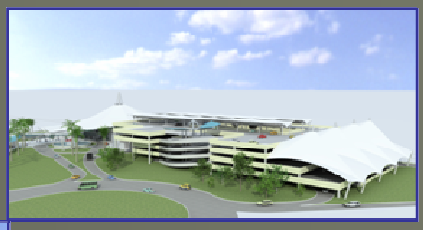
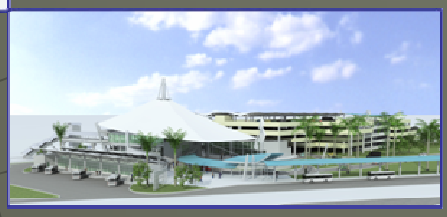
GOLDEN GLADES MULTIMODAL TRANSPORTATION FACILITY
PD & E
Preliminary Engineering Final Report

golden glades
multimodal center

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Florida Department of Transportation
District VI

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GOLDEN GLADES MULTIMODAL TRANSPORTATION FACILITY PD&E STUDY PRELIMINARY ENGINEERING REPORT

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SECTION 1 - EXECUTIVE SUMMARY

1.1 Introduction

The project development process involves the collection of information and data, the development of engineering alternatives, the evaluation and comparison of the alternatives and the documentation of engineering decisions and recommendations. The intent of the Project Development and Environment (PD&E) study process is to develop each project to the level of detail necessary to accurately assess the economic and environmental impacts through the application of preliminary engineering and environmental science. This Preliminary Engineering (PE) Report is used to develop and document the design criteria and engineering decisions for proposed improvements at the Golden Glades Multimodal Transportation Facility (GGMTF) and adjacent roadways. The preferred project alternative and subsequent recommendations will improve the Park-and-Ride (PNR) by enhancing amenities and transfer of modes while providing for the improvement of the safety and operations on SR 7, SR 9 and the two major intersections adjacent to the study area.

1.2 Commitments

This Project Development and Environment (PD&E) study addresses the proposed improvements for the GGMTF in Miami-Dade County, Florida.

The Florida Department of Transportation (FDOT), District VI will assess the benefits of implementing the referenced improvements along with the associated cost of implementation. The emerging recommended improvement program will be implemented in accordance with the commitments herein:

- FDOT is committed to continuing coordination with Miami-Dade County Transit, Broward County Transit, Greyhound Bus Lines, and the South Florida Regional Transportation Authority (SFRTA) throughout the design and construction phases of the project in order to maintain and accommodate the minimum program requirements and to define the management and operational responsibilities for a successful multimodal facility.

- FDOT is also committed to the inclusion of design features for the GGMTF that allow visual/aesthetic elements accenting the presence of the facilities in such a manner as to serve as a gateway to the Cities of Miami, Opa-Locka, Miami Gardens, North Miami, and North Miami Beach. These features, where found reasonable and feasible may include the following:

    - Signage and/or intelligent message signal displays;

    - Architectural facades facing I-95, South Florida Rail Corridor/SFRTA station, SR 9 and SR 7 that are aesthetically pleasing and functionally sufficient to meet the goals of improved use of the facilities;

    - Preservation of existing landscape features and inclusion of new landscaping within and around both the GGMTF and the surrounding roadway/ramp network.

- The proposed roadway improvements will be designed in accordance with FDOT standards and will comply with recommended standard practices set forth in the applicable FDOT and AASHTO documents.

- Maintenance of traffic/operations plans will be developed during the design phase of the project to minimize impacts to the traveling public and the currently operating PNR facility during the construction of the improvements. Access to businesses, residences, and through traffic will be maintained to the maximum extent possible during project implementation. The local news media will be notified in advance of road closings and other construction-related activities, which could excessively inconvenience the community so that business owners, residents, and/or tourists in the area can plan travel routes in advance. A sign providing the name, address, and telephone number of an FDOT contact person will be displayed on-site to assist the public in obtaining answers to questions or filing complaints about project construction.

- Best management practices will be used to minimize construction impacts on noise, and water quality of storm discharges. The contractor shall dispose of all oil, chemical, fuel, etc., in an acceptable manner according to local, state, and federal regulations and shall not dump these contaminants on the ground or in sinkholes, canals, ponds, or lakes, but rather in a safe and legal means of disposal.

- The FDOT commits to continue to coordinate with Congressman Meek and the City of Miami Gardens during the course of the Final Design phase of the project.

- During the joint development phase, the FDOT will further coordinate with the Turnpike Enterprise regarding the Truck Plaza proposal.

- During the Final Design phase, the FDOT will coordinate further with the North Dade Chamber of Commerce concerning the feasibility of the Welcome Center proposal.

- During the Joint Development phase, the FDOT will develop interagency agreements with the project stakeholders, including SFRTA, Greyhound, and Miami-Dade Transit. These agreements will outline the operation and details of the facility.

- During the PD&E and Final Design phases, the FDOT will continue to coordinate with the Miami-Dade County Bicycle/Pedestrian Advisory Committee to review and incorporate the following if found feasible: paved shoulders along SR 7, bike racks and lockers, elevators to the platform of the terminal building, a bike station, and an extension of the pedestrian bridge from the terminal to the SFRTA station across the railroad tracks.

- During the Final Design phase, the FDOT will coordinate further with the MPO Sub-Committee, the Transportation Aesthetics Review Committee (TARC), the Community Image Advisory Board (CIAB) to receive their input with regards to the design features for the facility and their involvement with the joint development proposal review process.

1.3 Alternatives

1.3.1 No Build

This alternative assumes that no improvements would be implemented for the PNR or the access. Aside from the parking areas and roads, the existing structures are minimal. The bus platform has a roof, four bays, benches and an unoccupied information booth. The SFRTA station platform is on the opposite side of SR 9 and is accessible via a pedestrian overpass. SFRTA train service is Florida's only commuter railroad which operates along the SFRC. The rail platform includes roofed benches and several pay telephones. The SFRTA station platform is on the opposite side of SR 9 and is accessible via a pedestrian overpass. The rail platform includes roofed benches and several pay telephones. The SFRTA booth and a few newspaper racks are scattered throughout the area. Drinking water is not available. However, the station is currently being expanded and refurbished. The walking distance from the auto/bus passenger drop-off platform to the SFRTA platform is approximately 1,500 feet including ramps to the railroad overpass. Greyhound Bus Lines provide two temporary one-story modular building. A 1050-gallon capacity septic tank and two 426 SF drain fields (one active and one for stand-by) are provided for sanitary facilities. There are 36 parking spaces and 15 bus parking spaces. The site covers an area of 41,661 SF.

Some of the deficiencies that currently exist at the PNR are: no rest room facilities; frequent curb breaks at bus bays due to lack of steel reinforcement in the concrete; some operational problems for buses exiting to the north during peak periods; and the location of handicap ramps at the ends, instead of in the middle of the waiting platform.

This alternative will be considered viable during the public hearing and final selection phase to serve as a comparison to the study alternatives.

1.3.2 Alternative 1

In this alternative the SR 9 alignment remains as it is currently. As such, the site location is not adjacent to the SFRTA station and the GGMTF would consist of a parking garage structure for approximately 800 vehicles with bus bays located on the ground floor level. The design would provide the flexibility to accommodate additional parking garage spaces in the future. The GGMTF would include passenger waiting areas and amenities; areas for transit supportive joint development (e.g., retail); an enclosed pedestrian bridge to connect the SFRTA station with the garage, and office space within the terminal to accommodate administrative and operations staff as well as Intelligent Transportation Systems (ITS) equipment. In addition, it is anticipated that a “gateway” feature such as a fountain or statue could be accommodated within the site. The GGMTF would include kiss & ride areas for passenger pick-ups and drop-offs and remote parking along the fringes of the property. Pedestrian facilities would be integrated within the GGMTF site plan to facilitate movements from the garage to the terminal. Roadway improvements would be minor; focusing on access/egress to the facility and to correct safety and operational deficiencies.

The roadways improvements include:

- Additional through lane on SR 7 in the northbound direction, just south of the SR 7/GGMTF entrance intersection
- Additional through lane on SR 7 in the southbound direction, just north of the SR 7/GGMTF entrance intersection
- Widening of the SR 7/SR 9 merge area to improve weaving in this area
- Improving the geometric and signal phasing configuration of SR 7/GGMTF entrance intersection. Proposed intersection configuration consists of:
    - Northbound approach: double left turn lanes, two thru lanes and one thru/right shared lane,
    - Southbound approach: single left turn lane, two thru lanes and one exclusive right turn pocket lane,
    - Eastbound approach: double left turn lanes, one thru lane and one free right turn lane,
    - Westbound approach: Single left turn lane and one thru/right shared lane.

1.3.3 Alternative 2

In this alternative, the site location is placed closer to the SFRTA Station. The GGMTF would consist of a 1,300-space garage with bus bays located on the ground floor level. The remainder of the GGMTF would be the same concept as presented in Alternative 1.

Improvements to access roads were evaluated in terms of improving access/egress to the GGMTF as well as addressing traffic operational and safety deficiencies within the site. The improvement concept is based on a major revamping of the existing roadway system (i.e. SR 7 and SR 9) to simplify access and egress as well as open up the site for development. The proposed improvements would consist of a complete realignment of SR 9, both northbound and southbound. The new alignment would follow the southern and eastern edges of the current PNR. Southbound access to the GGMTF, from SR 826 and the Turnpike, would be provided via a new off ramp connection. Northbound access from the GGMTF, to I-95, SR 826 and the Turnpike, would also be provided by a new ramp as part of the access road improvements. Grade separations would be provided at critical intersections within the immediate vicinity of the GGMTF to enhance traffic circulation for both passenger cars and buses.

1.4 Golden Glades Multimodal Transportation Facility Build Out

It is expected that the GGMTF improvements will be phased into an initial build and a final build-out, for both alternatives as described below:

Initial Building Development

The initial GGMTF improvements would include the following:

- A covered SFRTA station connection
- An Inter-City Bus Terminal (6 bus bays, 8,250 SF)
- A Covered Hub Plaza for pedestrian circulation among transportation modes.

- Provisions for retail kiosks (by others)
- Automobile & Jitney Bus Drop-off and Taxi staging
- Local & Express Bus Bays with covered walkways (12 buses – combination of standard & articulated buses)
- Public Restrooms
- Parking Structure for approximately 800 parking spaces for Alternative 1 and 1,300 parking spaces for Alternative 2.
- Passenger Information System

Build-out Development

For the final phase of the development the GGMTF improvements considered include the following:

- Incorporation of retail or other joint development within the Covered Hub Plaza (this is to be determined by joint development)
- A Traffic Management Center
- A Sheriff's Station
- A Chamber of Commerce Office

A summary of construction cost estimates (2005 dollars) for the study alternatives is presented in Table 1.1:

Table 1.1 - Project Cost Estimates - Study Alternatives (2004 Dollars)

Alternative	GGMTF Construction Cost	Roadway Construction Cost	Total Cost Estimate
No Build Alternative	$0	$0	$0
Alternative 1	$30,194,628	$3,736,061	$33,930,689
Alternative 2	$35,462,020	$34,534,552	$69,996,572

Several key evaluation parameters were used to evaluate the three project alternatives including: roadway/facility cost, social and neighborhood impacts, impacts to the natural environment, potential noise, air and contamination impacts, traffic level of service, traffic safety, joint development opportunity, maintenance of traffic during construction, construction time, compliance with local land use plans, utility impacts and transportation service. Based on the analyses presented herein, Alternative 1 is recommended as the "Preferred Alternative" for the following reasons:

- Alternative 1 is the only alternative which provides a balance in providing needed traffic capacity and safety improvements while minimizing disruption to traffic patterns and providing for modest roadway Level-of-Service (LOS) gains.
- Alternative 1 can be constructed faster than Alternative 2 and have much less of an impact on the motoring public, surrounding neighborhoods, drainage facilities, and utilities.
- Alternative 2 has a total roadway cost which is approximately 9 times more than that of Alternative 1 yet does not show significant benefits to warrant such cost.
- Alternative 2 does not provide adequate capacity gains, as compared to the increased expense, to accommodate both existing and future traffic.

1.5 Joint-Development Participation

The Department will be seeking participation from a Joint Development Team during the build out phase of the GGMMTF sites. At this point, it is anticipated that the Department would construct the Multimodal Facility, the improvements to the public roadway system, and the connection to the SFRTA terminal. All other improvements such as the parking structure, internal site circulation roads, gateway features, and other transit oriented development features such as retail area in the GGMMTF or other buildings/landscaping items would be provided by the Joint Development Team. This, obviously, will remain flexible depending on the proposals received by the Department during the Request-for-Proposal phase of this project.

1.6 Recommendations

Based on the alternative analyses presented in Section 8, Alternative 1 was selected as the preferred alternative. The preferred alternative (see Figure 8-2) was selected based on the evaluation of feasible alternatives, traffic capacity, safety, and cost.

The preferred alternative requires a one-lane ramp, 15' wide with 6' shoulders on each side, from SR 9 to the GGMTF; and a two-lane ramp, 24' wide with 8' shoulder on the inside and 12' shoulder on the outside from SR 9 westbound. In addition a three-lane section 36' wide with 12' shoulder on each side for SR 7. Roadway construction will consist of some widening with emphasis on milling and resurfacing.

Implementation of improvements to the GGMTF is contingent upon the availability of funds and responsiveness of the "Request for Joint Development Proposals". The current FDOT Five Year Transportation Work Program for District VI (Fiscal Years 2004/2005 to 2008/2009) includes $35,095,000 for FY 07/08.

The following recommendations should be adhered to during project implementation:

- ***Maintenance of Traffic/Operations*** **-** The proposed project will include maintenance of traffic/operations strategies that will consider the following specific objectives: (1) provide safe travel through the corridors during construction; (2) provide for safe travel to and from the existing PNR facility; (3) provide for the efficient and clear operation of the existing facility during construction; (4) provide an adequate level of service for traffic using both SR 7 & SR 9 during construction; and (5) minimize the number of lane shifts through the work zone in order to enhance traffic flow and facilitate driver decision making through the interchange.
- ***Best Practices:*** - Best management practices will be used to minimize construction impacts on air, noise, and water quality. The contractor shall dispose of all oil, chemical, fuel, etc., in an acceptable manner according to local, state, and federal regulations and shall not dump these contaminants on the ground or in sinkholes, canals, ponds, or lakes.

1.7 Summary

A summary of total project costs for the "Preferred Alternative", including roadway construction, facility construction, preliminary engineering, and construction engineering & inspection, is presented in Table 1.2 shown below.

Table 1.2 Summary of Project Costs

Cost Category	Preferred Alternative
Roadway Construction	$3,736,061
GGMTF Construction	$27,756,000
Preliminary Engineering (8%)	$2,714,455
CE&I (8%)	$2,714,455
TOTAL	**$39,359,599**

The balance of this Preliminary Engineering Report documents the engineering, environmental, and alternatives analyses conducted as part of the PD&E Study leading to the selection of the "Preferred Alternative."

SECTION 2 - INTRODUCTION

2.1 Study Purpose

The purpose of the Preliminary Engineering Report is to document the existing condition information of the PNR and roadways focusing on the engineering/geometric characteristics, operational elements, the socio-economic/environmental features, formulate possible alternatives to address deficiencies, analyze them and then make a preferred recommendation.

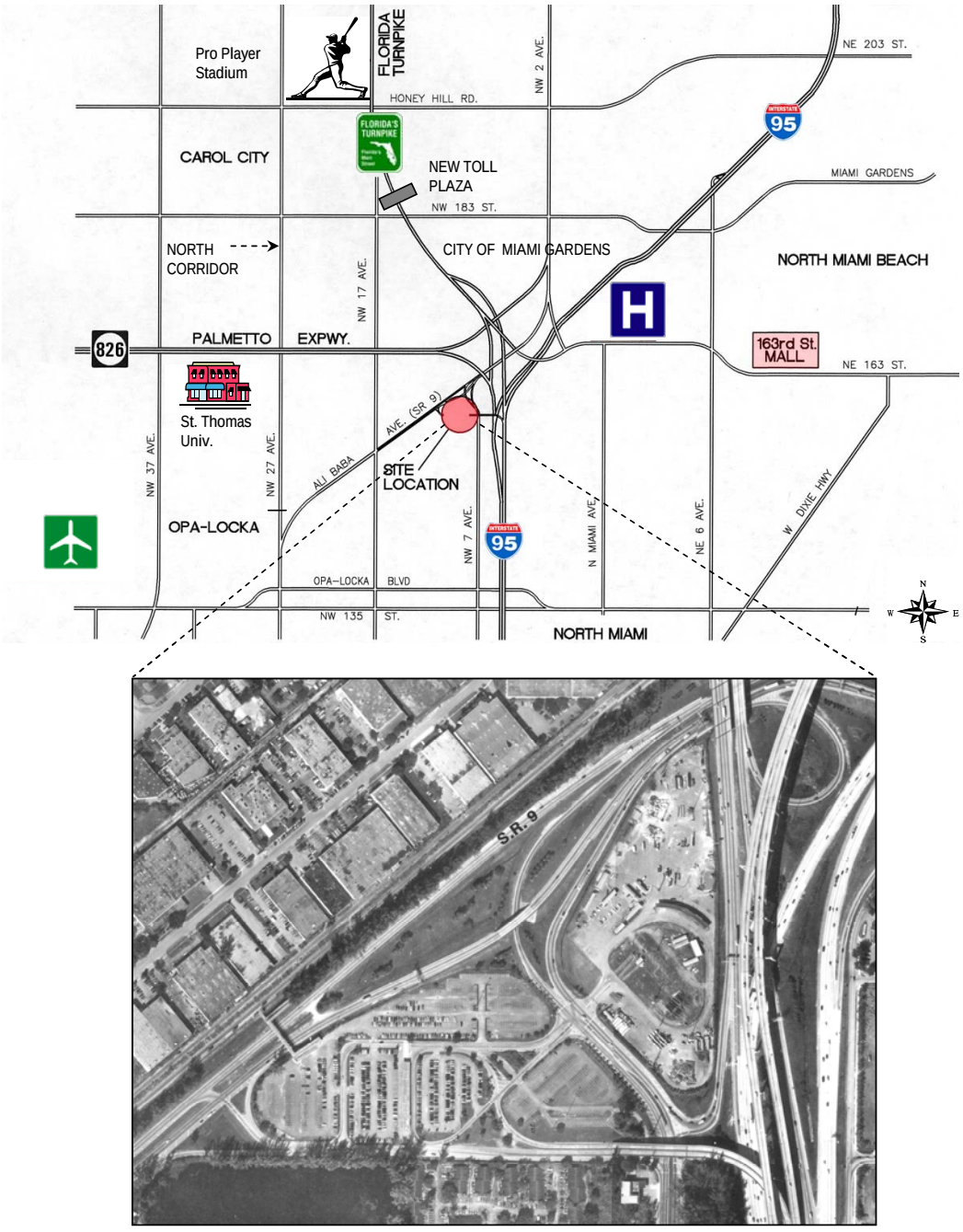
2.2 Project Description

In the 1970's, FDOT constructed the 1,350 space PNR lot at the GGI. This facility was constructed as part of the regional High Occupancy Vehicle (HOV) program that included HOV lanes along I-95 and US-1 within Miami-Dade County. The existing facility is essentially a parking lot covering a large area with poor connectivity between modes. The existing facility lacks passenger amenities, adequate lighting, landscaping and security. In addition, access and egress for the PNR area is confusing. The study area consists of the southwest quadrant of the GGI which is made up of the PNR Lot and the adjacent roadways and ramps including SR 9/Ali Baba Avenue and US 441/SR 7/NW 7th Avenue. The area is bordered by the South Florida Rail Corridor (SFRC) to the north, SR 9A (I-95) to the east, and NW 157th Street to the south and comprises approximately 45 acres within a triangular tract of land. (see Figure 3.1)

2.3 Related Projects within the Study Area

In order to establish the current and potential future roadway network and physical constraints, both the short-term and long-range transportation improvements within the project vicinity were identified. The following section summarizes planned improvements listed in Miami-Dade County People's Transportation Plan, Miami-Dade Expressway Authority TIP (March 2004), 2025 Long Range Transportation Plan, Miami-Dade 2005 TIP, Florida's Turnpike Enterprise (FY 2005 – 2015), and Tri-Rail's (SFRTA) 2020 Long-Range Master Plan. Tables 3.1 through 3.3 provides a listing of proposed short and long term improvements within the immediate project vicinity.

Figure 2-1. Location Map



2.3.1 *Miami-Dade County People's Transportation Plan Status Report, April 2004*

Metrorail – North Corridor Extension

- The North Corridor is a 9.5 mile heavy rail extension of Metrorail along NW 27th Avenue, from Dr. Martin Luther King, Jr. Metrorail station to the Broward/Miami-Dade County Line. The Project proposes seven stations and four multilevel parking structures along its length.
- Estimated Construction Costs: $873,000,000
- Funding: Federal: 50%; PTP: 25%; FDOT/Local: 25%
- Project Schedule: Design: 2005-2007, Construction: 2009-2012; Open to Service: 2012.

Increase of Bus Service

- Increase in service by 22.3%
- Bus Routes Future Improvements:
  - Route V: Improve headways from 60 to 30 min: Year 2005
  - Route 95X: Operate several peak hour trips in reverse direction: Year 2005
  - Route 42: Improve peak headways from 30 to 15 min: Year 2006
  - Route 7 Avenue MAX: New Limited-stop weekday service during the morning and evening peak periods at 15 min headways: Year 2006
  - Route 22: All night service, every 60 min, 7 days a week: Year 2007
  - Route 163rd St. Shuttle: New route operating seven days a week. Peak period service would be at 15-min headways with off-peak and weekends at 30-min headway: Year 2007.

Table 2-1. Miami-Dade Expressway Authority (Mdx)
Fiscal Years 2005-2009
Five-Year Work Program
TIP – March 2004

Project No.	Project Name	Description	Limits	Activity	FYO5 THROUH FY09 (000)				
					FY05	FY06	FY07	FY08	FY09
20001	*Central Parkway PD&E and Section 1	Project Development for new expressway connecting SR 836, SR 112 and SR 924. Includes system interchanges with SR 112 and SR 924 and potential service interchanges with NW 54th St., NW 79th St., and NW 103rd St., with connectors to NW 37th Avenue.	SR 112 to SR 924	Project Development	$1,557				

* Project on hold

Table 2-2. Year 2025 Long Range Transportation Plan

Area	Project or Facility	Priority Opening Year	Limits		Project Description
			From	To	
North, Northwest & Central	* Central Parkway	III 2020	SR 112	SR 924	New expressway connecting SR 836, SR 112, SR 924, and SR 836 Construct Interchanges at NW 54th St, NW 79th St., NW 103rd St., and Gratigny
North	I-95	III 2020	GGI	Ives Dairy Rd	Convert HOV to reversible HOV/HOV Lanes
North	I-95	IV 2025	North of SR 112	South of GGI	I-95 Master Plan: Convert HOV to reversible HOV/HOT Lane
North	SR 826-HOV	IV Unfunded	I-95	GGI	One HOV Lane each direction

* Project on hold

Table 2-3. MIAMI-DADE MPO 2005 TIP
ALL APPROVED PROJECTS

Mpo Proj No.	Agency	Facility	From	To	Type of work
DT2516822	FDOT	I-95/ SR 7 ITS	NW 62 Street	SR 860/Miami Gardens	ITS Freeway Management
DT2516841	FDOT	SR 9A/I-95	Golden Glades	Multimodal Terminal	Park and Ride Lots
DT4077391	FDOT	SR 7/US441 NW 7th Avenue	NW 159th Street	S of NW 177 Street	Resurfacing
Passenger Transfer Station					
TA0000001	MD Transit	North Corridor	Miami Intermodal Center	Broward County Line	New Construction: Metrorail extension
TA0000005	MD Transit	NE Corridor	Downtown Miami	Broward County Line	Alternative Analysis/Major Investment Study: NE Corridor
TA0000006	MD Transit	Metrorail extension	136 Street	220 Street	Feasibility Study: metrorail
Electronic Signs/Monitoring					
XA20001	MDX	*Central Parkway	SR 112	SR 924	New construction: expressway

* Project on hold

Table 2-4. Miami-Dade County's Florida's Turnpike Enterprise Projects (FY 2006 – 2015)

DESCRIPTION	PHASE GROUP	PHASE TYPE	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	TOTAL
CONSTRUCT TOLL PLAZA AT GOLDEN GLADES	Right-of-Way	Service Contract	141	0	0	0	0	0	0	0	0	0	141
	Right-of-Way	Consultant/ Contractor	30	0	0	0	0	0	0	0	0	0	30
	Right-of-Way	Purchase	1,813	0	0	0	0	0	0	0	0	0	1,813
	Right-of-Way	Relocate	54	0	0	0	0	0	0	0	0	0	54
	Construction	Contract Incentive	0	0	0	1,000	0	0	0	0	0	0	1,000
	Construction	Consultant/ Contractor	0	0	40,430	0	0	0	0	0	0	0	40,430
	Construction	Utility	0	0	2,000	0	0	0	0	0	0	0	2,000
	Construction Support	In-House	0	0	57	0	0	0	0	0	0	0	57
	Construction Support	Consultant/ Contractor	0	0	6,834	0	0	0	0	0	0	0	6,834
	Construction Support	Consultant/ Contractor	0	0	1,025	0	0	0	0	0	0	0	1,025

Phase Group identifies the various major areas of work performed by DOT,
Phase Type identifies who is being paid to perform the work on a DOT Defined activity.

2.3.2 SFRTA 2020 LONG-RANGE MASTER PLAN (Parsons Brinckerhoff, December 2001)

Golden Glades Multimodal Facility

FDOT District VI office is sponsoring this project and it is being planned as a real estate/joint development opportunity. The funding from the state will be for roadway/access improvements into the area. The potential developer of the site will be required to develop a transit terminal on the site. The future location of the terminal will be part of the overall real estate plan for the site, although the developer will be encouraged to move the transit terminal closer to the SFRTA Golden Glades station. As such, the Department shall develop a preferred alternative for the GGMTF and roadway improvements but maintain flexibility to consider all joint development proposals.

Miami's North Corridor

Miami Dade Transit will be conducting a reevaluation of the FEIS for the North Corridor to evaluate Bus Rapid Transit (BRT) technology. The project had originally recommended a Metrorail extension from the Martin Luther King Jr. station northward along NW 27th Avenue to the Broward County line. In October 1999 the Metropolitan Planning Organization (MPO) re-designated the North Corridor Locally Preferred Alternative from Metrorail to BRT.

Recommended Bus Alignment Changes

Route MDT 42: Divert slightly to serve Metrorail Station

2.3.3 Miami-Dade County's Florida's Turnpike Enterprise Projects (FY 2006 – 2015)

Golden Glades Toll Plaza

This project proposes to relocate the existing Golden Glades mainline toll plaza 3200 ft. north of the existing toll plaza with two new conventional toll plaza facilities along the Turnpike mainline. These new facilities will be located in the northeast quadrant of the Turnpike and Miami Gardens Drive (SR 860, NW 183rd Street) crossing and will be connected with an overhead structure. This project will also involve the design and construction of bridges, ramps, and roadway facilities. This project will be funded under the Florida's Turnpike Enterprise five-year work program. This project has been estimated at a total of $37 million for construction and right-of-way costs. This project has been scheduled for design in January 2005 and expected for completion by January 2010.

SECTION 3 - NEED FOR IMPROVEMENT

3.1 Deficiencies

The PNR facility is undergoing a Project Development (PD&E) Study to determine the most efficient and environmentally friendly design concept for the GGMTF that enhances the transit functions of the existing interchange. Specifically, the facility is deficient in its multi-modal connectivity, transfer efficiency, accessibility, comfort and convenience, safety and security, and image. Improvements are needed to address all of these deficiencies.

3.1.1 Multi-modal Connectivity

The PNR currently accommodates the following transportation modes: SFRTA commuter trains; Miami-Dade Transit (MDT) express and local buses; Broward County Transit (BCT) express and local buses; Greyhound intercity buses; and carpool commuters currently utilizing the PNR lot. The existing layout of the facility results in excessive walking distances that are a disincentive in using public transit.

3.1.2 Transfer Efficiency

The current facility has operational and maintenance deficiencies. Transfers between the different modes (bus and trains), need to be more efficient in terms of schedule coordination and for providing basic passenger services (e.g., traveler information systems). There is a long distance between transfer points.

3.1.3 Accessibility

The existing access and egress to the interchange is complex and confusing, particularly for commuters traveling to and from the north. Specific ramp configurations and signage will need to be upgraded to provide enhanced access and egress. Furthermore, consideration should be given for providing bus signal priority at key signalized intersections to improve access and egress by public transit modes. The access roadways are deficient in terms of design criteria, capacity, and the ability to accommodate future growth within the study area.

3.1.4 Comfort & Convenience

The current facility lacks the basic “comfort” and “convenience” features that would make this facility attractive to commuters. Transfers should be within environmentally protected corridors (e.g., covered walkways) and waiting areas should provide protection from rain, heat and humidity while other amenities should be available at the site, i.e., phone service, portable water, restrooms, etc.

3.1.5 Safety & Security

Although the current facility has security service, the overall image of the site needs to be upgraded to provide the commuter with a more comfortable sense of safety and security for themselves and their parked vehicles.

3.1.6 Image

The overall image of the PNR needs to be upgraded to be more visible from the neighboring interstate highways/arterials and to serve as a gateway to Miami-Dade County. These concepts need to be incorporated into the design of the project, in conjunction with input from the Miami-Dade Community Image Advisory Board (CIAB) and Miami-Dade Transportation Aesthetics Review Committee (TARC).

3.2 Study Area's Growth

According to Miami-Dade's 2025 Long Range Transportation Plan, countywide, the population is expected to increase 39% to almost three million residents by 2025 with employment following closely with a 30% increase to over one and a half million employees. Dwelling units are expected to increase 36% to over one million units, and autos and trips are both expected to increase by 39% to two and ten million, respectively.

In the north area of the county, the plan indicates that population and employment are expected to increase 21% and 29% respectively by year 2025; however, the growth expected in the area adjacent to the study site is much lower, 15% for population and 19% growth in employment.

3.3 Traffic Safety

There have been 100 crashes within the study area in the last time period which represents approximately 2 miles of roadway and two signalized intersections. Confidence levels (see section 4.1.9) at the locations indicated in Table 4-11 are experiencing an abnormally high crash rate as compared to similar locations statewide. Improvements need to be made to mitigate the probable causes of such abnormal crash patterns.

3.4 Consistency with Transportation Plans

The GGMTF Multimodal Facility project was assessed in terms of consistency with both regional and local transportation plans.

The proposed improvements are consistent with the

- **People's Transportation Plan.** Miami-Dade County has consistently ranked high on a list of the most congested areas in the nation. In 2002, the community decided to act. After 80 neighborhood meetings and the active participation of more than 2,000 concerned citizens at two countywide summits, the community developed a plan called the People's Transportation Plan with a recommendation to allocate a half percent sales surtax to fund major transportation improvements. Various recommendations from this plan will help increase transit service and ridership, and reduce transit headways of buses serving the facility.
- **Transportation Improvement Program.** Federal regulation requires, as part of the metropolitan planning process, the development of a Transportation Improvement Program (TIP) for metropolitan areas. According to the requirements, the document shall include a three-year priority list of federally funded transportation projects. In Miami-Dade County

the TIP includes 5-year priority list of federally funded projects and all other transportation projects funded with state and/or local monies. The improvements in Table 3-3 list all TIP approved projects in the vicinity of the study area. Some of the improvements include re-surfacing of SR 7 and improvement of the PNR in the GGI.

- 2025 Long Range Transportation Plan. In Miami-Dade County, by the year 2025, population is expected to increase by 15%, and employment by 19%, in the area adjacent to the study site. The twenty-year transportation "Needs Plan" identifies more than one hundred capacity improvement projects. These include highway programs which will cost $5.8 billion, transit capital projects which will cost $3.4 billion, and transit operations and maintenance expenditures amounting to $5.9 billion. The program identified in the draft Needs Plan totals $15.1 billion. An alternative "Minimum Revenue Plan" was also developed, based on a more conservative outlook for funding sources for transportation projects. The Minimum Revenue Plan contains new low-technology transit corridor projects, and postpones important highway improvements. The cost of this Plan is less than three-fourths the cost of the Needs Plan, totaling $11.2 billion. Improvement to the public transportation system is one of the primary emphases of the projects listed in the Plan. Identified transit needs call for provision of fixed guideway or exclusive right-of-way priority services along several major travel corridors and corridor extensions. Improvement to highway system High Occupancy Vehicle (HOV) lanes or Express lanes along major expressways, and reversible flow lanes are planned for Interstate 95. Intelligent Corridors Systems are also proposed for several major projects. In addition to the proposed transportation infrastructure and capital needs, a variety of short-term strategies are identified to deal with urban travel congestion ranging from highway traffic design solutions to employer-based measures to promote use of carpooling and public transportation. Also, the Plan is supported by a program of policy studies that will recommend courses of action to deal with funding, private sector involvement, and project-related community issues that need to be resolved to allow the proposed Transportation Plan to be successfully implemented.

In conclusion, the GGMTF Multimodal Facility project is consistent with both regional and local transportation plans.

SECTION 4 - EXISTING CONDITIONS

In order to evaluate existing conditions at the PNR information was gathered pertaining to (1) roadway characteristics, (2) bridge characteristics, (3) facility information and (4) environmental characteristics. This was accomplished by reviewing existing documents, on-site inventories, and collection of pertinent data that would serve as a basis for evaluation.

4.1 Existing Roadway Characteristics

The PNR is adjacent to three major highways. The I-95 H.O.V. Flyover consists of a one lane ramp in each direction that provides access to and from I-95 and the PNR Facility. SR 9 provides two lanes in each direction with paved and grassed shoulder on the outside and paved shoulder on the inside. There is a one lane ramp which connects NB SR 9 to SB SR 7, south of the PNR facility. SR 7 consists of two lanes in each direction with grassed shoulder on both sides.

4.1.1 Functional Classification

The functional classification of the study roadways are as follow:

- I-95 Flyover: Principal Arterial
- SR 7: Minor Arterial
- SR 9: Principal Arterial
- SR 9 Ramp: Principal Arterial

There is no existing posted speed limit for the I-95 Flyover into the PNR and SR 9 Ramp. The existing speed limit for SR7 is posted at 40 mph and for SR 9 is posted at 50 mph.

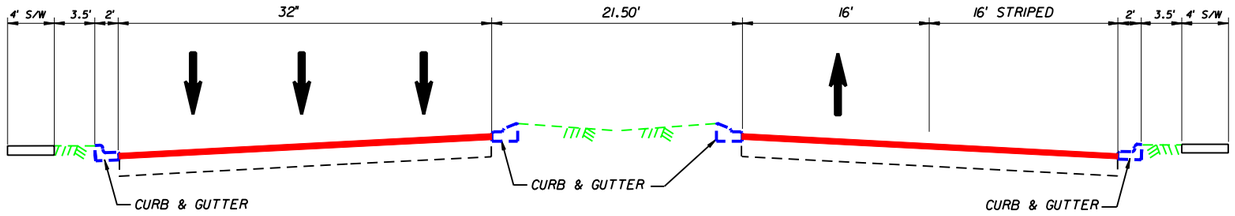
4.1.2 Typical Sections

There are three distinctive typical sections:

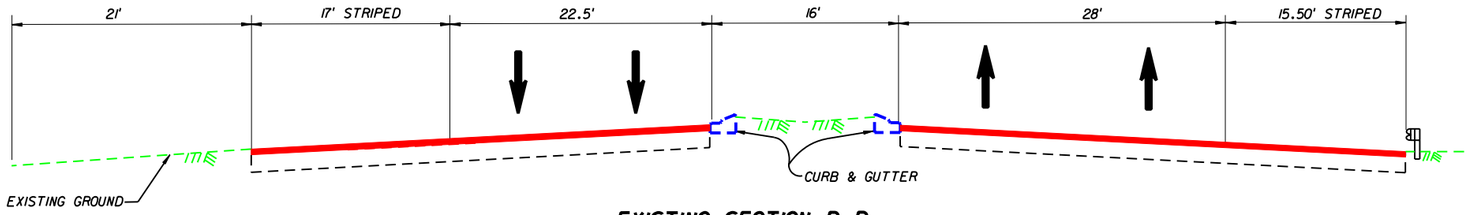
The existing typical section along SR 7, south of the I-95 Flyover into the PNR consists of 32’ of pavement in each direction with a 16’ curbed median and curb & gutter at the edges of pavement together with utility strips and sidewalk on both sides. North of the I-95 Flyover into the PNR it becomes a four-lane urban section with a raised median for approximately 250 feet. Then the roadway transitions to one lane in each direction except at the entrance to the PNR where there are left turn lanes. SR 9 is located northwest of the PNR. It consists of two lanes in two directions with a 40 foot wide median. The median varies in width as it approaches the GGI. Typical Sections for each roadway are shown in Figure 4.1 and Figure 4.2.

Figure 4-1

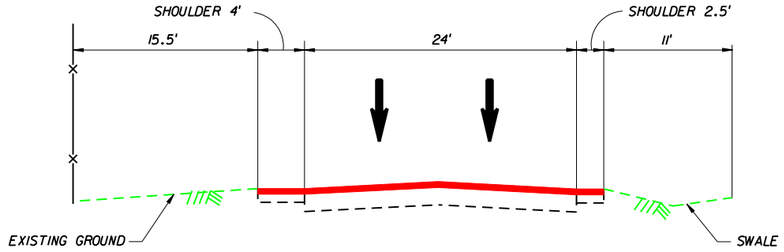
Existing Typical Section Locations



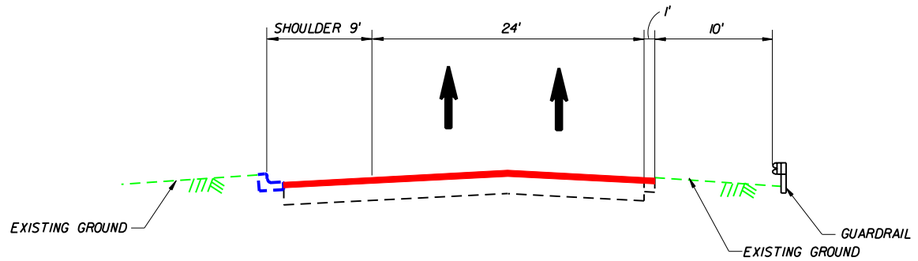
EXISTING SECTION A-A
S.R. 7 (441) SOUTH OF FLYOVER
NTS



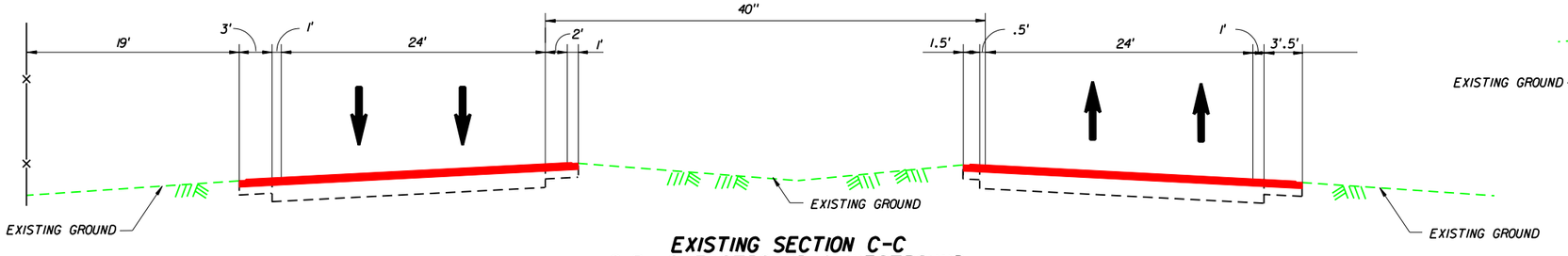
EXISTING SECTION B-B
S.R. 7 (441) NORTH OF FLYOVER
NTS



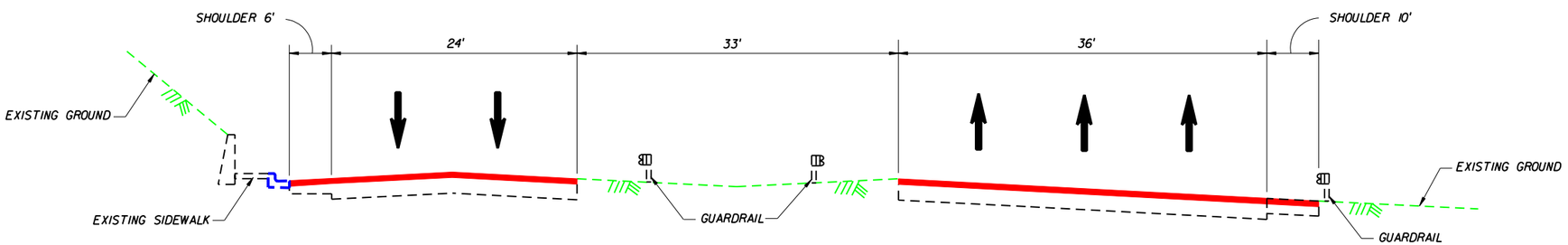
EXISTING SECTION D-D
S.R. 9 WESTBOUND
NTS



EXISTING SECTION E-E
S.R. 9 EASTBOUND
NTS



EXISTING SECTION C-C
S.R. 9 EASTBOUND & WESTBOUND
NTS



EXISTING SECTION F-F
S.R. 9/S.R 7 EASTBOUND
NTS

Figure 4-2
Existing Typical Sections

4.1.3 Pedestrian and Bicycle Facilities

There are no existing designated sidewalk or bicycle facilities within the study area roadways due to limited access designation along SR 9 and SR 7 within the project limits.

4.1.4 Right of Way

The existing right-of-way limits were developed using existing right-of-way maps (where available). The existing right-of-way varies throughout the length of the proposed project. See Figure 4.1 and Appendix A.

4.1.5 Horizontal Alignment

The I-95 Flyover into the PNR is essentially an east-west ramp that turns to the south with a radius of approximately 340 feet. The SR 9 ramp is an east-west roadway adjacent to the I-95 flyover where the one lane ramp crosses to the south with a radius of approximately 400 feet. SR 7 traverses in a north-south direction with horizontal curves in its alignment. SR 9 traverses in an east-west direction with an alignment that changes bearing with horizontal curves.

4.1.6 Vertical Alignment

The existing vertical alignment of I-95 Flyover into the PNR is elevated throughout most of the section with a touch down point at the PNR facility. The vertical alignment of SR 9 ramp, SR 7, and SR 9 southbound is essentially flat with grade breaks provided primarily for drainage purposes. The SR 9 northbound roadway is at grade until it crosses over the southbound SR 7 via a grade separation.

4.1.7 Drainage

The stormwater runoff from SR 7 and SR 9 is presently discharged via sheet flow into grass swales. The I-95 Flyover is discharged by a closed drainage system which ties into the PNR Facility drainage system. The GGMTF project falls within the jurisdiction of the South Florida Water Management District (SFWMD) and the Miami-Dade County Department of Environmental Resources Management (DERM).

4.1.8 Geotechnical Data

Subsurface investigations along the roadway alignment classifies the general near-surface stratigraphy, and provides subsurface information. More detailed information on soils and geotechnical issues is presented in Section 14 and Appendix C.

4.1.9 Crashes

Traffic crash data were analyzed to determine the frequency, severity and location of crashes relative to the PNR. The study area consisted of SR 7 from just south of the I-95 HOV Flyover into the PNR to the merge section with SR 9 and SR 9 from just south of the PNR exit to the merge section with

SR 7. Crash data for 2000, 2001 and 2002 were furnished by Florida DOT and were analyzed for the following:

- Location
- Severity of crash
- Day of week or weekend
- Hour of day
- Pavement condition
- Lighting conditions
- Manner of collision

The following characteristics were found:

Analysis of Crashes in Study Area

There were a total of 100 crashes within the study are from 2000 to 2002. Approximately 66 crashes (66 %) occurred on SR 7 within the limits described above and 34 crashes (34 %) on SR 9 within the limits described above. Of the crashes in the study area, one involved a fatality (1%), 67 (67%) involved injuries with a total of 98 injuries, and 33 (33%) were limited to property damage only (PDO).

The majority of all collisions in the PNR study area involved 43 (43%) rear end crashes, 13 (13%) guardrail crashes, 11 (11%) sideswipe crashes; 7 (7%) angle crashes, 6 (6%) left turn crashes, 5 (5%) overturn, and 11 (11%) others.

In addition, it was found that, over the three-year period, 73 of the 100 crashes occurred on weekdays and 27 on weekends. Also, the most frequent times of crashes were 6:00 a.m. to 9:00 a.m. (19 crashes), and 3:00 p.m. to 6:00 p.m. (21 crashes). There were 17 crashes that occurred during the night hours between 9:00 p.m. to 6:00 a.m. Also, 16% of the crashes occurred during wet conditions and 30% of the crashes occurred at night. Nighttime crashes were in line with the statewide average, of approximately 35%. The wet weather crashes were not abnormally high since the statewide average is approximately 15%.

Tables 4-1 and 4-2 show the summary representation of the crashes occurring in the study area during the last three years of available data.

Table 4-1. Crash Summary SR 7 (2000-2002)

FLORIDA DEPARTMENT OF TRANSPORTATION
CRASH SUMMARY

SECTION: 87140000 STATE ROUTE: 7
INTERSECTING ROADWAY: G.G.I. M.P. 10.714 TO 11.113 ENGINEER: AG
STUDY PERIOD: FROM 1/ 00 TO 12/ 02 COUNTY: Miami-Dade

No.	Mile Post	DATE	DAY	TIME	TYPE	FATAL	INJURY	PROP DAM	DAY / NT	WET / DRY	CONTRIBUTING CAUSE
1	10.714	4/20/2000	Thu	1500	Sideswipe	0	0	1	Day	Dry	Careless Driving
2	10.724	4/7/2000	Fri	2100	Angle	0	0	1	Nite	Dry	All Other
3	10.724	7/1/2000	Sat	1000	Rear-End	0	3	0	Day	Dry	Careless Driving
4	10.724	8/9/2000	Wed	1800	Angle	0	3	0	Day	Dry	Disregarded Stop Sign
5	10.724	9/10/2000	Sun	1500	Hit Guardrail	0	2	0	Day	Wet	Careless Driving
6	10.724	11/23/2000	Thu	1600	Rear-End	0	1	0	Nite	Dry	Careless Driving
7	10.724	11/24/2000	Fri	900	Rear-End	0	0	1	Day	Dry	Disregarded Other Traffic Control
8	10.765	5/21/2000	Sun	400	Overturned	0	0	1	Nite	Dry	Improper Lane Change
9	10.793	11/12/2000	Sun	1100	Sideswipe	0	0	1	Day	Dry	Improper Passing
10	10.812	4/17/2000	Mon	800	Rear-End	0	1	0	Day	Dry	Careless Driving
11	10.812	6/18/2000	Sun	1900	Rear-End	0	0	1	Day	Dry	Improper Lane Change
12	10.812	8/18/2000	Fri	1200	All other	0	0	1	Day	Dry	All Other
13	10.812	8/20/2000	Sun	2300	All other	0	0	1	Nite	Dry	Fleeing Police
14	10.812	9/24/2000	Sun	2200	Angle	0	0	1	Nite	Dry	Disregarded Traffic Signal
15	10.812	10/5/2000	Thu	900	Left-Turn	0	1	0	Day	Dry	No Improper Driving
16	10.812	12/1/2000	Fri	1000	Left-Turn	0	1	0	Day	Dry	Improper Turn
17	10.82	5/7/2000	Sun	1500	Occupant Fell from Vel	0	1	0	Day	Dry	Unknown
18	11.01	3/11/2000	Sat	1700	Sideswipe	0	0	1	Day	Dry	Failed to Yield R/W
19	11.01	3/30/2000	Thu	700	Rear-End	0	0	1	Day	Dry	Careless Driving
20	11.046	1/29/2000	Sat	1200	Rear-End	0	1	0	Day	Dry	Improper Lane Change
21	11.052	7/11/2000	Tue	800	Sideswipe	0	0	1	Day	Dry	Failed to Yield R/W
22	11.096	4/9/2000	Sun	2100	Rear-End	0	2	0	Nite	Dry	Improper Lane Change
23	11.113	1/20/2000	Thu	2200	Hit Guardrail	0	2	0	Nite	Dry	All Other
24	11.113	2/3/2000	Thu	1400	Hit Guardrail	0	1	0	Day	Dry	Careless Driving
25	11.113	9/10/2000	Sun	1100	Other Fixed Object	0	2	0	Day	Slippery	Careless Driving
26	11.113	12/28/2000	Thu	1800	Overturned	0	1	0	Nite	Wet	Careless Driving
27	10.688	9/7/2001	Fri	700	Rear-End	0	1	0	Day	Wet	Careless Driving
28	10.688	11/26/2001	Mon	1500	Left-Turn	0	3	0	Day	Dry	Improper Turn
29	10.691	10/18/2001	Thu	800	Rear-End	0	2	0	Day	Wet	Careless Driving
30	10.722	10/21/2001	Sun	1000	Rear-End	0	0	1	Day	Dry	Careless Driving
31	10.724	2/6/2001	Tue	2200	Rear-End	0	1	0	Nite	Dry	Careless Driving
32	10.724	2/24/2001	Sat	1000	Sideswipe	0	1	0	Day	Dry	Failed to Yield R/W
33	10.724	4/3/2001	Tue	1800	Rear-End	0	1	0	Day	Dry	Followed too Closely
34	10.724	8/1/2001	Wed	1100	Rear-End	0	0	1	Day	Wet	Careless Driving
35	10.724	8/31/2001	Fri	800	Rear-End	0	1	0	Day	Dry	Careless Driving
36	10.724	10/5/2001	Fri	700	Angle	0	2	0	Day	Wet	Failed to Yield R/W
37	10.755	3/9/2001	Fri	500	Hit Guardrail	0	0	1	Nite	Dry	Careless Driving
38	10.81	12/3/2001	Mon	600	Sideswipe	0	0	1	Nite	Dry	Careless Driving
39	10.812	2/13/2001	Tue	1600	Rear-End	0	1	0	Day	Dry	Careless Driving
40	10.812	10/24/2001	Wed	1400	Angle	0	1	0	Day	Dry	Improper Turn
41	10.846	3/16/2001	Fri	100	Overturned	0	1	0	Nite	Dry	Careless Driving
42	10.87	7/22/2001	Sun	800	Hit Guardrail	0	0	1	Nite	Dry	Careless Driving
43	10.999	3/16/2001	Fri	100	Hit Guardrail	1	0	0	Nite	Dry	Careless Driving
44	11.01	1/16/2001	Tue	1600	Rear-End	0	1	0	Day	Dry	Careless Driving
45	11.01	10/30/2001	Tue	1900	Sideswipe	0	2	0	Nite	Dry	Improper Lane Change
46	11.062	11/5/2001	Mon	800	Head-On	0	2	0	Day	Wet	Driving Wrong Side/Way
47	11.113	4/11/2001	Wed	1400	Other Fixed Object	0	0	1	Day	Dry	Unknown
48	11.113	12/6/2001	Thu	1700	Rear-End	0	0	1	Day	Wet	Careless Driving
49	10.688	10/7/2002	Mon	800	Rear-End	0	2	0	Day	Dry	No Improper Driving
50	10.724	7/16/2002	Tue	2100	Rear-End	0	3	0	Nite	Dry	Careless Driving
51	10.724	7/19/2002	Fri	1500	Angle	0	1	0	Day	Dry	All Other
52	10.724	7/22/2002	Mon	1600	Rear-End	0	2	0	Day	Dry	Careless Driving
53	10.812	2/22/2002	Fri	1600	Sideswipe	0	0	1	Day	Dry	Improper Lane Change
54	10.812	9/3/2002	Tue	2000	Left-Turn	0	2	0	Nite	Wet	All Other
55	10.812	11/22/2002	Fri	1300	Rear-End	0	7	0	Day	Dry	Obstructing Traffic
56	10.818	6/11/2002	Tue	1700	Sideswipe	0	0	1	Day	Wet	Improper Lane Change
57	10.87	5/10/2002	Fri	1600	Rear-End	0	0	1	Day	Dry	Improper Lane Change
58	10.984	5/16/2002	Thu	2100	Hit Guardrail	0	1	0	Nite	Wet	Exceeded Safe Spd LMT
59	11.01	6/18/2002	Tue	700	Rear-End	0	1	0	Day	Dry	Careless Driving
60	11.01	7/9/2002	Tue	900	Rear-End	0	0	1	Day	Wet	Careless Driving
61	11.01	11/25/2002	Mon	1100	Rear-End	0	0	1	Day	Dry	Improper Lane Change
62	11.046	4/27/2002	Sat	900	Rear-End	0	0	1	Day	Dry	No Improper Driving
63	11.046	9/6/2002	Fri	800	Rear-End	0	1	0	Day	Wet	Careless Driving
64	11.113	3/24/2002	Sun	600	Hit Guardrail	0	0	1	Nite	Dry	Unknown
65	11.113	5/16/2002	Thu	1800	Rear-End	0	2	0	Day	Dry	Careless Driving
66	11.113	8/26/2002	Mon	1800	Rear-End	0	0	1	Nite	Wet	Careless Driving

Total No.		Fatal	Injury	PDO	Angle	Left Turn	Right Turn	Rear End	Side swipe	Ped/Bike	
66		**1**	**64**	**27**	**6**	**4**	**0**	**30**	**9**	**0**	
		1.52%	*96.97%*	*40.91%*	*9.09%*	*6.06%*	*0.00%*	*45.45%*	*13.64%*	*0.00%*	
One Vehicle		Day	Night	Wet	Dry	Excess Speed	FTYR/W	DUI			
14		**46**	**20**	**14**	**51**	**1**	**4**	**3**			
21.21%		*69.70%*	*30.30%*	*21.21%*	*77.27%*	*1.52%*	*6.06%*	*4.55%*			

TOTAL VEHICLES ENTERING / ADT : **22,500**

SPOT ACCIDENT RATE: **8.037** /MV
SEGMENT ACCIDENT RATE: **20.142** /MVM

Note: Red Square indicates a fatality

Table 4-2. Crash Summary SR 9 (2000-2002)

FLORIDA DEPARTMENT OF TRANSPORTATION
CRASH SUMMARY

SECTION: 87240000 STATE ROUTE: 9
INTERSECTING ROADWAY: G.G.I. M.P. 13.30 TO 13.69 ENGINEER: AG
STUDY PERIOD: FROM 1/ 00 TO 12/ 02 COUNTY: Miami-Dade

No.	Mile Post	DATE	DAY	TIME	TYPE	FATAL	INJURY	PROP DAM	DAY / NT	WET / DRY	CONTRIBUTING CAUSE
1	13.299	5/17/2000	Wed	800	Rear-End	0	2	0	Day	Dry	Careless Driving
2	13.299	9/19/2000	Tue	900	Rear-End	0	1	0	Day	Wet	Careless Driving
3	13.331	4/11/2000	Tue	600	Left-Turn	0	2	0	Nite	Dry	Failed to Yield R/W
4	13.331	8/8/2000	Tue	1100	Overturned	0	1	0	Day	Dry	Failed to Yield R/W
5	13.331	12/8/2000	Fri	1600	Left-Turn	0	1	0	Day	Dry	Failed to Yield R/W
6	13.332	8/30/2000	Wed	1300	Head-On	0	1	0	Day	Dry	Careless Driving
7	13.652	2/3/2000	Thu	400	Overturned	0	2	0	Nite	Dry	Careless Driving
8	13.69	2/1/2000	Tue	200	All other	0	1	0	Nite	Dry	Unknown
9	13.69	6/22/2000	Thu	700	Rear-End	0	1	0	Day	Dry	Improper Lane Change
10	13.69	9/25/2000	Mon	900	Rear-End	0	1	0	Day	Dry	Careless Driving
11	13.131	5/26/2001	Sat	1100	Rear-End	0	1	0	Day	Dry	Careless Driving
12	13.224	9/23/2001	Sun	1300	Rear-End	0	1	0	Day	Dry	Careless Driving
13	13.309	3/18/2001	Sun	1100	Tree/Shrubbery	0	1	0	Day	Dry	Careless Driving
14	13.309	9/8/2001	Sat	500	Hit Guardrail	0	1	0	Nite	Dry	Careless Driving
15	13.331	1/7/2001	Sun	1600	Angle	0	0	1	Day	Dry	Failed to Yield R/W
16	13.331	1/30/2001	Tue	900	Sideswipe	0	0	1	Day	Dry	Failed to Yield R/W
17	13.331	3/6/2001	Tue	1800	Rear-End	0	1	0	Nite	Dry	Improper Lane Change
18	13.331	3/15/2001	Thu	1500	Head-On	0	0	1	Day	Dry	Failed to Yield R/W
19	13.331	11/26/2001	Mon	1800	Rear-End	0	1	0	Day	Dry	Improper Lane Change
20	13.44	3/22/2001	Thu	1800	Hit Guardrail	0	1	0	Day	Dry	Careless Driving
21	13.49	6/9/2001	Sat	800	Hit Guardrail	0	2	0	Day	Dry	Careless Driving
22	13.681	3/31/2001	Sat	2200	All other	0	1	0	Nite	Dry	Careless Driving
23	13.688	7/14/2001	Sat	1500	Rear-End	0	0	1	Day	Dry	Careless Driving
24	13.69	8/13/2001	Mon	1800	Rear-End	0	0	1	Day	Dry	Careless Driving
25	13.19	5/3/2002	Fri	1700	Sideswipe	0	0	1	Day	Dry	Improper Lane Change
26	13.224	11/10/2002	Sun	900	Hit Sign/Sign Post	0	1	0	Day	Dry	Careless Driving
27	13.224	11/13/2002	Wed	1900	Rear-End	0	1	0	Nite	Dry	Careless Driving
28	13.299	3/6/2002	Wed	600	All other	0	1	0	Nite	Dry	Improper Lane Change
29	13.324	8/1/2002	Thu	2300	Hit Guardrail	0	1	0	Nite	Dry	Careless Driving
30	13.354	10/31/2002	Thu	1400	w/ MV on Other Road	0	1	0	Day	Dry	Improper Lane Change
31	13.44	2/13/2002	Wed	1400	Rear-End	0	2	0	Day	Dry	Careless Driving
32	13.595	4/20/2002	Sat	2000	Hit Guardrail	0	1	0	Nite	Dry	Improper Lane Change
33	13.595	12/10/2002	Tue	1500	Unknown	0	1	0	Day	Dry	Improper Lane Change
34	13.662	6/11/2002	Tue	1700	Rear-End	0	2	0	Day	Wet	Careless Driving

Total No.		Fatal	Injury	PDO	Angle	Left Turn	Right Turn	Rear End	Side swipe	Ped/Bike	
34		**0**	**34**	**6**	**1**	**2**	**0**	**13**	**2**	**0**	
		0.00%	*100.00%*	*17.65%*	*2.94%*	*5.88%*	*0.00%*	*38.24%*	*5.88%*	*0.00%*	
One Vehicle		Day	Night	Wet	Dry	Excess Speed	FTYR/W	DUI			
6		**24**	**10**	**2**	**32**	**0**	**6**	**0**			
17.65%		*70.59%*	*29.41%*	*5.88%*	*94.12%*	*0.00%*	*17.65%*	*0.00%*			

TOTAL VEHICLES ENTERING / ADT : **24,174**

SPOT ACCIDENT RATE: **3.853** /MV
SEGMENT ACCIDENT RATE: **9.855** /MVM

Analysis of Crashes on SR 7

All crashes took place within a distance of approximately 0.5 miles over a three-year period (2000-2002). On SR 7 the yearly breakdown of crashes was 26, 22, and 18 in 2000, 2001, and 2002, respectively. This is a total of 66 crashes in the three-year period of which 39 crashes involved injuries, one fatal crash occurred in 2001, and 27 were limited to PDO. However, it appears that a downward trend is occurring in the numbers of crashes occurring within this segment of SR 7.

The top three crash types that occurred on SR 7 involved rear end collision (30 crashes; 45%), sideswipe collision (9 crashes; 13.6%), and guardrail collision (8 crashes; 12%).

Approximately half of the crashes occurred during peak hours, 16 crashes occurred between 6:00 and 9:00 a.m., and 19 crashes between 3:00 and 6:00 p.m. The peak day for crashes was Fridays with 18 crashes, Sundays and Thursdays came in next with 13 crashes each. In addition, 21% of the crashes occurred during wet conditions and 30% of the crashes occurred during night time conditions. Nighttime crashes were in line with the statewide average, of approximately 35%. The wet weather crashes were somewhat high compared to the statewide average which is approximately 15%. The following tables provide a tabular representation of the crash data.

Table 4-3. Crash Summary SR 7 (2000)

FLORIDA DEPARTMENT OF TRANSPORTATION
CRASH SUMMARY

SECTION: **87140000** STATE ROUTE: **7**
INTERSECTING ROADWAY: **G.G.I.** M.P. **10.714** TO **11.113** ENGINEER: **AG**
STUDY PERIOD: FROM **1/ 00** TO **12/ 00** COUNTY: **Miami-Dade**

No.	Mile Post	DATE	DAY	TIME	TYPE	FATAL	INJURY	PROP DAM	DAY / NT	WET / DRY	CONTRIBUTING CAUSE
1	10.714	4/20/2000	Thu	1500	Sideswipe	0	0	1	Day	Dry	Careless Driving
2	10.724	4/7/2000	Fri	2100	Angle	0	0	1	Nite	Dry	All Other
3	10.724	7/1/2000	Sat	1000	Rear-End	0	3	0	Day	Dry	Careless Driving
4	10.724	8/9/2000	Wed	1800	Angle	0	3	0	Day	Dry	Disregarded Stop Sign
5	10.724	9/10/2000	Sun	1500	Hit Guardrail	0	2	0	Day	Wet	Careless Driving
6	10.724	11/23/2000	Thu	1600	Rear-End	0	1	0	Nite	Dry	Careless Driving
7	10.724	11/24/2000	Fri	900	Rear-End	0	0	1	Day	Dry	Disregarded Other Traffic Control
8	10.765	5/21/2000	Sun	400	Overturned	0	0	1	Nite	Dry	Improper Lane Change
9	10.793	11/12/2000	Sun	1100	Sideswipe	0	0	1	Day	Dry	Improper Passing
10	10.812	4/17/2000	Mon	800	Rear-End	0	1	0	Day	Dry	Careless Driving
11	10.812	6/18/2000	Sun	1900	Rear-End	0	0	1	Day	Dry	Improper Lane Change
12	10.812	8/18/2000	Fri	1200	All other	0	0	1	Day	Dry	All Other
13	10.812	8/20/2000	Sun	2300	All other	0	0	1	Nite	Dry	Fleeing Police
14	10.812	9/24/2000	Sun	2200	Angle	0	0	1	Nite	Dry	Disregarded Traffic Signal
15	10.812	10/5/2000	Thu	900	Left-Turn	0	1	0	Day	Dry	No Improper Driving
16	10.812	12/1/2000	Fri	1000	Left-Turn	0	1	0	Day	Dry	Improper Turn
17	10.82	5/7/2000	Sun	1500	Occupant Fell from Vel	0	1	0	Day	Dry	Unknown
18	11.01	3/11/2000	Sat	1700	Sideswipe	0	0	1	Day	Dry	Failed to Yield R/W
19	11.01	3/30/2000	Thu	700	Rear-End	0	0	1	Day	Dry	Careless Driving
20	11.046	1/29/2000	Sat	1200	Rear-End	0	1	0	Day	Dry	Improper Lane Change
21	11.052	7/11/2000	Tue	800	Sideswipe	0	0	1	Day	Dry	Failed to Yield R/W
22	11.096	4/9/2000	Sun	2100	Rear-End	0	2	0	Nite	Dry	Improper Lane Change
23	11.113	1/20/2000	Thu	2200	Hit Guardrail	0	2	0	Nite	Dry	All Other
24	11.113	2/3/2000	Thu	1400	Hit Guardrail	0	1	0	Day	Dry	Careless Driving
25	11.113	9/10/2000	Sun	1100	Other Fixed Object	0	2	0	Day	Slippery	Careless Driving
26	11.113	12/28/2000	Thu	1800	Overturned	0	1	0	Nite	Wet	Careless Driving

Total No.		Fatal	Injury	PDO	Angle	Left Turn	Right Turn	Rear End	Side swipe	Ped/Bike	
26		**0**	**22**	**12**	**3**	**2**	**0**	**8**	**4**	**0**	
		0.00%	*84.62%*	*46.15%*	*11.54%*	*7.69%*	*0.00%*	*30.77%*	*15.38%*	*0.00%*	
One Vehicle		Day	Night	Wet	Dry	Excess Speed	FTYR/W	DUI			
7		**18**	**8**	**2**	**23**	**0**	**2**	**0**			
26.92%		*69.23%*	*30.77%*	*7.69%*	*88.46%*	*0.00%*	*7.69%*	*0.00%*			

TOTAL VEHICLES ENTERING / ADT : **22,500**

SPOT ACCIDENT RATE: **3.166** /MV
SEGMENT ACCIDENT RATE: **7.935** /MVM

Table 4-4. Crash Summary SR 7 (2001)

FLORIDA DEPARTMENT OF TRANSPORTATION
CRASH SUMMARY

SECTION: **87140000** STATE ROUTE: **7**
INTERSECTING ROADWAY: **G.G.I.** M.P. **10.688** TO **11.113** ENGINEER: **AG**
STUDY PERIOD: FROM **1/ 01** TO **12/ 01** COUNTY: **Miami-Dade**

No.	Mile Post	DATE	DAY	TIME	TYPE	FATAL	INJURY	PROP DAM	DAY / NT	WET / DRY	CONTRIBUTING CAUSE
1	10.688	9/7/2001	Fri	700	Rear-End	0	1	0	Day	Wet	Careless Driving
2	10.688	11/26/2001	Mon	1500	Left-Turn	0	3	0	Day	Dry	Improper Turn
3	10.691	10/18/2001	Thu	800	Rear-End	0	2	0	Day	Wet	Careless Driving
4	10.722	10/21/2001	Sun	1000	Rear-End	0	0	1	Day	Dry	Careless Driving
5	10.724	2/6/2001	Tue	2200	Rear-End	0	1	0	Nite	Dry	Careless Driving
6	10.724	2/24/2001	Sat	1000	Sideswipe	0	1	0	Day	Dry	Failed to Yield R/W
7	10.724	4/3/2001	Tue	1800	Rear-End	0	1	0	Day	Dry	Followed too Closely
8	10.724	8/1/2001	Wed	1100	Rear-End	0	0	1	Day	Wet	Careless Driving
9	10.724	8/31/2001	Fri	800	Rear-End	0	1	0	Day	Dry	Careless Driving
10	10.724	10/5/2001	Fri	700	Angle	0	2	0	Day	Wet	Failed to Yield R/W
11	10.755	3/9/2001	Fri	500	Hit Guardrail	0	0	1	Nite	Dry	Careless Driving
12	10.81	12/3/2001	Mon	600	Sideswipe	0	0	1	Nite	Dry	Careless Driving
13	10.812	2/13/2001	Tue	1600	Rear-End	0	1	0	Day	Dry	Careless Driving
14	10.812	10/24/2001	Wed	1400	Angle	0	1	0	Day	Dry	Improper Turn
15	10.846	3/16/2001	Fri	100	Overturned	0	1	0	Nite	Dry	Careless Driving
16	10.87	7/22/2001	Sun	800	Hit Guardrail	0	0	1	Nite	Dry	Careless Driving
17	10.999	3/16/2001	Fri	100	Hit Guardrail	1	0	0	Nite	Dry	Careless Driving
18	11.01	1/16/2001	Tue	1600	Rear-End	0	1	0	Day	Dry	Careless Driving
19	11.01	10/30/2001	Tue	1900	Sideswipe	0	2	0	Nite	Dry	Improper Lane Change
20	11.062	11/5/2001	Mon	800	Head-On	0	2	0	Day	Wet	Driving Wrong Side/Way
21	11.113	4/11/2001	Wed	1400	Other Fixed Object	0	0	1	Day	Dry	Unknown
22	11.113	12/6/2001	Thu	1700	Rear-End	0	0	1	Day	Wet	Careless Driving

Total No.		Fatal	Injury	PDO	Angle	Left Turn	Right Turn	Rear End	Side swipe	Ped/Bike	
22		**1**	**20**	**7**	**2**	**1**	**0**	**10**	**3**	**0**	
		4.55%	*90.91%*	*31.82%*	*9.09%*	*4.55%*	*0.00%*	*45.45%*	*13.64%*	*0.00%*	
One Vehicle		Day	Night	Wet	Dry	Excess Speed	FTYR/W	DUI			
5		**15**	**7**	**6**	**16**	**0**	**2**	**1**			
22.73%		*68.18%*	*31.82%*	*27.27%*	*72.73%*	*0.00%*	*9.09%*	*4.55%*			

TOTAL VEHICLES ENTERING / ADT : **22,500**

SPOT ACCIDENT RATE: **2.679** /MV
SEGMENT ACCIDENT RATE: **6.303** /MVM

Note: Red Square indicates a fatality

Table 4-5. Crash Summary SR 7 (2002)

FLORIDA DEPARTMENT OF TRANSPORTATION
CRASH SUMMARY

SECTION: 87140000 STATE ROUTE: 7
INTERSECTING ROADWAY: G.G.I. M.P. 10.688 TO 11.113 ENGINEER: AG
STUDY PERIOD: FROM 1/ 02 TO 12/ 02 COUNTY: Miami-Dade

No.	Mile Post	DATE	DAY	TIME	TYPE	FATAL	INJURY	PROP DAM	DAY / NT	WET / DRY	CONTRIBUTING CAUSE
1	10.688	10/7/2002	Mon	800	Rear-End	0	2	0	Day	Dry	No Improper Driving
2	10.724	7/16/2002	Tue	2100	Rear-End	0	3	0	Nite	Dry	Careless Driving
3	10.724	7/19/2002	Fri	1500	Angle	0	1	0	Day	Dry	All Other
4	10.724	7/22/2002	Mon	1600	Rear-End	0	2	0	Day	Dry	Careless Driving
5	10.812	2/22/2002	Fri	1600	Sideswipe	0	0	1	Day	Dry	Improper Lane Change
6	10.812	9/3/2002	Tue	2000	Left-Turn	0	2	0	Nite	Wet	All Other
7	10.812	11/22/2002	Fri	1300	Rear-End	0	7	0	Day	Dry	Obstructing Traffic
8	10.818	6/11/2002	Tue	1700	Sideswipe	0	0	1	Day	Wet	Improper Lane Change
9	10.87	5/10/2002	Fri	1600	Rear-End	0	0	1	Day	Dry	Improper Lane Change
10	10.984	5/16/2002	Thu	2100	Hit Guardrail	0	1	0	Nite	Wet	Exceeded Safe Spd LMT
11	11.01	6/18/2002	Tue	700	Rear-End	0	1	0	Day	Dry	Careless Driving
12	11.01	7/9/2002	Tue	900	Rear-End	0	0	1	Day	Wet	Careless Driving
13	11.01	11/25/2002	Mon	1100	Rear-End	0	0	1	Day	Dry	Improper Lane Change
14	11.046	4/27/2002	Sat	900	Rear-End	0	0	1	Day	Dry	No Improper Driving
15	11.046	9/6/2002	Fri	800	Rear-End	0	1	0	Day	Wet	Careless Driving
16	11.113	3/24/2002	Sun	600	Hit Guardrail	0	0	1	Nite	Dry	Unknown
17	11.113	5/16/2002	Thu	1800	Rear-End	0	2	0	Day	Dry	Careless Driving
18	11.113	8/26/2002	Mon	1800	Rear-End	0	0	1	Nite	Wet	Careless Driving

Total No.		Fatal	Injury	PDO	Angle	Left Turn	Right Turn	Rear End	Side swipe	Ped/Bike	
18		**0**	**22**	**8**	**1**	**1**	**0**	**12**	**2**	**0**	
		0.00%	*122.22%*	*44.44%*	*5.56%*	*5.56%*	*0.00%*	*66.67%*	*11.11%*	*0.00%*	
One Vehicle		Day	Night	Wet	Dry	Excess Speed	FTYR/W	DUI			
2		**13**	**5**	**6**	**12**	**1**	**0**	**2**			
11.11%		*72.22%*	*27.78%*	*33.33%*	*66.67%*	*5.56%*	*0.00%*	*11.11%*			

TOTAL VEHICLES ENTERING / ADT : **23,500**

SPOT ACCIDENT RATE: **2.099** /MV
SEGMENT ACCIDENT RATE: **4.938** /MVM

Analysis of Crashes on SR 9

All crashes took place within a distance of approximately 0.7 miles over a three-year period (2000-2002). On SR 9 the yearly breakdown of crashes was 10, 14, and 10 in 2000, 2001, and 2002, respectively. Of the 34 crashes in the 3 year period, 28 involved injuries, 6 were limited to PDO and there were no fatal crashes. Overall, the number of crashes remained constant during the study period.

The top three crash types that occurred on SR 9 involved rear end collision (13 crashes; 38%), guardrail collision (5 crashes; 14%), and sideswipe/head on/left turn/overturn collision each with (2 crashes; 5%).

Between the hours of 9:00 a.m. to Noon, 7 crashes occurred and between the hours of 3:00 p.m. to 6:00 p.m. These represent the peak times of day for the occurrence of crashes. The Peak crash days of the week occurred on Tuesdays with 8 crashes and Saturdays with 6 crashes. In addition, 5.9% of the crashes occurred during wet conditions and 29% of the crashes occurred during night time. Both

nighttime and wet weather crashes were low when compared to the statewide averages, given that the statewide average for nighttime and wet weather crashes are approximately 35% and 15%, respectively. The following tables provide a tabular representation of the crash data.

