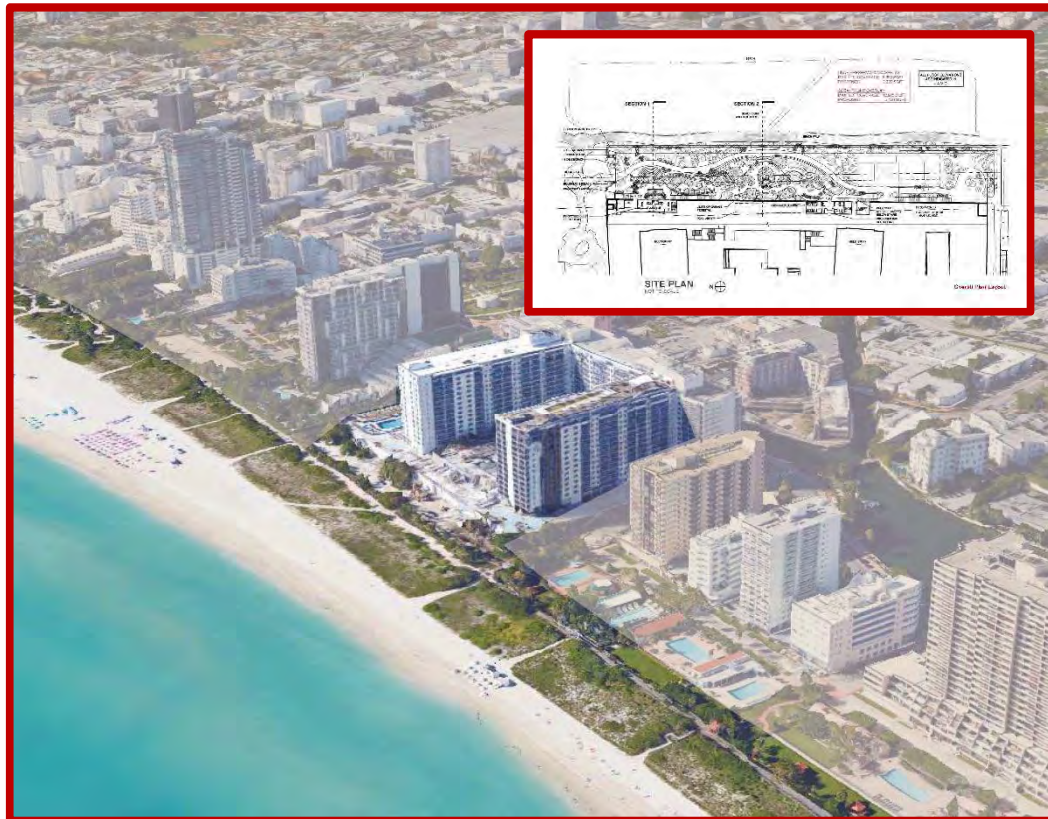


*Traffic Impact Analysis  
for Submittal to the  
City of Miami Beach*

1 Hotel Beach Club  
City of Miami Beach, Florida



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June 2016  
043433000



*Traffic Impact Analysis  
for Submittal to the  
City of Miami Beach*

**1 Hotel Beach Club  
Miami Beach, Florida**

*Prepared for:*

2377 Collins Resort, L.P.  
Miami Beach, Florida

*Prepared by:*

Kimley-Horn and Associates, Inc.

**Kimley»Horn**

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June 2016  
043433000



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## EXECUTIVE SUMMARY

2377 Collins Resort, L.P. is proposing to develop a beach club on the east side of the 1 Hotel fronting the Miami Beach Beachwalk between 23<sup>rd</sup> Street and 24<sup>th</sup> Street in Miami Beach, Florida. The 1 Hotel site is currently occupied by 828 high-rise residential condominium units (569 units in the Roney Palace and 249 units in the Pardisio), a 333-room hotel, and 93,000 square feet of retail space. Please note that a large portion of the retail space will be used for additional lobby space. The proposed redevelopment program consists of the addition of a beach club. The beach club is bounded by the beach to the east, 1 Hotel to the west, 24<sup>th</sup> Street to the north, and 23<sup>rd</sup> Street to the south. The proposed beach club consists of an 80-seat food and beverage area with a maximum occupancy of 816 patrons. The beach club will operate primarily as a members-only venue but will also be open to the public. The redevelopment is expected to be completed and opened by 2018.

A traffic impact analysis was conducted for the project. Trip generation for the project was calculated using equations contained in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual*, 9<sup>th</sup> Edition. ITE Land Use Code (LUC) 220 (Apartment) was used for the existing development and LUC 931 (Quality Restaurant) was used for the proposed redevelopment. The redevelopment is expected to generate 121 net new vehicle trips during the weekend P.M. peak hour of generator.

The beach club will operate primarily as a members-only venue but will also be open to the public. The beach club will be open from 10:00 A.M. to 8:00 P.M., seven (7) days a week. Self-parking is not provided on-site for the proposed redevelopment. All vehicles with the exception of taxis/shared-rides will be valeted. Access to the beach club will be provided by two (2) valet drop-off and pick-up areas for members/guests and the public. The member/guest valet drop-off/pick-up is located within the 1 Hotel porte-cochere along the east side of Collins Avenue and the public valet drop-off/pick-up is located along the south side of 24<sup>th</sup> Street just north of the 1 Hotel.

Intersection capacity analyses indicate that the study intersections are expected to operate at adopted levels of service (LOS D+20 or better) during the analysis peak hour under all analysis conditions.

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## INTRODUCTION

2377 Collins Resort, L.P. is proposing to develop a beach club on the east side of the 1 Hotel fronting the Miami Beach Beachwalk between 23<sup>rd</sup> Street and 24<sup>th</sup> Street in Miami Beach, Florida. The 1 Hotel site is currently occupied by 828 high-rise residential condominium units (569 units in the Roney Palace and 249 units in the Pardisio), a 333-room hotel, and 93,000 square feet of retail space. Please note that a large portion of the retail space will be used for additional lobby space. The proposed redevelopment program consists of the addition of a beach club. The beach club is bounded by the beach to the east, 1 Hotel to the west, 24<sup>th</sup> Street to the north, and 23<sup>rd</sup> Street to the south. The proposed beach club consists of an 80-seat food and beverage area with a maximum occupancy of 816 patrons. The beach club will operate primarily as a members-only venue but will also be open to the public. The redevelopment is expected to be completed and opened by 2018.

The beach club will be open from 10:00 A.M. to 8:00 P.M., seven (7) days a week. Self-parking is not provided on-site for the proposed redevelopment. All vehicles with the exception of taxis/shared-rides will be valeted. Access to the beach club will be provided by two (2) valet drop-off and pick-up areas for members/guests and the public. The member/guest valet drop-off/pick-up is located within the 1 Hotel porte-cochere along the east side of Collins Avenue and the public valet drop-off/pick-up is located along the south side of 24<sup>th</sup> Street just north of the 1 Hotel. A site location map is provided as Figure 1. A site plan is provided in Appendix A. The project is expected to be completed and opened by year 2018.

Kimley-Horn and Associates, Inc. has completed this traffic impact analysis for submittal to the City of Miami Beach. The purpose of the study is to assess the project's impact on the surrounding roadway network and determine if adequate capacity is available to support future traffic volumes. The study's methodology is consistent with the requirements of the City of Miami Beach. Methodology correspondence detailing the traffic study requirements is included in Appendix B. This report summarizes the data collection, project trip generation and distribution, and capacity analyses.





Figure 1  
Location Map  
1 Hotel Beach Club  
City of Miami Beach, Florida



## ANALYSIS PERIOD

The proposed beach club is expected to host the largest events generating the most traffic on Saturday afternoons. Therefore, turning movement counts were collected on Saturday, June 18, 2016 from 2:00 P.M. to 6:00 P.M. The analysis period was based on the highest peak hour determined from the four-hour peak period turning movement counts collected at the study area intersections. Detailed count data is provided in Appendix C.



## EXISTING TRAFFIC

Weekend peak period (2:00 P.M. to 6:00 P.M.) turning movement counts were collected on Saturday, June 18, 2016 at the following study intersections:

- 26<sup>th</sup> Street and Collins Avenue
- 24<sup>th</sup> Street and Collins Avenue
- 1 Hotel driveway exit and Collins Avenue
- 1 Hotel driveway entrance and Collins Avenue
- 23<sup>rd</sup> Street and Collins Avenue
- 23<sup>rd</sup> Street and Dade Boulevard




The traffic volumes were collected in 15-minute intervals and the peak hour was determined for each intersection. City of Miami Beach peak season conversion factors were developed from Florida Department of Transportation (FDOT) data and were applied to the traffic counts to adjust the traffic to peak season volumes. The appropriate peak season conversion factor of 1.11 was applied to collected turning movement counts.

Existing signal phasing and timing patterns were obtained from the Miami-Dade County Department of Transportation and Public Works – Signals and Signs Division for the signalized intersection required to be evaluated in this analysis. The turning movement counts, FDOT peak season factor category report, and signal timing data are included in Appendix C. Figure 2 presents the existing turning movement volumes at the study intersections during the weekend peak hour.



NOT TO SCALE

**Legend**

-  Study Roadway
-  Study Intersection
-  Weekend Peak Hour Traffic

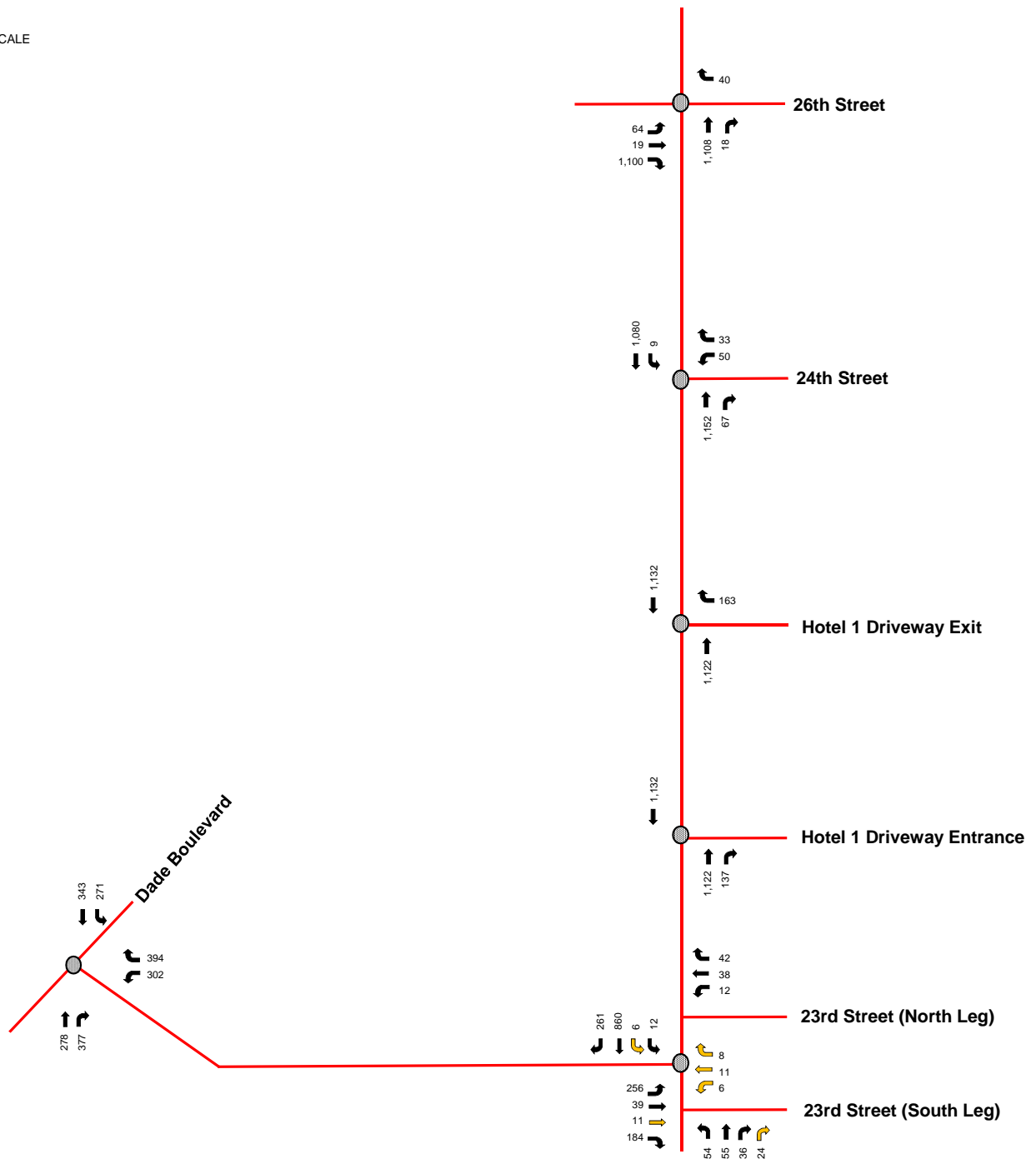


Figure 2  
Existing Weekend Peak Hour Traffic  
1 Hotel Beach Club  
City of Miami Beach, Florida



## FUTURE BACKGROUND TRAFFIC

Future background traffic conditions are defined as expected traffic conditions on the roadway network in the year 2018 without the construction of the proposed redevelopment. Future background traffic volumes used in the analysis are the sum of the existing traffic and an additional amount of traffic generated by growth in the study area. Refer to Figure 3 for the 2018 analysis peak hour background traffic volumes.

### Background Area Growth

Future traffic growth on the transportation network was determined based upon (1) historic growth trends at nearby FDOT traffic count stations and (2) traffic volume comparisons from the year 2010 and 2040 Florida Standard Urban Transportation Model Structure (FSUTMS) - Southeast Florida Regional Planning Model (SERPM) model.

The FDOT count station referenced in this analysis is count station 5170: SR A1A/Collins Avenue – North of 21<sup>st</sup> Street. The historic growth rate analysis, based on the FDOT count station determined a growth rate of 0.80 percent (0.80%) over a 5-year period and a negative growth rate of 0.17 percent (0.17%) over a 10-year period.

Based on the volume information obtained from years 2010 and 2040 FSUTMS SERPM model, an annual growth rate of 0.02 percent (0.02%) in the vicinity of the redevelopment site was calculated. The highest growth rate of 0.80 percent (0.80%) was applied annually to the existing traffic volumes for future (2018) background conditions. The worksheets used to analyze the historic growth trends along with the FSUTMS transportation model outputs are included in Appendix D.

### Committed Development

City of Miami Beach staff was contacted to determine if any projects that have been approved but not yet completed in the vicinity of the project site should be accounted for in this analysis.

The following developments were identified as committed developments:

- Saxony (Faena) Hotel
- Versailles Hotel

These developments were included as future background conditions. Trip assignments for these developments are included in Appendix E. Please note that the Faena Hotel, restaurants, and bars are open and operational and are included in existing turning movement counts rather than in committed conditions.

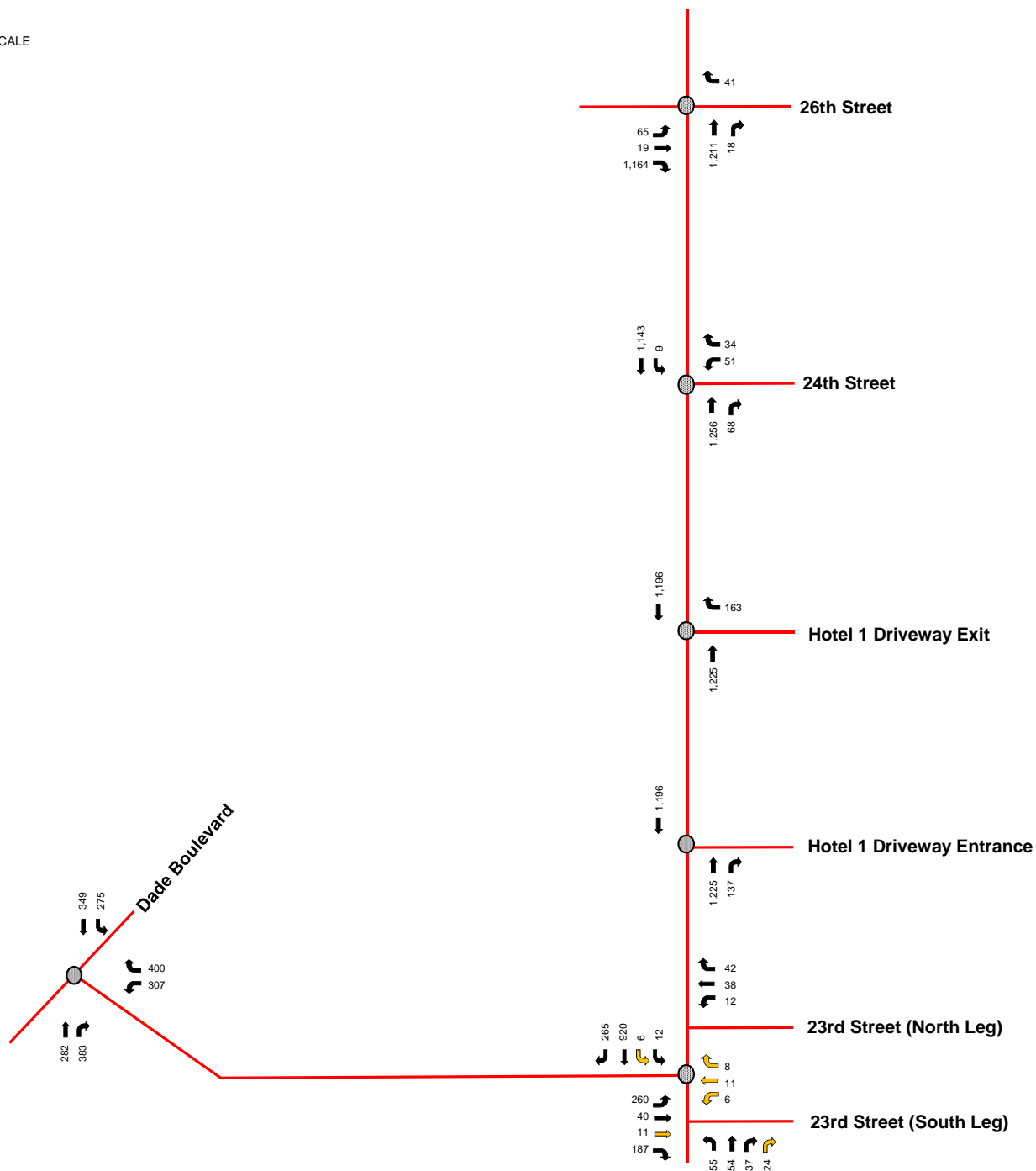




NOT TO SCALE

**Legend**

- Study Roadway
- Study Intersection
- XX Weekend Peak Hour Traffic



## PROJECT TRAFFIC

Project traffic used in this analysis is defined as the vehicle trips expected to be generated by the project and the distribution and assignment of that traffic over the study roadway network.

### Existing and Proposed Land Uses

The property proposed for redevelopment is currently occupied by 828 high-rise residential condominium units (569 units in the Roney Palace and 249 units in the Pardisio), a 333-room hotel, and 93,000 square feet of retail space. Please note that a large portion of the retail space will be used for additional lobby space. The proposed beach club consists of an 80-seat food and beverage area and a maximum occupancy of 816 patrons. The project is expected to be completed and opened by year 2018.

### Project Access

Self-parking is not provided on-site for the proposed redevelopment. All vehicles with the exception of taxis/shared-rides will be valeted. Access to the beach club will be provided by two (2) valet drop-off and pick-up areas for members/guests and the public. The member/guest valet drop-off/pick-up is located within the 1 Hotel porte-cochere along the east side of Collins Avenue and the public valet drop-off/pick-up is located along the south side of 24th Street just north of the 1 Hotel.

### Trip Generation

Institute of Transportation Engineers' (ITE) Land Use Code (LUC) 232 (High-Rise Residential Condominium/Townhouse), 310 (Hotel), and 931 (Quality Restaurant) were used for the existing development. The ITE *Trip Generation Manual*, 9<sup>th</sup> Edition was not used for the proposed beach club due to the limited number of referenced studies relevant to the 1 Hotel Beach Club. 1 Hotel Beach Club vehicle-trips were determined by assuming that the occupancy of the beach club is equivalent to the total person-trips generated by the beach club. Person-trips were then converted into vehicle-trips using a vehicle occupancy factor.



### Multimodal Reduction

In order to account for the urban environment in which the project site is located in, a multimodal (public transit, bicycle, and pedestrian) reduction of 10.0 percent (10.0%) was applied to the site. It is expected that some employees, nearby residents, and guests will choose to walk or bike to the proposed redevelopment. It is also anticipated that patrons will walk to the adjacent retail stores, other restaurants, hotels, and local places of interest. Furthermore, it is expected that a portion of the trips including employee trips will utilize public transit. Miami-Dade County Transit (MDT) provides bus service via three (3) routes and the City of Miami Beach's Alton West trolley operate in the vicinity of the site:

- Route 119/Route S operates on Collins Avenue within the vicinity of the project. This route serves the Downtown Miami Bus Terminal, Main Library, Historical Museum, Miami Art Museum, Government Center Metrorail station, Omni Bus Terminal, MacArthur Causeway, City of Miami Beach, South Beach, Lincoln Road, Collins Avenue, 192 Street Causeway, City of Aventura, and Aventura Mall. This route operates with 15-minute headways and provides connecting service to 25 additional Miami-Dade Transit bus routes, as well as the Metrorail.
- Route 123/South Beach Local operates on Collins Avenue within the vicinity of the project. This route serves Belle Isle, Collins Park, South Miami Beach, Biscayne Street, Ziff Jewish Museum, Washington Avenue, the Fillmore Miami Beach at the Jackie Gleason Theatre, 17<sup>th</sup> Street, City Hall, Meridian Avenue, Holocaust Memorial, Dade Boulevard, Bay Road/20<sup>th</sup> Street, Lincoln Road, West Avenue, Alton Road, and the Miami Beach Marina. This route operates with 13-minute headways throughout the day and provides connecting service to five (5) additional Miami-Dade Transit bus routes.
- Route 150/Miami Beach Airport Express operates on Collins Avenue within the vicinity of the project. This route serves the Miami International Airport Metrorail Station, 41<sup>st</sup> Street, Alton Road, Collins Avenue, Lincoln Road, and Washington Avenue. This route

operates with 20-minute headways and provides connecting service to 10 additional Miami-Dade Transit bus routes, as well as the Metrorail.

Detailed route information and headway data is provided in Appendix F.

### Internal Capture

Internal capture is expected between the complementary land uses within a project and neighboring developments. Internal capture trips are trips made among the on-site uses, which in the case of this project are trips between the proposed beach club and the existing 1 Hotel. Internal capture trips will be made by walking and will not result in additional vehicle trips on the roadway network. Internal capture trips for the project were determined based upon methodology contained in the ITE's, *Trip Generation Handbook*, 3<sup>rd</sup> Edition. The internal capture for the proposed beach club is expected to be 6.0 percent (6.0%) with an internal capture for the total site, including the 1 Hotel and beach club, expected to be 9.6 percent (9.6%). Internal capture calculations are contained in Appendix F.

