	D	6LD	E
NE 171 St	NE 15 Ave to Biscayne Blvd.	Collector	2LU	E	2LU	F	2LU	F
NE 167 St / SR 826	I-95 to NE 10 Ave	Principal Arterial / State	6LD	D	6LD	E	6LD	F
	NE 10 Ave to NE 15 Ave	Collector	2LU	E	2LU	E	2LU	F
NE 163 St / Sunny Isles Blvd. / Ocean Beach Blvd. / SR 826	NE 10 Ave to Biscayne Blvd.	Principal Arterial / State	6LD	D	6LD	D	6LD	E
	Biscayne Blvd. to NE 35 Ave.	Principal Arterial / State	8LD	D	8LD	D	8LD	E
	NE 35 Ave. to Ocean Blvd./Collins Ave.	Principal Arterial / State	8LD	C	8LD	C	8LD	C
NE 159 St	NE 6 Ave to NE 10 Ave	Collector	2LU	F	2LU	F	2LU	F
	NE 10 Ave to W. Dixie HWY	Collector	2LU	D	2LU	E	2LU	E
NE 151 St	NE 10 Ave to Biscayne Blvd.	Collector	2LU	F	2LU	F	2LU	F
	Biscayne Blvd. to Bay Vista Blvd.	Collector	2LU	D	2LU	D	2LU	E
Opa Locka Blvd. / NE 135 St / SR 916	NW 17 Ave to NW 7 Ave	Minor Arterial / State	6LD	C	6LD	C	6LD	C
	NW 7 Ave to W. Dixie HWY	Minor Arterial / State	4LD	C	4LD	D	4LD	F
	W. Dixie HWY to Biscayne Blvd.	Minor Arterial / State	4LD	C	4LD	D	4LD	E
	Biscayne Blvd. to Bay Vista Blvd.	Minor Arterial / State	2LD	C	2LD	C	2LD	C
NW 127 St	NW 22 Ave to NW 7 Ave	Collector	2LU	D	2LU	D	2LU	E
NE 125 St / NE 123 St / Broad CSWY / SR 922	NW 7 Ave to W. Dixie HWY	Minor Arterial / State	4LD	D	4LD	D	4LD	E
	W. Dixie HWY to Biscayne Blvd.	Minor Arterial / State	4LD	D	4LD	D	4LD	E
	Biscayne Blvd. to Collins Ave.	Minor Arterial / State	4LD	C	4LD	C	4LD	C
NW 119 St / SR 924	NW 22 Ave to NW 7 Ave	Principal Arterial / State	6LD	C	6LD	C	6LD	D
	NW 7 Ave to NE 2 Ave	Principal Arterial / State	4LD	C	4LD	C	4LD	C

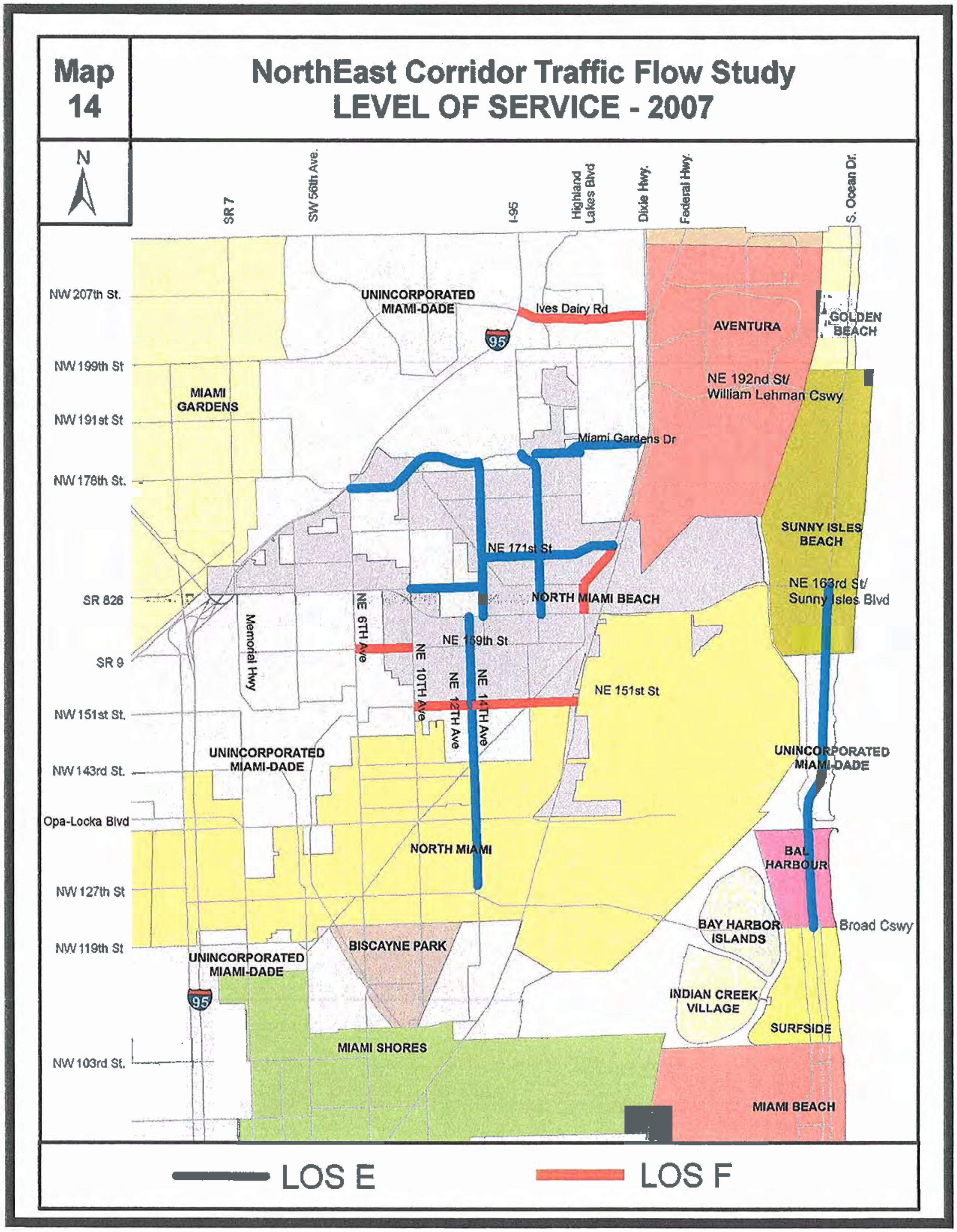


Figure 3 – Roadway 2007 LOS

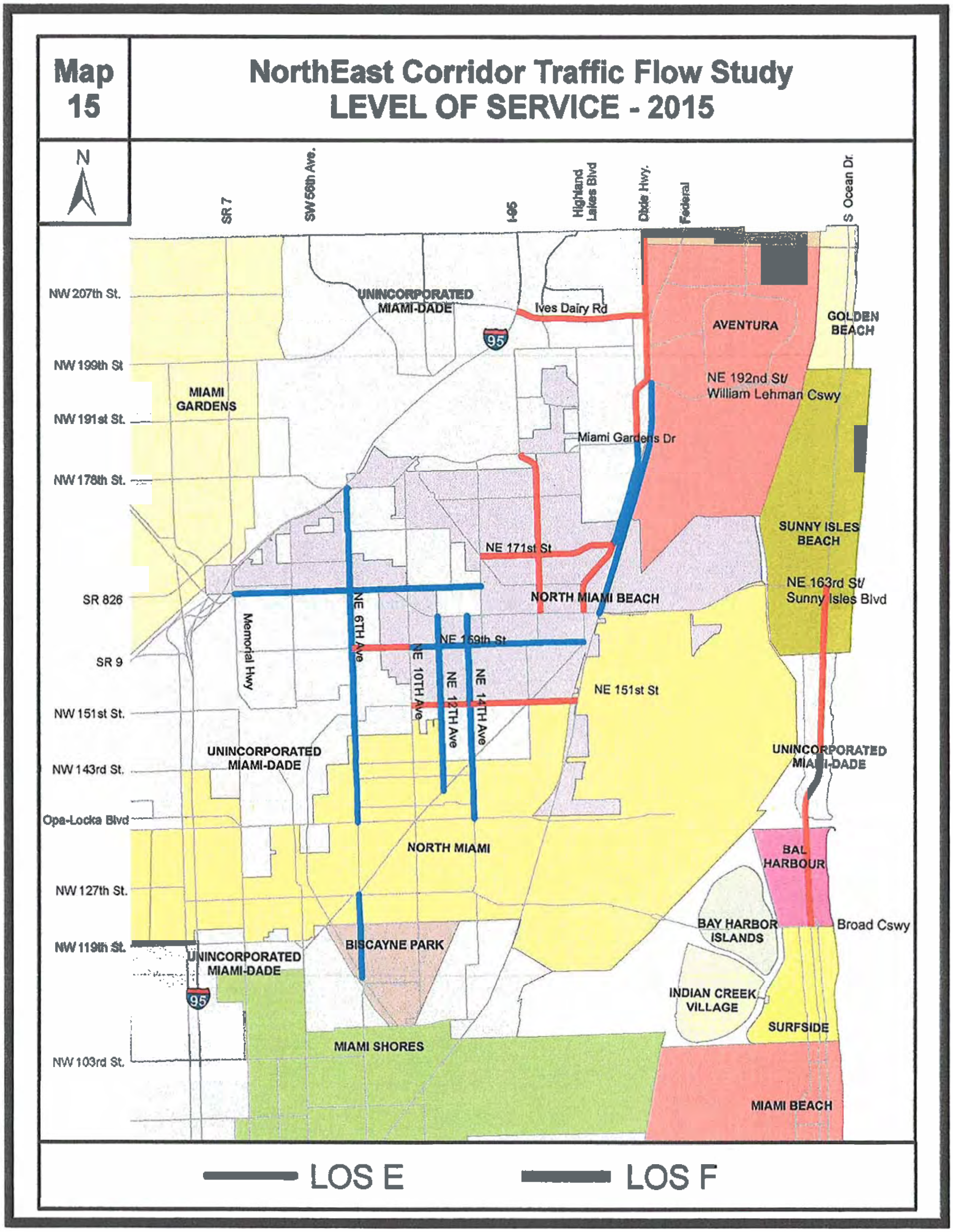


Figure 4 – Roadway 2015 LOS

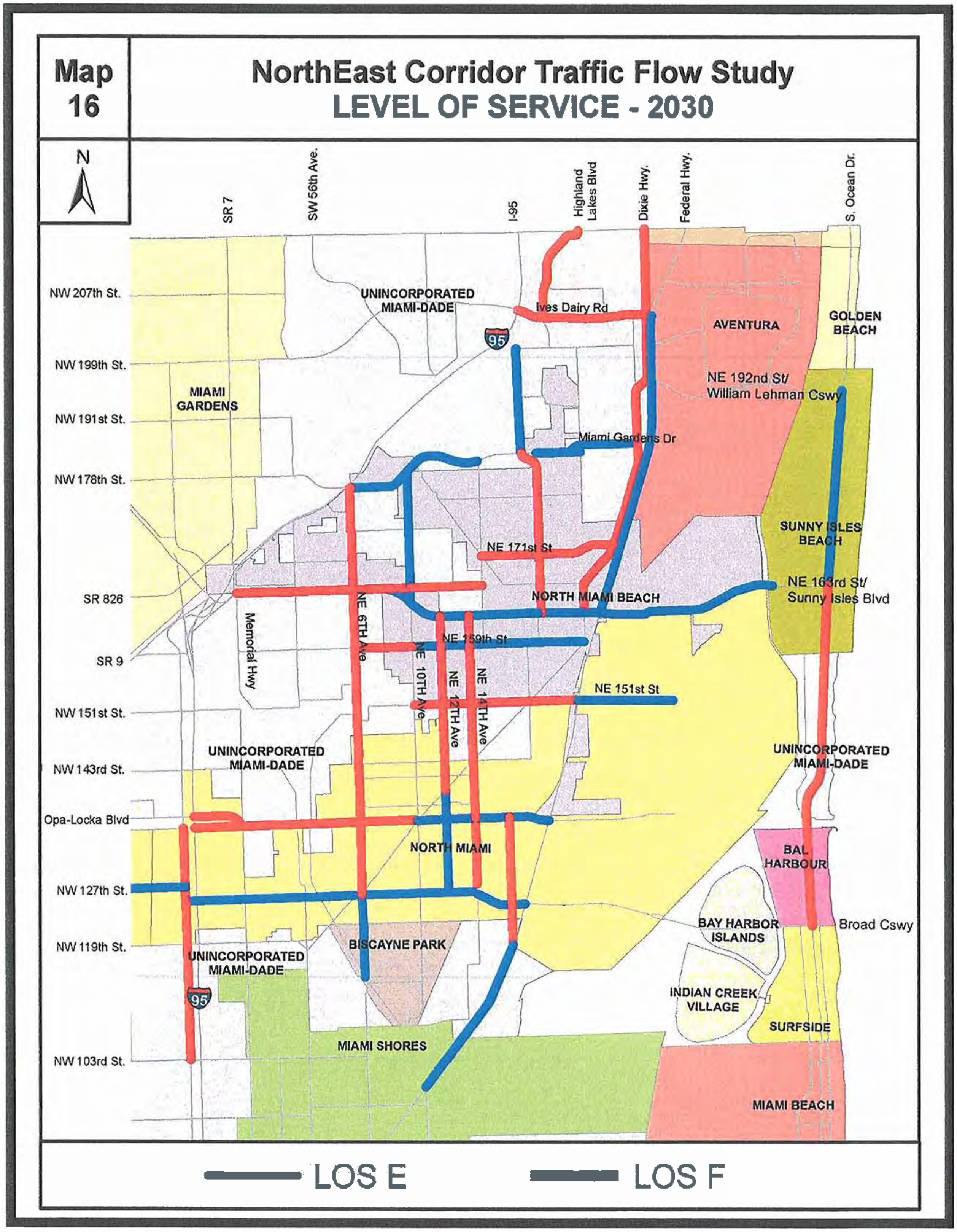


Figure 5 – Roadway 2030 LOS

Planned and Proposed Roadway Improvements

The first stage of this program seeks easily attained capacity improvements. A result of this analysis has shown that additional right of way for capacity is a limiting factor. The physical spatial capacity and traffic operations of a roadway network can be improved in several ways:

- Adding lanes to existing roads.
- Adding new roads.
- Widening intersections.
- Eliminating curb parking.
- Eliminating left and right turns.
- Improve signage and pavement markings.
- Relocating bus stops.
- Consolidating driveways.
- Traffic signal phasing and timing improvements.
- Traffic signal coordination.
- Reversible Lane Systems.

Within the study area, there are already proposed transportation improvement projects ranging from roadway widening to the NE extension of Metrorail along the Florida East Coast (FEC) railroad corridor parallel to US-1 from downtown to northern Miami-Dade County. These are contained within the MPO's 2007 TIP and adopted Long Range Transportation Plan to the year 2030. The roadway improvement projects found in these documents are the listed in the table below.

Table 4 – Planned Transportation Improvements

Project or Facility	From	To	Project Description/Type of Work	Priority	Source
HIGHLAND LAKE & NE 203 ST			INTERSECTION IMPROVEMENT: LENGTHEN NBLT & SPLIT PHASE		2007 TIP
MIAMI GARDENS DR CONNECTOR	US - 1	WILLIAM LEHMAN CAUSEWAY	NEW CONSTRUCTION: 4 LANES		2007 TIP
MIAMI GARDENS DR CONNECTOR	US - 1	WILLIAM LEHMAN CAUSEWAY	NEW 4 LANES		2007 TIP
MIAMI GARDENS DR/NE 186 ST/SR 860	NE 6 AVE	US1	4 TO 6 LANES	2	2030 LRTP
N MIAMI AVE & NE 135 ST			INTERSECTION IMPROVEMENT: ADD PRO/PER WBLT		2007 TIP
NE 12 AVE	NE 151 ST	NE 167 ST	WIDEN TO 3 LANES	1	2030 LRTP
NE 12 AVE	NE 151 ST	NE 167 ST	WIDENING: TO 3 LANES, T.O.P.I.C.S. IMPROVEMENTS		2007 TIP
NE 15 AVE	NE 159 ST	MIAMI GARDENS DR	WIDEN TO 4 LANES	1	2030 LRTP
NE 15 AVE	NE 163 ST	NE 170 ST	WIDENING: TO 4 LANES		2007 TIP
NE 15 AVE	NE 159 ST TO 163 ST	NE 170 ST TO MIAMI GARDENS DR	WIDENING: TO 3 LANES, T.O.P.I.C.S. IMPROVEMENTS		2007 TIP
NW 17 AVE	NW 119 ST	OPA LOCKA BLVD	WIDENING: TO 5 LANES		2007 TIP
NW 2 AVE & NE 167 ST/SR 826			INTERSECTION IMPROVEMENT: ADD 3RD EBLT LANE & EBRT LANE		2007 TIP
SR 856 & US-1			INTERSECTION IMPROVEMENT: CHANGE WB LANE ASSIGNMENT		2007 TIP
US-1 & SR-856			INTERSECTION IMPROVEMENTS: ADD TURBO LANES SB		2007 TIP
WEST DIXIE HWY	NE 119 ST	NE 163 ST	4 TO 6 LANES	4U	2030 LRTP

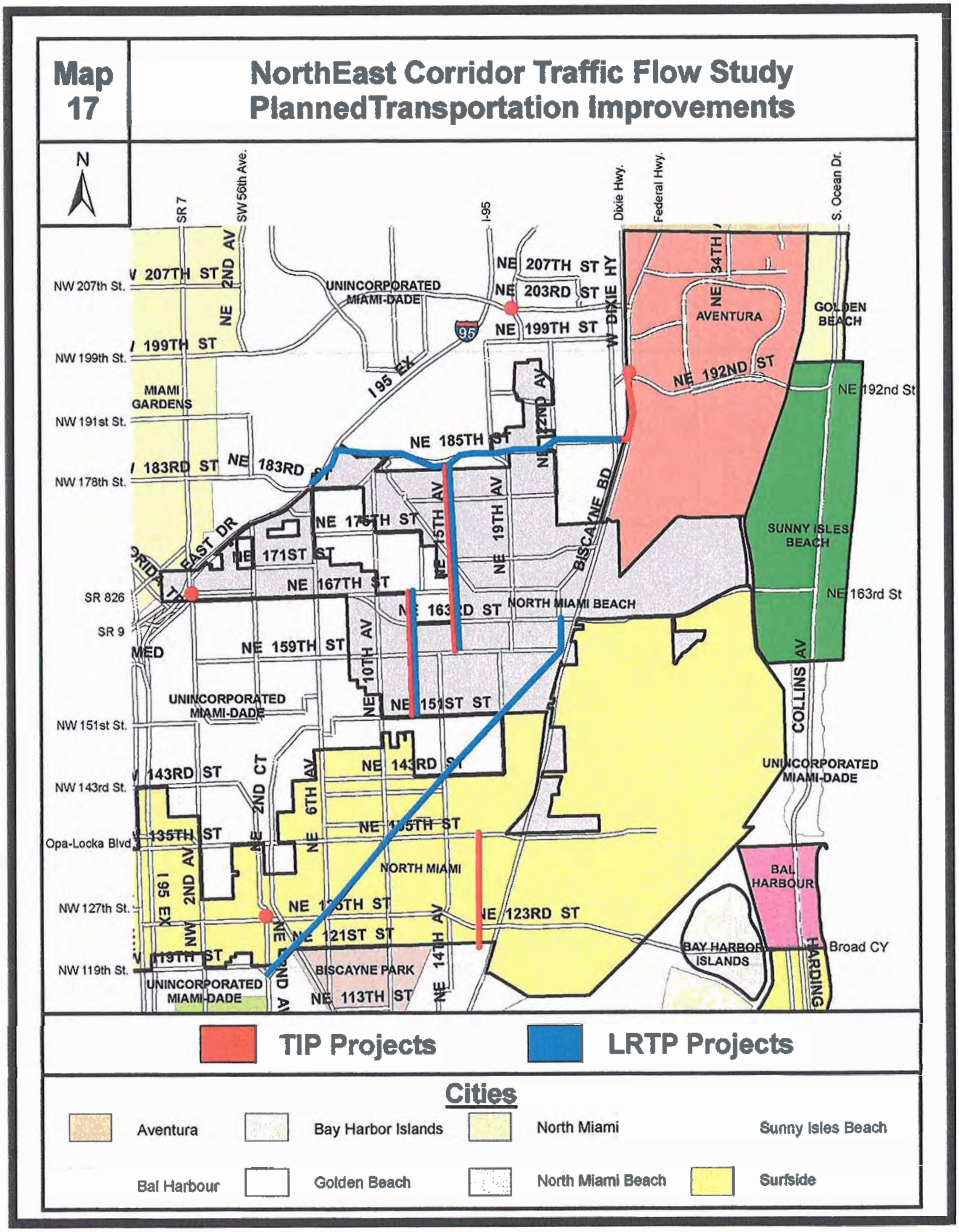


Figure 6 - Planned Improvements

INTERSECTION ANALYSIS

The second, more limiting component of the roadway system is the intersection, which tends to produce the bulk of the congestion. The goal of this section of the study is to develop intersection improvements that can be quickly implemented; recognizing that there is a need to study further the multiple modes of travel within the road network, as well as, consideration of long term potential improvement projects.

This section of the report analyzes the existing conditions of the eleven selected intersections. In the cases where the intersection is below the acceptable operation criteria, alternatives are presented which recommend operational or physical improvements.

Project Study Intersections

Eleven intersections within the study area were selected for evaluation. The intersections are listed in Table 5 below and depicted in Map 11.

Table 5 – Study Intersections

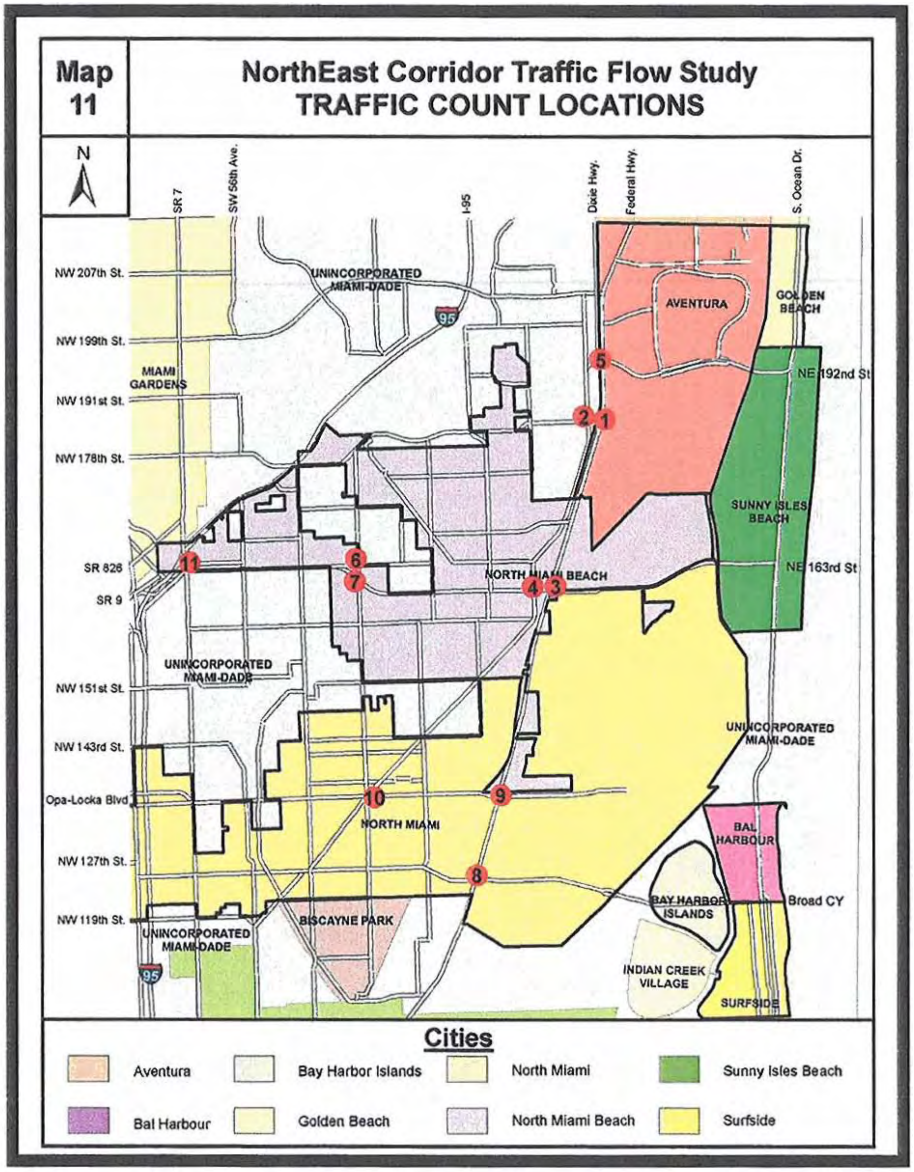
Project Study Intersections				
	SAN	Project Intersection	Control	Jurisdiction
1	3469	US 1 & MIAMI GARDENS DR	SA	Aventura
2	2524	M GARDENS DR & W DIXIE HWY	SA	Miami-Dade County
3	2010	SR 826 & US 1	SA	North Miami Beach
4	2019	SR 826 & W DIXIE HWY	SA	North Miami Beach
5	4655	US-1 & SR-856	SA	Aventura
6	3229	NE 10 AVE & 167 ST	SA	North Miami Beach
7	2003	SR 826 & NE 10 AVE	SA	North Miami Beach
8	2537	US 1 & N MIAMI BLVD/NE 123 ST	SA	North Miami
9	3144	US I & NE 135 ST	SA	North Miami
10	2555	W DIXIE HWY & 135 ST	SA	North Miami
11	2020	SR 826 & NW 2 AVE	SA	North Miami Beach
Abbreviations				
SAN - SIGNAL ASSET NUMBER				
SA - Semi-Actuated				

Traffic Control

All intersections analyzed within the Study area are operated as semi-actuated (meaning they are controlled by in road sensors that provide minor movements with time if vehicles are detected). The signals along major corridors theoretically coordinated. The timing to evaluate the existing performance for the study intersections was obtained from Miami-Dade County Traffic Control Center. This data was used as baseline to compare proposed timing strategies.

Traffic Volume

Peak hour vehicular traffic movement counts were taken at the study intersections. All of the traffic data was gathered between the 1st and 3rd of May 2007 and can be found in the Appendix. These were projected to the years 2015 and 2030 based on growth factors obtained from the Miami-Dade MPO Model. The result of the traffic data collected and the projections of these were used to calculate the level of service at each of the intersections using HCS+ software. Figures 6 and 7 depict the traffic volumes for the years 2007, 2015 and 2030 respectively. The appendix contains the traffic count data.



Intersections Analysis

The existing and forecasted traffic volumes, geometry and signal timing plans served as input into the HCS+ software to evaluate the existing and future operating conditions of the study intersections. Once analysis was carried out, various field reviews were conducted to calibrate HCS+ model outputs.

The intersections within the study area are generally operating in adequate condition. Often it is the intersections which govern the overall feel of constriction in a network because they create the bottlenecks where traffic begins to slow. Eleven intersections were studied as part of this project. The worst conditions were in the PM peak hours. In 2007 all but one (Miami Gardens Dr / West Dixie Hwy) operates better than LOS F, with 7 of 11 or 63 percent of the intersections operating at LOS D or better. By 2015 there is still one LOS F but 5 of 11 or 45 percent will operate at LOS D or better, a decrease of 18 percent. By 2030, the numbers will be reversed with 45 percent of the intersections operate at LOS F and only 18 percent (2 of 11) operating at LOS D or better.

The eleven intersections were first analyzed with 2007 signal timing for both AM and PM peak hours. Growth rates were developed from the Miami-Dade MPO network volume assignment maps for the years of 2015 and 2030. Then traffic volumes for 2007 were projected to the years of 2015 and 2030. Planned roadway improvements (MPO's 2007 TIP and 2030 LRTP) were reviewed and included as applicable. The detailed intersection level of service calculation sheets are provided in the Appendix of this report.

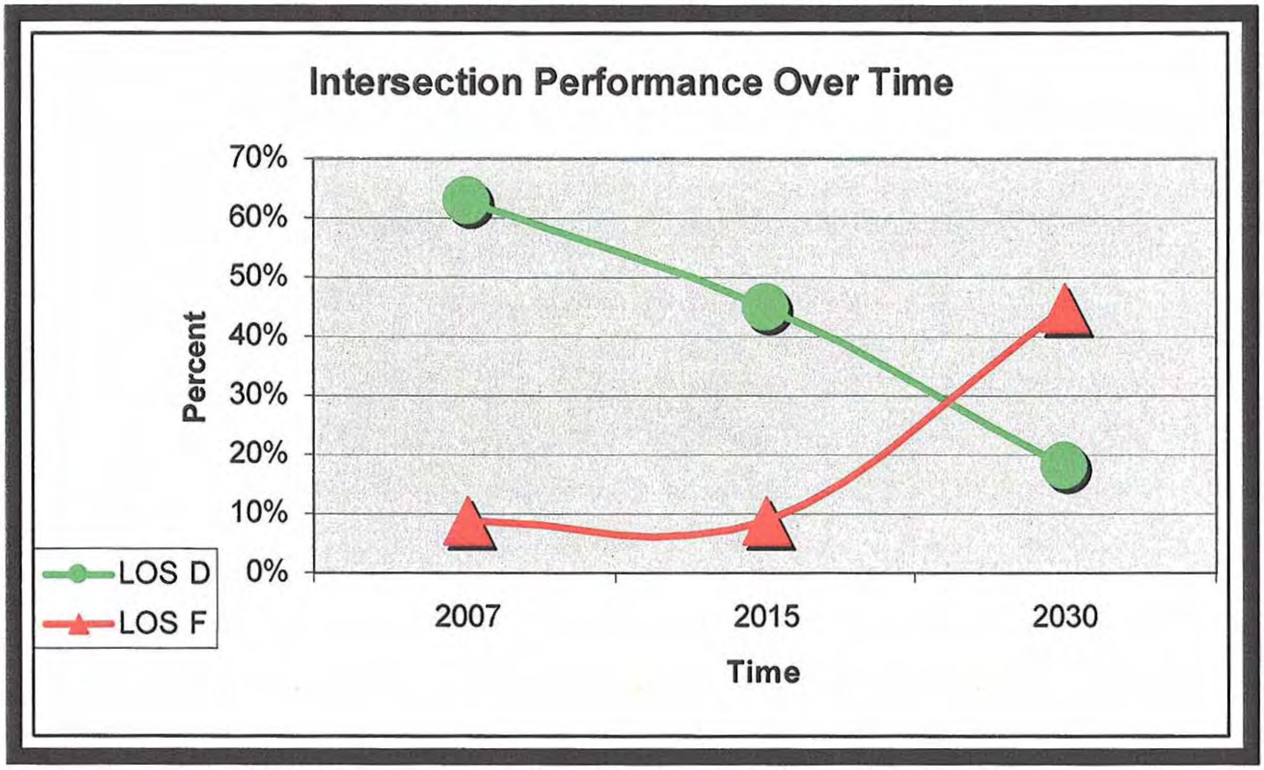
Table 6 – AM Peak Hour

Location	INTERSECTION	CYCLE LENGTH (SEC)	INT. DEL. (SEC/VEH)	LOS	INT. DEL. (SEC/VEH)	LOS	INT. DEL. (SEC/VEH)	LOS
			2007		2015		2030	
1	US 1 & MIAMI GARDENS DR	180	UNDER CONSTRUCTION					
2	M GARDENS DR & W DIXIE HWY	180	40.5	D	47.9	D	80.4	F
3	SR 826 & US 1	150	39.5	D	40.4	D	46.6	D
4	SR 826 & W DIXIE HWY	150	34.9	C	37.1	D	46.3	D
5	US 1 & SR 856	180	58.0	E	58.4	E	59.1	E
6	NE 10 AVE & 167 ST	130	29.6	C	35.9	D	79.4	E
7	SR 826 & NE 10 AVE	130	27.6	C	55.3	E	117.2	F
8	US 1 & NE 123 ST	150	50.9	D	66.1	E	113.5	F
9	US I & NE 135 ST	150	42.2	D	51.1	D	76.4	E
10	W DIXIE HWY & 135 ST	110	33.1	C	45.1	D	84.4	F
11	SR 826 & NW 2 AVE	180	46.7	D	52.3	D	69.5	E

Table 7 – PM Peak Hour

Location	INTERSECTION	CYCLE LENGTH (SEC)	INT. DEL. (SEC/VEH)	LOS	INT. DEL. (SEC/VEH)	LOS	INT. DEL. (SEC/VEH)	LOS
			2007		2015		2030	
1	US 1 & MIAMI GARDENS DR	180	UNDER CONSTRUCTION					
2	M GARDENS DR & W DIXIE HWY	180	84.4	F	107.6	F	157.0	F
3	SR 826 & US 1	150	39.7	D	41.2	D	52.0	D
4	SR 826 & W DIXIE HWY	150	38.8	D	40.7	D	50.4	D
5	US 1 & SR 856	180	71.9	E	72.6	E	80.8	F
6	NE 10 AVE & 167 ST	130	27.8	C	34.4	C	71.6	E
7	SR 826 & NE 10 AVE	130	36.0	D	57.9	E	140.4	F
8	US 1 & NE 123 ST	150	48.2	D	53.3	D	73.2	E
9	US I & NE 135 ST	150	50.8	D	64.8	E	98.8	F
10	W DIXIE HWY & 135 ST	110	28.1	C	36.2	C	66.6	E
11	SR 826 & NW 2 AVE	174	55.1	E	64.7	E	81.0	F

Intersections normally operate at a worse Level of Service and with greater vehicular delays when compared with roadway segments between intersections. This is mostly due to the fact that large numbers of vehicles approach the intersection from two different intersecting roadways and the slowing effects from existing traffic control. For instance, if the intersection is controlled by a traffic signal, then during a particular signal phase, certain vehicular movements are required to stop, while others are allowed to go through the intersection; then at a subsequent phase, the movements previously stopped are now allowed to go through, while the others are then required to stop. Obviously, this creates additional delays when compared with a roadway segment.



Examination of the Tables 6 and 7 clearly demonstrates how the LOS will deteriorate from existing conditions to the year 2015 and most notably in the year 2030. It was not surprising to see that during the year 2030; most of the intersections will be performing at poor LOS during both the AM and PM peak hour.

CORRIDOR ANALYSIS

In addition to examining the specific links and intersections of the system, an evaluation of all the roadway corridors was undertaken to provide the perspective of overall traffic flow. From this the network can holistically examined, detailing general origins, destinations and flow patterns. As civic leaders look for congestion relief, each potential corridor and connection was reviewed. It is apparent that a new corridor can be costly, time consuming and politically unpalatable, as it likely will require neighborhood disruption or eminent domain. An infinitely less expensive and less intrusive option would be to utilize latent capacity on an existing corridor. Directionality of traffic was examined. The concept of reversible lanes or special use lanes to add capacity within an existing right of way can be further explored if a +- 60 percent/40 percent directional split is shown. There are at least three opportunities where this may be accomplished.

Flow

Examination of all the data previously presented in light of a corridor and areawide perspective tells much about overall flow, origins, and destinations in the study area. Flow was examined for east / west movement, north / south movement and across the causeways.

The study area is made up of a series of east/west and north south corridors. The roadway network is best described as an interrupted grid. Few corridors traverse the entire study area. From a north / south perspective, three corridors carry the bulk of the systems traffic. These include:

- I-95
- Biscayne Boulevard
- Collins Avenue

East / West mobility is characterized by five, corridors which connect I-95 and Biscayne Boulevard:

- Ives Dairy Road
- Miami Gardens Drive
- 167/163rd Street
- 135th Street
- 125th Street

The mainland and barrier islands are connected by three causeways:

- William Lehman
- Sunny Isles
- Broad

Of these east/west corridors only two connect the barrier islands directly with I-95:

- 167/163rd Streets – Sunny Isles Boulevard
- 125th Street – Broad Causeway

Today the roadway links operate in a relatively good condition as the analysis of the roadway links and intersections detailed. The northern part of the study area is carrying much more volume than the southern part. As an example Ives Dairy Road carries over 4,500 trips in the PM peak hour, while 135th Street, the southern most east/west corridor carries less than 1000 trips.

Volumes from north to south on each corridor that connects Biscayne Boulevard and I-95. The same is true on Biscayne Boulevard. The volume on Biscayne Boulevard south of Ives Dairy Road is about 6,400 trips. This volume decreased by 65 percent at 125th Street south of Broad Causeway to 2,300 trips.

East/West Movement – Directional Split, Total Trips

	Westbound		Eastbound		Directional Split	Total Trips
Total	Trips	Percentage	Trips	Percentage	52%/48% W/E	25430
Ives Dairy	2453	55%	2025	45%	55%/45% W/E	4478
Miami Gardens	1746	52%	1590	48%	52%/48% W/E	3336
SR 826 between						
US-1 and 19th Ave	1791	60%	1202	40%	60%/40% W/E	2993
19th Ave and 10th Ave	1838	58%	1356	42%	58%/42% W/E	3194
10th Ave and 6th Ave	1806	57%	1365	43%	57%/43% W/E	3171
6th Ave and 2nd Ave	1218	48%	1317	52%	48%/52% W/E	2535
NE 135th St between						
US-1 and 14th Ave	312	31%	681	69%	31%/69% W/E	993
14th Ave and Dixie Hwy	791	51%	748	49%	51%/49% W/E	1539
Dixie Hwy and I-95	840	47%	939	53%	47%/53% W/E	1779
NE 123 St	580	41%	832	59%	41%/59% W/E	1412

Red text represents directional splits favorable for managed lanes

North/South Movement – Directional Split, Total Trips

	Northbound		Southbound		Directional Split	Total Trips
Total Trips	Trips	Percentage	Trips	Percentage	52%/48% N/S	34,078
US-1 between						
Ives Dairy and Lehman Cswy	3006	47%	3343	53%	47%/53% N/S	6,349
Lehman Cswy and Miami Gardens	3061	47%	3408	53%	47%/53% N/S	6,469
Miami Gardens and SR 826	1637	51%	1548	49%	51%/49% N/S	3,185
SR 826 and NE 151st	1362	50%	1342	50%	50%/50% N/S	2,704
NE 151st and NE 135	1790	61%	1131	39%	61%/39% N/S	2,921
NE 135th and NE 127th	1601	56%	1239	44%	56%/44% N/S	2,840
NE 127th and NE 123rd	1696	58%	1224	42%	58%/42% N/S	2,920
NE 123rd and NE 115th	1351	56%	1043	44%	56%/44% N/S	2,394
NE 14th Ave	895	54%	750	46%	54%/46% N/S	1,645
NE 6th Ave	910	55%	738	45%	55%/45% N/S	1,648
NE 2nd Ave	872	87%	131	13%	87%/13% N/S	1,003

East/West Movement

	Lanes	Total Trips	Trips Per Lane	LOS
Ives Dairy	6	4478	746	F
Miami Gardens	6	3336	556	E
SR 826 between				
US-1 and 19th Ave	8	2993	374	C
19th Ave and 10th Ave	8	3194	399	C
10th Ave and 6th Ave	8	3171	396	C
6th Ave and 2nd Ave	8	2535	317	C
NE 135th St between				
US-1 and 14th Ave	4	993	248	C
14th Ave and Dixie Hwy	4	1539	385	C
Dixie Hwy and I-95	4	1779	445	C
NE 123 St	4	1412	353	D

Causeway Lanes, Trips, LOS

	Lanes	Total Trips	Trips Per Lane	LOS
William Lehman Causeway	6	2802	467	C
NE 163rd St/SR 826/Sunny Isles Blvd	8	3086	386	C
NE 123 St/Broad Causeway	4	1708	427	C

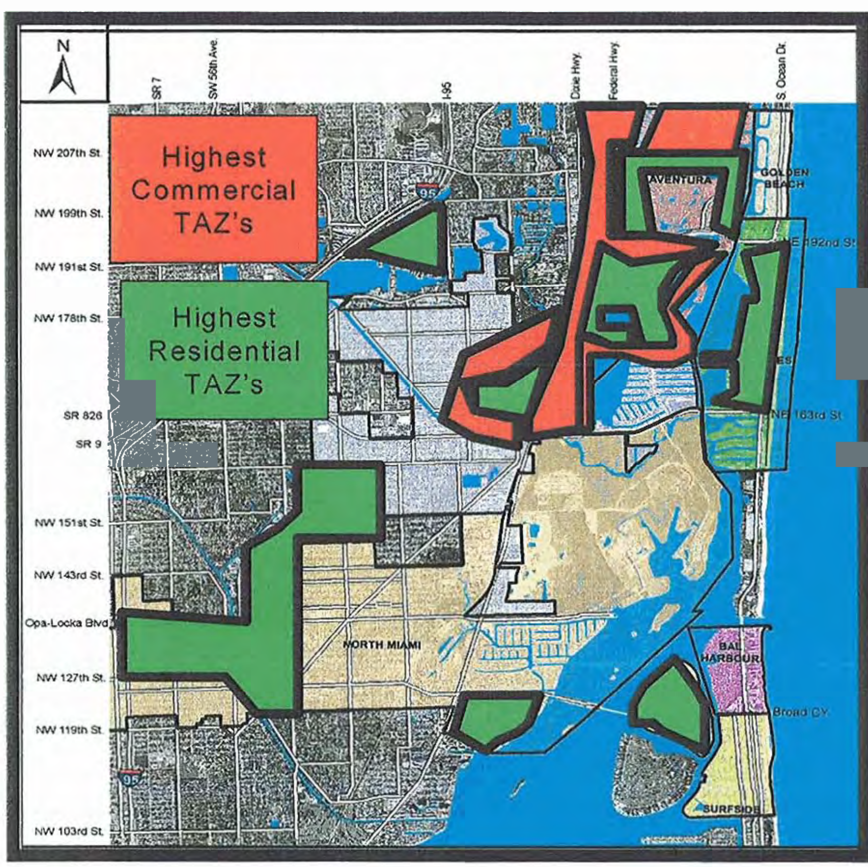
The epicenter of north/south flow is along Biscayne Boulevard between Miami Gardens Drive and Ives Dairy Road. The bulk of the traffic volume is in the northern part of the study area. Directional flow is generally balanced through the study area except in a few key locations. This can partially be explained by the fact that the northern roads have more lanes, and more capacity, therefore more volume. While this is true because Ives Dairy Road and Miami Gardens have six lanes, and 167/163rd Street has eight lanes and both 135th Street and 125th Street have four lanes. Further analysis of vehicles per lane and indicator of congestion shows that the northern roads are most congested. Ives Road carries nearly 750 vehicles per lane, while the highest total vehicles per lane is on 135th Street at 445 vehicles per lane. Even the William Lehman Causeway, has the highest vehicle per lane of any of the causeways at over 450.

Areas with high directional split (60%/40%) are appropriate for reversible lanes or special use lanes. Directionality can be seen on a hand full of corridors. For east/west corridors, there is a predominant PM westbound flow on the 167/163rd Street / Sunny Isles Boulevard corridor. This is +-60 percent westbound, +-40 percent eastbound between AIA and NE 2nd Avenue, where it balances. Conversely, there is a +- 60 percent eastbound, +-40 percent westbound PM flow on 125th Street. For north/south flow, Biscayne Boulevard is highly directional +-60 percent northbound, +-40 percent southbound PM flow between the Broad Causeway, and the 151st Street area. Traffic seems to be converging on the center of the area on Biscayne Boulevard. North of 163rd Street the predominant flow is south. South of 163rd Street the predominant flow is north, while the flow at the 163rd Street, Biscayne Boulevard intersection is essentially split evenly north and south, with the largest movement being from the barrier islands to the west. Half of those trips that approach the intersection continue through in a westbound direction. Where this "counter clockwise" directional flow is taking place, provides the best opportunity to enhance the corridors, without invasive projects which may require infrastructure where none exists today.

Intersection Directional Splits

	East/West	North/South
William Lehman Causeway@ US-1	0%/100% W/E	50%/50% N/S
NE 163rd St/SR 826/Sunny Isles Blvd @ US-1	60%/40% W/E	52%/48% N/S
NE 135th St @ US-1	36%/64% W/E	59%/41% N/S
NE 123 St/Broad Causeway @US-1	47%/53% W/E	63%/37% N/S
SR 826 @ NE 10th Ave	53%/47% W/E	49%/51% N/S
SR 826 @ NE 2nd Ave	48%/52% W/E	90%/10% N/S
NE 135th St @ Dixie Hwy	49%/51% W/E	53%/47% N/S

The reasons for this have everything to do with the nexus transportation and land use. The area in Aventura and along Biscayne Boulevard have the highest concentrations of both residential and commercial density. There is a home/work imbalance. It can be said that for the most part, Aventura in the area and the employees in the area don't live in the area. There is a tremendous cross flow each day.



Because of this cross flow of drivers, the northern part of the study area exhibits a relatively balanced directional split. Biscayne Boulevard at William Lehman Causeway is balanced 47 percent northbound / 53 percent southbound. The Causeway itself is a 50/50 split.

Like the results of the Coastal Communities Transportation Master

Plan, it is shown that traffic does not distribute either on AIA or Biscayne Boulevard. It most likely distributes on I-95. Traffic generally enters and exits the Study Area on the I-95 connected corridor closest to its Study Area origin or destination. This can be seen by the amount of volume lost between links in a north south direction. For instance, on northbound Biscayne Boulevard, nearly 1,350 vehicles approach the 125th Street/Biscayne Boulevard intersection headed northbound in the PM peak hour. Of these vehicles 85 percent or 1,154 continue north. The total traffic northbound out of that intersection is 1,696. The additional 500 vehicles come from both the east and west. By the 135th Street / Biscayne Boulevard intersection on northbound Biscayne Boulevard, only 1,601 vehicles approach from the south. This means that nearly 100 vehicles got off of the road. The outbound to the north number of trips from that intersection equal 1790. Meaning that 189 trips entered northbound Biscayne Boulevard at that intersection. The northbound approach to 163rd Street and Biscayne Boulevard intersection from Biscayne Boulevard is 1362 vehicles. This means 428 vehicles exited the system between the intersections. But outbound northbound from that intersection Biscayne Boulevard carries 1637 trips, meaning that 275 trips entered from the east or west. Large blocks of traffic disappear off of the road between links, and even larger blocks of traffic enter at each intersection. This shows that vehicles are coming in to the system on the east/west road closest to their north / south destination. The northbound side of each Biscayne Boulevard intersection has more volume than the south bound approach.

East / West Connectivity

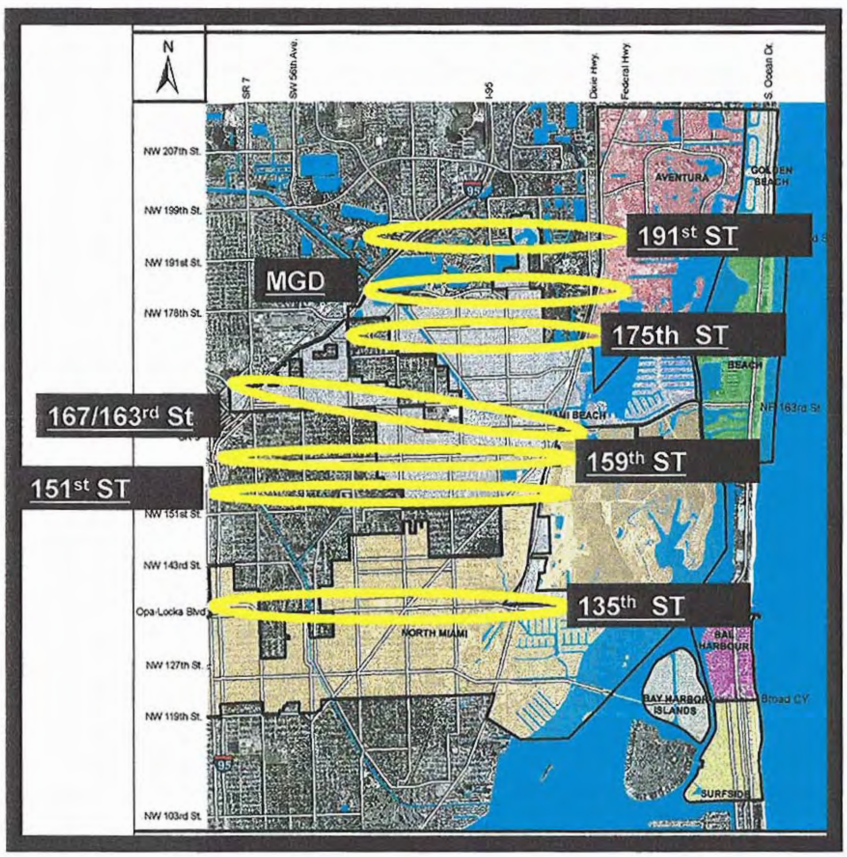
Of particular importance to the Mayor's Joint Task Force was identification of an additional east-west route to efficiently link US-1 with I-95 in a way that minimized impact to the highly compact neighborhoods in the area. Currently, Ives Dairy Road, Miami Gardens Drive, N.E. 167th/N.E. 163rd Streets, N.E. 135th Street, and N.E 125th Street are the only roads that provide unobstructed connectivity and an interchange. It is felt that more roads with east-west connectivity would facilitate greater movements on the roads and less congestion in the overall system. One of the key traffic congestion issues is the lack of an efficient connection between US-1 and I-95. Most of the routes that do travel east and west go through densely populated neighborhoods or are not continuous, i.e., they are blocked by a canal, park, or a neighborhood. As a result, people trying to get to I-95 from the east have few choices.

To address the lack of east-west connectivity, two issues were examined, including the more efficient utilization of existing corridors through reversible or special use lanes, and development of a new corridor by making new connections where none exist now. Preliminary field reconnaissance of all corridors was undertaken. Directional splits were evaluated and possible connecting links in the area were examined.

The corridors reviewed included:

- N.E. 191st Street
- Miami Gardens Drive
- N.E. 175th Street
- N.E. 167th Street/N.E. 163rd Street
- N.E. 159th Street
- N.E. 151st Street
- N.E. 135th Street

Possibility of New Corridors
The following discussion reviews each corridor in greater detail. Following this discussion, an analysis of the overall characteristics of each is presented.



N.E. 191st Street

N.E. 191st Street provides a generally continuous link from Dixie Highway to I-95. The land use along most of the street is residential, with some areas with development only on one side of the street. One of the challenges in using this corridor as an efficient east-west connector are the abrupt turns such as shown below.

Other challenges include the fact that there is no connection from US-1 to Dixie Highway. As a result there would have to be a connection built to create such a linkage. The other obstruction is the fact that there is no interchange with I-95. Short of building a new interchange, a tunnel or bridge would have to be built to allow traffic heading southbound to enter into the system (a canal bridge would also have to be built). Northbound traffic would likely have to be routed via Miami Gardens Drive and north.

Miami Gardens Drive (N.E. 181st, N.E. 185th, N.E. 186th)

Miami Gardens Drive provides east / west connectivity between US-1 and I-95. Like Ives Dairy Road further north, traffic is very heavy due to the heavy concentration of residential development along the corridor and the commercial/retail development east of 22nd Avenue. This route has been identified for consideration for future widening. Nevertheless, the current high level of development (schools, high-rises, condominiums, etc.) may make such a project very expensive.

N.E. 175th Street

This corridor, which is relatively straight with no turns, would rely on a connection from US-1 along 172nd Street to 20th Street and then left on 175th Street. On 175th Street the neighborhood is residential on both sides of the street. There is a canal (Glades) between N.E. 14th and N.E. 13th Avenues which would have to be bridged. West of the Glades canal, the street again passes through residential neighborhoods. It ends at the park at N.E. 6th Street. From there it continues to I-95, where an interchange or other type of connection to feed into the interstate system would need to be built.

N.E. 167th / 163rd Streets

N.E. 167th Street runs on a generally straight alignment from N.E. 22nd Avenue to I-95. It traverses a mixture of residential and commercial areas. Coming from the west, the predominant traffic flow diverts just east of N.E. 8th Street onto 163rd Street where it continues on to Sunny Isles Beach and Miami Beach. Like Miami Gardens Drive, this route (N.E. 167 – N.E. 163) is heavily congested, particularly in the 163rd Street area and is not seen as a viable primary east/west route to offer traffic options in the area. Extending N.E. 167th Street (i.e., going straight along a corridor north of 163rd) could be an alternative. The two primary obstructions are the need to traverse the Glades Canal and the lack of a linkage with US-1.

The connection to US-1 could be avoided by making improvements to N.E. 22nd Avenue and routing traffic from US-1 north on 22nd Avenue to 167th Street via the 163rd Street/Sunny Isles Boulevard. connection.

N.E. 159th Street

N.E. 159th Street travels along a straight alignment from N.E. 22nd Avenue to I-95 where it ends at an intersection with a service road. The street passes through an almost exclusively residential environment with houses on both sides of the street. The only obstructions are the lack of an immediate interchange at I-95 and the need to create a viable connection to US-1. As an alternative, traffic could be routed along N.E. 22nd Avenue from N.E. 163rd/Sunny Isles Boulevard. .

N.E. 151st Street

N.E. 151st Street offers an existing linkage between US-1 and I-95. The only blockages to a continuous corridor are at the area near N.E. 3rd Street and the Biscayne Canal. Like the other corridors considered, there is residential development along both sides of the street which would need to be considered in any major roadway improvement. This corridor would also provide a linkage to the Florida International University (FIU) campus.

N.E. 135th Street

Like N.E. 151st Street, N.E. 135th Street offers a continuous corridor between US-1 and I-95 with an interchange at I-95. Unlike 151st Street, the road already is bridged across the Biscayne Canal. There is a mix of residential and commercial land use along the road.

Development of an alternative east-west through route in any of these corridors that could effectively provide traffic relief throughout the system would impact residential and commercial neighborhoods. To understand at a preliminary level which of the routes should be considered for more detailed analysis, Table 3-1 was prepared.

Table 3-1
Preliminary Route Analysis

Corridor	Impact to Residential Areas*	Impact to Commercial Areas	Obstructions	Connectivity	Alignment	Score
N.E. 191st	1	4	3	2	2	12
Miami Gardens Dr.	1	1	4	4	2	12
N.E. 175th	2	4	1	2	2	11
N.E. 167th	2	3	2	3	4	14
N.E. 159th	2	3	4	3	3	15
N.E. 151st	2	3	2	5	4	16
N.E. 135th	1	1	4	4	4	14

*Scores are from 1 to 5 with 5 being best and 1 being worst.

This preliminary analysis indicates that from the standpoint of creating an alternative east/west route that can move traffic from US-1 and points east to I-95 and have a beneficial impact to the entire transportation system the corridors to the south may provide the best opportunities. This would either be from the standpoint of simply creating projects that connect the dots (i.e., no major roadway improvements but rather constructing projects that facilitate a continuous connection) or from adding lanes and widening to a facility.

N.E. 151st Street and N.E. 159th Street appear to be the best candidates. N.E. 135th Street scores well but may be too far south to have a realistic benefit to the problem areas further north.

Other Considerations

The type of investment being considered on one of these corridors to create the transportation options desired will be significant. Clearly, design considerations will include minimizing impact on residential and commercial development (which also drastically escalates project costs). In the event a major improvement is considered (beyond for example putting a bridge over the canal but not any road widening to accommodate increased traffic), the corridor should be designated as a premium transportation corridor with sufficient capacity for autos, transit, and non-motorized uses. This will require significant investment in right-of-way. It should include transit and non-motorized considerations.

Reversible Lanes

Utilization of existing right of way to enhance corridor flow would be less invasive, less costly and faster to implement than the development of a new corridor. There is a potential that latent capacity exists on some of the corridors, particularly if there is high directional flow of traffic. Through the analysis conducted in this study, three primary corridors have arisen as candidates for reversible lanes. Others were evaluated. This list of candidate corridors within the study area where reversible lane systems may be considered was developed for preliminary assessment. A review of the projected 2030 roadway traffic conditions illustrate that many of the major corridors will be operating at LOS E or worse.

Reversible lanes provide an additional lane, but not through physically expanding the roadway right of way, but by utilizing a lane which is not significantly used for a particular period of the day. A reversible lane is a path on which the direction of traffic flow can be changed to increase roadway capacity during peak demand periods. Reverse-flow operation on undivided streets generally is justified where 60 percent or more of the traffic moves in one direction during peak periods, where the remaining lanes are adequate for the lighter directional traffic flow; when there is continuity in the route; adequacy to accommodate the reversible lane width; where there is no raised median and where left turns and parking can be restricted during peak hours.

Reversible lane systems are a commonly implemented traffic operation and vehicular flow movement strategy. Used throughout the country, reversible lanes control traffic on congested arterials, tunnels and bridges by allocating additional roadway lanes to one direction or another by time of day thereby using the latent capacity of the road. This strategy is particularly effective when traffic volumes are directional in nature and right-of-way is limited. Reversible lanes have the ability to address traffic congestion issues and make efficient use of available right-of-way.

The Institute of Transportation Engineers (ITE) describes the reverse laning of roadways as "potentially one of the most effective methods of increasing rush-hour capacity of existing streets under the proper conditions."

The practical reason in South Florida for using reversible lane systems (RLS) is to increase (as in the case of peak hour traffic and extraordinary events such as hurricane evacuation or major sport events) or maintain (as in the case of construction zones) capacity. It affords the flexibility of changing lane use to fit changing demand patterns and is best suited to routes in which it is not economically practical to add lanes, particularly on bridges, tunnels or those facilities where impacts to residential and for businesses would be insignificant. Preferably, capacity gains should be without significantly degrading the operational quality of the opposing direction.

Through various resources, organizations such as ITE, the American Association of State Highway and Transportation Officials (AASHTO) and the Federal Highway Administration (FHWA) have proposed warrant criteria for RLS as well as general practices to help it operate in a positive manner.

Generally speaking, a ratio of major to minor directional traffic volumes of at least 2:1 is recommended. AASHTO suggests that reversible operations are justified when "60 percent or more of the traffic moves in one direction during peak hours." However, smaller traffic volume ratios and directional percentages of less than 60 percent may support the use of reversible lanes if proven feasible by the appropriate detailed traffic engineering studies.

Additional criteria to be taken into account include:

- Congestion and Bottlenecks (vehicular speed at less than half the posted speed limit for existing conditions or future year for at least two hours each commute period)
- Physical Factors (such as horizontal and vertical alignment, cross section, road density, and weaving sections)
- Transit Service
- Travel Patterns (accrued travel time savings)
- Available Space (ability to widen or modify roadway through minor changes in geometrics)
- Connectivity (identification of critical links between segments of a system)
- Improvement in the roadway Level-of-Service (LOS)

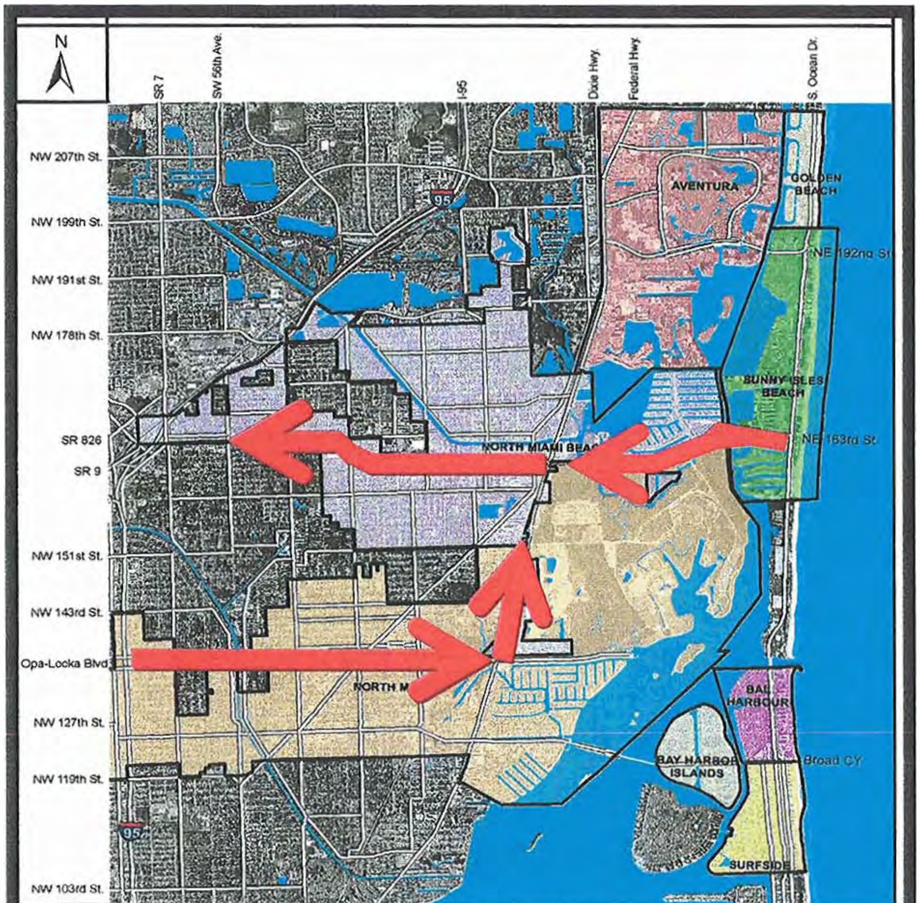
Potential advantages:

- Higher operational speeds
- Reduced travel time
- Better service in the direction where congestion warrants a dedicated lane treatment
- Improved LOS
- Lower cost when compared with roadway widening

Potential disadvantages:

- Removal of existing median, landscape, signs and drainage structures
- Greater police enforcement
- Greater need to monitor and quickly respond to incidents
- Potential for wrong way movements
- Additional cost associated with reversible roadway signs and/or signalization
- On-site personnel required to confirm proper deployment and closure, even if the traffic controls are automated.
- Potential prohibition of left turns during hours of operation

Corridor by Corridor Analysis of Reversible Lane Potential



Reversible Lane Candidates

NE 167th/163rd Street/SR 826. The segment of NE 167th/163rd Street between NW 2nd Avenue and US-1/Biscayne Boulevard is six-lane divided with a minimum median width of 12 feet, which may be conducive to reversible flow lanes. This section represents an important operating segment, providing important connection between the Palmetto/I-95, US-1 and the barrier island communities, as it directly connects to the Sunny Isles Boulevard. This segment exhibits a directional split on the links between US-1 and SW 6th Avenue of between 61 percent and 57 percent westbound, and between 40 percent and 43 percent eastbound in the PM peak hours. Implementation of a reversible lane may be difficult here because it requires left turn prohibition, which would present an impact to this heavily commercial area. Sunny Isles Beach Boulevard, connecting to the barrier islands to US-1operates at a 61 percent westbound, 39 percent eastbound split. This direct link could be very efficient in traffic movement and mobility.