Table 4-6. Crash Summary SR 9 (2000)

FLORIDA DEPARTMENT OF TRANSPORTATION
CRASH SUMMARY

SECTION: 87240000 STATE ROUTE: 9
INTERSECTING ROADWAY: G.G.I. M.P. 13.30 TO 13.69 ENGINEER: AG
STUDY PERIOD: FROM 1/ 00 TO 12/ 00 COUNTY: Miami-Dade

No.	Mile Post	DATE	DAY	TIME	TYPE	FATAL	INJURY	PROP DAM	DAY / NT	WET / DRY	CONTRIBUTING CAUSE
1	13.299	5/17/2000	Wed	800	Rear-End	0	2	0	Day	Dry	Careless Driving
2	13.299	9/19/2000	Tue	900	Rear-End	0	1	0	Day	Wet	Careless Driving
3	13.331	4/11/2000	Tue	600	Left-Turn	0	2	0	Nite	Dry	Failed to Yield R/W
4	13.331	8/8/2000	Tue	1100	Overturned	0	1	0	Day	Dry	Failed to Yield R/W
5	13.331	12/8/2000	Fri	1600	Left-Turn	0	1	0	Day	Dry	Failed to Yield R/W
6	13.332	8/30/2000	Wed	1300	Head-On	0	1	0	Day	Dry	Careless Driving
7	13.652	2/3/2000	Thu	400	Overturned	0	2	0	Nite	Dry	Careless Driving
8	13.69	2/1/2000	Tue	200	All other	0	1	0	Nite	Dry	Unknown
9	13.69	6/22/2000	Thu	700	Rear-End	0	1	0	Day	Dry	Improper Lane Change
10	13.69	9/25/2000	Mon	900	Rear-End	0	1	0	Day	Dry	Careless Driving

Total No.		Fatal	Injury	PDO	Angle	Left Turn	Right Turn	Rear End	Side swipe	Ped/Bike	
10		**0**	**13**	**0**	**0**	**2**	**0**	**4**	**0**	**0**	
		0.00%	*130.00%*	*0.00%*	*0.00%*	*20.00%*	*0.00%*	*40.00%*	*0.00%*	*0.00%*	
One Vehicle		Day	Night	Wet	Dry	Excess Speed	FTYR/W	DUI			
2		**7**	**3**	**1**	**9**	**0**	**3**	**0**			
20.00%		*70.00%*	*30.00%*	*10.00%*	*90.00%*	*0.00%*	*30.00%*	*0.00%*			

TOTAL VEHICLES ENTERING / ADT : **24,174**

SPOT ACCIDENT RATE: **1.133** /MV
SEGMENT ACCIDENT RATE: **2.899** /MVM

Table 4-7. Crash Summary SR 9 (2001)

FLORIDA DEPARTMENT OF TRANSPORTATION
CRASH SUMMARY

SECTION: 87240000 STATE ROUTE: 9
INTERSECTING ROADWAY: G.G.I. M.P. 13.131 TO 13.69 ENGINEER: AG
STUDY PERIOD: FROM 1/ 01 TO 12/ 01 COUNTY: Miami-Dade

No.	Mile Post	DATE	DAY	TIME	TYPE	FATAL	INJURY	PROP DAM	DAY / NT	WET / DRY	CONTRIBUTING CAUSE
1	13.131	5/26/2001	Sat	1100	Rear-End	0	1	0	Day	Dry	Careless Driving
2	13.224	9/23/2001	Sun	1300	Rear-End	0	1	0	Day	Dry	Careless Driving
3	13.309	3/18/2001	Sun	1100	Tree/Shrubbery	0	1	0	Day	Dry	Careless Driving
4	13.309	9/8/2001	Sat	500	Hit Guardrail	0	1	0	Nite	Dry	Careless Driving
5	13.331	1/7/2001	Sun	1600	Angle	0	0	1	Day	Dry	Failed to Yield R/W
6	13.331	1/30/2001	Tue	900	Sideswipe	0	0	1	Day	Dry	Failed to Yield R/W
7	13.331	3/6/2001	Tue	1800	Rear-End	0	1	0	Nite	Dry	Improper Lane Change
8	13.331	3/15/2001	Thu	1500	Head-On	0	0	1	Day	Dry	Failed to Yield R/W
9	13.331	11/26/2001	Mon	1800	Rear-End	0	1	0	Day	Dry	Improper Lane Change
10	13.44	3/22/2001	Thu	1800	Hit Guardrail	0	1	0	Day	Dry	Careless Driving
11	13.49	6/9/2001	Sat	800	Hit Guardrail	0	2	0	Day	Dry	Careless Driving
12	13.681	3/31/2001	Sat	2200	All other	0	1	0	Nite	Dry	Careless Driving
13	13.688	7/14/2001	Sat	1500	Rear-End	0	0	1	Day	Dry	Careless Driving
14	13.69	8/13/2001	Mon	1800	Rear-End	0	0	1	Day	Dry	Careless Driving

Total No.		Fatal	Injury	PDO	Angle	Left Turn	Right Turn	Rear End	Side swipe	Ped/Bike	
14		**0**	**10**	**5**	**1**	**0**	**0**	**6**	**1**	**0**	
		0.00%	*71.43%*	*35.71%*	*7.14%*	*0.00%*	*0.00%*	*42.86%*	*7.14%*	*0.00%*	
One Vehicle		Day	Night	Wet	Dry	Excess Speed	FTYR/W	DUI			
2		**11**	**3**	**0**	**14**	**0**	**3**	**0**			
14.29%		*78.57%*	*21.43%*	*0.00%*	*100.00%*	*0.00%*	*21.43%*	*0.00%*			

TOTAL VEHICLES ENTERING / ADT : **24,875**

SPOT ACCIDENT RATE: **1.542** /MV
SEGMENT ACCIDENT RATE: **2.758** /MVM

Table 4-8. Crash Summary SR 9 (2002)

FLORIDA DEPARTMENT OF TRANSPORTATION
CRASH SUMMARY

SECTION: **87240000** STATE ROUTE: **9**
INTERSECTING ROADWAY: **G.G.I.** M.P. **13.19** TO **13.662** ENGINEER: **AG**
STUDY PERIOD: FROM **1/ 02** TO **12/ 02** COUNTY: **Miami-Dade**

No.	Mile Post	DATE	DAY	TIME	TYPE	FATAL	INJURY	PROP DAM	DAY / NT	WET / DRY	CONTRIBUTING CAUSE
1	13.19	5/3/2002	Fri	1700	Sideswipe	0	0	1	Day	Dry	Improper Lane Change
2	13.224	11/10/2002	Sun	900	Hit Sign/Sign Post	0	1	0	Day	Dry	Careless Driving
3	13.224	11/13/2002	Wed	1900	Rear-End	0	1	0	Nite	Dry	Careless Driving
4	13.299	3/6/2002	Wed	600	All other	0	1	0	Nite	Dry	Improper Lane Change
5	13.324	8/1/2002	Thu	2300	Hit Guardrail	0	1	0	Nite	Dry	Careless Driving
6	13.354	10/31/2002	Thu	1400	w/ MV on Other Road	0	1	0	Day	Dry	Improper Lane Change
7	13.44	2/13/2002	Wed	1400	Rear-End	0	2	0	Day	Dry	Careless Driving
8	13.595	4/20/2002	Sat	2000	Hit Guardrail	0	1	0	Nite	Dry	Improper Lane Change
9	13.595	12/10/2002	Tue	1500	Unknown	0	1	0	Day	Dry	Improper Lane Change
10	13.662	6/11/2002	Tue	1700	Rear-End	0	2	0	Day	Wet	Careless Driving

Total No.		Fatal	Injury	PDO	Angle	Left Turn	Right Turn	Rear End	Side swipe	Ped/Bike	
10		**0**	**11**	**1**	**0**	**0**	**0**	**3**	**1**	**0**	
		0.00%	*110.00%*	*10.00%*	*0.00%*	*0.00%*	*0.00%*	*30.00%*	*10.00%*	*0.00%*	
One Vehicle		Day	Night	Wet	Dry	Excess Speed	FTYR/W	DUI			
2		**6**	**4**	**1**	**9**	**0**	**0**	**0**			
20.00%		*60.00%*	*40.00%*	*10.00%*	*90.00%*	*0.00%*	*0.00%*	*0.00%*			

TOTAL VEHICLES ENTERING / ADT : **26,079**

SPOT ACCIDENT RATE: **1.051** /MV
SEGMENT ACCIDENT RATE: **2.226** /MVM

Figure 4-3, on the following page, shows the location of the crashes within the study area during the study period. It is clear that the crashes are clustered at the signalized intersections along SR 7. As such, further analysis was performed for the two signalized intersections within the study area.

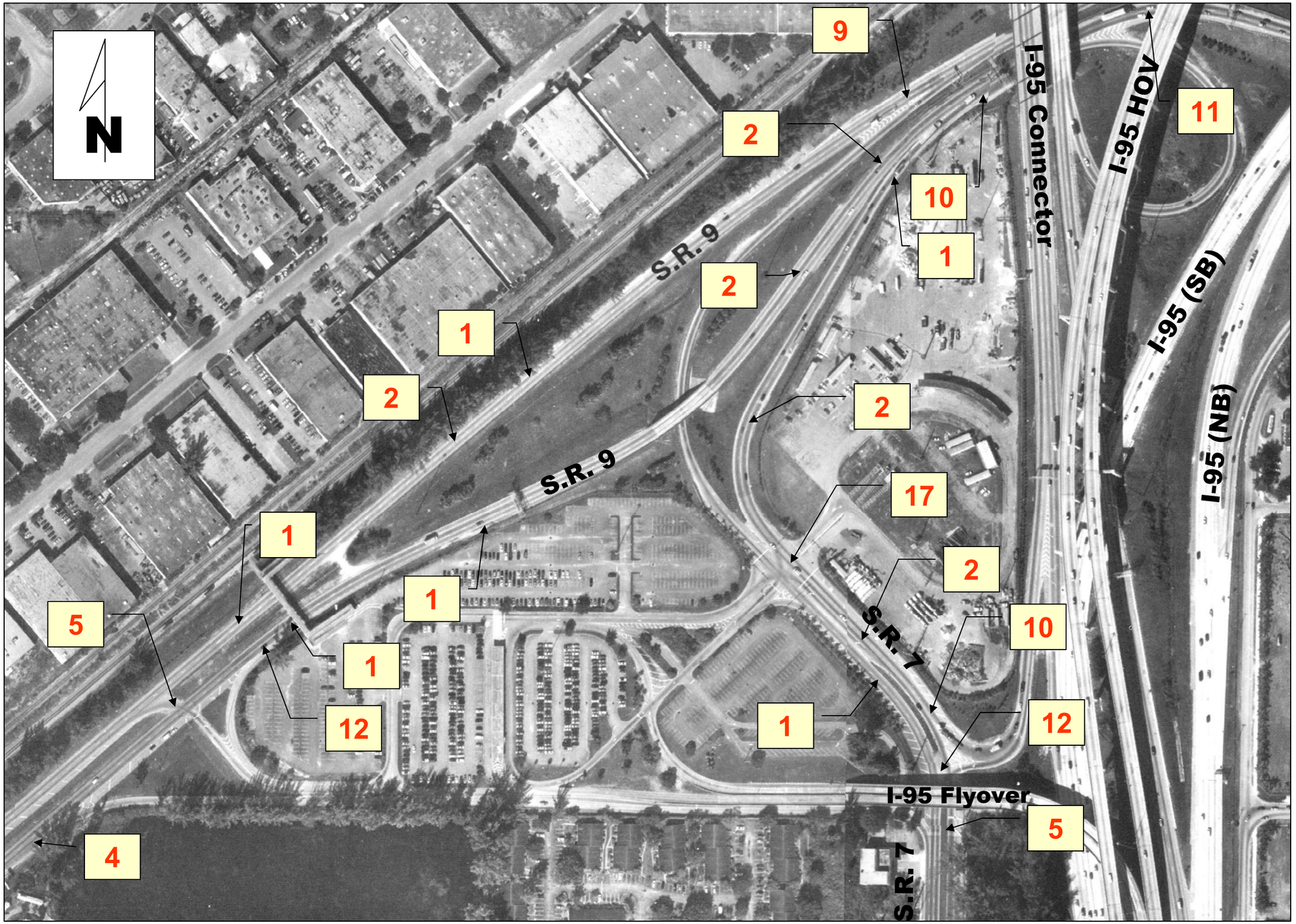


Figure 4-3

Number of Traffic Crashes and Location (2000-2002)

Analysis of Crashes at the SR 7/Turnpike-I-95 Connector Ramp

At this intersection, the yearly breakdown of crashes was 8, 11, and 4 in 2000, 2001, and 2002, respectively. This is a total of 23 crashes in the 3 year period of which 16 involved injuries, 7 were limited to PDO and there were no fatal crashes. Overall, the number of crashes varied a large amount from year to year.

The top three crash types that occurred at this intersection involved rear end collision (13 crashes; 56%), angle collision (4 crashes; 17%), and sideswipe/guardrail collision each with (2 crashes; 8%).

Between the hours of 6:00 a.m. to 9:00 a.m., 5 crashes occurred and between the hours of 3:00 p.m. to 6:00 p.m. 6 crashes occurred. These represent the peak times of day for the occurrence of crashes. The Peak crash days of the week occurred on Fridays with 7 crashes and all other days had similar amounts of crashes. In addition, 21.7% of the crashes occurred during wet conditions and 26% of the crashes occurred during night time. Nighttime crashes were low when compared to the statewide average of 35%. However, wet weather crashes were high, given that the statewide average for wet weather crashes is 15%. The following table provides a tabular representation of the crash data.

Table 4-9. Crash Summary Southern Traffic Signal on SR 7 (2000-2002)

FLORIDA DEPARTMENT OF TRANSPORTATION
CRASH SUMMARY

SECTION: 87140000 STATE ROUTE: 7
INTERSECTING ROADWAY: I-95 Conn offramp M.P. 10.688 TO 10.755 ENGINEER: AG
STUDY PERIOD: FROM 1/ 00 TO 12/ 02 COUNTY: Miami-Dade

No.	Mile Post	DATE	DAY	TIME	TYPE	FATAL	INJURY	PROP DAM	DAY / NT	WET / DRY	CONTRIBUTING CAUSE
1	10.714	4/20/2000	Thu	1500	Sideswipe	0	0	1	Day	Dry	Careless Driving
2	10.724	4/7/2000	Fri	2100	Angle	0	0	1	Nite	Dry	All Other
3	10.724	7/1/2000	Sat	1000	Rear-End	0	3	0	Day	Dry	Careless Driving
4	10.724	8/9/2000	Wed	1800	Angle	0	3	0	Day	Dry	Disregarded Stop Sign
5	10.724	9/10/2000	Sun	1500	Hit Guardrail	0	2	0	Day	Wet	Careless Driving
6	10.724	11/23/2000	Thu	1600	Rear-End	0	1	0	Nite	Dry	Careless Driving
7	10.724	11/24/2000	Fri	900	Rear-End	0	0	1	Day	Dry	Disregarded Other Traffic Control
8	10.765	5/21/2000	Sun	400	Overturned	0	0	1	Nite	Dry	Improper Lane Change
9	10.688	9/7/2001	Fri	700	Rear-End	0	1	0	Day	Wet	Careless Driving
10	10.688	11/26/2001	Mon	1500	Left-Turn	0	3	0	Day	Dry	Improper Turn
11	10.691	10/18/2001	Thu	800	Rear-End	0	2	0	Day	Wet	Careless Driving
12	10.722	10/21/2001	Sun	1000	Rear-End	0	0	1	Day	Dry	Careless Driving
13	10.724	2/6/2001	Tue	2200	Rear-End	0	1	0	Nite	Dry	Careless Driving
14	10.724	2/24/2001	Sat	1000	Sideswipe	0	1	0	Day	Dry	Failed to Yield R/W
15	10.724	4/3/2001	Tue	1800	Rear-End	0	1	0	Day	Dry	Followed too Closely
16	10.724	8/1/2001	Wed	1100	Rear-End	0	0	1	Day	Wet	Careless Driving
17	10.724	8/31/2001	Fri	800	Rear-End	0	1	0	Day	Dry	Careless Driving
18	10.724	10/5/2001	Fri	700	Angle	0	2	0	Day	Wet	Failed to Yield R/W
19	10.755	3/9/2001	Fri	500	Hit Guardrail	0	0	1	Nite	Dry	Careless Driving
20	10.688	10/7/2002	Mon	800	Rear-End	0	2	0	Day	Dry	No Improper Driving
21	10.724	7/16/2002	Tue	2100	Rear-End	0	3	0	Nite	Dry	Careless Driving
22	10.724	7/19/2002	Fri	1500	Angle	0	1	0	Day	Dry	All Other
23	10.724	7/22/2002	Mon	1600	Rear-End	0	2	0	Day	Dry	Careless Driving

Total No.		Fatal	Injury	PDO	Angle	Left Turn	Right Turn	Rear End	Side swipe	Ped/Bike	
23		**0**	**29**	**7**	**4**	**1**	**0**	**13**	**2**	**0**	
		0.00%	*126.09%*	*30.43%*	*17.39%*	*4.35%*	*0.00%*	*56.52%*	*8.70%*	*0.00%*	
One Vehicle		Day	Night	Wet	Dry	Excess Speed	FTYR/W	DUI			
2		**17**	**6**	**5**	**18**	**0**	**2**	**0**			
8.70%		*73.91%*	*26.09%*	*21.74%*	*78.26%*	*0.00%*	*8.70%*	*0.00%*			

TOTAL VEHICLES ENTERING / ADT : **22,500**

SPOT ACCIDENT RATE: **2.801** /MV
SEGMENT ACCIDENT RATE: **41.800** /MVM

Analysis of Crashes at the northern signalized intersection on SR 7.

At this intersection, the yearly breakdown of crashes was 9, 4, and 4 in 2000, 2001, and 2002, respectively. This is a total of 17 crashes in the 3 year period of which 9 involved injuries, no fatal crashes occurred, and 8 were limited to PDO. Overall, the number of crashes appeared to have a downward trend during the study period.

The top three crash types that occurred at this intersection involved rear end collision (4 crashes; 23%), sideswipe collision (4 crashes; 23%), and left turn collision (3 crashes; 17%).

Between the hours of 9:00 a.m. to Noon, 3 crashes occurred and between the hours of 3:00 p.m. to 6:00 p.m. 4 crashes occurred. These represent the peak times of day for the occurrence of crashes. The Peak crash days of the week occurred on Fridays with 5 crashes and Sundays with 5 crashes. In addition, 11.7% of the crashes occurred during wet conditions and 29% of the crashes occurred during night time. Both nighttime and wet weather crashes were low when compared to the statewide averages, given that the statewide average for nighttime and wet weather crashes are approximately 35% and 15%, respectively. The following tables provide a tabular representation of the crash data.

Table 4-10. Crash Summary Northern Traffic Signal on SR 7 (2000-2002)

FLORIDA DEPARTMENT OF TRANSPORTATION
CRASH SUMMARY

SECTION: 87140000 STATE ROUTE: 7
INTERSECTING ROADWAY: P-N-R Entrance M.P. 10.793 TO 10.846 ENGINEER: AG
STUDY PERIOD: FROM 1/ 00 TO 12/ 02 COUNTY: Miami-Dade

No.	Mile Post	DATE	DAY	TIME	TYPE	FATAL	INJURY	PROP DAM	DAY / NT	WET / DRY	CONTRIBUTING CAUSE
1	10.793	11/12/2000	Sun	1100	Sideswipe	0	0	1	Day	Dry	Improper Passing
2	10.812	4/17/2000	Mon	800	Rear-End	0	1	0	Day	Dry	Careless Driving
3	10.812	6/18/2000	Sun	1900	Rear-End	0	0	1	Day	Dry	Improper Lane Change
4	10.812	8/18/2000	Fri	1200	All other	0	0	1	Day	Dry	All Other
5	10.812	8/20/2000	Sun	2300	All other	0	0	1	Nite	Dry	Fleeing Police
6	10.812	9/24/2000	Sun	2200	Angle	0	0	1	Nite	Dry	Disregarded Traffic Signal
7	10.812	10/5/2000	Thu	900	Left-Turn	0	1	0	Day	Dry	No Improper Driving
8	10.812	12/1/2000	Fri	1000	Left-Turn	0	1	0	Day	Dry	Improper Turn
9	10.82	5/7/2000	Sun	1500	Occupant Fell from Veh	0	1	0	Day	Dry	Unknown
10	10.81	12/3/2001	Mon	600	Sideswipe	0	0	1	Nite	Dry	Careless Driving
11	10.812	2/13/2001	Tue	1600	Rear-End	0	1	0	Day	Dry	Careless Driving
12	10.812	10/24/2001	Wed	1400	Angle	0	1	0	Day	Dry	Improper Turn
13	10.846	3/16/2001	Fri	100	Overturned	0	1	0	Nite	Dry	Careless Driving
14	10.812	2/22/2002	Fri	1600	Sideswipe	0	0	1	Day	Dry	Improper Lane Change
15	10.812	9/3/2002	Tue	2000	Left-Turn	0	2	0	Nite	Wet	All Other
16	10.812	11/22/2002	Fri	1300	Rear-End	0	7	0	Day	Dry	Obstructing Traffic
17	10.818	6/11/2002	Tue	1700	Sideswipe	0	0	1	Day	Wet	Improper Lane Change

Total No.		Fatal	Injury	PDO	Angle	Left Turn	Right Turn	Rear End	Side swipe	Ped/Bike	
17		**0**	**16**	**8**	**2**	**3**	**0**	**4**	**4**	**0**	
		0.00%	*94.12%*	*47.06%*	*11.76%*	*17.65%*	*0.00%*	*23.53%*	*23.53%*	*0.00%*	
One Vehicle		Day	Night	Wet	Dry	Excess Speed	FTYR/W	DUI			
3		**12**	**5**	**2**	**15**	**0**	**0**	**2**			
17.65%		*70.59%*	*29.41%*	*11.76%*	*88.24%*	*0.00%*	*0.00%*	*11.76%*			

TOTAL VEHICLES ENTERING / ADT : **22,500**

SPOT ACCIDENT RATE: **2.070** /MV
SEGMENT ACCIDENT RATE: **39.057** /MVM

The corresponding yearly confidence levels were calculated for both the segments for SR 7 & SR 9 and for the 2 signalized intersections. This information is summarized in Table 4-11, below. The

confidence level of an abnormally high crash rate when compared to similar locations statewide is high for locations in bold.

Table 4-11. Confidence Levels

Location	2000	2001	2002
SR 7			
Urban limited access	**99.99%**	**99.99%**	N/A
Suburban 4 lane divided road	96.19%	96.28%	N/A
SR 9			
Suburban 4 lane divided road	**99.986%**	**99.956%**	97.967%
SR 7 intersections			
SR 7 S intersection	**99.999%**	N/A	N/A
SR 7 N intersection	96.596%	N/A	N/A

Note: N/A: not applicable for less than 8 crashes per year
Bold: abnormally high confidence interval

4.1.10 Intersections and Signalization

There are two signalized intersections within the corridor under the control of the Miami-Dade Traffic Signal System. Both traffic signals are isolated (not part of a control section) and located along SR 7 at the intersection of the I-95 connector ramp and at the entrance to the PNR Facility. Figure 4.4 graphically shows the signalized intersections and the existing lane configurations.

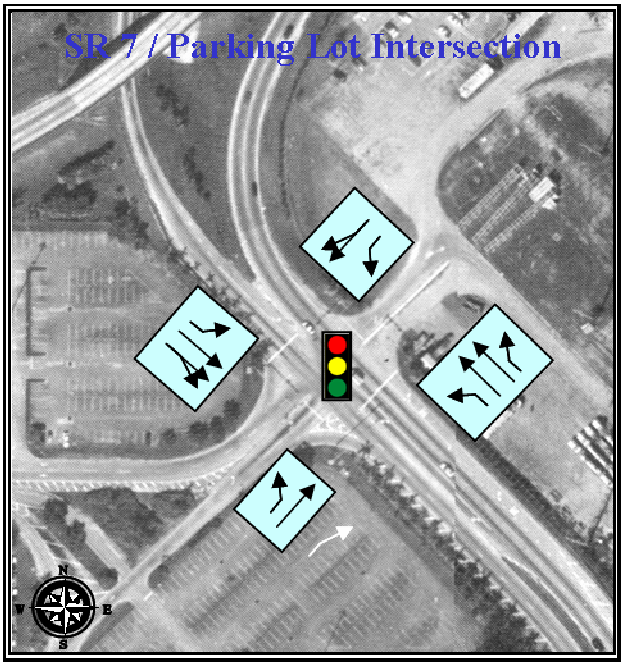
The traffic control time-of-day cycle lengths are shown in Table 4-12.

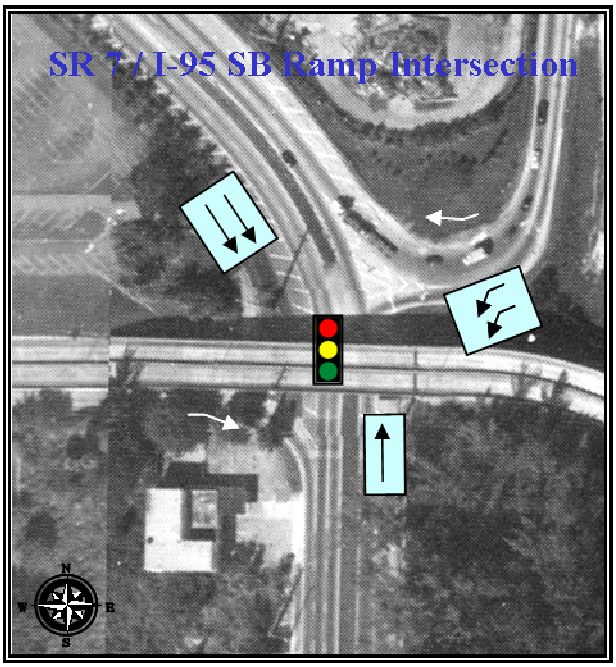
Table 4-12. Traffic Control Section Time-of-Day Cycle Lengths

Signalized Intersection	Late night (midnight to 5:30 AM)	AM Peak (5:30 – 10:00 AM)	Average (10:00 AM – Mid night)
NW 7th Ave/SB I-95	71 sec	110 sec	90 sec
NW 7th Ave/Parking Lot	81 sec	125 sec	90 sec

Source: Miami-Dade County Public Works Department – Traffic Signal Division

Figure 4-4. Existing intersections and lane configurations





4.1.11 Lighting

Lighting along the I-95 Flyover is provided by high pressure sodium fixtures on standard cobra head luminaries mounted on aluminum poles. Lighting through the remainder of the project area is provided by high mast lighting.

4.1.12 Utilities and Railroad Crossings

The franchised utility companies and governmental utility departments have few facilities within the project area as summarized in Table 4-13.

Table 4-13. Utilities Along GGMTF

Utility Owner	Facility within the Project Site
Bell South	Yes
City of North Miami	None
City of North Miami Beach	Yes (16" water main)
Florida Power and Light	Yes (Overhead 138 kv)
FPL Fiber Net	None
Miami-Dade Water and Sewer	None
Teco (People Gas)	None

A summary of the approximate locations of the utilities within the study corridor is presented in Appendix B.

South Florida Rail Corridor (SFRC) is a double track railroad corridor adjacent to the project, which runs parallel to SR 9. SFRTA's Golden Glades station is located northwest of SR 9 in the study area. Table 4-14 shows the average weekday activity at the Golden Glades Station.

Table 4-14. Golden Glades SFRTA Station Average Weekday Station Activity

Northbound			Southbound		
Ons	Offs	On Board	Ons	Offs	On Board
253	46	1849	42	242	2009

Source: SFRTA 2020 Long-Range Master Plan – December 2001

4.1.13 Pavement Condition

The pavement surface on SR 7 is in poor condition. The pavement condition for I-95 Flyover, SR 9 ramp, and SR 9 is in fair condition.

4.1.14 Stopping Sight Distance

Stopping sight distance is the length required for a driver to see an object (6" in height) and negotiate a complete stop. This parameter is typically impaired by severe crests in vertical alignment, poor horizontal alignment, and/or roadside obstructions. As these conditions are not present along the existing facility, this parameter was qualitatively rated as "Good."

4.1.15 Intersection Sight Distance

This parameter relates to the provision of proper sight distances for a vehicle approaching an at-grade intersection. The sight distance considered safe under various assumptions of physical conditions and driver behavior is directly related to vehicle speeds and the resultant distances traversed during perception and reaction time and breaking. Project intersections including SR 7/PNR Entrance, SR 7/I-95 Connector, and SR 9/PNR exit received qualitative ratings of "Good."

4.1.16 Decision Sight Distance

This parameter is based on the minimum distance required for a driver approaching a complex decision area in order to properly evaluate and react to the situation. Typical decision areas include gore areas, lane reduction areas, and merge areas. Decision sight distance was qualitatively rated "Fair" along SR 7lane reduction and merge areas.

4.1.17Signing

An inventory was conducted of the existing signage along the I-95 HOV Flyover into the PNR, SR 9 Ramp, SR 7, and SR 9. In general, the overall signage is good with adequate placement, lettering and symbol sizes. A summary of the existing signing along the study corridor is presented below.

Speed Limit Signing

The posted speed limit on SR 7 south of PNR is 40 mph. There is no reduction as northbound traffic approaches the highly congested GGI.

The posted speed limit on SR 9 south of Golden Glades is 50 mph. There is a sign facing northbound traffic that says "REDUCED SPEED AHEAD". According to the MUTCD, this sign *shall* be accompanied by a reduced speed. However, as with SR 7 there is no speed reduction as northbound traffic approaches the highly congested GGI. This constitutes a MUTCD violation.

SR 7 undergoes two lane reductions in the northbound direction. The first occurs south of the Golden Glades where SR 7 abruptly transitions from three northbound through lanes to one. There is only one sign advising motorists of this condition and this sign occurs after the transition begins. Lane lines are discontinued and there are no pavement messages. Northbound motorists are left with only the transition and crosshatch lines for guidance. This does not appear to conform to State Standard Indexes. It was observed that many northbound motorists continue to pass all the way through the transition zone.

The second lane reduction occurs between the PNR Lot signal and the junction with SR 9. In this area SR 7 reduces from two through lanes to one. There are no signs and only two MERGE messages. This, too, does not appear to conform to State Standard Indexes.

Northbound SR 7 transitioning from two lanes to one prior to the junction of SR 9

SFRTA and Park-and-Ride Lot Directional Guide Signs

Each approach to the PNR is marked with SFRTA and PNR Lot guide signs. Based on field observations theses signs appear to be ineffective for the following reasons:

- The guidance is generally furnished by logo signs. In many instances, a logo placard is affixed to a much larger overhead directional guide sign. In some instances the logo placards are ground-mounted along with the text message "FREE PARKING".
- Generally, the logo placards have poor target value. The SFRTA logo consists of three intertwined arrows in light shades of blue, green and orange on a white background. These may be suitable for a piece of printed material or for display on the side of a train but lack the color contrast necessary for an effective traffic sign. A few of the SFRTA logo placards bear the word "SFRTA" but most do not. This requires users to recognize the SFRTA logo.
- The PNR logo consists of fine black line work on a white background. The combination of black on a white background is satisfactory for color contrast, but the fine line detail and small images lack the target value necessary for an effective highway sign. This logo conveys very little meaning, particularly for the unfamiliar driver.

SFRTA and PNR logo placards on a traffic sign

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4.1.18 Existing Bridges

Golden Glades Pedestrian Bridge over SR 9 (PNR to SFRTA)

This pedestrian bridge crosses over SR 9 and is located just west of the GGI. This structure provides a direct connection between the PNR and the SFRTA station.

Type of Structure
The structure consists of pedestrian access ramps, built as concrete continuous slabs supported on hammerhead piers. The pier columns are circular of approximately 3.5 ft diameter.

The pedestrian bridge superstructure, crossing over SR 9, consists of 2 spans with two-simply supported precast concrete double-tee beams. The bridge section is approximately 12 ft wide with a concrete topping. The substructure consist of single column pier (3.5 ft in diameter) with a L shape pier cap at the sides and a hammerhead pier cap at the intermediate support.

Current Condition and Year of Construction
After a visual inspection, both the superstructure and substructure appears to be in satisfactory condition.

Geometry and Span Arrangement
The portion of the pedestrian bridge that crosses over SR 9 is on a straight alignment with 2 spans of approximately 70 ft. The bridge has a crown at the intermediate pier with a grade of approximately 1%. Minimum vertical clearances are not indicated on the bridge, however, this dimension was measured in the field to be 16'-11", which meets and exceeds the required minimum vertical clearance. The pedestrian access ramps are also 12 ft wide with a 10% to 12% grade which is not ADA compliant. Furthermore, elevators are not provided.

***Golden Glades Interchange SR 9 Bridge over SR 7* (Bridge No. 870044)**

This bridge supports westbound traffic on SR 9 and crosses over SR 7. It is located just east of the existing GGI and it carries 2 lanes of traffic connecting to: I-95 Northbound, and/or SR 7/US 441 from the left lane and the Florida Turnpike, and SR 826 from the right lane. The bridge is on a curved alignment.

Type of Structure

The bridge superstructure consist of three simply supported spans with AASHTO Type II precast prestressed concrete beams. These beams rest on neoprene bearings pads. The end bent/abutments are comprised of nine (9)-18" square prestressed concrete piles interconnected with a cast-in-place concrete pile cap. The slopes at these abutments are 2:1 and are protected by concrete pavement. The two intermediate piers consist of concrete frames with two bays and three columns of 3 ft in diameter with a 3'6" by 3'6"pier cap. The pier column foundation consist of four (4)-14" square prestressed concrete piles with a 6'x 6'square pile cap.

Current Condition and Year of Construction

A visual inspection of this bridge indicates that both the superstructure and substructure appear to be in good condition. The central part of the exterior girder, on the north side of the bridge, has suffered some damage in the form of concrete portions lost due to, what seems to be, truck impacts. However, neither prestressed strands nor reinforcing steel have been exposed. The bridge was built in 1963.

Geometry and Span Arrangement

The bridge superstructure consists of three simply supported spans of 46 ft, 60 ft anf 46 ft lengths. The bridge alignment is curved with a radius of 240 ft and a superelevation of 5.7%. The bridge width is 34'2". The first and last span consist of five AASHTO Type II prestressed concrete beams, while the center span has 7-AASHTO Type II beams. SR 7 underpasses the adjacent bridge with a curved alignment and the bridge pier columns are protected by guardrails in front of the pier columns.

The posted vertical clearance reads 14'-7" which does not meet current FDOT minimum vertical clearance requirements. This point of minimum vertical clearance is located at the intersection of the north side of the bridge and the outside edge of the travel lane of SR 7.

Golden Glades Interchange Flyover Ramp over I-95 Southbound and SR 7 into Facility

This bridge provides a direct connection between I-95 and the PNR, west of SR 7. Traffic going into the park-and-ride lot comes from I-95 Northbound and the traffic going out of the PNR lot gets connected to the I-95 Southbound. The bridge provides one traffic lane in each direction separated by a concrete median barrier.

Type of Structure

The superstructure consists of continuous steel plate girders composite with a concrete deck. The bridge deck is approximately 45 ft wide, supported by 6 steel plate girders spaced at approximately 7 ft on centers and with girder height in the order of 6 to 7 ft. The bridge was built in two units. The first unit has three feet pans with average lengths of 160 ft along a curved alignment with a radius of curvature in the order of 300 ft. The second unit consists of 2 spans along a tangent alignment with an average span length in the order of 140 ft. The substructure consists of concrete hammerhead piers. The pier cap is tapered from 4 ft to 6 ft at the edge and 7 ft at the root of the cantilever span. The pier columns are also tapered from approximately 10 ft at the top to 12 feet at the base.

Current Condition

A visual inspection of this bridge indicates that both the superstructure and substructure appear to be in good condition. The exterior layer of paint in the steel girders shows some discoloration at various locations. In addition, some loss of paint was observed at some locations. This condition occurs mainly on the exterior face of the exterior girder.

Some signs of superficial rusting were observed at the steel girder splice locations, while the cross frames and the lateral bracing system seem to be in good conditions

Geometry and Span Arrangement

The bridge consists of five spans built in two continuous structural units. The first unit is on a curved alignment and has three spans over I-95 southbound with average span lengths of approximately 160 feet. The second unit has 2 spans with an average span length of 140 ft and is located on a tangent alignment. This unit spans over SR 7 and a local street which is within the boundaries of the PNR Lot. The vertical clearance over SR 7 is posted on the bridge as 18’0” clearance.

4.2 Facility Information

During the evolution of the GGI, part of the land between I-95 and SR 9 was incorporated into the PNR Lot. This PNR lot is the largest in the state, able to accommodate up to 1,350 vehicles. However, aside from the parking areas and roads, the existing structures are minimal. The bus platform has a roof, four bays, benches and an unoccupied information booth. The SFRTA station platform is on the opposite side of SR 9 and is accessible via a pedestrian overpass. SFRTA train service is Florida's only commuter railroad which operates along the SFRC. The rail platform includes roofed benches and several pay telephones. The SFRTA booth and a few newspaper racks are scattered throughout the area. Drinking water is not available. However, the station is currently being expanded and refurbished.

All this land area (three lots totaling 45 acres), as well as the roadway right-of-way and the lot on the east side of SR 7, is owned by the State of Florida and managed by the Florida Department of Transportation (FDOT). The existing land-use designation for the PNR site is predominantly GU (Interim) and IU-1 (Industrial Light Manufacturing).

The walking distance from the auto/bus passenger drop-off platform to the SFRTA platform is approximately 1,500 feet including ramps to the railroad overpass. This is a very long, arduous and inconvenient walking distance. The walking path is unsheltered for most of its length.

Greyhound Bus Lines is providing two temporary one-story modular buildings measuring 12' x 44'. A 1050-gallon capacity septic tank and two 426 sf drainfields (one active and one for stand-by) are provided for sanitary facilities. There are 36 parking spaces and 15 spaces for bus parking. The site covers an area of 41,661 sf.

Miscellaneous deficiencies that currently exist at the PNR are: no rest room facilities; frequent curb breaks at bus bays due to lack of steel reinforcement in the concrete; some operational problems for buses exiting to the north during peak periods; and the location of handicap ramps at the ends, instead of the middle, of the waiting platform.

4.3 Environmental Characteristics

4.3.1 Land Use Changes

The project area is located within the limits of unincorporated Miami-Dade County. The Cities of Opa-Locka and North Miami are located south of the project while the City of Miami Gardens and North Miami Beach are located to the north. The unincorporated communities of Bunche Park and Carol City are located to the west and north of the study site, respectively. One large neighborhood, Biscayne Gardens, is located south and east of the project area. Based on the Adopted 2005 and 2015 Land Use Plan for Miami-Dade County, the principal land uses in this vicinity include Industrial (light manufacturing) to the northwest, Government (interim) to the south, Open Space to the southeast, Business/Office to the south, and Residential (Multi Family and Single Family) to the south and east. There are no proposed amendments to change these current land uses except for the PNR or the GGI.

The PNR is owned by the FDOT. Two covered bus passenger shelters, a Greyhound Bus Building and a FDOT Construction Trailer are located within the site. Land use outside of the study area includes business/commercial uses such as gas stations, hotels, and construction and transportation related businesses such as building contractors, glass contractors, plumbers, heating and air conditioning companies, roofers, and discount auto part stores. These businesses are primarily adjacent to SR 7/NW 7th Avenue. Residential uses within the immediate vicinity include rental apartments located adjacent to NW 7th Avenue on NW 155 Avenue (Golden Lake Apartments [multi-story]) and on SR 9/Ali Baba Avenue (Centre Lake Apartments [single-story]).

No significant changes are anticipated in land use as a result of this project. However, recommendations may be proposed for a land use amendment in the study area to include mixed-use development just within the PNR/GGI. This mixed use might include joint development of additional office, retail, commercial, and restaurant land uses. The specific areas proposed for reconstruction, relocation, or new roadway/ramp construction of SR 7/NW 7th Avenue and SR 9/Ali Baba Avenue are located within the existing I-95 right-of-way, which is classified as Transportation land use (see Figure 4.5, Existing Land Use).

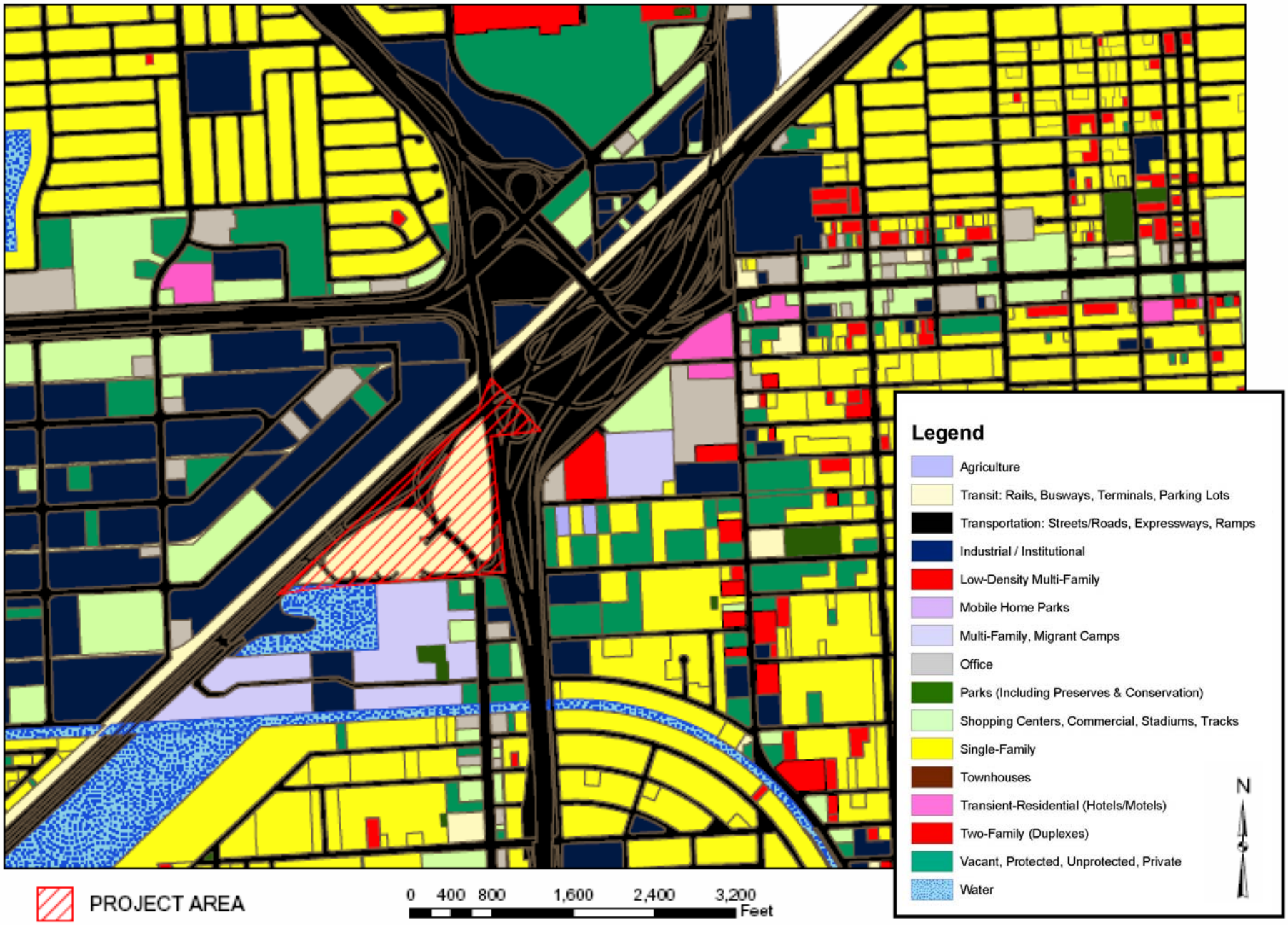

Legend
Agriculture
Transit: Rails, Busways, Terminals, Parking Lots
Transportation: Streets/Roads, Expressways, Ramps
Industrial / Institutional
Low-Density Multi-Family
Mobile Home Parks
Multi-Family, Migrant Camps
Office
Parks (Including Preserves & Conservation)
Shopping Centers, Commercial, Stadiums, Tracks
Single-Family
Townhouses
Transient-Residential (Hotels/Motels)
Two-Family (Duplexes)
Vacant, Protected, Unprotected, Private
Water
N
PROJECT AREA
0 400 800 1,600 2,400 3,200
Feet

Figure 4-5

4.3.2 Cultural Features and Community Services

Economic and Community Development

The project area is located within the limits of unincorporated Miami-Dade County. The Cities of Opa-Locka and North Miami are located south of the project area while the City of Miami Gardens and North Miami Beach are located north of the project area. The unincorporated communities of Bunche Park and Carol City are located to the west and north of the study site, respectively. One large neighborhood, Biscayne Gardens, is located south and east of the project area.

Parks and Recreation Facilities

The following are park facilities located within the project area:

Parks:

- Oak Grove Park – NW 159th Street, Unincorporated Miami-Dade County
- Bunche Park – NW 155th Terrace, City of Opa-Locka
- Biscayne Park – NW 161st Street, Unincorporated Miami-Dade
- Uleta Park – NE 168th Street, Unincorporated Miami-Dade

Archaeological and Historical Resources

Historic Sites/District

One newly recorded historic resource identified (15721 NW 7th Avenue) and documented within the Area of Potential Effect (APE) is considered ineligible for listing in the National Register of Historic Places (NRHP). Constructed in circa 1954, this building exhibits significant non-historic exterior alternations. Its modifications obscure the building's original appearance and compromise its historic integrity to the point where the resource no longer conveys its architectural or historical significance. For this reason, and the lack of historical associations with significant local events or persons, this resource is considered ineligible for listing in the NRHP on an individual basis or as part of a historic district.

Archaeological Sites

The current archaeological investigations of the project corridor indicate that the potential for the recovery of important archaeological information from this area is low. Further, the current survey has indicated that there are no archaeological resources within the project area that are eligible for inclusion in the NRHP.

Community Services:

The following Community Services are located within the vicinity of the project area:

Public Schools:

- Biscayne Gardens Elementary – NW 151st Street, Unincorp. Miami-Dade
- Thomas Jefferson Middle School – NW 147th Street, Unincorp. Miami-Dade
- North Miami Senior High – NE 137th Street, City of North Miami
- Rainbow Park Elementary – 15355 NW 19th Avenue, Opa-Locka
- North Dade Elementary – 1840 NW 157th Street, Unincorp. Miami-Dade
- Bunche Park Elementary – 16001 Bunche Park School Drive, Opa-Locka
- Oak Grove Elementary and Head Start Center – 15640 NE 8th Avenue, City of North Miami Beach

Private Schools:

Catholic Schools:

- Saint Monica – 3490 NW 191st Street, Opa-Locka (PK – 8 / Elem. School)
- Marian Center – 15701 NW 37th Avenue, Opa-Locka (KK – 12 / Spec. Ed)
- Holy Family – 15650 NE 12th Avenue, North Miami
- Saint James – 601 NW 131st Street, North Miami

Kid Care Outreach Centers:

- Colonel Harry Subkoff Comprehensive Center (CAA) – 55 NW 199th Street, Unincorporated Miami-Dade
- Opa-Locka Neighborhood Center (DHS) – 16405 NW 25th Avenue, Unincorporated Miami-Dade
- North Central Regional Office (Team Metro) – 18579 NW 27th Avenue, Unincorporated Miami-Dade

District Courts:

- Joseph Caleb Center – 5400 NW 22nd Avenue, Unincorp. Miami-Dade
- North Dade Justice Center – 15555 Biscayne Boulevard, North Miami

Medical Centers:

- Parkway Regional Medical Center – 160 NW 170th Street, North Miami Beach
- Parkway West Regional Medical Center – 17300 NW 7th Avenue, Unincorp. Miami-Dade
- A number of private medical clinics are located south of the project area along N.W. 7th Avenue, including portions of North Miami Beach, Unincorporated Miami-Dade, and North Miami.

Churches:

- Holy Cross Free Catholic – 62 NW 151st Street, Unincorp. Miami-Dade
- Mount Hermon AME Church - 2245 W. Bunche Park Dr., Opa-Locka
- Mt. Zion AME Church – 15250 NW 183rd Street, Opa-Locka
- New Way Fellowship Baptist Church - 16800 NW 22nd Avenue, Opa-Locka
- Parkway Baptist Church - 18000 NW 18th Avenue, Opa-Locka
- Ship of Zion Baptist Church - 18200 NW 22nd Avenue, Opa-Locka
- Magnolia Park Church of Christ - 2037 NW 152nd St., Opa-Locka
- Church of God of Prophecy - 16801 NW 19th Avenue, Opa-Locka

- Croom Temple Church of God - 2090 NW 151st Street, Opa-Locka
- Faith Truth & Deliverance Inc - 2201 NW 153rd Street, Opa-Locka
- Carol City Spanish Seventh-Day - 17001 NW 20th Avenue, Opa-Locka
- Unity Light of The World - 16800 NW 17th Avenue, Opa-Locka
- Christ Crusaders Inc - 2101 NW 153rd Street, Opa-Locka
- Church of The Transfiguration - 15260 NW 19th Avenue, Opa-Locka
- Holy Faith Missionary Church - 17001 NW 20th Avenue, Opa-Locka
- Iglesia de Dios - 17200 NW 17th Avenue, Opa-Locka
- St. Philip's Church - 15700 NW 20th Avenue, Opa-Locka
- Evangelical Church International, 590 NW 159th Street, Unincorp. Miami-Dade
- Christ Community Church, 15651 NW 6th Avenue, Unincorp. Miami-Dade

Emergency Services and Government Buildings

Police Stations:

Metro-Dade County

- Carol City Station – Carol City District 9 – 18805 NW 27th Avenue, Unincorp. Miami-Dade
- Intracoastal Station – Intracoastal District Station 6 – 15665 Biscayne Boulevard, North Miami

City of North Miami Beach

- Washington Park Community Patrol Office – 1528 NE 152nd Terrace, North Miami Beach

City of North Miami

- Police Headquarters – 700 NE 124th Street, North Miami

City of Opa-Locka

- Police Headquarters – 2495 Ali Baba Avenue, Opa-Locka

Metro-Dade Fire Stations:

- Station No. 32 – NW 167th Street, Unincorp. Miami-Dade/North Miami Beach
- Station No. 31 – NW 199th Street/NE 7th Avenue, Unincorp. Miami-Dade
- Station No. 19 – NW 125th Street, North Miami

Metro-Dade Correctional Facilities:

- North Dade Community Corrections Center – 15801 SR 9/Ali Baba Avenue, Unincorp. Miami-Dade

4.3.3 Natural and Biological Features

Floodplains

According to Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), Community Panel Number 12025C0080 J (revised March 03, 1994), the proposed project is located

entirely within special flood hazard area designated Zone AE. This area is inundated by the 100-year floodplain with base elevations determined at 7 feet (ft). Miami-Dade County has no designated regulatory floodways.

Wetlands

Within the southwest quadrant of the proposed project site, there is a small (0.18 acre) stormwater detention area that contains wetland vegetation including hydrophytic species that comprise the majority of the groundcover: spikerush (*Eleocharis spp.*), white-top sedge (*Rhynchospora colorata*), primrose willow (*Ludwigia microcarpa, Ludwigia sp.*), and hurricane grass (*Fimbristylis cymosa*). One exotic species, torpedo grass (*Panicum repens*), was also present.

Wildlife and Habitats

As required by Section 7(c) of the Endangered Species Act of 1973, as amended, an official list of Endangered, Threatened and Proposed species that may occur in the proposed project area was provided to the U.S. Fish and Wildlife Service (USFWS). Official lists produced by the Florida Game and Fresh Water Fish Commission (FGFWFC) were also reviewed.

A listing was developed and provided to both the USFWS and the FFWCC as part of an Advanced Notification (AN) letter that was distributed for review and comment on March 25, 2004.

The following species are listed by either the USFWS or the FFWCC as endangered (E), or threatened (T), and were considered by FDOT as potential inhabitants or migratory visitors through the project area and the immediate vicinity.

TABLE 4-15: Potentially Occurring Federal/State Protected Species

Scientific Name	Common Name	Federal Status	State Status	Occurrence Status
Alligator Mississippiensis	American Alligator	TSA	E	No
Drymarchon corais couperi	Eastern indigo snake	T	T	No
BIRDS				
Falco peregrimus tundrius	Arctic peregrine falcon	N	E	No
Falco sparverius paulus	Southeastern American Kestrel	N	T	No
Haliaeetus leucocephalus	Bald eagle	T	T	No
Mycteria Americana	Wood stork	E	E	No
Sterna antillarum	Least tern	E	T	No

Federal Status

E= Endangered
T= Threatened
TSA= Threatened by Similarity in Appearance

State Status

E= Endangered

T= Threatened

4.3.4 Physical Features

Noise

Noise sensitive land use near the GGI with potential to be impacted by this project consists of the Centre Lake Apartments along the southern perimeter of the interchange. Fifty-four (54) apartments are located in the group of buildings nearest the interchange. Twenty-eight (28) apartments are in the row of buildings adjacent to the interchange and twenty-six (26) apartments are in the second row of buildings.

Air Quality

Carbon monoxide (CO) is the only pollutant of concern that is evaluated on a project level for FDOT projects. All other pollutants are evaluated on a program level for the entire Miami-Dade metropolitan area. The National Ambient Air Quality Standard (NAAQS) for CO is thirty-five (35) parts per million (PPM) for one-hour periods and nine (9) PPM for eight-hour periods.

Contamination

Sites of potential contamination risk to the project were identified, examined and ranked for risk to the project, in accordance with the PD&E Manual, Part 2, Chapter 22, Contamination Impacts. One (1) High risk (Chemco Corporation, 1130 NW 159 Dr), one (1) Medium risk (Anodyne, Inc., 1270 NW 165 St), seven (7) Low risk and ten (10) No risk sites were identified. A detailed Contamination Screening Evaluation Report (CSER) for this project has been prepared and is available for review at the FDOT District Six Environmental Management Office.

Navigation

No navigable waters exist within the project study area.

SECTION 5 - TRAFFIC

This section presents a summary of the Design Traffic Memo, a companion document to the PD&E Study. The purpose of this section is to develop and evaluate the existing and future traffic operating conditions related to SR 7 and SR 9 within the GGI that may influence the design of the GGMTF and associated joint development activity. Recommendations will be made to improve operating conditions if the quality of traffic flow is unacceptable in the future. For design purposes, the following years have been chosen for the development and evaluation of traffic conditions:

- 2004 - Base year
- 2009 - Project opening year
- 2019 - Interim year
- 2029 - Design year

5.1 Existing (2004) Traffic Conditions

5.1.1 Traffic Data Collection

The primary purpose for collecting existing traffic data and examining roadway characteristics is to verify vehicular volumes as well as provide field information for the analysis of existing conditions. Identification of existing deficiencies in safety and operating conditions will help evaluate potential improvements for future traffic conditions. The existing conditions analysis will also serve as a base for comparison with projected future conditions. All data collection and analyses were performed in accordance with FDOT's procedures.

5.1.2 Lane Configurations

Field observations were conducted to identify existing lane configurations for all roads and signalized intersections within the study area. This information was used in the level-of-service calculations and for signal timing improvements developed later in this study. The lane configurations provided the base for the evaluation of possible future roadway improvements.

5.1.3 Approach Counts

Seventy-two hour continuous automatic machine counts were conducted along SR 9, SR 7 and the I-95 Connector off ramp at the locations shown in Figure 5-1. The 72-hour machine counts were collected during the period Tuesday, February 3rd, 2004 through Thursday February 5th, 2004. Figure 5- 1 depicts the locations of the average machine traffic counts.

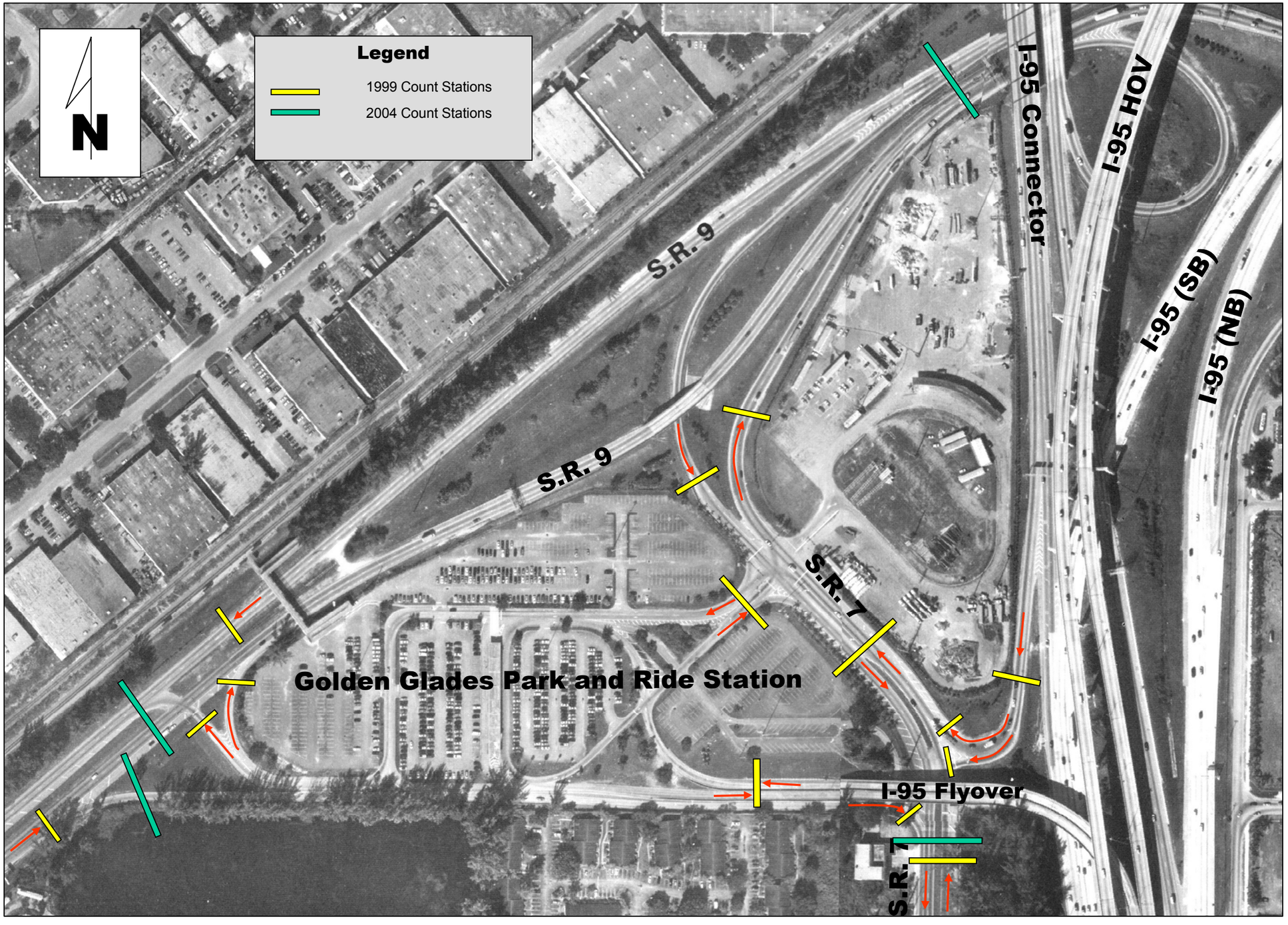


Figure 5-1

Machine Count Station Locations

Results from the machine counts were used to estimate the annual average daily traffic (AADT) along these segments of roads. Table 5-1 shows the computed ADTs.

Table 5-1. Existing Traffic Counts Summary

Count Location	Description	ADT
1	Turnpike-I-95 Connector Ramp onto SR 7	27,165
2	Turnpike-I-95 Connector Ramp -onto NB SR 7	12,299
3	Turnpike-I-95 Connector Ramp - onto SB SR 7	11,150
4	SB onto SR 7 (S of I-95 Flyover)	2,748
5A-NB	SR 7 NB – S of I-95 Flyover	12,347
5B-SB	SR 7 SB - S of I-95 Flyover	18,603
7	SR 9 off-ramp SB to GG	16,449
8	SR 7 NB on-ramp to I-95	22,579
9	SR 9 SB	13,182
10	West Parking exit onto SB SR 9	2,457
11	West Parking exit onto NB SR 9	1,200
12	SR 9 NB	15,623
13A-NB	SR 7-NB N of I-95 off ramp	23,800
13B-SB	SR 7-SB N of I-95 off ramp	14,021
14A-EB	Parking exit to SR 7 EB	NA
14B-WB	SR 7 to Parking entrance – WB	NA

NA: not available

5.1.4 Turning Movement Counts

SR 7 / I-95 Connector Off-Ramp Intersection

Turning movement counts (TMCs) were collected at the intersection of SR 7 and the Turnpike-I-95 Connector ramp between 7:00 and 11:00 am and between 3:00 and 7:00 pm peak periods. Table 5-2 summarizes morning and evening peak hour turning movement counts (TMC) at the intersection of SR 7 and Turnpike-I-95 Connector ramp.

Table 5-2. 2004 Peak Hour TMC - SR 7 / Turnpike-I-95 Connector Ramp Intersection

	SB			WB			NB			EB		
Period	R	T	L	R	T	L	R	T	L	R	T	L
AM	-	1352	-	1,254	-	873	-	522	-	223	-	-
PM	-	737	-	963	-	873	-	1,046	-	120	-	-

Notes:
R: right turn volume
T: through volume
L: Left turn volume
AM peak hour: 7:15 AM to 8:15 AM
PM peak hour: 5:00 PM to 6:00 PM

SR 7 / PNR Entrance Intersection

Year 2000 Turning movement count percentages for the intersection of SR 7 / PNR entrance, 2004 approach volumes and calculated growth rates were used in the development of 2004 and future traffic. This traffic is summarized in Tables 5-3 and 5-4.

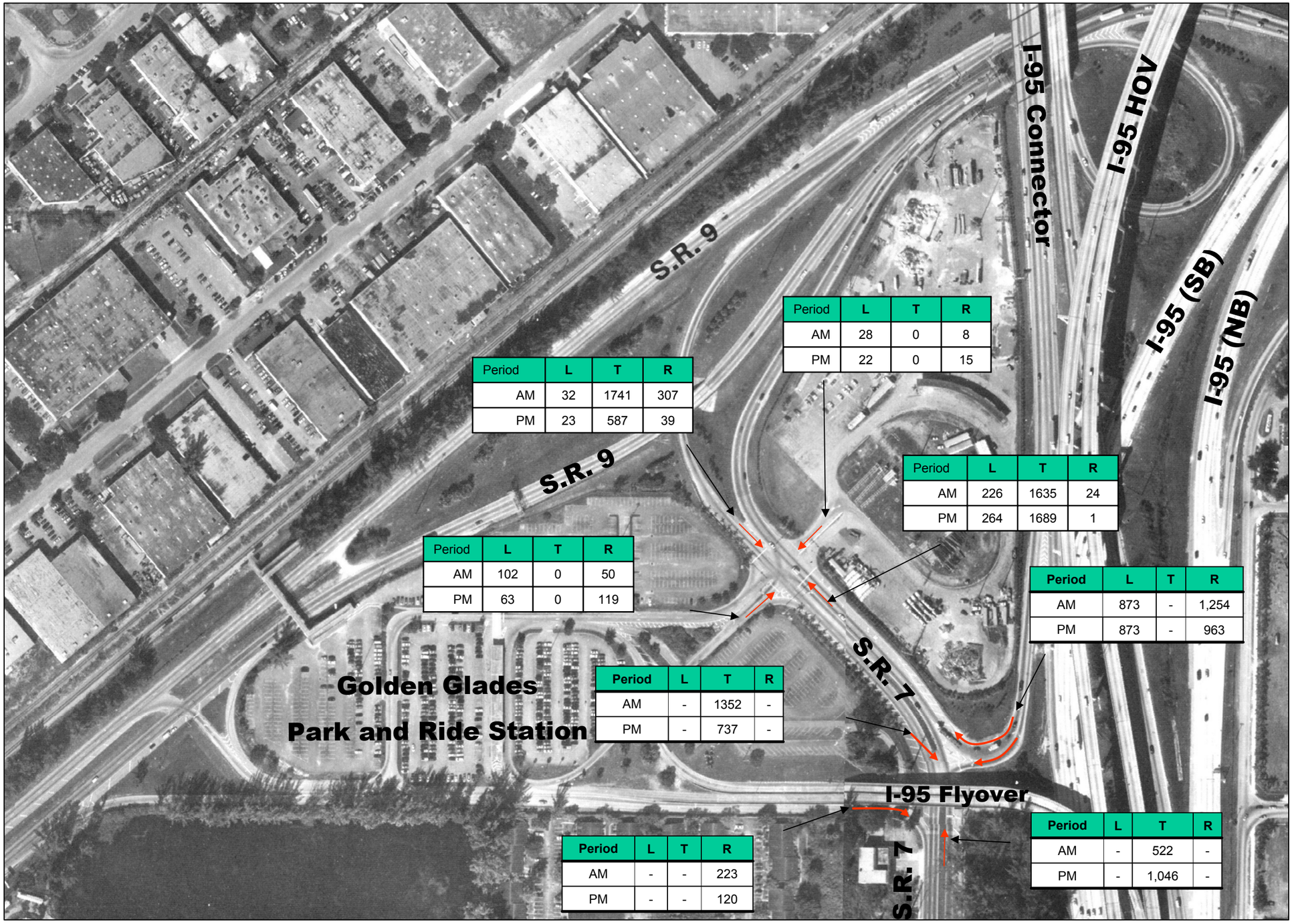
Table 5-3. 2000 Peak Hour TMC - SR 7 / PNR Entrance Intersection

	SB			WB			NB			EB		
Year	R	T	L	R	T	L	R	T	L	R	T	L
AM	203	1153	21	8	0	23	21	1457	202	41	3	99
PM	35	526	21	10	0	12	1	1747	273	52	0	49

Table 5-4. 2004 Peak Hour TMC - SR 7 / PNR Entrance Intersection

	SB			WB			NB			EB		
Year	R	T	L	R	T	L	R	T	L	R	T	L
AM	307	1741	32	8	0	28	24	1635	226	50	0	102
PM	39	587	23	15	0	22	1	1689	264	119	0	63

Graphic representations of the AM and PM peak period TMCs are shown in Figure 5-2.



Period	L	T	R
AM	32	1741	307
PM	23	587	39

Period	L	T	R
AM	28	0	8
PM	22	0	15

Period	L	T	R
AM	226	1635	24
PM	264	1689	1

Period	L	T	R
AM	102	0	50
PM	63	0	119

Period	L	T	R
AM	873	-	1,254
PM	873	-	963

Period	L	T	R
AM	-	1352	-
PM	-	737	-

Period	L	T	R
AM	-	-	223
PM	-	-	120

Period	L	T	R
AM	-	522	-
PM	-	1,046	-

Figure 5-2

2004 Turning Movement Counts

5.1.5 Historical Trends

Five FDOT traffic count stations are located within the study limits. These locations are as follows:

- Station # 0096 - On SR 9, South of NW 17th Avenue
- Station # 0436 - On SR 7, North of NW 143rd Street
- Station # 2504 - On SR9/Florida Turnpike, South of NW 183rd Street
- Station # 0527 - On SR 826/Palmetto Expressway, East of NW 17th Avenue
- Station # 2134 - On I-95, South of NE 159th Street

Analysis of historical data (1991 to 2002) collected at these stations within the study area was performed and the results of the analysis indicated that traffic has grown at approximately 0.2% per year along SR 7, 1.3% along SR 9, 2.3% on the Florida Turnpike Extension, 1.9% along SR 826/Palmetto Expressway and 1.5% along I-95. The historical data from these count stations were used later in the study for the development of future traffic volumes.

5.2 Traffic Data Analysis

5.2.1 Traffic Forecast Parameters - K_{30}, D_{30}, and T Factors

The design traffic parameters - K_{30}, D_{30}, and T factors - were developed based on the guidelines provided in the FDOT "Design Traffic Handbook, Chapter 3." These factors were used in the development of existing and future AADT.

The K-factor is the ratio of the peak hour, two-way traffic to the two-way AADT. It is critical in design traffic forecasts because it defines the amount of traffic during the peak hour. The K_{30} factor is used to build the peak hour traffic volumes for the design year. K_{30} is the proportion of the AADT occurring during the 30th highest hour of the year and is assumed to remain constant over time. An estimated K_{30} has been developed for this study and is used to determine the Design Hour Volume (DHV).

The Directional Distribution, or D-factor, is the percentage of the traffic in the peak direction during the peak hour. The D_{30} factor is the proportion of traffic in the 30th highest hour of the design year traveling in the peak direction and was assumed to remain constant over time. An estimated D_{30} has been developed and was used to determine the Directional Design Hour Volume (DDHV).

The T-factor is the percentage of truck traffic during the peak hour and includes the FHWA Vehicle Classifications 4 through 13. An estimated T-factor was calculated and used in the calculations for levels-of-service. The T-factor was also assumed to remain constant over time.

Design traffic parameters were obtained from the 2002 Florida Traffic Information CD and are summarized in Table 5-5.

Table 5-5. Recommended K30, D30, and T Factors

Count Location	K	D	T
I-95 Connector	10.43	53.42	6.49
I-95	7.83	51.22	9.68
SR 7	9.75	52.35	4.42
SR 9	9.75	52.35	7.88

5.2.2 Daily Traffic Volumes - Existing AADTs

The 2004 Annual Average Daily Traffic (AADT) was calculated using the approach count, the D-factor, the Seasonal Adjustment Factor (SF) and an Axle Adjustment Factor (AF) as follows:

2004 AADT = (Approach Count / D) * SF * AF

The 2004 AADTs are shown in Table 5-6. 2004 Seasonal Adjustment Factor was not available, the 2002 SF of 0.97 was used. The estimated 2004 AADTs were checked against the historical data from the FDOT count stations and found that they were reasonable.

Table 5-6. Existing (2004) Annual Average Daily Traffic (AADTs)

Count Location	2004
1	26,350
2	11,930
3	10,816
4	2,666
5A-NB	11,977
5B-SB	18,045
6A-NB	306
6B-SB	904
7	15,956
8	21,902
9	12,787
10	2,383
11	1,164
12	15,154
13A-NB	23,086
13B-SB	13,600
14A-EB	847
14B-WB	1,084

5.3 Existing Level of Service (LOS) Analysis

Capacity analyses were conducted for critical links and intersections within the PNR area based on traffic counts for the morning and evening peak hour periods. The traffic count survey revealed that the morning peak period occurred from 7:45 AM to 8:45 AM and the evening peak period occurred from 5:00 PM to 6:00 PM. Thus, link and intersection capacity analyses were performed for those peak periods.

5.3.1 Link Capacity (Level-of-Service) Analysis

This analysis consisted of comparing existing volumes with LOS "D" capacity thresholds established by the Florida Department of Transportation (FDOT) 2004 Two-Way Peak Hour Volumes Level-of-Service Generalized tables for the various count stations within the study area. Table 5-7 summarizes the AM and PM LOS analysis and are shown in Figure 5-3.

Table 5-7. Peak Hour Link Capacity Analysis

			Existing			
Count	Number	LOS "D"	AM Peak		PM Peak	
Location	Lanes	Capacity	2004	LOS	2004	LOS
1	2L	1,872	**2,171**	**F**	**1,811**	**E**
2	1L	936	**1,280**	**F**	891	D
3	1L	936	891	D	920	D
4	1L	936	247	C	132	C
5A-NB	1L	778	605	C	**1,063**	**F**
5B-SB	3L	2,332	**2,490**	**E**	1,808	C
6A-NB	1L	936	48	C	22	C
6B-SB	1L	936	78	C	55	C
7	1L	1,468	**2,080**	**F**	650	B
8	2L	2,935	1,791	C	1,544	B
9	2L	2,935	731	A	832	A
10	1L	417	**847**	**F**	361	D
11	1L	417	18	C	**450**	**E**
12	2L	2,935	649	A	989	B
13A-NB	2L	1,555	**1,885**	**F**	**1,954**	**F**
13B-SB	2L	1,555	1,352	D	756	C
14A-EB	2L	776	55	C	104	C
14B-WB	2L	776	284	C	0	C

This analysis showed the following:

During the morning peak period, six sections of road within the study period were operating deficiently. These roads are:

- Turnpike/I-95 ramp
- The WB right turn movement at the intersection of SR 7 and Turnpike-I-95 connector ramp
- SR 7 south of GGI, southbound direction
- SR 9 off ramp

- PNR southbound exit road
- SR 7 north of Turnpike/I-95 ramp, northbound direction

During the evening peak period, four sections of road showed to be operating over capacity. These segments are:

- Turnpike/I-95 connector ramp
- SR 7 south of GGI, northbound direction
- SR 7 north of Turnpike/I-95 Connector ramp, northbound direction
- Parking exit road via SR 9 northbound

5.3.2 Capacity (Level-of-Service)

Capacity analysis was performed for the signalized intersections of SR 7 at PNR entrance and SR 7 at Turnpike/I-95 Connector ramp. These analyses were performed in accordance with the current 2000 Highway Capacity Manual (HCM) and FDOT's LOS standards. The Highway Capacity Software (HCS), Release 4.1d, was used to perform the LOS analyses. According to the HCM, failing intersections are those operating with LOS below "D." The results of this analysis are summarized in Tables 5-8 and 5-9.