### Net New Project Trips

Net new project trips are equal to the gross project trips minus the multimodal reduction factor and internal capture. The net new project trips represent additional vehicles on the roadway network. Table 1 summarizes the project's trip generation potential for the analysis peak hour. As shown in Table 1, the redevelopment is expected to generate 121 net new trips during the analysis peak hour. Detailed trip generation information is included in Appendix F.

Table 1: Proposed Net New Trip Generation						
Future Land Use (ITE Code)	Scale	Net External Trips	Entering		Exiting	
			%	Trips	%	Trips
Existing Development						
High-Rise Residential Condominium/Townhouse (220)	828 dwelling units	229	43%	100	57%	129
Hotel	333-rooms	201	56%	111	44%	90
Quality Restaurant	10,000 square feet	76	59%	47	41%	29
External Trips		506		258		248
Proposed Redevelopment						
High-Rise Residential Condominium/Townhouse (220)	828 dwelling units	228	43%	98	57%	130
Hotel	333-rooms	200	56%	110	44%	90
Quality Restaurant	10,000 square feet	71	59%	45	41%	26
Beach Club	-	128	81%	106	19%	22
External Trips		627		359		268
Net New Project Trips		121		101		20
42.6% Taxi/Shared-ride Reduction		52		43		9
Net New Valet Trips	Collins Avenue	36		30		6
	24 <sup>th</sup> Street	33		28		5

### Trip Distribution and Assignment

The trip distribution was determined based on an interpolated cardinal trip distribution for the project site's traffic analysis zones (TAZs) obtained from the Miami-Dade Metropolitan Planning Organization's (MPO's) *Miami-Dade 2010 and 2040 Long Range Transportation Plan Directional Trip Distribution Report*. The project is located within TAZ 635. The cardinal distribution is shown in Table 2. Figure 4 presents the project's net new traffic distribution for the analysis peak hour. Detailed cardinal distribution calculations are contained in Appendix G.



Table 2: Cardinal Trip Distribution	
Cardinal Direction	Percentage of Trips
North-Northeast	13.0%
East-Northeast	0.0%
East-Southeast	0.0%
South-Southeast	0.0%
South-Southwest	18.0%
West-Southwest	30.0%
West-Northwest	19.0%
North-Northwest	20.0%
Total	100.0 %

The existing development and proposed redevelopment do not provide self-parking on-site. Beach club patrons will drop-off and pick-up vehicles at the two (2) valet drop-off and pick-up areas for members/guests and the public. The member/guest valet drop-off/pick-up is located within the 1 Hotel porte-cochere along the east side of Collins Avenue and the public valet drop-off/pick-up is located along the south side of 24<sup>th</sup> Street just north of the 1 Hotel. All vehicles with the exception of taxis/shared-rides will be valet parked at the on-site parking garage located between 23<sup>rd</sup> Street and 24<sup>th</sup> Street between Collins Avenue and the beach. Based on data collected for a similar hotel redevelopment (Cadillac Hotel Expansion), 42.6 percent (42.6%) of the vehicles arriving are taxis. This percentage was applied to the net new trip assignment to develop valet trips. Data related to taxi trips is provided in Appendix F.

Please note that based on data provided by the Applicant, it was assumed that 48 percent (48%) of the net new valet trips will utilize the 24<sup>th</sup> Street valet drop-off/pick-up (public) and 52 percent (52%) of the net new valet trips will utilize the 1 Hotel porte-cochere along Collins Avenue (members/guests).



Figure 5 provides a graphic illustration of the proposed valet routes to/from the on-site parking garage and Figure 6 presents the project's net new valet trip distribution.

Figure 7 presents the project's net new traffic assignment for the analysis peak hour. Additionally, the anticipated trips associated with the valet operations serving the proposed parking garage were included in the project traffic assignment.



NOT TO SCALE

**Legend**

-  Study Roadway
-  Study Intersection
- XX% Entering Trip Distribution
- (XX)% Exiting Trip Distribution

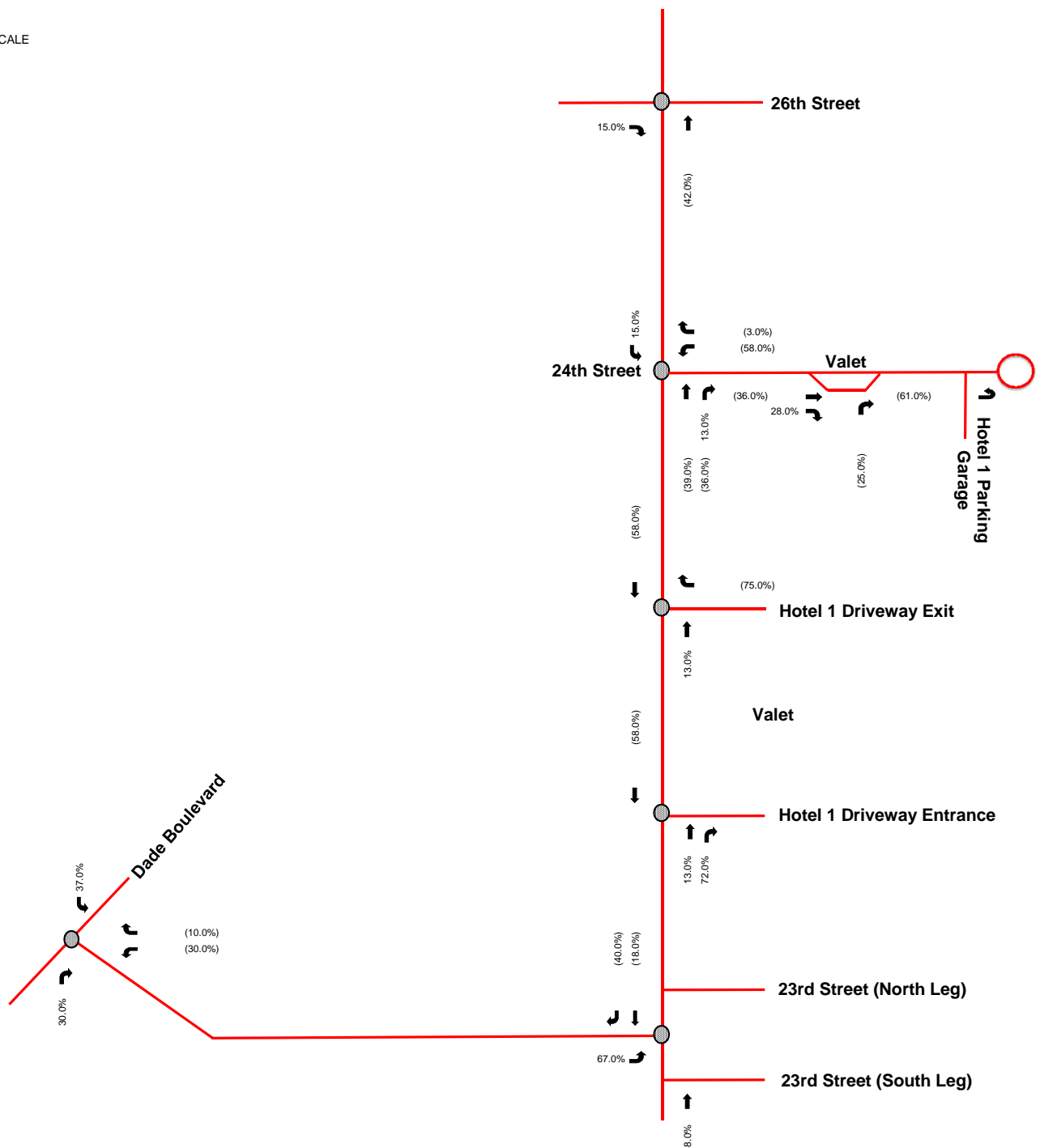
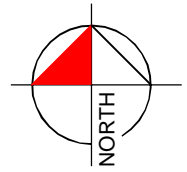


Figure 4  
Weekend Peak Hour Net New Trip Distribution  
1 Hotel Beach Club  
City of Miami Beach, Florida





NOT TO SCALE



#### LEGEND

- ← MEMBER/GUEST DROP-OFF VALET ROUTE
- ← MEMBER/GUEST PICK-UP VALET ROUTE
- ← PUBLIC DROP-OFF VALET ROUTE
- ← PUBLIC PICK-UP VALET ROUTE

FIGURE 5  
PROPOSED VALET ROUTING  
1 HOTEL BEACH CLUB

**Kimley»Horn**





NOT TO SCALE

**Legend**

- Study Roadway
- Study Intersection
- XX% Valet Drop-off Distribution
- (XX)% Valet Pick-up Distribution

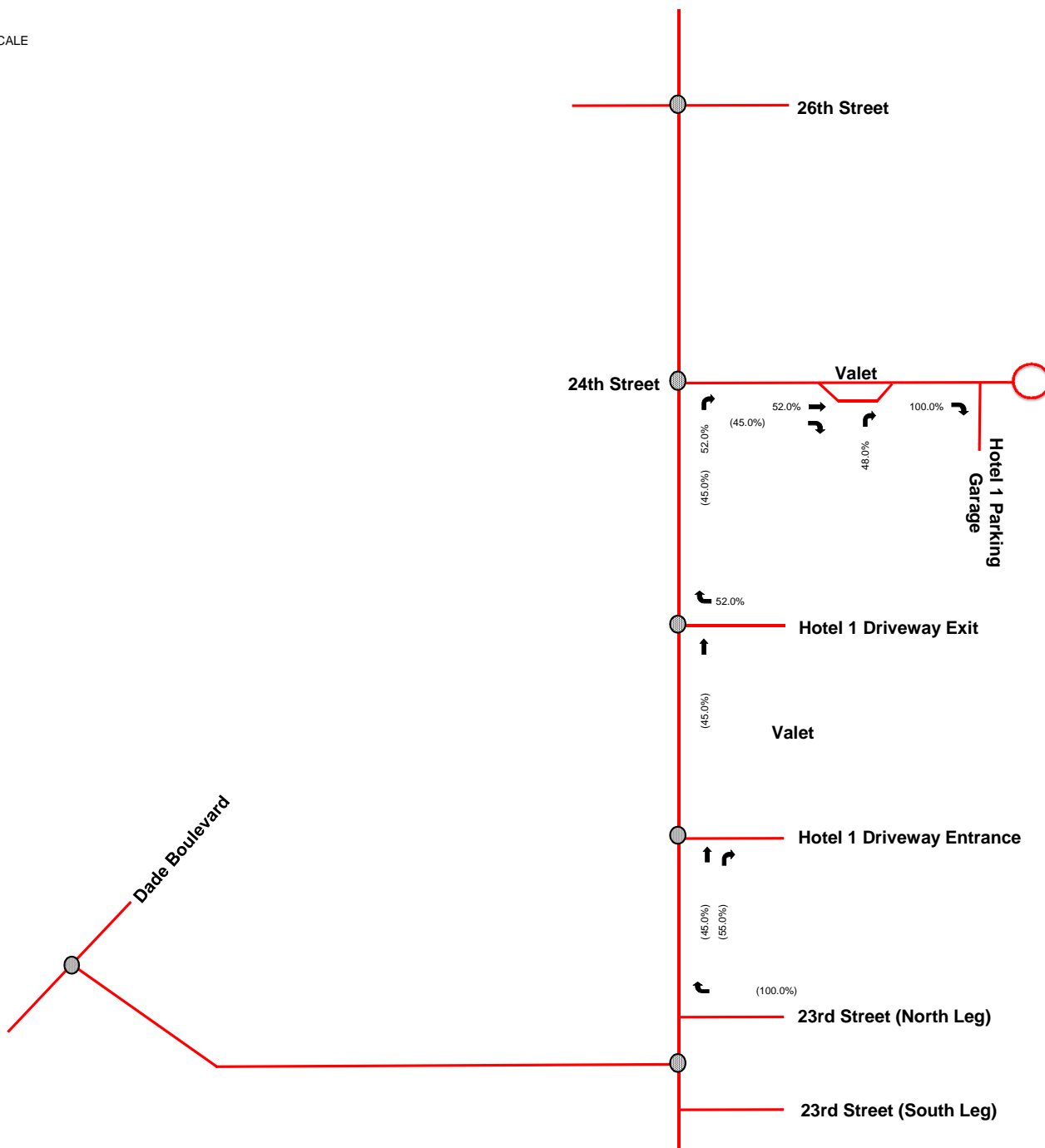


Figure 6  
Weekend Peak Hour Valet Trip Distribution  
1 Hotel Beach Club  
City of Miami Beach, Florida

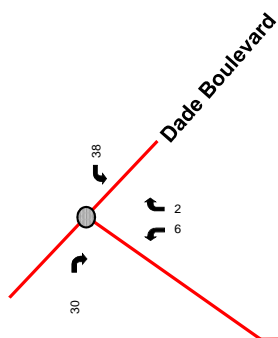
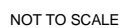


Figure 7  
Weekend Peak Hour Net New Trip Assignment  
1 Hotel Beach Club  
City of Miami Beach, Florida

## FUTURE TOTAL TRAFFIC

Future total traffic conditions are defined as the expected traffic conditions in the year 2018 after the opening of the project. Total traffic volumes considered in the analysis for this project are the sum of the background traffic volumes and the expected project traffic volumes. The analysis peak hour future traffic volumes are shown in Figure 8. Volume development worksheets for the study intersections are included in Appendix H.



NOT TO SCALE

**Legend**

- Study Roadway
- Study Intersection
- XX Weekend Peak Hour Traffic

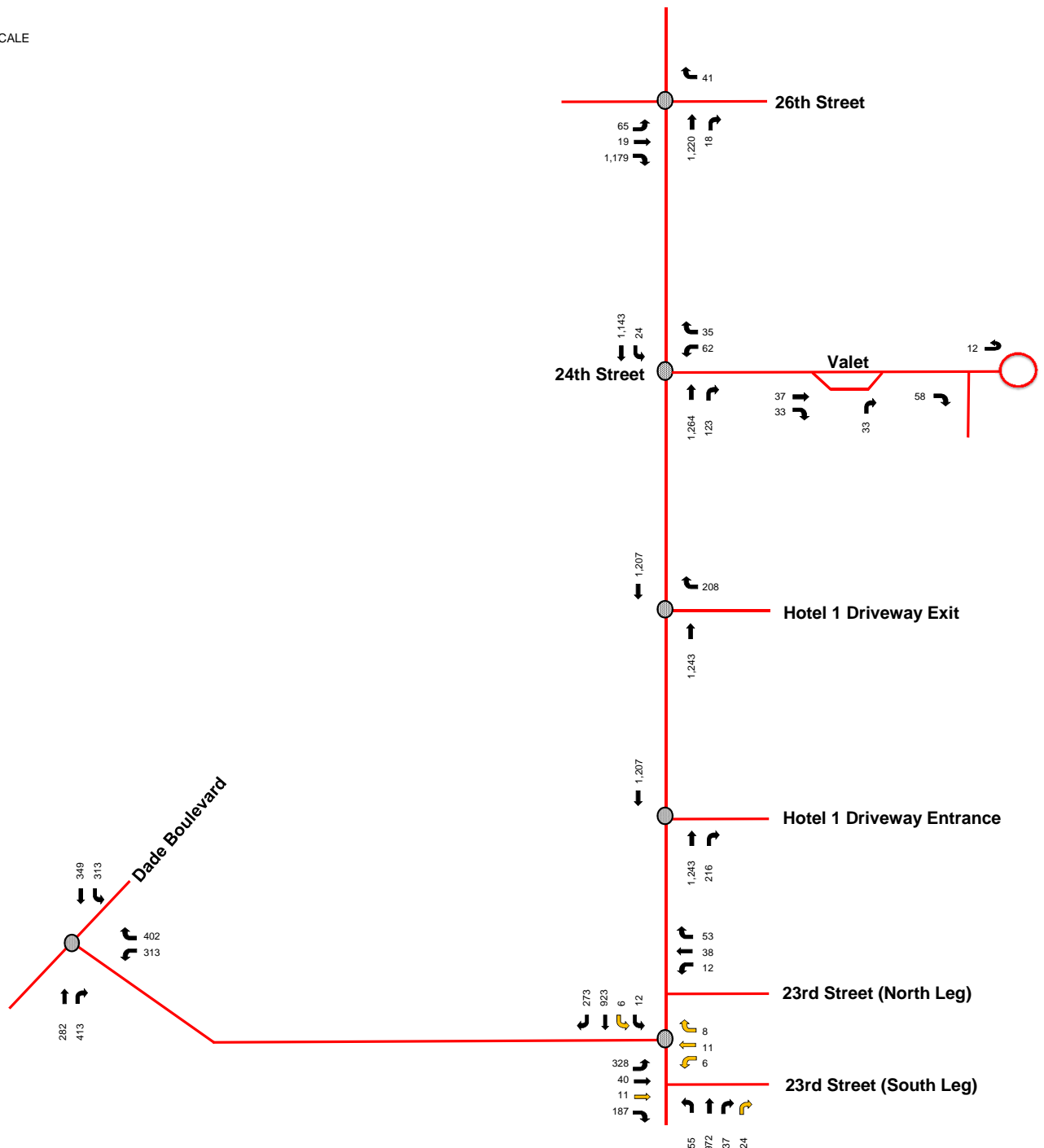


Figure 8  
Future Total Weekend Peak Hour Traffic  
1 Hotel Beach Club  
City of Miami Beach, Florida



## INTERSECTION CAPACITY ANALYSIS

The study area intersection operating conditions were analyzed for three (3) scenarios (existing conditions, future background conditions, and future total conditions) were analyzed using Trafficware's *SYNCHRO 9.0* software, which applies methodologies outlined in the Transportation Research Board's (TRB's) *Highway Capacity Manual*, 2000 and 2010 Editions. Synchro worksheets for the study intersections are included in Appendix I.

A summary of the intersection analyses for the analysis peak hour is presented in Table 3. Please note that as mass transit service with headways of 20 minutes or less is provided within 0.25 miles of the study intersections, LOS D+20 was utilized as the adopted level of service standard consistent with the City of Miami Beach's *2025 Comprehensive Plan*. As this table indicates, the study intersections are expected to operate at adopted levels of service (LOS D+20 or better) during the analysis peak hour under all analysis conditions.

Table 3: Peak Hour Intersection Capacity Analysis

Intersection	Traffic Control	Overall LOS/Delay	Approach LOS				
			EB	WB	WB2 <sup>(5)</sup>	NB	SB
Existing Conditions (Background Conditions) [Future Total Conditions]							
Collins Avenue & 26 <sup>th</sup> Street	Signalized	A/9.8 (B/10.3) [B/11.3]	A (A) [A]	D (D) [D]	(3)	B (B) [B]	(3)
Collins Avenue & 24 <sup>th</sup> Street	Signalized	A/6.4 (A/6.9) [A/8.1]	(3)	D (D) [D]	(3)	A (A) [A]	A (A) [A]
Collins Avenue & 1 Hotel Driveway Exit	One-Way Stop-Controlled	(1)	(3)	B (B) [C]	(3)	(2)	(2)
Collins Avenue & 1 Hotel Driveway Entrance <sup>(4)</sup>	Free-flow	-	-	-	-	-	-
Collins Avenue & 23 <sup>rd</sup> Street	Signalized	D/42.1 (E/57.5) [E/64.9]	D (D) [E]	D (D) [D]	E (E) [E]	D (F) [F]	C (C) [C]
Dade Boulevard & 23 <sup>rd</sup> Street	Two-Way Stop-Controlled	C/24.4 (C/24.7) [C/26.1]	(3)	D (D) [D]	(3)	C (C) [C]	B (B) [B]

## Notes:

- (1) Overall intersection LOS is not defined, as intersection operates under free-flow or stop-control conditions.
- (2) Approach operates under free-flow conditions. LOS is not defined.
- (3) Approach does not exist.
- (4) Intersection operates under free-flow operation. Therefore, intersection LOS is not defined.
- (5) Represents the south leg of the westbound approach.

## TRANSPORTATION DEMAND MANAGEMENT STRATEGIES

Transportation Demand Management (TDM) strategies are proposed to reduce the impacts of the project traffic on the surrounding roadway network. Typical measures promote bicycling and walking, encourage car/vanpooling, and offer alternatives to the typical personal car trip. The Applicant has committed to continue the following programs that are already in place:

- The People Operations Department serves as the employee transportation coordinator to manage the existing TDM programs.
- Subsidized mass transit passes provided to employees.
- Fifteen designated scooter/motorcycle parking spaces and 25 bicycle parking spaces are provided in the west parking lot.
- Hotel guest car services provided locally on Miami Beach.
- Citi Bike passes are subsidized for hotel guests.
- Five (5) electric car charging are provided on-site.

In addition to the existing TDM strategies in place, the Applicant will explore the following TDM strategies:

- Employee carpool incentive programs and/or providing on-site car/vanpooling designated parking spaces.
- Subsidize Citi Bike passes for employees.

## ADDITIONAL CONSIDERATIONS

### On-Street Parking

Approximately four (4) on-street parking spaces along the south side of 24<sup>th</sup> Street will be removed to provide valet service and taxi/shared-ride drop-off/pick-up to serve the public patrons.



