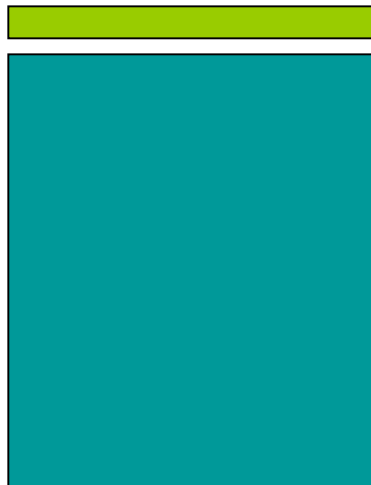


Sunset Harbour Miami Beach, Florida

traffic study



prepared for:
Deco Capital Group, LLC

Traf Tech
ENGINEERING, INC.

Revised July 2018

July 27, 2018

Mr. Bradley W. Colmer
Managing Principal
Deco Capital Group, LLC
119 Washington Avenue, Suite 505
Miami Beach, Florida 33139

**Re: Sunset Harbour- Traffic Engineering Study
Miami Beach, Florida**

Dear Bradley:

Traf Tech Engineering, Inc. is pleased to provide you with the results of the traffic study undertaken for the proposed Sunset Harbor project planned to be located at 1759 Purdy Avenue in Miami Beach, Florida. The revised study addresses the traffic impacts created by the proposed project to the surrounding street system.

It has been a pleasure working with Deco Capital Group, LLC on this project.

Sincerely,

TRAF TECH ENGINEERING, INC.

Joaquin E. Vargas, P.E.
Senior Transportation Engineer



July 27, 2018

TABLE OF CONTENTS

INTRODUCTION	1
INVENTORY	3
Existing Land Use.....	3
Proposed Land Uses and Access.....	3
EXISTING CONDITIONS	4
Roadway System.....	4
Nearby Intersections.....	4
TRAFFIC COUNTS	6
TRIP GENERATION	8
TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT	10
TRAFFIC ANALYSES	14
Future Conditions Traffic Volumes	14
Level of Service Analyses.....	15
Valet Operation	19
CONCLUSIONS AND RECOMMENDATIONS	21

LIST OF FIGURES

FIGURE 1 – Project Location Map	2
FIGURE 2 – Existing Lane Geometry	5
FIGURE 3 – Existing Traffic Counts – Peak Hour	7
FIGURE 4A – New Project Traffic Assignment	11
FIGURE 4B – Pass-by Trips.....	12
FIGURE 4C – Valet Trips	13
FIGURE 5 – Background Traffic (Year 2020)	16
FIGURE 6 – Total Traffic with Project (Year 2020).....	17

LIST OF TABLES

TABLE 1 – Trip Generation Summary.....	8
TABLE 2 – Project Trip Distribution	10
TABLE 3 – Signalized Intersection Capacity/LOS Analyses	18
TABLE 4 – Unsignalized Intersections Capacity/LOS Analyses	18
TABLE 5 – Signalized Intersections 95 th Queue	19
TABLE 6 – Unsignalized Intersections 95 th Queue.....	19

INTRODUCTION

Sunset Harbour is a proposed mixed-use development, including retail and residential units planned to be located at 1759 Purdy Avenue in the City of Miami Beach in Miami-Dade County, Florida. The location of the project site is illustrated in Figure 1 on the following page.

Traf Tech Engineering, Inc. was retained by Deco Capital Group, LLC to conduct a traffic study¹ in connection with the proposed development. The study addresses trip generation and the traffic impacts created by the proposed project on the nearby transportation network. This study is divided into seven (7) sections, as listed below:

1. Inventory
2. Existing Conditions
3. Traffic Counts
4. Trip Generation
5. Trip Distribution and Traffic Assignment
6. Traffic Impact Analysis
7. Conclusions and Recommendations

¹ The traffic methodology was discussed and agreed with the City of Miami Beach staff and is included in Appendix A



INVENTORY

Existing Land Use and Access

The project site is currently vacant.

Proposed Land Use and Access

An 19,214 square-foot commercial building plus 12 residential units (ownership) with a parking structure on site.

The proposed access to the parking structure will be off of Bay Road. An internal pedestrian connection roadway linking Purdy Avenue and Bay Road is proposed near the north property line (Pedestrian Promenade). Valet service is being considered for the residents and 80% of the retail customers. The valet station is anticipated to be located on Purdy Avenue and all entrance and exiting to the garage will occur on Bay Road.

.

EXISTING CONDITIONS

This section addresses the existing roadway system located in the vicinity of the project site and nearby intersections.

Roadway System

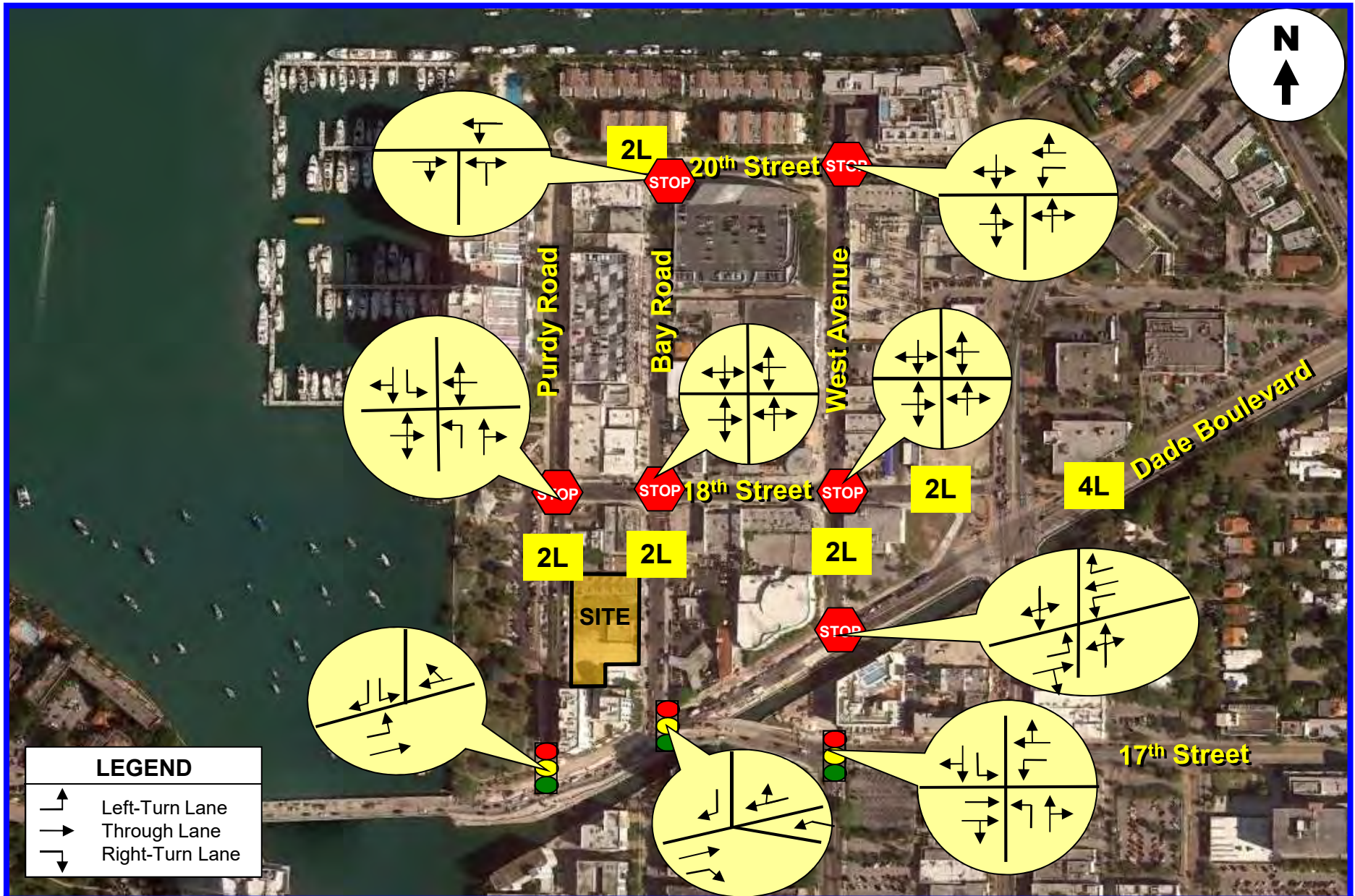
The roadway system located near the project site includes Dade Boulevard, 17th Street, West Avenue, Bay Road, Purdy Avenue, 18th Street, and 20th Street. Dade Boulevard is a 4-lane facility while 17th Street, West Avenue, Bay Road, Purdy Avenue, 18th Street and 20th Street are generally 2-lane local streets.

Nearby Intersections

With the assistance of City of Miami Beach staff, nine intersections (were identified as the locations that will be impacted the most by the proposed project. These intersections include:

1. Dade Boulevard and Purdy Avenue (signalized)
2. Dade Boulevard and Bay Road (signalized)
3. Dade Boulevard and West Avenue (stop controlled)
4. 17th Street and West Avenue (signalized)
5. 18th Street and West Avenue
6. 18th Street and Bay Road
7. 18th Street and Purdy Avenue
8. 20th Street and West Avenue
9. 20th Street and Bay Road (stop controlled)

Figure 2 shows the existing lane geometry of the study intersections selected for analysis purposes. The number of lanes on the street system surrounding the project site is also depicted in the figure.



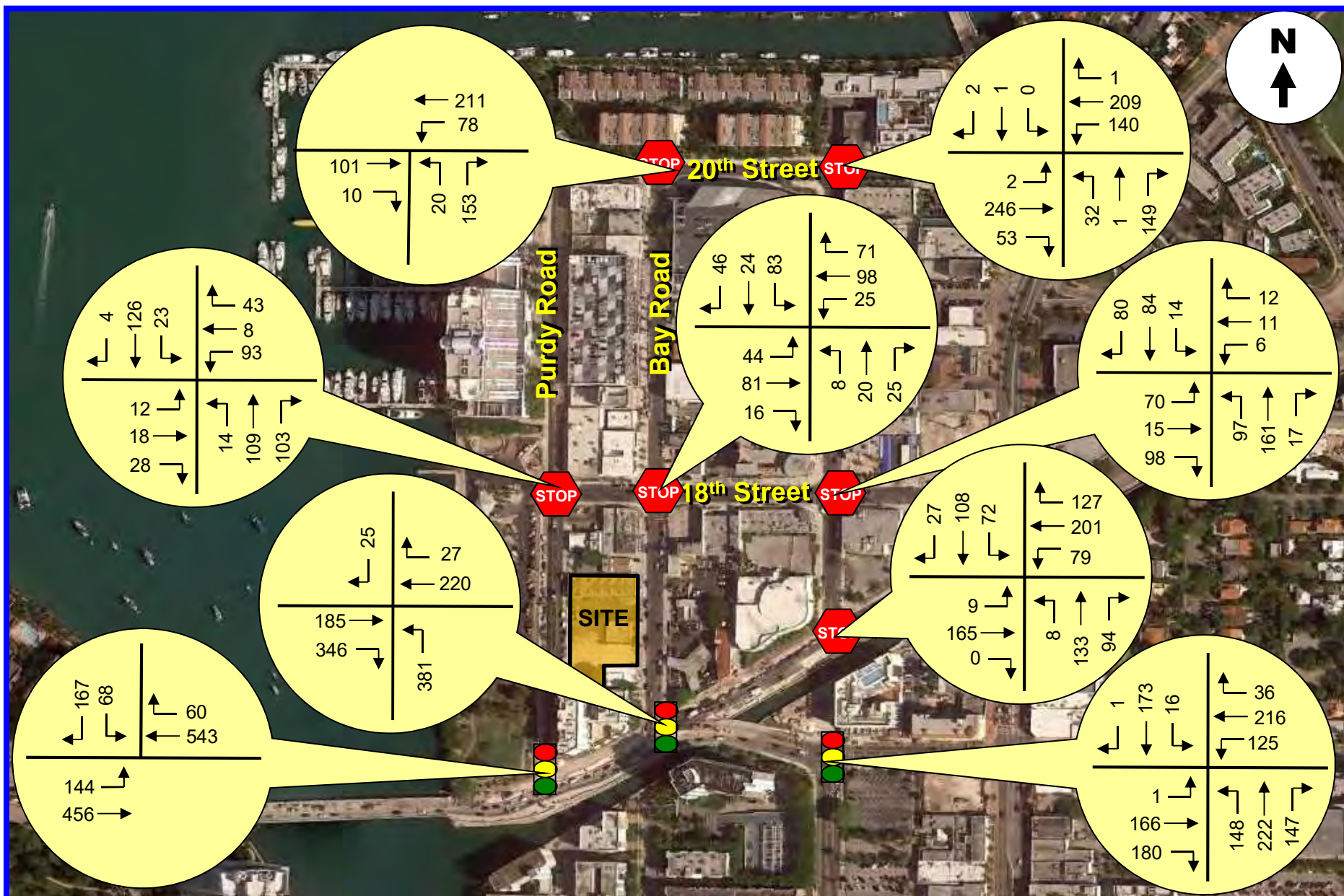
TRAFFIC COUNTS

Traf Tech Engineering, Inc., in association with Traffic Survey Specialists, Inc., collected intersection turning movement counts at the following nine (9) intersections located within the study area:

- Dade Boulevard and Purdy Avenue (signalized)
- Dade Boulevard and Bay Road (signalized)
- Dade Boulevard and West Avenue (stop controlled)
- 17th Street and West Avenue (signalized)
- 18th Street and West Avenue
- 18th Street and Bay Road
- 18th Street and Purdy Avenue
- 20th Street and West Avenue
- 20th Street and Bay Road

The intersection turning movement counts were collected on Friday, December 15, 2017 . The intersection turning movement counts were recorded during the afternoon (4:30 PM to 7:00 PM) peak period. At the intersection of 20th Street and Bay Road, 12-hour turning movement counts were collected on March 9, 2018 from 9 AM to 9 PM.

Figure 3 summarizes the results of the intersection turning movement counts. Appendix C contains the intersection turning movement counts, as collected in the field. The signal timing plans were obtained from the Miami-Dade County's ftp site and are also contained in Appendix C.



TRIP GENERATION

The trip generation for the project was based on information contained in the Institute of Transportation Engineer's (ITE) *Trip Generation Manual* (10th Edition). According to the subject ITE manual, the most appropriate "land use" categories for the proposed land uses includes: Land Use 820 – Shopping Center and Land Use 220 – Multifamily Housing. Table 1 summarizes the trips associated with the proposed development.

TABLE 1 Trip Generation Summary (Proposed Uses) Sunset Harbour					
Land Use	Size	Daily Trips	PM Peak Hour		
			Total Trips	Inbound	Outbound
Retail (LUC 820)	19,214 sf	1,958	160	77	83
Residential (LUC 220)	12 units	50	9	6	3
Subtotal		2,008	169	83	86
Internalization (5%)		-100	-8	-4	-4
Multimodal Trip Reduction (20%)		-382	-32	-16	-16
Gross Trips		1,526	129	63	66
Pass-by (Retail -34%)		-499	-41	-21	-20
Net New Trips		1,027	88	42	46

Source: Institute of Transportation Engineer's (ITE) *Trip Generation Manual* (10th Edition)

As indicated in Table 1, the new trips anticipated to be generated by the proposed development consist of approximately 1,027 daily trips and approximately 86 trips during the weekday PM peak hour (42 inbound and 46 outbound).

The trip generation rates/equations used to determine the trips associated with the proposed land uses are presented below:

ITE Land Use 820 – Shopping Center

Weekday Daily Trip Generation

$$\ln T = 0.68 \ln (X) + 5.57$$

Where T = number of weekday daily trips and
X = 1,000 Sq. feet of gross leasable area

Weekday PM Peak Hour of Adjacent Street

$$\ln T = 0.74 \ln (X) + 2.89 \text{ (48\% inbound and 52\% outbound)}$$

Where T = number of weekday peak hour trips and
X = 1,000 Sq. feet of gross leasable area

ITE Land Use 220 – Multifamily Housing

Weekday Daily Trip Generation

$$T = 7.56 (X) + 40.86$$

Where T = number of weekday daily trips and
X = number of dwelling units

Weekday PM Peak Hour of Adjacent Street

$$\ln T = 0.89 \ln (X) - 0.02 \text{ (63\% inbound and 37\% outbound)}$$

Where T = number of weekday peak hour trips and
X = number of dwelling units

TRIP DISTRUBUTION AND TRAFFIC ASSIGNMENT

The trip distribution and traffic assignment for the project were based on Miami-Dade County's Cardinal Distribution information for the study area. Table 2 summarizes the County's cardinal distribution data for Traffic Analysis Zone 639, which is applicable to the project site from the latest SERPM data published by Miami-Dade County.

TABLE 2		
Project Trip Distribution		
Sunset Harbour		
Direction		% of Total Trips
North:	Northwest	9.8
	Northeast	15.2
South:	Southwest	2.3
	Southeast	19.6
East:	Northeast	5.8
	Southeast	3.5
West:	Northwest	17.0
	Southwest	26.8
Total		100.00%

Source: Miami-Dade County. LEGEND: 2040

Based on the above, the following traffic assignment was assumed for the proposed development:

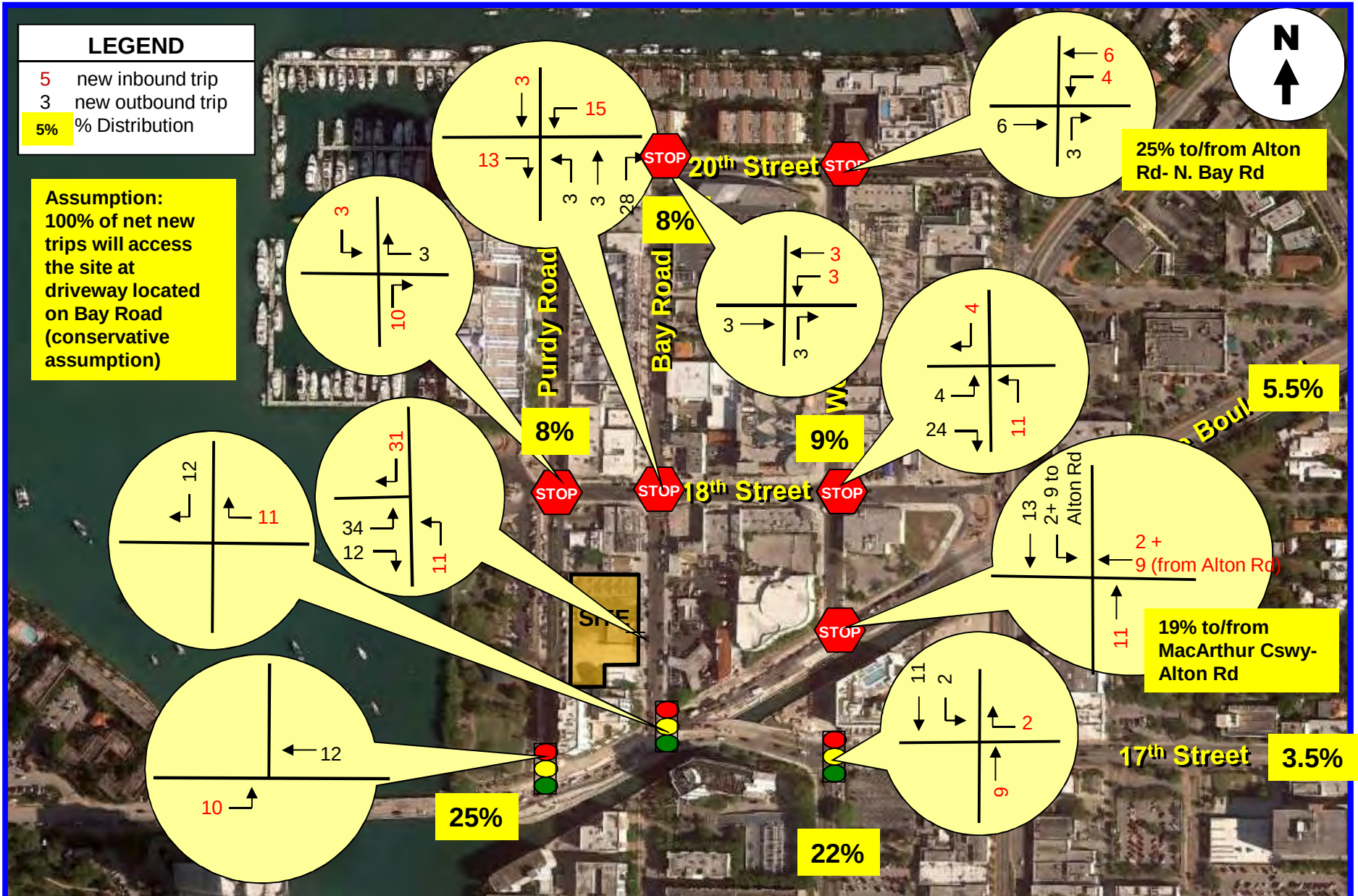
- 25% to and from the west via Dade Boulevard
- 19% to and from the west via MacArthur Causeway – Alton Road (reflected at the intersection of Dade Boulevard and West Avenue)
- 5.5% to and from the east via Dade Boulevard
- 3.5% to and from the east via 17 Street
- 25% to and from the north via Alton Road – N. Bay Road. (reflected at the intersection of 20th Street and West Avenue). The 25% was distributed as follows:
 - 9% to and from the north via West Avenue
 - 8% to and from the north via Bay Road
 - 8% to and from the north via Purdy Avenue
- 22% to and from the south via West Avenue

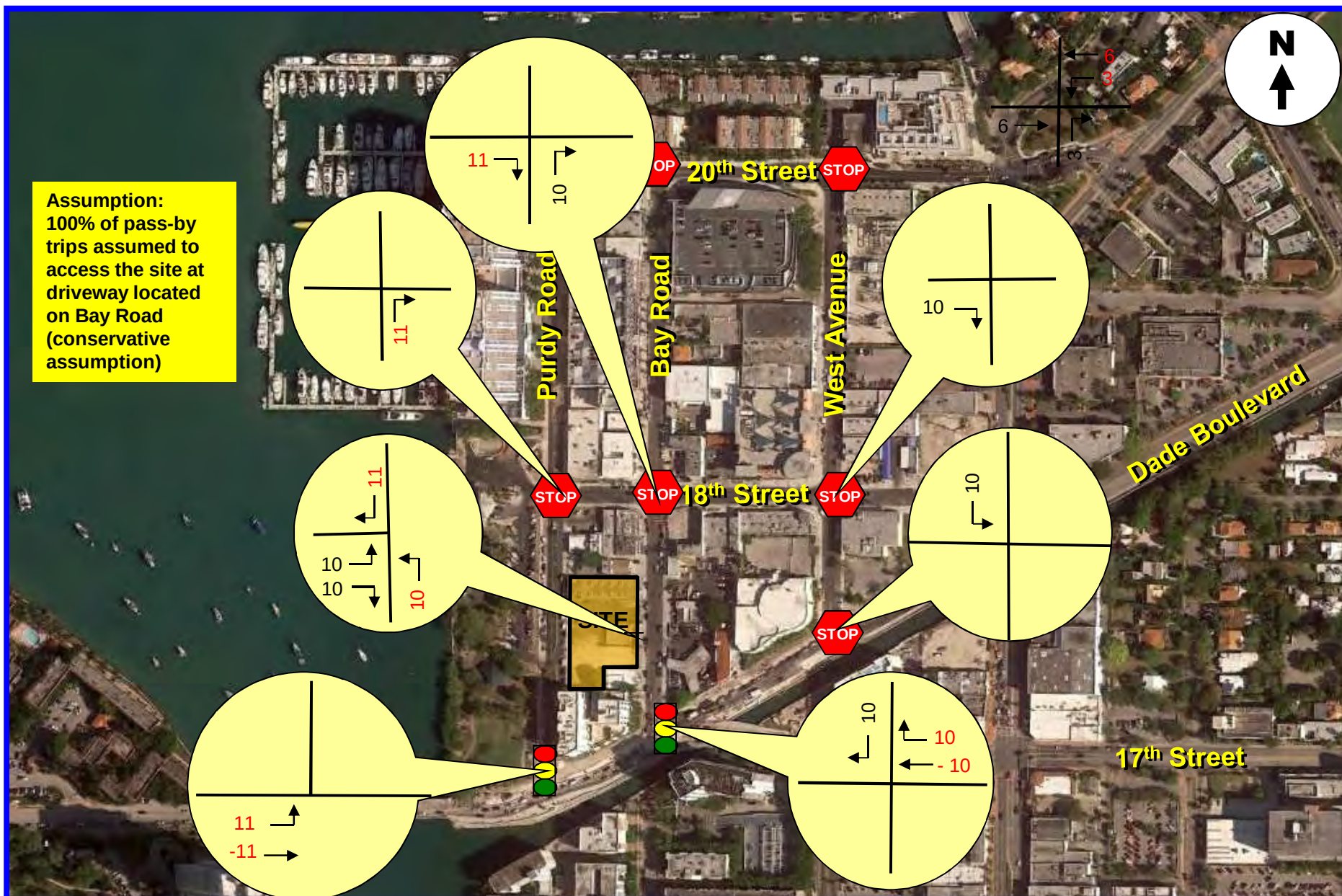
The new peak hour traffic generated by the project was assigned to the nearby transportation network using the traffic assignment documented above. The new project traffic assignment is summarized in Figures 4A, 4B, and 4C.

LEGEND

- 5 new inbound trip
- 3 new outbound trip
- 5% % Distribution

Assumption:
100% of net new trips will access the site at driveway located on Bay Road (conservative assumption)





Valet Trips = $0.80 \times (\text{Inbound trips} - \text{Internalization} - \text{Multimodal reduction})$

Where:

Inbound trips = 77 (from trip generation table)

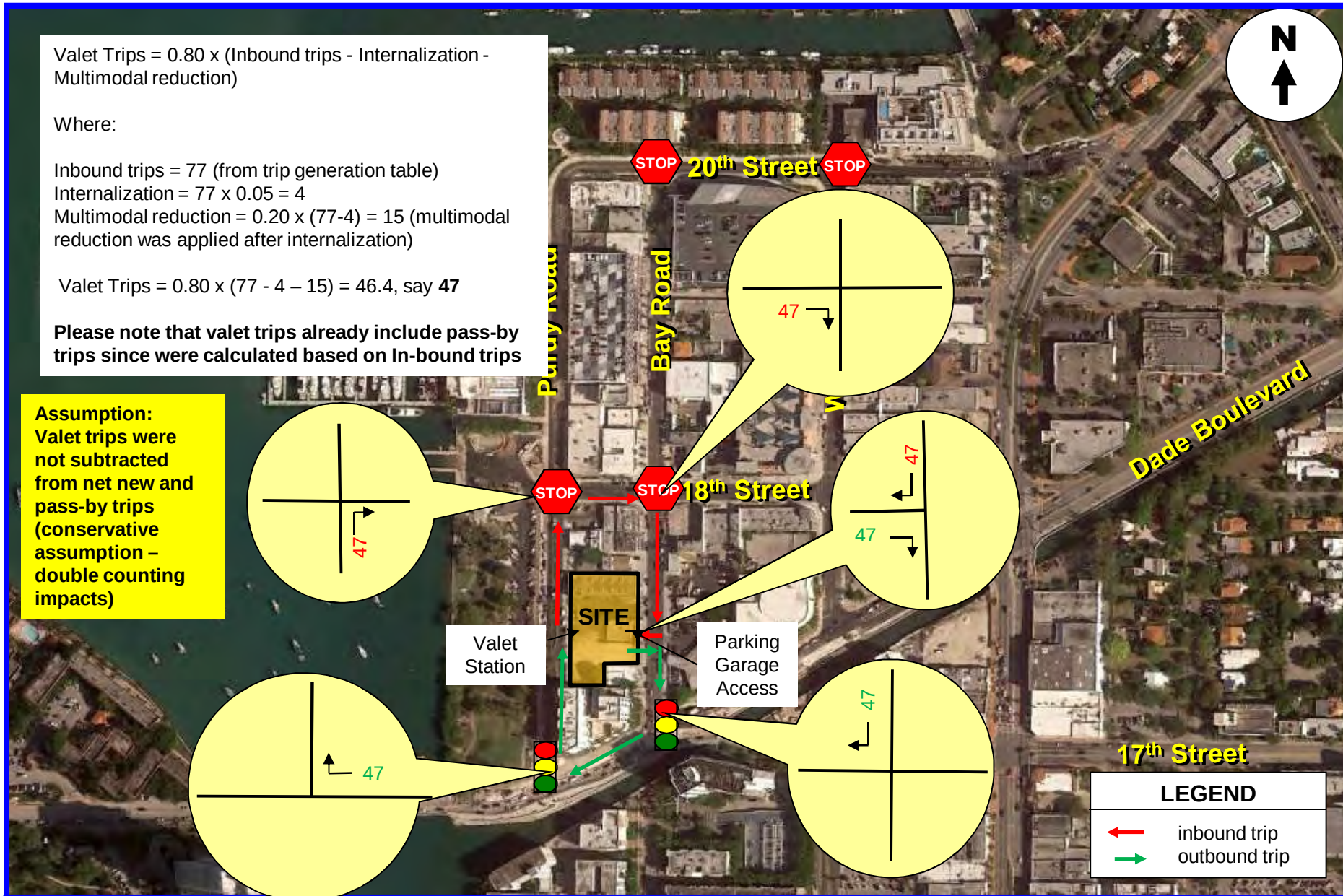
Internalization = $77 \times 0.05 = 4$

Multimodal reduction = $0.20 \times (77 - 4) = 15$ (multimodal reduction was applied after internalization)

Valet Trips = $0.80 \times (77 - 4 - 15) = 46.4$, say 47

Please note that valet trips already include pass-by trips since were calculated based on In-bound trips

Assumption:
Valet trips were not subtracted from net new and pass-by trips (conservative assumption – double counting impacts)



TRAFFIC ANALYSIS

This section of the study is divided into three parts. The first part consists of developing the future conditions traffic volumes for the study area. The second part includes level-of-service analyses for existing and future conditions. The final section focusses on valet parking.

Future Conditions Traffic Volumes

Two sets of future traffic volumes were developed. The first set includes project buildout conditions without the proposed project and the second set adds the new trips anticipated to be generated by the project.

In order to develop year 2020 traffic volumes (project anticipated to be built and occupied by the year 2020), without the proposed project, two separate analyses were undertaken. The first analysis converts the existing peak hour traffic counts collected in the field during the month of December to average peak season conditions. Based on FDOT's Peak Season Factor Category report, 1.04 and 1.0 factors are required to convert traffic counts collected in second week of December and first week of March to average peak season conditions (refer to Appendix D). The second analysis includes a growth factor to project 2017 peak season traffic volumes to the year 2020. Based on traffic growth data published by the FDOT for a nearby traffic count stations, minimal/negligible traffic growth has occurred during the past five years (refer to Appendix D). However, in order to assess impacts with a conservative approach, and to account for unforeseen approved project (committed trips) that may impact the study intersections, a one percent (1%) growth rate was used for purposes of this study. Additionally, trips associated with the approved 1901 Alton, Trader Joes, 1747 Bay Road Development, and 1750 Alton were added as committed developments.

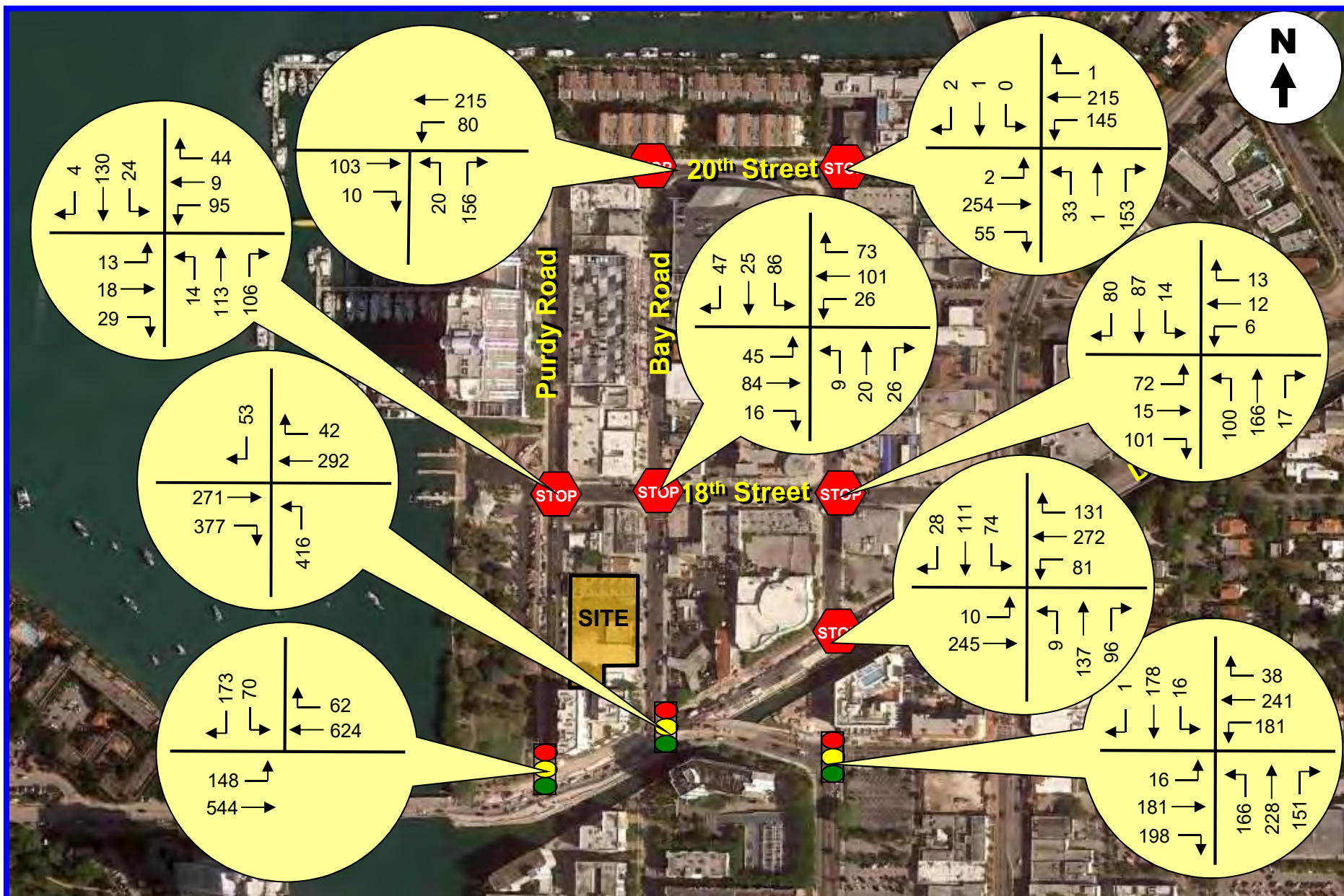
The new trips generated by the Sunset Harbour (refer to Figure 4) were added to the 2020 background traffic in order to develop total traffic conditions. The future traffic projections for the study intersections (peak season adjustments, traffic growth rates, committed developments and project traffic) are presented in tabular format in Appendix E. Figures 5 and 6 present the year 2020 future traffic volumes for the study area.

Figure 5 includes background traffic only (without the proposed project) and Figure 6 includes the additional traffic anticipated to be generated by the Sunset Harbour project.

Level of Service Analyses

Intersection capacity/level of service analyses were conducted for the eight study intersections. The analyses were undertaken following the capacity/level of service procedures outlined in the Highway Capacity Manual (HCM) using the SYNCHRO software. The results of the capacity analyses are summarized in Tables 3 and 4. As indicated in Tables 3 and 4, all study intersections are currently operating at an acceptable level of service. All study intersections are currently operating at an acceptable level of service. In the year 2020 with the proposed project in place, all intersections are expected to continue to operate at an acceptable level of service.

Tables 5 and 6 summarize the existing turn lane storage and the expected queues at all turn lanes of the study intersections.



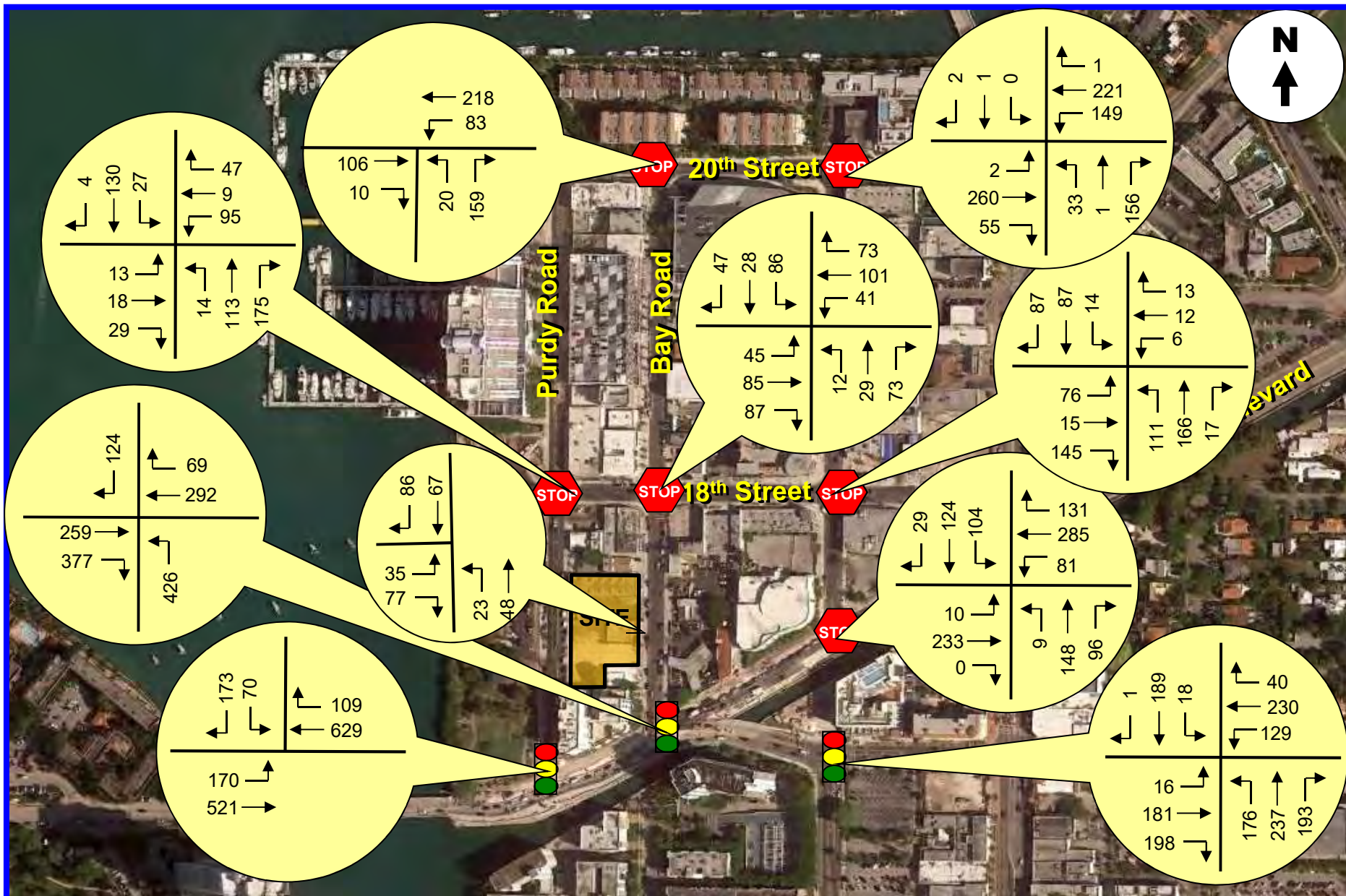


TABLE 3			
Intersection Level of Service – (Signalized Intersections)			
Sunset Harbour			
		Future Traffic Conditions	
	2017	2020	2020
Intersection	Existing	w/o Project	With Project
Dade Blvd & Purdy Ave	B	B	B
Dade Blvd & Bay Road/17th St	C	C	D
West Ave & Dade Blvd	B	B	B
17 th St & West Ave	D	D	D

Source: Highway Capacity Manual

TABLE 4			
Intersection Level of Service (Unsignalized Intersections)			
Sunset Harbour			
		Future Traffic Conditions	
	2017	2020	2020
Intersection/Movement	Existing	w/o Project	With Project
18 St & West Ave	A	B	B
18 St & Bay Rd	A	A	A
18 St & Purdy Ave	A	A	B
20 St & West Ave	B	B	B
20 St & Bay Rd	B	B	B
Bay Rd & Driveway			A

Source: Highway Capacity Manual

NOTE: All intersections on Table 4 are all-way stop and were analyzed as such, except the access driveway.

TABLE 5				
95th Queue – (Signalized Intersections)				
Sunset Harbour				
Intersection	Storage Bay (ft)	2017	Future Traffic Conditions	
		Existing (ft)	2020	2020
			w/o Project (ft)	With Project (ft)
Dade Blvd & Purdy Ave				
EBL	80	67	78	105
SBL	100	108	111	111
17 th St & West Ave				
NBL	170	169	199	184
WBL	160	170	174	173
SBL	50	28	27	26

Source: Highway Capacity Manual

TABLE 6				
95th Queue (Unsignalized Intersections)				
Sunset Harbour				
Intersection/Movement	Storage Bay (ft)	2017	Future Traffic Conditions	
		Existing (ft)	2020	2020
			w/o Project (ft)	With Project (ft)
18 St & Purdy Ave				
NBL	100	0.1	0.1	0.1
SBL	100	0.1	0.1	0.1
20 St & West Ave				
WBL	85	1.0	1.0	1.1

Source: Highway Capacity Manual

The computer printouts of the intersection capacity analyses are contained in Appendix F.

Valet Operation

The proposed development will provide valet parking service to 80% of retail customers. Valet stand is anticipated to be located on Purdy Ave, and all entrance and exiting to the garage will occur on Bay Road. Thus, all vehicles will be dropped-off along Purdy Ave, will head north towards 18th Street, turn right on 18th Street, and right on Bay Road to

enter garage. Once a car is claimed, the vehicle will exit garage on Bay Road, head south toward Dade Boulevard, turn right on Dade Boulevard, and right on Purdy Avenue to be picked up near the valet stand.