Analysis at SR7 / PNR Entrance Intersection

The results of this analysis indicate that the intersection is failing in the morning due to the poor operations of the northbound and southbound approaches.

Table 5-8. SR 7 / PNR Entrance Intersection – 2004 HCS Results

Year	EB	WB	NB	SB	Intersection LOS
AM	D	D	E	F	E
PM	D	C	A	A	B

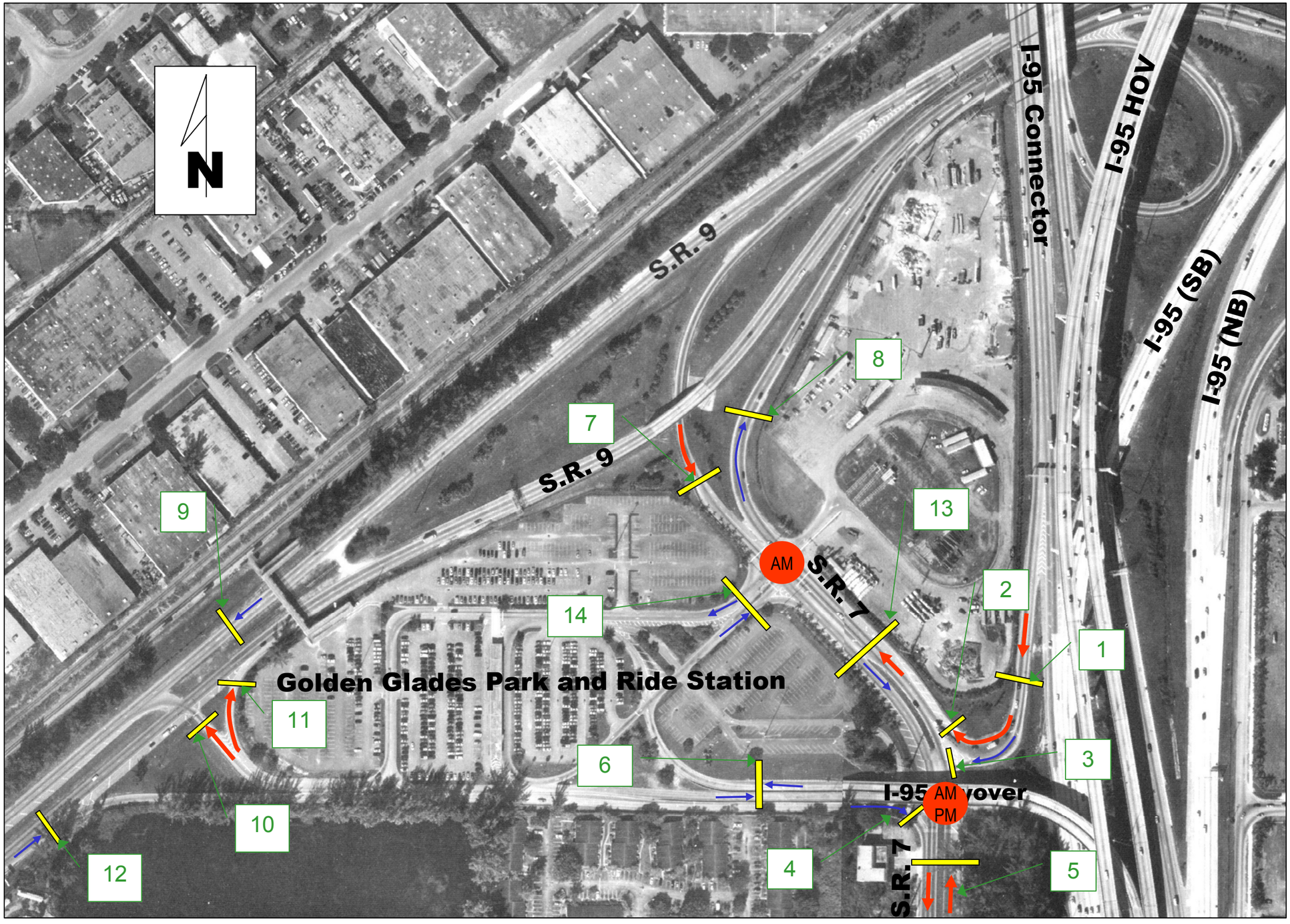
Analysis at SR7 / Turnpike/I-95 ramp

The results of this analysis indicate that the intersection is failing in both peak hours to the poor operations of the westbound approach in the AM peak and PM peaks and of the northbound approach in the PM peak.

Table 5-9. SR 7 / Turnpike/I-95 ramp Intersection - 2004 HCS AM Results

Year	EB	WB	NB	SB	Intersection LOS
AM	-	F	B	B	E
PM	-	C	F	B	F

Figure 5-4 illustrates intersection levels of service.



Count	AM Peak		PM Peak	
Location	2004	LOS	2004	LOS
1	**2,171**	**F**	**1,811**	**E**
2	**1,280**	**F**	891	D
3	891	D	920	D
4	247	C	132	C
5A-NB	605	C	**1,063**	**F**
5B-SB	**2,490**	**E**	1,808	C
6A-NB	48	C	22	C
6B-SB	78	C	55	C
7	**2,080**	**F**	650	B
8	1,791	C	1,544	B
9	731	A	832	A
10	**847**	**F**	361	D
11	18	C	**450**	**E**
12	649	A	989	B
13A-NB	**1,885**	**F**	**1,954**	**F**
13B-SB	1,352	D	756	C
14A-EB	55	C	104	C
14B-WB	284	C	0	C

LEGEND:

Failing link – LOS E, F

Failing Intersection – LOS E, F

Figure 5-3

Existing 2004 AM/PM Peak Hour Link Traffic and LOS

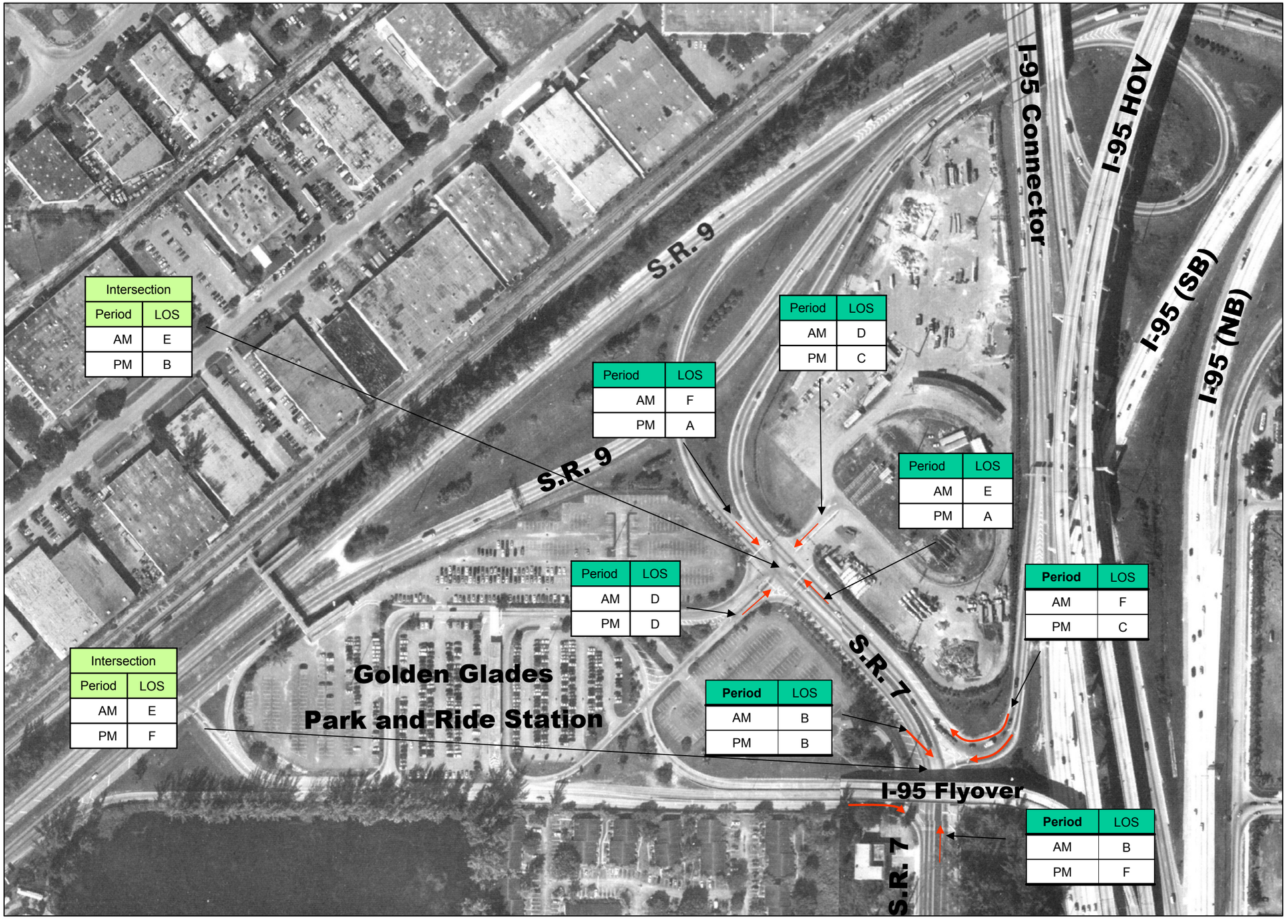


Figure 5-4

Existing 2004 Intersection Levels of Service

5.4 Design Traffic Development

5.4.1 Methodology for the Development of Design Traffic

Design traffic volumes were developed in accordance with procedures specified in the Department's Project Traffic Forecasting Handbook, 2002. Traffic volumes were developed for the opening year 2009, the interim year 2019, and the design year 2029.

5.4.2 Annual Average Daily Traffic (AADT)

Future-year traffic projections through the design year (2029) were developed based on regression analyses of historic traffic count information.

5.4.3 Linear Regression Analyses

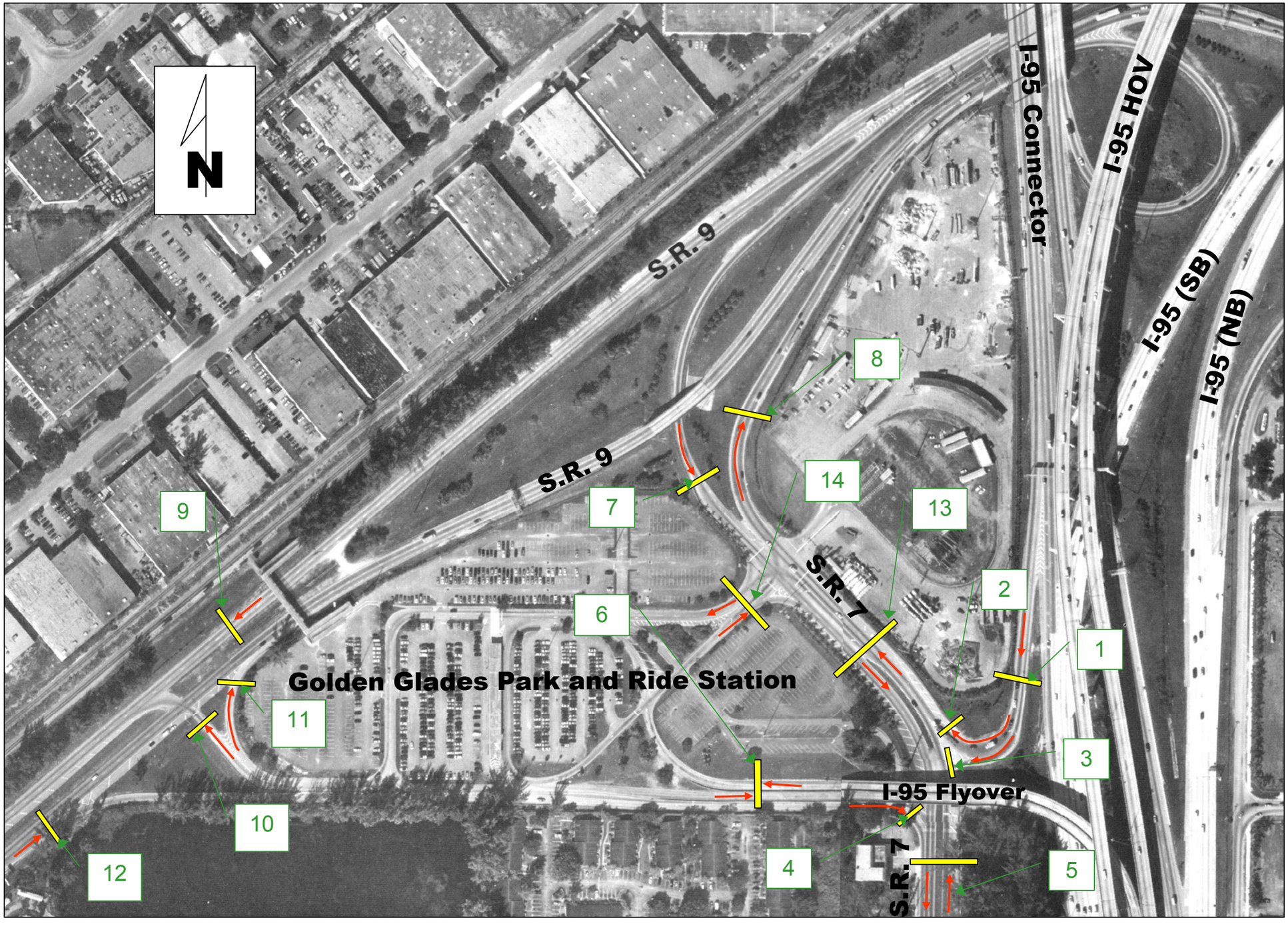
Linear regression analyses were performed for the three FDOT traffic count stations within the study limits to determine future traffic. Outlying or abnormal fluctuations in historical traffic were omitted where it was deemed necessary and regressions were computed for the remaining data. Engineering and planning judgment were used to select the best projection of future traffic.

Growth rates were calculated at each FDOT count station by linear interpolation using the traffic projection results from the base year of 2004 to the project years of 2009, 2019, and 2029. The AADT for the project years over the entire corridor was calculated by multiplying the 2004 AADT by the corresponding growth rate. Calculated growth rates are presented in Table 5-10.

Table 5-10. Calculated Growth Rates

Location	Annual Growth rate (%)
SR 7	0.2%
SR 9	1.3%
I-95	1.5%
Turnpike/I-95 Ramp	1.85%

A comparison of the AADTs for the projected years is shown in Table 5-11 and Figure 5-5. These projected AADTs will be used in the calculation of design hour volumes.



Count Location	2009	2019	2029
1	28,879	34,689	41,668
2	13,075	15,706	18,865
3	11,854	14,238	17,103
4	2,843	3,235	3,925
5A-NB	12,097	12,341	12,590
5B-SB	18,226	18,594	18,969
6A-NB	329	382	444
6B-SB	955	1,067	1,193
7	17,020	19,367	23,495
8	23,047	25,522	28,262
9	13,640	15,520	18,829
10	2,519	2,815	3,146
11	1,230	1,375	1,536
12	16,165	18,394	22,315
13A-NB	24,294	26,902	29,790
13B-SB	14,508	16,508	18,784
14A-EB	895	1,000	1,118
14B-WB	1,146	1,281	1,431

Figure 5-5

Future Annual Average Daily Traffic

Table 5-11. Annual Average Daily Traffic

		ADT	AADT			
Count Location	Growth	2004	2004	2009	2019	2029
1	0.0185	27,165	26,350	28,879	34,689	41,668
2	0.0185	12,299	11,930	13,075	15,706	18,865
3	0.0185	11,150	10,816	11,854	14,238	17,103
4	0.0130	2,748	2,666	2,843	3,235	3,925
5A-NB	0.0020	12,347	11,977	12,097	12,341	12,590
5B-SB	0.0020	18,603	18,045	18,226	18,594	18,969
6A-NB	0.015	315	306	329	382	444
6B-SB	0.0112	931	904	955	1,067	1,193
7	0.0130	16,449	15,956	17,020	19,367	23,495
8	0.0103	22,579	21,902	23,047	25,522	28,262
9	0.0130	13,182	12,787	13,640	15,520	18,829
10	0.0112	2,457	2,383	2,519	2,815	3,146
11	0.0112	1,200	1,164	1,230	1,375	1,536
12	0.0130	15,623	15,154	16,165	18,394	22,315
13A-NB	0.0103	23,800	23,086	24,294	26,902	29,790
13B-SB	0.0130	14,021	13,600	14,508	16,508	18,784
14A-EB	0.0112	873	847	895	1,000	1,118
14B-WB	0.0112	1,118	1,084	1,146	1,281	1,431

Average growth rates were used for count locations 8, 10, 11, and 13 as follow:

- Growth rates from SR 7 and I-95 Connector off ramp were averaged and used for locations 8 and 11.
- Growth rates from SR 7, SR 9 and I-95 Connector off ramp were averaged and used for locations 6B-SB, 10, 11 and 13, 14A and 14B.

This analysis considered the impacts of the planned Central Parkway project which consists of an eight-mile, north-south limited access facility that would connect SR 836, SR 112, and SR 924. This project is planned to be built out by year 2019. This analysis assumed that the Central Parkway project will generate an increase in traffic in as much as 20% from 2019 through 2029. Therefore, the growth factor on roads impacted by Central Parkway (count locations 4, 7, 9 and 12) was increased by 20%.

5.5 Design Hour Volume (DHV) Projection

The calculations of the Design Hour Volumes (DHVs) for the project years have been based on FDOT's Design Traffic Handbook (Chapter 3, page 3-2) by using the K_{30} and the projected AADT as follows:

$DHV = AADT * K_{30}$

where:

DHV = design hourly volume (vph)

AADT = forecast average annual daily traffic (vpd)

K_{30} = design hour factor for the design year

The K_{30} was assumed to remain constant over time, and therefore the values shown in Table 5-5 were used. Table 5-12 depicts the comparison of 2009, 2019, and 2029 DHVs.

Table 5-12. Design Hourly Volumes

Count Location	K	ADT 2004	DHV 2004	DHV 2009	DHV 2019	DHV 2029
1	0.1043	27,165	2,748	3,012	3,618	4,346
2	0.1043	12,299	1,244	1,364	1,638	1,968
3	0.1043	11,150	1,128	1,236	1,485	1,784
4	0.0975	2,748	260	277	315	383
5 *	0.0975	30,950	2,927	2,956	3,016	3,077
6*	0.0783	1,247	95	101	114	128
7	0.0975	16,449	1,556	1,659	1,888	2,291
8	0.1009	22,579	2,210	2,325	2,575	2,852
9	0.0975	13,182	1,247	1,330	1,513	1,836
10	0.1009	2,457	240	254	284	320
11	0.1009	1,200	117	124	139	155
12	0.0975	15,623	1,478	1,576	1,793	2,176
13*	0.1009	37,821	3,702	3,915	4,380	4,901
14*	0.1009	1,990	195	206	230	257

*(bi- directional)

5.6 Directional Design Hour Volume (DDHV) Projection

The design year Directional Design Hour Volumes (DDHVs) is defined as follows:

$DDHV = DHV * D_{30}$

where:

DDHV = directional design hourly volume (vph)

DHV = design hourly volume (vph)

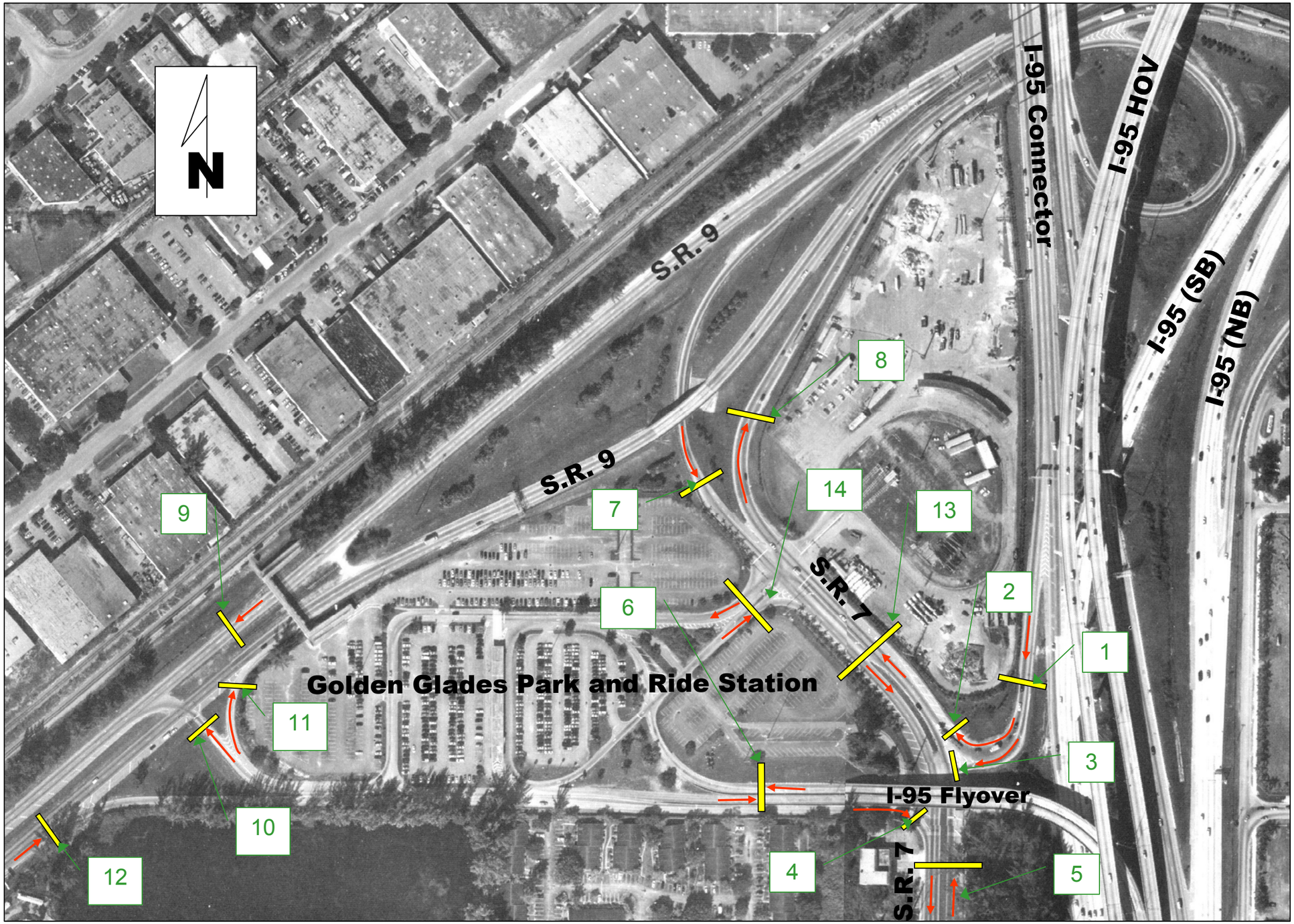
D_{30} = directional distribution factor for the design year

The D_{30} was assumed to remain constant over time, and therefore the values shown in Table 5-5 were used. Table 5-13 shows the comparison of 2004, 2009, 2019 and 2029 DDHVs on the sections of road that are bi-directional.

Figure 5-6 and 5-7 show DHV's and DDHV's.

Table 5-13. Directional Design Hourly Volumes

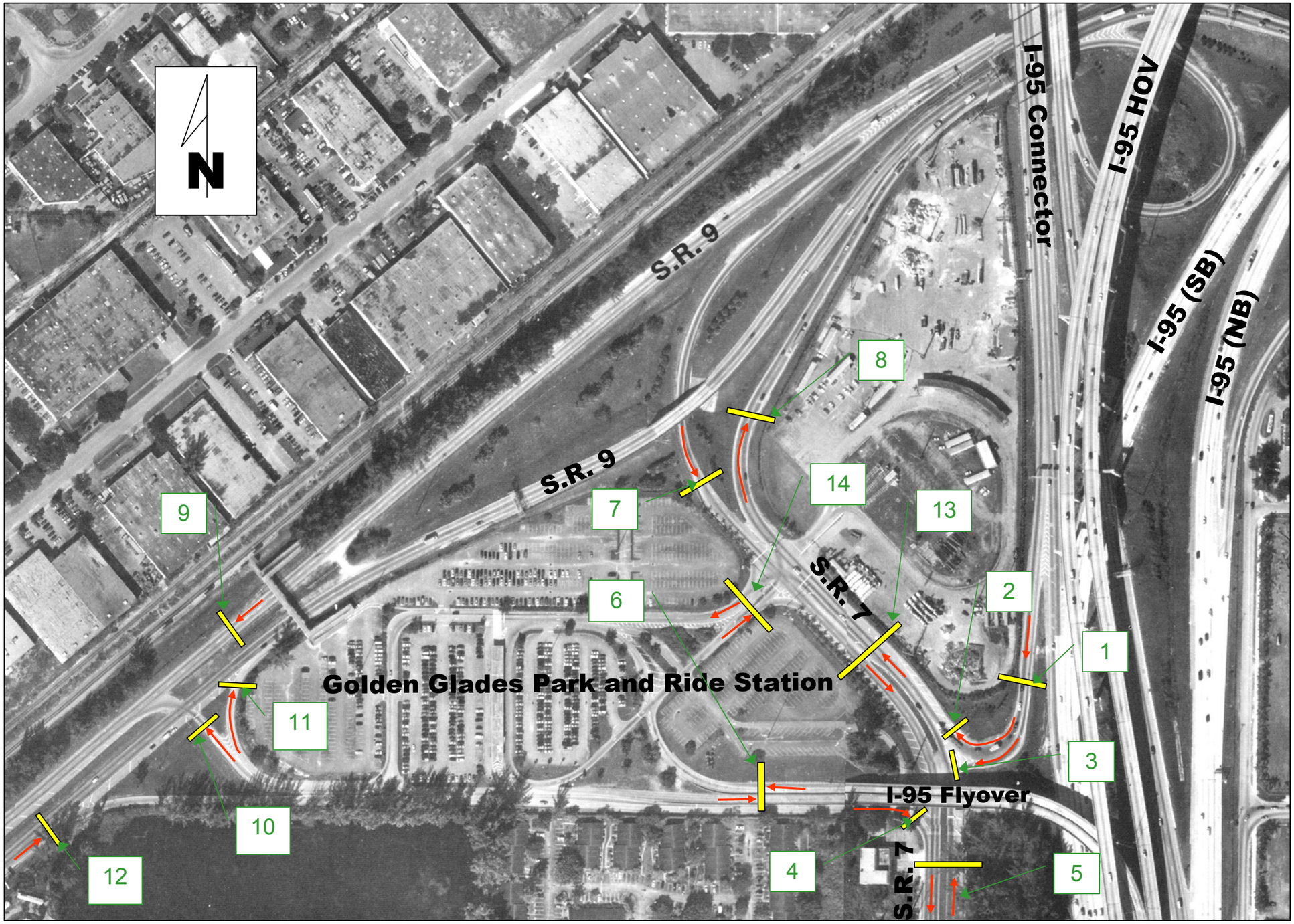
Count Location	D	ADT 2004	DDHV 2004	2009	2019	2029
5A-NB	52.35	12,347	1,532	1,548	1,579	1,611
5B-SB	47.65	18,603	1,395	1,409	1,437	1,466
6A-NB	48.78	315	46	49	55	62
6B-SB	51.22	931	48	52	58	66
13A-NB	52.35	23,800	1,938	2,050	2,293	2,566
13B-SB	47.65	14,021	1,764	1,866	2,087	2,335
14A-EB	44	873	86	91	101	113
14B-WB	56	1,118	109	115	129	144



Count Location	2009	2019	2029
1	3,012	3,618	4,346
2	1,364	1,638	1,968
3	1,236	1,485	1,784
4	277	315	383
5	2,956	3,016	3,077
6	101	114	128
7	1,659	1,888	2,291
8	2,325	2,575	2,852
9	1,330	1,513	1,836
10	254	284	320
11	124	139	155
12	1,576	1,793	2,176
13	3,915	4,380	4,901
14	206	230	257

Figure 5-6

Future Design Hourly Volumes



Count Location	2009	2019	2029
5A-NB	1,548	1,579	1,611
5B-SB	1,409	1,437	1,466
6A-NB	49	55	62
6B-SB	52	58	66
13A-NB	2,050	2,293	2,566
13B-SB	1,866	2,087	2,335
14A-EB	91	101	113
14B-WB	115	129	144

Figure 5-7

Future Directional Design Hourly Volumes

5.7 Future Turning Movement Volumes

Traffic volumes for future years were estimated using growth factor techniques. Future year traffic volumes were estimated by applying a growth rate to the existing 2004 traffic volumes. The turning movement percentages measured at the intersections for the 2004 counts were assumed to remain constant throughout the life of the project. The annual compound growth rate of 1% (average of 0.2%, 1.3% and 1.5%) was used for computing the future years traffic volumes at both intersections SR 7 / I-95 PNR Entrance and SR 7 / I-95 Connector off Ramp. Future Turning Movement volumes are summarized in Tables 5-14 through 5-17 and graphically shown in Figures 5-8 and 5-9.

5.7.1 SR 7 / I-95 PNR Entrance Intersection

Table 5-14. AM Peak Future Turning Movement Volumes

	SB			WB			NB			EB		
Year	R	T	L	R	T	L	R	T	L	R	T	L
2009	325	1840	33	9	0	30	25	1728	239	53	0	108
2019	363	2057	37	10	0	34	28	1931	267	59	0	121
2029	406	2298	42	11	0	37	31	2158	299	66	0	135

Table 5-15. PM Peak Future Turning Movement Volumes

	SB			WB			NB			EB		
Year	R	T	L	R	T	L	R	T	L	R	T	L
2009	41	621	25	16	0	23	1	1786	279	126	0	67
2019	46	694	28	17	0	26	1	1995	312	141	0	75
2029	52	775	31	19	0	29	1	2230	348	158	0	84

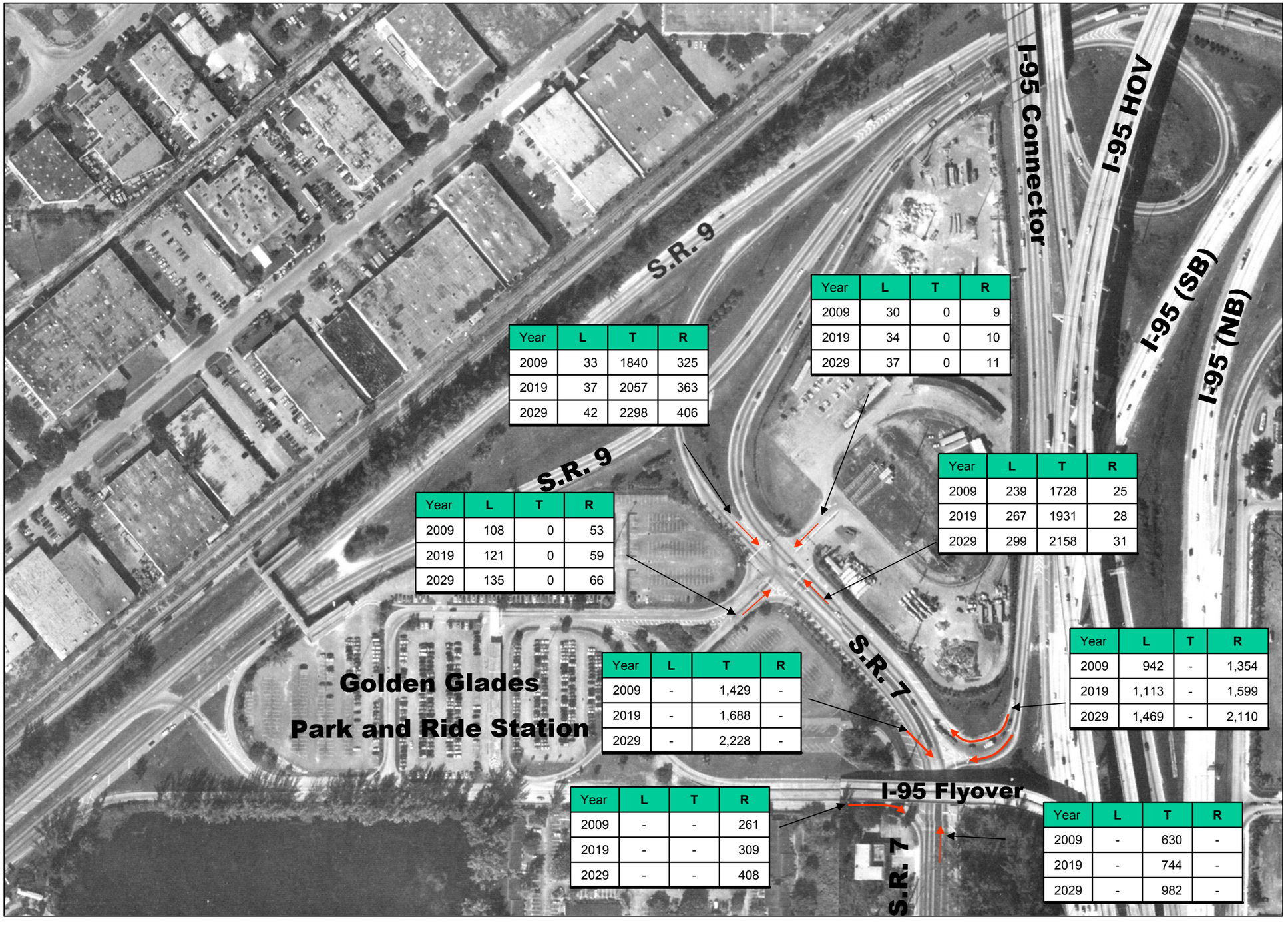
SR 7 / I-95 Connector Off Ramp Intersection

Table 5-16. AM Peak Future Turning Movement Volumes

	SB			WB			NB			EB		
Year	R	T	L	R	T	L	R	T	L	R	T	L
2009	-	1,429	-	1,354	-	942	-	630	-	261	-	-
2019	-	1,688	-	1,599	-	1,113	-	744	-	309	-	-
2029	-	2,228	-	2,110	-	1,469	-	982	-	408	-	-

Table 5-17. PM Peak Future Turning Movement Volumes

	SB			WB			NB			EB		
Year	R	T	L	R	T	L	R	T	L	R	T	L
2009	-	861	-	1,156	-	1,048	-	1,192	-	150	-	-
2019	-	1,018	-	1,366	-	1,238	-	1,409	-	178	-	-
2029	-	1,343	-	1,803	-	1,634	-	1,859	-	234	-	-



Year	L	T	R
2009	33	1840	325
2019	37	2057	363
2029	42	2298	406

Year	L	T	R
2009	30	0	9
2019	34	0	10
2029	37	0	11

Year	L	T	R
2009	108	0	53
2019	121	0	59
2029	135	0	66

Year	L	T	R
2009	239	1728	25
2019	267	1931	28
2029	299	2158	31

Year	L	T	R
2009	-	1,429	-
2019	-	1,688	-
2029	-	2,228	-

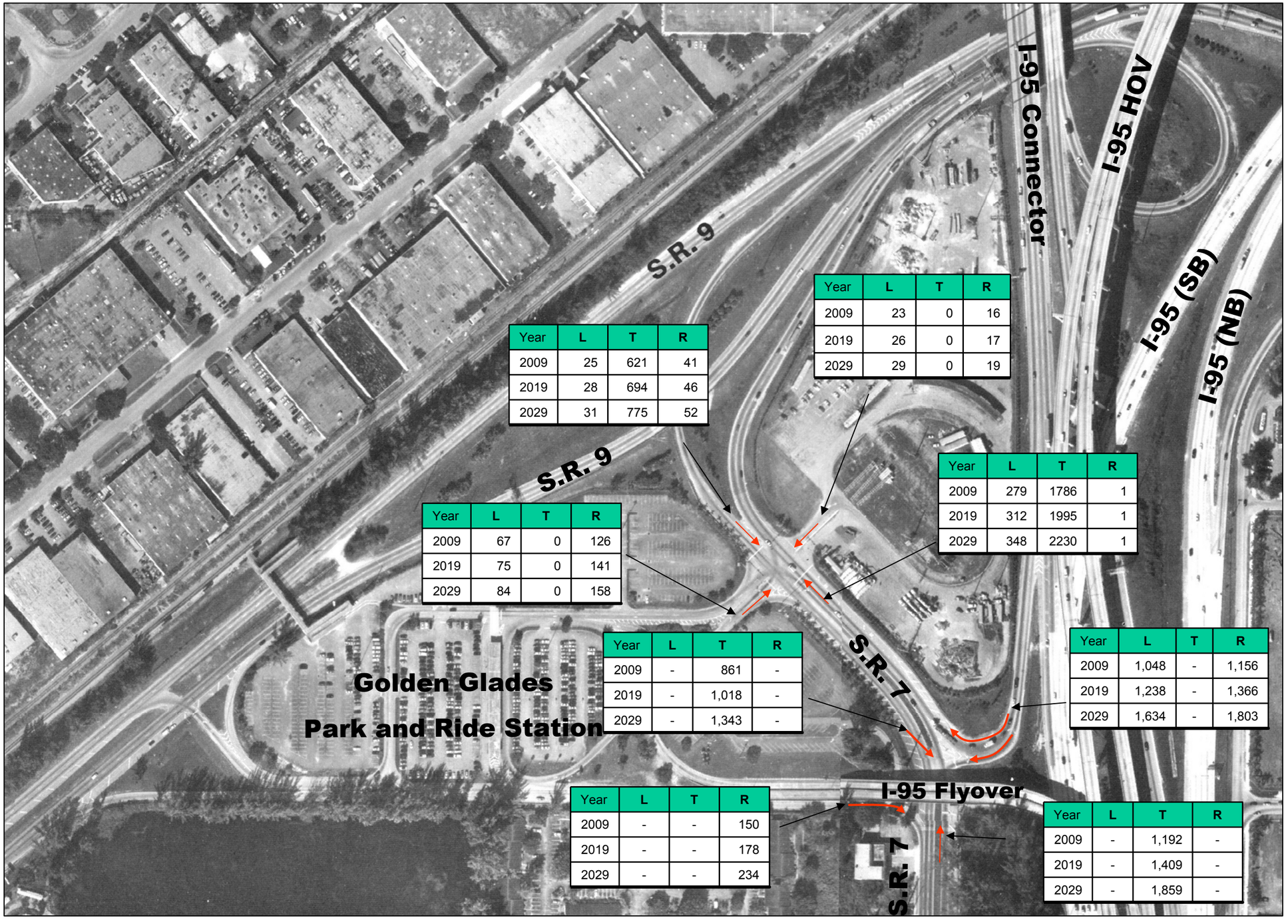
Year	L	T	R
2009	942	-	1,354
2019	1,113	-	1,599
2029	1,469	-	2,110

Year	L	T	R
2009	-	-	261
2019	-	-	309
2029	-	-	408

Year	L	T	R
2009	-	630	-
2019	-	744	-
2029	-	982	-

Figure 5-8

AM Future Turning Movement Counts



Year	L	T	R
2009	25	621	41
2019	28	694	46
2029	31	775	52

Year	L	T	R
2009	23	0	16
2019	26	0	17
2029	29	0	19

Year	L	T	R
2009	279	1786	1
2019	312	1995	1
2029	348	2230	1

Year	L	T	R
2009	67	0	126
2019	75	0	141
2029	84	0	158

Year	L	T	R
2009	-	861	-
2019	-	1,018	-
2029	-	1,343	-

Year	L	T	R
2009	1,048	-	1,156
2019	1,238	-	1,366
2029	1,634	-	1,803

Year	L	T	R
2009	-	-	150
2019	-	-	178
2029	-	-	234

Year	L	T	R
2009	-	1,192	-
2019	-	1,409	-
2029	-	1,859	-

Figure 5-9

PM Future Turning Movement Counts

5.8 Level-of-Service Analysis

5.8.1 Methodology

A level-of-service analysis was performed for each project year during the AM and PM design hours based on the projected turning movement percentages. Future Peak Hour volumes are summarized in Tables 5-18 and 5-19. Florida Department of Transportation (FDOT) 2004 Two-Way Peak Hour Volumes Level-of-Service Generalized tables were used to analyze link level of service.

Table 5-18. AM Future Peak Hour Volumes

Count Location	2009	2019	2029
1	2,261	2,716	3,263
2	1,024	1,230	1,477
3	928	1,115	1,339
4	206	234	284
5A-NB	691	705	719
5B-SB	2,371	2,419	2,468
6A-NB	51	59	69
6B-SB	82	92	102
7	2,005	2,282	2,768
8	1,402	1,553	1,720
9	1,306	1,486	1,803
10	241	270	301
11	82	92	102
12	1,078	1,227	1,489
13A-NB	1,902	2,106	2,333
13B-SB	1,709	1,945	2,213
14A-EB	58	65	73
14B-WB	300	336	375

Table 5-19. PM Future Peak Hour Volumes

Count Location	2009	2019	2029
1	1,981	2,379	2,858
2	897	1,077	1,294
3	813	976	1,173
4	173	197	239
5A-NB	1,066	1,087	1,109
5B-SB	1,041	1,062	1,084
6A-NB	24	28	32
6B-SB	58	65	73
7	1,066	1,213	1,472
8	1,667	1,846	2,044
9	1,019	1,159	1,406
10	188	210	235
11	103	115	1,863
12	1,349	1,536	1,747
13A-NB	1,666	1,845	2,043
13B-SB	909	1,034	1,177
14A-EB	110	123	137
14B-WB	0	0	0

5.8.2 Opening Year 2009

Link Analysis

Table 5-20 summarizes link LOS analysis. This information is also shown in Figure 5-10.

Table 5-20. Year 2009 Link Capacity Analysis

Count	Number	LOS "D"	AM Peak		PM Peak	
Location	Lanes	Capacity	2009	LOS	2009	LOS
1	2L	1,872	**2,223**	**F**	**1,947**	**F**
2	1L	936	**1,006**	**F**	881	D
3	1L	936	912	D	799	D
4	1L	936	206	C	173	C
5A-NB	1L	778	691	D	**1,066**	**F**
5B-SB	3L	2,332	**2,371**	**E**	1,041	C
6A-NB	1L	936	51	B	24	B
6B-SB	1L	936	82	B	88	B
7	1L	1,468	**2,005**	**F**	1,066	C
8	2L	2,935	1,390	B	1,653	C
9	2L	2,935	1,306	B	1,019	D
10	1L	417	240	C	187	C
11	1L	417	82	C	102	C
12	2L	2,935	1,078	B	1,349	B
13A-NB	2L	1,555	**1,886**	**F**	**1,652**	**F**
13B-SB	2L	1,555	**1,709**	**F**	909	C
14A-EB	2L	776	58	C	110	C
14B-WB	2L	776	300	C	0	C

This analysis showed the following:

During the morning peak period, six sections of road within the study period will be operating deficiently. These sections of roads are:

- I-95 Connector off ramp
- The WB right turn movement at the intersection of SR 7 and I-95 Connector off ramp
- SR 7 south of GGI, southbound direction
- SR 9 off ramp
- SR 7 north of I-95 Connector off ramp, northbound direction, and
- SR 7 north of I-95 Connector off ramp, southbound direction

During the evening peak period, four sections of road showed to be operating over capacity. These segments are:

- I-95 Connector off ramp
- SR 7 south of GGI, northbound direction
- SR 9 off ramp
- SR 7 north of I-95 Connector off ramp, northbound direction

Intersection Capacity Analysis

The results of this analysis is summarized in Tables 5-21 and 5-22. Table 5-21 shows that the intersection of SR 7 / PNR Entrance will fail in the morning due to the poor operations on all approaches.

Table 5-21. SR 7 / PNR Entrance Intersection – Year 2009

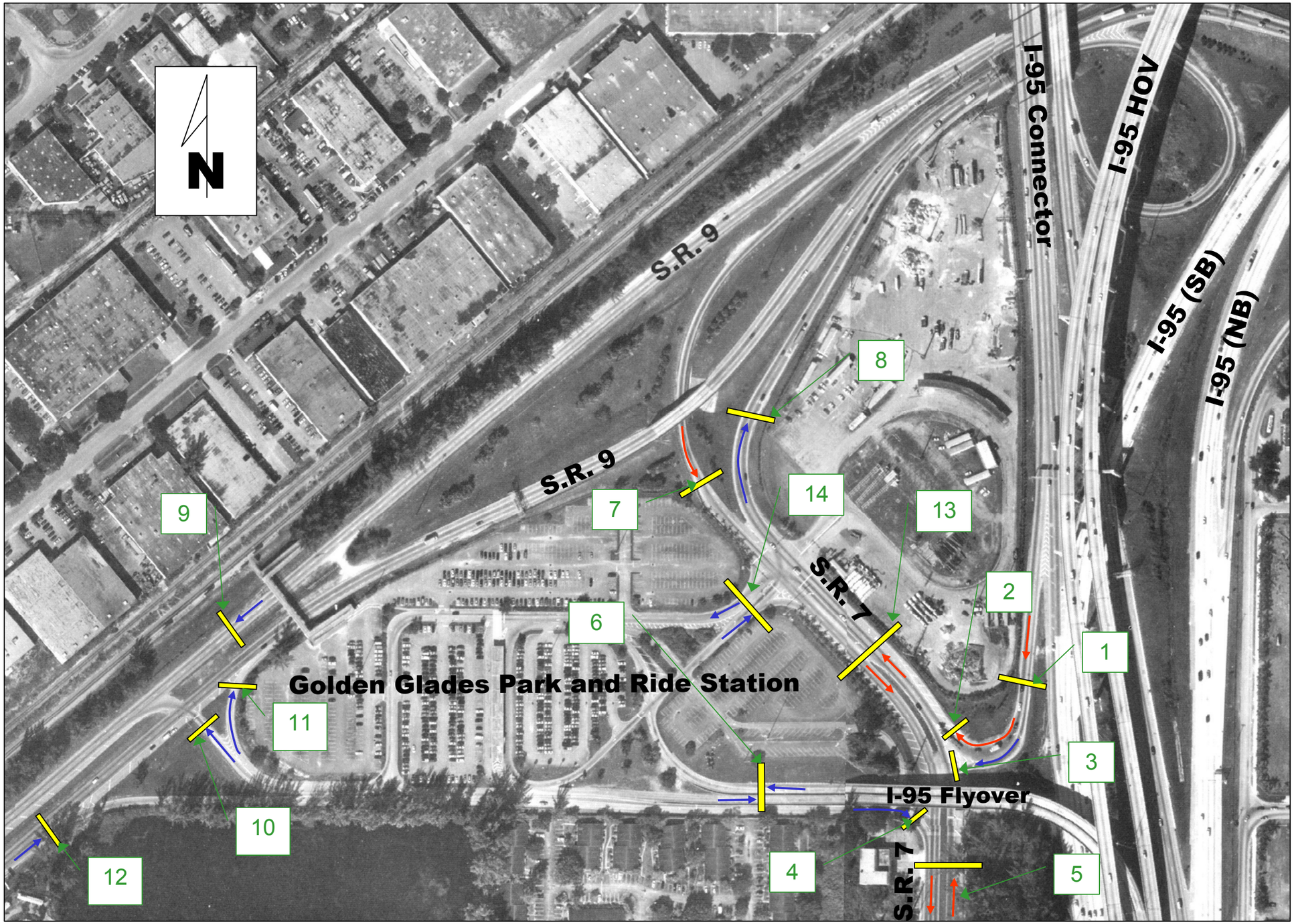
Peak Period	EB	WB	NB	SB	Intersection LOS
AM	E	E	E	F	F
PM	D	D	A	A	B

Table 5-22 shows that the intersection of SR 7/ I-95 Connector off Ramp will fail in the morning peak period due to the westbound approach. It will also fail in the evening peak due congestion in the westbound and northbound approaches.

Table 5-22. SR 7 / I-95 Connector off Ramp Intersection – Year 2009

Peak Period	EB	WB	NB	SB	Intersection LOS
AM	-	F	B	B	F
PM	-	C	F	C	F

This information is also shown in Figure 5-11.



Count	AM Peak		PM Peak	
Location	2009	LOS	2009	LOS
1	**2,223**	**F**	**1,947**	**F**
2	**1,006**	**F**	881	D
3	912	D	799	D
4	206	C	173	C
5A-NB	691	D	**1,066**	**F**
5B-SB	**2,371**	**E**	1,041	C
6A-NB	51	B	24	B
6B-SB	82	B	88	B
7	**2,005**	**F**	1,066	C
8	1,390	B	1,653	C
9	1,306	B	1,019	D
10	240	C	187	C
11	82	C	102	C
12	1,078	B	1,349	B
13A-NB	**1,886**	**F**	**1,652**	**F**
13B-SB	**1,709**	**F**	909	C
14A-EB	58	C	110	C
14B-WB	300	C	0	C

LEGEND:

→ Failing link – LOS E, F

Figure 5-10

2009 AM/PM Peak Hour Traffic Capacity Link Analysis

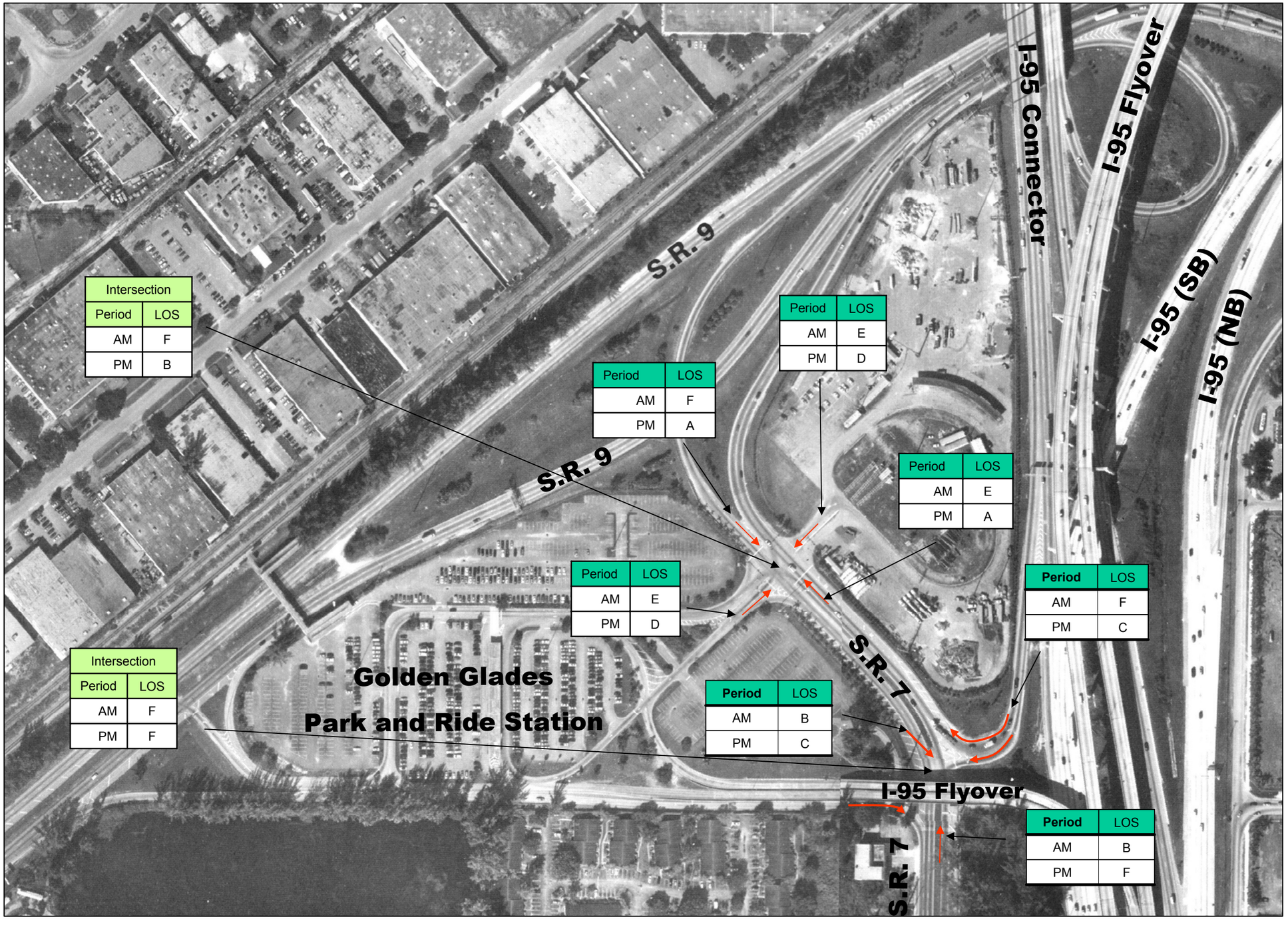


Figure 5-11

2009 Intersection Levels of Service

5.8.3 Interim Year 2019

Link Capacity Analysis

Table 5-23 summarizes link LOS analysis. This information is also shown in Figure 5-12.

Table 5-23. Year 2019 Link Capacity Analysis

Count	Number	LOS "D"	AM Peak		PM Peak	
Location	Lanes	Capacity	2019	LOS	2019	LOS
1	2L	1,872	**2,579**	**F**	**2,259**	**F**
2	1L	936	**1,168**	**F**	**1,023**	**F**
3	1L	936	**1,059**	**F**	927	D
4	1L	936	234	C	197	C
5A-NB	1L	778	705	D	**1,087**	**F**
5B-SB	3L	2,332	**2,419**	**E**	1,062	C
6A-NB	1L	936	59	C	28	C
6B-SB	1L	936	62	C	65	C
7	1L	1,468	**2,282**	**F**	1,213	D
8	2L	2,935	1,513	B	1,799	C
9	2L	2,935	1,486	B	1,159	B
10	1L	417	265	D	207	C
11	1L	417	90	C	113	C
12	2L	2,935	1,227	B	1,536	B
13A-NB	2L	1,555	**2,052**	**F**	**1,798**	**F**
13B-SB	2L	1,555	**1,945**	**F**	1,034	C
14A-EB	2L	776	65	C	123	C
14B-WB	2L	776	336	C	0	C

This analysis showed the following:

During the morning peak period, seven sections of road within the study period will be operating deficiently. These sections of roads are:

- I-95 Connector off ramp
- The WB right turn movement at the intersection of SR 7 and I-95 Connector off ramp
- The WB left turn movement at the intersection of SR 7 and I-95 Connector off ramp
- SR 7 south of GGI, southbound direction
- SR 9 off ramp
- SR 7 north of I-95 Connector off ramp, northbound direction, and
- SR 7 north of I-95 Connector off ramp, southbound direction

During the evening peak period, four sections of road showed to be operating over capacity. These segments are:

- I-95 Connector off ramp
- The WB right turn movement at the intersection of SR 7 and I-95 Connector off ramp

- SR 7 south of GGI, northbound direction
- SR 7 north of I-95 Connector off ramp, northbound direction

Intersection Capacity Analysis

The results of this analysis is summarized in Tables 5-24 and 5-25. Table 5-24 shows that the intersection of SR 7 / PNR Entrance will fail in the morning due to heavy congestion on all approaches during the AM peak period.

Table 5-24. SR 7 / PNR Entrance Intersection – Year 2019

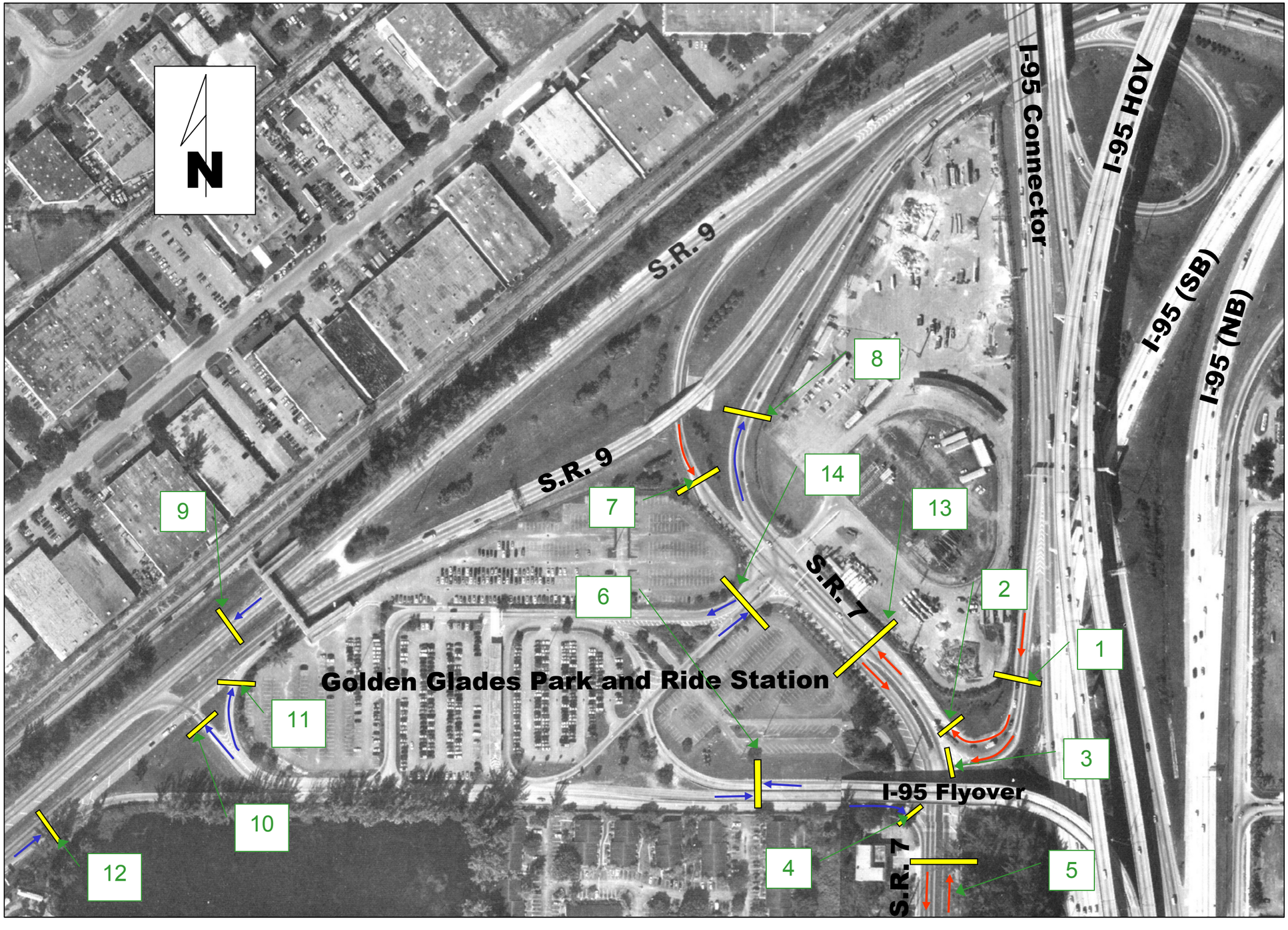
Peak Period	EB	WB	NB	SB	Intersection LOS
AM	E	F	F	F	F
PM	D	D	B	B	B

Table 5-25 shows that the intersection of SR 7/ I-95 Connector off Ramp will fail in the morning peak period due to the westbound approach. It will also fail in the evening peak due congestion in the westbound and northbound approaches.

Table 5-25. SR 7 / I-95 Connector off Ramp Intersection – Year 2019

Peak Period	EB	WB	NB	SB	Intersection LOS
AM	-	F	C	C	F
PM	-	C	F	C	F

This information is also shown in Figure 5-13.



Count	AM Peak		PM Peak	
Location	2019	LOS	2019	LOS
1	**2,579**	**F**	**2,259**	**F**
2	**1,168**	**F**	**1,023**	**F**
3	**1,059**	**F**	927	D
4	234	C	197	C
5A-NB	705	D	**1,087**	**F**
5B-SB	**2,419**	**E**	1,062	C
6A-NB	59	C	28	C
6B-SB	62	C	65	C
7	**2,282**	**F**	1,213	D
8	1,513	B	1,799	C
9	1,486	B	1,159	B
10	265	D	207	C
11	90	C	113	C
12	1,227	B	1,536	B
13A-NB	**2,052**	**F**	**1,798**	**F**
13B-SB	**1,945**	**F**	1,034	C
14A-EB	65	C	123	C
14B-WB	336	C	0	C

LEGEND:

→ Failing link – LOS E, F

Figure 5-12

2019 AM/PM Peak Hour Traffic Capacity Link Analysis

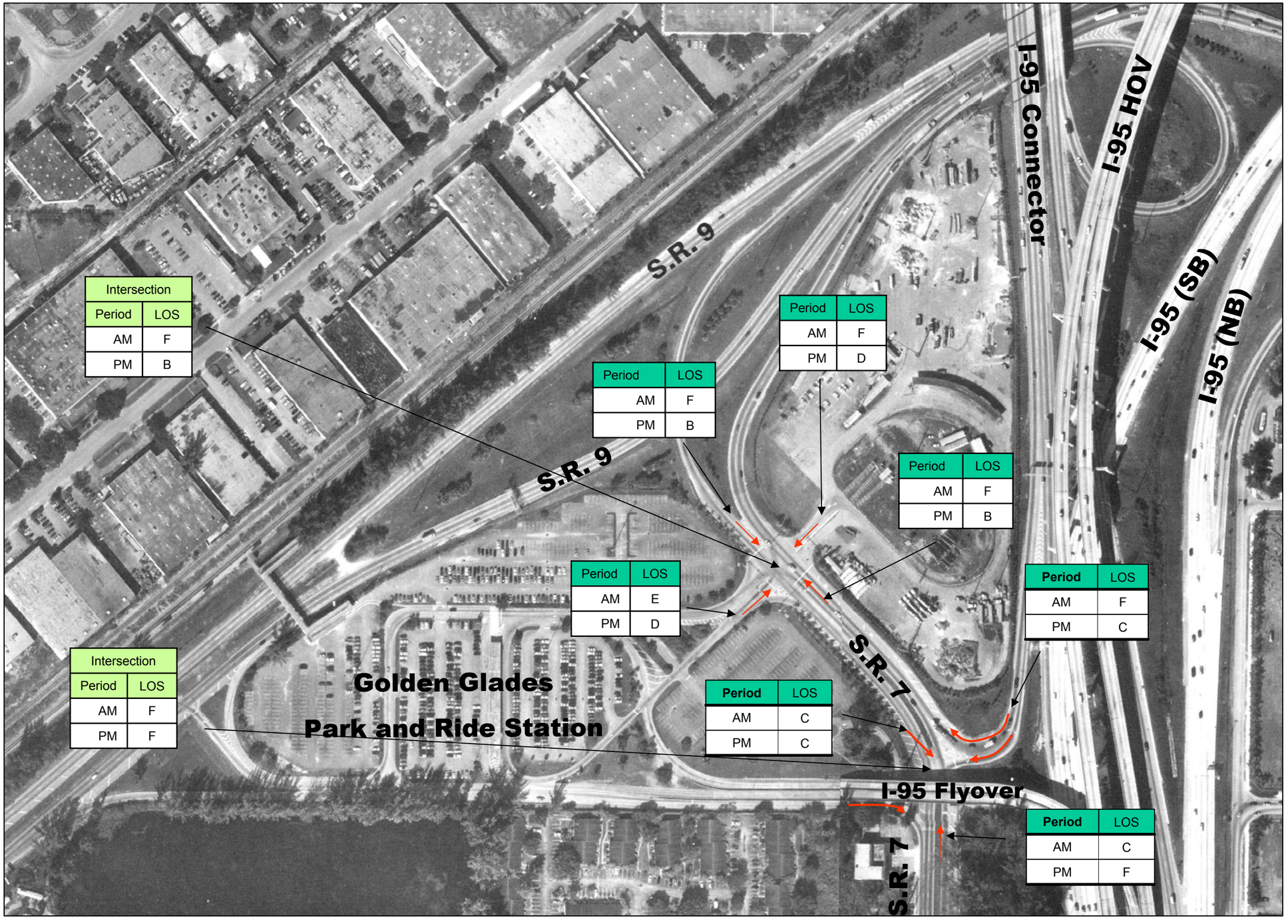


Figure 5-13

2019 Intersection Levels of Service

5.8.4 Design Year 2029

Link Capacity Analysis

Table 5-26 summarizes link LOS analysis. This information is also shown in Figure 5-14.

Table 5-26. Year 2029 Link Capacity Analysis

Count Location	Number Lanes	LOS "D" Capacity	AM Peak 2029	AM Peak LOS	PM Peak 2029	PM Peak LOS
1	2L	1,872	**3,263**	**F**	**2,858**	**F**
2	1L	936	**1,477**	**F**	**1,294**	**F**
3	1L	936	**1,339**	**F**	**1,173**	**F**
4	1L	936	284	C	239	C
5A-NB	1L	778	719	D	**1,109**	**F**
5B-SB	3L	2,332	**2,468**	**E**	1,084	C
6A-NB	1L	936	69	C	32	C
6B-SB	1L	936	102	C	73	C
7	1L	1,468	**2,768**	**F**	**1,472**	**E**
8	2L	2,935	1,720	C	2,044	C
9	2L	2,935	1,803	C	1,406	B
10	1L	417	301	D	235	C
11	1L	417	102	C	128	C
12	2L	2,935	1,489	B	1,863	C
13A-NB	2L	1,555	**2,333**	**F**	**2,043**	**F**
13B-SB	2L	1,555	**2,213**	**F**	1,177	C
14A-EB	2L	776	73	C	137	C
14B-WB	2L	776	375	C	0	C

This analysis showed the following:

During the morning peak period, seven sections of road within the study period will be operating deficiently. These sections of roads are:

- I-95 Connector off ramp
- The WB right turn movement at the intersection of SR 7 and I-95 Connector off ramp
- The WB left turn movement at the intersection of SR 7 and I-95 Connector off ramp
- SR 7 south of GGI, southbound direction
- SR 9 off ramp
- SR 7 north of I-95 Connector off ramp, northbound direction, and
- SR 7 north of I-95 Connector off ramp, southbound direction

During the evening peak period, six sections of road showed to be operating over capacity. These segments are:

- I-95 Connector off ramp
- The WB right turn movement at the intersection of SR 7 and I-95 Connector off ramp

- The WB left turn movement at the intersection of SR 7 and I-95 Connector off ramp
- SR 7 south of GGI, northbound direction
- SR 9 off ramp
- SR 7 north of I-95 Connector off ramp, northbound direction

Intersection Capacity Analysis

The results of this analysis is summarized in Tables 5-27 and 5-28. Table 5-27 shows that the intersection of SR 7 / PNR Entrance will fail in the morning due to heavy congestion on all approaches during the AM peak period.

Table 5-27. SR 7 / PNR Entrance Intersection – Year 2029

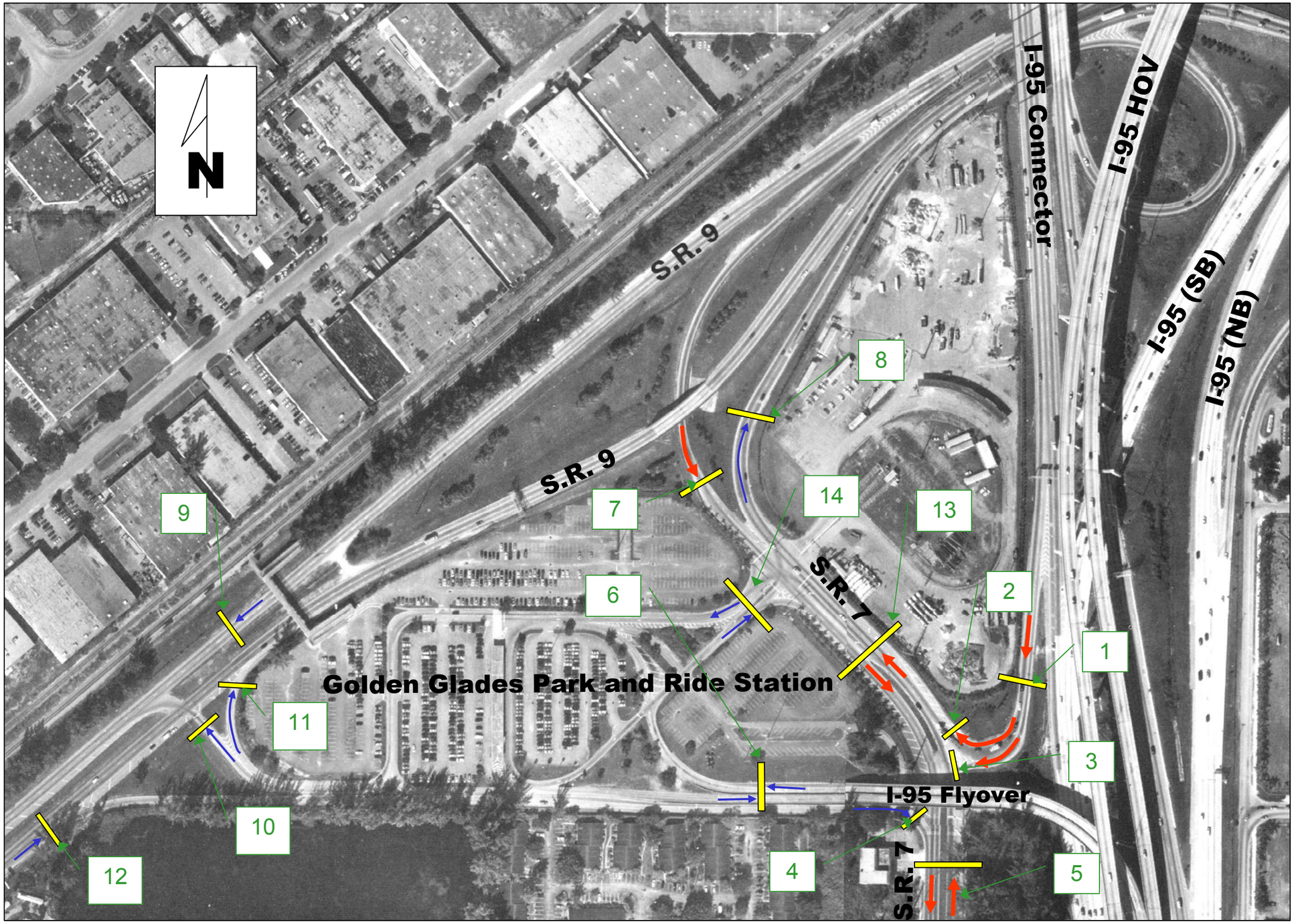
Peak Period	EB	WB	NB	SB	Intersection LOS
AM	F	F	F	F	F
PM	D	D	B	B	B

Table 5-28 shows that the intersection of SR 7/ I-95 Connector off Ramp will fail in the morning peak period due to heavy congestion on three approaches, westbound, northbound and southbound approaches. It will also fail in the evening peak due congestion in the westbound and northbound approaches.

Table 5-28. SR 7 / I-95 Connector off Ramp Intersection – Year 2029

Peak Period	EB	WB	NB	SB	Intersection LOS
AM	-	F	F	F	F
PM	-	F	F	C	F

This information is also shown in Figure 5-15.