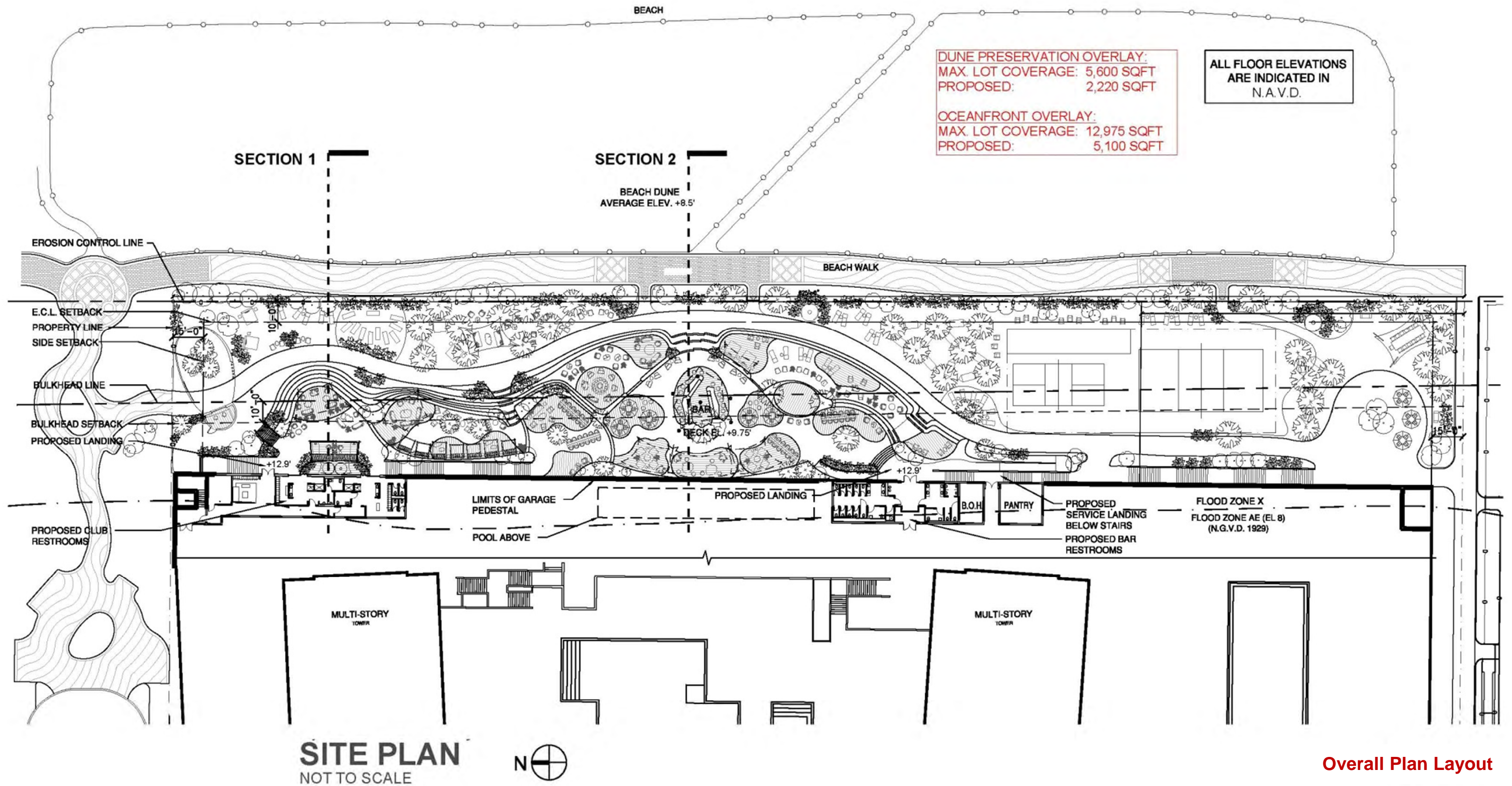
## CONCLUSION

This analysis has addressed traffic-related impacts associated with the proposed beach club on the east side of the 1 Hotel fronting the Miami Beach Beachwalk between 23<sup>rd</sup> Street and 24<sup>th</sup> Street in Miami Beach, Florida. The 1 Hotel site is currently occupied by 828 high-rise residential condominium units (569 units in the Roney Palace and 249 units in the Pardisio), a 333-room hotel, and 93,000 square feet of retail space. Please note that a large portion of the retail space will be used for additional lobby space. The proposed redevelopment program consists of the addition of a beach club. The beach club is bounded by the beach to the east, 1 Hotel to the west, 24<sup>th</sup> Street to the north, and 23<sup>rd</sup> Street to the south. The proposed beach club consists of an 80-seat food and beverage area with a maximum occupancy of 816 patrons. The beach club will operate primarily as a members-only venue but will also be open to the public. The redevelopment is expected to be completed and opened by 2018.

The beach club will operate primarily as a members-only venue but will also be open to the public. The beach club will be open from 10:00 A.M. to 8:00 P.M., seven (7) days a week. Self-parking is not provided on-site for the proposed redevelopment. All vehicles with the exception of taxis/shared-rides will be valeted. Access to the beach club will be provided by two (2) valet drop-off and pick-up areas for members/guests and the public. The member/guest valet drop-off/pick-up is located within the 1 Hotel porte-cochere along the east side of Collins Avenue and the public valet drop-off/pick-up is located along the south side of 24<sup>th</sup> Street just north of the 1 Hotel.

Intersection capacity analyses indicate that the study intersections are expected to operate at adopted levels of service (LOS D+20 or better) during the analysis peak hour under all analysis conditions.

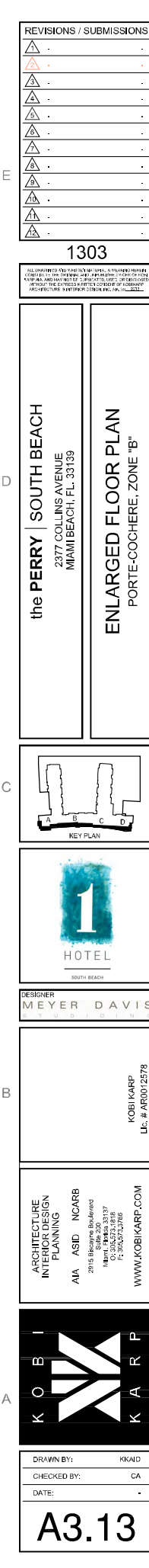
## APPENDIX A: Site Plan



Overall Plan Layout

# ONE HOTEL MIAMI BEACH




## BEACH CLUB





Plotted By: Ebrahimi, Sina	Sheet Set: Kria	Layout: EX-1 VALET LOCATION	May 17, 2016	04:00:02pm	K:\FTL\PTO\043433000--Perry Hotel 2300 Collins Avenue\Beach Club\CADD Exhibits\2016.05.12 Valet Location.dwg
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	CENTERLINE
	RIGHT OF WAY AND/ OR PROPERTY LINE
	PROPOSED VALET BOOTH

[illegible]

## APPENDIX B:

### Methodology Correspondence

Dorman, Cory

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From: Ferrer, Josiel <JOSIELFERRER@miamibeachfl.gov>  
Sent: Friday, June 17, 2016 3:04 PM  
To: Dabkowski, Adrian  
Cc: Gonzalez, Jose R.; clamus@fteinc.net; Belush, Michael; Dorman, Cory; cmcdowell@bilzin.com  
Subject: RE: One Hotel Beach Club | Traffic Study Methodology

Adrian,

I have no further comments.

Thanks,

Respectfully,

The logo for Miami Beach, featuring the word "MIAMIBeach" in a stylized, green, sans-serif font. The "MIAMI" part is in all caps, and "Beach" is in title case.

Josiel Ferrer-Diaz, E.I. *Transportation Manager*  
TRANSPORTATION DEPARTMENT  
1700 Convention Center Drive, Miami Beach, Florida 33139  
305-673-7514 [www.miamibeachfl.gov](http://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.*

---

From: Adrian.Dabkowski@Kimley-horn.com [mailto:Adrian.Dabkowski@Kimley-horn.com]  
Sent: Friday, June 17, 2016 2:27 PM  
To: Ferrer, Josiel  
Cc: Gonzalez, Jose R.; clamus@fteinc.net; Belush, Michael; cory.dorman@kimley-horn.com; cmcdowell@bilzin.com  
Subject: RE: One Hotel Beach Club | Traffic Study Methodology

Good afternoon Josiel:

Can you please let us know if the City has any comments on the attached traffic study methodology.

Thank you  
Adrian

**Adrian K. Dabkowski, P.E., PTOE**  
**Kimley-Horn** | 600 North Pine Island Road, Suite 450, Plantation, FL 33324  
Direct: 954-535-5144 | Main: 954-535-5100

---

From: Dorman, Cory  
Sent: Monday, June 13, 2016 6:04 PM  
To: [JOSIELFERRER@miamibeachfl.gov](mailto:JOSIELFERRER@miamibeachfl.gov)  
Cc: [josegonzalez@miamibeachfl.gov](mailto:josegonzalez@miamibeachfl.gov); Claudia Lamus <[clamus@fteinc.net](mailto:clamus@fteinc.net)>; Belush, Michael  
([MichaelBelush@miamibeachfl.gov](mailto:MichaelBelush@miamibeachfl.gov)) <[MichaelBelush@miamibeachfl.gov](mailto:MichaelBelush@miamibeachfl.gov)>; Dabkowski, Adrian

<[Adrian.Dabkowski@Kimley-horn.com](mailto:Adrian.Dabkowski@Kimley-horn.com)>

Subject: FW: One Hotel Beach Club | Traffic Study Methodology

Good evening Josiel,

Do we have a status update on the One Hotel methodology?

Thanks,



Cory D. Dorman, E.I.

**Kimley-Horn** | 600 North Pine Island Road, Plantation, FL 33324

Direct: (954) 535-5114 | Office: (954) 535-5100

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From: Dorman, Cory

Sent: Friday, June 10, 2016 11:17 AM

To: 'JOSIELFERRER@miamibeachfl.gov' <[JOSIELFERRER@miamibeachfl.gov](mailto:JOSIELFERRER@miamibeachfl.gov)>

Cc: Dabkowski, Adrian <[Adrian.Dabkowski@Kimley-horn.com](mailto:Adrian.Dabkowski@Kimley-horn.com)>

Subject: RE: One Hotel Beach Club | Traffic Study Methodology

Good morning Josiel,

Any update on this?

Thanks,



Cory D. Dorman, E.I.

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---

From: Dorman, Cory

Sent: Monday, June 06, 2016 9:36 AM

To: 'JOSIELFERRER@miamibeachfl.gov' <[JOSIELFERRER@miamibeachfl.gov](mailto:JOSIELFERRER@miamibeachfl.gov)>

Cc: Dabkowski, Adrian <[Adrian.Dabkowski@Kimley-horn.com](mailto:Adrian.Dabkowski@Kimley-horn.com)>

Subject: RE: One Hotel Beach Club | Traffic Study Methodology

Good morning Josiel,

Just following up regarding potential comments on the One Hotel Beach Club traffic study methodology.

Thanks,



Cory D. Dorman, E.I.

**Kimley-Horn** | 600 North Pine Island Road, Plantation, FL 33324

Direct: (954) 535-5114 | Office: (954) 535-5100

From: Dabkowski, Adrian  
Sent: Wednesday, June 01, 2016 1:14 PM  
To: [JOSIELFERRER@miamibeachfl.gov](mailto:JOSIELFERRER@miamibeachfl.gov)  
Cc: Cory Dorman ([cory.dorman@kimley-horn.com](mailto:cory.dorman@kimley-horn.com)) <[cory.dorman@kimley-horn.com](mailto:cory.dorman@kimley-horn.com)>  
Subject: One Hotel Beach Club | Traffic Study Methodology

Good afternoon Josiel:

Thank you for taking the time to meet with me last week to discuss the One Hotel Beach Club. The traffic study methodology is attached. Please let us know if the City has any questions/comments.

Thank you  
Adrian




**Adrian K. Dabkowski, P.E., PTOE**  
**Kimley-Horn** | 600 North Pine Island Road, Suite 450, Plantation, FL 33324  
Direct: 954-535-5144 | Main: 954-535-5100

Please note that I will be out of the office on vacation from June 2 and returning on June 15.



**Memorandum**

To: Josiel Ferrer-Diaz, E.I.  
City of Miami Beach

From: Adrian K. Dabkowski, P.E., PTOE 

Date: June 1, 2016

**Subject: One Hotel Beach Club  
Traffic Study Methodology**

The purpose of this memorandum is to summarize the traffic study methodology discussed at our May 24, 2016 meeting. The proposed beach club development is located on the east side of the One Hotel fronting the Miami Beach Beachwalk between 23<sup>rd</sup> Street and 24<sup>th</sup> Street in Miami Beach, Florida.

The proposed beach club consists of an 80-seat food and beverage area and a maximum occupancy of 816 patrons. The beach club will operate primarily as a members-only venue but will also be open to the public. The beach club will be open from 10:00 A.M. to 8:00 P.M., seven (7) days a week. Access to the beach club will be provided by a dedicated valet area located on the south side of 24<sup>th</sup> Street. Self-parking will not be available on-site. Therefore, it is assumed that all beach club patrons arriving to the site in personal vehicles will valet. The valet drop-off/pick-up area site plan and development site plan are provided in Attachment A. The following sections summarize our proposed methodology.

**TRIP GENERATION**

The Institute of Transportation Engineers' (ITE's) *Trip Generation Manual*, 9<sup>th</sup> Edition was not used for trip generation calculations due to the limited number of referenced studies relevant to the One Hotel Beach Club. One Hotel Beach Club vehicle-trips were determined by assuming the occupancy of the beach club is equivalent to the total person-trips generated by the beach club. Person-trips were then converted into vehicle-trips by using a vehicle occupancy factor. Please note that the ITE's *Trip Generation Manual*, 9<sup>th</sup> Edition, was used for the existing land uses to prepare Saturday peak hour of generator trip generation to determine the internal capture rate for the proposed beach club. ITE Land Use Code (LUC) 232 (High-Rise Residential Condominium/Townhouse) was used for the 828 condominium units which consist of 569 units in the Roney Palace and 259 units in the Paradiso. ITE LUC 310 (Hotel) was used for the 333-room hotel. Please note that the approved conditional use permit also includes 93,000 square feet of retail space. However, a portion of this area will be used for additional lobby space. In order to provide a conservative internal capture analysis, it was assumed that 10,000 square feet of restaurant space will be occupied. ITE LUC 931 (Quality Restaurant) was used for 10,000 square feet of restaurant space.

Based on the maximum December occupancy capacity of the beach club, 816 person-trips were assumed during the weekend event capacity. Several reduction factors were applied. Internal capture based on the ITE's *Trip Generation Handbook*, August 2014 were prepared for the proposed beach club. The beach club is expected to have a 6.0 percent (6.0%) internal capture rate during the Saturday peak hour of generator. A ten percent (10%) multimodal reduction factor was applied to account for the



urban environment in which the redevelopment is located. A 42.6 percent (42.6%) taxi/shared-ride reduction factor was applied based on actual field observation from the Cadillac Hotel located at 3925 Collins Avenue, data related to taxi trips is provided in Attachment B. An occupancy rate of 2.0 passengers/vehicle was applied.

Hourly arrival distribution assumes 5.0 percent (5.0%) between 1:00 to 2:00 P.M., 15.0 percent (15.0%) between 2:00 to 3:00 P.M., 25.0 percent (25.0%) between 3:00 to 4:00 P.M., 30.0 percent (30.0%) between 4:00 to 5:00 P.M., 20.0 percent (20.0%) between 5:00 to 6:00 P.M., and 5.0 percent (5.0%) between 6:00 to 7:00 P.M.

Hourly departure distribution assumes the following:

- 1:00 to 2:00 P.M. no departures
- 2:00 to 3:00 P.M. 20.0 percent (20.0%) of traffic arriving between 1:00 to 2:00 P.M. depart
- 3:00 to 4:00 P.M. 30.0 percent (30.0%) of traffic arriving between 1:00 to 2:00 P.M. depart and 20.0 percent (20.0%) of traffic arriving between 2:00 to 3:00 P.M. depart
- 4:00 to 5:00 P.M. 50.0 percent (50.0%) of traffic arriving between 1:00 to 2:00 P.M. depart and 30.0 percent (30.0%) of traffic arriving between 2:00 to 3:00 P.M. depart
- 5:00 to 6:00 P.M. 50.0 percent (50.0%) of traffic arriving between 2:00 to 3:00 P.M. depart and 20.0 percent (20.0%) of traffic arriving between 3:00 to 4:00 P.M. depart
- 6:00 to 7:00 P.M. 30.0 percent (30.0%) of traffic arriving between 3:00 to 4:00 P.M. depart and 20.0 percent (20.0%) of traffic arriving between 4:00 to 5:00 P.M. depart
- 7:00 to 8:00 P.M. 50.0 percent (50.0%) of traffic arriving between 3:00 to 4:00 P.M. depart, 30.0 percent (30.0%) of traffic arriving between 4:00 to 5:00 P.M. depart, and 20.0 percent (20.0%) of traffic arrive between 5:00 to 6:00 P.M.
- 8:00 to 9:00 P.M. 50.0 percent (50.0%) of traffic arriving between 4:00 to 5:00 P.M. depart, 30.0 percent (30.0%) of traffic arriving between 5:00 to 6:00 P.M. depart, and 20.0 percent (20.0%) of traffic arriving between 6:00 to 7:00 P.M.
- 9:00 to 10:00 P.M. 50.0 percent (50.0%) of traffic arriving between 5:00 to 6:00 P.M. depart and 80.0 percent (80.0%) of traffic arriving between 6:00 to 7:00 P.M. depart

The beach club is expected to generate 121 Saturday peak hour of generator trips. Detailed trip generation calculations are included in Attachment B.

## **ANALYSIS PERIOD DETERMINATION**

The proposed beach club is expected to host the largest events generating the most traffic on Saturday afternoons. Therefore, turning movement counts will be collected on a Saturday from 2:00 P.M. to 6:00 P.M. The analysis period will be based on one (1) peak period determined from the 4-hour turning movement counts. All traffic counts will be adjusted to account for seasonality using the appropriate Florida Department of Transportation (FDOT) seasonal factors specific for Miami Beach. Signal timing information will be obtained from Miami-Dade County Department of Transportation and Public Works – Traffic Signals and Signs Division. All background documentation collected will be provided in the Appendix of the traffic impact study.

## STUDY AREA

Based on the proposed development plan, the following intersections in addition to the project driveways, are proposed to be analyzed.

1. Dade Boulevard and 23<sup>rd</sup> Street
2. 23<sup>rd</sup> Street and Collins Avenue
3. One Hotel driveway entrance and Collins Avenue
4. One Hotel driveway exit and Collins Avenue
5. 24<sup>th</sup> Street and Collins Avenue
6. 26<sup>th</sup> Street and Collins Avenue

Turning movement counts will include pedestrians and bicyclists.

## TRIP DISTRIBUTION

Trip distribution will be determined based on turning movements counts collected at the study area intersections as well as the location of parking facilities used by the proposed redevelopment. Additionally, the distribution will be based on an interpolated cardinal trip distribution for the project site's traffic analysis zones (TAZs) obtained from the Miami-Dade Metropolitan Planning Organization's (MPO's) 2040 Cost Feasible Plan travel demand model 2010 and 2040 data. The project is located within TAZ 635. Therefore, a cardinal distribution was developed based on this TAZ. The traffic impact study will include graphics of the project traffic assignment and valet trips at the project's driveways and the study intersections. The detailed cardinal distribution is provided in Attachment C.

## BACKGROUND GROWTH RATE/MAJOR COMMITTED DEVELOPMENT

A background growth rate will be calculated based on historic growth trends at nearby Florida Department of Transportation (FDOT) traffic count stations. Additionally, growth rates based on the Miami-Dade MPO's projected 2010 and 2040 model network volumes will be examined. The higher of the two (2) growth rates will be used in the analysis. Documentation will be provided in the Appendix of the traffic impact study.

At this time the City has indicated that the following committed projects are to be included as part of background conditions:

1. Saxony (Faena)
2. Versailles Hotel

## CAPACITY ANALYSIS

Capacity analyses will be conducted for the analysis period for the study intersections. Intersection analyses will be performed using *Synchro 9.0* traffic engineering analysis software which applies the Transportation Research Board's (TRB's), *Highway Capacity Manual* (HCM), 2000 and 2010 methodologies. Capacity analyses will be conducted for three (3) scenarios: existing, build-out without project, and build-out with project. The build-out year will be specified in the analysis.

The following figures will be included for the study intersections:

- Existing conditions
- Trip distribution

- Trip assignment (will outline which driveways are used for the various land uses)
- Future background traffic conditions (with growth rate and committed development traffic)
- Future total traffic conditions (with project)

## ON-SITE BICYCLE PARKING

Providing on-site bicycle parking will be examined and documented in the report for both short-term and long-term bicycle parking. The City of Miami Beach's *Bicycle Parking Guidelines*, March 2011 will be used in determining on-site bicycle parking feasibility.

## ON-STREET PARKING

Any on-street parking modifications will be documented in the report. Furthermore, any proposed on-street parking modifications will be coordinated with the City of Miami Beach Parking Department. Coordination with the Parking Department will be documented in the traffic impact study.

## TRANSPORTATION DEMAND MANAGEMENT STRATEGIES

Transportation Demand Management (TDM) strategies will be developed to reduce the impact of project traffic on the surrounding roadway network and promote trip reduction. Typical measures promote bicycling and walking, encourage car/vanpooling and offer alternatives to the typical workday hours.

## DOCUMENTATION

The results of the traffic analysis will be summarized in a report. The report will include supporting documents including signal timings, lane geometry, and software output sheets. The report will also include text and graphics necessary to summarize the assumptions and analysis.

A CD and electronic copy of the reports will be provided as part of the submittal package. Additionally, the Synchro analysis files will be provided on the CD. The submittal package will also include the latest site plan to scale.

A separate document will be prepared for the valet/queuing.

## VALET ANALYSIS

A valet operations queuing analysis will be prepared for the vehicle drop-off/pick-up area to ensure that queues do not spill back into public right-of-way. The vehicle drop-off/pick-up area for the valet operation will be coordinated with the City of Miami Beach Parking Department.

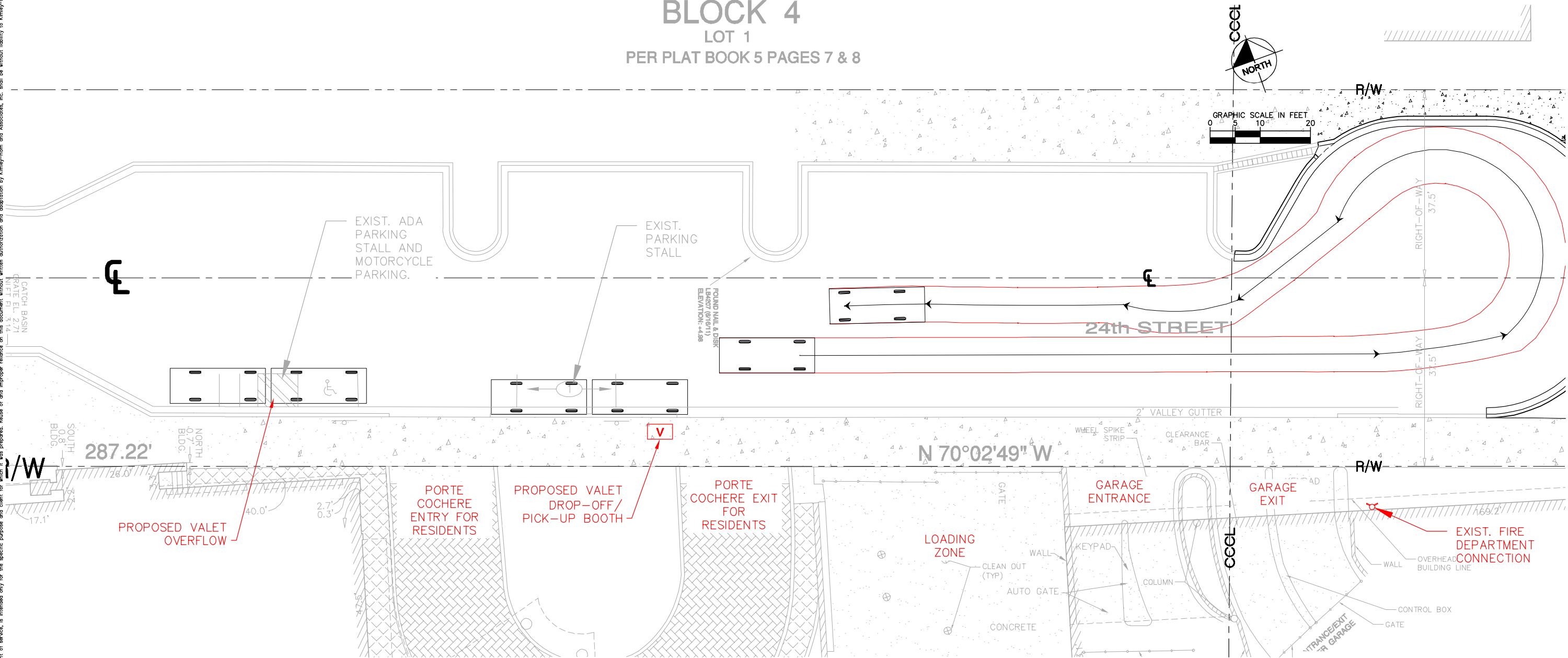
Trip generation estimates will be utilized to provide for two (2) scenarios including typical/average scenario and highest demand (peak hour of generator) scenario. The typical/average demand scenario will be based on half of the highest demand scenario. Taxi traffic will also be accounted for in the analysis. The valet operations queuing analysis will be conducted consistent with procedures described in ITE's *Transportation and Land Development*, 1988. A traffic circulation figure will be prepared to illustrate the valet routes to and from the vehicle drop-off/pick-up area. A technical memorandum documenting analysis assumptions and results, including the location of valet lots along with the number of parking spaces assigned for valet operations and the required number of valet attendants to service the facility under both typical and highest demand will be prepared.