Miami Gardens Drive/SR 860. The segment of Miami Gardens Drive between I-95 and US-1 may not be conducive to reversible lane operations as its traffic is very balanced at 52 percent westbound 48 percent eastbound. This road represents an important operating segment, providing a connection between I-95 and US-1. The majority of the segment consists of a four-lane divided cross section with a minimum median width of 16 feet, presenting favorable physical factors. The segment appears to be congested in both directions during the peak hour which makes it not favorable for reversible lane implementation. Implementation of a reversible lane may be difficult due to location of businesses and schools requiring the need to provide adequate alternative routes (three consecutive right turns) if left turn is prohibited.

Ives Dairy Road/SR 854 The segment of Ives Dairy Road between I-95 and US-1 possesses conditions which may not be conducive to reversible lane operations. This exhibits a 55 percent/45 percent westbound predominant split of traffic. It provides an important connection between I-95 to US-1 and the Aventura Mall. The majority of the segment consists of a four-lane divided cross section with a minimum median width of 12 feet, presenting favorable physical factors. However, due to the nature of reversible lanes which prohibits left turns it may not be feasible to implement as there is a need to provide alternate routes which will consist of three consecutive right turns.

135th Street/SR 916 The segment of 135^{th} Street between 14th Avenue and US-1 possesses conditions which may be conducive to reversible lane operations. It exhibits a 69 percent/31 percent eastbound split in the PM peak. This road represents an important operating segment, providing a connection between the US-1 and the Opa-Locka Airport. It appears to be heavily congested in one direction with an existing continuous left turn lane in the center which makes it ideal for reversible flow lane implementation. Further detailed engineering studies would prove the feasibility of implementing a reversible lane system on this corridor.

125th Street between I-95 and US-1 may be conducive for reversible lanes. It exhibits a 59 percent/41 percent eastbound predominant splint in the PM peak hours.

Biscayne Boulevard/US-1 The segment of Biscayne Boulevard between NE 151st Street and NE 115th Street may be conducive to reversible lane operations. It exhibits between a 61% and 56% northbound predominance in the PM peak hours. The majority of the segment consists of an eight-lane cross section with a minimum median width of 12 feet. The largest negative relative to the implementation of reversible lane operations would be the number of turning vehicles that would have to cross the width of the road safely.

NE 6 Avenue This segment of NE 6 Avenue between Miami Gardens Dr and NE 13th Street possess conditions which may not be conducive to a reversible lane system. It appears to be heavily congested in both directions. Yet it has an existing continuous left turn lane in the center which makes it ideal for reversible flow lane implementation. This road exhibits a 55 percent/45 percent northbound pm peak split.

Transportation Demand Management Techniques

Transportation Demand Management (TDM) is defined as the use of incentives, disincentives, and market management to affect travel behavior to shift to non-motorized and/or higher-occupancy modes, reduce or eliminate the need to travel, and/or shift travel onto less congested routes. It represents policies that are consistent with federal surface transportation planning initiatives. TDM is also described as the art of influencing traveler behavior for the purpose of reducing or redistributing travel demand and used to mean the provision or expansion of alternatives to Single Occupancy Vehicle (SOV) travel, such as transit, bicycling, and walking. In recent years TDM has been targeted in federal legislation as potentially important pieces of the overall strategy to address congestion and air quality issues.

TDM strategies include:

- Public mode support
- Employer-based support
- Pricing
- Telecommunications
- Land-use policies
- Public policy and regulations

In our region these programs made available by the South Florida Commuter Services (SFCS). It is recommended that the municipalities included in this study area coordinate and implement TDM strategies, in partnership with the South Florida Commuter Services.

Transportation Management Associations (TMA's), like SFCS are organizations that operate within a city, district or are made up of employers in a district or city. They are formed to assist in the planning and coordinating and implementing of TDM measures, and to provide the private sector with an organized means of providing input into public sector planning, decision-making, and project development.

The goal of TMA's is synergistic, in that individual employers will be able to create more effective TDM programs by pooling their resources with other employers than they would be able to alone. TMA's are especially beneficial to their smaller members who are able to offer their employees more transportation options than they would be able to in isolation.

Transportation Demand Management (TDM) can be grouped into three general categories:

- Alternative Transportation Modes
- Alternative Work Schedules and Sites
- Incentives and Disincentives

Carpooling, an alternative to the single occupant automobile, is done between at least two people who desire to share driving duties and/or costs, using their own private vehicles. These are either arranged independently or with the assistance of a ride matching service. SFCS provides matching service in our region. Often carpools are more formalized, to the extent that the vehicles are provided by an employer, a Transportation Management Association, a private contractor, or a public agency.

Often the provider also assists in the creation of the carpools and the administration of the program, although in some cases the two tasks are handled by separate entities. This is more similar to vanpooling which is done with larger groups. These consist of 7-to-15 passenger vans which are used instead of automobiles. In general, vanpools are only used for longer commute trips due to time, cost, and convenience factors.

Ridesharing

The concept behind ridesharing is fairly straightforward; reduce the number of vehicles on the road by shifting drivers of single-occupant vehicles into multi-occupant vehicles, much like carpooling. In part because of this, ridesharing is the most widely utilized and most commonly recognized of all the TDM measures. The two oldest and most common forms of ridesharing are carpooling and vanpooling.

Ride matching

Ride matching is integral to ridesharing. Ride matching is a service that assists individuals in the creation or expansion of carpools and vanpools, and also provides information on vanpool and transit routes, and the location of park-and-ride lots. Such a service can be limited to a specific employer or an individual site, or it can be organized through a regional ride matching provider. The actual service can be as simple as a bulletin board or as complex as a GIS-based computer system.

Walking and Bicycling

Two of the most basic transportation modes which TDM measures try to encourage are bicycling and walking. People begin and end each trip as a pedestrian. In some areas within the study area, the urban environment precludes convenient walking and bicycle trips. These are frequently seen as hazardous. Many urban design and management techniques can be developed to make these trips more attractive. These include:

- Use of FDOT Livable communities initiative
- Colored and or textured crosswalks
- Sidewalks around individual sites
- Wide curb lanes for bicyclists
- Facilities to allow pedestrians and bicyclists to bypass natural and man-made barriers
- Off-road bicycle paths
- Designated bike lanes (with appropriate striping and signing)
- Sidewalks on both sides of arterial and collector streets
- Traffic control devices allowing pedestrians to safely cross at intersections
- Bicycle-sensitive loop detectors to enable bicyclists to trip traffic signals
- Showers and locker rooms at individual sites
- Adequate bicycle storage facilities at individual sites

High Occupancy Vehicles (HOV) Lanes

Any vehicle carrying more than two occupants gets to bypass back-ups and cut commute time by using an HOV lane. HOV lanes re-open to all traffic during non-commute hours.

High Occupancy Toll (HOT) Lanes (Express Lanes)

Similar to High Occupancy Vehicle lanes, the High Occupancy Toll lanes allow vehicles to bypass congestion by using a special use lane which is tolled. The toll is generally set to maintain a certain preferred level of service. For instance to maintain a level of service C in the off peak hours the toll may be low. To do so in peak hours the tolls would rise until the number of vehicles willing to pay to use the lanes matched the number and speed of LOS C on that facility. These facilities are often excellent opportunities for Bus Rapid Transit. Transit buses are allowed to ride free.

Land Use Techniques

Land use and transportation cannot be separated. Transportation inadequacies are symptomatic of land use decisions, and vice versa. Land use techniques that enhance the viability of alternative modes center primarily around zoning requirements to encourage high density, mixed-use development that is easily accessible to transit, and provides quality bicycle, pedestrian, and transit links between homes, shops, and jobs.

Alternative Work Schedules and Sites

Alternative work schedules (AWS) is a TDM technique that seeks to relieve congestion by shifting the hours an employee reports to and leaves work. The types of AWS are:

Compressed Work Week

Employees work more hours per day, but work fewer days per week. The most common programs involve employees working four 10-hour days in a one week period, or working 80 hours in nine days during a two-week period.

Flextime

Employees are allowed to set their own workday start and finish times, provided that they work an agreed upon number of hours. Generally, employees are required to be at work during a "core" period each day (for example, between 9 a.m. and 3 p.m.).

Telecommuting

Employees are enabled to work at a location other than their conventional office, in order to reduce or eliminate their normal commute. The most common alternative site is the employee's home, although in some cases "satellite" work offices are also used. Additional costs associated with telecommuting from an employee's home may be covered entirely by the employer, entirely by the employee, or jointly between the two. Costs may include computer hardware and software, additional phone lines, and utility costs. Telecommuting is most often applied on a part-time basis, with the majority of participants only telecommuting one or two days per week.

Staggered Work Hours

Employees' work times are staggered in such a way that their arrival and departure times are spread over a longer period of time.

Incentives and Disincentives

These are measures which motivate people to use a particular mode. Incentives generally focus on the cost and convenience of particular items.

Parking Management

The availability and cost of parking are key factors underlying travelers' choice of travel mode. In short, if parking is expensive and scarce, individuals will be more likely to select alternative modes of transportation such as transit and ridesharing. A range of methods to alter parking supply and costs involving both the public and private sector are available. Measures that can be used by municipalities include:

- Establishing differential parking fees at public parking facilities, based upon the number of vehicle occupants, with single-occupant vehicles paying the highest fee.
- Reserving the most desirable parking locations at public parking facilities for high occupancy vehicles.
- Installing on-street parking controls (meters, timed zones, neighborhood preferential parking).
- Imposing parking pricing through regulations.
- Placing controls on the amount of parking built and operated in an area.
- Altering parking codes to discourage oversupplying parking.
- Giving High-Occupancy-Vehicles (HOVs) priority in constrained parking situations.
- Eliminating or monthly discounts favoring long-term commuter parking.

Transportation Allowances and Other Financial Incentives

In order to encourage the use of transportation alternatives, a number of different incentives are available. The majority of such incentives are usually provided by employers and developers; however, there are several incentives that can be provided by the public sector. Employer-based incentives include the following:

General Transportation Allowances

Employer provides each employee with a fixed amount of money to cover their transportation costs, regardless of the commute mode which is selected. Parking fees are generally increased in combination with the allowance in one of two ways: Parking fees are increased by an amount equivalent to the allowance. In this way, individuals are provided with an incentive to use a transportation alternative, yet they are still not penalized for driving. Parking fees are increased by an amount greater than the allowance. In this way, individuals are penalized for driving, while users of alternatives are not. Often the excess revenue which is collected from single-occupant-vehicles (SOV's) is used to help fund the allowance program.

Targeted Transportation Allowances

Employer provides those employees who travel by selected modes with a set amount of money to cover their transportation costs. The most frequently used allowance is a free or reduced-cost transit pass, although in some cases the allowance is broadened to include carpooling, vanpooling, bicycling, and/or walking.

New Vanpooler Benefits

In order to attract new vanpoolers, employers cover all or part of the fares for the first several months of usage.

Miscellaneous Financial Incentives

Employer provides those employees who travel by selected modes with incentives which, although they are not a direct payment, still provide a financial benefit to users of alternative modes. Examples include:

- Allowing the use of fleet vehicles for ridesharing.
- Providing free or discounted fuel for pooling vehicles.
- Providing free or discounted maintenance and repair for pooling vehicles.
- Providing free or discounted equipment for users of alternative modes.
- Awarding additional vacation time to users of alternative transportation modes.

Financial incentives under the control of public agencies include:

New Vanpooler Benefits

In order to attract new vanpoolers, a local agency pays for all or part of the vanpool fares for the first several months of usage.

HOV Facilities/Park-and-Ride Lots

HOV facilities serve as an incentive for people to use buses, carpools, and vanpools by providing travel time savings to them. Generally, an HOV lane is available to buses and vehicles with 2 or more occupants, although in some cases it is limited to buses only. Such facilities are generally oriented to serve the downtown core of a metropolitan area along radial corridors, and are focused on downtown oriented work trips. In many cases the facilities are in operation only during the morning and afternoon peak periods.

Transit Fare Incentives

A local agency provides employers with the opportunity to purchase transit passes at reduced fees, which the employers then provide to their employees for a free or reduced price.

Park-and-Ride lots are often developed in conjunction with HOV facilities, although they are also used in areas that do not have a designated HOV facility. In general, park-and-ride lots are developed to serve as a collection point for individuals using HOV modes such as transit, vanpooling, and carpooling.

Pricing Measures

Pricing measures related to TDM can be classified under one of the following three categories:

- General Tolls: Flat fees that users of a transportation facility are charged regardless of the time of day that the facility is used. The same fee is enforced throughout the day.
- Congestion Tolls: Variable fees that users of a specific transportation facility are charged that are dependent upon the time of day that the facility is used.
- Generally, congestion tolls are set at a relatively high level during peak periods, and are set at a very low rate (or eliminated altogether) during off-peak periods.

Area Wide Pricing Measures

Congestion tolls that motor vehicle users are charged for entering a congested zone, regardless of the facility that is utilized. Of these measures, only general tolls have been used extensively to date. However the primary reason for using tolls on such facilities is not to manage transportation demand. Instead, the major impetus for using tolls to date has been to provide another means to finance a facility that otherwise may not have been built. Congestion tolls and area wide pricing measures have been studied and proposed for implementation in several areas of the United States over the past 25 years. Some have been successfully implemented in California and Texas, while others have not due primarily to public opposition.

Trip Reduction Ordinances (TRO's)

Trip reduction ordinances (TRO's) are local, regional, or state regulations requiring developer and employer participation in the implementation of TDM. TRO's can be applied based on a variety of different criteria, including number of employees, size of development, type of development, and motor vehicle trip generation. In most cases, the key component of the TRO is the creation and implementation of a TDM plan. Generally, TDM plans must include a description of what measures will be used to meet the requirements of the TRO, and a timetable for implementing the TDM program. Once an initial plan has been developed, it is then reviewed and updated on a regular basis by a regulatory agency. If the review shows the plan is not meeting the requirements of the TRO, further action is often required. The enforcement of TRO's can vary widely, from no penalties at all (in voluntary programs) to a scale of fines for failing to meet the requirements of the TRO. Generally, fines are not assessed if an entity fails to meet trip reduction requirements. In most cases, punitive action is taken only if an entity fails to make a good- faith effort to meet the requirements of a TRO.

Complementary Incentives

Although the measures described above are generally regarded as the most effective means of encouraging the use of transportation alternatives, several other TDM measures are also often identified as playing a complementary role, primarily by addressing the reasons individuals frequently give for using SOVS. These measures include:

- Providing fleet vehicles for at-work trips, in order to offset the need to drive a personal vehicle to work for work-related use during the day.
- Providing shuttle service between multiple sites of an individual employer, to offset the need for a personal vehicle to make at-work trips between sites.
- Providing on-site day care, to offset the need for a vehicle to pick up and drop off children before and after work.
- Providing mid-day shuttle service to nearby activity centers, to offset the need for a vehicle to run errands or go to lunch over the noon hour.
- Establishing a guaranteed ride home program, to offset the need for a vehicle should an employee need to leave work during the day in the case of an emergency or should they need to work overtime.

All of these complementary measures are in most cases primarily the responsibility of an individual employer or a Transportation Management Association.

Control of Truck Movements

Trucks can be major contributors to congestion and air pollution problems in urban areas, particularly during peak travel periods. Because of this, methods of controlling and directing truck movements are often explored as one means to address congestion and air quality problems. Such methods include techniques such as incident management programs, adjustments in sign placement, and variable message signs. In addition, other techniques that have been explored but not implemented in other parts of the country include:

- Requirements that businesses do most of their shipping and receiving at night when there is generally excess capacity is available.
- Bans on truck travel on freeways during peak periods.

South Florida Commuter Services

South Florida Commuter Services acts as a large Transportation Management Association, (TMA) for our region. Among the services provided by TMA's are:

- Vanpools;
- Ride matching;
- Coordination of alternative work schedules;
- Guaranteed Ride Home programs;
- Promotion and marketing of TDM strategies;
- Shuttle services between work sites and commercial areas.

South Florida Commuter Services (SFCS) is a regional commuter assistance program funded by the Florida Department of Transportation (FDOT) providing assistance to commuters and businesses in Miami-Dade, Broward and Palm Beach Counties. This program was established to increase the use of alternative modes of transportation by offering South Florida employers and their employee's alternatives to driving to work alone. SFCS provides free assistance to employers that would like to implement transportation solutions within their company. There are several TDM initiatives that are offered for organization by SFCS. It is important to note that TDM is most potent and flexible, given that local municipalities and the private sector are able to use resources as they see fit. The will or incentive to do so becomes integral to the success of each program. SFCS provides free assistance to employers in the tri-county area that would like to implement transportation solutions at their company. Programs offered include:

Work Plan Needs Assessments & Program Development

SFCS Outreach Coordinators assist employers with conducting on-site analysis of the work-site and employee commuting habits and behaviors to establish tailored strategies to meet the needs of the employer and employees.

Carpooling Programs

SFCS will create a Zip Code Analysis identifying clusters of possible carpools. The state ride matching software can match employees commuting patterns with those people who live and work near them and commute at the same time.

Vanpooling Programs

A vanpool is a group of 5-15 individuals sharing the ride and commuting costs to get to work. SFCS can provide a fully insured van, offer employees a flexible month-to-month lease, and provide a subsidy toward the operating expenses of the van, all at no cost to employers.

Emergency Ride Home (ERH)

SFCS gives employees a "commuter insurance". Commuters who carpool, vanpool, bike, use transit, or walk get a free taxi ride in the event of an emergency or unscheduled overtime. Registered users receive up to six free taxi rides per year.

Employer Tax Benefits Assistance

There are several ways an employer can save on taxes by offering employees benefits that encourage commuting to work by vanpooling or using transit. SFCS can provide employers with information on these programs and assistance in implementing them at the worksite.

Transit

Another important aspect is the assessment of existing transit service and identifying potential improvements such as increasing transit service frequency, new or modified bus routes, feasibility of providing a local transit circulator among others.

The table below shows (highlighted in yellow) the existing bus routes serving the study area with their average weekday boarding and peak period headway. Subject to further detailed studies; it is recommended that where the average weekday boarding is 2000 passengers or more, the peak period headway be no more than 20 minutes.

North East Corridor Traffic Flow Study
Existing Transit Service

Route Number	Average Weekday Boardings	AM Peak Headway	PM Peak Headway	Principal Roadways Served
E	1945	30	30	Aventura Blvd., Lehman Causeway, Collins Ave, Sunny Isles Blvd., NW 7 Ave., Opa-Locka Blvd.
G	3036	< 20	30	Collins Ave, Broad CSWY, NE 125 St, NW 17 Ave, Opa-Locka Blvd.
H	5050	<20	<20	Collins Ave., Sunny Isles Blvd., NE 167 St., NE 15 Ave, NE 171 St, NE 19 Ave, Miami Gardens Dr., NE 18 Ave
K	5066	15	15	MacArthur Cswy., Collins Ave.
R	687	30	30	Alton Rd., Collins Ave.
S	12775	10	12	Lehman Cswy., Harding Ave., Collins Ave., MacArthur Cswy.
T	2343	24	24	Julia Tuttle Cswy, Harding Ave., Collins Ave.
V	345	60	60	Ocean Ave., Sunny Isles Blvd., NE 167 St., Biscayne Blvd., Miami Gardens Blvd., NE 19 Ave, N. Miami Ave., NW 2nd Ave, NW 7 Ave.
2	3551	20	20	NE 167 St.
3	8554	18	18	Biscayne Blvd., NE 171 St, NE 15 Ave, NE 167 St, NE 12 Ave, NE 163 St.
9	5980	12	12	West Dixie Hwy, Miami Gardens Dr., NE 10 Ave, NE 167 St, NE 6 Ave, NE 123 St, NE 2 Ave
10	2562	30	30	NE 125 St.
16	4285	14	18	NE 125 St., NE 123 St., Biscayne Blvd.
22	4750	15	13	NW 22 Ave.
28	1464	26	30	NE 151 St, Biscayne Blvd, Opa-locka Blvd.
75	4019	28	28	NW 175 St., Miami Gardens, W Dixie HWY, NE 119 St.
77	10691	8	8	NW 7 Ave.
83	4384	15	15	NE 151 St, Biscayne Blvd, Opa-locka Blvd., NE 163 St., NE 6 Ave, Miami Gardens Blvd.
91	1245	15	30	NW 215 St., NE 2nd Ave, Ives Dairy Blvd, NE 19 Ave, NE 164 St
93	3573	10	15	Aventura Blvd., Biscayne Blvd.,
95	1843	0	1	I-95
99	932	30	30	NW 215 St., NE 2nd Ave, Ives Dairy Blvd, NE 19 Ave, NE 164 St, US1 to Aventura mall
183	1585	27	30	NE 151 St, Miami Gardens Drive, Biscayne Blve, Aventura Ave
246	447	60	60	Collins Ave., NW 22 Ave., MacArthur Cswy., Sunny Isles Blvd.
277	1367	13	14	NW 7 Ave.

CONCLUSION

The interrupted grid network functions well now, but will deteriorate significantly through the planning horizon. Roadway segments, intersections and corridors will exhibit heightened congestion as time goes by. The ability to mitigate the situation lies in the development of a diverse array of multimodal projects which address physical capacity, alternative modes and transportation policy. From the perspective of physical capacity the needs to be addressed are focused on individual roadway segments, and intersections as well as the examination of new corridor development by connecting missing links in the system, or by more efficiently using the existing corridors to accommodate flow. Relative to alternative modes, a higher use of transit and transit incentives needs to be examined, located and provided. Policies that link transportation and land use, as well as attempt to make positive impacts on how and when people travel are going to be needed. As these efforts are developed some will be easier to implement, either by having greater support, requiring less study, requiring less money or being less intrusive. A phased approach is needed, organizing projects in to short and long term implementation categories. The next task: Identification of Multimodal Projects, will address these needs with individual projects stemming from the public involvement and analysis portions of the study.

THE CORRADINO GROUP

NORTHEAST MIAMI DADE

TRAFFIC FLOW STUDY

Task 4 : Project Development

Task 5 : Implementation Plan

THE CORRADINO GROUP

SEPTEMBER, 2007

INTRODUCTION

This report presents the results of Task 4: Development of Potential Projects. This multimodal list of projects is intended to address the deficiencies in the transportation system identified in the prior work conducted for the study. The projects listed in this section were developed as part of a multi-tasked process that included input from all levels during the public involvement process as well as data analysis, examination of existing resources, and understanding of long range planning efforts. The recommendations are holistic in nature, a general discussion of the roadways, intersections, corridors, transit and policy initiatives has been provided. It includes reviewing reversible or special use lanes, short term capacity projects, alternative modes of transportation, and transportation demand management techniques.

Northeast Miami-Dade County experiences traffic congestion and resulting impacts throughout the day. Some of the county's most densely populated and highest traffic volume areas are contained in this area. The Northeast Miami-Dade Mayors Joint Task Force is particularly interested in identifying multi-modal long-term transportation improvements to accommodate future growth in the area while protecting and enhancing mobility, economic prosperity, and quality of life.

Prior work on this study has included two reports including: Task 2: Data Collection and Analysis and Task 3: Needs Assessment. Together, these reports provide a thorough analysis and a solid basis for the development of a multi-modal list of projects that will comprise the Northeast Miami-Dade Traffic Flow Study.

The following projects have been identified through both the art and science of transportation planning. This attempts to understanding what people want (the art) through the public involvement process, and what the area needs (the science) through the transportation engineering and planning analysis. Those projects that match relative to wants and needs are most eligible for further development and represent a "project bank," that will form the core of the sub-regional plan that will have in the implementation plan will determine near-term, mid-term, and long-term horizons. The plan attempts to utilize projects in these implementation horizons as incremental steps to the development of a mature transportation system. As this is a sub-regional plan, there are few issues that any individual city is in sole control of. The cities in Northeast Miami-Dade are influenced by regional issues that can best be dealt with at a regional level. Many of these issues are in the ultimate control of either the County, or the Florida Department of Transportation (FDOT).

Not enough capacity exists in any one mode of transportation to satisfy the all need alone, yet if a variety of modes were effectively utilized, providing traveler's alternatives, the system would function in an improved manner. The ability to implement greater physical capacity is limited. There are opportunities to make major impactfull gains in the area of transit.

It is important to understand the travel patterns in the area, and build a multimodal transportation system that effectively responds to them. This effort begins by looking at the roadway issues, and attempts to maximize the potential that exists within the existing rights of way. It explores where new linkages can be made and where efficiencies in the existing utilization can be taken advantage of. Bottlenecks in the form of intersections will be addressed either by operational or signal improvements. From a mass transit perspective this starts with the existing bus transit system, by reevaluating it then restructuring it appropriately so that, over time it will look and behave like the future system it will eventually become. It is not enough to focus on the future development of rail projects, but to build to those goals through the incremental reformation of the existing system. Initially, route consolidation being planned by Miami Dade Transit will be important, transforming the many similar routes in to fewer "super routes" from which to connect other aspects of the system at logical nodes. The route structures need to be simplified, creating linear routes more similar to that of rail transit. This improved operational efficiency is important so that the bus routes function as a reaction to the local needs. As the increase functional efficiency and effectiveness of the route system is enhanced, a major emphasis should be placed on attracting more "choice" riders. In that sense transit amenities need to be put on the buses, stops and stations. Additionally the marketing of the system needs to be enhanced. Over time the system needs to present a more state of the art, polished rail-like look, feel and customer interface. This plan encourages governments to be open to reevaluating and potentially reprioritizing mass transit needs county wide to more accurately service the need, and to manage growth by actively measuring the impact of various types of development and coordinating land use policies with neighboring jurisdictions. Policy initiatives focused on Transportation Demand Management techniques, such as ride sharing, flexible work hours, intelligent transportation systems, and other methods by which to more flexibly use the mobility system and provide incentives for the use of alternative modes should be put in place. It is incumbent on each community to focus on measurable transportation goals, such as modal split. These should be evaluated in their current state, and periodically measured to track performance. The ultimate goal of a more balanced mode split can be achieved by lessening the dependence on the automobile, through the provision of viable alternatives.

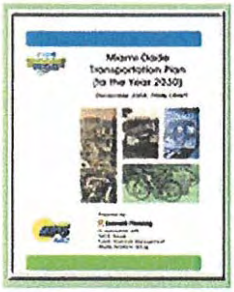
The transportation system, left un-treated will create economic consequences, symptoms of which are already being experienced. Transportation is but one aspect, yet cumulatively, the lack of mobility, lack of affordable housing, deteriorating water quality and quantity, as well as skyrocketing property taxes and insurance rates, are fast draining the viability from our communities.

Project Types

Projects have been developed in three categories and are organized into short term or long term efforts in order to address the entire transportation system. These include:

- Physical Capacity
- Alternative Mode
- Policy

Some improvements are already planned for the area. The Miami-Dade Metropolitan Planning



Organization for the Urbanized Area in its Long Range Transportation Plan (MPO – LRTP) and the 2007 Transportation Improvement Program (MPO –2007 TIP) contain several improvements and are depicted in Table 1.

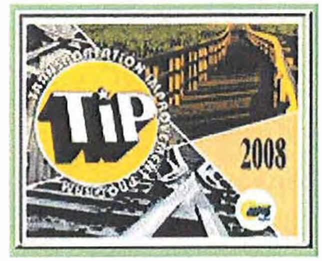


Table 1 – Scheduled and Proposed Improvements

	Project Intersection	Jurisdiction	TIP 2007/LRTP		Proposed Improvements
			Page	Scheduled Improvements	
1	US 1 & MIAMI GARDENS DR	Aventura			Under construction
2	M GARDENS DR & W DIXIE HWY	Miami-Dade County			Change N & SB right turn only lanes to shared NBTR & SBTR
3	SR 826 & US 1	North Miami Beach			Signal Optimization
4	SR 826 & W DIXIE HWY	North Miami Beach			Signal Optimization
5	US-1 & SR-856	Aventura	A5-42	Change westbound lane assignment	Change WB lanes to 2-WBL + 2-WBR
6	NE 10 AVE & 167 ST	North Miami Beach			Signal Optimization
7	SR 826 & NE 10 AVE	North Miami Beach			Signal Optimization
8	US 1 & N MIAMI BLVD/NE 123 ST	North Miami			Signal Optimization
9	US 1 & NE 135 ST	North Miami			Signal Optimization
10	W DIXIE HWY & 135 ST	North Miami			Signal Optimization
11	SR 826 & NW 2 AVE	North Miami Beach	A5-43	Add 3rd EBLT & EBRT Lane	Add N & SB lanes making SB a SBR ONLY & a shared SBTL and making 2-NBL, a NBT and a shared NBTR

Project Lists

Physical Capacity Projects

1. Intersection Level of Service Improvements (Short Term, 1-5yrs if no ROW is needed)
   1.1. West Dixie Highway @ Miami Gardens Drive
   1.2. Biscayne Boulevard @ William Lehman Causeway
   1.3. 2nd Avenue @ 167th Street
   1.4. 163rd Street/Biscayne Boulevard grade separated interchange

2. Traffic Signal Operations (Short Term, 1 – 5 yrs)
   2.1. Biscayne Boulevard @ 163rd Street
   2.2. West Dixie Hwy @ 163rd Street
   2.3. 10th Avenue @ 167th Street
   2.4. 10th Avenue @ 163rd St
   2.5. Biscayne Boulevard @ 125th Street
   2.6. Biscayne Boulevard @ 135th Street
   2.7. West Dixie Hwy @ 135th Street
   2.8. Signal Coordination
   2.9. Traffic Loop Detector Repair

3. Link Level of Service Improvements (Short Term, 1-5yrs if no ROW is needed) (Long Term 5 – 15 Yrs if ROW is needed)
   3.1. 10th Avenue between 151st Street and Miami Gardens Drive
   3.2. 16th Avenue between US-1 and 135th Street
   3.3. 14th Avenue between 163rd Street and 135th Street
   3.4. 151st Street between 10th Avenue and US-1
   3.5. 159th Street between 6th Avenue and West Dixie Highway
   3.6. 171st Street between 15th Avenue and US-1
   3.7. 19th Avenue between 103rd Street and Miami Gardens Drive
   3.8. Collins Avenue between Harbor Way and Bay View Drive
   3.9. West Dixie Hwy between 163rd Street and County Line Road
   3.10. Highland Lakes Boulevard between Ives Dairy Road and 125th Street

4. New Corridor Connections (Long Term 5 – 15 yrs)
   4.1. 159th Street
   4.2. 151st Street

5. Reversible Lane Studies (Short Term, 1-5 yrs)
   5.1. 167/163rd Streets
   5.2. 135th Street
   5.3. Biscayne Boulevard between 125th Street and 151st Street

6. School Board Coordination (Short Term, 1-5 yrs)
   6.1. Relief of Congestion Related to School Loading on Ives Dairy Road and Miami Gardens Drive
   6.2. Work with School Board to minimize traffic impact to Sunny Isles Beach School BB-1

7. Direct Connection Between William Lehman Causeway and Aventura Mall (Long Term, 5-15 yrs)
8. Improved Directional Signage Throughout Area (Short Term, 1-5yrs)
9. North Miami Avenue Consistent 4 Lane Section North and South of 105th Street (Long Term, 5-15 yrs)
10. Implement Aventura Biscayne Boulevard Intersection Modifications (Short Term, 1-5 yrs)

Alternative Mode Projects

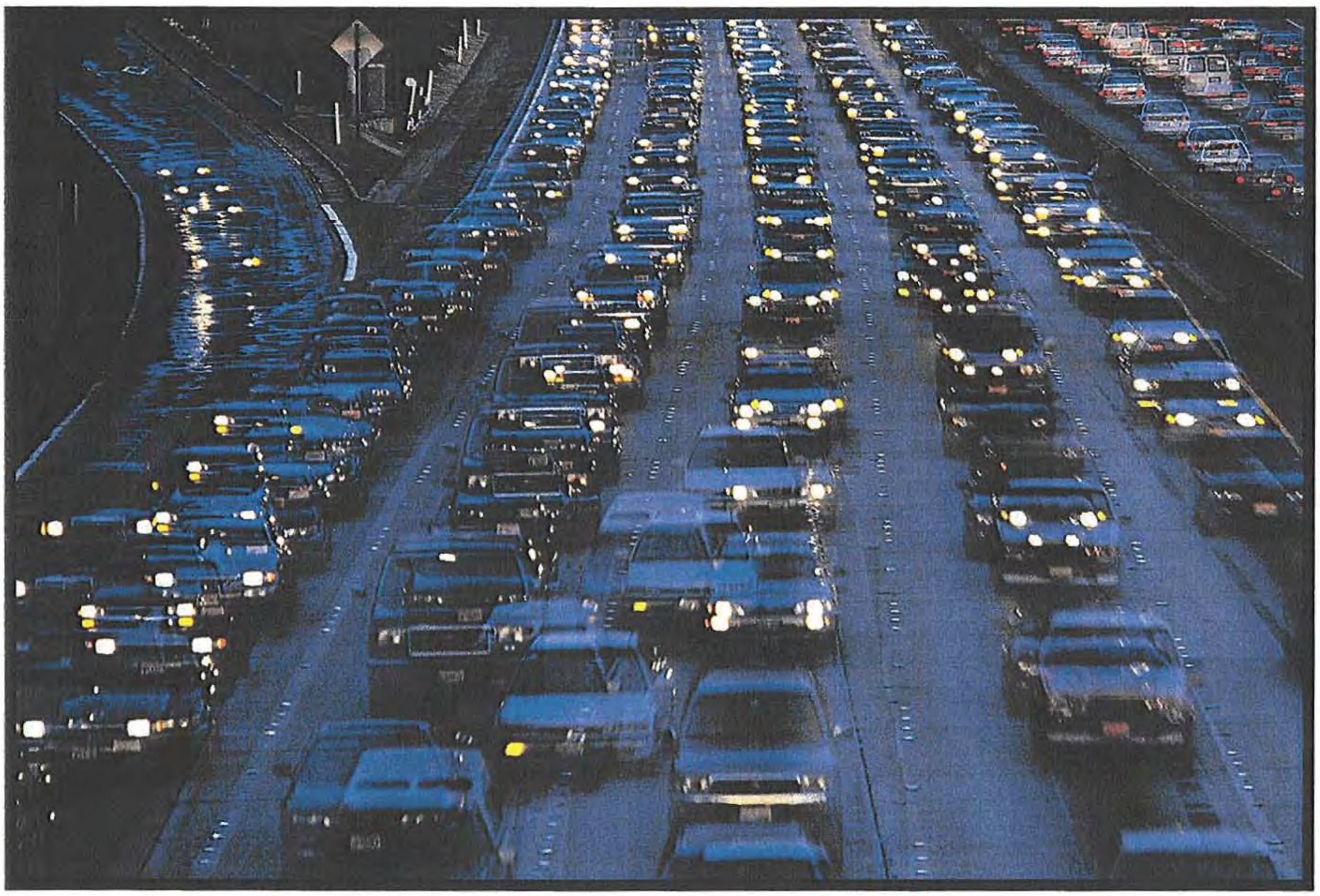
1. Study Biscayne Boulevard Corridor for Higher Level Transit Potential (Short Term, 1-5 yrs)
2. Reformation of Transit Routes in the Study Area Based on MDT Comprehensive Bus Operations Analysis and Coastal Communities Transportation Master Plan (Short Term, 1-5 yrs)
   2.1. Decrease bus headways
3. Support I-95 Bus Rapid Transit (Managed Lanes) (Short Term, 1-5 yrs)
4. Link Municipal Shuttles (Immediate)
5. Adopt Mode Split Goals in Comprehensive Plans (Short Term, 1-5 yrs)
6. BRT on Collins Avenue (Long Term, 5-15 yrs)
7. Coordinate Municipal Circulator Transit Routes with MDT (Short Term, 1-5 yrs)
8. 163rd Street/Biscayne Boulevard Intermodal Center (Long Term, 5-15 yrs)
9. Ensure Appropriate MDT Bus Operations to Sustain Pedestrian Friendly Environment on West Dixie Highway and 15th Street (Short Term, 1-5 yrs)
10. Attract Choice Transit Riders (Short Term, 1-5 yrs)
    10.1. Special use lanes evaluation
    10.2. Enhanced transit amenities
    10.3. Fuel efficient buses
    10.4. Better transit marketing
    10.5. Use smaller buses

Policy Projects

1. Shift County Transit Priorities to Biscayne Boulevard Corridor (Short Term, 1-5 yrs)
2. Develop Northeast Miami-Dade Traffic Impact Fee (Short Term, 1-5 yrs)
3. Provide Incentives for Transportation Demand Management Participation (Short Term, 1-5 yrs)
4. Municipal Transportation Coordinator (Immediate)
5. Further Develop Intelligent Transportation Systems (Short Term, 1-5 yrs)
6. Coordinate Municipal Land Use Policies Along West Dixie Highway and Biscayne Boulevard (Short Term, 1-5 yrs)
   a. West Dixie Highway Charrette

PHYSICAL CAPACITY PROJECTS

Little opportunity to gain large scale impacts exists relative to the implementation of physical capacity within the existing right of way. The right of ways are almost totally built out; therefore this set of projects generally attempts to make minor adjustments to the network, although more elaborate long term physical enhancements have been suggested. While several roadway segments would be operating at poor LOS, it is not generally feasible to add new lanes. Most of the roadways do not have the available right-of-way (ROW) to effectively accommodate additional lanes for the typical sections shown in Figure 5. They are also fully developed with extensive amount of businesses and residential uses surrounding them. Increasing the number of lanes could not only be costly in terms of acquiring the ROW, but would create significant impacts to both the residential and business interests. Implementing reversible flow lanes may be a viable option to increase the capacity of the roadways without ROW acquisition. This is examined in greater detail. Many of the roadways in the network present favorable physical features for enhancement, but there are operational and socio-economic factors that may not make them feasible to implement. Therefore, it is prudent to consider multimodal options, addressed through the transit and policy projects.



Physical Capacity Projects

11. Intersection Level of Service Improvements (Short Term, 1-5yrs if no ROW is needed)
- 11.1. West Dixie Highway @ Miami Gardens Drive
- 11.2. Biscayne Boulevard @ William Lehman Causeway
- 11.3. 2nd Avenue @ 167th Street
- 11.4. 163rd Street/Biscayne Boulevard grade separated interchange

12. Traffic Signal Operations (Short Term, 1 – 5 yrs)
- 12.1. Biscayne Boulevard @ 163rd Street
- 12.2. West Dixie Hwy @ 163rd Street
- 12.3. 10th Avenue @ 167th Street
- 12.4. 10th Avenue @ 163rd St
- 12.5. Biscayne Boulevard @ 125th Street
- 12.6. Biscayne Boulevard @ 135th Street
- 12.7. West Dixie Hwy @ 135th Street
- 12.8. Signal Coordination
- 12.9. Traffic Loop Detector Repair

13. Link Level of Service Improvements (Short Term, 1-5yrs if no ROW needed) (Long Term 5–15 Yrs if ROW needed)
- 13.1. 10th Avenue between 151st Street and Miami Gardens Drive
- 13.2. 16th Avenue between US-1 and 135th Street
- 13.3. 14th Avenue between 163rd Street and 135th Street
- 13.4. 151st Street between 10th Avenue and US-1
- 13.5. 159th Street between 6th Avenue and West Dixie Highway
- 13.6. 171st Street between 15th Avenue and US-1
- 13.7. 19th Avenue between 103rd Street and Miami Gardens Drive
- 13.8. Collins Avenue between Harbor Way and Bay View Drive
- 13.9. West Dixie Hwy between 163rd Street and County Line Road
- 13.10. Highland Lakes Boulevard between Ives Dairy Road and 125th Street

14. New Corridor Connections (Long Term 5 – 15 yrs)
- 14.1. 159th Street
- 14.2. 151st Street

15. Reversible Lane Studies (Short Term, 1-5 yrs)
- 15.1. 167/163rd Streets
- 15.2. 135th Street
- 15.3. Biscayne Boulevard between 125th Street and 151st Street

16. School Board Coordination (Short Term, 1-5 yrs)
- 16.1. Relief of Congestion Related to School Loading on Ives Dairy Road and Miami Gardens Drive
- 16.2. Work with school board to minimize traffic impact to Sunny Isles Beach School on BB-1

17. Direct Connection Between William Lehman Causeway and Aventura Mall (Long Term, 5-15 yrs)

18. Improved Directional Signage Throughout Area (Short Term, 1-5yrs)

19. North Miami Avenue Consistent 4 Lane Section North and South of 105th Street (Long Term, 5-15 yrs)

20. Implement Aventura Biscayne Boulevard Intersection Modifications

Physical Capacity

Project 1: **Intersection Level of Service Improvements** (Short Term, 1-5yrs if no ROW is needed)

Purpose: The purpose of this set of projects is to develop physical improvements to intersections exhibiting poor level of service conditions during the planning horizon. Alternatives are proposed and analyzed. The results of the different options can be seen in Table 2 for the AM peak hour and Table 3 for the PM peak hour.

Need: In 2007 all but one intersection (Miami Gardens Drive / West Dixie Hwy) operates better than LOS F, with 7 of 11 or 63% of the intersections operating at LOS D or better. By 2015 there is still one LOS F, but 5 of 11 or 45% will operate at LOS D or better, a decrease of 18%. By 2030, the numbers will be reversed with 45% of the intersections operating at LOS F and only 18% (2 of 11) operating at LOS D or better.

Description: Projects are located at four intersections in the study area:

1.1 West Dixie Highway @ Miami Gardens Drive
1.2 Biscayne Boulevard @ William Lehman Causeway
1.3 2nd Avenue @ 167th Street
1.4 163rd Street/Biscayne Boulevard grade separated interchange

The following tables show the intersection, the LOS as projected into the future and the LOS after the various improvements.

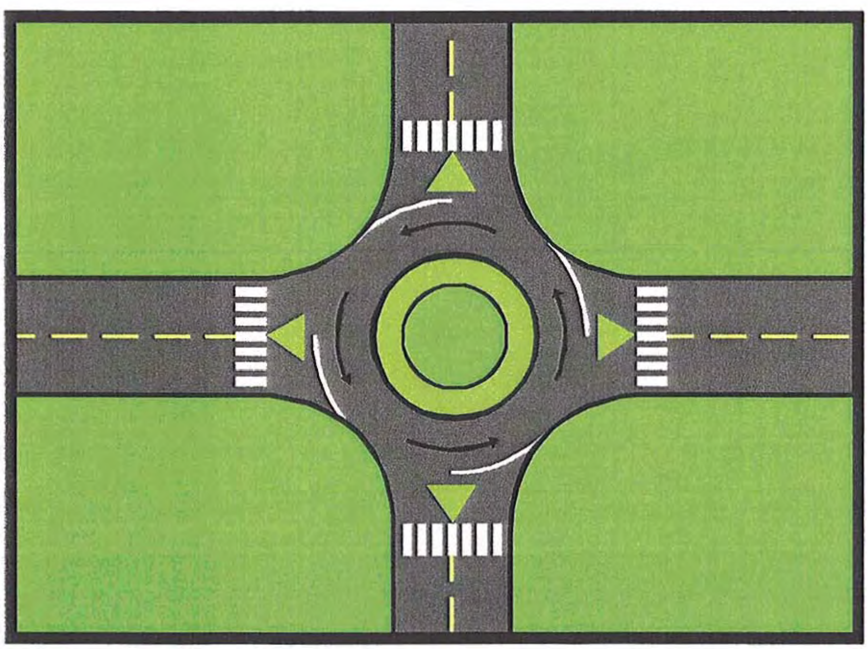


Table 2 – AM Peak Hour

Location	SAN	INTERSECTION	CYCLE LENGTH (SEC)	INT. DEL. (SEC/VEH) 2007	LOS 2007	INT. DEL. (SEC/VEH) 2015	LOS 2015	INT. DEL. (SEC/VEH) 2030	LOS 2030	EXISTING CONDITIONS & POTENTIAL IMPROVEMENTS
1	3469	US 1 & MIAMI GARDENS DR	180							UNDER CONSTRUCTION
2	2524	M GARDENS DR & W DIXIE HWY	180	40.5	D	47.9	D	80.4	F	EXISTING CONDITIONS
				39.8	D	47.9	D	67.6	E	CHANGE WBR TO WBTR ONLY
				37.2	D	42.6	D	66.6	E	CHANGE SBR ONLY TO SBTR
				35.4	D	37.9	D	59.6	E	CHANGE NB & SB R ONLY TO SHARED R & T LANES
				34.7	D	36.2	D	48.2	D	ADD THRU LANES N & SB
3	2010	SR 826 & US 1	150	39.5	D	40.4	D	46.6	D	EXISTING CONDITIONS
				35.3	D	35.9	D	39.4	D	SPLIT OPTIMIZATION
4	2019	SR 826 & W DIXIE HWY	150	34.9	C	37.1	D	46.3	D	EXISTING CONDITIONS
				33.6	C	36.0	D	41.8	D	SPLIT OPTIMIZATION
5	4655	US 1 & SR 856	180	58.0	E	58.4	E	59.1	E	EXISTING CONDITIONS
				24.4	C	24.7	C	26.3	C	2-WBR & 2-WBL
				17.0	B	17.2	B	18.9	B	3-WBL & 1-WBR FREE FLOW
6	3229	NE 10 AVE & 167 ST	130	29.6	C	35.9	D	79.4	E	EXISTING CONDITIONS
				28.0	C	29.6	C	40.9	D	SPLIT OPTIMIZATION
7	2003	SR 826 & NE 10 AVE	130	27.6	C	55.3	E	117.2	F	EXISTING CONDITIONS
				24.7	C	31.4	C	79.2	E	SPLIT OPTIMIZATION
				22.5	C	25.4	C	52.8	D	ADD THRU LANES N & SB
8	2537	US 1 & NE 123 ST	150	50.9	D	66.1	E	113.5	F	EXISTING CONDITIONS
				44.2	D	51.7	D	95.6	F	SPLIT OPTIMIZATION
				37.9	D	40.9	D	52.7	D	ADD SBT & EBL + CHANGE EBR TO EBTR
9	3144	US 1 & NE 135 ST	150	42.2	D	51.1	D	76.4	E	EXISTING CONDITIONS
				42.9	D	51.8	D	76.4	E	CHANGE EBR TO EBTR ONLY
				40.5	D	48.0	D	70.5	E	SPLIT OPTIMIZATION
				38.2	D	40.2	D	50.0	D	ADD N & E L LANES
10	2555	W DIXIE HWY & 135 ST	110	33.1	C	45.1	D	84.4	F	USE SAN 5235 PHASING & TIMING
			150	40.1	D	36.8	D	55.4	E	USE SAN 5235 PHASING, SET CYCLE TO 150, OPT SPLITS
11	2020	SR 826 & NW 2 AVE	180	46.7	D	52.3	D	69.5	E	EXISTING CONDITIONS
				46.6	D	52.3	D	69.4	E	3-EBL, 3-EBT + 1-EBR
				36.2	D	37.1	D	42.0	D	ADD 1-LANE NB & SB, CHANGE LANE LAYOUT + TIP IMPROVEMENTS

Abbreviations:
WBTR: Westbound Shared Thru & Right
SBTR: Southbound Shared Thru & Right
NB: Northbound
T: Thru
R: Right
EB: Eastbound

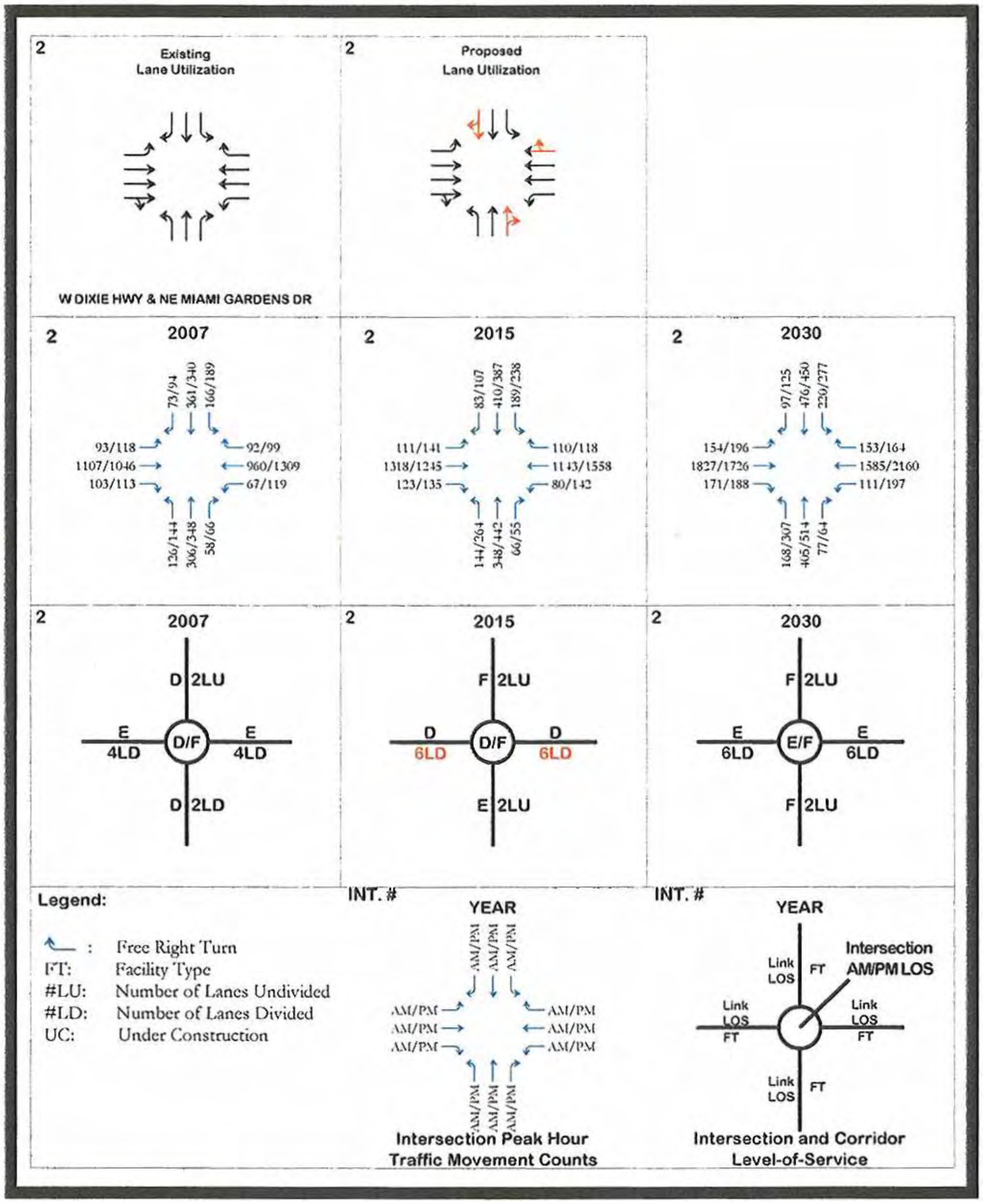
Table 3 – PM Peak Hour

Location	SAN	INTERSECTION	CYCLE LENGTH (SEC)	INT. DEL. (SEC/VEH) 2007	LOS 2007	INT. DEL. (SEC/VEH) 2015	LOS 2015	INT. DEL. (SEC/VEH) 2030	LOS 2030	EXISTING CONDITIONS & POTENTIAL IMPROVEMENTS
1	3469	US 1 & MIAMI GARDENS DR	180							UNDER CONSTRUCTION
2	2524	M GARDENS DR & W DIXIE HWY	180	84.4	F	107.6	F	157.0	F	EXISTING CONDITIONS
				83.0	F	104.2	F	139.7	F	CHANGE WBR TO WBTR ONLY
				74.8	E	92.4	F	126.6	F	CHANGE SBR ONLY TO SBTR
				55.2	E	67.6	E	99.8	F	CHANGE NB & SB R ONLY TO SHARED R & T LANES
				46.4	D	58.8	E	88.5	F	ADD THRU LANES N & SB
3	2010	SR 826 & US 1	150	39.7	D	41.2	D	52.0	D	EXISTING CONDITIONS
				37.8	D	39.9	D	46.1	D	SPLIT OPTIMIZATION
4	2019	SR 826 & W DIXIE HWY	150	38.8	D	40.7	D	50.4	D	EXISTING CONDITIONS
				34.6	C	37.7	D	49.4	D	SPLIT OPTIMIZATION
5	4655	US 1 & SR 856	180	71.9	E	72.6	E	80.8	F	EXISTING CONDITIONS
				72.9	E	71.5	E	79.7	E	2-WBR & 2-WBL
				41.7	D	43.2	D	54.4	D	3-WBL & 1-WBR FREE FLOW
6	3229	NE 10 AVE & 167 ST	130	27.8	C	34.4	C	71.6	E	EXISTING CONDITIONS
				26.7	C	26.5	C	29.7	C	SPLIT OPTIMIZATION
7	2003	SR 826 & NE 10 AVE	130	36.0	D	57.9	E	140.4	F	EXISTING CONDITIONS
				29.9	C	36.7	D	89.5	F	SPLIT OPTIMIZATION
				31.8	C	35.1	D	70.0	E	ADD THRU LANES N & SB
8	2537	US 1 & NE 123 ST	150	48.2	D	53.3	D	73.2	E	EXISTING CONDITIONS
				41.9	D	43.7	D	54.0	D	SPLIT OPTIMIZATION
				39.6	D	40.9	D	46.8	D	ADD SBT & EBL + CHANGE EBR TO EBTR
9	3144	US I & NE 135 ST	150	50.8	D	64.8	E	98.8	F	EXISTING CONDITIONS
				51.7	D	65.7	E	101.3	F	CHANGE EBR TO EBTR ONLY
				40.8	D	50.3	D	87.5	F	SPLIT OPTIMIZATION
				35.6	D	39.7	D	58.3	E	ADD N & E L LANES
10	2555	W DIXIE HWY & 135 ST	110	28.1	C	36.2	C	66.6	E	USE SAN 5235 PHASING & TIMING
			150	37.6	D	42.4	D	68.8	E	USE SAN 5235 PHASING, SET CYCLE TO 150, OPT SPLITS
11	2020	SR 826 & NW 2 AVE	174	55.1	E	64.7	E	81.0	F	EXISTING CONDITIONS
				55.2	E	64.4	E	80.7	F	3-EBL, 3-EBT + 1-EBR
				38.0	D	39.4	D	44.8	D	ADD 1-LANE NB & SB, CHANGE LANE LAYOUT + TIP IMPROVEMENTS

1.1 West Dixie Highway & NE Miami Gardens Drive/NE 187th St

Intersection LOS Improvement - Lane Restriping

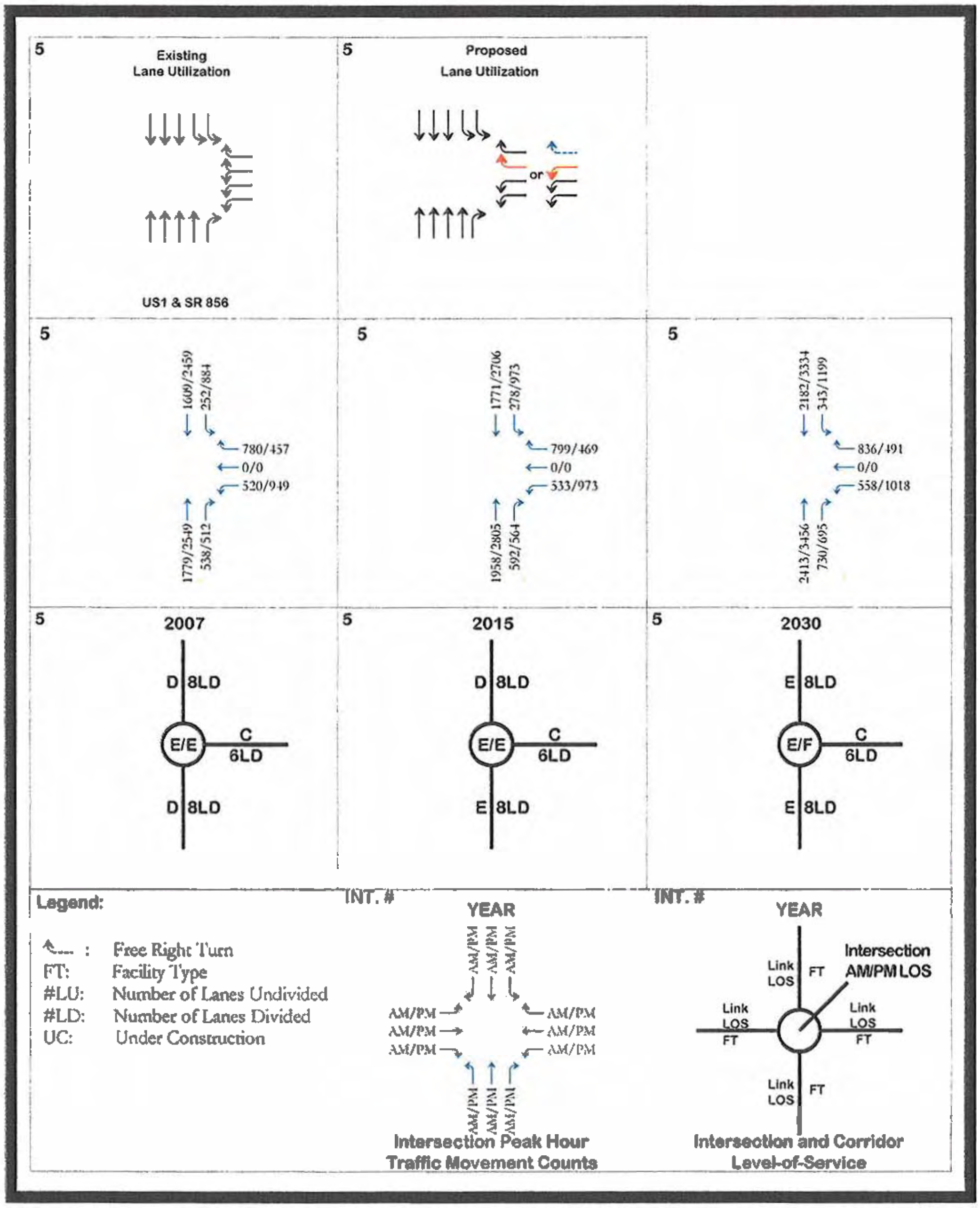
This intersection is about 540 feet west of US-1 & NE Miami Gardens Drive. The NE, SE, & SW corners are commercial in use while the NW corner is institutional (school). West Dixie Hwy is a 2-lane undivided road while NE Miami Gardens Dr is a 6-lane divided road. The intersection is currently operating at level of service D in the AM and F in the PM and will continue to deteriorate towards the year 2030. Proposed improvements consist of re-stripping the north and southbound lanes. Where there are currently exclusive right turn lanes these may be re-striped to be shared through and right lanes. This measure will improve current intersection delay.



1.2 Biscayne Blvd & William Lehman Causeway/SR 856/NE 194th St

Intersection LOS Improvement, Restripe Westbound Lanes

This is a T-intersection with the Aventura Mall on the NE corner. The NW corner is designated to commercial use also. The railroad runs parallel to US-1. At this location US-1 is an 8-lane divided roadway and the causeway is a 6-lane divided road. During AM peak hour, all vehicles seem to clear in one-cycle but during the PM, northbound traffic blocks intersection. The intersection is currently operating at level of service E for both AM and PM peak hours. Improvements to this intersection to improve level of service include re-stripping the westbound shared right and left turn to either a right or left turn only.



There are several alternatives that can be implemented to improve this intersection:

1.2.1 3-WBL & 1-WBR free flow. Reconfiguring the westbound movements to allow for three left turn and a free flow right turn requiring R/W acquisition without changing north and southbound lane stripping. This will require median modification on the south end.

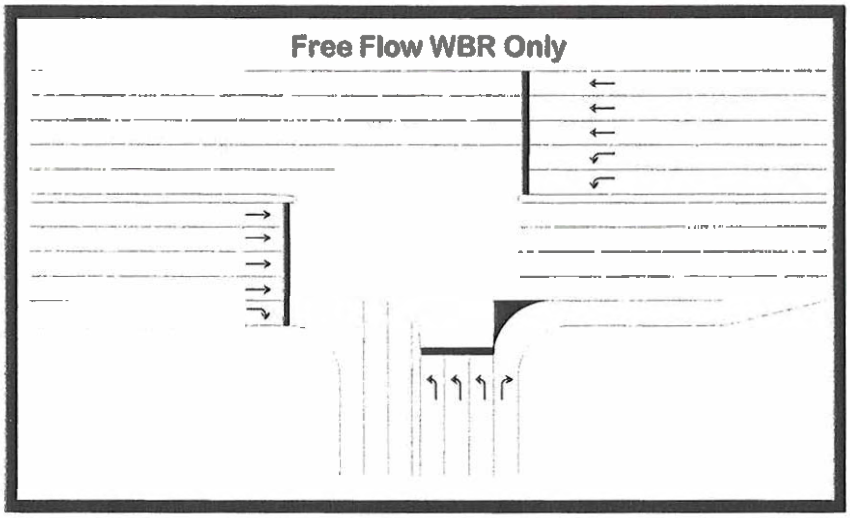


Figure 1 – Intersection Expansion

1.2.2 Continuous Green-T. Reconfiguring the northbound lanes and purchasing R/W to allow the free flow of two westbound right lanes with 3 southbound lanes bypassing traffic signal.