Count	AM Peak		PM Peak	
Location	2029	LOS	2029	LOS
1	**3,263**	**F**	**2,858**	**F**
2	**1,477**	**F**	**1,294**	**F**
3	**1,339**	**F**	**1,173**	**F**
4	284	C	239	C
5A-NB	719	D	**1,109**	**F**
5B-SB	**2,468**	**E**	1,084	C
6A-NB	69	C	32	C
6B-SB	102	C	73	C
7	**2,768**	**F**	**1,472**	**E**
8	1,720	C	2,044	C
9	1,803	C	1,406	B
10	301	D	235	C
11	102	C	128	C
12	1,489	B	1,863	C
13A-NB	**2,333**	**F**	**2,043**	**F**
13B-SB	**2,213**	**F**	1,177	C
14A-EB	73	C	137	C
14B-WB	375	C	0	C

LEGEND:

Failing link – LOS E, F

Figure 5-14

2029 AM/PM Peak Hour Traffic Capacity Link Analysis

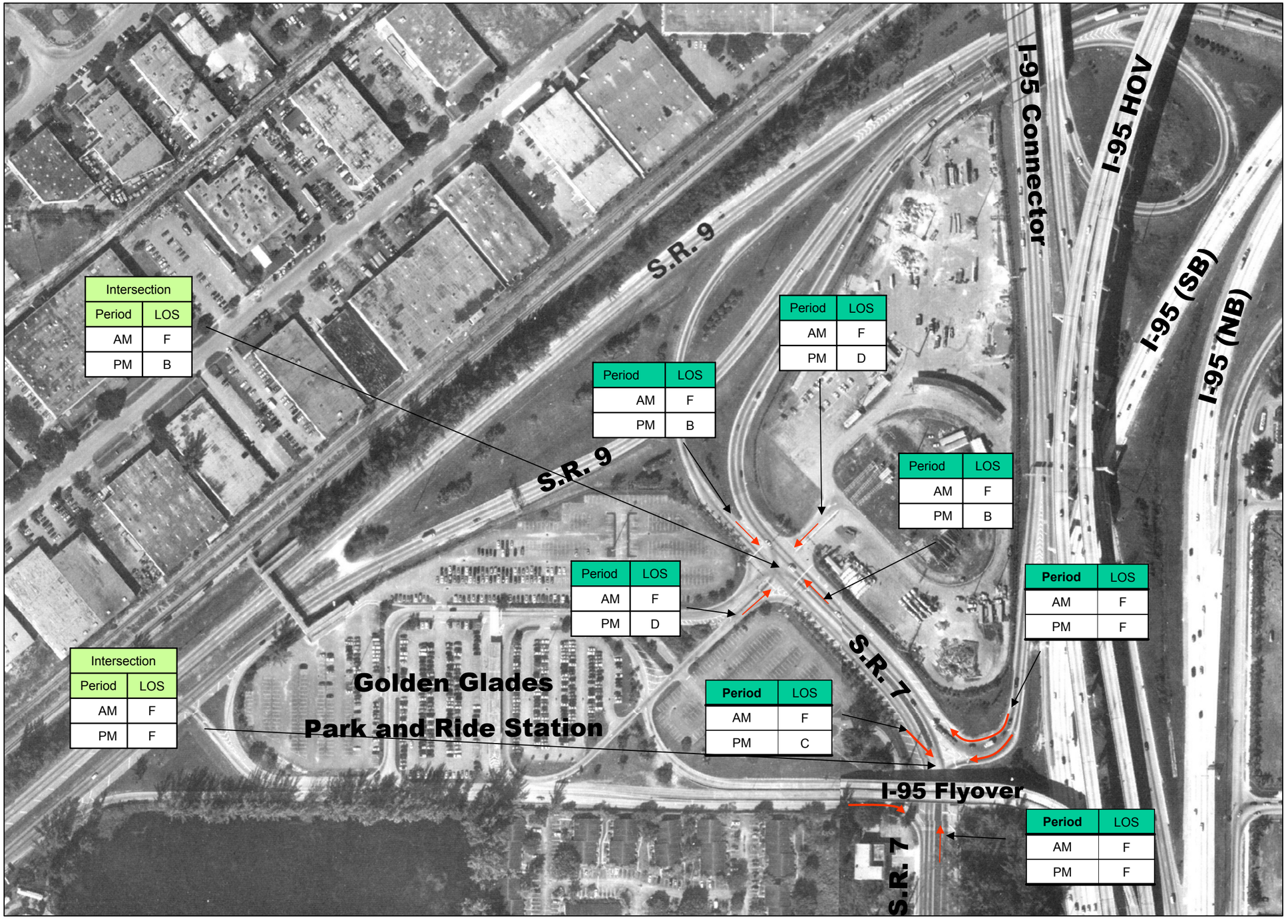


Figure 5-15

2029 Intersection Levels of Service

5.9 SUMMARY

The study was performed to develop and evaluate the existing and future traffic operating conditions related to SR 7 and SR 9 within the GGI that may influence the design of the GGMTF and associated joint development activity. The study included the development of future traffic projections for the opening year 2009, the interim year 2019, and the design year 2029.

The results indicate that due to the heavy traffic demand on SR 7, the existing facility within the project limits does not have the capacity to adequately accommodate current or projected traffic volumes. The analyses and results in this report are summarized below:

1. The traffic projections indicate moderate growth in traffic over the study area.
2. The two signalized intersections studied are currently operating at an unacceptable LOS and will continue to deteriorate for future years.
3. The LOS analysis for the current year indicates poor operating conditions on various sections of road, primarily SR 7, SR 9 and the I-95 SB Connector off ramp. These conditions will worsen during the project year if no physical improvements are made within the study area.
4. By design year (2029), the following sections of road will be operating at LOS F:
   - I-95 Connector off ramp
   - SR 9 southbound ramp to SR 7
   - SR 7, between the I-95 Connector off ramp signal and the PNR signal.

SECTION 6 – JOINT DEVELOPMENT MARKET ASSESSMENT

An assessment of market potentials was conducted for major land uses including office, retail and hotel facilities in conjunction with the planned development of the GGMTF. The objectives of this analysis were to facilitate FDOT's decision-making process regarding potential opportunity for joint public/private development and alternative project implementation strategies and to support possible solicitation of private development interests.

This section presents a summary of major findings and conclusions supported by analysis and data contained in subsequent sections of the report and technical appendix. Major elements of the analysis include:

- Regional Market Framework
- Office Space Market Opportunity Assessment
- Retail Space Market Opportunity Assessment
- Hotel Market Opportunity Assessment
- Site and Area Evaluation
- Development Opportunity and Program Guidelines

6.1 Site and Area

The PNR site is centrally located within Southeast Florida's primary regional transportation corridor. The eastern sectors of Miami-Dade, Broward, and Palm Beach Counties encompassing this corridor have become the focus of intensive infill and redevelopment due to the depletion of land available for development in suburban areas that captured much of the region's residential and commercial expansion over the past several decades. Growth and development pressure is generating increasing competition for eastern sites and rapidly escalating land prices for scarce sites suitable for major commercial as well as residential development. The PNR site benefits from a unique combination of strategic transportation linkages, central regional location and parcel size sufficient to support major new commercial development. Perhaps the most important feature of the site is its size given its unique combination of direct transit linkages.

Primary limitations or physical site 'negatives' potentially impacting private commercial development interest include the existing configuration of adjacent highway structures and major roadways traversing the site and the quality and nature of adjacent land-uses including existing industrial and moderate to low income transitional residential neighborhoods including single and multifamily areas as illustrated in the existing land-use overlay shown in Figure 19-1.

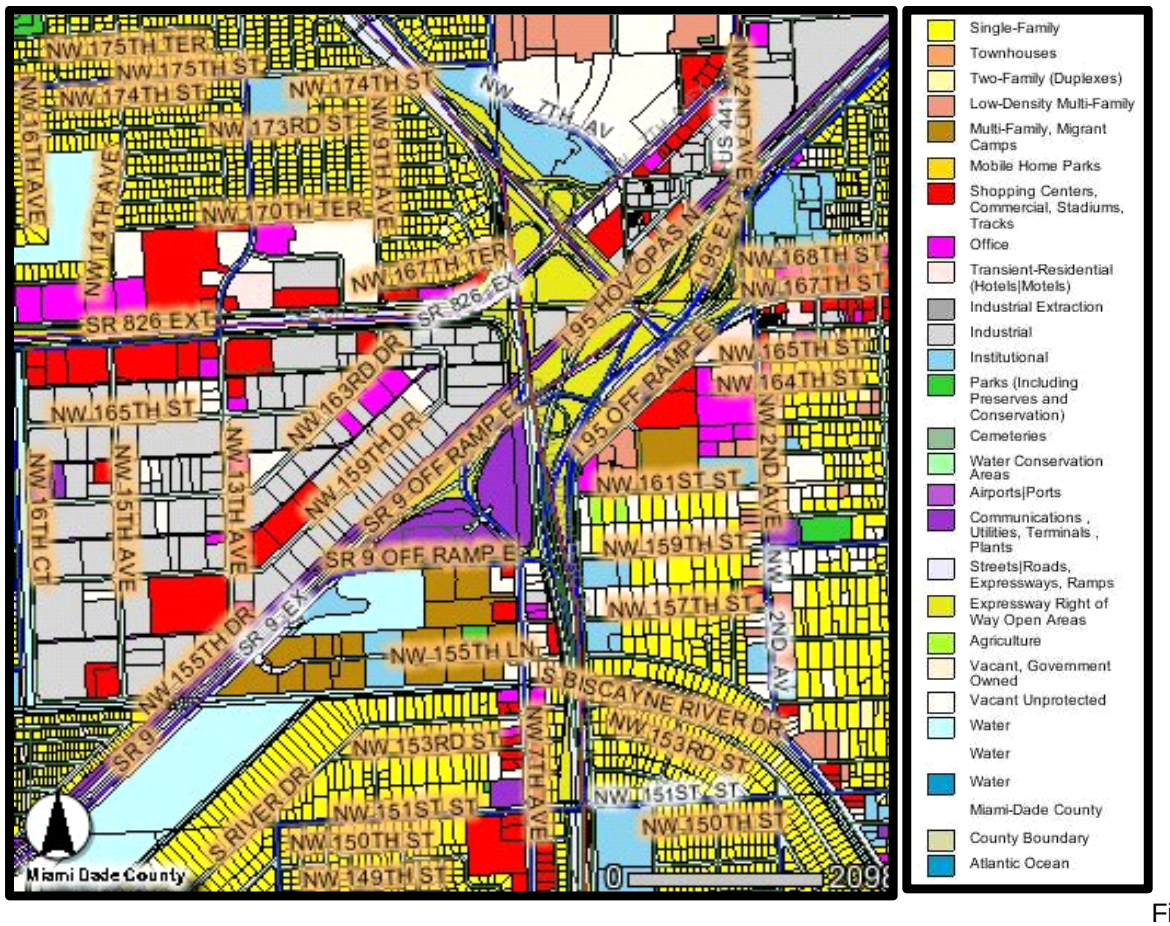


Figure 6-1. Existing Land Use for Market Assessment

The primary issue associated with on-site physical limitations will be cost and financial feasibility. Site improvement concepts and alternative configurations developed in preceding phases of the GGMF implementation program demonstrate viable design solutions that overcome the primary physical limitations associated with existing conditions, subject to cost.

Apart from physical conditions, the site's public ownership and the complexity generally associated with major public/private development and possible political issues also must be viewed as limitations on private development interest. However, we believe these limitations can be mitigated to a large degree based on successful precedents in joint public/private development particularly in the area of Transit Oriented Development (TOD), which addresses regional transportation concerns.

6.2 Market Summary by Land Use

During the past several years, as national and regional economic growth have remained strong, commercial real estate surpluses have declined and institutional investors' appetites for real estate investment and development opportunities are expanding. Recent trends indicate emerging demand for new development in commercial office, retail and hotel sectors in the region, Miami-Dade County and the northeast Miami-Dade submarket area. Depletion of available land for development

in the western portions of the region, where major share of new development occurred through the mid-1990s, along with other factors including increased traffic congestion and extended commute times along with county and regional initiatives encouraging infill and redevelopment, support expanding development opportunities in the eastern sectors of the region and the Miami-Dade County in particular.

Key findings concerning supply/demand conditions and market outlook for each of the candidate land-use categories considered in this analysis for the GGIF site are summarized below.

6.3 Northeast Miami-Dade County and Golden Glades Market Opportunity

- The Golden Glades site represents a unique commercial real estate development opportunity within Southeast Florida in conjunction with the planned Multimodal Facility and proposed site improvements.
- All sectors of commercial real estate exhibit near-term (2 – 3yrs) expansion opportunity countywide including the Northeast Miami-Dade County area.
- Both near- and long-term development potential at the Golden Glades site are favorable based on its unique location attributes, regional accessibility, depletion of available new development sites and corresponding intensification of infill and redevelopment in the eastern corridor of the tri-county region.
- Analysis of market demand/supply conditions associated with each major property type and specific site/location attributes suggest the following potentials, concept development and planning considerations:
- Office
    - Primary market opportunity - regional business services including information, telecommunications, employment, finance, insurance, legal, real estate, education, medical, government and administrative support functions.
    - Achievable rents would be consistent with Class A, suburban rates for new construction within the region ($25 - $35/Sq.ft.).
    - Site size affords sufficient potential critical mass for large-scale, multi-tenant, multi-functional complex and/or single-tenant structure, subject to zoning and design considerations.
- Retail
    - The physical size and extent of the retail component will be subject to and highly dependent on the scope and mix of on-site office development tenancy.
    - Retail opportunity will be primarily limited to goods and services outlets supporting the on-site population including tenants and transient commuters/visitors utilizing the multimodal transportation facilities.
    - Principal opportunities include a range of food and beverage services, business support services, and specialty and convenience outlets.
    - Achievable retail rents for the types of retail outlets (food & beverage, goods and services) are estimated to be in the range of $20 to $25 per square foot based on the

current retail market framework in Miami-Dade County and the Northeast Miami area.

- Hotel
  - Lodging industry trends and conditions in Miami-Dade and Broward Counties indicate emerging opportunity for expansion in this sector, subject to property type/location.
  - The unique location attributes of the Golden Glades site with its regional transportation linkages in conjunction with large-scale commercial office development suggest potential support for budget to mid-priced (possibly extended stay) type lodging facilities.

Potential for hotel development at the Golden Glades site will be highly dependent on scope and nature of office and other commercial components of the project. Moreover, new hotel development is ultimately controlled by a relatively small universe of companies (hotel chains) influenced as much by corporate, regional competitive positioning and investment criteria as by the merits of any specific site. Therefore, hotel development at the Golden Glades site represents a viable opportunity; however, the variables influencing this use preclude a definitive conclusion regarding the implementation prospect for this element.

SECTION 7 - SITE ANALYSIS

The purpose of the site analysis is to evaluate alternative sites for the possible placement of the multimodal facility. As part of this analysis access to and egress from any proposed alternative site has to be evaluated for feasibility and adequacy.

7.1 Alternate Site

One alternate site was evaluated as a possible location for the GGMTF. The site is located approximately 3,300 feet northeast of the current PNR facility. This potential alternate site is identified in Figure7-1. The site is slightly over 8 acres in area and approximately 5.5 acres is owned by FDOT. The remaining area is privately owned property. However, the owner has shown interest and willingness to participate in the process. Currently, there is a bus repair facility in operation on the privately owned property. This site is obviously smaller than the current site by over 30 acres and has one access point to the NW 7 Avenue extension/ NW 4 Avenue/NW 171 Street intersection. The existing route to access this alternate site is highlighted in Figure 7-1.

7.2 Evaluation of Alternate Site

The identified alternate site was assessed for its potential in accommodating the proposed facility footprint, including the parking garage, and its accessibility. This alternate site was rejected for the following reasons:

- Needs major access additions due to very limited and confusing current access.
- Less opportunity for same amount of development
- There would have to be Right-of-Way acquisition, which would involve a substantial amount of time and funds to accomplish.
- This site would place the multimodal facility further away from and make it more difficult for the surrounding residences to access.
- Given the current business and lack of historical data for that site, it may very well be a potential contamination site.
- There is a large building on the site which would have to be demolished to accommodate the proposed facility.
- There appears to be less incentive for developers at the site.
- There is less potential for expansion due to smaller site area.

However, the portion of this site owned by FDOT shall be included as part of the development properties to be offered in the joint development request for proposal.

Figure 7-1

Site Analysis – Alternate Site

SECTION 8 - ALTERNATIVES ANALYSES

8.1 No Project Alternative

The "No-Project" Alternative assumes that no improvements would be implemented within the corridor other than those already programmed in the adopted Transportation Improvement Program. This alternative, as shown in Figure 8.1, is considered viable during the public hearing and final selection phase as a basis for comparison with study alternatives.

8.2 Study Alternatives

8.2.1 Alternative 1

In this alternative the site location is not adjacent to the SFRTA station and the GGMTF would consist of a parking garage structure for approximately 800 vehicles with bus bays located on the ground floor level. The design would provide the flexibility to accommodate additional parking garage spaces in the future. The GGMTF would include passenger waiting areas and amenities; areas for transit supportive joint development (e.g., retail); an enclosed pedestrian bridge to connect the SFRTA station with the garage and office space within the terminal to accommodate administrative and operations staff as well as Intelligent Transportation Systems (ITS) equipment. The GGMTF would include kiss & ride areas for passenger pick-ups and drop-offs and remote parking along the fringes of the property. Pedestrian facilities would be integrated within the GGMTF site plan to facilitate movements from the garage to the terminal. Roadway improvements would be minor; focusing on access/egress to the facility and to correct safety and operational deficiencies.

The roadways improvements include:

- Additional lane on SR 7 in the northbound direction, just south of the SR 7/GGMTF entrance intersection
- Additional lane on SR 7 in the southbound direction, just north of the SR 7/GGMTF entrance intersection
- Widening of the SR 7/SR 9 merge area to improve weaving
- Improving the geometric and signal phasing configuration of SR 7/GGMTG entrance intersection. Proposed intersection configuration consists of:
    - Northbound approach: double left turn lanes, two thru lanes and one thru/right shared lane,
    - Southbound approach: single left turn lane, two thru lanes and one exclusive right turn pocket lane,
    - Eastbound approach: double left turn lanes, one thru lane and one free right turn lane,
    - Westbound approach: single left turn lane, and one thru/right shared lane.

8.2.2 Alternative 2

In this alternative, the site location is placed closer to the SFRTA Station. The GGMTF would consist of a 1,300-space garage with bus bays located on the ground floor level. The remainder of the GGMTF would be the same concept as presented in Alternative 1.

Improvements to access road were evaluated in terms of improving access / egress to the GGMTF as well as addressing traffic operational and safety deficiencies within the site. The improvement concept is based on a major revamping of the existing roadway system (i.e. SR 7 and SR 9) to simplify access and egress as well as open up the site for development. The proposed improvements would consist of a complete realignment of SR 9, both northbound and southbound. The new alignment would follow the southern and eastern edges of the current PNR. Southbound access to the GGMTF, from SR 826 and the Turnpike, would be provided via a new ramp connection. Northbound access from the GGMTF, to I-95, SR 826 and the Turnpike, would also be provided by a new ramp as part of the access road improvements. Grade separations would be provided at critical intersections within the immediate vicinity of the GGMTF to enhance traffic circulation for both passenger cars and buses. These improvements are depicted in Figure 8.3.

The phasing of the facility improvements, initial and build-out, for both alternatives are described below:

Initial Building Development

The facility improvements would include the following:

- A SFRTA station connection
- An Inter-City Bus Terminal (6 bus bays, 8,250 SF)
- A Covered Hub Plaza for pedestrian circulation among transportation modes.
- Provisions for retail kiosks by others
- Automobile & Jitney Bus Drop-off and Taxi staging
- Local & Express Bus Bays with covered walkways (12 buses – combination of standard & articulated buses)
- Public Restrooms
- Parking Structure for approximately 800 spaces for Alternative 1 and 1,300 spaces for Alternative 2.
- A Passenger Information System

Build-out Development

For this phase of the development the facility improvements considered include the following:

- Incorporation of retail or other joint development within the Covered Hub Plaza (this is to be determined by joint development)
- A Traffic Management Center
- A Sheriff's Station
- A Chamber of Commerce Office
- A Parking Structure of 1,300 spaces

8.2.3 Discarded Alternative

This option is similar to Alternative 1 except for the relocation to the east of the ramp from southbound SR 9 to southbound SR 7. However, no operating or safety benefits are associated with this change. It would however impact the existing SR 9 bridge over SR 7 thus increasing the construction costs and affecting the maintenance of traffic significantly. As such, this alternative was not considered further.

8.3 Alternatives Analyses

8.3.1 Operational Analyses

Operational effectiveness can be defined by the following measures:

- Level of Service
- Access Improvements
- Safety Improvements
- Maintenance of Traffic

The operational effectiveness of the study alternatives for each measure is presented is discussed below.

8.3.2 Level of Service

The Traffic Report presents a detailed level of service analysis for the study corridor for the years 2004, 2009 (projected opening year), 2019, and 2029 (design year). The analysis compares the "No Build" "Transportation System Management" and study alternatives for both the AM and PM peak hours. As a result, the roadway and signalized intersection lane configuration needs are identified which would bring the roadway up to acceptable levels of service. The level of service analyses for Alternative 1 and Alternative 2 follows.

Figure 8-1
No Build

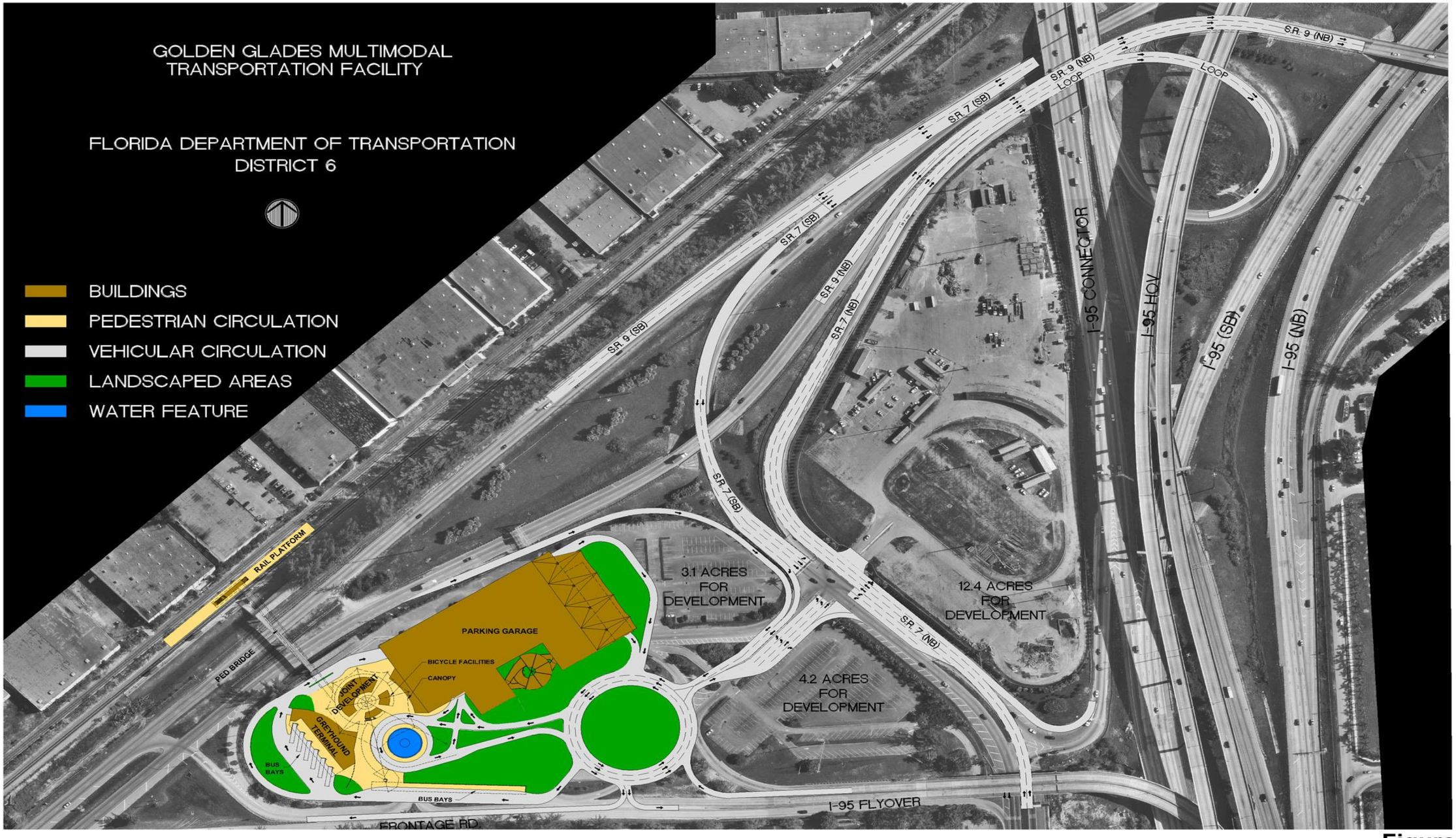


Figure 8-2
Alternative 1

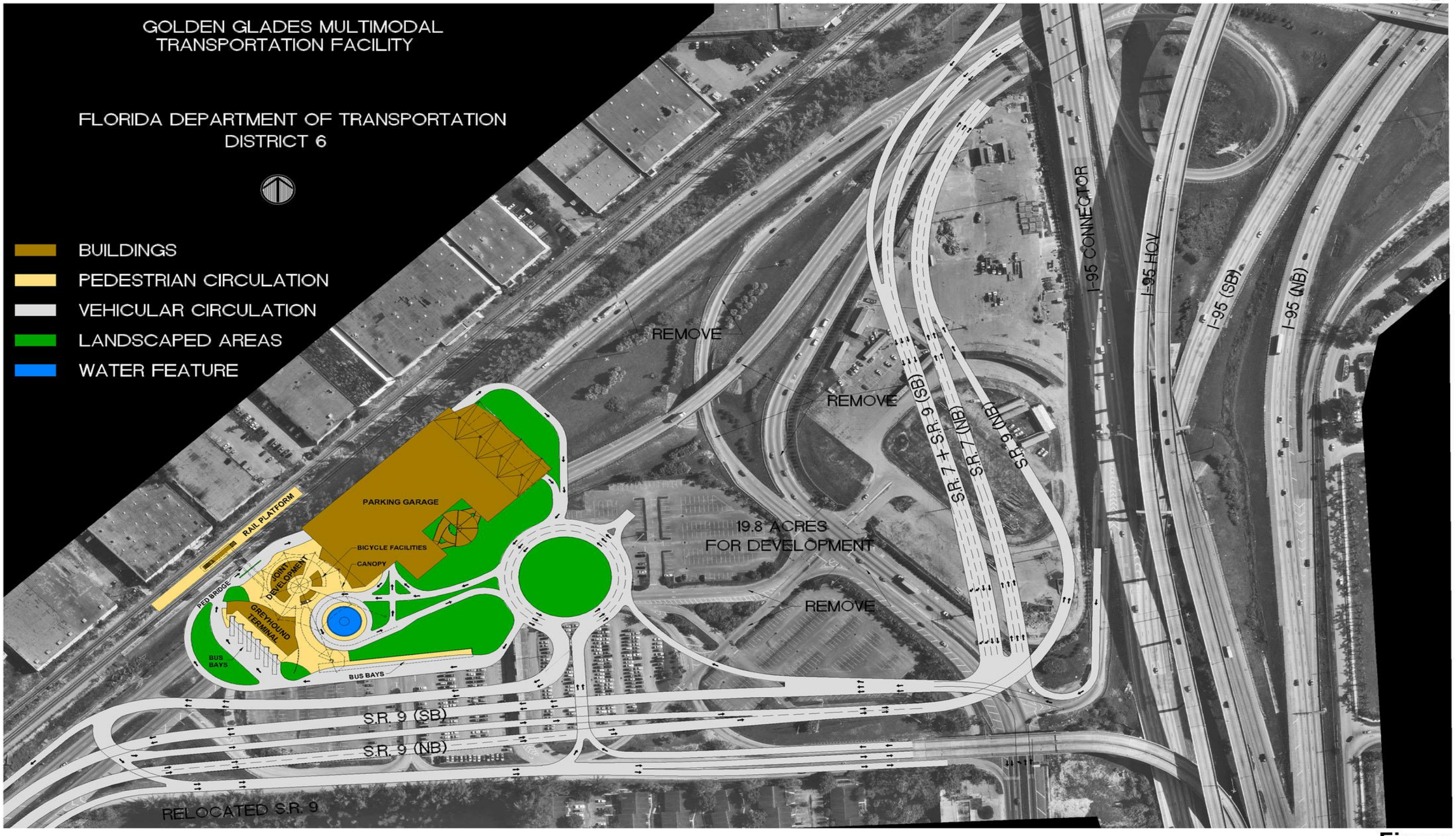


Figure 8-3
Alternative 2

8.4 Alternative 1 - Design Year 2029

8.4.1 Link Capacity Analysis

Table 8-1 summarizes link LOS analysis. This information is also shown in Figure 8-4.

Table 8-1. Year 2029 Link Capacity Analysis

Count	Number	LOS "D"	AM Peak		PM Peak	
Location	Lanes	Capacity	2029	LOS	2029	LOS
1	2L	1,872	**3,263**	**F**	**2,858**	**F**
2	2L	1,872	1,477	C	1,294	C
3	1L	936	**1,339**	**F**	**1,173**	**F**
4	1L	936	284	C	239	C
5A-NB	2L	1,555	719	C	1,109	C
5B-SB	2L	1,555	**2,468**	**F**	1,084	C
6A-NB	1L	936	69	C	32	C
6B-SB	1L	936	102	C	73	C
7	2L	2,935	2,768	D	1,472	B
8	3L	4,405	1,822	B	2,172	B
9	2L	2,935	1,803	C	1,406	B
10	1L	417	301	D	235	C
11	1L	417	Exit to SR 9 NB Closed			
12	2L	2,935	1,489	B	1,863	C
13A-NB	2L	1,555	**2,333**	**F**	**2,043**	**F**
13B-SB	2L	1,555	**2,213**	**F**	1,177	C
14A-EB	2L	776	175	C	265	C
14B-WB	2L	776	375	C	0	C

This analysis showed the following:

During the morning peak period, seven sections of road within the study period will be operating deficiently. These sections of roads are:

- I-95 Connector off ramp
- The WB left turn movement at the intersection of SR 7 and I-95 Connector off ramp
- SR 7 south of GGI, southbound direction
- SR 7 north of I-95 Connector off ramp, northbound direction, and
- SR 7 north of I-95 Connector off ramp, southbound direction

During the evening peak period, six sections of road showed to be operating over capacity. These segments are:

- I-95 Connector off ramp
- The WB left turn movement at the intersection of SR 7 and I-95 Connector off ramp

- SR 7 north of I-95 Connector off ramp, northbound direction

8.4.2 Intersection Capacity Analysis

The results of this analysis is summarized in Tables 8-2 and 8-3. Table 8-2 shows that the intersection of SR 7 / PNR Entrance will fail in the morning due to heavy congestion on the eastbound approach during the AM peak period.

Table 8-2. SR 7 / PNR Entrance Intersection – Year 2029

Peak Period	EB	WB	NB	SB	Intersection LOS
AM	E	D	D	F	F
PM	D	D	C	B	C

Table 8-3 shows that the intersection of SR 7/ I-95 Connector off Ramp will fail in the morning peak period due to heavy congestion on three approaches, westbound, northbound and southbound approaches. It will also fail in the evening peak due congestion in the westbound and northbound approaches.

Table 8-3. SR 7 / I-95 Connector off Ramp Intersection – Year 2029

Peak Period	EB	WB	NB	SB	Intersection LOS
AM	-	F	F	F	F
PM	-	F	F	C	F

This information is also shown in Figure 8-5.

Count	AM Peak		PM Peak	
Location	2029	LOS	2029	LOS
1	**3,263**	**F**	**2,858**	**F**
2	1,477	C	1,294	C
3	**1,339**	**F**	**1,173**	**F**
4	284	C	239	C
5A-NB	719	C	1,109	C
5B-SB	**2,468**	**F**	1,084	C
6A-NB	69	C	32	C
6B-SB	102	C	73	C
7	2,768	D	1,472	B
8	1,822	B	2,172	B
9	1,803	C	1,406	B
10	301	D	235	C
11	Exit to SR 9 NB			
12	1,489	B	1,863	C
13A-NB	**2,333**	**F**	**2,043**	**F**
13B-SB	**2,213**	**F**	1,177	C
14A-EB	175	C	265	C
14B-WB	375	C	0	C

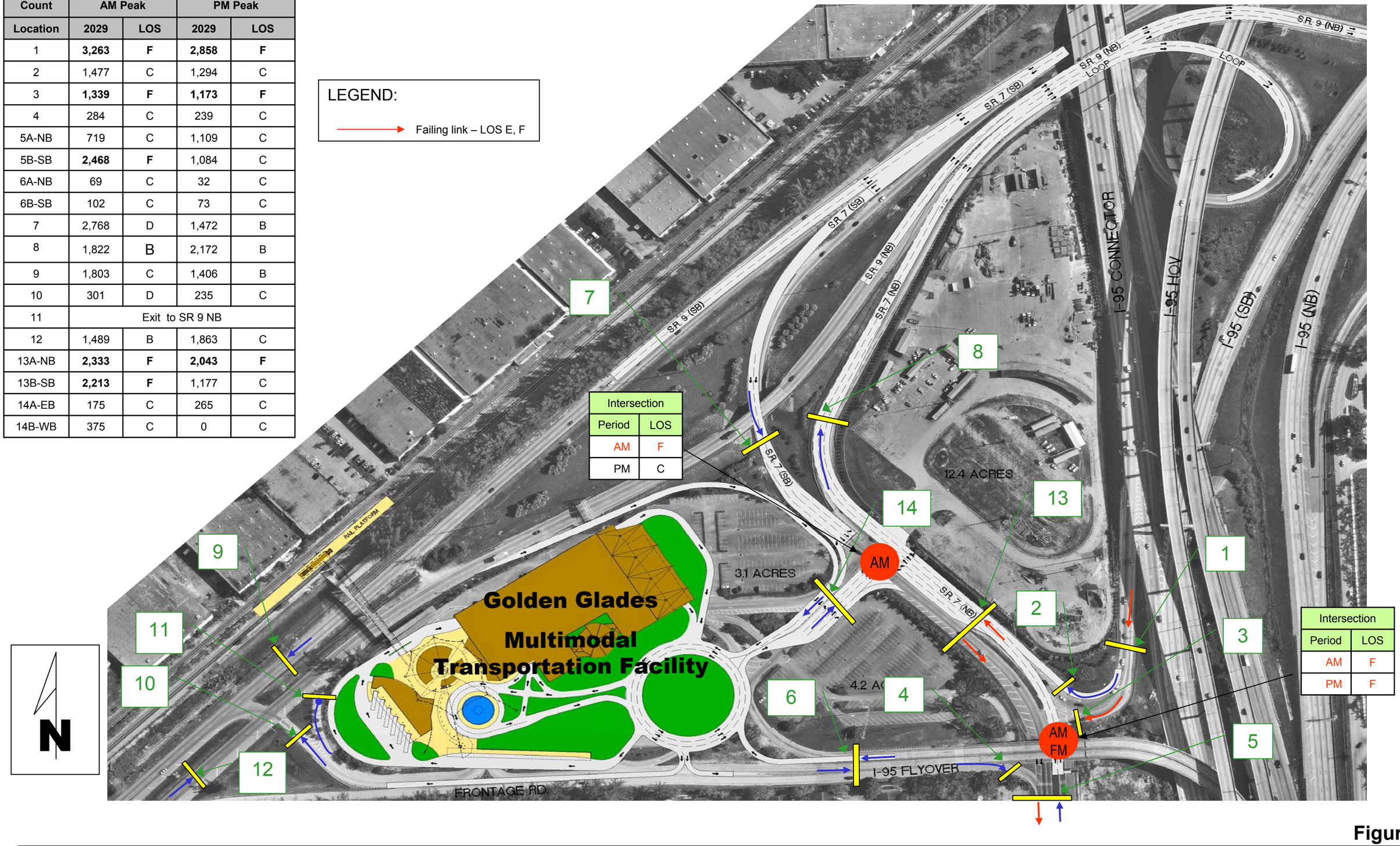


Figure 8-4

Alternative 1 - 2029 AM/PM Peak Hour Traffic Capacity Link Analysis

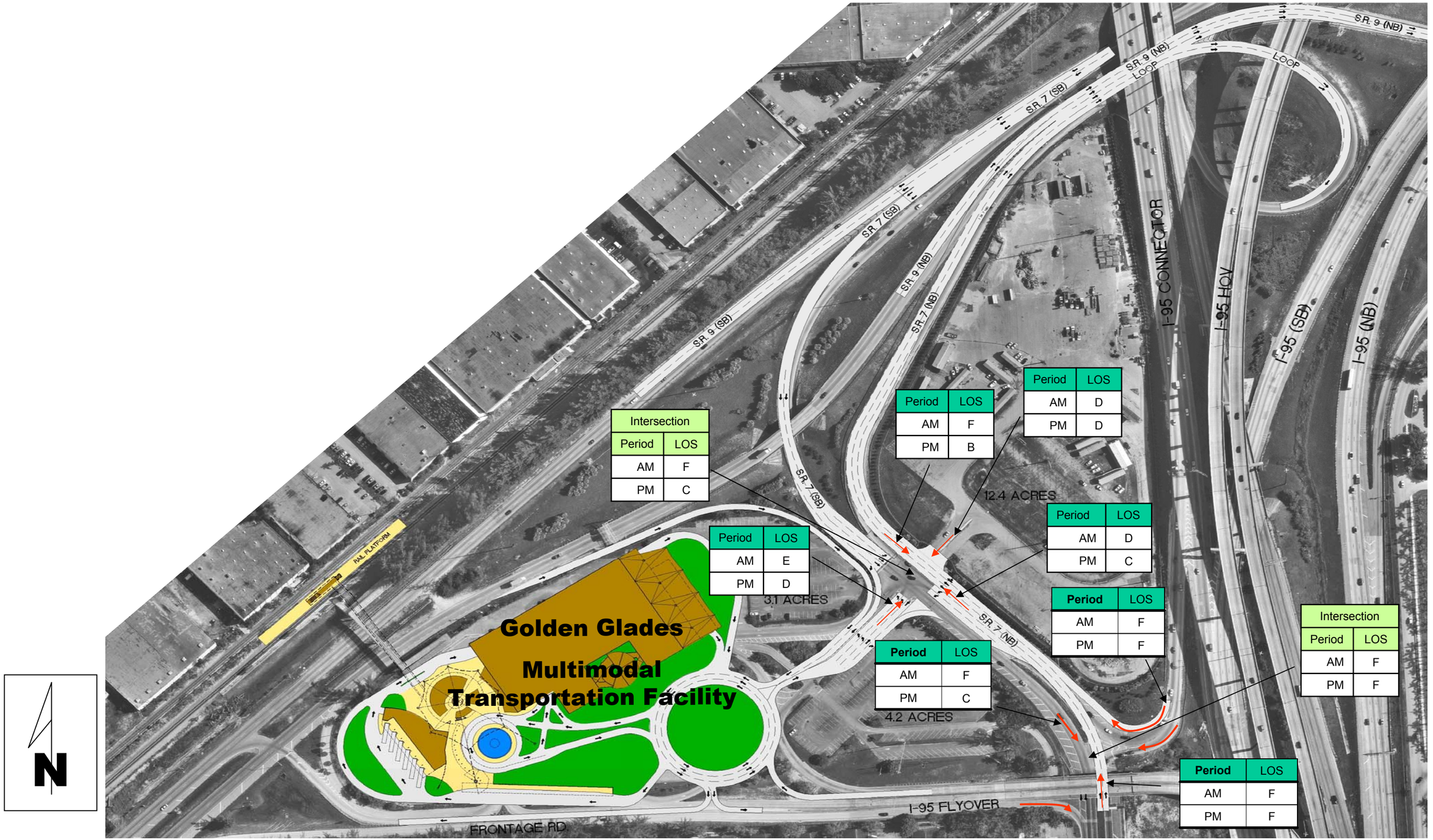


Figure 8-5

Alternative 1 - 2029 Intersection Levels of Service

8.5 Alternative 2 - Design Year 2029

8.5.1 Link Capacity Analysis

Table 8-4 summarizes link LOS analysis. This information is also shown in Figure 8-6.

Table 8-4. Year 2029 Link Capacity Analysis

Count Location	Number Lanes	LOS "D" Capacity	AM Peak 2029	AM Peak LOS	PM Peak 2029	PM Peak LOS
1	2L	1,872	**3,263**	**F**	**2,858**	**F**
2A	1L	936	**1,477**	**F**	**1,294**	**F**
2B	1L	936	447	C	391	C
3	1L	936	**1,339**	**F**	**1,173**	**F**
4	1L	936	284	C	239	C
5A-NB	2L	1,555	719	C	1,109	C
5B-SB	2L	1,555	**2,468**	**F**	1,084	C
6A-NB	1L	936	69	C	32	C
6B-SB	1L	936	102	C	73	C
7	2L	2,935	2,768	D	1,472	B
8A	2L	2,935	1,720	C	2,044	C
8B	3L	2,340	**3,027**	**E**	**3,796**	**F**
9	2L	2,935	1,803	C	1,406	B
10	1L	417	301	D	235	C
11	1L	417	102	C	128	C
12A	2L	2,935	1,489	B	1,863	C
12B	2L	2,935	1,307	B	1,752	C
12C	1L	1,468	1,307	D	**1,752**	**F**
13A-NB	3L	2,340	2,333	D	2,043	D
13B-SB	3L	2,340	2,213	D	1,177	C
14-WB	2L	1,035	375	C	0	C

This analysis showed the following:

During the morning peak period, five sections of road within the study period will be operating deficiently. These sections of roads are:

- I-95 Connector off ramp
- The WB left and right turn movements at the intersection of SR 7 and I-95 Connector off ramp
- SR 7 south of GGI, southbound direction
- SR 7 north of I-95 Connector off ramp, northbound direction

During the evening peak period, five sections of road showed to be operating over capacity. These segments are:

- I-95 Connector off ramp
- The WB left and right turn movements at the intersection of SR 7 and I-95 Connector off ramp
- SR 7 south of GGI, southbound direction
- SR 9 flyover extension north of I-95 Connector off ramp

8.5.2 Intersection Capacity Analysis

The results of this analysis is summarized in Tables 8-5.

Table 8-5 shows that the intersection of SR 7/ I-95 Connector off Ramp will fail in the morning peak period due to heavy congestion on three approaches, westbound, northbound and southbound approaches. It will also fail in the evening peak due congestion in the westbound and northbound approaches.

Table 8-5. SR 7 / I-95 Connector off Ramp Intersection – Year 2029

Peak Period	EB	WB	NB	SB	Intersection LOS
AM	-	F	F	F	F
PM	-	F	F	C	F

This information is also shown in Figure 8-6.

Count	AM Peak		PM Peak	
Location	2029	LOS	2029	LOS
1	**3,263**	**F**	**2,858**	**F**
2A	**1,477**	**F**	**1,294**	**F**
2B	447	C	391	C
3	**1,339**	**F**	**1,173**	**F**
4	284	C	239	C
5A-NB	719	C	1,109	C
5B-SB	**2,468**	**F**	1,084	C
6A-NB	69	C	32	C
6B-SB	102	C	73	C
7	2,768	D	1,472	B
8A	1,720	C	2,044	C
8B	**3,027**	**E**	**3,796**	**F**
9	1,803	C	1,406	B
10	301	D	235	C
11	102	C	128	C
12A	1,489	B	1,863	C
12B	1,307	B	1,752	C
12C	1,307	D	**1,752**	**F**
13A-NB	2,333	D	2,043	D
13B-SB	2,213	D	1,177	C
14-WB	375	C	0	C

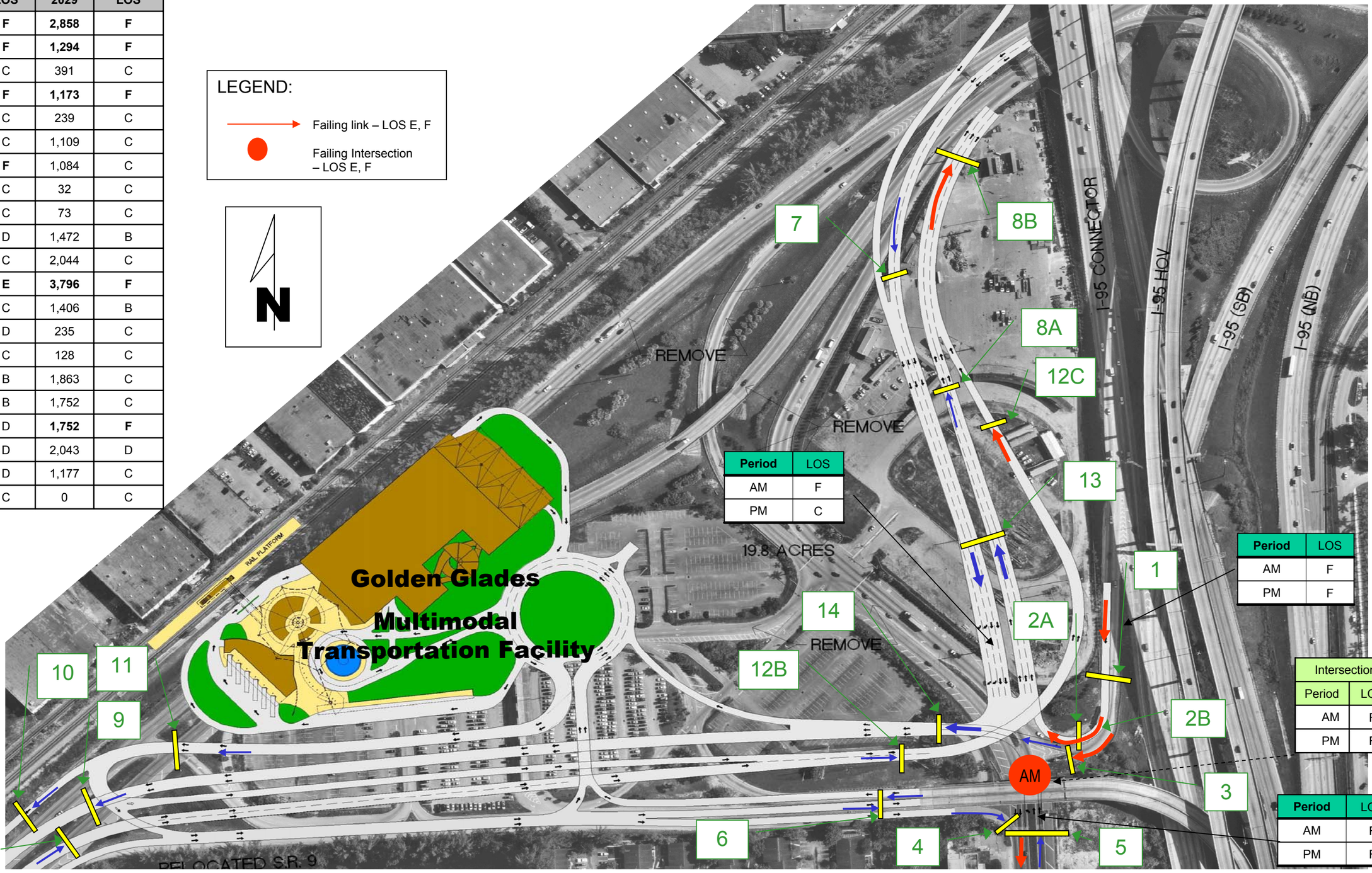


Figure 8-6

Alternative 2 - 2029 AM/PM Peak Hour Traffic Capacity Link Analysis

8.6 Safety Improvements

A review of the crash data for the 3 year period from 2000 to 2002, indicates that the major pattern involved rear-end crashes with a total of 43 crashes. Of the 43 rear-end crashes, 30 occurred on SR 7 and 13 occurred on SR 9. Of the 30 which occurred on SR 7, 17 occurred at the two signalized intersections. The southern signalized intersection is that of the off ramp from the Turnpike/I-95 Connector with SR 7. The northern signalized intersection is that of the entrance to the existing PNR with SR 7. The intersections are approximately 191 feet apart. Rear-end crashes are typical occurrences at signalized intersections. As congestion increases and signal spacing decreases, these occurrences would be expected to go up. As such, the addition of a second northbound and eastbound left turn lane and the addition of an exclusive southbound left turn lane at the northern signalized intersection will provide additional capacity to better handle turning movements. Therefore, the signal timing modifications to make use of the additional turn lanes should alleviate to a certain extent the occurrence of the rear-end crashes by allowing additional green time for the through movements. Also, the addition of another northbound through lane on northbound SR 7 will increase capacity and reduce congestion on this link and thus further reduce rear-end crashes.

Following the rear-end crash pattern, the next most common crash patterns involve impacts with guardrail (13 crashes) and Sideswipe crashes (11 crashes). These two patterns are most likely due to the merge and weaving condition at the junction of northbound SR 7 and northbound SR 9. The widening of the SR 7 ramp junction will eliminate the need for northbound SR 7 traffic from weaving to continue to NB I-95 which is the primary route for northbound traffic on SR 7. These improvements will help reduce crashes occurring within this area of the GGI.

Alternative 2 provides larger scale modifications to the access of the GGMTF. This will eliminate the current signal intersection providing access to the GGMTF. As such, all crashes associated with this signal will be eliminated. Also, the improvements at the northbound junction of SR 7 and SR 9 will eliminate the weaving issues currently occurring. This will also reduce side swipe and rear-end crashes occurring at the merge point. However, the addition of movements added to the southern signalized intersection on SR 7 will complicate the operation and will not reduce crashes; instead, it will make the situation worse. In addition, the southbound SR 9 movement, which is currently free flow will now also be under signal control. This will also create potential for additional crashes.

8.7 Construction Cost Estimate

Preliminary construction and roadway cost estimates, developed for each of the study alternatives, are summarized in Tables 8-6 through 8-9. The preliminary construction cost estimates are as follow:

- Alternative 1 - $3,736,061 for the roadway and $30,194,628 for the GGMTF
- Alternative 2 - $34,534,552 for the roadway and $35,462,020 for the GGMTF

Table 8-6. Construction Cost Estimate Alternative 1

Golden Glades Multimodal Transportation Facility				
Order of Magnitude Estimate (Prefered Alternative - Initial Phase Scheme 1)				
DMJM+HARRIS				02/20/06
ITEM DESCRIPTION	**UNIT**	**QUANTITY**	**UNIT COST**	**TOTALS**
Parking Facility				
Structure Parking	Per Space	813	10816.00	8,793,408.00
Helix Ramp	SF	30000	82.00	2,460,000.00
Access Drive Paving	SY	25000	29.50	737,500.00
Tensile Canopy	SF	30000	82.00	2,460,000.00
Tensile Canopies	SF	25000	63.00	1,575,000.00
Steel Canopy	SF	3700	49.00	181,300.00
Bus Platform Paving	SF	11000	16.50	181,500.00
Landscaping / Irrigation	LS	1	118975.00	118,975.00
SUBTOTAL: Parking Facility				**16,507,683.00**
Parking Facility Office /Toilet/ Vertical Circulation				
Office (2 stories)	SF	6000	186.00	1,116,000.00
Elevator/Stair Enclosure	SF	3500	86.50	302,750.00
Stairs	LS	1	54080.00	54,080.00
Public Toilet Enclosure	SF	1053	86.50	91,084.50
Toilet fixtures / Plumbing	Per Fixt.	24	1625.00	39,000.00
Mechanical / Electrical Enclosure	EA	1	183870.00	183,870.00
Elevator Equipment	EA	2	65000.00	130,000.00
SUBTOTAL: Office / Toilet/ Vertical circulation				**1,916,784.50**
Greyhound Bus				
Terminal Facility	SF	8200	220.00	1,804,000.00
Bus Platform Canopy	SF	9700	71.00	688,700.00
Bus Platform Paving	SF	15	3570.00	53,550.00
Landscaping / Irrigation	LS	1	97345.00	97,345.00
SUBTOTAL PAVEMENT				**2,643,595.00**
Main Plaza				
Plaza Paving	SF	33000	16.50	544,500.00
Plaza Tensile Structure	SF	40000	109.00	4,360,000.00
Water Feature	LS	1	162250.00	162,250.00
Landscaping / Irrigation	LS	1	65000.00	65,000.00
SUBTOTAL: SITE DEVELOPMENT				**5,131,750.00**
Express and Articulated Bus Facility				
Platform Canopy	SF	6300	71.00	447,300.00
Platform Paving	SF	15	4000.00	60,000.00
Landscaping / Irrigation	LS	1	43265.00	43,265.00
SUBTOTAL: Express and Articulated Bus Facility				**550,565.00**
SUBTOTAL CONSTRUCTION COST				**26,750,377.50**
Miscellaneous Items				
Passenger Information system	LS	1	1082000.00	1,082,000.00
ITS (TMC)	LS	1	2200000.00	2,200,000.00
Roadway & Access Road Landscaping / Irrigation	LS	1	162250.00	162,250.00
SUBTOTAL: Miscellaneous Items				**3,444,250.00**
TOTAL CONSTRUCTION COST				**30,194,627.50**

Table 8-7. Roadway Cost Estimate Alternative 1

PAY ITEM NO.	Units	ITEM DESCRIPTION	APPROXIMATE QUANTITY	UNIT OR LUMP SUM PRICE	AMOUNTS
		ROADWAY			
110- 1- 1	LS	CLEARING AND GRUBBING	1.0	$27,000.00	$27,000.00
120- 6	CY	EMBANKMENT	8000.0	$30.00	$240,000.00
160- 4	SY	STABILIZATION TYPE B	17367.9	$3.00	$52,103.73
285-701	SY	BASE OPTIONAL (SHOULDER)	3522.7	$15.00	$52,840.80
285-706	SY	BASE OPTIONAL (MAINLINE)	8507.3	$20.00	$170,145.00
327- 70- 6	SY	MILLING EXISTING ASPHALT PAVT (1 1/2" AVG DEPTH)	10584.5	$4.00	$42,338.16
334- 1- 13	TN	SUPERPAVE ASPHALTIC CONC (TRAFFIC 3) 3 INCH	1403.7	$100.00	$140,369.63
334- 1- 13	TN	SUPERPAVE ASPHALTIC CONC (TRAFFIC 3) 1.5 INCH	290.6	$100.00	$29,062.44
337- 7- 6	TN	ASPH CONC FRICTION COURSE (INC RUBBER)(FC-6)	1809.2	$110.00	$199,007.69
520- 5- 11	LF	CONCRETE TRAFFIC SEPARATOR 4' TYPE 1	200.0	$30.00	$6,000.00
521- 72- 3	LF	CONCRETE BARRIER WALL, SHOULDER	1100.0	$250.00	$275,000.00
536- 1- 1	LF	GUARDRAIL (ROADWAY)	1000.0	$29.00	$29,000.00
536- 85- 22	EA	GUARDRAIL END ANCHORAGE ASSEMBLY FLARED	8.0	$2,500.00	$20,000.00
706- 3-	EA	RETRO-REFLECTIVE PAVEMENT MARKERS	200.0	$6.50	$1,300.00
709- 11- 1	GM	TRAFFIC STRIPE SKIP (WHITE/BLACK)	1.1	$330.00	$376.53
710- 25-61	LF	TRAFFIC STRIPE SOLID (WHITE) (6")	5771.0	$0.30	$1,731.30
710- 26- 61	LF	TRAFFIC STRIPE SOLID (YELLOW) (6")	4916.0	$0.30	$1,474.80
710- 25-181	LF	TRAFFIC STRIPE SOLID (WHITE/BLACK/BLUE) (18")	384.0	$1.20	$460.80
710- 25-81	LF	TRAFFIC STRIPE SOLID (WHITE/BLACK) (8")	993.0	$0.50	$496.50
710-90	LS	PAINTED PAVEMENT MARKINGS (FINAL SURFACE)	1.0	$25,000.00	$25,000.00
		ROADWAY SUBTOTAL →			$1,313,707.37
		DRAINAGE ITEMS			
	LF	FRENCH DRAIN	3000.0	$175.00	$525,000.00
	EA	INLETS (Ditch Bottom)	8.0	$5,000.00	$40,000.00
	LF	OPTIONAL PIPE MATERIAL (18")	1000.0	$75.00	$75,000.00
		DRAINAGE SUBTOTAL →			$640,000.00
XXX-XXX-XXX	1.000	LIGHTING (CONTINGENCY)		$200,000.00	$200,000.00
XXX-XXX-XXX	1.000	TRAFFIC SIGNAL	1.0	$75,000.00	$75,000.00
		LIGHTING/SIGNAL SUBTOTAL →			$275,000.00
		PROJECT SUBTOTAL →			$2,228,707.37
101- 1		MOBILIZATION (15% of Subtotal)			$334,306.11
102- 1		MAINTENANCE OF TRAFFIC (20% of Subtotal)			$445,741.47
		CONTIGENCY (15% of Subtotal)			$334,306.11
				SUBTOTAL:	**$3,343,061.06**

FACILITY ROADWAYS

285-706	SY	Optional Base(Mainline)	13,461.00	$20.00	$269,220.00
285-701	SY	Optional Base(Shldr)	578.00	$15.00	$8,670.00
334- 1- 13	TN	Superpave (1.5")	47.69	$100.00	$4,768.50
334- 1- 13	TN	Superpave (3")	2,221.07	$100.00	$222,106.50
160- 4	SY	Stabilization	14,481.00	$3.00	$43,443.00
327- 70- 6	SY	Milling (1.5" Ave Depth)	1,962.00	$4.00	$7,848.00
110- 1- 1	LS	Clearing & Grubbing	1.00	$27,000.00	$27,000.00
	LF	French Drain	1000	$175.00	$175,000.00
	EA	Inlets (Ditch bottom)	5	$5,000.00	$25,000.00
	EA	Inlets (Curb)	3	$6,000.00	$18,000.00
	LF	Optional Pipe Material (18")	600.00	$75.00	$45,000.00
		Traffic stripes	1.000		$3,500.00
		Contingency			$10,000.00
				SUBTOTAL:	**$859,556.00**
				SAY:	**$420,000.00**
				Total:	**$3,763,061.06**

Table 8-8. Construction Cost Estimate Alternative 2

Golden Glades Multimodal Transportation Facility				
Order of Magnitude Estimate (Alternative 2)				
DMJM+HARRIS				02/20/06
ITEM DESCRIPTION	**UNIT**	**QUANTITY**	**UNIT COST**	**TOTALS**
Parking Facility				
Structure Parking	Per Space	1300	10816.00	14,060,800.00
Helix Ramp	SF	30000	82.00	2,460,000.00
Access Drive Paving	SY	25000	29.50	737,500.00
Tensile Canopy	SF	30000	82.00	2,460,000.00
Tensile Canopies	SF	25000	63.00	1,575,000.00
Steel Canopy	SF	3700	49.00	181,300.00
Bus Platform Paving	SF	11000	16.50	181,500.00
Landscaping / Irrigation	LS	1	118975.00	118,975.00
SUBTOTAL: Parking Facility				**21,775,075.00**
Parking Facility Office /Toilet/ Vertical Circulation				
Office (2 stories)	SF	6000	186.00	1,116,000.00
Elevator/Stair Enclosure	SF	3500	86.50	302,750.00
Stairs	LS	1	54080.00	54,080.00
Public Toilet Enclosure	SF	1053	86.50	91,084.50
Toilet fixtures / Plumbing	Per Fixt.	24	1625.00	39,000.00
Mechanical / Electrical Enclosure	EA	1	183870.00	183,870.00
Elevator Equipment	EA	2	65000.00	130,000.00
SUBTOTAL: Office / Toilet/ Vertical circulation				**1,916,784.50**
Greyhound Bus				
Terminal Facility	SF	8200	220.00	1,804,000.00
Bus Platform Canopy	SF	9700	71.00	688,700.00
Bus Platform Paving	SF	15	3570.00	53,550.00
Landscaping / Irrigation	LS	1	97345.00	97,345.00
SUBTOTAL PAVEMENT				**2,643,595.00**
Main Plaza				
Plaza Paving	SF	33000	16.50	544,500.00
Plaza Tensile Structure	SF	40000	109.00	4,360,000.00
Water Feature	LS	1	162250.00	162,250.00
Landscaping / Irrigation	LS	1	65000.00	65,000.00
SUBTOTAL: SITE DEVELOPMENT				**5,131,750.00**
Express and Articulated Bus Facility				
Platform Canopy	SF	6300	71.00	447,300.00
Platform Paving	SF	15	4000.00	60,000.00
Landscaping / Irrigation	LS	1	43265.00	43,265.00
SUBTOTAL: Express and Articulated Bus Facility				**550,565.00**
SUBTOTAL CONSTRUCTION COST				**32,017,769.50**
Miscellaneous Items				
Passenger Information system	LS	1	1082000.00	1,082,000.00
ITS (TMC)	LS	1	2200000.00	2,200,000.00
Roadway & Access Road Landscaping / Irrigation	LS	1	162250.00	162,250.00
SUBTOTAL: Miscellaneous Items				**3,444,250.00**
TOTAL CONSTRUCTION COST				**35,462,019.50**

Table 8-9. Roadway Cost Estimate Alternative 2

PAY ITEM NO.	APPROXIMATE QUANTITIES	ITEM DESCRIPTION	QUANTITY	UNIT OR LUMP SUM PRICE	AMOUNTS
		ROADWAY			
110- 1- 1	LS	CLEARING AND GRUBBING	29.5	$27,000.00	$796,500.00
120- 6	CY	EMBANKMENT	223462.0	$30.00	$6,703,860.00
160- 4	SY	STABILIZATION TYPE B	83097.1	$3.00	$249,291.33
162- 3-101	SY	FINISH SOIL LAYER(GRASSING OPERATIONS) (6")	4686.7	$5.00	$23,433.33
285-701	SY	BASE OPTIONAL (SHOULDER)	16741.1	$15.00	$251,116.67
285-706	SY	BASE OPTIONAL (MAINLINE)	52689.2	$20.00	$1,053,783.33
327- 70- 6	SY	MILLING EXISTING ASPHALT PAVT (1 1/2" AVG DEPTH)	1866.7	$4.00	$7,466.67
334- 1- 13	TN	SUPERPAVE ASPHALTIC CONC (TRAFFIC 3) 3 INCH	7653.8	$100.00	$765,380.00
337- 7- 6	TN	ASPH CONC FRICTION COURSE (INC RUBBER)(FC-6)	5421.3	$110.00	$596,344.71
400- 2- 10	CY	CONCRETE CLASS II (APPROACH SLAB)	655.6	$1,000.00	$655,555.56
455-133-	SF	STEEL SHEET PILING (PERMANENT)	1260.0	$28.00	$35,280.00
520- 1- 7	LF	CURB & GUTTER CONCRETE (TYPE E)	2304.0	$45.00	$103,680.00
520- 5- 11	LF	CONCRETE TRAFFIC SEPARATOR 4' TYPE 1	100.0	$60.00	$6,000.00
521- 72- 3	LF	CONCRETE BARRIER WALL, SHOULDER	4119.0	$250.00	$1,029,750.00
536- 1- 1	LF	GUARDRAIL (ROADWAY)	1800.0	$29.00	$52,200.00
536- 8	EA	GUARDRAIL BRIDGE ANCHORAGE ASSEMBLY (F&I)	12.0	$2,000.00	$24,000.00
536- 85- 22	EA	GUARDRAIL END ANCHORAGE ASSEMBLY FLARED	12.0	$2,500.00	$30,000.00
570- 5-	TN	FERTILIZER	0.2	$10,000.00	$1,936.64
570- 9-	MG	WATER FOR GRASSING	29.0	$1,000.00	$29,049.59
575- 1-	SY	SODDING	4686.7	$7.61	$35,665.53
700- 4X-XXX	AS	SIGNS (INSTALLATION OF NEW AND REMOVAL OF EXISTING)	21.0	$450.00	$9,450.00
700- 42-XXX	AS	SIGN OVERHEAD TRUSS	9.0	$45,000.00	$405,000.00
705- 71-	EA	DELINEATOR, TUBULAR (FLEXIBLE)	100.0	$57.08	$5,708.00
706- 3-	EA	RETRO-REFLECTIVE PAVEMENT MARKERS	675.0	$6.50	$4,387.50
709- 11- 1	GM	TRAFFIC STRIPE SKIP (WHITE/BLACK)	3.2	$330.00	$1,063.56
710- 11-	SF	MARKING (PAINT) REMOVE	1250.0	$3.00	$3,750.00
710- 23-61	NM	TRAFFIC STRIPE SOLID (WHITE) (6")	3.9	$845.00	$3,292.94
710- 24- 61	NM	TRAFFIC STRIPE SOLID (YELLOW) (6")	3.9	$1,050.00	$4,091.82
710- 25-181	LF	TRAFFIC STRIPE SOLID (WHITE/BLACK/BLUE 18")	2500.0	$1.75	$4,375.00
710- 25-241	LF	TRAFFIC STRIPE SOLID (WHITE/BLACK/BLUE 24")	50.0	$1.45	$72.50
710-90	LS	PAINTED PAVEMENT MARKING (FINAL SURFACE)	1.0	$25,000.00	$25,000.00
		ROADWAY SUBTOTAL →			$12,916,484.68
		DRAINAGE ITEMS			
	LF	FRENCH DRAIN	5200.0	$175.00	$910,000.00
	EA	INLETS (P5 & P6)	48.0	$4,800.00	$230,400.00
	LF	OPTIONAL PIPE MATERIAL (18")	2400.0	$75.00	$180,000.00
		DRAINAGE SUBTOTAL →			$1,320,400.00
		NEW BRIDGES			
		Bridge: NB SR9 (2lane) 49' wide by 145' long	7105.0	$140.00	$994,700.00
		Bridge: SB SR9 (2lane) 49' wide by 145' long	7105.0	$140.00	$994,700.00
		Bridge: SB SR9 over Ent.(2lane) 43' wide by 52' long	2236.0	$140.00	$313,040.00
		Bridge: NB SR9 over Ent.(3lane) 81' wide by 89' long	7209.0	$140.00	$1,009,260.00
		Steel Bridge: NB SR9 (2lane) 43' wide by 230' long	9890.0	$190.00	$1,879,100.00
		Partial Bridge: 30' wide by 210 long	6300.0	$140.00	$882,000.00
		MSE RETAINING WALLS	172833.0	$35.00	$6,049,155.00
		STRUCTURE SUBTOTAL →			$12,121,955.00
XXX-XXX-XXX	1.000	LIGHTING	41.0	$3,200.00	$131,200.00
XXX-XXX-XXX	1.000	TRAFFIC SIGNAL	1.0	$75,000.00	$75,000.00
		LIGHTING/SIGNAL SUBTOTAL →			$206,200.00
		PROJECT SUBTOTAL →			$26,565,039.68
101- 1		MOBILIZATION (10% of Subtotal)			$2,656,503.97
102- 1		MAINTENANCE OF TRAFFIC (10% of Subtotal)			$2,656,503.97
		CONTIGENCY (10% of Subtotal)			$2,656,503.97
				TOTAL:	**$34,534,551.58**

8.8 Right-of-Way Impacts

Neither of the two alternatives require the acquisition of any Right-of-Way.

8.9 Environmental Impacts

The proposed project is entirely located within the limits of the GGI. Therefore no significant impact to the natural environment is anticipated. There are no significant areas in or near the project location that have not already been substantially altered from their pre-development state. Therefore, the proposed project is not expected to have ay impact on wildlife habitats. The man-made borrow pit, Golden Lake, lies immediately to the south but also away from any anticipated direct impacts. Within the study area, no aquatic preserves, outstanding Florida waters or rivers designated as wild or scenic were found. A Contamination Screening Evaluation Report was prepared which identified nineteen (19) sites as potential hazardous material generators for the project. There are no or minimal air and noise impacts as a result of either project alternative.

8.10 Evaluation Matrix Summary

The results of the Alternatives analyses are summarized in Figure 8-7. The selected evaluation measures are defined below:

- ***Construction Cost*** - Construction cost is expressed in dollars (in $2005).
- ***Social and Economic Neighborhood Impact*** - Impacts to the neighboring residential areas as a result of roadway improvements and right-of-way acquisition are rated as “no impact,” “little,” and “moderate.”
- ***Natural Environmental Considerations*** – The impacts to wetlands, wildlife or protected species must be considered and quantified. The impacts to the existing stormwater management system are also quantified. The impact is qualitatively measured in relative terms of “no impact,” “low” , “moderate” or “greatly.impacted”
- ***Noise, Air and Contamination Impacts*** - Air quality, noise pollution, and possible contamination impacts are also taken into consideration and quantified.
- ***Traffic Service*** - The overall operation of the roadway with the anticipated increase in traffic volume is rated by whether level of service is improved or otherwise.
- ***Safety*** – Confidence Interval within the corridors indicate that these sections of SR 7 and SR 9 are high crash locations. As such, the different alternatives are rated for their potential improvement to traffic safety, given the anticipated degree of future traffic growth, from “no impact,” to “little,” to “moderate.”

- ***Joint Development Opportunity –*** The overall effect that a particular roadway, facility, and available land layout will affect how "attractive" the project area is to joint development opportunities. Based on marketing analysis performed for this area the level of joint development opportunity was anticipated ranging from "no improvement" to "moderate improvement."
- ***Maintenance of Traffic*** - Maintaining the flow of traffic during construction is critical not only for roadway construction but also for maintaining the operation of the existing PNR facility. The impact of the roadway/facility construction for the proposed improvements, as it relates to maintenance of traffic flow/operations, is rated by the level of traffic/operation disruption which may result. Maintenance of traffic ranges from "no impact" to "major."
- ***Construction Time –*** As with MOT, construction time not only affects the motorist, but also the surrounding neighborhoods and the ability for developers to enter and initiate successful operations. As such impact of construction time range from "no impact" to "moderate impact."
- ***Compliance with Local Land Use Plans*** - The impact of the proposed improvements upon existing and future land use plans is assessed based on the degree of mobility an alternative may provide.
- ***Utility Impacts –*** The impact on utilities by the construction of the roadway and facility will not only impact the existing operation of the PNR but also construction cost and time. This impact was evaluated based on level of impact from "no impact" to "moderate impact."
- ***Transportation Service –*** This effect is associated with the overall ability to improve regional transportation opportunities and service. This benefit ranges from "no improvement" to "moderate improvement."

8.11 Preferred Alternative

Based on the analyses presented herein, Alternative 1 is recommended as the "Preferred Alternative" for the following reasons:

- Alternative 1 is the only alternative which provides a balance in providing needed traffic capacity and safety improvements while minimizing disruption to traffic patterns and providing for modest roadway Level-of-Service (LOS) gains.
- Alternative 1 can be constructed faster than Alternative 2 and have much less of an impact on the motoring public, surrounding neighborhoods, drainage facilities, and utilities.
- Alternative 2 has a total roadway cost which is approximately 9 times more than that of Alternative 2 yet does not show significant benefits to warrant such cost.
- Alternative 2 does not provide adequate capacity gains, as compared to the increased expense, to accommodate both existing and future traffic.

ALTERNATIVE CRITERIA	NO PROJECT	ALTERNATIVE 1	ALTERNATIVE 2
ROADWAY COST FACILITY COST R/W COST TOTAL	$0 $0 $0	$ 1,877,471 $27,756,740 $ 0 $29,633,000	$34,534,552 $35,462,020 $ 0 $69,996,572
SOCIAL & ECONOMIC NEIGHBORHOOD IMPACT	No Impact	Primarily positive, beneficial effects on communities, surrounding neighborhoods with either build alternative (same facility footprint of construction). Alt. 1 may not separate various transportation modes as well as Alt. 2. Same access to/from facility via existing roadways, ramps as current.	Primarily positive, beneficial effects on communities and surrounding neighborhoods anticipated. Alt. 2 anticipated to better separate various transportation modes than Alt. 1. Better access to and from facility via new ramp/access point network.
NATURAL ENVIRONMENTAL CONSIDERATIONS		No effect to wetlands, wildlife or protected species. Existing stormwater detention area will not be impacted.	No effect to wildlife or protected species. Existing stormwater detention area will be impacted.
NOISE, AIR AND CONTAMINATION IMPACTS	Expect increased air and noise pollution as traffic volumes increase.	Air quality and noise impacts similar to No Project. Phase II contamination assessment recommended.	Expect some decline in air quality, similar to No Project. Noise impacts worsen compared to No Project and Alt.1. Phase II contamination assessment recommended.
TRAFFIC SERVICE	Roadway is currently congested. Future service will seriously degrade.	Increases capacity on SR 7 and SR 9. This will improve LOS on the arterials.	Increases capacity on SR 7 and removal of one signalized intersections. However, SR 9 has degradation of LOS.
SAFETY	Definite crash patterns exist along SR 7 at the southern signalized intersection and at the northbound junction of SR 9 and SR 7. As congestion in the area increases, crashes will increase as well.	This alternative improves the crash hotspots with targeted improvements at these locations. This will have a moderate reduction on the number of crashes at the signalized intersection and a significant reduction at the northbound SR 7 and SR 9 junction.	This alternative improves the typical section and removes the northern signalized intersection. However, southbound SR 9 is now signal controlled and the southern signal is now a 4-legged intersection. The improvements will reduce the number of crashes at the northbound junction of SR 7 and SR 9.
JOINT DEVELOPMENT OPPORTUNITY	This will cause no change to current joint development opportunity.	The joint development opportunity is somewhat improved by the construction of the multimodal facility. This alternative provides for three separate properties for development.	The joint development opportunity is moderately improved by the construction of the multimodal facility and the realignment of both SR 7 and SR 9 to provide one large property for development.
MAINTENANCE OF TRAFFIC	No impact.	Minor disruption of traffic flow along SR 7 and the existing facility during construction.	Major disruption of traffic flow along SR 7 and SR 9 along with the existing facility during construction.
CONSTRUCTION TIME	No impact.	The number of days for construction of the roadway improvements is estimated 210 days which will have minor impacts.	The number of days for construction of the roadway improvements is estimated at 550 days which will have moderate impacts.
COMPLIANCE WITH LOCAL LAND USE PLANS	No impact.	Enhances mobility to support long-range land use plan.	Same as Alternative 1
UTILITY IMPACTS	No impact.	Potential minor utility impact.	Potential moderate utility impact.
TRANSPORTATION SERVICE	No improvement in service	Multimodal Facility will moderately improve regional transportation opportunities and service	Multimodal Facility will moderately improve regional transportation opportunities and service

SECTION 9 - PRELIMINARY DESIGN ANALYSIS

9.1 Design Traffic Volumes

Section 5 provides extensive detail on the estimation of Design Traffic Volumes on a link-by-link basis as well as for each signalized intersection. Table 9.1 summarizes these findings indicating existing (1996), opening year (2002) and design year traffic volumes (2022) as well as K (peak hour percentage), D (directional split during the peak hour), and T (percentage of trucks in the peak hour traffic) factors.

Table 9-1. Design Traffic Volumes

	AADT			
Count Location	2004	2009	2019	2029
1	26,350	28,879	34,689	41,668
2	11,930	13,075	15,706	18,865
3	10,816	11,854	14,238	17,103
4	2,666	2,843	3,235	3,925
5A-NB	11,977	12,097	12,341	12,590
5B-SB	18,045	18,226	18,594	18,969
6A-NB	306	329	382	444
6B-SB	904	955	1,067	1,193
7	15,956	17,020	19,367	23,495
8	21,902	23,047	25,522	28,262
9	12,787	13,640	15,520	18,829
10	2,383	2,519	2,815	3,146
11	1,164	1,230	1,375	1,536
12	15,154	16,165	18,394	22,315
13A-NB	23,086	24,294	26,902	29,790
13B-SB	13,600	14,508	16,508	18,784
14A-EB	847	895	1,000	1,118
14B-WB	1,084	1,146	1,281	1,431

Table 9-2. Recommended K_{30}, D_{30}, and T Factors

Count Location	K	D	T
I-95 Connector	10.43	53.42	6.49
I-95	7.83	51.22	9.68
SR 7	9.75	52.35	4.42
SR 9	9.75	52.35	7.88

9.2 Typical Sections

The typical section of the preferred alternative requires a one-lane ramp 15’ wide with 6’ shoulders on each side (from SR 9 to GGMTF) a two-lane ramp 24’ wide with 8’ shoulder on the left side and 12’ shoulder on the right side (SR 9 westbound, part of the connection from SR 9 to SR 7, SR 9

Eastbound and part of SR 7 Eastbound) and a three-lane section 36' wide with 12' shoulder on each side as part of SR 7. Widening with milling and resurfacing will be utilized in some areas to avoid reconstruction. The typical sections for the preferred alternative are depicted in the preliminary engineering plans at the end of this Section.