K:\FTL\_TPTO\043433000-Perry Hotel 2300 Collins Avenue\Beach Club\correspondence\memo\06 01 16 one hotel beach club traffic study meth.docx

## **Attachment A**

Plotted By: Ebrahim, Sina Sheet Set: Kha Layout: EX-1 VALET LOCATION May 17, 2016 04:00:02pm K:\TL\TPTD\043433000-Perry Hotel 2300 Collins Avenue\Beech Club\CADD\Exhibits\2016.05.12 Valet Location\EX-1 Valet Location.dwg  
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BLOCK 4  
LOT 1  
PER PLAT BOOK 5 PAGES 7 & 8



LEGEND

- CENTERLINE
- RIGHT OF WAY AND/ OR PROPERTY LINE
- PROPOSED VALET BOOTH

No.	REVISIONS	DATE	BY

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600 N. PINE ISLAND RD, SUITE 450 PLANTATION FL 33324  
PHONE: 954-535-5100  
WWW.KIMLEY-HORN.COM CA 00000696

KHA PROJECT  
043433000

DATE  
5/17/2016

SCALE AS SHOWN

DESIGNED BY SE

DRAWN BY SE

CHECKED BY AD

ONE HOTEL  
BEACH CLUB

MIAMI BEACH

FLORIDA

DATE:

VALET DROP OFF  
24TH STREET

SHEET NUMBER  
EX-1

## **Attachment B**



### EXISTING WEEKEND PEAK HOUR OF GENERATOR TRIP GENERATION

		ITE TRIP GENERATION CHARACTERISTICS					DIRECTIONAL DISTRIBUTION		GROSS VOLUMES			INTERNAL CAPTURE		EXTERNAL TRIPS			10% MULTIMODAL REDUCTION		NET NEW EXTERNAL TRIPS		
		Land Use	ITE Edition	ITE Code	Scale	ITE Units	Percent		In	Out	Total	Percent	IC Trips	In	Out	Total	Percent	PB Trips	In	Out	Total
							In	Out													
GROUP 1	1	High-Rise Residential Condominium/Townhouse	9	232	828	du	43%	57%	119	158	277	7.9%	22	111	144	255	10.0%	26	100	129	229
	2	Hotel	9	310	333	room	56%	44%	131	103	234	4.7%	11	123	100	223	10.0%	22	111	90	201
	3	Quality Restaurant	9	931	10	ksf	59%	41%	64	44	108	21.3%	23	52	33	85	10.0%	9	47	29	76
	4																				
	5																				
	6																				
	7																				
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	11																				
	12																				
	13																				
	14																				
	15																				
		ITE Land Use Code		Rate or Equation		Total:		314	305	619	9.0%	56	286	277	563	10.0%	57	258	248	506	
		232		Y=0.3*(X)+28.85																	
		310		Y=0.69*(X)+4.32																	
		931		Y=10.87*(X)+-0.46																	

### PROPOSED WEEKEND PEAK HOUR OF GENERATOR TRIP GENERATION

ITE TRIP GENERATION CHARACTERISTICS					DIRECTIONAL DISTRIBUTION		GROSS VOLUMES			INTERNAL CAPTURE		EXTERNAL TRIPS			10% MULTIMODAL REDUCTION		NET NEW EXTERNAL TRIPS				
Land Use		ITE Edition	ITE Code	Scale	ITE Units	Percent		In	Out	Total	Percent	IC Trips	In	Out	Total	Percent	PB Trips	In	Out	Total	
						In	Out														
GROUP 2	1	High-Rise Residential Condominium/Townhouse	9	232	828	du	43%	57%	119	158	277	8.7%	24	109	144	253	10.0%	25	98	130	228
	2	Hotel	9	310	333	room	56%	44%	131	103	234	5.1%	12	122	100	222	10.0%	22	110	90	200
	3	Quality Restaurant	9	931	10	ksf	59%	41%	64	44	108	26.9%	29	50	29	79	10.0%	8	45	26	71
	4	Beach Club <sup>(1)</sup>	N/A	N/A	N/A	N/A	81%	19%	122	29	151	6.0%	9	118	24	142	10.0%	14	106	22	128
	5																				
	6																				
	7																				
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	12																				
	13																				
	14																				
	15																				
ITE Land Use Code						Total:		436	334	770	9.6%	74	399	297	696	10.0%	69	359	268	627	
232		Rate or Equation																			
310		Y=0.3*(X)+28.85																			
931		Y=0.69*(X)+4.32																			
N/A		Y=10.87*(X)+-0.46																			
		N/A																			
																		IN	OUT	TOTAL	
																		101	20	121	
																		43	9	52	
																		58	11	69	

Note: <sup>(1)</sup>Trip generation data based on valet parking projections and weekly event capacities. Detailed trip generation is attached.

<sup>(2)</sup>Taxi/shared-ride reduction based on data collected at Cadillac Hotel. Detailed calculations are attached.

Table 1

**1 Hotel South Beach - Private Beach - Valet Parking Projections**

Saturday Party Hourly Valet Projections	Saturday Event Capacity (person-trips)	Saturday Event Capacity (vehicle-trips) 2 persons per vehicle	Hourly Drop-off Valet Breakdown (1pm-2pm)		Hourly Drop-off Valet Breakdown (2pm-3pm)		Hourly Drop-off Valet Breakdown (3pm-4pm)		Hourly Drop-off Valet Breakdown (4pm-5pm)		Hourly Drop-off Valet Breakdown (5pm-6pm)		Hourly Drop-off Valet Breakdown (6pm-7pm)		Hourly Drop-off Valet Breakdown (7 pm-8pm)		Weekly Event Occupancy
January	408	204	5%	10	15%	31	25%	51	30%	61	20%	41	5%	10	0%	0	408
February	510	255	5%	13	15%	38	25%	64	30%	77	20%	51	5%	13	0%	0	510
March (Daylight Saving Start)	510	255	5%	13	5%	13	20%	51	30%	77	25%	64	10%	26	5%	13	510
April	595	298	5%	15	5%	15	20%	60	30%	89	25%	74	10%	30	5%	15	595
May	595	298	5%	15	5%	15	20%	60	30%	89	25%	74	10%	30	5%	15	595
June	574	287	5%	14	5%	14	20%	57	30%	86	25%	72	10%	29	5%	14	574
July	574	287	5%	14	5%	14	20%	57	30%	86	25%	72	10%	29	5%	14	574
August	574	287	5%	14	5%	14	20%	57	30%	86	25%	72	10%	29	5%	14	574
September	574	287	5%	14	5%	14	20%	57	30%	86	25%	72	10%	29	5%	14	574
October	638	319	5%	16	5%	16	20%	64	30%	96	25%	80	10%	32	5%	16	638
November (Daylight Savings End)	638	319	5%	16	15%	48	25%	80	30%	96	20%	64	5%	16	0%	0	638
December	816	408	5%	20	15%	61	25%	102	30%	122	20%	82	5%	20	0%	0	816

Assumptions: projections made with help from Zac Courtney, who opened the Beach Club at Soho House. The use of valet parking is correlated to the price charged. Charging \$25 will likely generate a 10% utilization of this service. Charging \$10-\$12 will generate aprox 50% utilization. Projections made for the Saturday parties are based on 50% utilization.

December Saturday Peak Hour Valet Trips	Drop-off Valet	Pick-up Valet	Total Valet	
1 to 2 PM	20	0	20	Pick-up valet trips represent 0% of 1 to 2 pm drop-off valet trips
2 to 3 PM	61	4	65	Pick-up valet trips represent 20% of 1 to 2 pm drop-off valet trips
3 to 4 PM	102	18	120	Pick-up valet trips represent 30% of 1 to 2 pm drop-off valet trips and 20% of 2 to 3 pm drop-off valet trips
4 to 5 PM	122	29	151	Pick-up valet trips represent 50% of 1 to 2 pm drop-off valet trips and 30% of 2 to 3 pm drop-off valet trips
5 to 6 PM	82	51	133	Pick-up valet trips represent 50% of 2 to 3 pm drop-off valet trips and 20% of 3 to 4 pm drop-off valet trips
6 to 7 PM	20	55	75	Pick-up valet trips represent 30% of 3 to 4 pm drop-off valet trips and 20% of 4 to 5 pm drop-off valet trips
7 to 8 PM	0	104	104	Pick-up valet trips represent 50% of 3 to 4 pm drop-off valet trips, 30% of 4 to 5 pm drop-off valet trips, and 20% of 5 to 6 pm drop-off valet trips
8 to 9 PM	0	90	90	Pick-up valet trips represent 50% of 4 to 5 pm drop-off valet trips, 30% of 5 to 6 pm drop-off valet trips, and 20% of 6 to 7 pm drop-off valet trips
9 to 10 PM	0	57	57	Pick-up valet trips represent 50% of 5 to 6 pm drop-off valet trips and 80% of 6 to 7 pm drop-off valet trips

# Internal Capture Reduction Calculations

Methodology for A.M. Peak Hour and P.M. Peak Hour  
based on the *Trip Generation Handbook*, 3rd Edition, published by the Institute of Transportation Engineers

Methodology for Daily  
based on the average of the Unconstrained Rates for the A.M. Peak Hour and P.M. Peak Hour

## SUMMARY (EXISTING)

GROSS TRIP GENERATION							
INPUT	Land Use	Daily		A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit	Enter	Exit
	Office						
	Retail						
	Restaurant					64	44
	Cinema/Entertainment						
	Residential					119	158
	Hotel					131	103
		0	0	0	0	314	305
INTERNAL TRIPS							
OUTPUT	Land Use	Daily		A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit	Enter	Exit
	Office	0	0	0	0	0	0
	Retail	0	0	0	0	0	0
	Restaurant	0	0	0	0	12	11
	Cinema/Entertainment	0	0	0	0	0	0
	Residential	0	0	0	0	8	14
	Hotel	0	0	0	0	8	3
		0	0	0	0	28	28
OUTPUT	Total % Reduction	0.0%		0.0%		9.0%	
	Office						
	Retail						
	Restaurant					21.3%	
	Cinema/Entertainment						
	Residential					7.9%	
	Hotel					4.7%	
EXTERNAL TRIPS							
OUTPUT	Land Use	Daily		A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit	Enter	Exit
	Office	0	0	0	0	0	0
	Retail	0	0	0	0	0	0
	Restaurant	0	0	0	0	52	33
	Cinema/Entertainment	0	0	0	0	0	0
	Residential	0	0	0	0	111	144
	Hotel	0	0	0	0	123	100
		0	0	0	0	286	277

# Internal Capture Reduction Calculations

Methodology for A.M. Peak Hour and P.M. Peak Hour  
based on the *Trip Generation Handbook*, 3rd Edition, published by the Institute of Transportation Engineers

Methodology for Daily  
based on the average of the Unconstrained Rates for the A.M. Peak Hour and P.M. Peak Hour

## SUMMARY (PROPOSED)

GROSS TRIP GENERATION							
INPUT	Land Use	Daily		A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit	Enter	Exit
	Office						
	Retail						
	Restaurant					64	44
	Cinema/Entertainment					122	29
	Residential					119	158
	Hotel					131	103
		0	0	0	0	436	334
INTERNAL TRIPS							
OUTPUT	Land Use	Daily		A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit	Enter	Exit
	Office	0	0	0	0	0	0
	Retail	0	0	0	0	0	0
	Restaurant	0	0	0	0	14	15
	Cinema/Entertainment	0	0	0	0	4	5
	Residential	0	0	0	0	10	14
	Hotel	0	0	0	0	9	3
		0	0	0	0	37	37
OUTPUT	Total % Reduction	0.0%		0.0%		9.6%	
	Office						
	Retail						
	Restaurant					26.9%	
	Cinema/Entertainment					6.0%	
	Residential					8.7%	
	Hotel					5.1%	
EXTERNAL TRIPS							
OUTPUT	Land Use	Daily		A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit	Enter	Exit
	Office	0	0	0	0	0	0
	Retail	0	0	0	0	0	0
	Restaurant	0	0	0	0	50	29
	Cinema/Entertainment	0	0	0	0	118	24
	Residential	0	0	0	0	109	144
	Hotel	0	0	0	0	122	100
		0	0	0	0	399	297

Hotel and Restaurant Valet Drop-off and Pick-up Traffic Data Summary  
Friday October 22, 2010

Hotel Valet Area Observations									
Time	Hotel Pick-up Maximum Queue	Hotel Pick-Up Volume	Hotel Pick-Up Peak Hour Volume	Hotel Drop-off Maximum Queue	Hotel Drop-off Volume	Hotel Drop-Off Peak Hour Volume	Total Hotel Volume		Total Hotel Peak Hour Volume
18:00	0	0		3	18		18		
18:15	2	4		2	3		7		
18:30	2	6		3	7		13		
18:45	4	23	40	4	13	37	36		77
19:00	3	9		1	3		12		
19:15	2	6		2	7		13		
19:30	1	2		3	14		16		
19:45	0	0		2	4		4		
20:00	1	3		2	7		10		
20:15	1	3		1	2		5		
20:30	3	11		2	7		18		
20:45	3	13		2	6		19		

Restaurant Valet Area Observations						
Time	Restaurant Pick-up Maximum Queue	Restaurant Pick-Up Volume	Restaurant Pick-Up Peak Hour Volume	Restaurant Drop-off Maximum Queue	Restaurant Drop-off Volume	Restaurant Drop-off Peak Hour Volume
18:00	5	17		0	0	
18:15	4	13		2	7	8
18:30	3	9		0	0	
18:45	3	18		0	0	
19:00	4	15		1	1	
19:15	4	14		1	1	
19:30	5	18		1	1	
19:45	6	27		1	2	
20:00	5	18	81	1	1	
20:15	5	15		0	0	
20:30	5	15		0	1	
20:45	6	33		0	0	

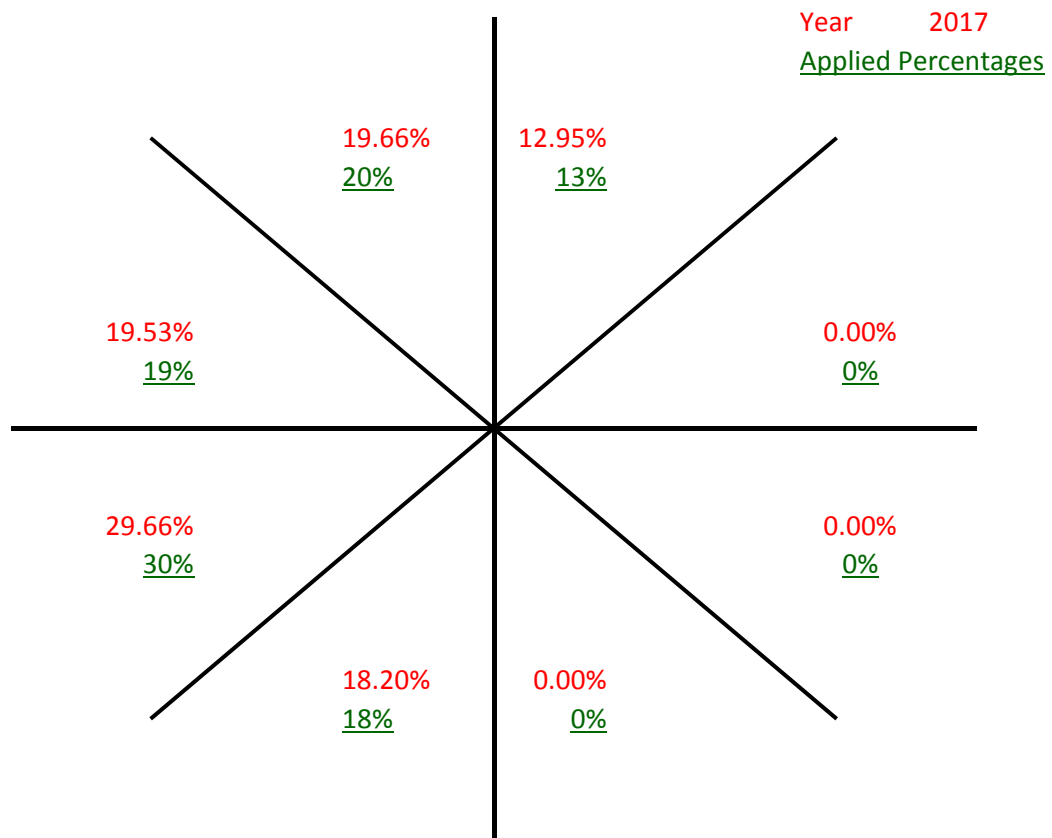
Taxi vs Valet Trips									
Time	Valet Pick-up Trips	Valet Drop-off Trips	Total Valet Trips	Taxi Pick-up Trips	Taxi Drop-off Trips	Total Taxi Trips	Total Site Pick-up Trips	Total Site Drop-off Trips	Total Site Trips
18:00	1	11	12	16	7	23	17	18	35
18:15	5	6	11	12	4	16	17	10	27
18:30	3	3	6	12	4	16	15	7	22
18:45	32	10	42	9	3	12	41	13	54
19:00	17	1	18	7	3	10	24	4	28
19:15	12	5	17	8	3	11	20	8	28
19:30	12	12	24	8	3	11	20	15	35
19:45	20	4	24	7	2	9	27	6	33
20:00	10	4	14	11	4	15	21	8	29
20:15	3	1	4	15	1	16	18	2	20
20:30	15	4	19	11	4	15	26	8	34
20:45	35	2	37	11	4	15	46	6	52

Taxi Trips Observed 42.6%



## **Attachment C**

Cardinal Distribution for TAZ 635



## Miami-Dade 2010 Directional Distribution Summary

Origin TAZ			Cardinal Directions								Total
County TAZ	Regional TAZ		NNE	ENE	ESE	SSE	SSW	WSW	WNW	NNW	
616	3516	TRIPS	703	540	0	1,630	1,842	1,537	1,127	1,812	9,191
616	3516	PERCENT	7.7	5.9	0.0	17.7	20.0	16.7	12.3	19.7	
617	3517	TRIPS	0	10	0	0	10	0	0	20	40
617	3517	PERCENT	0.0	25.0	0.0	0.0	25.0	0.0	0.0	50.0	
618	3518	TRIPS	330	165	0	322	542	490	234	755	2,838
618	3518	PERCENT	11.6	5.8	0.0	11.4	19.1	17.3	8.3	26.6	
619	3519	TRIPS	158	0	0	588	1,822	1,431	915	2,017	6,931
619	3519	PERCENT	2.3	0.0	0.0	8.5	26.3	20.7	13.2	29.1	
620	3520	TRIPS	173	0	0	481	2,563	2,285	1,185	2,715	9,402
620	3520	PERCENT	1.8	0.0	0.0	5.1	27.3	24.3	12.6	28.9	
621	3521	TRIPS	750	0	271	730	1,325	1,008	570	1,178	5,832
621	3521	PERCENT	12.9	0.0	4.7	12.5	22.7	17.3	9.8	20.2	
622	3522	TRIPS	846	0	0	547	1,669	2,238	881	1,779	7,960
622	3522	PERCENT	10.6	0.0	0.0	6.9	21.0	28.1	11.1	22.4	
623	3523	TRIPS	865	314	362	1,036	918	2,053	953	915	7,416
623	3523	PERCENT	11.7	4.2	4.9	14.0	12.4	27.7	12.9	12.3	
624	3524	TRIPS	1,510	1,185	279	1,139	2,348	3,798	2,999	2,480	15,738
624	3524	PERCENT	9.6	7.5	1.8	7.2	14.9	24.1	19.1	15.8	
625	3525	TRIPS	904	151	0	713	469	1,573	902	1,029	5,741
625	3525	PERCENT	15.8	2.6	0.0	12.4	8.2	27.4	15.7	17.9	
626	3526	TRIPS	86	0	0	0	2,128	2,780	1,523	2,730	9,247
626	3526	PERCENT	0.9	0.0	0.0	0.0	23.0	30.1	16.5	29.5	
627	3527	TRIPS	268	0	0	0	2,782	2,384	1,028	1,982	8,444
627	3527	PERCENT	3.2	0.0	0.0	0.0	33.0	28.2	12.2	23.5	
628	3528	TRIPS	572	0	107	174	1,417	1,412	675	755	5,112
628	3528	PERCENT	11.2	0.0	2.1	3.4	27.7	27.6	13.2	14.8	
629	3529	TRIPS	2,040	549	224	1,939	1,885	5,257	2,755	2,552	17,201
629	3529	PERCENT	11.9	3.2	1.3	11.3	11.0	30.6	16.0	14.8	
630	3530	TRIPS	1,018	0	101	231	1,694	2,664	1,198	1,047	7,953
630	3530	PERCENT	12.8	0.0	1.3	2.9	21.3	33.5	15.1	13.2	
631	3531	TRIPS	422	0	0	0	1,119	1,636	433	741	4,351
631	3531	PERCENT	9.7	0.0	0.0	0.0	25.7	37.6	10.0	17.0	
632	3532	TRIPS	250	0	0	0	528	1,486	568	688	3,520
632	3532	PERCENT	7.1	0.0	0.0	0.0	15.0	42.2	16.1	19.6	
633	3533	TRIPS	330	0	0	0	1,045	1,375	758	776	4,284
633	3533	PERCENT	7.7	0.0	0.0	0.0	24.4	32.1	17.7	18.1	
634	3534	TRIPS	1,649	138	246	667	1,620	2,236	1,335	1,553	9,444
634	3534	PERCENT	17.5	1.5	2.6	7.1	17.2	23.7	14.1	16.4	
635	3535	TRIPS	768	0	0	0	1,106	1,912	1,284	1,253	6,323
635	3535	PERCENT	12.2	0.0	0.0	0.0	17.5	30.2	20.3	19.8	
636	3536	TRIPS	775	0	0	320	731	2,473	1,515	1,466	7,280