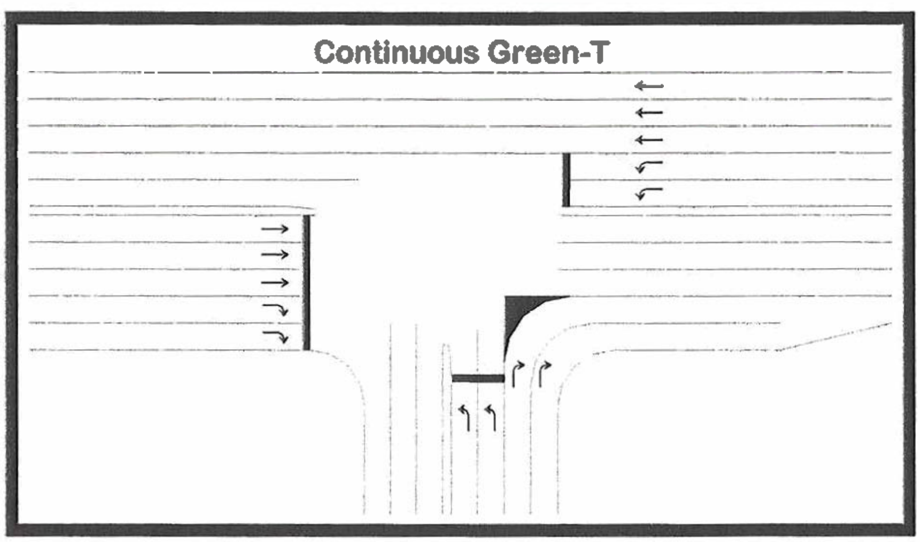


Figure 2 – Lane Re-striping and Intersection Expansion

1.2.3 Turbo lanes. Reconfiguring the northbound lanes to allow free flow movement of two westbound lanes with the 2 southbound lanes bypassing the traffic signal and the other southbound movements still signal controlled.

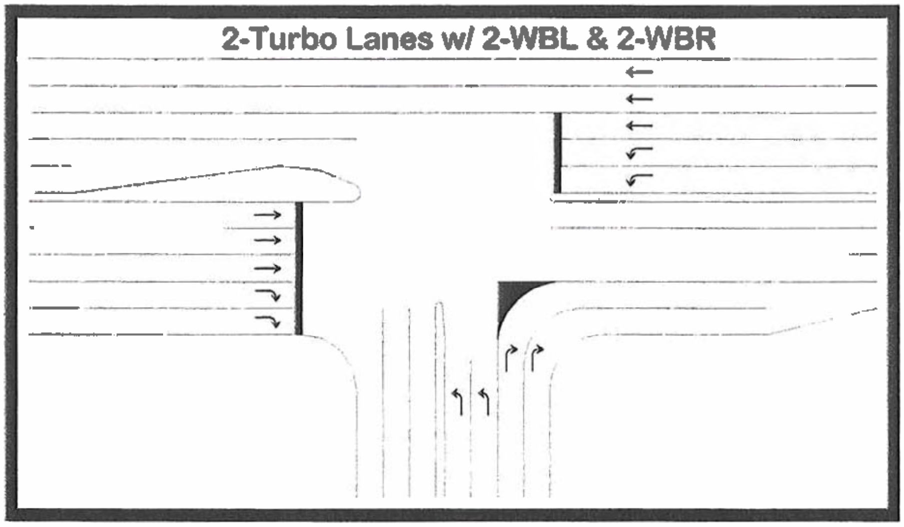


Figure 3 – Lane Re-striping and Intersection Expansion

1.2.4 Turbo lanes. Purchasing R/W to allow free flow of westbound right free flow lane with 2 southbound lanes bypassing the signal while the other southbound movements remain signal controlled.

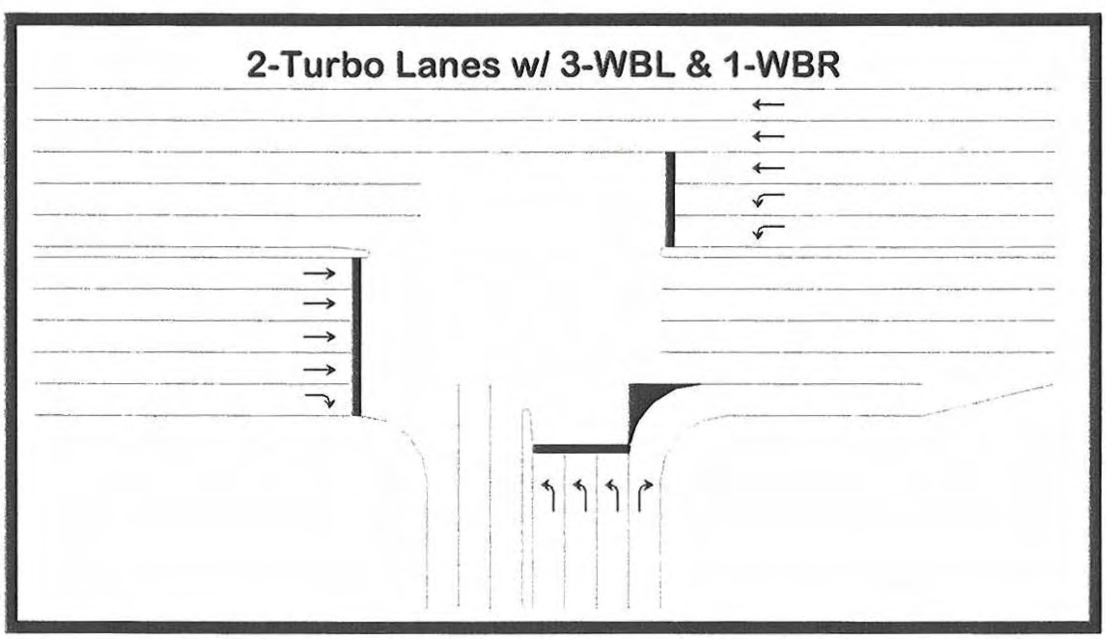
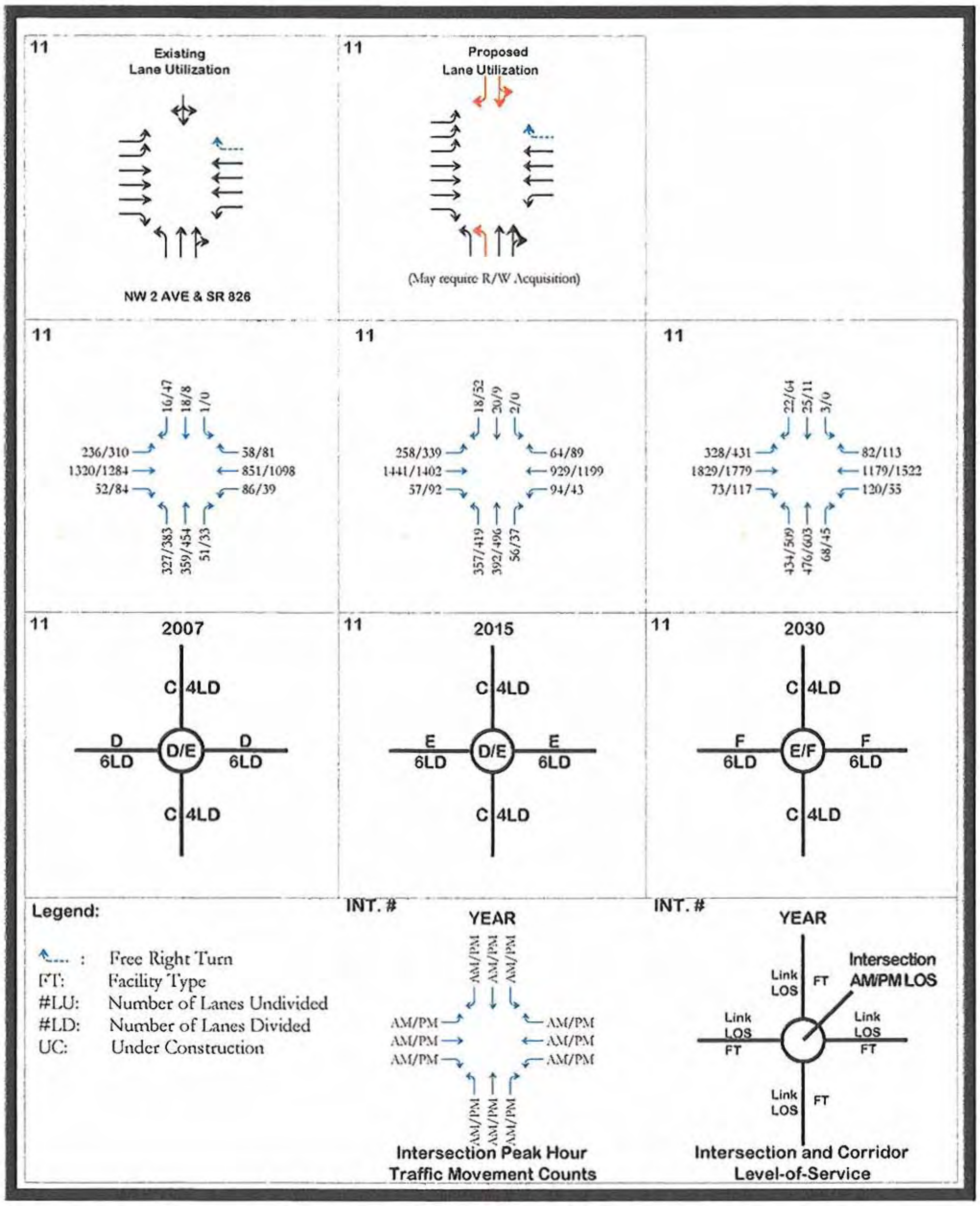


Figure 4 - Lane Re-striping and Intersection Expansion

1.3 NW 2nd Ave & NW 167th St

Intersection LOS Improvement, Lane Addition

This intersection is the major access point to and from the Palmetto Expressway as well as I-95. These ramps are located on the NW corner of the intersection while the other three corners are commercial use. At present the NB and EB traffic are operating poorly during the AM & PM peak hours. NW 2nd Ave is a 2-lane road south of the intersection and 4-lane undivided north of the intersection. NW 167th St is a 6-lane divided roadway east of NW 2 Avenue. The intersection is currently operating at level of service D in the AM and E in the PM peak hours. Proposed improvement requires the investigation of available R/W to expand the intersection by adding a lane to NW 2nd Avenue. This combined with the additional left turn lane scheduled in the 2007 TIP would improve the operating LOS of the intersection to E or better by the year 2030.



Physical Capacity

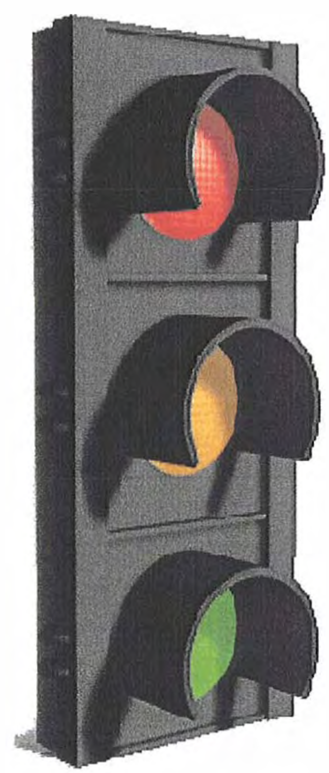
Project 2: Traffic Signal Operational Improvements

Purpose: Traffic signal operations improvements are typically modifications to the existing signal phasing and timing. They can also provide for other intersection improvements such as additional turning lanes, increasing the existing length for storing queued turning vehicles, etc. All these improvements either by themselves or combined are often times very effective in improving LOS and reducing associated vehicular delays. It is also recommended to analyze a large portion of a roadway facility with the objective of improving traffic signal coordination. Signal coordination/synchronization, if done correctly, can significantly improve the LOS and expedite traffic flow along the arterial.

Need: In 2007 all but one intersection (Miami Gardens Drive / West Dixie Hwy) operates better than LOS F, with 7 of 11 or 63% of the intersections operating at LOS D or better. By 2015 there is still one LOS F but 5 of 11 or 45% will operate at LOS D or better, a decrease of 18%. By 2030, the numbers will be reversed, with 45% of the intersections operate at LOS F and only 18% (2 of 11) operating at LOS D or better.

Description: Traffic signal operations are improvements that impact level of service through manipulation or optimization of the signal operations. No physical improvements are needed to this project. There are nine efforts that would remedy signal operations in the area. These include:

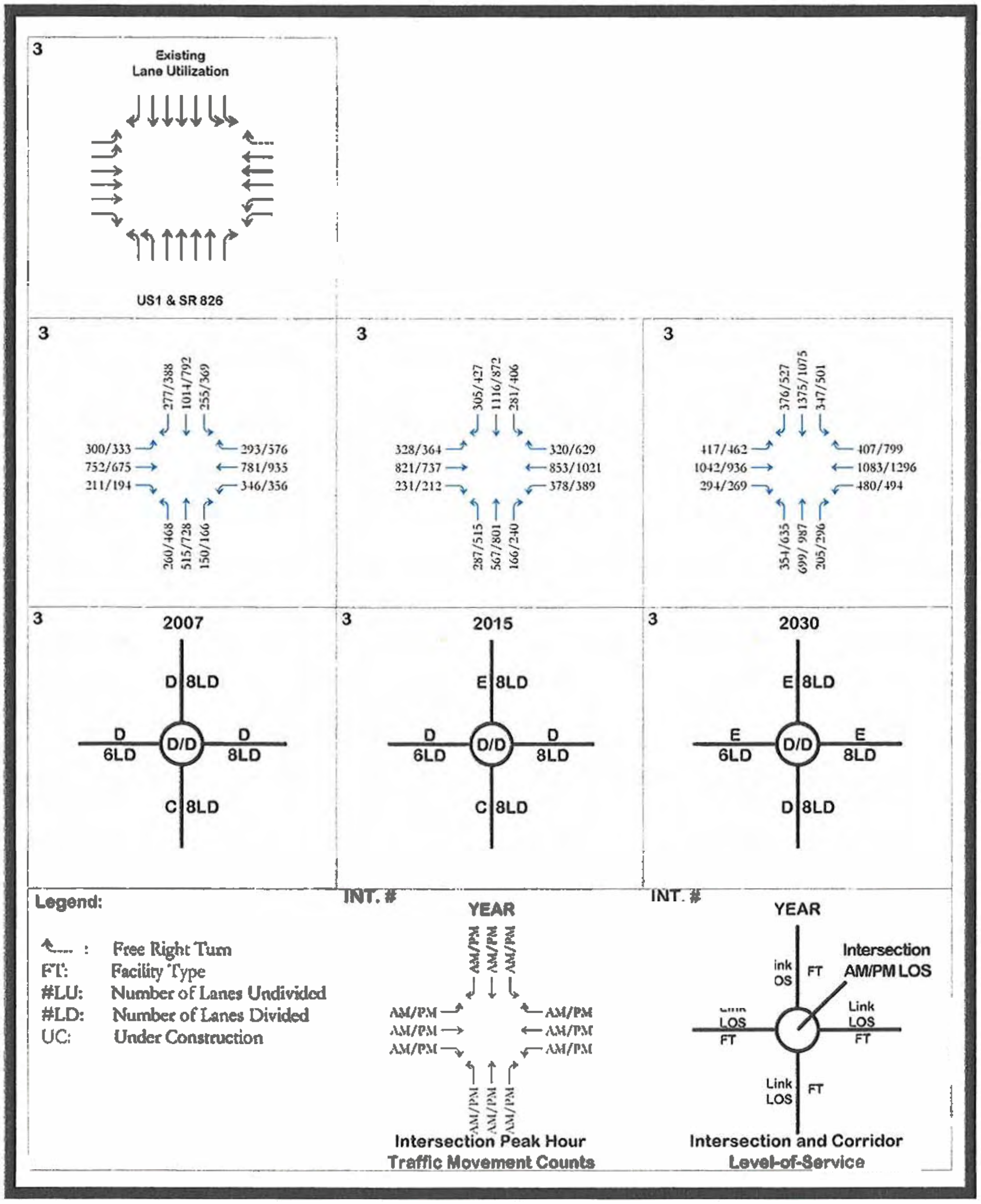
- 2.1 Biscayne Boulevard @ 163rd Street
- 2.2 West Dixie Hwy @ 163rd Street
- 2.3 10th Avenue @ 167th Street
- 2.4 10th Avenue @ 163rd St
- 2.5 Biscayne Boulevard @ 125th Street
- 2.6 Biscayne Boulevard @ 135th Street
- 2.7 West Dixie Hwy @ 135th Street
- 2.8 Signal Coordination
- 2.9 Traffic Loop Detector Repair



2.1 Biscayne Blvd & NE 163rd Street

Signal Operations, Signal Retiming

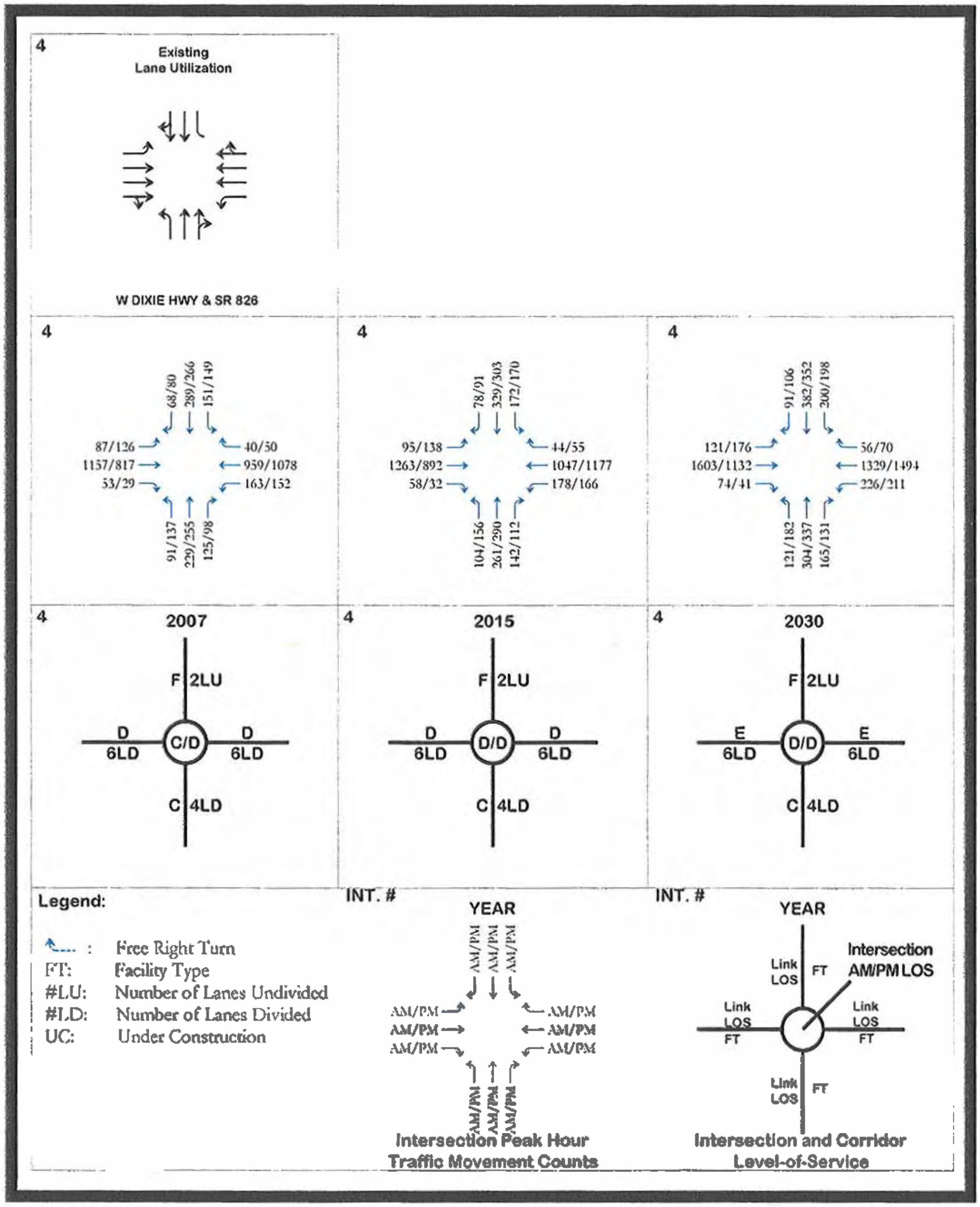
This intersection has commercial use on four corners with the FEC railroad running parallel to it west of US-1. US-1 is a 4-lane divided road while NE 163rd St is a 6-lane divided road. The intersection is currently operating at level of service D for both AM and PM peak hours and will continue to operate at acceptable level of service in the year 2030. Improvements to maintain level of service consist of signal retiming.



2.2 W Dixie Hwy & NE 163rd St

Signal Operations **Signal Retiming**

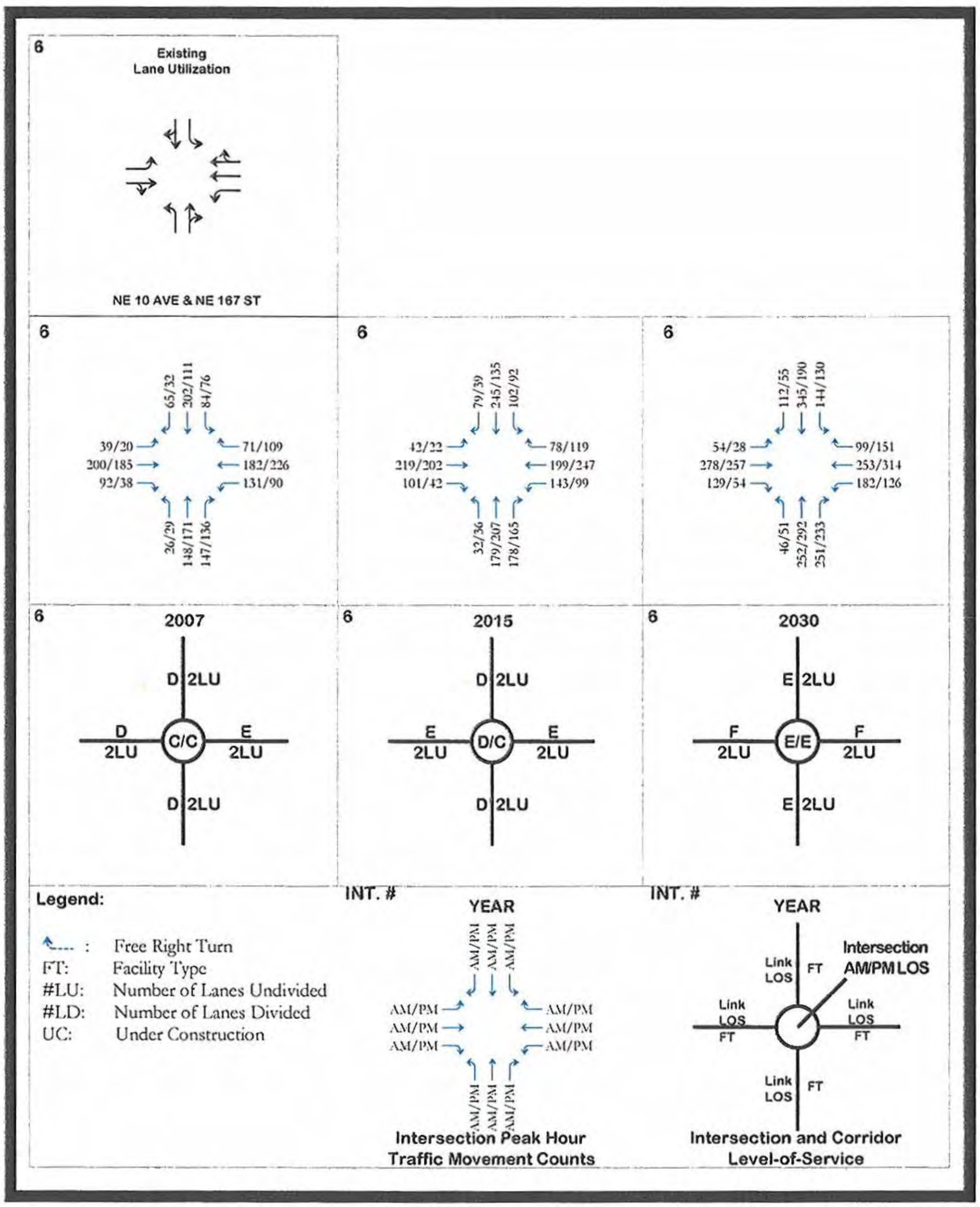
Located about 680 feet west of US-1, it has commercial use on all corners with the NW corner being an office complex. West Dixie Hwy is a 4-lane divided road at this intersection with NE 163rd St having a 6-lane divided road. The intersection is currently operating at level of service C in the AM and D in the PM and will continue to operate at acceptable level of service in 2030. Improvements consist of signal re-timing.



2.3 NE 10th Avenue & NE 167th St

Signal Operations Signal Retiming

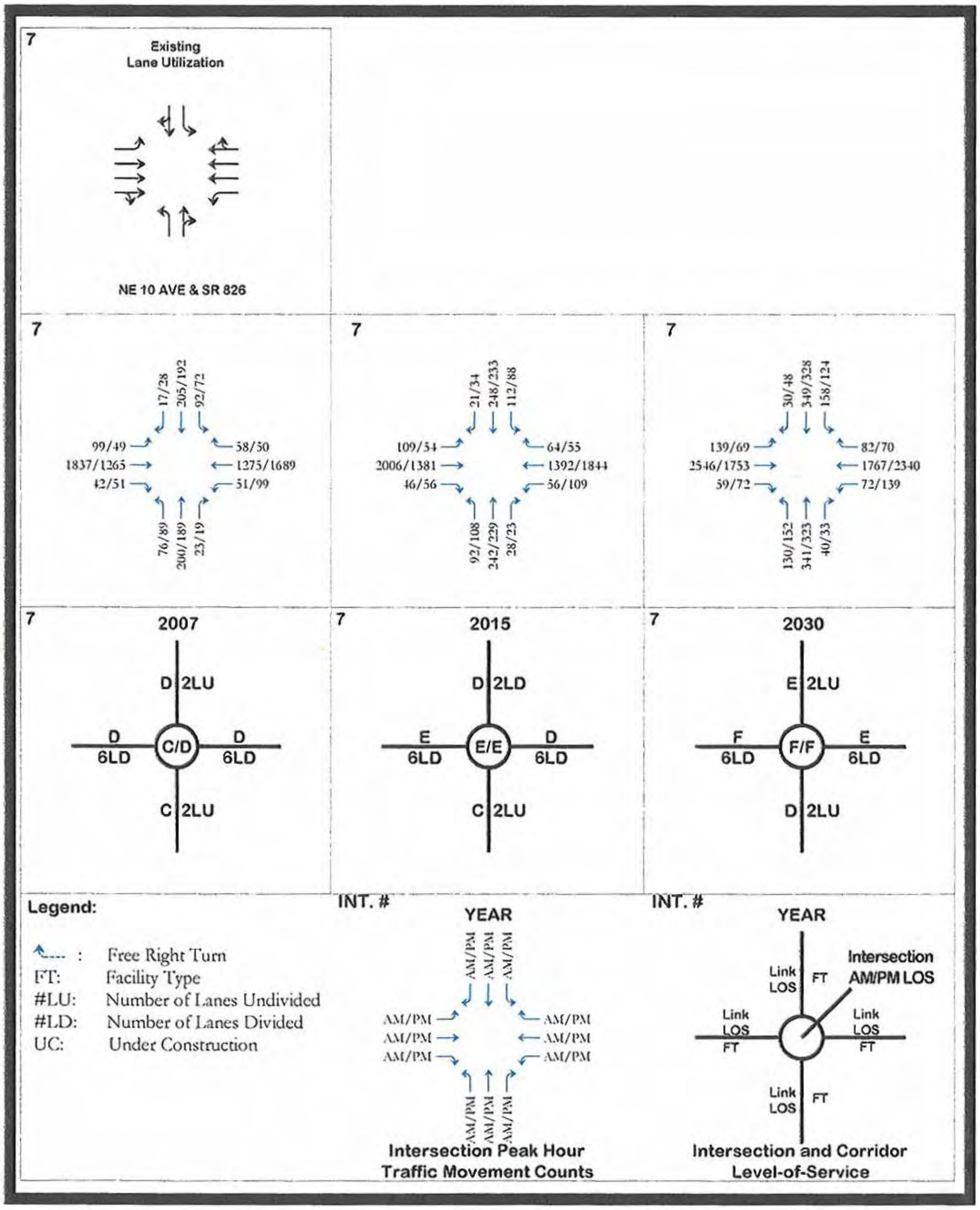
NE 10th Ave and NE 167th St are 2-lane undivided roadways with the NE corner designated for school use; the NW & SE corners are residential and the SW is commercial. The intersection is currently operating at level of service C for both AM & PM peak hours but will deteriorate to levels of service E or worse by the year 2030. Improvements for this intersection include signal re-timing.



2.4 NE 10th Avenue & NE 163rd Street

Signal Operations   Signal Retiming

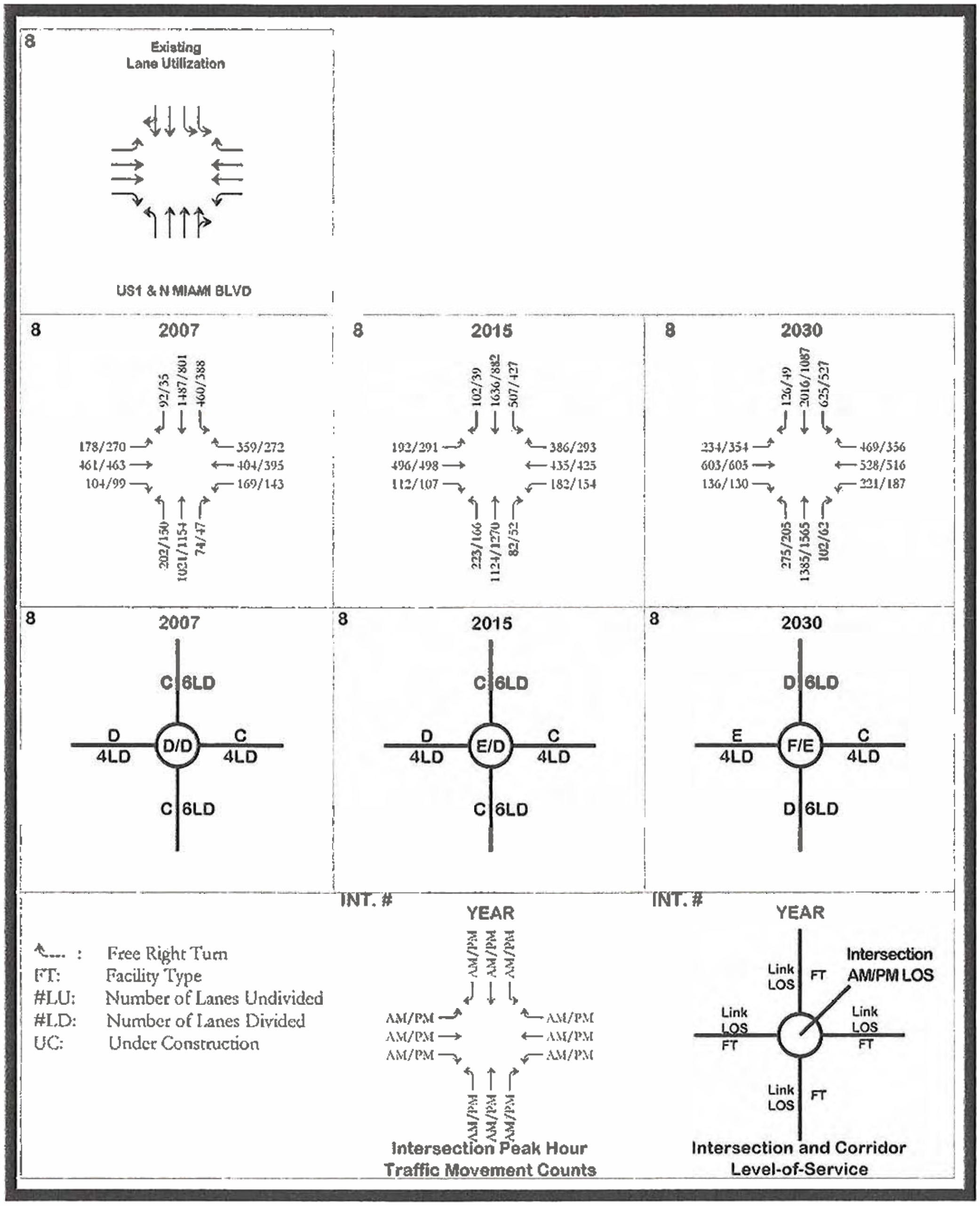
NE 10th Ave is a 2-lane undivided roadway. The four corners are commercial uses. NE 163rd St is a 6-lane divided roadway. Westbound progression is poor at this intersection with some traffic blocking intersection during the AM peak hour. No problems are seen during the PM peak hour. The intersection is currently operating at level of service C in the AM and D in the PM peak hours but will deteriorate to level of service E or worse by the year 2030. Improvement for this intersection includes signal re-timing.



2.5 Biscayne Blvd & NE 125th St

Signal Operations **Signal Retiming**

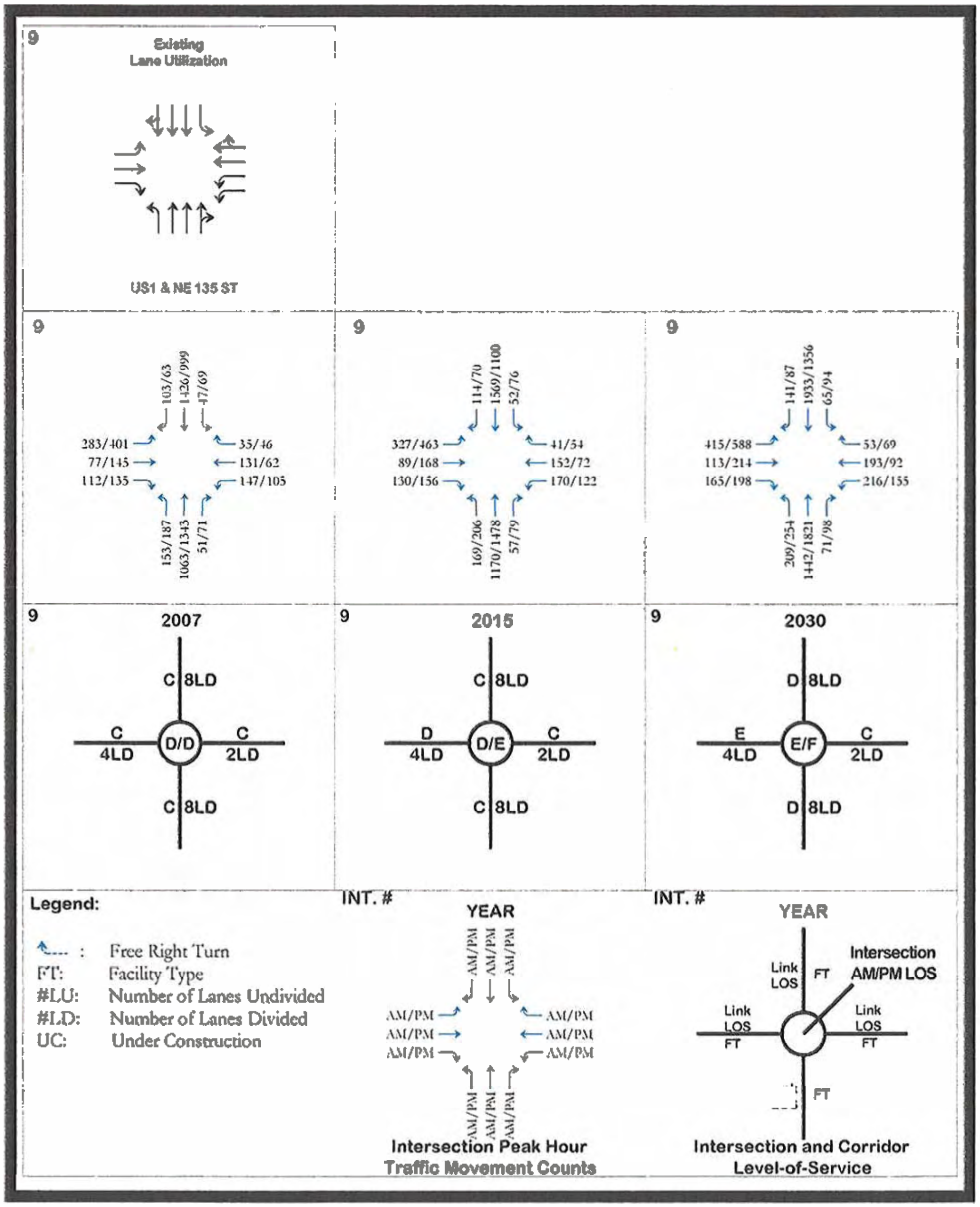
Biscayne Boulevard is a 6-lane divided roadway while 125th Street is a 4-lane undivided roadway. The four corners are commercial land use. The intersection is currently operating at level of service D for both AM and PM peak hours. However, by the year 2030, this level of service will deteriorate to F. Improvements for this intersection includes signal re-timing.



2.6 Biscayne Blvd & NE 135th St

Signal Operations Signal Retiming

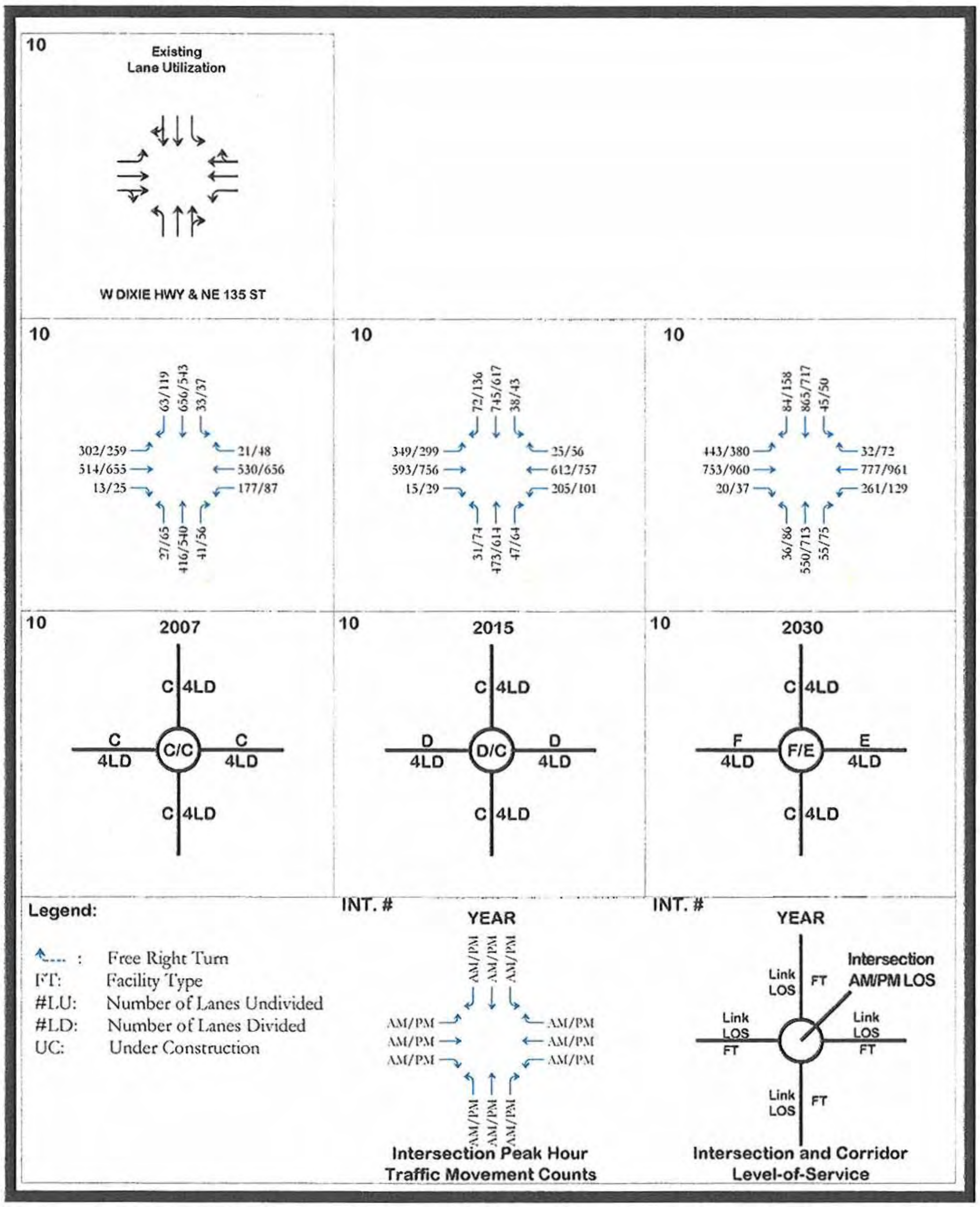
Biscayne Boulevard is a 6-lane divided roadway running north and south of this intersection while NE 135th St is a 4-lane divided road on the west leg and a 2-lane divided on the east leg. The NE, NW & SW corners are commercial in use while the SE corner is residential. The intersection is currently operating at level of service D for both AM and PM peak hours but will continue to deteriorate to level of service E or worse by the year 2030. Improvements for this intersection include signal re-timing.



2.7 W Dixie Hwy & NE 135th St

Signal Operations **Signal Retiming**

Construction has been carried out recently at this intersection, where the NE 10th Ave no longer runs through the intersection. Existing signal timing was not available from the Miami-Dade Traffic Control Center consequently signal planning and timing were estimated. West Dixie Hwy is a 4-lane divided roadway at this intersection while NE 135th St is 4-lane undivided. The four corners are commercial in use. The intersection is currently operating at level of service C for both AM and PM peak hours but will deteriorate to level of service E or worse by the year 2030. Improvements for this intersection include signal re-timing.



2.8 Signal Coordination

Signal Operations

Roadway links and corridors are ultimately impacted by the ability of the traffic signals to pass vehicles through the intersections. Corridor progression is enhanced by the ability to move vehicles from one end of the corridor to the other with minimal delay. One way to do this is to coordinate the signals so that vehicles once started, can progress through the corridor without stopping. Once they stop at their first light and proceed at a certain speed (35 mph) they are able to progress the entire corridor without stopping. Many communities under the assumption that they want to control speeding, or create more walkable environments, purposefully force vehicles to stop multiple times along the corridor. Speed can be controlled with the signal timing as can gaps in traffic, which will allow pedestrians the ability to cross. This is best used during high congestion hours. Conversely, un-syncronizing the signals in less congested periods prevents speeding by stopping vehicles from the free flow.

Miami Dade County should be completing the signal synchronization program that they are currently developing. Currently a test program is happening in Doral. This program will allow manipulation of the signals from a central location.

It is recommended that signals be synchronized on each of the corridors connecting I-95 and US-1, during the AM and PM peak hours.

Corridor	AM Direction	PM Direction
Ives Dairy Road	east/west	east/west
Miami Gardens Drive	east/west	east/west
167/163rd Streets	east	west
135th Street	east/west	east/west
125th Street	west	east

Physical Capacity

Project 3 Roadway Level of Service Improvements

Purpose: Roads which will fall below acceptable Level of Service in the future, with no currently planned improvements, are listed below. Included are the physical improvements required to bring them to compliance.

Need: The vast majority of the links, (62 of 75), or 82% operate at an acceptable LOS D or better. This situation will be reversed within the planning horizon. By 2015, the number of failing links will double. The number of acceptable links will shrink to 55 links (73%). By 2030 the number of failing links will increase to 23, going from 6% to 30%. Acceptable links will shrink to 34 or from 82% to 45% of all links.

Description:

3.1 **NE 10th Ave between NE 151st St and Miami Gardens Drive.** Widen from 2 to 4-lanes divided eliminating on street parking where necessary. Existing right-of-way (R/W) suggest a width of at least 70 feet. R/W purchase may be deemed necessary to accommodate the minimum 4-lanes width of 76 feet. Further studies would determine existing R/W and typical cross section to be implemented.

3.2 **NE 16 Ave between US-1 and NE 135th St.** Widen from 2 to 4-lanes. Existing R/W appears to be 70 feet. Minimum road geometry suggests the need of 76 feet to accommodate the 4-lane road width. Further studies would determine existing R/W and typical cross section to be implemented.

3.3 **NE 14 Ave between NE 163rd St and NE 135th St.** Widen from 2 to 4-lanes. Existing R/W appears to be 70 feet. Minimum road geometry suggests the need of 76 feet to accommodate the 4-lane road width. Further studies would determine existing R/W and typical cross section to be implemented.

3.4 **NE 12 Ave between West Dixie Hwy and NE 163 St/SR 826.** Widen from 2 to 3-lanes. Existing R/W appears to be 60 feet. Further studies would determine road cross section to be implemented.

3.5 **NE 151st St between NE 10th Ave and US-1.** Widen from 2 to 4-lanes. Existing R/W suggest a width of at least 70 feet. R/W purchase may be deemed necessary to accommodate the minimum 4-lanes width of 76 feet. Further studies would determine existing R/W and typical cross section to be implemented.

3.6 **NE 159th St between NE 6 Ave and W Dixie Hwy.** Widen from 2 to 4-lanes. Existing R/W suggest a width of at least 70 feet. R/W purchase may be deemed necessary to accommodate the minimum 4-lanes width of 76 feet. Further studies would determine existing R/W and typical cross section to be implemented.

3.7 **NE 167th St between NE 9th Ave and NE 15th Ave.** Widen from 2 to 4-lanes. Existing R/W suggests a width of at least 70 feet. R/W purchase may be deemed necessary as well as the removal of on-street parking to accommodate the minimum 4-lanes width of 76 feet. Further studies would determine existing R/W and typical cross section to be implemented.

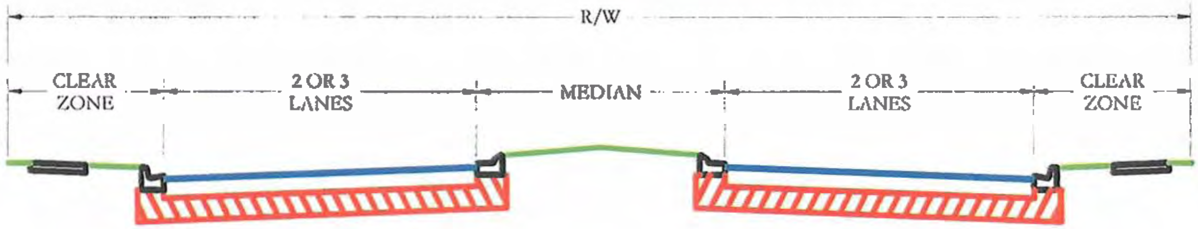
3.8 **NE 171st St between NE 15 Ave and US-1.** Widen from a 2-lane to a 4-lane roadway. The existing R/W appears to be 120 feet. If further studies verify the available space, R/W may accommodate a 4-lane road of 84 feet width with allocation for on street parking where deemed necessary. Further studies would determine existing R/W and typical cross section to be implemented.

3.9 NE 19 Ave between NE 163rd St and NE Miami Gardens Dr. Widen from a 4 to 6-lanes. There appears to be 125 feet right-of-way, which would fit the 108 feet of road width necessary. Further studies would determine existing R/W and typical cross section to be implemented.

3.10 Collins Ave between Harbor Way and Bay View Drive. Widen from a 4 to 6-lane road. Through Haulover Park, R/W could not be easily identified, assuming there is a 100 feet R/W; it may be able to accommodate a reduced 6-lane road. There will be a need to widen the Haulover Bridge which may present adverse impact to the environment and the users of the waterway during construction. Further studies would determine existing R/W and typical cross section to be implemented. As well as installation of Traffic/Pedestrian Signals were volumes warrants its installation.

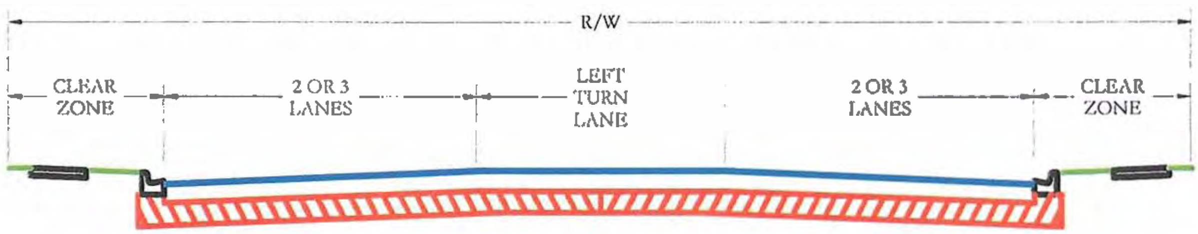
3.11 West Dixie Highway between NE 163rd St and County Line Road. Widen from 2 to 4-lanes. Existing Right-of-Way (R/W) appears to be 70 feet. There may be a need to remove on-street parking and purchase R/W to accommodate a 4-lane roadway. Further studies would verify the R/W available to accommodate the minimum 4-lane road.

3.12 Highland Lakes Blvd between Ives Dairy Rd and NE 215th St. Widen from 2 to 4-lanes. Existing R/W appears to be 70 feet. There may be the need to remove on-street parking and purchase R/W to accommodate the minimum roadway 4-lane street width. Further studies would determine the available R/W.



ROADWAY	CLASSIFICATION	FACILITY TYPE	WIDTHS (FEET)				
			CLEAR ZONE	2 LANES	3 LANES	MEDIAN	TOTAL
NE 10 AVE		2LU TO 4LD	10	24	--	15.5	83.5
NE 14 AVE	COLLECTOR	2LU TO 4LD	10	24	--	15.5	83.5
NE 151 ST	COLLECTOR	2LU TO 4LD	10	24	--	15.5	83.5
NE 167 ST	COLLECTOR	2LU TO 4LD	10	24	--	15.5	83.5
NE 171 ST	COLLECTOR	2LU TO 4LD	10	24	--	15.5	83.5
NE 19 AVE	COLLECTOR	4LD TO 6LD	10	--	36	15.5	107.5
COLLINS AVE	ARTERAIL	4LD TO 6LD	10	--	36	15.5	107.5
W DIXIE HWY	ARTERIAL	2LU TO 4LD	10	--	36	15.5	83.5

PREFERRED R/W WIDTH OPTION



ROADWAY	CLASSIFICATION-JURISDICTION	FACILITY TYPE	WIDTHS (FEET)				
			CLEAR ZONE	2 LANES	3 LANES	LT LANE	TOTAL
NE 10 AVE	COLLECTOR-NS	2LU TO 4LD	10	22	--	12	76
NE 14 AVE	COLLECTOR-NS	2LU TO 4LD	10	22	--	12	76
NE 151 ST	COLLECTOR-NS	2LU TO 4LD	10	22	--	12	76
NE 167 ST	COLLECTOR-NS	2LU TO 4LD	10	22	--	12	76
NE 171 ST	COLLECTOR-NS	2LU TO 4LD	10	22	--	12	76
NE 19 AVE	COLLECTOR-NS	4LD TO 6LD	10	--	33	12	98
COLLINS AVE	ARTERIAL-STATE	4LD TO 6LD	10	--	33	12	98
W DIXIE HWY	ARTERIAL-STATE	2LU TO 4LD	10	--	33	12	76

MINIMUM R/W WIDTH OPTION

Figure 5 – Typical Road Sections

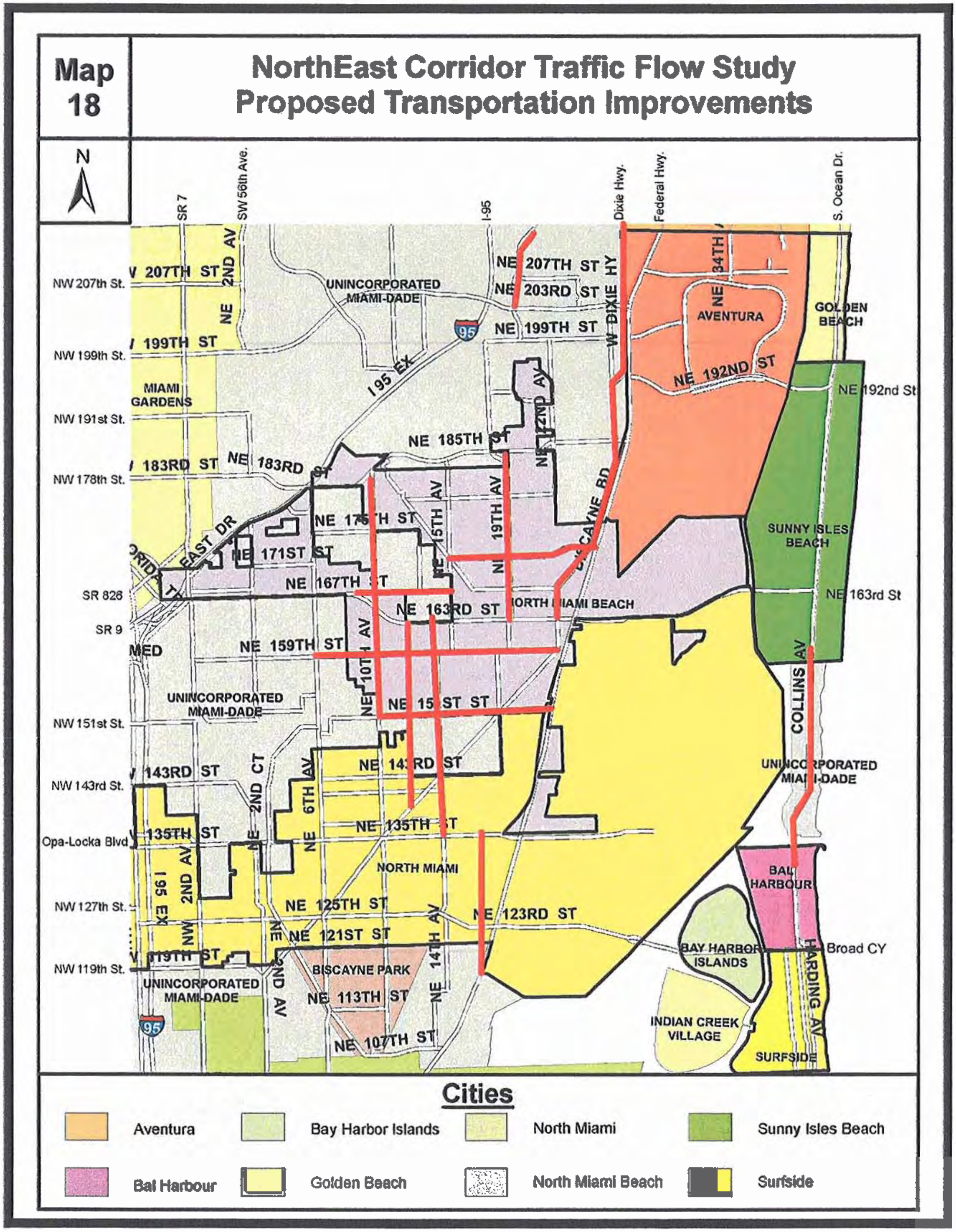


Figure 6 - Proposed Improvements

Physical Capacity

Project 4 New Corridor Connections (Long Term 5-15 yrs)

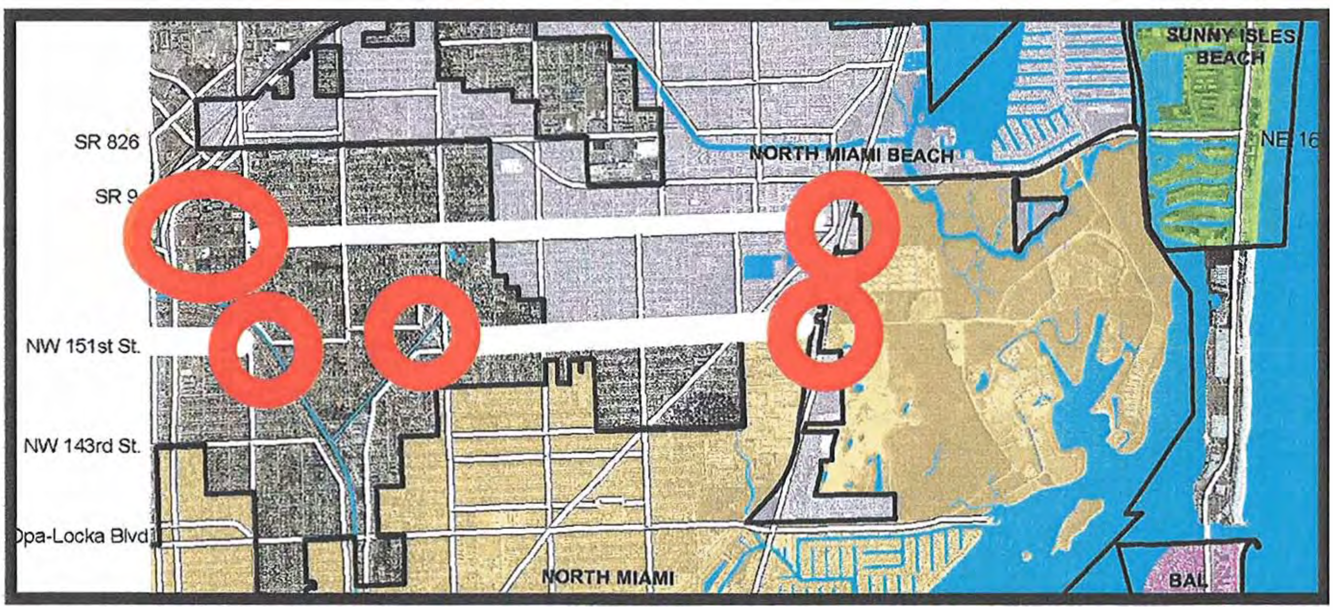
Purpose: East/west mobility is one of the deficiencies in the transportation system. This effort seeks to determine opportunities to open new corridors to enhance flow.

Need: The study area is made up of a series of east/west and north/south corridors. The roadway network is best described as an interrupted grid. Few corridors traverse the entire study area. East / West mobility is characterized by five, corridors which connect I-95 and Biscayne Boulevard:

- Ives Dairy Road
- Miami Gardens Drive
- 167/163rd Street
- 135th Street
- 125th Street

The mainland and barrier islands are connected by three causeways: William Lehman, Sunny Isles, and Broad. Of these east/west corridors only two connect the barrier islands directly with I-95: 167/163rd Sts – Sunny Isles Blvd, 125th St – Broad Causeway

Description: Examine linkages on 159th Street and 151st Street to connect with both Biscayne Boulevard and I-95 and to make any interim connections to produce full corridors to facilitate flow. Both these corridors have ranked highest in the new corridor analysis and will represent opportunities to do so with minimal neighborhood interruption and ROW cost.



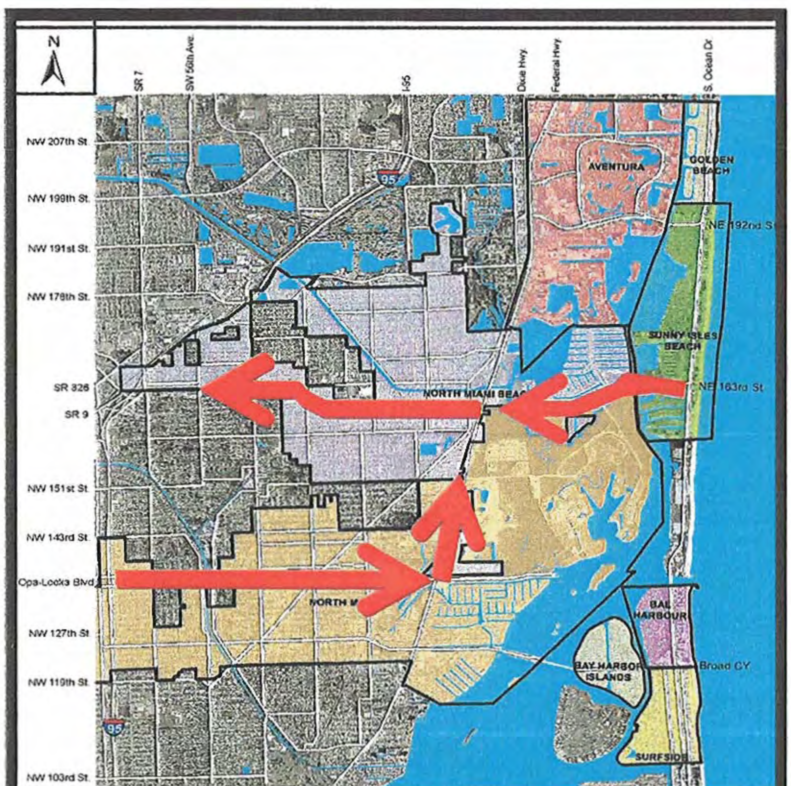
Physical Capacity

Project 5 Reversible Lane Studies (Short-Term 1-5 yrs)

Purpose: East west mobility is one of the deficiencies in the transportation system. This effort seeks to determine opportunities on existing corridors to enhance flow.