In order to determine the stacking requirements associated with the valet operation, a queuing analysis was undertaken. The maximum number of inbound vehicles associated with this project, during a one-hour period, is approximately 47 vehicles (80% of the retail customers)

A queuing analysis was conducted in order to ensure that the stacking is sufficient to accommodate the maximum inbound vehicular demand anticipated at this facility.

The length of queue anticipated was determined using information contained in ITE's *Transportation and Land Development*, Chapter 8 – Drive-In Facilities¹. For this analysis, the following input variables were used:

- Service Rate: It was assumed that the average time to park/unpark a vehicle by a valet runner is approximately 3.5 minutes, or 17 vehicles per hour per valet runner. Assuming up to six (6) valet runners, the maximum service rate of the facility is 120 vehicles in a one-hour period.
- Demand Rate: As indicated above, a maximum of 47 vehicles will arrive during the highest hour (i.e., PM peak). Please refer to calculations in Appendix F.

Using equation 8-9b and Table 8-11 of ITE's *Transportation and Land Development*, the maximum length of queue at the 95% confidence level, is two vehicles. Therefore, the valet station should provide stacking for at least two (2) vehicles. The results of the ITE queuing procedure is contained in Appendix F.

¹ By Vergil G. Stover and Frank J. Koepke.

CONCLUSIONS AND RECOMMENDATIONS

Sunset Harbour is a proposed mixed-use development, including retail and residential units planned to be located at 1759 Purdy Avenue in the City of Miami Beach in Miami-Dade County, Florida.

The project site is currently vacant. Proposed to the site is an 19,214 square-foot commercial building plus 12 residential units (ownership) with a parking structure on site.

The proposed access to the parking structure will be off of Bay Road. An internal pedestrian connection roadway linking Purdy Avenue and Bay Road is proposed near the north property line (Pedestrian Promenade). Valet service is being considered for 80% of the retail customers. The valet station is anticipated to be located on Purdy Avenue and all entrance and exiting to the garage will occur on Bay Road.

Traf Tech Engineering, Inc. was retained by Deco Capital Group, LLC to conduct a traffic study in connection with the proposed development. The conclusions and recommendations of the traffic study are presented below:

- The new trips anticipated to be generated by the proposed development consist of approximately 1,027 daily trips and approximately 86 trips during the weekday PM peak hour (42 inbound and 46 outbound).
- All study intersections are currently operating at an acceptable level of service. In the year 2020 with the proposed project in place, all intersections are expected to continue to operate at an acceptable level of service.
- The maximum length of queue at the 95% confidence level, is two (2) vehicles. Therefore, the valet station should provide stacking for at least two (2) vehicles.

TRANSPORTATION DEMAND MANAGEMENT (TDM) PLAN

Traf Tech Engineering, Inc. prepared a Transportation Demand Management (TDM) plan for the proposed development.

Introduction

Travel Demand Management plans (TDM) establish policies and mechanisms to reduce automobile trips to and from designated facilities. TDM plans usually use several approaches to address all modes of transportation likely to be used to provide access to a facility such as single occupant driving, carpooling, transit, bicycling and walking. The goal of TDM plans is to increase the use of alternatives modes to single occupant driving, i.e., to reduce the number of automobile trips to and from the facility and consequently, minimizing automobile traffic impacts on the street system.

Successful TDM plans not only address all modes of transportation, but also use policies such as inducements for alternative modes (subsidies), physical enhancements (bike lockers, preferential parking for carpools) and disincentives for automobile use (no free parking for employees).

Potential measures for each mode are addressed below. Use of an employee transportation subsidy is also presented.

Pedestrian Access

Walking not only reduces automobile trips and their contribution to congestion and emissions, it also provides health benefits to the employees who use this mode of transportation. It is, however, the mode that is least likely to be used for a number of reasons. It is unlikely that employees of the restaurant/bar use will reside within a reasonable walking distance (within $\frac{1}{4}$ - $\frac{1}{2}$ mile) of the subject facility. However, the area near the subject project is a high pedestrian traffic area and therefore, many future customers of the Sunset Harbour development are expected to be walking trips. Sidewalks exist on the east and west sides of project as well as safe pedestrian crosswalks

(with ramps and pedestrian signals).

Bicycling

The site of the Sunset Harbour project offers two potential approaches to encourage cycling, the use of the Citi Bike program and use of retail employee-owned bicycles.

Use of Citi Bike could be supported by providing monthly passes to employees. Monthly passes are \$15.00 for unlimited 30 minute rides and \$25.00 for unlimited 60 minute rides. Within the immediate area of the project, there is one convenient Citi Bike rental station (Station 177 - Purdy Ave & 18th Street (Marina), and Station 187 - West Ave & 20th Street (Publix on the Bay)) and employees will be informed of the Citi Bike Stations.

Mass Transit

There is a wealth of transit options for the Sunset Harbour development. These transit routes include A, M, and 115. The nearest bus stop for these services is located at the intersection of Dade Boulevard and Purdue Avenue. These transit routes provide frequent service and access to all of Miami-Dade County as well as connections to other destinations outside of the County. Employers of the restaurant can provide a significant inducement to employees to use public transportation (Miami-Dade Transit, MDT) through a transit subsidy. Transit subsidies can also provide tax benefits to both employees and employers.

MDT offers three methods to provide transit subsidies:

The employee uses pre-tax dollars from their salary to purchase monthly transit passes. There is no income tax on the portion of their salary used for transit passes. The pre-tax funds also reduce the employees' taxable salary, reducing the total amount of income tax paid by the employees. The employer pays the total cost of a monthly transit pass using a tax-deductible (to the employer) subsidy. The employer receives a tax deduction equivalent to the value of the transit subsidies provided to the employees. The transit subsidy is a fringe benefit to employees and is not taxable income.

Both the employer and employees share the cost of transit passes, paying for them with pre-tax dollars. The employer reduces his/her payroll taxes. Employees do not pay income tax on the money used for transit passes.

MDT monthly passes if purchased by an individual are \$112.50. Corporate discounts are available based on the number of participating employees. For 4 – 99 employees, monthly passes are \$101.25 per employee, for 100 or more employees, the cost is \$95.65 per employee.

Carpooling

Carpooling is historically the least effective alternative transportation mode, even when implemented on a regional basis. Given the relatively small employee base of a single employer, it is unlikely that carpooling will provide a significant amount of trip reduction. However, preferential parking could be made available to employees that carpool.

APPENDIX A

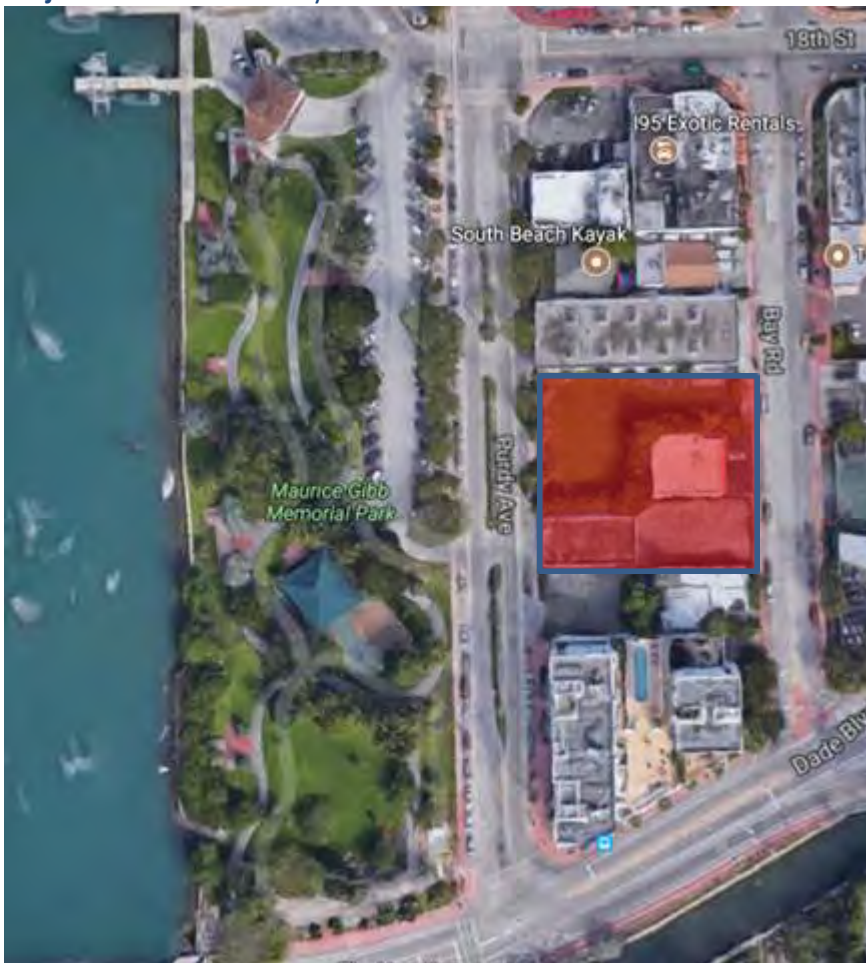
Traffic Methodology

From: Akcay, Firat <FiratAkcay@miamibeachfl.gov>
Sent: Tuesday, October 10, 2017 1:25 PM
To: Joaquin@traftech.biz
Cc: Munday, Tui; 'Claudia Lamus'; Ferrer, Josiel
Subject: RE: PB 10-02-2017 Sunset Harbor

Joaquin,

From the methodology meeting with Joaquin on Friday and after meeting with Josiel for an extended review of the project our suggested scope. The traffic study shall include, at a minimum, the following scope items:

Project Location: 1752 Bay Road



Project Scope: Joaquin, please provide final proposed development plan by land use and number of units for residential component as the study from 2015 suggests 15 units compared to 12 units with the latest plans you provided. If you have any information regarding the possible tenants of the retail component as well as for the restaurant component, please provide this information for trip generation purposes. Otherwise, we suggest shopping center 820(equation) for the retail land uses.

Traffic Counts: The West Ave Bridge and Dade Boulevard construction is scheduled to be completed on the 17th of this month.

Generally we would allow at least 3 months' time to allow for traffic to normalize and drivers to adjust to the new traffic pattern after the implementation of the new bridge.

Provide the date of hearing for the Planning Board Meeting. Based on the date, our Department is willing to allow traffic counts to be collected as soon as 2 weeks following opening of the bridge, the week of October 31st, if meeting date and time of review are a concern.

The intersections that will need to be counted:

Dade Blvd -	Purdy Avenue
	Bay Road
	West Avenue
17 th Street -	West Avenue
18 th Street-	West Avenue
	Bay Road
	Purdy Avenue
20 th Street-	West Avenue
	Bay Road(please collect multimodal counts for an AWSC warrant analysis)

Committed Developments:

Reach out to the Planning Department and copy me to obtain information on committed developments in the area.

Valet and Parking:

According to the site plan submitted, there is a parking deficit of 4 vehicles.

The valet plan needs to be submitted as well as pick up and drop off locations.

Will the restaurant have a separate valet station than the residential and retail valet service?

Please provide as much detail on this as possible.

Trip reduction factors:

Multimodal trip reduction: 20%

Internalization – Please use methodology presented in ITE Trip Generation Manual 9th Edition, Chapter 7, Multi-Use Developments.

Master Plan:

According to the Bicycle Pedestrian Master Plan, we are implementing a bicycle greenway along West Avenue. This greenway will continue over the West Avenue Bridge. Can you please collect geometric data on West Avenue, north of Dade Boulevard for a feasibility study of a 6 feet bicycle lane?

Travel Demand Management Plan:

Please provide a TDM plan.

Peer Review:

The type of peer review will be a Level B, in the amount of \$5800.00

Thank you and please feel free to contact us with any questions,



Firat Akcay, Transportation Analyst

TRANSPORTATION DEPARTMENT

1688 Meridian Avenue, Suite 801, Miami Beach, FL 33139

Tel: 305-673-7000 X 6839 / www.miamibeachfl.gov

We are committed to providing excellent public service and safety to all who live, work and play in our vibrant, tropical, historic, community.



Please do not print this e-mail unless necessary.

From: Munday, Tui
Sent: Monday, October 09, 2017 1:21 PM
To: Akcay, Firat; Ferrer, Josiel
Cc: 'Joaquin@traftech.biz'
Subject: RE: PB 10-02-2017 Sunset Harbor

What was the decision about peer review and the price/level of the peer review?



Tui Munday, Senior Planner
PLANNING DEPARTMENT
1700 Convention Center Drive, Miami Beach, FL 33139
Tel: 305-673-7000 X 6320 / Fx: 305-673-7559 / www.miamibeachfl.gov

We are committed to providing excellent public service and safety to all who live, work and play in our vibrant, tropical, historic, community.



Please do not print this e-mail unless necessary.

From: Joaquin@traftech.biz [<mailto:Joaquin@traftech.biz>]
Sent: Friday, October 06, 2017 10:38 AM
To: Akcay, Firat; Ferrer, Josiel
Cc: Munday, Tui
Subject: PB 10-02-2017 Sunset Harbor

Firat and Josiel,

Will see you around 2PM to discuss the traffic methodology. Josiel may remember, we evaluated this project back in late 2015 (see attached study without appendix) and had to rely on old traffic counts because at that time the area was under construction. The project is very similar (less residential units). It consists of two restaurants 5,768 sf and retail of about 12,498 sf plus 12 residential units.

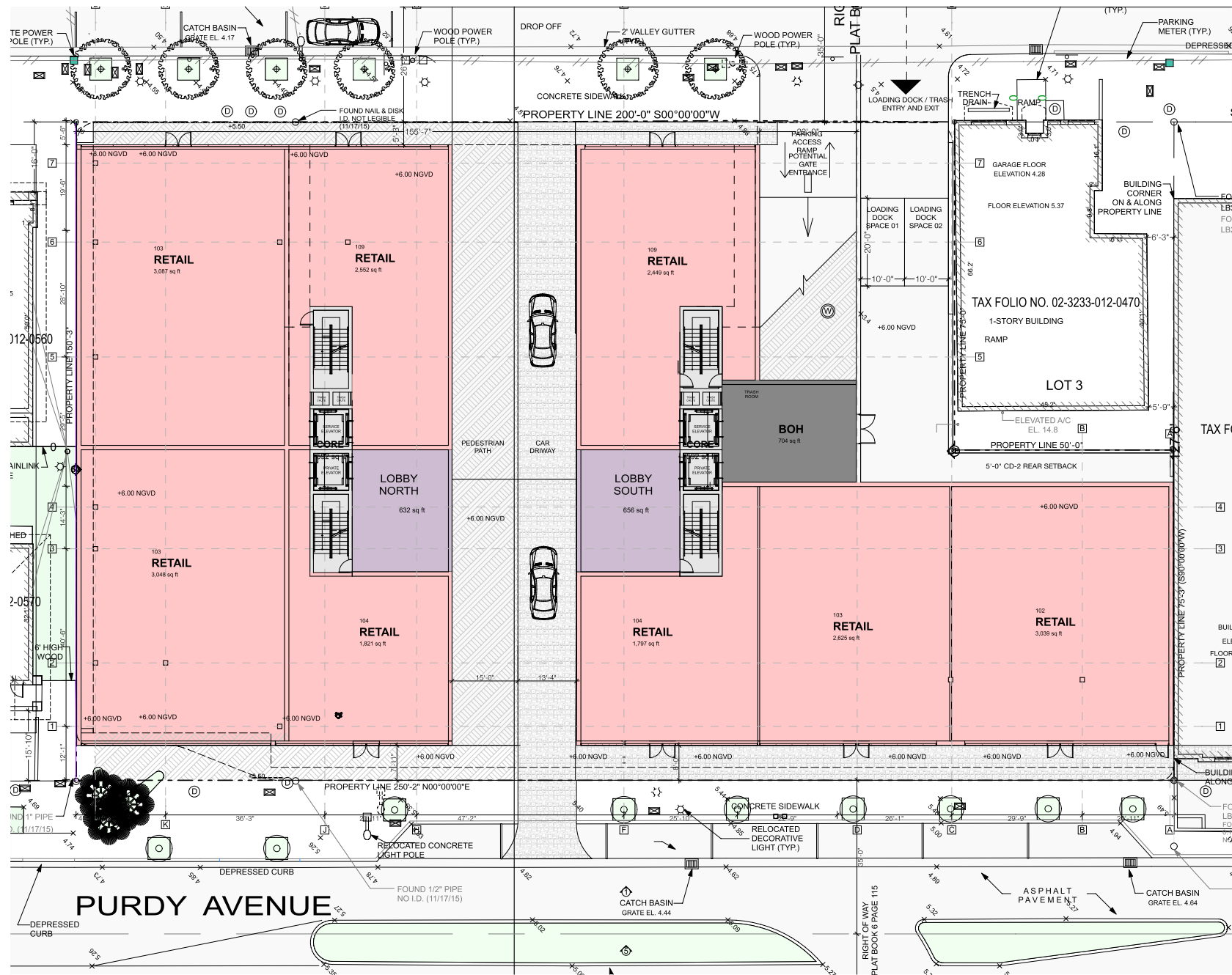
Joaquin

Joaquin E. Vargas, P.E.

Traf Tech ENGINEERING
8400 N. University Drive, Suite 309
Tamarac, Florida 33321
Tel: (954) 582-0988
Fax: (954) 582-0989
Mobile: (954) 643-1671
joaquin@traftech.biz

APPENDIX B

Site Plan – Sunset Harbour



APPENDIX C

Signal Timing Plan and Traffic Counts

TOD Schedule Report
for 4130: West Av&17 St

Print Date:
11/20/2017

Print Time:
6:14 PM

<u>Asset</u>	<u>Intersection</u>	<u>TOD Schedule</u>	<u>Op Mode</u>	<u>Plan #</u>	<u>Cycle</u>	<u>Offset</u>	<u>TOD Setting</u>	<u>Active PhaseBank</u>	<u>Active Maximum</u>
4130	West Av&17 St	DOW-2		N/A	0	0	N/A	0	Max 0

Splits

<u>PH 1</u>	<u>PH 2</u>	<u>PH 3</u>	<u>PH 4</u>	<u>PH 5</u>	<u>PH 6</u>	<u>PH 7</u>	<u>PH 8</u>
-	WBT	-	NBT	WBL	EBT	-	SBT
0	0	0	0	0	0	0	0
							

Active Phase Bank: Phase Bank 1

<u>Phase</u>	<u>Walk</u>	<u>Don't Walk</u>	<u>Min Initial</u>	<u>Veh Ext</u>	<u>Max Limit</u>	<u>Max 2</u>	<u>Yellow</u>	<u>Red</u>
<u>Phase Bank</u>								
	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3		
1 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
2 WBT	7 - 7 - 7	24 - 24 - 24	7 - 7 - 5	1 - 1 - 1	40 - 30 - 30	0 - 0 - 0	4	2.2
3 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
4 NBT	7 - 7 - 7	20 - 20 - 20	7 - 7 - 5	2.5 - 2.5 - 2.5	15 - 12 - 12	50 - 50 - 50	4	2.2
5 WBL	0 - 0 - 0	0 - 0 - 0	5 - 5 - 0	2 - 2 - 2	10 - 10 - 10	12 - 12 - 12	3.7	2
6 EBT	7 - 7 - 7	24 - 24 - 24	7 - 7 - 5	1 - 1 - 1	40 - 30 - 30	0 - 0 - 0	4	2.2
7 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
8 SBT	0 - 0 - 0	0 - 0 - 0	7 - 7 - 5	2.5 - 2.5 - 2.5	15 - 12 - 12	50 - 50 - 50	4	2.2

Last In Service Date: unknown

Permitted Phases

12345678

Default -2-456-8
External Permit 0 -2-4-6--
External Permit 1 -2-4-6--
External Permit 2 -2-4-6--

TOD Schedule Report
for 4130: West Av&17 St

Print Date:
11/20/2017

Print Time:
6:14 PM

Current TOD Schedule	Plan	Cycle	Green Time								Ring Offset	Offset
			1 -	2 WBT	3 -	4 NBT	5 WBL	6 EBT	7 -	8 SBT		
1		160	0	69	0	79	14	49	0	79	0	72
2		160	0	69	0	79	14	49	0	79	0	72
3		120	0	59	0	49	14	39	0	49	0	72
4		130	0	69	0	49	14	49	0	49	0	54
5		130	0	77	0	41	22	49	0	41	0	60
6		130	0	69	0	49	14	49	0	49	0	44
7		105	0	64	0	29	9	49	0	29	0	72
8		120	0	59	0	49	9	44	0	49	0	109
9		120	0	59	0	49	9	44	0	49	0	111
10		130	0	69	0	49	9	54	0	49	0	44
13		105	0	64	0	29	9	49	0	29	0	67
14		105	0	64	0	29	9	49	0	29	0	75
15		130	0	69	0	49	9	54	0	49	0	66
16		130	0	69	0	49	9	54	0	49	0	114
17		130	0	69	0	49	9	54	0	49	0	44
18		90	0	49	0	29	9	34	0	29	0	75
19		90	0	49	0	29	9	34	0	29	0	75
20		130	0	69	0	49	9	54	0	49	0	75
23		90	0	49	0	29	9	34	0	29	0	75

Local TOD Schedule		
Time	Plan	DOW
0000	8	Su M T W Th F S
0030	Free	M T W Th
0100	Free	Su F S
0600	8	Su M T W Th F S
0800	7	Su S
0800	5	M T W Th F
0930	13	S
1000	14	Su S
1030	4	S
1200	14	S
1300	4	S
1515	16	M T W Th F
1600	7	Su S
1830	4	Su S
2000	8	Su M T W Th F S
2330	Free	M T W Th

Current Time of Day Function			
Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	-----	SuM T W ThF S

Local Time of Day Function			
Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	-----	SuM T W ThF S

* Settings
Blank - FREE - Phase Bank 1, Max 1
Blank - Plan - Phase Bank 1, Max 2
1 - Phase Bank 2, Max 1
2 - Phase Bank 2, Max 2
3 - Phase Bank 3, Max 1
4 - Phase Bank 3, Max 2
5 - EXTERNAL PERMIT 1
6 - EXTERNAL PERMIT 2
7 - X-PED OMIT
8 - TBA

No Calendar Defined/Enabled

TOD Schedule Report

for 4131: Bay Rd&Dade Blvd&17 St

Print Date:
11/20/2017

Print Time:
6:14 PM

<u>Asset</u>	<u>Intersection</u>	<u>TOD Schedule</u>	<u>Op Mode</u>	<u>Plan #</u>	<u>Cycle</u>	<u>Offset</u>	<u>TOD Setting</u>	<u>Active PhaseBank</u>	<u>Active Maximum</u>
4131	Bay Rd&Dade Blvd&17 St	DOW-2		N/A	0	0	N/A	0	Max 0

Splits

<u>PH 1</u>	<u>PH 2</u>	<u>PH 3</u>	<u>PH 4</u>	<u>PH 5</u>	<u>PH 6</u>	<u>PH 7</u>	<u>PH 8</u>
-	SWT	-	WBT	-	NET	-	-
0	0	0	0	0	0	0	0



Active Phase Bank: Phase Bank 1

<u>Phase</u>	<u>Walk</u>	<u>Don't Walk</u>	<u>Min Initial</u>	<u>Veh Ext</u>	<u>Max Limit</u>	<u>Max 2</u>	<u>Yellow</u>	<u>Red</u>
<u>Phase Bank</u>								
	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	
1 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
2 SWT	0 - 0 - 0	0 - 0 - 0	14 - 14 - 14	2.5 - 2.5 - 2.5	12 - 12 - 12	80 - 80 - 80	4	2.9
3 -	4 - 4 - 4	15 - 15 - 15	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
4 WBT	0 - 0 - 0	0 - 0 - 0	14 - 14 - 14	3.5 - 3.5 - 3.5	10 - 10 - 10	80 - 80 - 50	4	3.7
5 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
6 NET	0 - 0 - 0	0 - 0 - 0	14 - 14 - 14	2.5 - 2.5 - 2.5	12 - 12 - 12	80 - 80 - 80	4	2.9
7 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
8 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0

Last In Service Date: unknown

Permitted Phases

12345678

Default	-234-6--
External Permit 0	-234-6--
External Permit 1	-234-6--
External Permit 2	-234-6--

<u>Current</u>	<u>Green Time</u>										<u>Ring Offset</u>	<u>Offset</u>
<u>TOD Schedule</u>	<u>Plan</u>	<u>Cycle</u>	1	2	3	4	5	6	7	8		
			-	SWT	-	WBT	-	NET	-	-		
	1	85	0	27	13	30	0	27	0	0	0	64
	2	120	0	62	13	30	0	62	0	0	0	20
	3	130	0	72	13	30	0	72	0	0	0	6
	4	95	0	37	13	30	0	37	0	0	0	0
	5	80	0	22	13	30	0	22	0	0	0	0
	6	90	0	32	13	30	0	32	0	0	0	68
	13	90	0	32	13	30	0	32	0	0	0	0
	25	140	0	82	13	30	0	82	0	0	0	122
	26	180	0	122	13	30	0	122	0	0	0	58
	27	140	0	82	13	30	0	82	0	0	0	64
	28	140	0	82	13	30	0	82	0	0	0	114

Local TOD Schedule

<u>Time</u>	<u>Plan</u>	<u>DOW</u>
0000	Free	Su M T W Th F S
0530	2	M T W Th F
0700	6	M T W Th F
0930	5	Su M T W Th F S
1030	2	Su S
1515	Free	M T W Th F
1830	2	M T W Th F
2030	Free	Su S
2330	Free	M T W Th F

TOD Schedule Report

for 4131: Bay Rd&Dade Blvd&17 St

Print Date:
11/20/2017

Print Time:
6:14 PM

Current Time of Day Function

Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	-----	SuM T W ThF S
0000	TOD LOCAL MULTIFU	----4---	SuM T W ThF S
0500	TOD LOCAL MULTIFU	-----	SuM T W ThF S
0530	TOD OUTPUTS	-----3--	M T W ThF
1600	TOD OUTPUTS	----4---	M T W ThF
2330	TOD OUTPUTS	-----	M T W ThF

Local Time of Day Function

Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	-----	SuM T W ThF S
0000	TOD LOCAL MULTIFUNCT	----4---	SuM T W ThF S
0500	TOD LOCAL MULTIFUNCT	-----	SuM T W ThF S
0530	TOD OUTPUTS	-----3--	M T W ThF
0930	TOD OUTPUTS	-----2-	Su S
1600	TOD OUTPUTS	----4---	M T W ThF
2030	TOD OUTPUTS	-----	Su S
2330	TOD OUTPUTS	-----	M T W ThF

* Settings

Blank - FREE - Phase Bank 1, Max 1
Blank - Plan - Phase Bank 1, Max 2
1 - Phase Bank 2, Max 1
2 - Phase Bank 2, Max 2
3 - Phase Bank 3, Max 1
4 - Phase Bank 3, Max 2
5 - EXTERNAL PERMIT 1
6 - EXTERNAL PERMIT 2
7 - X-PED OMIT
8 - TBA

No Calendar Defined/Enabled

TOD Schedule Report
for 6593: Dade Blvd&Purdy Av

Print Date:
11/21/2017

Print Time:
10:11 AM

<u>Asset</u>	<u>Intersection</u>	<u>TOD Schedule</u>	<u>Op Mode</u>	<u>Plan #</u>	<u>Cycle</u>	<u>Offset</u>	<u>TOD Setting</u>	<u>Active PhaseBank</u>	<u>Active Maximum</u>
6593	Dade Blvd&Purdy Av	DOW-3		N/A	0	0	N/A	0	Max 0

Splits

<u>PH 1</u>	<u>PH 2</u>	<u>PH 3</u>	<u>PH 4</u>	<u>PH 5</u>	<u>PH 6</u>	<u>PH 7</u>	<u>PH 8</u>
-	WBT	-	-	-	EBT	-	SBT
0	0	0	0	0	0	0	0



Active Phase Bank: Phase Bank 1

<u>Phase</u>	<u>Walk</u>	<u>Don't Walk</u>	<u>Min Initial</u>	<u>Veh Ext</u>	<u>Max Limit</u>	<u>Max 2</u>	<u>Yellow</u>	<u>Red</u>
<u>Phase Bank</u>								
	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3		
1 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
2 WBT	0 - 0 - 0	0 - 0 - 0	14 - 14 - 14	1 - 1 - 1	35 - 55 - 55	0 - 0 - 0	4	2.1
3 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
4 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
5 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
6 EBT	0 - 0 - 0	0 - 0 - 0	14 - 14 - 14	1 - 1 - 1	35 - 55 - 55	0 - 0 - 0	4	2.1
7 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
8 SBT	7 - 7 - 7	17 - 17 - 17	7 - 7 - 7	2.5 - 2.5 - 2.5	12 - 14 - 22	36 - 0 - 0	4	2

Last In Service Date: unknown

Permitted Phases

12345678

Default	-2---6-8
External Permit 0	-2---6-8
External Permit 1	-2---6-8
External Permit 2	-2---6-8

<u>Current TOD Schedule</u>	<u>Plan</u>	<u>Cycle</u>	<u>Green Time</u>								<u>Ring Offset</u>	<u>Offset</u>
			1	2	3	4	5	6	7	8		
			-	WBT	-	-	-	EBT	-	SBT		
	2	80	0	43	0	0	0	43	0	25	0	0
	3	130	0	83	0	0	0	83	0	35	0	86
	4	90	0	52	0	0	0	52	0	26	0	32
	13	90	0	53	0	0	0	53	0	25	0	61
	20	110	0	73	0	0	0	73	0	25	0	24
	25	140	0	103	0	0	0	103	0	25	0	19
	26	180	0	143	0	0	0	143	0	25	0	28
	27	140	0	103	0	0	0	103	0	25	0	66
	28	140	0	103	0	0	0	103	0	25	0	12

Local TOD Schedule

<u>Time</u>	<u>Plan</u>	<u>DOW</u>
0000	Free	Su M T W Th F S
0530	2	M T W Th F
0700	13	M T W Th F
0930	2	Su M T W Th F S
1515	3	M T W Th F
1830	2	M T W Th F
2030	Free	Su S
2330	Free	M T W Th F

TOD Schedule Report
for 6593: Dade Blvd&Purdy Av

Print Date:
11/21/2017

Print Time:
10:11 AM

Current Time of Day Function			
<u>Time</u>	<u>Function</u>	<u>Settings *</u>	<u>Day of Week</u>
0000	TOD OUTPUTS	-----	SuM T W ThF S
0000	TOD LOCAL MULTIFU	----4---	SuM T W ThF S
0030	TOD OUTPUTS	-----1	SuM T W ThF S
0500	TOD LOCAL MULTIFU	-----	SuM T W ThF S
0600	TOD OUTPUTS	-----	SuM T W ThF S
2330	TOD OUTPUTS	-----1	M T W ThF

Local Time of Day Function			
<u>Time</u>	<u>Function</u>	<u>Settings *</u>	<u>Day of Week</u>
0000	TOD OUTPUTS	-----	SuM T W ThF S
0000	TOD LOCAL MULTIFUNCT	----4---	SuM T W ThF S
0030	TOD OUTPUTS	-----1	SuM T W ThF S
0500	TOD LOCAL MULTIFUNCT	-----	SuM T W ThF S
0600	TOD OUTPUTS	-----	SuM T W ThF S
2000	TOD OUTPUTS	-----1	Su S
2330	TOD OUTPUTS	-----1	M T W ThF

* Settings
Blank - FREE - Phase Bank 1, Max 1
Blank - Plan - Phase Bank 1, Max 2
1 - Phase Bank 2, Max 1
2 - Phase Bank 2, Max 2
3 - Phase Bank 3, Max 1
4 - Phase Bank 3, Max 2
5 - EXTERNAL PERMIT 1
6 - EXTERNAL PERMIT 2
7 - X-PED OMIT
8 - TBA

No Calendar Defined/Enabled

TRAFFIC SURVEY SPECIALISTS, INC.

DADE BOULEVARD & PURDY AVENUE

85 SE 4TH AVENUE, UNIT 109

Site Code : 00170211

MIAMI BEACH, FLORIDA

DELRAY BEACH, FLORIDA

Start Date: 12/15/17

COUNTED BY: RALPH MARTINEZ

PHONE (561)272-3255

File I.D. : DADEPURD

NOT SIGNALIZED

Page : 1

ALL VEHICLES

PURDY AVENUE					DADE BOULEVARD					-----				DADE BOULEVARD					
From North					From East					From South				From West					
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total	
Date 12/15/17 -----																			
16:30	0	21	0	34	0	0	137	9	0	0	0	0	0	0	29	91	0	321	
16:45	0	16	0	40	0	0	146	13	0	0	0	0	0	0	42	115	0	372	
17:00	0	13	0	43	1	0	119	17	0	0	0	0	0	0	29	104	0	326	
17:15	0	15	0	44	0	0	120	19	0	0	0	0	0	0	38	128	0	364	
Hr Total	0	65	0	161	1	0	522	58	0	0	0	0	0	0	138	438	0	1383	
17:30	0	8	0	47	0	0	121	17	0	0	0	0	0	1	42	82	0	318	
17:45	0	12	0	52	0	0	111	17	0	0	0	0	0	0	40	113	0	345	
18:00	0	12	0	32	0	0	85	25	0	0	0	0	0	0	40	110	0	304	
18:15	1	13	0	33	0	0	89	21	0	0	0	0	0	0	24	102	0	283	
Hr Total	1	45	0	164	0	0	406	80	0	0	0	0	0	1	146	407	0	1250	
18:30	0	4	0	30	4	0	102	20	0	0	0	0	0	0	17	81	0	258	
18:45	0	16	0	30	0	0	124	22	0	0	0	0	0	0	28	111	0	331	
Hr Total	0	20	0	60	4	0	226	42	0	0	0	0	0	0	45	192	0	589	

TOTAL	1	130	0	385	5	0	1154	180	0	0	0	0	0	1	329	1037	0	3222	

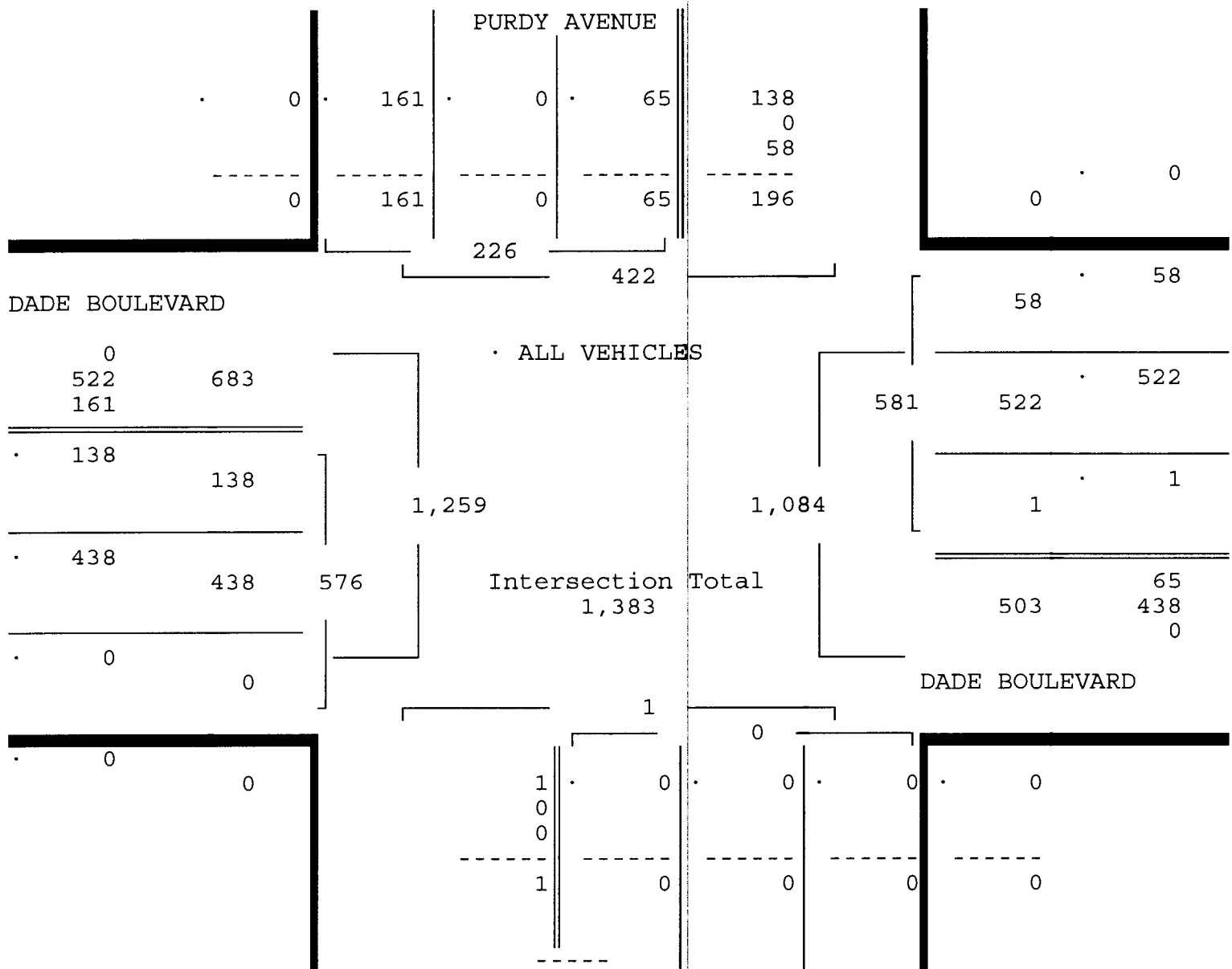
DADE BOULEVARD & PURDY AVENUE
 MIAMI BEACH, FLORIDA
 COUNTED BY: RALPH MARTINEZ
 NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.
 85 SE 4TH AVENUE, UNIT 109
 DELRAY BEACH, FLORIDA
 PHONE (561)272-3255

Site Code : 00170211
 Start Date: 12/15/17
 File I.D. : DADEPURD
 Page : 2

ALL VEHICLES

PURDY AVENUE					DADE BOULEVARD					-----				DADE BOULEVARD					Total
From North					From East					From South				From West					
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right	
Date 12/15/17 -----																			
Peak Hour Analysis By Entire Intersection for the Period: 16:30 to 19:00 on 12/15/17																			
Peak start 16:30					16:30					16:30					16:30				
Volume	0	65	0	161	1	0	522	58	0	0	0	0	0	0	138	438	0		
Percent	0%	29%	0%	71%	0%	0%	90%	10%	0%	0%	0%	0%	0%	0%	24%	76%	0%		
Pk total	226				581					0					576				
Highest	17:15				16:45					16:30					17:15				
Volume	0	15	0	44	0	0	146	13	0	0	0	0	0	0	38	128	0		
Hi total	59				159					0					166				
PHF	.96				.91					.0					.87				



TRAFFIC SURVEY SPECIALISTS, INC.

DADE BOULEVARD & PURDY AVENUE
 MIAMI BEACH, FLORIDA
 COUNTED BY: RALPH MARTINEZ
 NOT SIGNALIZED

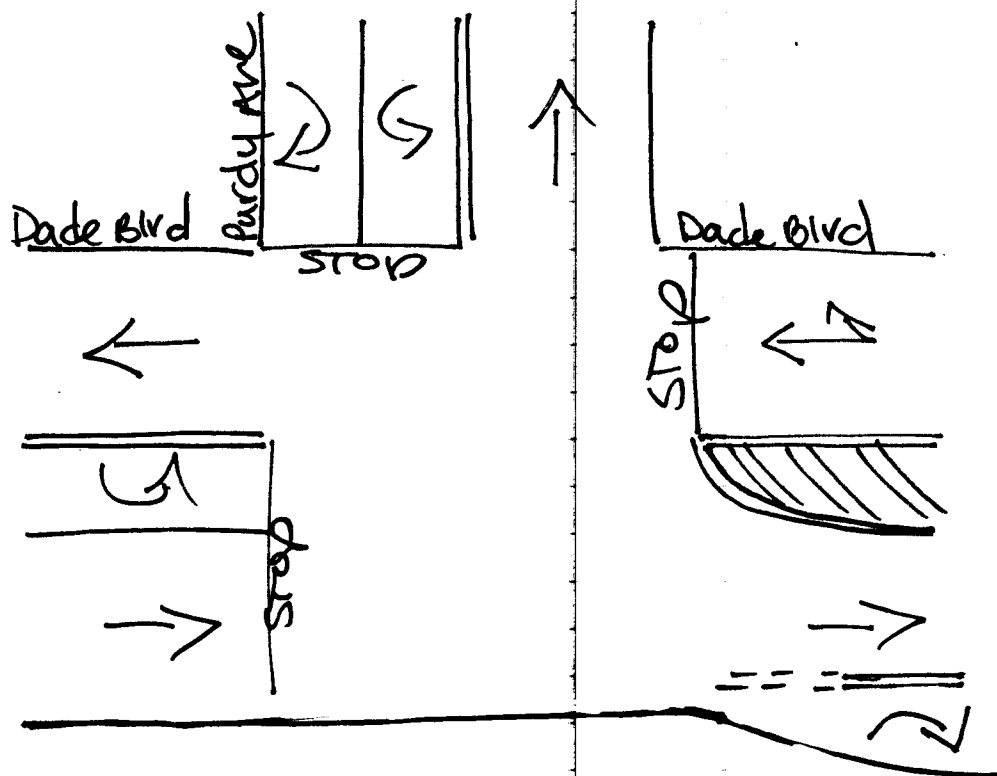
85 SE 4TH AVENUE, UNIT 109
 DELRAY BEACH, FLORIDA
 PHONE (561)272-3255

Site Code : 00170211
 Start Date: 12/15/17
 File I.D. : DADEPURD
 Page : 1

PEDESTRIANS & BIKES

PURDY AVENUE					DADE BOULEVARD					-----				DADE BOULEVARD						
From North					From East					From South					From West					
Left	BIKES	Right	Peds		Left	BIKES	Right	Peds		Left	BIKES	Right	Peds		Left	BIKES	Right	Peds	Total	
Date 12/15/17																				
16:30	0	8	0	5	0	0	0	0	0	0	5	0	4	0	0	1	0	6	29	
16:45	0	17	0	7	0	0	0	0	0	0	2	0	4	0	0	1	0	11	42	
17:00	0	8	0	4	0	1	0	0	0	0	2	0	1	0	0	1	0	5	22	
17:15	0	5	0	8	0	0	0	1	0	0	0	0	0	0	0	2	0	16	32	
Hr Total	0	38	0	24	0	1	0	1	0	0	9	0	9	0	0	5	0	38	125	
17:30	0	12	0	5	0	2	0	0	0	0	6	0	3	0	0	6	0	7	41	
17:45	0	9	0	4	0	0	0	0	0	0	1	0	5	0	0	1	0	13	33	
18:00	0	9	0	3	0	0	0	1	0	0	0	0	0	0	0	0	0	6	19	
18:15	0	1	0	2	0	0	0	0	0	0	2	0	0	0	0	1	0	7	13	
Hr Total	0	31	0	14	0	2	0	1	0	0	9	0	8	0	0	8	0	33	106	
18:30	0	8	0	3	0	1	0	1	0	0	1	0	0	0	0	0	0	12	26	
18:45	0	2	0	9	0	0	0	0	0	0	3	0	1	0	0	1	0	5	21	
Hr Total	0	10	0	12	0	1	0	1	0	0	4	0	1	0	0	1	0	17	47	
TOTAL	0	79	0	50	0	4	0	3	0	0	22	0	18	0	0	14	0	88	278	

↑
North



Miami Beach, Florida
December 15, 2017
drawn by Luis Palomino
NOT Signalized

TRAFFIC SURVEY SPECIALISTS, INC.