## Miami-Dade 2040 Directional Distribution Summary

Origin TAZ			Cardinal Directions								Total
County TAZ	Regional TAZ		NNE	ENE	ESE	SSE	SSW	WSW	WNW	NNW	
616	3516	TRIPS	887	556	0	1,876	1,859	1,836	1,423	2,112	10,549
616	3516	PERCENT	8.4	5.3	0.0	17.8	17.6	17.4	13.5	20.0	
617	3517	TRIPS	81	36	8	61	50	65	48	56	405
617	3517	PERCENT	20.0	8.9	2.0	15.1	12.4	16.1	11.9	13.8	
618	3518	TRIPS	245	194	0	283	618	438	292	527	2,597
618	3518	PERCENT	9.4	7.5	0.0	10.9	23.8	16.9	11.2	20.3	
619	3519	TRIPS	297	0	0	1,202	2,738	1,949	1,188	3,411	10,785
619	3519	PERCENT	2.8	0.0	0.0	11.2	25.4	18.1	11.0	31.6	
620	3520	TRIPS	59	0	0	691	2,586	2,659	1,388	3,229	10,612
620	3520	PERCENT	0.6	0.0	0.0	6.5	24.4	25.1	13.1	30.4	
621	3521	TRIPS	641	0	207	652	1,069	897	507	931	4,904
621	3521	PERCENT	13.1	0.0	4.2	13.3	21.8	18.3	10.3	19.0	
622	3522	TRIPS	1,041	0	0	1,013	1,705	2,290	939	1,768	8,756
622	3522	PERCENT	11.9	0.0	0.0	11.6	19.5	26.2	10.7	20.2	
623	3523	TRIPS	660	379	254	1,131	910	1,892	857	961	7,044
623	3523	PERCENT	9.4	5.4	3.6	16.1	12.9	26.9	12.2	13.6	
624	3524	TRIPS	1,731	1,417	382	1,244	2,520	3,891	3,312	2,764	17,261
624	3524	PERCENT	10.0	8.2	2.2	7.2	14.6	22.5	19.2	16.0	
625	3525	TRIPS	919	266	0	846	669	1,872	1,085	1,165	6,822
625	3525	PERCENT	13.5	3.9	0.0	12.4	9.8	27.4	15.9	17.1	
626	3526	TRIPS	108	0	0	0	3,832	3,818	1,879	4,428	14,065
626	3526	PERCENT	0.8	0.0	0.0	0.0	27.2	27.2	13.4	31.5	
627	3527	TRIPS	667	0	0	0	4,525	3,711	1,836	3,520	14,259
627	3527	PERCENT	4.7	0.0	0.0	0.0	31.7	26.0	12.9	24.7	
628	3528	TRIPS	555	0	175	168	1,097	1,212	405	514	4,126
628	3528	PERCENT	13.5	0.0	4.2	4.1	26.6	29.4	9.8	12.5	
629	3529	TRIPS	1,948	557	335	1,556	1,577	4,662	2,347	1,892	14,874
629	3529	PERCENT	13.1	3.7	2.3	10.5	10.6	31.3	15.8	12.7	
630	3530	TRIPS	1,398	0	223	373	1,797	2,860	1,105	1,164	8,920
630	3530	PERCENT	15.7	0.0	2.5	4.2	20.2	32.1	12.4	13.1	
631	3531	TRIPS	802	0	0	0	2,347	2,348	855	1,454	7,806
631	3531	PERCENT	10.3	0.0	0.0	0.0	30.1	30.1	11.0	18.6	
632	3532	TRIPS	603	0	0	0	1,583	2,022	1,057	919	6,184
632	3532	PERCENT	9.8	0.0	0.0	0.0	25.6	32.7	17.1	14.9	
633	3533	TRIPS	573	0	0	0	1,534	1,830	876	1,027	5,840
633	3533	PERCENT	9.8	0.0	0.0	0.0	26.3	31.3	15.0	17.6	
634	3534	TRIPS	1,445	71	167	680	1,389	1,930	1,212	1,265	8,159
634	3534	PERCENT	17.7	0.9	2.1	8.3	17.0	23.7	14.9	15.5	
635	3535	TRIPS	1,380	0	0	0	1,833	2,491	1,518	1,720	8,942
635	3535	PERCENT	15.4	0.0	0.0	0.0	20.5	27.9	17.0	19.2	
636	3536	TRIPS	1,729	0	0	727	1,308	2,610	1,308	1,181	8,863

## APPENDIX C: Traffic Data

Peak Season Conversion Factor



MacArthur Causeway Peak Season Conversion Factor				
Week	Weekly Volume	PSCF	Month	Days
1	84501.5	1.24	Jan	1-4
2	96697.8	1.08		7-11
3	92890.4	1.13		14-18
4	87868.25	1.19		21-25
5	93600.75	1.12		28-31
6	93618	1.12	Feb	1-8
7	97020.8	1.08		11-15
8	95629	1.10		18-22
9	93869	1.12		25-28
10	98171.4	1.07	mar	1-8
11	103386.8	1.01		11-15
12	104828.6	1.00		18-22
13	100316.2	1.04		25-29
14	92938.8	1.13	apr	1-5
15	94095.2	1.11		8-12
16	92559.8	1.13		15-19
17	93979	1.12		22-30
18	92123.333	1.14	may	1-3
19	94034.2	1.11		6-10
20	94298.8	1.11		13-17
21	87019.2	1.20		20-24
22	83929	1.25		27-31
23	86256	1.22	june	3-7
24	82286.2	1.27		10-14
25	94499.2	1.11		17-21
26	85008.8	1.23		24-28
27			july	1-5
28	91188.2	1.15		8-12
29	79613.6	1.32		15-19
30	82289.6	1.27		22-26
31	80496	1.30		29-31
32	84339.6	1.24	aug	1-9
33	87381.6	1.20		12-16
34	88768.4	1.18		19-23
35	86854.6	1.21		26-30
36	85645.2	1.22	sept	2-6
37	85048.2	1.23		9-13
38	85223	1.23		16-20
39	87485	1.20		23-30
40	87247.75	1.20	oct	1-4
41	89149	1.18		7-11
42	91419.2	1.15		14-18
43	89443.6	1.17		21-25
44	91675.75	1.14		28-31
45	91660	1.14	Nov	1-8
46	88852	1.18		11-15
47	86189.2	1.22		18-22
48	82268.4	1.27		25-29
49	96358.8	1.09	dec	2-6
50	90945.2	1.15		9-13
51	91048.2	1.15		16-20
52	82311.2	1.27		23-31

## Turning Movement Counts

23RD STREET & DADE BOULEVARD  
 MIAMI BEACH, FLORIDA  
 COUNTED BY: ADAM JOHNSON  
 SIGNALIZED

Traffic Survey Specialists, Inc.  
 85 SE 4th Avenue, Unit 109  
 Delray Beach, Florida 33483  
 Phone (561) 272-3255

Site Code : 00160137  
 Start Date: 06/18/16  
 File I.D. : 23STDADE  
 Page : 1

ALL VEHICLES

PINE TREE DRIVE				23RD 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 06/18/16 -----																	
14:00	0	52	80	0	0	59	0	85	0	0	70	83	0	0	0	0	429
14:15	0	55	85	0	0	59	0	69	0	0	60	82	0	0	0	0	410
14:30	2	43	83	0	0	45	0	98	0	0	72	86	0	0	0	0	429
14:45	1	72	99	0	1	67	0	73	0	0	51	88	0	0	0	0	452
Hr Total	3	222	347	0	1	230	0	325	0	0	253	339	0	0	0	0	1720
15:00	1	49	65	0	0	61	0	89	0	0	76	77	0	0	0	0	418
15:15	1	51	70	0	0	75	0	103	0	0	67	78	0	0	0	0	445
15:30	0	63	87	0	0	45	0	80	0	0	63	102	0	0	0	0	440
15:45	0	59	75	0	0	78	0	99	0	0	67	84	0	0	0	0	462
Hr Total	2	222	297	0	0	259	0	371	0	0	273	341	0	0	0	0	1765
16:00	0	70	77	0	0	74	0	73	0	0	53	76	0	0	0	0	423
16:15	0	54	73	0	0	65	0	80	0	0	52	65	0	0	0	0	389
16:30	0	52	72	0	0	68	0	93	0	0	71	67	0	0	0	0	423
16:45	0	53	88	0	0	76	0	93	0	0	59	81	0	0	0	0	450
Hr Total	0	229	310	0	0	283	0	339	0	0	235	289	0	0	0	0	1685
17:00	1	47	71	0	0	64	0	93	0	0	74	68	0	0	0	0	418
17:15	0	46	78	0	0	78	0	103	0	0	78	70	0	0	0	0	453
17:30	1	40	75	0	0	63	0	127	0	0	50	83	0	0	0	0	439
17:45	0	65	83	0	0	72	0	74	0	0	63	64	0	0	0	0	421
Hr Total	2	198	307	0	0	277	0	397	0	0	265	285	0	0	0	0	1731
-----																	
*TOTAL*	7	871	1261	0	1	1049	0	1432	0	0	1026	1254	0	0	0	0	6901

PINE TREE DRIVE				23RD STREET			
0	0	309	244	0	0	355	0
0	0	309	244	0	0	355	0
553		1,158		627		355	
ALL VEHICLES				ALL VEHICLES			
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0
1,171		590		1,211		272	
Intersection Total				Intersection Total			
1,770				1,770			
DADE BOULEVARD				23RD STREET			
272	0	250	340	0	0	340	0
309	0	250	340	0	0	340	0
0	0	250	340	0	0	340	0
581	0	250	340	0	0	340	0

23RD STREET & DADE BOULEVARD  
 MIAMI BEACH, FLORIDA  
 COUNTED BY: ADAM JOHNSON  
 SIGNALIZED

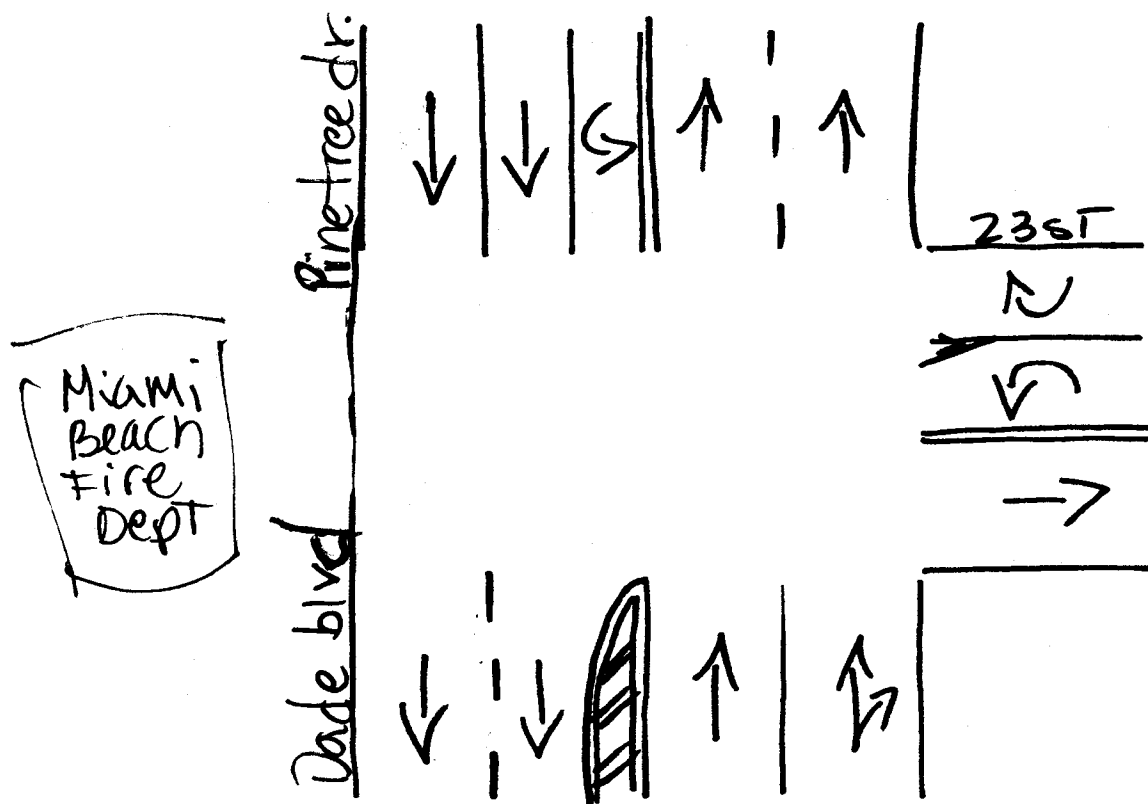
Traffic Survey Specialists, Inc.  
 85 SE 4th Avenue, Unit 109  
 Delray Beach, Florida 33483  
 Phone (561) 272-3255

Site Code : 00160137  
 Start Date: 06/18/16  
 File I.D. : 23STDADE  
 Page : 1

PEDESTRIANS & BIKES

PINE TREE DRIVE From North				23RD STREET From East				DADE BOULEVARD From South				----- From West								Total
Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds					
Date 06/18/16 -----																				
14:00	0	0	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	2
14:15	0	2	0	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	4
14:30	0	2	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	0	5
14:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	4	0	2	0	0	0	2	0	1	0	2	0	0	0	0	0	0	0	11
15:00	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	1
15:15	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4
15:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
15:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	1	0	4	0	0	0	0	0	0	0	5
16:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
Hr Total	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	0	0	4
-----																				
*TOTAL*	0	4	0	2	0	0	0	3	0	2	0	10	0	0	0	0	0	0	0	21

↑  
North



Miami beach, Florida  
November 25, 2013  
drawn by: Luis Palomino  
Signalized ✓



23RD STREET & A1A  
 MIAMI BEACH, FLORIDA  
 COUNTED BY: SEBASTIAN SALVO  
 SIGNALIZED

Traffic Survey Specialists, Inc.  
 85 SE 4th Avenue, Unit 109  
 Delray Beach, Florida 33483  
 Phone (561) 272-3255

Site Code : 00160137  
 Start Date: 06/18/16  
 File I.D. : 23ST\_A1A  
 Page : 1

23RD ST & A1A, SOUTH DRIVEWAY

A1A From North					23RD STREET From East					A1A From South					23RD STREET From West					
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		
Date 06/18/16																				
14:00	0	2	205	55	0	3	6	7	0	7	196	5	0	59	7	30	582			
14:15	1	7	179	46	0	3	2	11	1	8	189	5	0	58	7	34	551			
14:30	1	7	186	66	0	2	3	10	0	16	177	9	0	48	12	35	572			
14:45	0	6	189	46	0	2	8	7	0	17	183	7	0	61	17	39	582			
Hr Total	2	22	759	213	0	10	19	35	1	48	745	26	0	226	43	138	2287			
15:00	0	5	174	51	0	3	10	3	1	17	186	7	0	62	15	36	570			
15:15	0	6	187	43	0	3	12	10	0	9	186	10	0	54	7	33	560			
15:30	0	1	191	49	0	3	12	8	0	14	186	8	0	52	6	54	584			
15:45	1	2	192	65	0	1	12	12	0	13	197	6	0	64	13	30	608			
Hr Total	1	14	744	208	0	10	46	33	1	53	755	31	0	232	41	153	2322			
16:00	1	4	192	69	0	4	6	10	0	8	197	7	0	66	8	50	622			
16:15	0	2	200	52	1	2	4	8	0	14	190	11	0	49	8	32	573			
16:30	0	2	172	53	0	0	12	8	0	13	194	8	0	59	9	31	561			
16:45	1	7	181	55	0	1	7	12	0	12	183	11	0	56	5	29	560			
Hr Total	2	15	745	229	1	7	29	38	0	47	764	37	0	230	30	142	2316			
17:00	0	5	211	56	0	4	6	8	0	8	204	5	0	64	5	37	613			
17:15	1	3	182	55	0	5	11	8	0	14	164	12	0	65	5	34	559			
17:30	0	3	166	48	0	2	8	4	0	8	213	10	0	63	5	27	557			
17:45	0	4	164	53	0	4	12	15	0	6	158	5	0	48	5	35	509			
Hr Total	1	15	723	212	0	15	37	35	0	36	739	32	0	240	20	133	2238			
*TOTAL*	6	66	2971	862	1	42	131	141	2	184	3003	126	0	928	134	566	9163			

23RD STREET & A1A  
 MIAMI BEACH, FLORIDA  
 COUNTED BY: SEBASTIAN SALVO  
 SIGNALIZED

Traffic Survey Specialists, Inc.  
 85 SE 4th Avenue, Unit 109  
 Delray Beach, Florida 33483  
 Phone (561) 272-3255

Site Code : 00160137  
 Start Date: 06/18/16  
 File I.D. : 23ST\_A1A  
 Page : 2

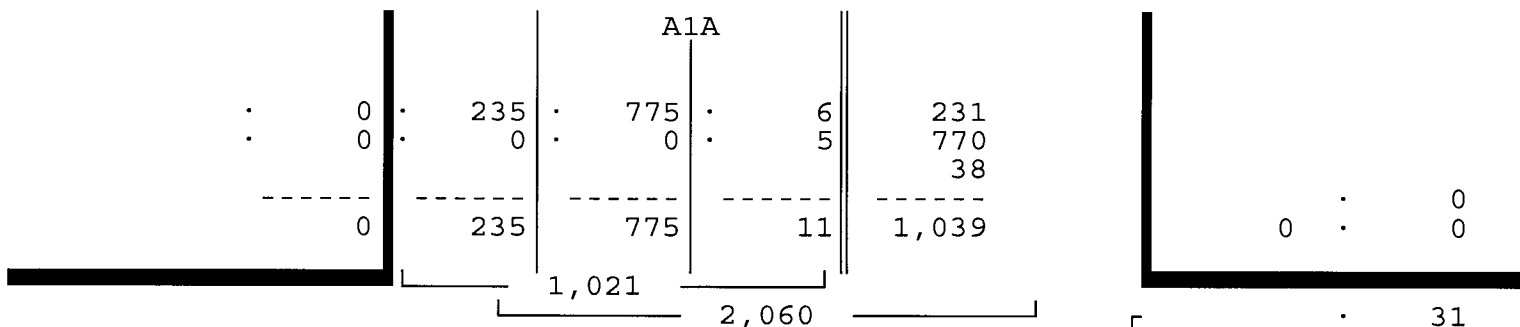
23RD ST & A1A, SOUTH DRIVEWAY

A1A From North				23RD STREET From East				A1A From South				23RD STREET From West				Total
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	

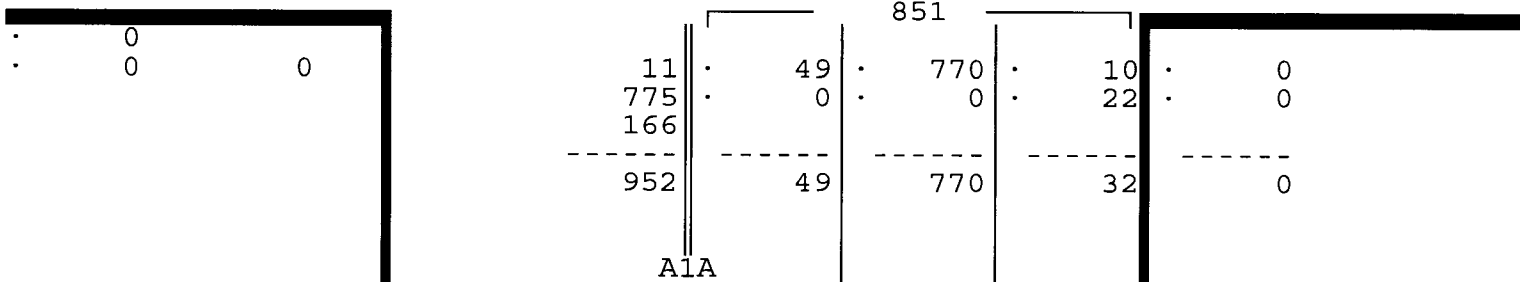
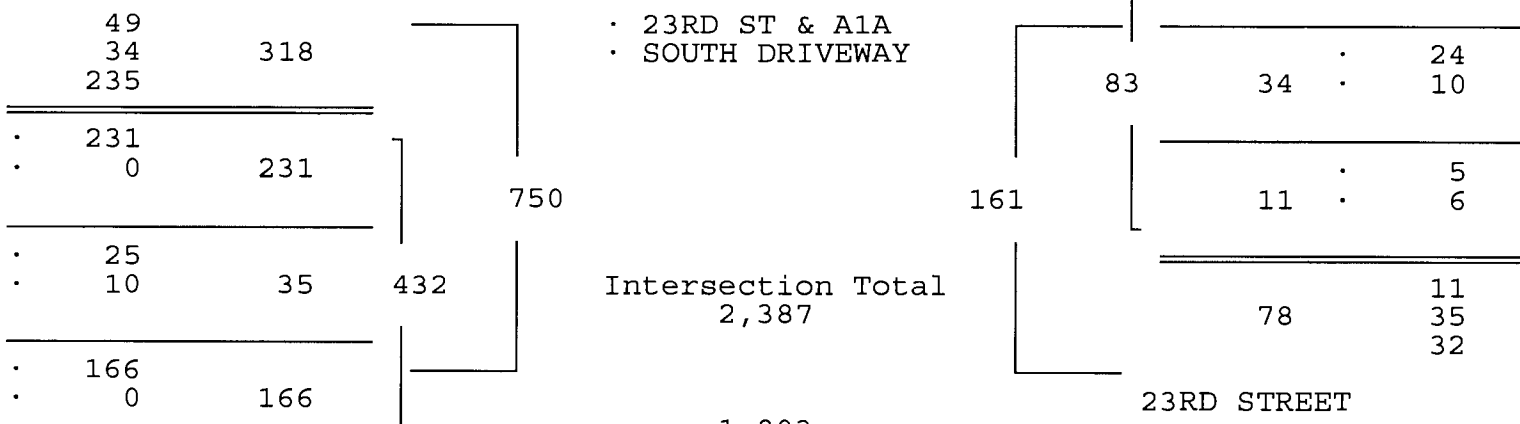
Date 06/18/16

Peak Hour Analysis By Entire Intersection for the Period: 14:00 to 18:00 on 06/18/16

Peak start	15:30				15:30				15:30				15:30					
Volume	2	9	775	235	1	10	34	38	0	49	770	32	0	231	35	166		
Percent	0%	1%	76%	23%	1%	12%	41%	46%	0%	6%	90%	4%	0%	53%	8%	38%		
Pk total	1021					83					851					432		
Highest	16:00				15:45				15:45				16:00					
Volume	1	4	192	69	0	1	12	12	0	13	197	6	0	66	8	50		
Hi total	266					25					216					124		
PHF	.96					.83					.98					.87		



23RD STREET



23RD STREET & A1A  
 MIAMI BEACH, FLORIDA  
 COUNTED BY: SEBASTIAN SALVO  
 SIGNALIZED

Traffic Survey Specialists, Inc.  
 85 SE 4th Avenue, Unit 109  
 Delray Beach, Florida 33483  
 Phone (561) 272-3255

Site Code : 00160137  
 Start Date: 06/18/16  
 File I.D. : 23ST\_A1A  
 Page : 1