Need: Directional flow is generally balanced through the study area except in a few key locations. The reasons for this have everything to do with transportation and land use. The area in Aventura and along Biscayne Boulevard has the highest concentrations of both residential and commercial intensity. Directionality can be seen on a few corridors. For east/west corridors, there is a predominant PM westbound flow on the 167/163rd Street / Sunny Isles Boulevard corridor. This is +-60% westbound, +-40% eastbound between AIA and NE 2nd Avenue, where it balances. Conversely, there is a +- 60% eastbound, +-40% westbound PM flow on 125th Street. For north/south flow, Biscayne Boulevard is highly directional +-60% northbound, +-40% southbound PM flow between the Broad Causeway, and the 151st Street area.

Description: Provide an in-depth evaluation of the 167/163rd Street, Sunny Isles Boulevard, 125th St, and Biscayne Boulevard corridors to confirm level of service, directional splits, and develop detailed process including Planning Feasibility, PD&E, Design and Construction phases of implementation of reversible or special use lanes on these corridors.



Reversible Lane Candidates

Physical Capacity

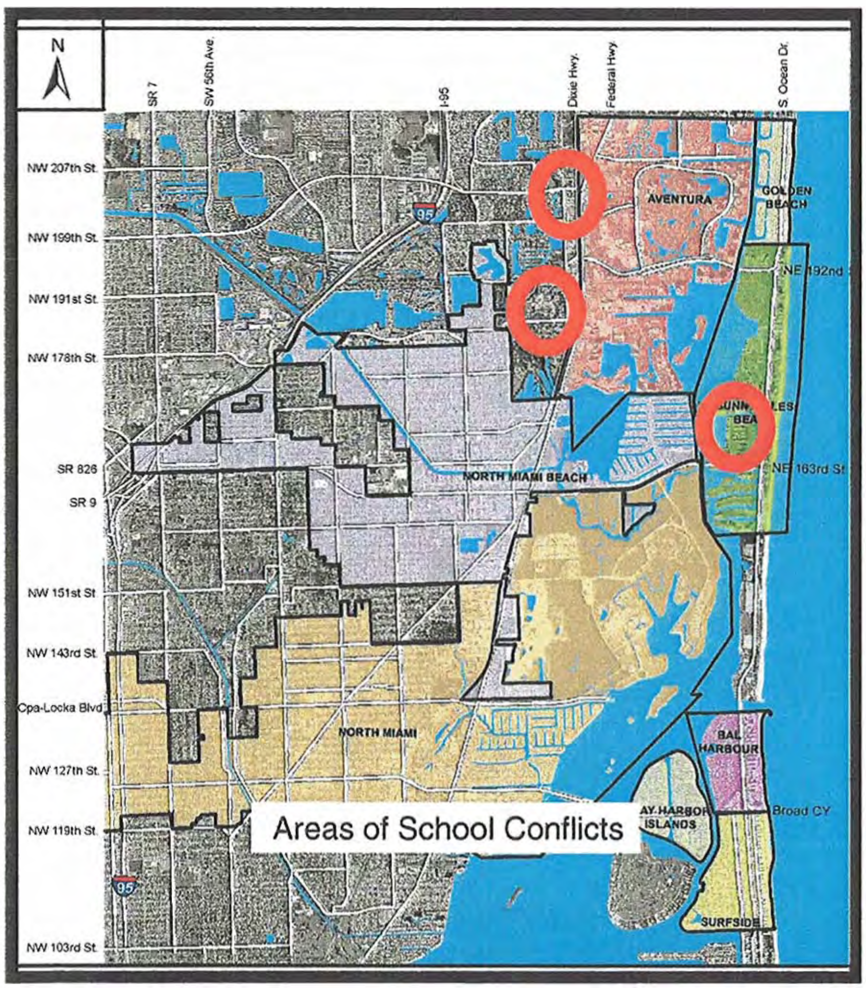
Project 6: **School Board Coordination** (Short Term, 1-5yrs)

Purpose: The purpose of this project is to coordinate with the School Board relative to the congestion along major corridors within the study area.

Need: One of the major issues relative to am peak hour traffic is the fact that many school zones are located on section line and half section line roads. These roads represent the backbone of the surface transportation system in the county. Not only is the grid interrupted by canals and other gaps, it must contend with school zones. There is a need to mitigate this situation to the extent possible by addressing both child safety, of street loading and traffic flow on a school by school basis. A Safe Routes To School analysis should be the beginning point of the investigation.

Description: There are three main areas of school zone disruption. These include schools on

- Miami Gardens Drive
- Ives Dairy Road
- Sunny Isles Beach



Physical Capacity

Project 7: Direct Connection between William Lehman Causeway and Aventura Mall
(Long Term, 5-15 yrs)

Purpose: This project will study ways to provide increased capacity on Biscayne Boulevard, focusing on improving mobility along the Lehman causeway.

Need: Traffic performance is poor along the Biscayne Boulevard corridor and traffic bottlenecks are frequent. The performance will further deteriorate with future increases in volumes due to the many residential and commercial development projects currently under construction. There is a need for increased capacity along this corridor to relieve the traffic congestion within the northeastern communities of Miami-Dade County. One project that would provide significant relief would be to provide an exit off of the Lehman Causeway into the Aventura Mall which is a regional attraction.

Description: This will determine the feasibility of providing an exit ramp off of the Lehman Causeway directly to the Aventura Mall. An examination of traffic impacts, available right of way, alternative locations, cost and conceptual design will need to be provided. Liaison work with the Miami Dade MPO and FDOT will need to take place in an effort to move the concept forward on their respective work programs.

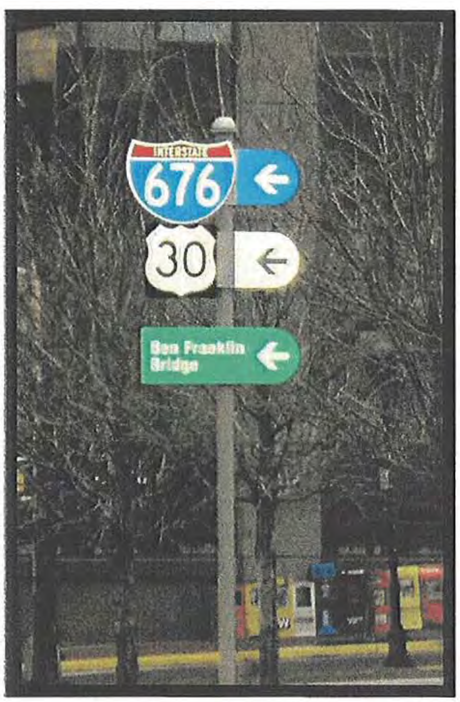
Physical Capacity

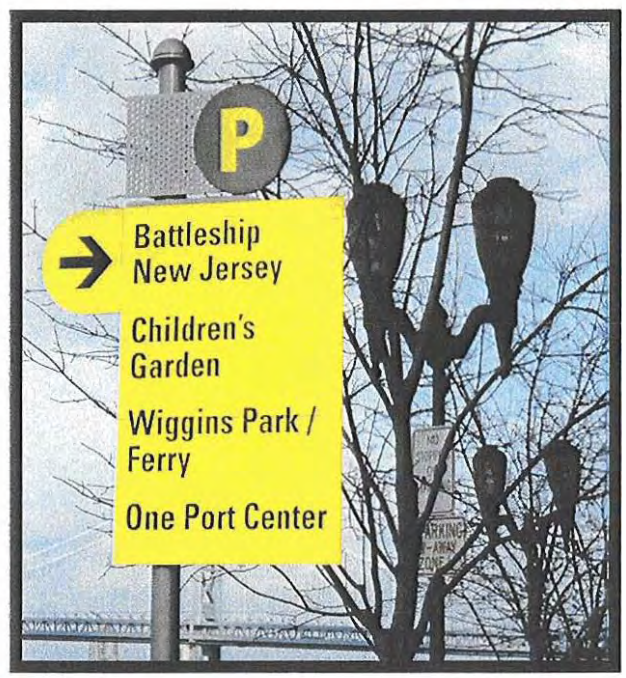
Project 8: **Improved Way Finding Signage throughout area** (Short Term, 1-5yrs)

Purpose: The purpose here is to provide efficiency in the system by letting drivers know where they are and how to get to where they are going through improved directional and informational signage in the area.

Need: There are many frequent destinations in the study area, such as government offices, commercial and retail centers and recreation area. A stated need from the public was to provide signage notifying drivers of how to get to these destinations

Description: This program would implement a directional and way-finding signage program. It would seek to identify the major traffic generators, either commercial, governmental, recreational or institutional, and then provide signage along the major routes to them from.





Physical Capacity

Project 9: North Miami Avenue consistent 4 lane section north and south of 105th Street
(Long Term, 5-15 yrs)

Purpose: The purpose of this project is to provide a component of logically connected grid system

Need: North Miami Avenue, is a fully connected corridor between downtown Miami and the Biscayne Canal at about 145th Street. Yet its typical cross section is not similar and changes at about NW 103rd Street. South of this area it has more capacity and can be used as a transportation corridor. The road to the west, NE 2nd Ave is interrupted at NW 86th Street, hampering its ability to provide a consistent connection.

Description: Evaluate the feasibility of making the cross sections consistent along the length of the corridor. This will entail an assessment of need, available ROW and implementation costs.

Physical Capacity

Project 10: Implement Aventura Biscayne Boulevard Intersection Modifications

Purpose: The purpose of this project is to implement the 2006 recommendations from the Biscayne Boulevard Intersection Study.

Need: Aventura has provided detailed analysis of traffic conditions in Biscayne Boulevard between N. E. 213th Street and N.E. 178th Street. The task encompassed the evaluation of all east/west roadway intersections to determine if modification should be made to increase the turn land capacity and or lengths to improve traffic flow. Eleven projects were recommended. These were:

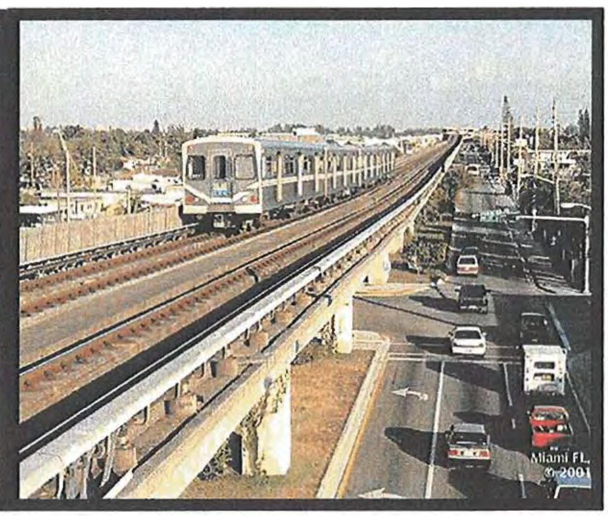
- 10.1 **213 St** – Signal timing
- 10.2 **209 St** – New westbound approach lane
- 10.3 **203 St** – Dual right turn configuration (add 2nd eastbound right turn lane)
- 10.4 **196 St/195St–** Improve the two intersections as part of Mall Expansion Program
- 10.5 **192 St** – Raised Curb
- 10.6 **191 St** – Provide triple westbound left turns and one exclusive right turn lane in addition to signal timing
- 10.7 **187 St** – Eliminate parallel parking on north side of 187, Eliminate northbound left turn on Miami Garden Drive
- 10.8 **183 St** – Second westbound left turn lane, striping, signal timing, eliminate southbound left turn movement to shopping center
- 10.9 **182 St** – Signal timing
- 10.10 **187 St** – New signage, signal timing
- 10.11 **203 St** – Driveway modifications at shopping center intersection

Description: Coordinate with FDOT and MDCPW, and then bid the design aspect of the projects. Upon a completed set of design plans, bid the construction and implement the projects.

ALTERNATIVE MODE PROJECTS

Multimodal transportation plans must also include other components of a transportation system. The main goal alternate modes of transportation is to increase the shift from single occupancy vehicles to public transit or to high occupancy vehicles. This will reduce traffic congestion, pollution, and travel time, while saving money and aggravation to the users of the transportation network. It is a necessity in urban areas to move more people in less space, either by having dense urban centers where they are able to walk between uses, or by transporting them in higher capacity vehicles. When the cost of physical infrastructure is essentially the same for the actual lane space, it is prudent to transport more people within that same space, allowing for a higher cost benefit ratio.

Currently there are plans such as the extension of the coverage of the Metrorail (NE Corridor) and the Managed Lane Project on I-95. There is no doubt that the future extension of Metrorail will help to divert many trips from the single occupancy vehicles with the associated improvements in congestion and LOS, yet the question must be asked, how long until these alternatives are developed? At what monetary cost? Can we afford it? Many feel that the cost of the rail, the lack of ability to implement substantive projects and attain Federal Government matches for funds puts such projects in jeopardy, or at least in a very distant time horizon. This report advocates developing these projects incrementally. Enhancing the proposed future rail corridors with essential components for those systems in a phased approach, thereby lessening the ultimate cost, while building meaningful transit improvements in the area. Simply put, to wait for Metrorail to come prior to implementing higher level transit will be seriously detrimental to the community.



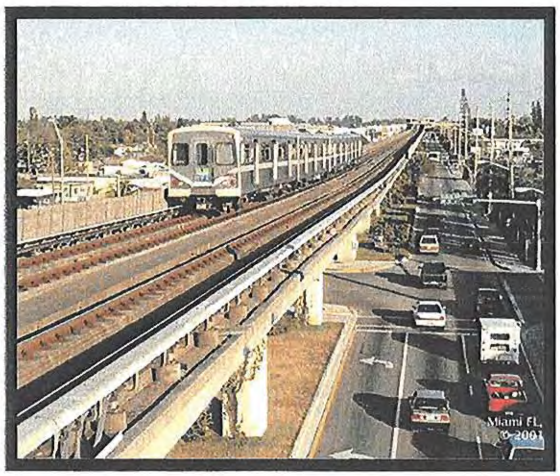
Alternative Mode Projects

1 Study Biscayne Boulevard Corridor for Higher Level Transit Potential (Short Term, 1-5 yrs)

2 Reformation of Transit Routes in the Study Area Based on MDT Comprehensive Bus Operations Analysis and Coastal Communities Transportation Master Plan (Short Term, 1-5 yrs)

    2.1Decrease bus headways

3. Support I-95 Bus Rapid Transit (Managed Lanes) (Short Term, 1-5 yrs)
4. Link Municipal Shuttles (Immediate)
5. Adopt Mode Split Goals in Comprehensive Plans (Short Term, 1-5 yrs)
6. BRT on Collins Avenue (Long Term, 5-15 yrs)
7. Coordinate Municipal Circulator Transit Routes with MDT (Short Term, 1-5 yrs)
8. 163rd Street/Biscayne Boulevard Intermodal Center (Long Term, 5-15 yrs)
9. Ensure Appropriate MDT Bus Operations to Sustain Pedestrian Friendly Environment on West Dixie Highway and 15th Street (Short Term, 1-5 yrs)
10. Attract Choice Transit Riders (Short Term, 1-5 yrs)
    - 10.1 Special use lanes evaluation
    - 10.2 Enhanced transit amenities
    - 10.3 Fuel efficient buses
    - 10.4 Better transit marketing
    - 10.5 Use smaller buses



Alternative Mode

Project 1 Study Biscayne Boulevard Corridor for Transit Potential (Short Term 1-5yrs)

Purpose: Re-prioritize the Northeast Corridor, as the highest transit priority, so that it attains federal matching funds, and is subsequently designed and constructed in the nearest timeframe to begin to provide service.

Need: The provision of high capacity mass transit in the long term is seen as a way to effectuate a more balanced modal split in the study area. Since most trip making in the area enters or exits on the I-95 connector closest to the study area origin or destination, it is assumed that distribution of traffic occurs on I-95. A parallel distributor on Biscayne Boulevard would enhance mobility. The Northeast Corridor is the only project near the study area being studied.

Description: This project, under the name of "South Florida East Coast Corridor Transit Analysis Study (SFECCTA) is being undertaken now in regional cooperation, sponsored by the South Florida Regional Transit Authority, the MPO's of Miami-Dade, Broward, and Palm Beach Counties, and FDOT. It is utilizing Federal Transit Administration Guidelines to determine what mode of transit would best service potential riders in the service area. Its Tier 1 Analysis of 38 alternatives was submitted in 2006. A Regional Record of Decision, allowing the study to progress to Tier 2, is expected in 2007. Tier 2 will draw conclusions as to corridor sections, types of transit, and station locations, culminating in a Sectional Record of Decision. The first segment could be available for service in 2012. The public involvement aspect of this study showed heavy local study area support for the ongoing SFECCTA study. The community strongly urges the MPO to give the recommended regional transit alternative the highest priority, of all potential projects in the planning process.

Alternative Mode

Project 11: Reformation of Transit Routes in Study Area Based on MDT Comprehensive Bus Operations Analyses and Coastal Communities Transportation Master Plan (Short Term, 1-5yrs)

Purpose: The purpose of this project is to improve the bus service in the study area by examining opportunities to increase frequency of service or reorganize the systems routing to more efficiently and effectively service the riding population. Details of this effort are explored in depth in the Coastal Communities Transit report.

Need: Currently, according to MDT via their extensive Comprehensive Bus Operations Analysis (CBOA) there are many routes that run at less than optimal headways and are thus not as attractive to potential riders. There is also frequent redundancy in routes. While many focus on serving long haul riders from distant parts of the county, and cannot be disturbed on much of their mainland alignments, it may be possible to reorganize some of the routes in the study area. At the very least the consolidation and increased frequency of the existing structure should be examined. At the most, concepts have been discussed regarding the provision of east/west routs to and from the barrier islands via the causeways, linking at intermodal stations and longer service spine routes in the study area. At the very least the consolidation and increased frequency of the existing structure should be examined.

Description: This project will utilize the MDT evaluation of each route that exists in the study area. Recommendations will be made for consolidation. Cost and time savings will be quantified on a route by route basis and for the system as a whole. Ridership numbers will be projected. Other issues including those regarding the unions will be explored. Additionally three conceptual alternatives regarding a complete overhaul of the system will be designed and tested as to ridership, cost and effectiveness. Work with MDT to implement its findings.

Alternative Mode

Project 3: **Support I-95 BRT (Managed Lanes)** (Short Term, 1-5yrs)

Purpose: The purpose of this is to advocate for a higher level of transit that is ultimately impactfull to the community and can be done in the near term.

Need: Service levels are deterioration rapidly as time goes by. The transportation system will not be functioning well by the end of the planning horizon. The need to begin to provide alternatives to the single occupancy vehicle is now. Many feel that it is impractical to wait for proposed heavy rail transit as an answer, and believe a near term incremental solution is needed. I-95 Bus Rapid Transit lanes provide this near term impactfull rapid transit.

Description: The I-95 Managed Lanes concept will provide double the MDT transit capacity on I-95 with a rail like function and feel. I -95 will maintain the vehicular capacity it has today. Its HOV lane and the inside shoulder will be converted to managed lanes, with the primary purpose of serving as a Bus Rapid Transit corridor, similar in function to the US-1 Busway in South Dade. The difference being that the lanes will be shared with private vehicles. To keep the lanes flowing at a level that provides an advantage to transit (LOS C @ +-50mph), the number of private vehicles will be limited. This limit will be controlled by tolling the vehicles. The toll will be adjustable to assure the buses are able to move at the desired speed and level of service.

Alternative Mode

Project 4: **Link municipal shuttles** (Immediate)

Purpose: To coordinate the transit assets that currently exist within the community

Need: Each municipality provides a level of transit service via, municipal shuttles, funded primarily through the ½ penny sales tax known as the Peoples Transportation Plan. These services need to be coordinated at their edges so that a synergy can be found.

Description: It is recommended that through the NE Dade Mayors Task Force, a transit directors committee be developed which will be charged with creating linkages of the existing municipal and county transit systems. Initially these may be focused on either connecting specific origins and destinations with multiple providers, connecting the route end transfer points by location and bus arrival and departure time. It may recommend coordinate marketing and scheduling information. In the future should make more formal suggestions as to intermodal transfer facilities. This should be done by producing a GIS map of each of the municipal transit routes. An attempt to coordinate by creating transfer points at route edges, route realignment where they are in close proximity, schedule coordination, and elimination of duplicative routes.

Alternative Mode

Project 5: **Adopt Mode Split Goals in Comprehensive Plans** (Short Term, 1-5 yrs)

Purpose: The purpose of this is to officially strive to achieve impactufull transportation benefits.

Need: Adequate transportation options are lacking in our region. The use of the private automobile is predominant, and reinforced by our land use pattern. While transportation is a regional issue, the impetus for change often comes from the grassroots level. Local willingness to advocate shift in transportation mode usage can be impactfull in changing regional policy.

Description: Add a policies to the transportation element of each comprehensive plan stating that the city shall attempt to ascertain the mode split taking place and will strive to implement policies, and projects to shift that mode split to provide a heavier share to the alternative modes.

Alternative Mode

Project 6: **BRT on Collins Avenue** (Long Term, 5-15 yrs)

Purpose: The purpose of this effort is to evaluate the need and feasibility of bus rapid transit facilities on Collins Avenue between Surfside and South Beach.

Need: As levels of service decrease, many have called for a higher level of transit on the barrier islands. Aside from the route restructuring recommended by MDT, bus rapid transit amenities such as queue jumpers, signal prioritization, elevated stations, and special use lanes should be examined along this corridor.

Description: The first step to implementing this higher level of transit is to evaluate the current BRT technologies and to examine how they may work along Collins Avenue. An evaluation of available right of way, existing travel patterns, ridership and other spatial and operational constraints should be made and evaluated relative to cost.

Alternative Mode

Project 7: **Coordinate Municipal Circulator Transit Routes with MDT** (Short Term, 1-5 yrs)

Purpose: Implement greater transit efficiency through coordinated transit services.

Need: Each municipality operates transit as part of the Peoples Transportation Plan. Necessary to gain approval of that was the requirement that MDT routes and services would not be duplicated by municipal systems. MDT is currently experiencing major service reductions. The need to integrate these services at various connection points would enhance the attractiveness of each.

Description: Essentially Miami Dade Transit provides service to and through communities, and the local circulators move around them. An effort should be developed that would examine the linkages of the regional and local systems, and list opportunities where coordination of schedules, headways, service periods and the location of transfer facilities and amenities could be implemented.

Alternative Mode

Project 8: 163rd Street/Biscayne Boulevard Intermodal Center (Long Term, 5-15 yrs)

Purpose: This project is designed to improve the level of service along the major roadways within the study area by providing improved transit service and increasing options for modes of transportation other than a personal vehicle. Its purpose is to explore potential locations for an intermodal center in the 163rd Street/ Biscayne Boulevard area.

Need: The study area has strong need for an improved sub-regional transit system that would be made up of transit centers along the causeway termini, on the beach and at the mainland with frequent east/west bus service linking the beach to a strong north/south regional spine on the FEC Corridor. The need for increased capacity on the causeways was expressed, especially in the beach communities and the need was reinforced by the findings from the origin/destination study in the Coastal Communities Transportation Master Plan.

Description: This project will be to develop an intermodal center adjacent in the 163rd Street / Biscayne Boulevard area. The exact locations will have to be further studied and identified. The intermodal facility will serve the communities as transfer stations and transit loading areas for transit users that are making regional commutes to and from the barrier island. A conceptual intermodal center design and appropriate programming would be developed. Tentative sites would be examined for their ability to accommodate the programming, their impact on the adjacent land uses and neighborhoods, and their proximity to transit uses. It is anticipated that these would provide a direct link to any proposed transit on the FEC Corridor, on the mainland.

Alternative Mode

Project 9: Ensure Appropriate MDT Bus Operations to Sustain Pedestrian Friendly eEnvironment on West Dixie Highway and 15th Street (Short Term, 1-5 yrs)

Purpose: The purpose of this effort is to coordinate with MDT to assure that through the provision of transit the pedestrian environment is protected and enhanced.

Need: Integral to good mobility is the ability to walk. It is said that every trip includes a walking trip, whether it be from the house to the car at the origin, or from the car or bus from the parking lot to the grocery store or work at the destination. The pedestrian environment is crucial to the overall quality of life of an area and dictates ultimate mobility.

Description: For this area quality principles of urban design, transit oriented development and pedestrian mobility need to be applied. Specific locational deficiencies and improvements should be listed and implemented in the near term.

Alternative Mode

Project 10 : Attract Choice Transit Riders (Short Term, 1-5 yrs)

Purpose: This project will be specifically geared to attracting choice riders to the transit system. A choice rider is a person who is not transit dependant, therefore has access to a vehicle and is able to drive it and maintain it.

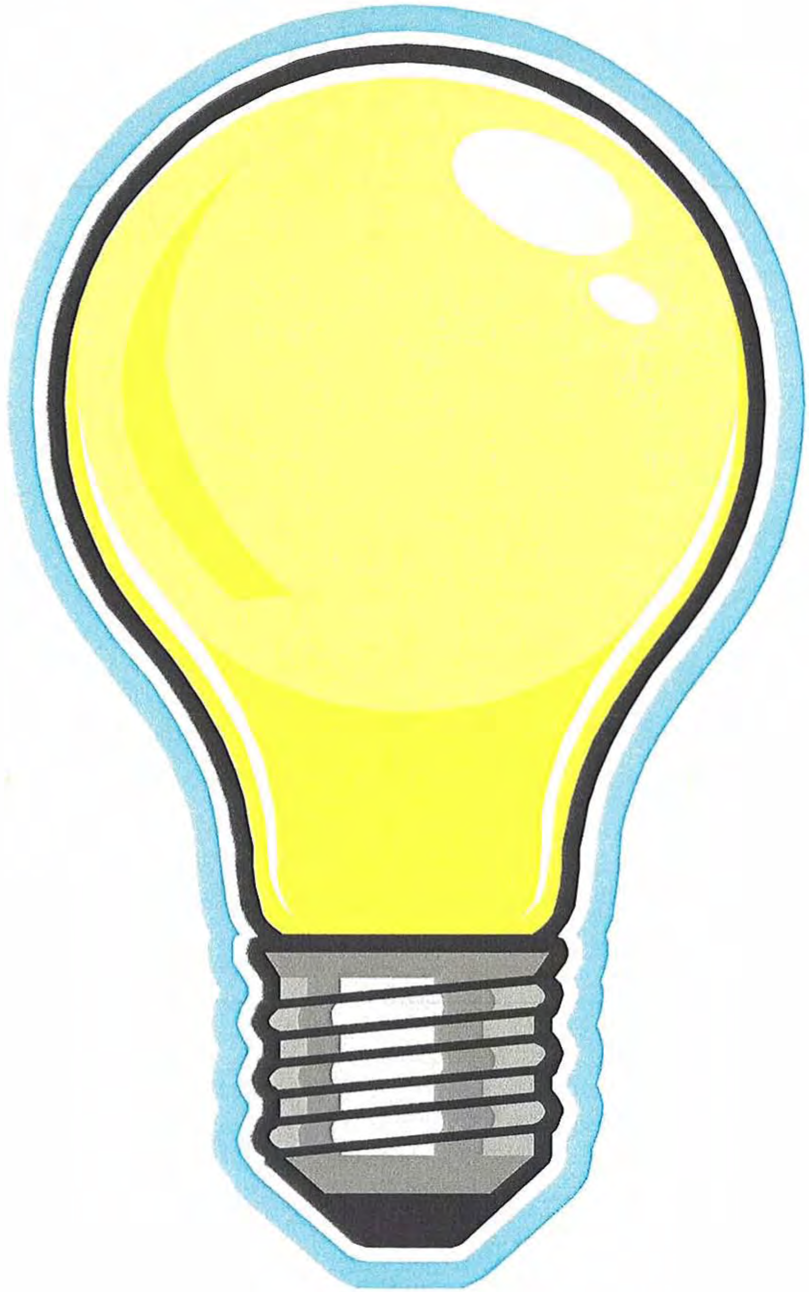
Need: Adequate mobility depends on having more people ride transit.

Description: While it is true that the next level of transit usage may very well come from the demographic directly adjacent to the demographic which rides today, which is mainly transit dependant, there is another segment of the population that should be targeted. All riders are concerned the basic service parameter of getting to their destination quickly. In addition to this other amenities should be examined. These include:

- Special Use Lanes Evaluation
- Enhanced Transit Amenities
- Fuel Efficient Buses
- Better Transit Marketing
- Use smaller buses

POLICY PROJECTS

Policy projects are those that don't necessarily fit into either the physical capacity category or the alternative mode category. They often deal with initiatives that attempt to change driver behavior or provide incentives to use the system differently. Below are general descriptions of the types of projects in this category.



Policy Projects

11. **Shift County Transit Priorities to Biscayne Boulevard Corridor** (Short Term, 1-5 yrs)
12. **Develop Northeast Miami-Dade Traffic Impact Fee** (Short Term, 1-5 yrs)
13. **Provide Incentives for Transportation Demand Management Participation** (Short Term, 1-5 yrs)
14. **Areawide Coordination with South Florida Commuter Services, FDOT and MDT, Broward County and Hallandale** (Short Term, 1-5 yrs)
15. **Further Develop Intelligent Transportation Systems** (Short Term, 1-5 yrs)
16. **Coordinate Municipal Land Use Policies Along West Dixie Highway and Biscayne Boulevard** (Short Term, 1-5 yrs)
    - 16.1 West Dixie Highway Charrette

Policy Projects

Project 1: **Shift County Transit Priorities to Biscayne Boulevard Corridor** (Short Term, 1-5 yrs)

Purpose: The purpose of this is to place the highest levels of transit where they are needed most.

Need: Growth management and transportation policies should match up. The most densely populated residential and commercial areas are on the eastern side of the county. The County's Urban Infill Area and Transportation Concurrency Exception Area are in the same location. These have both provided incentive to develop in the area. Yet major transit in the area is not the highest county priority, and it needs to be.

Description: Work with county officials through the MPO Long Range Transportation Planning process to have transit projects, particularly rail moved up in the priority list.

Policy Projects

Project 2: **Develop Northeast Miami-Dade Traffic Impact Fee** (Short Term, 1-5 yrs)

Purpose: The purpose of this is to examine the feasibility of instituting traffic impact or concurrency fees to pay for various transportation improvements listed in individual municipal master plans.

Need: Projects to be implemented in the study area, need to be part of a financially feasible capital improvements element, as a result of SB 360, the 2005 growth management legislation. Sources of funding may be needed to assure that the transportation infrastructure necessary to continue the economic development of the area.

Description: Evaluate the need and desire for the various participating communities to implement impact fees. A draft fee structure should be developed. An ordinance should be developed by each community based on the cumulative amount of local transportation improvements needed as specified in their long term budgets or transportation master plans

Policy Projects

Project 3: **Provide Incentives for Transportation Demand Management Participation** (Short Term, 1-5 yrs)

Purpose: Transportation Demand Management programs will provide incentives, disincentives and market management to affect travel behavior to shift to non-motorized and/or higher occupancy modes in order to reduce congestion on the roadways in the study area.

Need: There is significant traffic congestion in our region generally between 8:00 am and 8:00 pm. The utilization of techniques like van pools, HOV lanes, telecommuting and flexible work schedules would free capacity at the most critical times of the day. The I-95 Bus Rapid Transit Managed Lanes is funded partly to provide the opportunity for such management techniques.

Description: Transportation Demand Management strategies would utilize the services offered by the South Florida Commuter Services by encouraging businesses to take advantage of the programs.

Policy Projects

Project 4: **Municipal Transportation Coordinator** (Immediate)

Purpose: The key to the implementation of this or any other master plan is to hard work. None of these projects are going to implement themselves or be picked from this plan by state or federal agencies. Each project needs an advocate and a champion. The Mayors Task Force has provided this leadership to date, but the day to day work to coordinate and manage transportation in the study area, act as a liaison between the cities, the citizens, the development community, local employers, and other local, county and state transportation authorities is the most important aspect of the plan.

Need: As transportation levels of service deteriorate added emphasis should be placed on developing solutions. This coordinator would facilitate the implementation of these plans and monitor transportation activities.

Description: This position would coordinate Transportation Demand Management strategies with local employers, act as a liaison, with MDCPW, MDT, MPO, and FDOT, in an attempt to develop and implement projects as a result of this report. This could be an additional position, or one which could be added to an existing position. It should exist in each city, as a staff position in the Planning Department, the City Managers Office, or Public Works Department. Additional duties can be to review traffic impact analysis, measure concurrency, develop cost feasible projects for upcoming budgeting cycles, and search for funding via grants.

Policy Projects

Project 5: **Further Develop Intelligent Transportation Systems** (Short Term, 1-5 yrs)

Purpose: The purpose of this project is to utilize technology to improve the existing transportation network and relieve traffic congestion.

Need: There is significant traffic congestion in the study area that would benefit from technological advances to monitor the flow of traffic in the area.

Description: Intelligent Transportation Systems include such things as installing cameras to monitor the flow of traffic and be able to view accidents in real time. This is beneficial because it will speed up the time it takes emergency responders to arrive on the scene. Additional systems could include electronic variable messages boards to inform drivers of congestion before they reach it, to allow them to take alternate routes and avoid contributing to the delays.

Policy Projects

Project 6: Coordinate Municipal Land Use Policies along West Dixie Highway and Biscayne Boulevard (Short Term, 1-5 yrs)

Purpose: To work to have land use policies long major corridors are relatively uniform.

Need: Evaluation of the growth management strategies and policies of each individual municipality and of the area as a whole is interesting, in the sense that there is a decided lack of coordination. There is a need to have areas of similar intensity along connecting corridors.

Description: In areas of common interest, like the West Dixie Highway area between North Miami and North Miami Beach, land use planning charretts, modeled after those done along US-1 in South Dade would be helpful not only in facilitating transportation, and transit oriented development, but in assisting in redevelopment activities. The Miami Dade County Department of Planning and Zoning should be contacted for direction and assistance. Funding is eligible out of the Peoples Transportation Plan funds received by each city.

INTRODUCTION

The final aspect of this study is to organize the projects resulting from the involvement, data and analysis in a manner that provides a snapshot of future transportation issues and trends that will impact the study area. The Implementation Plan establishes a vision for transportation and makes recommendations for meeting the identified needs.

Key factors to the implementation of any plan is the ability to systematically approach the further development of the individual projects. In general, from a technical perspective, transportation efforts have several phases; planning, design and construction. They must seek funding for each phase, whether from the municipal budgeting cycle or at the State or Federal levels. From a practical perspective, each effort also needs an advocate to drive the process forward. This study represents one of the first subregional transportation master plans attempted in Miami-Dade County. It is a "grassroots" effort to examine the community from a broader local perspective, taking into account the common desires of each city. It has tested these desires through analysis and has determined what is wanted and what is needed locally. It establishes a local vision for transportation and makes recommendations for meeting identified needs. Aspects of this vision are relatively simple to implement, in as much as they are purely local issues. Other aspects become increasingly complex, as they require multi-jurisdictional coordination and funding, beyond the scope of any municipality.

At the core of this implementation plan is the list of projects developed from the data and analysis. This identifies specific projects or strategies in the form of physical capacity, alternative mode or policy initiatives that will improve mobility and enhance the quality of life in the area.

Locator Map

The following is a phased implementation schedule of the projects. It is believed that integral to implementing projects from the municipal level is coordination and communication. The implementation process is built from a pragmatic perspective.

The plan seeks to advocate for these projects, and first attempt to implement the ones that present the greatest opportunity to have the most impact at the lowest cost. It progresses through the list to projects of greater complexity, controversy and coordination. Essentially all of the policy initiatives can begin to be implemented in the short term, as can the physical capacity improvements that don't require additional right of way. Similarly, many of the alternative mode projects that require the support of the local community can be done in the short term, as can the initiation of many of the higher intensity transit studies, and route modifications. Long term projects are those that require additional right of way, federal funding matches, or inclusion in the Long Range Transportation Plan or Transportation Improvement Program. The most limiting aspect of this effort is the funding to move the plan forward.

More formally, the first step of the implementation plan is the creation of a position that can oversee the process, further developing project parameters, seeking funding sources, and moving projects through their respective funding, planning, design and implementation phases with various municipalities and agencies. This position in each city, could be incharge of multiple issues, but would sit generally in the planning department, public works department or city managers office. In many instances this position would be incharge of reviewing concurrency, or development applications relative to traffic. An immediate step would be to coordinate the municipal shuttles. Working with the CITT, and each of the communities that offer shuttles, an evaluation of opportunities and willingness to contribute can be undertaken. Concurrently conversations with MDT about the route consolidations and realignments can take place as they relate to coordinating with shuttle activity. Policy initiatives such as the support of the I-95 BRT/Managed Lanes concept is a short term activity. More consistent effort will need to occur in getting local businesses to not only support, but implement transportation demand management techniques. The same goes for advocating a reprioritization of transit policies at the county level. From this consistent communication and advocacy with FDOT and the MPO, the longer term efforts that must go on the LRTP or TIP can begin to be moved forward. While this is on going, the physical capacity projects can be evaluated and moved forward. Those projects not requiring additional right of way can move first depending on municipal funding availability and other coordinative issues. Those projects determined to need additional right of way can be scrutinized from the technical and political perspectives to ascertain the cost/benefit of each. With consistent advocacy in the short term horizon, longer term projects such as the development of the connection from the Lehman Causeway to Aventura Mall and other more intensive projects requiring right of way, can make their way onto requisite plans and begin design and implementation phases by the 5th through 10th years. If individual local funds are available the ability to implement with less coordination is easier.

Immediate projects (1 month to 1 year)

Alternative Mode

- Link Municipal Shuttles

Policy

- Municipal Transportation Coordinator

Short Term Projects (1 – 5 years)

Physical Capacity

- Traffic Signal Operations (Short Term, 1 – 5 yrs)
    - Biscayne Boulevard @ 163rd Street
    - West Dixie Hwy @ 163rd Street
    - 10th Avenue @ 167th Street
    - 10th Avenue @ 163rd St
    - Biscayne Boulevard @ 125th Street
    - Biscayne Boulevard @ 135th Street
    - West Dixie Hwy @ 135th Street

  - Signal Coordination
  - Traffic Loop Detector Repair

- Improved Directional Signage Throughout Area
- Implement Aventura Biscayne Boulevard Intersection Modifications
- School Board Coordination
  - Relief of Congestion Related to School Loading on Ives Dairy Road and Miami Gardens Drive
  - Work with school board to minimize traffic impact to Sunny Isles Beach School on BB-1

- Reversible Lane Studies
  - 167/163rd Streets
  - 135th Street
  - Biscayne Boulevard between 125th Street and 151st Street
- Link Level of Service Improvements (Where no ROW is needed)
- Intersection Level of Service Improvements (Where no ROW is needed)

Alternative Mode

- Support I-95 Bus Rapid Transit (Managed Lanes)
- Study Biscayne Boulevard Corridor for Higher Level Transit Potential
- Reformation of Transit Routes in the Study Area Based on MDT Comprehensive Bus Operations Analysis and Coastal Communities Transportation Master Plan Adopt Mode Split Goals in Comprehensive Plans
- Coordinate Municipal Circulator Transit Routes with MDT
- Ensure Appropriate MDT Bus Operations to Sustain Pedestrian Friendly Environment on West Dixie Highway and 15th Street (Short Term, 1-5 yrs)
- Attract Choice Transit Riders (Short Term, 1-5 yrs)
  - Special use lanes evaluation
  - Enhanced transit amenities
  - Fuel efficient buses
  - Better transit marketing
  - Use smaller buses

Policy

- Shift County Transit Priorities to Biscayne Boulevard Corridor
- Develop Northeast Miami-Dade Traffic Impact Fee (
- Provide Incentives for Transportation Demand Management Participation
- Further Develop Intelligent Transportation Systems
- Coordinate Municipal Land Use Policies Along West Dixie Highway and Biscayne Boulevard

<u>Long Term Projects (5 -15 years)</u>

Physical Capacity

- Intersection Level of Service Improvements (where ROW is needed)
- Link Level of Service Improvements (where ROW is needed)
- New Corridor Connections
  - 159th Street
  - 151st Street
- Direct Connection Between William Lehman Causeway and Aventura Mall
- North Miami Avenue Consistent 4 Lane Section North and South of 105th Street

Alternative Mode

- BRT on Collins Avenue
- 163rd Street/Biscayne Boulevard Intermodal Center

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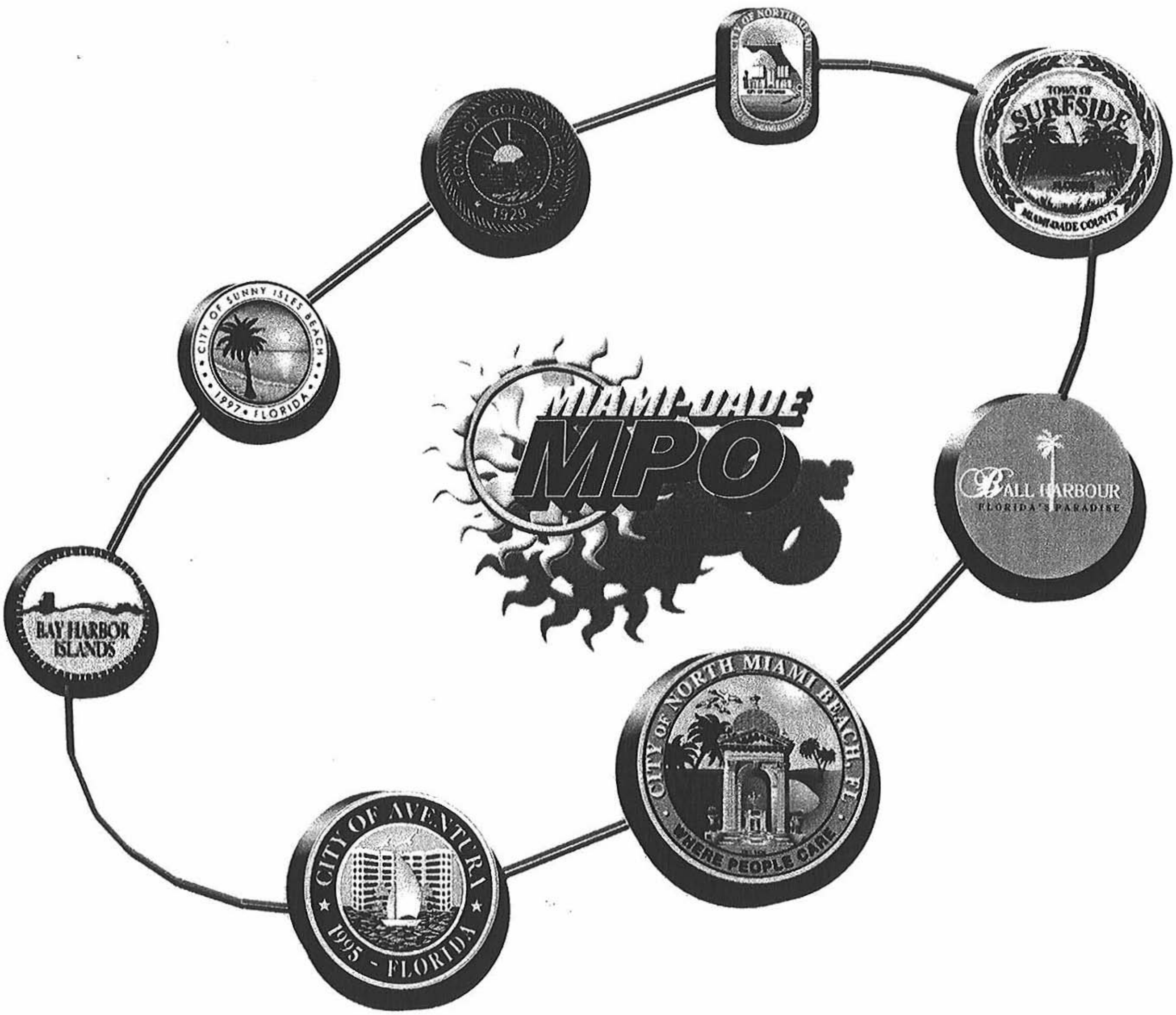
NORTHEAST MIAMI DADE TRAFFIC FLOW STUDY

Appendix A : Traffic Counts
Appendix B : Traffic Analysis Study



THE CORRADINO GROUP

JULY 2007

Appendix A

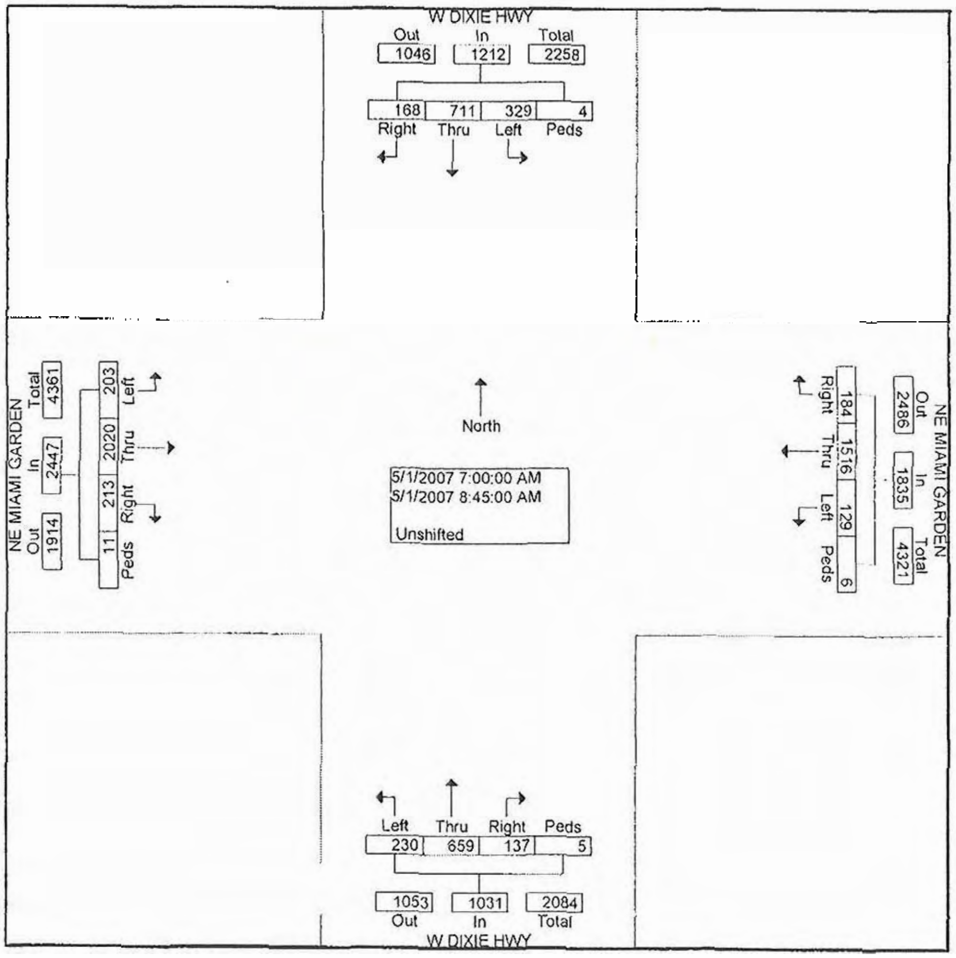
Traffic Counts

Richard Garcia & Associates, Inc
13117 NW 107 Ave. Suite- No.4
Hialeah Gardens, FL 33018
Tel: 305-595-7505/Fax:305-675-6474

File Name : WDIXIE~4
Site Code : 00000000
Start Date : 5/1/2007

Groups Printed- Unshifted

	W DIXIE HWY From North					NE MIAMI GARDEN From East					W DIXIE HWY From South					NE MIAMI GARDEN From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	23	80	30	0	133	21	118	15	0	154	20	88	32	1	141	25	276	20	3	324	752
07:15 AM	27	77	45	1	150	23	127	17	1	168	18	83	23	0	124	31	222	31	1	285	727
07:30 AM	20	89	42	0	151	19	128	20	1	168	13	91	29	2	135	22	206	27	2	257	711
07:45 AM	23	93	41	1	158	27	154	8	0	189	27	82	17	1	127	29	175	30	1	235	709
Total	93	339	158	2	592	90	527	60	2	679	78	344	101	4	527	107	879	108	7	1101	2899
08:00 AM	19	92	53	0	164	25	243	11	3	282	11	78	26	0	115	27	270	25	0	322	883
08:15 AM	22	101	39	2	164	22	268	26	0	316	15	82	31	0	128	20	283	19	2	324	932
08:30 AM	20	88	31	0	139	24	263	18	1	306	14	76	30	1	121	29	287	24	0	340	906
08:45 AM	14	91	48	0	153	23	215	14	0	252	19	79	42	0	140	30	301	27	2	360	905
Total	75	372	171	2	620	94	989	69	4	1156	59	315	129	1	504	106	114 1	95	4	1346	3626
Grand Total	168	711	329	4	1212	184		129	6	1835	137	659	230	5	1031	213	202 0	203	11	2447	6525
Apprch %	13.	58.	27.	0.3		10. 0	82. 6	7.0	0.3		13. 3	63. 9	22. 3	0.5		8.7	82. 6	8.3	0.4		
Total %	2.6	10. 9	5.0	0.1	18.6	2.8	23. 2	2.0	0.1	28.1	2.1	10. 1	3.5	0.1	15.8	3.3	31. 0	3.1	0.2	37.5	



Richard Garcia & Associates, Inc
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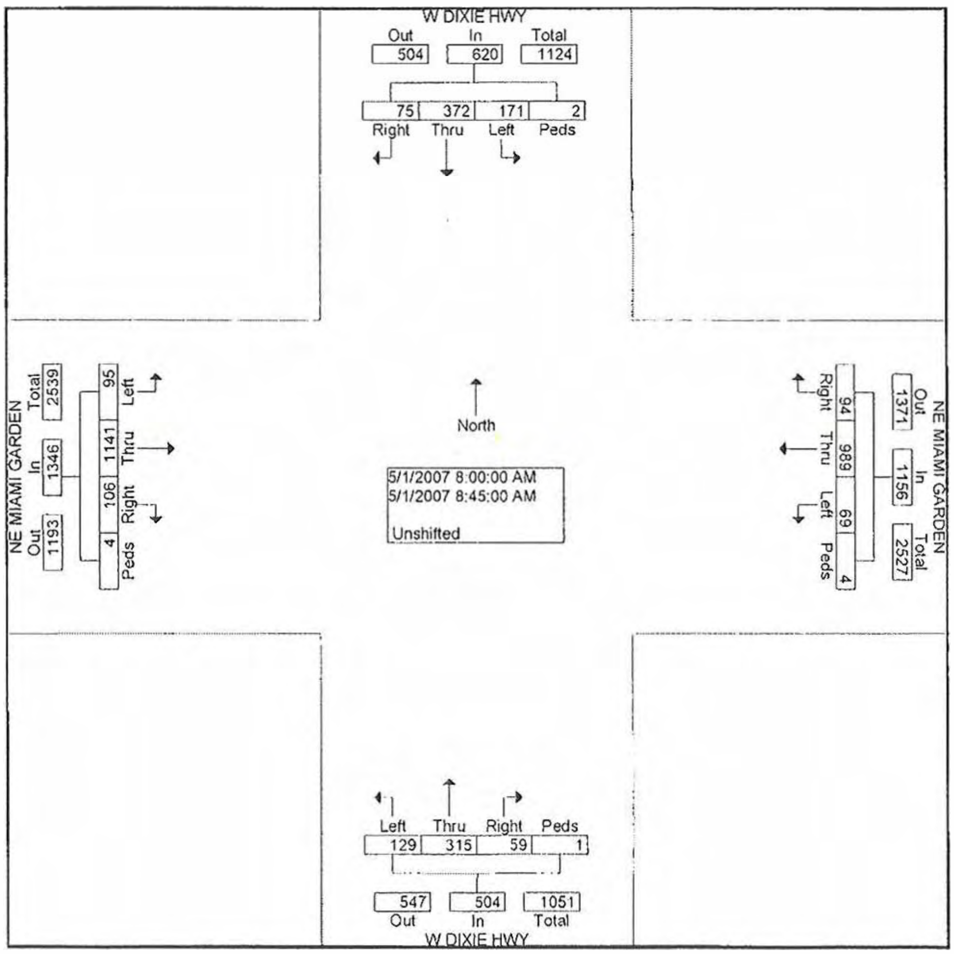
File Name : WDIXIE~4
Site Code : 00000000
Start Date : 5/1/2007
Page No : 2

	W DIXIE HWY From North					NE MIAMI GARDEN From East					W DIXIE HWY From South					NE MIAMI GARDEN From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Intersection	08:00 AM																				
Volume	75	372	171	2	620	94	989	69	4	1156	59	315	129	1	504	106	1141	95	4	1346	3626
Percent	12.1	60.0	27.6	0.3		8.1	85.6	6.0	0.3		11.7	62.5	25.6	0.2		7.9	84.8	7.1	0.3		
08:15 Volume	22	101	39	2	164	22	268	26	0	316	15	82	31	0	128	20	283	19	2	324	932
Peak Factor																					0.973
High Int.	08:00 AM					08:15 AM					08:45 AM					08:45 AM					
Volume	19	92	53	0	164	22	268	26	0	316	19	79	42	0	140	30	301	27	2	360	
Peak Factor					0.945					0.915					0.900					0.935	



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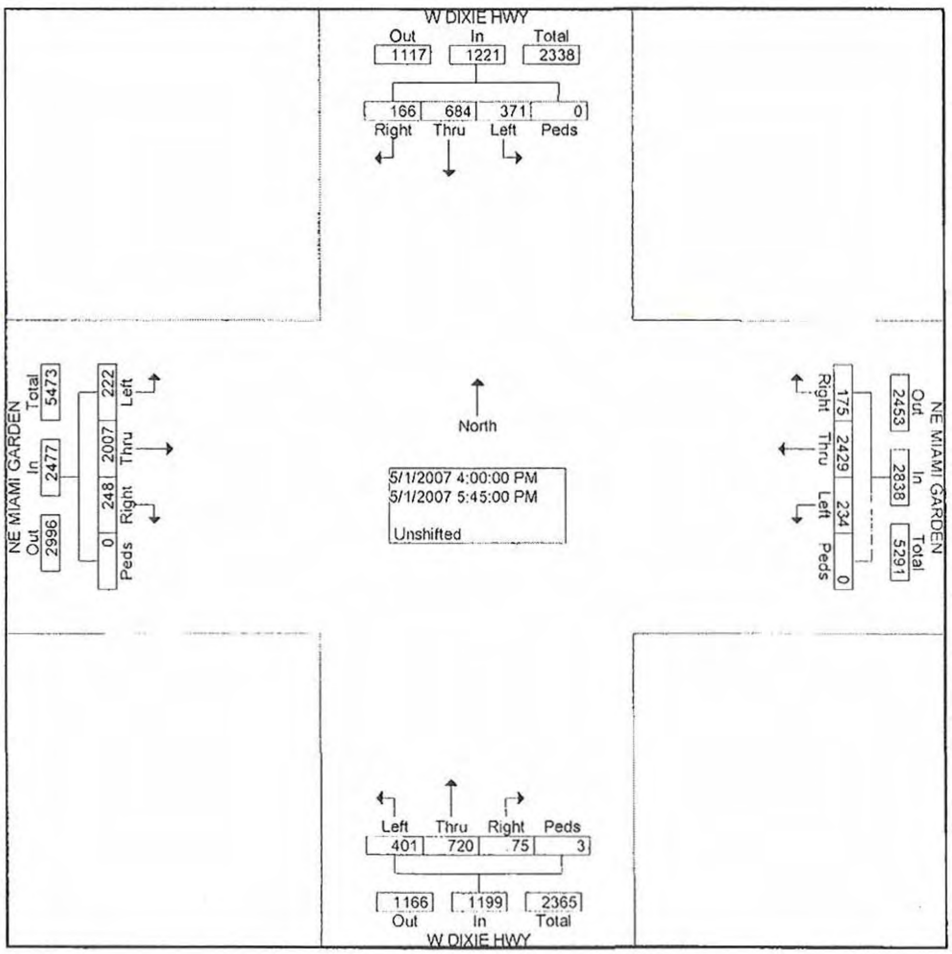
File Name : W DIXIE & MIAMI GARDEN DR_PM
Site Code : 00000000
Start Date : 5/1/2007
Page No : 1

Groups Printed- Unshifted

	W DIXIE HWY From North					NE MIAMI GARDEN From East					W DIXIE HWY From South					NE MIAMI GARDEN From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	23	58	38	0	119	29	268	34	0	331	10	49	29	0	88	29	250	40	0	319	857
04:15 PM	19	72	23	0	114	12	250	39	0	301	7	64	20	0	91	28	192	25	0	245	751
04:30 PM	31	71	36	0	138	33	327	33	0	393	9	89	39	0	137	30	264	35	0	329	997
04:45 PM	16	86	56	0	158	27	420	47	0	494	11	91	53	0	155	35	324	28	0	387	1194
Total	89	287	153	0	529	101	1265	153	0	1519	37	293	141	0	471	122	1030	128	0	1280	3799
05:00 PM	23	114	89	0	226	28	372	19	0	419	24	117	87	0	228	30	267	24	0	321	1194
05:15 PM	26	79	34	0	139	14	230	23	0	267	5	104	60	0	169	21	223	34	0	278	853
05:30 PM	16	104	40	0	160	17	252	24	0	293	3	119	48	0	170	37	242	18	0	297	920
05:45 PM	12	100	55	0	167	15	310	15	0	340	6	87	65	3	161	38	245	18	0	301	969
Total	77	397	218	0	692	74	1164	81	0	1319	38	427	260	3	728	126	977	94	0	1197	3936
Grand Total	166	684	371	0	1221	175	2429	234	0	2838	75	720	401	3	1199	248	2007	222	0	2477	7735
Apprch %	13.6	56.0	30.4	0.0		6.2	85.6	8.2	0.0		6.3	60.1	33.4	0.3		10.0	81.0	9.0	0.0		
Total %	2.1	8.8	4.8	0.0	15.8	2.3	31.4	3.0	0.0	36.7	1.0	9.3	5.2	0.0	15.5	3.2	25.9	2.9	0.0	32.0	



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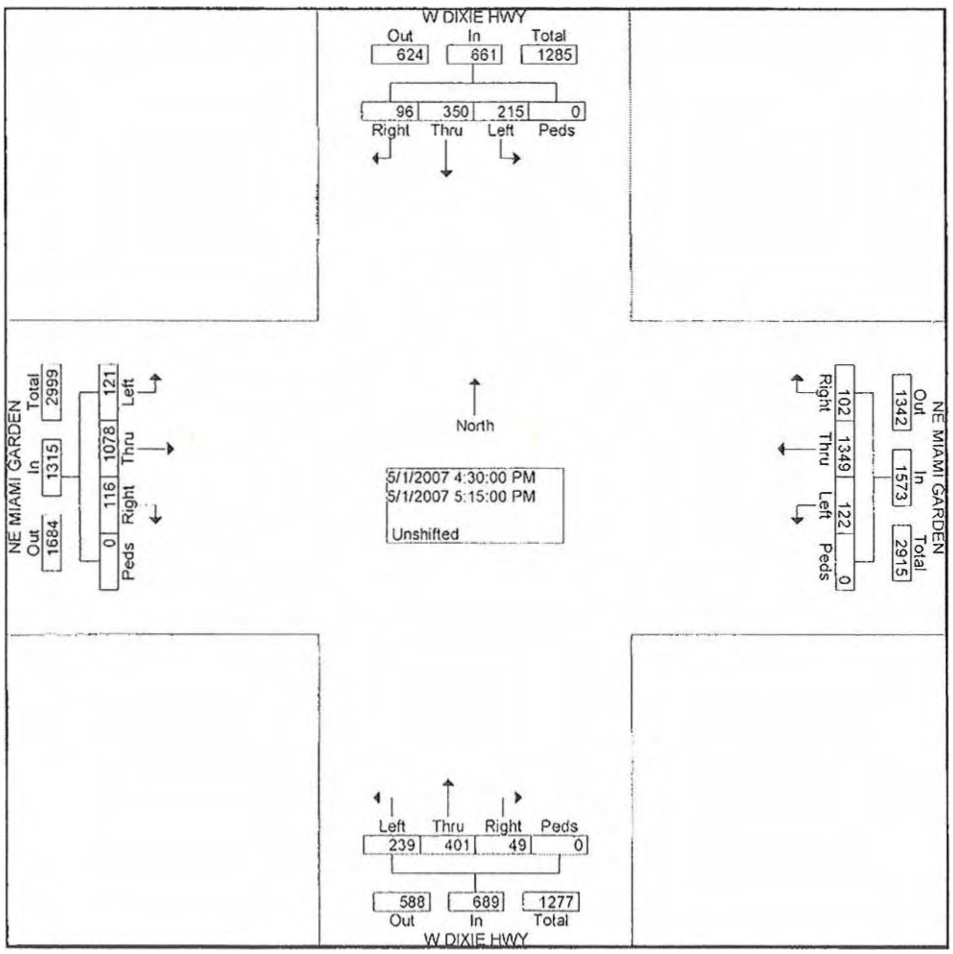
File Name : W DIXIE & MIAMI GARDEN DR_PM
Site Code : 00000000
Start Date : 5/1/2007

	W DIXIE HWY From North					NE MIAMI GARDEN From East					W DIXIE HWY From South					NE MIAMI GARDEN From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:30 PM																				
Volume	96	350	215	0	661	102	1349	122	0	1573	49	401	239	0	689	116	1078	121	0	1315	4238
Percent	14.5	53.0	32.5	0.0		6.5	85.8	7.8	0.0		7.1	58.2	34.7	0.0		8.8	82.0	9.2	0.0		
05:00 Volume	23	114	89	0	226	28	372	19	0	419	24	117	87	0	228	30	267	24	0	321	1194
Peak Factor																					0.887
High Int.	05:00 PM					04:45 PM					05:00 PM					04:45 PM					
Volume	23	114	89	0	226	27	420	47	0	494	24	117	87	0	228	35	324	28	0	387	
Peak Factor					0.731					0.796					0.755					0.849	