DADE BOULEVARD & BAY ROAD
 MIAMI BEACH, FLORIDA
 COUNTED BY: SEBASTIAN SALVO
 SIGNALIZED WITH STOP

85 SE 4TH AVENUE, UNIT 109
 DELRAY BEACH, FLORIDA
 PHONE (561)272-3255

Site Code : 00170211
 Start Date: 12/15/17
 File I.D. : DADE_BAY
 Page : 1

ALL VEHICLES

BAY ROAD					DADE BOULEVARD				17TH STREET				DADE BOULEVARD						
From North					From East				From South				From West						
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right	Total
Date 12/15/17																			
16:30	0	0	0	7	0	0	59	2	0	0	86	0	1	0	0	0	42	71	268
16:45	0	0	0	5	0	0	52	4	0	0	103	0	2	0	0	0	41	83	290
17:00	0	0	0	2	0	0	42	6	0	0	94	0	1	0	0	0	40	75	260
17:15	0	0	0	10	0	0	59	14	0	0	83	0	0	0	0	0	55	104	325
Hr Total	0	0	0	24	0	0	212	26	0	0	366	0	4	0	0	0	178	333	1143
17:30	0	0	2	7	0	0	46	5	0	0	89	0	0	0	0	0	41	49	239
17:45	0	0	2	9	0	0	54	2	0	0	75	0	0	0	0	0	43	80	265
18:00	0	0	0	12	0	0	27	7	0	0	68	0	0	1	0	0	42	75	232
18:15	0	0	0	11	0	0	39	4	0	0	59	0	1	0	0	0	44	74	232
Hr Total	0	0	4	39	0	0	166	18	0	0	291	0	1	1	0	0	170	278	968
18:30	0	0	7	17	0	0	39	9	0	0	69	0	1	0	0	0	27	61	230
18:45	0	0	3	6	0	0	53	6	0	0	99	0	1	0	0	0	44	81	293
Hr Total	0	0	10	23	0	0	92	15	0	0	168	0	2	0	0	0	71	142	523
TOTAL	0	0	14	86	0	0	470	59	0	0	825	0	7	1	0	0	419	753	2634

TRAFFIC SURVEY SPECIALISTS, INC.

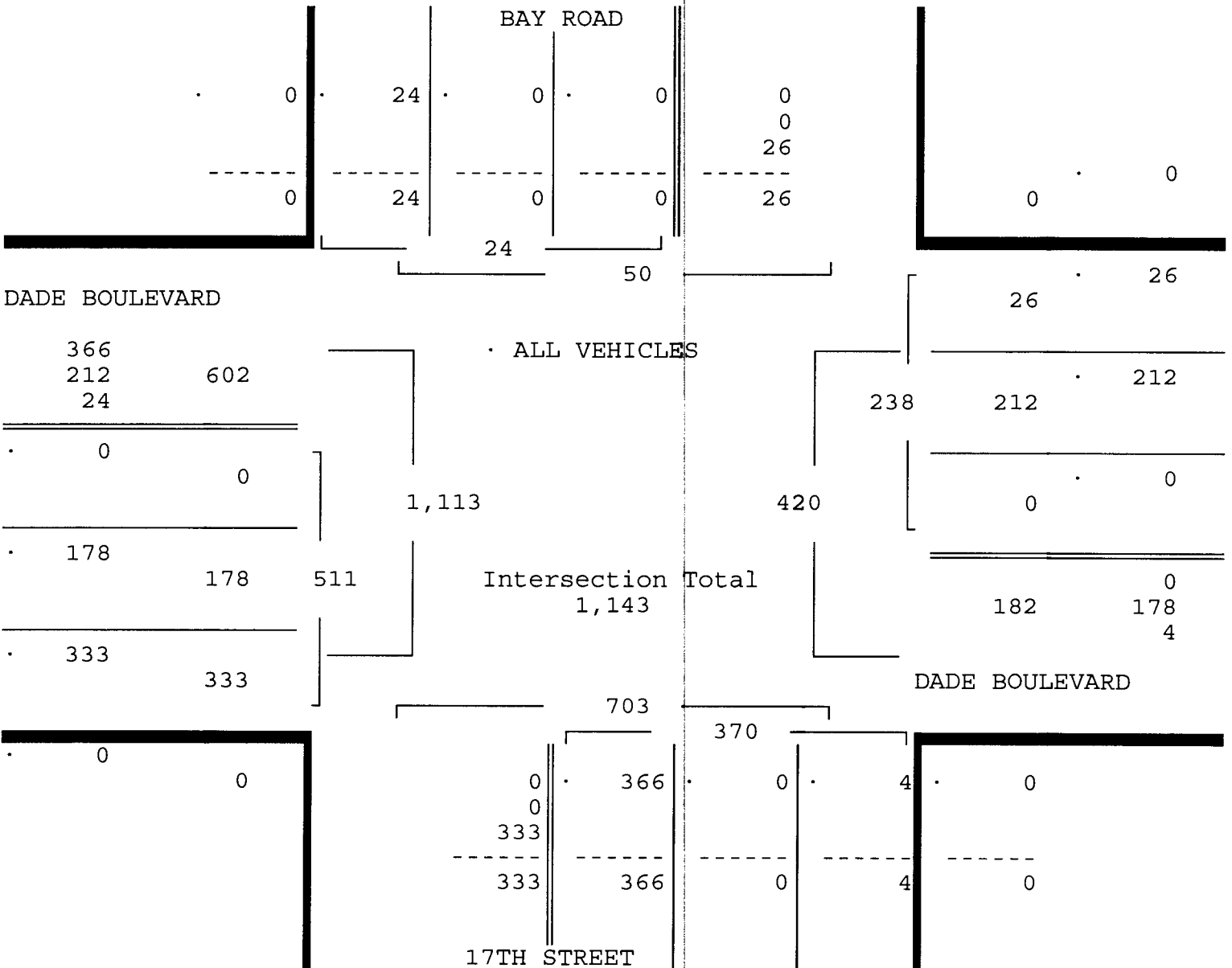
DADE BOULEVARD & BAY ROAD
MIAMI BEACH, FLORIDA
COUNTED BY: SEBASTIAN SALVO
SIGNALIZED WITH STOP

85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

Site Code : 00170211
Start Date: 12/15/17
File I.D. : DADE_BAY
Page : 2

ALL VEHICLES

BAY ROAD					DADE BOULEVARD				17TH STREET				DADE BOULEVARD						
From North					From East				From South				From West						
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right	Total
Date 12/15/17																			
Peak Hour Analysis By Entire Intersection for the Period: 16:30 to 19:00 on 12/15/17																			
Peak start 16:30					16:30				16:30				16:30						
Volume	0	0	0	24	0	0	212	26	0	366	0	4	0	0	178	333			
Percent	0%	0%	0%	100%	0%	0%	89%	11%	0%	99%	0%	1%	0%	0%	35%	65%			
Pk total	24				238				370				511						
Highest	17:15				17:15				16:45				17:15						
Volume	0	0	0	10	0	0	59	14	0	103	0	2	0	0	55	104			
Hi total	10				73				105				159						
PHF	.60				.82				.88				.80						



TRAFFIC SURVEY SPECIALISTS, INC.

DADE BOULEVARD & BAY ROAD
 MIAMI BEACH, FLORIDA
 COUNTED BY: SEBASTIAN SALVO
 SIGNALIZED WITH STOP

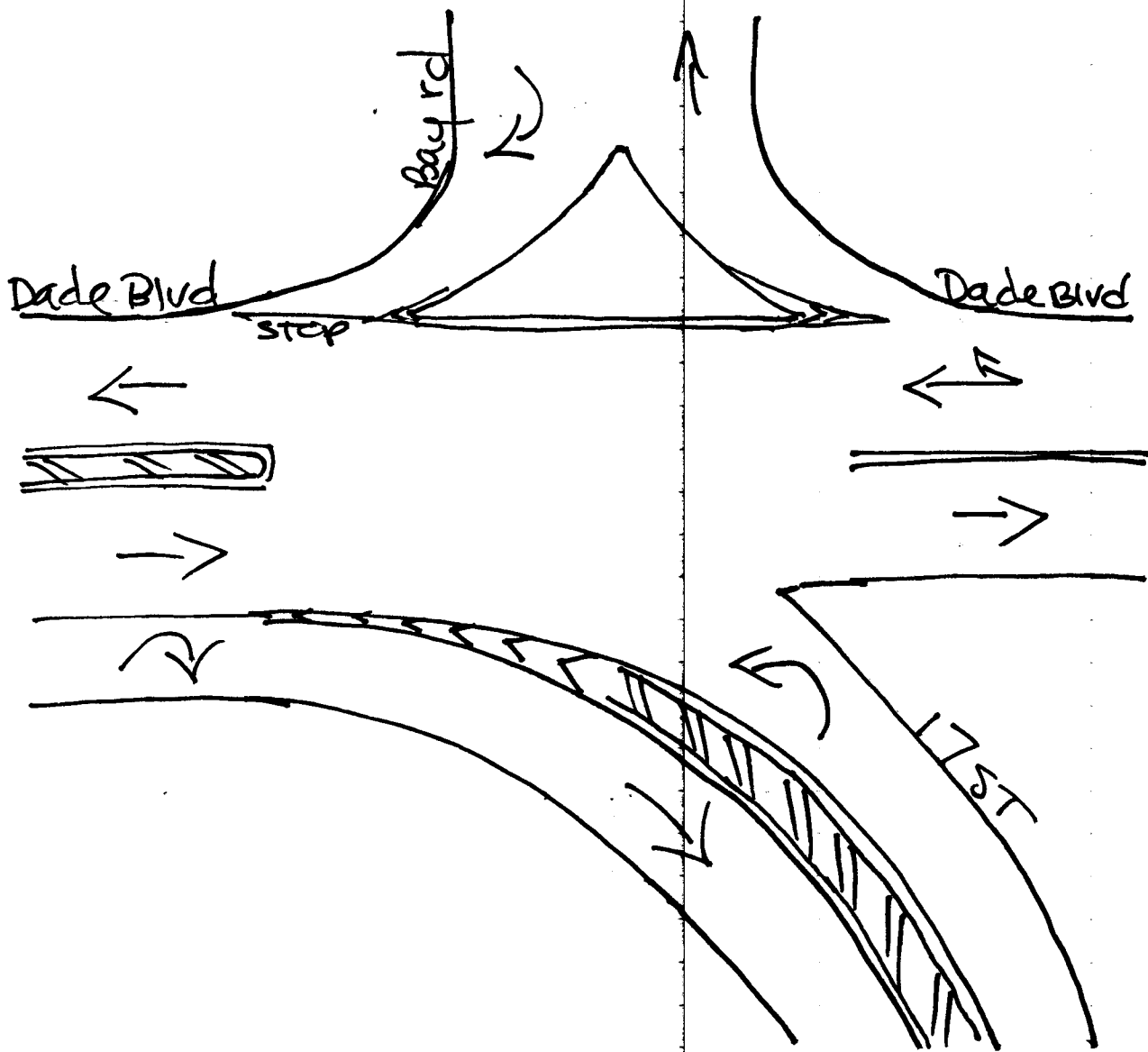
85 SE 4TH AVENUE, UNIT 109
 DELRAY BEACH, FLORIDA
 PHONE (561)272-3255

Site Code : 00170211
 Start Date: 12/15/17
 File I.D. : DADE_BAY
 Page : 1

PEDESTRIANS & BIKES

BAY ROAD From North					DADE BOULEVARD From East					17TH STREET From South					DADE BOULEVARD From West					
Left	BIKES	Right	Peds		Left	BIKES	Right	Peds		Left	BIKES	Right	Peds		Left	BIKES	Right	Peds		Total
Date 12/15/17																				
16:30	0	5	0	3	0	1	0	1	0	0	0	0	0	0	0	0	0	0	0	10
16:45	0	1	0	6	0	1	0	6	0	0	0	0	0	0	0	0	0	0	0	14
17:00	0	4	0	3	0	0	0	3	0	0	1	0	0	0	0	0	0	0	0	11
17:15	0	4	0	5	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	11
Hr Total	0	14	0	17	0	4	0	10	0	0	1	0	0	0	0	0	0	0	0	46
17:30	0	5	0	0	0	1	0	2	0	0	0	0	0	0	0	0	0	0	0	8
17:45	0	2	0	6	0	3	0	6	0	0	1	0	0	0	0	1	0	0	0	19
18:00	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
18:15	0	0	0	3	0	1	0	6	0	0	2	0	0	0	0	0	0	0	0	12
Hr Total	0	12	0	9	0	5	0	14	0	0	3	0	0	0	0	1	0	0	0	44
18:30	0	6	0	2	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	11
18:45	0	1	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	6
Hr Total	0	7	0	2	0	0	0	8	0	0	0	0	0	0	0	0	0	0	0	17
TOTAL	0	33	0	28	0	9	0	32	0	0	4	0	0	0	0	1	0	0	0	107

North



Miami Beach, Florida
December 15, 2017
drawn by: Luis Palomino
signalized w/ stop

TRAFFIC SURVEY SPECIALISTS, INC.

DADE BOULEVARD & WEST AVENUE
 MIAMI BEACH, FLORIDA
 COUNTED BY: GERMAIN CAMPUSANO
 NOT SIGNALIZED

85 SE 4TH AVENUE, UNIT 109
 DELRAY BEACH, FLORIDA
 PHONE (561)272-3255

Site Code : 00170211
 Start Date: 12/15/17
 File I.D. : DADEWEST
 Page : 1

ALL VEHICLES

WEST AVENUE					DADE BOULEVARD				WEST AVENUE				DADE BOULEVARD				
From North					From East				From South				From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 12/15/17																	
16:30	1	14	24	7	0	16	54	35	0	2	39	25	0	3	38	0	258
16:45	0	20	24	7	0	15	40	22	0	3	24	23	0	2	34	0	214
17:00	0	20	31	6	0	21	43	39	0	1	37	23	0	1	39	0	261
17:15	0	14	25	6	0	24	56	26	0	2	28	19	0	3	48	0	251
Hr Total	1	68	104	26	0	76	193	122	0	8	128	90	0	9	159	0	984
17:30	0	18	23	1	0	18	45	34	0	2	23	11	0	5	34	0	214
17:45	0	15	29	4	0	29	51	30	0	1	29	16	0	1	41	0	246
18:00	0	13	37	7	0	16	27	31	0	1	37	22	0	0	44	0	235
18:15	0	18	25	4	0	22	36	28	0	1	22	17	0	4	38	2	217
Hr Total	0	64	114	16	0	85	159	123	0	5	111	66	0	10	157	2	912
18:30	0	15	32	5	0	17	39	23	0	4	33	23	0	0	26	1	218
18:45	0	11	23	2	0	15	54	25	0	4	32	24	0	6	37	1	234
Hr Total	0	26	55	7	0	32	93	48	0	8	65	47	0	6	63	2	452
TOTAL	1	158	273	49	0	193	445	293	0	21	304	203	0	25	379	4	2348

Site Code : 00170211
Start Date: 12/15/17
File I.D. : DADEWEST
Page : 2

DADE BOULEVARD		WEST AVENUE		ALL VEHICLES		DADE BOULEVARD	
8	227	0	26	104	69	122	122
193		0	26	104	69	128	
26		0	26	104	69	122	
9	9	0	26	104	69	259	0
159	159	0	26	104	69		0
0	0	0	26	104	69		0
395	168	199	26	104	69	458	122
Intersection Total							193
984							76
406							76
226							69
76	8	128	90	0			159
104	8	128	90	0			90
0	8	128	90	0			
180	8	128	90	0			
WEST AVENUE							

TRAFFIC SURVEY SPECIALISTS, INC.

DADE BOULEVARD & WEST AVENUE
 MIAMI BEACH, FLORIDA
 COUNTED BY: GERMAIN CAMPUSANO
 NOT SIGNALIZED

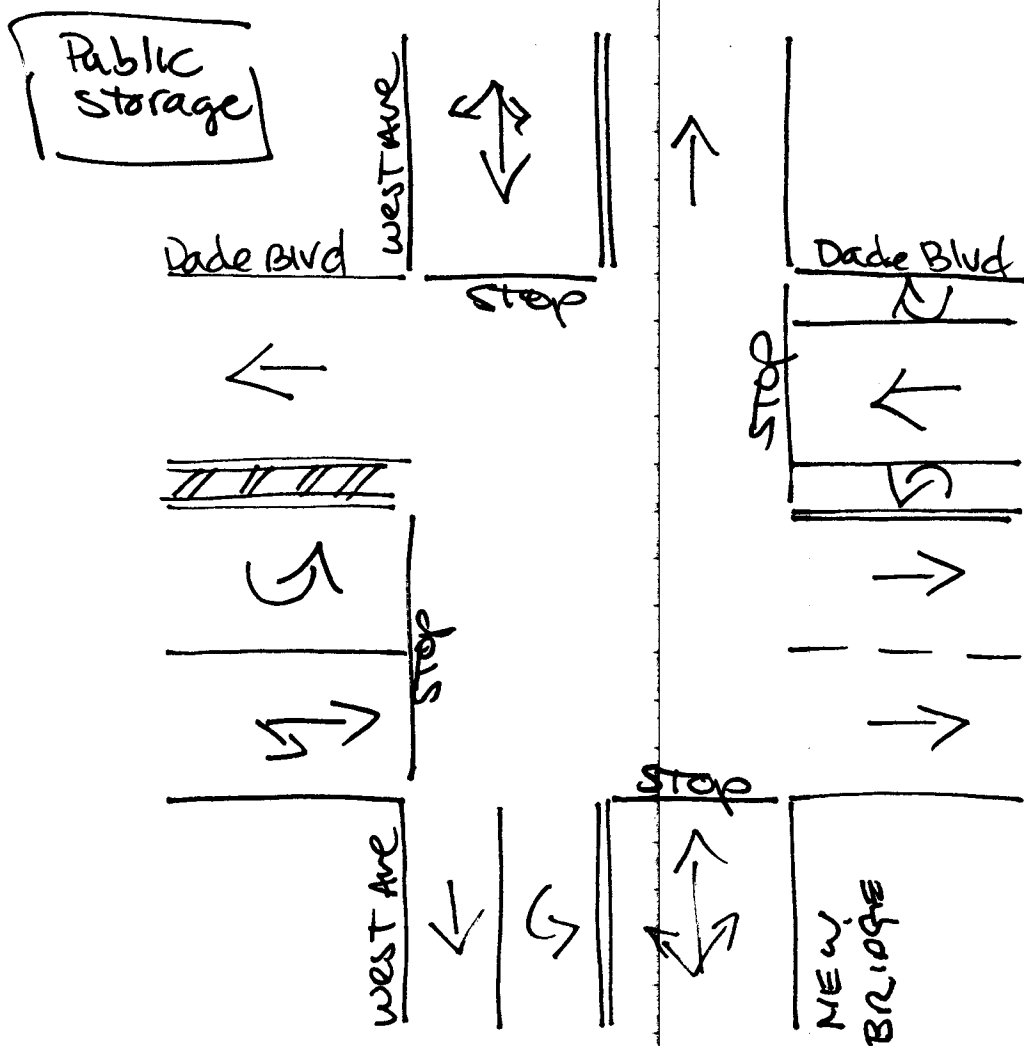
85 SE 4TH AVENUE, UNIT 109
 DELRAY BEACH, FLORIDA
 PHONE (561)272-3255

Site Code : 00170211
 Start Date: 12/15/17
 File I.D. : DADEWEST
 Page : 1

PEDESTRIANS & BIKES

WEST AVENUE From North					DADE BOULEVARD From East					WEST AVENUE From South					DADE BOULEVARD From West					
Left	BIKES	Right	Peds		Left	BIKES	Right	Peds		Left	BIKES	Right	Peds		Left	BIKES	Right	Peds	Total	
Date 12/15/17																				
16:30	0	3	0	3	0	4	0	6	0	0	0	0	0	0	0	3	0	5	24	
16:45	0	0	0	2	0	1	0	8	0	0	0	0	1	0	0	1	0	5	18	
17:00	0	0	0	1	0	1	0	1	0	0	1	0	1	0	0	0	0	3	8	
17:15	0	0	0	0	0	2	0	6	0	0	0	0	0	0	0	0	0	5	13	
Hr Total	0	3	0	6	0	8	0	21	0	1	0	2	0	0	4	0	18	63		
17:30	0	2	0	0	0	3	0	3	0	0	0	0	0	0	1	0	2	11		
17:45	0	1	0	1	0	0	0	4	0	0	0	1	0	0	0	0	0	7		
18:00	0	0	0	3	0	2	0	11	0	2	0	0	0	0	2	0	9	29		
18:15	0	1	0	0	0	2	0	10	0	1	0	0	0	0	3	0	6	23		
Hr Total	0	4	0	4	0	7	0	28	0	3	0	1	0	0	6	0	17	70		
18:30	0	0	0	0	0	4	0	3	0	0	0	2	0	0	5	0	13	27		
18:45	0	0	0	2	0	2	0	10	0	0	0	0	0	0	3	0	9	26		
Hr Total	0	0	0	2	0	6	0	13	0	0	0	2	0	0	8	0	22	53		
TOTAL	0	7	0	12	0	21	0	62	0	4	0	5	0	0	18	0	57	186		

↑
North



Miami Beach, Florida
December 15, 2017
drawn by: Luis Palomino
NOT signalized

TRAFFIC SURVEY SPECIALISTS, INC.

17TH STREET & WEST AVENUE
 MIAMI BEACH, FLORIDA
 COUNTED BY: MICHAEL MALONE
 SIGNALIZED

85 SE 4TH AVENUE, UNIT 109
 DELRAY BEACH, FLORIDA
 PHONE (561)272-3255

Site Code : 00170211
 Start Date: 12/15/17
 File I.D. : 17STWEST
 Page : 1

ALL VEHICLES

WEST AVENUE					17TH STREET					WEST AVENUE					17TH STREET						
From North					From East					From South					From West						
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		Total	
Date 12/15/17																					
16:30	0	3	40	1	0	27	46	14	0	38	57	30	0	0	34	37			327		
16:45	0	4	32	0	0	31	51	3	0	41	51	41	0	0	41	46			341		
17:00	0	5	45	0	0	28	64	6	0	30	59	41	0	1	36	41			356		
17:15	0	3	49	0	0	34	47	12	1	32	46	29	0	0	49	49			351		
Hr Total	0	15	166	1	0	120	208	35	1	141	213	141	0	1	160	173			1375		
17:30	0	3	35	0	0	35	52	3	0	32	42	33	0	0	14	34			283		
17:45	0	2	50	1	0	38	43	6	0	26	48	38	0	0	42	42			336		
18:00	0	7	45	0	0	36	37	7	0	34	55	26	0	0	38	40			325		
18:15	0	6	43	1	0	24	33	12	0	23	38	31	0	0	37	41			289		
Hr Total	0	18	173	2	0	133	165	28	0	115	183	128	0	0	131	157			1233		
18:30	0	2	49	0	0	32	43	7	0	34	48	32	0	0	32	34			313		
18:45	0	7	37	0	0	27	33	5	1	46	57	32	1	0	44	44			334		
Hr Total	0	9	86	0	0	59	76	12	1	80	105	64	1	0	76	78			647		
TOTAL	0	42	425	3	0	312	449	75	2	336	501	333	1	1	367	408			3255		

TRAFFIC SURVEY SPECIALISTS, INC.

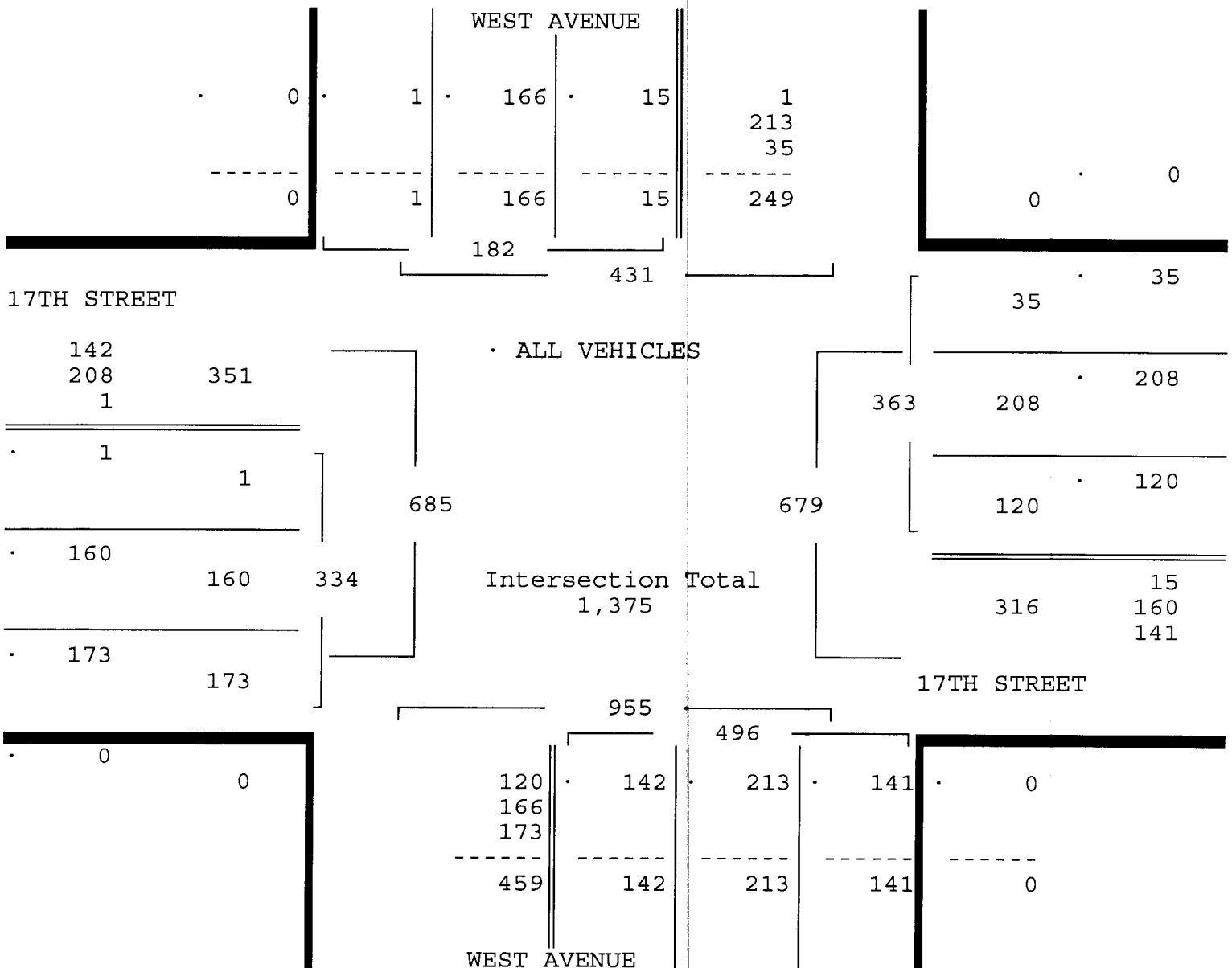
17TH STREET & WEST AVENUE
 MIAMI BEACH, FLORIDA
 COUNTED BY: MICHAEL MALONE
 SIGNALIZED

85 SE 4TH AVENUE, UNIT 109
 DELRAY BEACH, FLORIDA
 PHONE (561)272-3255

Site Code : 00170211
 Start Date: 12/15/17
 File I.D. : 17STWEST
 Page : 2

ALL VEHICLES

WEST AVENUE					17TH STREET				WEST AVENUE				17TH STREET						
From North					From East				From South				From West						
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right	Total
Date 12/15/17																			
Peak Hour Analysis By Entire Intersection for the Period: 16:30 to 19:00 on 12/15/17																			
Peak start 16:30					16:30				16:30				16:30						
Volume	0	15	166	1	0	120	208	35	1	141	213	141	0	1	160	173			
Percent	0%	8%	91%	1%	0%	33%	57%	10%	0%	28%	43%	28%	0%	0%	48%	52%			
Pk total	182				363				496				334						
Highest	17:15				17:00				16:45				17:15						
Volume	0	3	49	0	0	28	64	6	0	41	51	41	0	0	49	49			
Hi total	52				98				133				98						
PHF	.88				.93				.93				.85						



TRAFFIC SURVEY SPECIALISTS, INC.

17TH STREET & WEST AVENUE
 MIAMI BEACH, FLORIDA
 COUNTED BY: MICHAEL MALONE
 SIGNALIZED

85 SE 4TH AVENUE, UNIT 109
 DELRAY BEACH, FLORIDA
 PHONE (561)272-3255

Site Code : 00170211
 Start Date: 12/15/17
 File I.D. : 17STWEST
 Page : 1

PEDESTRIANS & BIKES

WEST AVENUE From North					17TH STREET From East					WEST AVENUE From South					17TH STREET From West					
Left	BIKES	Right	Peds		Left	BIKES	Right	Peds		Left	BIKES	Right	Peds		Left	BIKES	Right	Peds		
Date 12/15/17																				
16:30	0	1	0	16	0	5	0	6	0	0	4	0	7	0	0	2	0	7	48	
16:45	0	10	0	16	0	6	0	15	0	0	5	0	16	0	0	8	0	7	83	
17:00	0	4	0	6	0	6	0	6	0	0	0	0	15	0	0	2	0	6	45	
17:15	0	4	0	9	0	11	0	10	0	0	3	0	8	0	0	4	0	15	64	
Hr Total	0	19	0	47	0	28	0	37	0	0	12	0	46	0	0	16	0	35	240	
17:30	0	12	0	9	0	12	0	18	0	0	3	0	8	0	0	6	0	9	77	
17:45	0	3	0	2	0	10	0	23	0	0	3	0	18	0	0	4	0	4	67	
18:00	0	6	0	13	0	9	0	23	0	0	0	0	16	0	0	2	0	7	76	
18:15	0	1	0	5	0	3	0	12	0	0	3	0	1	0	0	4	0	5	34	
Hr Total	0	22	0	29	0	34	0	76	0	0	9	0	43	0	0	16	0	25	254	
18:30	0	9	0	13	0	5	0	11	0	0	1	0	11	0	0	4	0	8	62	
18:45	0	4	0	16	0	4	0	8	0	0	3	0	5	0	0	1	0	10	51	
Hr Total	0	13	0	29	0	9	0	19	0	0	4	0	16	0	0	5	0	18	113	
TOTAL	0	54	0	105	0	71	0	132	0	0	25	0	105	0	0	37	0	78	607	

TRAFFIC SURVEY SPECIALISTS, INC.

18TH STREET & WEST AVENUE
 MIAMI BEACH, FLORIDA
 COUNTED BY: WILLIAN DE LUNA VARGAS
 NOT SIGNALIZED

85 SE 4TH AVENUE, UNIT 109
 DELRAY BEACH, FLORIDA
 PHONE (561)272-1255

Site Code : 00170211
 Start Date: 12/15/17
 File I.D. : 18STWEST
 Page : 1

ALL VEHICLES

WEST AVENUE From North					18TH STREET From East					WEST AVENUE From South					18TH STREET From West					
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		
Date 12/15/17																				
16:30	0	3	17	13	0	3	2	7	0	0	18	47	7	0	0	20	3	20	160	
16:45	1	3	22	9	0	2	5	4	0	0	19	32	2	0	0	16	3	24	142	
17:00	1	1	17	15	0	1	2	3	1	1	24	41	2	0	0	14	6	28	156	
17:15	0	4	20	23	0	1	7	4	0	0	26	38	2	0	0	18	4	22	169	
Hr Total	2	11	76	60	0	7	16	18	1	1	87	158	13	0	0	68	16	94	627	
17:30	0	1	20	11	0	1	2	2	0	0	26	35	3	0	0	13	2	25	141	
17:45	1	3	21	28	0	2	1	2	0	0	19	37	6	0	0	22	2	26	170	
18:00	0	4	20	15	0	2	1	4	0	0	22	45	5	0	0	14	6	21	159	
18:15	0	1	19	23	0	3	2	1	0	0	24	32	2	1	1	15	7	26	156	
Hr Total	1	9	80	77	0	8	6	9	0	0	91	149	16	1	1	64	17	98	626	
18:30	0	0	13	12	0	2	0	6	0	0	22	38	0	1	1	11	4	33	142	
18:45	0	1	15	12	0	2	1	2	0	0	30	30	1	0	0	20	5	21	140	
Hr Total	0	1	28	24	0	4	1	8	0	0	52	68	1	1	1	31	9	54	282	
TOTAL	3	21	184	161	0	19	23	35	1	1	230	375	30	2	2	163	42	246	1535	

TRAFFIC SURVEY SPECIALISTS, INC.

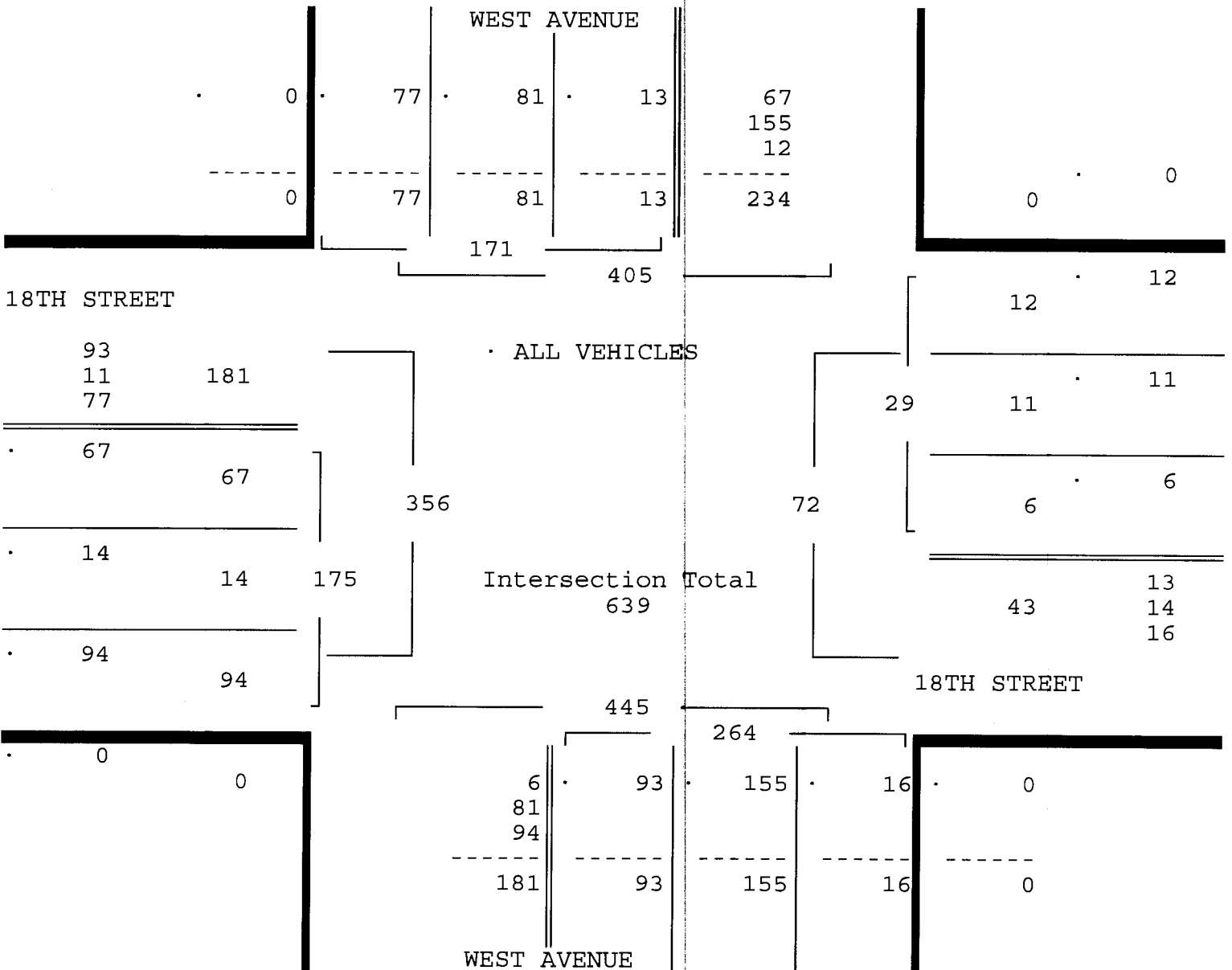
18TH STREET & WEST AVENUE
 MIAMI BEACH, FLORIDA
 COUNTED BY: WILLIAN DE LUNA VARGAS
 NOT SIGNALIZED

85 SE 4TH AVENUE, UNIT 109
 DELRAY BEACH, FLORIDA
 PHONE (561)272-3255

Site Code : 00170211
 Start Date: 12/15/17
 File I.D. : 18STWEST
 Page : 2

ALL VEHICLES

WEST AVENUE					18TH STREET				WEST AVENUE				18TH STREET				Total
From North					From East				From South				From West				
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right		
Date 12/15/17																	
Peak Hour Analysis By Entire Intersection for the Period: 16:30 to 19:00 on 12/15/17																	
Peak start 17:15					17:15				17:15				17:15				
Volume	1	12	81	77	0	6	11	12	0	93	155	16	0	67	14	94	
Percent	1%	7%	47%	45%	0%	21%	38%	41%	0%	35%	59%	6%	0%	38%	8%	54%	
Pk total	171				29				264				175				
Highest	17:45				17:15				18:00				17:45				
Volume	1	3	21	28	0	1	7	4	0	22	45	5	0	22	2	26	
Hi total	53				12				72				50				
PHF	.81				.60				.92				.88				



TRAFFIC SURVEY SPECIALISTS, INC.

18TH STREET & WEST AVENUE
 MIAMI BEACH, FLORIDA
 COUNTED BY: WILLIAN DE LUNA VARGAS
 NOT SIGNALIZED

85 SE 4TH AVENUE, UNIT 109
 DELRAY BEACH, FLORIDA
 PHONE (561)272-3255

Site Code : 00170211
 Start Date: 12/15/17
 File I.D. : 18STWEST
 Page : 1

PEDESTRIANS & BIKES

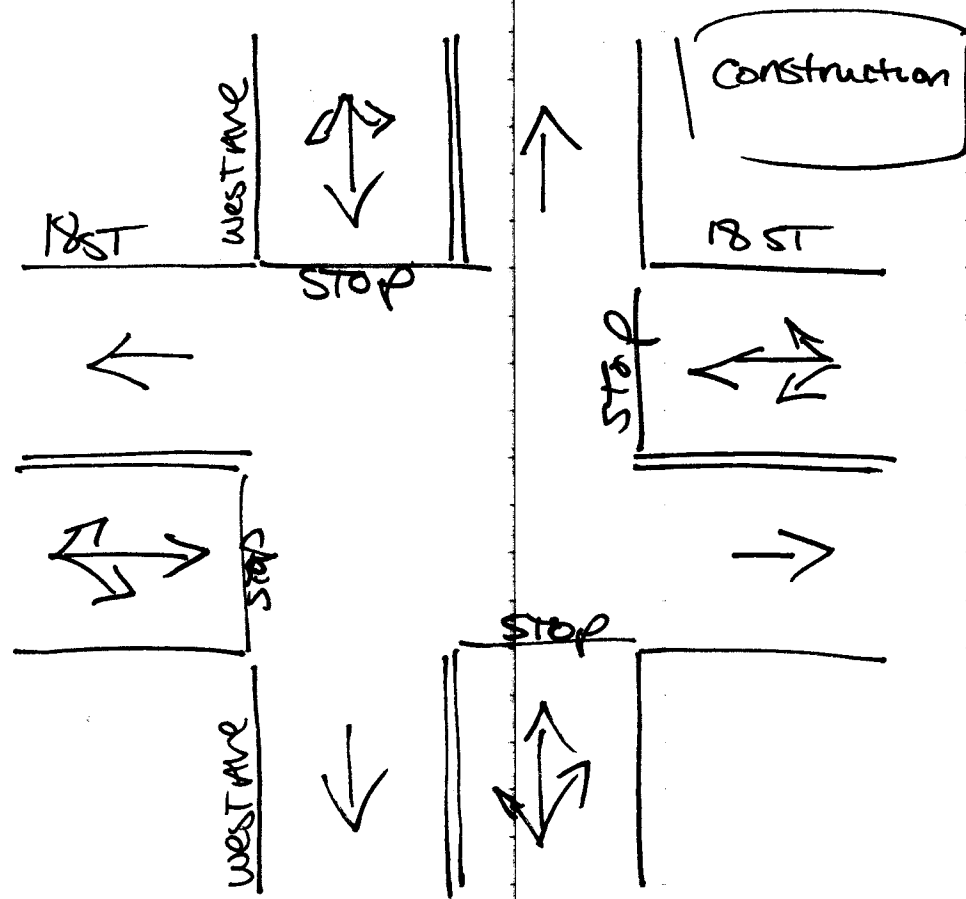
WEST AVENUE From North					18TH STREET From East					WEST AVENUE From South					18TH STREET From West					
Left	BIKES	Right	Peds		Left	BIKES	Right	Peds		Left	BIKES	Right	Peds		Left	BIKES	Right	Peds		
Date 12/15/17 -----																				
16:30	0	0	0	13	0	0	0	4	0	0	0	0	6	0	0	0	0	8	31	
16:45	0	0	0	14	0	0	0	3	0	0	0	0	3	0	1	0	0	7	28	
17:00	0	0	0	8	0	1	0	5	0	1	0	1	1	0	0	0	0	7	23	
17:15	0	0	0	11	0	0	0	7	0	0	0	0	12	0	0	0	0	4	34	
Hr Total	0	0	0	46	0	1	0	19	0	1	0	22	0	0	1	0	26	116		

17:30	0	2	0	7	0	0	0	6	0	0	0	3	0	2	0	0	7	27		
17:45	0	0	0	8	0	0	0	18	0	0	0	3	0	0	0	0	9	38		
18:00	0	0	0	4	0	0	0	10	0	0	0	3	0	0	0	0	12	29		
18:15	0	0	0	4	0	1	0	5	0	0	0	10	0	1	0	0	10	31		
Hr Total	0	2	0	23	0	1	0	39	0	0	0	19	0	3	0	38	125			

18:30	0	1	0	11	0	1	0	0	0	0	0	2	0	0	0	0	10	25		
18:45	0	0	0	4	0	0	0	2	0	0	0	0	0	0	0	0	13	19		
Hr Total	0	1	0	15	0	1	0	2	0	0	0	2	0	0	0	0	23	44		

TOTAL	0	3	0	84	0	3	0	60	0	1	0	43	0	4	0	87	285			

↑
North



Miami Beach, Florida
December 15, 2017
drawn by: Luis Palomino
NOT signalized

TRAFFIC SURVEY SPECIALISTS, INC.