SOUTH DRIVEWAY

A1A From North					23RD STREET From East				A1A From South				23RD STREET From West							
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		Total
Date 06/18/16 -----																				
14:00	0	0	0	0	0	1	1	3		0	0	0	2		0	0	4	0		11
14:15	0	0	0	0	0	1	0	1		0	0	0	3		0	0	5	0		10
14:30	0	2	0	0	0	1	2	2		0	0	0	8		0	0	3	0		18
14:45	0	4	0	0	0	1	3	3		0	0	0	4		0	0	8	0		23
Hr Total	0	6	0	0	0	4	6	9		0	0	0	17		0	0	20	0		62
15:00	0	2	0	0	0	1	1	0		0	0	0	6		0	0	5	0		15
15:15	0	3	0	0	0	1	5	3		0	0	0	6		0	0	1	0		19
15:30	0	1	0	0	0	2	3	2		0	0	0	4		0	0	2	0		14
15:45	0	1	0	0	0	0	4	2		0	0	0	4		0	0	1	0		12
Hr Total	0	7	0	0	0	4	13	7		0	0	0	20		0	0	9	0		60
16:00	0	2	0	0	0	1	1	1		0	0	0	5		0	0	4	0		14
16:15	0	1	0	0	1	2	2	2		0	0	0	9		0	0	3	0		20
16:30	0	0	0	0	0	0	3	3		0	0	0	4		0	0	2	0		12
16:45	0	1	0	0	0	0	3	1		0	0	0	8		0	0	3	0		16
Hr Total	0	4	0	0	1	3	9	7		0	0	0	26		0	0	12	0		62
17:00	0	2	0	0	0	2	2	2		0	0	0	3		0	0	1	0		12
17:15	0	0	0	0	0	1	3	3		0	0	0	10		0	0	0	0		17
17:30	0	0	0	0	0	1	3	0		0	0	0	5		0	0	0	0		9
17:45	0	1	0	0	0	2	4	2		0	0	0	5		0	0	1	0		15
Hr Total	0	3	0	0	0	6	12	7		0	0	0	23		0	0	2	0		53
-----																				
*TOTAL*	0	20	0	0	1	17	40	30		0	0	0	86		0	0	43	0		237

23RD STREET & A1A  
 MIAMI BEACH, FLORIDA  
 COUNTED BY: SEBASTIAN SALVO  
 SIGNALIZED

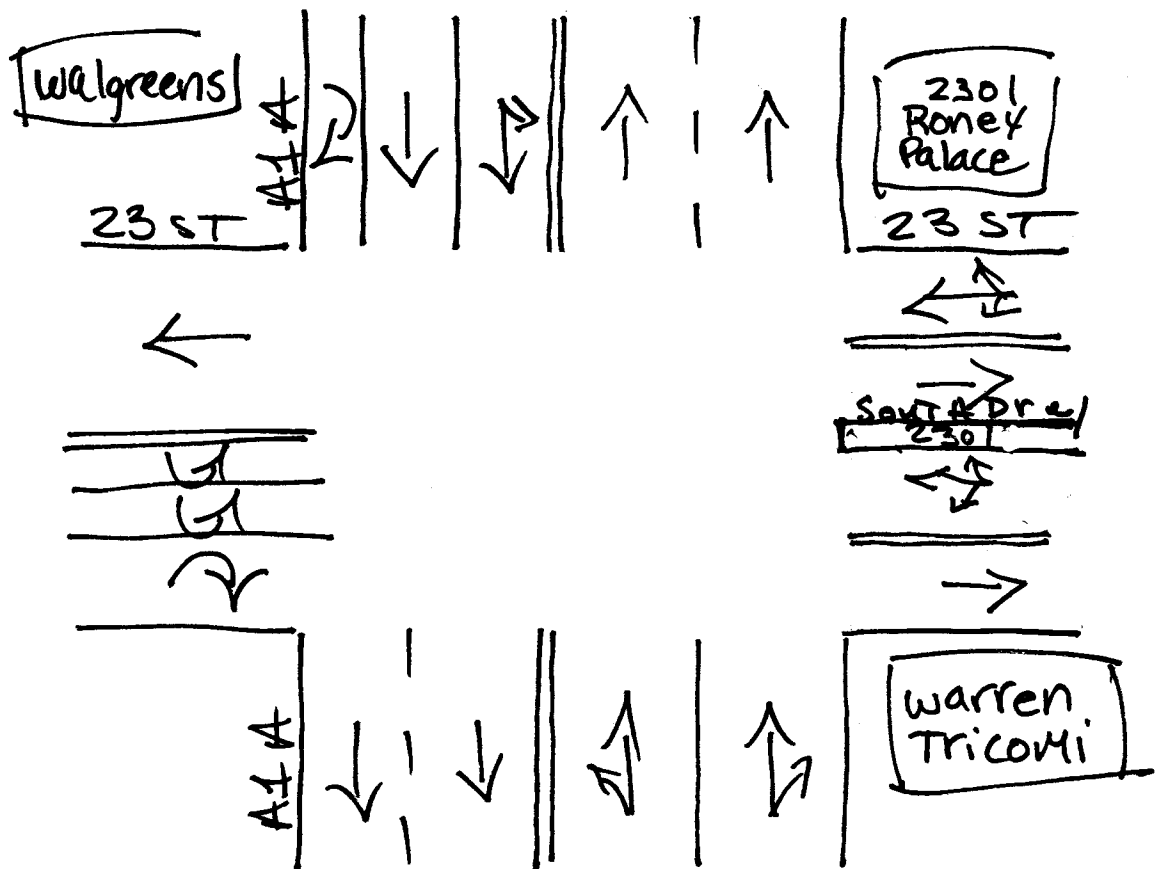
Traffic Survey Specialists, Inc.  
 85 SE 4th Avenue, Unit 109  
 Delray Beach, Florida 33483  
 Phone (561) 272-3255

Site Code : 00160137  
 Start Date: 06/18/16  
 File I.D. : 23ST\_A1A  
 Page : 1

PEDESTRIANS

A1A From North				23RD STREET From East				A1A From South				23RD STREET From West								Total
Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds					
Date 06/18/16																				
14:00	0	2	0	29	0	5	0	64	0	1	0	16	0	1	0	15	133			
14:15	0	0	0	30	0	5	0	37	0	0	0	19	0	2	0	24	117			
14:30	0	0	0	33	0	2	0	59	0	1	0	15	0	3	0	16	129			
14:45	0	0	0	25	0	1	0	29	0	0	0	6	0	7	0	24	92			
Hr Total	0	2	0	117	0	13	0	189	0	2	0	56	0	13	0	79	471			
15:00	0	0	0	32	0	0	0	30	0	0	0	25	0	1	0	17	105			
15:15	0	0	0	27	0	4	0	18	0	0	0	8	0	6	0	28	91			
15:30	0	0	0	21	0	1	0	20	0	0	0	19	0	3	0	22	86			
15:45	0	0	0	12	0	1	0	14	0	0	0	19	0	0	0	20	66			
Hr Total	0	0	0	92	0	6	0	82	0	0	0	71	0	10	0	87	348			
16:00	0	0	0	29	0	0	0	31	0	0	0	21	0	4	0	35	120			
16:15	0	1	0	55	0	2	0	37	0	0	0	19	0	2	0	28	144			
16:30	0	0	0	39	0	8	0	49	0	0	0	19	0	5	0	34	154			
16:45	0	2	0	38	0	2	0	32	0	0	0	25	0	1	0	32	132			
Hr Total	0	3	0	161	0	12	0	149	0	0	0	84	0	12	0	129	550			
17:00	0	0	0	12	0	0	0	61	0	2	0	25	0	1	0	19	120			
17:15	0	0	0	21	0	0	0	36	0	0	0	24	0	3	0	38	122			
17:30	0	1	0	43	0	0	0	43	0	1	0	22	0	7	0	33	150			
17:45	0	0	0	35	0	4	0	37	0	1	0	8	0	0	0	17	102			
Hr Total	0	1	0	111	0	4	0	177	0	4	0	79	0	11	0	107	494			
*TOTAL*	0	6	0	481	0	35	0	597	0	6	0	290	0	46	0	402	1863			

North



Miami bch, Florida  
June 14, 2016  
drawn by: Luis Palomino  
Signalized

HOTEL DRIVEWAY ENTRANCE & COLLINS AVENUE  
 MIAMI BEACH, FLORIDA  
 COUNTED BY: RICHARD MENDEZ  
 INS ONLY

Traffic Survey Specialists, Inc.  
 85 SE 4th Avenue, Unit 109  
 Delray Beach, Florida 33483  
 Phone (561) 272-3255

Site Code : 00160137  
 Start Date: 06/18/16  
 File I.D. : SDWY\_A1A  
 Page : 1

ALL BUT TAXIS, TAXIS

COLLINS AVENUE From North					HOTEL ENTRANCE From East					COLLINS AVENUE From South					----- From West					
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		Total
Date 06/18/16																				
14:00	0	0	0	0	0	0	0	0	0	0	0	0	21	0	0	0	0	0	0	21
14:15	0	0	0	0	0	0	0	0	0	0	0	0	30	0	0	0	0	0	0	30
14:30	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	20
14:45	0	0	0	0	0	0	0	0	0	0	0	0	26	0	0	0	0	0	0	26
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0	97	0	0	0	0	0	0	97
15:00	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	20
15:15	0	0	0	0	0	0	0	0	0	0	0	0	30	0	0	0	0	0	0	30
15:30	0	0	0	0	0	0	0	0	0	0	0	0	30	0	0	0	0	0	0	30
15:45	0	0	0	0	0	0	0	0	0	0	0	0	38	0	0	0	0	0	0	38
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0	118	0	0	0	0	0	0	118
16:00	0	0	0	0	0	0	0	0	0	0	0	0	25	0	0	0	0	0	0	25
16:15	0	0	0	0	0	0	0	0	0	0	0	0	25	0	0	0	0	0	0	25
16:30	0	0	0	0	0	0	0	0	0	0	0	0	30	0	0	0	0	0	0	30
16:45	0	0	0	0	0	0	0	0	0	0	0	0	25	0	0	0	0	0	0	25
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0	105	0	0	0	0	0	0	105
17:00	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	20
17:15	0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	0	0	15
17:30	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	0	20
17:45	0	0	0	0	0	0	0	0	0	0	0	0	23	0	0	0	0	0	0	23
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0	78	0	0	0	0	0	0	78
*TOTAL*	0	0	0	0	0	0	0	0	0	0	0	0	398	0	0	0	0	0	0	398

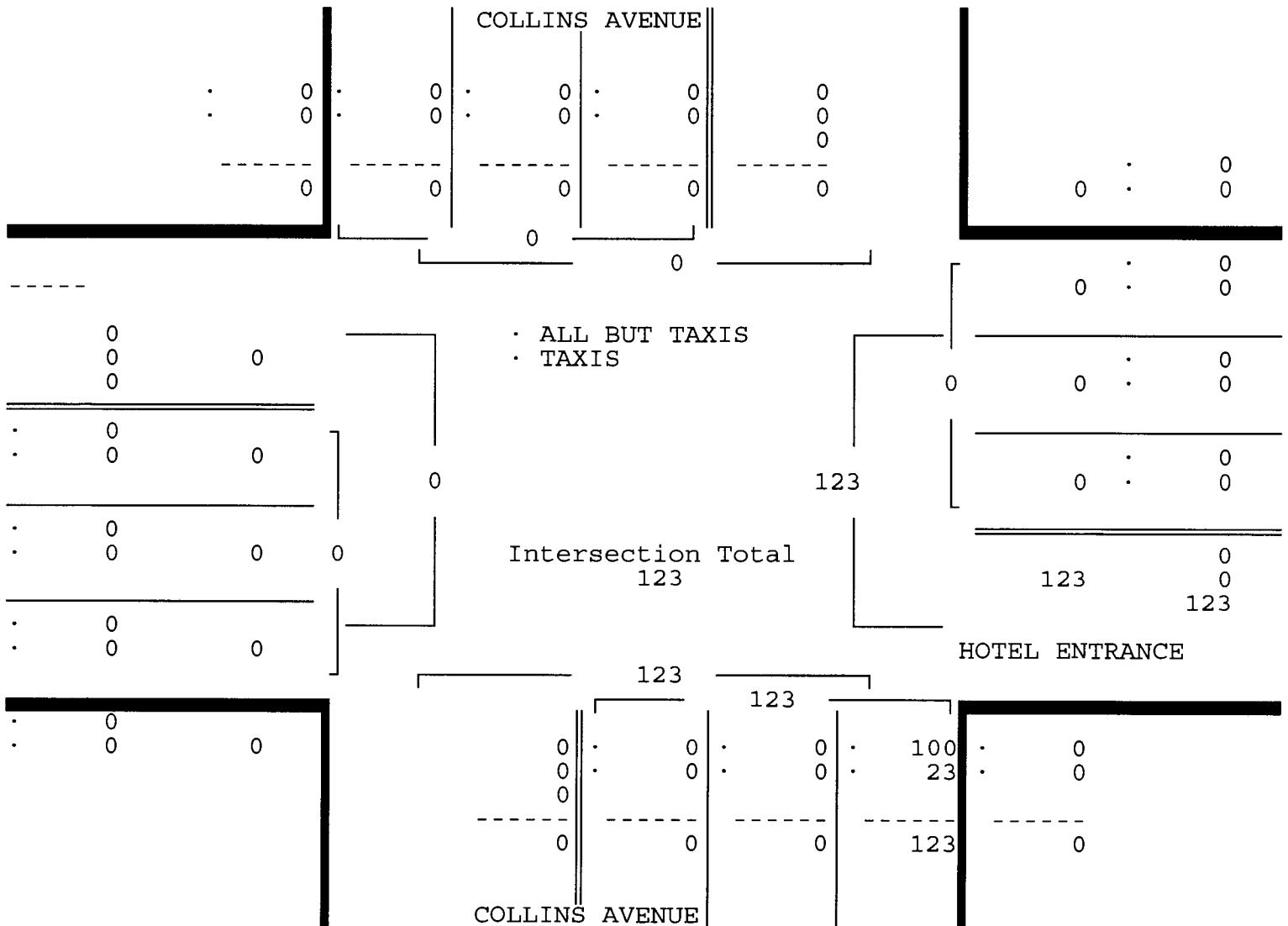
NO  
 CARS  
 FROM  
 ENTERED  
 THE NORTH



Site Code : 00160137  
Start Date: 06/18/16  
File I.D. : SDWY\_A1A  
Page : 2

ALL BUT TAXIS, TAXIS

COLLINS AVENUE				HOTEL ENTRANCE				COLLINS AVENUE				-----				
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 06/18/16 -----																
Peak Hour Analysis By Entire Intersection for the Period: 14:00 to 18:00 on 06/18/16																
Peak start 15:15				15:15				15:15				15:15				
Volume	0	0	0	0	0	0	0	0	0	0	123	0	0	0	0	
Percent	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	100%	0%	0%	0%	0%	
Pk total	0			0			123			0						
Highest	14:00			14:00			15:45			14:00						
Volume	0	0	0	0	0	0	0	0	0	0	38	0	0	0	0	
Hi total	0			0			38			0						
PHF	.0			.0			.81			.0						



HOTEL DRIVEWAY ENTRANCE & COLLINS AVENUE  
 MIAMI BEACH, FLORIDA  
 COUNTED BY: RICHARD MENDEZ  
 INS ONLY

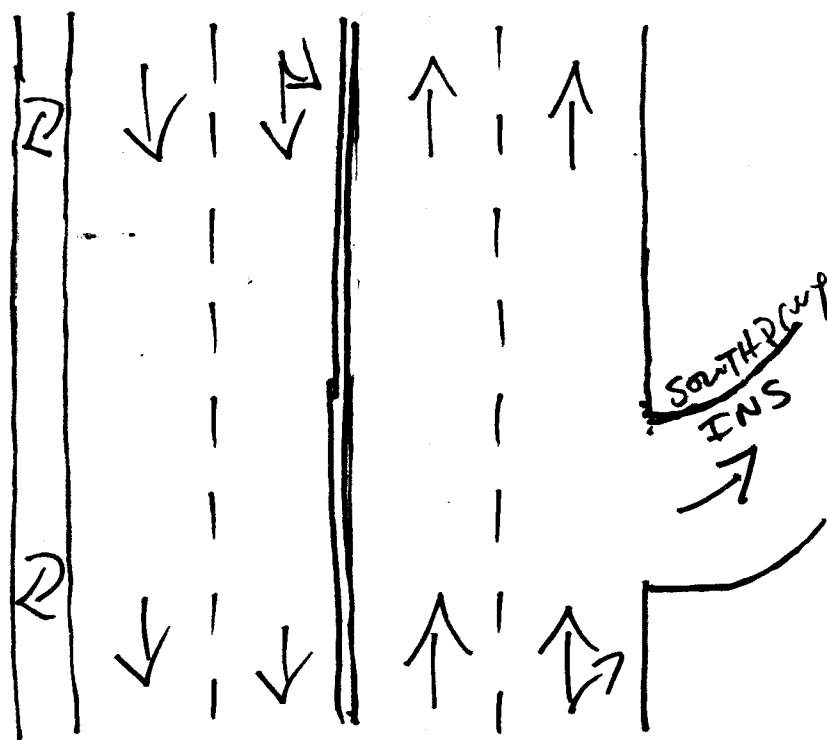
Traffic Survey Specialists, Inc.  
 85 SE 4th Avenue, Unit 109  
 Delray Beach, Florida 33483  
 Phone (561) 272-3255

Site Code : 00160137  
 Start Date: 06/18/16  
 File I.D. : SDWY\_A1A  
 Page : 1

TAXIS

COLLINS AVENUE					HOTEL ENTRANCE					COLLINS AVENUE					-----				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 06/18/16 -----																			
14:00	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4
14:15	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	9
14:30	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
14:45	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	0	7
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0	22	0	0	0	0	0	22
15:00	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5
15:15	0	0	0	0	0	0	0	0	0	0	0	0	9	0	0	0	0	0	9
15:30	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	6
15:45	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	6
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0	26	0	0	0	0	0	26
16:00	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	2
16:15	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4
16:30	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	6
16:45	0	0	0	0	0	0	0	0	0	0	0	0	8	0	0	0	0	0	8
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0	20	0	0	0	0	0	20
17:00	0	0	0	0	0	0	0	0	0	0	0	0	6	0	0	0	0	0	6
17:15	0	0	0	0	0	0	0	0	0	0	0	0	5	0	0	0	0	0	5
17:30	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	3
17:45	0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	0	0	4
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0	18	0	0	0	0	0	18
-----																			
*TOTAL*	0	0	0	0	0	0	0	0	0	0	0	0	86	0	0	0	0	0	86

North



Miami bch, Florida  
June 14, 2016  
drawn by: Luis Palomino  
not signalized

Site Code : 00160137  
Start Date: 06/18/16  
File I.D. : NDWY\_A1A  
Page : 1

ALL BUT TAXIS, TAXIS

COLLINS AVENUE From North					HOTEL EXIT DRIVEWAY From East					COLLINS AVENUE From South					----- From West						
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		Total	
Date 06/18/16 -----																					
14:00	0	0	0	0		0	1	0	13		0	0	0	0		0	0	0	0		14
14:15	0	0	0	0		0	5	0	23		0	0	0	0		0	0	0	0		28
14:30	0	0	0	0		0	2	0	17		0	0	0	0		0	0	0	0		19
14:45	0	0	0	0		0	5	0	12		0	0	0	0		0	0	0	0		17
Hr Total	0	0	0	0		0	13	0	65		0	0	0	0		0	0	0	0		78
15:00	0	0	0	0		0	4	0	24		0	0	0	0		0	0	0	0		28
15:15	0	0	0	0		0	4	0	24		0	0	0	0		0	0	0	0		28
15:30	0	0	0	0		0	2	0	38		0	0	0	0		0	0	0	0		40
15:45	0	0	0	0		0	3	0	33		0	0	0	0		0	0	0	0		36
Hr Total	0	0	0	0		0	13	0	119		0	0	0	0		0	0	0	0		132
16:00	0	0	0	0		0	6	0	37		0	0	0	0		0	0	0	0		43
16:15	0	0	0	0		0	3	0	23		0	0	0	0		0	0	0	0		26
16:30	0	0	0	0		0	3	0	27		0	0	0	0		0	0	0	0		30
16:45	0	0	0	0		0	3	0	24		0	0	0	0		0	0	0	0		27
Hr Total	0	0	0	0		0	15	0	111		0	0	0	0		0	0	0	0		126
17:00	0	0	0	0		0	2	0	23		0	0	0	0		0	0	0	0		25
17:15	0	0	0	0		0	1	0	17		0	0	0	0		0	0	0	0		18
17:30	0	0	0	0		0	5	0	23		0	0	0	0		0	0	0	0		28
17:45	0	0	0	0		0	3	0	22		0	0	0	0		0	0	0	0		25
Hr Total	0	0	0	0		0	11	0	85		0	0	0	0		0	0	0	0		96
-----																					
*TOTAL*	0	0	0	0		0	52	0	380		0	0	0	0		0	0	0	0		432

HOTEL DRIVEWAY EXIT & COLLINS AVENUE  
 MIAMI BEACH, FLORIDA  
 COUNTED BY: DREW GONZALEZ  
 OUTS ONLY

Traffic Survey Specialists, Inc.  
 85 SE 4th Avenue, Unit 109  
 Delray Beach, Florida 33483  
 Phone (561) 272-3255

Site Code : 00160137  
 Start Date: 06/18/16  
 File I.D. : NDWY\_A1A  
 Page : 2