9.3 Intersection Concepts and Signal Analysis

The intersection needs, were drawn on base mapping. The two signalized intersections are all under the control of the Miami-Dade Signalization System. This system is currently being upgraded to add more capacity as well as compatibility with advanced traffic management systems. Signalization improvements are proposed at the following intersections:

- SR 7 and Turnpike/I-95 off ramp – Additional northbound through lane will accommodate signal timing split changes.
- SR 7 and GGMTF entrance – Additional northbound & eastbound left turn lanes and an additional southbound right turn lane will required protected-only left turn phasing for northbound and eastbound approaches. Signal timing splits will also be optimized

9.4 Preliminary Engineering Plans (Preferred Alternative)

The preliminary engineering plans for Alternative 1 include the proposed typical plans; drainage improvements; intersection improvements and other details. These are presented in at the end of this section.

9.5 Proposed GGMTF

The organizational layout of the GGMTF creates safe, weather protected and seamless pedestrian connections between the Parking Garage, Intercity Bus Station, SFRTA Station and Local & Express Bus Bays. The 'U' shaped configuration allows on-grade pedestrian transfers between transit modes without crossing a roadway. For enhanced safety, busses and cars are separated by two separated roadways. An inner roadway is dedicated for automobiles, taxis, and small jitney busses, which provides access to the parking garage and a drop-off area. The outer roadway is dedicated for busses only.

The central hub of the GGMTF is a public plaza covered by a tension roof structure. All the transit modes converge at the plaza. The plaza is envisioned as a primary waiting and meeting place for transit users. Its central location within the GGMTF could be an ideal location for joint development. The adjacent photo is a conceptual image of a two level circular retail complex within the plaza.

9.6 Aesthetics and Landscaping

There are several issues to be considered in preparing the landscape plans. These include (1) providing the appropriate landscaping to further support the gateway image expectations of the GGMTF; (2) request of surrounding communities for beautification of SR 9 and the vacant parcel east of SR 7; and (3) costs for maintenance of proposed planting improvements. These issues are discussed below:

9.6.1 Gateway Image

The GGMTF's location near the Dade/Broward County line adjacent to the GGI creates a highly visible project. TARC has declared that the GGMTF convey a "Gateway Image." Since the public plaza would be the center of activity, it seemed an appropriate area to emphasis architecturally. A tensile fabric structure is proposed, which could be illuminated at night creating a "beacon of light." The primary advantages of a tension roof structure are its long unsupported spans, contemporary lightweight appearance and translucent material allowing filtered light into spaces. A gateway type facility should create a sense of arrival into the Miami community and leave a notable impression to the public upon departure.

9.6.2 Community Need

The surrounding communities have requested that the Department beautify SR 9, the existing PNR facility, and the vacant parcel east of SR 7 which was formally a FDOT maintenance storage area. As such, landscaping is recommended to satisfy such requests as ground cover and trees/palms in the median of SR 9 approaching the GGMTF and within the facility site itself. The parcel east of SR 7 could be easily improved by clearing out all storage material on the site, grading the site and providing limited landscaping around the perimeter of the site. Given the joint development expectations, it is not fiscally sound to landscape the site further since it will be further developed and at that time the appropriate landscaping would be installed.

9.6.3 Maintenance

Maintenance is of extreme importance to the success of the project. Care will be taken in ensuring that the landscape is designed to require minimal maintenance through the selection and placement of proper plant species. There are also other techniques that can be employed to ease the burden of maintenance costs. While the initial investment of landscaping will be greater, over time, the final costs can be less through reduced maintenance expenses. Recommendations follow:

- *The use of weed barrier cloth instead of mulch in shrub bed* - The weed barrier cloth virtually eliminates the need to weed the beds and does not need to be replenished every six months like mulch.

- *The use of shrubs to cover the medians in lieu of sod* - This will eliminate the costs of mowing and edging in these areas. Additionally, if the weed barrier cloth is utilized, the need for weeding around the shrubs is practically eliminated.
- *The use of trees as the primary canopy instead of palm trees* - Palms require continual pick-up or trimming of fronds; trees need pruning no more than once every three to five years.

9.7 User Benefits

User benefits anticipated as a result of the construction of the GGMTF and roadway improvements to SR 7 and SR 9 in the area of the facility include the following:

- Reduced traffic congestion and travel times for regional traffic passing through the site
- Reduced traffic congestion and travel times for traffic having either trip destinations within the facility
- Reduced vehicle operating costs, such as fuel consumption, tire wear, and oil consumption
- Reduced crash costs by virtue of the improvements along both SR 7 and SR 9 which would reduce congestion at the signalized intersections and the junction of both state roads.
- Improved utilization of the GGMTF thus increasing transit and other modes of transportation.
- Joint development will provide both combination of public and private partnership to continue the GGMTF needs and opportunities for development at the site.

9.8 Economic and Community Development

Proposed improvements to the PNR facility and surrounding roadways are expected to improve access to both residential and commercial properties in the vicinity of the site as well as enhance opportunities for mixed-use development within the GGI site area. Such improvements will support the economic and community development goals of the area. No adverse impacts are anticipated to the elderly, handicapped, non-drivers, and transit dependent people. Joint Public/Private development of commercial land-uses in conjunction with the GGMTF will generate employment opportunities during construction (temporary) and operation (long-term). The ultimate extent of economic and fiscal impacts of the project will depend on the nature, size and mix of commercial project elements.

9.8.1 Utility Impacts

Three local utility providers have infrastructure within the project limits. These include: Florida Power and Light (FPL); BellSouth Telephone; City of North Miami Beach. A review of the locations of existing and planned utilities indicated that no major utility conflicts are likely. The FDOT District VI Utility Section staff will maintain coordination with these utilities throughout the study and subsequent design phases. Based on early coordination, no significant impacts to the utility services or disruptions of services to area businesses are expected to occur. Section 12 provides additional detail on utilities.

9.9 Value Engineering

Two Value Engineering Workshops on the GGMTF PD&E Study were conducted on October 14-15, 2003 and February 11, 2004. A summary of the value engineering discussion items are indicated below. There were no true recommendations developed, instead the V.E. report indicated that the PD&E focus on:

- Improving the existing GG facility
- Improving traffic flow
- Utilize property available as much as possible
- Attract private developers

The V.E. report further discussed the following items and made observations which are detailed in the report:

- Transit Needs
- Multimodal Center Improvement Ideas
- Traffic Flow Improvements
- Potential Options to Attract Developers

The results of these VE sessions included ideas generated for further consideration as the FDOT develops the Request for Proposal for this project site. The following table indicates a comparison of advantages and disadvantages indicated for the sites considered during the work session. The two sites that were compared were the current facility's site where the bus and rail terminal and the PNR lot is located and an alternate site that is north of the SFRTA tracks, west of Florida's Turnpike, east of the Palmetto Expressway and south of NW 167th Street.

The Value Engineering Report, which is a companion document to the PD&E Study, provides additional detail on value engineering recommendations as well as design observations. This information is summarized in Section 15.

Table 9-3. Comparison of Sites Advantages and Disadvantages

PNR		Proposed Facility (Whatley Site)	
Advantages	**Disadvantages**	**Advantages**	**Disadvantages**
▪ Existing rail station ▪ Access to I-95 and all points ▪ No DOT R/W needed ▪ Established traffic patterns ▪ Community accepts this option ▪ Site is larger ▪ Potential for Joint Development ▪ Less utility impacts ▪ Better access to residences ▪ Access to two local roads ▪ Less initial cost	▪ No access to Sunshine Industrial Park ▪ Adjacent to residents ▪ Higher cost to build Alternative 1	▪ MOT ▪ Constructability ▪ Can free up a 6-acre site on the current site for future development ▪ Easier to observe ▪ Better access to Sunshine Ind. Park ▪ Slightly better access for Broward Transit ▪ Less Construction time	▪ Needs major access additions ▪ Less opportunity for same amount of development ▪ R/W cost ▪ Poor access/need to pave over an existing rail spur ▪ Less access to residences ▪ Needs environmental assessment ▪ May need building demolition ▪ Less incentive for developers at site, but may be able to locate nearby ▪ Less potential for expansion

9.10 Relocation

The proposed project, as presently conceived, will not displace any residences or businesses within the community. Should this change over the course of the project, FDOT will implement a right-of-way and relocation program in accordance with Florida Statute 339.09 and the Uniform Relocation Assistance and Real Property Acquisition Act of 1970 (Public Law 91-646). The brochures, which describe in detail the Department's relocation assistance program and right-of-way acquisition program, are "Your Relocation" and "Coming Your Way". Both of these brochures are made available upon request to any interested persons.

SECTION 10 - SOCIO-ECONOMIC/ENVIRONMENTAL IMPACTS

10.1 Socio-Economic Impacts

The proposed project is anticipated to enhance access to, and mobility between, the surrounding residential, institutional, and industrial/commercial areas from I-95/SR 9A, the Florida's Turnpike (SR 91), SR 826/Palmetto Expressway, Tri-Rail as well as the local street network (SR 7/US 441/NW 7th Avenue and SR 9/Ali Baba Avenue). No adverse impacts are anticipated from the proposed project on the elderly, handicapped, non-drivers, and transit dependent people.

10.1.1 Land Use

No significant changes are anticipated in land use as a result of this project. However, recommendations may be proposed for a land use amendment in the study area to include mixed-use development just within the PNR. This mixed use might include joint development of additional office, retail, commercial, and restaurant land uses. The specific areas proposed for reconstruction, relocation, or new roadway/ramp construction of SR 7/NW 7th Avenue and SR 9/Ali Baba Avenue are located within the existing I-95 right-of-way, which is classified as Transportation land use.

10.1.2 Community Cohesion

No significant changes are anticipated in community cohesion as a result of project implementation. The proposed project is anticipated to enhance access to, and mobility between, the surrounding residential, institutional, and industrial/commercial areas from I-95/SR 9A, the Florida's Turnpike (SR 91), SR 826/Palmetto Expressway, Tri-Rail as well as the local street network (SR 7/US 441/NW 7th Avenue and SR 9/Ali Baba Avenue).

The preferred alternative falls within the same footprint of the existing interchange, so impacts of the project on adjacent neighborhoods and community are not anticipated to vary much in either direct or indirect impacts. Many of the impacts of the project are anticipated to be positive to the adjacent neighborhoods and surrounding community through improvements to local and regional transportation mode interfaces. The negative impacts may be either direct (such as visual or noise) or indirect (such as induced traffic), and involve both the adjacent or nearby neighborhoods as well as the surrounding community.

Access issues are anticipated to be minor with the project, providing some access improvements utilizing the current ramps and roadway network in essentially the current configuration. The preferred alternative will provide enhancements deemed critical to success of the facility in multi-modal connectivity, transfer efficiency, accessibility, comfort and convenience, safety and security, as well as overall image and aesthetics.

10.1.3 Relocation Potential

The proposed project is located entirely within the FDOT right-of-way. Therefore, there is no relocation potential on this project.

10.1.4 Community Services

As noted in Community Cohesion Section above, many of the impacts of the project are anticipated to be positive to these adjacent neighborhoods and surrounding community through improvements to local and regional transportation mode interfaces. These improvements will facilitate access to the above-listed community services by the residents, workers and service providers in the study area.

Access issues are anticipated to be minor with the preferred alternative since it provides some access improvements utilizing the current ramps and roadway network in essentially the current configuration. This alternative will provide enhancements deemed critical to success of the facility in multi-modal connectivity, transfer efficiency, accessibility, comfort and convenience, safety and security, as well as overall image and aesthetics.

An extensive Public Involvement Program is being conducted to coordinate with all Federal, State, and local agencies as well as municipalities, neighborhoods and other interested groups. Therefore, given the positive transportation and intermodal enhancements to be provided by the proposed project, the social service needs of the community have been, and will continue to be, taken into consideration in the development of this project.

10.1.5 Title VI Considerations

This project has been developed in accordance with the Civil Rights Act of 1964, as amended by the Civil Rights Act of 1968. This project is not anticipated to affect minorities or other groups such as the elderly pursuant to Title VI of the 1964 Civil Rights Act. Title VI provides that no person shall, on the grounds of race, color, religion, sex, national origin, marital status, handicap, or family composition be excluded from participation in, or be denied the benefits of, or be otherwise subject to discrimination under any program of the Federal, State, or local government. The local population will benefit from project implementation by the improved access to and from I-95, the Florida's Turnpike, SR 826/Palmetto Expressway, Tri-Rail as well as the local street network (SR 7/NW 7th Avenue and SR 9/Ali Baba Avenue), along with the enhanced multi-modal features, safety, and aesthetic improvements.

10.1.6 Controversy Potential

The proposed improvements are in accordance with the approved Miami-Dade County Comprehensive Plan. The Florida Department of Community Affairs (DCA) has found the proposed action consistent with Florida Coastal Management Plan and with the applicable comprehensive plan. An extensive Public Involvement Program is being

conducted to coordinate with all Federal, State, and local agencies as well as municipalities, neighborhoods and other interested groups. Based on the coordination, the concerns of the public and agencies are summarized below:

- Representative Meek requested that he play an active role and be the contact for all public involvement activities held in the Biscayne Gardens area. He also stated that the community would request noise walls due to the construction of new access roadways south of the project area. In response, the FDOT stated that they would continue to coordinate with Representative Meek during the course of the project. In addition, the FDOT's preferred alternative does not include reconstruction of the access roadways. Therefore, there will be minimal noise impacts to the residents of Biscayne Gardens from the construction of the project.
- The Turnpike Enterprise proposed that the FDOT transfer the eastern portion of the existing Park& Ride Lot (located on the east side of SR 7) to their agency so that they could relocate an existing tandem truck staging area to the Golden Glades Toll Plaza to the Park & Ride Lot. The Turnpike Enterprise also proposed to build a Truck Service Plaza, which would include quick serve restaurants, full service dining restaurants, a convenience store, private showers, and laundry facilities. In response, the FDOT met with representatives from the Turnpike Enterprise regarding this proposal, and committed to continue coordination with this agency to determine the feasibility of the proposal during the joint development phase of the project.
- The North Dade Chamber of Commerce proposed that a Welcome Center be built within the project site. The facility would require approximately 2,500 sq. feet of space within the project area. In response, the FDOT stated that that they would coordinate further with the Chamber as the project progressed through the Study and Final Design phases to determine the feasibility of building this center.
- The Mayor of Miami Gardens voiced concern about how the Study would include public input, and who would make the decision on how the facility would be operated. In response, the FDOT stated that they would obtain input from each stakeholder during the Study, and interagency agreements with the different agencies, including Tri-Rail, Greyhound, and Miami-Dade Transit Department, would be developed during the Study to address the operation of the facility.
- The Miami-Dade County Fire and Rescue Chief voiced concern over emergency response times to serve the new transportation facility, and the need to have viable access to the project area. In addition, he stated that because of FDOT's plans for joint development of the eastern side of the project area, impact fees would be required for building another fire station in the area. In response, the FDOT stated that these concerns would be addressed as part of the development review process for the proposed joint development of the site.
- The BPAC of the MPO requested that the FDOT consider the following improvements for bicycles: paved shoulders for SR 7, bike racks and lockers, elevators to the railroad platform, a bike station, and an extension of the pedestrian bridge from the terminal to the Tri-rail station across the railroad

tracks. In response, the FDOT will continue to coordinate with the BPAC to consider the feasibility of constructing the above referenced improvements.

- The CTAC of the MPO requested that the FDOT consider the building of shelters at the terminal to protect the citizens from the weather conditions. The FDOT responded that the terminal building would provide shelter from the weather.
- The TARC of the MPO requested that the FDOT's design for the facility provide for a visual gateway to the Miami-Dade County, and that their committee participate in the review of the joint development proposals. In response, the FDOT will coordinate further with the TARC during the Final Design phase to receive their input with regards to the design features for the facility and including TARC within the joint development proposal review process.
- One citizen asked if there were any restrictions in building a ramp between the existing developments/warehouses west of the project area to the interchange of SR 826/NW 12th Avenue. This ramp would be elevated over the existing railroad tracks. In response, the FDOT stated that a flyover may be possible and that this idea would further be developed during the PD&E stage. Based on further analysis, the FDOT decided that this alternative would involve extensive bridge, roadway reconstruction, and right-of-way acquisition. Therefore would not be feasible based on a cost and impact perspective.

10.2 Cultural Resources Impacts

As listed in Affected Environment Section, four (4) park resources were identified within the project area. Because of the distance of these parks to the project area, no impacts are expected to these facilities by the proposed project. Therefore, no Section 4(f) impacts are expected as a result of the project.

10.2.1 Historical/Archaeological Sites

In accordance with the procedures contained in 36 CFR, Part 800, a Cultural Resource Assessment, including background research and a field survey coordinated with the State Historic Preservation Officer (SHPO), was performed for the project. As a result of the assessment, one property (8DA5388) was identified. The Federal Highway Administration, after application of the National Register Criteria of Significance, found that the property was not eligible for listing on the National Register of Historic Places. The SHPO rendered the same opinion. Based on the fact that no additional archaeological or historical sites or properties are expected to be encountered during subsequent project development, the Federal Highway Administration, after consultation with the SHPO, has determined that no National Register properties would be impacted. The SHPO coordination letter dated June 16, 2004 is located in the project file.

10.3 Natural Environmental Impacts

10.3.1 Wetlands

Within the project area, only one wetland community was identified under consideration for the development of the proposed GGMTF. Within the southwest quadrant of the proposed project site, this is a small (0.18 acre) stormwater detention area that contains wetland vegetation. However, based on the preferred alternative , no impacts are expected to this wetland-like area.

10.3.2 Aquatic Preserves

Based on a field review and literature search, no aquatic preserves are located within the project area. Therefore, no involvement with OFWs is expected with this project.

10.3.3 Water Quality

Based on the Water Quality Impact Evaluation (WQIE) Checklist, the proposed stormwater facility design will include, at a minimum, the water quantity requirements for water quality impacts as required by the SFWMD in Rule(s) 4E4, 4E40, and 4E400. The existing stormwater management system does not satisfy SFWMD stormwater quality criteria. Untreated stormwater runoff from the project area sheetflows directly into the swales and or ditch bottom inlets. To control the effects of stormwater runoff during construction, a Storm Water Pollution Prevention Plan (SWPPP) will be incorporated into the project, as required by the Florida Department of Environmental Protection (FDEP) National Pollutant Discharge Elimination System (NPDES) permit.

The proposed drainage system includes the construction of a combination of swales, on-site retention areas, and french drains, if necessary. These swales, french drains, and retention areas will be designed to retain both the required water quality retention volume according to DERM and SFWMD criteria, and the required attenuation volume according to DERM, SFWMD, and FDOT criteria.

10.3.4 Outstanding Florida Waters

Based on a field review and literature search, no waters classified as Outstanding Florida Waters are located within the project area. Therefore, no involvement with OFWs is expected with this project.

10.3.5 Floodplains

According to Federal Emergency Management Agency (FEMA) Flood Insurance Rate Map (FIRM), Community Panel Number 12025C0080 J (revised March 03, 1994), the proposed project is located entirely within special flood hazard area designated Zone AE. This area is inundated by the 100-year floodplain with base elevations determined at 7 feet (ft). Miami-Dade County has no designated regulatory floodways.

This project will be classified as a Category 4: "Projects on existing alignment involving replacement of existing drainage structures with no record of drainage problems."

The proposed structure will perform hydraulically in a manner equal to or greater than the existing structure, and backwater surface elevations are not expected to increase. As a result there will be no significant adverse impacts on natural and beneficial floodplain values. There will be no significant change in flood risk, and there will not be a significant change in the potential for interruption or termination of emergency service or emergency evacuation routes. Therefore, it has been determined that this encroachment is not significant.

10.3.6 Coastal Zone Consistency

The Florida Department of Community Affairs determined that this project is consistent with the Florida Coastal Zone Management Program (letter dated May 27, 2004).

10.3.7 Wildlife and Habitat

The results of the field investigations (performed on July 7, 2003, November 24, 2003, and July 27, 2004), research, and regulatory agency coordination indicate that the project area should have no involvement with any federally listed species of plants, animals, or critical habitat.

The FDOT submitted the ESBA to the US Fish and Wildlife Service (USFWS), for concurrence that the project will not impact Federally-listed species. The USFWS is anticipated to concur with this determination. The ESBA Technical Memorandum is located in the Project File.

As per the National Marine Fisheries Service (NMFS) AN response letter requesting additional information, the FDOT submitted additional project information to the NMFS on October 8th , 2004. On October 13, 2004, the NMFS responded and agreed with the FDOT's determination that there will be no adverse impacts to sustainable fisheries habitat as a result of the project.

10.4 Physical Environmental Impacts

10.4.1 Noise

The results of the Noise analysis indicate that Design year traffic noise levels with the preferred alternative are predicted to range from 62.9 to 66.0 dBA at the Centre Lake Apartments. Outdoor areas at approximately eight (8) apartments are predicted to experience traffic noise levels equal to the FDOT Noise Abatement Approach Criteria for residential land use (66.0 dBA) during the design year with the preferred alternative. Traffic noise levels with the preferred alternative are predicted to only increase by a maximum of 0.5 dBA from the existing conditions. Thus, there is no substantial increase in traffic noise, defined as 15 dBA, attributable to the project. Moreover, the noise level

with the preferred alternative is predicted to be 0.4 to 0.5 dBA less than that of the No Build Alternative during the design year.

Project generated noise levels are not predicted to meet or exceed the FHWA Noise Abatement Criteria (67.0 dBA). No significant project related noise impacts are anticipated to occur as a result of project implementation. Given that the Centre Lake Apartments were constructed in 1986, well after construction of the GGI was largely complete, and that the predicted noise level with the project is virtually unchanged from existing and future noise levels without the project, construction of noise abatement for the apartments in the Centre Lake complex is not considered reasonable with this project. Thus, based on the noise analysis performed to date, there are no apparent solutions available to mitigate the noise impacts at the locations identified above.

Short-term noise impacts during construction will be minimized in accordance with the latest edition of the FDOT Standard Specifications for Road and Bridge Construction.

10.4.2 Air Quality

An air quality analysis was conducted for the project. The project's No-Build and Build alternatives were analyzed using the FDOT's COSCREEN98R2 screening model. The location within the project study area with the greatest potential for traffic generated air quality impacts was determined to be a ground-level patio at the Centre Lake Apartments that is located approximately thirty-five (35) feet from the near edge-of-pavement of the eastbound frontage road between SR 9 and SR 7. The worst-case signalized interchange near this site is the intersection of SR 7 and the bus terminal entranceway, approximately 480 feet to the north. The predicted worst-case one-hour CO levels at this location are estimated to be 7.0 parts per million (PPM) during the opening year and 7.5 PPM during the project's design year. The predicted worst-case eight-hour CO levels are estimated to be 4.2 PPM during the opening year and 4.5 PPM during the project's design year. Thus, the proposed project is not expected to cause any exceedance of the one-hour or eight-hour NAAQS for CO. The project passes the CO screening analysis and air quality impacts resulting from the proposed project improvements are not expected.

Short-term air quality impacts during construction will be minimized in accordance with the latest edition of the FDOT Standard Specifications for Road and Bridge Construction.

10.4.3 Construction

Construction activities for the proposed project may generate air, noise, vibration, water quality and visual impacts of a temporary nature for those businesses and residents within the immediate project vicinity. As discussed in the air and noise sections of this document, the Contractor will adhere to the measures outlined in the latest edition of the FDOT Standard Specifications for Road and Bridge Construction. Where applicable, adherence to local construction noise and/or construction vibration ordinances by the contractor will also be required. Water quality impacts resulting from erosion, sedimentation and turbidity reduction will also be controlled through measures outlined in the FDOT Standard Specifications for Road and Bridge Construction. The removal of

structures and debris will be in accordance with local and State regulation agencies permitting this operation. The contractor is responsible for his methods of controlling pollution on haul roads, in borrow pits, other material pits, and areas used for disposal of waste materials from the project. Temporary erosion control features as specified in Section 104 of the FDOT Standard Specifications, may consist of temporary grassing, sodding, mulching, sandbagging, slope drains, sediment basins, sediment checks, artificial coverings, and berms.

The sequence of construction will be planned in such a way as to minimize traffic delays. The project will involve the development and use of a Maintenance of Traffic (MOT) Plan and a Maintenance of Operation (MOO). The local news media will be notified in advance of road closings and other construction-related activities, which could excessively inconvenience the community so that business owners, residents, and/or tourists in the area can plan travel routes in advance. A sign providing the name, address, and telephone of a FDOT contact person will be displayed on-site to assist the public in obtaining answers to questions or complaints about project construction.

10.4.4 Contamination

The State of Florida has evaluated the proposed R/W and has identified potentially contaminated sites for both proposed alternatives. Results of this evaluation were utilized in the selection of a preferred alternative. With selection of a preferred alternative for implementation, a site assessment will be performed to the degree necessary to determine levels of contamination and, if necessary, evaluate the options to remediate, along with associated costs. Resolution of problems associated with contamination will be coordinated with the appropriate regulatory agencies and appropriate action will be taken, where applicable.

Both build alternatives share essentially the same risk ratings, as both proposed alternatives remain totally within the existing R/W. No R/W acquisition is anticipated. Therefore, contamination risk was rated equally for each alternative and was determined not to be a deciding factor in the selection process.

The FDOT has identified and evaluated potentially contaminated sites for the project corridor in accordance with the PD&E Manual, Part 2, Chapter 22, Contamination Impacts. A Contamination Screening Evaluation Report (CSER) for this project has been prepared and is available for review at the FDOT District Six Environmental Management Office. The results are summarized below.

Sites of potential contamination risk to the project were identified, examined and ranked for risk to the project, resulting in one (1) High risk, one (1) Medium risk, seven (7) Low risk and ten (10) No risk sites. *Table 10-1, Potential Contamination Sites* provides the facility name, address, file numbers, permit numbers, contaminants of concern, distance and direction from the project site, and the assigned risk ratings of all 19 sites. The full descriptions of the High and Medium risk sites are provided below.

The High risk site, Chemco Corporation, located approximately 90 ft west of the existing Golden Glades Tri Rail Station, formerly housed ACME Plastic Machinery Corporation which bought, sold and repaired large machinery. The site's contamination history dates back to August 1991 when a Department of Environmental Resources Management (DERM) inspection discovered an uncontrolled discharge of waste oil to the ground. The DERM inspection report indicated that the discharge originated from 55-gallon drums of waste oil located in the southwestern portion of the property. A subsequent DERM inspection report, dated November 1993, documented a leak of hydraulic fluid at the site. No further information was available regarding the cleanup of either discharge. DERM inspections continued annually, but indicated no additional discharges. ACME Plastic Machinery Corporation moved in June 2001.

In January 2002, a DERM inspection report indicated that Chemco Corporation, a manufacturer of cosmetics, was the sole operator at the site. In March 2002, DERM issued Chemco Corp. a Warning/Cease and Desist Notice for elevated levels of acetone. An April 2002 response letter to DERM stated that Chemco Corp. had corrected the violation and was taking precautions to prevent future discharges. DERM inspected and resampled the site in April 2003. Sample analysis results revealed phenols and acetone concentrations above applicable standards. DERM issued a Cease and Desist letter in August 2003. Consequently, in November 2003, two tons of contaminated soils were excavated from the site and properly disposed. Subsequent soil sampling results indicated that all soil contaminant concentrations were below detectable limits (BDL).

An October 2004 CES field inspection confirmed that Chemco Corp. currently operates at this site. Additionally, numerous drums of unidentified waste were observed located along the southern and western perimeters of the property. Waste from the drums near the middle of the southern perimeter was observed to be overflowing onto the open ground. It is unknown whether the unidentified waste may pose a potential soil or groundwater contamination hazard.

DERM has reported two discharges at this site which lack cleanup documentation. Additionally, an October 2004 CES field inspection revealed an overflow of unidentified waste to the open ground along the southern perimeter of the site. Therefore, due to unresolved discharges and the site's location, approximately 90 ft west of the existing Golden Glades Tri Rail Station, this site is ranked as a Medium Risk to the proposed project activities

The Medium risk site, located in the southeast quadrant of the NW 165th Street and NW 13th Avenue intersection approximately 1,500 feet (ft) northwest of the proposed project, operated as Anodyne, Inc., a manufacturer of silk screen prints, anodized aluminum and lithographs, from approximately 1960 to1978. In 1985, following the closure of the facility and the sale of the property, extensive organic and inorganic soil and groundwater contamination was discovered. Subsequently, the U.S. Environmental Protection Agency

(EPA) designated the site a Superfund Site and placed it on the National Priorities List (NPL) in 1990. According to the EPA's 1993 Record of Decision (ROD), soil and groundwater contamination originated from many sources, including: overflow pipes which discharged unprocessed wastes to the ground at various locations around the property; the routine disposal of spent solvents into a 90-ft deep injection well; uncontained cleaning operations which utilized and discharged various solvents; storage tanks on the south side of the property which frequently overflowed to the ground; and, leaking storage tank piping.

According to a DERM inspection report, one (1) 10,000-gallon gasoline underground storage tank (UST) was removed from the north side of the property in January 1988. Groundwater and soil sampling was conducted in the location of the excavation in April 1994. According to the Soil and Groundwater Testing Report (undated, DERM received 4/19/1996), soil contaminant concentrations were below detectable limits (BDL) and groundwater contaminant levels were either BDL or at concentrations that could be attributed to sources other than the UST (i.e. leeching from poly vinyl chloride [PVC] conduit). The report indicated that a supplemental evaluation would not be necessary. DERM approved the report on April 25, 1996 and released the UST portion of the site from further obligation.

A January 1997 Telephone Communication Memo between DERM and the EPA documented that the groundwater plume associated with Anodyne, Inc. had been semi-defined and was migrating to the northeast. Additionally, the memo documented that soil and groundwater remediation was pending funding approval. A Final Groundwater Investigation Report, December 2000, reported that no volatile organic compounds were detected in shallow (20 ft) monitoring wells. However, volatile organic aromatic (VOA) concentrations above applicable standards were recorded in the deep (>90 ft) wells. Isopleth maps (see Appendix) of the contaminant concentrations within the deep wells illustrate the contamination plume extending into the proposed limits of construction at the existing Golden Glades Tri Rail Station and the existing Golden Glades PNR. However, the contamination plume within the proposed limits of construction is located at a depth of at least 90 ft below land surface (bls). The contaminants which have migrated within the proposed project limits include cis-1,2-trichloroethene (70 ug/l), vinyl chloride (2 ug/l), total VOA (2 ug/l), methane (1400 ug/l), chloride (150 ug/l), and sulfate (10 ug/l). Additionally, the report documented that the site's groundwater flow was generally towards the south-southeast. However, along the northern portion of the site, groundwater flow was to the north.

A February 2002 DERM letter indicated that the EPA submitted a proposal for supplemental sampling. The purpose of the proposed supplemental sampling was to determine the limits of necessary soil excavation and to more accurately define the contamination plume, which reportedly extends over 150 ft vertically and more than 1500 ft horizontally from the site. A June 2002 letter to DERM explained that soils excavated from the site would be disposed of out of the County because Miami-Dade had no

landfills that could accept the soil. No information was available regarding when the soils were scheduled to be excavated.

The most recent document from file, a March 2003 Technical Memorandum, proposed an in-situ remediation system which would utilize bioremediation and Monitored Natural Attenuation to remediate the groundwater. No information regarding approval of the Technical Memorandum or of further soil or groundwater remediation activities was available from agency files.

An October 2004 Consulting Engineering and Science, Inc (CES) field inspection ascertained that the property is currently utilized by Wise Snacks, a food distribution operation and ATC International, a security installation business. Additionally, approximately 50,000 square feet of warehouse space was advertised as available for lease. No evidence of active remediation was observed at the site.

This Superfund site has a documented contamination plume which extends into the proposed limits of construction at the existing Golden Glades Tri Rail Station and existing Golden Glades PNR. However, the documented contamination plume in this area is at least 90 ft bls. Therefore, due to the depth of the contamination below the proposed project activities, this Superfund site is ranked as a Medium Risk to the proposed project. However, should the proposed project activities include subterranean activities at a depth of 90 ft bls or greater, the risk rating of this site should be elevated to high.

It is recommended that further assessment up to or including Level II assessment with soil and groundwater testing be considered for the project site's western boundary, nearest the high risk site.

Section 120 Excavation and Embankment – Subarticle 120-1.2 Unidentified Areas of Contamination of the *Standard Specifications for Road and Bridge Construction* is provided in the project's construction contract documents. This specification requires that in the event that any hazardous material or suspected contamination is encountered during construction, or if any spills caused by construction-related materials should occur, the contractor shall be instructed to stop work immediately and notify the District Six Environmental Management Office as well as the appropriate regulatory agencies for assistance.

Table 10-1: Potential Contamination Sites

FACILITY NAME	ADDRESS	FILE #	PERMIT NUMBER(S)	CONTAMINANTS OF CONCERN	DIRECTION/ DISTANCE (ft) FROM FDOT R/W		RISK
CHEMCO CORP./ACME PLASTIC MACHINERY CORP/MAGIC PRINT	1130 NW 159 DR	16601 12093	IW5 12295 IW5 7894	Waste oil, hydraulic fluid, lacquer thinner, paint, acetone, phenols	NW	180	High
ANODYNE, INC (SUPERFUND)/WISE SNACKS/ATC INTERNATIONAL	1270 NW 165 ST	4301	UT 932 IW5 4649	Diesel, gasoline, chlorinated solvents, organic solvents	NW	1625	Medium
MILLER INDUSTRIES	16295 NW 13 AV	12513	IW5 8167	Unknown	NW	1050	Low
DOT-GOLDEN GLADES STORAGE YARD	600 NW 167 ST	12834	SW 1174	Asbestos, herbicide, oil, construction debris	NE	525	Low
PETROZONE	15821 NW 7 AV	19074	UT 6250 AP 944	Gasoline	S	210	Low
UNIVERSAL LUCITE DISPLAY, INC.	16505 NW 8 AV	14900	IW5 11050	Unknown	NW	460	Low
NORTH DADE DETENTION CENTER	15801 N SR 9	18607	UT 6181	Diesel	SW	285	Low
SUNSHINE KITCHENS, INC	15885 NW 13 AV	18688	IW5 13896	None	SW	975	Low
DYNACOLOR GRAPHICS INC	1182 NW 159 DR	504	IW5 541	Ammonia, silver, chloroform,	NW	300	Low
ATLAS METALINDUSTRIES, INC.	850/1128 NW 159 DR	20272 20273	IW5 15168 IW5 15169	Unknown	NW	180	No
RUDCO IND./THERMAX CORP.	1160 NW 159 DR	224	UT 2127, IW5 239, AP 880	Diesel	NW	200	No
SALCOM IND INC	1114 NW 159 DR	6555	IW5 7147	Unknown	NW	160	No
ALL-BEV L.C./SHEFFIELD IND.	1190 NW 159 DR	2795	IW5 409, UT 1485, IW5 3027	Oil, #2 fuel	SW	525	No
ALGERNON MACHINE SHOP/ COASTAL BLDG MAINTENANCE	15890 NW 7 AV	2076 14585	UT 661, IW5 2244, IW5 10028	Waste & fresh oil, batteries, racing fuel	N	110	No
SATTLELIGHT PRODUCTS	900 NW 159 DR	7641	UT 1097	Gasoline, diesel	NW	280	No
HERITAGE MOTOR CARS INC.	16500 NW 7 AV	2361	MSP 585, AP 826, IW5 2557	Polyester resins, fiberglass, acetone, lacquer thinner, paints	W	180	No
GOLDEN LAKES & HIDDEN COVE APTS	East of SR 9	NR	PSO 890	Sewage	SW	1450	No
I W P INC	16409 NW 8 AV	5163	IW5 3902 IW5 5562	Unknown	NW	250	No
CENTRE LAKE APARTMENTS	15750 NW 7 AV	NR	PSO 262	Sewage	S	210	No

(ft) = feet; R/W = Right-of-Way; IW5 = Industrial Waste Permit; UT = Underground Tank Permit; SW = Solid Waste Permit; AP = Air Admissions Permit; MSP = Multiple Source Permit; PSO = Private Sanitary Sewer Operating Permit; NR = No Reco

10.4.5 Navigation

The project does not involve navigable waters of the US. Therefore, no involvement with navigation is expected from this project.

SECTION 11 - DRAINAGE

11.1 Introduction

The conceptual drainage analysis addresses the inventory and evaluation of the existing drainage systems; the evaluation of potential drainage concepts; and the evaluation of a preliminary drainage design. The drainage design will be in accordance with the FDOT Drainage Manual and the requirements of the regulatory agencies.

11.2 Existing Drainage Systems

The area of the project is approximately 45 acres.

The existing drainage system for SR 9 and SR 7 consists of swales along the roadway. Dry retention is provided in the following areas along SR 9:

1) Between southbound SR 9 and northbound SR 9 in the median north of the pedestrian overpass.
2) Between southbound SR 9 ramp to southbound SR 7 roadway.
3) Between northbound SR 9 and northbound SR 7 ramp to northbound SR 9.

The existing PNR lot as well as the existing storage lot along the east side of SR 7 have a combination of swales and drainage structures with french drains which capture and treat the rainwater.

11.3 Alternative Stormwater Management Systems

Alternative drainage systems need to accommodate the design runoff which satisfies the design criteria included in Section 17.2. DERM policy states that any existing roadway that is to be modified or improved must also have its drainage system(s) improved in such a manner as to include stormwater treatment facilities.

For Alternative 1, the existing roadway facilities are being modified slightly. The amount of additional impervious area is minor as compared to the existing condition.

An additional lane is being added to SR 7 northbound, just south of the SR 7/GGMTF entrance intersection. In order to accommodate this widening under the I-95 connector, the roadway is being widened to the north. Thus the existing swale to the south of the roadway is available for drainage retention.

An additional lane is being added to SR 7 southbound, just north of SR 7/GGMTF entrance intersection. In order to accommodate this widening under the northbound SR 9 mainline bridge,

the roadway is being shifted slightly too the northwest. The existing retention areas adjacent to the ramp are available for retention of the proposed runoff.

If needed, french drains may be added to the retention areas in order to dissipate the runoff at a higher rate.

For Alternative 2, the existing facility provides minimal stormwater treatment, therefore, there needs to be significant modifications to the current system. Several alternative drainage systems to potentially accommodate the design runoff were considered, including:

- Deep Wells
- Retention/Detention Swales
- Exfiltration Trenches (french drains)

Deep wells were rejected because they are only permitted within areas of brackish ground water. Retention/detention swales are allowed beyond the 30-day contour of the nearest well field

A combination of exfiltration trenches and retention areas are the most likely to be used for this alternative.

The area between the east side of relocated SR 7 and the west side of the SR 9 flyover can be used for stormwater retention as well as the area between the west side of the I-95 connector and relocated SR 7 / SR 9.

The roadway along relocated SR 9 to the south side of the GGI Triangle can have exfiltration trenches to treat the stormwater runoff.

11.4 Permit Coordination

The following regulatory agencies standards and criteria have played a key role in developing the drainage design concept and will continue to be involved in the permitting of this project throughout the design and implementation phases:

- Miami-Dade County Department of Environmental Resources Management (DERM)
- South Florida Water Management District (SFWMD)

11.5 Conclusions

Implementation of the proposed drainage system, as part of the overall GGMTF will improve the water quality of the GGI at this location.

SECTION 12 - UTILITIES

Appendix B presents the existing utility locations within the PNR site. Eight local utility providers have facilities around the project site. These include: Bell South, City of North Miami, City of North Miami Beach, Florida Power and Light, FPL Fiber Net, Miami-Dade Water & Sewer Authority, TECO (People Gas), and Comcast. The Eight Utility Companies were contacted and their respective locations were plotted in relation to the project site. A review of the locations of existing utility facilities indicated that no major utility conflicts are likely. The FDOT District VI Utility Section staff will maintain coordination with these utility providers throughout the study and subsequent design phases. Based on early coordination with the utility owners, no significant impacts to the utility services or disruptions of services to area businesses are expected to occur. None of the existing facilities identified appears to be in easements, which would involve compensation in the event that they are required to be relocated.

Table 12.1 shows which utility owners have facilities within the project area:

Table 12-1. Existing Utilities

Utility Company / Agency	Facilities within the PNR Site
Bell South	Yes
City of North Miami	None
City of North Miami Beach	Yes (16" Water)
Florida Power & Light	Yes (138 kv OE)
FPL Fibernet	None
Miami-Dade Water & Sewer	None
Teco (Peoples Gas)	None
Comcast	None

SECTION 13 - MAINTENANCE OF TRAFFIC / MAINTENANCE OF OPERATION

Maintenance of Traffic (MOT) during construction was identified as one of the most important project issues due to the fact that these roadways are a part of the GGI. MOT schemes will need to consider the following specific objectives: (1) provide safe travel through the corridor during construction; (2) minimize the amount of time that any one section is under construction; (3) provide an adequate level of service for traffic using the roadways during construction; and (4) minimize the number of lane shifts through the work zone in order to smooth traffic flow and standardize driver decision making through each intersection. Proper sequence of construction plans is necessary in order to achieve these objectives.

Alternative 1 can easily be constructed by maintaining traffic along the exiting roadways while performing minor widening to the facilities as required. Figure 13-1 depicts the MOT for this alternative.

Figures 13.2 through 13.4 illustrate the conceptual construction sequence to construct Alternative 2. For this Alternate, Phase I construction consists of completing all of the new roadway work outside of the existing roadway facilities, including the new northbound SR 9 bridge over SR 7. All existing roadways will remain open to traffic during this phase of construction. In Phase II, the new alignment will be constructed. Phase III consists of the demolition of the southbound SR 9 roadway.

Interruption to traffic flow is inevitable; however, the appropriate use of lane markings, construction signs, variable message signs, flaggers and other commonly used construction work zone traffic control techniques would be utilized to minimize inconvenience to local and regional traffic. Furthermore, the construction schedules for other construction projects within the PNR area (i.e., resurfacing of NW 7th Avenue, North Corridor transit project) need to be coordinated to ensure that an acceptable level of service is maintained throughout.

In addition to maintaining traffic moving along the roadways adjacent to the PNR, the operation of the existing facility itself must be maintained while the new GGMTF is constructed. In order to accomplish this, the parking will be restricted to the two eastern most lots (the 3.1 acre and 4.2 acre lots). The existing bus plaza would also be shifted east approximately 100 feet. This along with minor onsite circulation changes will allow the construction of the parking garage, terminal, and bus plazas. Once these amenities are complete, parking can be shifted into the garage, and facility operations can be shifted to the now vacant 3.1 acre site on the northwest portion of the parking garage. Again, minor onsite circulation changes would be required to facilitate movements. The remaining final onsite circulation roads could then be finalized.

PHASE I

- MAINTAIN TRAFFIC ON EXISTING ROADS.
- WIDEN NORTHBOUND S.R. 7.
- WIDEN NORTHBOUND S.R. 9.
- WIDEN LOOP RAMP FROM NORTHBOUND S.R. 9 TO I-95 CONNECTOR.
- CONSTRUCT NEW NORTHBOUND S.R. 9 TO GGI MULTI-MODAL FACILITY RAMP.
- WIDEN SOUTHBOUND S.R. 9.
- CONSTRUCT RIGHT LANE FROM SOUTHBOUND S.R. 9. TO SOUTHBOUND S.R. 7.

PHASE II

- SHIFT SOUTHBOUND S.R. 9 TO SOUTHBOUND S.R. 7 TRAFFIC TO NEWLY CONSTRUCTED LANE IN PHASE I.
- CONSTRUCT LEFT LANE FROM SOUTHBOUND S.R. 9 TO SOUTHBOUND S.R. 7.

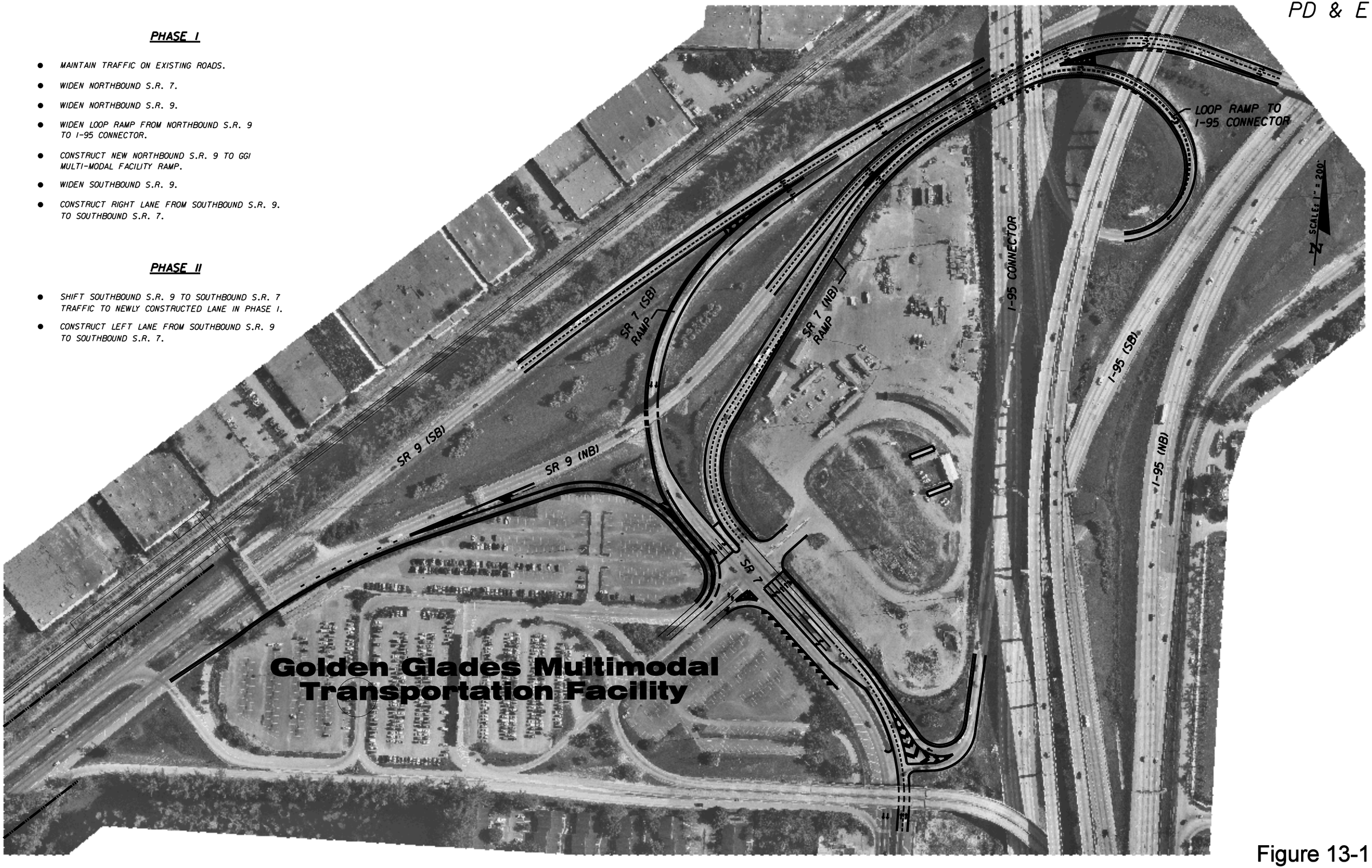


Figure 13-1

Maintenance Of Traffic - Alternate 1, Phases 1 & 2

PHASE I

- INSTALL ADVANCED WARNING AND ALL SIGNS AND MAINTENANCE OF TRAFFIC DEVICES AS SPECIFIED IN STANDARD INDEX 600 SERIES.
- MAINTAIN TRAFFIC ON EXISTING SOUTHBOUND AND NORTHBOUND S.R. 9.
- MAINTAIN TRAFFIC ON EXISTING SOUTHBOUND AND NORTHBOUND S.R. 7.
- BEGIN CONSTRUCTION OF ALL NEW ROADWAY IN WORKZONES.

LEGEND

WORKZONE

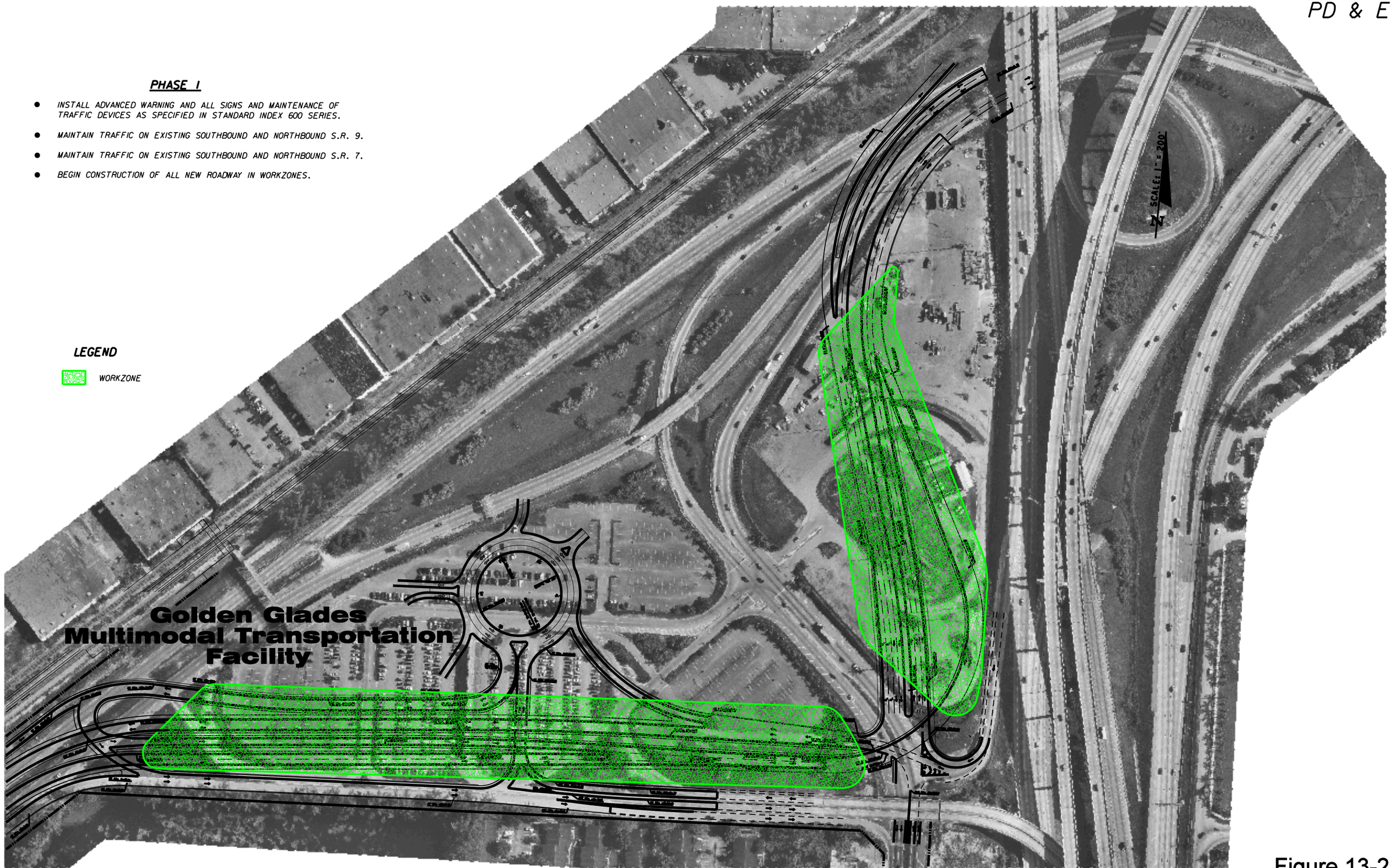


Figure 13-2

Maintenance Of Traffic - Alternate 2, Phase 1

PHASE II

- MAINTAIN TRAFFIC ON EXISTING SOUTHBOUND S.R. 9.
- SHIFT NORTHBOUND S.R. 9 TRAFFIC TO NEW ROADWAY.
- DEMOLISH OLD NORTHBOUND S.R. 9.
- BEGIN CONSTRUCTION OF CONNECTORS FOR SOUTHBOUND S.R. 9 TO NEW ALIGNMENT.

LEGEND

WORKZONE

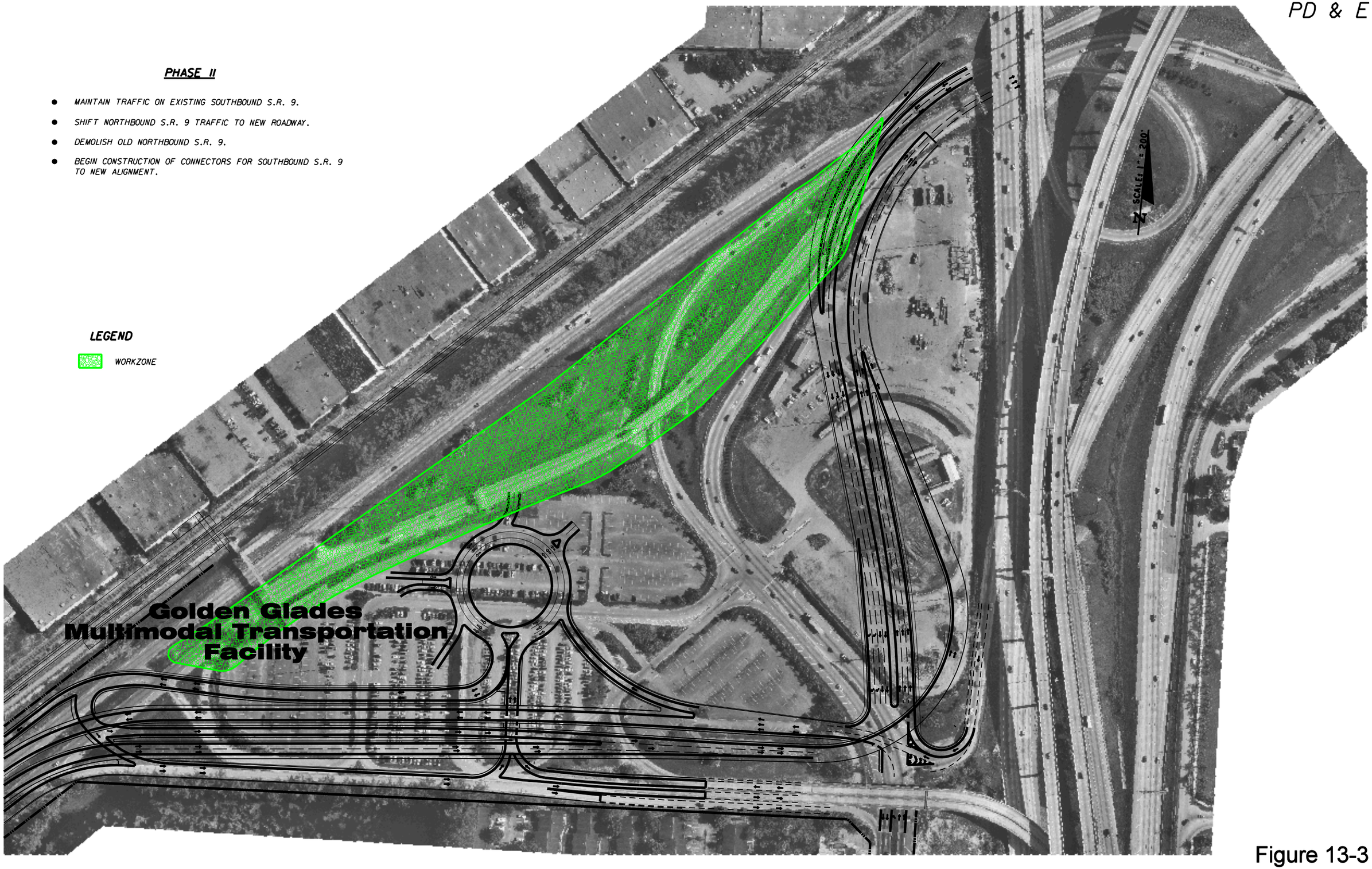


Figure 13-3

Maintenance Of Traffic - Alternate 2, Phase 2

PHASE III

- SHIFT SOUTHBOUND S.R. 9 TRAFFIC TO NEW ROADWAY.
- DEMOLISH OLD SOUTHBOUND S.R. 9.

LEGEND

WORKZONE

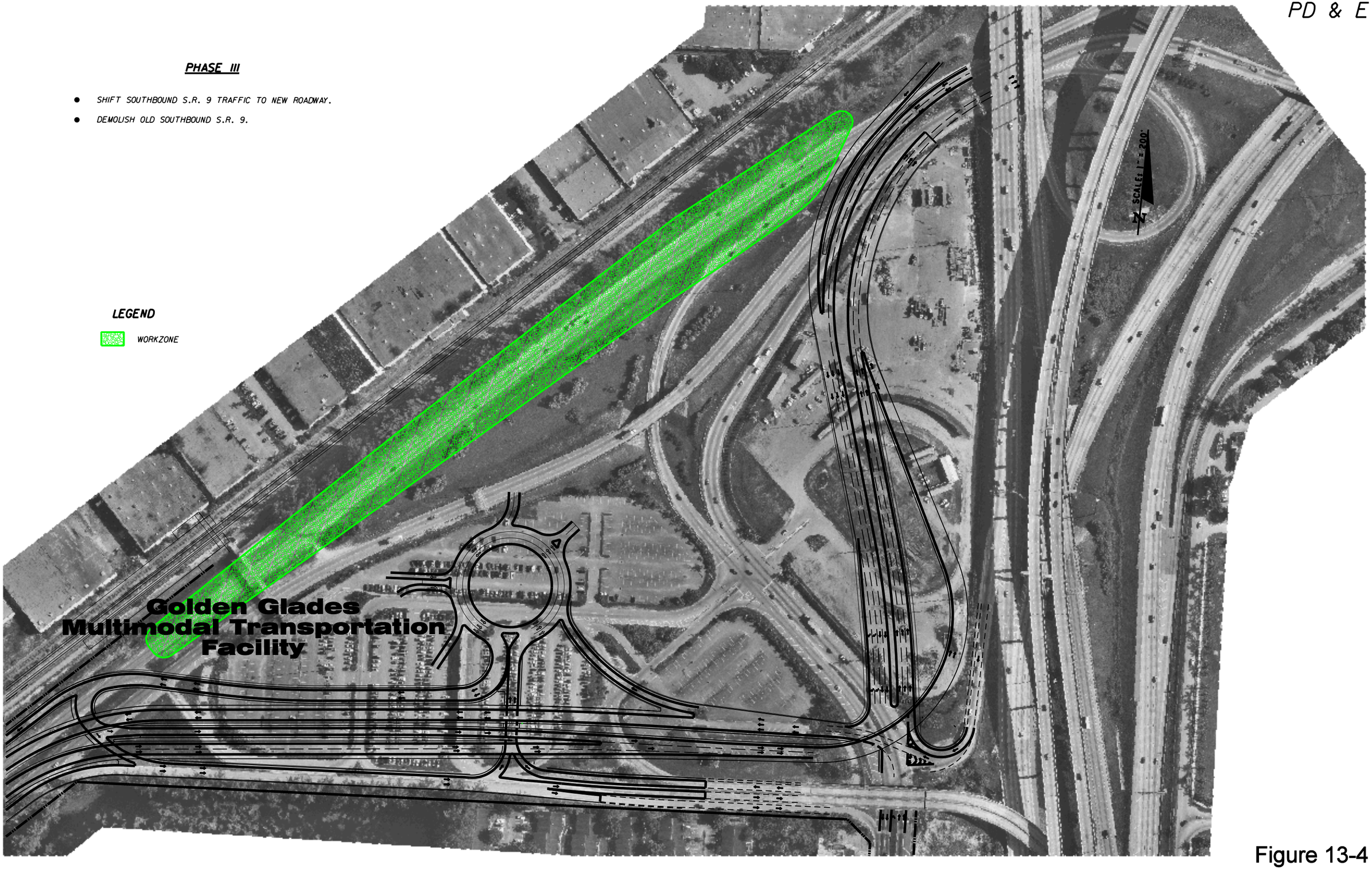


Figure 13-4

Maintenance Of Traffic - Alternate 2, Phase 3

SECTION 14 - SOILS AND GEOTECHNICAL ISSUES

Subsurface investigations along the roadway alignment and within the project site were performed. The investigations classify the general near-surface stratigraphy, and provide subsurface information. A total of twenty-nine (29) Standard Penetration Test (SPT) borings were performed. Ten (10) strata in the borings within the limits of the project were identified. A detailed description for each of the strata located within the site is shown in Table 14.1 below.

Table 14-1 Soil Strata Description

Stratum	Soil Description
1A	Asphaltic Concrete
1B	(Topsoil) Dark brown oragnic silty fine sand with roots
2	(Fill) Light brown sandy limerock
3	(Fill) Light brown / brown fine sand to slightly silty sand with or without limerock
4	(Organic) Black organic fine sand
5	Brown silty fine sand
6A	Light brown / light gray clean to slightly silty fine sand
6B	Light brown / light gray clean to silty fine sand with limestone layers
7	(Miami Limestone Formation) brown and gray sandy limestone
8	(Fort Thompson Formation Sandstone / Limestone) Gray sandstone and brown sandy limeston

In general, the soils encountered are those typically found in south Florida. The subsoil consists of sands and limestone deposits which are good materials to construct roadways. Deep foundations such as piles or drill shafts should be embedded into the Fort Thompson Limestone Layer which is located approximately 40 to 45 feet below the existing ground.

Eight (8) exfiltration tests were performed to estimate the hydraulic conductivity of the soils. The exfiltration tests were performed in general compliance with SFWMD procedures for the "Usual Open Hole Constant Head" exfiltration tests. The summary of constant head percolation test results are shown below in Table 14.2.

Table 14-2 Summary of Constant Head Percolation Tests

Test No.	Depth of hole	Average Flow Rate, Q (gpm)
P-1	10	10.5
	15	5.4
	20	0.2
P-2	10	2.1
	15	0.3
	20	0.6
P-3	10	4.3
	15	2.8
	20	0.3
P-4	10	5.6
	15	5.8
	20	3.6
P-5	10	1.7

Test No.	Depth of hole	Average Flow Rate, Q (gpm)
	15	2.1
	20	0.8
P-7	10	0.5
	15	30.5
P-8	10	0.8
	15	1.0
	20	1.7
P-9	10	3.3
	15	3.5
	20	16.3

Moderate percolation rates were found within the first 10 feet of the percolation tests. Beyond the 10 foot depth, most of the percolation rates diminish considerably. Therefore, exfiltration trenches should be constructed to an average depth of 10 feet for the treatment of stormwater runoff.

Appendix C contains the complete results of the SPT Borings and Percolation Tests which were performed for this project.

SECTION 15 - VALUE ENGINEERING

Two Value Engineering Workshops on the GGMTF PD&E Study were conducted on October 14-15, 2003 and February 11, 2004. Those present and participating included:

Name	Representing	Affiliation
October 14 Meeting		
Rick Johnson, PE	Team Leader	PMA Consultants
Del Younker	Team Co Leader	PMA Consultants
Chuck Hixon, III	Simulation Model	Bergmann Associates
Ed Morales, Jr., PE	Simulation Model	Bergmann Associates
Craig Miller, PE	Technical Creative Ideas	Miller Consulting, Inc
October 15 Meeting		
Nancy Bright, PE	FDOT District Value Engineer	FDOT District 1
Bobbi Goss	FDOT District Value Engineer	FDOT District 2
Kurt Lieblong, PE	FDOT State Value Engineer	FDOT
Rocky DePrimo, PE	FDOT District Value Engineer	FDOT District 4
Larry Timp	FDOT District Value Engineer	FDOT District 7
H. T. Waller	FDOT District Value Engineer	FDOT District 3
Bob Smith, PE	FDOT District Value Engineer	FDOT /Turnpike/PBSJ
Gary Bass	FDOT District Value Engineer	FDOT District 5
John Dovel	FDOT District Value Engineer	FDOT District VI
All attendees from the October 14, 2003 Meeting		
February 11, 2004 Meeting		
Carlos Francis, PE	Planner/Design	DMJM - HARRIS
Richard Heidrich, RA	Planner/Design	DMJM - HARRIS
Alex Meitin, PE	Planner/Design	DMJM - HARRIS
Greg Kelahan	Planner	Miller Consulting, Inc.
Jose Gonzalez, PE	Project Manager	FDOT District VI
Alice Bravo, PE	District Env. Mang. Engineer	FDOT District VI
John Dovel	FDOT District Value Engineer	FDOT District VI
Susie LaPlant	Stakeholder	Miami-Dade Transit
Jonathan Roberson	Stakeholder	South Florida Regional Transportation Authority
Gary Wohlforth	Stakeholder	North Miami Beach
Wade Jones	Stakeholder	Miami-Dade County Commissioners
Anthony Williams	Stakeholder	Congressman Kendrick Meek
Dante Starks	Stakeholder	Miami-Dade County Commissioners
Mark Hazelwood	Potential Development	Pilot Travel Centers
L. G. Whately	Potential Development	Whately Construction
All attendees from the October 14, 2003 Meeting		

A summary of the value engineering discussion items are indicated below. There were no true recommendations developed, instead V.E. report provided the following observations:

What are we trying to do at the GGC facility?

1. Improve the existing GGC facility
2. Improve traffic flow
3. Utilize property available as much as possible
4. Attract private developers

Transit Needs

1. Central Transition with good connections to existing roads
2. Too many buses and not enough bus bays at the existing facility
3. Increase number of parking spaces for future users
4. Incorporate passenger information improvements into new project
5. Amenities need to be provided
6. Food facilities and restrooms are needed
7. Explore new potential routes for multimodal transit uses
8. Integrate bus and rail route schedules as each train runs every 20 minutes and each bus runs every 2½ minutes (express and local)
9. Passengers should not be required to pass active roadways at the facility

Potential Travel Center

1. Travel Center would require 12-14,000 SF of facility space
2. Facility would include restaurants and convenience stores
3. Gas station would include eight diesel truck lanes
4. Parking spaces are anticipated for 200-250 trucks
5. Car/trucks parking would be separated
6. Greyhound buses could use the facility (may be decoupled from Multimodal center or nearby)
7. Need a 10-12-acre site or 18 acres with a Greyhound Bus Terminal
8. Provide space for “Idle-Air” for trucks to use while parked
9. Two similar facilities are near Ft. Pierce, Florida
10. A buffer should be allowed between the residents and the Travel Center. A connection should be provided though
11. A Travel Center could provide the region with 125 new jobs
12. Need to review other sites nearby for a Travel Center

Multimodal Center Improvement Ideas

1. Need amenities
2. Keep good connections to surrounding areas
3. Look at other available sites (green areas on the 3D model shown)
4. Provide a concrete surface for the bus bays
5. Integrate center with pedestrian traffic that exists within surrounding communities that would use the facility
6. Move community functions into Center i.e., residential (condos, apartments)
7. Pedestrian overpasses need to connect areas across the interchange

8. Local shuttle passengers to/from GGC instead of or in addition to way to move pedestrians to the site
9. Come up with a separate session to create new financial ideas to fund the GGC and joint developers
10. Add a "smart kiosk" and integrate into the existing transit systems with updates into convenient locations
11. Integrate parking garage with joint developers needs
12. Utilize a moving sidewalk instead of relocating the roads (provided the costs are beneficial)
13. Locate private developer(s) to help with relocating SR 9
14. Revenue sources-
    a. Variable message signs
    b. Kiosks
    c. Ticket sales
    d. Parking
15. Consider another nearby site for GGC location with access improvements
16. Transit rail spur to ProPlayer stadium-review with Miami-Dade MPO North Line
17. Provide restrooms in the interim such as rented trailers
18. Add pedestrian crossing to Sunshine Industrial Park across the railroad from current site

Traffic Flow Improvements

1. Consider relieving I-95 look at SR 9 and a reliever Central Parkway connection (not yet built)
2. Fix I-95 SB to 163rd Street (E) Could have 163rd St to I-95 ramp SB if provided
3. Reroute 826 and eliminate ramp and reinstall ramp from 826 to Turnpike south. This is an option for SR 9 to relieve I-95
4. Improve Sunshine Industrial Park and pave over the existing railroad to provide cross connections under Turnpike connecting NW and SW quadrants under the Turnpike
5. Avoid tight curve on SR 9 relocation noted on the Exhibit 7.2 by DMJM
6. May need more parking spaces
7. Fix 826 to I-95
    a. Widen ramps
    b. Flyover to GGC then route around GGC to provide a better weave distance downstream
8. Provide ramp to GGC without a signal
9. Study cost to add a flyover (see #7 above)

Potential Options to Attract Developers

1. Give the developers the flexibility to respond to the RFP
2. Provide a thorough Performance – Functional/Qualification based RFP
3. Provide interested developers with a video/presentation package to review the various options for these sites
4. Utilize entrepreneurial spirit
5. FDOT should prepare the evaluation criteria for analyzing the proposals from developers (in advance of receiving the proposals)
6. Utilize the Market study summary being prepared to formulate plans for the RFP

7. Partner with developer(s)

The results of this VE session include ideas generated for further consideration as the FDOT develops the Request for Proposal for this project site. Table 9-3 showed a comparison of advantages and disadvantages indicated for the sites considered during the work session. The two sites that were compared were the current facility's site where the bus and rail terminal and the PNR lot is located and an alternate site that is north of the SFRTA tracks, west of Florida's Turnpike, east of the Palmetto Expressway and south of NW 167th Street.

SECTION 16 - PROJECT COSTS

16.1 Construction Cost Estimate

A preliminary construction cost estimate was developed and refined for the preferred alternative (Alternative 1). The cost estimate is based on the following:

- Quantities are based on the preliminary engineering drawings presented at the end of Section 9.
- Unit prices are based on average FDOT and local prices as well as information received from manufacturers and suppliers.
- Cost estimates assume construction cost add-ons of 8% for mobilization and indirect costs; 8% for maintenance of traffic costs; and a 8% contingency factor added to the subtotal cost to account for utility relocation, landscaping, and other costs.
- The cost estimate is expressed in current dollars (i.e., 2005).

The cost estimate does not account for the following items:

- Environmental remediation/mitigation, if required
- Cost of inflation to reflect the actual construction time-frame.

Table 16-1. Construction Cost Estimate (Alternative 1)

ITEM DESCRIPTION	UNIT	QUANTITY	UNIT COST	TOTALS
Parking Facility				
Structure Parking	Per Space	813	10816.00	8,793,408.00
Helix Ramp	SF	30000	82.00	2,460,000.00
Access Drive Paving	SY	25000	29.50	737,500.00
Tensile Canopy	SF	30000	82.00	2,460,000.00
Tensile Canopies	SF	25000	63.00	1,575,000.00
Steel Canopy	SF	3700	49.00	181,300.00
Bus Platform Paving	SF	11000	16.50	181,500.00
Landscaping / Irrigation	LS	1	118975.00	118,975.00
SUBTOTAL: Parking Facility				**16,507,683.00**
Parking Facility Office /Toilet/ Vertical Circulation				
Office (2 stories)	SF	6000	186.00	1,116,000.00
Elevator/Stair Enclosure	SF	3500	86.50	302,750.00
Stairs	LS	1	54080.00	54,080.00
Public Toilet Enclosure	SF	1053	86.50	91,084.50
Toilet fixtures / Plumbing	Per Fixt.	24	1625.00	39,000.00
Mechanical / Electrical Enclosure	EA	1	183870.00	183,870.00
Elevator Equipment	EA	2	65000.00	130,000.00
SUBTOTAL: Office / Toilet/ Vertical circulation				**1,916,784.50**
Greyhound Bus				
Terminal Facility	SF	8200	220.00	1,804,000.00
Bus Platform Canopy	SF	9700	71.00	688,700.00
Bus Platform Paving	SF	15	3570.00	53,550.00
Landscaping / Irrigation	LS	1	97345.00	97,345.00
SUBTOTAL PAVEMENT				**2,643,595.00**
Main Plaza				
Plaza Paving	SF	33000	16.50	544,500.00
Plaza Tensile Structure	SF	40000	109.00	4,360,000.00
Water Feature	LS	1	162250.00	162,250.00
Landscaping / Irrigation	LS	1	65000.00	65,000.00
SUBTOTAL: SITE DEVELOPMENT				**5,131,750.00**
Express and Articulated Bus Facility				
Platform Canopy	SF	6300	71.00	447,300.00
Platform Paving	SF	15	4000.00	60,000.00
Landscaping / Irrigation	LS	1	43265.00	43,265.00
SUBTOTAL: Express and Articulated Bus Facility				**550,565.00**
SUBTOTAL CONSTRUCTION COST				**26,750,377.50**
Miscellaneous Items				
Passenger Information system	LS	1	1082000.00	1,082,000.00
ITS (TMC)	LS	1	2200000.00	2,200,000.00
Roadway & Access Road Landscaping / Irrigation	LS	1	162250.00	162,250.00
SUBTOTAL: Miscellaneous Items				**3,444,250.00**
TOTAL CONSTRUCTION COST				**30,194,627.50**

16.2 Alternative One Preliminary Engineering and CE&I Cost Estimates

The associated preliminary engineering cost and construction engineering and inspection (CE&I) cost, calculated as a percentage of the total construction costs, are summarized in Table 16-1.