18TH STREET & BAY ROAD
 MIAMI BEACH, FLORIDA
 COUNTED BY: ROLANDO MARTINEZ
 NOT SIGNALIZED

85 SE 4TH AVENUE, UNIT 109
 DELRAY BEACH, FLORIDA
 PHONE (561)272-3255

Site Code : 00170211
 Start Date: 12/15/17
 File I.D. : 18ST_BAY
 Page : 1

ALL VEHICLES

BAY ROAD					18TH STREET					BAY ROAD					18TH STREET					
From North					From East					From South					From West					
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		Total
Date 12/15/17																				
16:30	0	22	5	14	0	2	26	10	0	0	1	3	4	0	6	18	0		111	
16:45	0	18	4	11	0	2	18	10	0	0	5	3	6	1	7	18	2		105	
17:00	0	27	5	14	0	3	22	17	0	0	2	5	5	0	11	20	0		131	
17:15	0	20	6	7	0	10	26	17	0	0	5	8	6	0	14	17	4		140	
Hr Total	0	87	20	46	0	17	92	54	0	0	13	19	21	1	38	73	6		487	
17:30	1	16	4	12	0	6	17	21	0	0	1	2	7	0	11	17	4		119	
17:45	0	16	8	11	0	5	29	13	0	0	0	4	6	0	6	24	7		129	
18:00	0	13	10	9	0	0	24	11	0	0	1	4	11	1	11	18	3		116	
18:15	0	21	9	10	0	2	22	21	0	0	1	2	5	1	11	14	4		123	
Hr Total	1	66	31	42	0	13	92	66	0	0	3	12	29	2	39	73	18		487	
18:30	0	21	11	12	1	6	18	11	0	0	0	8	8	0	12	19	8		135	
18:45	0	16	8	13	2	5	19	15	1	1	1	4	6	0	11	21	2		124	
Hr Total	0	37	19	25	3	11	37	26	1	1	1	12	14	0	23	40	10		259	
TOTAL	1	190	70	113	3	41	221	146	1	1	17	43	64	3	100	186	34		1233	

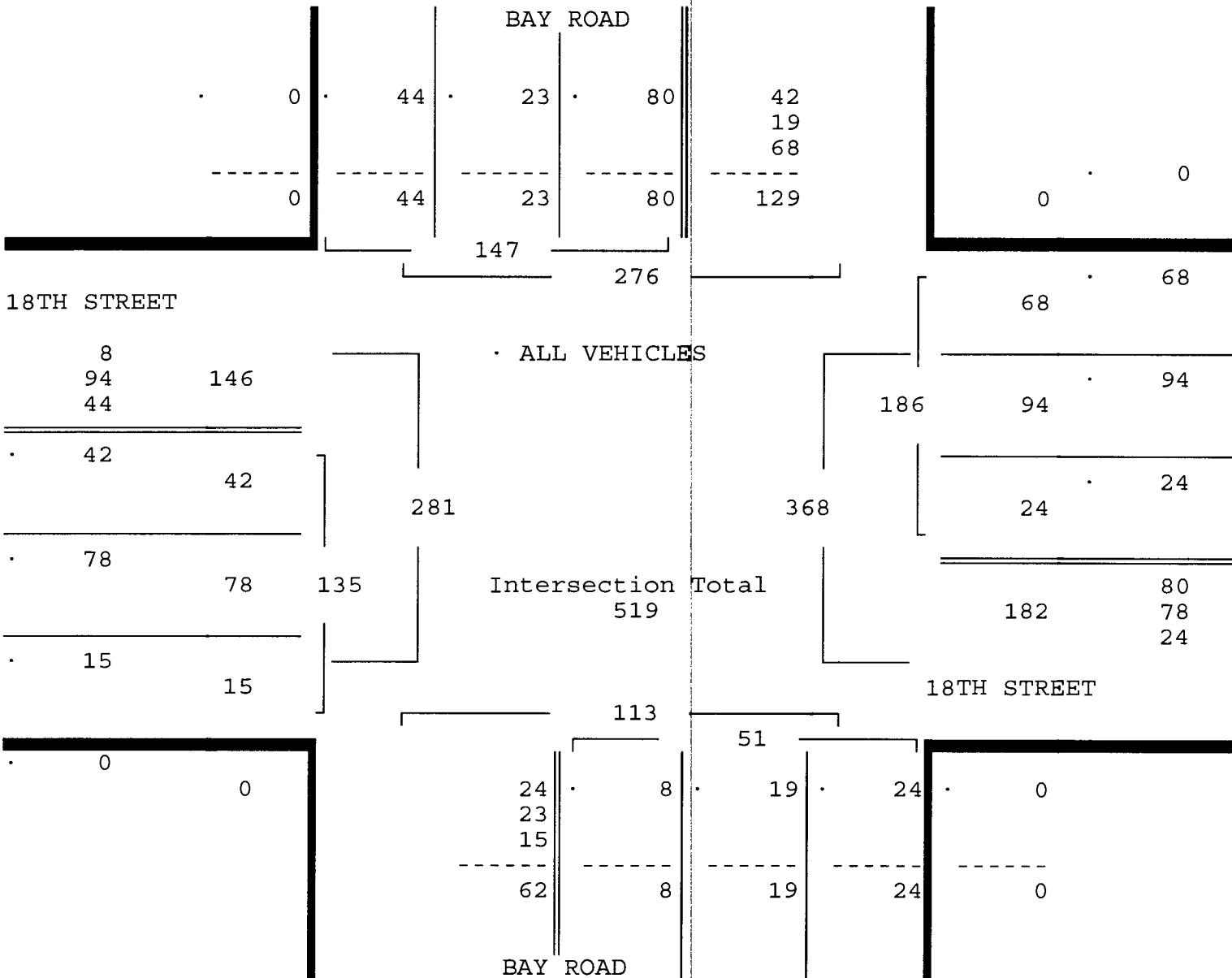
18TH STREET & BAY ROAD
 MIAMI BEACH, FLORIDA
 COUNTED BY: ROLANDO MARTINEZ
 NOT SIGNALIZED

TRAFFIC SURVEY SPECIALISTS, INC.
 85 SE 4TH AVENUE, UNIT 109
 DELRAY BEACH, FLORIDA
 PHONE (561)272-3255

Site Code : 00170211
 Start Date: 12/15/17
 File I.D. : 18ST_BAY
 Page : 2

ALL VEHICLES

BAY ROAD					18TH STREET				BAY ROAD				18TH STREET				
From North					From East				From South				From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 12/15/17 -----																	
Peak Hour Analysis By Entire Intersection for the Period: 16:30 to 19:00 on 12/15/17																	
Peak start	17:00				17:00				17:00				17:00				
Volume	1	79	23	44	0	24	94	68	0	8	19	24	0	42	78	15	
Percent	1%	54%	16%	30%	0%	13%	51%	37%	0%	16%	37%	47%	0%	31%	58%	11%	
Pk total	147				186				51				135				
Highest	17:00				17:15				17:15				17:45				
Volume	0	27	5	14	0	10	26	17	0	5	8	6	0	6	24	7	
Hi total	46				53				19				37				
PHF	.80				.88				.67				.91				



TRAFFIC SURVEY SPECIALISTS, INC.

18TH STREET & BAY ROAD
 MIAMI BEACH, FLORIDA
 COUNTED BY: ROLANDO MARTINEZ
 NOT SIGNALIZED

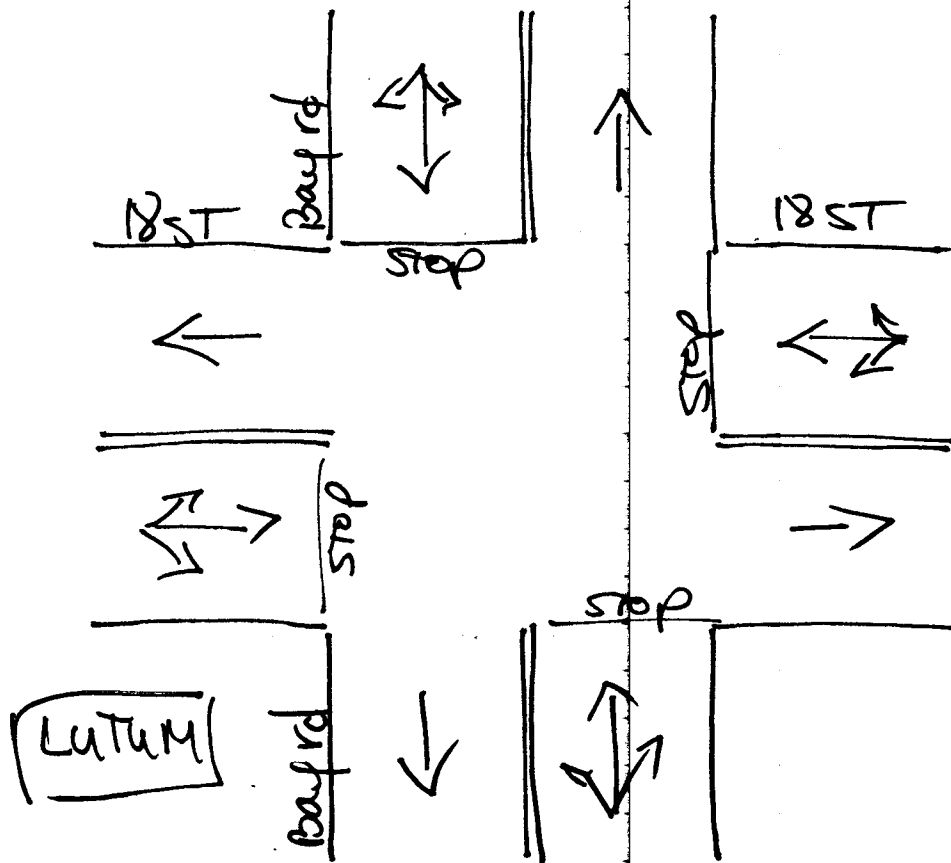
85 SE 4TH AVENUE, UNIT 109
 DELRAY BEACH, FLORIDA
 PHONE (561)272-3255

Site Code : 00170211
 Start Date: 12/15/17
 File I.D. : 18ST_BAY
 Page : 1

PEDESTRIANS & BIKES

BAY ROAD				18TH STREET				BAY ROAD				18TH STREET					
From North				From East				From South				From West					
Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total	
Date 12/15/17																	
16:30	0	6	0	15	0	1	0	4	0	1	0	6	0	3	0	2	38
16:45	0	3	0	15	0	4	0	5	0	0	0	4	0	2	0	9	42
17:00	0	0	0	18	0	0	0	1	0	3	0	4	0	1	0	5	32
17:15	0	5	0	11	0	2	0	2	0	3	0	11	0	7	0	3	44
Hr Total	0	14	0	59	0	7	0	12	0	7	0	25	0	13	0	19	156
17:30	0	6	0	5	0	0	0	0	0	6	0	10	0	3	0	5	35
17:45	0	3	0	17	0	1	0	2	0	1	0	0	0	2	0	10	36
18:00	0	4	0	8	0	1	0	2	0	5	0	6	0	0	0	8	34
18:15	0	3	0	10	0	1	0	5	0	0	0	3	0	0	0	6	28
Hr Total	0	16	0	40	0	3	0	9	0	12	0	19	0	5	0	29	133
18:30	0	1	0	17	0	3	0	9	0	2	0	5	0	2	0	4	43
18:45	0	1	0	20	0	0	0	9	0	3	0	9	0	2	0	13	57
Hr Total	0	2	0	37	0	3	0	18	0	5	0	14	0	4	0	17	100
TOTAL	0	32	0	136	0	13	0	39	0	24	0	58	0	22	0	65	389

↑
North



Miami Beach, Florida
December 15, 2017
drawn by: Luis Palomino
NOT Signalized

TRAFFIC SURVEY SPECIALISTS, INC.

18TH STREET & PURDY AVENUE

85 SE 4TH AVENUE, UNIT 109

Site Code : 00170211

MIAMI BEACH, FLORIDA

DELRAY BEACH, FLORIDA

Start Date: 12/15/17

COUNTED BY: MARISA CRUZ

PHONE (561)272-3255

File I.D. : 18STPURD

NOT SIGNALIZED

Page : 1

ALL VEHICLES

PURDY AVENUE From North					18TH STREET From East					PURDY AVENUE From South					DRIVEWAY From West					
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right	UTurn	Left	Thru	Right		Total	
Date 12/15/17 -----																				
16:30	0	2	22	0	0	20	2	11	0	0	1	19	16	0	2	0	11	0	106	
16:45	0	3	30	1	0	17	1	12	1	1	4	23	23	1	2	0	7	1	125	
17:00	0	4	37	3	0	19	0	18	0	0	2	18	17	0	3	6	2	0	129	
17:15	0	7	34	1	1	20	2	15	0	0	4	25	25	0	3	4	3	0	144	
Hr Total	0	16	123	5	1	76	5	56	1	1	11	85	81	1	10	10	23	1	504	
17:30	0	3	31	1	0	17	2	9	1	1	3	19	23	0	3	5	2	0	119	
17:45	0	7	35	2	0	27	3	8	0	0	1	32	28	0	6	3	12	0	164	
18:00	0	5	21	0	0	24	1	9	0	0	4	29	23	0	0	5	10	0	131	
18:15	0	10	25	3	0	15	0	15	2	2	2	23	21	0	5	3	10	0	134	
Hr Total	0	25	112	6	0	83	6	41	3	3	10	103	95	0	14	16	34	0	548	
18:30	0	9	20	1	2	20	1	12	1	1	0	13	22	0	4	8	3	0	116	
18:45	0	4	28	0	0	18	1	9	3	3	4	20	24	0	1	2	5	0	119	
Hr Total	0	13	48	1	2	38	2	21	4	4	4	33	46	0	5	10	8	0	235	

TOTAL	0	54	283	12	3	197	13	118	8	8	25	221	222	1	29	36	65	1	1287	

TRAFFIC SURVEY SPECIALISTS, INC.

18TH STREET & PURDY AVENUE

MIAMI BEACH, FLORIDA

COUNTED BY: MARISA CRUZ

NOT SIGNALIZED

85 SE 4TH AVENUE, UNIT 109

DELRAY BEACH, FLORIDA

PHONE (561)272-3255

Site Code : 00170211

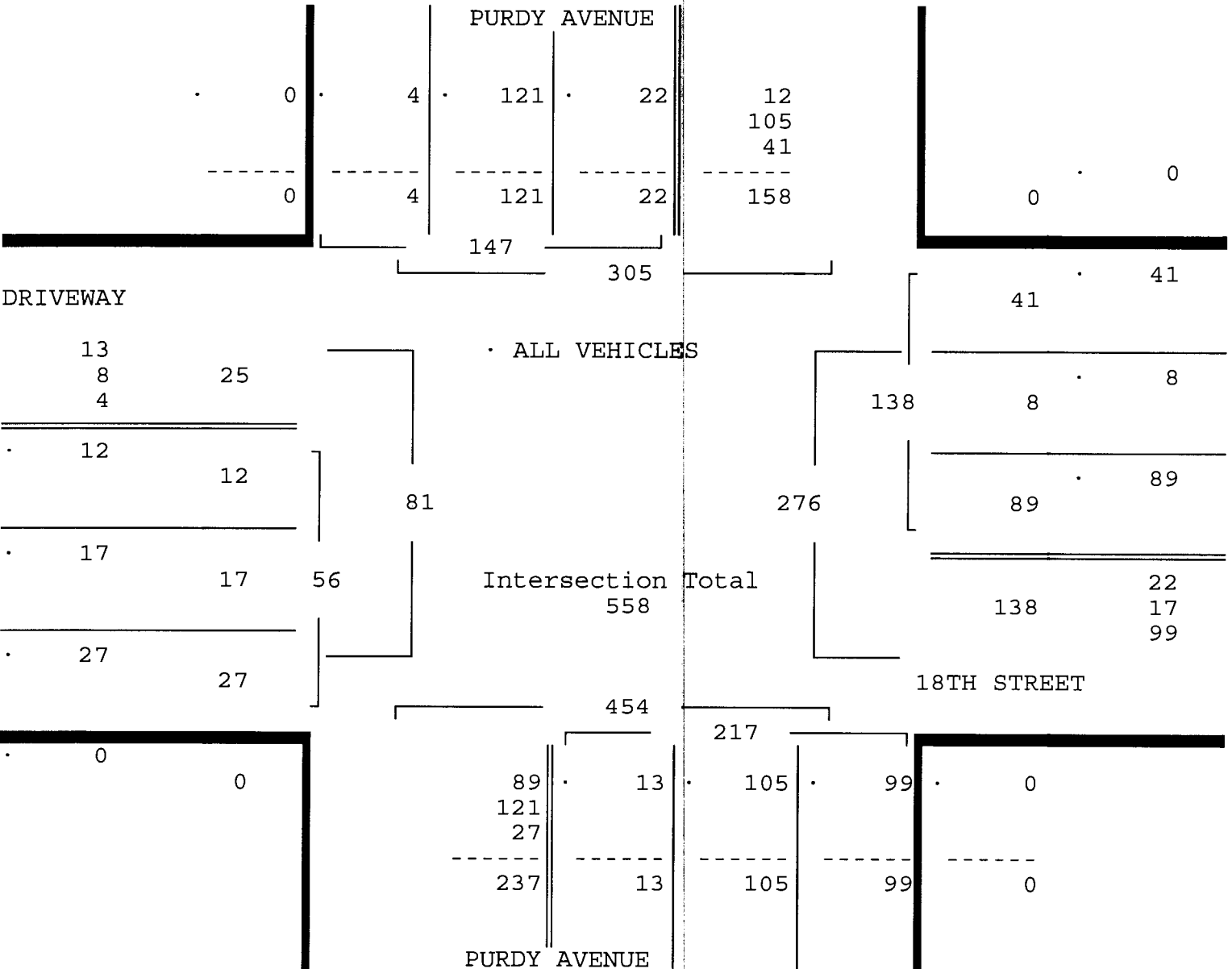
Start Date: 12/15/17

File I.D. : 18STPURD

Page : 2

ALL VEHICLES

PURDY AVENUE					18TH STREET					PURDY AVENUE					DRIVEWAY					
From North					From East					From South					From West					
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		
Date 12/15/17																				
Peak Hour Analysis By Entire Intersection for the Period: 16:30 to 19:00 on 12/15/17																				
Peak start 17:15					17:15					17:15					17:15					
Volume	0	22	121	4	1	88	8	41		1	12	105	99		0	12	17	27		
Percent	0%	15%	82%	3%	1%	64%	6%	30%		0%	6%	48%	46%		0%	21%	30%	48%		
Pk total	147				138					217					56					
Highest	17:45				17:15					17:45					17:45					
Volume	0	7	35	2	1	20	2	15		0	1	32	28		0	6	3	12		
Hi total	44				38					61					21					
PHF	.84				.91					.89					.67					



TRAFFIC SURVEY SPECIALISTS, INC.

18TH STREET & PURDY AVENUE

85 SE 4TH AVENUE, UNIT 109

Site Code : 00170211

MIAMI BEACH, FLORIDA

DELRAY BEACH, FLORIDA

Start Date: 12/15/17

COUNTED BY: MARISA CRUZ

PHONE (561)272-1255

File I.D. : 18STPURD

NOT SIGNALIZED

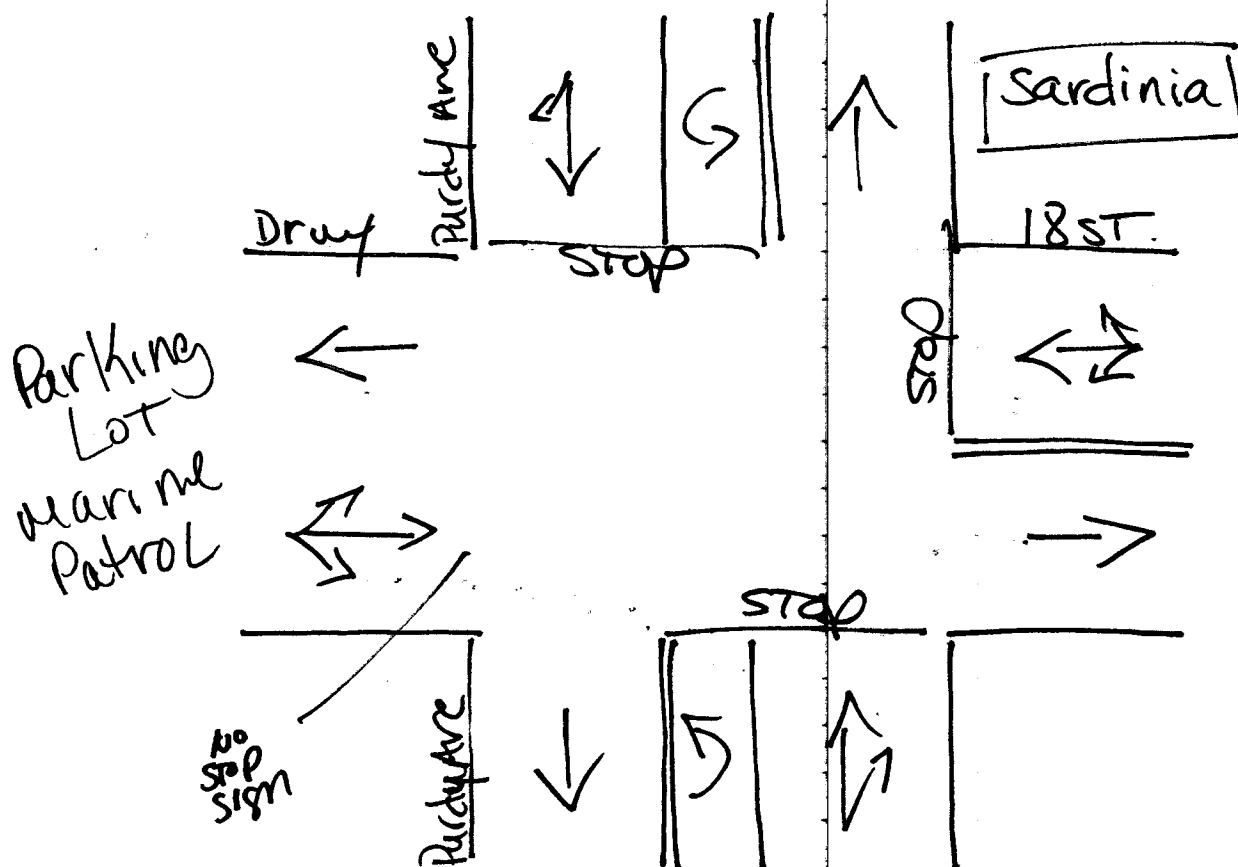
Page : 1

PEDESTRIANS & BIKES

PURDY AVENUE From North					18TH STREET From East				PURDY AVENUE From South				DRIVEWAY From West						
Left	BIKES	Right	Peds		Left	BIKES	Right	Peds		Left	BIKES	Right	Peds		Left	BIKES	Right	Peds	Total
Date 12/15/17 -----																			
16:30	0	2	0	17	0	1	0	12	0	0	0	2	0	2	0	6			42
16:45	0	2	0	13	0	1	0	3	0	2	0	7	0	1	0	15			44
17:00	0	2	0	7	0	2	0	7	0	0	0	5	0	1	0	5			29
17:15	0	1	0	9	0	0	0	6	0	0	0	2	0	2	0	6			26
Hr Total	0	7	0	46	0	4	0	28	0	2	0	16	0	6	0	32			141
17:30	0	1	0	10	0	1	0	2	0	0	0	9	0	1	0	8			32
17:45	0	2	0	1	0	0	0	4	0	0	0	6	0	0	0	0			13
18:00	0	2	0	7	0	0	0	8	0	2	0	5	0	4	0	0			28
18:15	0	0	0	2	0	1	0	9	0	0	0	2	0	0	0	2			16
Hr Total	0	5	0	20	0	2	0	23	0	2	0	22	0	5	0	10			89
18:30	0	0	0	18	0	0	0	9	0	0	0	2	0	0	0	1			30
18:45	0	0	0	23	0	0	0	15	0	0	0	6	0	1	0	11			56
Hr Total	0	0	0	41	0	0	0	24	0	0	0	8	0	1	0	12			86

TOTAL	0	12	0	107	0	6	0	75	0	4	0	46	0	12	0	54			316

North



Miami Beach, Florida

December 15, 2017

drawn by: Luis Palomino
not signalized

TRAFFIC SURVEY SPECIALISTS, INC.

20TH STREET & WEST AVENUE
 MIAMI BEACH, FLORIDA
 COUNTED BY: RICH MENDEZ
 NOT SIGNALIZED

85 SE 4TH AVENUE, UNIT 109
 DELRAY BEACH, FLORIDA
 PHONE (561)272-3255

Site Code : 00170211
 Start Date: 12/15/17
 File I.D. : 20STWEST
 Page : 1

ALL VEHICLES

DRIVEWAY					20TH STREET					WEST AVENUE					20TH STREET					
From North					From East					From South					From West					
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		
Date 12/15/17																				
16:30	0	0	1	0	0	39	31	0	0	11	0	48	1	0	58	12		201		
16:45	0	0	0	0	0	31	38	1	0	7	0	38	0	0	54	14		183		
17:00	0	0	0	0	0	39	52	0	0	9	1	32	0	0	63	8		204		
17:15	0	0	0	2	0	32	55	0	0	6	0	41	0	0	44	20		200		
Hr Total	0	0	1	2	0	141	176	1	0	33	1	159	1	0	219	54		788		
17:30	0	0	1	0	0	33	56	0	0	9	0	32	0	2	76	9		218		
17:45	0	0	0	2	0	33	49	0	2	2	2	29	0	1	48	10		178		
18:00	0	0	1	0	0	27	49	0	0	9	1	31	0	1	49	10		178		
18:15	0	0	0	0	0	29	38	0	0	4	0	25	1	1	54	12		164		
Hr Total	0	0	2	2	0	122	192	0	2	24	3	117	1	5	227	41		738		
18:30	0	0	0	0	0	21	50	1	0	9	0	35	0	0	54	7		177		
18:45	0	0	1	0	0	24	38	0	0	13	0	27	0	0	49	12		164		
Hr Total	0	0	1	0	0	45	88	1	0	22	0	62	0	0	103	19		341		
TOTAL	0	0	4	4	0	308	456	2	2	79	4	338	2	5	549	114		1867		

TRAFFIC SURVEY SPECIALISTS, INC.

20TH STREET & WEST AVENUE

MIAMI BEACH, FLORIDA

COUNTED BY: RICH MENDEZ

NOT SIGNALIZED

85 SE 4TH AVENUE, UNIT 109

DELRAY BEACH, FLORIDA

PHONE (561) 272-3255

Site Code : 00170211

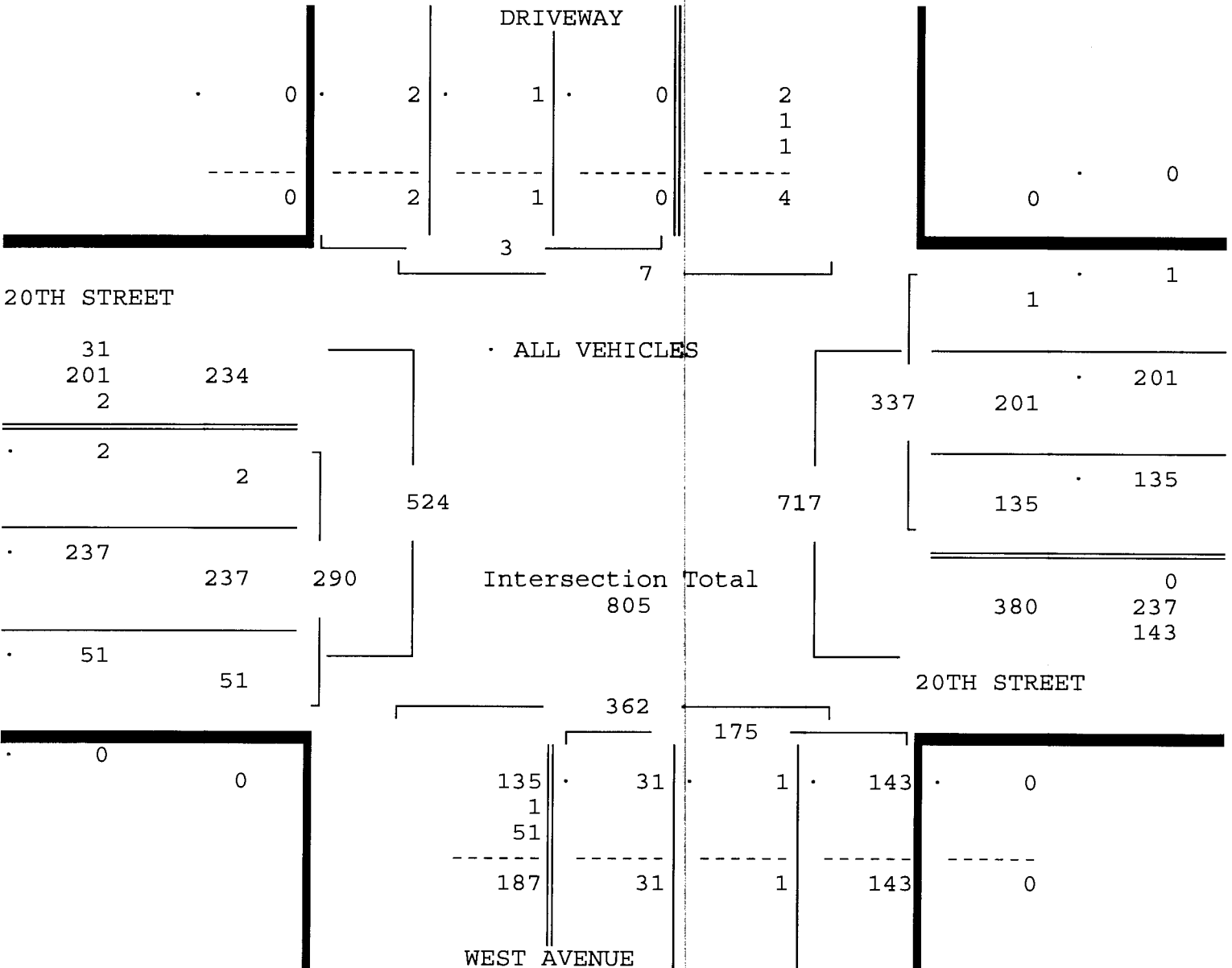
Start Date: 12/15/17

File I.D. : 20STWEST

Page : 2

ALL VEHICLES

DRIVEWAY				20TH STREET				WEST AVENUE				20TH STREET				
From North				From East				From South				From West				
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 12/15/17																
Peak Hour Analysis By Entire Intersection for the Period: 16:30 to 19:00 on 12/15/17																
Peak start 16:45				16:45				16:45				16:45				
Volume	0	0	1	2	0	135	201	1	0	31	1	143	0	2	237	51
Percent	0%	0%	33%	67%	0%	40%	60%	0%	0%	18%	1%	82%	0%	1%	82%	18%
Pk total	3				337				175				290			
Highest	17:15				17:00				17:15				17:30			
Volume	0	0	0	2	0	39	52	0	0	6	0	41	0	2	76	9
Hi total	2				91				47				87			
PHF	.38				.93				.93				.83			



20TH STREET & WEST AVENUE
 MIAMI BEACH, FLORIDA
 COUNTED BY: RICH MENDEZ
 NOT SIGNALIZED

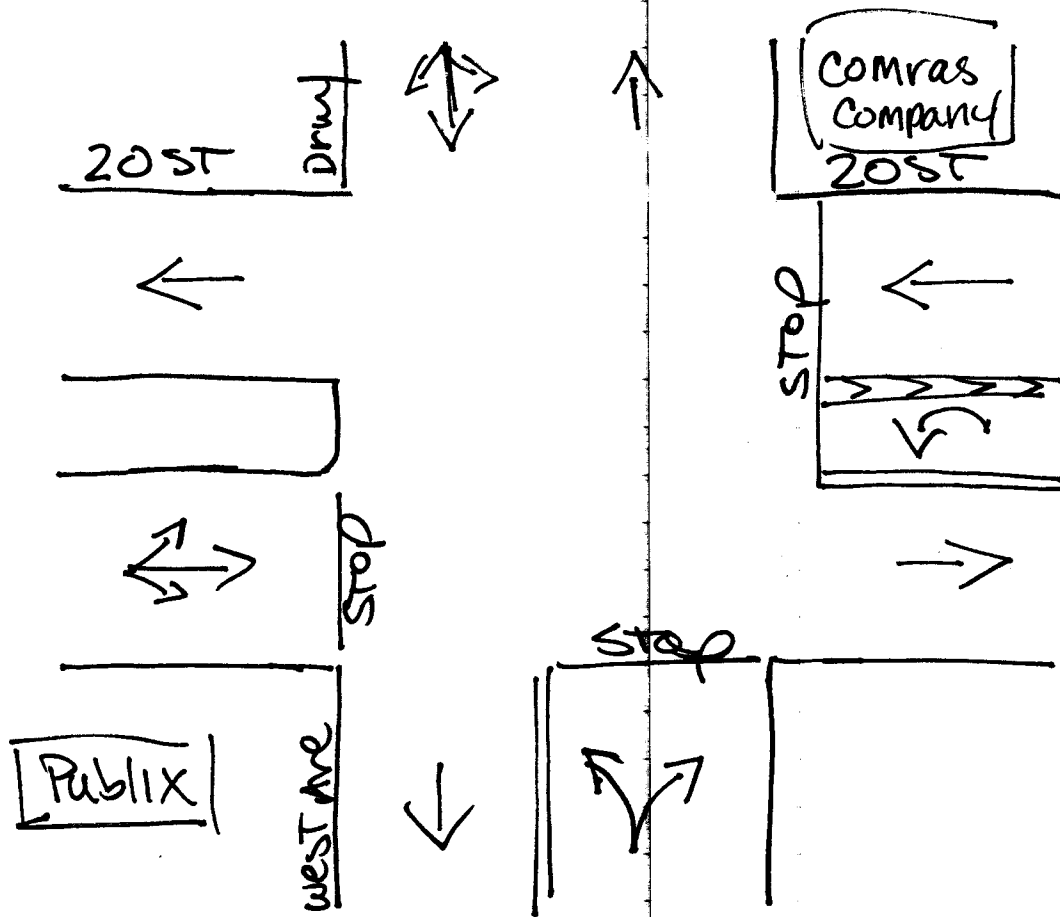
TRAFFIC SURVEY SPECIALISTS, INC.
 85 SE 4TH AVENUE, UNIT 109
 DELRAY BEACH, FLORIDA
 PHONE (561)272-3255

Site Code : 00170211
 Start Date: 12/15/17
 File I.D. : 20STWEST
 Page : 1

PEDESTRIANS & BIKES

DRIVEWAY					20TH STREET					WEST AVENUE					20TH STREET					
From North					From East					From South					From West					
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total			
Date 12/15/17																				
16:30	0	2	0	1	0	1	0	4	0	2	0	18	0	1	0	0	29			
16:45	0	2	0	4	0	0	0	1	0	0	0	22	0	0	0	4	33			
17:00	0	2	0	5	0	0	0	5	0	4	0	25	0	1	0	3	45			
17:15	0	4	0	4	0	0	0	1	0	4	0	13	0	0	0	4	30			
Hr Total	0	10	0	14	0	1	0	11	0	10	0	78	0	2	0	11	137			
17:30	0	2	0	6	0	0	0	1	0	2	0	19	0	0	0	2	32			
17:45	0	2	0	7	0	0	0	5	0	1	0	18	0	0	0	4	37			
18:00	0	4	0	5	0	0	0	2	0	6	0	13	0	0	0	2	32			
18:15	0	1	0	6	0	0	0	6	0	1	0	18	0	2	0	3	37			
Hr Total	0	9	0	24	0	0	0	14	0	10	0	68	0	2	0	11	138			
18:30	0	0	0	11	0	0	0	2	0	0	0	15	0	0	0	6	34			
18:45	0	1	0	7	0	0	0	0	0	1	0	12	0	0	0	1	22			
Hr Total	0	1	0	18	0	0	0	2	0	1	0	27	0	0	0	7	56			
TOTAL	0	20	0	56	0	1	0	27	0	21	0	173	0	4	0	29	331			

North ↑



Miami Beach, Florida
December 15, 2017
drawn by: Luis Palomino
not signed

Traf Tech Engineering, Inc.

File Name : Bay Rd & 20th Street

Site Code : 00000000

Start Date : 3/9/2018

Page No : 1

Groups Printed- Auto - Heavy Vehicles

	Bay Rd Southbound					20th Street Westbound					Bay Rd Northbound					20th Street Eastbound					
Start Time	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Int. Total
09:00 AM	0	0	0	0	0	0	36	25	0	61	27	0	1	0	28	2	34	0	0	36	125
09:15 AM	0	0	0	0	0	0	32	29	0	61	30	0	10	0	40	4	14	0	0	18	119
09:30 AM	0	0	0	0	0	0	31	18	0	49	32	0	4	0	36	3	18	0	0	21	106
09:45 AM	0	0	0	0	0	0	31	19	0	50	38	0	2	0	40	2	25	0	0	27	117
Total	0	0	0	0	0	0	130	91	0	221	127	0	17	0	144	11	91	0	0	102	467
10:00 AM	0	0	0	0	0	0	34	23	0	57	33	0	3	0	36	6	21	0	0	27	120
10:15 AM	0	0	0	0	0	0	39	34	0	73	45	0	4	0	49	9	20	0	0	29	151
10:30 AM	0	0	0	0	0	0	31	20	0	51	51	0	6	0	57	6	22	0	0	28	136
10:45 AM	0	0	0	0	0	0	20	8	0	28	0	0	0	0	0	4	31	0	0	35	63
Total	0	0	0	0	0	0	124	85	0	209	129	0	13	0	142	25	94	0	0	119	470
11:00 AM	0	0	0	0	0	0	22	19	0	41	36	0	4	0	40	11	22	0	0	33	114
11:15 AM	0	0	0	0	0	0	32	8	0	40	33	0	0	0	33	4	26	0	0	30	103
11:30 AM	0	0	0	0	0	0	28	26	0	54	54	0	1	0	55	9	21	0	0	30	139
11:45 AM	0	0	0	0	0	0	32	22	0	54	33	0	6	0	39	7	29	0	0	36	129
Total	0	0	0	0	0	0	114	75	0	189	156	0	11	0	167	31	98	0	0	129	485
12:00 PM	0	0	0	0	0	0	34	19	0	53	40	0	2	0	42	16	29	0	0	45	140
12:15 PM	0	0	0	0	0	0	38	16	0	54	45	0	4	0	49	6	29	0	1	36	139
12:30 PM	0	0	0	0	0	0	31	20	0	51	40	0	6	0	46	14	23	0	0	37	134
12:45 PM	0	0	0	0	0	0	27	13	0	40	41	0	8	0	49	10	28	0	0	38	127
Total	0	0	0	0	0	0	130	68	0	198	166	0	20	0	186	46	109	0	1	156	540
01:00 PM	0	0	0	0	0	0	42	19	0	61	48	0	8	0	56	7	24	0	0	31	148
01:15 PM	0	0	0	0	0	0	30	20	0	50	39	0	2	0	41	16	29	0	0	45	136
01:30 PM	0	0	0	0	0	0	30	15	0	45	45	0	9	0	54	3	31	0	0	34	133
01:45 PM	0	0	0	0	0	0	33	19	0	52	26	0	4	0	30	11	28	0	0	39	121
Total	0	0	0	0	0	0	135	73	0	208	158	0	23	0	181	37	112	0	0	149	538
02:00 PM	0	0	0	0	0	0	34	17	0	51	43	0	4	0	47	6	25	0	0	31	129
02:15 PM	0	0	0	0	0	0	30	20	0	50	42	0	7	0	49	10	33	0	0	43	142
02:30 PM	0	0	0	0	0	0	36	16	0	52	54	0	6	0	60	3	20	0	0	23	135
02:45 PM	0	0	0	0	0	0	28	14	0	42	35	0	3	0	38	5	17	0	1	23	103
Total	0	0	0	0	0	0	128	67	0	195	174	0	20	0	194	24	95	0	1	120	509
03:00 PM	0	0	0	0	0	0	36	14	0	50	54	0	4	0	58	4	26	0	0	30	138
03:15 PM	0	0	0	0	0	0	36	22	0	58	33	0	3	0	36	9	28	0	0	37	131
03:30 PM	0	0	0	0	0	0	40	18	0	58	42	0	6	0	48	3	37	0	0	40	146
03:45 PM	0	0	0	0	0	0	32	17	0	49	28	0	4	1	33	7	30	0	0	37	119
Total	0	0	0	0	0	0	144	71	0	215	157	0	17	1	175	23	121	0	0	144	534

Traf Tech Engineering, Inc.