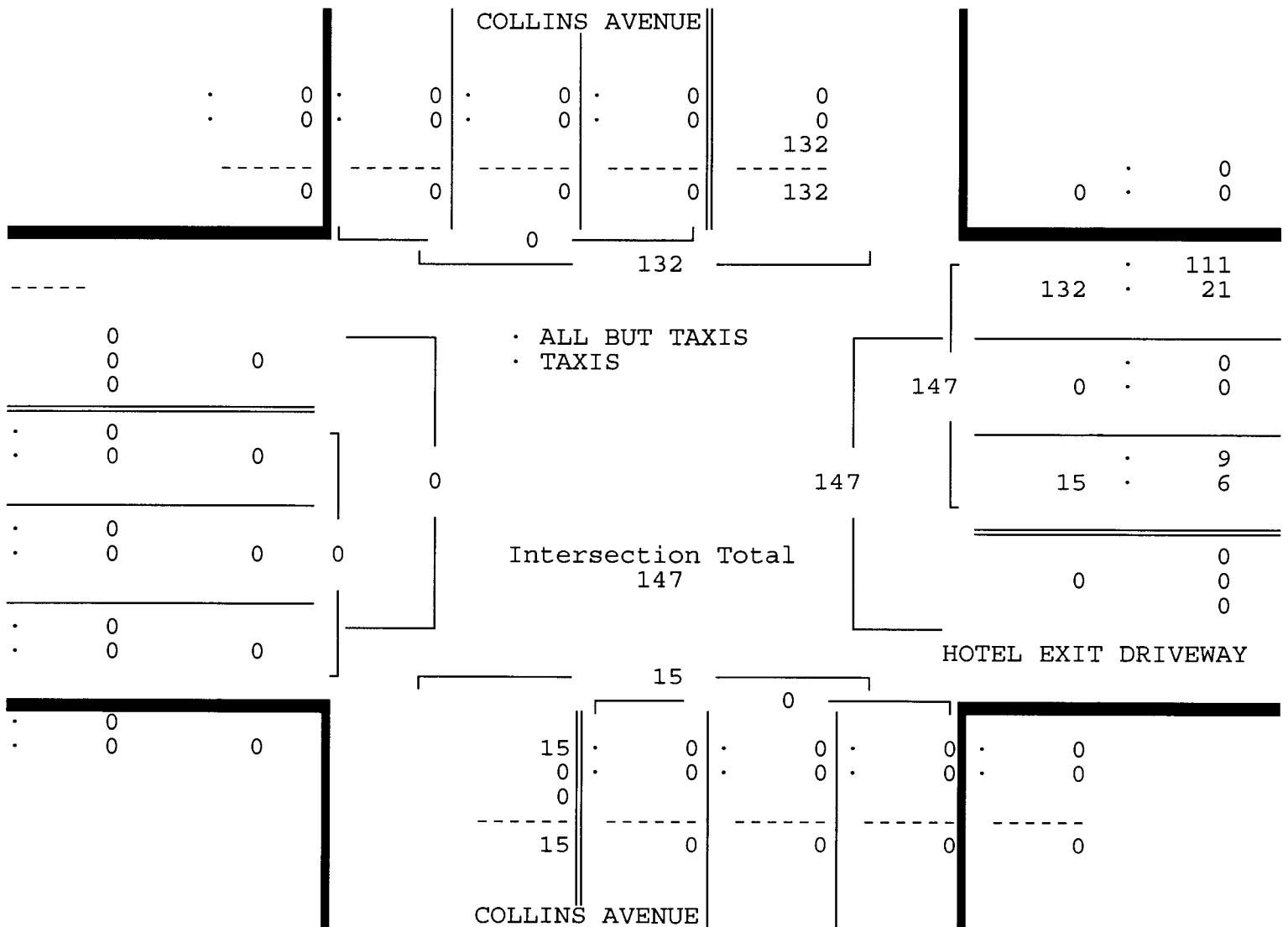
ALL BUT TAXIS, TAXIS

COLLINS AVENUE From North				HOTEL EXIT DRIVEWAY From East				COLLINS AVENUE From South				----- From West				Total
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	

Date 06/18/16

Peak Hour Analysis By Entire Intersection for the Period: 14:00 to 18:00 on 06/18/16

Peak start 15:15				15:15				15:15				15:15				
Volume	0	0	0	0	0	15	0	132	0	0	0	0	0	0	0	0
Percent	0%	0%	0%	0%	0%	10%	0%	90%	0%	0%	0%	0%	0%	0%	0%	0%
Pk total	0				147				0				0			
Highest	14:00				16:00				14:00				14:00			
Volume	0	0	0	0	0	6	0	37	0	0	0	0	0	0	0	0
Hi total	0				43				0				0			
PHF	.0				.85				.0				.0			



COLLINS AVENUE					HOTEL EXIT DRIVEWAY					COLLINS AVENUE					-----						
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 06/18/16 -----																					
14:00	0	0	0	0		0	1	0	3		0	0	0	0		0	0	0	0		4
14:15	0	0	0	0		0	1	0	5		0	0	0	0		0	0	0	0		6
14:30	0	0	0	0		0	1	0	1		0	0	0	0		0	0	0	0		2
14:45	0	0	0	0		0	4	0	2		0	0	0	0		0	0	0	0		6
Hr Total	0	0	0	0		0	7	0	11		0	0	0	0		0	0	0	0		18
15:00	0	0	0	0		0	1	0	3		0	0	0	0		0	0	0	0		4
15:15	0	0	0	0		0	1	0	4		0	0	0	0		0	0	0	0		5
15:30	0	0	0	0		0	1	0	7		0	0	0	0		0	0	0	0		8
15:45	0	0	0	0		0	2	0	6		0	0	0	0		0	0	0	0		8
Hr Total	0	0	0	0		0	5	0	20		0	0	0	0		0	0	0	0		25
16:00	0	0	0	0		0	2	0	4		0	0	0	0		0	0	0	0		6
16:15	0	0	0	0		0	1	0	3		0	0	0	0		0	0	0	0		4
16:30	0	0	0	0		0	2	0	6		0	0	0	0		0	0	0	0		8
16:45	0	0	0	0		0	1	0	5		0	0	0	0		0	0	0	0		6
Hr Total	0	0	0	0		0	6	0	18		0	0	0	0		0	0	0	0		24
17:00	0	0	0	0		0	1	0	4		0	0	0	0		0	0	0	0		5
17:15	0	0	0	0		0	0	0	1		0	0	0	0		0	0	0	0		1
17:30	0	0	0	0		0	1	0	5		0	0	0	0		0	0	0	0		6
17:45	0	0	0	0		0	2	0	2		0	0	0	0		0	0	0	0		4
Hr Total	0	0	0	0		0	4	0	12		0	0	0	0		0	0	0	0		16
-----																					
*TOTAL*	0	0	0	0		0	22	0	61		0	0	0	0		0	0	0	0		83



HOTEL DRIVEWAY EXIT & COLLINS AVENUE  
MIAMI BEACH, FLORIDA  
COUNTED BY: DREW GONZALEZ  
OUTS ONLY

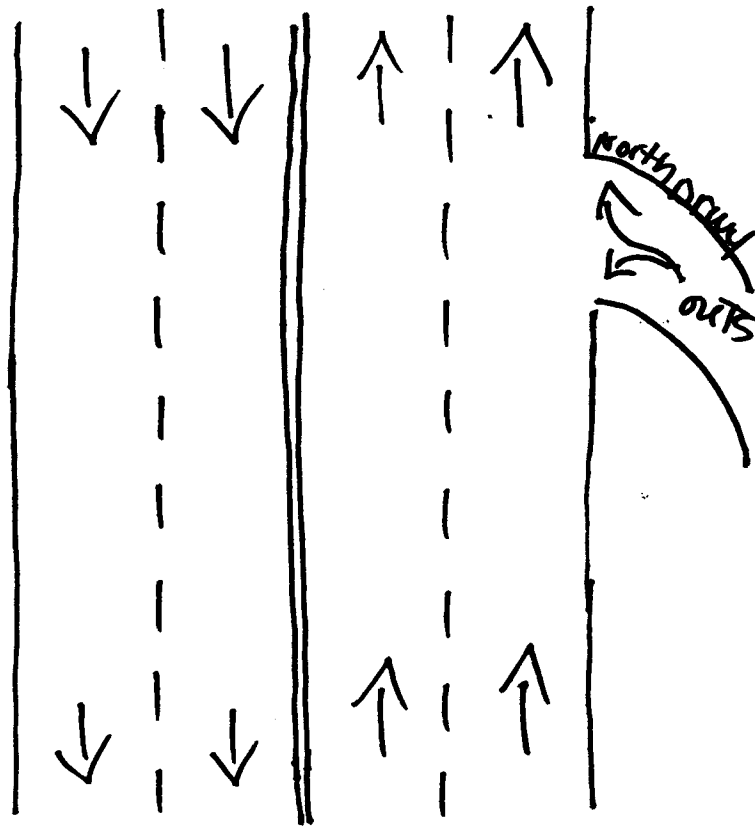
Traffic Survey Specialists, Inc.  
85 SE 4th Avenue, Unit 109  
Delray Beach, Florida 33483  
Phone (561) 272-3255

Site Code : 00160137  
Start Date: 06/18/16  
File I.D. : NDWY\_A1A  
Page : 1

## PEDESTRIANS

[illegible]

North



Miami bch, Florida  
June 14, 2016  
drawn by: Luis Palomino  
not signalized

24TH STREET & A1A  
 MIAMI BEACH, FLORIDA  
 COUNTED BY: ISIDRO GONZALEZ  
 SIGNALIZED

Traffic Survey Specialists, Inc.  
 85 SE 4th Avenue, Unit 109  
 Delray Beach, Florida 33483  
 Phone (561) 272-3255

Site Code : 00160137  
 Start Date: 06/18/16  
 File I.D. : 24ST\_A1A  
 Page : 1

ALL VEHICLES

A1A From North					24TH STREET From East					A1A From South					----- From West					
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		
Date 06/18/16 -----																				
14:00	0	0	243	0	0	11	0	4		0	0	253	20		0	0	0	0	531	
14:15	0	3	222	0	0	13	0	3		0	0	241	19		0	0	0	0	501	
14:30	0	6	241	0	0	20	0	10		0	0	224	23		0	0	0	0	524	
14:45	0	3	229	0	1	8	0	5		0	0	227	17		0	0	0	0	490	
Hr Total	0	12	935	0	1	52	0	22		0	0	945	79		0	0	0	0	2046	
15:00	0	7	225	0	0	13	0	11		0	0	242	20		0	0	0	0	518	
15:15	0	4	227	0	0	9	0	8		0	0	234	15		0	0	0	0	497	
15:30	0	3	223	0	0	10	0	5		1	0	246	20		0	0	0	0	508	
15:45	0	3	241	0	0	11	0	14		0	0	245	25		0	0	0	0	539	
Hr Total	0	17	916	0	0	43	0	38		1	0	967	80		0	0	0	0	2062	
16:00	0	1	250	0	1	13	0	5		0	0	258	11		0	0	0	0	539	
16:15	0	1	247	0	0	8	0	3		0	0	270	14		0	0	0	0	543	
16:30	1	2	235	0	1	11	0	8		0	0	265	10		0	0	0	0	533	
16:45	0	1	234	0	3	5	0	5		0	0	235	13		0	0	0	0	496	
Hr Total	1	5	966	0	5	37	0	21		0	0	1028	48		0	0	0	0	2111	
17:00	1	6	256	0	0	19	0	4		0	0	273	21		0	0	0	0	580	
17:15	2	2	230	0	0	12	0	5		0	0	204	14		0	0	0	0	469	
17:30	0	3	203	0	0	10	0	7		0	0	292	17		0	0	0	0	532	
17:45	1	6	215	0	0	9	0	3		0	0	205	11		0	0	0	0	450	
Hr Total	4	17	904	0	0	50	0	19		0	0	974	63		0	0	0	0	2031	
-----																				
*TOTAL*	5	51	3721	0	6	182	0	100		1	0	3914	270		0	0	0	0	8250	

24TH STREET & A1A  
 MIAMI BEACH, FLORIDA  
 COUNTED BY: ISIDRO GONZALEZ  
 SIGNALIZED

Traffic Survey Specialists, Inc.  
 85 SE 4th Avenue, Unit 109  
 Delray Beach, Florida 33483  
 Phone (561) 272-3255

Site Code : 00160137  
 Start Date: 06/18/16  
 File I.D. : 24ST\_A1A  
 Page : 2

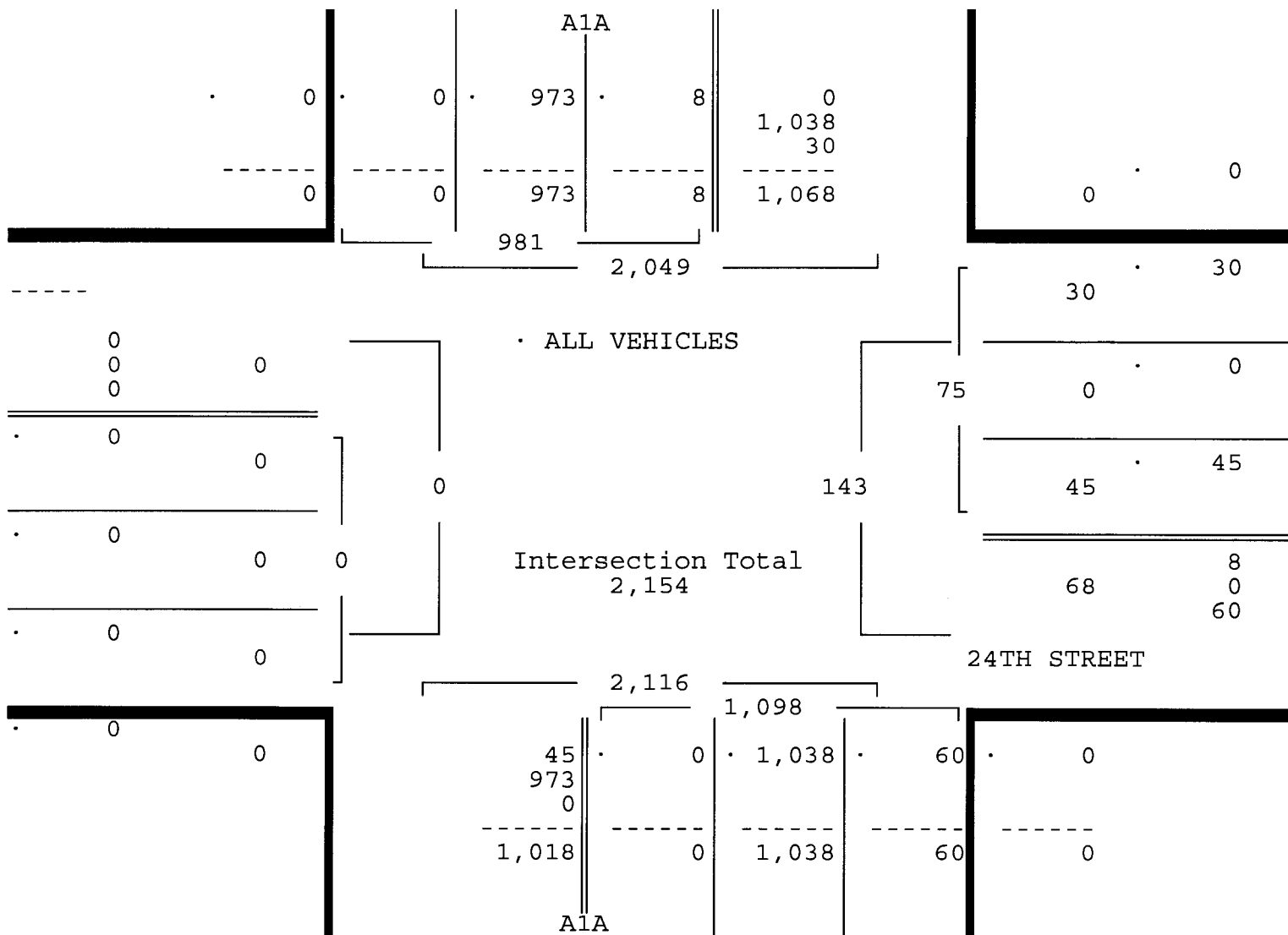
ALL VEHICLES

A1A From North				24TH STREET From East				A1A From South				----- From West				Total
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	

Date 06/18/16

Peak Hour Analysis By Entire Intersection for the Period: 14:00 to 18:00 on 06/18/16

Peak start 15:45					15:45					15:45					15:45	
Volume	1	7	973	0	2	43	0	30	0	0	1038	60	0	0	0	0
Percent	0%	1%	99%	0%	3%	57%	0%	40%	0%	0%	95%	5%	0%	0%	0%	0%
Pk total	981					75					1098					0
Highest	16:00					15:45					16:15					14:00
Volume	0	1	250	0	0	11	0	14	0	0	270	14	0	0	0	0
Hi total	251					25					284					0
PHF	.98					.75					.97					.0



24TH STREET & A1A  
 MIAMI BEACH, FLORIDA  
 COUNTED BY: ISIDRO GONZALEZ  
 SIGNALIZED

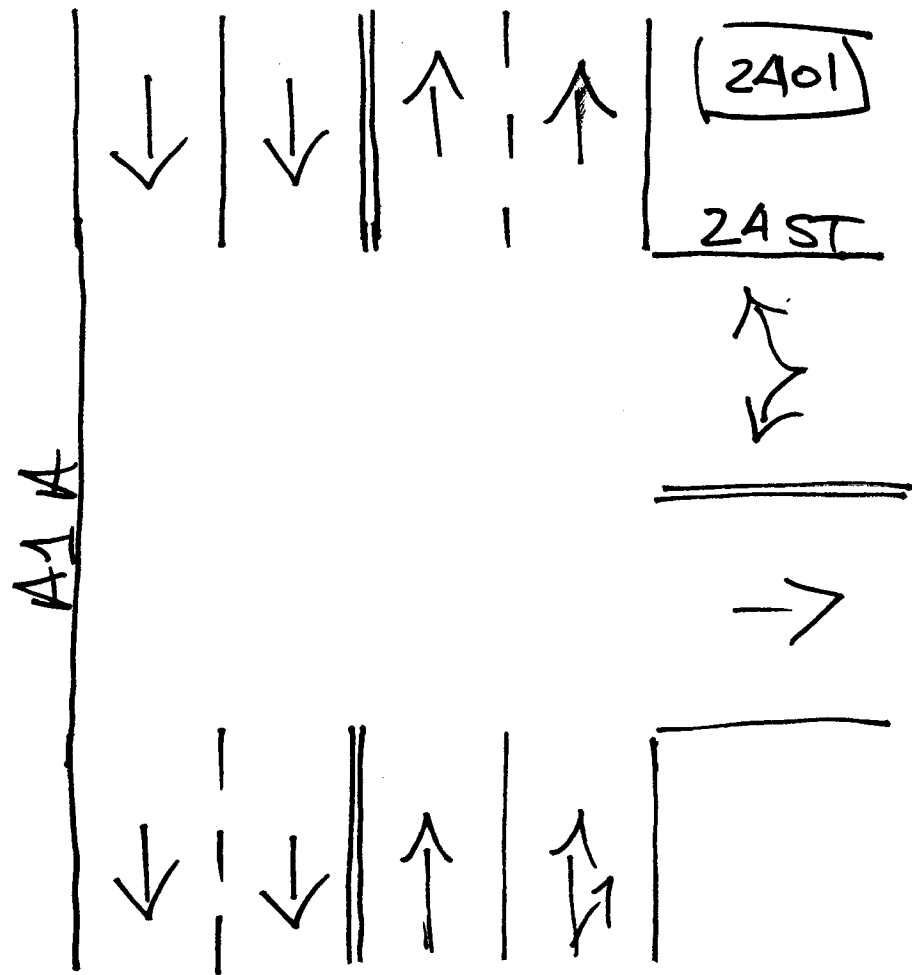
Traffic Survey Specialists, Inc.  
 85 SE 4th Avenue, Unit 109  
 Delray Beach, Florida 33483  
 Phone (561) 272-3255

Site Code : 00160137  
 Start Date: 06/18/16  
 File I.D. : 24ST\_A1A  
 Page : 1

PEDESTRIANS & BIKES

A1A From North				24TH STREET From East				A1A From South				----- From West					
Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total	
Date 06/18/16 -----																	
14:00	0	2	0	4	0	4	0	20	0	0	0	5	0	1	0	0	36
14:15	0	0	0	10	0	4	0	13	0	0	0	2	0	0	0	0	29
14:30	0	2	0	15	0	1	0	21	0	0	0	2	0	3	0	0	44
14:45	0	0	0	10	0	3	0	16	0	1	0	6	0	3	0	0	39
Hr Total	0	4	0	39	0	12	0	70	0	1	0	15	0	7	0	0	148
15:00	0	0	0	3	0	2	0	19	0	0	0	5	0	0	0	0	29
15:15	0	0	0	15	0	3	0	20	0	0	0	1	0	3	0	0	42
15:30	0	0	0	11	0	2	0	17	0	2	0	7	0	2	0	0	41
15:45	0	3	0	7	0	5	0	25	0	2	0	2	0	2	0	0	46
Hr Total	0	3	0	36	0	12	0	81	0	4	0	15	0	7	0	0	158
16:00	0	1	0	18	0	2	0	16	0	0	0	2	0	7	0	0	46
16:15	0	0	0	17	0	0	0	18	0	0	0	3	0	6	0	0	44
16:30	0	1	0	21	0	3	0	43	0	0	0	8	0	2	0	0	78
16:45	0	0	0	14	0	2	0	44	0	0	0	10	0	0	0	0	70
Hr Total	0	2	0	70	0	7	0	121	0	0	0	23	0	15	0	0	238
17:00	0	5	0	17	0	1	0	15	0	0	0	5	0	0	0	0	43
17:15	0	2	0	14	0	2	0	26	0	0	0	5	0	1	0	0	50
17:30	0	0	0	23	0	1	0	36	0	0	0	3	0	5	0	0	68
17:45	0	0	0	15	0	4	0	26	0	0	0	6	0	1	0	0	52
Hr Total	0	7	0	69	0	8	0	103	0	0	0	19	0	7	0	0	213
-----																	
*TOTAL*	0	16	0	214	0	39	0	375	0	5	0	72	0	36	0	0	757

North



Miami bch, Florida  
June 14, 2016  
drawn by: Luis Palomiro  
signalized

26TH STREET & A1A  
 MIAMI BEACH, FLORIDA  
 COUNTED BY: ROLANDO MARTINEZ  
 SIGNALIZED

Traffic Survey Specialists, Inc.  
 85 SE 4th Avenue, Unit 109  
 Delray Beach, Florida 33483  
 Phone (561) 272-3255

Site Code : 00160137  
 Start Date: 06/18/16  
 File I.D. : 26STCOLL  
 Page : 1

ALL VEHICLES

A1A From North					26TH STREET From East					A1A From South					26TH STREET From West					
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		
Date 06/18/16																				
14:00	0	0	0	0	0	0	0	10	0	0	241	6	0	12	4	241		514		
14:15	0	0	0	0	0	0	0	11	0	0	228	7	0	6	8	235		495		
14:30	0	0	0	0	0	0	0	8	0	0	227	1	0	5	7	242		490		
14:45	0	0	0	0	0	0	0	14	0	0	212	10	0	10	5	236		487		
Hr Total	0	0	0	0	0	0	0	43	0	0	908	24	0	33	24	954		1986		
15:00	0	0	0	0	0	0	0	14	0	0	226	6	0	17	11	228		502		
15:15	0	0	0	0	0	0	0	9	0	0	246	6	0	17	4	239		521		
15:30	0	0	0	0	0	0	0	10	0	0	237	6	0	17	6	228		504		
15:45	0	0	0	0	0	0	0	7	0	0	247	3	0	18	5	259		539		
Hr Total	0	0	0	0	0	0	0	40	0	0	956	21	0	69	26	954		2066		
16:00	0	0	0	0	0	0	0	11	0	0	248	2	0	17	7	261		546		
16:15	0	0	0	0	0	0	0	6	0	0	247	2	0	10	4	244		513		
16:30	0	0	0	0	0	0	0	12	0	0	256	9	0	13	1	227		518		
16:45	0	0	0	0	0	0	0	7	1	0	228	4	0	12	5	247		504		
Hr Total	0	0	0	0	0	0	0	36	1	0	979	17	0	52	17	979		2081		
17:00	0	0	0	0	0	0	0	5	0	0	264	2	0	9	4	249		533		
17:15	0	0	0	0	0	0	0	6	0	0	202	0	0	10	4	236		458		
17:30	0	0	0	0	0	0	0	7	0	0	252	3	0	5	0	207		474		
17:45	0	0	0	0	0	0	0	2	0	0	205	1	0	11	0	227		446		
Hr Total	0	0	0	0	0	0	0	20	0	0	923	6	0	35	8	919		1911		
*TOTAL*	0	0	0	0	0	0	0	139	1	0	3766	68	0	189	75	3806		8044		