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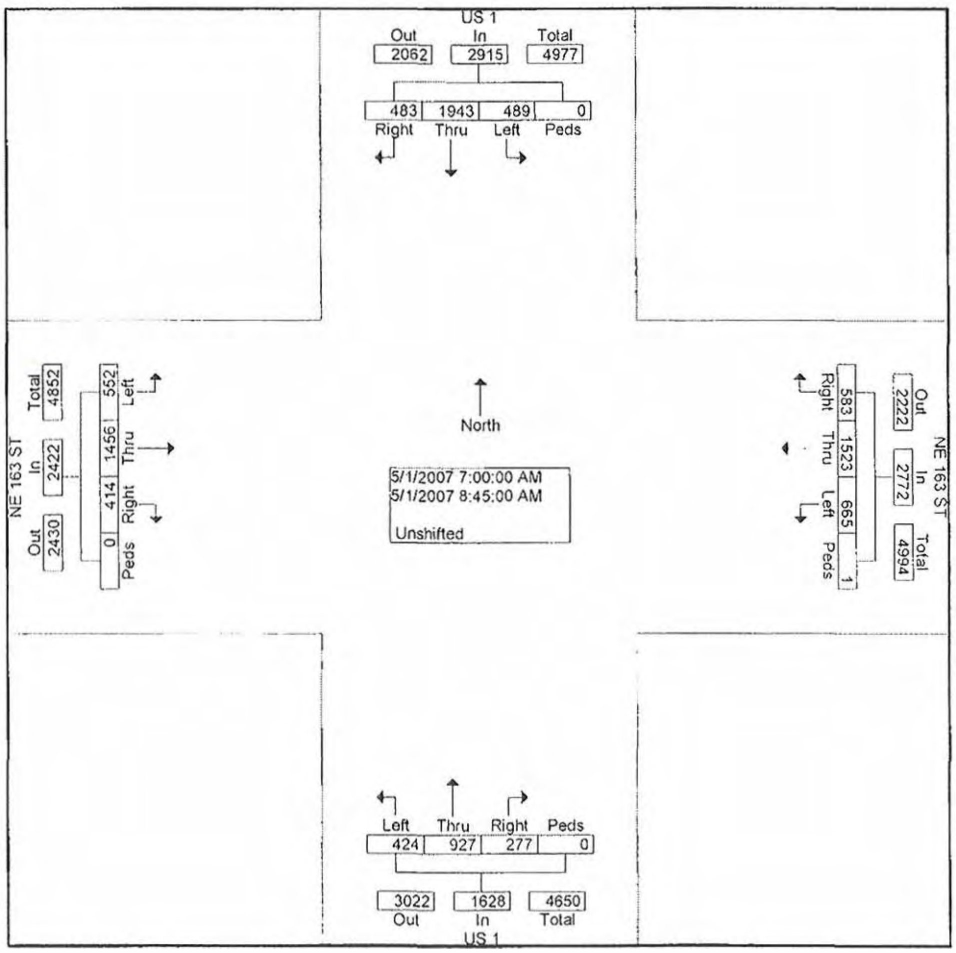
File Name : US1&16~1
Site Code : 00000000
Start Date : 5/1/2007
Page No : 1

Groups Printed- Unshifted

	US 1 From North					NE 163 ST From East					US 1 From South					NE 163 ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	52	241	49	0	342	56	173	65	0	294	16	83	32	0	131	45	189	51	0	285	1052
07:15 AM	26	216	51	0	293	90	179	72	0	341	34	105	34	0	173	36	138	66	0	240	1047
07:30 AM	63	253	63	0	379	62	190	84	0	336	36	133	40	0	209	62	196	61	0	319	1243
07:45 AM	51	271	50	0	372	60	177	86	1	324	28	129	62	0	219	47	184	85	0	316	1231
Total	192	981	213	0	1386	268	719	307	1	1295	114	450	168	0	732	190	707	263	0	1160	4573
08:00 AM	62	267	65	0	394	65	195	75	0	335	53	137	51	0	241	40	169	67	0	276	1246
08:15 AM	84	235	82	0	401	70	193	104	0	367	30	98	77	0	205	49	196	80	0	325	1298
08:30 AM	88	272	65	0	425	107	240	91	0	438	43	166	78	0	287	81	226	77	0	384	1534
08:45 AM	57	188	64	0	309	73	176	88	0	337	37	76	50	0	163	54	158	65	0	277	1086
Total	291	962	276	0	1529	315	804	358	0	1477	163	477	256	0	896	224	749	289	0	1262	5164
Grand Total	483	1943	489	0	2915	583	1523	665	1	2772	277	927	424	0	1628	414	1456	552	0	2422	9737
Apprch %	16.6	66.7	16.8	0.0		21.0	54.9	24.0	0.0		17.0	56.9	26.0	0.0		17.1	60.1	22.8	0.0		
Total %	5.0	20.0	5.0	0.0	29.9	6.0	15.6	6.8	0.0	28.5	2.8	9.5	4.4	0.0	16.7	4.3	15.0	5.7	0.0	24.9	



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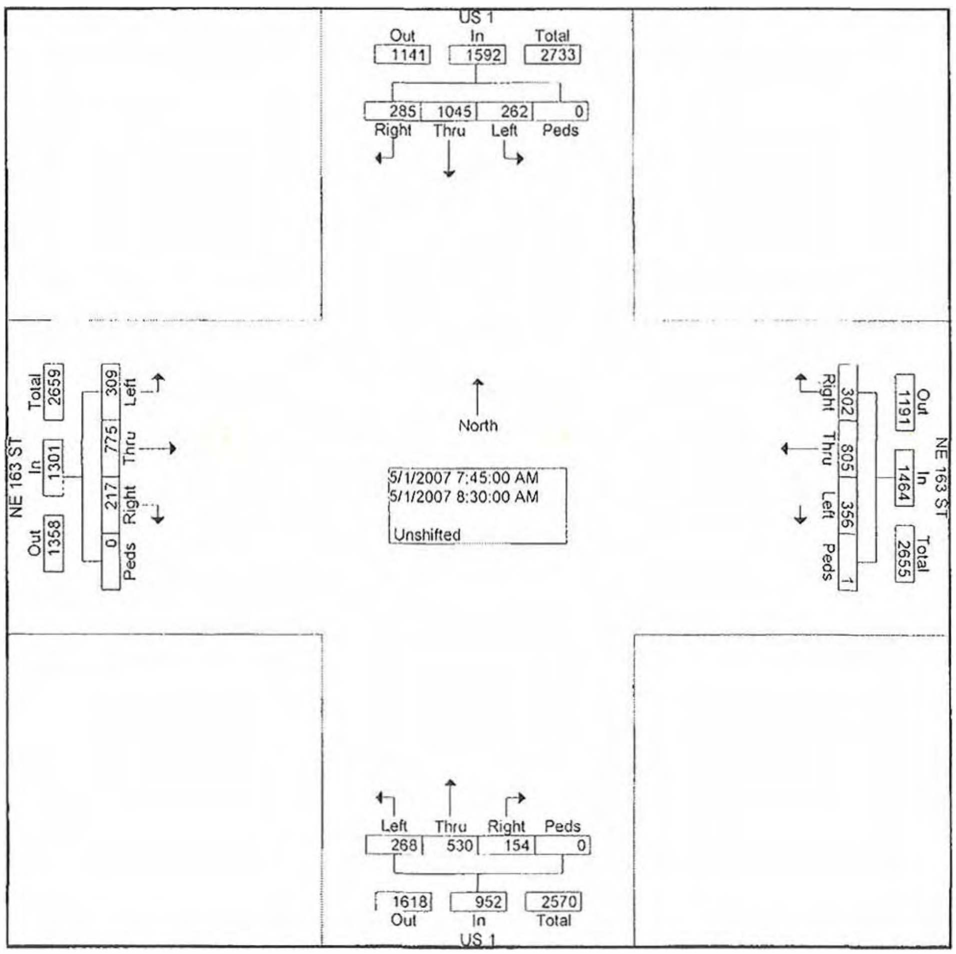
File Name : US1&16~1
Site Code : 00000000
Start Date : 5/1/2007
Page No : 2

	US 1 From North					NE 163 ST From East					US 1 From South					NE 163 ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Intersection	07:45 AM																				
Volume	285	1045	262	0	1592	302	805	356	1	1464	154	530	268	0	952	217	775	309	0	1301	5309
Percent	17.9	65.6	16.5	0.0		20.6	55.0	24.3	0.1		16.2	55.7	28.2	0.0		16.7	59.6	23.8	0.0		
08:30 Volume	88	272	65	0	425	107	240	91	0	438	43	166	78	0	287	81	226	77	0	384	1534
Peak Factor																					0.865
High Int.	08:30 AM					08:30 AM					08:30 AM					08:30 AM					
Volume	88	272	65	0	425	107	240	91	0	438	43	166	78	0	287	81	226	77	0	384	
Peak Factor					0.936					0.836					0.829					0.847	



Richard Garcia & Associates, Inc
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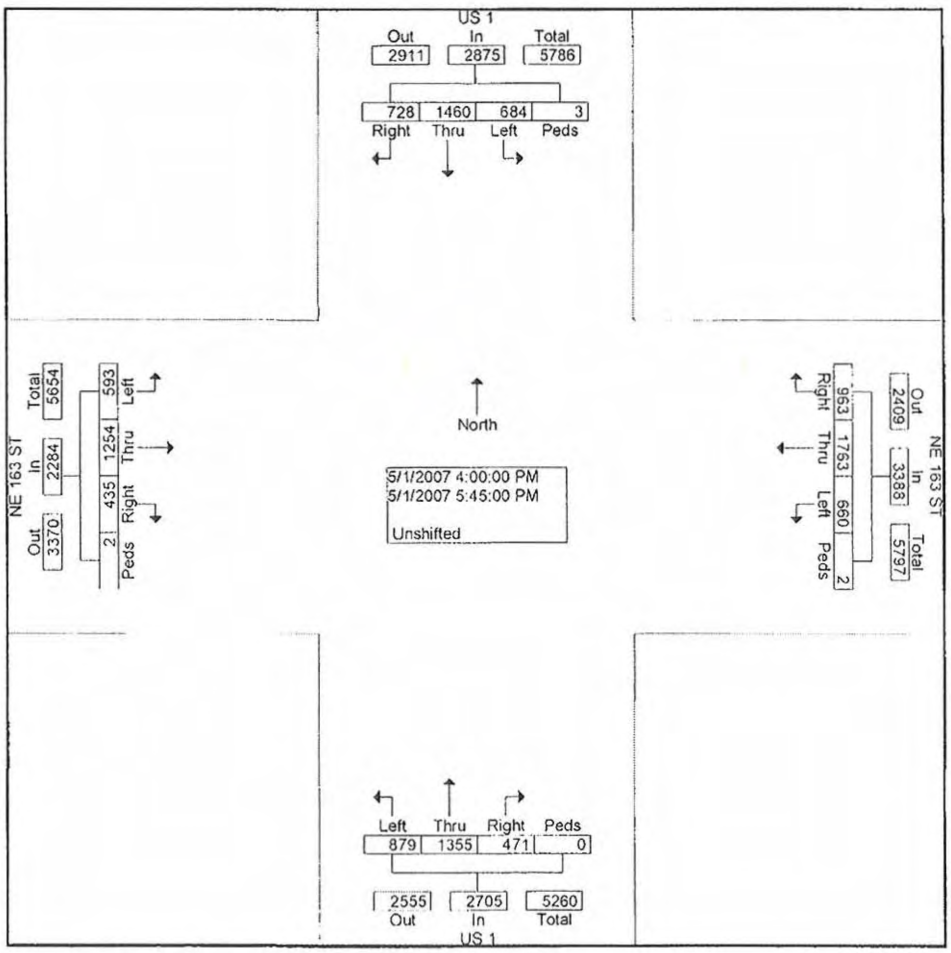
File Name : US1&16~2
Site Code : 00000000
Start Date : 5/1/2007
Page No : 1

Groups Printed- Unshifted

	US 1 From North					NE 163 ST From East					US 1 From South					NE 163 ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	108	234	111	0	453	138	266	86	1	491	37	183	133	0	353	45	192	88	0	325	1622
04:15 PM	121	215	97	1	434	173	254	101	0	528	78	206	131	0	415	50	171	99	0	320	1697
04:30 PM	86	208	93	0	387	153	218	99	0	470	43	176	119	0	338	63	181	80	0	324	1519
04:45 PM	84	159	79	0	322	129	225	81	0	435	66	185	99	0	350	41	151	76	0	268	1375
Total	399	816	380	1	1596	593	963	367	1	1924	224	750	482	0	1456	199	695	343	0	1237	6213
05:00 PM	77	163	110	0	350	137	271	92	0	500	47	181	143	0	371	78	173	85	0	336	1557
05:15 PM	89	206	61	1	357	72	167	66	1	306	68	167	73	0	308	53	148	68	0	269	1240
05:30 PM	105	163	91	1	360	101	193	67	0	361	87	158	114	0	359	74	137	49	2	262	1342
05:45 PM	58	112	42	0	212	60	169	68	0	297	45	99	67	0	211	31	101	48	0	180	900
Total	329	644	304	2	1279	370	800	293	1	1464	247	605	397	0	1249	236	559	250	2	1047	5039
Grand Total	728	1460	684	3	2875	963	1763	660	2	3388	471	1355	879	0	2705	435	1254	593	2	2284	11252
Apprch %	25.3	50.8	23.8			28.4	52.0	19.5	0.1		17.4	50.1	32.5	0.0		19.0	54.9	26.0	0.1		
Total %	6.5	13.0	6.1	0.0	25.6	8.6	15.7	5.9	0.0	30.1	4.2	12.0	7.8	0.0	24.0	3.9	11.1	5.3	0.0	20.3	



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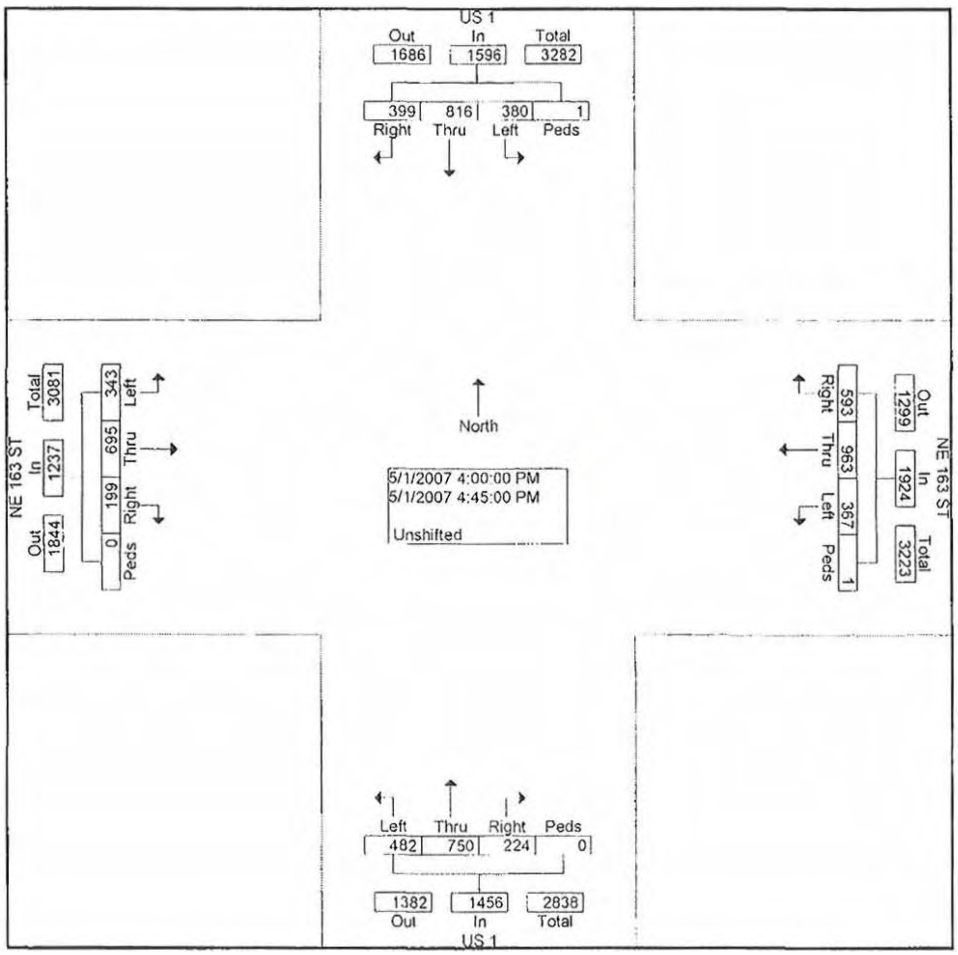
File Name : US1&16~2
Site Code : 00000000
Start Date : 5/1/2007
Page No : 2

	US 1 From North					NE 163 ST From East					US 1 From South					NE 163 ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:00 PM																				
Volume	399	816	380	1	1596	593	963	367	1	1924	224	750	482	0	1456	199	695	343	0	1237	6213
Percent	25.1	51.1	23.8	0.1		30.8	50.1	19.1	0.1		15.4	51.5	33.1	0.0		16.1	56.2	27.7	0.0		
04:15 Volume	121	215	97	1	434	173	254	101	0	528	78	206	131	0	415	50	171	99	0	320	1697
Peak Factor																					0.915
High Int.	04:00 PM					04:15 PM					04:15 PM					04:00 PM					
Volume	108	234	111	0	453	173	254	101	0	528	78	206	131	0	415	45	192	88	0	325	
Peak Factor					0.881					0.911					0.877					0.952	



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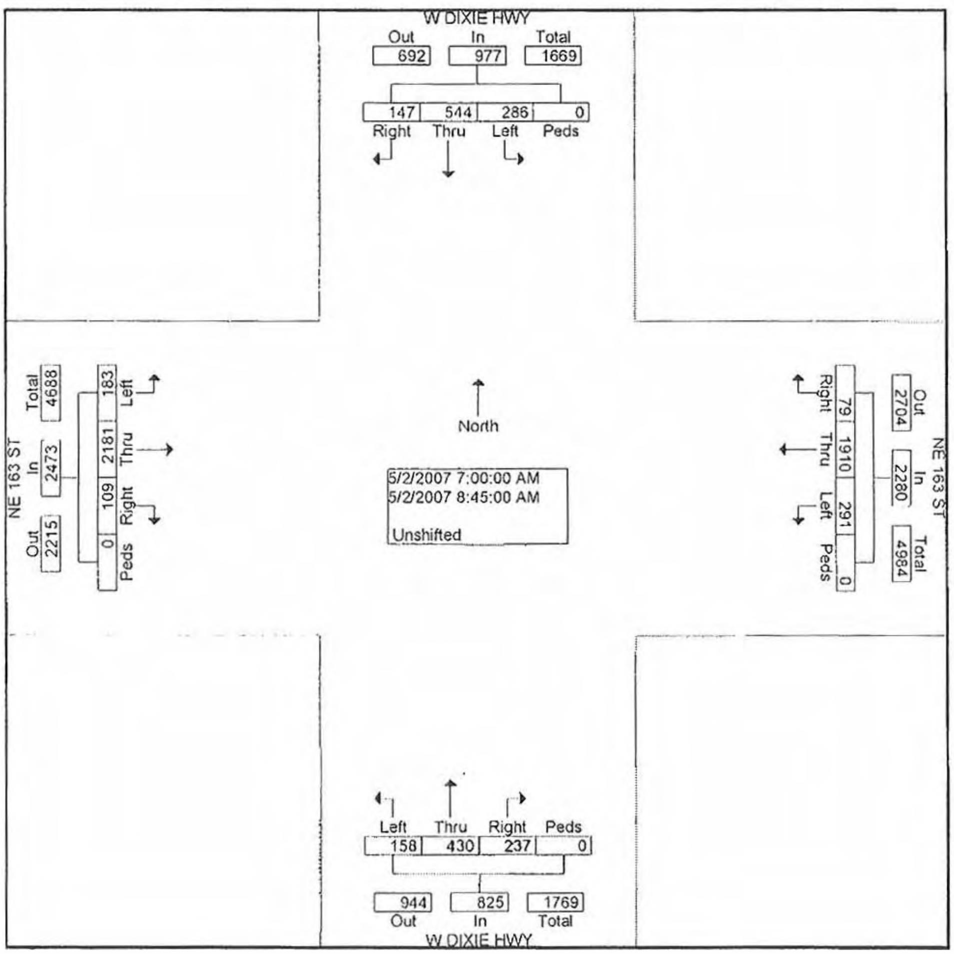
File Name : NE163S~1
Site Code : 00000000
Start Date : 5/2/2007
Page No : 1

Groups Printed- Unshifted

	W DIXIE HWY From North					NE 163 ST From East					W DIXIE HWY From South					NE 163 ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	20	80	29	0	129	5	227	33	0	265	26	43	6	0	75	21	275	22	0	318	787
07:15 AM	18	61	29	0	108	4	193	29	0	226	31	47	14	0	92	10	262	17	0	289	715
07:30 AM	19	70	36	0	125	2	250	49	0	301	31	56	19	0	106	13	320	17	0	350	882
07:45 AM	19	71	45	0	135	12	245	41	0	298	26	56	28	0	110	14	333	30	0	377	920
Total	76	282	139	0	497	23	915	152	0	1090	114	202	67	0	383	58	1190	86	0	1334	3304
08:00 AM	11	72	34	0	117	17	254	38	0	309	37	61	32	0	130	7	260	22	0	289	845
08:15 AM	21	84	40	0	145	10	239	40	0	289	34	63	14	0	111	20	279	20	0	319	864
08:30 AM	21	57	40	0	118	18	285	32	0	335	32	65	23	0	120	9	225	35	0	269	842
08:45 AM	18	49	33	0	100	11	217	29	0	257	20	39	22	0	81	15	227	20	0	262	700
Total	71	262	147	0	480	56	995	139	0	1190	123	228	91	0	442	51	991	97	0	1139	3251
Grand Total	147	544	286	0	977	79	1910	291	0	2280	237	430	158	0	825	109	2181	183	0	2473	6555
Apprch %	15.0	55.7	29.3	0.0		3.5	83.8	12.8	0.0		28.7	52.1	19.2	0.0		4.4	88.2	7.4	0.0		
Total %	2.2	8.3	4.4	0.0	14.9	1.2	29.1	4.4	0.0	34.8	3.6	6.6	2.4	0.0	12.6	1.7	33.3	2.8	0.0	37.7	



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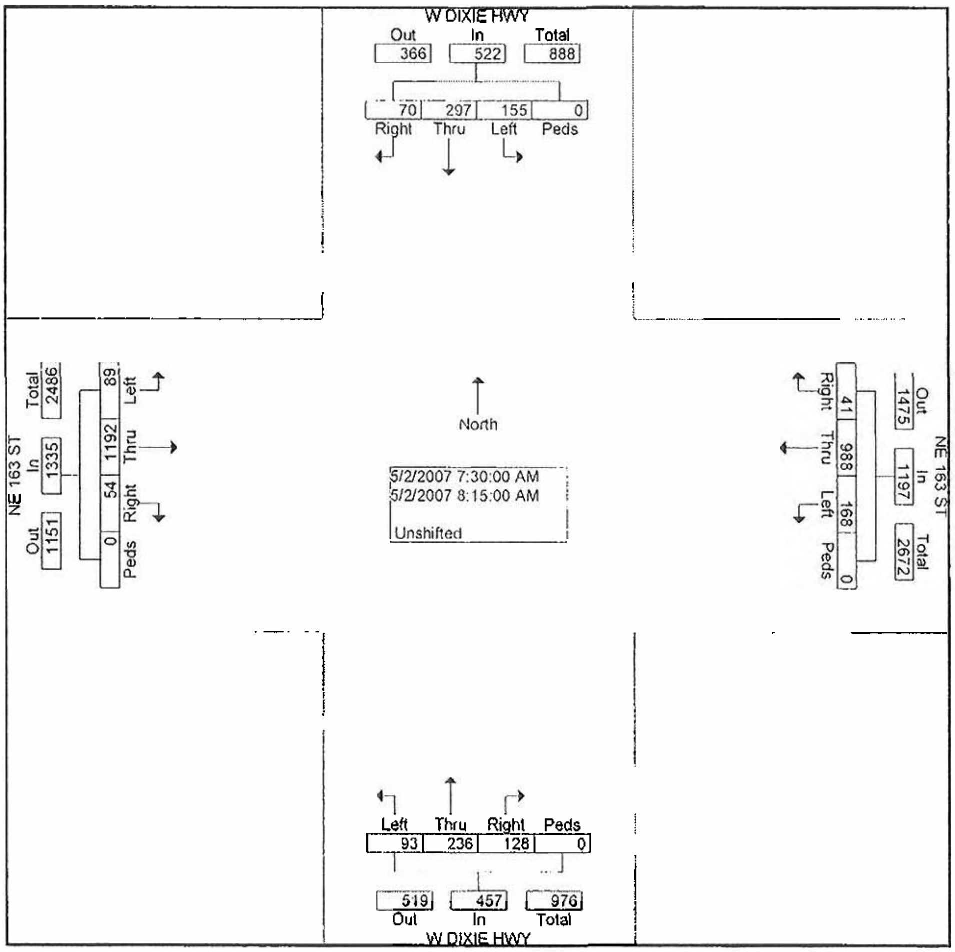
File Name : NE163S~1
Site Code : 00000000
Start Date : 5/2/2007
Page No : 2

	W DIXIE HWY From North					NE 163 ST From East					W DIXIE HWY From South					NE 163 ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru		Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Intersection	07:30 AM																				
Volume	70	297	155	0	522	41	988	168	0	1197	128	236	93	0	457	54	1192	89	0	1335	3511
Percent	13.4	56.9	29.7	0.0		3.4	82.5	14.0	0.0		28.0	51.6	20.4	0.0		4.0	89.3	6.7	0.0		
07:45 Volume	19	71	45	0	135	12	245	41	0	298	26	56	28	0	110	14	333	30	0	377	920
Peak Factor																					0.954
High Int.	08:15 AM					08:00 AM					08:00 AM					07:45 AM					
Volume	21	84	40	0	145	17	254	38	0	309	37	61	32	0	130	14	333	30	0	377	
Peak Factor					0.900					0.968					0.879					0.885	



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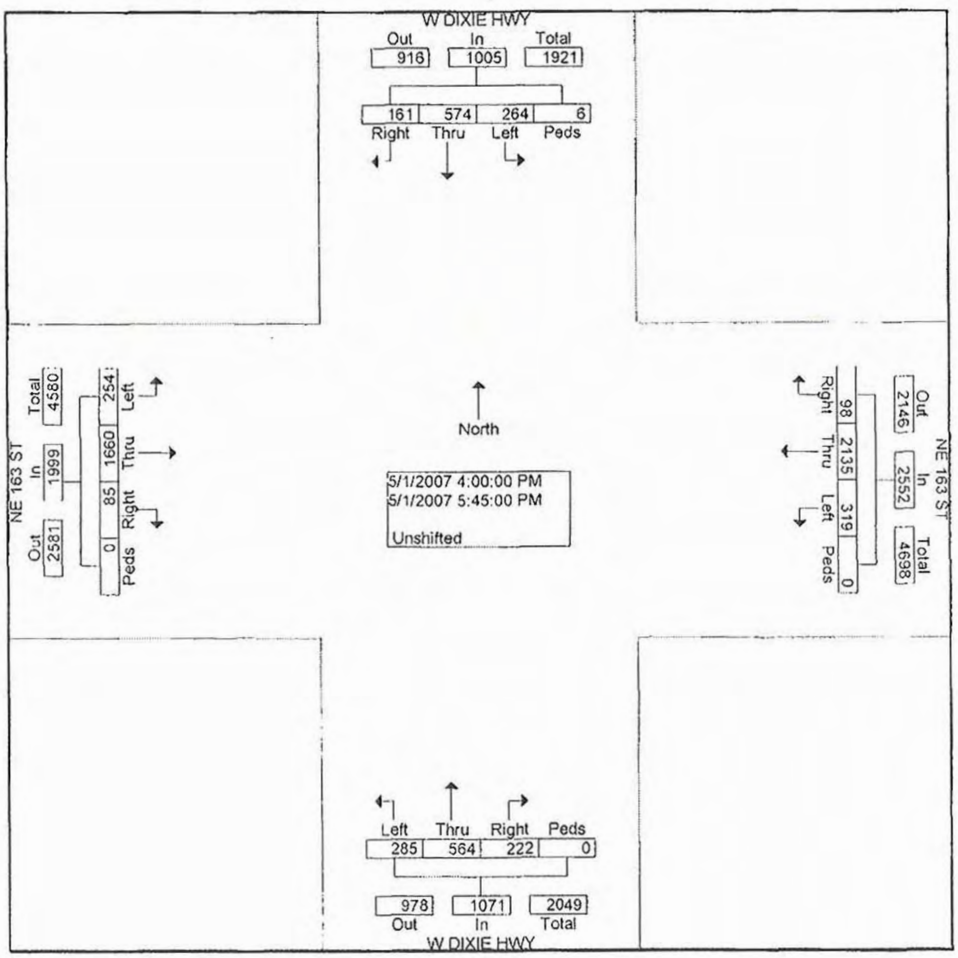
File Name : NE 163 ST & W.DIXIE HWY_PM
Site Code : 00000000
Start Date : 5/1/2007

Groups Printed- Unshifted

	W DIXIE HWY From North					NE 163 ST From East					W DIXIE HWY From South					NE 163 ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	19	80	40	6	145	11	289	41	0	341	36	78	34	0	148	4	191	29	0	224	858
04:15 PM	19	82	28	0	129	16	300	44	0	360	32	49	38	0	119	8	230	44	0	282	890
04:30 PM	18	62	40	0	120	15	282	42	0	339	16	73	37	0	126	9	218	25	0	252	837
04:45 PM	26	50	45	0	121	9	240	29	0	278	17	62	32	0	111	8	203	31	0	242	752
Total	82	274	153	6	515	51	1111	156	0	1318	101	262	141	0	504	29	842	129	0	1000	3337
05:00 PM	15	79	24	0	118	5	240	45	0	290	23	68	40	0	131	12	192	32	0	236	775
05:15 PM	11	83	32	0	126	20	273	36	0	329	31	98	40	0	169	17	228	38	0	283	907
05:30 PM	25	66	26	0	117	7	234	43	0	284	32	63	44	0	139	9	180	28	0	217	757
05:45 PM	28	72	29	0	129	15	277	39	0	331	35	73	20	0	128	18	218	27	0	263	851
Total	79	300	111	0	490	47	1024	163	0	1234	121	302	144	0	567	56	818	125	0	999	3290
Grand Total	161	574	264	6	1005	98	2135	319	0	2552	222	564	285	0	1071	85	1660	254	0	1999	6627
Apprch %	16.0	57.1	26.3	0.6		3.8	83.7	12.5	0.0		20.7	52.7	26.6	0.0		4.3	83.0	12.7	0.0		
Total %	2.4	8.7	4.0	0.1	15.2	1.5	32.2	4.8	0.0	38.5	3.3	8.5	4.3	0.0	16.2	1.3	25.0	3.8	0.0	30.2	



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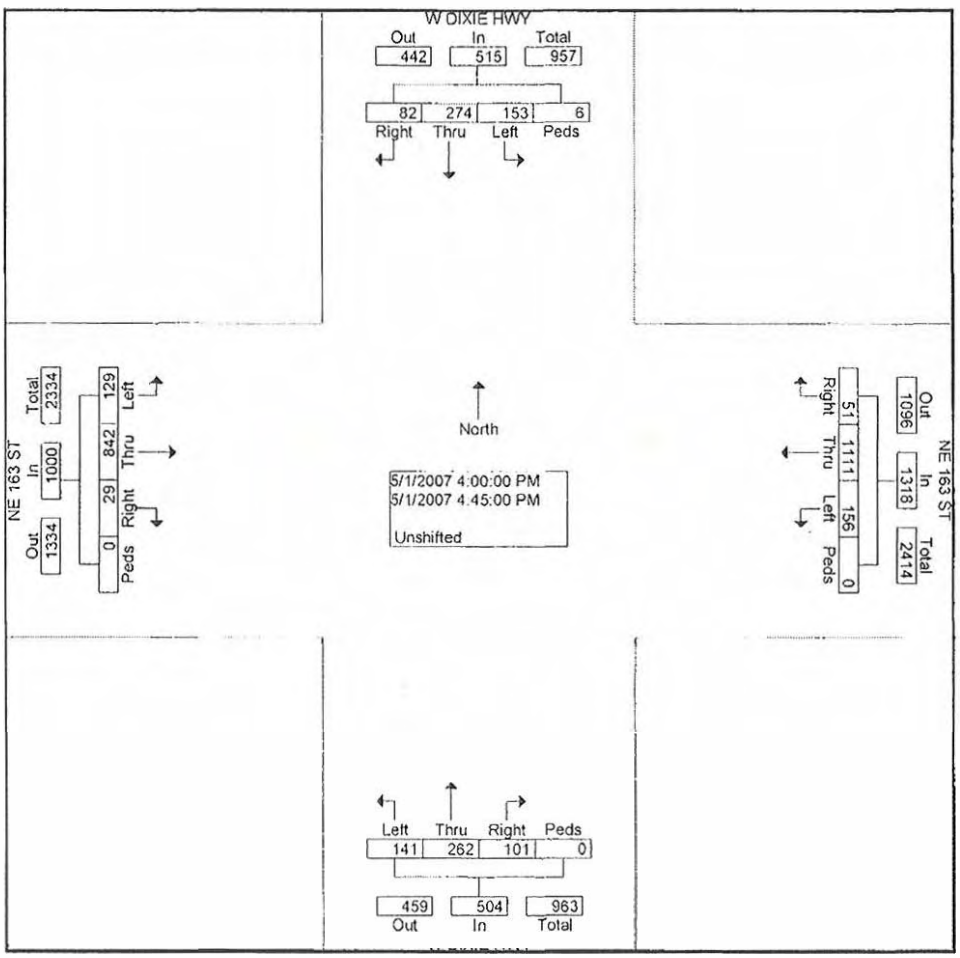
File Name : NE 163 ST & W.DIXIE HWY_PM
Site Code : 00000000
Start Date : 5/1/2007
Page No : 2

	W DIXIE HWY From North					NE 163 ST From East					W DIXIE HWY From South					NE 163 ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:00 PM																				
Volume	82	274	153	6	515	51	1111	156	0	1318	101	262	141	0	504	29	842	129	0	1000	3337
Percent	15.9	53.2	29.7	1.2		3.9	84.3	11.8	0.0		20.0	52.0	28.0	0.0		2.9	84.2	12.9	0.0		
04:15 Volume	19	82	28	0	129	16	300	44	0	360	32	49	38	0	119	8	230	44	0	282	890
Peak Factor																					0.937
High Int.	04:00 PM					04:15 PM					04:00 PM					04:15 PM					
Volume	19	80	40	6	145	16	300	44	0	360	36	78	34	0	148	8	230	44	0	282	
Peak Factor					0.888					0.915					0.851					0.887	



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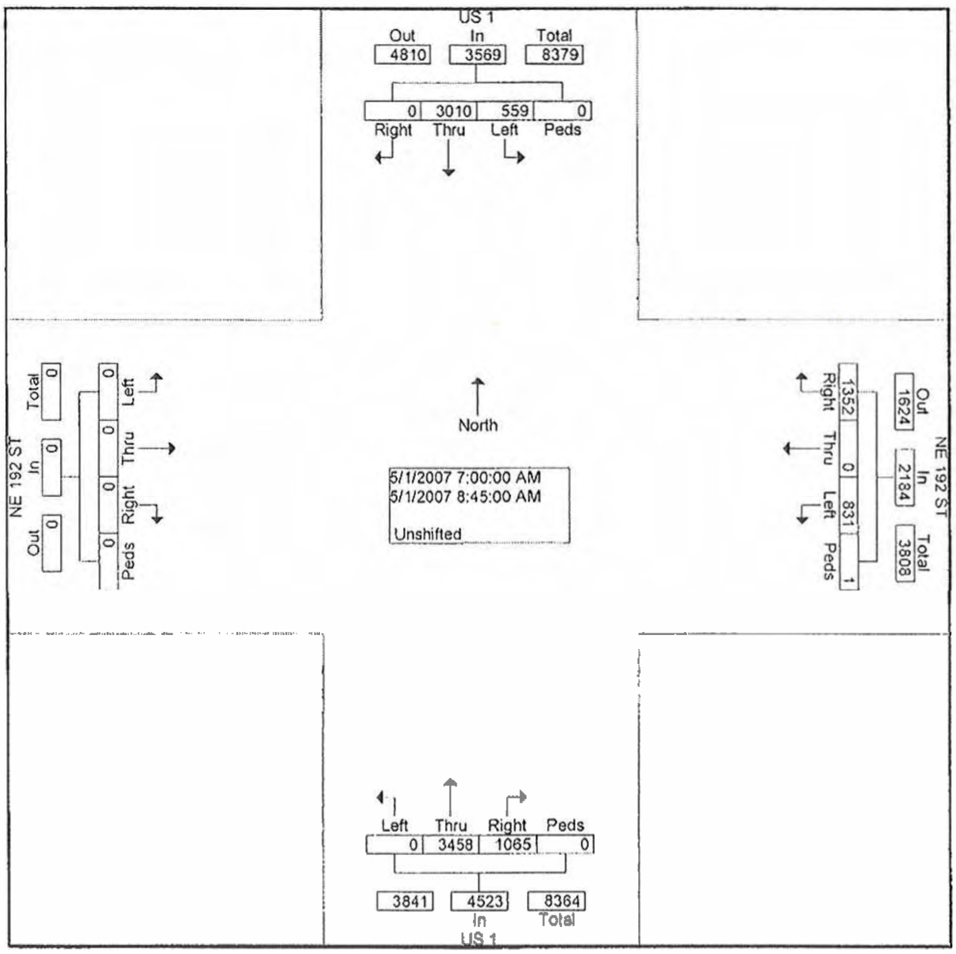
File Name : US1&19~1
Site Code : 00000000
Start Date : 5/1/2007
Page No : 1

Groups Printed- Unshifted

	US 1 From North					NE 192 ST From East					US 1 From South					NE 192 ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	0	318	94	0	412	131	0	52	0	183	127	348	0	0	475	0	0	0	0	0	1070
07:15 AM	0	343	52	0	395	142	0	69	0	211	127	433	0	0	560	0	0	0	0	0	1166
07:30 AM	0	347	63	0	410	126	0	76	0	202	104	354	0	0	458	0	0	0	0	0	1070
07:45 AM	0	430	78	0	508	220	0	149	0	369	144	434	0	0	578	0	0	0	0	0	1455
Total	0	1438	287	0	1725	619	0	346	0	965	502	1569	0	0	2071	0	0	0	0	0	4761
08:00 AM	0	400	64	0	464	230	0	140	0	370	169	477	0	0	646	0	0	0	0	0	1480
08:15 AM	0	375	62	0	437	218	0	130	1	349	121	459	0	0	580	0	0	0	0	0	1366
08:30 AM	0	453	55	0	508	136	0	117	0	253	120	464	0	0	584	0	0	0	0	0	1345
08:45 AM	0	344	91	0	435	149	0	98	0	247	153	489	0	0	642	0	0	0	0	0	1324
Total	0	1572	272	0	1844	733	0	485	1	1219	563	1889	0	0	2452	0	0	0	0	0	5515
Grand Total	0	3010	559	0	3569	1352	0	831	1	2184	1065	3458	0	0	4523	0	0	0	0	0	10276
Apprch %	0.0	84.3	15.7	0.0		61.9	0.0	38.0	0.0		23.5	76.5	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	29.3	5.4	0.0	34.7	13.2	0.0	8.1	0.0	21.3	10.4	33.7	0.0	0.0	44.0	0.0	0.0	0.0	0.0	0.0	



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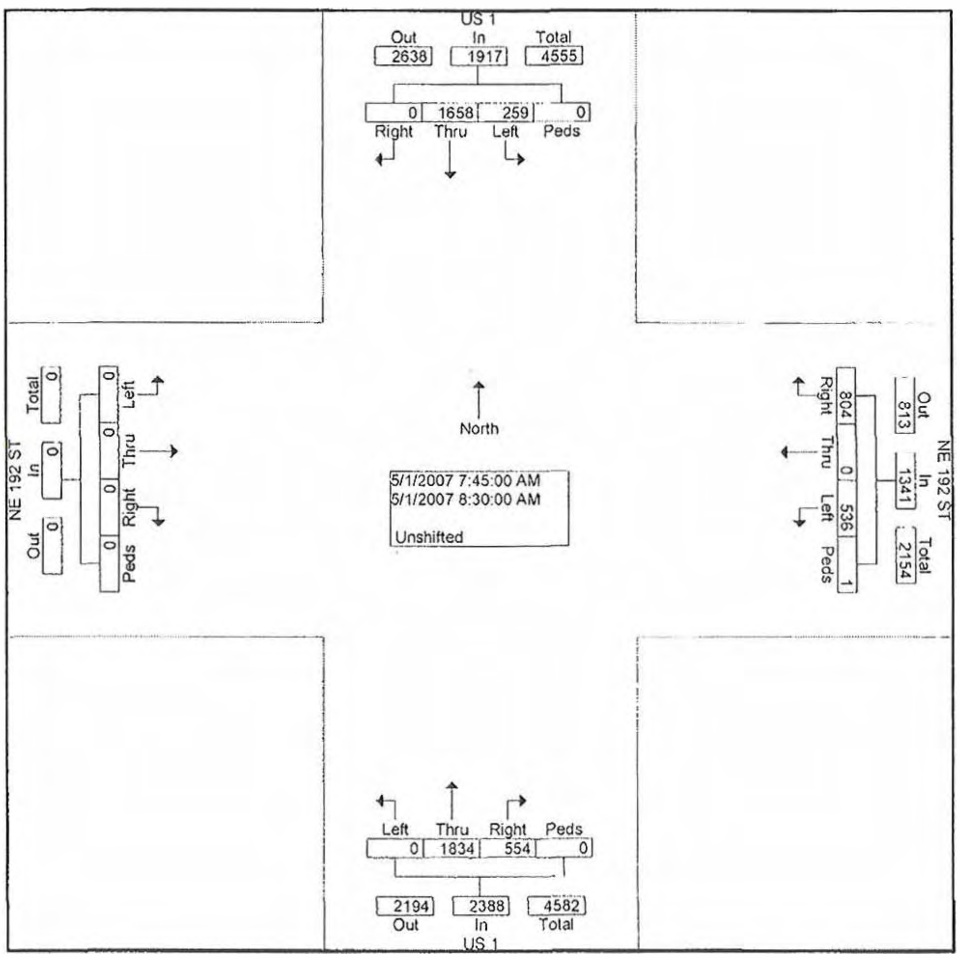
File Name : US1&19~1
Site Code : 00000000
Start Date : 5/1/2007
Page No : 2

	US 1 From North					NE 192 ST From East					US 1 From South					NE 192 ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Intersection	07:45 AM																				
Volume	0	1658	259	0	1917	804	0	536	1	1341	554	1834	0	0	2388	0	0	0	0	0	5646
Percent	0.0	86.5	13.5	0.0		60.0	0.0	40.0	0.1		23.2	76.8	0.0	0.0		0.0	0.0	0.0	0.0		
08:00 Volume	0	400	64	0	464	230	0	140	0	370	169	477	0	0	646	0	0	0	0	0	1480
Peak Factor																					0.954
High Int.	07:45 AM					08:00 AM					08:00 AM					6:45:00 AM					
Volume	0	430	78	0	508	230	0	140	0	370	169	477	0	0	646						
Peak Factor					0.943					0.906					0.924						



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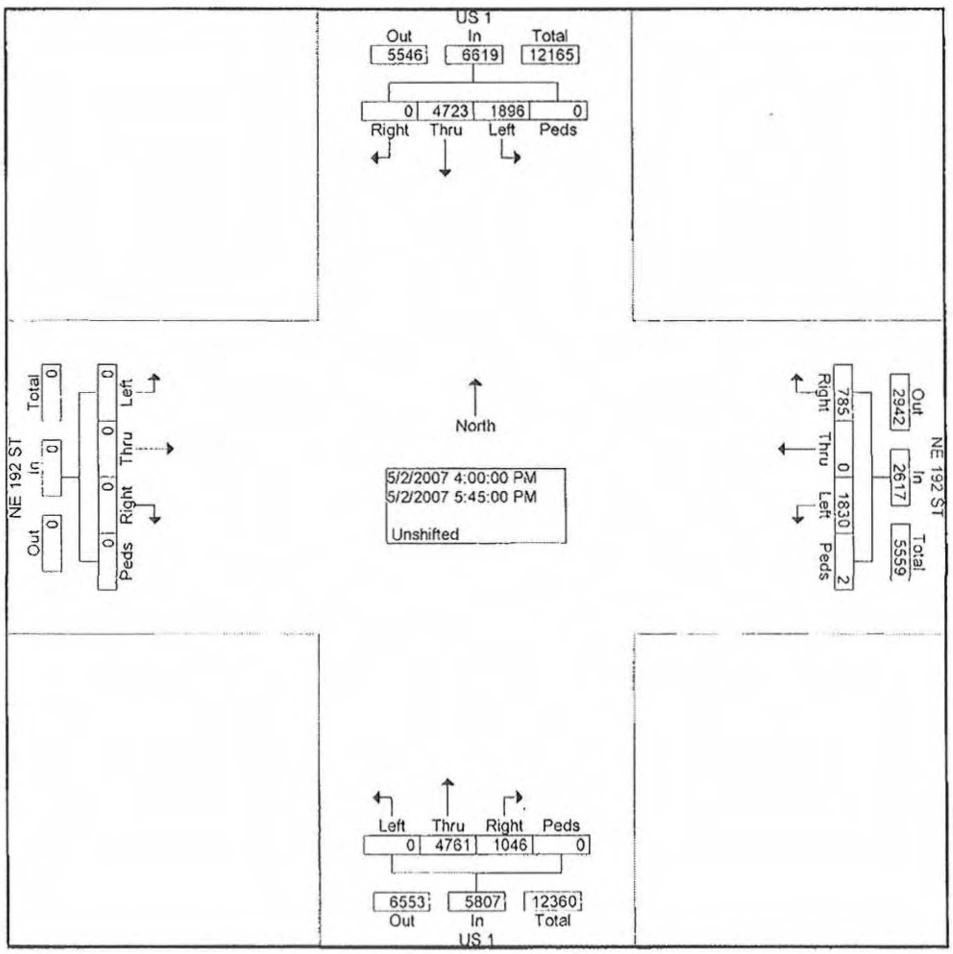
File Name : US1 & 192 ST_PM
Site Code : 00000000
Start Date : 5/2/2007
Page No : 1

Groups Printed- Unshifted

	US 1 From North					NE 192 ST From East					US 1 From South					NE 192 ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	0	654	155	0	809	138	0	255	0	393	119	664	0	0	783	0	0	0	0	0	1985
04:15 PM	0	631	227	0	858	124	0	266	0	390	138	604	0	0	742	0	0	0	0	0	1990
04:30 PM	0	613	254	0	867	113	0	224	0	337	130	684	0	0	814	0	0	0	0	0	2018
04:45 PM	0	637	275	0	912	96	0	233	0	329	140	675	0	0	815	0	0	0	0	0	2056
Total	0	2535	911	0	3446	471	0	978	0	1449	527	2627	0	0	3154	0	0	0	0	0	8049
05:00 PM	0	656	255	0	911	95	0	229	0	324	133	564	0	0	697	0	0	0	0	0	1932
05:15 PM	0	643	212	0	855	72	0	187	2	261	126	593	0	0	719	0	0	0	0	0	1835
05:30 PM	0	484	239	0	723	67	0	168	0	235	154	524	0	0	678	0	0	0	0	0	1636
05:45 PM	0	405	279	0	684	80	0	268	0	348	106	453	0	0	559	0	0	0	0	0	1591
Total	0	2188	985	0	3173	314	0	852	2	1168	519	2134	0	0	2653	0	0	0	0	0	6994
Grand Total	0	4723	1896	0	6619	785	0	1830	2	2617	1046	4761	0	0	5807	0	0	0	0	0	15043
Apprch %	0.0	71.4	28.6	0.0		30.0	0.0	69.9	0.1		18.0	82.0	0.0	0.0		0.0	0.0	0.0	0.0		
Total %	0.0	31.4	12.6	0.0	44.0	5.2	0.0	12.2	0.0	17.4	7.0	31.6	0.0	0.0	38.6	0.0	0.0	0.0	0.0	0.0	



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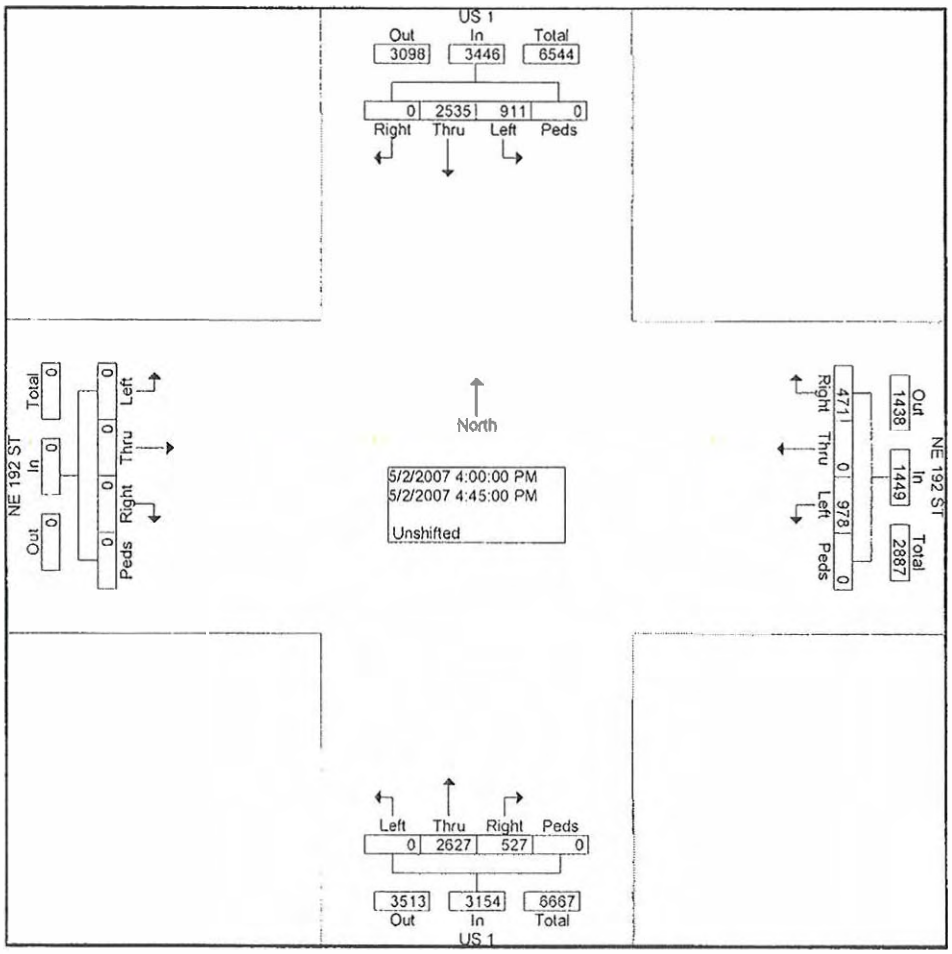
File Name : US1 & 192 ST_PM
Site Code : 00000000
Start Date : 5/2/2007

	From North					NE 192 ST From East					US 1 From South					NE 192 ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:00 PM																				
Volume	0	2535	911	0	3446	471	0	978	0	1449	527	2627	0	0	3154	0	0	0	0	0	8049
Percent	0.0	73.6	26.4	0.0		32.5	0.0	67.5	0.0		16.7	83.3	0.0	0.0		0.0	0.0	0.0	0.0		
04:45 Volume	0	637	275	0	912	96	0	233	0	329	140	675	0	0	815	0	0	0	0	0	2056
Peak Factor																					0.979
High Int.	04:45 PM					04:00 PM					04:45 PM					3:45:00 PM					
Volume	0	637	275	0	912	138	0	255	0	393	140	675	0	0	815						
Peak Factor					0.945					0.922					0.967						



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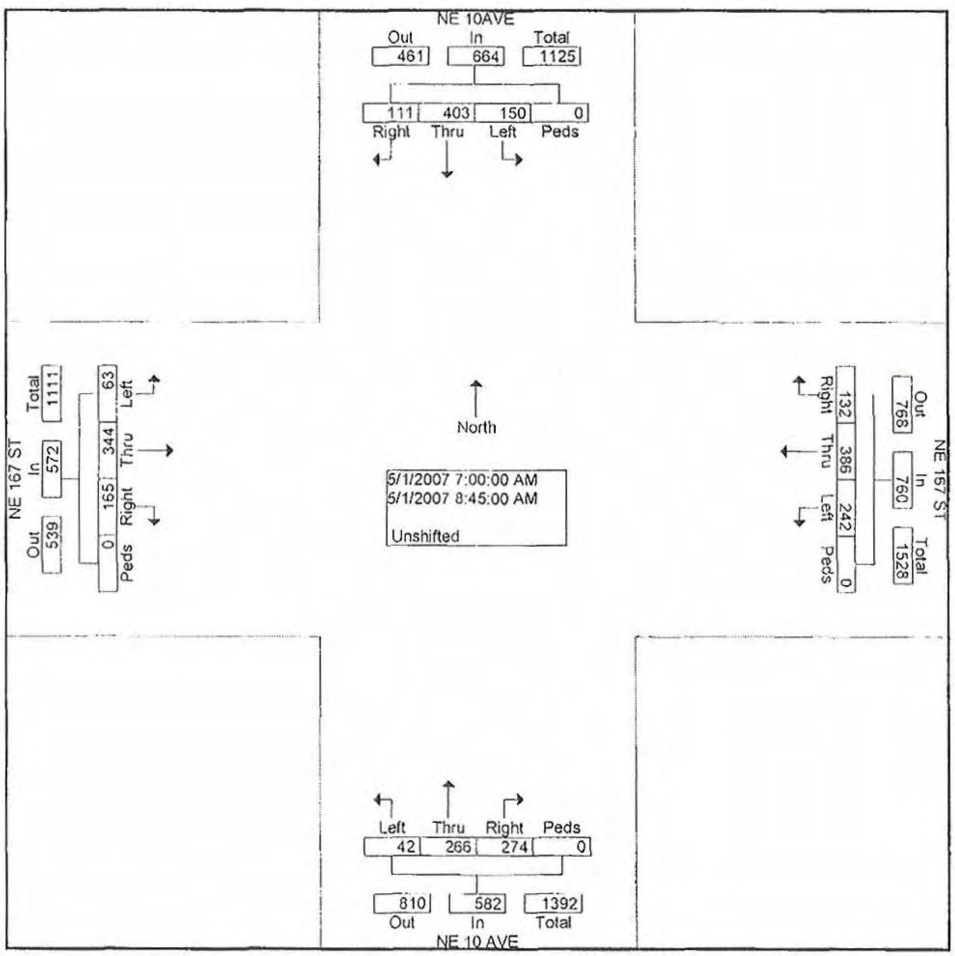
File Name : NE10AV~3
Site Code : 00000000
Start Date : 5/1/2007

Groups Printed- Unshifted

	NE 10AVE From North					NE 167 ST From East					NE 10 AVE From South					NE 167 ST From West					
Start Time	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	12	36	11	0	59	26	72	50	0	148	55	31	4	0	90	6	53	13	0	72	369
07:15 AM	10	33	14	0	57	14	52	25	0	91	27	21	3	0	51	11	30	3	0	44	243
07:30 AM	9	90	21	0	120	12	41	23	0	76	24	33	4	0	61	41	37	4	0	82	339
07:45 AM	10	67	19	0	96	16	40	31	0	87	38	44	2	0	84	30	56	9	0	95	362
Total	41	226	65	0	332	68	205	129	0	402	144	129	13	0	286	88	176	29	0	293	1313
08:00 AM	17	47	20	0	84	14	48	25	0	87	44	37	7	0	88	23	47	14	0	84	343
08:15 AM	18	43	23	0	84	25	60	42	0	127	39	27	4	0	70	21	62	10	0	93	374
08:30 AM	22	51	24	0	97	18	39	37	0	94	30	44	13	0	87	20	41	6	0	67	345
08:45 AM	13	36	18	0	67	7	34	9	0	50	17	29	5	0	51	13	18	4	0	35	203
Total	70	177	85	0	332	64	181	113	0	358	130	137	29	0	296	77	168	34	0	279	1265
Grand Total	111	403	150	0	664	132	386	242	0	760	274	266	42	0	582	165	344	63	0	572	2578
Apprch %	16.7	60.7	22.6	0.0		17.4	50.8	31.8	0.0		47.1	45.7	7.2	0.0		28.8	60.1	11.0	0.0		
Total %	4.3	15.6	5.8	0.0	25.8	5.1	15.0	9.4	0.0	29.5	10.6	10.3	1.6	0.0	22.6	6.4	13.3	2.4	0.0	22.2	



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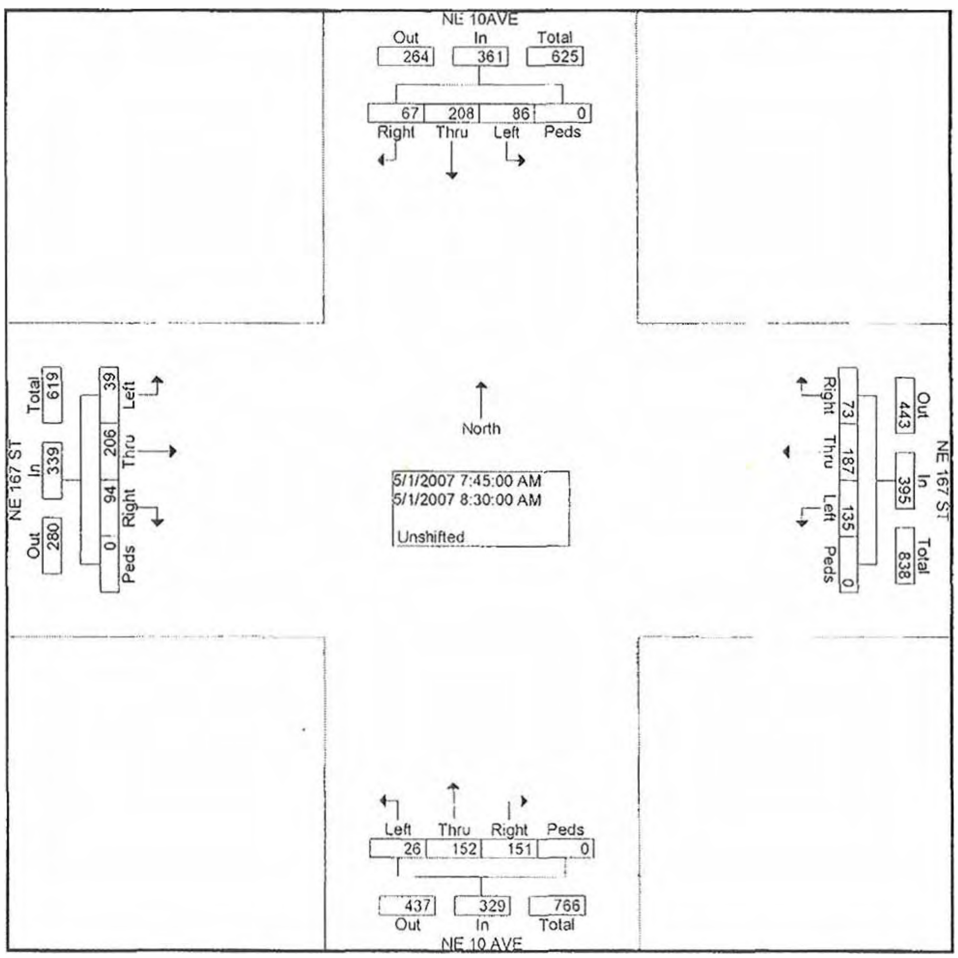
	NE 10AVE From North					NE 167 ST From East					NE 10 AVE From South					NE 167 ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Intersection	07:45 AM																				
Volume	67	208	86	0	361	73	187	135	0	395	151	152	26	0	329	94	206	39	0	339	1424
Percent	18.6	57.6	23.8	0.0		18.5	47.3	34.2	0.0		45.9	46.2	7.9	0.0		27.7	60.8	11.5	0.0		
08:15 Volume	18	43	23	0	84	25	60	42	0	127	39	27	4	0	70	21	62	10	0	93	374
Peak Factor																					0.952
High Int.	08:30 AM					08:15 AM					08:00 AM					07:45 AM					
Volume	22	51	24	0	97	25	60	42	0	127	44	37	7	0	88	30	56	9	0	95	
Peak Factor					0.930					0.778					0.935					0.892	