File Name : Bay Rd & 20th Street

Site Code : 00000000

Start Date : 3/9/2018

Page No : 2

Groups Printed- Auto - Heavy Vehicles

	Bay Rd Southbound					20th Street Westbound					Bay Rd Northbound					20th Street Eastbound					
Start Time	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	37	13	0	50	41	0	4	0	45	2	26	0	0	28	123
04:15 PM	0	0	0	0	0	0	52	16	0	68	33	0	5	0	38	4	30	0	0	34	140
04:30 PM	0	0	0	0	0	0	66	18	0	84	39	0	4	0	43	8	29	0	0	37	164
04:45 PM	0	0	0	0	0	0	49	11	0	60	32	0	4	0	36	2	27	0	0	29	125
Total	0	0	0	0	0	0	204	58	0	262	145	0	17	0	162	16	112	0	0	128	552
05:00 PM	0	0	0	0	0	0	30	8	0	38	32	0	1	0	33	2	17	0	0	19	90
05:15 PM	0	0	0	0	0	0	64	26	0	90	44	0	5	0	49	4	29	0	0	33	172
05:30 PM	0	0	0	0	0	0	57	12	0	69	38	0	7	0	45	4	21	0	0	25	139
05:45 PM	0	0	0	0	0	0	43	14	0	57	35	0	3	0	38	0	31	0	0	31	126
Total	0	0	0	0	0	0	194	60	0	254	149	0	16	0	165	10	98	0	0	108	527
06:00 PM	0	0	0	0	0	0	47	26	0	73	36	0	5	0	41	2	20	0	0	22	136
06:15 PM	0	0	0	0	0	0	39	15	0	54	27	0	5	0	32	4	29	0	0	33	119
06:30 PM	0	0	0	0	0	0	30	28	0	58	58	0	5	0	63	4	24	0	0	28	149
06:45 PM	0	0	0	0	0	0	34	17	0	51	41	0	1	0	42	13	24	0	0	37	130
Total	0	0	0	0	0	0	150	86	0	236	162	0	16	0	178	23	97	0	0	120	534
07:00 PM	0	0	0	0	0	0	28	23	0	51	37	0	5	0	42	10	24	0	0	34	127
07:15 PM	0	0	0	0	0	0	39	25	0	64	33	0	9	0	42	8	21	0	0	29	135
07:30 PM	0	0	0	0	0	0	28	29	0	57	32	0	8	0	40	8	16	0	9	33	130
07:45 PM	0	0	0	0	0	0	34	26	0	60	37	0	7	0	44	12	15	0	1	28	132
Total	0	0	0	0	0	0	129	103	0	232	139	0	29	0	168	38	76	0	10	124	524
08:00 PM	0	0	0	0	0	0	35	24	0	59	35	0	7	0	42	10	18	0	0	28	129
08:15 PM	0	0	0	0	0	0	37	28	0	65	32	0	5	0	37	8	20	0	0	28	130
08:30 PM	0	0	0	0	0	0	31	22	0	53	40	0	6	0	46	4	19	0	0	23	122
08:45 PM	0	0	0	0	0	0	36	25	0	61	38	0	8	0	46	5	20	0	0	25	132
Total	0	0	0	0	0	0	139	99	0	238	145	0	26	0	171	27	77	0	0	104	513
Grand Total	0	0	0	0	0	0	1721	936	0	2657	1807	0	225	1	2033	311	1180	0	12	1503	6193
Apprch %	0	0	0	0	0	0	64.8	35.2	0		88.9	0	11.1	0		20.7	78.5	0	0.8		
Total %	0	0	0	0	0	0	27.8	15.1	0	42.9	29.2	0	3.6	0	32.8	5	19.1	0	0.2	24.3	
Auto	0	0	0	0	0	0	1716	923	0	2639	1798	0	222	0	2020	306	1171	0	0	1477	6136
% Auto	0	0	0	0	0	0	99.7	98.6	0	99.3	99.5	0	98.7	0	99.4	98.4	99.2	0	0	98.3	99.1
Heavy Vehicles	0	0	0	0	0	0	5	13	0	18	9	0	3	1	13	5	9	0	12	26	57
% Heavy Vehicles	0	0	0	0	0	0	0.3	1.4	0	0.7	0.5	0	1.3	100	0.6	1.6	0.8	0	100	1.7	0.9

Traf Tech Engineering, Inc.

File Name : Bay Rd & 20th Street

Site Code : 00000000

Start Date : 3/9/2018

Page No : 3

[illegible]

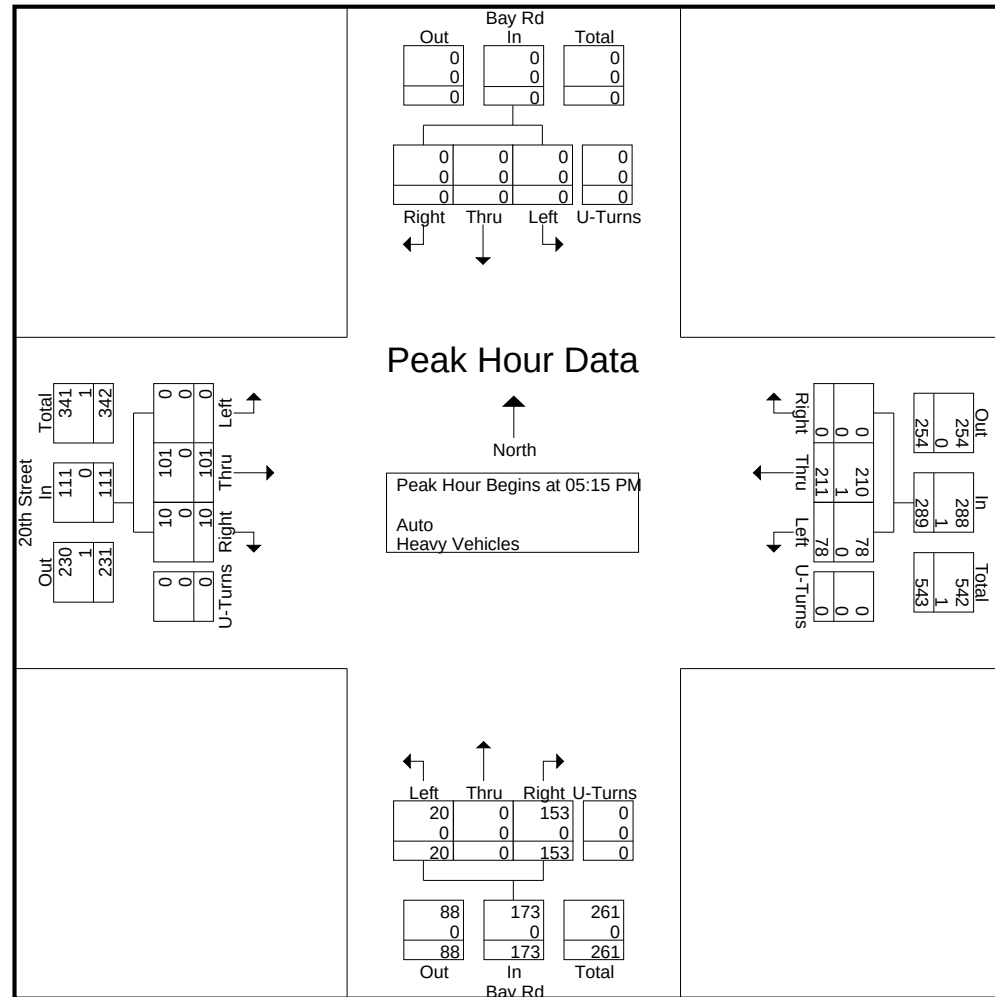
Traf Tech Engineering, Inc.

File Name : Bay Rd & 20th Street

Site Code : 00000000

Start Date : 3/9/2018

Page No : 4



Traf Tech Engineering, Inc.

File Name : Bay Rd & 20th Street
 Site Code : 00000000
 Start Date : 3/9/2018
 Page No : 1

Groups Printed- Peds

	Bay Rd Southbound					20th Street Westbound					Bay Rd Northbound					20th Street Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
09:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	17	17	0	0	0	3	3	21
09:15 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	17	17	0	0	0	3	3	20
09:30 AM	0	0	0	0	0	0	0	0	6	6	0	0	0	16	16	0	0	0	2	2	24
09:45 AM	0	0	0	0	0	0	0	0	3	3	0	0	0	18	18	0	0	0	1	1	22
Total	0	0	0	0	0	0	0	0	10	10	0	0	0	68	68	0	0	0	9	9	87
10:00 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	15	15	0	0	0	0	0	16
10:15 AM	0	0	0	0	0	0	0	0	2	2	0	0	0	33	33	0	0	0	0	0	35
10:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	22	22	0	0	0	4	4	26
10:45 AM	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	0	4	4	0	0	0	70	70	0	0	0	4	4	78
11:00 AM	0	0	0	0	0	0	0	0	4	4	0	0	0	16	16	0	0	0	0	0	20
11:15 AM	0	0	0	0	0	0	0	0	2	2	0	0	0	20	20	0	0	0	0	0	22
11:30 AM	0	0	0	0	0	0	0	0	0	0	0	0	0	19	19	0	0	0	2	2	21
11:45 AM	0	0	0	0	0	0	0	0	4	4	0	0	0	33	33	0	0	0	1	1	38
Total	0	0	0	0	0	0	0	0	10	10	0	0	0	88	88	0	0	0	3	3	101
12:00 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	34	34	0	0	0	1	1	36
12:15 PM	0	0	0	0	0	0	0	0	2	2	0	0	0	34	34	0	0	0	2	2	38
12:30 PM	0	0	0	0	0	0	0	0	5	5	0	0	0	39	39	0	0	0	1	1	45
12:45 PM	0	0	0	0	0	0	0	0	6	6	0	0	0	23	23	0	0	0	1	1	30
Total	0	0	0	0	0	0	0	0	14	14	0	0	0	130	130	0	0	0	5	5	149
01:00 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	26	26	0	0	0	1	1	28
01:15 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	21	21	0	0	0	8	8	30
01:30 PM	0	0	0	0	0	0	0	0	3	3	0	0	0	27	27	0	0	0	4	4	34
01:45 PM	0	0	0	0	0	0	0	0	2	2	0	0	0	25	25	0	0	0	0	0	27
Total	0	0	0	0	0	0	0	0	7	7	0	0	0	99	99	0	0	0	13	13	119
02:00 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	17	17	0	0	0	0	0	18
02:15 PM	0	0	0	0	0	0	0	0	4	4	0	0	0	13	13	0	0	0	2	2	19
02:30 PM	0	0	0	0	0	0	0	0	5	5	0	0	0	41	41	0	0	0	1	1	47
02:45 PM	0	0	0	0	0	0	0	0	2	2	0	0	0	14	14	0	0	0	2	2	18
Total	0	0	0	0	0	0	0	0	12	12	0	0	0	85	85	0	0	0	5	5	102
03:00 PM	0	0	0	0	0	0	0	0	2	2	0	0	0	14	14	0	0	0	1	1	17
03:15 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	14	14	0	0	0	0	0	15
03:30 PM	0	0	0	0	0	0	0	0	2	2	0	0	0	18	18	0	0	0	2	2	22
03:45 PM	0	0	0	0	0	0	0	0	11	11	0	0	0	23	23	0	0	0	1	1	35
Total	0	0	0	0	0	0	0	0	16	16	0	0	0	69	69	0	0	0	4	4	89

Traf Tech Engineering, Inc.

File Name : Bay Rd & 20th Street

Site Code : 00000000

Start Date : 3/9/2018

Page No : 2

Groups Printed- Peds

	Bay Rd Southbound					20th Street Westbound					Bay Rd Northbound					20th Street Eastbound					
Start Time	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Int. Total
04:00 PM	0	0	0	0	0	0	0	0	3	3	1	0	0	16	17	0	0	0	1	1	21
04:15 PM	0	0	0	0	0	0	0	0	2	2	0	0	0	13	13	0	0	0	1	1	16
04:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	18	18	0	0	0	0	0	18
04:45 PM	0	0	0	0	0	0	0	0	4	4	0	0	0	19	19	0	0	0	0	0	23
Total	0	0	0	0	0	0	0	0	9	9	1	0	0	66	67	0	0	0	2	2	78
05:00 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	16	16	0	0	0	0	0	17
05:15 PM	0	0	0	0	0	0	0	0	2	2	0	0	0	21	21	0	0	0	0	0	23
05:30 PM	0	0	0	0	0	0	0	0	5	5	0	0	0	19	19	0	0	0	5	5	29
05:45 PM	0	0	0	0	0	0	0	0	2	2	0	0	0	24	24	0	0	0	2	2	28
Total	0	0	0	0	0	0	0	0	10	10	0	0	0	80	80	0	0	0	7	7	97
06:00 PM	0	0	0	0	0	0	0	0	3	3	0	0	0	15	15	0	0	0	3	3	21
06:15 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	29	29	0	0	0	1	1	31
06:30 PM	0	0	0	0	0	0	0	0	0	0	0	0	0	28	28	0	0	0	8	8	36
06:45 PM	0	0	0	0	0	0	0	0	3	3	0	0	0	15	15	0	0	0	0	0	18
Total	0	0	0	0	0	0	0	0	7	7	0	0	0	87	87	0	0	0	12	12	106
07:00 PM	0	0	0	0	0	0	0	0	5	5	0	0	0	26	26	0	0	0	5	5	36
07:15 PM	0	0	0	0	0	0	0	0	6	6	0	0	0	15	15	0	0	0	0	0	21
07:30 PM	0	0	0	0	0	0	0	0	2	2	0	0	0	22	22	0	0	0	1	1	25
07:45 PM	0	0	0	0	0	0	0	0	3	3	0	0	0	23	23	0	0	0	2	2	28
Total	0	0	0	0	0	0	0	0	16	16	0	0	0	86	86	0	0	0	8	8	110
08:00 PM	0	0	0	0	0	0	0	0	2	2	0	0	0	26	26	0	0	0	3	3	31
08:15 PM	0	0	0	0	0	0	0	0	5	5	0	0	0	20	20	0	0	0	2	2	27
08:30 PM	0	0	0	0	0	0	0	0	2	2	0	0	0	21	21	0	0	0	2	2	25
08:45 PM	0	0	0	0	0	0	0	0	1	1	0	0	0	23	23	0	0	0	3	3	27
Total	0	0	0	0	0	0	0	0	10	10	0	0	0	90	90	0	0	0	10	10	110
Grand Total	0	0	0	0	0	0	0	0	125	125	1	0	0	1018	1019	0	0	0	82	82	1226
Apprch %	0	0	0	0	0	0	0	0	100	100	0.1	0	0	99.9	99.9	0	0	0	100	100	
Total %	0	0	0	0	0	0	0	0	10.2	10.2	0.1	0	0	83	83.1	0	0	0	6.7	6.7	

APPENDIX D

Peak Season Conversion Factors Historical Traffic Data and Committed Developments

2016 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
 CATEGORY: 8700 MIAMI-DADE NORTH

WEEK	DATES	SF	MOCF: 0.98	
			PSCF	
1	01/01/2016 - 01/02/2016	1.02	1.04	
2	01/03/2016 - 01/09/2016	1.03	1.05	
3	01/10/2016 - 01/16/2016	1.04	1.06	
4	01/17/2016 - 01/23/2016	1.03	1.05	
5	01/24/2016 - 01/30/2016	1.02	1.04	
6	01/31/2016 - 02/06/2016	1.00	1.02	
7	02/07/2016 - 02/13/2016	0.99	1.01	
* 8	02/14/2016 - 02/20/2016	0.97	0.99	
* 9	02/21/2016 - 02/27/2016	0.97	0.99	
*10	02/28/2016 - 03/05/2016	0.98	1.00	
*11	03/06/2016 - 03/12/2016	0.98	1.00	
*12	03/13/2016 - 03/19/2016	0.98	1.00	
*13	03/20/2016 - 03/26/2016	0.98	1.00	
*14	03/27/2016 - 04/02/2016	0.98	1.00	
*15	04/03/2016 - 04/09/2016	0.98	1.00	
*16	04/10/2016 - 04/16/2016	0.98	1.00	
*17	04/17/2016 - 04/23/2016	0.98	1.00	
*18	04/24/2016 - 04/30/2016	0.98	1.00	
*19	05/01/2016 - 05/07/2016	0.98	1.00	
*20	05/08/2016 - 05/14/2016	0.99	1.01	
21	05/15/2016 - 05/21/2016	0.99	1.01	
22	05/22/2016 - 05/28/2016	0.99	1.01	
23	05/29/2016 - 06/04/2016	1.00	1.02	
24	06/05/2016 - 06/11/2016	1.00	1.02	
25	06/12/2016 - 06/18/2016	1.01	1.03	
26	06/19/2016 - 06/25/2016	1.02	1.04	
27	06/26/2016 - 07/02/2016	1.02	1.04	
28	07/03/2016 - 07/09/2016	1.03	1.05	
29	07/10/2016 - 07/16/2016	1.03	1.05	
30	07/17/2016 - 07/23/2016	1.03	1.05	
31	07/24/2016 - 07/30/2016	1.03	1.05	
32	07/31/2016 - 08/06/2016	1.02	1.04	
33	08/07/2016 - 08/13/2016	1.02	1.04	
34	08/14/2016 - 08/20/2016	1.02	1.04	
35	08/21/2016 - 08/27/2016	1.02	1.04	
36	08/28/2016 - 09/03/2016	1.02	1.04	
37	09/04/2016 - 09/10/2016	1.02	1.04	
38	09/11/2016 - 09/17/2016	1.01	1.03	
39	09/18/2016 - 09/24/2016	1.01	1.03	
40	09/25/2016 - 10/01/2016	1.00	1.02	
41	10/02/2016 - 10/08/2016	1.00	1.02	
42	10/09/2016 - 10/15/2016	0.99	1.01	
43	10/16/2016 - 10/22/2016	1.00	1.02	
44	10/23/2016 - 10/29/2016	1.00	1.02	
45	10/30/2016 - 11/05/2016	1.01	1.03	
46	11/06/2016 - 11/12/2016	1.01	1.03	
47	11/13/2016 - 11/19/2016	1.02	1.04	
48	11/20/2016 - 11/26/2016	1.02	1.04	
49	11/27/2016 - 12/03/2016	1.02	1.04	
50	12/04/2016 - 12/10/2016	1.02	1.04	
51	12/11/2016 - 12/17/2016	1.02	1.04	
52	12/18/2016 - 12/24/2016	1.03	1.05	
53	12/25/2016 - 12/31/2016	1.04	1.06	

* PEAK SEASON

21-FEB-2017 10:54:35

830UPD

6_8700_PKSEASON.TXT

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2016 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

SITE: 0012 - SR 907/ALTON RD, 200' N OF 20 ST (MIAMI BEACH)

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
----	-----		-----		-----	-----	-----	-----
2016	46000	C	N 22500		S 23500	9.00	54.50	3.70
2015	46000	C	N 22500		S 23500	9.00	54.70	3.20
2014	47500	S	N 22000		S 25500	9.00	54.50	2.50
2013	47500	F	N 22000		S 25500	9.00	52.40	2.50
2012	48500	C	N 22500		S 26000	9.00	55.70	2.50
2011	47000	C	N 22500		S 24500	9.00	55.10	3.50
2010	46000	C	N 23000		S 23000	8.98	54.08	3.50
2009	47000	C	N 23500		S 23500	8.99	53.24	3.90
2008	46500	C	N 23000		S 23500	9.09	55.75	2.10
2007	47500	C	N 23000		S 24500	8.01	54.34	2.20
2006	46500	C	N 23000		S 23500	7.97	54.22	3.00
2005	46500	F	N 22500		S 24000	8.80	53.80	5.30
2004	46500	C	N 22500		S 24000	9.00	53.30	5.30
2003	42500	C	N 20500		S 22000	8.80	53.40	4.80
2002	44000	C	N 21500		S 22500	9.80	52.30	1.70
2001	45500	C	N 22500		S 23000	8.20	53.50	5.00

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN

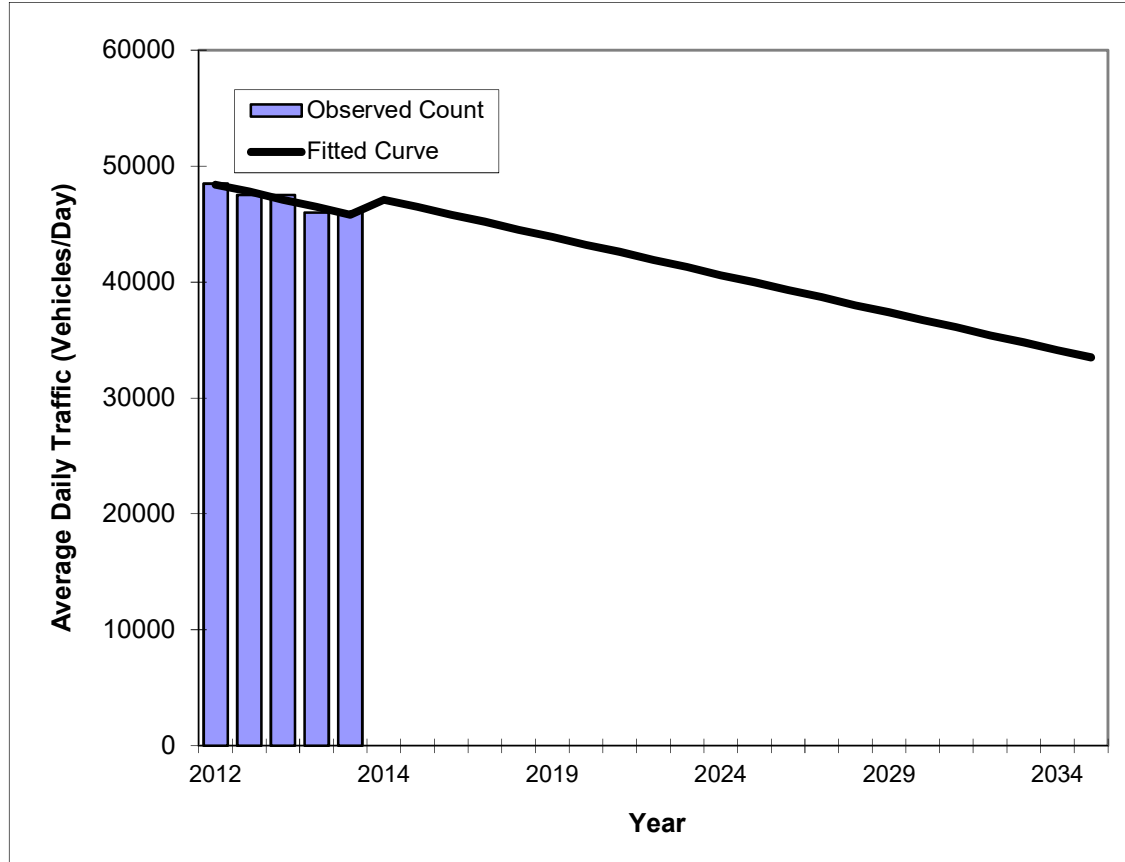
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Traffic Trends - V2.0

SR 907/ALTON RD -- 200' N OF 20 ST

PIN#	0
Location	1

County:	Miami-Dade
Station #:	0012
Highway:	SR 907/ALTON RD



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2012	48500	48400
2013	47500	47800
2014	47500	47100
2015	46000	46500
2016	46000	45800
2017 Opening Year Trend		
2017	N/A	45200
2018 Mid-Year Trend		
2018	N/A	44500
2020 Design Year Trend		
2020	N/A	43200
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	-650
Trend R-squared:	89.89%
Trend Annual Historic Growth Rate:	-1.34%
Trend Growth Rate (2016 to Design Year):	-1.42%
Printed:	16-Jan-18
Straight Line Growth Option	

*Axle-Adjusted

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2016 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

SITE: 2542 - SR 907/ALTON RD, 200' S OF VENETIAN CSWY

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
----	-----		-----		-----	-----	-----	-----
2016	30000	C	N 15000		S 15000	9.00	54.50	5.90
2015	41000	C	N 21000		S 20000	9.00	54.70	1.60
2014	30500	F	N 14000		S 16500	9.00	54.50	7.60
2013	30500	C	N 14000		S 16500	9.00	52.40	7.60
2012	37000	C	N 19000		S 18000	9.00	55.70	7.50
2011	39500	C	N 19000		S 20500	9.00	55.10	1.50
2010	39000	C	N 20000		S 19000	8.98	54.08	1.50
2009	38500	C	N 19000		S 19500	8.99	53.24	6.20
2008	37500	C	N 17500		S 20000	9.09	55.75	4.80
2007	39500	C	N 18500		S 21000	8.01	54.34	5.20
2006	36500	C	N 17500		S 19000	7.97	54.22	1.60
2005	34000	C	N 17000		S 17000	8.80	53.80	9.30
2004	39000	C	N 18500		S 20500	9.00	53.30	9.30
2003	32500	C	N 16000		S 16500	8.80	53.40	10.60
2002	33000	C	N 16000		S 17000	9.80	52.30	5.80
2001	32500	C	N 16500		S 16000	8.20	53.50	5.50

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN

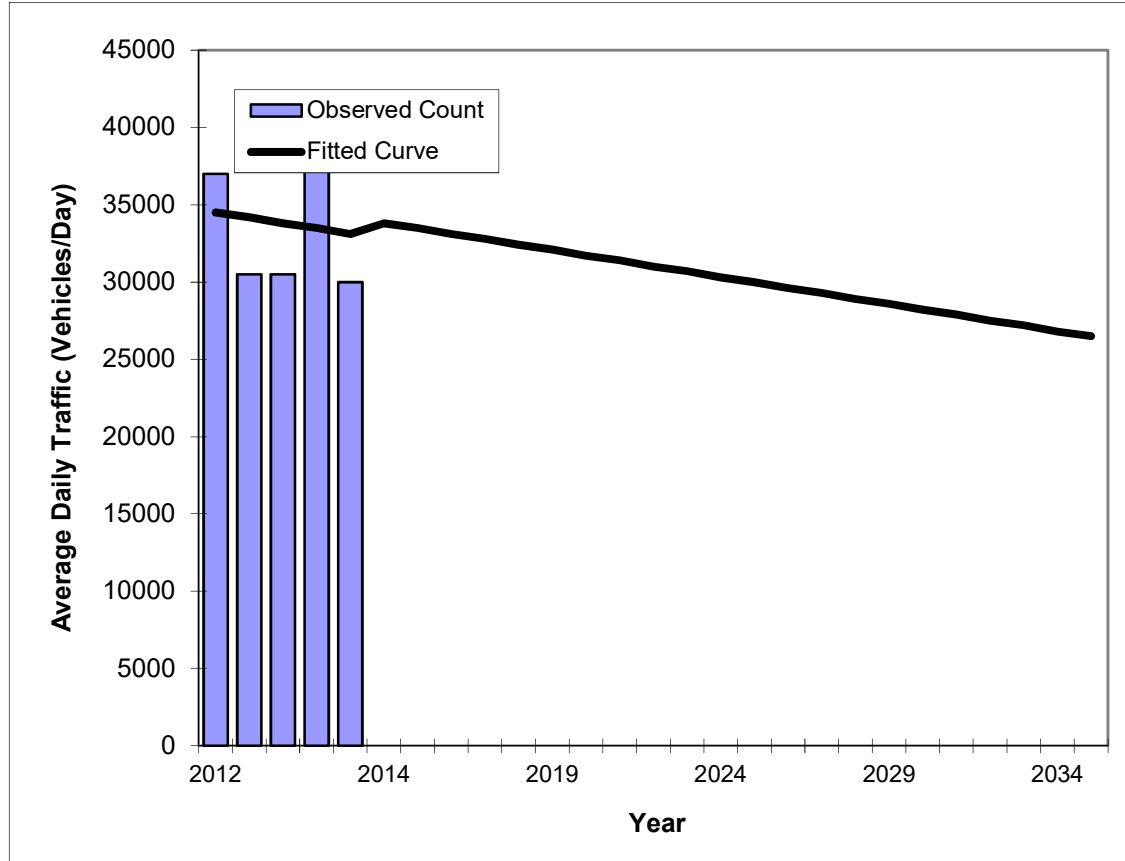
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Traffic Trends - V2.0

SR 907/ALTON RD -- 200' S OF VENETIAN CSWY

PIN#	0
Location	2

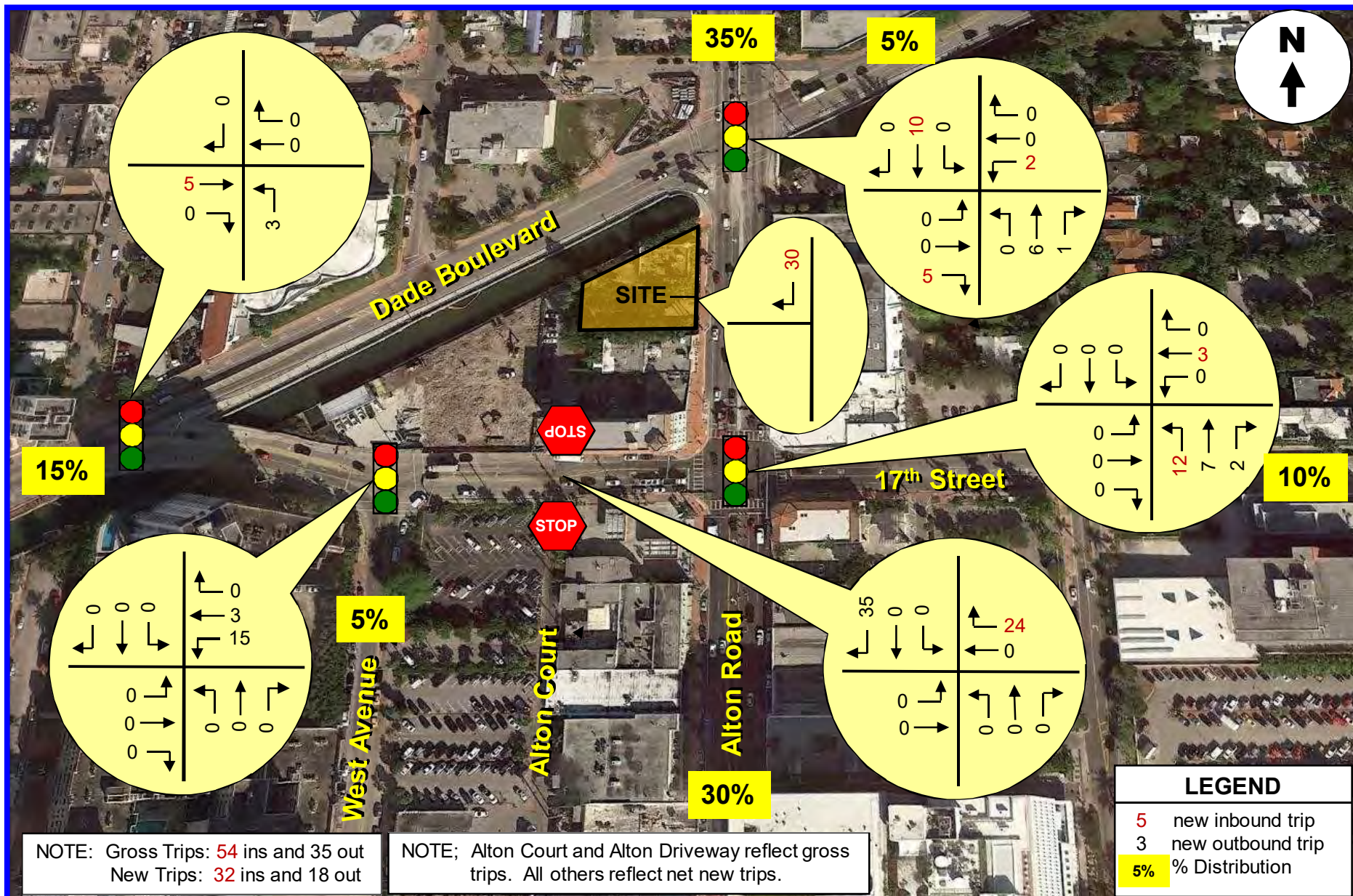
County:	Miami-Dade
Station #:	2542
Highway:	SR 907/ALTON RD

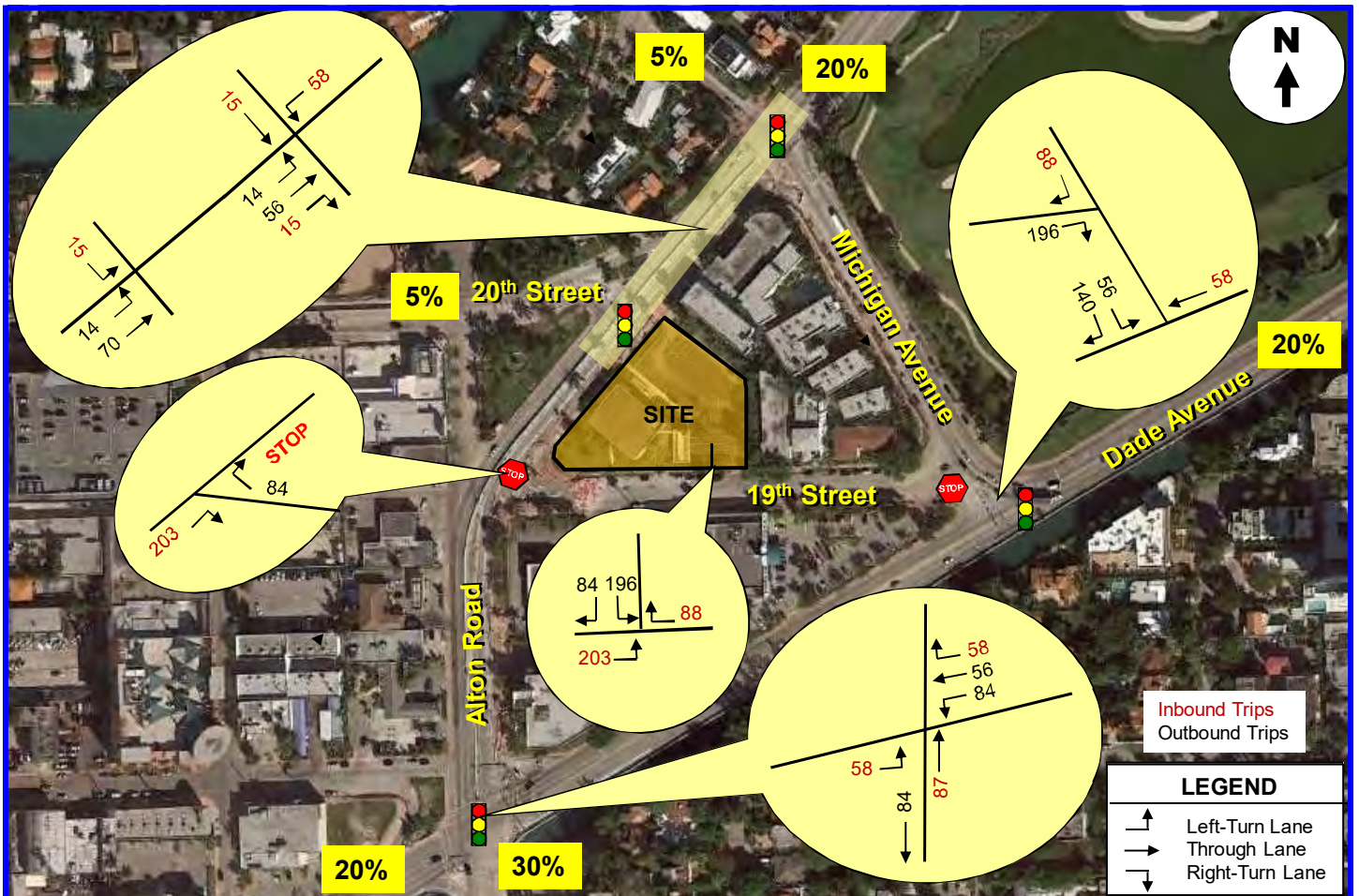


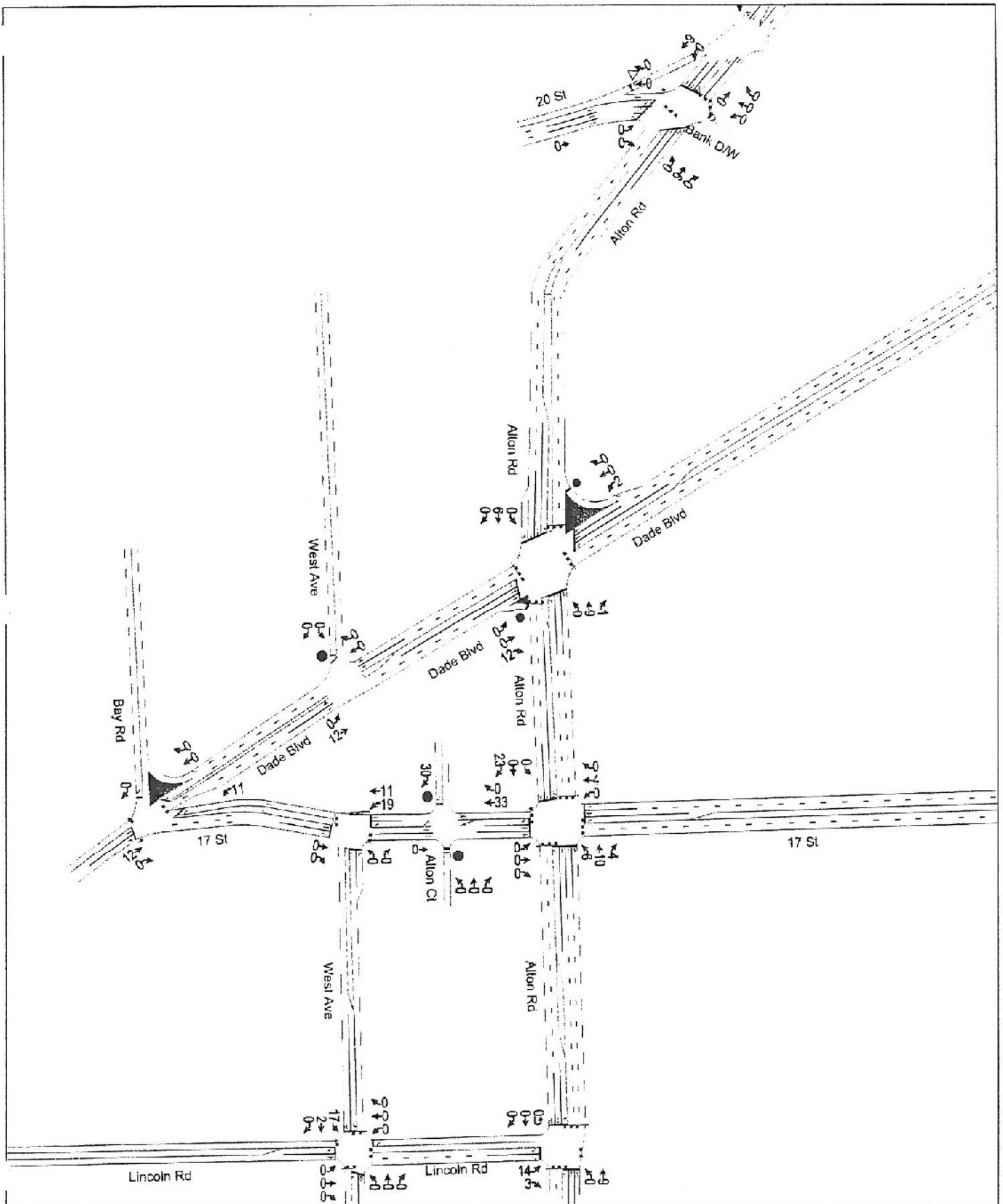
Year	Traffic (ADT/AADT)	
	Count*	Trend**
2012	37000	34500
2013	30500	34200
2014	30500	33800
2015	41000	33500
2016	30000	33100
2017 Opening Year Trend		
2017	N/A	32800
2018 Mid-Year Trend		
2018	N/A	32400
2020 Design Year Trend		
2020	N/A	31700
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	-350
Trend R-squared:	1.25%
Trend Annual Historic Growth Rate:	-1.01%
Trend Growth Rate (2016 to Design Year):	-1.06%
Printed:	16-Jan-18
Straight Line Growth Option	