Table 16-2. Alternative 1 – PE and CE&I Costs

Cost Component	Alternative 1
Preliminary Engineering (8%)	$2,714,455
CE&I (8%)	$2,714,455
TOTAL	**$5,428,910**

16.3 Summary of Project Costs

A summary of total project costs, including construction, preliminary engineering, and construction engineering & inspection, is presented in Table 16-2.

Table 16-3. Alternative 1 - Summary of Project Costs

Cost Category	Preferred Alternative
Roadway Construction	$3,736,061
GGMTF Construction	$30,194,628
Preliminary Engineering (8%)	$2,714,455
CE&I (8%)	$2,714,455
TOTAL	**$39,359,599**

SECTION 17- DESIGN CRITERIA

17.1 Roadway Design Criteria

The design criteria used in the planning and concept design are those established for federally funded urban roadways. These design criteria, summarized in Table 17.1, conform with:

- American Association of State Highway and Transportation Officials (AASHTO), A Policy on Geometric Design of Highways and Streets (2001)
- Federal Highway Administration (FHWA), Manual on Uniform Traffic Control Devices (2003)
- Transportation Research Board, Highway Capacity Manual (2000)
- FDOT, Standard Specifications for Road and Bridge Construction (2004)
- FDOT, Roadway and Traffic Design Standards (2004)
- FDOT, Roadway Plans Preparation Manual (2003)
- Miami-Dade County Public Works Department, Design and Construction Procedures Manual.

Table 17-1. Roadway Design Criteria for SR 7 and SR 9

DESIGN ELEMENT	URBAN PRINCIPAL ARTERIAL	DESIGN ELEMENT	URBAN PRINCIPAL ARTERIAL
Design Year	2029	Minimum Vertical Clearance	
Design Vehicle	WB 40	Overhead SR 826 (Signs)	16.5 ft.
Design Speed	50 mph	Over Cross Streets	16.5 ft.
Design Year Level of Service	LOS D	Cross Section	
Horizontal Alignment		Lane Width, through	11.0 ft.
Min. Degree of Curvature	8^0 15’	Lane Width, turning	11.0 ft.
Maximum Superelevation	10%	Median Width	15.5 ft.
Vertical Alignment		Pavement Cross Slope	2.0% - inside lanes
Minimum Grade	0.30%		3.0% - outside lane
Maximum Grade	6.0%	Clear Zone	4 ft. outside
Length Vertical Curve min	Crest K = 136		6 ft. inside
	Sag K = 96		

Table 17-2. Roadway Design Criteria for Ramps

DESIGN ELEMENT	URBAN PRINCIPAL ARTERIAL	DESIGN ELEMENT	URBAN PRINCIPAL ARTERIAL
Design Year	2029	Minimum Vertical Clearance	
Design Vehicle	WB 40	Overhead (Signs)	16.5 ft.
Design Speed	35 mph	Over Cross Streets	16.5 ft.
Design Year Level of Service	LOS D	Cross Sections	
Horizontal Alignment		Lane Width, through	11.0 ft.
Min. Degree of Curvature	17^0 45’	Lane Width, turning	11.0 ft.
Maximum Superelevation	10%	Median Width	15.5 ft.
Vertical Alignment		Pavement Cross Slope	2.0% - inside lanes
Minimum Grade	0.30%		3.0% - outside lane
Maximum Grade	4.0% to 6.0%	Clear Zone	4 ft. outside
Length Vertical Curve min	Crest K = 47		6 ft. inside
	Sag K = 49		

17.2 Drainage Design Criteria

Table 17.3 outlines the drainage design criteria for the corridor as stipulated by SFWMD and DERM, the permitting authorities who have jurisdiction in the project area.

Table 17-3. Drainage Design Criteria

Storm Sewer Hydraulics	
Storm Design Frequency	10 years
Maximum / Minimum Velocity	2 fps / 15 fps
Hydraulic Gradient	To be maintained 1 ft. below gutter line
Open Channel Hydraulics	
Storm Design Frequency	10 years (roadside ditches) 25 years (outfall ditches and canals)
Recommended Lining	Velocities ≤ 5.5 fps: Sodding Velocities > 5.5 fps: Concrete
Bridge and Culvert Hydraulics	
Storm Design Frequency	50 years
Roadway Base Clearance	
Required Clearance	Bottom of roadway base should be located a minimum of 2 to 3 ft. from Design High Water
Gutter, Inlet and Pavement Hydraulics	
Storm Design Frequency	10 years
Spread	Flooding should never exceed lane adjacent to gutter or shoulder for design conditions
Storm Water Management	
Storm Water Quality	
DERM Criteria	Dry detention shall be provided for runoff generated by 10 year DERM design storm for a duration of $(t_1 + t_c)$.
	Volume of storm water retained in ponds or ditches must be infiltrated within 24-hour period
	Runoff from areas adjacent to signalized intersections should be detained for 90 seconds using pollutant retardant baffles
SFWMD Criteria	Retention shall be provided for first inch of runoff of the developed project or 2.5 inches times the percent of imperviousness, whichever is greater.
Storm Water Quantity	
There should be zero increase in the peak flow rate/runoff volume for all frequencies (100 years max.) for the critical duration event (10 days max.). The allowable discharge/volume is the pre-developed peak flow rate/volume for the frequency and duration being analyzed.	

17.3 Bridge Design Criteria

The bridge design criteria, pertaining to this project, are summarized below in Table 17.4

Table 17-4. Bridge Design Criteria

Design Element		Criteria
Dead Load	Unit Weight of Reinforced Concrete	150 pcf
	Unit Weight of Structural Steel	490 pcf
	Unit Weight of Aluminum	173 pcf
	Future Wearing Surface (FWS)	15 pcf
	Traffic Railing Barrier	418 plf
	Compacted Soil	115 pcf
Live Load		HS 25 or military loading, which ever controls
Thermal Forces	Normal Temperature	70 degrees F (21 C)
Temperature Rise		Per AASHTO
Temperature Fall		Per AASHTO
Earthquake		Seismic Performance Category "A"
Wind Loads		As per AASHTO Specifications

The above bridge design criteria will be applied to the design of all new bridge structures for the GGMTF roadway improvements.

17.4 Facility Design Criteria

The facility design criteria, pertaining to this project, are summarized below in Table 17-5.

Table 17-5. GGMTF Program Requirements

Program Element	Quantity
Local Bus	8 Bus Bays
Express Bus	4 Bus Bays
Additional Bus Bays	2 Bus Bays
Tri Rail Jitney	4 Bus Bays
Inter-City Bus	6 Bus Bays
Kiss & Ride	4,500 sf
Main Concourse	6,825 sf
Inter-City Bus Facility	1,500 sf
Administration Offices / ITS Center	2,500 sf
Transit Supportive Development	3,450 sf
Pedestrian Arcade	13,200 sf
Elevated Walkway	750 sf
Parking	800 – 1,300 vehicles

Note: Space for Taxi and Bicycles are included in Pedestrian Arcade Space Requirements.

In addition, the most restrictive regulations of the following codes and standards shall be applied:

- Florida Building Code (FBC) with the amendments as implemented by local jurisdictions

- National Fire Protection Association (NFPA) codes
- FDOT Design Standards
- American Society of Testing Materials (ASTM)
- National Electric Code (NEC)
- Americans with Disabilities Act (ADA)
- Florida Accessibility Code for Building Construction (FACBC)

SECTION 18 - COORDINATION

The Public Involvement Program (PIP), implemented as part of the PD&E Study, encompassed a diversified range of techniques including, distribution of Project Newsletters, creation of a project website, holding of kickoff meetings with local residents/businesses/agencies, holding of a Public Workshop and Public Hearing, as well as one-on-one meetings with elected officials and agency representatives.

The public input received during the course of the PD&E Study served as a local "reality check" on the proposed engineering solutions towards screening out non-viable alternatives.

In addition, the Department provided an early notification package to federal, state and local agencies and other interested parties defining the project as well as anticipated issues and impacts. Coordination was maintained throughout the study with the following key groups:

- Environmental agencies (DERM, SFWMD)
- Utility companies within the corridor
- City of Miami Gardens
- Miami-Dade County
- Local residents, property owners, and business owners
- Local, state, and federal officials

A Public Kickoff meeting was held on February 24, 2004 from 5:00 PM to 8:00 PM at the Biscayne Gardens Civic Association building in the Biscayne Gardens Community. The meeting minutes are included in Appendix D. The meeting offered the opportunity to the Department to introduce the project and explain the PD&E process to the public. It also allowed the gathering of public input at an early stage to be considered during the study process. A total of 17 persons from the general public, excluding FDOT and consultant representatives, attended the Public Workshop. A PowerPoint presentation was provided to describe the PD&E process in detail, express the need for the project, and list the goals for this study. Some of the keys points from the meeting are as follow:

- There was a request for a Police Substation at the facility
- There was a request for a day care facility at the Multimodal Center
- Concerns with congestion on SR 7

An Agency Kickoff meeting was held on February 25, 2004 from 10:00 AM to Noon at the Florida Department of Law Enforcement facility adjacent to the FDOT District VI Building. The meeting minutes are included in Appendix D. This meeting's purpose was the same as that of the public kickoff meeting, to introduce the project and explain the PD&E process to the agencies. A total of 16 persons from the general public, excluding FDOT and consultant representatives, attended the Public Workshop. Some of the keys points from the meeting are as follow:

- TARC requested an update on the project
- North Dade Chamber of Commerce requested that a "Welcome Center" be considered for the facility
- Discussion about the possibility of have a Fire Station in the vicinity of the Multimodal Facility
- Miami Gardens officials asked how the facility was going to be operated/managed and by who.

A meeting was held on January 22, 2004 between FDOT and Congressman Meek's District Director, Mr. Anthony Williams. Mr. Williams expressed his office's desire to participate in the public involvement efforts for this project. The FDOT committed to maintain open lines of communications with his office throughout the process.

A meeting was held with the Florida Turnpike's Enterprise on January 15, 2004 and a Teleconference was held on March 19, 2004. This was related to the Turnpike's request to acquire the vacant lot east of SR 7 across from the proposed Multimodal Facaility site to provide a tandem-truck layover facility. The Turnpike explained that the current facility which is adjacent to the Golden Glades Toll Plaza on the Turnpike Mainline was going to be removed with the upcoming project to relocate the toll plaza. The FDOT District VI staff agreed to maintain consideration of the Turnpikes request and would evaluate this option along with any other proposals received during the Design-Build RFP process.

Additional informational presentations were given to the Transportation Planning Council, the Citizens Transportation Advisory Committee, the Transportation Aesthetics Review Committee, and the Bike and Pedestrian Advisory Committee.

The CTAC of the MPO requested that the FDOT consider the building of shelters at the terminal to protect the citizens from the weather conditions. The FDOT responded that the terminal building would provide shelter from the weather.

The TARC of the MPO requested that the FDOT's design for the facility provide for a visual gateway to the Miami-Dade County, and that their committee participate in the review of the joint development proposals. In response, the FDOT will coordinate further with the TARC during the Final Design phase to receive their input with regards to the design features for the facility and including TARC within the joint development proposal review process.

The BPAC of the MPO requested that the FDOT consider the following improvements for bicycles: paved shoulders for SR 7, bike racks and lockers, elevators to the railroad platform, a bike station, and an extension of the pedestrian bridge from the terminal to the SFRTA station across the railroad tracks. In response, the FDOT will continue to coordinate with the BPAC to consider the feasibility of constructing the above referenced improvements.

A Public Workshop was held for the proposed project on June 15, 2004 from 5:00 p.m. to 8:00 p.m. at the Biscayne Gardens Civic Association building in the Biscayne Gardens community. The Public Workshop minutes is included in Appendix E. The workshop offered an opportunity for the

public to view the alternatives and ask questions regarding the parameters of the project. Representatives from the Department, as well as the consulting firm for the project, were available prior to, during, and after the workshop to answer questions and receive feedback from the public. A total of 27 persons from the general public, excluding FDOT and consultant representatives, attended the Public Workshop. A PowerPoint presentation was again conducted which summarized the need for the project and the engineering and environmental analyses performed up to that point. Aerial photographs, defining the project alternatives, were displayed to answer questions and solicit community feedback. Highlights of the meeting are as follow:

Additional public involvement activities are ongoing and the Public Hearing is currently scheduled for October 20th , 2005.

SECTION 19 - INTELLIGENT TRANSPORTATION SYSTEMS

An Intelligent Transportation System (ITS) Plan for the GGMTF is presented herein as a viable component of the project to enhance traveler information and traffic management within the GGMTF area. In addition, the ITS Plan will support the goals of the SunGuide Program and be consistent with existing and planned ITS programs within the region.

19.1 Background

ITS is the application of advanced technology and communications systems to improve the efficiency and safety of the surface transportation system. ITS infrastructures are currently being implemented in most major regions throughout the U.S., including Southeast Florida. FDOT District VI's ITS program is summarized in the table below.

Table 19-1. FDOT District VI SunGuide ITS Program

ITS Project	Date	Cost	DMSs	CCTVs	Detectors	Ramp Meters	Trail Blazers
Golden Glades Interchange	1998	$2.2M	10	6	14	---	---
GGI CCTV Design / Build	2001	$0.9M	---	7	---	---	---
I-95 SunGuide Package A	2001	$13.0M	4	27	16	---	---
I-95 SunGuide Package B	2005	$9.8M	15	---	54	22	27
I-95 SunGuide Package C	2004	$9.2M					
SR 826 East / West	2005	$6.0M	4	9	50	---	---
SR 826 North / South	2005	$1.0M					
Monroe County – Upper Keys	2005	Note 5	4	7	2	---	---
Monroe County – Lower Keys	2006	$7.5M	14	40	---	---	---
I-75	2006	$3.5M	3	7	30	---	---
I-195	2006	$3.8M	4	6	22	---	---
Totals	---	$56.9M	58	109	188	22	27

Notes:
1. "Date" is the project's completion date.
2. "Cost" is the project's construction cost expressed in millions of dollars ($M).
3. Abbreviations: DMS – Dynamic Message Sign; CCTV – Closed Circuit Television; Detector – Collects vehicle volume, speed and occupancy; Ramp Meter – Meters the rate of traffic at select ramps entering I-95; and Trailblazer – Electronic signs used to indicate alternate routes during major incidents resulting in closures of I-95.
4. I-95 SunGuide Package C is the new Transportation Management Center.
5. Cost is included in the cost of the SR 826 East / West project.

Future phases of ITS deployment are expected to occur along selected arterials (e.g., US 1). In addition, FDOT has retained the services of a private firm to provide Advanced Traveler Information System (ATIS) services within the Tri-County region.

Other agencies within the region are also in various stages of ITS deployment. These agencies include: Miami-Dade Transit (Automated Vehicle Location Systems), Miami-Dade Public Works (Advanced Traffic Management System); Florida Turnpike Enterprise; Miami-Dade Expressway Authority; Port of Miami; and Miami-Dade Aviation (Miami International Airport). The South Florida Regional ITS

Coalition has members from each of these agencies to ensure the coordination and integration of these projects during the planning, design, implementation, operations, maintenance and evaluation phases.

19.2 Potential ITS Strategies

The following ITS strategies were conceptualized and discussed with FDOT District VI ITS staff for potential integration with the GGMTF facility:

- FDOT anticipates that the ATIS Contractor (or GGMTF Developer) will initiate the installation and operation of smart kiosks. These kiosks will provide ATIS information; streamline video images of traffic conditions; provide access to the internet for viewing traffic conditions within the region; and provide an audio / visual component for user-friendly interface. The ATIS Contractor will use a wide area ATIS infrastructure to provide verification of information generated by various sources (i.e., detection stations, AVL, etc.). It is envisioned that several kiosks could be provided at the GGMTF serving as a potential revenue producing mechanism in providing certain retail services (e.g., ATM banking).
- FDOT discussed installing banks of video monitors providing real-time travel information along pedestrian corridors for GGMTf users making transfers between modes.
- FDOT also discussed the possibility of locating telephones at the GGMTF with access to the "511 / Consumer Information" system for providing transit schedule information within the tri-county region.
- FDOT requested that a small area (e.g., 400 – 600 sf) be dedicated as part of the GGMTF to serve as a remote maintenance facility (or backup substation during emergencies) for their ITS infrastructure at the GGI. This would include the existing communications hub building at the GGI.
- ITS enhancements, as part of the GGMTF project, should be assessed after the traffic circulation plan is established to determine if operational improvements (i.e., queue jumpers, bus signal priority, etc.) are applicable along key corridors or intersections to enhance access / egress to the site.

In addition to ITS integration, the GGMTF project needs to consider the existing ITS infrastructure (i.e., communications hub building, CCTV cameras, underground fiber optics, etc.) that is present at the GGI and whether or not it needs to be relocated.

19.3 ITS Recommendations

The following ITS recommendations should be considered as part of the development of the GGMTF:

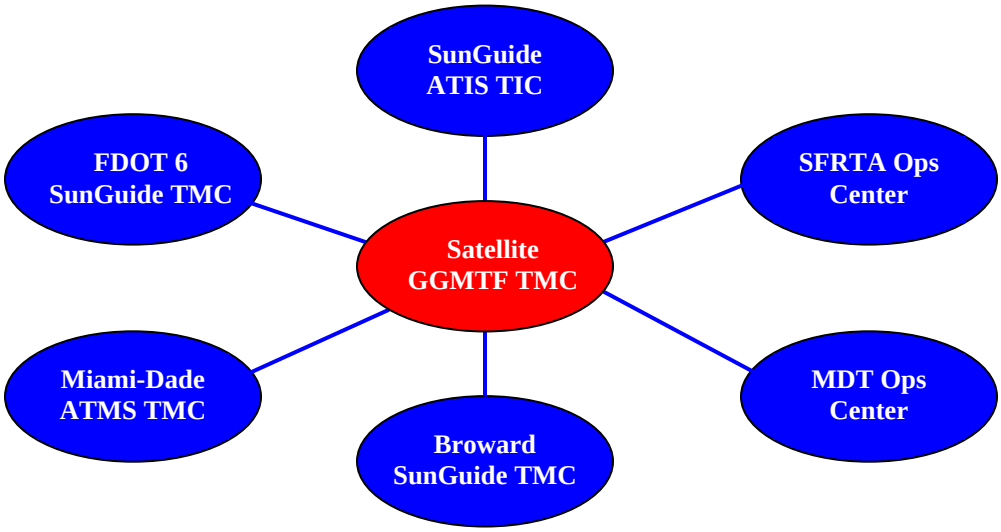
- *Traveler Information Center* - A Traveler Information Center (TIC) is proposed to provide GGMTF users with real-time travel information to make intelligent decisions regarding alternate routes and alternate modes. The TIC should be included within the GGMTF facility in the common waiting area where passengers transfer between modes. The TIC

should include traveler information kiosks; electronic message boards; website maps indicating traffic conditions along regional roadways; car-pool matching services; as well as electronic fare payment machines.

Figure 19-1. Traveler Information Kiosk

- *Satellite Traffic Management Center* - A Satellite Traffic Management Center (TMC) is proposed to be located within the GGMTF to manage multimodal transportation access and egress to the site. It is envisioned that the Satellite TMC will consist of two computer workstations that will integrate real-time information derived from several sources (i.e., FDOT District VI SunGuide TMC; MDTA Bus AVL data; SFRTA Train Trac data; Miami-Dade Traffic Operations Center). The intent of these workstations is to provide buses with signal priority at congested links and intersections to avoid "bunching"; to adjust signal timings at critical intersections to improve access / egress; and to coordinate bus / train arrivals and departures to improve the efficiency in transferring between modes.

Figure 19-2. GGMTF Satellite Transportation Management Center



- *Smart Bus Stops* - Smart bus stops are proposed to provide real-time information regarding the status of arriving buses. This system already exists for the SFRTA trains where both LED signs and Public Announcement Systems are used to indicate the estimated time of arrivals for the next train.
- *Electronic Fare Payment System* – The SFRTA prepared an implementation plan for the "South Florida Regional Electronic Fare Payment System". Smart card technology can be used for electronic fare payment as well as other "value" activities, including automation of manual data entry; data collection regarding ridership on different transit routes / segments; increased security; and flexibility to adapt to most fare policies. The GGMTF should provide the necessary systems and equipment to accommodate the recommendations of the "South Florida Regional Electronic Fare Payment System" implementation plan.

Figure 19-3. Electronic Fare Payment System

- *ITS Field Devices* - ITS field devices are recommended to enhance legacy ITS systems as well as additional devices that will be deployed as part of the SunGuide Package "B" contract. These additional field devices would be used to provide real-time guidance on alternative access / egress to the GGMTF in the event that primary access routes are congested; parking availability information; highway advisory radio to provide advisories regarding multimodal information while the traveler is en-route to the GGMTF; and CCTV cameras to focus on selected access points to the GGMTF as well as to provide enhanced security of the parking facilities.

These ITS components should be integrated in conjunction with the phased deployment of the ITS infrastructure within the Tri-County region. The ATIS should be leveraged to provide the mechanism to collect, process and disseminate traveler information while the SunGuide ITS and Miami-Dade ATMS should be used to provide traffic management.

19.4 Summary

The proposed ITS recommendations presented herein provide a concept that would enhance traveler information and traffic management at the GGMTF. While it is recognized that these ITS elements are a subset of a regional system, it is important that this GGMTF ITS program be managed locally to provide useful, reliable and credible multimodal transportation information to the people transferring between modes. It is also recommended that the ITS components be consolidated in one area of the GGMTF.

APPENDIX A

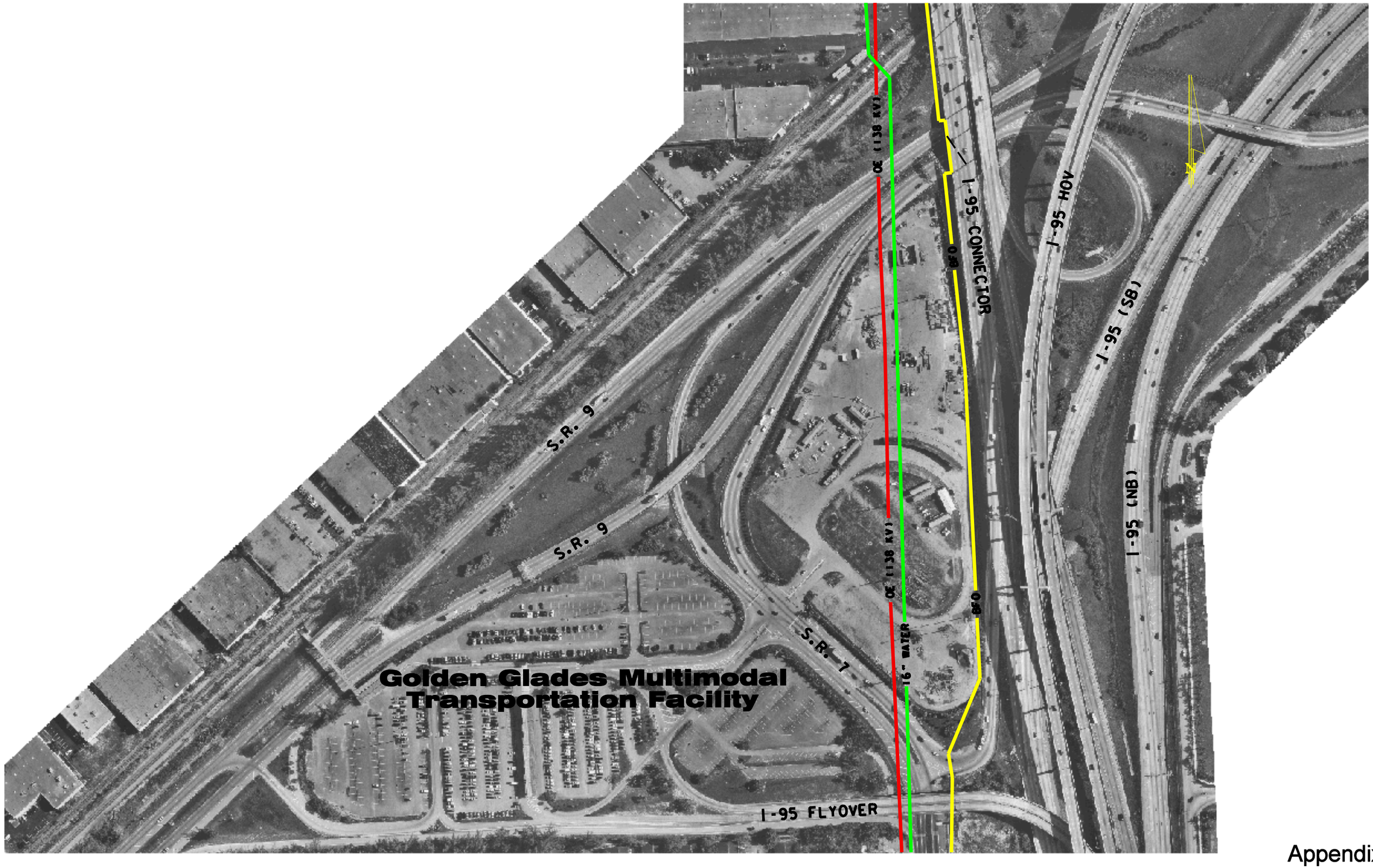
EXISTING RIGHT-OF-WAY MAPS

DMJM HARRIS | AECOM

APPENDIX B

EXISTING UTILITIES

DMJM HARRIS | AECOM


I-95 CONNECTOR
I-95 HOV
I-95 (SB)
I-95 (NB)
S.R. 9
S.R. 9
S.R. 7
I-95 FLYOVER
OE (138 KV)
16" WATER
OFO
Golden Glades Multimodal
Transportation Facility

APPENDIX C

GEOTECHNICAL INFORMATION

DMJM HARRIS | AECOM

PERCOLATION TEST SOIL BORINGS
GOLDEN GLADES INTERCHANGE
PSI PROJECT NO. 397-45002
FINANCIAL PROJECT ID. 252174-1-52-01

BORING NO. P-1

DEPTH (ft)		DESCRIPTION
From	To	
0.0	5.0	Tan Sandy LIMEROCK Fill
5.0	10.0	Tan Silty SAND with Trace Limestone
10.0	15.0	Tan LIMESTONE with Silty Sand
15.0	20.0	Tan Fine SAND

Groundwater Depth (Feet): 5.4

BORING NO. P-2

DEPTH (ft)		DESCRIPTION
From	To	
0.0	3.0	Tan Sandy LIMEROCK Fill
3.0	5.0	Tan Fine SAND
5.0	10.0	Fine Tan Sandy LIMESTONE
10.0	20.0	Tan Fine SAND with Limestone Fragments

Groundwater Depth (Feet): 5.2

Note:

1. THESE SERVICES WERE PERFORMED UNDER DISTRICT/AREAWIDE CONTRACT FM NO. 250730-1-32-02.
2. THE SUBSURFACE SOIL DESCRIPTION FOR THE PERCOLATION TESTS WAS BASED ON FIELD LOGS PROVIDED TO PSI, INC BY F.D.O.T. PSI, INC HAS NOT BEEN SUPPLIED WITH THE RECOVERED SOIL SAMPLES.
3. PERCOLATION TEST P-6 WAS NOT PERFORMED DUE TO ACCESSBILITY CONSTRAINTS.
4. PERCOLATION TEST P-7 WAS PERFORMED AT DEPTHS OF 10 AND 15 FEET ONLY.

PERCOLATION TEST SOIL BORINGS
GOLDEN GLADES INTERCHANGE
PSI PROJECT NO. 397-45002
FINANCIAL PROJECT ID. 252174-1-52-01

BORING NO. P-3

DEPTH (ft)		DESCRIPTION
From	To	
0.0	1.0	Asphaltic Concrete over Limerock Base/Sub-base
1.0	6.0	Tan SAND with Limerock Fill
6.0	9.0	Dark Tan Sand, Slightly Silty
9.0	11.0	Tan Fine SAND
11.0	20.0	Tan SAND with Traces of Limerock and Organics

Groundwater Depth (Feet): 5.6

BORING NO. P-4

DEPTH (ft)		DESCRIPTION
From	To	
0.0	5.0	Tan Fine SAND with Traces of Limerock
5.0	20.0	Tan Fine SAND

Groundwater Depth (Feet): 5.4

Note:

1. THESE SERVICES WERE PERFORMED UNDER DISTRICT/AREAWIDE CONTRACT FM NO. 250730-1-32-02.
2. THE SUBSURFACE SOIL DESCRIPTION FOR THE PERCOLATION TESTS WAS BASED ON FIELD LOGS PROVIDED TO PSI, INC BY F.D.O.T. PSI, INC HAS NOT BEEN SUPPLIED WITH THE RECOVERED SOIL SAMPLES.
3. PERCOLATION TEST P-6 WAS NOT PERFORMED DUE TO ACCESSBILITY CONSTRAINTS.
4. PERCOLATION TEST P-7 WAS PERFORMED AT DEPTHS OF 10 AND 15 FEET ONLY.

PERCOLATION TEST SOIL BORINGS
GOLDEN GLADES INTERCHANGE
PSI PROJECT NO. 397-45002
FINANCIAL PROJECT ID. 252174-1-52-01

BORING NO. P-5

DEPTH (ft)		DESCRIPTION
From	To	
0.0	11.0	Tan Silty Fine SAND with Some Limestone
11.0	20.0	Tan Fine SAND

Groundwater Depth (Feet): 4.7

BORING NO. P-7

DEPTH (ft)		DESCRIPTION
From	To	
0.0	1.0	Asphaltic Concrete over Limerock Base/Sub-base
1.0	5.0	Tan Silty Fine SAND
5.0	8.0	Dark Tan Silty Fine SAND
8.0	11.0	Tan SAND with Limerock
11.0	15.0	Tan LIMESTONE with Fine SAND

Groundwater Depth (Feet): 6.9

Note:

1. THESE SERVICES WERE PERFORMED UNDER DISTRICT/AREAWIDE CONTRACT FM NO. 250730-1-32-02.
2. THE SUBSURFACE SOIL DESCRIPTION FOR THE PERCOLATION TESTS WAS BASED ON FIELD LOGS PROVIDED TO PSI, INC BY F.D.O.T. PSI, INC HAS NOT BEEN SUPPLIED WITH THE RECOVERED SOIL SAMPLES.
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4. PERCOLATION TEST P-7 WAS PERFORMED AT DEPTHS OF 10 AND 15 FEET ONLY.

PERCOLATION TEST SOIL BORINGS
GOLDEN GLADES INTERCHANGE
PSI PROJECT NO. 397-45002
FINANCIAL PROJECT ID. 252174-1-52-01

BORING NO. P-8

DEPTH (ft)		DESCRIPTION
From	To	
0.0	4.0	Dark Tan Fine SAND
4.0	5.0	Dark Tan Silty Fine SAND
5.0	15.0	Tan Sandy LIMESTONE
15.0	20.0	Tan Fine SAND

Groundwater Depth (Feet): 6.8

BORING NO. P-9

DEPTH (ft)		DESCRIPTION
From	To	
0.0	1.0	Asphaltic Concrete over Limerock Base/Sub-base
1.0	8.0	Dark Tan Silty Fine SAND
8.0	20.0	Tan Silty Fine Sand with LIMESTONE

Groundwater Depth (Feet): 5.9

Note:

1. THESE SERVICES WERE PERFORMED UNDER DISTRICT/AREAWIDE CONTRACT FM NO. 250730-1-32-02.
2. THE SUBSURFACE SOIL DESCRIPTION FOR THE PERCOLATION TESTS WAS BASED ON FIELD LOGS PROVIDED TO PSI, INC BY F.D.O.T. PSI, INC HAS NOT BEEN SUPPLIED WITH THE RECOVERED SOIL SAMPLES.
3. PERCOLATION TEST P-6 WAS NOT PERFORMED DUE TO ACCESSBILITY CONSTRAINTS.
4. PERCOLATION TEST P-7 WAS PERFORMED AT DEPTHS OF 10 AND 15 FEET ONLY.

0 10 25 50 100
(IN FEET)
GRAPHIC SCALE

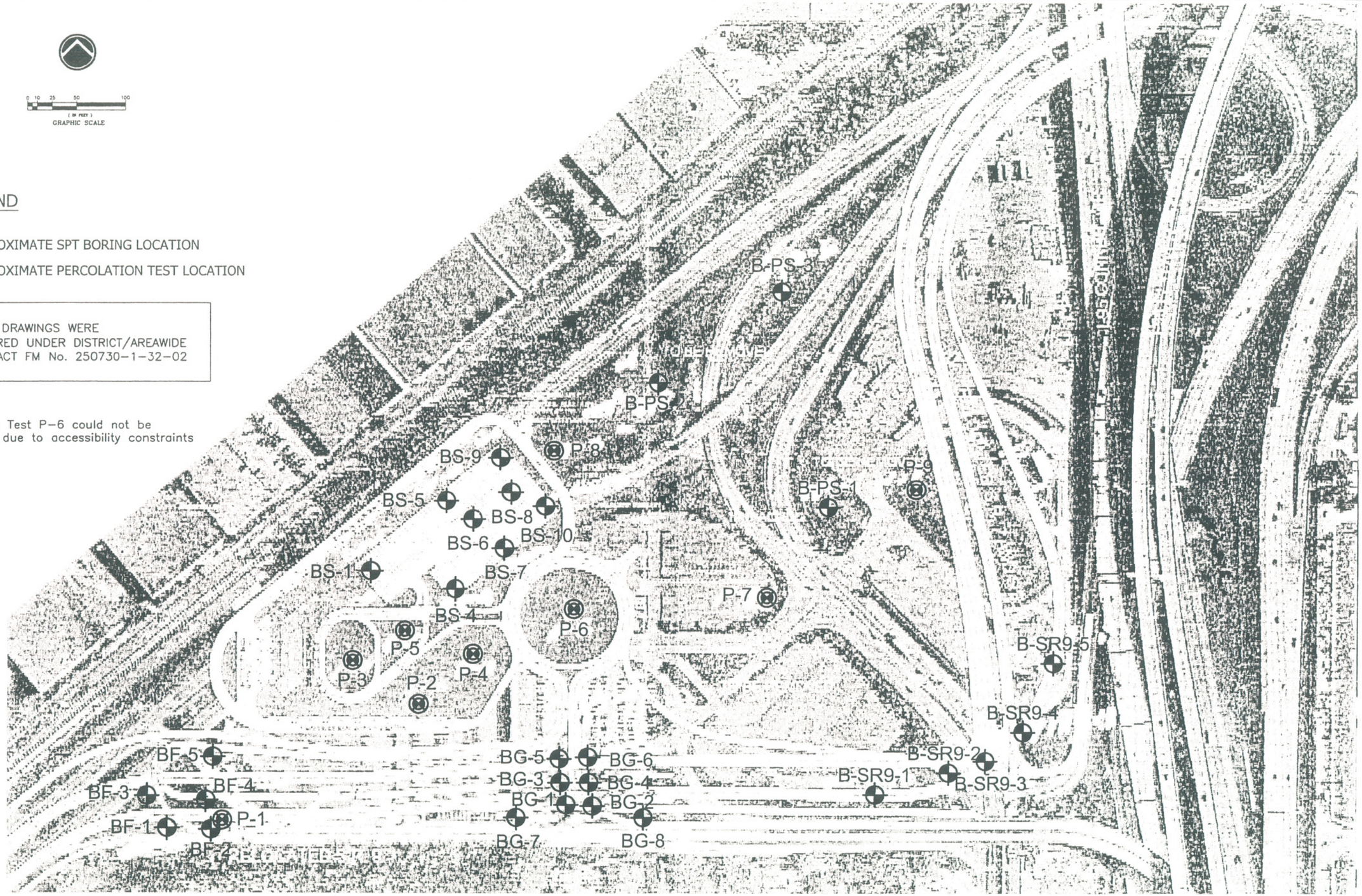
LEGEND

APPROXIMATE SPT BORING LOCATION

APPROXIMATE PERCOLATION TEST LOCATION

THESE DRAWINGS WERE
PREPARED UNDER DISTRICT/AREAWIDE
CONTRACT FM No. 250730-1-32-02

Note:
Percolation Test P-6 could not be performed due to accessibility constraints



REVISIONS						ENGINEER OF RECORD
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION	
						HUGO E. SOTO, P.E. FLA. REG. No. 36440

psi ENVIRONMENTAL GEOTECHNICAL CONSTRUCTION
CERTIFICATE OF AUTHORIZATION No. 3684
7950 N.W. 64th STREET, MIAMI, FL 33166
PHONE (305) 471-7725 ✖ FAX (305) 593-1915

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
----	MIAMI-DADE	252174-1-52-01

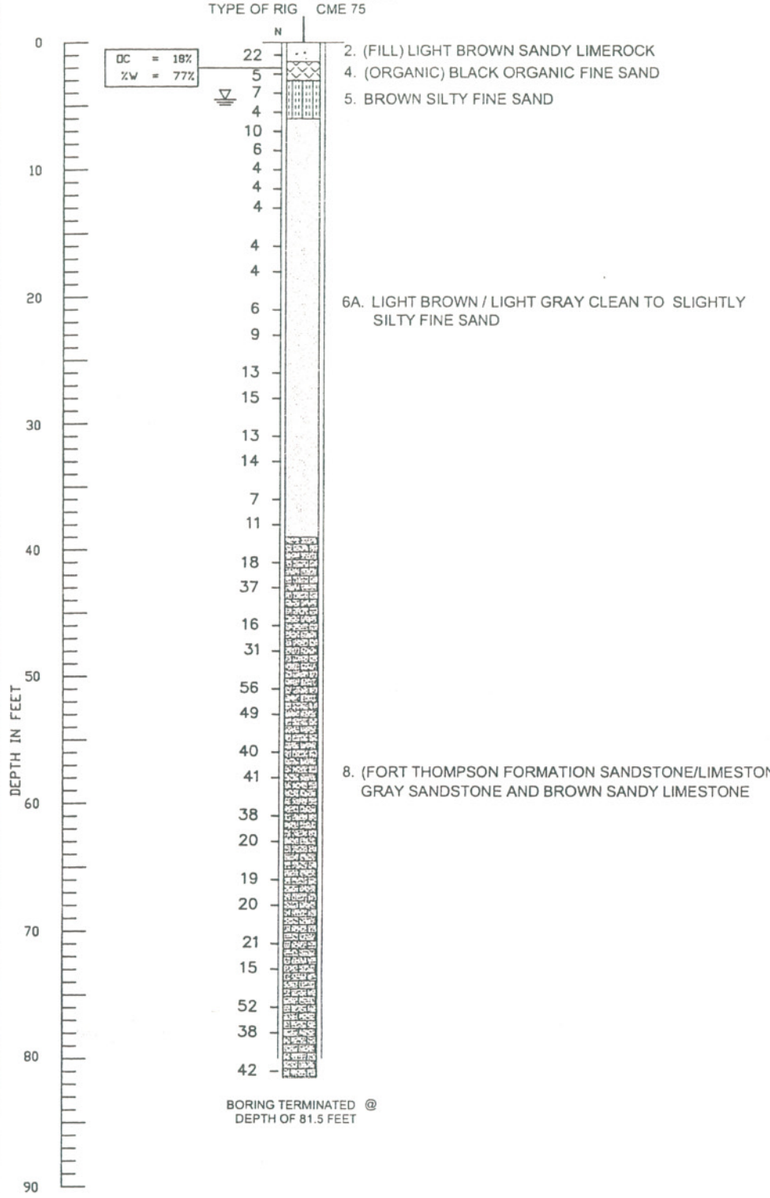
BORING LOCATION PLAN

GOLDEN GLADES INTERCHANGE

SHEET NO.

PSI PROJECT No. 397-45002
SHEET No. 1

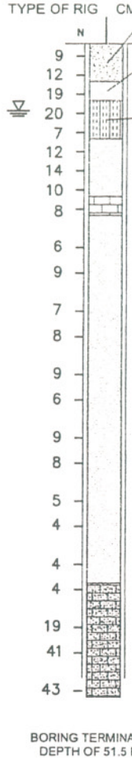
BORING NO. B-BF-1
DATE 3/02/04
NORTHING 577432.7
EASTING 913334.5
HAMMER AUTOMATIC
TYPE OF RIG CME 75



2. (FILL) LIGHT BROWN SANDY LIMEROCK
4. (ORGANIC) BLACK ORGANIC FINE SAND
5. BROWN SILTY FINE SAND
6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND
8. (FORT THOMPSON FORMATION SANDSTONE/LIMESTONE) GRAY SANDSTONE AND BROWN SANDY LIMESTONE

BORING TERMINATED @ DEPTH OF 81.5 FEET

BORING NO. B-BF-2
DATE 3/10/04
NORTHING 577437.2
EASTING 913479.1
HAMMER AUTOMATIC
TYPE OF RIG CME 75



3. (FILL) LIGHT BROWN / BROWN FINE SAND TO SLIGHTLY SILTY FINE SAND WITH OR WITHOUT LIMEROCK
6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND
5. BROWN SILTY FINE SAND
6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND
7. (MIAMI LIMESTONE FORMATION) BROWN AND GRAY SANDY LIMESTONE
6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND
8. (FORT THOMPSON FORMATION SANDSTONE/LIMESTONE) GRAY SANDSTONE AND BROWN SANDY LIMESTONE

BORING TERMINATED @ DEPTH OF 51.5 FEET

DISCLAIMER:

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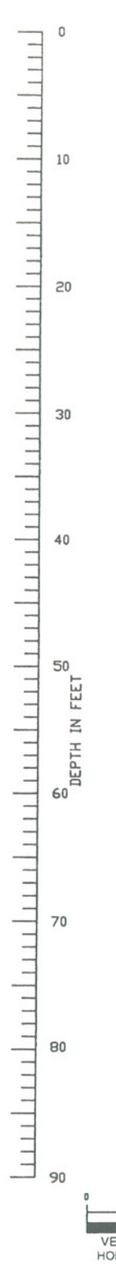


LEGEND

- 1A. ASPHALTIC CONCRETE
- 1B. (TOPSOIL) DARK BROWN ORGANIC SILTY FINE SAND WITH ROOTS
- 2. (FILL) LIGHT BROWN SANDY LIMEROCK
- 3. (FILL) LIGHT BROWN / BROWN FINE SAND TO SLIGHTLY SILTY FINE SAND WITH OR WITHOUT LIMEROCK
- 4. (ORGANIC) BLACK ORGANIC FINE SAND
- 5. BROWN SILTY FINE SAND
- 6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND
- 6B. LIGHT BROWN / LIGHT GRAY CLEAN TO SILTY FINE SAND WITH LIMESTONE LAYERS
- 7. (MIAMI LIMESTONE FORMATION) BROWN AND GRAY SANDY LIMESTONE
- 8. (FORT THOMPSON FORMATION SANDSTONE/LIMESTONE) GRAY SANDSTONE AND BROWN SANDY LIMESTONE

NOTES:

- ▼ WATER TABLE AT TIME OF DRILLING
- N NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12" PENETRATION (UNLESS OTHERWISE NOTED).
- || || 3.25" HEAVY DUTY HOLLOW STEM AUGER USED
- -200 FINES PASSING NO. 200 SIEVE (%)
- %W NATURAL MOISTURE CONTENT (%)
- OC ORGANIC CONTENT (%)
- WOH WEIGHT OF HAMMER
- DRILLED BY BERANUIL/GRIGGS

THESE DRAWINGS WERE PREPARED UNDER DISTRICT/AREAWIDE CONTRACT FM No. 250730-1-32-02

GRANULAR MATERIALS- RELATIVE DENSITY	SAFETY HAMMER SPT-N (BLOWS/12 In)	AUTOMATIC HAMMER SPT-N (BLOWS/12 In)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4-10	3-7
MEDIUM	10-30	7-21
DENSE	30-50	21-35
VERY DENSE	GREATER THAN 50	GREATER THAN 35
SILTS AND CLAYS CONSISTENCY	**SAFETY HAMMER SPT-N (BLOWS/12 In)**	**AUTOMATIC HAMMER SPT-N (BLOWS/12 In)**
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2-4	1-3
FIRM	4-8	3-6
STIFF	8-15	6-11
VERY STIFF	15-30	11-21
HARD	GREATER THAN 30	GREATER THAN 21

6/4/04

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

ENGINEER OF RECORD
HUGO E. SOTO, P.E.
FLA. REG. No. 36440

psi ENVIRONMENTAL GEOTECHNICAL CONSTRUCTION
CERTIFICATE OF AUTHORIZATION No. 3684
7950 N.W. 64th STREET, MIAMI, FL 33166
PHONE (305) 471-7725 ■ FAX (305) 593-1915

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
-----	MIAMI-DADE	252174-1-52-01

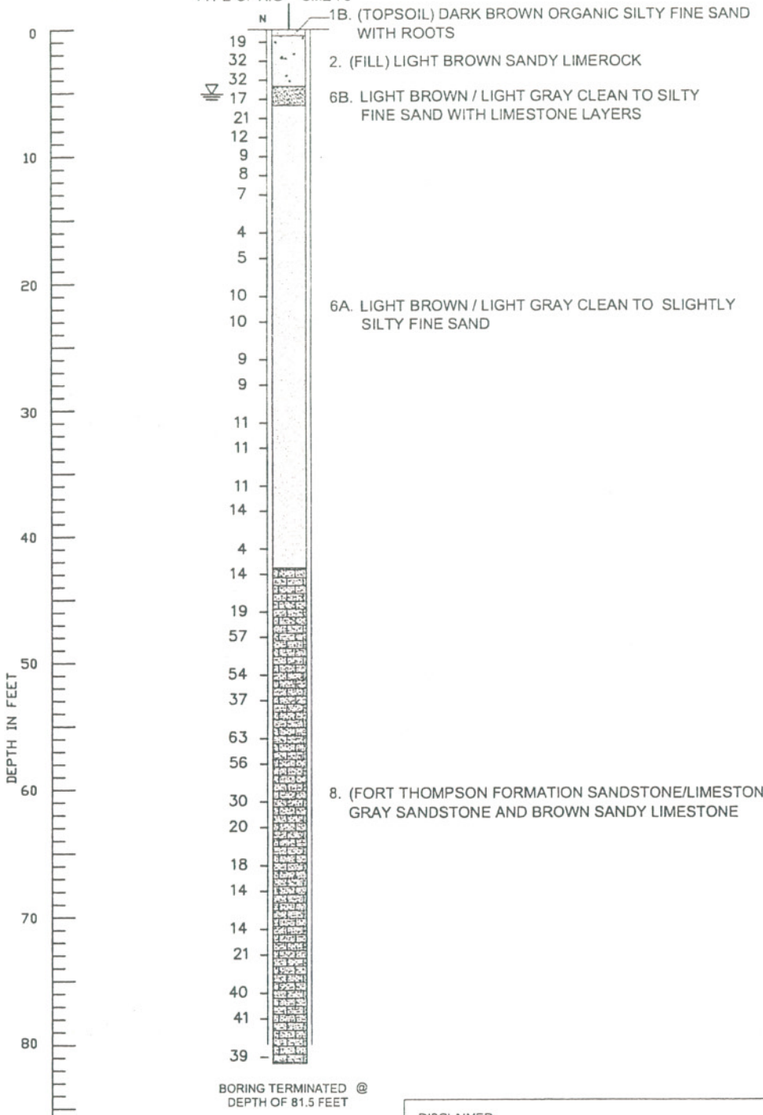
REPORT OF CORE BORINGS

GOLDEN GLADES INTERCHANGE

SHEET NO.

PSI PROJECT No. 397-45002
SHEET No.2

BORING NO. B-BF-3
DATE 3/1/04
NORTHING 579693.4
EASTING 913301.2
HAMMER AUTOMATIC
TYPE OF RIG CME 75



1B. (TOPSOIL) DARK BROWN ORGANIC SILTY FINE SAND WITH ROOTS

2. (FILL) LIGHT BROWN SANDY LIMEROCK

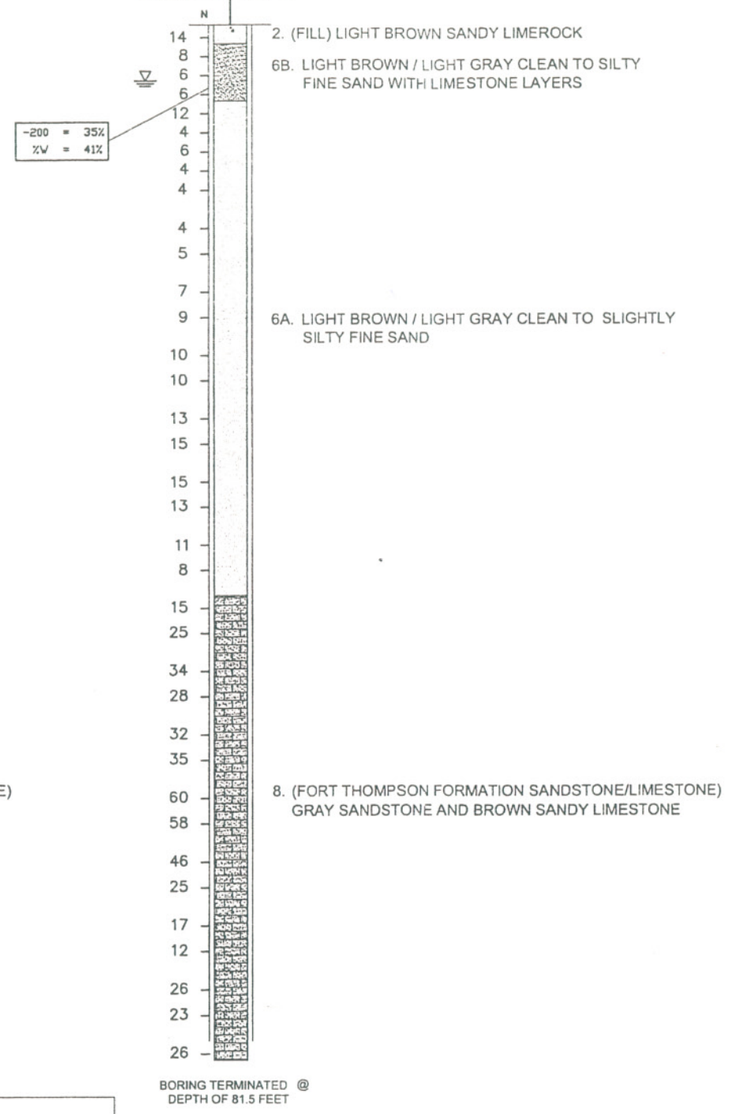
6B. LIGHT BROWN / LIGHT GRAY CLEAN TO SILTY FINE SAND WITH LIMESTONE LAYERS

6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND

8. (FORT THOMPSON FORMATION SANDSTONE/LIMESTONE) GRAY SANDSTONE AND BROWN SANDY LIMESTONE

BORING TERMINATED @ DEPTH OF 81.5 FEET

BORING NO. B-BF-4
DATE 3/04/04
NORTHING 577520.4
EASTING 913403.0
HAMMER AUTOMATIC
TYPE OF RIG CME 75



2. (FILL) LIGHT BROWN SANDY LIMEROCK

6B. LIGHT BROWN / LIGHT GRAY CLEAN TO SILTY FINE SAND WITH LIMESTONE LAYERS

6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND

8. (FORT THOMPSON FORMATION SANDSTONE/LIMESTONE) GRAY SANDSTONE AND BROWN SANDY LIMESTONE

BORING TERMINATED @ DEPTH OF 81.5 FEET

DISCLAIMER:

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LEGEND

1A. ASPHALTIC CONCRETE

1B. (TOPSOIL) DARK BROWN ORGANIC SILTY FINE SAND WITH ROOTS

2. (FILL) LIGHT BROWN SANDY LIMEROCK

3. (FILL) LIGHT BROWN / BROWN FINE SAND TO SLIGHTLY SILTY FINE SAND WITH OR WITHOUT LIMEROCK

4. (ORGANIC) BLACK ORGANIC FINE SAND

5. BROWN SILTY FINE SAND

6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND

6B. LIGHT BROWN / LIGHT GRAY CLEAN TO SILTY FINE SAND WITH LIMESTONE LAYERS

7. (MIAMI LIMESTONE FORMATION) BROWN AND GRAY SANDY LIMESTONE

8. (FORT THOMPSON FORMATION SANDSTONE/LIMESTONE) GRAY SANDSTONE AND BROWN SANDY LIMESTONE

NOTES:

- ▼ WATER TABLE AT TIME OF DRILLING
- N NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12" PENETRATION (UNLESS OTHERWISE NOTED).
- || || 3.25" HEAVY DUTY HOLLOW STEM AUGER USED
- -200 FINES PASSING NO. 200 SIEVE (%)
- %W NATURAL MOISTURE CONTENT (%)
- OC ORGANIC CONTENT (%)
- WOH WEIGHT OF HAMMER

DRILLED BY BERANUIL/GRIGGS

THESE DRAWINGS WERE PREPARED UNDER DISTRICT/AREAWIDE CONTRACT FM No. 250730-1-32-02

GRANULAR MATERIALS- RELATIVE DENSITY	SAFETY HAMMER SPT-N (BLOWS/12 in)	AUTOMATIC HAMMER SPT-N (BLOWS/12 in)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4-10	3-7
MEDIUM	10-30	7-21
DENSE	30-50	21-35
VERY DENSE	GREATER THAN 50	GREATER THAN 35
SILTS AND CLAYS CONSISTENCY	**SAFETY HAMMER SPT-N (BLOWS/12 in)**	**AUTOMATIC HAMMER SPT-N (BLOWS/12 in)**
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SOFT	2-4	1-3
FIRM	4-8	3-6
STIFF	8-15	6-11
VERY STIFF	15-30	11-21
HARD	GREATER THAN 30	GREATER THAN 21

0 5' 10'
VERTICAL SCALE
HORIZONTAL N.T.S.

6/4/04

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

ENGINEER OF RECORD
HUGO E. SOTO, P.E.
FLA. REG. No. 36440

ENVIRONMENTAL GEOTECHNICAL CONSTRUCTION
CERTIFICATE OF AUTHORIZATION No. 3684
7950 N.W. 64th STREET, MIAMI, FL 33166
PHONE (305) 471-7725 ■ FAX (305) 593-1915

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

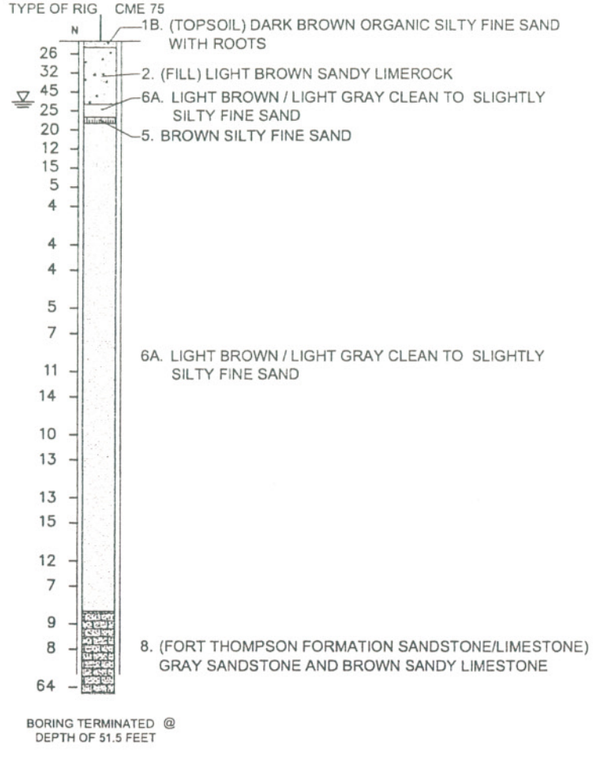
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
-----	MIAMI-DADE	252174-1-52-01

REPORT OF CORE BORINGS

GOLDEN GLADES INTERCHANGE

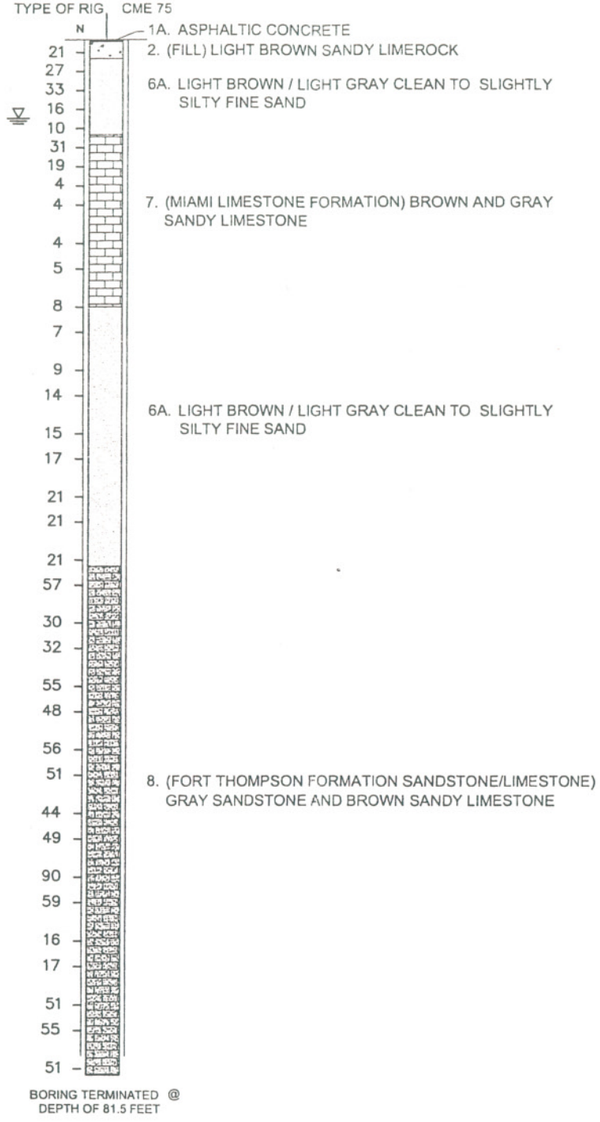
SHEET NO.

BORING NO. B-BF-5
DATE 3/09/04
NORTHING 577600.2
EASTING 913382.8
HAMMER AUTOMATIC
TYPE OF RIG CME 75



BORING TERMINATED @ DEPTH OF 51.5 FEET

BORING NO. B-G-1
DATE 12/16/03
NORTHING 941033.9
EASTING 912027.7
HAMMER AUTOMATIC
TYPE OF RIG CME 75



BORING TERMINATED @ DEPTH OF 81.5 FEET

DEPTH IN FEET
0 10 20 30 40 50 60 70 80 90

DISCLAIMER:

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6/4/04

LEGEND

- 1A. ASPHALTIC CONCRETE
- 1B. (TOPSOIL) DARK BROWN ORGANIC SILTY FINE SAND WITH ROOTS
- 2. (FILL) LIGHT BROWN SANDY LIMEROCK
- 3. (FILL) LIGHT BROWN / BROWN FINE SAND TO SLIGHTLY SILTY FINE SAND WITH OR WITHOUT LIMEROCK
- 4. (ORGANIC) BLACK ORGANIC FINE SAND
- 5. BROWN SILTY FINE SAND
- 6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND
- 6B. LIGHT BROWN / LIGHT GRAY CLEAN TO SILTY FINE SAND WITH LIMESTONE LAYERS
- 7. (MIAMI LIMESTONE FORMATION) BROWN AND GRAY SANDY LIMESTONE
- 8. (FORT THOMPSON FORMATION SANDSTONE/LIMESTONE) GRAY SANDSTONE AND BROWN SANDY LIMESTONE

NOTES:

- ▼ WATER TABLE AT TIME OF DRILLING
- N NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12" PENETRATION (UNLESS OTHERWISE NOTED).
- || || 3.25" HEAVY DUTY HOLLOW STEM AUGER USED
- -200 FINES PASSING NO. 200 SIEVE (%)
- %W NATURAL MOISTURE CONTENT (%)
- OC ORGANIC CONTENT (%)
- WOH WEIGHT OF HAMMER

DRILLED BY BERANUIL/GRIGGS

THESE DRAWINGS WERE PREPARED UNDER DISTRICT/AREAWIDE CONTRACT FM No. 250730-1-32-02

GRANULAR MATERIALS- RELATIVE DENSITY	SAFETY HAMMER SPT-N (BLOWS/12 in)	AUTOMATIC HAMMER SPT-N (BLOWS/12 in)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4-10	3-7
MEDIUM	10-30	7-21
DENSE	30-50	21-35
VERY DENSE	GREATER THAN 50	GREATER THAN 35

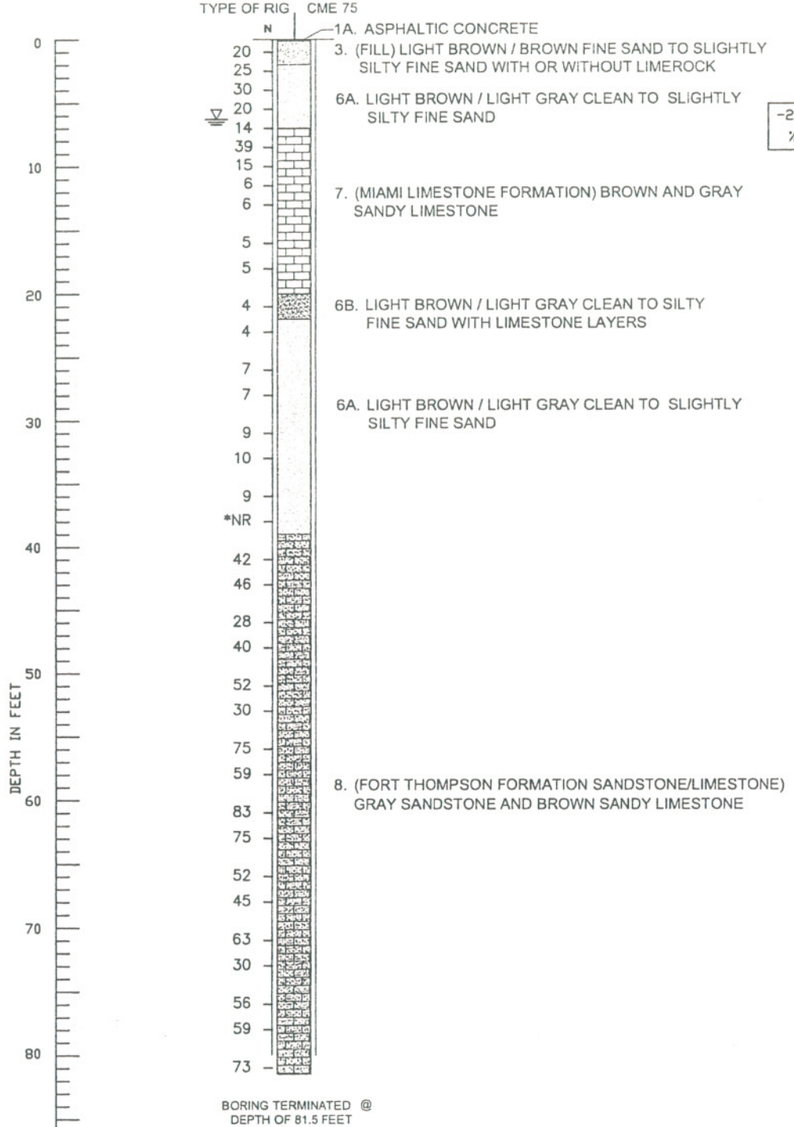
SILTS AND CLAYS CONSISTENCY	SAFETY HAMMER SPT-N (BLOWS/12 in)	AUTOMATIC HAMMER SPT-N (BLOWS/12 in)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2-4	1-3
FIRM	4-8	3-6
STIFF	8-15	6-11
VERY STIFF	15-30	11-21
HARD	GREATER THAN 30	GREATER THAN 21

0 5' 10'
VERTICAL SCALE
HORIZONTAL N.T.S.

REVISIONS						ENGINEER OF RECORD	ENVIRONMENTAL GEOTECHNICAL CONSTRUCTION	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			REPORT OF CORE BORINGS	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION			ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
						HUGO E. SOTO, P.E. FLA. REG. No. 36440	CERTIFICATE OF AUTHORIZATION No. 3684 7950 N.W. 64th STREET, MIAMI, FL 33166 PHONE (305) 471-7725 ✖ FAX (305) 593-1915	-----	MIAMI-DADE	252174-1-52-01	GOLDEN GLADES INTERCHANGE	

PSI PROJECT No. 397-45002
SHEET No. 4

BORING NO. B-G-2
DATE 1/13/04
NORTHING 941052.4
EASTING 912079.7
HAMMER AUTOMATIC
TYPE OF RIG CME 75



1A. ASPHALTIC CONCRETE

3. (FILL) LIGHT BROWN / BROWN FINE SAND TO SLIGHTLY SILTY FINE SAND WITH OR WITHOUT LIMEROCK

6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND

7. (MIAMI LIMESTONE FORMATION) BROWN AND GRAY SANDY LIMESTONE

6B. LIGHT BROWN / LIGHT GRAY CLEAN TO SILTY FINE SAND WITH LIMESTONE LAYERS

6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND

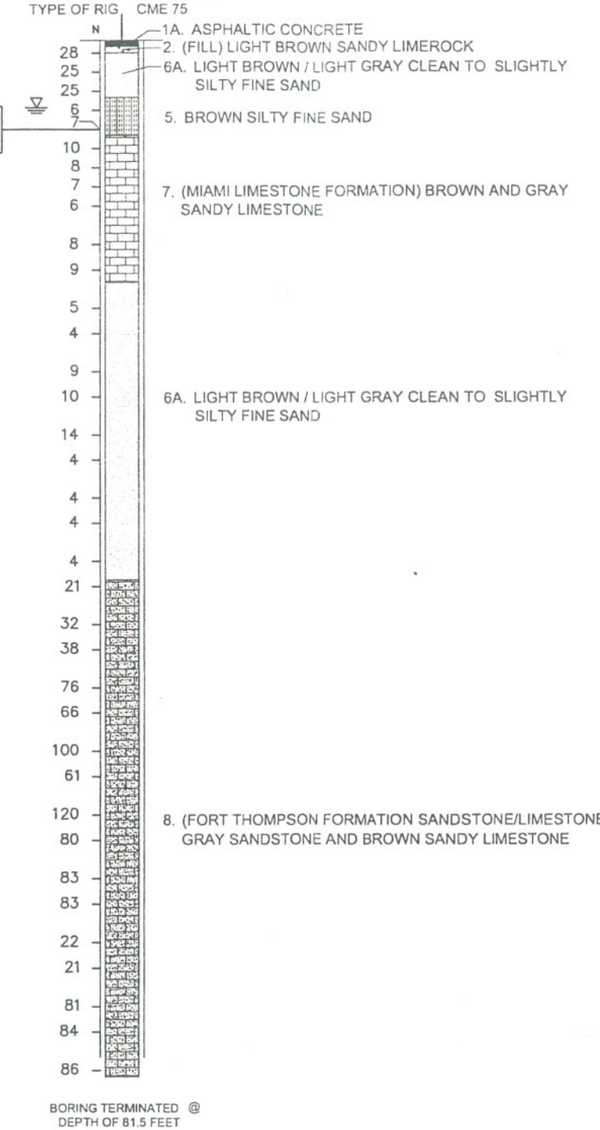
8. (FORT THOMPSON FORMATION SANDSTONE/LIMESTONE) GRAY SANDSTONE AND BROWN SANDY LIMESTONE

BORING TERMINATED @ DEPTH OF 81.5 FEET

NOTE:
*NR: SPT N-Value Not Recorded

BORING NO. B-G-3
DATE 12/15/03
NORTHING 577609.0
EASTING 914240.6
HAMMER AUTOMATIC
TYPE OF RIG CME 75

-200 = 25%
%W = 72%



1A. ASPHALTIC CONCRETE

2. (FILL) LIGHT BROWN SANDY LIMEROCK

6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND

5. BROWN SILTY FINE SAND

7. (MIAMI LIMESTONE FORMATION) BROWN AND GRAY SANDY LIMESTONE

6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND

8. (FORT THOMPSON FORMATION SANDSTONE/LIMESTONE) GRAY SANDSTONE AND BROWN SANDY LIMESTONE

BORING TERMINATED @ DEPTH OF 81.5 FEET

DISCLAIMER:

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LEGEND

- 1A. ASPHALTIC CONCRETE
- 1B. (TOPSOIL) DARK BROWN ORGANIC SILTY FINE SAND WITH ROOTS
- 2. (FILL) LIGHT BROWN SANDY LIMEROCK
- 3. (FILL) LIGHT BROWN / BROWN FINE SAND TO SLIGHTLY SILTY FINE SAND WITH OR WITHOUT LIMEROCK
- 4. (ORGANIC) BLACK ORGANIC FINE SAND
- 5. BROWN SILTY FINE SAND
- 6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND
- 6B. LIGHT BROWN / LIGHT GRAY CLEAN TO SILTY FINE SAND WITH LIMESTONE LAYERS
- 7. (MIAMI LIMESTONE FORMATION) BROWN AND GRAY SANDY LIMESTONE
- 8. (FORT THOMPSON FORMATION SANDSTONE/LIMESTONE) GRAY SANDSTONE AND BROWN SANDY LIMESTONE

NOTES:

- WATER TABLE AT TIME OF DRILLING
- N NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12" PENETRATION (UNLESS OTHERWISE NOTED).
- || || 3.25" HEAVY DUTY HOLLOW STEM AUGER USED
- -200 FINES PASSING NO. 200 SIEVE (%)
- %W NATURAL MOISTURE CONTENT (%)
- OC ORGANIC CONTENT (%)
- WOH WEIGHT OF HAMMER

DRILLED BY BERANUIL/GRIGGS

THESE DRAWINGS WERE PREPARED UNDER DISTRICT/AREAWIDE CONTRACT FM No. 250730-1-32-02

GRANULAR MATERIALS- RELATIVE DENSITY	SAFETY HAMMER SPT-N (BLOWS/12 In)	AUTOMATIC HAMMER SPT-N (BLOWS/12 In)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4-10	3-7
MEDIUM	10-30	7-21
DENSE	30-50	21-35
VERY DENSE	GREATER THAN 50	GREATER THAN 35

SILTS AND CLAYS CONSISTENCY	SAFETY HAMMER SPT-N (BLOWS/12 In)	AUTOMATIC HAMMER SPT-N (BLOWS/12 In)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2-4	1-3
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STIFF	8-15	6-11
VERY STIFF	15-30	11-21
HARD	GREATER THAN 30	GREATER THAN 21

0 5' 10'
VERTICAL SCALE
HORIZONTAL N.T.S.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

4/4/04
ENGINEER OF RECORD
HUGO E. SOTO, P.E.
FLA. REG. No. 36440

psi ENVIRONMENTAL GEOTECHNICAL CONSTRUCTION
CERTIFICATE OF AUTHORIZATION No. 3684
7950 N.W. 64th STREET, MIAMI, FL 33166
PHONE (305) 471-7725 * FAX (305) 593-1915

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
-----	MIAMI-DADE	252174-1-52-01

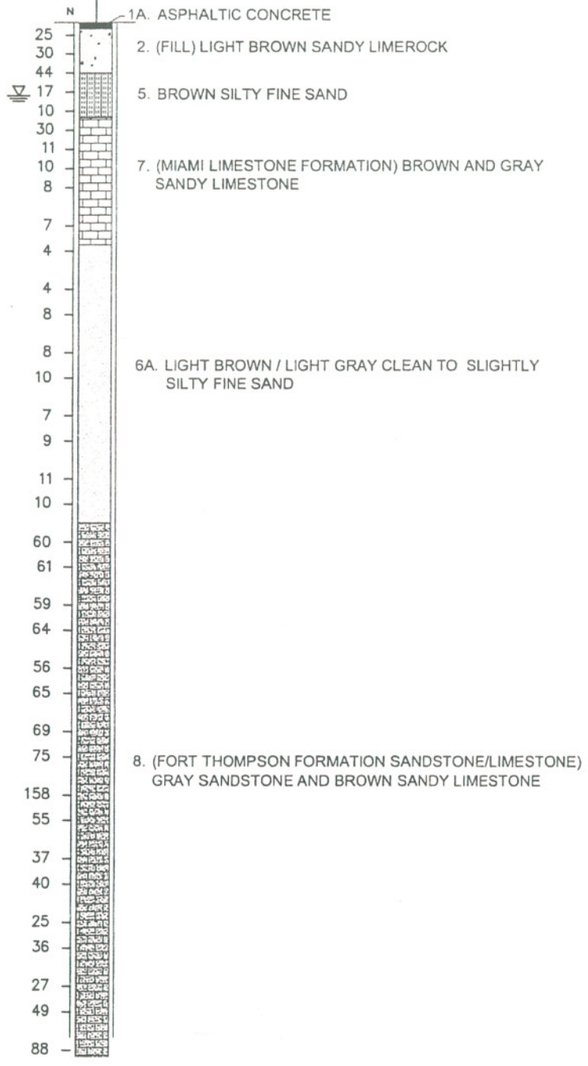
REPORT OF CORE BORINGS

GOLDEN GLADES INTERCHANGE

SHEET NO.