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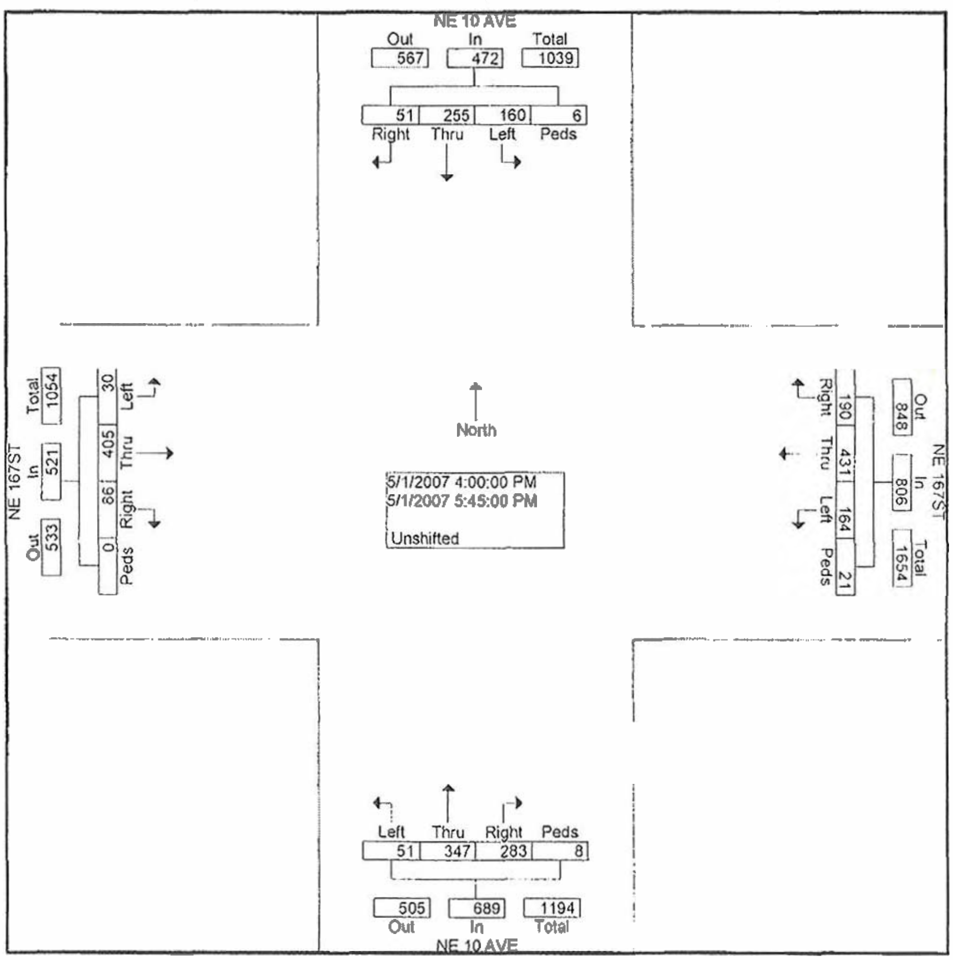
File Name : NE 10 AVE & NE 167ST_PM
Site Code : 00000000
Start Date : 5/1/2007
Page No : 1

Groups Printed- Unshifted

	NE 10 AVE From North					NE 167ST From East					NE 10 AVE From South					NE 167ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	5	37	24	2	68	26	53	23	6	108	42	39	10	2	93	11	55	4	0	70	339
04:15 PM	8	26	22	1	57	21	54	22	5	102	37	45	5	2	89	10	48	7	0	65	313
04:30 PM	5	20	20	0	45	38	64	24	1	127	36	45	9	0	90	10	47	3	0	60	322
04:45 PM	14	31	12	1	58	27	61	23	0	111	25	47	5	0	77	8	40	6	0	54	300
Total	32	114	78	4	228	112	232	92	12	448	140	176	29	4	349	39	190	20	0	249	1274
05:00 PM	2	33	22	1	58	22	49	22	0	93	35	45	8	1	89	9	52	6	0	67	307
05:15 PM	3	31	22	0	56	20	45	14	7	86	40	48	2	2	92	10	63	2	0	75	309
05:30 PM	7	31	22	0	60	23	50	21	1	95	40	44	8	1	93	11	62	2	0	75	323
05:45 PM	7	46	16	1	70	13	55	15	1	84	28	34	4	0	66	17	38	0	0	55	275
Total	19	141	82	2	244	78	199	72	9	358	143	171	22	4	340	47	215	10	0	272	1214
Grand Total	51	255	160	6	472	190	431	164	21	806	283	347	51	8	689	86	405	30	0	521	2488
Apprch %	10.8	54.0	33.9	1.3		23.6	53.5	20.3	2.6		41.1	50.4	7.4	1.2		16.5	77.7	5.8	0.0		
Total %	2.0	10.2	6.4	0.2	19.0	7.6	17.3	6.6	0.8	32.4	11.4	13.9	2.0	0.3	27.7	3.5	16.3	1.2	0.0	20.9	



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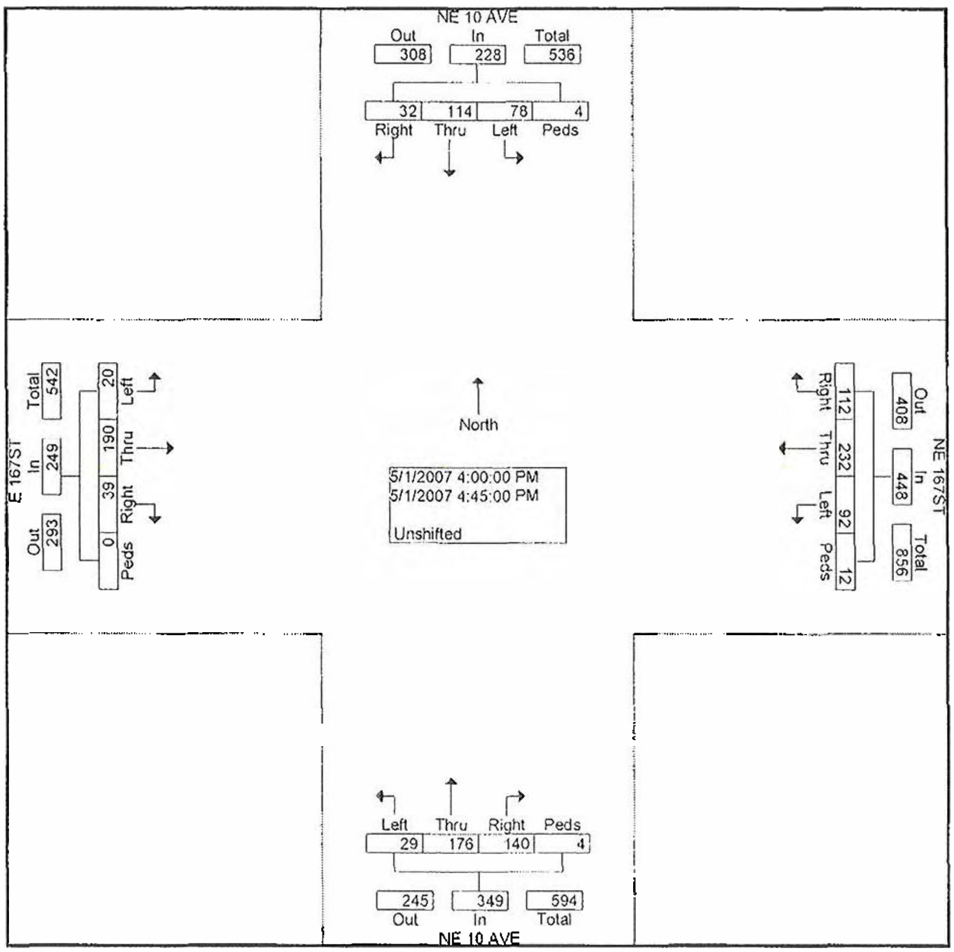
File Name : NE 10 AVE & NE 167ST_PM
Site Code : 00000000
Start Date : 5/1/2007

	NE 10 AVE From North					NE 167ST From East					NE 10 AVE From South					NE 167ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:00 PM																				
Volume	32	114	78	4	228	112	232	92	12	448	140	176	29	4	349	39	190	20	0	249	1274
Percent	14.	50.0	34.2			25.0	51.8	20.5	2.7		40.1	50.4	8.3	1.1		15.7	76.3	8.0	0.0		
04:00 Volume	5	37	24	2	68	26	53	23	6	108	42	39	10	2	93	11	55	4	0	70	339
Peak Factor																					0.940
High Int.	04:00 PM					04:30 PM					04:00 PM					04:00 PM					
Volume	5	37	24	2	68	38	64	24	1	127	42	39	10	2	93	11	55	4	0	70	
Peak Factor					0.838					0.882					0.938					0.889	



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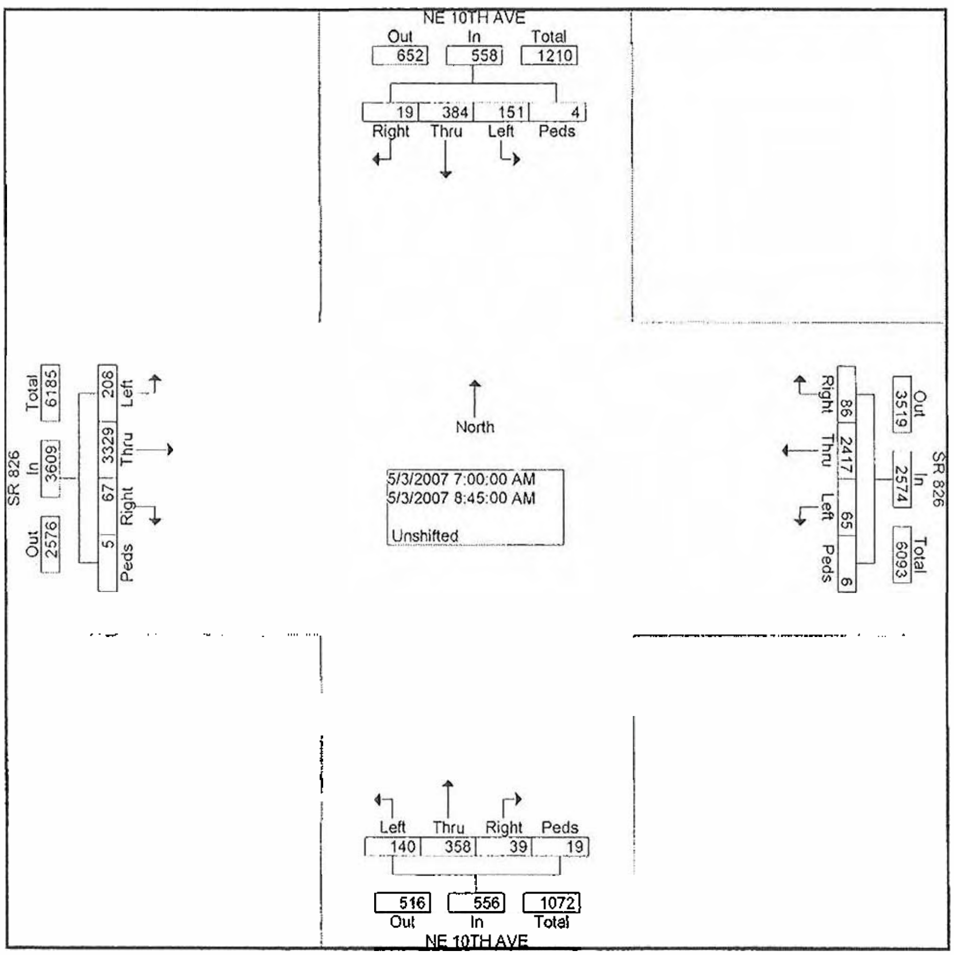
Tel: 305-595-7505/Fax:305-675-6474

File Name : untitled1
Site Code : 00000000
Start Date : 5/3/2007
Page No : 1

Groups Printed- Unshifted

	NE 10TH AVE From North					SR 826 From East					NE 10TH AVE From South					SR 826 From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	1	28	14	0	43	6	189	4	0	199	2	35	6	0	43	7	296	29	0	332	617
07:15 AM	1	36	10	0	47	11	285	2	0	298	7	40	17	0	64	2	349	30	0	381	790
07:30 AM	0	65	17	0	82	6	324	1	0	331	4	41	19	0	64	9	349	29	0	387	864
07:45 AM	0	44	16	0	60	4	305	6	0	315	3	36	20	3	62	6	442	18	0	466	903
Total	2	173	57	0	232	27	1103	13	0	1143	16	152	62	3	233	24	1436	106	0	1566	3174
08:00 AM	0	37	25	1	63	21	315	6	1	343	1	38	22	1	62	12	484	21	1	518	986
08:15 AM	0	48	28	3	79	19	340	21	2	382	4	55	20	4	83	11	484	41	3	539	1083
08:30 AM	9	73	20	0	102	12	281	13	1	307	11	63	26	10	110	8	458	24	1	491	1010
08:45 AM	8	53	21	0	82	7	378	12	2	399	7	50	10	1	68	12	467	16	0	495	1044
Total	17	211	94	4	326	59	1314	52	6	1431	23	206	78	16	323	43	1893	102	5	2043	4123
Grand Total	19	384	151	4	558	86	2417	65	6	2574	39	358	140	19	556	67	3329	208	5	3609	7297
Apprch %	3.4	68.8	27.1	0.7		3.3	93.9	2.5	0.2		7.0	64.4	25.2	3.4		1.9	92.2	5.8	0.1		
Total %	0.3	5.3	2.1	0.1	7.6	1.2	33.1	0.9	0.1	35.3	0.5	4.9	1.9	0.3	7.6	0.9	45.6	2.9	0.1	49.5	



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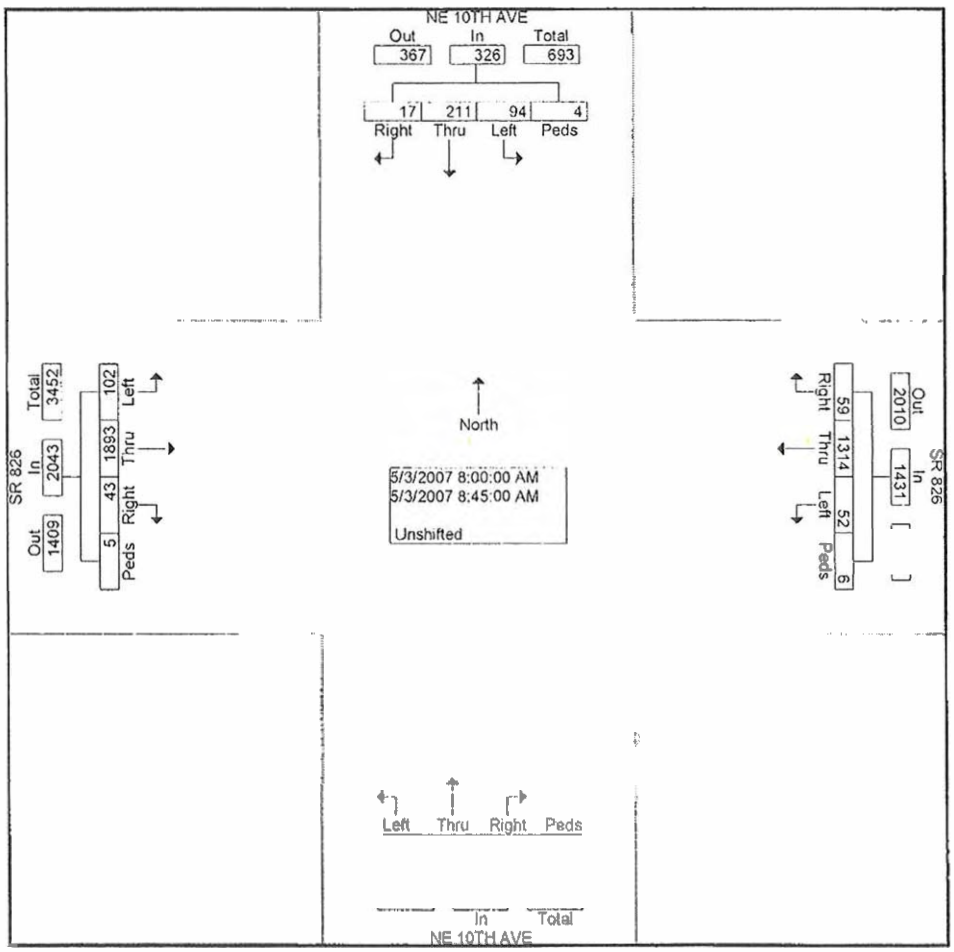
File Name : untitled1
Site Code : 00000000
Start Date : 5/3/2007
Page No : 2

	NE 10TH AVE From North					SR 826 From East					NE 10TH AVE From South					SR 826 From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Intersection	08:00 AM																				
Volume	17	211	94	4	326	59	1314	52	6	1431	23	206	78	16	323	43	1893	102	5	2043	4123
Percent	5.2	64.7	28.8	1.2		4.1	91.8	3.6	0.4		7.1	63.8	24.1	5.0		2.1	92.7	5.0	0.2		
08:15 Volume	0	48	28	3	79	19	340	21	2	382	4	55	20	4	83	11	484	41	3	539	1083
Peak Factor																					0.952
High Int.	08:30 AM					08:45 AM					08:30 AM					08:15 AM					
Volume	9	73	20	0	102	7	378	12	2	399	11	63	26	10	110	11	484	41	3	539	
Peak Factor					0.799					0.897					0.734					0.948	



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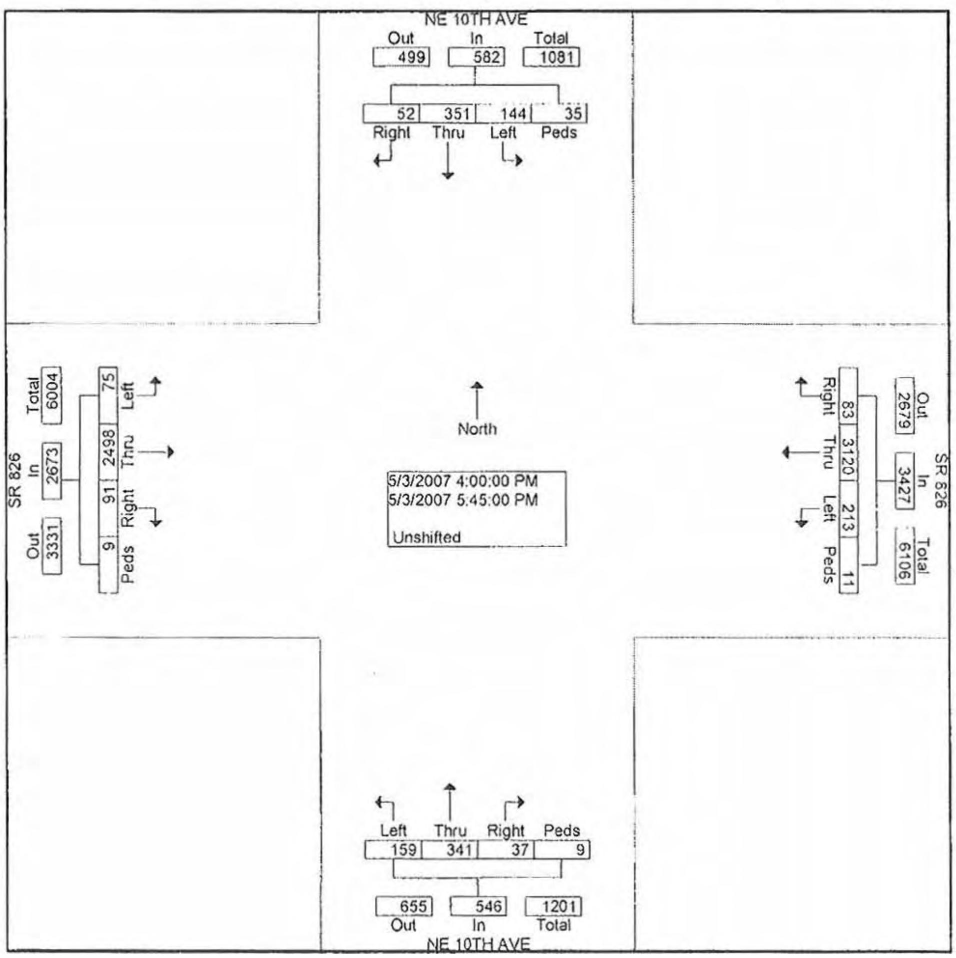
File Name : NE10AV~4
Site Code : 00000000
Start Date : 5/3/2007
Page No : 1

Groups Printed- Unshifted

	NE 10TH AVE From North					SR 826 From East					NE 10TH AVE From South					SR 826 From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	4	37	18	2	61	9	301	30	2	342	6	31	16	1	54	8	274	4	0	286	743
04:15 PM	9	40	11	2	62	4	341	33	3	381	3	38	15	0	56	13	287	4	2	306	805
04:30 PM	6	39	21	2	68	11	333	28	0	372	4	40	19	2	65	8	326	9	2	345	850
04:45 PM	5	38	20	5	68	8	404	20	0	432	5	38	18	0	61	10	307	8	1	326	887
Total	24	154	70	11	259	32	1379	111	5	1527	18	147	68	3	236	39	1194	25	5	1263	3285
05:00 PM	4	40	24	3	71	14	465	19	1	499	2	37	22	3	64	17	312	8	3	340	974
05:15 PM	6	50	20	6	82	13	418	39	1	471	2	42	24	1	69	15	309	13	0	337	959
05:30 PM	9	55	18	12	94	10	436	26	3	475	8	66	22	2	98	11	303	15	1	330	997
05:45 PM	9	52	12	3	76	14	422	18	1	455	7	49	23	0	79	9	380	14	0	403	1013
Total	28	197	74	24	323	51	1741	102	6	1900	19	194	91	6	310	52	1304	50	4	1410	3943
Grand Total	52	351	144	35	582	83	3120	213	11	3427	37	341	159	9	546	91	2498	75	9	2673	7228
Apprch %	8.9	60.3	24.7	6.0		2.4	91.0	6.2	0.3		6.8	62.5	29.1	1.6		3.4	93.5	2.8	0.3		
Total %	0.7	4.9	2.0	0.5	8.1	1.1	43.2	2.9	0.2	47.4	0.5	4.7	2.2	0.1	7.6	1.3	34.6	1.0	0.1	37.0	



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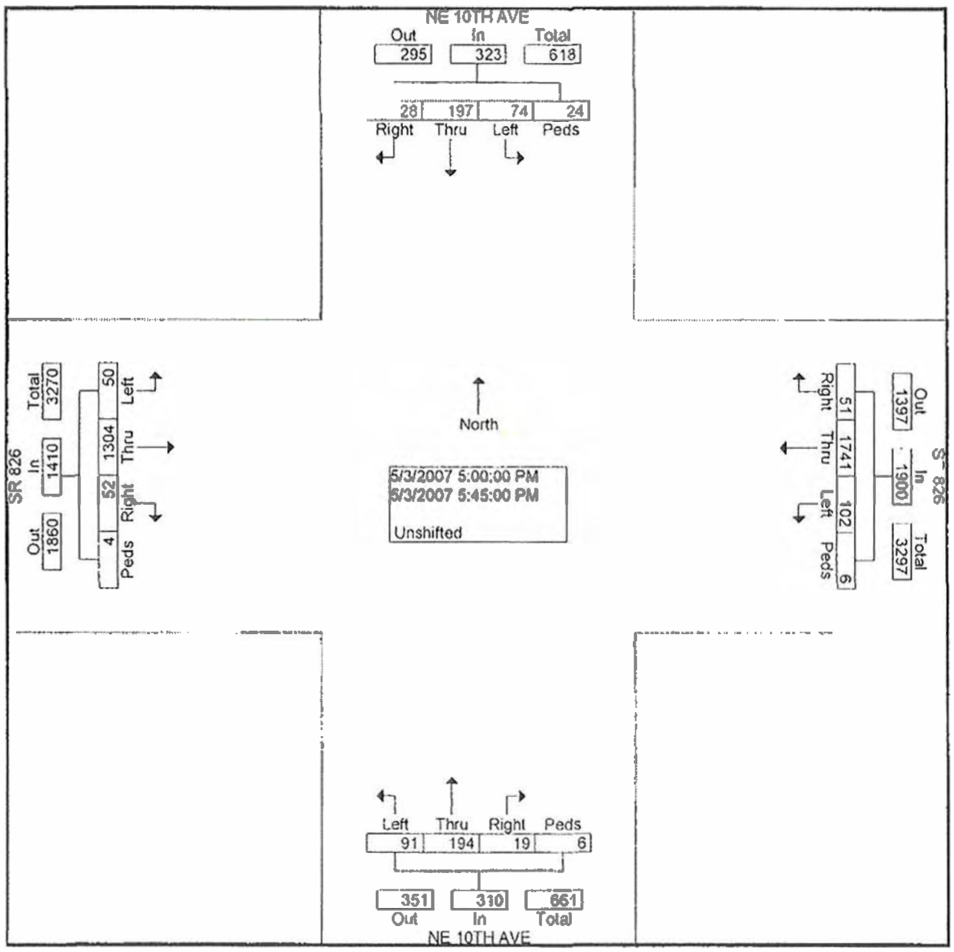
Start Date : 5/3/2007
Page No : 2

	NE 10TH AVE From North					SR 826 From East					NE 10TH AVE From South					SR 826 From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru		Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	05:00 PM																				
Volume	28	197	74	24	323	51	1741	102	6	1900	19	194	91	6	310	52	1304	50	4	1410	3943
Percent	8.7	61.0	22.9	7.4		2.7	91.6	5.4	0.3		6.1	62.6	29.4	1.9		3.7	92.5	3.5	0.3		
05:45 Volume	9	52	12	3	76	14	422	18	1	455	7	49	23	0	79	9	380	14	0	403	1013
Peak Factor																					0.973
High Int.	05:30 PM					05:00 PM					05:30 PM					05:45 PM					
Volume	9	55	18	12	94	14	465	19	1	499	8	66	22	2	98	9	380	14	0	403	
Peak Factor					0.859					0.952					0.791					0.875	



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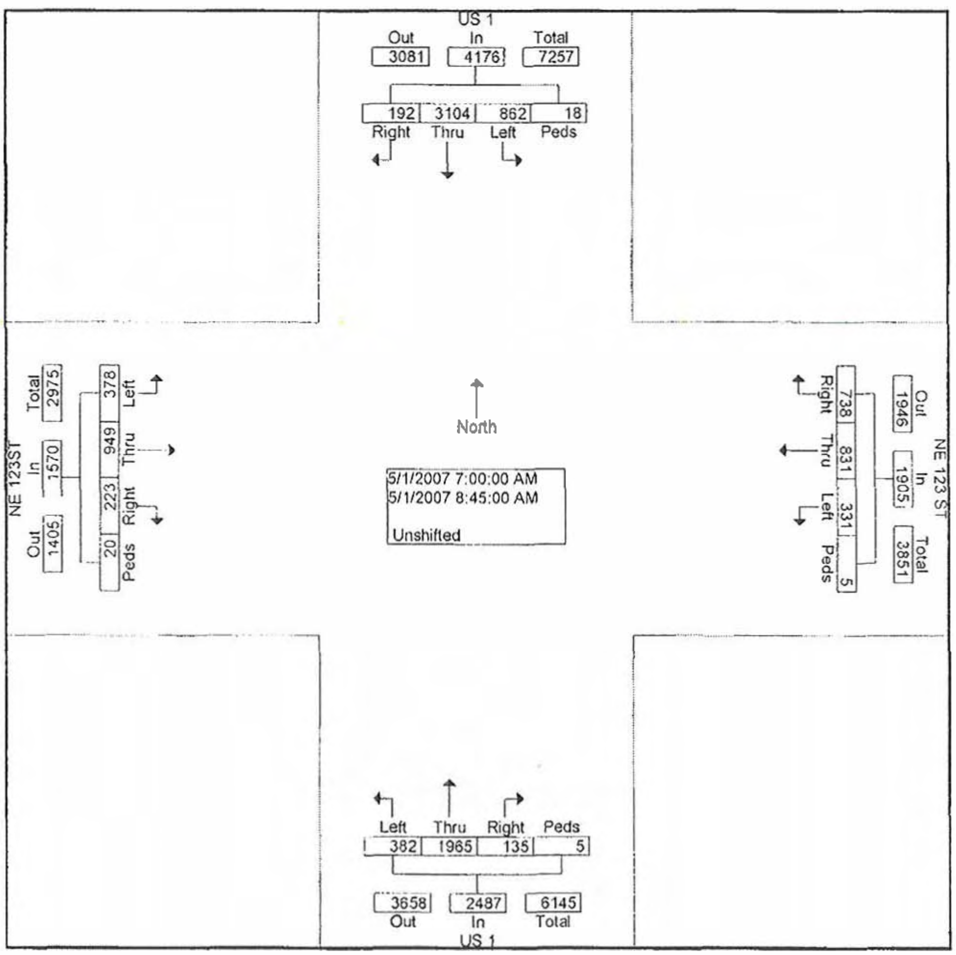
File Name : US1&12~1
Site Code : 00000000
Start Date : 5/1/2007
Page No : 1

Groups Printed- Unshifted

	US 1 From North					NE 123 ST From East					US 1 From South					NE 123ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	27	401	70	1	499	87	95	40	0	222	11	201	31	1	244	39	122	43	0	204	1169
07:15 AM	20	416	75	4	515	95	122	39	1	257	10	213	37	4	264	22	99	55	4	180	1216
07:30 AM	26	373	126	5	530	99	95	40	0	234	20	244	62	0	326	29	139	53	4	225	1315
07:45 AM	22	389	130	2	543	98	101	39	1	239	15	256	48	0	319	30	113	50	2	195	1296
Total	95	1579	401	12	2087	379	413	158	2	952	56	914	178	5	1153	120	473	201	10	804	4996
08:00 AM	22	376	98	1	497	89	112	42	0	243	19	261	60	0	340	24	124	42	1	191	1271
08:15 AM	26	356	124	1	507	93	104	53	1	251	20	264	52	0	336	26	118	48	4	196	1290
08:30 AM	24	411	122	3	560	90	99	40	0	229	22	271	48	0	341	27	120	43	0	190	1320
08:45 AM	25	382	117	1	525	87	103	38	2	230	18	255	44	0	317	26	114	44	5	189	1261
Total	97	1525	461	6	2089	359	418	173	3	953	79	1051	204	0	1334	103	476	177	10	766	5142
Grand Total	192	3104	862	18	4176	738	831	331	5	1905	135	1965	382	5	2487	223	949	378	20	1570	10138
Apprch %	4.6	74.3	20.6	0.4		38.7	43.6	17.4	0.3		5.4	79.0	15.4	0.2		14.2	60.4	24.1	1.3		
Total %	1.9	30.6	8.5	0.2	41.2	7.3	8.2	3.3	0.0	18.8	1.3	19.4	3.8	0.0	24.5	2.2	9.4	3.7	0.2	15.5	



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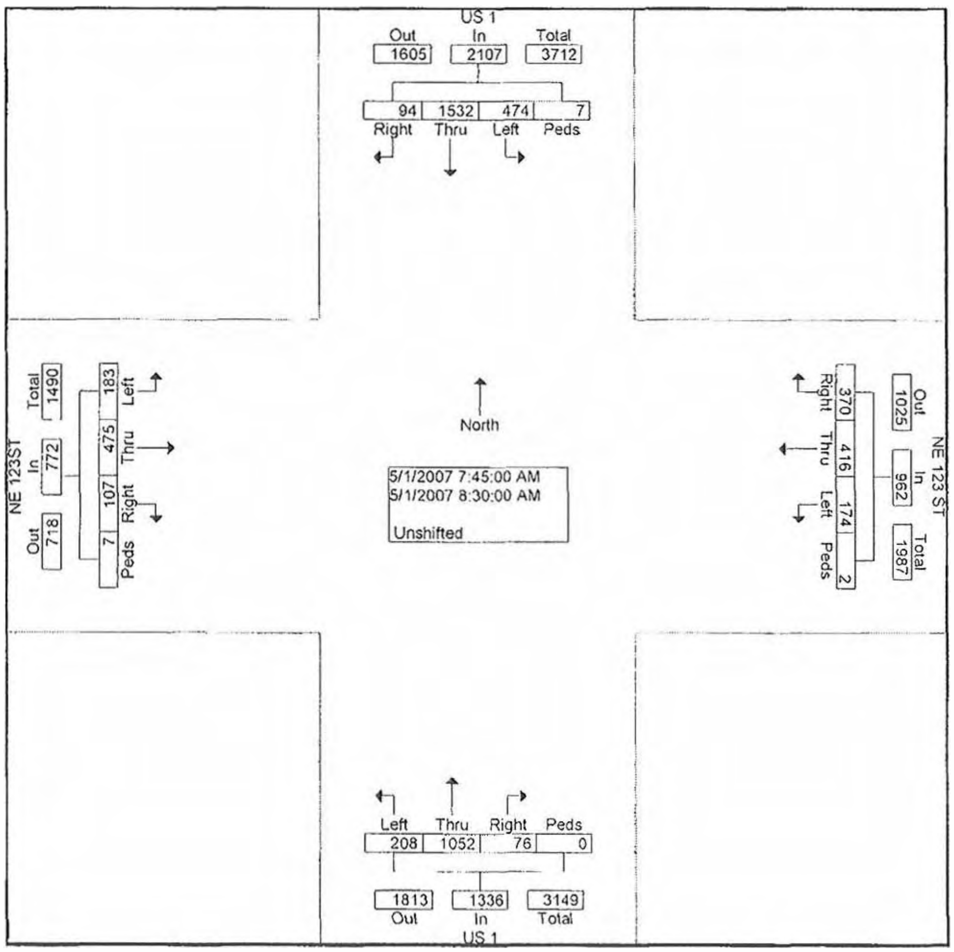
File Name : US1&12~1
Site Code : 00000000
Start Date : 5/1/2007

	US 1 From North					NE 123 ST From East					US 1 From South					NE 123ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Intersection	07:45 AM																				
Volume	94	1532	474	7	2107	370	416	174	2	962	76	1052	208	0	1336	107	475	183	7	772	5177
Percent	4.5	72.7	22.5	0.3		38.5	43.2	18.1	0.2		5.7	78.7	15.6	0.0		13.9	61.5	23.7	0.9		
08:30 Volume	24	411	122	3	560	90	99	40	0	229	22	271	48	0	341	27	120	43	0	190	1320
Peak Factor																					0.980
High Int.	08:30 AM					08:15 AM					08:30 AM					08:15 AM					
Volume	24	411	122	3	560	93	104	53	1	251	22	271	48	0	341	26	118	48	4	196	
Peak Factor					0.941					0.958					0.979					0.985	



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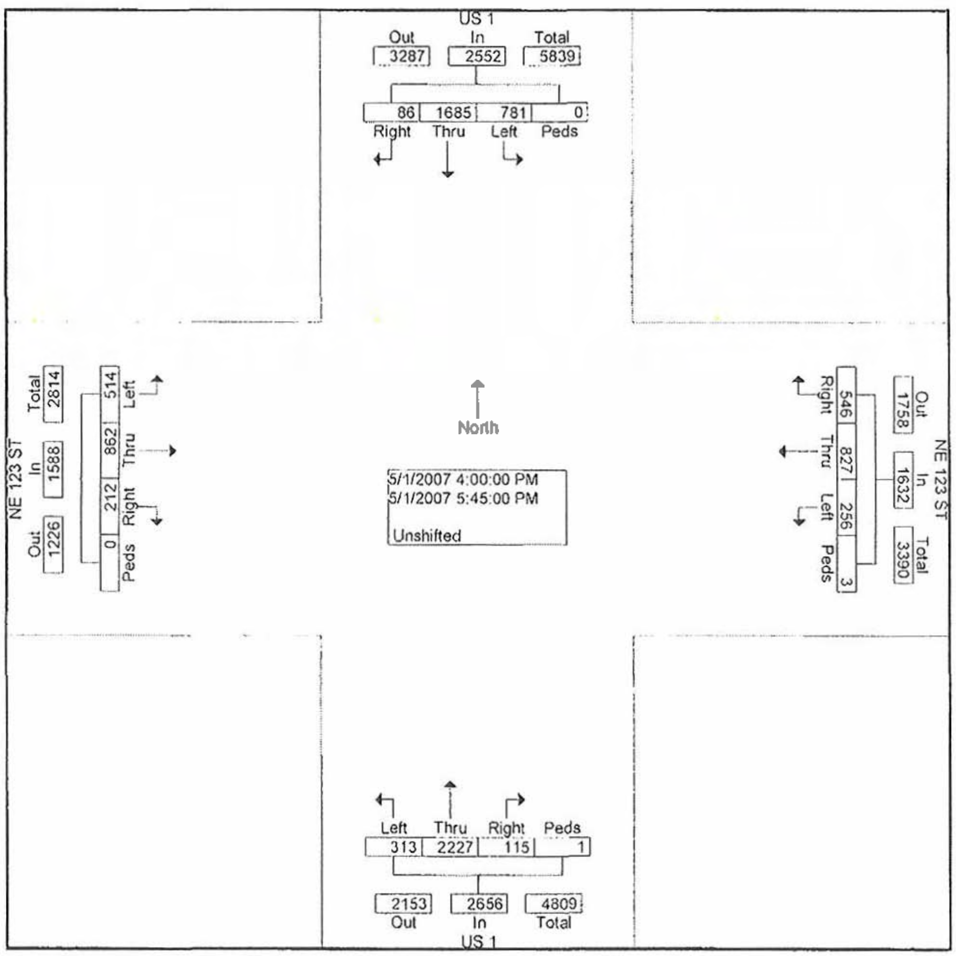
File Name : US1&NE~1
Site Code : 00000000
Start Date : 5/1/2007
Page No : 1

Groups Printed- Unshifted

	US 1 From North					NE 123 ST From East					US 1 From South					NE 123 ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	22	221	91	0	334	80	114	30	0	224	20	235	44	0	299	44	95	63	0	202	1059
04:15 PM	13	227	119	0	359	76	116	21	1	214	15	272	35	0	322	26	106	56	0	188	1083
04:30 PM	10	221	90	0	321	60	96	24	0	180	19	261	41	0	321	20	98	62	0	180	1002
04:45 PM	5	191	81	0	277	50	94	34	0	178	13	270	39	0	322	20	86	55	0	161	938
Total	50	860	381	0	1291	266	420	109	1	796	67	1038	159	0	1264	110	385	236	0	731	4082
05:00 PM	8	188	84	0	280	70	90	29	1	190	12	273	39	1	325	25	104	65	0	194	989
05:15 PM	12	212	100	0	324	65	124	40	0	229	13	292	50	0	355	41	141	63	0	245	1153
05:30 PM	5	207	100	0	312	75	106	43	0	224	8	304	26	0	338	23	100	66	0	189	1063
05:45 PM	11	218	116	0	345	70	87	35	1	193	15	320	39	0	374	13	132	84	0	229	1141
Total	36	825	400	0	1261	280	407	147	2	836	48	1189	154	1	1392	102	477	278	0	857	4346
Grand Total	86	1685	781	0	2552	546	827	256	3	1632	115	2227	313	1	2656	212	862	514	0	1588	8428
Apprch %	3.4	66.0	30.6	0.0		33.5	50.7	15.7	0.2		4.3	83.8	11.8	0.0		13.4	54.3	32.4	0.0		
Total %	1.0	20.0	9.3	0.0	30.3	6.5	9.8	3.0	0.0	19.4	1.4	26.4	3.7	0.0	31.5	2.5	10.2	6.1	0.0	18.8	



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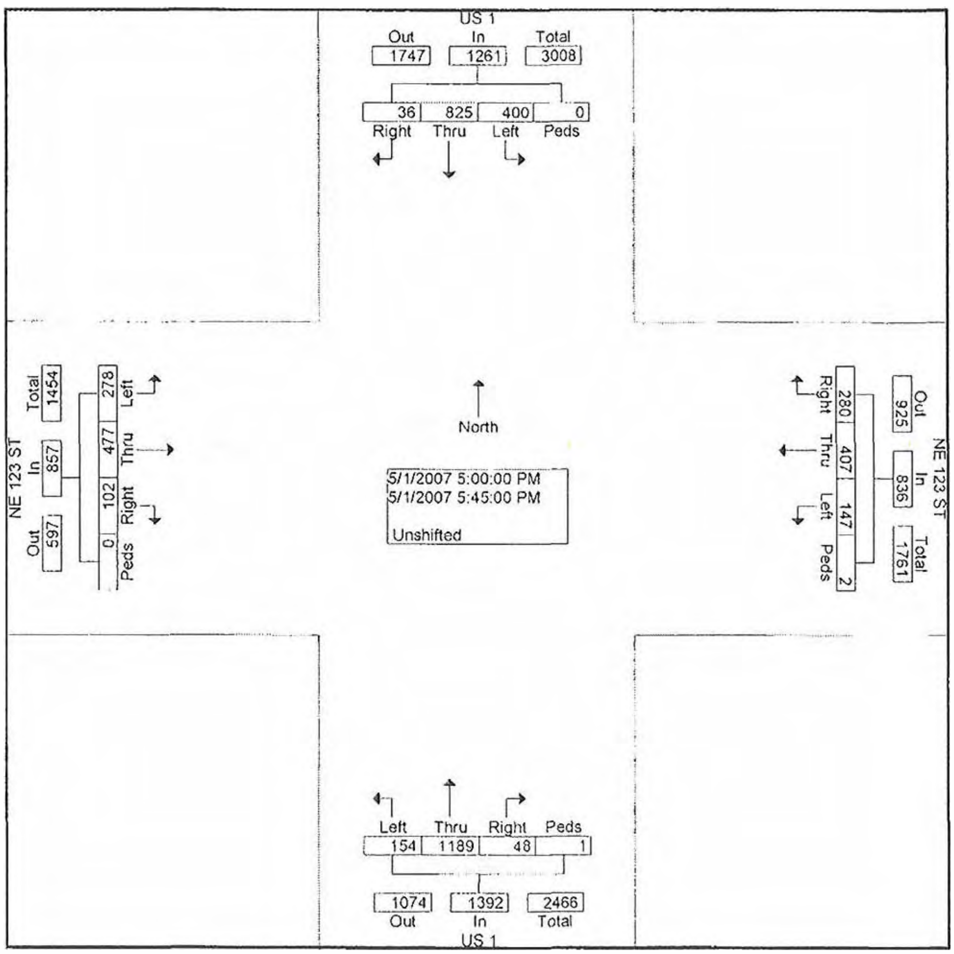
File Name : US1&NE~1
Site Code : 00000000
Start Date : 5/1/2007

	US 1 From North					NE 123 ST From East					US 1 From South					NE 123 ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	05:00 PM																				
Volume	36	825	400	0	1261	280	407	147	2	836	48	[illegible]9	154	1	1392	102	477	278	0	857	4346
Percent	2.9	65.4	31.7	0.0		33.5	48.7	17.6	0.2		3.4	85.4	11.1	0.1		11.9	55.7	32.4	0.0		
05:15 Volume	12	212	100	0	324	65	124	40	0	229	13	292	50	0	355	41	141	63	0	245	1153
Peak Factor																					0.942
High Int.	05:45 PM					05:15 PM					05:45 PM					05:15 PM					
Volume	11	218	116	0	345	65	124	40	0	229	15	320	39	0	374	41	141	63	0	245	
Peak Factor					0.914					0.913					0.930					0.874	



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Start Date : 5/1/2007
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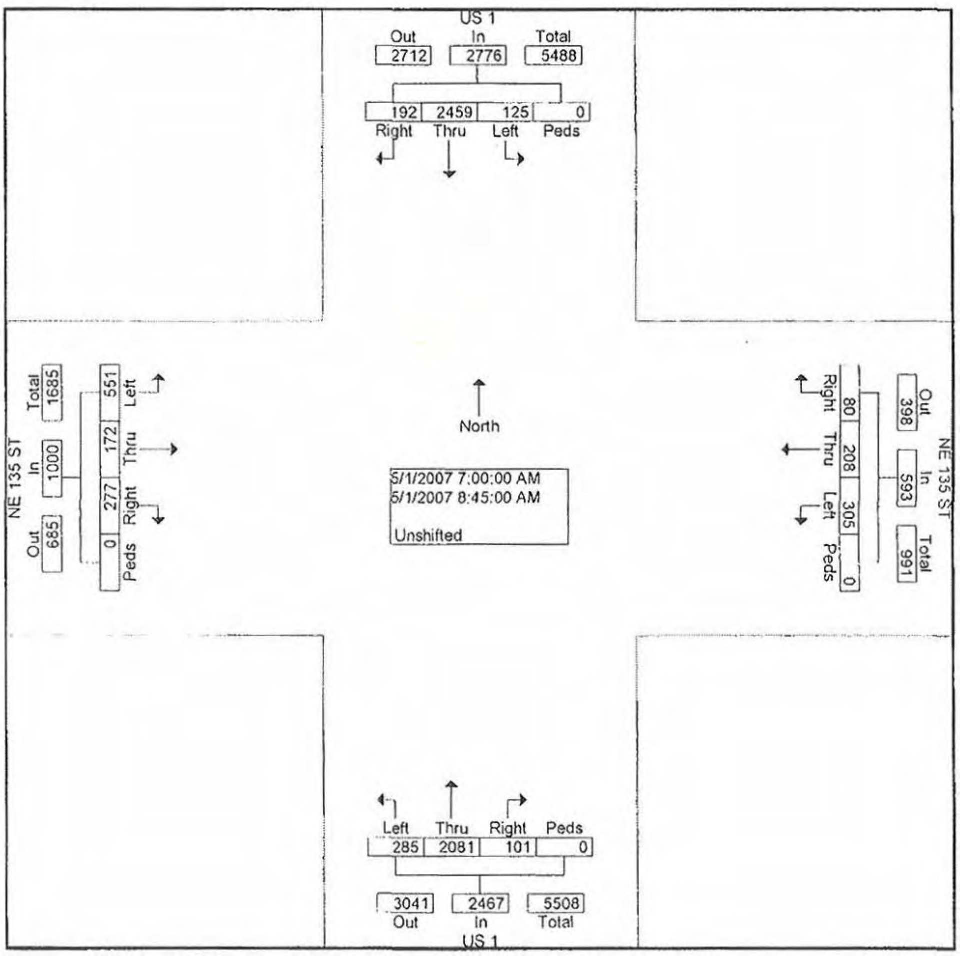
Groups Printed- Unshifted

	US 1 From North					NE 135 ST From East					US 1 From South					NE 135 ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	36	360	10	0	406	6	33	46	0	85	9	255	45	0	309	22	16	67	0	105	905
07:15 AM	27	386	9	0	422	10	28	31	0	69	14	273	35	0	322	28	19	66	0	113	926
07:30 AM	14	358	14	0	386	14	44	39	0	97	12	250	38	0	300	32	16	64	0	112	895
07:45 AM	29	366	15	0	410	6	30	35	0	71	17	317	39	0	373	33	28	94	0	155	1009
Total	106	1470	48	0	1624	36	135	151	0	322	52	1095	157	0	1304	115	79	291	0	485	3735
08:00 AM	18	263	22	0	303	14	26	44	0	84	7	270	36	0	313	39	23	60	0	122	822
08:15 AM	15	276	13	0	304	8	16	34	0	58	13	260	37	0	310	46	19	72	0	137	809
08:30 AM	23	218	32	0	273	11	18	43	0	72	13	200	31	0	244	46	17	55	0	118	707
08:45 AM	30	232	10	0	272	11	13	33	0	57	16	256	24	0	296	31	34	73	0	138	763
Total	86	989	77	0	1152	44	73	154	0	271	49	986	128	0	1163	162	93	260	0	515	3101
Grand Total	192	2459	125	0	2776	80	208	305	0	593	101	2081	285	0	2467	277	172	551	0	1000	6836
Apprch %	6.9	88.6	4.5	0.0		13.5	35.1	51.4	0.0		4.1	84.4	11.6	0.0		27.7	17.2	55.1	0.0		
Total %	2.8	36.0	1.8	0.0	40.6	1.2	3.0	4.5	0.0	8.7	1.5	30.4	4.2	0.0	36.1	4.1	2.5	8.1	0.0	14.6	



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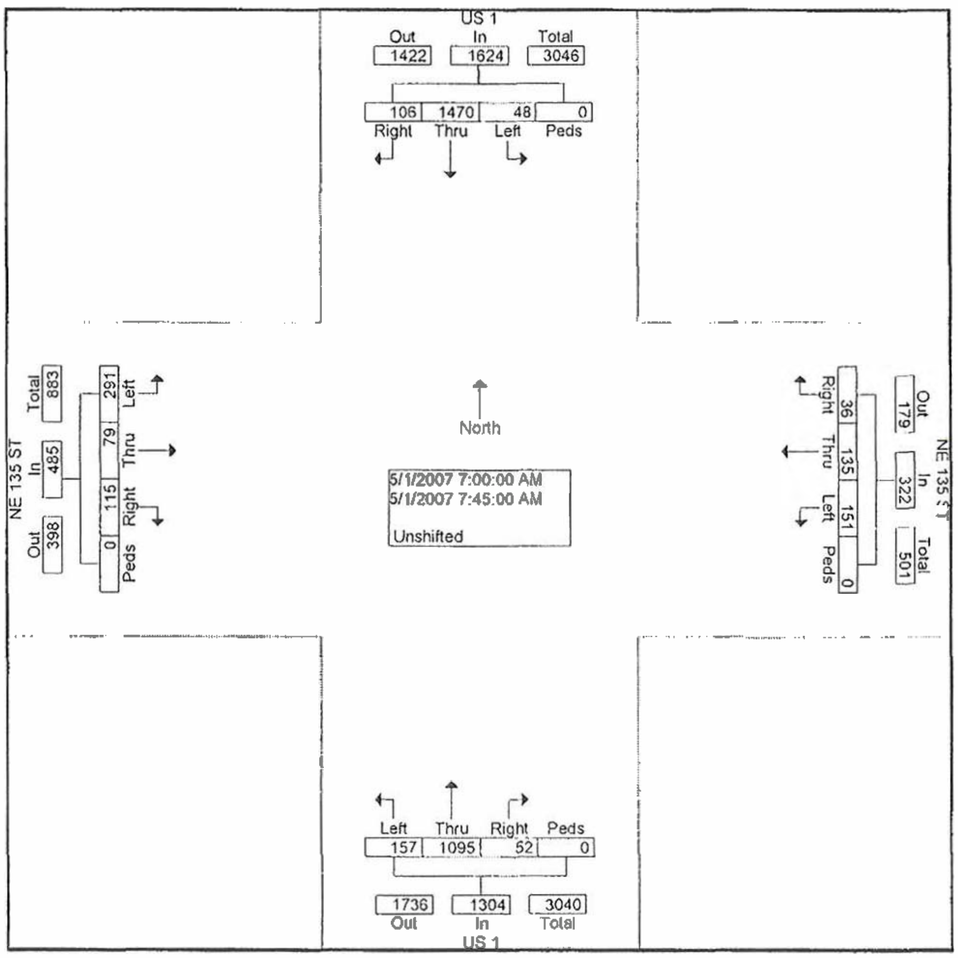
File Name : US1&NE~4
Site Code : 00000000
Start Date : 5/1/2007
Page No : 2

	US 1 From North					NE 135 ST From East					US 1 From South					NE 135 ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Intersection	07:00 AM																				
Volume	106	1470	48	0	1624	36	135	151	0	322	52	1095	157	0	1304	115	79	291	0	485	3735
Percent	6.5	90.5	3.0	0.0		11.2	41.9	46.9	0.0		4.0	84.0	12.0	0.0		23.7	16.3	60.0	0.0		
07:45 Volume	29	366	15	0	410	6	30	35	0	71	17	317	39	0	373	33	28	94	0	155	1009
Peak Factor																					0.925
High Int.	07:15 AM					07:30 AM					07:45 AM					07:45 AM					
Volume	27	386	9	0	422	14	44	39	0	97	17	317	39	0	373	33	28	94	0	155	
Peak Factor					0.962					0.830					0.874					0.782	



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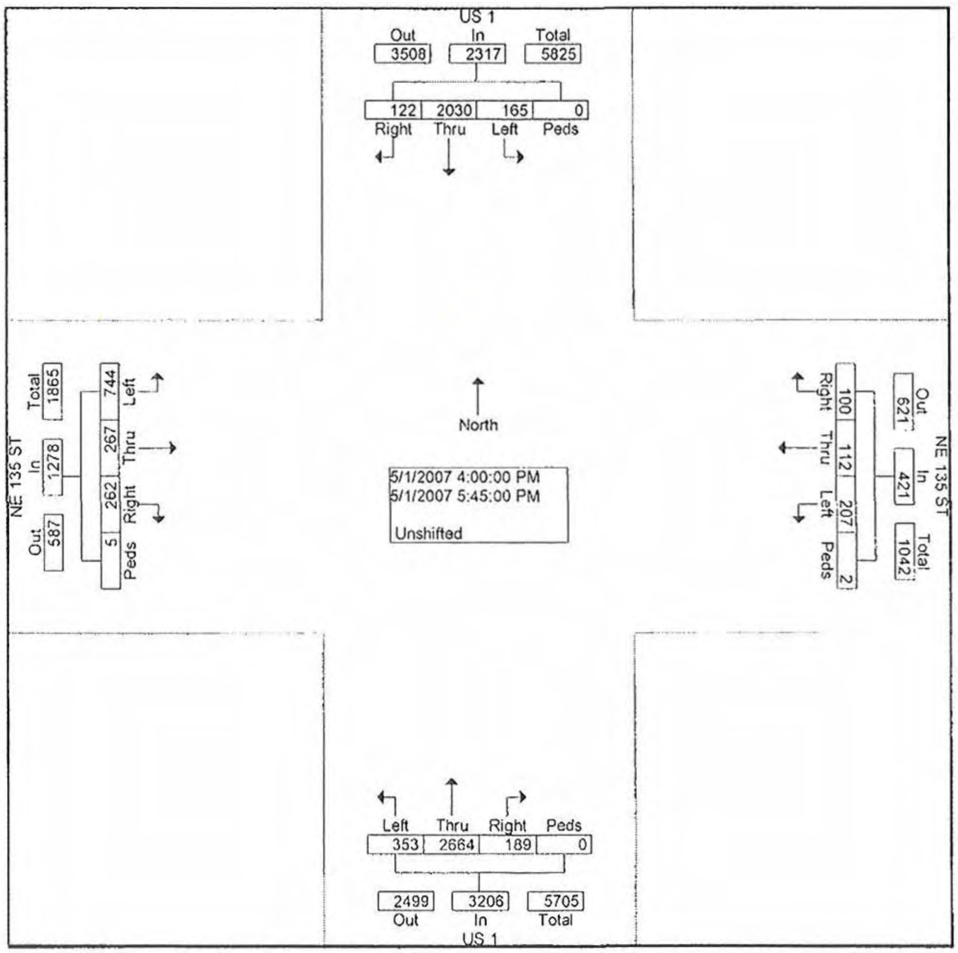
File Name : US 1 & NE 135 ST PM
Site Code : 00000000
Start Date : 5/1/2007
Page No : 1

Groups Printed- Unshifted

	US 1 From North					NE 135 ST From East					US 1 From South					NE 135 ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	8	305	21	0	334	14	14	29	0	57	36	367	53	0	456	44	20	104	0	168	1015
04:15 PM	18	211	22	0	251	15	5	28	2	50	29	300	33	0	362	39	40	80	0	159	822
04:30 PM	17	246	20	0	283	11	20	22	0	53	22	293	36	0	351	36	26	105	1	168	855
04:45 PM	14	250	13	0	277	11	10	26	0	47	11	373	49	0	433	39	40	105	0	184	941
Total	57	1012	76	0	1145	51	49	105	2	207	98	1333	171	0	1602	158	126	394	1	679	3633
05:00 PM	16	248	15	0	279	15	17	26	0	58	13	335	55	0	403	28	36	100	0	164	904
05:15 PM	17	285	23	0	325	10	16	34	0	60	27	383	52	0	462	36	47	103	0	186	1033
05:30 PM	8	239	20	0	267	11	11	17	0	39	32	350	41	0	423	23	27	70	0	120	849
05:45 PM	24	246	31	0	301	13	19	25	0	57	19	263	34	0	316	17	31	77	4	129	803
Total	65	1018	89	0	1172	49	63	102	0	214	91	1331	182	0	1604	104	141	350	4	599	3589
Grand Total	122	2030	165	0	2317	100	112	207	2	421	189	2664	353	0	3206	262	267	744	5	1278	7222
Apprch %	5.3	87.6	7.1	0.0		23.8	26.6	49.2	0.5		5.9	83.1	11.0	0.0		20.5	20.9	58.2	0.4		
Total %	1.7	28.1	2.3	0.0	32.1	1.4	1.6	2.9	0.0	5.8	2.6	36.9	4.9	0.0	44.4	3.6	3.7	10.3	0.1	17.7	



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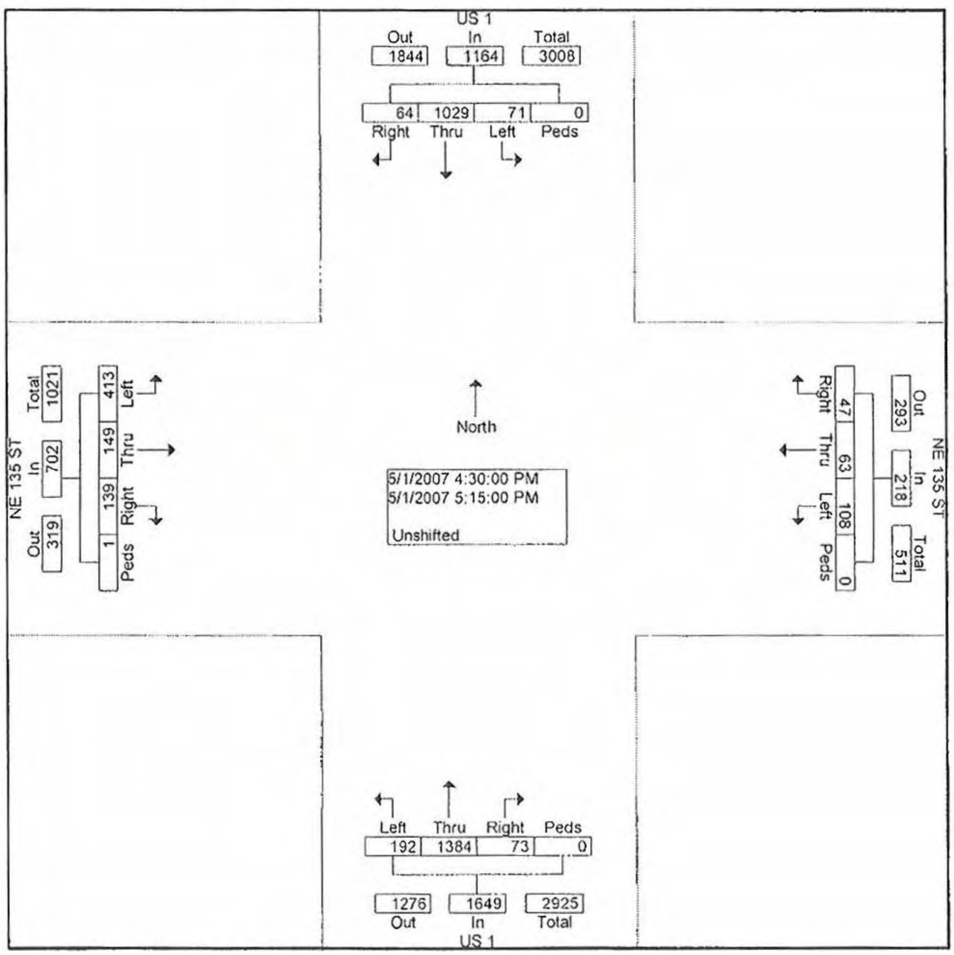
	US 1 From North					NE 135 ST From East					US 1 From South					NE 135 ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:30 PM																				
Volume	64	1029	71	0	1164	47	63	108	0	218	73	1384	192	0	1649	139	149	413	1	702	3733
Percent	5.5	88.4	6.1	0.0		21.6	28.9	49.5	0.0		4.4	83.9	11.6	0.0		19.8	21.2	58.8	0.1		
05:15 Volume	17	285	23	0	325	10	16	34	0	60	27	383	52	0	462	36	47	103	0	186	1033
Peak Factor																					0.903
High Int.	05:15 PM					05:15 PM					05:15 PM					05:15 PM					
Volume	17	285	23	0	325	10	16	34	0	60	27	383	52	0	462	36	47	103	0	186	
Peak Factor					0.895					0.90					0.892					0.944	



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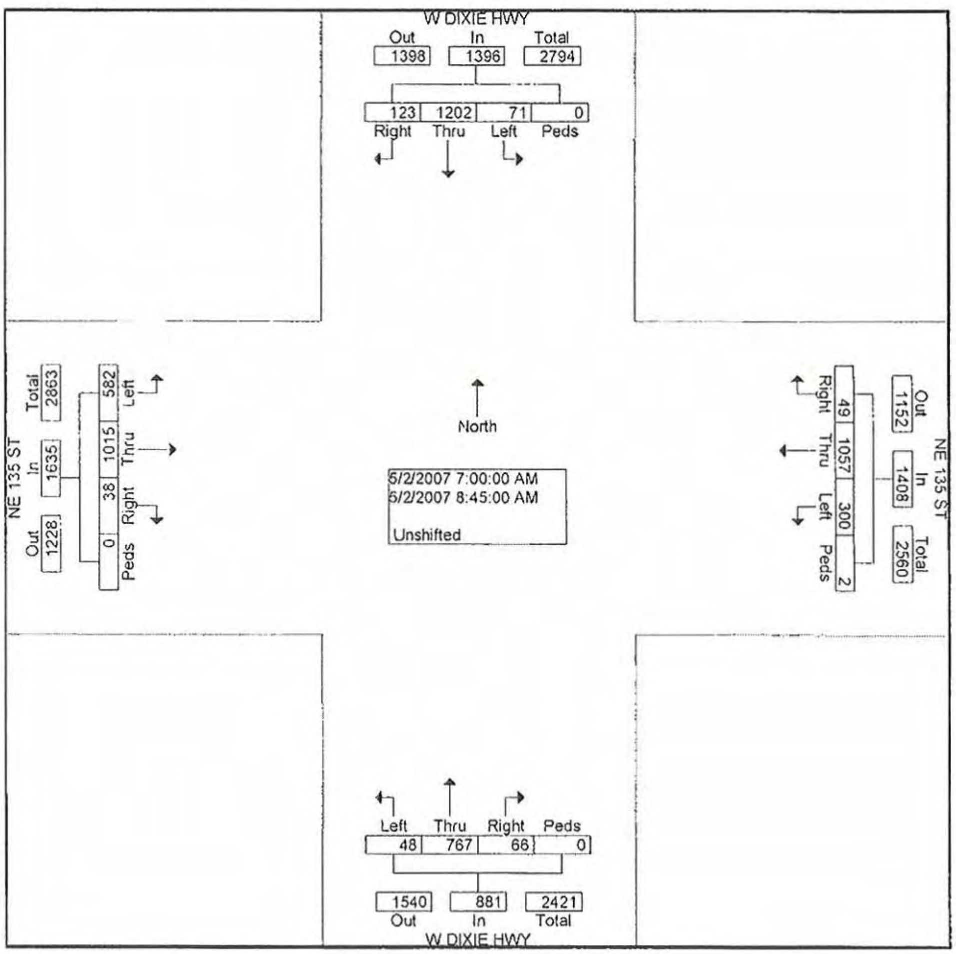
File Name : WDIXIE~1
Site Code : 00000000
Start Date : 5/2/2007
Page No : 1