*Axle-Adjusted







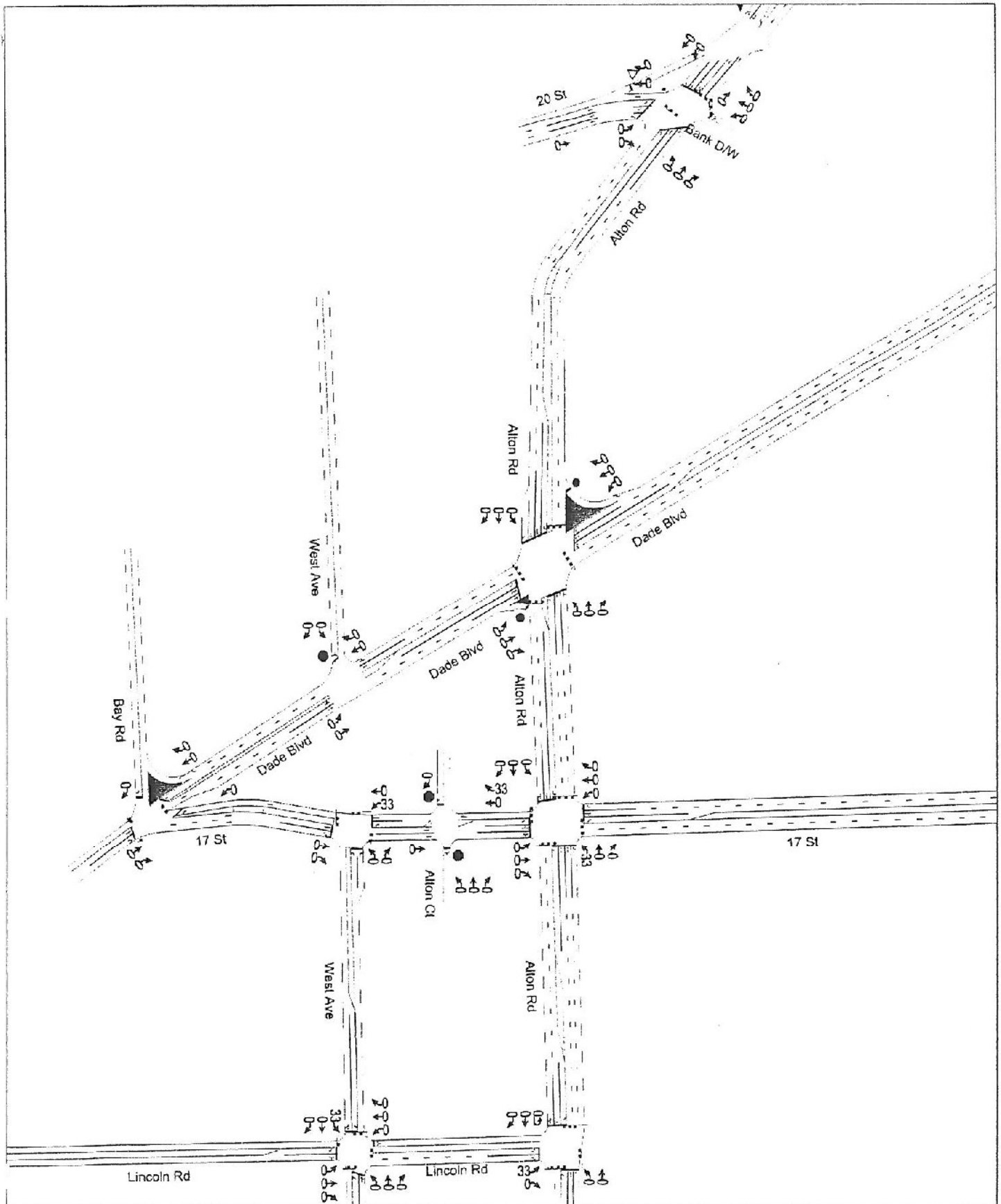


TABLE: A4
17th Street Hotel
PM PEAK HOUR INTERSECTION APPROACH VOLUMES

INTERSECTION NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14			
	INTERSECTION NAME	APPROACH	MOVEMENT	PM PEAK HR COUNT	DATE OF COUNT	PHF	SF	PM PEAK SEASONALLY ADJUSTED (EXISTING) (2012)	BACKGROUND GROWTH @ 0.52% FOR 3 YEARS	COMMITTED DEVELOPMENT	TOTAL TRAFFIC (VPH) (PROPOSED W/O PROJECT) (2015)	SITE TRAFFIC (VPH) VALET OPERATION	SITE TRAFFIC (VPH) VALET OPERATION	TOTAL TRAFFIC (VPH) (PROPOSED W/ PROJECT) (2015)			
1	Allan Road & 17 Street	SOUTHBOUND	SBR	171	Tuesday, July 10, 2012	0.983	1.02	174	3	0	178	23	0	201			
			SBT	810			1.02	826	15	0	842	0	0	842			
			SBL	209			1.02	213	4	0	217	0	0	217			
			TOTAL	1190				1214	23	0	1237	23	0	1260			
		WESTBOUND	WBR	301			1.02	307	8	0	313	0	0	313			
			WBT	144			1.02	147	3	0	150	4	0	154			
			WBL	272			1.02	277	5	0	283	0	0	283			
			TOTAL	717				731	14	0	745	4	0	749			
		NORTHBOUND	NBR	173			1.02	176	3	0	180	4	0	184			
			NBT	785			1.02	802	15	0	817	10	0	827			
NBL	59		1.02	50	1	0	51	5	33	100							
TOTAL	1018			1038	19	0	1058	20	33	1111							
EASTBOUND	EBR	75	1.02	78	1	0	79	0	0	79							
	EBT	142	1.02	145	3	0	148	0	0	148							
	EBL	372	1.02	379	7	0	387	0	0	387							
	TOTAL	590		602	11	0	613	0	0	613							
		TOTAL		3515			3585	67	0	3652	47	33	3732				
2	17 Street & West Avenue	SOUTHBOUND	SBR	0	Tuesday, July 10, 2012	0.958	1.02	0	0	0	0	0	0	0			
			SBT	0			1.02	0	0	0	0	0	0	0			
			SBL	0			1.02	0	0	0	0	0	0	0			
			TOTAL	0				0	0	0	0	0	0	0			
		WESTBOUND	WBR	0			1.02	0	0	0	0	0	0	0	0	0	0
			WBT	176			1.02	180	3	7	190	11	0	201			
			WBL	301			1.02	307	6	0	313	19	33	365			
			TOTAL	477				487	9	7	503	30	33	566			
		NORTHBOUND	NBR	255			1.02	270	5	0	275	0	0	275	0	0	275
			NBT	0			1.02	0	0	0	0	0	0	0	0	0	0
NBL	215		1.02	219	4	14	237	0	0	237	0	0	237				
TOTAL	490			490	9	14	513	0	0	513							
EASTBOUND	EBR	259	1.02	264	5	13	282	0	0	282	0	0	282				
	EBT	228	1.02	233	4	7	244	0	0	244	0	0	244				
	EBL	0	1.02	0	0	0	0	0	0	0	0	0	0				
	TOTAL	487		497	9	20	525	0	0	525	0	0	525				
		TOTAL		1444			1473	28	47	1541	30	33	1604				

TABLE: A4

17th Street Hotel

PM PEAK HOUR INTERSECTION APPROACH VOLUMES

INTERSECTION NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14		
INTERSECTION N NAME	APPROACH	MOVEMENT	PM PEAK HR COUNT	DATE OF COUNT	PHF	SF	PM PEAK SEASONALLY ADJUSTED (EXISTING) (2012)	BACKGROUND GROWTH @ 0.62% FOR 3 YEARS	COMMITTED DEVELOPMENT	TOTAL TRAFFIC (VPH) (PROPOSED W/O PROJECT) (2016)	SITE TRAFFIC (VPH) VALET OPERATION	TOTAL TRAFFIC (VPH) (PROPOSED W/ PROJECT) (2016)				
3	Dade Boulevard & West Avenue	SOUTHBOUND	SBR	50	Tuesday, July 10, 2012	0.867	1.02	51	1	0	52	0	52			
			SBT	0			1.02	0	0	0	0	0				
			*SBL	90			1.02	92	2	7	101	0	101			
		TOTAL	140	1.02			143	3	7	152	0	152				
		SWBR	91	1.02			93	2	0	95	0	95				
		SWBT	181	1.02			185	3	14	202	0	202				
		SWBL	0	1.02			0	0	0	0	0	0				
		TOTAL	272	1.02			277	6	14	297	0	297				
		NORTHBOUND	NBR	0			1.02	0	0	0	0	0	0	0	0	0
			NBT	0			1.02	0	0	0	0	0	0	0	0	0
NBL	0		1.02	0	0	0	0	0	0	0	0	0				
NORTHEASTBOUND	TOTAL	0	1.02	0	0	0	0	0	0	0	0	0				
	NEBR	0	1.02	0	0	0	0	0	0	0	0	0				
	*NEBT	237	1.02	242	5	0	246	12	0	258	0	258				
	*NEBL	25	1.02	26	0	21	47	0	0	47	0	47				
	TOTAL	262	1.02	267	5	21	293	12	0	305	0	305				
TOTAL																
4	Allen Road & Dade Boulevard	SOUTHBOUND	SBR	43	Tuesday, July 10, 2012	0.885	1.02	44	1	0	45	0	45			
			SBT	930			1.02	918	17	13	948	9	957			
			SRL	50			1.02	51	1	7	59	0	59			
		SRL	22	1.02			22	0	23	0	23	0	23			
		TOTAL	1015	1.02			1013	19	20	1075	9	1084				
		WBR	96	1.02			98	2	0	100	0	100				
		WBT	110	1.02			112	2	7	121	0	121				
		WBL	259	1.02			274	5	0	280	2	282				
		TOTAL	475	1.02			485	9	7	501	2	503				
		NORTHBOUND	NBR	224			1.02	228	4	0	233	1	234			
NBT	1141		1.02	1164	22	7	1193	9	1202							
NBL	74		1.02	75	1	7	84	0	84							
EASTBOUND	TOTAL	1439	1.02	1468	27	14	1509	10	1519							
	*EBR	59	1.02	60	1	61	73	0	73							
	*EBT	101	1.02	103	2	7	112	0	112							
	*EBL	97	1.02	99	2	0	101	0	101							
	TOTAL	286	1.02	282	5	7	274	0	286							
TOTAL																

TABLE: A4

17th Street Hotel
PM PEAK HOUR INTERSECTION APPROACH VOLUMES

INTERSECTION NO.	INTERSECTION NAME	2	3	4	5	6	7	8	9	10	11	12	13	14		
		APPROACH	MOVEMENT	PM PEAK HR COUNT	DATE OF COUNT	PHF	SF	PM PEAK SEASONALLY ADJUSTED (EXISTING) (2012)	BACKGROUND GROWTH @ 0.92% FOR 3 YEARS	COMMITTED DEVELOPMENT	TOTAL TRAFFIC (VPH) (PROPOSED W/O PROJECT) (2016)	SITE TRAFFIC (VPH) VALET OPERATION	TOTAL TRAFFIC (VPH) (PROPOSED W/ PROJECT) (2016)			
5	17 Street / Bay Road & Dade Boulevard	SOUTHBOUND	SBR	23	Tuesday, July 10, 2012	0.963	1.02	23	0	27	51	0	51			
			SBT	0			1.02	0	0	0	0	0				
			SBL	0			1.02	0	0	0	0	0				
		TOTAL	23				23	0	27	51	0	51				
		WESTBOUND	WBR	0			1.02	0	0	0	0	0	0	0	0	0
			WBT	0			1.02	0	0	0	0	0	0	0	0	0
			WBL	357			1.02	364	7	21	392	11	403			
		TOTAL	357				364	10	21	392	11	403				
		NORTHEASTBOUND	NEBR	506			1.02	516	10	20	546	0	546			
			*NEBT	319			1.02	325	6	0	331	12	343			
			NEBL	0			1.02	0	0	0	0	0	0			
		TOTAL	825				842	16	20	877	12	889				
SOUTHWESTBOUND	SWBR	69	1.02	70	1	14	86	0	86							
	SWBT	162	1.02	165	3	0	168	0	168							
	SWBL	0	1.02	0	0	0	0	0	0							
TOTAL	231		236	4	14	264	0	264								
TOTAL			1436													
6	Allen Road & 20 Street	SOUTHBOUND	SBR	205	Tuesday, July 10, 2012	0.984	1.02	1465	27	82	1674	23	1697			
			SBT	846			1.02	209	4	52	265	0	265			
			SBL	23			1.02	23	0	0	879	9	888			
		TOTAL	1074				1095	21	52	1168	9	1177				
		WESTBOUND	WBR	12			1.02	12	0	0	12	0	12			
			WBT	1			1.02	1	0	0	1	0	1			
			WBL	2			1.02	2	0	0	2	0	2			
		TOTAL	15				16	0	0	16	0	16				
		NORTHBOUND	NBR	13			1.02	13	0	0	14	0	14			
			NBT	1089			1.02	1111	21	0	1132	9	1141			
			NBL	107			1.02	109	2	16	127	0	127			
		TOTAL	1228				1253	23	16	1292	9	1301				
EASTBOUND	EBR	22	1.02	22	0	0	23	0	23							
	EBT	6	1.02	6	0	0	8	0	8							
	EBL	247	1.02	252	5	45	302	0	302							
TOTAL	277		283	5	45	333	0	333								
TOTAL			2594													

17th Street Hotel

PM PEAK HOUR INTERSECTION APPROACH VOLUMES

INTERSECTION NO.	INTERSECTION NAME	APPROACH	MOVEMENT	PM PEAK HR COUNT	DATE OF COUNT	PHF	SF	PM PEAK SEASONALLY ADJUSTED (EXISTING) (2012)	BACKGROUND GROWTH @ 0.62% FOR 3 YEARS	COMMITTED DEVELOPMENT	TOTAL TRAFFIC (VPH) (PROPOSED W/O PROJECT) (2018)	SITE TRAFFIC (VPH) VALET OPERATION	TOTAL TRAFFIC (VPH) (PROPOSED W/ PROJECT) (2018)				
7	Alton Road & Lincoln Road	SOUTHBOUND	SBR	100	Tuesday, July 10, 2012	0.975	1.02	102	2	0	104	0	104				
			SBL	1025			1.02	1046	20	0	1065	0	1065				
			SBU	25			1.02	25	0	25	0	25					
			TOTAL	1150			1.02	1173	22	0	1195	0	1195				
		WESTBOUND	WBR	0			1.02	0	0	0	0	0	0	0	0	0	
			WBL	0			1.02	0	0	0	0	0	0	0	0	0	
			WBT	0			1.02	0	0	0	0	0	0	0	0	0	
			TOTAL	0			1.02	0	0	0	0	0	0	0	0	0	
		NORTHBOUND	NBR	0			1.02	0	0	0	0	0	0	0	0	0	0
			NBL	938			1.02	957	18	0	975	8	975	9	984	0	984
			NBT	70			1.02	71	1	0	73	0	73	0	73	0	73
			TOTAL	1008			1.02	1028	19	0	1047	9	1047	9	1056	0	1056
		EASTBOUND	EBR	65			1.02	66	1	0	68	0	68	3	71	0	71
			EBT	0			1.02	0	0	0	0	0	0	0	0	0	0
EBL	68		1.02	69	1	0	71	14	71	14	85	33	118				
TOTAL	133		1.02	136	3	0	138	17	138	17	155	33	188				
TOTAL																	
8	Lincoln Road & West Avenue	SOUTHBOUND	SBR	89	Tuesday, July 10, 2012	0.944	1.02	91	2	0	92	0	92				
			SBL	397			1.02	405	8	0	413	2	415				
			SBU	25			1.02	25	0	25	17	33	78				
			TOTAL	511			1.02	521	10	0	531	19	550				
		WESTBOUND	WBR	42			1.02	43	1	0	44	0	44	0	44		
			WBL	45			1.02	45	1	0	47	0	47	0	47		
			WBT	46			1.02	47	1	0	48	0	48	0	48		
			TOTAL	133			1.02	136	3	0	138	0	138	0	138		
		NORTHBOUND	NBR	46			1.02	47	1	0	48	0	48	0	48		
			NBL	411			1.02	419	8	0	427	0	427	0	427		
			NBT	13			1.02	13	0	0	13	0	13	0	13		
			TOTAL	470			1.02	478	9	0	488	0	488	0	488		
		EASTBOUND	EBR	23			1.02	23	0	0	24	0	24	0	24		
			EBT	29			1.02	30	1	0	30	0	30	0	30		
EBL	54		1.02	55	1	0	56	0	56	0	56						
TOTAL	105		1.02	108	2	0	110	0	110	0	110						
TOTAL																	
9	17 Street & Alton Court	SOUTHBOUND	SBR	15	Tuesday, July 10, 2012	0.936	1.02	15	0	0	15	0	15				
			SBL	0			1.02	0	0	0	0	0	0				
			SBU	12			1.02	12	0	12	0	12					
			TOTAL	27			1.02	28	1	0	29	0	29				
		WESTBOUND	WBR	11			1.02	11	0	11	0	11	0	11			
			WBL	435			1.02	444	8	0	452	0	452	33	485		
			WBT	0			1.02	0	0	0	0	0	0				
			TOTAL	446			1.02	455	8	0	463	33	496				
		NORTHBOUND	NBR	78			1.02	80	1	0	81	0	81	0	81		
			NBL	1			1.02	1	0	0	1	0	1	0	1		
			NBT	26			1.02	27	0	0	27	0	27	0	27		
			TOTAL	105			1.02	107	2	0	109	0	109	0	109		
		EASTBOUND	EBR	0			1.02	0	0	0	0	0	0	0	0	0	
			EBT	489			1.02	499	9	0	508	0	508	0	508		
EBL	4		1.02	4	0	0	4	0	4	0	4						
TOTAL	493		1.02	503	9	0	512	0	512	0	512						
TOTAL																	

Notes:

* Volumes extrapolated from PD&E TMC data.

1 Intersection Name

2 Intersection Approach

3 Intersection Approach Movement

4 TMC data provided by RGA, Inc.

5 Date of Count

6 Peak Hour Factor

7 Seasonal Factor obtained from FDOT

©Richard Garcia and Associates, Inc., 2008

8 Seasonally Adjusted TMC = Count * SF (These are the volumes utilized in the existing condition intersection LOS).

9 A 0.62 percent background growth was utilized with a project build-out of three years.

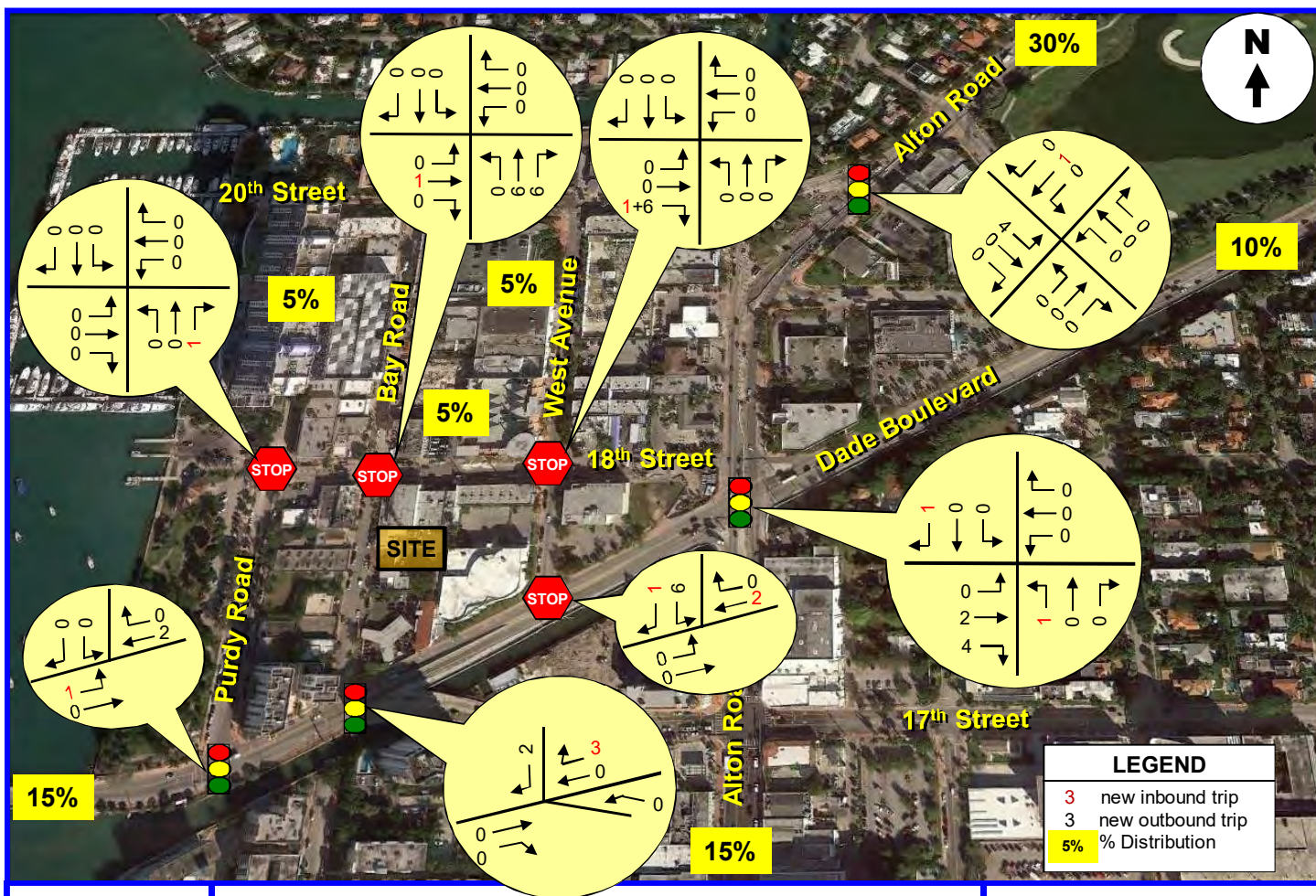
*0 Committed Traffic.

*1 Proposed Traffic w/o Project - Peak Seasonally Adjusted TMC + Background+Committed

*2 Site traffic assignment

*3 Site traffic assignment for Valet Operation

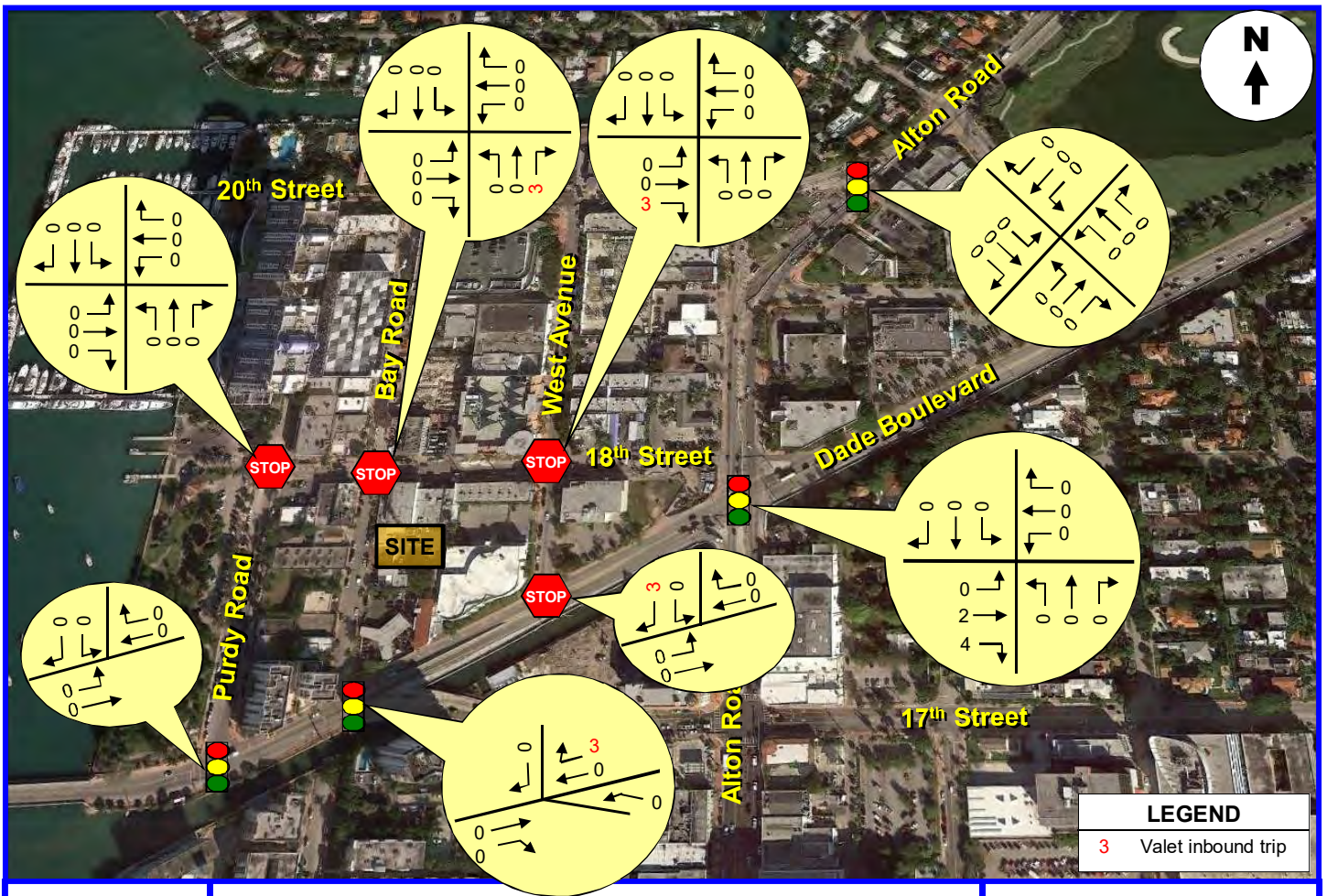
*4 Total Traffic = Net Traffic + Site Traffic (These are the volumes utilized in the proposed intersection LOS analysis)



Traf Tech
ENGINEERING, INC.

NEW PROJECT TRAFFIC ASSIGNMENT (Weekday New PM Peak Hour Trips)

FIGURE 3a
1747 Bay Road
Miami Beach, Florida



Traf Tech
ENGINEERING, INC.

NEW PROJECT TRAFFIC ASSIGNMENT
(Weekday Valet PM Peak Hour Trips)

FIGURE 3b
 1747 Bay Road
 Miami Beach, Florida

APPENDIX E

Future Turning Movement Volumes

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Dade Boulevard and Purdy Avenue PM Peak Hour

Description	Dade Boulevard Northbound			Purdy Avenue Southbound			Dade Boulevard Eastbound			Dade Boulevard Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (12/15/2017)				65		161	138	438			522	58
Season Adjustment Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
2017 Peak Season Traffic	0	0	0	68	0	167	144	456	0	0	543	60
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments:												
1901 Alton								58			56	
Trader Joes												
1750 Alton												
Other Committed Developments								5			9	
1747 Bay Road Development							1				2	
2020 Background Traffic	0	0	0	70	0	173	149	532	0	0	626	62
Sunset Harbour Trips							10					
Pass-by							11	-11				
Valet												47
2020 Total Traffic	0	0	0	70	0	173	170	521	0	0	626	109

Sunset Harbour	PM Peak		
	INS	OUTS	Total
Net New Trips	42	46	88
Pass-by	21	20	41
Gross Trips	63	66	129

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Dade Boulevard and Bay Road PM Peak Hour

Description	17 Street Northbound			Bay Road Southbound			Dade Boulevard Eastbound			Dade Boulevard Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (12/15/2017)	366					24		178	333		212	26
Season Adjustment Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
2017 Peak Season Traffic	381	0	0	0	0	25	0	185	346	0	220	27
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments:												
1901 Alton								58			56	
Trader Joes	10										10	
1750 Alton	3							5				
Other Committed Developments	21					27		5	20		9	14
1747 Bay Road Development						2						6
2020 Background Traffic	426	0	0	0	0	55	0	259	377	0	302	48
Sunset Harbour Trips						12						11
Pass-by						10					-10	10
Valet						47						
2020 Total Traffic	426	0	0	0	0	124	0	259	377	0	292	69

Sunset Harbour	PM Peak		
	INS	OUTS	Total
Net New Trips	42	46	88
Pass-by	21	20	41
Gross Trips	63	66	129

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

17th Street and West Avenue PM Peak Hour

Description	West Avenue Northbound			West Avenue Southbound			17th Street Eastbound			17th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (12/15/2017)	142	213	141	15	166	1	1	160	173	120	208	35
Season Adjustment Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
2017 Peak Season Traffic	148	222	147	16	173	1	1	166	180	125	216	36
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments:												
1901 Alton												
Trader Joes	10		42									
1750 Alton												
Other Committed Developments	14						15	3				
1747 Bay Road Development							7	13		7		
2020 Background Traffic	176	228	193	16	178	1	16	181	198	129	230	38
Sunset Harbour Trips		9		2	11							2
Pass-by												
Valet												
2020 Total Traffic	176	237	193	18	189	1	16	181	198	129	230	40

Sunset Harbour	PM Peak		
	INS	OUTS	Total
Net New Trips	42	46	88
Pass-by	21	20	41
Gross Trips	63	66	129

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Dade Boulevard and West Avenue PM Peak Hour

Description	West Avenue Northbound			West Avenue Southbound			Dade Boulevard Eastbound			Dade Boulevard Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (12/15/2017)	8	128	90	69	104	26	9	159		76	193	122
Season Adjustment Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
2017 Peak Season Traffic	8	133	94	72	108	27	9	165	0	79	201	127
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments: 1901 Alton Trader Joes 1750 Alton								58			56	
Other Committed Developments 1747 Bay Road Development				9		1		5			9	
2020 Background Traffic	9	137	96	83	111	29	10	233	0	81	274	131
Sunset Harbour Trips Pass-by Valet		11		11 10	13						11	
2020 Total Traffic	9	148	96	104	124	29	10	233	0	81	285	131

Sunset Harbour	INS	PM Peak OUTS	Total
Net New Trips	42	46	88
Pass-by	21	20	41
Gross Trips	63	66	129

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

18th Street and West Avenue PM Peak Hour

Description	West Avenue Northbound			West Avenue Southbound			18th Street Eastbound			18th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (12/15/2017)	93	155	16	13	81	77	67	14	94	6	11	12
Season Adjustment Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
2017 Peak Season Traffic	97	161	17	14	84	80	70	15	98	6	11	12
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments: 1901 Alton Trader Joes 1750 Alton Other Committed Developments 1747 Bay Road Development									10			
2020 Background Traffic	100	166	17	14	87	83	72	15	111	6	12	13
Sunset Harbour Trips Pass-by Valet	11					4	4		24 10			
2020 Total Traffic	111	166	17	14	87	87	76	15	145	6	12	13

Sunset Harbour	PM Peak		
	INS	OUTS	Total
Net New Trips	42	46	88
Pass-by	21	20	41
Gross Trips	63	66	129

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

18th Street and Bay Road PM Peak Hour

Description	Bay Road Northbound			Bay Road Southbound			18th Street Eastbound			18th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (12/15/2017)	8	19	24	80	23	44	42	78	15	24	94	68
Season Adjustment Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
2017 Peak Season Traffic	8	20	25	83	24	46	44	81	16	25	98	71
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments: 1901 Alton Trader Joes 1750 Alton Other Committed Developments 1747 Bay Road Development		6	9					1				
2020 Background Traffic	9	26	35	86	25	47	45	85	16	26	101	73
Sunset Harbour Trips	3	3	28		3				13	15		
Pass-by			10						11			
Valet									47			
2020 Total Traffic	12	29	73	86	28	47	45	85	87	41	101	73

Sunset Harbour	PM Peak		
	INS	OUTS	Total
Net New Trips	42	46	88
Pass-by	21	20	41
Gross Trips	63	66	129

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

18th Street and Purdy Avenue PM Peak Hour

Description	Purdy Avenue Northbound			Purdy Avenue Southbound			18th Street Eastbound			18th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (12/15/2017)	13	105	99	22	121	4	12	17	27	89	8	41
Season Adjustment Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
2017 Peak Season Traffic	14	109	103	23	126	4	12	18	28	93	8	43
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments: 1901 Alton Trader Joes 1750 Alton Other Committed Developments 1747 Bay Road Development			1									
2020 Background Traffic	14	113	107	24	130	4	13	18	29	95	9	44
Sunset Harbour Trips			10	3								3
Pass-by			11									
Valet			47									
2020 Total Traffic	14	113	175	27	130	4	13	18	29	95	9	47

Sunset Harbour	PM Peak		Total
	INS	OUTS	
Net New Trips	42	46	88
Pass-by	21	20	41
Gross Trips	63	66	129

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

20th Street and West Avenue PM Peak Hour

Description	West Avenue Northbound			Driveway Southbound			20th Street Eastbound			20th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (12/15/2017)	31	1	143	0	1	2	2	237	51	135	201	1
Season Adjustment Factor	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04	1.04
2017 Peak Season Traffic	32	1	149	0	1	2	2	246	53	140	209	1
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments: 1901 Alton Trader Joes 1750 Alton Other Committed Developments 1747 Bay Road Development												
2020 Background Traffic	33	1	153	0	1	2	2	254	55	145	215	1
Sunset Harbour Trips Pass-by Valet			3					6		4	6	
2020 Total Traffic	33	1	156	0	1	2	2	260	55	149	221	1

Sunset Harbour	INS	PM Peak OUTS	Total
Net New Trips	42	46	88
Pass-by	21	20	41
Gross Trips	63	66	129

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

20th Street and West Avenue PM Peak Hour

Description	Bay Road Northbound			Southbound			20th Street Eastbound			20th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (3/9/2018)	20		153					101	10	78	211	
Season Adjustment Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
2017 Peak Season Traffic	20	0	153	0	0	0	0	101	10	78	211	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments: 1901 Alton Trader Joes 1750 Alton Other Committed Developments 1747 Bay Road Development												
2020 Background Traffic	20	0	156	0	0	0	0	103	10	80	215	0
Sunset Harbour Trips Pass-by Valet			3					3		3	3	
2020 Total Traffic	20	0	159	0	0	0	0	106	10	83	218	0

Sunset Harbour	PM Peak		
	INS	OUTS	Total
Net New Trips	42	46	88
Pass-by	21	20	41
Gross Trips	63	66	129

APPENDIX F

Intersection Capacity Analyses

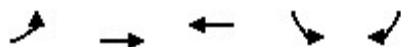
HCM 2010 Signalized Intersection Summary

101: Dade Boulevard & Purdy Avenue

								
Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	144	456	543	60	68	167		
Future Volume (veh/h)	144	456	543	60	68	167		
Number	1	6	2	12	3	18		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	0.90	0.90	0.90		
Adj Sat Flow, veh/h/ln	1676	1676	1676	1710	1676	1676		
Adj Flow Rate, veh/h	157	496	590	65	74	182		
Adj No. of Lanes	1	1	1	0	1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	437	1255	996	110	228	203		
Arrive On Green	0.75	0.75	0.75	0.75	0.16	0.16		
Sat Flow, veh/h	696	1676	1331	147	1437	1282		
Grp Volume(v), veh/h	157	496	0	655	74	182		
Grp Sat Flow(s),veh/h/ln	696	1676	0	1478	1437	1282		
Q Serve(g_s), s	17.1	13.7	0.0	26.0	5.9	18.1		
Cycle Q Clear(g_c), s	43.2	13.7	0.0	26.0	5.9	18.1		
Prop In Lane	1.00			0.10	1.00	1.00		
Lane Grp Cap(c), veh/h	437	1255	0	1106	228	203		
V/C Ratio(X)	0.36	0.40	0.00	0.59	0.32	0.90		
Avail Cap(c_a), veh/h	437	1255	0	1106	387	345		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.00	0.56	1.00	1.00		
Uniform Delay (d), s/veh	17.1	5.8	0.0	7.4	48.5	53.6		
Incr Delay (d2), s/veh	2.3	0.9	0.0	1.3	0.6	12.4		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	3.5	6.7	0.0	11.0	2.4	7.1		
LnGrp Delay(d),s/veh	19.4	6.8	0.0	8.7	49.1	66.0		
LnGrp LOS	B	A		A	D	E		
Approach Vol, veh/h		653	655		256			
Approach Delay, s/veh		9.8	8.7		61.1			
Approach LOS		A	A		E			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		103.4				103.4		26.6
Change Period (Y+Rc), s		6.1				6.1		6.0
Max Green Setting (Gmax), s		83.0				83.0		35.0
Max Q Clear Time (g_c+I1), s		28.0				45.2		20.1
Green Ext Time (p_c), s		1.7				1.8		0.5
Intersection Summary								
HCM 2010 Ctrl Delay			17.8					
HCM 2010 LOS			B					

Timings

101: Dade Boulevard & Purdy Avenue



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	144	456	543	68	167
Future Volume (vph)	144	456	543	68	167
Turn Type	Perm	NA	NA	Prot	Perm
Protected Phases		6	2	8	
Permitted Phases	6				8
Detector Phase	6	6	2	8	8
Switch Phase					
Minimum Initial (s)	14.0	14.0	14.0	7.0	7.0
Minimum Split (s)	20.8	20.8	22.1	30.0	30.0
Total Split (s)	89.1	89.1	89.1	41.0	41.0
Total Split (%)	68.5%	68.5%	68.5%	31.5%	31.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.1	2.1	2.1	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.1	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Min	C-Min	C-Min	None	None
Act Effect Green (s)	106.1	106.1	106.1	11.9	11.9
Actuated g/C Ratio	0.82	0.82	0.82	0.09	0.09
v/c Ratio	0.33	0.40	0.54	0.57	0.68
Control Delay	5.7	4.8	6.3	72.3	20.8
Queue Delay	0.0	0.0	1.4	0.0	0.0
Total Delay	5.7	4.8	7.7	72.3	20.8
LOS	A	A	A	E	C
Approach Delay		5.0	7.7	35.7	
Approach LOS		A	A	D	

Intersection Summary

Cycle Length: 130.1

Actuated Cycle Length: 130.1

Offset: 86 (66%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.68

Intersection Signal Delay: 11.2

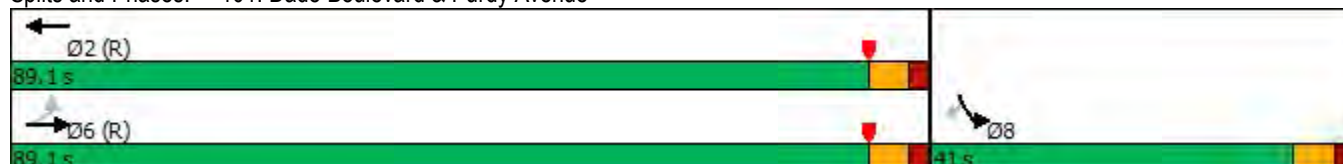
Intersection LOS: B

Intersection Capacity Utilization 78.7%

ICU Level of Service D

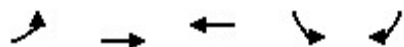
Analysis Period (min) 15

Splits and Phases: 101: Dade Boulevard & Purdy Avenue



Queues

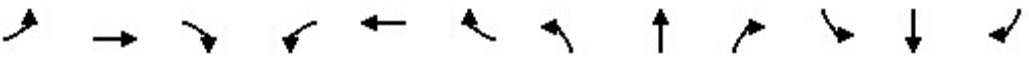
101: Dade Boulevard & Purdy Avenue



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	157	496	655	74	182
v/c Ratio	0.33	0.40	0.54	0.57	0.68
Control Delay	5.7	4.8	6.3	72.3	20.8
Queue Delay	0.0	0.0	1.4	0.0	0.0
Total Delay	5.7	4.8	7.7	72.3	20.8
Queue Length 50th (ft)	26	91	142	61	0
Queue Length 95th (ft)	67	174	273	108	75
Internal Link Dist (ft)		273	491	484	
Turn Bay Length (ft)	80			100	
Base Capacity (vph)	473	1230	1213	385	434
Starvation Cap Reductn	0	0	349	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.33	0.40	0.76	0.19	0.42
Intersection Summary					

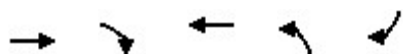
HCM Signalized Intersection Capacity Analysis

102: 17th Street/Bay Road & Dade Boulevard

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↑	↗		↖		↗					↖
Traffic Volume (vph)	0	185	346	0	220	27	381	0	0	0	0	25
Future Volume (vph)	0	185	346	0	220	27	381	0	0	0	0	25
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.9	6.9		6.9		7.7					6.9
Lane Util. Factor		1.00	1.00		1.00		1.00					1.00
Frpb, ped/bikes		1.00	1.00		0.99		1.00					1.00
Flpb, ped/bikes		1.00	1.00		1.00		1.00					1.00
Frt		1.00	0.85		0.99		1.00					0.86
Flt Protected		1.00	1.00		1.00		0.95					1.00
Satd. Flow (prot)		1509	1282		1477		1433					1233
Flt Permitted		1.00	1.00		1.00		0.95					1.00
Satd. Flow (perm)		1509	1282		1477		1433					1233
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	0	213	398	0	253	31	438	0	0	0	0	29
RTOR Reduction (vph)	0	0	267	0	10	0	0	0	0	0	0	19
Lane Group Flow (vph)	0	213	131	0	274	0	438	0	0	0	0	10
Confl. Peds. (#/hr)	17					17			10	10		
Confl. Bikes (#/hr)			1			14			4			
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	10
Turn Type		NA	custom		NA		Prot					Perm
Protected Phases			6				4					
Permitted Phases		6			2							6
Actuated Green, G (s)		14.0	14.0		14.0		14.0					14.0
Effective Green, g (s)		14.0	14.0		14.0		14.0					14.0
Actuated g/C Ratio		0.33	0.33		0.33		0.33					0.33
Clearance Time (s)		6.9	6.9		6.9		7.7					6.9
Vehicle Extension (s)		2.5	2.5		2.5		3.5					2.5
Lane Grp Cap (vph)		495	421		485		470					405
v/s Ratio Prot			0.10				c0.31					
v/s Ratio Perm		0.14			c0.19							0.01
v/c Ratio		0.43	0.31		0.56		0.93					0.02
Uniform Delay, d1		11.2	10.7		11.8		13.8					9.7
Progression Factor		1.00	1.00		1.00		1.00					1.00
Incremental Delay, d2		0.4	0.3		1.2		25.7					0.0
Delay (s)		11.6	11.0		13.0		39.5					9.7
Level of Service		B	B		B		D					A
Approach Delay (s)		11.2			13.0			39.5			9.7	
Approach LOS		B			B			D			A	
Intersection Summary												
HCM 2000 Control Delay			20.7									
HCM 2000 Volume to Capacity ratio			0.75									
Actuated Cycle Length (s)			42.6									
Intersection Capacity Utilization			64.8%									
Analysis Period (min)			15									
c Critical Lane Group												

Timings

102: 17th Street/Bay Road & Dade Boulevard



Lane Group	EBT	EBR	WBT	NBL	SBR
Lane Configurations	↑	↑	↑	↑	↑
Traffic Volume (vph)	185	346	220	381	25
Future Volume (vph)	185	346	220	381	25
Turn Type	NA	custom	NA	Prot	Perm
Protected Phases		6		4	
Permitted Phases	6		2		6
Detector Phase	6	6	2	4	6
Switch Phase					
Minimum Initial (s)	14.0	14.0	14.0	14.0	14.0
Minimum Split (s)	20.9	20.9	20.9	21.7	20.9
Total Split (s)	20.9	20.9	20.9	21.7	20.9
Total Split (%)	49.1%	49.1%	49.1%	50.9%	49.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.9	2.9	2.9	3.7	2.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.9	6.9	6.9	7.7	6.9
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	Min	Min	Min	None	Min
Act Effect Green (s)	14.0	14.0	14.0	14.0	14.0
Actuated g/C Ratio	0.33	0.33	0.33	0.33	0.33
v/c Ratio	0.43	0.58	0.57	0.93	0.05
Control Delay	14.5	5.6	16.7	47.1	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	14.5	5.6	16.7	47.1	0.2
LOS	B	A	B	D	A
Approach Delay	8.7		16.7		
Approach LOS	A		B		

Intersection Summary

Cycle Length: 42.6

Actuated Cycle Length: 42.6

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 0.93

Intersection Signal Delay: 22.6

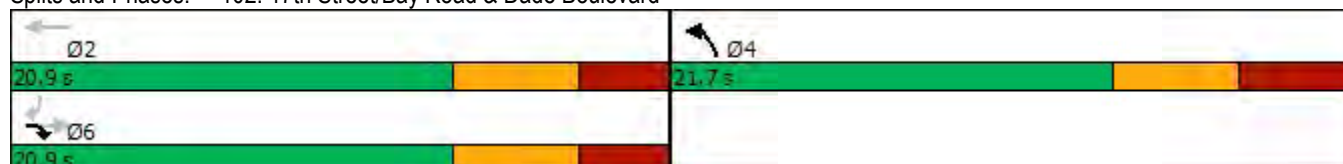
Intersection LOS: C

Intersection Capacity Utilization 64.8%

ICU Level of Service C

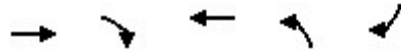
Analysis Period (min) 15

Splits and Phases: 102: 17th Street/Bay Road & Dade Boulevard



Queues

102: 17th Street/Bay Road & Dade Boulevard



Lane Group	EBT	EBR	WBT	NBL	SBR
Lane Group Flow (vph)	213	398	284	438	29
v/c Ratio	0.43	0.58	0.57	0.93	0.05
Control Delay	14.5	5.6	16.7	47.1	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	14.5	5.6	16.7	47.1	0.2
Queue Length 50th (ft)	39	0	52	99	0
Queue Length 95th (ft)	79	40	103	#226	0
Internal Link Dist (ft)	491		508		
Turn Bay Length (ft)					
Base Capacity (vph)	495	688	495	470	532
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.43	0.58	0.57	0.93	0.05