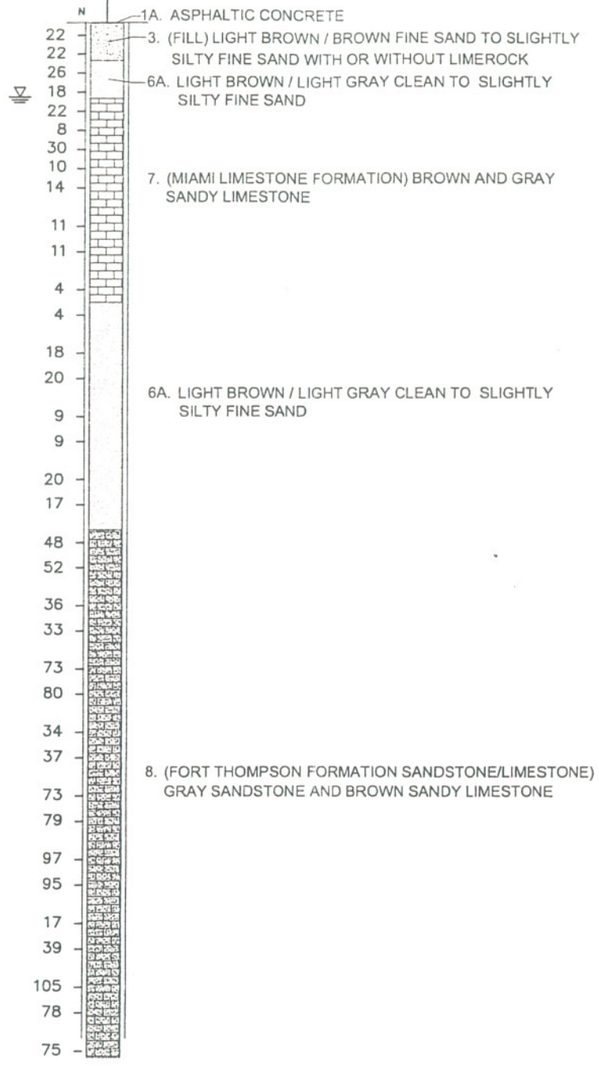
PSI PROJECT No. 397-45002
SHEET No.5

BORING NO. B-G-4
DATE 1/14/04
NORTHING 577594.7
EASTING 914290.0
HAMMER AUTOMATIC
TYPE OF RIG CME 75



BORING TERMINATED @ DEPTH OF 81.5 FEET

BORING NO. B-G-5
DATE 12/11/03
NORTHING 577656.3
EASTING 914246.9
HAMMER AUTOMATIC
TYPE OF RIG CME 75



BORING TERMINATED @ DEPTH OF 81.5 FEET

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0 5' 10'
VERTICAL SCALE
HORIZONTAL N.T.S.

LEGEND

- 1A. ASPHALTIC CONCRETE
- 1B. (TOPSOIL) DARK BROWN ORGANIC SILTY FINE SAND WITH ROOTS
- 2. (FILL) LIGHT BROWN SANDY LIMEROCK
- 3. (FILL) LIGHT BROWN / BROWN FINE SAND TO SLIGHTLY SILTY FINE SAND WITH OR WITHOUT LIMEROCK
- 4. (ORGANIC) BLACK ORGANIC FINE SAND
- 5. BROWN SILTY FINE SAND
- 6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND
- 6B. LIGHT BROWN / LIGHT GRAY CLEAN TO SILTY FINE SAND WITH LIMESTONE LAYERS
- 7. (MIAMI LIMESTONE FORMATION) BROWN AND GRAY SANDY LIMESTONE
- 8. (FORT THOMPSON FORMATION SANDSTONE/LIMESTONE) GRAY SANDSTONE AND BROWN SANDY LIMESTONE

NOTES:

- ▼ WATER TABLE AT TIME OF DRILLING
- N NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12" PENETRATION (UNLESS OTHERWISE NOTED).
- || || 3.25" HEAVY DUTY HOLLOW STEM AUGER USED
- -200 FINES PASSING NO. 200 SIEVE (%)
- %W NATURAL MOISTURE CONTENT (%)
- OC ORGANIC CONTENT (%)
- WOH WEIGHT OF HAMMER

DRILLED BY BERANUIL/GRIGGS

THESE DRAWINGS WERE PREPARED UNDER DISTRICT/AREAWIDE CONTRACT FM No. 250730-1-32-02

GRANULAR MATERIALS- RELATIVE DENSITY	SAFETY HAMMER SPT-N (BLOWS/12 in)	AUTOMATIC HAMMER SPT-N (BLOWS/12 in)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4-10	3-7
MEDIUM	10-30	7-21
DENSE	30-50	21-35
VERY DENSE	GREATER THAN 50	GREATER THAN 35

SILTS AND CLAYS CONSISTENCY	SAFETY HAMMER SPT-N (BLOWS/12 in)	AUTOMATIC HAMMER SPT-N (BLOWS/12 in)
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SOFT	2-4	1-3
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STIFF	8-15	6-11
VERY STIFF	15-30	11-21
HARD	GREATER THAN 30	GREATER THAN 21

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

6/04/04
ENGINEER OF RECORD
HUGO E. SOTO, P.E.
FLA. REG. No. 36440

PSI ENVIRONMENTAL GEOTECHNICAL CONSTRUCTION
CERTIFICATE OF AUTHORIZATION No. 3684
7950 N.W. 64th STREET, MIAMI, FL 33166
PHONE (305) 471-7725 ✱ FAX (305) 593-1915

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

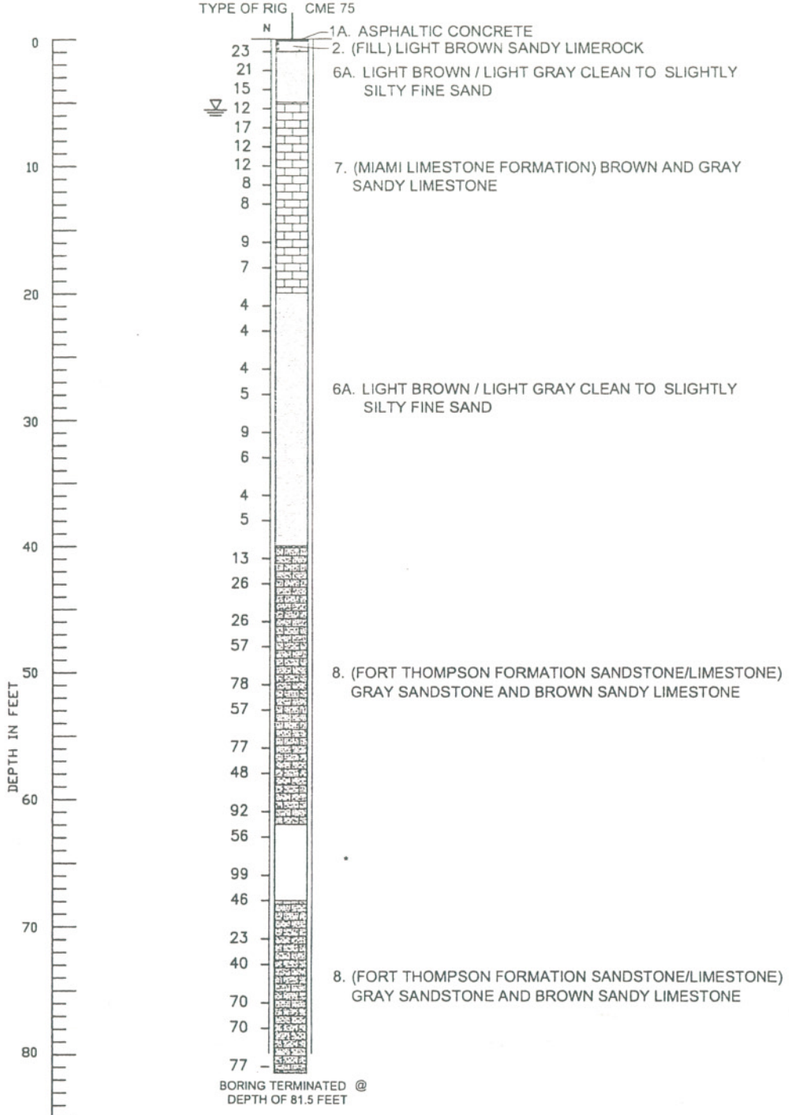
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
-----	MIAMI-DADE	252174-1-52-01

REPORT OF CORE BORINGS

GOLDEN GLADES INTERCHANGE

SHEET NO.

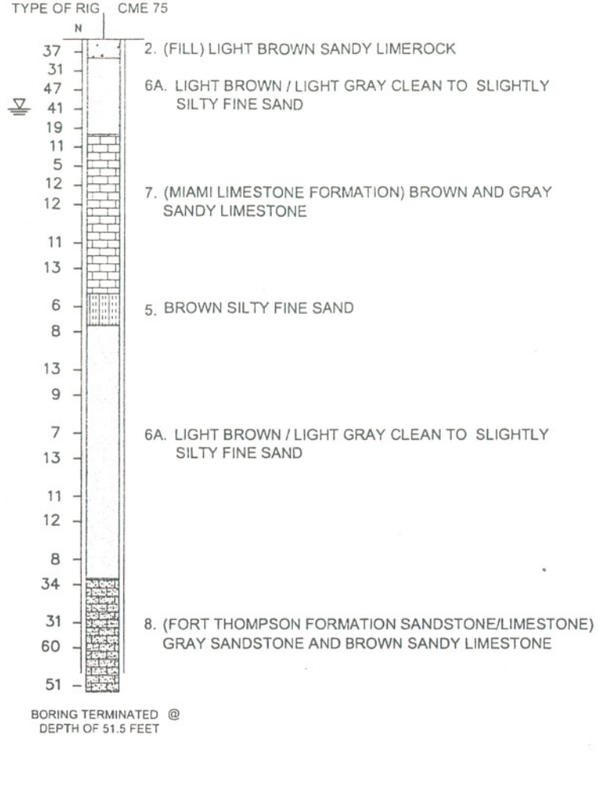
BORING NO. B-G-6
DATE 1/15/04
NORTHING 577631.2
EASTING 914302.9
HAMMER AUTOMATIC
TYPE OF RIG CME 75



1A. ASPHALTIC CONCRETE
2. (FILL) LIGHT BROWN SANDY LIMEROCK
6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND
7. (MIAMI LIMESTONE FORMATION) BROWN AND GRAY SANDY LIMESTONE
6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND
8. (FORT THOMPSON FORMATION SANDSTONE/LIMESTONE) GRAY SANDSTONE AND BROWN SANDY LIMESTONE
8. (FORT THOMPSON FORMATION SANDSTONE/LIMESTONE) GRAY SANDSTONE AND BROWN SANDY LIMESTONE

BORING TERMINATED @ DEPTH OF 81.5 FEET

BORING NO. B-BG-7
DATE 3/15/04
NORTHING 577488.2
EASTING 914103.3
HAMMER AUTOMATIC
TYPE OF RIG CME 75



2. (FILL) LIGHT BROWN SANDY LIMEROCK
6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND
7. (MIAMI LIMESTONE FORMATION) BROWN AND GRAY SANDY LIMESTONE
5. BROWN SILTY FINE SAND
6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND
8. (FORT THOMPSON FORMATION SANDSTONE/LIMESTONE) GRAY SANDSTONE AND BROWN SANDY LIMESTONE

BORING TERMINATED @ DEPTH OF 51.5 FEET

NOTE:

* : No Sample Recovery at depth 62 to 68 feet possible soil type 8

DISCLAIMER:

THE SURFACE PROFILE SHOWN ON SHEETS 2 THROUGH 16 WAS OBTAINED FROM SOIL SAMPLES RETRIEVED IN THE FIELD, FIELD LOGS (INCLUDING SPT "N" VALUES) AND GPS DATA PROVIDED BY FDOT. THE SHEETS HAVE BEEN PREPARED WITH THE UNDERSIGNED PROFESSIONAL ENGINEER'S DIRECT SUPERVISION AND CONTROL USING THE INFORMATION PROVIDED BY FDOT. THE INFORMATION CONTAINED IN THE BORING PROFILES IS NOT A RESPONSABILITY OF PROFESIONAL SERVICE INDUSTRIES, INC.

LEGEND

- 1A. ASPHALTIC CONCRETE
- 1B. (TOPSOIL) DARK BROWN ORGANIC SILTY FINE SAND WITH ROOTS
- 2. (FILL) LIGHT BROWN SANDY LIMEROCK
- 3. (FILL) LIGHT BROWN / BROWN FINE SAND TO SLIGHTLY SILTY FINE SAND WITH OR WITHOUT LIMEROCK
- 4. (ORGANIC) BLACK ORGANIC FINE SAND
- 5. BROWN SILTY FINE SAND
- 6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND
- 6B. LIGHT BROWN / LIGHT GRAY CLEAN TO SILTY FINE SAND WITH LIMESTONE LAYERS
- 7. (MIAMI LIMESTONE FORMATION) BROWN AND GRAY SANDY LIMESTONE
- 8. (FORT THOMPSON FORMATION SANDSTONE/LIMESTONE) GRAY SANDSTONE AND BROWN SANDY LIMESTONE

NOTES:

- ▼ WATER TABLE AT TIME OF DRILLING
- N NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12" PENETRATION (UNLESS OTHERWISE NOTED).
- || || 3.25" HEAVY DUTY HOLLOW STEM AUGER USED
- -200 FINES PASSING NO. 200 SIEVE (%)
- %W NATURAL MOISTURE CONTENT (%)
- OC ORGANIC CONTENT (%)
- WOH WEIGHT OF HAMMER

THESE DRAWINGS WERE PREPARED UNDER DISTRICT/AREAWIDE CONTRACT FM No. 250730-1-32-02

DRILLED BY BERANUIL/GRIGGS

GRANULAR MATERIALS- RELATIVE DENSITY	SAFETY HAMMER SPT-N (BLOWS/12 In)	AUTOMATIC HAMMER SPT-N (BLOWS/12 In)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4-10	3-7
MEDIUM	10-30	7-21
DENSE	30-50	21-35
VERY DENSE	GREATER THAN 50	GREATER THAN 35

SILTS AND CLAYS CONSISTENCY	SAFETY HAMMER SPT-N (BLOWS/12 In)	AUTOMATIC HAMMER SPT-N (BLOWS/12 In)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2-4	1-3
FIRM	4-8	3-6
STIFF	8-15	6-11
VERY STIFF	15-30	11-21
HARD	GREATER THAN 30	GREATER THAN 21

0 5' 10'
VERTICAL SCALE
HORIZONTAL N.T.S.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

6/4/04

ENGINEER OF RECORD
HUGO E. SOTO, P.E.
FLA. REG. No. 36440

PSI ENVIRONMENTAL GEOTECHNICAL CONSTRUCTION
CERTIFICATE OF AUTHORIZATION No. 3684
7950 N.W. 64th STREET, MIAMI, FL 33166
PHONE (305) 471-7725 ✖ FAX (305) 593-1915

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

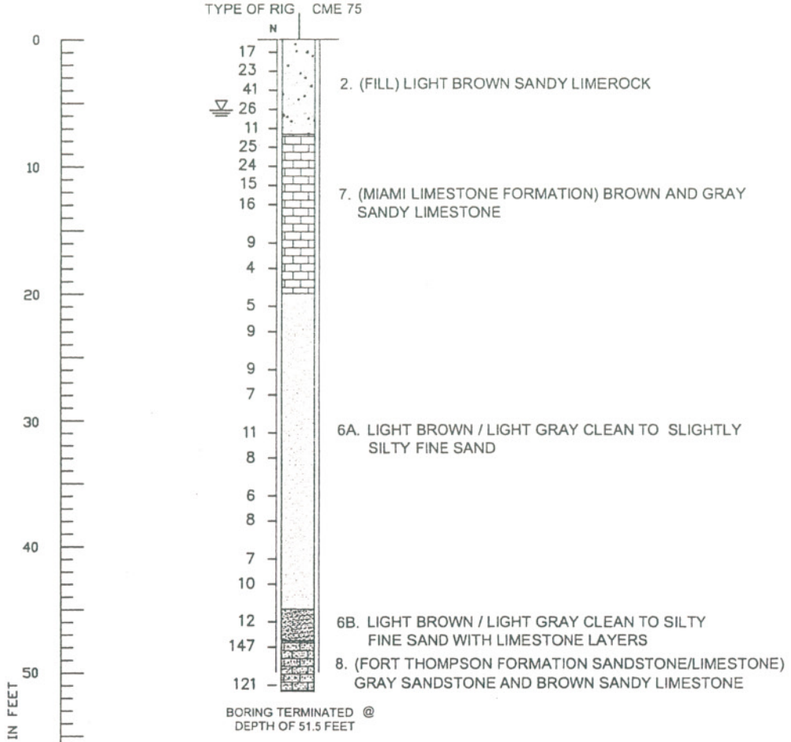
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
-----	MIAMI-DADE	252174-1-52-01

REPORT OF CORE BORINGS

GOLDEN GLADES INTERCHANGE

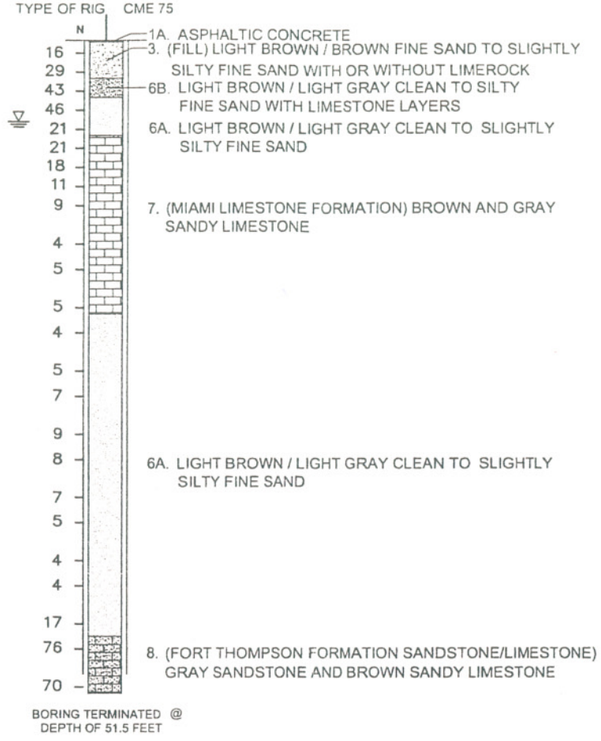
SHEET NO.

BORING NO. B-BG-8
DATE 3/17/04
NORTHING 577500.7
EASTING 914372.7
HAMMER AUTOMATIC
TYPE OF RIG CME 75



BORING TERMINATED @ DEPTH OF 51.5 FEET

BORING NO. B-SR9-1
DATE 1/28/04
NORTHING 577594.8
EASTING 914904.7
HAMMER AUTOMATIC
TYPE OF RIG CME 75



BORING TERMINATED @ DEPTH OF 51.5 FEET

LEGEND

- 1A. ASPHALTIC CONCRETE
- 1B. (TOPSOIL) DARK BROWN ORGANIC SILTY FINE SAND WITH ROOTS
- 2. (FILL) LIGHT BROWN SANDY LIMEROCK
- 3. (FILL) LIGHT BROWN / BROWN FINE SAND TO SLIGHTLY SILTY FINE SAND WITH OR WITHOUT LIMEROCK
- 4. (ORGANIC) BLACK ORGANIC FINE SAND
- 5. BROWN SILTY FINE SAND
- 6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND
- 6B. LIGHT BROWN / LIGHT GRAY CLEAN TO SILTY FINE SAND WITH LIMESTONE LAYERS
- 7. (MIAMI LIMESTONE FORMATION) BROWN AND GRAY SANDY LIMESTONE
- 8. (FORT THOMPSON FORMATION SANDSTONE/LIMESTONE) GRAY SANDSTONE AND BROWN SANDY LIMESTONE

NOTES:

- ▼ WATER TABLE AT TIME OF DRILLING
- N NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12" PENETRATION (UNLESS OTHERWISE NOTED).
- || || 3.25" HEAVY DUTY HOLLOW STEM AUGER USED
- -200 FINES PASSING NO. 200 SIEVE (%)
- %W NATURAL MOISTURE CONTENT (%)
- OC ORGANIC CONTENT (%)
- WOH WEIGHT OF HAMMER

DRILLED BY BERANUIL/GRIGGS

THESE DRAWINGS WERE PREPARED UNDER DISTRICT/AREAWIDE CONTRACT FM No. 250730-1-32-02

GRANULAR MATERIALS- RELATIVE DENSITY	SAFETY HAMMER SPT-N (BLOWS/12 in)	AUTOMATIC HAMMER SPT-N (BLOWS/12 in)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4-10	3-7
MEDIUM	10-30	7-21
DENSE	30-50	21-35
VERY DENSE	GREATER THAN 50	GREATER THAN 35
SILTS AND CLAYS CONSISTENCY	**SAFETY HAMMER SPT-N (BLOWS/12 in)**	**AUTOMATIC HAMMER SPT-N (BLOWS/12 in)**
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2-4	1-3
FIRM	4-8	3-6
STIFF	8-15	6-11
VERY STIFF	15-30	11-21
HARD	GREATER THAN 30	GREATER THAN 21

0 5' 10'
VERTICAL SCALE
HORIZONTAL N.T.S.

DISCLAIMER:

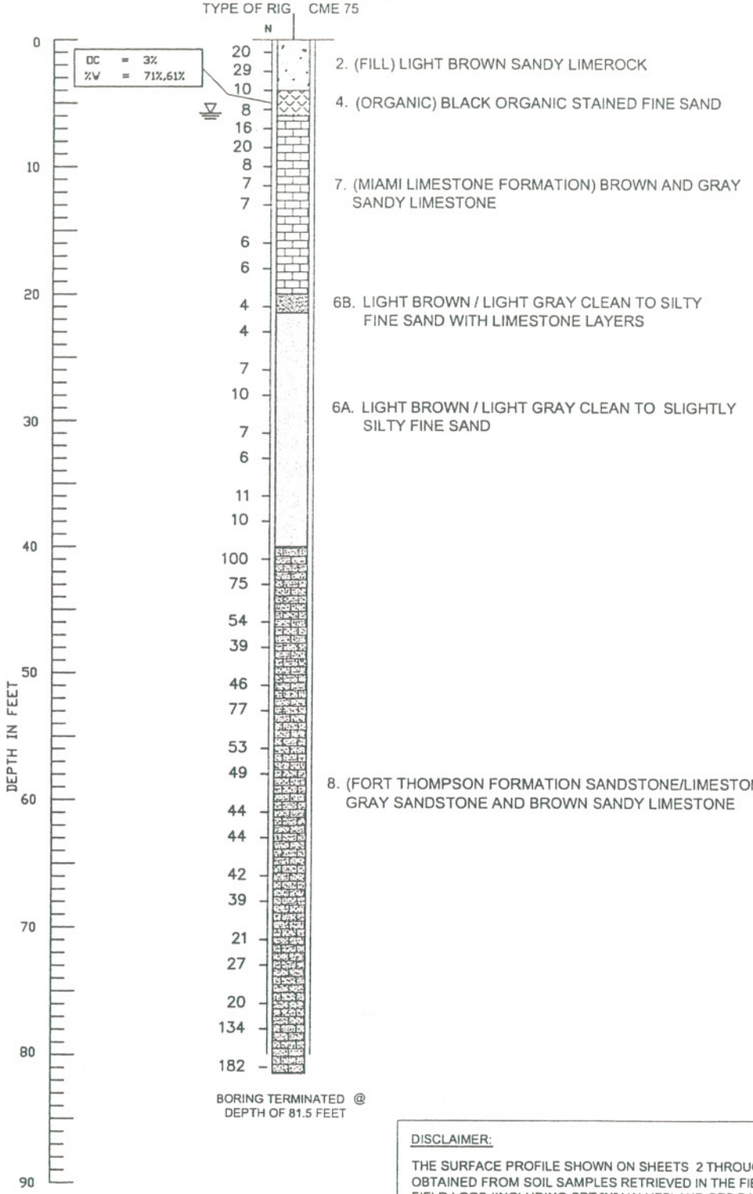
THE SURFACE PROFILE SHOWN ON SHEETS 2 THROUGH 16 WAS OBTAINED FROM SOIL SAMPLES RETRIEVED IN THE FIELD, FIELD LOGS (INCLUDING SPT "N" VALUES) AND GPS DATA PROVIDED BY FDOT. THE SHEETS HAVE BEEN PREPARED WITH THE UNDERSIGNED PROFESSIONAL ENGINEER'S DIRECT SUPERVISION AND CONTROL USING THE INFORMATION PROVIDED BY FDOT.
THE INFORMATION CONTAINED IN THE BORING PROFILES IS NOT A RESPONSABILITY OF PROFESIONAL SERVICE INDUSTRIES, INC.

6/4/04

REVISIONS						ENGINEER OF RECORD	ENVIRONMENTAL GEOTECHNICAL CONSTRUCTION	STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			REPORT OF CORE BORINGS	SHEET NO.
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION			ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
						HUGO E. SOTO, P.E. FLA. REG. No. 36440	CERTIFICATE OF AUTHORIZATION No. 3684 7950 N.W. 64th STREET, MIAMI, FL 33166 PHONE (305) 471-7725 * FAX (305) 593-1915	-----	MIAMI-DADE	252174-1-52-01	GOLDEN GLADES INTERCHANGE	

PSI PROJECT No. 397-45002
SHEET No. 8

BORING NO. B-SR9-2
DATE 1/26/04
NORTHING 577592.2
EASTING 915072.3
HAMMER AUTOMATIC
TYPE OF RIG CME 75



2. (FILL) LIGHT BROWN SANDY LIMEROCK

4. (ORGANIC) BLACK ORGANIC STAINED FINE SAND

7. (MIAMI LIMESTONE FORMATION) BROWN AND GRAY SANDY LIMESTONE

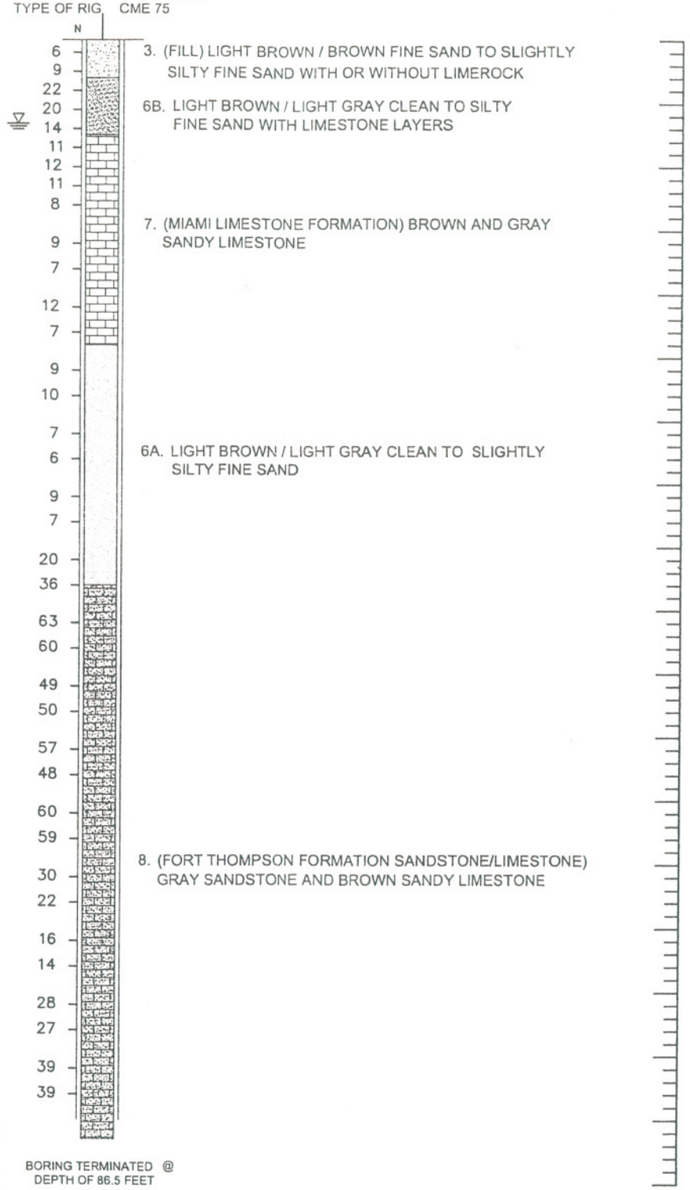
6B. LIGHT BROWN / LIGHT GRAY CLEAN TO SILTY FINE SAND WITH LIMESTONE LAYERS

6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND

8. (FORT THOMPSON FORMATION SANDSTONE/LIMESTONE) GRAY SANDSTONE AND BROWN SANDY LIMESTONE

BORING TERMINATED @ DEPTH OF 81.5 FEET

BORING NO. B-SR9-3
DATE 1/27/04
NORTHING 577621.5
EASTING 915118.2
HAMMER AUTOMATIC
TYPE OF RIG CME 75



3. (FILL) LIGHT BROWN / BROWN FINE SAND TO SLIGHTLY SILTY FINE SAND WITH OR WITHOUT LIMEROCK

6B. LIGHT BROWN / LIGHT GRAY CLEAN TO SILTY FINE SAND WITH LIMESTONE LAYERS

7. (MIAMI LIMESTONE FORMATION) BROWN AND GRAY SANDY LIMESTONE

6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND

8. (FORT THOMPSON FORMATION SANDSTONE/LIMESTONE) GRAY SANDSTONE AND BROWN SANDY LIMESTONE

BORING TERMINATED @ DEPTH OF 86.5 FEET

DISCLAIMER:

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LEGEND

1A. ASPHALTIC CONCRETE

1B. (TOPSOIL) DARK BROWN ORGANIC SILTY FINE SAND WITH ROOTS

2. (FILL) LIGHT BROWN SANDY LIMEROCK

3. (FILL) LIGHT BROWN / BROWN FINE SAND TO SLIGHTLY SILTY FINE SAND WITH OR WITHOUT LIMEROCK

4. (ORGANIC) BLACK ORGANIC FINE SAND

5. BROWN SILTY FINE SAND

6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND

6B. LIGHT BROWN / LIGHT GRAY CLEAN TO SILTY FINE SAND WITH LIMESTONE LAYERS

7. (MIAMI LIMESTONE FORMATION) BROWN AND GRAY SANDY LIMESTONE

8. (FORT THOMPSON FORMATION SANDSTONE/LIMESTONE) GRAY SANDSTONE AND BROWN SANDY LIMESTONE

NOTES:

- WATER TABLE AT TIME OF DRILLING
- N NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12" PENETRATION (UNLESS OTHERWISE NOTED).
- || || 3.25" HEAVY DUTY HOLLOW STEM AUGER USED
- -200 FINES PASSING NO. 200 SIEVE (%)
- %W NATURAL MOISTURE CONTENT (%)
- DC ORGANIC CONTENT (%)
- WOH WEIGHT OF HAMMER
- DRILLED BY BERANUIL/GRIGGS

THESE DRAWINGS WERE PREPARED UNDER DISTRICT/AREAWIDE CONTRACT FM No. 250730-1-32-02

GRANULAR MATERIALS- RELATIVE DENSITY	SAFETY HAMMER SPT-N (BLOWS/12 In)	AUTOMATIC HAMMER SPT-N (BLOWS/12 In)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4-10	3-7
MEDIUM	10-30	7-21
DENSE	30-50	21-35
VERY DENSE	GREATER THAN 50	GREATER THAN 35

SILTS AND CLAYS CONSISTENCY	SAFETY HAMMER SPT-N (BLOWS/12 In)	AUTOMATIC HAMMER SPT-N (BLOWS/12 In)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2-4	1-3
FIRM	4-8	3-6
STIFF	8-15	6-11
VERY STIFF	15-30	11-21
HARD	GREATER THAN 30	GREATER THAN 21

0 5' 10'
VERTICAL SCALE
HORIZONTAL N.T.S.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

6/15/05
ENGINEER OF RECORD
HUGO E. SOTO, P.E.
FLA. REG. No. 36440

PSI ENVIRONMENTAL GEOTECHNICAL CONSTRUCTION
CERTIFICATE OF AUTHORIZATION No. 3684
7950 N.W. 64th STREET, MIAMI, FL 33166
PHONE (305) 471-7725 ■ FAX (305) 593-1915

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

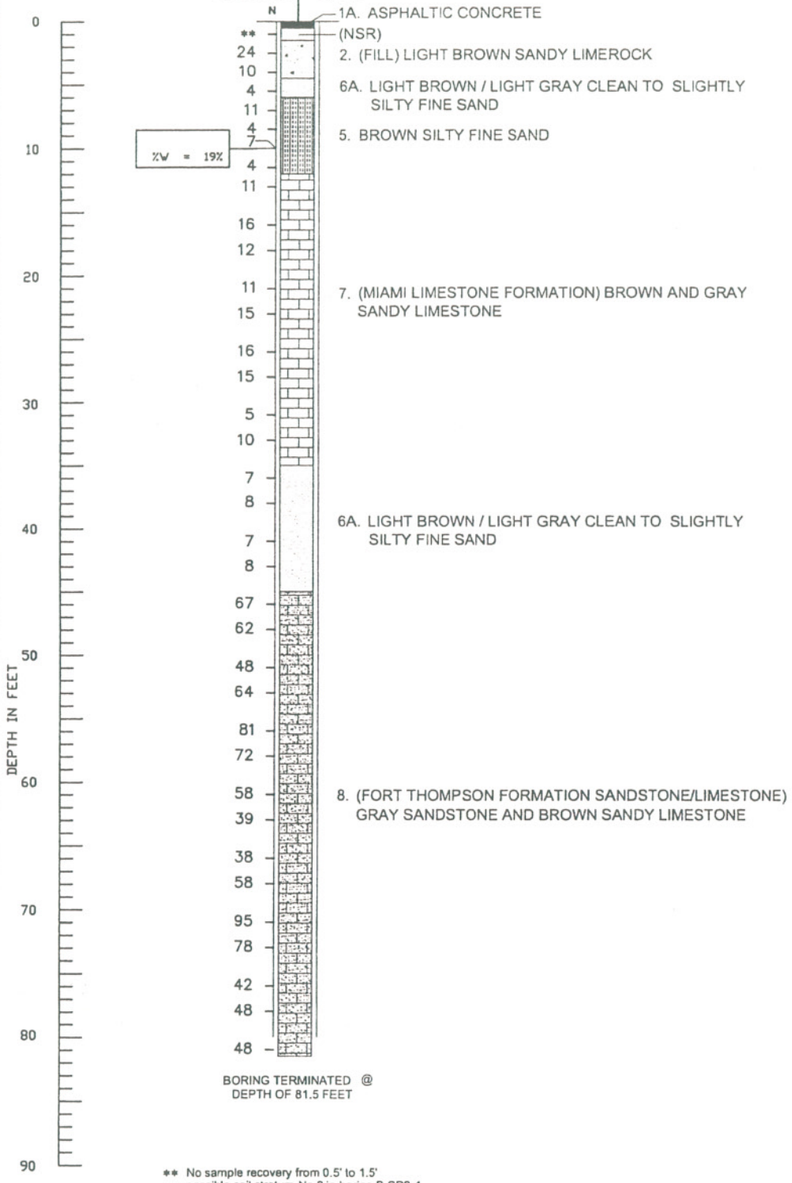
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
-----	MIAMI-DADE	252174-1-52-01

REPORT OF CORE BORINGS

GOLDEN GLADES INTERCHANGE

SHEET NO.

BORING NO. B-SR9-4
DATE 1/29/04
NORTHING 577708.9
EASTING 915143.9
HAMMER AUTOMATIC
TYPE OF RIG CME 75

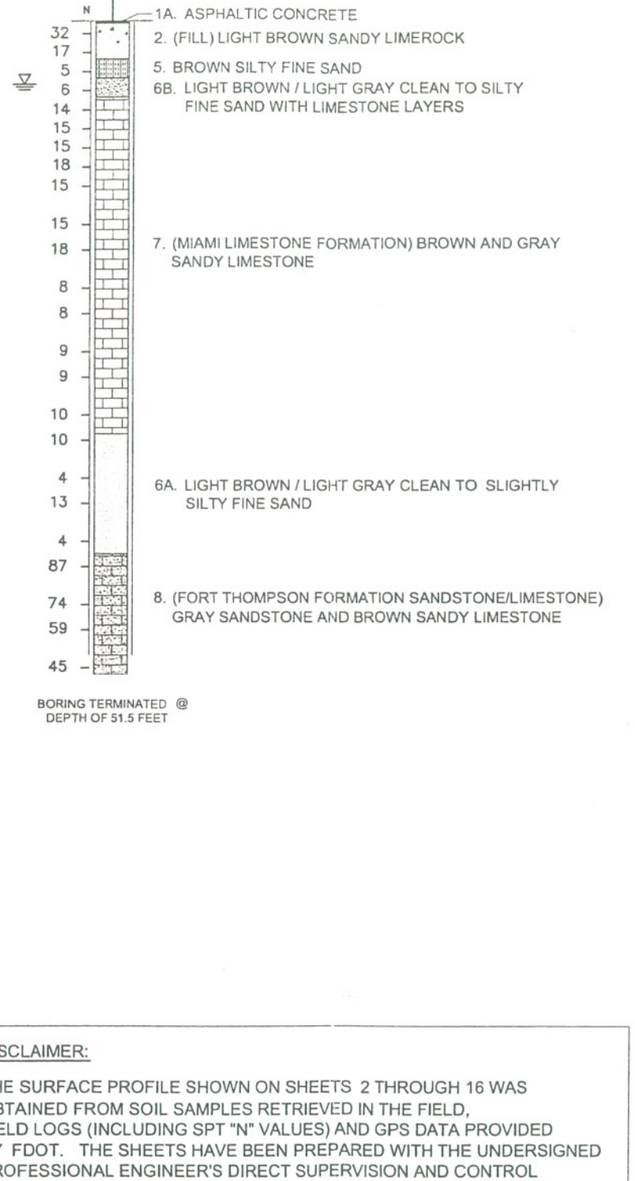


BORING TERMINATED @ DEPTH OF 81.5 FEET

** No sample recovery from 0.5' to 1.5' possible soil stratum No.2 in boring B-SR9-4

Water table depth Not recorded in boring B-SR9-4

BORING NO. B-SR9-5
DATE 2/2/04
NORTHING 577800.4
EASTING 915248.6
HAMMER AUTOMATIC
TYPE OF RIG CME 75



BORING TERMINATED @ DEPTH OF 51.5 FEET

LEGEND

- 1A. ASPHALTIC CONCRETE
- 1B. (TOPSOIL) DARK BROWN ORGANIC SILTY FINE SAND WITH ROOTS
- 2. (FILL) LIGHT BROWN SANDY LIMEROCK
- 3. (FILL) LIGHT BROWN / BROWN FINE SAND TO SLIGHTLY SILTY FINE SAND WITH OR WITHOUT LIMEROCK
- 4. (ORGANIC) BLACK ORGANIC FINE SAND
- 5. BROWN SILTY FINE SAND
- 6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND
- 6B. LIGHT BROWN / LIGHT GRAY CLEAN TO SILTY FINE SAND WITH LIMESTONE LAYERS
- 7. (MIAMI LIMESTONE FORMATION) BROWN AND GRAY SANDY LIMESTONE
- 8. (FORT THOMPSON FORMATION SANDSTONE/LIMESTONE) GRAY SANDSTONE AND BROWN SANDY LIMESTONE

NOTES:

- WATER TABLE AT TIME OF DRILLING
- N NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12" PENETRATION (UNLESS OTHERWISE NOTED).
- || || 3.25" HEAVY DUTY HOLLOW STEM AUGER USED
- -200 FINES PASSING NO. 200 SIEVE (%)
- %W NATURAL MOISTURE CONTENT (%)
- OC ORGANIC CONTENT (%)
- WOH WEIGHT OF HAMMER
- DRILLED BY BERANUIL/GRIGGS

THESE DRAWINGS WERE PREPARED UNDER DISTRICT/AREAWIDE CONTRACT FM No. 250730-1-32-02

GRANULAR MATERIALS- RELATIVE DENSITY	SAFETY HAMMER SPT-N (BLOWS/12 In)	AUTOMATIC HAMMER SPT-N (BLOWS/12 In)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4-10	3-7
MEDIUM	10-30	7-21
DENSE	30-50	21-35
VERY DENSE	GREATER THAN 50	GREATER THAN 35

SILTS AND CLAYS CONSISTENCY	SAFETY HAMMER SPT-N (BLOWS/12 In)	AUTOMATIC HAMMER SPT-N (BLOWS/12 In)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2-4	1-3
FIRM	4-8	3-6
STIFF	8-15	6-11
VERY STIFF	15-30	11-21
HARD	GREATER THAN 30	GREATER THAN 21

0 5' 10'
VERTICAL SCALE
HORIZONTAL N.T.S.

DISCLAIMER:

THE SURFACE PROFILE SHOWN ON SHEETS 2 THROUGH 16 WAS OBTAINED FROM SOIL SAMPLES RETRIEVED IN THE FIELD, FIELD LOGS (INCLUDING SPT "N" VALUES) AND GPS DATA PROVIDED BY FDOT. THE SHEETS HAVE BEEN PREPARED WITH THE UNDERSIGNED PROFESSIONAL ENGINEER'S DIRECT SUPERVISION AND CONTROL USING THE INFORMATION PROVIDED BY FDOT.
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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

6/4/04
ENGINEER OF RECORD
HUGO E. SOTO, P.E.
FLA. REG. No. 36440

PSI ENVIRONMENTAL GEOTECHNICAL CONSTRUCTION
CERTIFICATE OF AUTHORIZATION No. 3684
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PHONE (305) 471-7725 ■ FAX (305) 593-1915

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

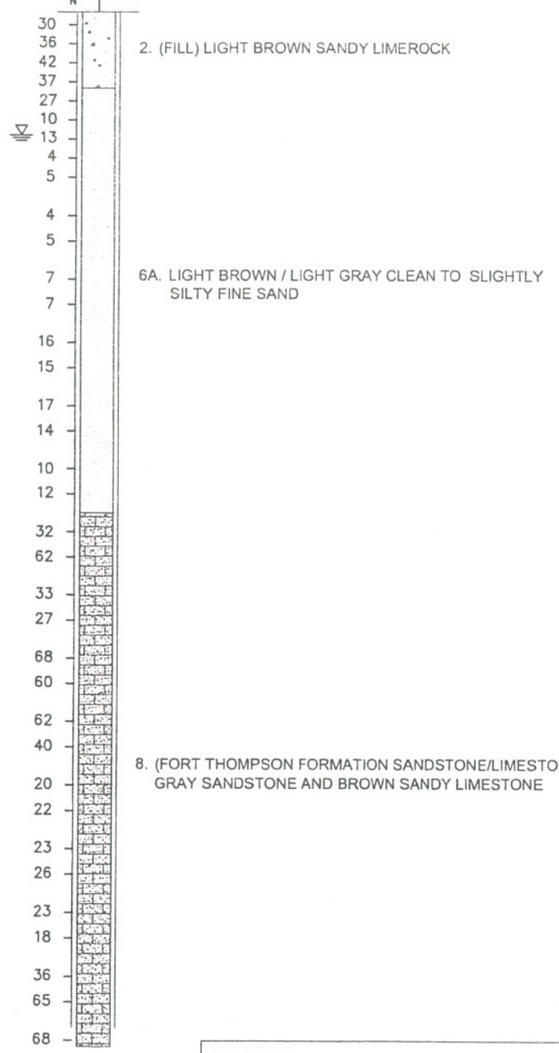
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
-----	MIAMI-DADE	252174-1-52-01

REPORT OF CORE BORINGS

GOLDEN GLADES INTERCHANGE

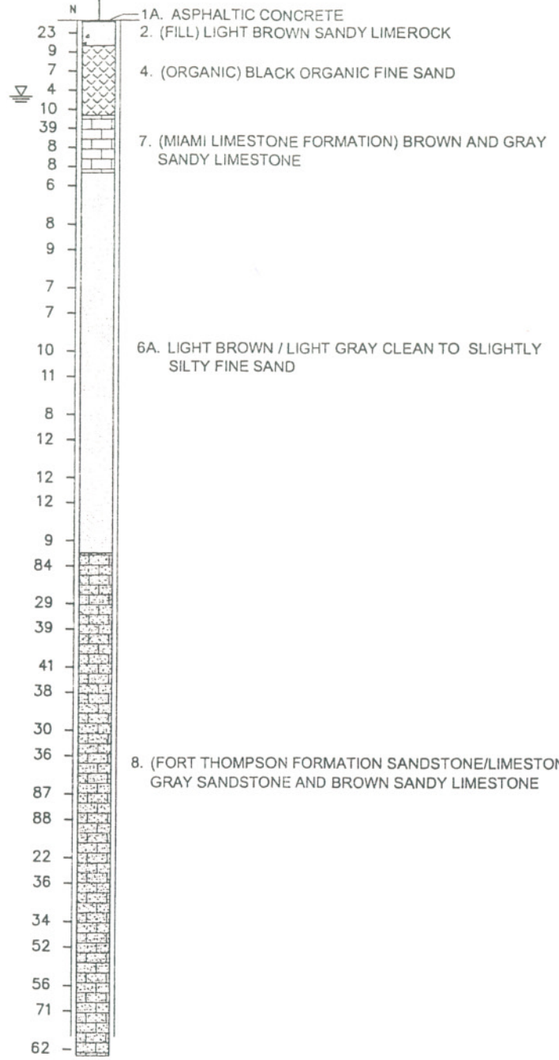
SHEET NO.

BORING NO. B-BS-1
DATE 2/10/04
NORTHING 577951.4
EASTING 913761.9
HAMMER AUTOMATIC
TYPE OF RIG CME 75



BORING TERMINATED @ DEPTH OF 81.5 FEET

BORING NO. B-BS-4
DATE 2/04/04
NORTHING 941450.4
EASTING 911770.9
HAMMER AUTOMATIC
TYPE OF RIG CME 75



BORING TERMINATED @ DEPTH OF 81.5 FEET

DISCLAIMER:

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LEGEND

- 1A. ASPHALTIC CONCRETE
- 1B. (TOPSOIL) DARK BROWN ORGANIC SILTY FINE SAND WITH ROOTS
- 2. (FILL) LIGHT BROWN SANDY LIMEROCK
- 3. (FILL) LIGHT BROWN / BROWN FINE SAND TO SLIGHTLY SILTY FINE SAND WITH OR WITHOUT LIMEROCK
- 4. (ORGANIC) BLACK ORGANIC FINE SAND
- 5. BROWN SILTY FINE SAND
- 6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND
- 6B. LIGHT BROWN / LIGHT GRAY CLEAN TO SILTY FINE SAND WITH LIMESTONE LAYERS
- 7. (MIAMI LIMESTONE FORMATION) BROWN AND GRAY SANDY LIMESTONE
- 8. (FORT THOMPSON FORMATION SANDSTONE/LIMESTONE) GRAY SANDSTONE AND BROWN SANDY LIMESTONE

NOTES:

- WATER TABLE AT TIME OF DRILLING
- N NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12" PENETRATION (UNLESS OTHERWISE NOTED).
- 3.25" HEAVY DUTY HOLLOW STEM AUGER USED
- -200 FINES PASSING NO. 200 SIEVE (%)
- %W NATURAL MOISTURE CONTENT (%)
- OC ORGANIC CONTENT (%)
- WOH WEIGHT OF HAMMER
- DRILLED BY BERANUIL/GRIGGS

THESE DRAWINGS WERE PREPARED UNDER DISTRICT/AREAWIDE CONTRACT FM No. 250730-1-32-02

GRANULAR MATERIALS- RELATIVE DENSITY	SAFETY HAMMER SPT-N (BLOWS/12 in)	AUTOMATIC HAMMER SPT-N (BLOWS/12 in)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4-10	3-7
MEDIUM	10-30	7-21
DENSE	30-50	21-35
VERY DENSE	GREATER THAN 50	GREATER THAN 35

SILTS AND CLAYS CONSISTENCY	SAFETY HAMMER SPT-N (BLOWS/12 in)	AUTOMATIC HAMMER SPT-N (BLOWS/12 in)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2-4	1-3
FIRM	4-8	3-6
STIFF	8-15	6-11
VERY STIFF	15-30	11-21
HARD	GREATER THAN 30	GREATER THAN 21

0 5' 10'
VERTICAL SCALE
HORIZONTAL N.T.S.

6/4/04

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

ENGINEER OF RECORD
HUGO E. SOTO, P.E.
FLA. REG. No. 36440

PSI ENVIRONMENTAL GEOTECHNICAL CONSTRUCTION
CERTIFICATE OF AUTHORIZATION No. 3684
7950 N.W. 64th STREET, MIAMI, FL 33166
PHONE (305) 471-7725 ✱ FAX (305) 593-1915

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

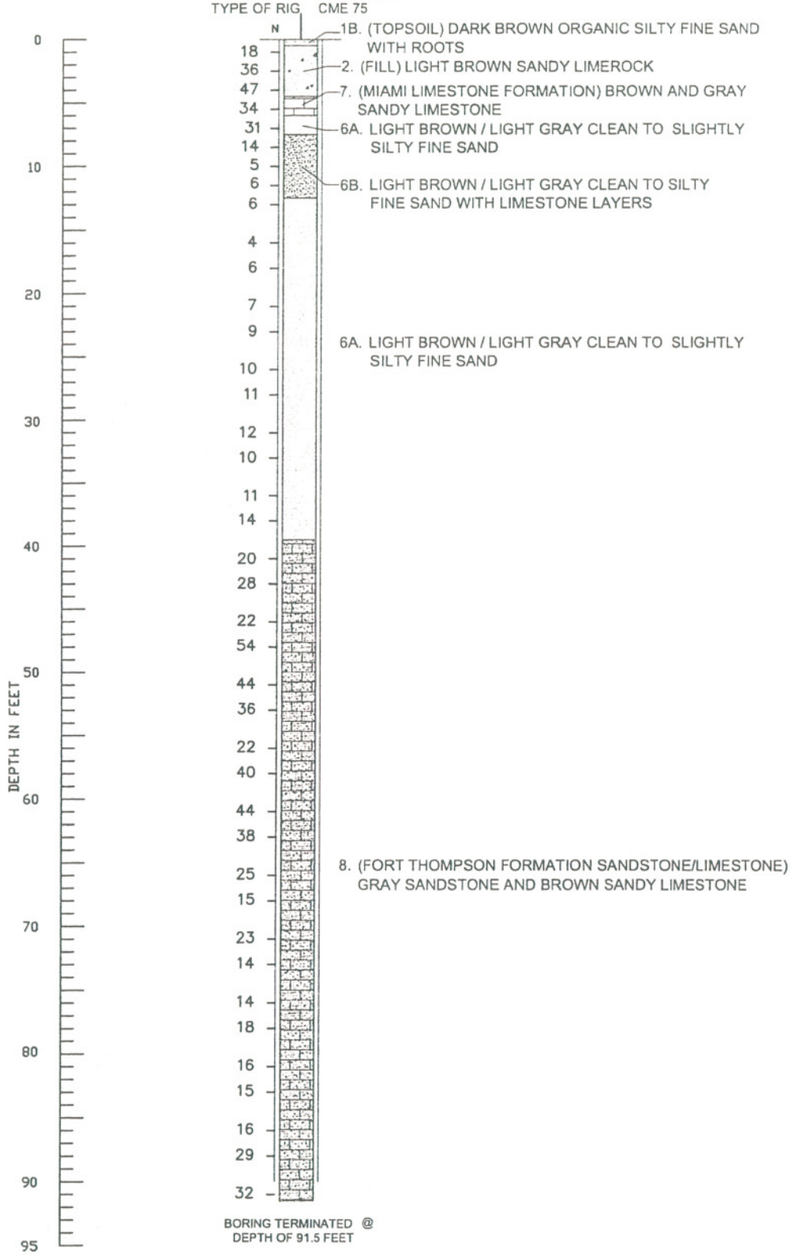
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
-----	MIAMI-DADE	252174-1-52-01

REPORT OF CORE BORINGS

GOLDEN GLADES INTERCHANGE

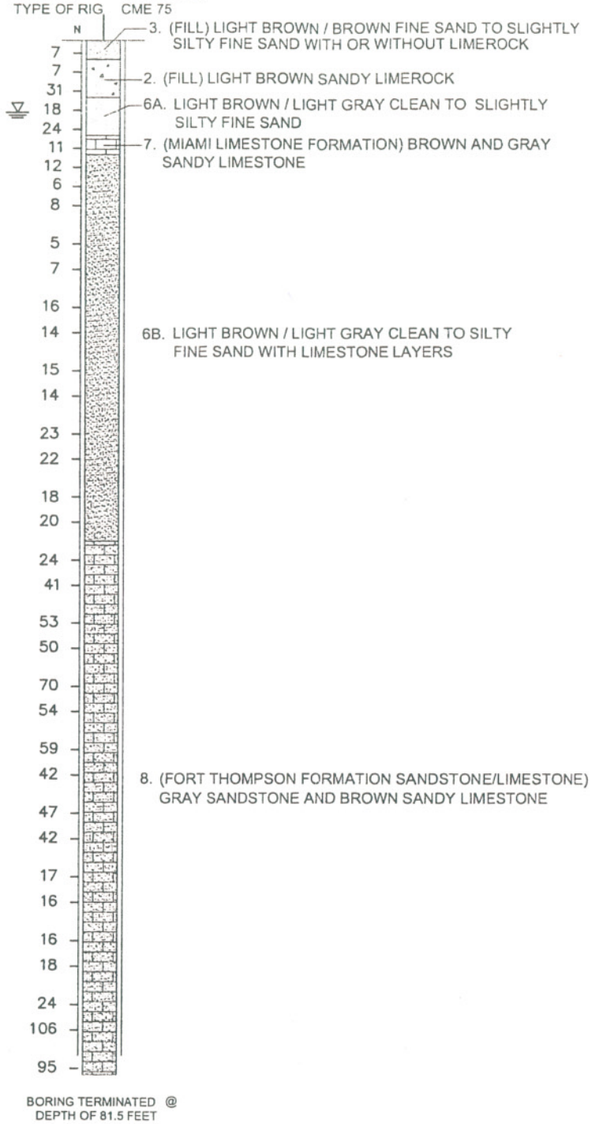
SHEET NO.

BORING NO. B-BS-5
DATE 2/12/04
NORTHING 578141.7
EASTING 913964.6
HAMMER AUTOMATIC
TYPE OF RIG CME 75



Water table depth Not recorded in boring B-BS-5

BORING NO. B-BS-6
DATE 2/11/04
NORTHING 578072.8
EASTING 913994.6
HAMMER AUTOMATIC
TYPE OF RIG CME 75



DISCLAIMER:

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LEGEND

1A. ASPHALTIC CONCRETE

1B. (TOPSOIL) DARK BROWN ORGANIC SILTY FINE SAND WITH ROOTS

2. (FILL) LIGHT BROWN SANDY LIMEROCK

3. (FILL) LIGHT BROWN / BROWN FINE SAND TO SLIGHTLY SILTY FINE SAND WITH OR WITHOUT LIMEROCK

4. (ORGANIC) BLACK ORGANIC FINE SAND

5. BROWN SILTY FINE SAND

6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND

6B. LIGHT BROWN / LIGHT GRAY CLEAN TO SILTY FINE SAND WITH LIMESTONE LAYERS

7. (MIAMI LIMESTONE FORMATION) BROWN AND GRAY SANDY LIMESTONE

8. (FORT THOMPSON FORMATION SANDSTONE/LIMESTONE) GRAY SANDSTONE AND BROWN SANDY LIMESTONE

NOTES:

- WATER TABLE AT TIME OF DRILLING
- N NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12" PENETRATION (UNLESS OTHERWISE NOTED).
- 3.25" HEAVY DUTY HOLLOW STEM AUGER USED
- -200 FINES PASSING NO. 200 SIEVE (%)
- %W NATURAL MOISTURE CONTENT (%)
- OC ORGANIC CONTENT (%)
- WOH WEIGHT OF HAMMER
- DRILLED BY BERANUIL/GRIGGS

THESE DRAWINGS WERE PREPARED UNDER DISTRICT/AREAWIDE CONTRACT FM No. 250730-1-32-02

GRANULAR MATERIALS- RELATIVE DENSITY	SAFETY HAMMER SPT-N (BLOWS/12 In)	AUTOMATIC HAMMER SPT-N (BLOWS/12 In)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4-10	3-7
MEDIUM	10-30	7-21
DENSE	30-50	21-35
VERY DENSE	GREATER THAN 50	GREATER THAN 35

SILTS AND CLAYS CONSISTENCY	SAFETY HAMMER SPT-N (BLOWS/12 In)	AUTOMATIC HAMMER SPT-N (BLOWS/12 In)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2-4	1-3
FIRM	4-8	3-6
STIFF	8-15	6-11
VERY STIFF	15-30	11-21
HARD	GREATER THAN 30	GREATER THAN 21

0 5' 10'
VERTICAL SCALE
HORIZONTAL N.T.S.

6/4/04

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

ENGINEER OF RECORD
HUGO E. SOTO, P.E.
FLA. REG. No. 36440

PSI ENVIRONMENTAL GEOTECHNICAL CONSTRUCTION
CERTIFICATE OF AUTHORIZATION No. 3684
7950 N.W. 64th STREET, MIAMI, FL 33166
PHONE (305) 471-7725 ✱ FAX (305) 593-1915

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

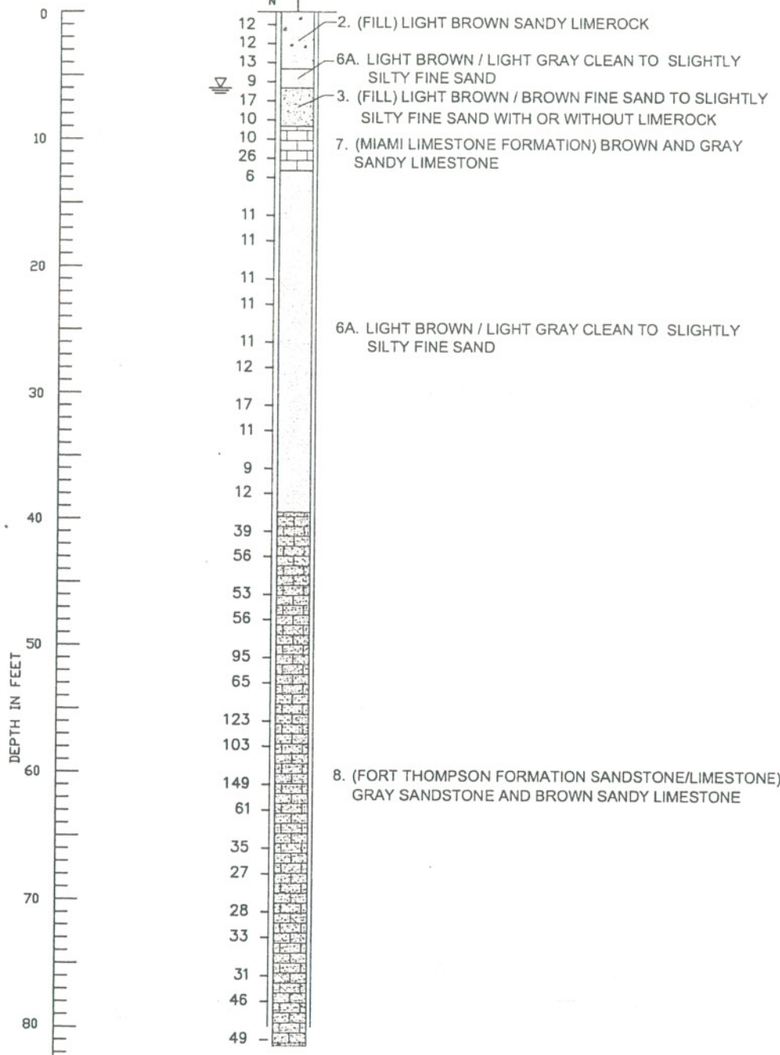
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
-----	MIAMI-DADE	252174-1-52-01

REPORT OF CORE BORINGS

GOLDEN GLADES INTERCHANGE

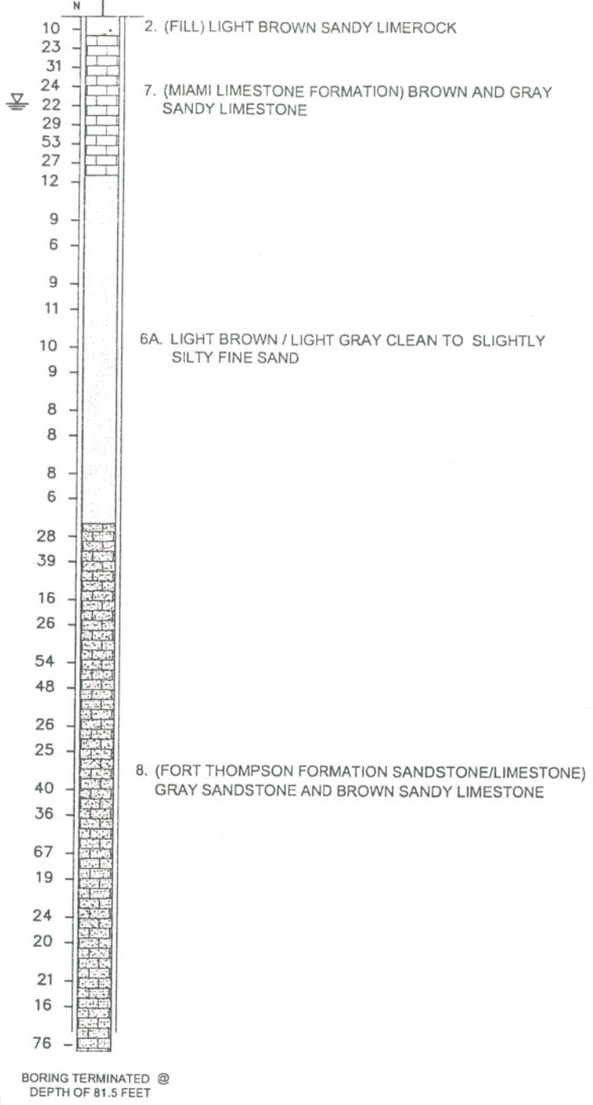
SHEET NO.

BORING NO. B-BS-7
DATE 2/9/04
NORTHING 577997.1
EASTING 914103.5
HAMMER AUTOMATIC
TYPE OF RIG CME 75



BORING TERMINATED @ DEPTH OF 81.5 FEET

BORING NO. B-BS-8
DATE 2/17/04
NORTHING 578164.3
EASTING 914105.8
HAMMER AUTOMATIC
TYPE OF RIG CME 75



BORING TERMINATED @ DEPTH OF 81.5 FEET

DISCLAIMER:

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THE INFORMATION CONTAINED IN THE BORING PROFILES IS NOT A RESPONSABILITY OF PROFESIONAL SERVICE INDUSTRIES, INC.

LEGEND

- 1A. ASPHALTIC CONCRETE
- 1B. (TOPSOIL) DARK BROWN ORGANIC SILTY FINE SAND WITH ROOTS
- 2. (FILL) LIGHT BROWN SANDY LIMEROCK
- 3. (FILL) LIGHT BROWN / BROWN FINE SAND TO SLIGHTLY SILTY FINE SAND WITH OR WITHOUT LIMEROCK
- 4. (ORGANIC) BLACK ORGANIC FINE SAND
- 5. BROWN SILTY FINE SAND
- 6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND
- 6B. LIGHT BROWN / LIGHT GRAY CLEAN TO SILTY FINE SAND WITH LIMESTONE LAYERS
- 7. (MIAMI LIMESTONE FORMATION) BROWN AND GRAY SANDY LIMESTONE
- 8. (FORT THOMPSON FORMATION SANDSTONE/LIMESTONE) GRAY SANDSTONE AND BROWN SANDY LIMESTONE

NOTES:

- WATER TABLE AT TIME OF DRILLING
- N NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12" PENETRATION (UNLESS OTHERWISE NOTED).
- 3.25" HEAVY DUTY HOLLOW STEM AUGER USED
- -200 FINES PASSING NO. 200 SIEVE (%)
- %W NATURAL MOISTURE CONTENT (%)
- OC ORGANIC CONTENT (%)
- WOH WEIGHT OF HAMMER

DRILLED BY BERANUIL/GRIGGS

THESE DRAWINGS WERE PREPARED UNDER DISTRICT/AREAWIDE CONTRACT FM No. 250730-1-32-02

GRANULAR MATERIALS– RELATIVE DENSITY	SAFETY HAMMER SPT-N (BLOWS/12 in)	AUTOMATIC HAMMER SPT-N (BLOWS/12 in)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4-10	3-7
MEDIUM	10-30	7-21
DENSE	30-50	21-35
VERY DENSE	GREATER THAN 50	GREATER THAN 35

SILTS AND CLAYS CONSISTENCY	SAFETY HAMMER SPT-N (BLOWS/12 in)	AUTOMATIC HAMMER SPT-N (BLOWS/12 in)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2-4	1-3
FIRM	4-8	3-6
STIFF	8-15	6-11
VERY STIFF	15-30	11-21
HARD	GREATER THAN 30	GREATER THAN 21

0 5' 10'
VERTICAL SCALE
HORIZONTAL N.T.S.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

6/14/06

ENGINEER OF RECORD
HUGO E. SOTO, P.E.
FLA. REG. No. 36440

PSI ENVIRONMENTAL GEOTECHNICAL CONSTRUCTION
CERTIFICATE OF AUTHORIZATION No. 3684
7950 N.W. 64th STREET, MIAMI, FL 33166
PHONE (305) 471-7725 ✱ FAX (305) 593-1915

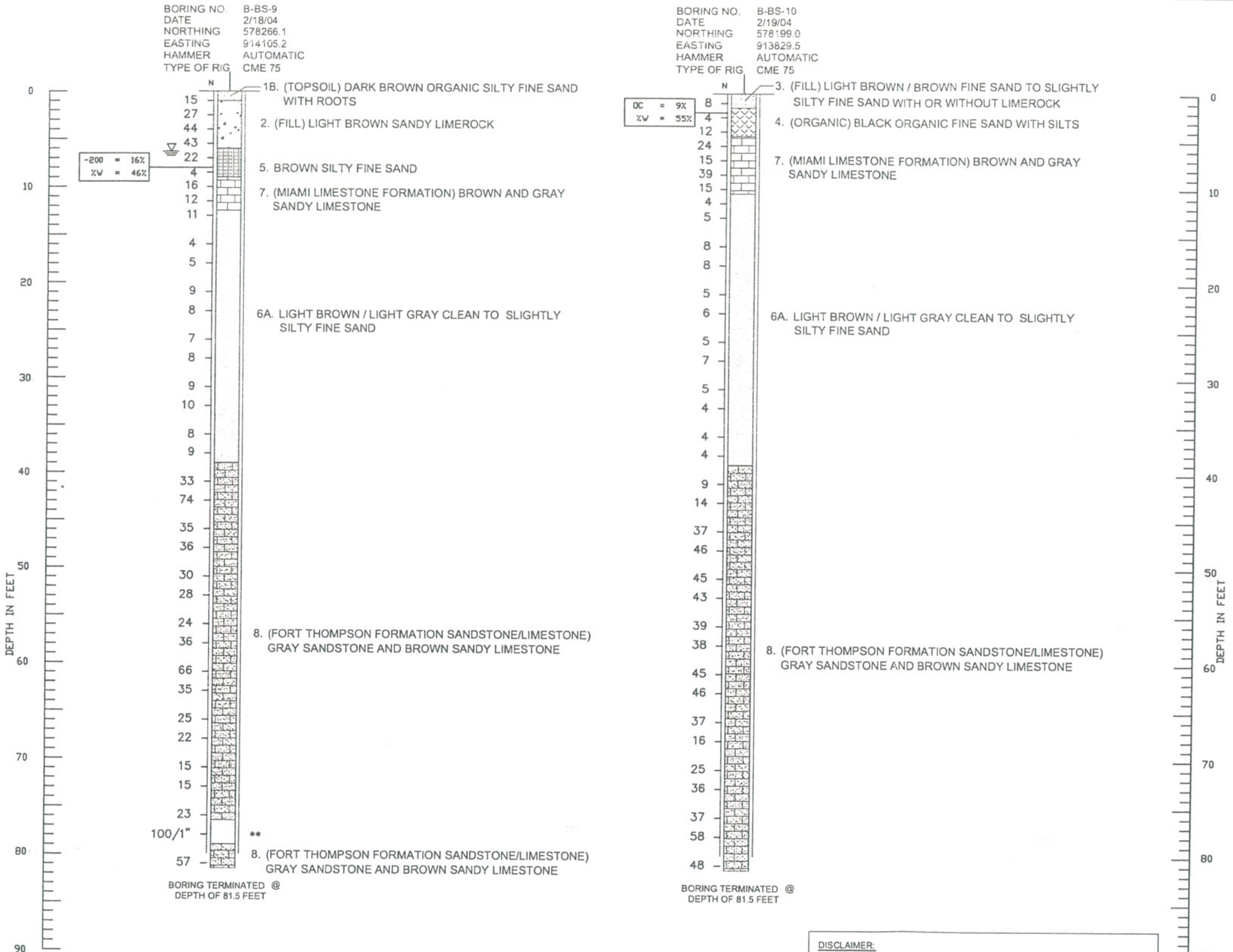
STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
-----	MIAMI-DADE	252174-1-52-01

REPORT OF CORE BORINGS

GOLDEN GLADES INTERCHANGE

SHEET NO.



LEGEND

- 1A. ASPHALTIC CONCRETE
- 1B. (TOPSOIL) DARK BROWN ORGANIC SILTY FINE SAND WITH ROOTS
- 2. (FILL) LIGHT BROWN SANDY LIMEROCK
- 3. (FILL) LIGHT BROWN / BROWN FINE SAND TO SLIGHTLY SILTY FINE SAND WITH OR WITHOUT LIMEROCK
- 4. (ORGANIC) BLACK ORGANIC FINE SAND
- 5. BROWN SILTY FINE SAND
- 6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND
- 6B. LIGHT BROWN / LIGHT GRAY CLEAN TO SILTY FINE SAND WITH LIMESTONE LAYERS
- 7. (MIAMI LIMESTONE FORMATION) BROWN AND GRAY SANDY LIMESTONE
- 8. (FORT THOMPSON FORMATION SANDSTONE/LIMESTONE) GRAY SANDSTONE AND BROWN SANDY LIMESTONE

NOTES:

- ▼ WATER TABLE AT TIME OF DRILLING
- N NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12" PENETRATION (UNLESS OTHERWISE NOTED).
- || || 3.25" HEAVY DUTY HOLLOW STEM AUGER USED
- -200 FINES PASSING NO. 200 SIEVE (%)
- %W NATURAL MOISTURE CONTENT (%)
- OC ORGANIC CONTENT (%)
- WOH WEIGHT OF HAMMER

DRILLED BY BERANUIL/GRIGGS

THESE DRAWINGS WERE PREPARED UNDER DISTRICT/AREAWIDE CONTRACT FM No. 250730-1-32-02

GRANULAR MATERIALS- RELATIVE DENSITY	SAFETY HAMMER SPT-N (BLOWS/12 In)	AUTOMATIC HAMMER SPT-N (BLOWS/12 In)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4-10	3-7
MEDIUM	10-30	7-21
DENSE	30-50	21-35
VERY DENSE	GREATER THAN 50	GREATER THAN 35

SILTS AND CLAYS CONSISTENCY	SAFETY HAMMER SPT-N (BLOWS/12 In)	AUTOMATIC HAMMER SPT-N (BLOWS/12 In)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2-4	1-3
FIRM	4-8	3-6
STIFF	8-15	6-11
VERY STIFF	15-30	11-21
HARD	GREATER THAN 30	GREATER THAN 21

** No sample recovery from 76.5' to 79' in boring B-BS-9

DISCLAIMER:

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0 5' 10'
VERTICAL SCALE
HORIZONTAL N.T.S.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

6/4/04
ENGINEER OF RECORD
HUGO E. SOTO, P.E.
FLA. REG. No. 36440

ENVIRONMENTAL GEOTECHNICAL CONSTRUCTION
CERTIFICATE OF AUTHORIZATION No. 3684
7950 N.W. 64th STREET, MIAMI, FL 33166
PHONE (305) 471-7725 ■ FAX (305) 593-1915

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

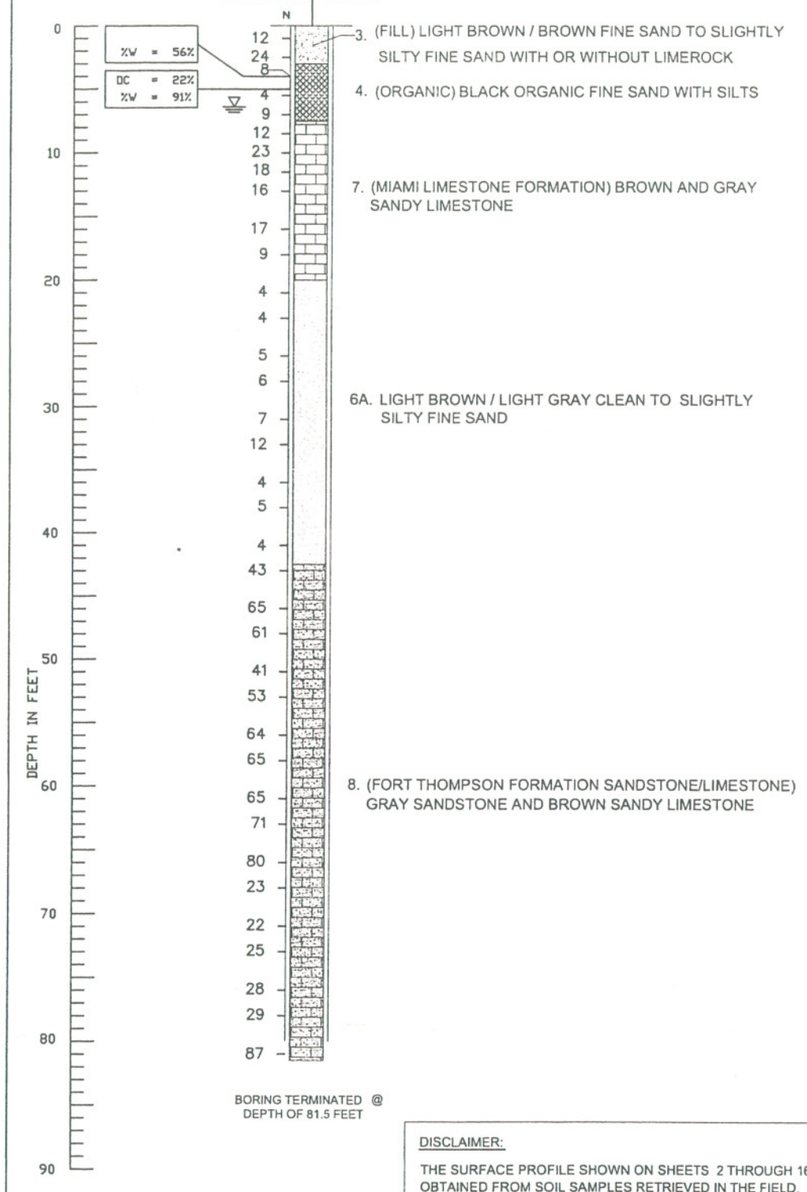
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
-----	MIAMI-DADE	252174-1-52-01

REPORT OF CORE BORINGS

GOLDEN GLADES INTERCHANGE

SHEET NO.