Groups Printed- Unshifted

	W DIXIE HWY From North					NE 135 ST From East					W DIXIE HWY From South					NE 135 ST From West					
Start Time	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	Rig ht	Thr u	Left	Ped s	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	13	166	12	0	191	6	176	68	0	250	11	99	10	0	120	4	140	88	0	232	793
07:15 AM	20	175	6	0	201	4	152	33	0	189	10	122	3	0	135	3	142	81	0	226	751
07:30 AM	20	179	6	0	205	6	111	37	0	154	11	113	9	0	133	2	125	58	0	185	677
07:45 AM	11	156	9	0	176	5	107	44	1	157	10	94	5	0	109	4	122	84	0	210	652
Total	64	676	33	0	773	21	546	182	1	750	42	428	27	0	497	13	529	311	0	853	2873
08:00 AM	13	154	13	0	180	10	156	37	1	204	4	82	3	0	89	2	126	84	0	212	685
08:15 AM	20	136	7	0	163	4	145	26	0	175	6	101	7	0	114	4	118	78	0	200	652
08:30 AM	15	116	12	0	143	9	101	26	0	136	6	78	7	0	91	16	119	56	0	191	561
08:45 AM	11	120	6	0	137	5	109	29	0	143	8	78	4	0	90	3	123	53	0	179	549
Total	59	526	38	0	623	28	511	118	1	658	24	339	21	0	384	25	486	271	0	782	2447
Grand Total	123	1202	71	0	1396	49	1057	300	2	1408	66	767	48	0	881	38	1015	582	0	1635	5320
Apprch %	8.8	86.1	5.1	0.0		3.5	75.1	21.3	0.1		7.5	87.1	5.4	0.0		2.3	62.1	35.6	0.0		
Total %	2.3	22.6	1.3	0.0	26.2	0.9	19.9	5.6	0.0	26.5	1.2	14.4	0.9	0.0	16.6	0.7	19.1	10.9	0.0	30.7	



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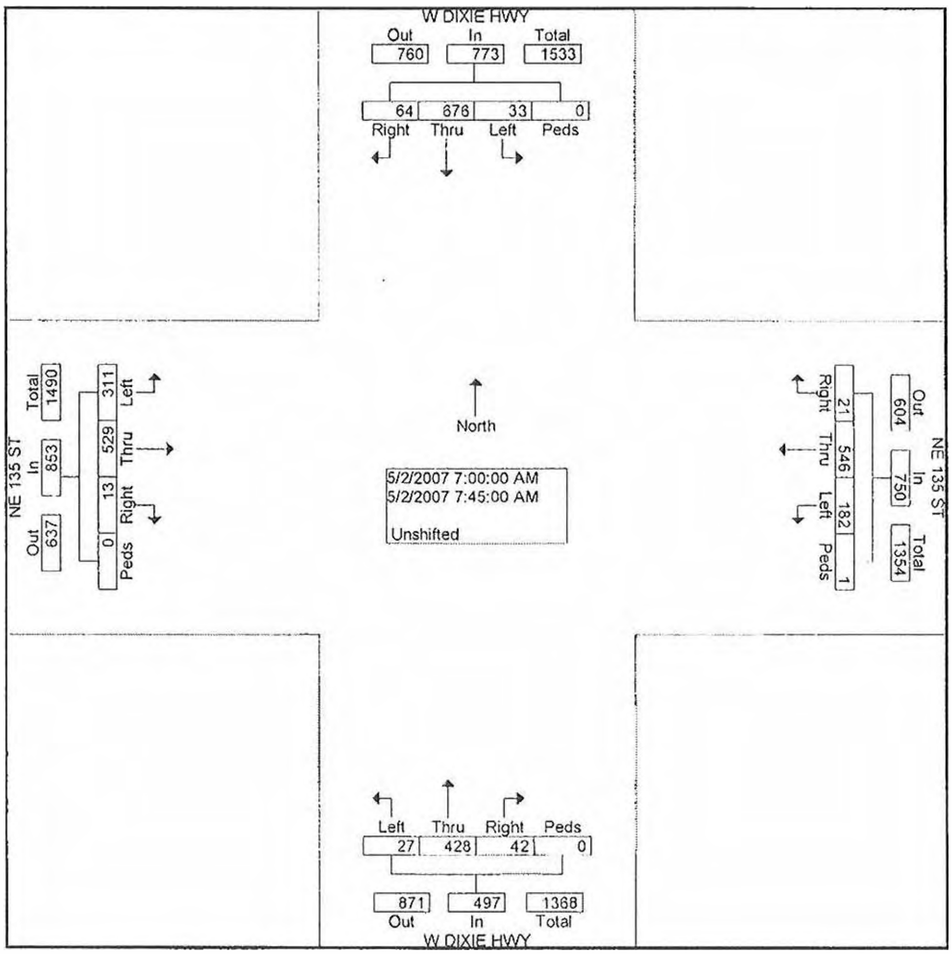
File Name : WDIXIE~1
Site Code : 00000000
Start Date : 5/2/2007
Page No : 2

	W DIXIE HWY From North					NE 135 ST From East					DIXIE HWY From South					NE 135 ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Intersection	07:00 AM																				
Volume	64	676	33	0	773	21	546	182	1	750	42	428	27	0	497	13	529	311	0	853	2873
Percent	8.3	87.5	4.3	0.0		2.8	72.8	24.3	0.1		8.5	86.1	5.4	0.0		1.5	62.0	36.5	0.0		
07:00 Volume	13	166	12	0	191	6	176	68	0	250	11	99	10	0	120	4	140	88	0	232	793
Peak Factor																					0.906
High Int.	07:30 AM					07:00 AM					07:15 AM					07:00 AM					
Volume	20	179	6	0	205	6	176	68	0	250	10	122	3	0	135	4	140	88	0	232	
Peak Factor					0.943					0.750					0.920					0.919	



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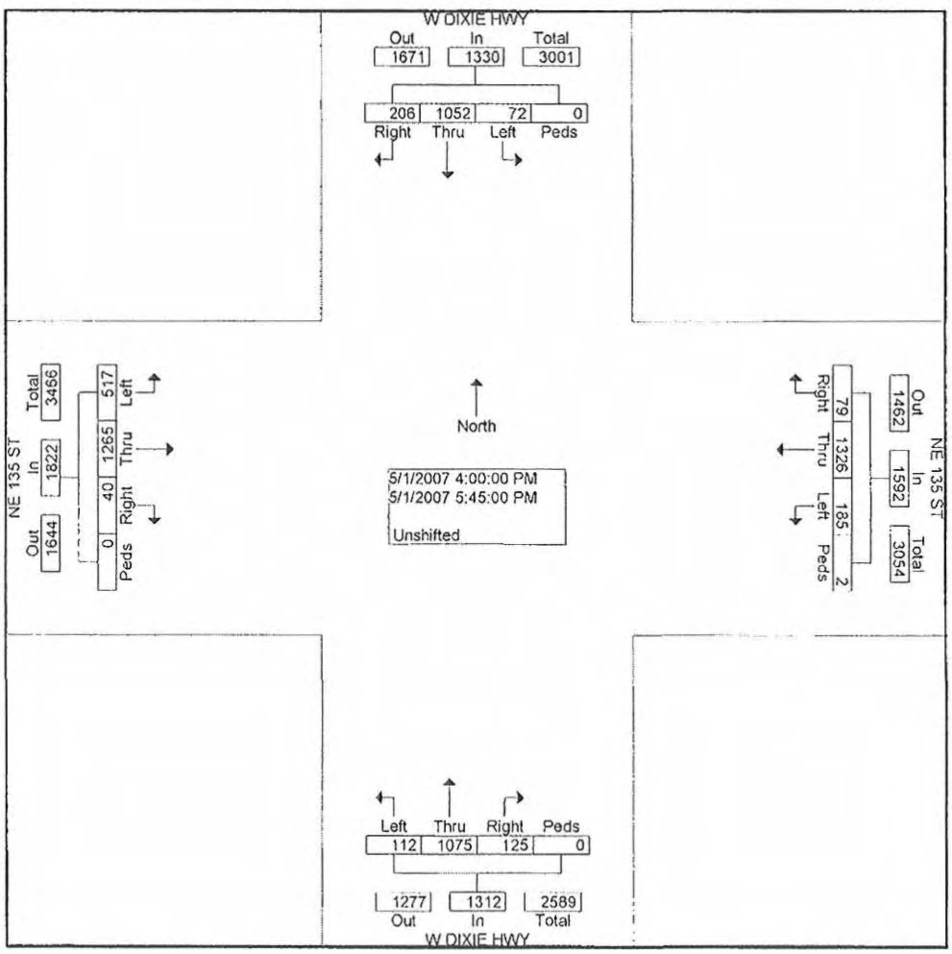
File Name : W.DIXIE HWY & NE135 ST_PM
Site Code : 00000000
Start Date : 5/1/2007
Page No : 1

Groups Printed- **Unshifted**

	W DIXIE HWY From North					NE 135 ST From East					W DIXIE HWY From South					NE 135 ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	30	131	9	0	170	8	181	34	0	223	14	133	12	0	159	3	146	62	0	211	763
04:15 PM	40	158	8	0	206	9	160	22	2	193	14	139	11	0	164	11	190	59	0	260	823
04:30 PM	25	116	7	0	148	13	190	29	0	232	14	144	17	0	175	5	165	74	0	244	799
04:45 PM	33	130	11	0	174	14	151	20	0	185	12	124	20	0	156	5	167	66	0	238	753
Total	128	535	35	0	698	44	682	105	2	833	54	540	60	0	654	24	668	261	0	953	3138
05:00 PM	24	155	12	0	191	13	175	18	0	206	17	149	18	0	184	4	153	67	0	224	805
05:15 PM	15	125	8	0	148	7	153	21	0	181	10	124	9	0	143	0	125	52	0	177	649
05:30 PM	21	118	10	0	149	8	153	19	0	180	26	139	16	0	181	9	143	68	0	220	730
05:45 PM	18	119	7	0	144	7	163	22	0	192	18	123	9	0	150	3	176	69	0	248	734
Total	78	517	37	0	632	35	644	80	0	759	71	535	52	0	658	16	597	256	0	869	2918
Grand Total	206	1052	72	0	1330	79	1326	185	2	1592	125	1075	112	0	1312	40	1265	517	0	1822	6056
Apprch %	15.5	79.1	5.4	0.0		5.0	83.3	11.6	0.1		9.5	81.9	8.5	0.0		2.2	69.4	28.4	0.0		
Total %	3.4	17.4	1.2	0.0	22.0	1.3	21.9	3.1	0.0	26.3	2.1	17.8	1.8	0.0	21.7	0.7	20.9	8.5	0.0	30.1	



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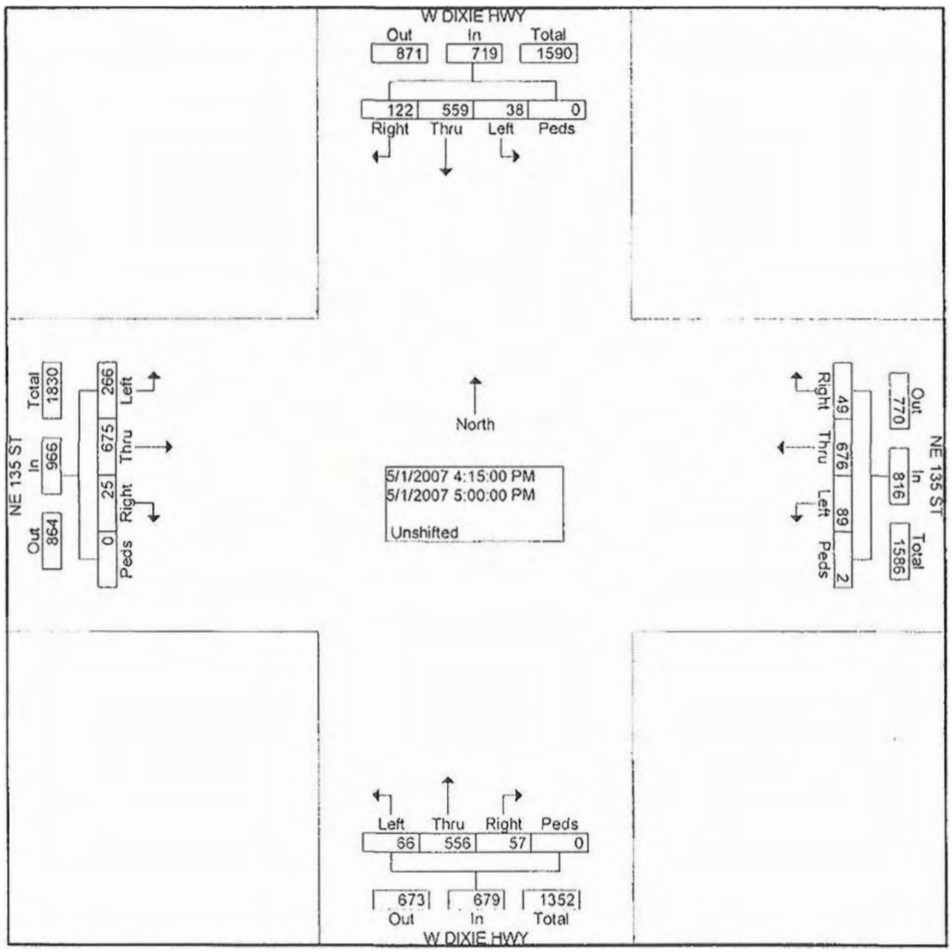
File Name : W.DIXIE HWY & NE135 ST_PM
Site Code : 00000000
Start Date : 5/1/2007

	W DIXIE HWY From North					NE 135 ST From East					W DIXIE HWY From South					NE 135 ST From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:15 PM																				
Volume	122	559	38	0	719	49	676	89	2	816	57	556	66	0	679	25	675	266	0	966	3180
Percent	17.0	77.7	5.3	0.0		6.0	82.8	10.9	0.2		8.4	81.9	9.7	0.0		2.6	69.9	27.5	0.0		
04:15 Volume	40	158	8	0	206	9	160	22	2	193	14	139	11	0	164	11	190	59	0	260	823
Peak Factor																					0.966
High Int.	04:15 PM					04:30 PM					05:00 PM					04:15 PM					
Volume	40	158	8	0	206	13	190	29	0	232	17	149	18	0	184	11	190	59	0	260	
Peak Factor					0.873					0.879					0.923					0.929	



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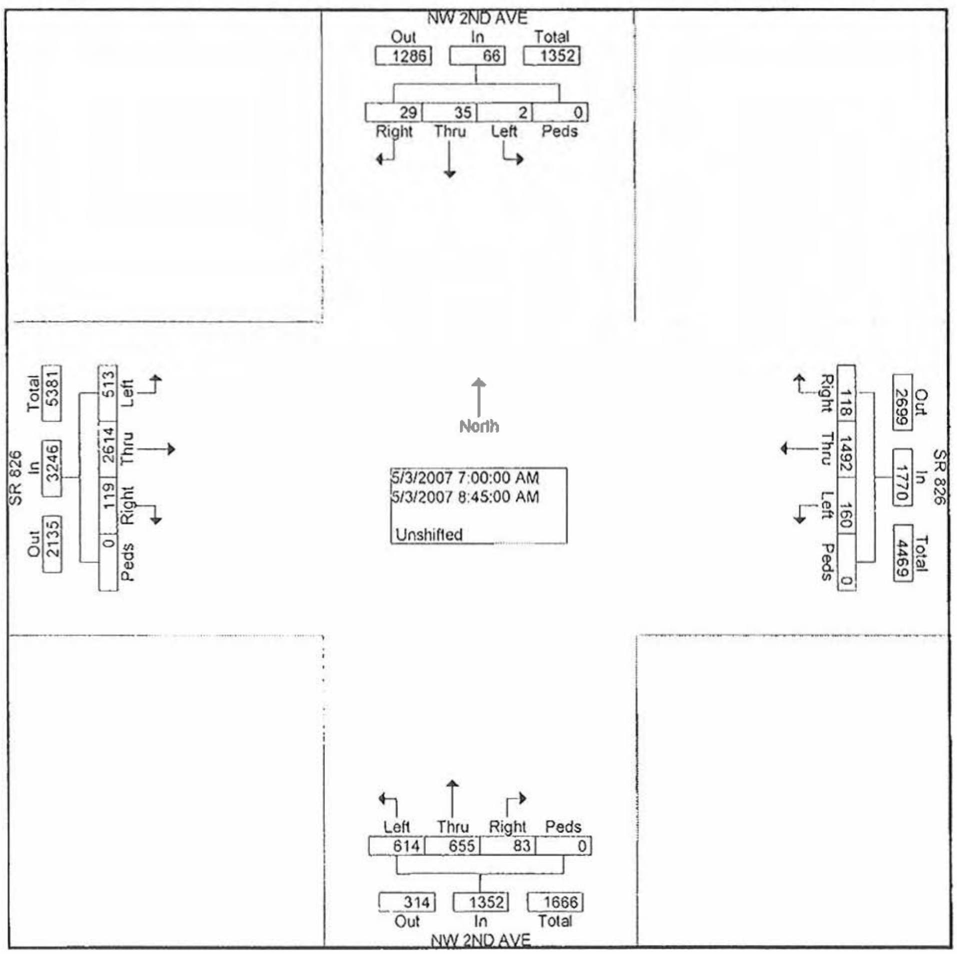
File Name : SR 826 NW 2nd AVE_AM
Site Code : 00000000
Start Date : 5/3/2007
Page No : 1

Groups Printed- Unshifted

	NW 2ND AVE From North					SR 826 From East					NW 2ND AVE From South					SR 826 From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
07:00 AM	1	2	0	0	3	15	126	16	0	157	5	69	54	0	128	24	320	61	0	405	693
07:15 AM	3	6	0	0	9	11	126	17	0	154	7	63	76	0	146	16	225	55	0	296	605
07:30 AM	4	4	0	0	8	14	158	21	0	193	9	65	75	0	149	14	324	70	0	408	758
07:45 AM	5	5	1	0	11	19	205	18	0	242	10	88	72	0	170	12	385	84	0	481	904
Total	13	17	1	0	31	59	615	72	0	746	31	285	277	0	593	66	1254	270	0	1590	2960
08:00 AM	4	3	1	0	8	18	227	22	0	267	13	78	66	0	157	20	359	53	0	432	864
08:15 AM	2	4	0	0	6	13	198	20	0	231	11	93	92	0	196	10	324	57	0	391	824
08:30 AM	4	5	0	0	9	12	212	22	0	246	18	101	89	0	208	13	341	63	0	417	880
08:45 AM	6	6	0	0	12	16	240	24	0	280	10	98	90	0	198	10	336	70	0	416	906
Total	16	18	1	0	35	59	877	88	0	1024	52	370	337	0	759	53	1360	243	0	1656	3474
Grand Total	29	35	2	0	66	118	1492	160	0	1770	83	655	614	0	1352	119	2614	513	0	3246	6434
Apprch %	43.9	53.0	3.0	0.0		6.7	84.3	9.0	0.0		6.1	48.4	45.4	0.0		3.7	80.5	15.8	0.0		
Total %	0.5	0.5	0.0	0.0	1.0	1.8	23.2	2.5	0.0	27.5	1.3	10.2	9.5	0.0	21.0	1.8	40.6	8.0	0.0	50.5	



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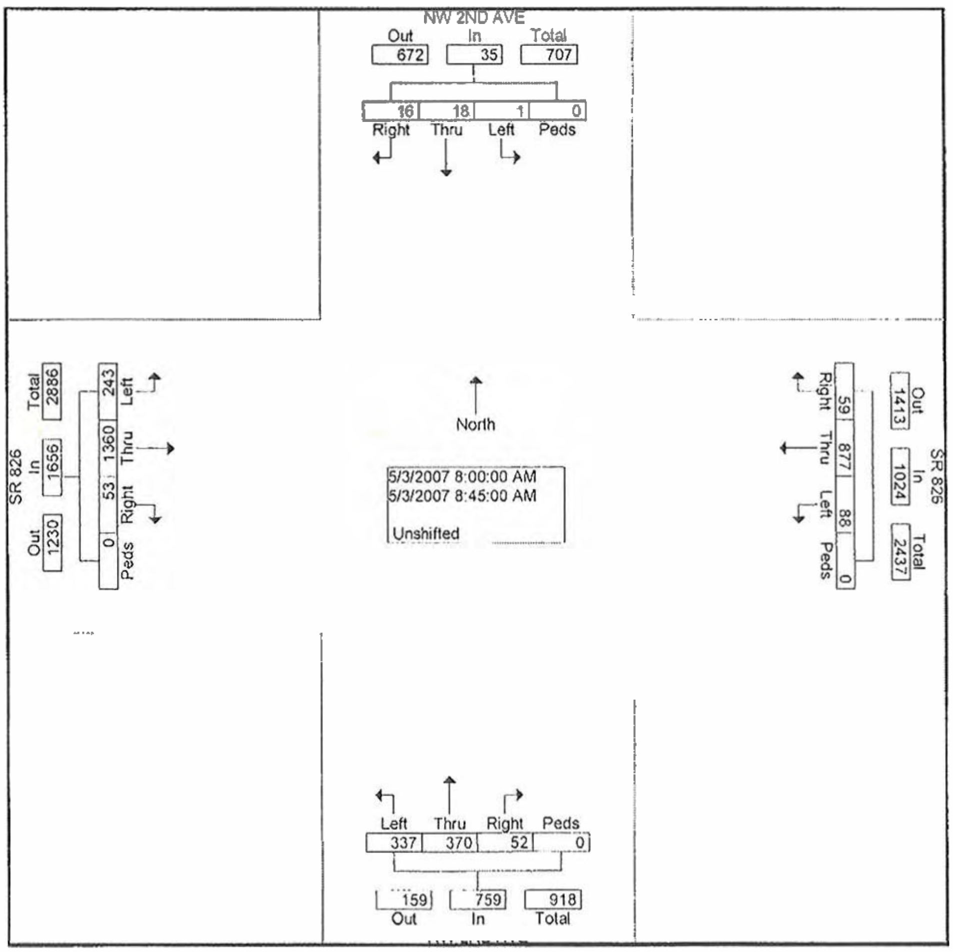
File Name : SR 826 NW 2nd AVE_AM
Site Code : 00000000
Start Date : 5/3/2007

	NW 2ND AVE From North					SR 826 From East					NW 2ND AVE From South					SR 826 From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Intersection	08:00 AM																				
Volume	16	18	1	0	35	59	877	88	0	1024	52	370	337	0	759	53	1360	243	0	1656	3474
Percent	45.7	51.4	2.9	0.0		5.8	85.6	8.6	0.0		6.9	48.7	44.4	0.0		3.2	82.1	14.7	0.0		
08:45 Volume	6	6	0	0	12	16	240	24	0	280	10	98	90	0	198	10	336	70	0	416	906
Peak Factor																					0.959
High Int.	08:45 AM					08:45 AM					08:30 AM					08:00 AM					
Volume	6	6	0	0	12	16	240	24	0	280	18	101	89	0	208	20	359	53	0	432	
Peak Factor					0.729					0.914					0.912					0.958	



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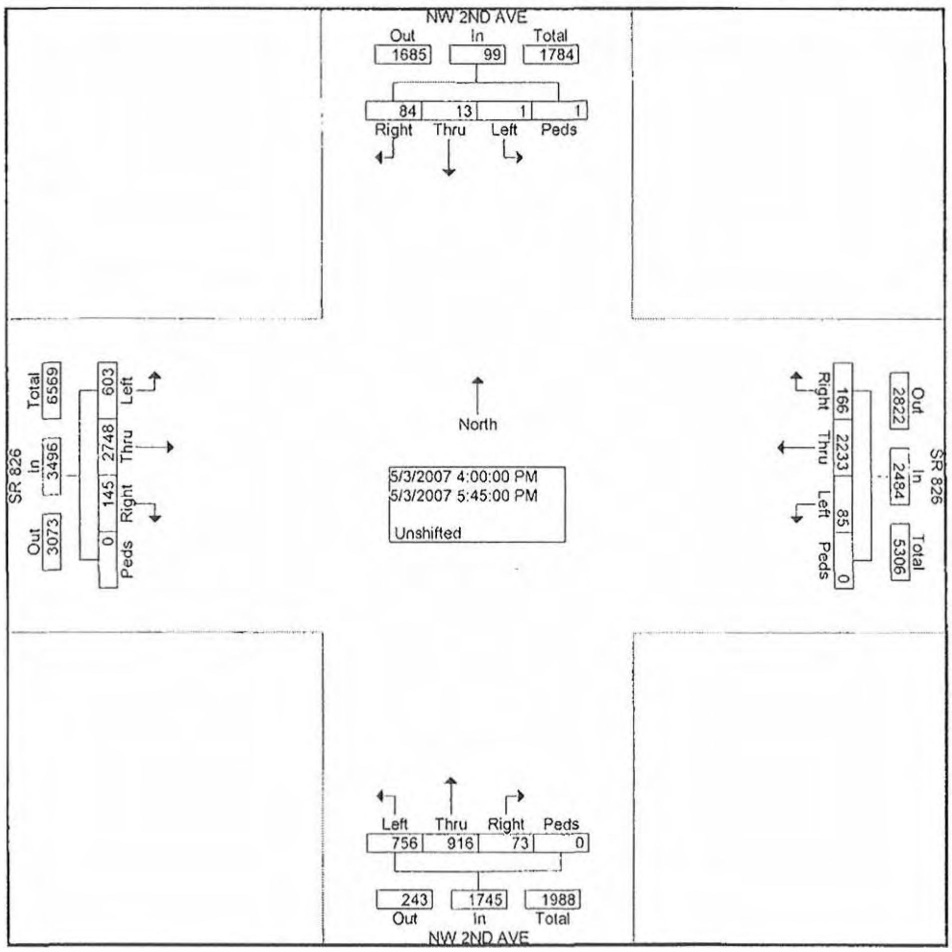
File Name : SR826N~1
Site Code : 00000000
Start Date : 5/3/2007
Page No : 1

Groups Printed- Unshifted

	NW 2ND AVE From North					SR 826 From East					NW 2ND AVE From South					SR 826 From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Factor	1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		1.0	1.0	1.0	1.0		
04:00 PM	13	1	0	0	14	24	293	8	0	325	14	103	98	0	215	10	390	83	0	483	1037
04:15 PM	13	2	1	0	16	14	268	6	0	288	16	112	92	0	220	11	346	81	0	438	962
04:30 PM	9	3	0	0	12	21	301	11	0	333	12	132	109	0	253	16	363	87	0	466	1064
04:45 PM	7	2	0	0	9	20	234	9	0	263	9	102	91	0	202	47	253	63	0	363	837
Total	42	8	1	0	51	79	1096	34	0	1209	51	449	390	0	890	84	1352	314	0	1750	3900
05:00 PM	15	3	0	0	18	21	325	9	0	355	5	123	77	0	205	11	353	100	0	464	1042
05:15 PM	17	0	0	1	18	21	271	11	0	303	7	111	117	0	235	12	354	69	0	435	991
05:30 PM	5	0	0	0	5	24	299	12	0	335	3	104	82	0	189	20	341	55	0	416	945
05:45 PM	5	2	0	0	7	21	242	19	0	282	7	129	90	0	226	18	348	65	0	431	946
Total	42	5	0	1	48	87	1137	51	0	1275	22	467	366	0	855	61	1396	289	0	1746	3924
Grand Total	84	13	1	1	99	166	2233	85	0	2484	73	916	756	0	1745	145	2748	603	0	3496	7824
Apprch %	84.8	13.1	1.0	1.0		6.7	89.9	3.4	0.0		4.2	52.5	43.3	0.0		4.1	78.6	17.2	0.0		
Total %	1.1	0.2	0.0	0.0	1.3	2.1	28.5	1.1	0.0	31.7	0.9	11.7	9.7	0.0	22.3	1.9	35.1	7.7	0.0	44.7	



Richard Garcia & Associates, Inc
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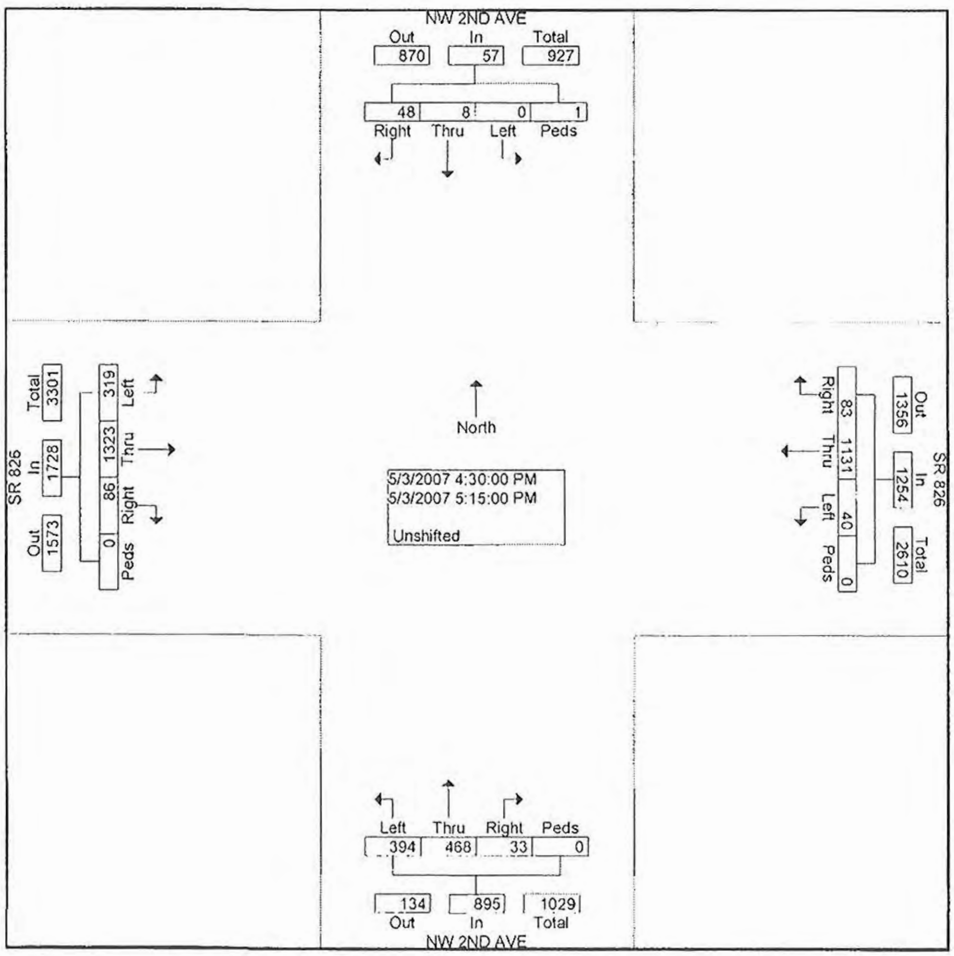
File Name : SR826N~1
Site Code : 00000000
Start Date : 5/3/2007

	NW 2ND AVE From North					SR 826 From East					NW 2ND AVE From South					SR 826 From West					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
Peak Hour From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Intersection	04:30 PM																				
Volume	48	8	0	1	57	83	1131	40	0	1254	33	468	394	0	895	86	1323	319	0	1728	3934
Percent	84.2	14.0	0.0	1.8		6.6	90.2	3.2	0.0		3.7	52.3	44.0	0.0		5.0	76.6	18.5	0.0		
04:30 Volume	9	3	0	0	12	21	301	11	0	333	12	132	109	0	253	16	363	87	0	466	1064
Peak Factor																					0.924
High Int.	05:00 PM					05:00 PM					04:30 PM					04:30 PM					
Volume	15	3	0	0	18	21	325	9	0	355	12	132	109	0	253	16	363	87	0	466	
Peak Factor					0.792					0.883					0.884					0.927	



RICHARD GARCIA & ASSOCIATES, INC.
13117 NW 107 AVE. UNIT NO.4
HIALEAH GARDENS, FL 33018
305.595.7505 / FAX 305.675.6474

Site Code: 000000000000
Station ID: 9762
NE MIAMI GARDEN DR between NE15 & 18 AVE

Latitude: 0' 0.000 Undefined

Start Time	01-May-07 Tue	WB	EB	Total
12:00 AM		113	93	206
12:15		116	86	202
12:30		79	80	159
12:45		71	63	134
01:00		64	90	154
01:15		72	71	143
01:30		70	63	133
01:45		41	54	95
02:00		42	56	98
02:15		54	45	99
02:30		64	45	109
02:45		40	32	72
03:00		21	35	56
03:15		47	38	85
03:30		27	29	56
03:45		33	46	79
04:00		28	31	59
04:15		27	38	65
04:30		17	23	40
04:45		18	29	47
05:00		29	34	63
05:15		14	37	51
05:30		41	48	89
05:45		38	50	88
06:00		43	48	91
06:15		73	102	175
06:30		82	131	213
06:45		70	143	213
07:00		97	124	221
07:15		123	160	283
07:30		145	170	315
07:45		138	228	366
08:00		162	156	318
08:15		163	189	352
08:30		172	243	415
08:45		187	288	475
09:00		215	255	470
09:15		223	270	493
09:30		233	298	531
09:45		233	326	559
10:00		253	259	512
10:15		260	284	544
10:30		**340**	**383**	**723**
10:45		**320**	**338**	**658**
11:00		**327**	**327**	**654**
11:15		**342**	**334**	**676**
11:30		319	336	655
11:45		341	330	671
Total		6027	6938	12965
Percent		46.5%	53.5%	
Peak		10:30	10:30	10:30
Vol.		1329	1382	2711
P.H.F.		0.971	0.902	0.937

RICHARD GARCIA & ASSOCIATES, INC.
13117 NW 107 AVE. UNIT NO.4
HIALEAH GARDENS, FL 33018
305.595.7505 / FAX 305.675.6474

Site Code: 000000000000
Station ID: 9762
NE MIAMI GARDEN DR between NE15 & 18 AVE

Latitude: 0' 0.000 Undefined

Start Time	01-May-07 Tue	WB	EB	Total
12:00 PM		377	330	707
12:15		351	338	689
12:30		365	346	711
12:45		357	334	691
01:00		363	347	710
01:15		340	363	703
01:30		334	344	678
01:45		351	382	733
02:00		366	337	703
02:15		356	337	693
02:30		372	351	723
02:45		342	344	686
03:00		368	325	693
03:15		391	379	770
03:30		463	322	785
03:45		407	340	747
04:00		448	328	776
04:15		398	321	719
04:30		418	338	756
04:45		371	337	708
05:00		435	345	780
05:15		434	375	809
05:30		408	354	762
05:45		357	376	733
06:00		420	342	762
06:15		311	404	715
06:30		361	368	729
06:45		327	335	662
07:00		332	394	726
07:15		308	309	617
07:30		294	309	603
07:45		261	312	573
08:00		284	290	574
08:15		277	285	562
08:30		252	281	533
08:45		250	255	505
09:00		283	274	557
09:15		219	205	424
09:30		226	203	429
09:45		220	189	409
10:00		201	164	365
10:15		187	159	346
10:30		146	200	346
10:45		183	177	360
11:00		153	104	257
11:15		111	104	215
11:30		94	89	183
11:45		80	73	153
Total		14952	14118	29070
Percent		51.4%	48.6%	
Peak		15:30	18:15	17:00
Vol.		1716	1501	3084
P.H.F.		0.927	0.929	0.953

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HIALEAH GARDENS, FL 33018
305.595.7505 / FAX 305.675.6474

Site Code: 000000000000
Station ID: 9762
NE MIAMI GARDEN DR between NE15 & 18 AVE

Latitude: 0' 0.000 Undefined

Start Time	02-May-07 Wed	WB	EB	Total
12:00 AM		95	70	165
12:15		55	59	114
12:30		37	55	92
12:45		43	47	90
01:00		36	46	82
01:15		21	23	44
01:30		21	26	47
01:45		22	18	40
02:00		20	21	41
02:15		25	25	50
02:30		17	18	35
02:45		12	18	30
03:00		11	20	31
03:15		14	22	36
03:30		27	17	44
03:45		9	27	36
04:00		16	11	27
04:15		26	16	42
04:30		18	25	43
04:45		18	37	55
05:00		25	24	49
05:15		50	56	106
05:30		63	70	133
05:45		72	90	162
06:00		98	94	192
06:15		115	236	351
06:30		141	304	445
06:45		190	280	470
07:00		233	254	487
07:15		255	286	541
07:30		256	350	606
07:45		285	376	661
08:00		334	335	669
08:15		307	333	640
08:30		337	**374**	711
08:45		297	**407**	704
09:00		283	**356**	639
09:15		319	**381**	**700**
09:30		321	359	**680**
09:45		304	384	**688**
10:00		**343**	345	**688**
10:15		**341**	359	700
10:30		**323**	327	650
10:45		**311**	351	662
11:00		311	307	618
11:15		331	324	655
11:30		358	334	692
11:45		238	363	601
Total		7384	8660	16044
Percent		46.0%	54.0%	
Peak		10:00	08:30	09:15
Vol.		1318	1518	2756
P.H.F.		0.920	0.932	0.969

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Site Code: 000000000000
Station ID: 9762
NE MIAMI GARDEN DR between NE15 & 18 AVE

Latitude: 0' 0.000 Undefined

Start Time	02-May-07 Wed	WB	EB	Total
12:00 PM		380	326	706
12:15		330	331	661
12:30		345	316	661
12:45		323	338	661
01:00		367	372	739
01:15		368	317	685
01:30		336	357	693
01:45		361	345	706
02:00		308	338	646
02:15		328	361	689
02:30		366	343	709
02:45		347	350	697
03:00		417	366	783
03:15		359	354	713
03:30		441	356	797
03:45		422	372	794
04:00		408	326	734
04:15		355	326	681
04:30		414	336	750
04:45		378	346	724
05:00		410	318	728
05:15		406	380	786
05:30		415	378	793
05:45		395	370	765
06:00		411	360	771
06:15		326	379	705
06:30		322	404	726
06:45		298	418	716
07:00		304	326	630
07:15		322	337	659
07:30		284	324	608
07:45		276	317	593
08:00		291	309	600
08:15		225	298	523
08:30		282	261	543
08:45		234	256	490
09:00		245	267	512
09:15		240	190	430
09:30		219	224	443
09:45		210	209	419
10:00		215	201	416
10:15		205	184	389
10:30		195	198	393
10:45		147	163	310
11:00		156	117	273
11:15		101	103	204
11:30		106	98	204
11:45		63	86	149
Total		14656	14351	29007
Percent		50.5%	49.5%	
Peak		15:00	18:00	17:15
Vol.		1639	1561	3115
P.H.F.		0.929	0.934	0.977

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Site Code: 000000000000
Station ID: 9762
NE MIAMI GARDEN DR between NE15 & 18 AVE

Latitude: 0' 0.000 Undefined

Start Time	03-May-07 Thu	WB	EB	Total
12:00 AM		78	51	129
12:15		52	68	120
12:30		64	58	122
12:45		52	42	94
01:00		32	35	67
01:15		23	32	55
01:30		20	19	39
01:45		25	31	56
02:00		19	15	34
02:15		23	27	50
02:30		14	14	28
02:45		24	35	59
03:00		21	16	37
03:15		17	24	41
03:30		21	26	47
03:45		17	12	29
04:00		14	23	37
04:15		22	18	40
04:30		28	21	49
04:45		19	25	44
05:00		27	36	63
05:15		38	54	92
05:30		63	78	141
05:45		68	87	155
06:00		98	107	205
06:15		150	216	366
06:30		126	286	412
06:45		155	311	466
07:00		215	246	461
07:15		235	269	504
07:30		265	356	621
07:45		265	378	643
08:00		334	362	696
08:15		327	335	662
08:30		**344**	**373**	**717**
08:45		**306**	**368**	**674**
09:00		**340**	**382**	**722**
09:15		**335**	**344**	**679**
09:30		303	348	651
09:45		297	349	646
10:00		285	334	619
10:15		310	298	608
10:30		280	335	615
10:45		284	324	608
11:00		314	304	618
11:15		317	316	633
11:30		336	320	656
11:45		325	315	640
Total		7327	8423	15750
Percent		46.5%	53.5%	
Peak		08:30	08:30	08:30
Vol.		1325	1467	2792
P.H.F.		0.963	0.960	0.967

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Site Code: 000000000000
Station ID: 9762
NE MIAMI GARDEN DR between NE15 & 18 AVE

Latitude: 0' 0.000 Undefined

Start Time	03-May-07 Thu	WB	EB	Total
12:00 PM		360	307	667
12:15		326	360	686
12:30		381	308	689
12:45		344	330	674
01:00		369	344	713
01:15		347	346	693
01:30		325	328	653
01:45		373	333	706
02:00		348	337	685
02:15		334	356	690
02:30		356	341	697
02:45		292	340	632
03:00		376	317	693
03:15		404	310	714
03:30		456	316	772
03:45		435	368	803
04:00		451	307	758
04:15		401	373	774
04:30		395	320	715
04:45		401	364	765
05:00		449	331	780
05:15		453	374	827
05:30		404	344	748
05:45		385	364	749
06:00		400	363	763
06:15		344	404	748
06:30		331	403	734
06:45		287	398	685
07:00		281	385	666
07:15		311	331	642
07:30		301	311	612
07:45		270	306	576
08:00		285	307	592
08:15		273	285	558
08:30		254	292	546
08:45		217	260	477
09:00		274	254	528
09:15		268	256	524
09:30		253	215	468
09:45		209	194	403
10:00		190	191	381
10:15		231	167	398
10:30		222	201	423
10:45		190	161	351
11:00		168	125	293
11:15		110	105	215
11:30		104	91	195
11:45		94	81	175
Total		15032	14204	29236
Percent		51.4%	48.6%	
Peak		15:15	18:15	16:45
Vol.		1746	1590	3120
P.H.F.		0.957	0.984	0.943
Grand Total		65378	66694	132072
Percent		49.5%	50.5%	

ADT Not Calculated

RICHARD GARCIA & ASSOCIATES, INC.
13117 NW 107 AVE. UNIT NO.4
HIALEAH GARDENS, FL 33018
305.595.7505 / FAX 305.675.6474

Site Code: 000000000000
Station ID: 8682
NE 159 ST BETWEEN NE 10 AVE 6 AVE

Latitude: 0' 0.000 Undefined

Start Time	01-May-07 Tue	WB	EB	Total
12:00 AM		40	33	73
12:15		30	24	54
12:30		33	22	55
12:45		14	24	38
01:00		22	17	39
01:15		15	12	27
01:30		18	17	35
01:45		20	13	33
02:00		12	8	20
02:15		8	4	12
02:30		11	11	22
02:45		11	9	20
03:00		13	6	19
03:15		10	6	16
03:30		13	3	16
03:45		12	5	17
04:00		13	7	20
04:15		10	6	16
04:30		12	9	21
04:45		18	10	28
05:00		27	15	42
05:15		43	14	57
05:30		46	21	67
05:45		49	23	72
06:00		75	39	114
06:15		100	71	171
06:30		107	82	189
06:45		125	121	246
07:00		126	104	230
07:15		125	106	231
07:30		126	118	244
07:45		134	133	267
08:00		126	129	255
08:15		137	115	252
08:30		123	175	298
08:45		134	135	269
09:00		110	118	228
09:15		112	131	243
09:30		98	117	215
09:45		119	115	234
10:00		106	106	212
10:15		106	93	199
10:30		116	100	216
10:45		118	108	226
11:00		122	88	210
11:15		110	116	226
11:30		127	127	254
11:45		103	108	211
Total		3285	2974	6259
Percent		52.5%	47.5%	
Peak		07:30	08:30	08:00
Vol.		523	559	1074
P.H.F.		0.954	0.799	0.901

RICHARD GARCIA & ASSOCIATES, INC.
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Site Code: 000000000000
Station ID: 8682
NE 159 ST BETWEEN NE 10 AVE 6 AVE

Latitude: 0' 0.000 Undefined

Start Time	01-May-07 Tue	WB	EB	Total
12:00 PM		152	118	270
12:15		145	118	263
12:30		144	112	256
12:45		132	126	258
01:00		129	108	237
01:15		151	135	286
01:30		139	120	259
01:45		139	102	241
02:00		131	108	239
02:15		134	119	253
02:30		134	129	263
02:45		132	151	283
03:00		126	139	265
03:15		169	135	304
03:30		180	153	333
03:45		174	166	340
04:00		169	158	327
04:15		178	172	350
04:30		203	160	363
04:45		169	155	324
05:00		178	164	342
05:15		178	169	347
05:30		183	167	350
05:45		166	178	344
06:00		181	172	353
06:15		157	181	338
06:30		182	132	314
06:45		169	133	302
07:00		187	127	314
07:15		155	129	284
07:30		157	147	304
07:45		147	123	270
08:00		112	104	216
08:15		134	113	247
08:30		110	96	206
08:45		115	99	214
09:00		110	95	205
09:15		86	95	181
09:30		83	110	193
09:45		90	80	170
10:00		94	80	174
10:15		110	81	191
10:30		72	65	137
10:45		90	71	161
11:00		66	59	125
11:15		63	46	109
11:30		58	52	110
11:45		44	41	85
Total		6507	5793	12300
Percent		52.9%	47.1%	
Peak		16:15	17:30	17:15
Vol.		728	698	1394
P.H.F.		0.897	0.964	0.960

RICHARD GARCIA & ASSOCIATES, INC.
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305.595.7505 / FAX 305.675.6474

Site Code: 000000000000
Station ID: 8682
NE 159 ST BETWEEN NE 10 AVE 6 AVE

Latitude: 0' 0.000 Undefined

Start Time	02-May-07 Wed	WB	EB	Total
12:00 AM		25	44	69
12:15		27	43	70
12:30		28	25	53
12:45		23	18	41
01:00		22	12	34
01:15		15	9	24
01:30		23	15	38
01:45		15	16	31
02:00		23	7	30
02:15		13	10	23
02:30		21	5	26
02:45		16	10	26
03:00		6	5	11
03:15		14	6	20
03:30		9	10	19
03:45		14	4	18
04:00		14	8	22
04:15		14	11	25
04:30		22	11	33
04:45		20	17	37
05:00		23	14	37
05:15		37	17	54
05:30		47	21	68
05:45		60	23	83
06:00		74	41	115
06:15		95	65	160
06:30		138	112	250
06:45		107	127	234
07:00		100	87	187
07:15		108	99	207
07:30		115	117	232
07:45		122	102	224
08:00		133	107	240
08:15		135	154	289
08:30		145	152	297
08:45		136	143	279
09:00		113	132	245
09:15		116	116	232
09:30		120	118	238
09:45		84	118	202
10:00		106	115	221
10:15		123	118	241
10:30		113	97	210
10:45		116	94	210
11:00		97	94	191
11:15		129	116	245
11:30		108	114	222
11:45		108	120	228
Total		3272	3019	6291
Percent		52.0%	48.0%	
Peak		08:00	08:15	08:15
Vol.		549	581	1110
P.H.F.		0.947	0.943	0.934

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305.595.7505 / FAX 305.675.6474

Site Code: 000000000000
Station ID: 8682
NE 159 ST BETWEEN NE 10 AVE 6 AVE

Latitude: 0' 0.000 Undefined

Start Time	02-May-07 Wed	WB	EB	Total
12:00 PM		135	93	228
12:15		122	127	249
12:30		137	127	264
12:45		133	109	242
01:00		146	107	253
01:15		163	131	294
01:30		134	107	241
01:45		127	99	226
02:00		140	114	254
02:15		144	119	263
02:30		151	107	258
02:45		145	119	264
03:00		137	121	258
03:15		146	137	283
03:30		165	154	319
03:45		178	173	351
04:00		180	160	340
04:15		189	167	356
04:30		191	145	336
04:45		171	177	348
05:00		197	149	346
05:15		180	171	351
05:30		188	181	369
05:45		177	171	348
06:00		173	185	358
06:15		168	196	364
06:30		173	131	304
06:45		155	145	300
07:00		157	130	287
07:15		146	129	275
07:30		135	113	248
07:45		130	106	236
08:00		165	120	285
08:15		130	115	245
08:30		100	97	197
08:45		101	125	226
09:00		110	93	203
09:15		102	115	217
09:30		115	101	216
09:45		101	104	205
10:00		84	77	161
10:15		67	78	145
10:30		74	78	152
10:45		68	64	132
11:00		72	72	144
11:15		59	46	105
11:30		58	43	101
11:45		45	37	82
Total		6464	5765	12229
Percent		52.9%	47.1%	
Peak		16:15	17:30	17:30
Vol.		748	733	1439
P.H.F.		0.949	0.935	0.975

RICHARD GARCIA & ASSOCIATES, INC.
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305.595.7505 / FAX 305.675.6474

Site Code: 000000000000
Station ID: 8682
NE 159 ST BETWEEN NE 10 AVE 6 AVE

Latitude: 0' 0.000 Undefined

Start Time	03-May-07 Thu	WB	EB	Total
12:00 AM		42	37	79
12:15		35	35	70
12:30		35	30	65
12:45		31	17	48
01:00		20	27	47
01:15		15	18	33
01:30		17	13	30
01:45		9	9	18
02:00		18	11	29
02:15		12	6	18
02:30		13	10	23
02:45		16	7	23
03:00		14	9	23
03:15		16	10	26
03:30		17	8	25
03:45		9	10	19
04:00		13	7	20
04:15		17	7	24
04:30		12	17	29
04:45		24	16	40
05:00		23	13	36
05:15		31	11	42
05:30		45	21	66
05:45		62	22	84
06:00		64	47	111
06:15		88	74	162
06:30		106	87	193
06:45		117	110	227
07:00		115	104	219
07:15		114	100	214
07:30		126	115	241
07:45		116	119	235
08:00		**133**	124	257
08:15		**141**	**127**	**268**
08:30		**123**	**149**	**272**
08:45		**135**	**145**	**280**
09:00		116	**155**	**271**
09:15		135	122	257
09:30		124	120	244
09:45		131	106	237
10:00		118	103	221
10:15		121	119	240
10:30		113	124	237
10:45		119	108	227
11:00		120	110	230
11:15		120	112	232
11:30		146	124	270
11:45		135	127	262
Total		3422	3102	6524
Percent		52.5%	47.5%	
Peak		08:00	08:15	08:15
Vol.		532	576	1091
P.H.F.		0.911	0.929	0.974

RICHARD GARCIA & ASSOCIATES, INC.
13117 NW 107 AVE. UNIT NO.4
HIALEAH GARDENS, FL 33018
305.595.7505 / FAX 305.675.6474

Site Code: 000000000000
Station ID: 8682
NE 159 ST BETWEEN NE 10 AVE 6 AVE

Latitude: 0' 0.000 Undefined

Start Time	03-May-07 Thu	WB	EB	Total
12:00 PM		136	115	251
12:15		149	134	283
12:30		140	122	262
12:45		118	121	239
01:00		141	126	267
01:15		150	111	261
01:30		159	115	274
01:45		140	137	277
02:00		153	115	268
02:15		135	135	270
02:30		140	137	277
02:45		160	110	270
03:00		128	121	249
03:15		145	159	304
03:30		**198**	167	365
03:45		**185**	140	325
04:00		**187**	159	346
04:15		**200**	157	357
04:30		176	156	332
04:45		171	163	334
05:00		183	**189**	**372**
05:15		182	**203**	**385**
05:30		194	**158**	**352**
05:45		180	**188**	**368**
06:00		180	147	327
06:15		199	161	360
06:30		165	149	314
06:45		171	169	340
07:00		182	154	336
07:15		159	169	328
07:30		197	157	354
07:45		155	149	304
08:00		137	143	280
08:15		144	144	288
08:30		124	125	249
08:45		135	115	250
09:00		125	111	236
09:15		145	121	266
09:30		132	100	232
09:45		113	101	214
10:00		125	94	219
10:15		91	76	167
10:30		96	108	204
10:45		85	90	175
11:00		103	82	185
11:15		79	84	163
11:30		78	63	141
11:45		58	53	111
Total		7028	6303	13331
Percent		52.7%	47.3%	
Peak		15:30	17:00	17:00
Vol.		770	738	1477
P.H.F.		0.963	0.909	0.959
Grand Total		29978	26956	56934
Percent		52.7%	47.3%	

ADT Not Calculated

RICHARD GARCIA & ASSOCIATES, INC.
13117 NW 107 AVE. UNIT NO.4
HIALEAH GARDENS, FL 33018
305.595.7505 / FAX 305.675.6474

Site Code: 000000000000
Station ID: 9453
IVES DAIRY RD BET H.LAND LAKES & NE 22AV

Latitude: 0' 0.000 Undefined

Start Time	01-May-07 Tue	EB	WB	Total
12:00 AM		105	145	250
12:15		101	103	204
12:30		80	86	166
12:45		68	77	145
01:00		64	59	123
01:15		65	48	113
01:30		55	46	101
01:45		53	45	98
02:00		42	44	86
02:15		29	25	54
02:30		25	35	60
02:45		30	20	50
03:00		25	18	43
03:15		31	22	53
03:30		34	27	61
03:45		28	19	47
04:00		32	32	64
04:15		42	38	80
04:30		47	44	91
04:45		68	50	118
05:00		65	61	126
05:15		77	71	148
05:30		145	113	258
05:45		217	116	333
06:00		286	185	471
06:15		397	213	610
06:30		524	283	807
06:45		504	410	914
07:00		389	546	**935**
07:15		**525**	448	**973**
07:30		**539**	479	**1018**
07:45		**514**	460	**974**
08:00		**448**	482	930
08:15		458	465	923
08:30		483	457	940
08:45		393	**452**	845
09:00		422	**513**	935
09:15		426	**481**	907
09:30		481	**494**	975
09:45		529	427	956
10:00		474	435	909
10:15		469	446	915
10:30		501	445	946
10:45		504	434	938
11:00		483	474	957
11:15		474	462	936
11:30		503	496	999
11:45		473	292	765
Total		12727	11623	24350
Percent		52.3%	47.7%	
Peak		07:15	08:45	07:00
Vol.		2026	1940	3900
P.H.F.		0.940	0.888	0.958

RICHARD GARCIA & ASSOCIATES, INC.
13117 NW 107 AVE. UNIT NO.4
HIALEAH GARDENS, FL 33018
305.595.7505 / FAX 305.675.6474

Site Code: 000000000000
Station ID: 9453
IVES DAIRY RD BET H.LAND LAKES & NE 22AV

Latitude: 0' 0.000 Undefined

Start Time	01-May-07 Tue	EB	WB	Total
12:00 PM		469	486	955
12:15		464	528	992
12:30		505	493	998
12:45		451	463	914
01:00		455	510	965
01:15		487	526	1013
01:30		431	469	900
01:45		486	480	966
02:00		408	519	927
02:15		447	582	1029
02:30		516	478	994
02:45		528	532	1060
03:00		491	561	1052
03:15		421	574	995
03:30		447	566	1013
03:45		447	483	930
04:00		405	473	878
04:15		451	627	1078
04:30		450	647	1097
04:45		412	597	1009
05:00		476	609	1085
05:15		466	601	1067
05:30		501	620	1121
05:45		481	583	1064
06:00		505	620	1125
06:15		542	551	1093
06:30		568	477	1045
06:45		484	441	925
07:00		425	462	887
07:15		415	485	900
07:30		464	472	936
07:45		405	418	823
08:00		401	401	802
08:15		370	352	722
08:30		345	454	799
08:45		334	367	701
09:00		325	388	713
09:15		314	389	703
09:30		281	332	613
09:45		295	450	745
10:00		256	316	572
10:15		244	269	513
10:30		226	276	502
10:45		206	261	467
11:00		183	291	474
11:15		183	226	409
11:30		147	178	325
11:45		123	172	295
Total		19136	22055	41191
Percent		46.5%	53.5%	
Peak		18:00	16:15	17:30
Vol.		2099	2480	4403
P.H.F.		0.924	0.958	0.978

RICHARD GARCIA & ASSOCIATES, INC.
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HIALEAH GARDENS, FL 33018
305.595.7505 / FAX 305.675.6474

Site Code: 000000000000
Station ID: 9453
IVES DAIRY RD BET H.LAND LAKES & NE 22AV

Latitude: 0' 0.000 Undefined

Start Time	02-May-07 Wed	EB	WB	Total
12:00 AM		115	140	255
12:15		118	97	215
12:30		103	83	186
12:45		49	92	141
01:00		69	67	136
01:15		59	59	118
01:30		48	51	99
01:45		47	54	101
02:00		35	57	92
02:15		43	43	86
02:30		34	33	67
02:45		35	24	59
03:00		31	28	59
03:15		18	33	51
03:30		35	37	72
03:45		34	42	76
04:00		34	45	79
04:15		31	42	73
04:30		60	61	121
04:45		98	67	165
05:00		114	87	201
05:15		122	110	232
05:30		149	121	270
05:45		225	137	362
06:00		267	176	443
06:15		337	209	546
06:30		560	264	824
06:45		500	418	918
07:00		411	529	940
07:15		517	459	976
07:30		468	451	919
07:45		529	437	966
08:00		468	473	941
08:15		442	457	899
08:30		490	460	950
08:45		434	483	917
09:00		401	427	828
09:15		450	450	900
09:30		502	444	946
09:45		456	464	920
10:00		457	452	909
10:15		452	445	897
10:30		492	418	910
10:45		455	447	902
11:00		438	425	863
11:15		445	467	912
11:30		485	454	939
11:45		463	465	928
Total		12625	11784	24409
Percent		51.7%	48.3%	
Peak		06:30	07:00	07:15
Vol.		1988	1876	3802
P.H.F.		0.888	0.887	0.974

RICHARD GARCIA & ASSOCIATES, INC.
13117 NW 107 AVE. UNIT NO.4
HIALEAH GARDENS, FL 33018
305.595.7505 / FAX 305.675.6474

Site Code: 000000000000
Station ID: 9453
IVES DAIRY RD BET H.LAND LAKES & NE 22AV

Latitude: 0' 0.000 Undefined

Start Time	02-May-07 Wed	EB	WB	Total
12:00 PM		453	551	1004
12:15		459	503	962
12:30		527	471	998
12:45		478	472	950
01:00		467	501	968
01:15		491	505	996
01:30		486	496	982
01:45		428	466	894
02:00		424	496	920
02:15		450	516	966
02:30		533	554	1087
02:45		504	498	1002
03:00		399	567	966
03:15		411	591	1002
03:30		390	535	925
03:45		473	492	965
04:00		418	498	916
04:15		443	599	1042
04:30		430	616	1046
04:45		454	**616**	1070
05:00		456	**629**	1085
05:15		518	**603**	1121
05:30		494	**631**	**1125**
05:45		492	592	**1084**
06:00		**563**	557	**1120**
06:15		**529**	620	**1149**
06:30		**570**	487	1057
06:45		**529**	456	985
07:00		502	498	1000
07:15		470	510	980
07:30		455	454	909
07:45		393	457	850
08:00		426	427	853
08:15		397	434	831
08:30		354	405	759
08:45		349	380	729
09:00		361	376	737
09:15		332	456	788
09:30		333	411	744
09:45		315	347	662
10:00		289	371	660
10:15		299	415	714
10:30		283	384	667
10:45		303	281	584
11:00		249	323	572
11:15		189	282	471
11:30		192	235	427
11:45		144	146	290
Total		19904	22710	42614
Percent		46.7%	53.3%	
Peak		18:00	16:45	17:30
Vol.		2191	2479	4478
P.H.F.		0.961	0.982	0.974

RICHARD GARCIA & ASSOCIATES, INC.
13117 NW 107 AVE. UNIT NO.4
HIALEAH GARDENS, FL 33018
305.595.7505 / FAX 305.675.6474

Site Code: 000000000000
Station ID: 9453
IVES DAIRY RD BET H.LAND LAKES & NE 22AV

Latitude: 0' 0.000 Undefined

Start Time	03-May-07 Thu	EB	WB	Total
12:00 AM		139	152	291
12:15		114	139	253
12:30		91	106	197
12:45		69	101	170
01:00		78	89	167
01:15		85	54	139
01:30		51	54	105
01:45		56	47	103
02:00		41	68	109
02:15		47	53	100
02:30		56	127	183
02:45		38	114	152
03:00		39	44	83
03:15		47	27	74
03:30		43	48	91
03:45		46	44	90
04:00		34	39	73
04:15		38	36	74
04:30		61	52	113
04:45		79	55	134
05:00		79	67	146
05:15		72	80	152
05:30		113	103	216
05:45		204	135	339
06:00		294	143	437
06:15		352	222	574
06:30		489	255	744
06:45		566	416	982
07:00		400	503	903
07:15		482	432	914
07:30		493	440	933
07:45		567	460	1027
08:00		397	450	847
08:15		518	454	972
08:30		439	444	883
08:45		411	439	850
09:00		432	481	913
09:15		438	453	891
09:30		482	474	956
09:45		475	430	905
10:00		466	407	873
10:15		457	455	912
10:30		496	470	966
10:45		453	461	914
11:00		511	484	995
11:15		462	483	945
11:30		518	469	987
11:45		477	485	962
Total		12795	12044	24839
Percent		51.5%	48.5%	
Peak		07:30	11:00	11:00
Vol.		1975	1921	3889
P.H.F.		0.871	0.955	0.947