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 2010 Signalized Intersection Summary

103: West Avenue & Dade Boulevard

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	9	165	0	79	201	127	8	133	94	72	108	27
Future Volume (veh/h)	9	165	0	79	201	127	8	133	94	72	108	27
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	0.98		0.93	0.98		0.93
Parking Bus, Adj	1.00	0.90	1.00	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	1676	1676	1710	1676	1676	1710	1710	1676	1710	1710	1676	1710
Adj Flow Rate, veh/h	10	176	0	84	214	135	9	141	100	77	115	29
Adj No. of Lanes	1	1	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	529	717	0	598	856	511	87	205	140	194	213	45
Arrive On Green	0.48	0.48	0.00	0.48	0.48	0.48	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	922	1509	0	1079	1801	1074	18	795	542	333	826	175
Grp Volume(v), veh/h	10	176	0	84	188	161	250	0	0	221	0	0
Grp Sat Flow(s),veh/h/ln	922	1509	0	1079	1593	1282	1355	0	0	1333	0	0
Q Serve(g_s), s	0.3	3.1	0.0	2.3	3.2	3.4	0.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	3.7	3.1	0.0	5.4	3.2	3.4	7.5	0.0	0.0	6.2	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.84	0.04		0.40	0.35		0.13
Lane Grp Cap(c), veh/h	529	717	0	598	757	610	432	0	0	452	0	0
V/C Ratio(X)	0.02	0.25	0.00	0.14	0.25	0.26	0.58	0.00	0.00	0.49	0.00	0.00
Avail Cap(c_a), veh/h	529	717	0	598	757	610	563	0	0	568	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	8.2	7.0	0.0	8.6	7.0	7.1	15.2	0.0	0.0	14.6	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.7	0.0	0.5	0.8	1.1	1.2	0.0	0.0	0.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	1.4	0.0	0.7	1.5	1.3	2.9	0.0	0.0	2.5	0.0	0.0
LnGrp Delay(d),s/veh	8.2	7.7	0.0	9.1	7.8	8.1	16.4	0.0	0.0	15.5	0.0	0.0
LnGrp LOS	A	A		A	A	A	B			B		
Approach Vol, veh/h		186			433			250			221	
Approach Delay, s/veh		7.8			8.2			16.4			15.5	
Approach LOS		A			A			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		17.6		27.4		17.6		27.4				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		16.0		17.0		16.0		17.0				
Max Q Clear Time (g_c+I1), s		9.5		5.7		8.2		7.4				
Green Ext Time (p_c), s		0.8		0.7		0.8		1.7				
Intersection Summary												
HCM 2010 Ctrl Delay				11.5								
HCM 2010 LOS				B								

Timings

103: West Avenue & Dade Boulevard

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	9	165	79	201	8	133	72	108
Future Volume (vph)	9	165	79	201	8	133	72	108
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	23.0	23.0	23.0	23.0	22.0	22.0	22.0	22.0
Total Split (%)	51.1%	51.1%	51.1%	51.1%	48.9%	48.9%	48.9%	48.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0		6.0		6.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	C-Max	C-Max	C-Max	C-Max	Min	Min	Min	Min
Act Effect Green (s)	20.8	20.8	20.8	20.8		12.2		12.2
Actuated g/C Ratio	0.46	0.46	0.46	0.46		0.27		0.27
v/c Ratio	0.03	0.25	0.19	0.25		0.58		0.66
Control Delay	8.9	10.1	10.3	5.9		14.3		22.2
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	8.9	10.1	10.3	5.9		14.3		22.2
LOS	A	B	B	A		B		C
Approach Delay		10.0		6.8		14.3		22.2
Approach LOS		B		A		B		C

Intersection Summary

Cycle Length: 45

Actuated Cycle Length: 45

Offset: 22 (49%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow

Natural Cycle: 45

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.66

Intersection Signal Delay: 12.2

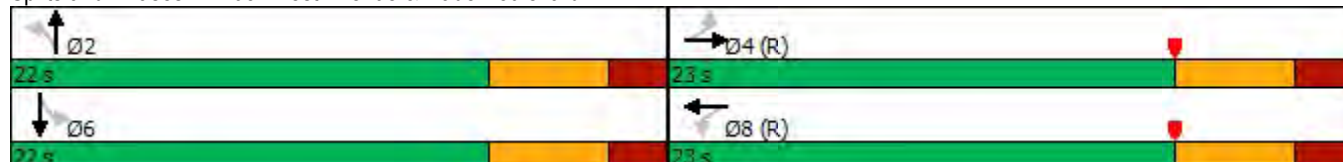
Intersection LOS: B

Intersection Capacity Utilization 66.7%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 103: West Avenue & Dade Boulevard



Queues

103: West Avenue & Dade Boulevard



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	10	176	84	349	250	221
v/c Ratio	0.03	0.25	0.19	0.25	0.58	0.66
Control Delay	8.9	10.1	10.3	5.9	14.3	22.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.9	10.1	10.3	5.9	14.3	22.2
Queue Length 50th (ft)	1	26	12	15	35	44
Queue Length 95th (ft)	8	66	38	40	77	89
Internal Link Dist (ft)		508		381	432	477
Turn Bay Length (ft)						
Base Capacity (vph)	375	697	449	1372	540	435
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.25	0.19	0.25	0.46	0.51
Intersection Summary						

HCM 2010 Signalized Intersection Summary

104: West Avenue & 17th Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1	166	180	125	216	36	148	222	147	16	173	1
Future Volume (veh/h)	1	166	180	125	216	36	148	222	147	16	173	1
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.97		0.92	1.00		0.93	0.96		0.94	1.00		0.91
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.85	1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	1710	1676	1710	1676	1676	1710	1676	1676	1710	1676	1676	1710
Adj Flow Rate, veh/h	1	173	188	130	225	38	154	231	153	17	180	1
Adj No. of Lanes	0	2	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	28	784	504	111	722	122	295	252	167	89	485	3
Arrive On Green	0.47	0.47	0.47	0.07	0.58	0.58	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	1	1675	1076	1597	1243	210	1037	778	515	896	1498	8
Grp Volume(v), veh/h	174	0	188	130	0	263	154	0	384	17	0	181
Grp Sat Flow(s),veh/h/ln	1676	0	1076	1597	0	1453	1037	0	1293	896	0	1506
Q Serve(g_s), s	0.0	0.0	14.6	9.0	0.0	12.0	17.4	0.0	37.2	2.4	0.0	12.0
Cycle Q Clear(g_c), s	8.0	0.0	14.6	9.0	0.0	12.0	29.4	0.0	37.2	39.6	0.0	12.0
Prop In Lane	0.01		1.00	1.00		0.14	1.00		0.40	1.00		0.01
Lane Grp Cap(c), veh/h	812	0	504	111	0	844	295	0	418	89	0	487
V/C Ratio(X)	0.21	0.00	0.37	1.18	0.00	0.31	0.52	0.00	0.92	0.19	0.00	0.37
Avail Cap(c_a), veh/h	812	0	504	111	0	844	351	0	487	137	0	568
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.5	0.0	22.3	60.5	0.0	13.9	45.1	0.0	42.3	61.4	0.0	33.8
Incr Delay (d2), s/veh	0.6	0.0	2.1	140.6	0.0	1.0	1.1	0.0	20.1	0.8	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	4.6	8.3	0.0	5.0	5.1	0.0	15.6	0.6	0.0	5.0
LnGrp Delay(d),s/veh	21.1	0.0	24.4	201.1	0.0	14.9	46.2	0.0	62.4	62.1	0.0	34.2
LnGrp LOS	C		C	F		B	D		E	E		C
Approach Vol, veh/h		362			393			538			198	
Approach Delay, s/veh		22.8			76.5			57.8			36.6	
Approach LOS		C			E			E			D	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		81.7		48.3	14.7	67.0		48.3				
Change Period (Y+Rc), s		* 6.2		* 6.2	* 5.7	* 6.2		* 6.2				
Max Green Setting (Gmax), s		* 69		* 49	* 9	* 54		* 49				
Max Q Clear Time (g_c+I1), s		14.0		39.2	11.0	16.6		41.6				
Green Ext Time (p_c), s		0.6		1.9	0.0	0.9		0.5				
Intersection Summary												
HCM 2010 Ctrl Delay				51.4								
HCM 2010 LOS				D								
Notes												

Timings

104: West Avenue & 17th Street

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	1	166	125	216	148	222	16	173
Future Volume (vph)	1	166	125	216	148	222	16	173
Turn Type	Perm	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases		6	5	2		4		8
Permitted Phases	6				4		8	
Detector Phase	6	6	5	2	4	4	8	8
Switch Phase								
Minimum Initial (s)	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	37.2	37.2	12.0	37.2	35.2	35.2	32.2	32.2
Total Split (s)	60.2	60.2	14.7	75.2	55.2	55.2	55.2	55.2
Total Split (%)	46.2%	46.2%	11.3%	57.7%	42.3%	42.3%	42.3%	42.3%
Yellow Time (s)	4.0	4.0	3.7	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.2	2.2	2.0	2.2	2.2	2.2	2.2	2.2
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.2	5.7	6.2	6.2	6.2	6.2	6.2
Lead/Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	C-Min	C-Min	None	C-Min	Min	Min	Min	Min
Act Effect Green (s)		48.2	24.2	78.1	39.9	39.9	39.9	39.9
Actuated g/C Ratio		0.37	0.19	0.60	0.31	0.31	0.31	0.31
v/c Ratio		0.35	0.51	0.30	0.64	0.87	0.13	0.39
Control Delay		15.9	56.4	15.1	49.7	59.2	31.2	36.5
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		15.9	56.4	15.1	49.7	59.2	31.2	36.5
LOS		B	E	B	D	E	C	D
Approach Delay		15.9		28.8		56.5		36.1
Approach LOS		B		C		E		D

Intersection Summary

Cycle Length: 130.4

Actuated Cycle Length: 130.4

Offset: 114 (87%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 36.6

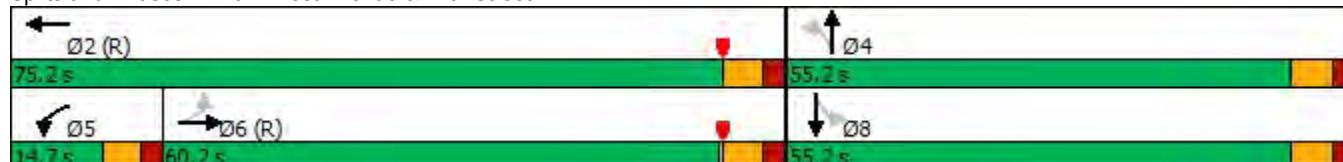
Intersection LOS: D

Intersection Capacity Utilization 102.4%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 104: West Avenue & 17th Street



Queues

104: West Avenue & 17th Street

							
Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	362	130	263	154	384	17	181
v/c Ratio	0.35	0.51	0.30	0.64	0.87	0.13	0.39
Control Delay	15.9	56.4	15.1	49.7	59.2	31.2	36.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	15.9	56.4	15.1	49.7	59.2	31.2	36.5
Queue Length 50th (ft)	51	102	101	111	285	10	120
Queue Length 95th (ft)	106	170	189	169	371	28	165
Internal Link Dist (ft)	476		364		407		104
Turn Bay Length (ft)		160		170		50	
Base Capacity (vph)	1151	256	876	300	539	161	572
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.51	0.30	0.51	0.71	0.11	0.32
Intersection Summary							

HCM 2010 AWSC
105: West Avenue & 18 Street

Intersection	
Intersection Delay, s/veh	10
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	70	15	98	6	11	12	97	161	17	14	84	80
Future Vol, veh/h	70	15	98	6	11	12	97	161	17	14	84	80
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	75	16	105	6	12	13	104	173	18	15	90	86
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.7	8.5	10.8	9.2
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	35%	38%	21%	8%
Vol Thru, %	59%	8%	38%	47%
Vol Right, %	6%	54%	41%	45%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	275	183	29	178
LT Vol	97	70	6	14
Through Vol	161	15	11	84
RT Vol	17	98	12	80
Lane Flow Rate	296	197	31	191
Geometry Grp	1	1	1	1
Degree of Util (X)	0.39	0.265	0.044	0.244
Departure Headway (Hd)	4.75	4.854	5.136	4.597
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	754	736	690	775
Service Time	2.804	2.917	3.22	2.657
HCM Lane V/C Ratio	0.393	0.268	0.045	0.246
HCM Control Delay	10.8	9.7	8.5	9.2
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	1.9	1.1	0.1	1

HCM 2010 AWSC
106: Bay Road & 18 Street

Intersection	
Intersection Delay, s/veh	9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	44	81	16	25	98	71	8	20	25	83	24	46
Future Vol, veh/h	44	81	16	25	98	71	8	20	25	83	24	46
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	48	88	17	27	107	77	9	22	27	90	26	50
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	8.9	9.1	8.2	9.2
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	15%	31%	13%	54%
Vol Thru, %	38%	57%	51%	16%
Vol Right, %	47%	11%	37%	30%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	53	141	194	153
LT Vol	8	44	25	83
Through Vol	20	81	98	24
RT Vol	25	16	71	46
Lane Flow Rate	58	153	211	166
Geometry Grp	1	1	1	1
Degree of Util (X)	0.076	0.2	0.261	0.22
Departure Headway (Hd)	4.732	4.708	4.463	4.767
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	753	760	803	750
Service Time	2.785	2.752	2.503	2.812
HCM Lane V/C Ratio	0.077	0.201	0.263	0.221
HCM Control Delay	8.2	8.9	9.1	9.2
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.2	0.7	1	0.8

HCM 2010 AWSC
107: Purdy Avenue & 18 Street

Intersection	
Intersection Delay, s/veh	9.7
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	12	18	28	93	8	43	14	109	103	23	126	4
Future Vol, veh/h	12	18	28	93	8	43	14	109	103	23	126	4
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	21	32	107	9	49	16	125	118	26	145	5
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	8.6	9.6	10.1	9.6
HCM LOS	A	A	B	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	21%	65%	100%	2%
Vol Thru, %	0%	51%	31%	6%	0%	95%
Vol Right, %	0%	49%	48%	30%	0%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	14	212	58	144	21	132
LT Vol	14	0	12	93	21	2
Through Vol	0	109	18	8	0	126
RT Vol	0	103	28	43	0	4
Lane Flow Rate	16	244	67	166	24	152
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.026	0.336	0.092	0.232	0.039	0.226
Departure Headway (Hd)	5.808	4.961	4.993	5.039	5.877	5.36
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	613	721	711	708	606	665
Service Time	3.573	2.725	3.072	3.104	3.648	3.13
HCM Lane V/C Ratio	0.026	0.338	0.094	0.234	0.04	0.229
HCM Control Delay	8.7	10.2	8.6	9.6	8.9	9.7
HCM Lane LOS	A	B	A	A	A	A
HCM 95th-tile Q	0.1	1.5	0.3	0.9	0.1	0.9

HCM 2010 AWSC
108: West Avenue & 20 Street

Intersection	
Intersection Delay, s/veh	11.1
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	246	53	140	209	1	32	1	149	0	1	2
Future Vol, veh/h	2	246	53	140	209	1	32	1	149	0	1	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	267	58	152	227	1	35	1	162	0	1	2
Number of Lanes	0	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	11.9	10.8	10.2	8.7
HCM LOS	B	B	B	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	18%	1%	100%	0%	0%
Vol Thru, %	1%	82%	0%	100%	33%
Vol Right, %	82%	18%	0%	0%	67%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	182	301	140	210	3
LT Vol	32	2	140	0	0
Through Vol	1	246	0	209	1
RT Vol	149	53	0	1	2
Lane Flow Rate	198	327	152	228	3
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.279	0.444	0.247	0.338	0.005
Departure Headway (Hd)	5.085	4.886	5.844	5.337	5.625
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	700	730	609	667	640
Service Time	3.166	2.965	3.63	3.122	3.625
HCM Lane V/C Ratio	0.283	0.448	0.25	0.342	0.005
HCM Control Delay	10.2	11.9	10.6	10.9	8.7
HCM Lane LOS	B	B	B	B	A
HCM 95th-tile Q	1.1	2.3	1	1.5	0

HCM 2010 AWSC
109: Bay Road & 20 Street

Intersection

Intersection Delay, s/veh	10.3
Intersection LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	101	10	78	211	20	153
Future Vol, veh/h	101	10	78	211	20	153
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	122	12	94	254	24	184
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.9	11.4	9.2
HCM LOS	A	B	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	12%	0%	27%
Vol Thru, %	0%	91%	73%
Vol Right, %	88%	9%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	173	111	289
LT Vol	20	0	78
Through Vol	0	101	211
RT Vol	153	10	0
Lane Flow Rate	208	134	348
Geometry Grp	1	1	1
Degree of Util (X)	0.263	0.177	0.448
Departure Headway (Hd)	4.544	4.768	4.629
Convergence, Y/N	Yes	Yes	Yes
Cap	788	749	776
Service Time	2.588	2.822	2.674
HCM Lane V/C Ratio	0.264	0.179	0.448
HCM Control Delay	9.2	8.9	11.4
HCM Lane LOS	A	A	B
HCM 95th-tile Q	1.1	0.6	2.3

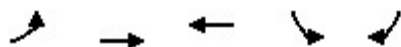
HCM 2010 Signalized Intersection Summary

101: Dade Boulevard & Purdy Avenue

								
Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	149	532	626	62	70	173		
Future Volume (veh/h)	149	532	626	62	70	173		
Number	1	6	2	12	3	18		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	0.90	0.90	0.90		
Adj Sat Flow, veh/h/ln	1676	1676	1676	1710	1676	1676		
Adj Flow Rate, veh/h	162	578	680	67	76	188		
Adj No. of Lanes	1	1	1	0	1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	364	1247	1002	99	234	209		
Arrive On Green	0.74	0.74	0.74	0.74	0.16	0.16		
Sat Flow, veh/h	639	1676	1348	133	1437	1282		
Grp Volume(v), veh/h	162	578	0	747	76	188		
Grp Sat Flow(s),veh/h/ln	639	1676	0	1480	1437	1282		
Q Serve(g_s), s	22.8	17.5	0.0	33.9	6.1	18.7		
Cycle Q Clear(g_c), s	56.8	17.5	0.0	33.9	6.1	18.7		
Prop In Lane	1.00			0.09	1.00	1.00		
Lane Grp Cap(c), veh/h	364	1247	0	1101	234	209		
V/C Ratio(X)	0.45	0.46	0.00	0.68	0.32	0.90		
Avail Cap(c_a), veh/h	364	1247	0	1101	387	345		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.00	0.35	1.00	1.00		
Uniform Delay (d), s/veh	23.3	6.5	0.0	8.6	48.1	53.3		
Incr Delay (d2), s/veh	3.9	1.2	0.0	1.2	0.6	13.8		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	4.4	8.5	0.0	14.1	2.4	7.4		
LnGrp Delay(d),s/veh	27.2	7.8	0.0	9.8	48.7	67.1		
LnGrp LOS	C	A		A	D	E		
Approach Vol, veh/h		740	747		264			
Approach Delay, s/veh		12.0	9.8		61.8			
Approach LOS		B	A		E			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		102.8				102.8		27.2
Change Period (Y+Rc), s		6.1				6.1		6.0
Max Green Setting (Gmax), s		83.0				83.0		35.0
Max Q Clear Time (g_c+I1), s		35.9				58.8		20.7
Green Ext Time (p_c), s		2.0				2.1		0.5
Intersection Summary								
HCM 2010 Ctrl Delay			18.6					
HCM 2010 LOS			B					

Timings

101: Dade Boulevard & Purdy Avenue



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	149	532	626	70	173
Future Volume (vph)	149	532	626	70	173
Turn Type	Perm	NA	NA	Prot	Perm
Protected Phases		6	2	8	
Permitted Phases	6				8
Detector Phase	6	6	2	8	8
Switch Phase					
Minimum Initial (s)	14.0	14.0	14.0	7.0	7.0
Minimum Split (s)	20.8	20.8	22.1	30.0	30.0
Total Split (s)	89.1	89.1	89.1	41.0	41.0
Total Split (%)	68.5%	68.5%	68.5%	31.5%	31.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.1	2.1	2.1	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.1	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Min	C-Min	C-Min	None	None
Act Effect Green (s)	106.0	106.0	106.0	12.0	12.0
Actuated g/C Ratio	0.81	0.81	0.81	0.09	0.09
v/c Ratio	0.39	0.47	0.62	0.58	0.69
Control Delay	6.9	5.5	7.7	72.5	20.6
Queue Delay	0.0	0.0	2.0	0.0	0.0
Total Delay	6.9	5.5	9.6	72.5	20.6
LOS	A	A	A	E	C
Approach Delay		5.8	9.6	35.5	
Approach LOS		A	A	D	

Intersection Summary

Cycle Length: 130.1

Actuated Cycle Length: 130.1

Offset: 86 (66%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 11.9

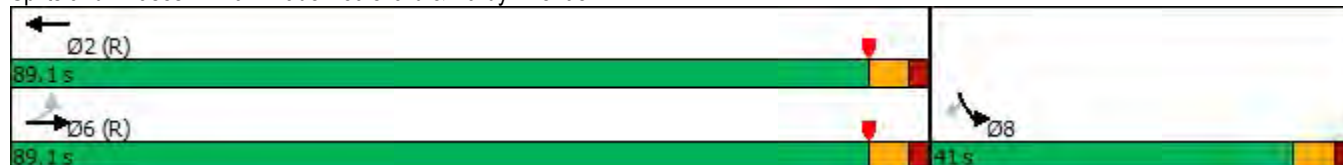
Intersection LOS: B

Intersection Capacity Utilization 83.7%

ICU Level of Service E

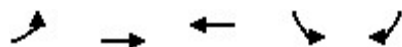
Analysis Period (min) 15

Splits and Phases: 101: Dade Boulevard & Purdy Avenue



Queues

101: Dade Boulevard & Purdy Avenue



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	162	578	747	76	188
v/c Ratio	0.39	0.47	0.62	0.58	0.69
Control Delay	6.9	5.5	7.7	72.5	20.6
Queue Delay	0.0	0.0	2.0	0.0	0.0
Total Delay	6.9	5.5	9.6	72.5	20.6
Queue Length 50th (ft)	29	117	184	63	0
Queue Length 95th (ft)	78	221	360	111	76
Internal Link Dist (ft)		273	491	484	
Turn Bay Length (ft)	80			100	
Base Capacity (vph)	418	1229	1213	385	438
Starvation Cap Reductn	0	0	305	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.39	0.47	0.82	0.20	0.43
Intersection Summary					

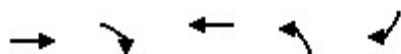
HCM Signalized Intersection Capacity Analysis

102: 17th Street/Bay Road & Dade Boulevard

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	259	377	0	302	48	426	0	0	0	0	55
Future Volume (vph)	0	259	377	0	302	48	426	0	0	0	0	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.9	6.9		6.9		7.7					6.9
Lane Util. Factor		1.00	1.00		1.00		1.00					1.00
Frpb, ped/bikes		1.00	1.00		0.99		1.00					1.00
Flpb, ped/bikes		1.00	1.00		1.00		1.00					1.00
Frt		1.00	0.85		0.98		1.00					0.86
Flt Protected		1.00	1.00		1.00		0.95					1.00
Satd. Flow (prot)		1509	1282		1469		1433					1233
Flt Permitted		1.00	1.00		1.00		0.95					1.00
Satd. Flow (perm)		1509	1282		1469		1433					1233
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	0	298	433	0	347	55	490	0	0	0	0	63
RTOR Reduction (vph)	0	0	291	0	13	0	0	0	0	0	0	42
Lane Group Flow (vph)	0	298	142	0	389	0	490	0	0	0	0	21
Confl. Peds. (#/hr)	17					17			10	10		
Confl. Bikes (#/hr)			1			14			4			
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	10
Turn Type		NA	custom		NA		Prot					Perm
Protected Phases			6				4					
Permitted Phases		6			2							6
Actuated Green, G (s)		14.0	14.0		14.0		14.0					14.0
Effective Green, g (s)		14.0	14.0		14.0		14.0					14.0
Actuated g/C Ratio		0.33	0.33		0.33		0.33					0.33
Clearance Time (s)		6.9	6.9		6.9		7.7					6.9
Vehicle Extension (s)		2.5	2.5		2.5		3.5					2.5
Lane Grp Cap (vph)		495	421		482		470					405
v/s Ratio Prot			0.11				c0.34					
v/s Ratio Perm		0.20			c0.26							0.02
v/c Ratio		0.60	0.34		0.81		1.04					0.05
Uniform Delay, d1		12.0	10.8		13.1		14.3					9.8
Progression Factor		1.00	1.00		1.00		1.00					1.00
Incremental Delay, d2		1.7	0.3		9.3		53.0					0.0
Delay (s)		13.7	11.1		22.3		67.3					9.8
Level of Service		B	B		C		E					A
Approach Delay (s)		12.2			22.3			67.3			9.8	
Approach LOS		B			C			E			A	
Intersection Summary												
HCM 2000 Control Delay			30.5				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.92									
Actuated Cycle Length (s)			42.6				Sum of lost time (s)			14.6		
Intersection Capacity Utilization			73.9%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

Timings

102: 17th Street/Bay Road & Dade Boulevard



Lane Group	EBT	EBR	WBT	NBL	SBR
Lane Configurations	↑	↑	↑	↑	↑
Traffic Volume (vph)	259	377	302	426	55
Future Volume (vph)	259	377	302	426	55
Turn Type	NA	custom	NA	Prot	Perm
Protected Phases		6		4	
Permitted Phases	6		2		6
Detector Phase	6	6	2	4	6
Switch Phase					
Minimum Initial (s)	14.0	14.0	14.0	14.0	14.0
Minimum Split (s)	20.9	20.9	20.9	21.7	20.9
Total Split (s)	20.9	20.9	20.9	21.7	20.9
Total Split (%)	49.1%	49.1%	49.1%	50.9%	49.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.9	2.9	2.9	3.7	2.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.9	6.9	6.9	7.7	6.9
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	Min	Min	Min	None	Min
Act Effect Green (s)	14.0	14.0	14.0	14.0	14.0
Actuated g/C Ratio	0.33	0.33	0.33	0.33	0.33
v/c Ratio	0.60	0.61	0.81	1.04	0.12
Control Delay	18.3	5.9	29.4	73.9	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	18.3	5.9	29.4	73.9	0.6
LOS	B	A	C	E	A
Approach Delay	10.9		29.4		
Approach LOS	B		C		

Intersection Summary

Cycle Length: 42.6

Actuated Cycle Length: 42.6

Natural Cycle: 60

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.04

Intersection Signal Delay: 33.3

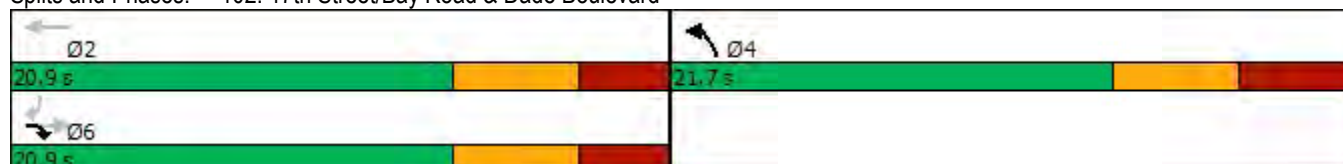
Intersection LOS: C

Intersection Capacity Utilization 73.9%

ICU Level of Service D

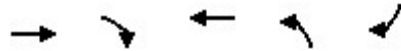
Analysis Period (min) 15

Splits and Phases: 102: 17th Street/Bay Road & Dade Boulevard



Queues

102: 17th Street/Bay Road & Dade Boulevard



Lane Group	EBT	EBR	WBT	NBL	SBR
Lane Group Flow (vph)	298	433	402	490	63
v/c Ratio	0.60	0.61	0.81	1.04	0.12
Control Delay	18.3	5.9	29.4	73.9	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	18.3	5.9	29.4	73.9	0.6
Queue Length 50th (ft)	58	0	82	~124	0
Queue Length 95th (ft)	113	41	#195	#259	1
Internal Link Dist (ft)	491		508		
Turn Bay Length (ft)					
Base Capacity (vph)	495	712	496	470	507
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.60	0.61	0.81	1.04	0.12

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 2010 Signalized Intersection Summary

103: West Avenue & Dade Boulevard

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	233	0	81	274	131	9	137	96	83	111	29
Future Volume (veh/h)	10	233	0	81	274	131	9	137	96	83	111	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.97	0.98		0.93	0.98		0.94
Parking Bus, Adj	1.00	0.90	1.00	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	1676	1676	1710	1676	1676	1710	1710	1676	1710	1710	1676	1710
Adj Flow Rate, veh/h	11	248	0	86	291	139	10	146	102	88	118	31
Adj No. of Lanes	1	1	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	483	711	0	531	937	433	88	210	141	203	202	44
Arrive On Green	0.47	0.47	0.00	0.47	0.47	0.47	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	856	1509	0	1011	1988	919	20	800	536	356	772	170
Grp Volume(v), veh/h	11	248	0	86	231	199	258	0	0	237	0	0
Grp Sat Flow(s),veh/h/ln	856	1509	0	1011	1593	1315	1356	0	0	1297	0	0
Q Serve(g_s), s	0.4	4.7	0.0	2.6	4.0	4.2	0.4	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	4.6	4.7	0.0	7.3	4.0	4.2	7.7	0.0	0.0	6.9	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.70	0.04		0.40	0.37		0.13
Lane Grp Cap(c), veh/h	483	711	0	531	750	619	439	0	0	450	0	0
V/C Ratio(X)	0.02	0.35	0.00	0.16	0.31	0.32	0.59	0.00	0.00	0.53	0.00	0.00
Avail Cap(c_a), veh/h	483	711	0	531	750	619	564	0	0	559	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	8.8	7.5	0.0	9.9	7.4	7.4	15.1	0.0	0.0	14.7	0.0	0.0
Incr Delay (d2), s/veh	0.1	1.0	0.0	0.7	1.1	1.4	1.3	0.0	0.0	1.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.1	0.0	0.8	2.0	1.7	3.0	0.0	0.0	2.8	0.0	0.0
LnGrp Delay(d),s/veh	8.9	8.6	0.0	10.5	8.4	8.8	16.4	0.0	0.0	15.7	0.0	0.0
LnGrp LOS	A	A		B	A	A	B			B		
Approach Vol, veh/h	259			516			258			237		
Approach Delay, s/veh	8.6			8.9			16.4			15.7		
Approach LOS	A			A			B			B		
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	17.8		27.2		17.8		27.2					
Change Period (Y+Rc), s	6.0		6.0		6.0		6.0					
Max Green Setting (Gmax), s	16.0		17.0		16.0		17.0					
Max Q Clear Time (g_c+I1), s	9.7		6.7		8.9		9.3					
Green Ext Time (p_c), s	0.8		1.0		0.8		1.8					
Intersection Summary												
HCM 2010 Ctrl Delay	11.6											
HCM 2010 LOS	B											

Timings

103: West Avenue & Dade Boulevard

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	10	233	81	274	9	137	83	111
Future Volume (vph)	10	233	81	274	9	137	83	111
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	23.0	23.0	23.0	23.0	22.0	22.0	22.0	22.0
Total Split (%)	51.1%	51.1%	51.1%	51.1%	48.9%	48.9%	48.9%	48.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0		6.0		6.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	C-Max	C-Max	C-Max	C-Max	Min	Min	Min	Min
Act Effect Green (s)	20.3	20.3	20.3	20.3		12.7		12.7
Actuated g/C Ratio	0.45	0.45	0.45	0.45		0.28		0.28
v/c Ratio	0.03	0.36	0.21	0.32		0.58		0.69
Control Delay	9.1	11.5	10.9	6.8		14.3		23.7
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	9.1	11.5	10.9	6.8		14.3		23.7
LOS	A	B	B	A		B		C
Approach Delay		11.4		7.5		14.3		23.7
Approach LOS		B		A		B		C

Intersection Summary

Cycle Length: 45

Actuated Cycle Length: 45

Offset: 22 (49%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow

Natural Cycle: 45

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 12.7

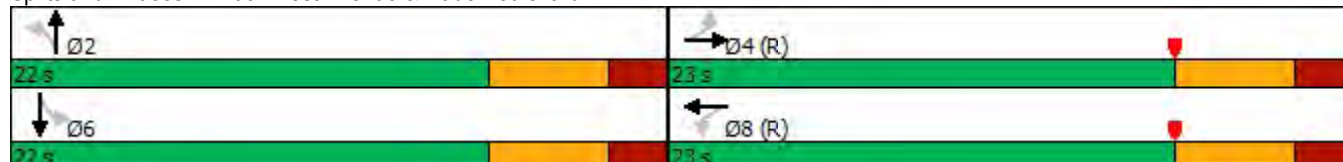
Intersection LOS: B

Intersection Capacity Utilization 68.3%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 103: West Avenue & Dade Boulevard



Queues

103: West Avenue & Dade Boulevard

						
Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	11	248	86	430	258	237
v/c Ratio	0.03	0.36	0.21	0.32	0.58	0.69
Control Delay	9.1	11.5	10.9	6.8	14.3	23.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.1	11.5	10.9	6.8	14.3	23.7
Queue Length 50th (ft)	2	40	13	23	36	47
Queue Length 95th (ft)	9	93	39	51	82	98
Internal Link Dist (ft)		508		381	432	477
Turn Bay Length (ft)						
Base Capacity (vph)	340	682	411	1365	538	427
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.03	0.36	0.21	0.32	0.48	0.56
Intersection Summary						

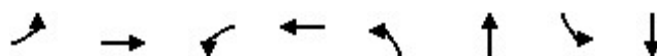
HCM 2010 Signalized Intersection Summary

104: West Avenue & 17th Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	181	198	129	230	38	176	228	193	16	178	1
Future Volume (veh/h)	16	181	198	129	230	38	176	228	193	16	178	1
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.96		0.92	1.00		0.92	0.97		0.94	1.00		0.92
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.85	1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	1710	1676	1710	1676	1676	1710	1676	1676	1710	1676	1676	1710
Adj Flow Rate, veh/h	17	189	206	134	240	40	183	238	201	17	185	1
Adj No. of Lanes	0	2	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	65	650	454	111	670	112	343	254	215	86	550	3
Arrive On Green	0.42	0.42	0.42	0.07	0.54	0.54	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	83	1530	1069	1597	1245	207	1037	694	586	852	1498	8
Grp Volume(v), veh/h	206	0	206	134	0	280	183	0	439	17	0	186
Grp Sat Flow(s),veh/h/ln	1613	0	1069	1597	0	1452	1037	0	1279	852	0	1507
Q Serve(g_s), s	0.0	0.0	17.9	9.0	0.0	14.3	20.1	0.0	43.0	2.6	0.0	11.6
Cycle Q Clear(g_c), s	10.5	0.0	17.9	9.0	0.0	14.3	31.7	0.0	43.0	45.6	0.0	11.6
Prop In Lane	0.08		1.00	1.00		0.14	1.00		0.46	1.00		0.01
Lane Grp Cap(c), veh/h	715	0	454	111	0	781	343	0	469	86	0	553
V/C Ratio(X)	0.29	0.00	0.45	1.21	0.00	0.36	0.53	0.00	0.94	0.20	0.00	0.34
Avail Cap(c_a), veh/h	715	0	454	111	0	781	354	0	482	95	0	568
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	24.5	0.0	26.6	60.5	0.0	17.2	41.2	0.0	39.7	61.6	0.0	29.7
Incr Delay (d2), s/veh	1.0	0.0	3.2	153.4	0.0	1.3	1.1	0.0	25.3	0.8	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.1	0.0	5.7	8.7	0.0	6.0	5.9	0.0	18.4	0.6	0.0	4.8
LnGrp Delay(d),s/veh	25.5	0.0	29.9	213.9	0.0	18.5	42.3	0.0	65.0	62.5	0.0	30.0
LnGrp LOS	C		C	F		B	D		E	E		C
Approach Vol, veh/h		412			414			622			203	
Approach Delay, s/veh		27.7			81.7			58.3			32.7	
Approach LOS		C			F			E			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		76.1		53.9	14.7	61.4		53.9				
Change Period (Y+Rc), s		* 6.2		* 6.2	* 5.7	* 6.2		* 6.2				
Max Green Setting (Gmax), s		* 69		* 49	* 9	* 54		* 49				
Max Q Clear Time (g_c+I1), s		16.3		45.0	11.0	19.9		47.6				
Green Ext Time (p_c), s		0.6		1.2	0.0	1.0		0.1				
Intersection Summary												
HCM 2010 Ctrl Delay				53.4								
HCM 2010 LOS				D								
Notes												

Timings

104: West Avenue & 17th Street



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations		↑↑	↵	↵	↵	↵	↵	↵
Traffic Volume (vph)	16	181	129	230	176	228	16	178
Future Volume (vph)	16	181	129	230	176	228	16	178
Turn Type	Perm	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases		6	5	2		4		8
Permitted Phases	6				4		8	
Detector Phase	6	6	5	2	4	4	8	8
Switch Phase								
Minimum Initial (s)	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	37.2	37.2	12.0	37.2	35.2	35.2	32.2	32.2
Total Split (s)	60.2	60.2	14.7	75.2	55.2	55.2	55.2	55.2
Total Split (%)	46.2%	46.2%	11.3%	57.7%	42.3%	42.3%	42.3%	42.3%
Yellow Time (s)	4.0	4.0	3.7	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.2	2.2	2.0	2.2	2.2	2.2	2.2	2.2
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.2	5.7	6.2	6.2	6.2	6.2	6.2
Lead/Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	C-Min	C-Min	None	C-Min	Min	Min	Min	Min
Act Effect Green (s)		42.0	25.1	72.8	45.2	45.2	45.2	45.2
Actuated g/C Ratio		0.32	0.19	0.56	0.35	0.35	0.35	0.35
v/c Ratio		0.44	0.50	0.34	0.66	0.89	0.12	0.36
Control Delay		19.4	55.6	18.2	46.6	57.0	28.1	32.4
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		19.4	55.6	18.2	46.6	57.0	28.1	32.4
LOS		B	E	B	D	E	C	C
Approach Delay		19.4		30.3		54.0		32.0
Approach LOS		B		C		D		C

Intersection Summary

Cycle Length: 130.4

Actuated Cycle Length: 130.4

Offset: 114 (87%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 36.7

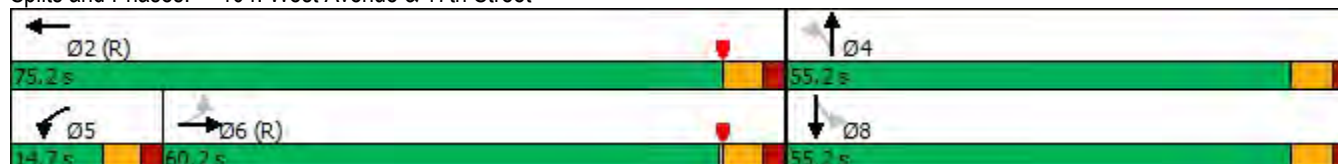
Intersection LOS: D

Intersection Capacity Utilization 106.1%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 104: West Avenue & 17th Street



Queues

104: West Avenue & 17th Street

							
Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	412	134	280	183	439	17	186
v/c Ratio	0.44	0.50	0.34	0.66	0.89	0.12	0.36
Control Delay	19.4	55.6	18.2	46.6	57.0	28.1	32.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	19.4	55.6	18.2	46.6	57.0	28.1	32.4
Queue Length 50th (ft)	68	105	122	128	320	10	115
Queue Length 95th (ft)	129	174	212	199	431	27	164
Internal Link Dist (ft)	476		364		407		104
Turn Bay Length (ft)		160		170		50	
Base Capacity (vph)	1137	266	830	311	546	153	583
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.36	0.50	0.34	0.59	0.80	0.11	0.32
Intersection Summary							

HCM 2010 AWSC
105: West Avenue & 18 Street

Intersection

Intersection Delay, s/veh	10.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	72	15	111	6	12	13	100	166	17	14	87	83
Future Vol, veh/h	72	15	111	6	12	13	100	166	17	14	87	83
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	77	16	119	6	13	14	108	178	18	15	94	89
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10	8.6	11.2	9.3
HCM LOS	A	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	35%	36%	19%	8%
Vol Thru, %	59%	8%	39%	47%
Vol Right, %	6%	56%	42%	45%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	283	198	31	184
LT Vol	100	72	6	14
Through Vol	166	15	12	87
RT Vol	17	111	13	83
Lane Flow Rate	304	213	33	198
Geometry Grp	1	1	1	1
Degree of Util (X)	0.406	0.289	0.048	0.256
Departure Headway (Hd)	4.809	4.88	5.199	4.659
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	742	730	680	764
Service Time	2.874	2.952	3.297	2.73
HCM Lane V/C Ratio	0.41	0.292	0.049	0.259
HCM Control Delay	11.2	10	8.6	9.3
HCM Lane LOS	B	A	A	A
HCM 95th-tile Q	2	1.2	0.2	1

HCM 2010 AWSC
106: Bay Road & 18 Street

Intersection	
Intersection Delay, s/veh	9.1
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	45	85	16	26	101	73	9	26	35	86	25	47
Future Vol, veh/h	45	85	16	26	101	73	9	26	35	86	25	47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	49	92	17	28	110	79	10	28	38	93	27	51
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	9.1	9.3	8.4	9.3
HCM LOS	A	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	13%	31%	13%	54%
Vol Thru, %	37%	58%	51%	16%
Vol Right, %	50%	11%	36%	30%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	70	146	200	158
LT Vol	9	45	26	86
Through Vol	26	85	101	25
RT Vol	35	16	73	47
Lane Flow Rate	76	159	217	172
Geometry Grp	1	1	1	1
Degree of Util (X)	0.101	0.211	0.274	0.231
Departure Headway (Hd)	4.759	4.784	4.535	4.832
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	748	746	789	740
Service Time	2.822	2.839	2.585	2.886
HCM Lane V/C Ratio	0.102	0.213	0.275	0.232
HCM Control Delay	8.4	9.1	9.3	9.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.3	0.8	1.1	0.9