BORING NO. B-PS-1
DATE 2/03/04
NORTHING 578175.7
EASTING 914789.4
HAMMER AUTOMATIC
TYPE OF RIG CME 75



3. (FILL) LIGHT BROWN / BROWN FINE SAND TO SLIGHTLY SILTY FINE SAND WITH OR WITHOUT LIMEROCK

4. (ORGANIC) BLACK ORGANIC FINE SAND WITH SILTS

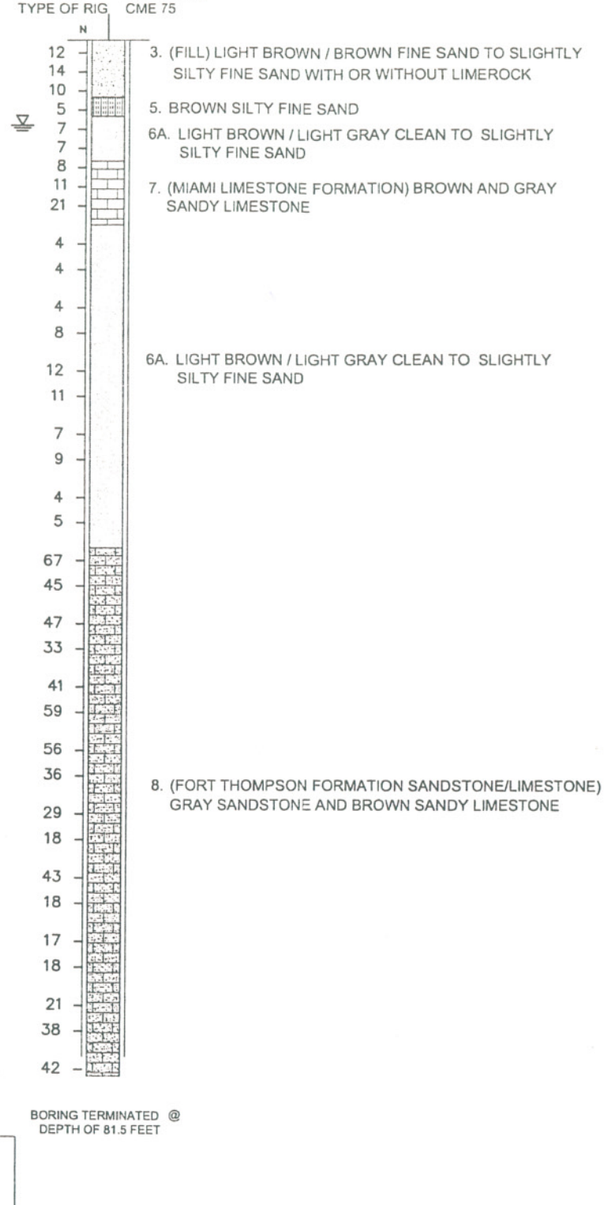
7. (MIAMI LIMESTONE FORMATION) BROWN AND GRAY SANDY LIMESTONE

6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND

8. (FORT THOMPSON FORMATION SANDSTONE/LIMESTONE) GRAY SANDSTONE AND BROWN SANDY LIMESTONE

BORING TERMINATED @ DEPTH OF 81.5 FEET

BORING NO. B-PS-2
DATE 2/23/04
NORTHING 578402.4
EASTING 914406.8
HAMMER AUTOMATIC
TYPE OF RIG CME 75



3. (FILL) LIGHT BROWN / BROWN FINE SAND TO SLIGHTLY SILTY FINE SAND WITH OR WITHOUT LIMEROCK

5. BROWN SILTY FINE SAND

6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND

7. (MIAMI LIMESTONE FORMATION) BROWN AND GRAY SANDY LIMESTONE

6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND

8. (FORT THOMPSON FORMATION SANDSTONE/LIMESTONE) GRAY SANDSTONE AND BROWN SANDY LIMESTONE

BORING TERMINATED @ DEPTH OF 81.5 FEET

LEGEND

1A. ASPHALTIC CONCRETE

1B. (TOPSOIL) DARK BROWN ORGANIC SILTY FINE SAND WITH ROOTS

2. (FILL) LIGHT BROWN SANDY LIMEROCK

3. (FILL) LIGHT BROWN / BROWN FINE SAND TO SLIGHTLY SILTY FINE SAND WITH OR WITHOUT LIMEROCK

4. (ORGANIC) BLACK ORGANIC FINE SAND

5. BROWN SILTY FINE SAND

6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND

6B. LIGHT BROWN / LIGHT GRAY CLEAN TO SILTY FINE SAND WITH LIMESTONE LAYERS

7. (MIAMI LIMESTONE FORMATION) BROWN AND GRAY SANDY LIMESTONE

8. (FORT THOMPSON FORMATION SANDSTONE/LIMESTONE) GRAY SANDSTONE AND BROWN SANDY LIMESTONE

NOTES:

- WATER TABLE AT TIME OF DRILLING
- N NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12" PENETRATION (UNLESS OTHERWISE NOTED).
- 3.25" HEAVY DUTY HOLLOW STEM AUGER USED
- -200 FINES PASSING NO. 200 SIEVE (%)
- %W NATURAL MOISTURE CONTENT (%)
- OC ORGANIC CONTENT (%)
- WOH WEIGHT OF HAMMER

DRILLED BY BERANUIL/GRIGGS

THESE DRAWINGS WERE PREPARED UNDER DISTRICT/AREAWIDE CONTRACT FM No. 250730-1-32-02

GRANULAR MATERIALS- RELATIVE DENSITY	SAFETY HAMMER SPT-N (BLOWS/12 In)	AUTOMATIC HAMMER SPT-N (BLOWS/12 In)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4-10	3-7
MEDIUM	10-30	7-21
DENSE	30-50	21-35
VERY DENSE	GREATER THAN 50	GREATER THAN 35

SILTS AND CLAYS CONSISTENCY	SAFETY HAMMER SPT-N (BLOWS/12 In)	AUTOMATIC HAMMER SPT-N (BLOWS/12 In)
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2-4	1-3
FIRM	4-8	3-6
STIFF	8-15	6-11
VERY STIFF	15-30	11-21
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0 5' 10'
VERTICAL SCALE
HORIZONTAL N.T.S.

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REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

6/4/04
ENGINEER OF RECORD
HUGO E. SOTO, P.E.
FLA. REG. No. 36440

PSI ENVIRONMENTAL GEOTECHNICAL CONSTRUCTION
CERTIFICATE OF AUTHORIZATION No. 3684
7950 N.W. 64th STREET, MIAMI, FL 33166
PHONE (305) 471-7725 ■ FAX (305) 593-1915

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
-----	MIAMI-DADE	252174-1-52-01

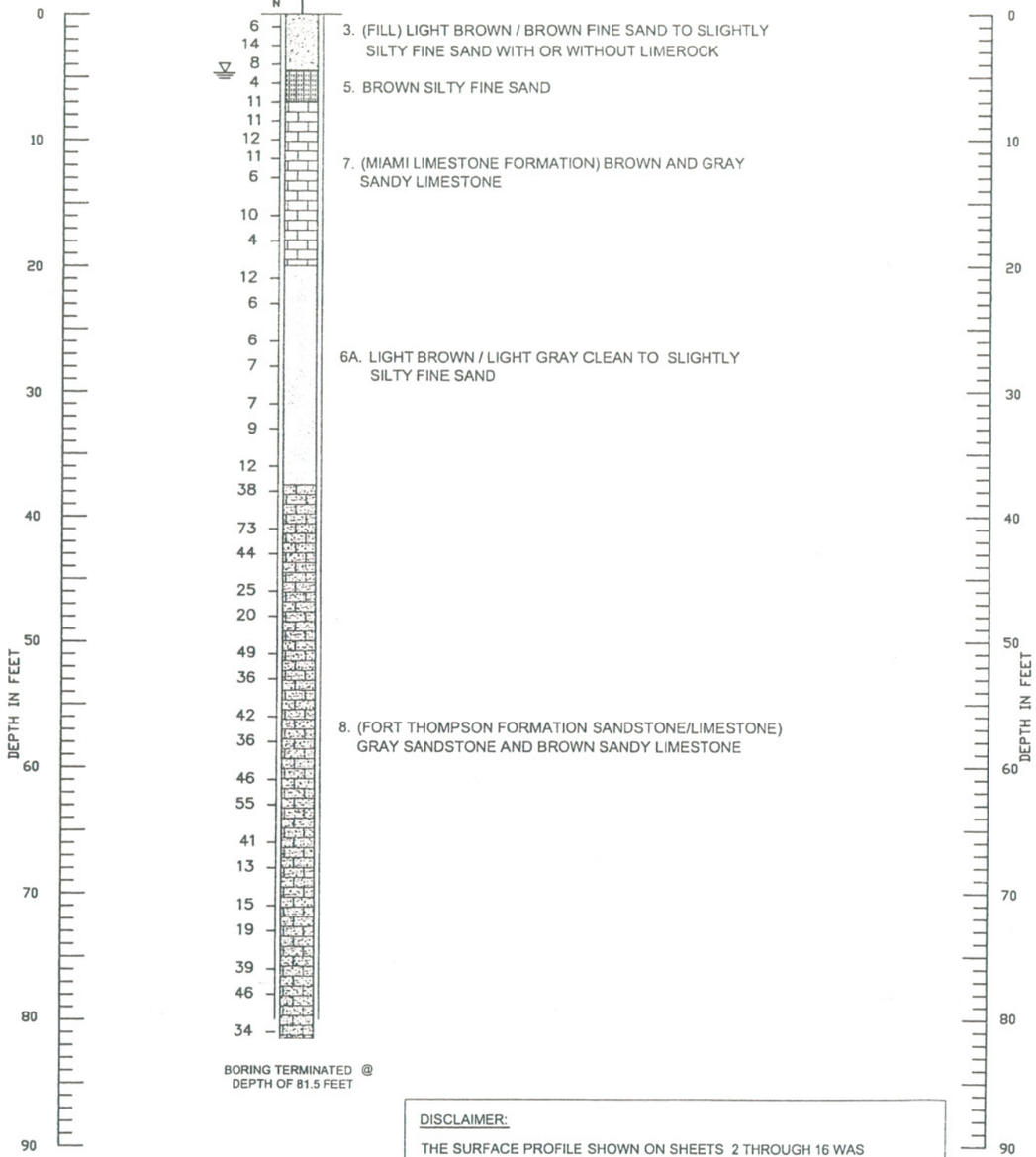
REPORT OF CORE BORINGS

GOLDEN GLADES INTERCHANGE

SHEET NO.

PSI PROJECT No. 397-45002
SHEET No. 15

BORING NO. B-PS-3
DATE 2/25/04
NORTHING 578672.9
EASTING 914664.8
HAMMER AUTOMATIC
TYPE OF RIG CME 75



3. (FILL) LIGHT BROWN / BROWN FINE SAND TO SLIGHTLY SILTY FINE SAND WITH OR WITHOUT LIMEROCK

5. BROWN SILTY FINE SAND

7. (MIAMI LIMESTONE FORMATION) BROWN AND GRAY SANDY LIMESTONE

6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND

8. (FORT THOMPSON FORMATION SANDSTONE/LIMESTONE) GRAY SANDSTONE AND BROWN SANDY LIMESTONE

BORING TERMINATED @ DEPTH OF 81.5 FEET

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0 5' 10'
VERTICAL SCALE
HORIZONTAL N.T.S.

LEGEND

1A. ASPHALTIC CONCRETE

1B. (TOPSOIL) DARK BROWN ORGANIC SILTY FINE SAND WITH ROOTS

2. (FILL) LIGHT BROWN SANDY LIMEROCK

3. (FILL) LIGHT BROWN / BROWN FINE SAND TO SLIGHTLY SILTY FINE SAND WITH OR WITHOUT LIMEROCK

4. (ORGANIC) BLACK ORGANIC FINE SAND

5. BROWN SILTY FINE SAND

6A. LIGHT BROWN / LIGHT GRAY CLEAN TO SLIGHTLY SILTY FINE SAND

6B. LIGHT BROWN / LIGHT GRAY CLEAN TO SILTY FINE SAND WITH LIMESTONE LAYERS

7. (MIAMI LIMESTONE FORMATION) BROWN AND GRAY SANDY LIMESTONE

8. (FORT THOMPSON FORMATION SANDSTONE/LIMESTONE) GRAY SANDSTONE AND BROWN SANDY LIMESTONE

NOTES:

- WATER TABLE AT TIME OF DRILLING
- N NUMBERS TO THE LEFT OF BORINGS INDICATE SPT VALUE FOR 12" PENETRATION (UNLESS OTHERWISE NOTED).
- 3.25" HEAVY DUTY HOLLOW STEM AUGER USED
- -200 FINES PASSING NO. 200 SIEVE (%)
- %W NATURAL MOISTURE CONTENT (%)
- OC ORGANIC CONTENT (%)
- WOH WEIGHT OF HAMMER

DRILLED BY BERANUIL/GRIGGS

THESE DRAWINGS WERE PREPARED UNDER DISTRICT/AREAWIDE CONTRACT FM No. 250730-1-32-02

GRANULAR MATERIALS- RELATIVE DENSITY	SAFETY HAMMER SPT-N (BLOWS/12 In)	AUTOMATIC HAMMER SPT-N (BLOWS/12 In)
VERY LOOSE	LESS THAN 4	LESS THAN 3
LOOSE	4-10	3-7
MEDIUM	10-30	7-21
DENSE	30-50	21-35
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SILTS AND CLAYS CONSISTENCY	**SAFETY HAMMER SPT-N (BLOWS/12 In)**	**AUTOMATIC HAMMER SPT-N (BLOWS/12 In)**
VERY SOFT	LESS THAN 2	LESS THAN 1
SOFT	2-4	1-3
FIRM	4-8	3-6
STIFF	8-15	6-11
VERY STIFF	15-30	11-21
HARD	GREATER THAN 30	GREATER THAN 21

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

6/4/04
ENGINEER OF RECORD
HUGO E. SOTO, P.E.
FLA. REG. No. 36440

psi ENVIRONMENTAL GEOTECHNICAL CONSTRUCTION
CERTIFICATE OF AUTHORIZATION No. 3684
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PHONE (305) 471-7725 ✱ FAX (305) 593-1915

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
-----	MIAMI-DADE	252174-1-52-01

REPORT OF CORE BORINGS

GOLDEN GLADES INTERCHANGE

SHEET NO.

Environmental Geotechnical Construction
Consulting • Engineering • Testing

SUMMARY OF CONSTANT HEAD PERCOLATION TEST RESULTS
GOLDEN GLADES INTERCHANGE
MIAMI-DADE COUNTY, FLORIDA
PSI PROJECT NO. 397-45002
FINANCIAL PROJECT ID. 252174-1-52-01

Test No.	Date Performed	Diameter		Depth of Hole (Feet)	Depth to Groundwater Level Below Ground Surface (Feet)		Hydraulic Head, H2 (Feet)	Saturated Hole Depth, Ds (Feet)	Average Flow Rate, Q (gpm)	K, Hydraulic Conductivity cfs/ft^2-ft
		Hole (Inches)	Casing (Inches)		Prior to Test	During Test				
P-1	24-Feb-04	7.3	0.0	10.0	5.4	1.0	4.4	4.6	10.5	4.0E-04
	24-Feb-04	3.2	0.0	15.0	5.4	1.0	4.4	9.6	5.4	2.8E-04
	24-Feb-04	3.2	0.0	20.0	5.4	1.0	4.4	14.6	0.2	7.2E-06
P-2	10-Mar-04	7.3	0.0	10.0	5.2	1.0	4.2	4.8	2.1	8.3E-05
	10-Mar-04	3.2	0.0	15.0	5.2	1.0	4.2	9.8	0.3	1.6E-05
	10-Mar-04	3.2	0.0	20.0	5.2	1.0	4.2	14.8	0.6	2.2E-05
P-3	11-Mar-04	7.3	0.0	10.0	5.6	1.0	4.6	4.4	4.3	1.6E-04
	11-Mar-04	3.2	0.0	15.0	5.6	1.0	4.6	9.4	2.8	1.4E-04
	11-Mar-04	3.2	0.0	20.0	5.6	1.0	4.6	14.4	0.3	1.0E-05
P-4	8-Mar-04	7.3	0.0	10.0	5.4	1.0	4.4	4.6	5.6	2.2E-04
	8-Mar-04	3.2	0.0	15.0	5.4	1.0	4.4	9.6	5.8	3.0E-04
	8-Mar-04	3.2	0.0	20.0	5.4	1.0	4.4	14.6	3.6	1.3E-04

Note:

(1) The above hydraulic conductivity values are for a french drain installed to the same depth as the borehole tests. The values represent an ultimate value. The designer should decide on the required factor of safety.

(2) The hydraulic conductivity values were calculated based on the South Florida Water Management Districts's USUAL OPEN HOLE CONSTANT HEAD percolation test procedures.

(3) A 7 1/4-inches diamter Hole was used at 10-foot depth and 3 3/16-inch for the 15 and 20-foot depths, in the computation of the Hydraulic Conductivity values presented in the above table.

(4) This work was performed under district/areawide contract FID No. 250730-1-32-02

(5) The percolations test results have been calculated based on the data provided to PSI, Inc by F.D.O.T. The data contained herein is not a responsibility of PSI, Inc.

Environmental Geotechnical Construction
Consulting • Engineering • Testing

SUMMARY OF CONSTANT HEAD PERCOLATION TEST RESULTS
GOLDEN GLADES INTERCHANGE
MIAMI-DADE COUNTY, FLORIDA
PSI PROJECT NO. 397-45002
FINANCIAL PROJECT ID. 252174-1-52-01

Test No.	Date Performed	Diameter		Depth of Hole (Feet)	Depth to Groundwater Level Below Ground Surface (Feet)		Hydraulic Head, H2 (Feet)	Saturated Hole Depth, Ds (Feet)	Average Flow Rate, Q (gpm)	K, Hydraulic Conductivity cfs/ft^2-ft
		Hole (Inches)	Casing (Inches)		Prior to Test	During Test				
P-5	26-Feb-04	7.3	0.0	10.0	4.7	1.0	3.7	5.3	1.7	7.4E-05
	26-Feb-04	3.2	0.0	15.0	4.7	1.0	3.7	10.3	2.1	1.2E-04
	26-Feb-04	3.2	0.0	20.0	4.7	1.0	3.7	15.3	0.8	3.3E-05
P-7	11-Mar-04	7.3	0.0	10.0	6.9	1.0	5.9	3.1	0.5	1.6E-05
	11-Mar-04	3.2	0.0	15.0	6.9	1.0	5.9	8.1	30.5	1.2E-03
P-8	24-Feb-04	7.3	0.0	10.0	6.8	1.0	5.8	3.2	0.8	2.6E-05
	24-Feb-04	3.2	0.0	15.0	6.8	1.0	5.8	8.2	1.0	4.1E-05
	24-Feb-04	3.2	0.0	20.0	6.8	1.0	5.8	13.2	1.7	4.8E-05
P-9	26-Feb-04	7.3	0.0	10.0	5.9	1.0	4.9	4.1	3.3	1.2E-04
	26-Feb-04	3.2	0.0	15.0	5.9	1.0	4.9	9.1	3.5	1.6E-04
	26-Feb-04	3.2	0.0	20.0	5.9	1.0	4.9	14.1	16.3	5.3E-04

Note:

(1) The above hydraulic conductivity values are for a french drain installed to the same depth as the borehole tests. The values represent an ultimate value. The designer should decide on the required factor of safety.

(2) The hydraulic conductivity values were calculated based on the South Florida Water Management Districts's USUAL OPEN HOLE CONSTANT HEAD percolation test procedures.

(3) A 7 1/4-inches diamter Hole was used at 10-foot depth and 3 3/16-inch for the 15 and 20-foot depths, in the computation of the Hydraulic Conductivity values presented in the above table.

(4) This work was performed under district/areawide contract FID No. 250730-1-32-02

(5) The percolations test results have been calculated based on the data provided to PSI, Inc by F.D.O.T. The data contained herein is not a responsibility of PSI, Inc.

(6) Percolation test P-6 was not performed due to accessibility constraints.

(7) Percolation test P-7 was performed at depths of 10 and 15 feet only.

APPENDIX D

MEETINGS AND CORRESPONDENCE

DMJM HARRIS | AECOM

March 2, 2004

Mr. Jose R. Gonzalez, P.E.
Project Manager
State of Florida
Department of Transportation
Environmental Management Office
1000 N.W. 111th Avenue, Room 6103
Miami, Florida 33172

RE: **Public Kick-off Meeting Minutes**
Golden Glades Project Development & Environment (PD&E) Study
Financial Management Number: 251684-1-22-01
Federal Aid Project Number: Not Assigned
County: Dade

Dear Mr. Gonzalez:

On February 24, 2004 a Public Kick-off Meeting was held between the FDOT, DMJM + Harris, Inc and the local community both residents and business owners. The meeting was held at the Biscayne Gardens Civic Association in the community of Biscayne Gardens which is in very close proximity to the project site. The purpose of the meeting was to provide a history and description of the project, and to gather input/comments from the local residents and business owners represented at the meeting (see attached meeting attendees sign-in sheet). The meeting commenced at 6:00pm and was completed by 8:15pm.

Jose Gonzalez, FDOT Project Manager, introduced himself and the rest of the Consultants. He also welcomed meeting attendees.

Jose gave a brief overview of the project history including the following:

- The FDOT High Occupational Vehicle (HOV) Program in the 1970's including construction of the Golden Glades Park & Ride Lot.
- The FDOT Feasibility Study in the 1980's
- The Miami-Dade Metropolitan Planning Organization (MPO) Study in the 1990's
- The FDOT Golden Glades Multimodal Facility Planning Study in 2001
- The Golden Glades Multimodal Facility PD&E Study currently being conducted.

Carlos Francis, Consultant Project Manager from DMJM + Harris, Inc., gave an overview of the PD&E process including the following:

- Collection of relevant engineering and environmental information
- Existing Conditions/Deficiencies

- Gathering of Public Input from the Kick-off and Alternatives Workshops
- Development and Analysis of Alternatives
- Recommendations for the Preferred Alternative
- Improvements to safety, ridership, separate vehicle/pedestrian flow, access, signage, landscaping, and roadways
- Consolidation of the different transportation modes
- Opportunities for joint development at the site
- Comparison Matrix which includes Engineering and Environmental factors
- Obtaining Federal Highway Administration approval of project for funding

Richard Heidrich from DMJM + Harris, Inc., gave an overview of the proposed improvements and showed the group a graphic of proposed Multimodal facility. He discussed that the new facility would offer the following features:

- Separation of buses from pedestrians
- Local, express, and Greyhound buses
- Tri-rail station movements
- Retail establishments
- Joint development (including Request for Proposals (RFP) for this effort)
- Office Structures
- Elevators to tri-rail
- Movement from the buses to transit to the parking garage to the facility

Bob Edelstein from DMJM + Harris, Inc., gave an overview of some of the Intelligent Transportation System (ITS) aspects of the project. The ITS would provide the following:

- Tri-rail kiosks that include FDOT traffic information (511 System)
- Electronic signs
- Parking management systems to provide information on parking lot capacity
- Security cameras
- Satellite control
- Smart car technology to include debit cards for users of bus and tri-rail
- Travel advisory radios to include traffic information

Bob also gave a brief explanation of the FDOT ITS Control Center at the Golden Glades. This center would provide linkage to the FDOT Sunguide, Tri-Rail, Miami-Dade County, Miami-Dade County MPO, and Broward County ITS Centers.

The presentation portion of the meeting ended and the following is a summary of the Question and Answer portion of the meeting:

Question: A resident asked about improving traffic congestion in and around the intersection of SR 7/SR 9. Response: Carlos explained that one task of the study was to collect traffic data and analyze these roads to improve access/egress to the site.

Question: A resident indicated that during the morning and evening peak periods, SR 7 is very congested. Response: FDOT indicated that a byproduct of the Implementation Plan was the identification of "hot spot" locations that will be addressed by proposed improvements. A resident indicated that the source of the congestion on SR 7 is the merge area at SR 9.

Question: What was the long-term plan for connecting Metrorail to the Golden Glades Multimodal Center?Response: FDOT indicated that there are no such plans.

Comment: A resident asked that more trees and landscape be incorporated into the Goledn Glades Multimodal Center as well as more pedestrian/bike amenities.

Question: A resident asked what is the difference between SunGuide, Sunpass and Smart Cards. Response: Robert Edelstein responded that SunGuide is the statewide brand name for Intelligent Transportation Systems; Sunpass was a subset of SunGuide pertaining to electronic toll collection along the Florida Turnpike; and Smart Cards is a system that can be used to integrate fare collection between different modes and agencies for buses, trains and other commercial applications. He also indicated that Tri-Rail is replacing their fare collection equipment with smart card enabled machines.to accommodate this technology in the future.

Comment: A resident suggested that the Consultant investigate the possibilities of having a police station located at the GGI as a joint venture partner.

Question: What was the ridership of the parking lot and who is using the parking lot?This is important to understand how it can be improved.
Response by Robert Edelstein: The current peak period demand is approximately 700 vehicles versus an available capacity of 1,350 spaces.

Question: A resident asked what was being added to the facility that could make it more attractive for potential users. Response: Robert Edelstein indicated that Tri-Rail is adding a second track and reducing the headways to 20 minutes. The station is being rebuilt to provide elevators and enclosed walkways to the platforms. The Transit Bridge Study, being conducted by the Broward MPO, is recommending Bus Rapid Transit along SR 7 from I-595 in Broward County to the Golden Glades Interchange. The Golden Glades Multimodal Center will need to provide a functional design to facilitate transfers between these modes, and additional demands, while improving safety, security, comfort and convenience.

Comment: A resident indicated that SR 441/SR 7 would operate better as an unimpeded road from the off ramp from SR 826 to I-95. Response: FDOT indicated that there is a design project (funded for design) that would connect directly freeway to freeway (Palmetto to I-95, etc)

Comment: A resident suggested that a solution to current traffic problems would be to add more flyovers to the GGI. Response: Although rebuilding of the Golden Glades Interchange is beyond the scope of this project, roadway improvement alternatives will be analyzed as part of the PD&E Study to provide free flow access and egress to the facility.

Question: A resident asked that Greyhound be approached as a possible joint venture partner. Response: Richard Heidrich indicated that Greyhound's needs are already being addressed as part of the proposed project..

Question: A resident indicated that a daycare would also be a good idea to have in the new facility. Response: Carlos Francis indicated that a market analysis is currently underway and the results would indicate what types of businesses would be appropriate for this area.

Comment: A resident indicated that the Biscayne Gardens Civic Association meets the first Thursday of every month and the attendance is very good (100 people), He asked that the Consultant present their findings at the June 2004 meeting..

The meeting adjourned at 8:15pm.

Sincerely,
DMJM+HARRIS, Inc.

Carlos Francis, PE, PTOE
Project Manager

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May 21, 2004

Mr. Jose R. Gonzalez, P.E.
Project Manager
State of Florida
Department of Transportation
Environmental Management Office
1000 N.W. 111th Avenue, Room 6103
Miami, Florida 33172

RE: **Agency Kick-off Meeting Minutes**
Golden Glades Project Development & Environment (PD&E) Study
Financial Management Number: 251684-1-22-01
Federal Aid Project Number: Not Assigned
County: Miami-Dade

Dear Mr. Gonzalez:

On February 25, 2004, an Agency Kick-off Meeting was held between the FDOT, the Consultant Team (DMJM+HARRIS./Pritchard Environmental/Consulting Engineering & Sciences, Inc.) and public agency representatives. The meeting was held at the Florida Department of Law Enforcement Building adjacent to the FDOT District Six Offices in Miami. The purpose of the meeting was to provide a history and description of the project and to gather initial input/comments from the agencies represented at the meeting (see attached meeting attendees sign-in sheet). The meeting commenced at 10:20am and was completed by 12:25am.

Jose Gonzalez, FDOT Project Manager, introduced himself and the Consultant Team. He also welcomed meeting attendees including the Honorable Shirley Gibson, Mayor of Miami Gardens (MG).

Mr. Gonzalez presented a brief overview of the project history including the following:

- The FDOT High Occupational Vehicle (HOV) Program in the 1970's including construction of the Golden Glades Park & Ride Lot.
- The FDOT Golden Glades Interchange PD&E Study in the 1980's
- The Miami-Dade Metropolitan Planning Organization (MPO) Golden Glades Multimodal Center Feasibility Study in the 1990's
- The FDOT Golden Glades Multimodal Facility Implementation Plan in 2001
- The FDOT Golden Glades Multimodal Facility PD&E Study currently being conducted.

Carlos Francis, Consultant Project Manager from DMJM+HARRIS, presented an overview of the PD&E process including the following:

- Collection of relevant engineering and environmental information
- Existing Conditions/Deficiencies

- Gathering of Public Input from the Kick-off and Alternatives Workshops
- Development and Analysis of Alternatives
- Recommendations for the Preferred Alternative
- Improvements to safety, ridership, separate vehicle/pedestrian flow, access, signage, landscaping, and roadways
- Consolidation of the different transportation modes
- Opportunities for joint development at the site
- Comparison Matrix which includes Engineering and Environmental factors
- Obtaining Federal Highway Administration approval of the project for funding eligibility.

Richard Heidrich from DMJM+HARRIS, presented an overview of the proposed improvements including an illustration of the concept. . He discussed that the new facility would offer the following features:

- Separation of buses from pedestrians
- Facilities for local, express, and Greyhound buses
- Connection facilities for Tri-rail station movements
- Space for retail development within the center.
- Space for joint development within the immediate vicinity of the facility.
- Provision for environmentally controlled movements from the buses to transit to the parking garage to the facility

Richard also discussed the compatibility of the project with the Implementation Plan that was developed during the previous phase (2001) The Implementation Plan addressed the following goals:

- Transit oriented development
- Generation of revenue
- Economic development
- Financial viability
- Transportation Aesthetics Review Committee (TARC) Guidelines
- Functional integration

Bob Edelstein from DMJM+HARRIS, presented an overview of the Intelligent Transportation System (ITS) components to be considered as part of the project:

- Traveler information kiosks that would provide real-time multimodal information (linked to the regional 511 system)Electronic message signs indicating estimated times of arrivals for buses and trains
- Parking management system to provide information on parking lot capacity (i.e., which levels are full vs. which levels have spaces available).
- Security CCTV cameras
- Modest satellite control center housed within the administration space of the facility

- Smart card technology to include debit cards for users of bus and Tri-Rail
- Travel advisory radio to disseminate travel conditions for motorists approaching the interchange

Bob provided a brief explanation of the proposed satellite control center at the Golden Glades Multimodal Center. This control center would provide linkage to the FDOT Sunguide TMC, Tri-Rail Operations Center, Miami-Dade County Signal System Traffic Operations Center, MDT Control Center,, and Broward County Transportation Management Center.

The presentation portion of the meeting concluded and the following is a summary of the Question and Answer portion of the meeting:

Question: Will there be cab service?
FDOT Response: This will be considered during the PD&E study. Currently, there is a private taxi service at the Tri-Rail station.

Question from Mayor Shirley Gibson (MG): How will the process include public input and who will make the decision on how the facility is operated?
Response from Richard Heidrich: There are multiple stakeholders including Tri-Rail, Greyhound, Miami-Dade Transit. The purpose of the PD&E process is to obtain input from each stakeholder.. Bob Edelstein also stated that interagency agreements should be developed as the study progressed.

Question from Terry Cuson (North Dade Chamber of Commerce): He stated that the North Dade Chamber had written a letter to propose a "Welcome Center" to be built on the site. They thought that the Golden Glades Multimodal Center may be interested in this kind of facility. The "Welcome Center" would require approximately 2,500 sf of space.
FDOT Response: This will be considered during the PD&E Study as the concept design is progressed..

Question: The City of North Miami Beach (NMB) has transit hub proposed within the vicinity of Florida International University North Campus. Why should there be two hubs?
Response from Mario Falcon (Miami-Dade Transit): This Golden Glades Multimodal Center would accommodate I-95 Express buses (regional focus) while the NMB facility would accommodate buses currently transferring on the north side of the 163rd Street Mall (local focus).

Question from Terry Cuson: Will there be any public hearings scheduled for the cities of Miami Gardens and Miami Beach?
Response: The actual location for the hearing has not been set as of this date but there will be a public hearing.

Question from Frank Hernandez (Miami-Dade County MPO Citizens Transportation Advisory Committee (CTAC): What is the number of users for Tri-Rail and other modes including buses that use the site?

Response from Carlos Francis: We will be reviewing Tri-Rail, MDT and Broward County Transit ridership statistics. Bob Edelstein: We also have conducted surveys of the different travel modes as part of the Implementation Plan that was conducted in 2001.

Question from Terry Cuson: Who do I call to coordinate the proposal for the "Welcome Center"?
Carlos Francis responded that he would coordinate further with the Chamber and proceeded to give him his office phone number.

Question from Mayor Gibson: When will the PD&E Study be completed?
Response from Carlos Francis and Jose Gonzalez: In March 2005, the environmental documents will be submitted to FHWA for review and approval. FDOT has programmed some funds for construction in the Fiscal-Year 2007-08. Operation of the facility is anticipated to begin in Fiscal-Year 2008-09.

Question: Will there be shuttles to nearby malls and other attractions in the area?
Response from Carlos Francis: This will be evaluated during the PD&E study. Mario Falcon indicated that a circulator bus would operate along 163rd Street between Collins Avenue and the Golden Glades Multimodal Center . David Korros from the FDOT Planning Section also responded that there are shuttle buses from Golden Glades to Pro Player Stadium football games.

Comment from Mayor Gibson: Transit services are not well publicized to residents of the local communities. A partnership should be considered among the neighboring municipalities in making the Golden Glades Multimodal Center an integral part of the transit service for this area.
Response from Jose Gonzalez: This is an excellent opportunity to provide cost-sharing of the facility, and supporting local transit service.

Question from Terry Cuson: Can enhancement funds be used for transportation projects?
Response from Mario Falcon (Miami-Dade Transit): Enhancement funds would need to be used strictly for transportation purposes.
Response from Jose Gonzalez: We will schedule a meeting with the MPO to discuss the issue further.

Question from Jose Gonzalez: Which committee do we discuss the enhancement fund issue with? Is there a MPO Committee for this?
Response from Mario Falcon: The MPO CTAC is the source for this issue and John Coscove is the Chairperson for CTAC.

Comment from Mayor Gibson: Municipalities need to be more innovative on how they will spend their portion of the ½ penny sales tax as part of the Peoples Transportation Plan (i.e., 20% allocation).
Question from Carlos Francis: Does the money roll over from year to year?
Response from Mario Falcon: Each municipality is required to submit a plan every year for this money.

Question from Daniel Perez-Zarraga (TARC): Is there flexibility to move the location of the facility? This is the gateway to Miami-Dade County and the proposed parking structure appears to be blocking the view of the facility.
Response from Richard Heidrich: As long as you connect to the rail corridor, you do have some flexibility for moving the parking structure and to bring in joint development.. A Market Study is presently being conducted; therefore, we will have a better idea concerning the potential for joint development once the study is completed.

Question from Terry Cuson: There are traffic problems at SR 9, the Turnpike, and other areas. What improvements will be made to these roadways?
Response from Carlos Francis: We are currently collecting traffic and crash data in the area and identifying "hot spots" which are areas which need improvements.

Question from Leroy Thomas (Miami-Dade Fire and Rescue Chief): I have two concerns. The first issue concerns emergency (911) response to serve new development as part of the project. . The other issue concerns the response times to access the project area.
Response from FDOT: These concerns will be addressed as part of the development review process for the proposed joint development.

Question from Leroy Thomas: I have a concern about the FDOT property on the east side of the study area. Is FDOT going to sell that property?
Response from Richard Heidrich: The FDOT is planning to to issue a RFP for joint development for that property. .

Comment from Leroy Thomas: We are limited in the number of fire stations that can be built. We have stations in the area: No. 32 (NW 167th Street/NE 3rd Ct), No. 31 (199th St. and NE 7th Ave.), and No. 19 (NW 125th St. east of I-95). We need to have viable access to the area. Also the joint development may be required to pay an impact fee for building another fire station in the area. Currently we respond to many medical emergency calls (83%-85% are medical).
Response from Carlos Francis: At last night's stakeholder meeting at Biscayne Gardens, there were discussions to have another police sub-station built in the area because they wanted quicker response times from the police. Terry Cuson also suggested that a private security company may handle security at the new multimodal facility.

The meeting adjourned at 12:25pm.

Sincerely,
DMJM+HARRIS, Inc.

Carlos Francis, PE, PTOE
Project Manager

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May 21, 2004

Mr. Jose R. Gonzalez, P.E.
Project Manager
State of Florida
Department of Transportation
Environmental Management Office
1000 N.W. 111th Avenue, Room 6103
Miami, Florida 33172

RE: **Florida's Turnpike Enterprise Concept Teleconference Minutes**
Golden Glades Project Development & Environment (PD&E) Study
Financial Management Number: 251684-1-22-01
Federal Aid Project Number: Not Assigned
County: Dade

Dear Mr. Gonzalez:

On April 12, 2004 the above mentioned teleconference was held between the FDOT, Florida's Turnpike Enterprise, and DMJM + HARRIS. The purpose of the teleconference was to further discuss the concept presented to the Department by the Turnpike Enterprise to place a Tandem-Truck staging area/joint development in the 12 acre parcel east of SR 7. The teleconference commenced at 9:00am and was completed by 9:40am.

The participants in the teleconference consisted of the following:

Jose Gonzalez	FDOT
Javier Rodriguez	FDOT
Gus Pego	FDOT
Gary Donn	FDOT
Alice Bravo	FDOT
Debora Rivera	FDOT
Nancy Clements	Florida's Turnpike Enterprise
Wade Fleming	Florida's Turnpike Enterprise
Richard Nelson	Florida's Turnpike Enterprise
Massoud Moradi	Florida's Turnpike Enterprise
Carlos Francis	DMJM+HARRIS
Tony Herrero	DMJM+HARRIS

All parties were introduced and Javier initiated the discussion by indicating the need for further clarification and coordination on this concept.

Nancy indicated that the current tandem truck staging lot at the Golden Glades Toll Plaza would no longer exist with the relocation of the toll plaza. As such, the Turnpike Enterprise is seeking an alternate site at the Golden Glades in the 12 acre parcel east of SR 7. Nancy indicated that they would hope to have a new facility operational for 2008. Richard indicated that the Turnpike Enterprise envisions a facility with truck repair services, showers, other amenities, and state of the art layover facility which is environmentally friendly.

Alice indicated that as part of the PD&E effort for the Golden Glades Multimodal Facility, a Market Assessment was performed. The market assessment indicated that there were strong opportunities for Office/Campus Park development at the site. Alice indicated that this had to factor into the decision making process. The possibility of a temporary tandem truck staging lot in the northeast area of the project site was discussed. Javier indicated that landscaping for this temporary lot would also have to be considered. There was discussion as to whether or not the tandem trucks had to remain within Turnpike Enterprise ROW when accessing the Tandem lot. Gus indicated that he believed that it was not required as per the FAC. Javier indicated that the Tandem Truck lot requirements could be incorporated as part of the RFP development. Javier also indicated that the Turnpike Enterprise may want to initiate some public outreach on their concept to get the community feel on their idea. Javier indicated that Representative Meek's office should be informed. It was discussed that a meeting would be set up between the Turnpike Enterprise (Nancy & Rick), FDOT (Javier, Jose, & Alice), and Anthony Williams.

Nancy indicated that the idea of a temporary lot with landscaping and incorporation of the lot requirements into the development of the RFP was acceptable. The Turnpike Enterprise indicated that they could complete a concept report in a 4 to 6 month time period. Nancy indicated that Wade Fleming would be the contact person for this project and he would be available to participate in the current public involvement efforts for the Golden Glades Multimodal Facility PD&E as needed.

Javier stated that Pilot may be in the process of approaching the Department or even the Turnpike Enterprise with an unsolicited proposal for the development of a Truck Service Plaza at the site. Richard indicated that the Turnpike Enterprise had been approached by developers (including Alan Harper) regarding possible development opportunities for the Golden Glades site and he indicated he would forward that information to Jose.

Action Items: Jose Gonzalez – to research Rule 14-54 FAC to clarify whether tandem trucks have to remain on Turnpike Enterprise ROW when accessing the lot.

Carlos Francis – to provide the Turnpike with the Implementation Plan and the Design Traffic Memo.

Richard Nelson – to provide Jose Gonzalez with information regarding developers interested in the Golden Glades site for possible development opportunities.

The meeting adjourned at 9:40 AM.

Sincerely,
DMJM+HARRIS, Inc.

Carlos Francis, PE, PTOE
Project Manager

APPENDIX E

PUBLIC WORKSHOP MINUTES

DMJM HARRIS | AECOM

August 27, 2004

Mr. Rene DeHuelbes, P.E.
Project Manager
State of Florida
Department of Transportation
Environmental Management Office
1000 N.W. 111th Avenue, Room 6103
Miami, Florida 33172

RE: **Agency Workshop Meeting Minutes**
Golden Glades Project Development & Environment (PD&E) Study
Financial Management Number: 251684-1-22-01
Federal Aid Project Number: Not Assigned
County: Dade

Dear Mr. Gonzalez:

On June 15th, 2004 a Public Workshop Meeting was held between the FDOT, DMJM + Harris, Inc, other agencies, and the local community both residents and business owners. The meeting was held at the Biscayne Gardens Civic Association in the community of Biscayne Gardens which is in very close proximity to the project site. The purpose of the meeting was to provide an update of the effort and to gather input/comments from the local residents and business owners represented at the meeting (see attached meeting attendees sign-in sheet). The meeting commenced at 5:00 pm and was completed by 8:00pm.

Jose Gonzalez, FDOT Project Manager, introduced himself and the rest of the Consultants. He also welcomed meeting attendees.

Jose gave a brief overview of the project history including the following:

- The Golden Glades Multimodal Facility PD&E Study currently being conducted.

Carlos Francis, Consultant Project Manager from DMJM + Harris, Inc., gave an overview of the PD&E process including the following:

- Collection of relevant engineering and environmental information
- Existing Conditions/Deficiencies
- Gathering of Public Input from the Kick-off and Alternatives Workshops
- Development and Analysis of Alternatives
- Recommendations for the Preferred Alternative
- Improvements to safety, ridership, separate vehicle/pedestrian flow, access, signage, landscaping, and roadways
- Consolidation of the different transportation modes
- Opportunities for joint development at the site

- Comparison Matrix which includes Engineering and Environmental factors
- Obtaining Federal Highway Administration approval of project for funding

The presentation portion of the meeting ended and the following is a summary of the Question and Answer portion of the meeting:

Question: A resident asked how moving SR 7 will affect the local existing businesses and what type of developments are being considered.

Response: Craig Werley explained that the types of business to consider depends on the amount of land available. He mentioned businesses such as services, retail, and restaurants are all potential candidates. The project does not affect existing and local businesses.

Question: A resident indicated that the consultant should improve the way the meetings are advertised in the paper. He indicated that the reason there were few residents was due to poor advertising.

Response: Carlos agreed that the FDOT would be made aware of the concerns.

Question: Will local government do the appropriate zoning changes.

Response: FDOT indicated that the local zoning development process has started, the state is in coordination with the County.

Question: A resident asked that the alternatives be explained.

Response: Carlos explained the 3 alternatives.

Question: A resident asked what is the Turnpike going to be doing in the site, and how can the site be shared by joint development and the Turnpike.

Response: Mr. Bill Austin, representing the Turnpike Enterprise, indicated that the Turnpike was currently studying the feasibility of relocating the existing tandem-truck lot at the Golden Glades Toll Plaza to the site east of SR 7 entering the GGI. He indicated that was all the Turnpike was currently looking at.

Question: A resident asked what was the impact of alternative 2 to abutting existing neighborhoods.

Response: Carlos explained that the noise and air studies are underway at the time and the impacts are still unknown.

Question: A resident asked if the study considered connecting SR 9 to Metrorail and GGI.

Response: FDOT and a representative from MDTA responded that the north-east connector of metrorail is in the environmental phase and that the alignment of that project cannot be changed at this point.

Comment: A resident indicated that the residents are going to be very disappointed if the preferred alternative does not connect SR 9 station with SW 27th Avenue. She asked which one of the alternatives lends to this.

Response: an attendee responded that currently GGI is a Tri-Rail station and that the system connects at NW 79th Street to downtown. However, it takes 20 min from GGI to downtown by bus compared to 30 min by train.

Question: A resident asked who will benefit from this study.

Response: Carlos responded that DMJM+HARRIS was working for FDOT to find the best alternative for the project and that ultimately the beneficiaries will be the end-users, that is the public.

Question: A resident asked if the three alternatives can go all in the RFP and she asked about the cost of the alternatives.

Response: FDOT responded that maximum flexibility in the RFP is the goal.

Comment: The representative for Congressman Meek said that the office has serious issues with Alternative 2 and that they prefer Alternative1.

Response: Carlos indicated that at this stage there is no preference for any alternative in particular.

Question: A resident asked in what phase the project is currently in.

Response: FDOT indicated that build out year is 2006/07; however, the process could be accelerated if funds are identified.

Question: A resident asked what was the year for construction.

Response: FDOT indicated that ideally construction could start 2006. Construction could start prior to completion of design plans due to it being a Design-Build procurement.

Question: A resident asked where the funds for this project are coming from, (Peoples Transportation Plan).

Response: FDOT indicated that mostly they are coming from federal funds.

Question: A resident asked if the future parking capacity will be greater than existing parking allotment.

Response: Richard Heidrich indicated that the proposed parking facility will have a capacity for 900 parking spaces with the ability to increase. MDTA stated that they do not favor a new facility with less parking capacity than the existing parking allotment.

Question: A resident asked if we are keeping the greyhound facility.

Response: Richard Heidrich indicated that the existing facility would remain and that there would be segregation between bus to bus, and more emphasis to pedestrian movements, etc.

Question: A resident asked if there will be a commercial/shopping center in the proposed Alternative 2.

Response: Carlos and Richard responded that the purpose of the alternatives is to increase more transit, offering amenities, restrooms, a transit center, a police substation, opportunities for joint development, etc.

Question: A resident asked if the proposed facility is similar to other transit centers in the nation.

Response: A resident responded that there is something similar in Tallahassee and also the MIC near the Miami International Airport.

Question: A resident asked if there were elevators on Tri-Rail.

Response: Richard Heidrich indicated that there are currently being built.

Question: A resident asked if there were any restrictions in building a connection to SR 826 crossing the existing developments and the RR tracks.

Response: Alex Meitin responded that a flyover might be possible and that this idea would be further explored.

Question: A resident asked how pedestrians from the east can access the station since there are no pedestrian crossings to cross I-95.

Response: Carlos indicated that there are no pedestrian crossings at the time but most likely pedestrian activity originating in that area would not existing due to long distance. However, with the advent of community bus service it is anticipated that transit users east of I-95 would get on a community bus and would be shuttled to the facility.

Question: A resident asked if there is access to the facility from NB SR 9.

Response: Carlos Francis indicated that both alternatives will provide access to the facility for northbound SR 9.

The meeting adjourned at 7:58pm.

Sincerely,
DMJM+HARRIS, Inc.

Carlos Francis, PE, PTOE
Project Manager

APPENDIX F

PUBLIC HEARING TRANSCRIPTS

DMJM HARRIS | AECOM

GOLDEN GLADES MULTIMODAL TRANSPORTATION FACILITY PROJECT DEVELOPMENT AND ENVIRONMENT STUDY PUBLIC HEARING

North Dade Regional Library
2455 Northwest 183rd Street
Miami, Florida
6:00 p.m.
January 12, 2006

Taken before BRIAN S. LACOUR, RMR, Court Reporter and Notary Public in and for the State of Florida at Large, pursuant to Notice.

(Thereupon, the following proceedings were had:)

DR. EDELSTEIN: Okay. We're going to get started now with the presentation. It's 6:30. Both before and after the presentation if you have any questions, any concerns or if you want to look at the exhibits and speak with us in detail, you know more, feel free.

Good evening and welcome to the public hearing for the Golden Glades Multimodal Transportation Facility. It's a project that really provides a terrific opportunity in integrating the various modes of transportation into a consolidated facility, and there's a number of modes of transportation, bus, rails, car pools that currently converge here within northern Miami-Dade County.

Hi, my name is Bob Edelstein. I'm a Vice President of DMJM Harris. We're a consulting engineering firm that's working on the project development environmental study.

The study is being conducted on behalf of the Florida Department of Transportation 6 office. Rene DeHuelbes is the Project Manager.

The public hearing tonight is being conducted in accordance with all relevant rules and regulations by the Federal and State government.

It's been advertised through legal notices in the Miami Herald, El Neuvo Herald, Sun Sentinel, as well as the Florida Administrative Weekly. It's being conducted in accordance with the Civil Rights Act.

If you have any issues or concerns please contact Elizabeth, Elizabeth Perez, or feel free to write to the Equal Opportunity Office.

And, finally, the project identification numbers, Financial Management Number 251684-1-22-01 and the Federal I.D. Project Number is 0951-586.

This project, the Golden Glades Multimodal Transportation Center has a history that goes back over three decades. It was back in the 1970's when we go through that gas crisis and everybody was waiting on lines and you had the pessimists saying that gas was going to climb to 2, $3 a gallon, yeah, right, that's going to happen, you know, but it was at that time when the Department of Transportation took a proactive role in doing something about it. They designed and built the high occupancy vehicle lanes along I-95, as well as the park and ride lot at the Golden Glades Interchange. At the interchange they have 1,350 spaces that were built. Currently about 700 of those spaces are being used.

Back in the 1980s the Florida Department of

Transportation then looked at the total interchange, the whole Golden Glades Interchange, looking at ways that they could rebuild and address the amount of congestion and the amount of safety and the amount of gratuitous problems that they've been experiencing. They did a lot of work on that study. Unfortunately the study results came up to a price tag of about $450 million and that's $450 million which the department did not have, so the project was subsequently cancelled.

In the 1990s the Metropolitan Planning Organization, the MPO, then took a look at the project. They looked at the project from the -- the multimodal center project from the feasibility perspective. They did their homework and they came to the conclusion that, yes, the project is feasible and it would probably even be more feasible if it was packaged together with joint development opportunities. Then more recently, over the last several years, the project was transferred over to the Florida Department of Transportation to implement the project. In the year 2001 we conducted a study, a planning study to look specifically at what are the requirements of this facility from the transit perspective, from the

parking perspective and from the Tri-Rail perspective, the Greyhound perspective, all the different modes that currently converge there.

The project was then segued into this current project development environmental study, where we're looking at architectural concepts of the facility, we're looking at roadway concepts for access to the facility, and we're also looking at the environmental impacts.

The project development environmental study process is a very structured process. It starts off with project kick off meetings with both agencies and the public. We then get into the data collection, develop and analyze alternatives. We did have an alternatives public workshop, I think it was back last June. We finalize the analysis, both the engineering and the environmental analysis, and then we recommend a preferred alternative, which we'll be presenting a little bit later on tonight.

Public hearing, that's here tonight, and we look forward to your input on the development of this alternative, and what happens after this, we gather your input, we respond to your input, we package up the reports, we send it to the Federal Highway Administration, they review it and if they

concur with our recommendation then they grant what's called location design concept acceptance, which in essence allows us to move forward with the project towards design and implementation.

The existing site, I'm sure you're all familiar with it, southwest quadrant of the I-95 interchange with Golden Glades, perhaps the busiest, most complicated interchange throughout the state of Florida.

As you can see from the exhibit, we have about 1,350 spaces spread throughout the entire tract of land. We have a Tri-Rail station. We have a Greyhound station, which is modular trailers that are set up at the southern end of the property, and this space over here, which is thought to be in the past was used for parking, it's spaces that haven't been used for parking in quite a while, so the DOT has been using it as construction staging area for many of their construction projects.

And the rest of the parking is pretty much dispersed through the acreage of property over here.

The first step that we took in the study was to take a look at the existing deficiencies, and there's numerous deficiencies. In essence the park and ride -- the parking lot is nothing more than a

large park and ride lot with very poor connectivity between the modes. There is really no organizational control in terms of who does the operations, who does the maintenance. Access and egress to the facility is very complex and very confusing. The good news is that we have the Tri-Rail station. The bad news is that we have it on the opposite side of the street. Here is State Road 9, which is a four lane divided roadway, so it requires people to go up and over State Road 9 to access Tri-Rail, which is about 1,500 feet and before coming to this meeting I walked it and it will keep you in good shape, it's approximately three ramps up, it's when you take the stairs to go to the southbound direction of Tri-Rail it's a good 50 steps, so they do have elevators that will be put into operation pretty soon, but it's -- right now it's an impediment toward a tight multimodal center. There's really no significant amenities, no restrooms, no water fountains, there's ADA compliance issues, ADA, American Disabilities Act for elderly and handicapped people, there's no real amenities for pedestrian facilities. Security, landscaping, lighting are all problems. There's congestion on State Road 7. There's a number of

crash hot spots on both State Road 7 and State Road 9.

One of the earlier tasks that we did in the study was traffic data collection. We took a look at the lane geometry. We did three day counts along State Road 7 and State Road 9. We did turning movement counts at the key intersections during the peak hours and we took a look at the historic trends as inputted to developing our traffic forecast for the future.

What we found, we did a level of service analysis, which is another way of saying what is the operational flow characteristics of the main roadways within the immediate vicinity, in other words how well is traffic moving. It's not moving very well. No big surprise. During the a.m. peak period we have six roadway segments shown here in red that are deficient, and then during p.m. peak hours there's a total of four segments that are operating over congestion limits. We also have the two key intersections within the complex, the access to the facility, as well as the I-95 off ramp into State Road 7, they're both at congested levels.

We then looked into the future, the future being the year 2029. The reason why we picked this

year is we figured it will take about three years to design and build this facility, so that brings us to the year 2009, and typically we do traffic projections 20 years into the future, so that brings us to the year 2029. We did our traffic projections. What it does not include is the potential for joint development. We seriously would like to see a joint development project associated with this particular multimodal facility, so when a developer comes in on proposals on this project they'll be doing their own studies and incorporating those numbers into the projections, but even without joint development, as expected traffic is going to get continuously worse, we're going to have seven segments that are operating over capacity and again the two intersections are going to continue to get even worse.

We also looked at the crash data for a three year period, 2000, 2001, 2002. There's a total of 100 accidents on this roadway network for those two roads, State Road 7 and State Road 9. That puts us at higher levels than most major -- than other similar type facilities throughout the state. We have about 43 percent of the accidents are rear-end collisions. Two-thirds of the accidents along State

Road 7, one-third along State Road 9.

We have a number of the accidents taking place again at the entrance to the facility, as well as the I-95 off ramp onto State Road 7. We also have an inordinate amount of accidents going northbound along State Road 7 as it merges with State Road 9 and then merges northbound with I-95 and 826.

In addition to doing a lot of the numerical analysis we had also had a number of meetings. We have had a dozen meetings over the duration of the project development environmental study. We've met with the public, we've met with various agencies, we've met with a number of the political leaders, all to garner some input and also to get some feedback on the development of alternatives.

What we heard is, number one, improve the traffic congestion situation at the merge of State Road 7 and State Road 9. Reduce congestion along State Road 7. Improve the landscape, the bicycle, pedestrian facilities. Possibly incorporate a police station and maybe even a welcome center at the Golden Glades Multimodal Center. Consider more flyovers for the interchange. Possibly include a day care facility and other joint development opportunities.

So we took this input and then we developed specific goals for the project.

One goal is to improve transit ridership. Second is to improve access to the facility. Third, try to consider joint development opportunities and, fourth, address the specific program requirements.

We looked at the program requirements, specifically the Miami-Dade Transit buses, the Broward County Transit buses, as well as the other many bus facility -- many bus services that we have within the network. We looked at express buses. We looked at local buses. We looked at the normal size buses and what's called articulate buses, buses that are really two buses in one, they're twice as long.

In essence, we need about 120 bus spaces. We also need space for the people, for the buses that are just dropping off and picking up passengers, as well as the taxis, as well as the people dropping off their loved ones to go to work. We need space for the terminal space, pedestrian plaza, elevated walkways, and also we're looking at the parking garage that will accommodate upwards of about 1,300 spaces.

So with that we developed, in essence, three alternatives. One alternative is no project

alternative, exactly what it says. No project and we leave the situation exactly the way it is today.

There are two alternatives, alternative one and alternative two would actually build the multimodal facility and also they would also build the roadway improvements serving the multimodal facility. The primary difference between the two is alternative one is more modest improvements. They're specifically focused in where we have deficiencies in both traffic congestion and traffic safety, while alterative two is really a major revamping of the roadway network which I'll show you in a minute. Also, alternative one, we have 800 spaces in the garage and alternative two we have 1,300 spaces in the garage.

With alternative one the intent was to develop a multimodal facility that's fairly compact. Fairly compact on the southwest part of the property, close to Tri-Rail. The intent here was to shorten up the walking distances in going from parking to bus to rail. Also, this provides an opportunity to open up areas for joint development that could be placed along adjacent properties.

Alternative one will also improving the two intersections that were shown to be deficient and

also adding an additional lane along State Road 7, particularly at the merger point to address the accidents that have been taking place there over the last several years.

With alternative two, as indicated before, it's major revamping of the roadway network. In essence, we're taking State Road 9 and State Road 7 and putting it along the periphery of the property. This will all include direct flyovers to provide direct access into and out of the facility. It's opening up more area for joint development, more contiguous area for joint development, about 19 acres, and again it brings it closer to Tri-Rail. By taking away State Road 9 we're able to move this facility closer to the Tri-Rail station, which again shortens up those walking distances.

All these analysis were incorporated into the reports which you can see on the table and they're available for your review. The two primary reports are the engineering document where we go into great detail of how we develop the architectural design concept, the roadway and bridge improvements. We come up with a construction cost, traffic and safety analysis and a myriad of other parameter. With the environmental report, it covers the socioeconomic,

cultural, natural and physical environments. If you care to review the reports, by all means we welcome that you do that.

If you'd like to consolidate and just incorporate into one slide, this is the slide.

This slide really takes the engineering data, the environmental data and compares it to the three alternatives. We're comparing alternative one, alternative two, to the no project.

So starting with the first line, construction costs, obviously no project is zero, no dollars invested. With alternative one there's a total cost of $29.6 million. Alternative two, $47.1 million. Now, out of the $29 million for alternative one 27.7 is in the building and parking garage. Alternative two is about $5 million higher because we're incorporating another 500 parking spaces as part of the garage, but the biggest impact is in the roadway improvement costs of alternative one, 1.8 million, alternative two, 14.5 and, again, the big difference here, almost $14 million is really attributed to the massive amount of roadway improvements that's required as part of alternative two.

With regard to the other improvements, socioeconomic impact, we're looking at both cases,

it will have a positive affect. In terms of the natural environment we don't have any significant impacts. Noise and air quality impact, as traffic grows we'll have minimal increases with the no build as well as the two build alternatives. Traffic service, we'll have increased congestion without a project and we'll have the same capacity improvements with both improvements. In terms of traffic safety, we'll have some crash reductions with both alternatives. Both alternatives also provides enhancement with regard to joint development potential. In terms of maintenance of traffic with alternative one we'll have some minor disruption, alternative two obviously major disruption because of the extensive roadway improvements. The construction time will take 210 days for alternative one. Alterative two, 550 days. Land use compliance, we feel that both alternatives will enhance mobility. Utility impacts, minor impacts with alternative one, moderate impacts with alternative two. And the very last parameter, transportation service, we can see a moderate improvement in both cases, which really leads us to our conclusion, because of the significant difference of loss between alternatives one and two,

over $17 million, and because we're getting very little in return in terms of the amount of congestion that we have with the massive amount of roadway system we're recommending for your consideration alternative one as the preferred alternative.

I have a series of rendering of what alternative one would look like. You see in the foreground the multimodal transportation center. In the background you see the parking garages. You see plenty of landscaping, plus bus facilities. Again you'll have 20 bus bays, which will include normal sized buses as well as the articulating buses, and you'll see on the left side you see the pedestrian bridge that will connect over Tri-Rail.

Here's another view where you could see again the landscaping with pedestrian activity, the enclosed space for waiting.

Another view showing again the pedestrian walkways, as well as the area where you would have drop-offs for either taxis, mini-buses or people just dropping off their spouses.

And here's the parking garage, which could be restaged. We could have the 800 spaces during phase one and we could size the foundation to the

structures where we could either build up or we could build on the side to eventually build out to the ultimate 1,300 spaces.

If we're going to invest in a multimodal transportation facility we might as well make it a smart facility, incorporating all the elements and ingredients of intelligent transportation systems. What we'd like to see is passenger information systems, electronic message signs which will indicated what is the estimated time of arrival of the next bus or train and what platform or what bus bay they'll be arriving at. We'd like to see smart kiosk touch screen monitors which will enable the passenger to get real time travel information and also if they're interested in car pooling entering their information into the work stations so they can get a match with somebody else.

We're looking at smart card enabled machines, so when smart card technology comes to our area it will enable the users to use one pass, whether they're using a Broward County bus, a Miami-Dade Transit bus or Tri-Rail. We'd like to have parking management systems in the garage. This will indicate which levels are full and which levels have spaces available, and we'd like to include closed

circuit television cameras, not only to monitor security but also to monitor traffic congestion, and then finally have a control work station within the office part of this complex that will monitor and control all of these ideas and devices and also be linked to the new transportation management center that's located at the regional headquarters for District 6. This will provide the passengers an opportunity to get real time travel information so they can make some smart decisions with regard to alternative modes, alternative times and alternative routes.

In closing, this project, I feel, is very important from a strategic planning sense. If we take the Golden Glades Multimodal Center on the north, combine it with the Miami Intermodal Center that's being built on the west, combine it with the Dadeland Center on the southwest we have an opportunity to convert people who are using single occupancy vehicles and attract them to using either transit or car pools. What this will do is help us take those single occupancy vehicles, reduce the amount of trips that are coming into the congested area of Miami-Dade County, and this is particularly important because, number one, for the last probably

five to ten years Miami-Dade County is ranked as one of the top ten congested cities across the country, but more importantly, as we go into the future, population is supposed to increase by about 39 percent, employment is expected to increase by about 30 percent and if we're going to continue to be a world class city and county and if we're going to continue to attract international trade and tourism we need to be proactive in how we address the transit infrastructure within the region. The people's transportation plan has gone a long way in making those significant investments and we've just got to make sure that the stations, the major transfer points are not the Achilles heel. For those reasons we feel that this is the primary need for this specific project.

So with that I'd like to close the presentation and open it up to the public and the agencies to provide us your feedback in how we can make this project even better.

You'll have an opportunity to come up. If you want to use the microphone we have a microphone. If you want to speak from your seats that's fine. If you are not into public speaking and you just want to come up afterwards and speak with us and indicate

and share with us your concerns or how we can make this project better we'll be here until 8:00 tonight, or if you want to write to us or fax us or e-mail us please do that to Rene, not to me.

We also have a website that's set up. We have -- the one thing I failed to mention is that there's a joint development request for proposal that will be advertised next week, January 17th, and the intent of the proposal is to start to solicit private sector interest in this project. We have our project as a public project, but we're looking for that private sector to come in and come up with development proposals, whether it be hotels, retail, office space or some combination that will make this project a little bit more attractive and also provide some synergy.

There's a meeting to be held on January 30th. It will be specifically focused on this joint development opportunities. It's 9 to 12:00 at El Palacio Hotel, which is just off the Palmetto Expressway, and if you're interested in attending please respond to Karen McGuire. Her telephone number is over here. So with that I'll turn it over to you.

Do we have any cards?

Okay. We have two speakers and after that, you know, feel free, if you have any comments, please fill out a card and we'll call you to the table. Okay. I have three.

Mark Brown.

MR. BROWN: Good evening, Mark Brown, Assistant to Commissioner, Barbara Jordan, District One County Commissioner.

I had a couple of questions and you somewhat answered it at the end in regards to perhaps moving it closer to the affected area, which would be where it's going to actually take place.

Secondly, had you considered advertising in some of the more minority papers, such as the Miami Times or some of the other newspapers?

MS. McGUIRE: What we have actually done, as we said here, on January 30th we're going to have an informational meeting so that any interested industry developers or interested parties can attend, and one of the places we're going to be advertising is El Neuvo Herald and the Miami Times.

MR. BROWN: Okay. Thirdly, you mentioned as far as closing State Road 9, does that mean you put a flyover 9 or it's completely gone, if I'm not mistaken?

DR. EDELSTEIN: With all alternative two, which we aren't recommending.

MR. BROWN: Alternative two.

DR. EDELSTEIN: We're not recommending alternative two. We're recommending alternative one, which you're not going to have that.

MR. BROWN: Okay. Thank you.

DR. EDELSTEIN: Second speaker, William Sliger.

MR. SLIGER: Just a brief question, please. My name is William Sliger. I'm with Greyhound Lines corporate offices. My question was your time project of 2009 to complete the facility, is that a total completion and build out of what is shown here, is that fairly realistic or is it subject to funding issues or anything you can perceive?

DR. EDELSTEIN: It's more the latter. There is funding in the work program, I think in the year 2007, 2008 to built all of this facility, if not a portion of it. We're looking at the joint development potentially as augmenting that amount of financial requirement to build a single facility, packaged together that will meet all the goals that I addressed as part of the presentation. Yes, I think it's realistic. We'll probably have a better idea four or five months from now, once we receive

the joint development proposals and one is selected, we'll have a better idea of what the implementation schedule is at that time. But is it realistic to do by the year 2009, yes.

MR. SLIGER: Thanks.

DR. EDELSTEIN: Riva Saker.

MS. SAKER: Hello. My name is Riva Saker, I live at 20 Northeast 152nd Street, Miami, Florida 33162 and that is unincorporated Dade County, which is Biscayne Gardens. Although you support alternative one, I think alternative two is better for the community because I walked from my house to Golden Glades and it is dangerous. I walk from -- I have to -- I can't pass I-95 so I have to walk south and then under the I-95 overpass, which is actually not down here, and then I come up Northwest 7th Avenue, which is rough, and then I walk along here, which is Frontage Road and that's just foliage and garbage, so I have to emphasize, access by foot and bicycle is very important because this area has been neglected, and if you're going to go for the gold drop the big pot of gold on the area, because if State Road 9 is eliminated and it becomes an overpass like this flyover here, is the ground here accessible for pedestrian or bicycles? And then

finally, esthetically, I think that it should include public art, like at the approach into Miami Beach has the neon around the palm trees. I think something art deco and attractive like that, because the people in the community like colors, I like colors, the tent appeal is nice. Anyway, I'm excited. Thank you.

DR. EDELSTEIN: Just to address some of those concerns, one of the committees that we have already met with and will continue to meet with is called TAR, the Transportation Architectural Review Committee which addresses things that you just focused in on, pedestrian access, bicycle access, the look of the facility. They are very much concerned that this be a gateway not only into northern Miami-Dade County, but all the communities within the vicinity. They would like to see some type of monument or some type of an identifier where you could see from the interstate, so that they would like to make this a very visible project, a very visible project that's pedestrian friendly, bicycle friendly and friendly to cars, a little bit more friendly to access by cars, and that will be incorporated into not only the design of the facilities but also that's something that the

department seriously will take a look at, the joint development proposal at a later time.

Any other comments, questions?

MR. PERSALL: I'm Bob Persall with Miami-Dade Transit, Manager of Service Planning and you had mentioned it's 20 bus bays at this facility, and as of right now the facility has four bus bays, yet I'm concerned whether 20 bus bays are going to be enough with the expansion that we still have at Express and Miami-Dade Transit, and I know Broward County Transit has big plans to increase service into Golden Glades. Of course Greyhound is there. So did you -- how did you determine that 20 bus bays was the right number?

DR. EDELSTEIN: We built it up part by part. We met and analyzed the requirements for Broward County Transit, both express -- I think it's mostly just express busses coming into facility, as well as with Miami-Dade Transit, and the Greyhound requirements. Richard, help me out, but I think the architects and the engineers, they had several meetings with each of the different parties in building up to that number 20.

MR. HEIDRICHS: Let me help you respond to that. I'm Richard Heidrichs. I'm with the

consultant, DMJM Harris. During the programming part of the master plan of part of this project we met with both Broward County Transit and Miami-Dade Transit in which we got some projection of bus bays. Those and through a series of meetings after that, including a value engineering meeting, both Broward County Transit and Miami-Dade Transit attended and the bus bay count was mostly confirmed at that time and so those numbers have been presented to both agencies and basically confirmed.

MR. PERSALL: They have been confirmed? Were these meetings prior to 2003 or --

MR. HEIDRICHS: The original programming was prior to 2003 and then the value engineering meeting, I'm not sure of that date.

DR. EDELSTEIN: It was after --

MR. HEIDRICHS: Probably after 2003.

DR. EDELSTEIN: It was about a year ago, right, John?

MR. DOVEL: I think it was closer to two years ago.

MR. PERSALL: You know, I would like to -- I want to make sure that we are not limited, you know, two years after this is built and even if it means maybe make sure there's space for staging buses or

something.

MR. HEIDRICHS: Some of the comments we did receive at that meeting was to add spaces for articulated buses and items of that sort and the basic concept in plan is to provide a facility that's obviously expandable to the current site plans, provide ability to expand the facility in a linear manner to provide more buses if needed.

MR. PERSALL: Okay. All right. Well, I'd like to be involved in the details as you get to it and, like I say, I want to make sure that we have the space because we do have plenty of expansion left at Miami-Dade Transit and, like I say, Broward has big plans, too, to Golden Glades, so thanks you.

MR. DEHUELBES: My name is Rene DeHuelbes and I work for the Florida Department of Transportation in District 6. In response to the gentleman, I would like him to send me his requirements because, again, you know, some of the study information was collected a long time ago and many things have been happening in Miami-Dade like the half penny taxes and stuff have changed the picture, so I would appreciate if you send me, my e-mail, and, you know, what are your requirements now and what would be the requirements for the future. Because right now we

are just developing the concept, so we are at a point in time where we can add more spaces.

MR. PERSALL: Good, great, I'll do that. Thanks.

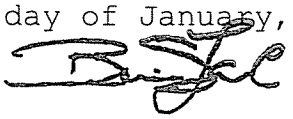
DR. EDELSTEIN: Anybody else? All right. I invite you again to stick around if you have any questions. All the charts, all the information, all the reports, consultants, DOT, we're all here to answer any of your questions. If you do plan to submit something in writing please do so within the next 10 days, because over the next 10 days what we need to do is take your comments, respond to those comments, incorporate them into the report and then take those reports and submit them to the Federal Highway Administration for approval, so I thank you all for coming out tonight and feel free to come up and ask any questions. Thanks.

(Thereupon, the proceedings concluded at 8:00 p.m.)

STATE OF FLORIDA :
: SS
COUNTY OF DADE :

I, BRIAN S. LACOUR, RMR, certify that I was authorized to and did stenographically report the foregoing proceedings and that the transcript is a true record.

Dated this 17th day of January, 2006.



Brian S. LaCour
Court Reporter

APPENDIX G

PHOTOGRAPHS OF EXISTING FACILITY CONDITIONS

DMJM HARRIS | AECOM

Golden Glades Interchange Field Photographs

Photograph 1. Park & Ride Terminal.

Photograph 2. Pedestrian Overpass Bridge.

Golden Glades Interchange Field Photographs

Photograph 3. Vacant Site East of SR 7.

Photograph 4. Looking South on SR 7.

Golden Glades Interchange Field Photographs

Photograph 5. Looking West at Entrance/Exit to Park & Ride Facility.

Photograph 6. Looking South on SR 7.

Photograph 7. Looking North on SR 7.

Photograph 8. Looking North on SR 7.

Golden Glades Interchange Field Photographs

Photograph 9. Looking North SR 7 at Lane Drop.

Photograph 10. Looking at Northbound Junction of SR 7 and SR 9

golden glades
multimodal center

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