RICHARD GARCIA & ASSOCIATES, INC.
13117 NW 107 AVE. UNIT NO.4
HIALEAH GARDENS, FL 33018
305.595.7505 / FAX 305.675.6474

Site Code: 000000000000
Station ID: 9453
IVES DAIRY RD BET H.LAND LAKES & NE 22AV

Latitude: 0' 0.000 Undefined

Start Time	03-May-07 Thu	EB	WB	Total
12:00 PM		460	521	981
12:15		485	479	964
12:30		529	495	1024
12:45		475	508	983
01:00		432	501	933
01:15		467	562	1029
01:30		427	521	948
01:45		444	474	918
02:00		422	575	997
02:15		442	560	1002
02:30		516	575	1091
02:45		476	510	986
03:00		457	572	1029
03:15		448	601	1049
03:30		454	560	1014
03:45		421	513	934
04:00		414	539	953
04:15		420	581	1001
04:30		449	**588**	**1037**
04:45		477	**615**	**1092**
05:00		477	**652**	**1129**
05:15		426	**598**	**1024**
05:30		441	584	1025
05:45		413	590	1003
06:00		439	502	941
06:15		488	574	1062
06:30		506	540	1046
06:45		**475**	535	1010
07:00		**481**	504	985
07:15		**494**	519	1013
07:30		**575**	531	1106
07:45		472	486	958
08:00		463	467	930
08:15		463	431	894
08:30		432	394	826
08:45		386	399	785
09:00		373	427	800
09:15		318	455	773
09:30		313	439	752
09:45		325	441	766
10:00		339	438	777
10:15		361	385	746
10:30		352	359	711
10:45		329	380	709
11:00		295	359	654
11:15		250	320	570
11:30		230	321	551
11:45		209	238	447
Total		20240	23718	43958
Percent		46.0%	54.0%	
Peak		18:45	16:30	16:30
Vol.		2025	2453	4282
P.H.F.		0.880	0.941	0.948
Grand Total		97427	103934	201361
Percent		48.4%	51.6%	

ADT Not Calculated

RICHARD GARCIA & ASSOCIATES, INC.
13117 NW 107 AVE. UNIT NO.4
HIALEAH GARDENS, FL 33018
305.595.7505 / FAX 305.675.6474

Site Code: 000000000000
Station ID: 7504
NE 6 AVE BETWEEN NW 143ST & NW 151 ST

Latitude: 0' 0.000 Undefined

Start Time	01-May-07 Tue	NB	SB	Total
12:00 AM		66	74	140
12:15		54	58	112
12:30		64	38	102
12:45		40	49	89
01:00		45	40	85
01:15		23	27	50
01:30		24	26	50
01:45		33	26	59
02:00		26	23	49
02:15		10	15	25
02:30		8	15	23
02:45		10	15	25
03:00		16	19	35
03:15		15	20	35
03:30		14	7	21
03:45		16	12	28
04:00		18	9	27
04:15		6	20	26
04:30		19	18	37
04:45		22	17	39
05:00		18	33	51
05:15		30	41	71
05:30		31	59	90
05:45		39	67	106
06:00		54	106	160
06:15		72	142	214
06:30		84	188	272
06:45		**98**	**194**	**292**
07:00		**127**	**203**	**330**
07:15		**124**	**207**	**331**
07:30		**120**	**211**	**331**
07:45		65	194	259
08:00		59	202	261
08:15		78	185	263
08:30		69	205	274
08:45		77	198	275
09:00		98	184	282
09:15		120	218	338
09:30		110	205	315
09:45		94	175	269
10:00		118	179	297
10:15		116	154	270
10:30		97	187	284
10:45		120	160	280
11:00		99	161	260
11:15		120	179	299
11:30		106	137	243
11:45		130	150	280
Total		3002	5052	8054
Percent		37.3%	62.7%	
Peak		06:45	06:45	06:45
Vol.		469	815	1284
P.H.F.		0.902	0.935	0.950

RICHARD GARCIA & ASSOCIATES, INC.
13117 NW 107 AVE. UNIT NO.4
HIALEAH GARDENS, FL 33018
305.595.7505 / FAX 305.675.6474

Site Code: 000000000000
Station ID: 7504
NE 6 AVE BETWEEN NW 143ST & NW 151 ST

Latitude: 0' 0.000 Undefined

Start Time	01-May-07 Tue	NB	SB	Total
12:00 PM		111	174	285
12:15		108	157	265
12:30		127	147	274
12:45		108	157	265
01:00		123	154	277
01:15		106	157	263
01:30		80	141	221
01:45		60	152	212
02:00		51	149	200
02:15		47	198	245
02:30		95	189	284
02:45		159	180	339
03:00		129	177	306
03:15		141	191	332
03:30		159	166	325
03:45		150	204	354
04:00		160	213	373
04:15		177	201	378
04:30		170	209	379
04:45		154	213	367
05:00		179	**232**	**411**
05:15		168	**227**	**395**
05:30		**180**	**229**	**409**
05:45		**177**	**241**	**418**
06:00		**187**	223	410
06:15		**203**	189	392
06:30		167	188	355
06:45		168	211	379
07:00		161	204	365
07:15		180	226	406
07:30		159	212	371
07:45		139	174	313
08:00		164	192	356
08:15		153	211	364
08:30		123	213	336
08:45		104	163	267
09:00		109	152	261
09:15		111	148	259
09:30		148	183	331
09:45		126	132	258
10:00		122	120	242
10:15		107	130	237
10:30		95	123	218
10:45		99	113	212
11:00		77	96	173
11:15		73	102	175
11:30		65	103	168
11:45		55	72	127
Total		6214	8338	14552
Percent		42.7%	57.3%	
Peak		17:30	17:00	17:00
Vol.		747	929	1633
P.H.F.		0.920	0.964	0.977

Site Code: 000000000000
Station ID: 7504
NE 6 AVE BETWEEN NW 143ST & NW 151 ST

Latitude: 0' 0.000 Undefined

Start Time	02-May-07 Wed	NB	SB	Total
12:00 AM		47	77	124
12:15		46	59	105
12:30		39	50	89
12:45		30	41	71
01:00		23	41	64
01:15		26	19	45
01:30		22	32	54
01:45		19	25	44
02:00		10	16	26
02:15		5	17	22
02:30		5	18	23
02:45		8	16	24
03:00		9	16	25
03:15		8	10	18
03:30		12	12	24
03:45		4	15	19
04:00		12	11	23
04:15		8	13	21
04:30		16	24	40
04:45		18	30	48
05:00		10	34	44
05:15		20	52	72
05:30		24	78	102
05:45		28	69	97
06:00		41	103	144
06:15		54	157	211
06:30		70	169	239
06:45		73	208	281
07:00		47	194	241
07:15		46	**208**	254
07:30		42	**204**	246
07:45		42	**214**	256
08:00		40	**221**	261
08:15		35	207	242
08:30		48	203	251
08:45		62	189	251
09:00		83	217	**300**
09:15		108	193	**301**
09:30		**115**	205	**320**
09:45		**103**	196	**299**
10:00		**108**	170	278
10:15		**113**	158	271
10:30		90	166	256
10:45		83	157	240
11:00		90	149	239
11:15		91	154	245
11:30		96	166	262
11:45		95	151	246
Total		2224	5134	7358
Percent		30.2%	69.8%	
Peak		09:30	07:15	09:00
Vol.		439	847	1220
P.H.F.		0.954	0.958	0.953

RICHARD GARCIA & ASSOCIATES, INC.
13117 NW 107 AVE. UNIT NO.4
HIALEAH GARDENS, FL 33018
305.595.7505 / FAX 305.675.6474

Site Code: 000000000000
Station ID: 7504
NE 6 AVE BETWEEN NW 143ST & NW 151 ST

Latitude: 0' 0.000 Undefined

Start Time	02-May-07 Wed	NB	SB	Total
12:00 PM		91	162	253
12:15		122	168	290
12:30		115	173	288
12:45		131	160	291
01:00		114	151	265
01:15		113	151	264
01:30		55	133	188
01:45		52	140	192
02:00		45	186	231
02:15		54	173	227
02:30		69	153	222
02:45		60	139	199
03:00		44	165	209
03:15		46	209	255
03:30		133	228	361
03:45		139	203	342
04:00		138	227	365
04:15		111	204	315
04:30		140	242	382
04:45		134	213	347
05:00		150	197	347
05:15		147	**243**	390
05:30		154	**221**	**375**
05:45		**204**	**232**	**436**
06:00		**173**	**214**	**387**
06:15		**196**	208	**404**
06:30		**165**	200	365
06:45		155	201	356
07:00		144	211	355
07:15		177	191	368
07:30		147	237	384
07:45		116	180	296
08:00		136	165	301
08:15		121	183	304
08:30		124	182	306
08:45		122	157	279
09:00		117	161	278
09:15		115	191	306
09:30		143	140	283
09:45		122	128	250
10:00		94	131	225
10:15		107	119	226
10:30		108	102	210
10:45		78	105	183
11:00		71	117	188
11:15		63	106	169
11:30		61	96	157
11:45		62	86	148
Total		5478	8284	13762
Percent		39.8%	60.2%	
Peak		17:45	17:15	17:30
Vol.		738	910	1602
P.H.F.		0.904	0.936	0.919

RICHARD GARCIA & ASSOCIATES, INC.
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HIALEAH GARDENS, FL 33018
305.595.7505 / FAX 305.675.6474

Site Code: 000000000000
Station ID: 7504
NE 6 AVE BETWEEN NW 143ST & NW 151 ST

Latitude: 0' 0.000 Undefined

Start Time	03-May-07 Thu	NB	SB	Total
12:00 AM		51	67	118
12:15		40	57	97
12:30		35	61	96
12:45		28	28	56
01:00		16	33	49
01:15		23	35	58
01:30		27	32	59
01:45		20	26	46
02:00		25	32	57
02:15		13	21	34
02:30		15	17	32
02:45		5	17	22
03:00		16	18	34
03:15		12	20	32
03:30		13	17	30
03:45		5	22	27
04:00		16	32	48
04:15		11	26	37
04:30		22	25	47
04:45		11	29	40
05:00		15	36	51
05:15		20	52	72
05:30		24	65	89
05:45		32	63	95
06:00		45	108	153
06:15		55	134	189
06:30		66	185	251
06:45		79	197	276
07:00		53	196	249
07:15		32	191	223
07:30		41	210	251
07:45		36	215	251
08:00		27	188	215
08:15		34	210	244
08:30		42	**193**	235
08:45		60	**204**	264
09:00		88	**219**	**307**
09:15		86	**233**	**319**
09:30		104	180	**284**
09:45		108	192	**300**
10:00		**113**	189	302
10:15		**120**	169	289
10:30		**124**	175	299
10:45		**121**	148	269
11:00		96	164	260
11:15		93	165	258
11:30		89	169	258
11:45		117	184	301
Total		2324	5249	7573
Percent		30.7%	69.3%	
Peak		10:00	08:30	09:00
Vol.		478	849	1210
P.H.F.		0.964	0.911	0.948

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HIALEAH GARDENS, FL 33018
305.595.7505 / FAX 305.675.6474

Site Code: 000000000000
Station ID: 7504
NE 6 AVE BETWEEN NW 143ST & NW 151 ST

Latitude: 0' 0.000 Undefined

Start Time	03-May-07 Thu	NB	SB	Total
12:00 PM		93	172	265
12:15		107	156	263
12:30		116	181	297
12:45		113	147	260
01:00		109	183	292
01:15		120	184	304
01:30		64	156	220
01:45		46	156	202
02:00		48	164	212
02:15		46	187	233
02:30		66	183	249
02:45		60	190	250
03:00		57	162	219
03:15		47	192	239
03:30		108	216	324
03:45		159	207	366
04:00		143	225	368
04:15		154	239	393
04:30		158	228	386
04:45		166	195	361
05:00		180	**225**	405
05:15		159	**246**	405
05:30		**186**	**216**	**402**
05:45		**178**	**230**	**408**
06:00		**174**	220	**394**
06:15		**189**	231	**420**
06:30		183	195	378
06:45		162	222	384
07:00		133	215	348
07:15		156	206	362
07:30		131	212	343
07:45		127	201	328
08:00		137	218	355
08:15		138	229	367
08:30		144	189	333
08:45		130	210	340
09:00		123	156	279
09:15		115	186	301
09:30		121	190	311
09:45		114	196	310
10:00		103	186	289
10:15		113	165	278
10:30		99	141	240
10:45		104	153	257
11:00		92	104	196
11:15		99	155	254
11:30		106	111	217
11:45		71	123	194
Total		5747	9054	14801
Percent		38.8%	61.2%	
Peak		17:30	17:00	17:30
Vol.		727	917	1624
P.H.F.		0.962	0.932	0.967
Grand Total		24989	41111	66100
Percent		37.8%	62.2%	

ADT Not Calculated

RICHARD GARCIA & ASSOCIATES, INC.
13117 NW 107 AVE. UNIT NO.4
HIALEAH GARDENS, FL 33018
305.595.7505 / FAX 305.675.6474

Site Code: 000000000000
Station ID: 9373
NE 14 AVE BETWEEN NW 143ST & NW 151 ST

Latitude: 0' 0.000 Undefined

Start Time	01-May-07 Tue	NB	SB	Total
12:00 AM		51	36	87
12:15		42	35	77
12:30		35	22	57
12:45		31	24	55
01:00		35	19	54
01:15		31	21	52
01:30		19	18	37
01:45		21	18	39
02:00		12	10	22
02:15		9	16	25
02:30		18	10	28
02:45		19	5	24
03:00		15	7	22
03:15		13	13	26
03:30		18	9	27
03:45		13	4	17
04:00		16	4	20
04:15		15	5	20
04:30		9	6	15
04:45		15	22	37
05:00		20	9	29
05:15		24	22	46
05:30		31	37	68
05:45		37	48	85
06:00		59	48	107
06:15		61	78	139
06:30		78	95	173
06:45		92	145	237
07:00		137	124	261
07:15		167	119	286
07:30		138	196	334
07:45		187	214	401
08:00		179	242	421
08:15		186	203	389
08:30		186	160	346
08:45		162	180	342
09:00		144	142	286
09:15		146	141	287
09:30		161	133	294
09:45		133	168	301
10:00		143	146	289
10:15		135	135	270
10:30		137	124	261
10:45		161	146	307
11:00		131	124	255
11:15		146	128	274
11:30		148	133	281
11:45		142	125	267
Total		3908	3869	7777
Percent		50.3%	49.7%	
Peak		07:45	07:30	07:45
Vol.		738	855	1557
P.H.F.		0.987	0.883	0.925

RICHARD GARCIA & ASSOCIATES, INC.
13117 NW 107 AVE. UNIT NO.4
HIALEAH GARDENS, FL 33018
305.595.7505 / FAX 305.675.6474

Site Code: 000000000000
Station ID: 9373
NE 14 AVE BETWEEN NW 143ST & NW 151 ST

Latitude: 0' 0.000 Undefined

Start Time	01-May-07 Tue	NB	SB	Total
12:00 PM		137	129	266
12:15		144	126	270
12:30		153	143	296
12:45		150	154	304
01:00		150	144	294
01:15		157	157	314
01:30		157	148	305
01:45		162	179	341
02:00		167	122	289
02:15		179	157	336
02:30		173	199	372
02:45		182	198	380
03:00		179	167	346
03:15		144	213	357
03:30		162	209	371
03:45		153	181	334
04:00		163	182	345
04:15		180	200	380
04:30		173	208	381
04:45		157	211	368
05:00		182	209	391
05:15		171	185	356
05:30		183	234	417
05:45		180	213	393
06:00		190	166	356
06:15		206	220	426
06:30		170	164	334
06:45		171	160	331
07:00		164	146	310
07:15		183	152	335
07:30		162	133	295
07:45		142	133	275
08:00		167	128	295
08:15		156	119	275
08:30		126	98	224
08:45		107	93	200
09:00		112	87	199
09:15		114	77	191
09:30		151	99	250
09:45		129	87	216
10:00		125	85	210
10:15		110	73	183
10:30		98	84	182
10:45		102	82	184
11:00		80	62	142
11:15		76	51	127
11:30		68	51	119
11:45		58	38	96
Total		7105	6856	13961
Percent		50.9%	49.1%	
Peak		17:30	17:00	17:30
Vol.		759	841	1592
P.H.F.		0.921	0.899	0.934

RICHARD GARCIA & ASSOCIATES, INC.
13117 NW 107 AVE. UNIT NO.4
HIALEAH GARDENS, FL 33018
305.595.7505 / FAX 305.675.6474

Site Code: 000000000000
Station ID: 9373
NE 14 AVE BETWEEN NW 143ST & NW 151 ST

Latitude: 0' 0.000 Undefined

Start Time	02-May-07 Wed	NB	SB	Total
12:00 AM		50	35	85
12:15		49	30	79
12:30		42	20	62
12:45		33	25	58
01:00		26	18	44
01:15		29	18	47
01:30		25	18	43
01:45		22	17	39
02:00		13	19	32
02:15		8	7	15
02:30		8	7	15
02:45		11	8	19
03:00		12	5	17
03:15		11	8	19
03:30		15	3	18
03:45		7	11	18
04:00		15	5	20
04:15		11	9	20
04:30		19	11	30
04:45		21	12	33
05:00		13	10	23
05:15		23	18	41
05:30		27	30	57
05:45		31	37	68
06:00		44	44	88
06:15		57	72	129
06:30		73	113	186
06:45		76	132	208
07:00		50	104	154
07:15		49	173	222
07:30		45	170	215
07:45		45	206	251
08:00		43	186	229
08:15		38	195	233
08:30		51	161	212
08:45		65	180	245
09:00		86	133	219
09:15		111	142	253
09:30		118	154	272
09:45		106	155	261
10:00		111	127	238
10:15		116	108	224
10:30		93	118	211
10:45		86	150	236
11:00		93	124	217
11:15		94	134	228
11:30		99	133	232
11:45		98	147	245
Total		2368	3742	6110
Percent		38.8%	61.2%	
Peak		09:30	07:30	09:15
Vol.		451	757	1024
P.H.F.		0.956	0.919	0.941

RICHARD GARCIA & ASSOCIATES, INC.
13117 NW 107 AVE. UNIT NO.4
HIALEAH GARDENS, FL 33018
305.595.7505 / FAX 305.675.6474

Site Code: 000000000000
Station ID: 9373
NE 14 AVE BETWEEN NW 143ST & NW 151 ST

Latitude: 0' 0.000 Undefined

Start Time	02-May-07 Wed	NB	SB	Total
12:00 PM		94	127	221
12:15		125	145	270
12:30		118	153	271
12:45		134	140	274
01:00		117	196	313
01:15		116	120	236
01:30		58	143	201
01:45		55	153	208
02:00		48	159	207
02:15		57	156	213
02:30		72	154	226
02:45		63	192	255
03:00		47	180	227
03:15		49	187	236
03:30		136	195	331
03:45		142	186	328
04:00		141	176	317
04:15		114	209	323
04:30		143	241	384
04:45		137	193	330
05:00		153	**221**	374
05:15		150	**221**	371
05:30		157	**234**	**391**
05:45		**207**	**219**	**426**
06:00		**176**	212	**388**
06:15		**199**	201	**400**
06:30		**168**	183	351
06:45		158	166	324
07:00		147	154	301
07:15		180	136	316
07:30		150	116	266
07:45		119	134	253
08:00		139	114	253
08:15		124	125	249
08:30		127	96	223
08:45		125	98	223
09:00		120	104	224
09:15		118	81	199
09:30		146	111	257
09:45		125	104	229
10:00		97	94	191
10:15		110	77	187
10:30		111	92	203
10:45		81	95	176
11:00		74	77	151
11:15		66	65	131
11:30		64	69	133
11:45		65	58	123
Total		5622	7062	12684
Percent		44.3%	55.7%	
Peak		17:45	17:00	17:30
Vol.		750	895	1605
P.H.F.		0.906	0.928	0.942

RICHARD GARCIA & ASSOCIATES, INC.
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305.595.7505 / FAX 305.675.6474

Site Code: 000000000000
Station ID: 9373
NE 14 AVE BETWEEN NW 143ST & NW 151 ST

Latitude: 0' 0.000 Undefined

Start Time	03-May-07 Thu	NB	SB	Total
12:00 AM		54	48	102
12:15		43	29	72
12:30		38	31	69
12:45		31	20	51
01:00		19	20	39
01:15		26	20	46
01:30		30	19	49
01:45		23	15	38
02:00		28	15	43
02:15		16	23	39
02:30		18	12	30
02:45		8	13	21
03:00		19	16	35
03:15		15	13	28
03:30		16	11	27
03:45		8	8	16
04:00		19	14	33
04:15		14	15	29
04:30		25	11	36
04:45		14	18	32
05:00		18	13	31
05:15		23	17	40
05:30		27	36	63
05:45		35	37	72
06:00		48	40	88
06:15		58	78	136
06:30		69	113	182
06:45		82	128	210
07:00		56	121	177
07:15		35	130	165
07:30		44	150	194
07:45		39	185	224
08:00		30	203	233
08:15		37	176	213
08:30		45	179	224
08:45		63	183	246
09:00		91	184	275
09:15		89	134	223
09:30		107	159	266
09:45		111	141	252
10:00		116	138	254
10:15		123	148	271
10:30		127	135	262
10:45		124	166	290
11:00		99	153	252
11:15		96	162	258
11:30		92	129	221
11:45		120	131	251
Total		2468	3940	6408
Percent		38.5%	61.5%	
Peak		10:00	07:45	10:00
Vol.		490	743	1077
P.H.F.		0.965	0.915	0.928

RICHARD GARCIA & ASSOCIATES, INC.
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Site Code: 000000000000
Station ID: 9373
NE 14 AVE BETWEEN NW 143ST & NW 151 ST

Latitude: 0' 0.000 Undefined

Start Time	03-May-07 Thu	NB	SB	Total
12:00 PM		96	146	242
12:15		110	150	260
12:30		119	153	272
12:45		116	155	271
01:00		112	163	275
01:15		123	164	287
01:30		67	156	223
01:45		49	137	186
02:00		51	168	219
02:15		49	198	247
02:30		69	171	240
02:45		63	200	263
03:00		60	169	229
03:15		50	170	220
03:30		111	196	307
03:45		162	203	365
04:00		146	186	332
04:15		157	219	376
04:30		161	194	355
04:45		169	**231**	400
05:00		183	**244**	**427**
05:15		162	**217**	**379**
05:30		**189**	**247**	**436**
05:45		**181**	227	**408**
06:00		**177**	214	391
06:15		**192**	201	393
06:30		186	246	432
06:45		165	193	358
07:00		136	186	322
07:15		159	159	318
07:30		134	171	305
07:45		130	180	310
08:00		140	156	296
08:15		141	143	284
08:30		147	142	289
08:45		133	116	249
09:00		126	114	240
09:15		118	109	227
09:30		124	114	238
09:45		117	104	221
10:00		106	104	210
10:15		116	76	192
10:30		102	106	208
10:45		107	76	183
11:00		95	88	183
11:15		102	68	170
11:30		109	76	185
11:45		74	60	134
Total		5891	7666	13557
Percent		43.5%	56.5%	
Peak		17:30	16:45	17:00
Vol.		739	939	1650
P.H.F.		0.962	0.950	0.946
Grand Total		27362	33135	60497
Percent		45.2%	54.8%	

ADT Not Calculated

Appendix B

Traffic Analysis Study

North East Corridor
Traffic Flow Study

Current Conditions **Year 2007**

Roadway	Limits	Facility Type	Function Classification Jurisdiction	Level-of-Service		LOS Std	Existing LOS	Peak Hr Directional Level Of-Service (vph)			Remaining Volume
				AADT (vpd)	Peak Hr Directional (vph)			C	D	E	
Ocean Blvd. / Collins Ave. / A1A	Miami Dade/ Broward Line to William CSWY	4LD	Principal Arterial / State	25857	1034	E	< C	1360	1710	2160	1126
	William CSWY to Sunny Isles Blvd	6LD	Principal Arterial / State	52221	2089	E	< C	2110	2570	3252	1163
	Sunny Isles Blvd to Broad CSWY/96 St	4LD	Principal Arterial / State	50397	2016	E	E	1360	1710	2160	144
	Broad CSWY/96 St to 77 St	3L One Way	Principal Arterial / State	24288	972	E	< C	2110	2570	3252	2280
Harding Ave / A1A	Broad CSWY/96 St to 77 St	3L One Way	Principal Arterial / State	24336	973	E	< C	2110	2570	3252	2279
Biscayne Blvd. / US 1 / SR 5	NE 213 St to Ives Dairy Rd.	8LD	Principal Arterial / State	51714	2069	E	< C	2790	3330	4200	2131
	NE 203 St to William Lehman CSWY	8LD	Principal Arterial / State	71982	2879	E	D	2790	3330	4200	1321
	William Lehman CSWY to Sunny Isles Blvd	8LD	Principal Arterial / State	65403	2616	E	< C	2790	3330	4200	1584
	Sunny Isles Blvd to NE 135 St	8LD	Principal Arterial / State	54349	2174	E	< C	2790	3330	4200	2026
	NE 135 St to NE 16 Ave	6LD	Principal Arterial / State	46898	1876	E	< C	2110	2570	3252	1376
	NE 16 Ave to NE 108 St	6LD	Principal Arterial / State	51714	2069	E	< C	2110	2570	3252	1183
West Dixie HWY / SR 909	County Line Rd. to Ives Dairy Rd.	2LU	Collector / State	15783	631	E	D	590	810	850	219
	Ives Dairy Rd. to Miami Gardens Dr.	2LU	Minor Arterial / State	18093	724	E	D	590	810	850	86
	Miami Gardens Dr. to NE 171 St	2LU	Minor Arterial / State	19119	765	E	D	590	810	850	85
	NE 171 St to NE 163 St	2LU	Minor Arterial / State	22557	902	E	F	590	810	850	-92
	NE 163 St to NE 151 St	4LD	Minor Arterial / State	18516	741	E	< C	1360	1710	1800	1059
	NE 151 St to NE 125 St	4LD	Minor Arterial / State	25064	1003	E	< C	1360	1710	1800	797
Highland Lakes Blvd	County Line Rd. to Ives Dairy Rd.	2LU	Collector	10263	411	E	D	250	530	660	249
NE 18 Ave	NE 199 St to Miami Gardens Dr.	4LD	Collector	24757	990	E	D	580	1140	1320	330
NE 19 Ave	Miami Gardens Dr. to Sunny Isles Blvd.	4LD	Collector	30345	1214	E	E	580	1140	1320	106
NE 16 Ave	Sunny Isles Blvd. to West Dixie Hwy	2LU	Collector	8834	353	E	< C	480	760	810	457
	West Dixie HWY to Opa Locka Blvd	2LU	Collector	11684	467	E	< C	480	760	810	343
	Opa Locka Blvd to Biscayne Blvd	2LU	Collector	14049	562	E	D	480	760	810	248
NE 15 Ave	Miami Gardens Dr. to Sunny Isles Blvd.	2LU	Collector	13579	543	E	E	250	530	660	117
NE 14 Ave	Sunny Isles Blvd. to Opa Locka Blvd.	2LU	Local	19561	782	E	F	250	530	660	-122
NE 12 Ave	Sunny Isles Blvd. to West Dixie Hwy	2LU	Collector	12226	489	E	D	250	530	660	171
	West Dixie HWY to NE 125 St	2LU	Collector	8930	357	E	D	250	530	660	303

North East Corridor
Traffic Flow Study

Current Conditions **Year 2007**

Roadway	Limits	Facility Type	Function Classification Jurisdiction	Level-of-Service		LOS Std	Existing LOS	Peak Hr Directional Level Of-Service (vph)			Remaining Volume
				AADT (vpd)	Peak Hr Directional (vph)			C	D	E	
NE 10 Ave	Miami Gardens Dr. to Sunny Isles Blvd.	2LU	Collector	13918	557	E	D	480	760	810	253
	Sunny Isles Blvd. to West Dixie Hwy	2LU	Collector	7544	302	E	< C	480	760	810	508
	West Dixie HWY to NE 125 St	2LU	Collector	7678	307	E	< C	480	760	810	503
NE 6 Ave / SR 915	Miami Gardens Dr. to Sunny Isles Blvd.	4LD	Minor Arterial / State	32025	1281	E	< C	1360	1710	2160	879
	Sunny Isles Blvd. to Opa Locka Blvd.	4LD	Minor Arterial / State	21372	855	E	< C	1360	1710	2160	1305
	Opa Locka Blvd. to NE 125 St	4LD	Minor Arterial / State	20364	815	E	< C	1360	1710	2160	1345
	NE 125 St to Griffing Blvd.	4LD	Minor Arterial / State	21680	867	E	< C	1360	1710	2160	1293
N. Miami Ave	Sunny Isles Blvd. to Memorial HWY.	2LU	Minor Arterial	10904	436	E	< C	480	760	810	374
	Memorial HWY. to Opa Locka Blvd.	2LU	Minor Arterial	8663	347	E	< C	480	760	810	463
	Opa Locka Blvd. to NE 125 St	2LU	Minor Arterial	4988	200	E	< C	480	760	810	610
	NE 125 St to NW 119 St	2LU	Minor Arterial	6862	274	E	< C	480	760	810	536
NW 2 Ave / Griffing Blvd / Memorial HWY	Sunny Isles Blvd. to N. Miami Ave	4LD	Collector	12032	481	E	< C	1120	1620	1720	1239
	N. Miami Ave to NE 135 St.	2LU	Collector	12911	516	E	D	480	760	810	294
	NE 135 St to W. Dixie HWY	2LU	Collector	11237	449	E	< C	480	760	810	361
	W. Dixie HWY to NE 6 Ave.	2LU	Collector	10015	401	E	< C	480	760	810	409
NW 7 Ave / US 441 / SR 7	Golden Glades Int. to Opa Locka Blvd.	6LD	Minor Arterial	30450	1218	E	< C	1740	2450	2580	1362
	Opa Locka Blvd. to NW 119 St	6LD	Minor Arterial	33056	1322	E	< C	1740	2450	2580	1258
	NW 119 St to NE 103 St.	6LD	Minor Arterial	32281	1291	E	< C	1740	2450	2580	1289
NW 17 Ave	Opa Locka Blvd. to NW 119 St	2LU	Collector	14639	586	E	E	250	530	660	74
	NW 119 St to NW 111 St	4LD	Collector	22343	894	E	D	580	1140	1320	426
Ives Dairy Rd. / NE 203 St	I-95 to Highland Lakes Blvd.	6LD	Minor Arterial	80498	3220	E	F	1740	2450	2580	-640
	Highland Lakes Blvd. to Biscayne Blvd.	6LD	Minor Arterial	65107	2604	E	F	1740	2450	2580	-24
NE 213 St	Biscayne Blvd. to NE 34 Ave	4LD	Local	14943	598	E	D	580	1140	1320	722
Waterway Blvd.	Biscayne Blvd. to NE 34 Ave	4LD	Collector	7834	313	E	< C	580	1140	1320	1007
Aventura Blvd.	Biscayne Blvd. to W Country Club Dr.	4LD	Collector	7423	297	E	< C	580	1140	1320	1023
William Lehman CSWY / SR 856 / NE 192 St	Biscayne Blvd. to Ocean Blvd.	6LD	Urban Principal Arterial Freeways & Expressways	34284	1371	E	< C	4180	5410	7380	6009
Miami Gardens Dr / NE 186 St / SR 860	NW 2 Ave to I-95	6LD	Minor Arterial / State	43283	1731	E	< C	2110	2570	2710	979
	I-95 to NE 15 Ave	4LD	Minor Arterial / State	50921	2037	E	E	1360	1710	2160	123
	NE 15 Ave to NE 18 Ave	4LD	Minor Arterial / State	42703	1708	E	D	1360	1710	2160	452
	NE 18 Ave to Biscayne Blvd.	4LD	Minor Arterial / State	49393	1976	E	E	1360	1710	2160	184
NE 171 St	NE 15 Ave to Biscayne Blvd.	2LU	Collector	14659	586	E	E	250	530	660	74
NE 167 St / SR 826	I-95 to NE 10 Ave	6LD	Principal Arterial / State	62123	2485	E	D	2110	2570	3252	767
	NE 10 Ave to NE 15 Ave	2LU	Collector	13942	558	E	E	250	530	792	234

North East Corridor
Traffic Flow Study

Current Conditions **Year 2007**

Roadway	Limits	Facility Type	Function Classification Jurisdiction	Level-of-Service AADT (vpd)	Level-of-Service Peak Hr Directional (vph)	LOS Std	Existing LOS	Peak Hr Directional Level Of-Service (vph) C	Peak Hr Directional Level Of-Service (vph) D	Peak Hr Directional Level Of-Service (vph) E	Remaining Volume
NE 163 St / Sunny Isles Blvd. / Ocean Beach Blvd. / SR 826	NE 10 Ave to Biscayne Blvd.	6LD	Principal Arterial / State	51703	2068	E	< C	2110	2570	3252	1184
	Biscayne Blvd. to NE 35 Ave.	8LD	Principal Arterial / State	67416	2697	E	< C	2790	3330	4200	1503
	NE 35 Ave. to Ocean Blvd./Collins Ave.	8LD	Principal Arterial / State	42072	1683	E	< C	2790	3330	4200	2517
NE 159 St	NE 6 Ave to NE 10 Ave	2LU	Collector	18409	736	E	F	250	530	660	-76
	NE 10 Ave to W. Dixie HWY	2LU	Collector	13978	559	E	E	250	530	660	101
NE 151 St	NE 10 Ave to Biscayne Blvd.	2LU	Collector	17255	690	E	F	250	530	660	-30
	Biscayne Blvd. to Bay Vista Blvd.	2LU	Collector	10852	434	E	D	250	530	660	226
Opa Locka Blvd. / NE 135 St / SR 916	NW 17 Ave to NW 7 Ave	6LD	Minor Arterial / State	31232	1249	E	< C	2110	2570	2710	1461
	NW 7 Ave to W. Dixie HWY	4LD	Minor Arterial / State	29184	1167	E	< C	1360	1710	1800	633
	W. Dixie HWY to Biscayne Blvd.	4LD	Minor Arterial / State	27136	1085	E	< C	1360	1710	1800	715
	Biscayne Blvd. to Bay Vista Blvd.	2LD	Minor Arterial / State	4209	168	E	< C	590	810	850	682
NW 127 St	NW 22 Ave to NW 7 Ave	2LU	Collector	11014	441	E	D	250	530	660	219
NE 125 St / NE 123 St / Broad CSWY / SR 922	NW 7 Ave to W. Dixie HWY	4LD	Minor Arterial / State	36155	1446	E	D	1360	1710	2160	714
	W. Dixie HWY to Biscayne Blvd.	4LD	Minor Arterial / State	35999	1440	E	D	1360	1710	2160	720
	Biscayne Blvd. to Collins Ave.	4LD	Minor Arterial / State	24104	964	E	< C	1360	1710	2160	1196
NW 119 St / SR 924	NW 22 Ave to NW 7 Ave	6LD	Principal Arterial / State	43232	1729	E	< C	2110	2570	2710	981
	NW 7 Ave to NE 2 Ave	4LD	Principal Arterial / State	20208	808	E	< C	1360	1710	1800	992

North East Corridor
Traffic Flow Study

2015 Conditions

Roadway	Limit	Facility Type	Functional Classification Jurisdiction	Existing AADT (vpd)	Existing Peak Hr (vph)	Growth Factor	Year 2015 Volumes		LOS Std	2015 LOS	Peak Hr Directional Level-Of-Service (vph)			Remaining Volume
							AADT (vpd)	Peak Hr (vph)			C	D	E	
Ocean Blvd. / Collins Ave. / A1A	Miami Dade/ Broward Line to William CSWY	4LD	Principal Arterial / State	25857	1034	1.014	28899	1156	E	< C	1360	1710	2160	1004
	William CSWY to Sunny Isles Blvd	6LD	Principal Arterial / State	52221	2089	1.014	58365	2335	E	D	2110	2570	3252	917
	Sunny Isles Blvd to Broad CSWY/96 St	4LD	Principal Arterial / State	50397	2016	1.013	55883	2235	E	F	1360	1710	2160	-75
	Broad CSWY/96 St to 77 St	3L One Way	Principal Arterial / State	24288	972	1.012	26720	1069	E	< C	2110	2570	3252	2183
Harding Ave / A1A	Broad CSWY/96 St to 77 St	3L One Way	Principal Arterial / State	24336	973	1.014	27199	1088	E	< C	2110	2570	3252	2164
Biscayne Blvd. / US 1 / SR 5	NE 213 St to Ives Dairy Rd.	8LD	Principal Arterial / State	51714	2069	1.014	57798	2312	E	< C	2790	3330	4200	1888
	NE 203 St to William Lehman CSWY	8LD	Principal Arterial / State	71982	2879	1.014	80455	3218	E	D	2790	3330	4200	982
	William Lehman CSWY to Sunny Isles Blvd	8LD	Principal Arterial / State	65403	2616	1.014	73097	2924	E	D	2790	3330	4200	1276
	Sunny Isles Blvd to NE 135 St	8LD	Principal Arterial / State	54349	2174	1.014	60743	2430	E	< C	2790	3330	4200	1770
	NE 135 St to NE 16 Ave	6LD	Principal Arterial / State	46898	1876	1.014	52415	2097	E	< C	2110	2570	3252	1155
	NE 16 Ave to NE 108 St	6LD	Principal Arterial / State	51714	2069	1.014	57798	2312	E	D	2110	2570	3252	940
West Dixie HWY / SR 909	County Line Rd. to Ives Dairy Rd.	2LU	Collector / State	15783	631	1.043	22113	885	E	F	590	810	850	-35
	Ives Dairy Rd. to Miami Gardens Dr.	2LU	Minor Arterial / State	18093	724	1.024	21930	877	E	F	590	810	850	-27
	Miami Gardens Dr. to NE 171 St	2LU	Minor Arterial / State	19119	765	1.013	21178	847	E	E	590	810	850	3
	NE 171 St to NE 163 St	2LU	Minor Arterial / State	22557	902	1.030	28476	1139	E	F	590	810	850	-289
	NE 163 St to NE 151 St	4LD	Minor Arterial / State	18516	741	1.023	22211	888	E	< C	1360	1710	1800	912
	NE 151 St to NE 125 St	4LD	Minor Arterial / State	25064	1003	1.023	30064	1203	E	< C	1360	1710	1800	597
Highland Lakes Blvd	County Line Rd. to Ives Dairy Rd.	2LU	Collector	10263	411	1.026	12622	505	E	D	250	530	660	155
NE 18 Ave	NE 199 St to Miami Gardens Dr.	4LD	Collector	24757	990	1.006	25884	1035	E	D	580	1140	1320	285
NE 19 Ave	Miami Gardens Dr. to Sunny Isles Blvd.	4LD	Collector	30345	1214	1.020	35651	1426	E	F	580	1140	1320	-106
NE 16 Ave	Sunny Isles Blvd. to West Dixie Hwy	2LU	Collector	8834	353	1.023	10558	422	E	< C	480	760	810	388
	West Dixie HWY to Opa Locka Blvd	2LU	Collector	11684	467	1.023	14061	562	E	D	480	760	810	248
	Opa Locka Blvd to Biscayne Blvd	2LU	Collector	14049	562	1.019	16397	656	E	D	480	760	810	154
NE 15 Ave	Miami Gardens Dr. to Sunny Isles Blvd.	4LD	Collector	13579	543	1.037	18097	724	E	D	580	1140	1320	596
NE 14 Ave	Sunny Isles Blvd. to Opa Locka Blvd.	4LD	Local	19561	782	1.017	22385	895	E	D	580	1140	1320	425
NE 12 Ave	Sunny Isles Blvd. to West Dixie Hwy	2LD	Collector	12226	489	1.017	13958	558	E	E	250	530	660	102
	West Dixie HWY to NE 125 St	2LU	Collector	8930	357	1.035	11789	472	E	D	250	530	660	188

North East Corridor
Traffic Flow Study

2015 Conditions

Roadway	Limit	Facility Type	Functional Classification Jurisdiction	Existing AADT (vpd)	Existing Peak Hr (vph)	Growth Factor	Year 2015 Volumes		LOS Std	2015 LOS	Peak Hr Directional Level-Of-Service (vph)			Remaining Volume
							AADT (vpd)	Peak Hr (vph)			C	D	E	
NE 10 Ave	Miami Gardens Dr. to Sunny Isles Blvd.	2LU	Collector	13918	557	1.017	15987	639	E	D	480	760	810	171
	Sunny Isles Blvd. to West Dixie Hwy	2LU	Collector	7544	302	1.029	9506	380	E	< C	480	760	810	430
	West Dixie HWY to NE 125 St	2LU	Collector	7678	307	1.048	11208	448	E	< C	480	760	810	362
NE 6 Ave / SR 915	Miami Gardens Dr. to Sunny Isles Blvd.	4LD	Minor Arterial / State	32025	1281	1.050	47316	1893	E	E	1360	1710	2160	267
	Sunny Isles Blvd. to Opa Locka Blvd.	4LD	Minor Arterial / State	21372	855	1.084	40746	1630	E	D	1360	1710	2160	530
	Opa Locka Blvd. to NE 125 St	4LD	Minor Arterial / State	20364	815	1.084	38824	1553	E	D	1360	1710	2160	607
	NE 125 St to Griffing Blvd.	4LD	Minor Arterial / State	21680	867	1.084	41333	1653	E	D	1360	1710	2160	507
N. Miami Ave	Sunny Isles Blvd. to Memorial HWY.	2LU	Minor Arterial	10904	436	1.017	12432	497	E	D	480	760	810	313
	Memorial HWY. to Opa Locka Blvd.	2LU	Minor Arterial	8663	347	1.055	13254	530	E	D	480	760	810	280
	Opa Locka Blvd. to NE 125 St	2LU	Minor Arterial	4988	200	1.055	7654	306	E	< C	480	760	810	504
	NE 125 St to NW 119 St	2LU	Minor Arterial	6862	274	1.055	10531	421	E	< C	480	760	810	389
NW 2 Ave / Griffing Blvd / Memorial HWY	Sunny Isles Blvd. to N. Miami Ave	4LD	Collector	12032	481	1.050	17769	711	E	< C	1120	1620	1720	1009
	N. Miami Ave to NE 135 St.	2LU	Collector	12911	516	1.011	14053	562	E	D	480	760	810	248
	NE 135 St to W. Dixie HWY	2LU	Collector	11237	449	1.019	13091	524	E	D	480	760	810	286
	W. Dixie HWY to NE 6 Ave.	2LU	Collector	10015	401	1.017	11426	457	E	< C	480	760	810	353
NW 7 Ave / US 441 / SR 7	Golden Glades Int. to Opa Locka Blvd.	6LD	Minor Arterial	30450	1218	1.015	34302	1372	E	< C	2110	2570	3252	1880
	Opa Locka Blvd. to NW 119 St	6LD	Minor Arterial	33056	1322	1.033	42860	1714	E	< C	2110	2570	3252	1538
	NW 119 St to NE 103 St.	6LD	Minor Arterial	32281	1291	1.033	41856	1674	E	< C	2110	2570	3252	1578
NW 17 Ave	Opa Locka Blvd. to NW 119 St	2LU	Collector	14639	586	1.015	16437	657	E	E	250	530	660	3
	NW 119 St to NW 111 St	4LD	Collector	22343	894	1.033	28895	1156	E	E	580	1140	1320	164
Ives Dairy Rd. / NE 203 St	I-95 to Highland Lakes Blvd.	6LD	Minor Arterial	80498	3220	1.016	91533	3661	E	F	1740	2450	2580	-1081
	Highland Lakes Blvd. to Biscayne Blvd.	6LD	Minor Arterial	65107	2604	1.000	65107	2604	E	F	1740	2450	2580	-24
NE 213 St	Biscayne Blvd. to NE 34 Ave	4LD	Local	14943	598	1.010	16220	649	E	D	580	1140	1320	671
Waterway Blvd.	Biscayne Blvd. to NE 34 Ave	4LD	Collector	7834	313	1.036	10410	416	E	< C	580	1140	1320	904
Aventura Blvd.	Biscayne Blvd. to W Country Club Dr.	4LD	Collector	7423	297	1.076	13323	533	E	< C	580	1140	1320	787
William Lehman CSWY / SR 856 / NE 192 St	Biscayne Blvd. to Ocean Blvd.	6LD	Urban Principal Arterial Freeways & Expressways	34284	1371	1.008	36640	1466	E	< C	4180	5410	7380	5914
Miami Gardens Dr / NE 186 St / SR 860	NW 2 Ave to I-95	6LD	Minor Arterial / State	43283	1731	1.018	50088	2004	E	< C	2110	2570	3252	1248
	I-95 to NE 15 Ave	6LD	Minor Arterial / State	50921	2037	1.018	58927	2357	E	D	2110	2570	3252	895
	NE 15 Ave to NE 18 Ave	6LD	Minor Arterial / State	42703	1708	1.018	49254	1970	E	< C	2110	2570	3252	1282
	NE 18 Ave to Biscayne Blvd.	6LD	Minor Arterial / State	49393	1976	1.018	57159	2286	E	D	2110	2570	3252	966
NE 171 St	NE 15 Ave to Biscayne Blvd.	2LU	Collector	14659	586	1.017	16732	669	E	F	250	530	660	-9
NE 167 St / SR 826	I-95 to NE 10 Ave	6LD	Principal Arterial / State	62123	2485	1.010	67206	2688	E	E	1740	2450	3096	408
	NE 10 Ave to NE 15 Ave	2LU	Collector	13942	558	1.014	15573	623	E	E	250	530	792	169

North East Corridor
Traffic Flow Study

2015 Conditions

Roadway	Limit	Facility Type	Functional Classification Jurisdiction	Existing AADT (vpd)	Existing Peak Hr (vph)	Growth Factor	Year 2015 Volumes		LOS Std	2015 LOS	Peak Hr Directional Level-Of-Service (vph)			Remaining Volume
							AADT (vpd)	Peak Hr (vph)			C	D	E	
NE 163 St / Sunny Isles Blvd. / Ocean Beach Blvd. / SR 826	NE 10 Ave to Biscayne Blvd.	6LD	Principal Arterial / State	51703	2068	1.014	57686	2307	E	D	2110	2570	3252	945
	Biscayne Blvd. to NE 35 Ave.	8LD	Principal Arterial / State	67416	2697	1.014	75218	3009	E	D	2790	3330	4200	1191
	NE 35 Ave. to Ocean Blvd./Collins Ave.	8LD	Principal Arterial / State	42072	1683	1.014	46941	1878	E	< C	2790	3330	4200	2322
NE 159 St	NE 6 Ave to NE 10 Ave	2LU	Collector	18409	736	1.027	22782	911	E	F	250	530	660	-251
	NE 10 Ave to W. Dixie HWY	2LU	Collector	13978	559	1.027	17298	692	E	F	250	530	660	-32
NE 151 St	NE 10 Ave to Biscayne Blvd.	2LU	Collector	17255	690	1.027	21371	855	E	F	250	530	660	-195
	Biscayne Blvd. to Bay Vista Blvd.	2LU	Collector	10852	434	1.027	13430	537	E	E	250	530	660	123
Opa Locka Blvd. / NE 135 St / SR 916	NW 17 Ave to NW 7 Ave	6LD	Minor Arterial / State	31232	1249	1.024	37757	1510	E	< C	2110	2570	2710	1200
	NW 7 Ave to W. Dixie HWY	4LD	Minor Arterial / State	29184	1167	1.024	35281	1411	E	D	1360	1710	1800	389
	W. Dixie HWY to Biscayne Blvd.	4LD	Minor Arterial / State	27136	1085	1.024	32805	1312	E	< C	1360	1710	1800	488
	Biscayne Blvd. to Bay Vista Blvd.	2LD	Minor Arterial / State	4209	168	1.024	5094	204	E	< C	590	810	850	646
NW 127 St	NW 22 Ave to NW 7 Ave	2LU	Collector	11014	441	1.007	11684	467	E	D	250	530	660	193
NE 125 St / NE 123 St / Broad CSWY / SR 922	NW 7 Ave to W. Dixie HWY	4LD	Minor Arterial / State	36155	1446	1.004	37423	1497	E	D	1360	1710	2160	663
	W. Dixie HWY to Biscayne Blvd.	4LD	Minor Arterial / State	35999	1440	1.004	37261	1490	E	D	1360	1710	2160	670
	Biscayne Blvd. to Collins Ave.	4LD	Minor Arterial / State	24104	964	1.004	24948	998	E	< C	1360	1710	2160	1162
NW 119 St / SR 924	NW 22 Ave to NW 7 Ave	6LD	Principal Arterial / State	43232	1729	1.005	45134	1805	E	< C	2110	2570	2710	905
	NW 7 Ave to NE 2 Ave	4LD	Principal Arterial / State	20208	808	1.005	21098	844	E	< C	1360	1710	1800	956

North East Corridor
Traffic Flow Study

2030 Conditions

Roadway	Limit	Facility Type	Functional Classification Justification	2015 AADT (vpd)	2015 Peak Hr (vph)	Growth Factor	Year 2030 Volumes		LOS Std	2030 LOS	Peak Hr Directional Level-Of-Service (vph)			Remaining Volume
							AADT (vpd)	Peak Hr (vph)			C	D	E	
Ocean Blvd. / Collins Ave. / A1A	Miami Dade/ Broward Line to William CSWY	4LD	Principal Arterial / State	28899	1156	1.009	33056	1322	E	< C	1360	1710	2160	838
	William CSWY to Sunny Isles Blvd	6LD	Principal Arterial / State	58365	2335	1.009	66760	2670	E	E	2110	2570	3252	582
	Sunny Isles Blvd to Broad CSWY/96 St	4LD	Principal Arterial / State	55883	2235	1.012	66832	2673	E	F	1360	1710	2160	-513
	Broad CSWY/96 St to 77 St	3L One Way	Principal Arterial / State	26720	1069	1.007	29667	1187	E	< C	2110	2570	3252	2065
Harding Ave / A1A	Broad CSWY/96 St to 77 St	3L One Way	Principal Arterial / State	27199	1088	1.009	31111	1244	E	< C	2110	2570	3252	2008
Biscayne Blvd. / US 1 / SR 5	NE 213 St to Ives Dairy Rd.	8LD	Principal Arterial / State	57798	2312	1.009	66112	2644	E	< C	2790	3330	4200	1556
	NE 203 St to William Lehman CSWY	8LD	Principal Arterial / State	80455	3218	1.009	92326	3693	E	E	2790	3330	4200	507
	William Lehman CSWY to Sunny Isles Blvd	8LD	Principal Arterial / State	73097	2924	1.009	83612	3344	E	E	2790	3330	4200	856
	Sunny Isles Blvd to NE 135 St	8LD	Principal Arterial / State	60743	2430	1.009	69481	2779	E	< C	2790	3330	4200	1421
	NE 135 St to NE 16 Ave	6LD	Principal Arterial / State	52415	2097	1.009	59954	2398	E	D	2110	2570	3252	854
	NE 16 Ave to NE 108 St	6LD	Principal Arterial / State	57798	2312	1.009	66112	2644	E	E	2110	2570	3252	608
West Dixie HWY / SR 909	County Line Rd. to Ives Dairy Rd.	2LU	Collector / State	22113	885	1.011	26056	1042	E	F	590	810	850	-192
	Ives Dairy Rd. to Miami Gardens Dr.	2LU	Minor Arterial / State	21930	877	1.007	24496	980	E	F	590	810	850	-130
	Miami Gardens Dr. to NE 171 St	2LU	Minor Arterial / State	21178	847	1.011	24910	996	E	F	590	810	850	-146
	NE 171 St to NE 163 St	2LU	Minor Arterial / State	28476	1139	1.014	34834	1393	E	F	590	810	850	-543
	NE 163 St to NE 151 St	6LD	Minor Arterial / State	22211	888	1.011	26171	1047	E	<C	2110	2570	2710	1663
	NE 151 St to NE 125 St	6LD	Minor Arterial / State	30064	1203	1.011	35425	1417	E	<C	2110	2570	2710	1293
Highland Lakes Blvd	County Line Rd. to Ives Dairy Rd.	2LU	Collector	12622	505	1.019	16779	671	E	F	250	530	660	-11
NE 18 Ave	NE 199 St to Miami Gardens Dr.	4LD	Collector	25884	1035	1.012	31021	1241	E	E	580	1140	1320	79
NE 19 Ave	Miami Gardens Dr. to Sunny Isles Blvd.	4LD	Collector	35651	1426	1.012	42851	1714	E	F	580	1140	1320	-394
NE 16 Ave	Sunny Isles Blvd. to West Dixie Hwy	2LU	Collector	10558	422	1.015	13221	529	E	D	480	760	810	281
	West Dixie HWY to Opa Locka Blvd	2LU	Collector	14061	562	1.011	16648	666	E	D	480	760	810	144
	Opa Locka Blvd to Biscayne Blvd	2LU	Collector	16397	656	1.016	20682	827	E	F	480	760	810	-17
NE 15 Ave	Miami Gardens Dr. to Sunny Isles Blvd.	4LD	Collector	18097	724	1.021	24562	982	E	F	250	530	660	-322
NE 14 Ave	Sunny Isles Blvd. to Opa Locka Blvd.	4LD	Local	22385	895	1.016	28403	1136	E	F	250	530	660	-476
NE 12 Ave	Sunny Isles Blvd. to West Dixie Hwy	2LD	Collector	13958	558	1.016	17822	713	E	F	250	530	660	-53
	West Dixie HWY to NE 125 St	2LU	Collector	11789	472	1.016	15053	602	E	E	250	530	660	58

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							AADT (vpd)	Peak Hr (vph)			C	D	E	
NE 10 Ave	Miami Gardens Dr. to Sunny Isles Blvd.	2LU	Collector	15987	639	1.015	20134	805	E	E	480	760	810	5
	Sunny Isles Blvd. to West Dixie Hwy	2LU	Collector	9506	380	1.020	12725	509	E	D	480	760	810	301
	West Dixie HWY to NE 125 St	2LU	Collector	11208	448	1.014	13725	549	E	D	480	760	810	261
NE 6 Ave / SR 915	Miami Gardens Dr. to Sunny Isles Blvd.	4LD	Minor Arterial / State	47316	1893	1.019	62750	2510	E	F	1360	1710	2160	-350
	Sunny Isles Blvd. to Opa Locka Blvd.	4LD	Minor Arterial / State	40746	1630	1.019	54038	2162	E	F	1360	1710	2160	-2
	Opa Locka Blvd. to NE 125 St	4LD	Minor Arterial / State	38824	1553	1.019	51489	2060	E	E	1360	1710	2160	100
	NE 125 St to Griffing Blvd.	4LD	Minor Arterial / State	41333	1653	1.011	48704	1948	E	E	1360	1710	2160	212
N. Miami Ave	Sunny Isles Blvd. to Memorial HWY.	2LU	Minor Arterial	12432	497	1.014	15419	617	E	D	480	760	810	193
	Memorial HWY. to Opa Locka Blvd.	2LU	Minor Arterial	13254	530	1.014	16438	658	E	D	480	760	810	152
	Opa Locka Blvd. to NE 125 St	2LU	Minor Arterial	7654	306	1.019	10216	409	E	< C	480	760	810	401
	NE 125 St to NW 119 St	2LU	Minor Arterial	10531	421	1.011	12368	495	E	D	480	760	810	315
NW 2 Ave / Griffing Blvd / Memorial HWY	Sunny Isles Blvd. to N. Miami Ave	4LD	Collector	17769	711	1.016	22488	900	E	< C	1120	1620	1720	820
	N. Miami Ave to NE 135 St.	2LU	Collector	14053	562	1.016	17785	711	E	D	480	760	810	99
	NE 135 St to W. Dixie HWY	2LU	Collector	13091	524	1.005	14089	564	E	D	480	760	810	246
	W. Dixie HWY to NE 6 Ave.	2LU	Collector	11426	457	1.005	12297	492	E	D	480	760	810	318
NW 7 Ave / US 441 / SR 7	Golden Glades Int. to Opa Locka Blvd.	6LD	Minor Arterial	34302	1372	1.012	41023	1641	E	< C	2110	2570	3252	1611
	Opa Locka Blvd. to NW 119 St	6LD	Minor Arterial	42860	1714	1.015	53585	2143	E	D	2110	2570	3252	1109
	NW 119 St to NE 103 St.	6LD	Minor Arterial	41856	1674	1.015	52329	2093	E	< C	2110	2570	3252	1159
NW 17 Ave	Opa Locka Blvd. to NW 119 St	2LU	Collector	16437	657	1.012	19732	789	E	F	250	530	660	-129
	NW 119 St to NW 111 St	4LD	Collector	28895	1156	1.015	35948	1438	E	F	580	1140	1320	-118
Ives Dairy Rd. / NE 203 St	I-95 to Highland Lakes Blvd.	6LD	Minor Arterial	91533	3661	1.011	107320	4293	E	F	1740	2450	2580	-1713
	Highland Lakes Blvd. to Biscayne Blvd.	6LD	Minor Arterial	65107	2604	1.011	76717	3069	E	F	1740	2450	2580	-489
NE 213 St	Biscayne Blvd. to NE 34 Ave	4LD	Local	16220	649	1.016	20581	823	E	D	580	1140	1320	497
Waterway Blvd.	Biscayne Blvd. to NE 34 Ave	4LD	Collector	10410	416	1.015	13015	521	E	< C	580	1140	1320	799
Aventura Blvd.	Biscayne Blvd. to W Country Club Dr.	4LD	Collector	13323	533	1.015	16657	666	E	D	580	1140	1320	654
William Lehman CSWY / SR 856 / NE 192 St	Biscayne Blvd. to Ocean Blvd.	6LD	Urban Principal Arterial Freeways & Expressways	36640	1466	1.026	53818	2153	E	< C	4180	5410	7380	5227
Miami Gardens Dr / NE 186 St / SR 860	NW 2 Ave to I-95	6LD	Minor Arterial / State	50088	2004	1.015	62744	2510	E	D	2110	2570	3252	742
	I-95 to NE 15 Ave	6LD	Minor Arterial / State	58927	2357	1.015	73817	2953	E	E	2110	2570	3252	299
	NE 15 Ave to NE 18 Ave	6LD	Minor Arterial / State	49254	1970	1.015	61700	2468	E	D	2110	2570	3252	784
	NE 18 Ave to Biscayne Blvd.	6LD	Minor Arterial / State	57159	2286	1.015	71602	2864	E	E	2110	2570	3252	388
NE 171 St	NE 15 Ave to Biscayne Blvd.	2LU	Collector	16732	669	1.011	19758	790	E	F	250	530	660	-130
NE 167 St / SR 826	I-95 to NE 10 Ave	6LD	Principal Arterial / State	67206	2688	1.013	81313	3253	E	F	1740	2450	3096	-157
	NE 10 Ave to NE 15 Ave	2LU	Collector	15573	623	1.024	22261	890	E	F	250	530	792	-98

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							AADT (vpd)	Peak Hr (vph)			C	D	E	
NE 163 St / Sunny Isles Blvd. / Ocean Beach Blvd. / SR 826	NE 10 Ave to Biscayne Blvd.	6LD	Principal Arterial / State	57686	2307	1.013	70375	2815	E	E	2110	2570	3252	437
	Biscayne Blvd. to NE 35 Ave.	8LD	Principal Arterial / State	75218	3009	1.013	91763	3671	E	E	2790	3330	4200	529
	NE 35 Ave. to Ocean Blvd./Collins Ave.	8LD	Principal Arterial / State	46941	1878	1.013	57266	2291	E	< C	2790	3330	4200	1909
NE 159 St	NE 6 Ave to NE 10 Ave	2LU	Collector	22782	911	1.006	24920	997	E	F	250	530	660	-337
	NE 10 Ave to W. Dixie HWY	2LU	Collector	17298	692	1.006	18872	755	E	F	250	530	660	-95
NE 151 St	NE 10 Ave to Biscayne Blvd.	2LU	Collector	21371	855	1.008	24092	964	E	F	250	530	660	-304
	Biscayne Blvd. to Bay Vista Blvd.	2LU	Collector	13430	537	1.016	17129	685	E	F	250	530	660	-25
Opa Locka Blvd. / NE 135 St / SR 916	NW 17 Ave to NW 7 Ave	6LD	Minor Arterial / State	37757	1510	1.016	47908	1916	E	< C	2110	2570	2710	794
	NW 7 Ave to W. Dixie HWY	4LD	Minor Arterial / State	35281	1411	1.016	44766	1791	E	E	1360	1710	1800	9
	W. Dixie HWY to Biscayne Blvd.	4LD	Minor Arterial / State	32805	1312	1.016	41625	1665	E	D	1360	1710	1800	135
	Biscayne Blvd. to Bay Vista Blvd.	2LD	Minor Arterial / State	5094	204	1.016	6494	260	E	< C	590	810	850	590
NW 127 St	NW 22 Ave to NW 7 Ave	2LU	Collector	11684	467	1.011	13718	549	E	E	250	530	660	111
NE 125 St / NE 123 St / Broad CSWY / SR 922	NW 7 Ave to W. Dixie HWY	4LD	Minor Arterial / State	37423	1497	1.015	46517	1861	E	E	1360	1710	2160	299
	W. Dixie HWY to Biscayne Blvd.	4LD	Minor Arterial / State	37261	1490	1.015	46316	1853	E	E	1360	1710	2160	307
	Biscayne Blvd. to Collins Ave.	4LD	Minor Arterial / State	24948	998	1.015	31011	1240	E	< C	1360	1710	2160	920
NW 119 St / SR 924	NW 22 Ave to NW 7 Ave	6LD	Principal Arterial / State	45134	1805	1.014	55359	2214	E	D	2110	2570	2710	496
	NW 7 Ave to NE 2 Ave	4LD	Principal Arterial / State	21098	844	1.014	25877	1035	E	< C	1360	1710	1800	765