HCM 2010 AWSC
107: Purdy Avenue & 18 Street

Intersection	
Intersection Delay, s/veh	9.9
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	18	29	95	9	44	14	113	107	24	130	4
Future Vol, veh/h	13	18	29	95	9	44	14	113	107	24	130	4
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	21	33	109	10	51	16	130	123	28	149	5
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	8.7	9.8	10.4	9.7
HCM LOS	A	A	B	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	22%	64%	100%	2%
Vol Thru, %	0%	51%	30%	6%	0%	95%
Vol Right, %	0%	49%	48%	30%	0%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	14	220	60	148	22	136
LT Vol	14	0	13	95	22	2
Through Vol	0	113	18	9	0	130
RT Vol	0	107	29	44	0	4
Lane Flow Rate	16	253	69	170	25	157
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.026	0.351	0.097	0.24	0.041	0.235
Departure Headway (Hd)	5.838	4.99	5.042	5.082	5.911	5.394
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	610	716	703	701	602	660
Service Time	3.608	2.76	3.13	3.154	3.688	3.171
HCM Lane V/C Ratio	0.026	0.353	0.098	0.243	0.042	0.238
HCM Control Delay	8.8	10.5	8.7	9.8	8.9	9.8
HCM Lane LOS	A	B	A	A	A	A
HCM 95th-tile Q	0.1	1.6	0.3	0.9	0.1	0.9

HCM 2010 AWSC
108: West Avenue & 20 Street

Intersection

Intersection Delay, s/veh	11.2
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	254	55	145	215	1	33	1	153	0	1	2
Future Vol, veh/h	2	254	55	145	215	1	33	1	153	0	1	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	276	60	158	234	1	36	1	166	0	1	2
Number of Lanes	0	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	12.2	10.9	10.3	8.7
HCM LOS	B	B	B	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	18%	1%	100%	0%	0%
Vol Thru, %	1%	82%	0%	100%	33%
Vol Right, %	82%	18%	0%	0%	67%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	187	311	145	216	3
LT Vol	33	2	145	0	0
Through Vol	1	254	0	215	1
RT Vol	153	55	0	1	2
Lane Flow Rate	203	338	158	235	3
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.29	0.462	0.257	0.35	0.005
Departure Headway (Hd)	5.133	4.918	5.876	5.368	5.704
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	693	723	605	662	631
Service Time	3.221	3.004	3.669	3.161	3.704
HCM Lane V/C Ratio	0.293	0.467	0.261	0.355	0.005
HCM Control Delay	10.3	12.2	10.7	11.1	8.7
HCM Lane LOS	B	B	B	B	A
HCM 95th-tile Q	1.2	2.5	1	1.6	0

HCM 2010 AWSC
109: Bay Road & 20 Street

Intersection

Intersection Delay, s/veh	10.4
Intersection LOS	B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	103	10	80	215	20	156
Future Vol, veh/h	103	10	80	215	20	156
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	124	12	96	259	24	188
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.9	11.6	9.3
HCM LOS	A	B	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	11%	0%	27%
Vol Thru, %	0%	91%	73%
Vol Right, %	89%	9%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	176	113	295
LT Vol	20	0	80
Through Vol	0	103	215
RT Vol	156	10	0
Lane Flow Rate	212	136	355
Geometry Grp	1	1	1
Degree of Util (X)	0.269	0.181	0.458
Departure Headway (Hd)	4.566	4.788	4.643
Convergence, Y/N	Yes	Yes	Yes
Cap	785	745	771
Service Time	2.612	2.845	2.691
HCM Lane V/C Ratio	0.27	0.183	0.46
HCM Control Delay	9.3	8.9	11.6
HCM Lane LOS	A	A	B
HCM 95th-tile Q	1.1	0.7	2.4

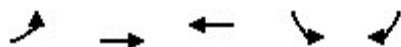
HCM 2010 Signalized Intersection Summary

101: Dade Boulevard & Purdy Avenue

								
Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	170	521	626	109	70	173		
Future Volume (veh/h)	170	521	626	109	70	173		
Number	1	6	2	12	3	18		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			0.97	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	0.90	0.90	0.90		
Adj Sat Flow, veh/h/ln	1676	1676	1676	1710	1676	1676		
Adj Flow Rate, veh/h	185	566	680	118	76	188		
Adj No. of Lanes	1	1	1	0	1	1		
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	321	1247	927	161	234	209		
Arrive On Green	0.74	0.74	0.74	0.74	0.16	0.16		
Sat Flow, veh/h	609	1676	1246	216	1437	1282		
Grp Volume(v), veh/h	185	566	0	798	76	188		
Grp Sat Flow(s),veh/h/ln	609	1676	0	1463	1437	1282		
Q Serve(g_s), s	32.0	17.0	0.0	40.0	6.1	18.7		
Cycle Q Clear(g_c), s	71.9	17.0	0.0	40.0	6.1	18.7		
Prop In Lane	1.00			0.15	1.00	1.00		
Lane Grp Cap(c), veh/h	321	1247	0	1088	234	209		
V/C Ratio(X)	0.58	0.45	0.00	0.73	0.32	0.90		
Avail Cap(c_a), veh/h	321	1247	0	1088	387	345		
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00		
Upstream Filter(I)	1.00	1.00	0.00	0.20	1.00	1.00		
Uniform Delay (d), s/veh	29.7	6.4	0.0	9.4	48.1	53.3		
Incr Delay (d2), s/veh	7.3	1.2	0.0	0.9	0.6	13.8		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	6.0	8.1	0.0	16.2	2.4	7.4		
LnGrp Delay(d),s/veh	37.0	7.6	0.0	10.3	48.7	67.1		
LnGrp LOS	D	A		B	D	E		
Approach Vol, veh/h		751	798		264			
Approach Delay, s/veh		14.9	10.3		61.8			
Approach LOS		B	B		E			
Timer	1	2	3	4	5	6	7	8
Assigned Phs		2				6		8
Phs Duration (G+Y+Rc), s		102.8				102.8		27.2
Change Period (Y+Rc), s		6.1				6.1		6.0
Max Green Setting (Gmax), s		83.0				83.0		35.0
Max Q Clear Time (g_c+I1), s		42.0				73.9		20.7
Green Ext Time (p_c), s		2.2				1.7		0.5
Intersection Summary								
HCM 2010 Ctrl Delay			19.7					
HCM 2010 LOS			B					

Timings

101: Dade Boulevard & Purdy Avenue



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Configurations					
Traffic Volume (vph)	170	521	626	70	173
Future Volume (vph)	170	521	626	70	173
Turn Type	Perm	NA	NA	Prot	Perm
Protected Phases		6	2	8	
Permitted Phases	6				8
Detector Phase	6	6	2	8	8
Switch Phase					
Minimum Initial (s)	14.0	14.0	14.0	7.0	7.0
Minimum Split (s)	20.8	20.8	22.1	30.0	30.0
Total Split (s)	89.1	89.1	89.1	41.0	41.0
Total Split (%)	68.5%	68.5%	68.5%	31.5%	31.5%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.1	2.1	2.1	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.1	6.1	6.1	6.0	6.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	C-Min	C-Min	C-Min	None	None
Act Effect Green (s)	106.0	106.0	106.0	12.0	12.0
Actuated g/C Ratio	0.81	0.81	0.81	0.09	0.09
v/c Ratio	0.47	0.46	0.66	0.58	0.69
Control Delay	9.0	5.4	8.7	72.5	20.6
Queue Delay	0.0	0.0	2.5	0.0	0.0
Total Delay	9.0	5.4	11.2	72.5	20.6
LOS	A	A	B	E	C
Approach Delay		6.3	11.2	35.5	
Approach LOS		A	B	D	

Intersection Summary

Cycle Length: 130.1

Actuated Cycle Length: 130.1

Offset: 86 (66%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.69

Intersection Signal Delay: 12.7

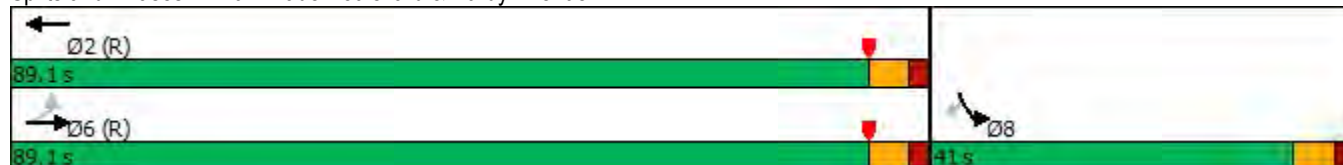
Intersection LOS: B

Intersection Capacity Utilization 86.9%

ICU Level of Service E

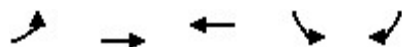
Analysis Period (min) 15

Splits and Phases: 101: Dade Boulevard & Purdy Avenue



Queues

101: Dade Boulevard & Purdy Avenue



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	185	566	798	76	188
v/c Ratio	0.47	0.46	0.66	0.58	0.69
Control Delay	9.0	5.4	8.7	72.5	20.6
Queue Delay	0.0	0.0	2.5	0.0	0.0
Total Delay	9.0	5.4	11.2	72.5	20.6
Queue Length 50th (ft)	37	113	212	63	0
Queue Length 95th (ft)	105	214	422	111	76
Internal Link Dist (ft)		273	491	484	
Turn Bay Length (ft)	80			100	
Base Capacity (vph)	390	1229	1202	385	438
Starvation Cap Reductn	0	0	273	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.47	0.46	0.86	0.20	0.43
Intersection Summary					

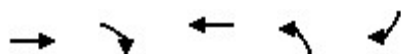
HCM Signalized Intersection Capacity Analysis

102: 17th Street/Bay Road & Dade Boulevard

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	0	259	377	0	292	69	426	0	0	0	0	124
Future Volume (vph)	0	259	377	0	292	69	426	0	0	0	0	124
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.9	6.9		6.9		7.7					6.9
Lane Util. Factor		1.00	1.00		1.00		1.00					1.00
Frpb, ped/bikes		1.00	1.00		0.99		1.00					1.00
Flpb, ped/bikes		1.00	1.00		1.00		1.00					1.00
Frt		1.00	0.85		0.97		1.00					0.86
Flt Protected		1.00	1.00		1.00		0.95					1.00
Satd. Flow (prot)		1509	1282		1453		1433					1233
Flt Permitted		1.00	1.00		1.00		0.95					1.00
Satd. Flow (perm)		1509	1282		1453		1433					1233
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Adj. Flow (vph)	0	298	433	0	336	79	490	0	0	0	0	143
RTOR Reduction (vph)	0	0	291	0	23	0	0	0	0	0	0	94
Lane Group Flow (vph)	0	298	142	0	392	0	490	0	0	0	0	49
Confl. Peds. (#/hr)	17					17			10	10		
Confl. Bikes (#/hr)			1			14			4			
Parking (#/hr)	0	0	0	0	0	0	0	0	0	0	0	10
Turn Type		NA	custom		NA		Prot					Perm
Protected Phases			6				4					
Permitted Phases		6			2							6
Actuated Green, G (s)		12.0	12.0		12.0		10.0					12.0
Effective Green, g (s)		12.0	12.0		12.0		10.0					12.0
Actuated g/C Ratio		0.33	0.33		0.33		0.27					0.33
Clearance Time (s)		6.9	6.9		6.9		7.7					6.9
Vehicle Extension (s)		2.5	2.5		2.5		3.5					2.5
Lane Grp Cap (vph)		494	420		476		391					404
v/s Ratio Prot			0.11				0.34					
v/s Ratio Perm		0.20			0.27							0.04
v/c Ratio		0.60	0.34		0.82		1.25					0.12
Uniform Delay, d1		10.3	9.3		11.3		13.3					8.6
Progression Factor		1.00	1.00		1.00		1.00					1.00
Incremental Delay, d2		1.8	0.3		10.8		133.4					0.1
Delay (s)		12.1	9.6		22.2		146.7					8.7
Level of Service		B	A		C		F					A
Approach Delay (s)		10.6			22.2		146.7				8.7	
Approach LOS		B			C		F				A	
Intersection Summary												
HCM 2000 Control Delay			50.6				HCM 2000 Level of Service				D	
HCM 2000 Volume to Capacity ratio			1.02									
Actuated Cycle Length (s)			36.6				Sum of lost time (s)			14.6		
Intersection Capacity Utilization			73.1%				ICU Level of Service			D		
Analysis Period (min)			15									
c Critical Lane Group												

Timings

102: 17th Street/Bay Road & Dade Boulevard



Lane Group	EBT	EBR	WBT	NBL	SBR
Lane Configurations	↑	↑	↑	↑	↑
Traffic Volume (vph)	259	377	292	426	124
Future Volume (vph)	259	377	292	426	124
Turn Type	NA	custom	NA	Prot	Perm
Protected Phases		6		4	
Permitted Phases	6		2		6
Detector Phase	6	6	2	4	6
Switch Phase					
Minimum Initial (s)	12.0	12.0	12.0	10.0	12.0
Minimum Split (s)	18.9	18.9	18.9	17.7	18.9
Total Split (s)	18.9	18.9	18.9	17.7	18.9
Total Split (%)	51.6%	51.6%	51.6%	48.4%	51.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.9	2.9	2.9	3.7	2.9
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.9	6.9	6.9	7.7	6.9
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	Min	Min	Min	None	Min
Act Effect Green (s)	12.0	12.0	12.0	10.0	12.0
Actuated g/C Ratio	0.33	0.33	0.33	0.27	0.33
v/c Ratio	0.60	0.61	0.83	1.25	0.29
Control Delay	16.8	5.7	29.7	154.1	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	16.8	5.7	29.7	154.1	4.2
LOS	B	A	C	F	A
Approach Delay	10.2		29.7		
Approach LOS	B		C		

Intersection Summary

Cycle Length: 36.6

Actuated Cycle Length: 36.6

Natural Cycle: 65

Control Type: Actuated-Uncoordinated

Maximum v/c Ratio: 1.25

Intersection Signal Delay: 53.9

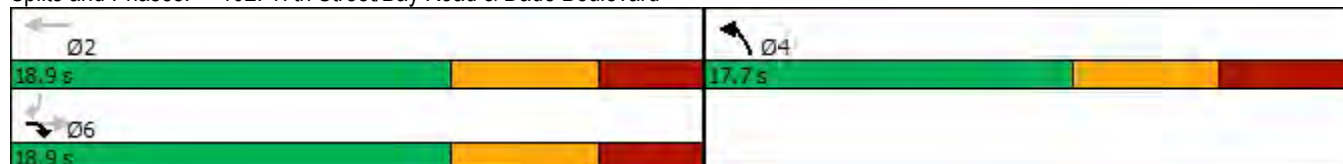
Intersection LOS: D

Intersection Capacity Utilization 73.1%

ICU Level of Service D

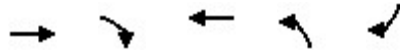
Analysis Period (min) 15

Splits and Phases: 102: 17th Street/Bay Road & Dade Boulevard



Queues

102: 17th Street/Bay Road & Dade Boulevard



Lane Group	EBT	EBR	WBT	NBL	SBR
Lane Group Flow (vph)	298	433	415	490	143
v/c Ratio	0.60	0.61	0.83	1.25	0.29
Control Delay	16.8	5.7	29.7	154.1	4.2
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	16.8	5.7	29.7	154.1	4.2
Queue Length 50th (ft)	48	0	67	~133	1
Queue Length 95th (ft)	95	36	#174	#241	22
Internal Link Dist (ft)	491		508		
Turn Bay Length (ft)					
Base Capacity (vph)	494	711	499	391	498
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.60	0.61	0.83	1.25	0.29

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.

Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

HCM 2010 Signalized Intersection Summary 103: West Avenue & Dade Boulevard

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	233	0	81	285	131	9	148	96	104	124	29
Future Volume (veh/h)	10	233	0	81	285	131	9	148	96	104	124	29
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	0.99		0.97	0.99		0.95	0.99		0.95
Parking Bus, Adj	1.00	0.90	1.00	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	1676	1676	1710	1676	1676	1710	1710	1676	1710	1710	1676	1710
Adj Flow Rate, veh/h	11	248	0	86	303	139	10	157	102	111	132	31
Adj No. of Lanes	1	1	0	1	2	0	0	1	0	0	1	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	299	444	0	316	591	263	90	368	229	297	304	62
Arrive On Green	0.29	0.29	0.00	0.29	0.29	0.29	0.44	0.44	0.44	0.44	0.44	0.44
Sat Flow, veh/h	846	1509	0	1009	2012	895	16	839	522	419	691	142
Grp Volume(v), veh/h	11	248	0	86	238	204	269	0	0	274	0	0
Grp Sat Flow(s),veh/h/ln	846	1509	0	1009	1593	1314	1376	0	0	1252	0	0
Q Serve(g_s), s	0.5	6.2	0.0	3.5	5.6	5.8	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	6.3	6.2	0.0	9.8	5.6	5.8	6.1	0.0	0.0	5.8	0.0	0.0
Prop In Lane	1.00		0.00	1.00		0.68	0.04		0.38	0.41		0.11
Lane Grp Cap(c), veh/h	299	444	0	316	468	386	687	0	0	663	0	0
V/C Ratio(X)	0.04	0.56	0.00	0.27	0.51	0.53	0.39	0.00	0.00	0.41	0.00	0.00
Avail Cap(c_a), veh/h	351	536	0	379	566	467	687	0	0	663	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.00	1.00	1.00	1.00	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	15.9	13.4	0.0	17.6	13.2	13.3	8.8	0.0	0.0	8.7	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.0	0.5	0.9	1.1	1.7	0.0	0.0	1.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	2.7	0.0	1.0	2.6	2.2	2.6	0.0	0.0	2.6	0.0	0.0
LnGrp Delay(d),s/veh	16.0	14.3	0.0	18.0	14.0	14.4	10.5	0.0	0.0	10.6	0.0	0.0
LnGrp LOS	B	B		B	B	B	B			B		
Approach Vol, veh/h		259			528			269			274	
Approach Delay, s/veh		14.3			14.8			10.5			10.6	
Approach LOS		B			B			B			B	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		25.8		19.2		25.8		19.2				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		17.0		16.0		17.0		16.0				
Max Q Clear Time (g_c+l1), s		8.1		8.3		7.8		11.8				
Green Ext Time (p_c), s		1.0		0.8		1.1		1.2				
Intersection Summary												
HCM 2010 Ctrl Delay				13.0								
HCM 2010 LOS				B								

Timings

103: West Avenue & Dade Boulevard

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	10	233	81	285	9	148	104	124
Future Volume (vph)	10	233	81	285	9	148	104	124
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	22.0	22.0	22.0	22.0	22.0	22.0	22.0	22.0
Total Split (s)	22.0	22.0	22.0	22.0	23.0	23.0	23.0	23.0
Total Split (%)	48.9%	48.9%	48.9%	48.9%	51.1%	51.1%	51.1%	51.1%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0		0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0		6.0		6.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min	C-Min
Act Effect Green (s)	12.1	12.1	12.1	12.1		20.9		20.9
Actuated g/C Ratio	0.27	0.27	0.27	0.27		0.46		0.46
v/c Ratio	0.06	0.61	0.35	0.51		0.40		0.52
Control Delay	11.0	20.4	16.2	10.8		8.7		14.7
Queue Delay	0.0	0.0	0.0	0.0		0.0		0.0
Total Delay	11.0	20.4	16.2	10.8		8.7		14.7
LOS	B	C	B	B		A		B
Approach Delay		20.0		11.7		8.7		14.7
Approach LOS		B		B		A		B

Intersection Summary

Cycle Length: 45

Actuated Cycle Length: 45

Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow

Natural Cycle: 45

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.61

Intersection Signal Delay: 13.3

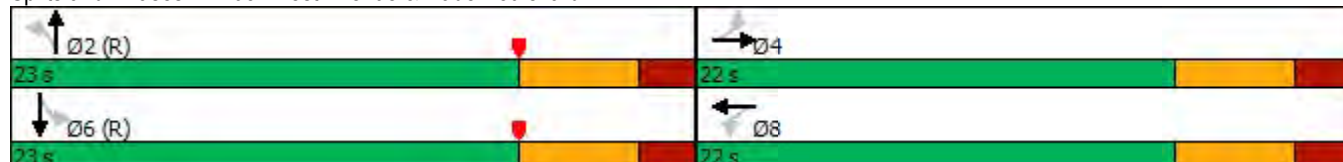
Intersection LOS: B

Intersection Capacity Utilization 70.9%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 103: West Avenue & Dade Boulevard



Queues

103: West Avenue & Dade Boulevard



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	11	248	86	442	269	274
v/c Ratio	0.06	0.61	0.35	0.51	0.40	0.52
Control Delay	11.0	20.4	16.2	10.8	8.7	14.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	11.0	20.4	16.2	10.8	8.7	14.7
Queue Length 50th (ft)	2	55	17	32	28	43
Queue Length 95th (ft)	9	97	41	55	82	#140
Internal Link Dist (ft)		508		381	432	477
Turn Bay Length (ft)						
Base Capacity (vph)	264	536	323	1104	681	528
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.46	0.27	0.40	0.40	0.52

Intersection Summary

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM 2010 Signalized Intersection Summary

104: West Avenue & 17th Street

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	181	198	129	230	40	176	237	193	18	189	1
Future Volume (veh/h)	16	181	198	129	230	40	176	237	193	18	189	1
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.96		0.91	1.00		0.92	0.97		0.94	1.00		0.92
Parking Bus, Adj	1.00	1.00	0.90	1.00	1.00	0.90	1.00	1.00	0.85	1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	1710	1676	1710	1676	1676	1710	1676	1676	1710	1676	1676	1710
Adj Flow Rate, veh/h	17	189	206	134	240	42	183	247	201	19	197	1
Adj No. of Lanes	0	2	0	1	1	0	1	1	0	1	1	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	61	595	411	157	654	114	343	265	216	89	562	3
Arrive On Green	0.39	0.39	0.39	0.10	0.53	0.53	0.37	0.37	0.37	0.37	0.37	0.37
Sat Flow, veh/h	79	1536	1062	1597	1234	216	1027	707	575	845	1499	8
Grp Volume(v), veh/h	206	0	206	134	0	282	183	0	448	19	0	198
Grp Sat Flow(s),veh/h/ln	1615	0	1062	1597	0	1450	1027	0	1283	845	0	1507
Q Serve(g_s), s	0.0	0.0	19.2	10.7	0.0	14.8	20.3	0.0	43.6	2.9	0.0	12.3
Cycle Q Clear(g_c), s	11.2	0.0	19.2	10.7	0.0	14.8	32.6	0.0	43.6	46.5	0.0	12.3
Prop In Lane	0.08		1.00	1.00		0.15	1.00		0.45	1.00		0.01
Lane Grp Cap(c), veh/h	656	0	411	157	0	768	343	0	481	89	0	565
V/C Ratio(X)	0.31	0.00	0.50	0.85	0.00	0.37	0.53	0.00	0.93	0.21	0.00	0.35
Avail Cap(c_a), veh/h	656	0	411	348	0	768	364	0	506	105	0	595
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	27.8	0.0	30.3	57.7	0.0	17.8	41.0	0.0	39.0	61.4	0.0	29.2
Incr Delay (d2), s/veh	1.3	0.0	4.3	5.0	0.0	1.4	1.0	0.0	23.4	0.9	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	0.0	6.1	4.9	0.0	6.2	5.8	0.0	18.6	0.7	0.0	5.2
LnGrp Delay(d),s/veh	29.1	0.0	34.6	62.6	0.0	19.2	42.0	0.0	62.4	62.2	0.0	29.5
LnGrp LOS	C		C	E		B	D		E	E		C
Approach Vol, veh/h		412			416			631			217	
Approach Delay, s/veh		31.8			33.2			56.5			32.4	
Approach LOS		C			C			E			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4	5	6		8				
Phs Duration (G+Y+Rc), s		75.1		54.9	18.5	56.6		54.9				
Change Period (Y+Rc), s		* 6.2		* 6.2	* 5.7	* 6.2		* 6.2				
Max Green Setting (Gmax), s		* 67		* 51	* 28	* 33		* 51				
Max Q Clear Time (g_c+l1), s		16.8		45.6	12.7	21.2		48.5				
Green Ext Time (p_c), s		0.6		1.7	0.2	0.9		0.2				
Intersection Summary												
HCM 2010 Ctrl Delay				41.5								
HCM 2010 LOS				D								
Notes												

Timings

104: West Avenue & 17th Street

								
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	16	181	129	230	176	237	18	189
Future Volume (vph)	16	181	129	230	176	237	18	189
Turn Type	Perm	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases		6	5	2		4		8
Permitted Phases	6				4		8	
Detector Phase	6	6	5	2	4	4	8	8
Switch Phase								
Minimum Initial (s)	7.0	7.0	5.0	7.0	7.0	7.0	7.0	7.0
Minimum Split (s)	37.2	37.2	12.0	37.2	35.2	35.2	32.2	32.2
Total Split (s)	38.9	38.9	34.0	72.9	57.5	57.5	57.5	57.5
Total Split (%)	29.8%	29.8%	26.1%	55.9%	44.1%	44.1%	44.1%	44.1%
Yellow Time (s)	4.0	4.0	3.7	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.2	2.2	2.0	2.2	2.2	2.2	2.2	2.2
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.2	5.7	6.2	6.2	6.2	6.2	6.2
Lead/Lag	Lag	Lag	Lead					
Lead-Lag Optimize?	Yes	Yes	Yes					
Recall Mode	C-Min	C-Min	None	C-Min	Min	Min	Min	Min
Act Effect Green (s)		48.2	17.2	71.1	46.9	46.9	46.9	46.9
Actuated g/C Ratio		0.37	0.13	0.55	0.36	0.36	0.36	0.36
v/c Ratio		0.40	0.74	0.36	0.64	0.88	0.13	0.37
Control Delay		20.3	76.5	19.7	44.1	53.3	26.3	31.1
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		20.3	76.5	19.7	44.1	53.3	26.3	31.1
LOS		C	E	B	D	D	C	C
Approach Delay		20.3		38.0		50.7		30.7
Approach LOS		C		D		D		C

Intersection Summary

Cycle Length: 130.4

Actuated Cycle Length: 130.4

Offset: 114 (87%), Referenced to phase 2:WBT and 6:EBTL, Start of Yellow

Natural Cycle: 85

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 37.5

Intersection LOS: D

Intersection Capacity Utilization 106.6%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 104: West Avenue & 17th Street



Queues

104: West Avenue & 17th Street

							
Lane Group	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Group Flow (vph)	412	134	282	183	448	19	198
v/c Ratio	0.40	0.74	0.36	0.64	0.88	0.13	0.37
Control Delay	20.3	76.5	19.7	44.1	53.3	26.3	31.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	20.3	76.5	19.7	44.1	53.3	26.3	31.1
Queue Length 50th (ft)	71	111	126	127	326	11	122
Queue Length 95th (ft)	148	173	234	184	407	26	160
Internal Link Dist (ft)	476		364		407		104
Turn Bay Length (ft)		160		170		50	
Base Capacity (vph)	1034	300	814	323	575	164	614
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.45	0.35	0.57	0.78	0.12	0.32
Intersection Summary							

HCM 2010 AWSC
105: West Avenue & 18 Street

Intersection

Intersection Delay, s/veh 10.8

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	76	15	145	6	12	13	111	166	17	14	87	87
Future Vol, veh/h	76	15	145	6	12	13	111	166	17	14	87	87
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	82	16	156	6	13	14	119	178	18	15	94	94
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.6	8.7	11.8	9.7
HCM LOS	B	A	B	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	38%	32%	19%	7%
Vol Thru, %	56%	6%	39%	46%
Vol Right, %	6%	61%	42%	46%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	294	236	31	188
LT Vol	111	76	6	14
Through Vol	166	15	12	87
RT Vol	17	145	13	87
Lane Flow Rate	316	254	33	202
Geometry Grp	1	1	1	1
Degree of Util (X)	0.433	0.345	0.05	0.269
Departure Headway (Hd)	4.929	4.899	5.445	4.782
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	724	726	662	742
Service Time	3.013	2.984	3.445	2.873
HCM Lane V/C Ratio	0.436	0.35	0.05	0.272
HCM Control Delay	11.8	10.6	8.7	9.7
HCM Lane LOS	B	B	A	A
HCM 95th-tile Q	2.2	1.5	0.2	1.1

HCM 2010 AWSC
106: Bay Road & 18 Street

Intersection

Intersection Delay, s/veh 9.9

Intersection LOS A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	45	85	87	41	101	73	12	29	73	86	28	47
Future Vol, veh/h	45	85	87	41	101	73	12	29	73	86	28	47
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	49	92	95	45	110	79	13	32	79	93	30	51
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	10.1	10.1	9.1	10
HCM LOS	B	B	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	11%	21%	19%	53%
Vol Thru, %	25%	39%	47%	17%
Vol Right, %	64%	40%	34%	29%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	114	217	215	161
LT Vol	12	45	41	86
Through Vol	29	85	101	28
RT Vol	73	87	73	47
Lane Flow Rate	124	236	234	175
Geometry Grp	1	1	1	1
Degree of Util (X)	0.173	0.313	0.312	0.254
Departure Headway (Hd)	5.022	4.871	4.906	5.23
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	717	743	736	691
Service Time	3.028	2.871	2.906	3.23
HCM Lane V/C Ratio	0.173	0.318	0.318	0.253
HCM Control Delay	9.1	10.1	10.1	10
HCM Lane LOS	A	B	B	A
HCM 95th-tile Q	0.6	1.3	1.3	1

HCM 2010 AWSC
107: Purdy Avenue & 18 Street

Intersection

Intersection Delay, s/veh 10.7

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↔			↔		↔	↔		↔	↔	
Traffic Vol, veh/h	13	18	29	95	9	47	14	113	175	27	130	4
Future Vol, veh/h	13	18	29	95	9	47	14	113	175	27	130	4
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	15	21	33	109	10	54	16	130	201	31	149	5
Number of Lanes	0	1	0	0	1	0	1	1	0	1	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	2	2
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	2	2	1	1
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	2	2	1	1
HCM Control Delay	9	10.2	11.7	9.9
HCM LOS	A	B	B	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	SBLn1	SBLn2
Vol Left, %	100%	0%	22%	63%	100%	2%
Vol Thru, %	0%	39%	30%	6%	0%	95%
Vol Right, %	0%	61%	48%	31%	0%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	14	288	60	151	24	137
LT Vol	14	0	13	95	24	3
Through Vol	0	113	18	9	0	130
RT Vol	0	175	29	47	0	4
Lane Flow Rate	16	331	69	174	28	157
Geometry Grp	7	7	2	2	7	7
Degree of Util (X)	0.026	0.454	0.103	0.253	0.047	0.24
Departure Headway (Hd)	5.87	4.936	5.356	5.255	6.112	5.495
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes
Cap	605	722	673	675	589	646
Service Time	3.657	2.723	3.356	3.349	3.812	3.295
HCM Lane V/C Ratio	0.026	0.458	0.103	0.258	0.048	0.243
HCM Control Delay	8.8	11.8	9	10.2	9.1	10.1
HCM Lane LOS	A	B	A	B	A	B
HCM 95th-tile Q	0.1	2.4	0.3	1	0.1	0.9

HCM 2010 AWSC
108: West Avenue & 20 Street

Intersection

Intersection Delay, s/veh 11.4

Intersection LOS B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	260	55	149	221	1	33	1	156	0	1	2
Future Vol, veh/h	2	260	55	149	221	1	33	1	156	0	1	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	2	283	60	162	240	1	36	1	170	0	1	2
Number of Lanes	0	1	0	1	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	1	1
Conflicting Approach Left SB		NB	EB	WB
Conflicting Lanes Left	1	1	1	2
Conflicting Approach Right NB		SB	WB	EB
Conflicting Lanes Right	1	1	2	1
HCM Control Delay	12.5	11	10.5	8.8
HCM LOS	B	B	B	A

Lane	NBLn1	EBLn1	WBLn1	WBLn2	SBLn1
Vol Left, %	17%	1%	100%	0%	0%
Vol Thru, %	1%	82%	0%	100%	33%
Vol Right, %	82%	17%	0%	0%	67%
Sign Control	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	190	317	149	222	3
LT Vol	33	2	149	0	0
Through Vol	1	260	0	221	1
RT Vol	156	55	0	1	2
Lane Flow Rate	207	345	162	241	3
Geometry Grp	2	5	7	7	2
Degree of Util (X)	0.296	0.473	0.265	0.361	0.005
Departure Headway (Hd)	5.166	4.942	5.895	5.387	5.759
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes
Cap	688	720	604	661	625
Service Time	3.258	3.032	3.691	3.183	3.759
HCM Lane V/C Ratio	0.301	0.479	0.268	0.365	0.005
HCM Control Delay	10.5	12.5	10.8	11.2	8.8
HCM Lane LOS	B	B	B	B	A
HCM 95th-tile Q	1.2	2.6	1.1	1.6	0

HCM 2010 AWSC
109: Bay Road & 20 Street

Intersection

Intersection Delay, s/veh 10.5

Intersection LOS B

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	106	10	83	218	20	159
Future Vol, veh/h	106	10	83	218	20	159
Peak Hour Factor	0.83	0.83	0.83	0.83	0.83	0.83
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	128	12	100	263	24	192
Number of Lanes	1	0	0	1	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	9	11.8	9.4
HCM LOS	A	B	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	11%	0%	28%
Vol Thru, %	0%	91%	72%
Vol Right, %	89%	9%	0%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	179	116	301
LT Vol	20	0	83
Through Vol	0	106	218
RT Vol	159	10	0
Lane Flow Rate	216	140	363
Geometry Grp	1	1	1
Degree of Util (X)	0.275	0.187	0.469
Departure Headway (Hd)	4.593	4.81	4.659
Convergence, Y/N	Yes	Yes	Yes
Cap	779	741	769
Service Time	2.64	2.87	2.71
HCM Lane V/C Ratio	0.277	0.189	0.472
HCM Control Delay	9.4	9	11.8
HCM Lane LOS	A	A	B
HCM 95th-tile Q	1.1	0.7	2.5

HCM 2010 TWSC
201: Bay Road & Driveway

Intersection						
Int Delay, s/veh	3.8					
Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	35	77	23	48	67	86
Future Vol, veh/h	35	77	23	48	67	86
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	38	84	25	52	73	93
Major/Minor	Minor2	Major1		Major2		
Conflicting Flow All	222	120	166	0	-	0
Stage 1	120	-	-	-	-	-
Stage 2	102	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	766	931	1412	-	-	-
Stage 1	905	-	-	-	-	-
Stage 2	922	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	752	931	1412	-	-	-
Mov Cap-2 Maneuver	752	-	-	-	-	-
Stage 1	889	-	-	-	-	-
Stage 2	922	-	-	-	-	-
Approach	EB	NB		SB		
HCM Control Delay, s	9.8	2.5		0		
HCM LOS	A					
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR	
Capacity (veh/h)	1412	-	867	-	-	
HCM Lane V/C Ratio	0.018	-	0.14	-	-	
HCM Control Delay (s)	7.6	0	9.8	-	-	
HCM Lane LOS	A	A	A	-	-	
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-	

Queuing Analysis based on ITE Procedures

$$q = 47 \text{ veh/hr (demand rate)}^*$$

$$Q = 17 \text{ veh/hr (service rate)}$$

$$p = \frac{q}{NQ} = 0.4607 \text{ (N = 6 valet runners)}$$

$$Q_M = 0.4607$$

Using Acceptable Probability of 5% (95% Confidence Level)

$$M = \left(\frac{\ln(x > M) - \ln(Q_M)}{\ln(p)} \right) - 1$$

$$M = \left(\frac{\ln(0.05) - \ln(0.4607)}{\ln(0.4607)} \right) - 1$$

$$M = \left(\frac{-2.995 - (-0.7750)}{-0.7750} \right) - 1$$

$$M = 2.86 - 1 = 1.86, \text{ say } 2 \text{ vehicles}$$

Note: when taking Ln of a number, it is recommended to have the same number of digits in the original number. Calculations involving "Ln" were not rounded.

- Assumed 80% of retail customers will use valet parking

Valet Trips Calculation

- Assumed 80% of retail customers will use valet parking

Valet Trips = $0.80 \times (\text{Inbound trips} - \text{Internalization} - \text{Multimodal reduction})$

Where:

Inbound trips = 77 (from trip generation table)

Internalization = $77 \times 0.05 = 4$

Multimodal reduction = $0.20 \times (77 - 4) = 15$ (multimodal reduction was applied after internalization)

Valet Trips = $0.80 \times (77 - 4 - 15) = 46.4$, say **47**

Please note that valet trips already include pass-by trips since were calculated based on In-bound trips

Service Rate Calculation

An average service rate was determined based on the service rate for standard parking spaces. The total service rate for standard parking spaces is the sum of the following times:

- Walking time: time for valet attendant to pick up vehicle within the garage at walking speed of 4 feet per second.
- Driving time: time to drive around on local roads at a speed of 25 miles per hour.

Valet Time (Standard Parking Spaces):

- Walking Time: $300 \text{ ft} * (1 \text{ sec}/4\text{ft}) * (1 \text{ min}/60\text{sec}) = 1.25 \text{ min}$
- Driving Time + Control Delay: $845 \text{ ft} * (1\text{mile}/5,280) * (1\text{hr}/25 \text{ miles}) * (60 \text{ min}/1\text{hr}) + 19 \text{ sec} * (1 \text{ min}/60 \text{ sec}) = 0.38 \text{ min} + 0.31 \text{ min} = 0.69 \text{ min} = \text{Assumed} = 1.0 \text{ min}$
- Total Time: $1.25 + 1.0 \text{ min}$

Average Valet Time:

2.25 min, say 3.5 min

SUNSET PARK
RESTAURANT 1
OPERATIONAL PLAN

The restaurant (hereinafter "Restaurant 1") consists of ±3,556 square feet, and a total of 108 seats (14 bar seats, 86 indoor seats, and 8 outdoor seats), as shown on the enclosed ground floor plan, sheet Z101. The operational criteria for Restaurant 1 is provided below:

1. Except as may be required for fire or building code/life safety code purposes, no loudspeakers shall be affixed to or otherwise located on the exterior premises of the retail spaces or in any outdoor dining terrace or sidewalk café should one be established.
2. No outdoor live music associated with any commercial uses in the retail space shall be permitted at any time, unless provided for under a special event permit.
3. Interior loud speakers shall not be located near doors which lead to the outside and interior music levels shall not interfere with the normal conversation of diners.
4. The maximum number of outdoor seats for a restaurant shall be 40 seats.
5. The maximum interior floor area of a restaurant on the Property shall be 3,600 square feet.
6. Any restaurant's primary function shall be food service and at no time shall a restaurant become a dance hall, disco or nightclub.
7. The hours of operation for any restaurant shall be limited to 8:00 AM to 11:30 PM, Sunday through Wednesday and 8:00 AM to 12:30 AM, Thursday through Saturday.
8. The following commercial uses shall be prohibited on the Property: entertainment establishment (excepting television, radio and/or recorded background music per Sections 114-1 and 142-305 of the City of Miami Beach Code), package store, tattoo studio, stand-alone bar (however, a restaurant is allowed to have a bar as a component or ancillary use thereof), check cashing store and pawnshop.
9. The main trash room on the ground floor will be enclosed. All on-site trash disposal will be physically blocked from view and noise limited by a wall and roofed enclosures within the Property.
10. Restaurant 1 trash bins shall be wheeled out to main dumpster(s) located in the loading dock area. Trash removal from main dumpster(s) shall take place in the hours between 6 AM and 10 AM.
11. Deliveries and loading shall occur along Purdy Avenue and Bay Road at those certain on-street parking spaces designated for loading and off-street loading areas identified on Sheet A-2.11, and during the hours between 7 AM and 4:30 PM.
12. The maximum number of employees allowed on the premises at one time at Restaurant 1 shall be 30.

SUNSET PARK
RESTAURANT 2
OPERATIONAL PLAN

The restaurant (hereinafter "Restaurant 2") consists of ±3,514 square feet, and a total of 124 seats (8 bar seats, 106 indoor seats, and 8 outdoor seats), as shown on the enclosed ground floor plan, sheet Z101. The operational criteria for Restaurant 2 is provided below:

1. Except as may be required for fire or building code/life safety code purposes, no loudspeakers shall be affixed to or otherwise located on the exterior premises of the retail spaces or in any outdoor dining terrace or sidewalk café should one be established.
2. No outdoor live music associated with any commercial uses in the retail space shall be permitted at any time, unless provided for under a special event permit.
3. Interior loud speakers shall not be located near doors which lead to the outside and interior music levels shall not interfere with the normal conversation of diners.
4. The maximum number of outdoor seats for a restaurant shall be 40 seats.
5. The maximum interior floor area of a restaurant on the Property shall be 3,600 square feet.
6. Any restaurant's primary function shall be food service and at no time shall a restaurant become a dance hall, disco or nightclub.
7. The hours of operation for any restaurant shall be limited to 8:00 AM to 11:30 PM, Sunday through Wednesday and 8:00 AM to 12:30 AM, Thursday through Saturday.
8. The following commercial uses shall be prohibited on the Property: entertainment establishment (excepting television, radio and/or recorded background music per Sections 114-1 and 142-305 of the City of Miami Beach Code), package store, tattoo studio, stand-alone bar (however, a restaurant is allowed to have a bar as a component or ancillary use thereof), check cashing store and pawnshop.
9. The main trash room on the ground floor will be enclosed. All on-site trash disposal will be physically blocked from view and noise limited by a wall and roofed enclosures within the Property.
10. Restaurant 2 trash bins shall be wheeled out to main dumpster(s) located in the loading dock area. Trash removal from main dumpster(s) shall take place in the hours between 6 AM and 10 AM.
11. Deliveries and loading shall occur along Purdy Avenue and Bay Road at those certain on-street parking spaces designated for loading and off-street loading areas identified on Sheet A-2.11, and during the hours between 7 AM and 4:30 PM.
12. The maximum number of employees allowed on the premises at one time at Restaurant 2 shall be 30.