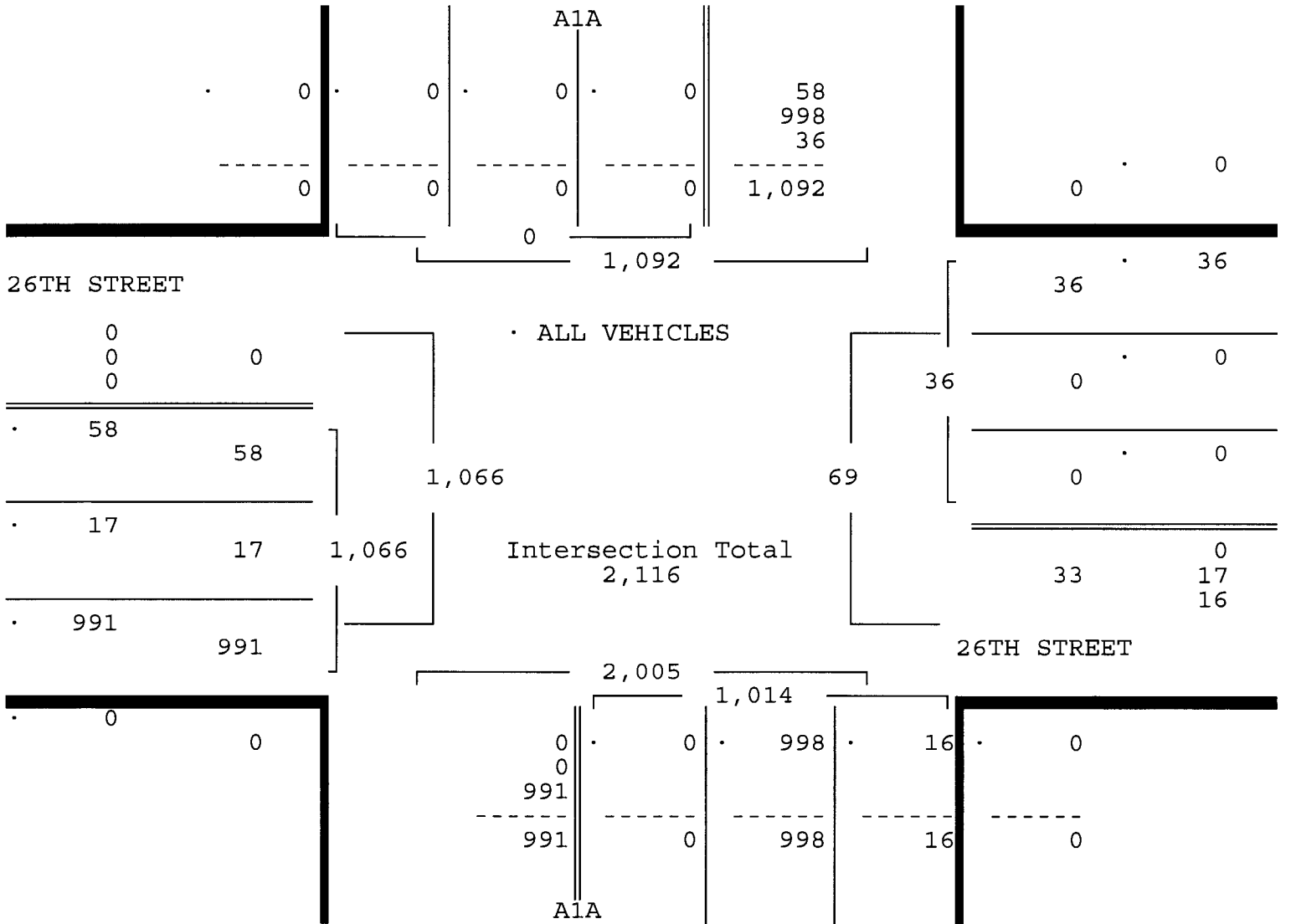
26TH STREET & A1A  
 MIAMI BEACH, FLORIDA  
 COUNTED BY: ROLANDO MARTINEZ  
 SIGNALIZED

Traffic Survey Specialists, Inc.  
 85 SE 4th Avenue, Unit 109  
 Delray Beach, Florida 33483  
 Phone (561) 272-3255

Site Code : 00160137  
 Start Date: 06/18/16  
 File I.D. : 26STCOLL  
 Page : 2

ALL VEHICLES

A1A				26TH STREET				A1A				26TH 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 06/18/16																
Peak Hour Analysis By Entire Intersection for the Period: 14:00 to 18:00 on 06/18/16																
Peak start 15:45				15:45				15:45				15:45				
Volume	0	0	0	0	0	0	36	0	0	998	16	0	58	17	991	
Percent	0%	0%	0%	0%	0%	0%	100%	0%	0%	98%	2%	0%	5%	2%	93%	
Pk total	0			36			1014			1066						
Highest	14:00			16:30			16:30			16:00						
Volume	0	0	0	0	0	0	12	0	0	256	9	0	17	7	261	
Hi total	0			12			265			285						
PHF	.0			.75			.96			.94						





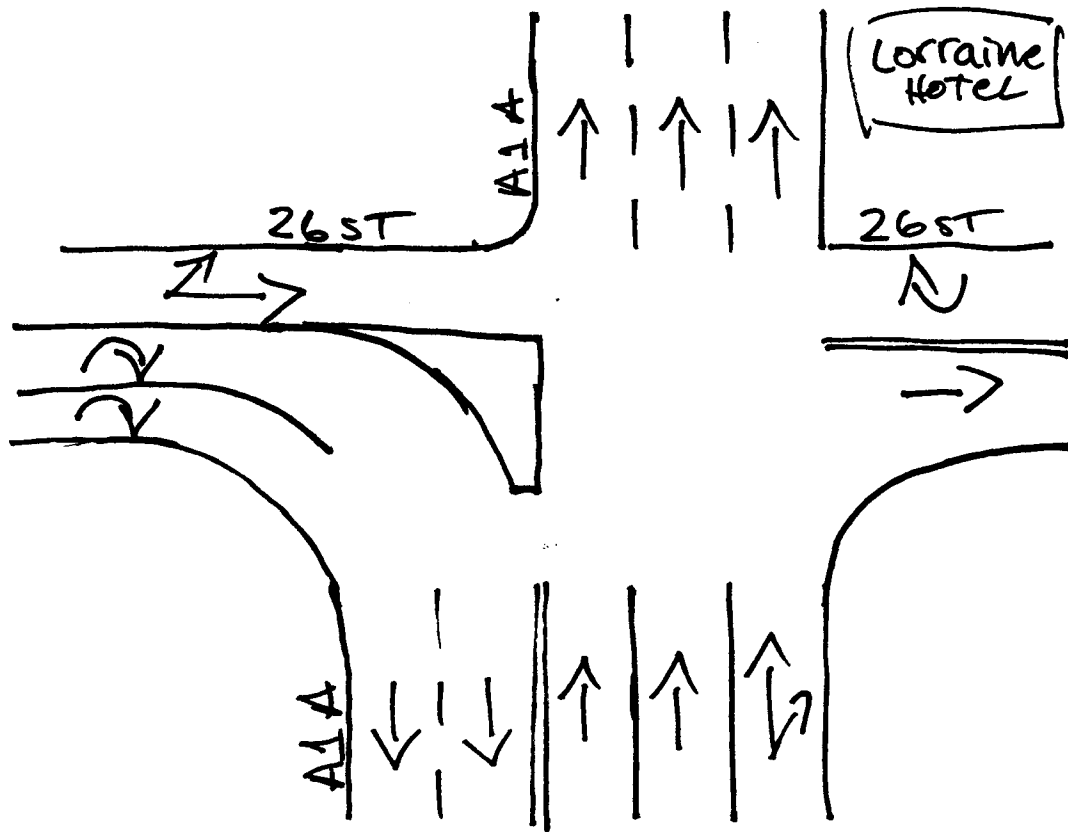
26TH STREET & A1A  
 MIAMI BEACH, FLORIDA  
 COUNTED BY: ROLANDO MARTINEZ  
 SIGNALIZED

Traffic Survey Specialists, Inc.  
 85 SE 4th Avenue, Unit 109  
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Site Code : 00160137  
 Start Date: 06/18/16  
 File I.D. : 26STCOLL  
 Page : 1

PEDESTRIANS & BIKES

A1A From North				26TH STREET From East				A1A From South				26TH STREET From West							
Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds				
Date 06/18/16																			Total
14:00	0	2	0	5	0	2	0	24	0	0	0	0	0	2	0	10	45		
14:15	0	0	0	1	0	7	0	18	0	0	0	0	0	3	0	11	40		
14:30	0	0	0	17	0	2	0	25	0	0	0	0	0	7	0	16	67		
14:45	0	2	0	1	0	3	0	10	0	1	0	0	0	9	0	8	34		
Hr Total	0	4	0	24	0	14	0	77	0	1	0	0	0	21	0	45	186		
15:00	0	1	0	11	0	4	0	20	0	0	0	0	0	1	0	7	44		
15:15	0	0	0	3	0	3	0	19	0	0	0	2	0	4	0	7	38		
15:30	0	0	0	5	0	1	0	18	0	0	0	0	0	2	0	16	42		
15:45	0	0	0	3	0	6	0	19	0	0	0	3	0	7	0	22	60		
Hr Total	0	1	0	22	0	14	0	76	0	0	0	5	0	14	0	52	184		
16:00	0	0	0	2	0	0	0	17	0	0	0	2	0	5	0	19	45		
16:15	0	0	0	5	0	2	0	21	0	0	0	0	0	6	0	14	48		
16:30	0	0	0	6	0	6	0	18	0	0	0	0	0	3	0	18	51		
16:45	0	0	0	0	0	1	0	14	0	0	0	0	0	3	0	2	20		
Hr Total	0	0	0	13	0	9	0	70	0	0	0	2	0	17	0	53	164		
17:00	0	0	0	1	0	3	0	17	0	0	0	0	0	4	0	14	39		
17:15	0	0	0	5	0	1	0	36	0	0	0	0	0	5	0	21	68		
17:30	0	0	0	2	0	3	0	11	0	0	0	2	0	6	0	8	32		
17:45	0	0	0	4	0	4	0	18	0	0	0	0	0	1	0	16	43		
Hr Total	0	0	0	12	0	11	0	82	0	0	0	2	0	16	0	59	182		
*TOTAL*	0	5	0	71	0	48	0	305	0	1	0	9	0	68	0	209	716		



Miami bch Florida  
June 14, 2016  
drawn by: Luis Palomero  
signalized

## Signal Timing Data




**TOD Schedule Report**  
for 2670: Collins Av&23 St

Print Date:  
5/27/2016

Print Time:  
2:11 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>
2670	Collins Av&23 St	HOLIDAY-6		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>
WB (S)	SBT	EBT	WB (N)	-	NBT	-	-
0	0	0	0	0	0	0	0
N/A			N/A				

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 WB (	0 - 0 - 0	0 - 0 - 0	7 - 7 - 7	2.5 - 2.5 - 2.5	7 - 7 - 7	7 - 10 - 10	4	2
2 SBT	5 - 5 - 5	20 - 20 - 20	5 - 5 - 5	1 - 1 - 1	27 - 27 - 27	0 - 27 - 27	4	2.5
3 EBT	4 - 4 - 4	12 - 12 - 12	7 - 7 - 7	2.5 - 2.5 - 2.5	8 - 8 - 8	30 - 15 - 15	4	2
4 WB (	4 - 4 - 4	16 - 16 - 16	7 - 7 - 7	2.5 - 2.5 - 2.5	7 - 7 - 7	7 - 12 - 12	4	2
5 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
6 NBT	5 - 5 - 5	20 - 20 - 20	5 - 5 - 5	1 - 1 - 1	27 - 27 - 27	0 - 27 - 27	4	2.5
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 1234-6--  
External Permit 0 -----  
External Permit 1 -----  
External Permit 2 -----

**TOD Schedule Report**  
for 2670: Collins Av&23 St

Print Date:  
5/27/2016

Print Time:  
2:11 AM

Current TOD Schedule	Plan	Cycle	Green Time								Ring Offset	Offset
			1 WB (	2 SBT	3 EBT	4 WB (N)	5 -	6 NBT	7 -	8 -		
1		100	7	32	17	20	0	32	0	0	0	28
2		95	7	27	17	20	0	27	0	0	0	21
3		100	7	32	17	20	0	32	0	0	0	3
4		90	7	22	17	20	0	22	0	0	0	28
5		110	7	42	17	20	0	42	0	0	0	41
6		120	7	42	27	20	0	42	0	0	0	83
7		120	7	52	17	20	0	52	0	0	0	83
8		150	7	82	17	20	0	82	0	0	0	67
11		90	6	22	17	21	0	22	0	0	0	28
12		90	6	22	17	21	0	22	0	0	0	28
13		90	6	22	17	21	0	22	0	0	0	28
14		120	6	52	17	21	0	52	0	0	0	83
15		120	6	52	17	21	0	52	0	0	0	83
16		90	6	22	17	21	0	22	0	0	0	28
17		90	6	22	17	21	0	22	0	0	0	28
18		100	6	32	17	21	0	32	0	0	0	65
21		90	6	22	17	21	0	22	0	0	0	28
22		100	6	32	17	21	0	32	0	0	0	65
23		100	6	32	17	21	0	32	0	0	0	65
25		140	15	73	14	14	0	73	0	0	0	98

Local TOD Schedule		
Time	Plan	DOW
0000	1	Su M T W Th
0000	7	F S
0300	1	F S
0300	22	M T W Th
0300	4	Su
0700	5	Su
0700	1	M T W Th F S
0930	2	M T W Th
0930	1	Su F S
1500	5	Su F S
1500	3	M T W Th
1800	1	M T W Th
1800	6	Su F S

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

***TOD Schedule Report  
for 2670: Collins Av&23 St***

Print Date:  
**5/27/2016**

Print Time:  
**2:11 AM**

<i><b>No Calendar Defined/Enabled</b></i>

# SIGNAL OPERATING PLAN

	Direction	NB	SB	EB	WB	WB	Ped Heads									
Timing Phases	Head No.	6	2	2R	3	8	4	4/7	10	9/10	P6	P2	P8	P4	Movements/Display/Actuation	
(2+6)	Dwell	G	G	G	<R	R	R	R	R	R	W/F	W/F	DW	DW		
N/SB Collins Av (RECALL)	Clear to	3	Y	Y	Y	<R	R	R	R	R	DW	DW	DW	DW		
		4	Y	Y	Y	<R	R	R	R	R	R	DW	DW	DW		DW
		1	Y	Y	Y	<R	R	R	R	R	R	DW	DW	DW		DW
	Dwell															
	Dwell	R	R	R/G>	<G	G	R	R	R	R	DW	DW	W/F	DW		
EB 23 STREET (ACTUATED)	Clear to	4	R	R	R/Y>	<Y	Y	R	R	R	DW	DW	DW	DW		
		1	R	R	R/Y>	<Y	Y	R	R	R	R	DW	DW	DW		DW
		(2+6)	R	R	R/Y>	<Y	Y	R	R	R	R	DW	DW	DW		DW
	Dwell	R	R	R	<R	R	R	R	G	<G/G	DW	DW	DW	W/F		
WB NORTHSIDE (ACTUATED)	Clear to	1	R	R	R	<R	R	R	R	Y	Y	DW	DW	DW		DW
		(2+6)	R	R	R	<R	R	R	R	Y	Y	DW	DW	DW		DW
	Dwell	R	R	R	<R	R	G	<G/G	R	R	DW	DW	W/F	W/F		
WB SOUTHSIDE (ACTUATED)	Clear to	(2+6)	R	R	R	<R	R	Y	Y	R	R	DW	DW	DW		DW
	Dwell															
	Dwell															
Flashing Operation		FY	FY	FY	FR	FR	FR	FR	FR	FR					Page 1 of 1	
Miami-Dade County Public Works Department																
Drawn		Date														
WILLIAM RIVERA PAZ		04/30/13		Collins Av & 23 Street												
Checked		Date		Placed in Service				Phasing No.				Asset Number				
H. HERNANDEZ		4/30/13		Date: 5/1/13 BY UND				7				2670				

**TOD Schedule Report**  
for 2671: Collins Av&24 St

Print Date:  
5/27/2016

Print Time:  
2:11 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>
2671	Collins Av&24 St	HOLIDAY-6		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>
-	SBT	-	WBT	-	NBT	-	-
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 SBT	7 - 7 - 7	12 - 12 - 12	7 - 7 - 7	1 - 1 - 1	45 - 45 - 45	0 - 45 - 45	4	2
3 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
4 WBT	7 - 7 - 7	17 - 17 - 17	7 - 7 - 7	2.5 - 2.5 - 2.5	10 - 10 - 10	24 - 24 - 24	4	2.9
5 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
6 NBT	7 - 7 - 7	12 - 12 - 12	7 - 7 - 7	1 - 1 - 1	45 - 45 - 45	0 - 45 - 45	4	2
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 -2-4-6--  
External Permit 0 -----  
External Permit 1 -----  
External Permit 2 -----



**TOD Schedule Report**  
for 2671: Collins Av&24 St

Print Date:  
5/27/2016

Print Time:  
2:11 AM

Current TOD Schedule	Plan	Cycle	Green Time								Ring Offset	Offset
			1 -	2 SBT	3 -	4 WBT	5 -	6 NBT	7 -	8 -		
1		100	0	63	0	24	0	63	0	0	0	49
2		95	0	58	0	24	0	58	0	0	0	85
3		100	0	63	0	24	0	63	0	0	0	24
4		90	0	53	0	24	0	53	0	0	0	10
5		110	0	73	0	24	0	73	0	0	0	32
6		120	0	83	0	24	0	83	0	0	0	73
7		120	0	83	0	24	0	83	0	0	0	31
8		150	0	113	0	24	0	113	0	0	0	22
11		90	0	46	0	31	0	46	0	0	0	4
12		90	0	46	0	31	0	46	0	0	0	72
13		90	0	46	0	31	0	46	0	0	0	42
14		120	0	76	0	31	0	76	0	0	0	72
15		120	0	76	0	31	0	76	0	0	0	22
16		90	0	46	0	31	0	46	0	0	0	27
17		90	0	46	0	31	0	46	0	0	0	25
18		100	0	55	0	32	0	55	0	0	0	38
22		100	0	56	0	31	0	56	0	0	0	0
25		140	0	96	0	31	0	96	0	0	0	0

Local TOD Schedule		
Time	Plan	DOW
0000	1	Su M T W Th
0000	7	F S
0300	1	F S
0300	22	M T W Th
0300	4	Su
0700	5	Su
0700	1	M T W Th F S
0930	2	M T W Th
0930	1	Su F S
1500	5	Su F S
1500	3	M T W Th
1800	1	M T W Th
1800	6	Su F S

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

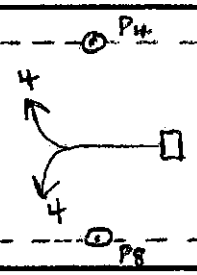
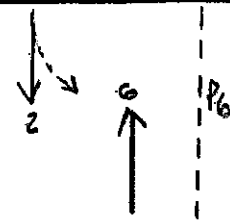
* Settings
Blank - FREE - Phase Bank 1, Max 1
Blank - Plan - Phase Bank 1, Max 2
1 - Phase Bank 2, Max 1
2 - Phase Bank 2, Max 2
3 - Phase Bank 3, Max 1
4 - Phase Bank 3, Max 2
5 - EXTERNAL PERMIT 1
6 - EXTERNAL PERMIT 2
7 - X-PED OMIT
8 - TBA

**No Calendar Defined/Enabled**

# SIGNAL OPERATING PLAN



Direction	SB	NB	WB	Head Heads			Movements/Display/Actuation	
Head No.	Z	G	4	P6	P4	P2		
Timing Phases								
Z+6 N/S Collins Av RECALL	Dwell	G	G	R	W/F	DW	DW	
	Clear to	4	Y	Y	R	DW	DW	DW
4 WBND 24 ST ACTUATED	Dwell	R	R	G	DW	W/F	W/F	
	Clear to	2+6	R	R	Y	DW	DW	DW
	Dwell							
	Clear to							
	Dwell							
	Clear to							
	Dwell							
	Clear to							



Flashing Operation

FY FY FR

Page 1 of 1

Miami-Dade County Public Works Department

Drawn  
H. FRANCHILLON

Date  
10/11/02

Collins Av & 24 St

Checked  
H. HERNANDEZ

Date  
10/15/02

Placed in Service

Phasing No.

Asset Number

Date

By STI

6

2671

**TOD Schedule Report**  
for 2672: Collins Av&26 St

Print Date:  
5/27/2016

Print Time:  
2:12 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>
2672	Collins Av&26 St	HOLIDAY-6		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>
-	NBT	PED	EW	-	SBT	-	-
0	0	0	0	0	0	0	0



N/A



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 NBT	5 - 5 - 5	13 - 13 - 13	7 - 7 - 7	1 - 1 - 1	35 - 35 - 35	0 - 35 - 35	4	2.3
3 PED	5 - 5 - 5	14 - 14 - 14	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
4 EW	5 - 5 - 5	15 - 15 - 15	7 - 7 - 7	2.5 - 2.5 - 2.5	10 - 10 - 10	16 - 16 - 16	4	2.3
5 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
6 SBT	5 - 5 - 5	13 - 13 - 13	7 - 7 - 7	1 - 1 - 1	35 - 35 - 35	0 - 35 - 35	4	2.3
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 -----  
External Permit 1 -----  
External Permit 2 -----

**TOD Schedule Report**  
for 2672: Collins Av&26 St

Print Date:  
5/27/2016

Print Time:  
2:12 AM

Current TOD Schedule	Plan	Cycle	Green Time								Ring Offset	Offset
			1 -	2 NBT	3 PED	4 EW	5 -	6 SBT	7 -	8 -		
1		100	0	42	20	26	0	42	0	0	0	46
2		95	0	37	20	26	0	37	0	0	0	72
3		100	0	42	20	26	0	42	0	0	0	46
4		90	0	32	20	26	0	32	0	0	0	59
5		110	0	52	20	26	0	52	0	0	0	96
6		120	0	62	20	26	0	62	0	0	0	72
7		120	0	62	20	26	0	62	0	0	0	58
8		150	0	92	20	26	0	92	0	0	0	33
11		90	0	32	20	26	0	32	0	0	0	26
12		90	0	32	20	26	0	32	0	0	0	86
13		90	0	32	20	26	0	32	0	0	0	37
14		120	0	62	20	26	0	62	0	0	0	67
15		120	0	62	20	26	0	62	0	0	0	51
16		90	0	32	20	26	0	32	0	0	0	37
17		90	0	32	20	26	0	32	0	0	0	37
18		100	0	42	20	26	0	42	0	0	0	43
22		100	0	42	20	26	0	42	0	0	0	12
25		140	0	82	20	26	0	82	0	0	0	0

Local TOD Schedule		
Time	Plan	DOW
0000	1	Su M T W Th
0000	7	F S
0300	1	F S
0300	22	M T W Th
0300	4	Su
0700	5	Su
0700	1	M T W Th F S
0930	2	M T W Th
0930	1	Su F S
1500	5	Su F S
1500	3	M T W Th
1800	1	M T W Th
1800	6	Su F S

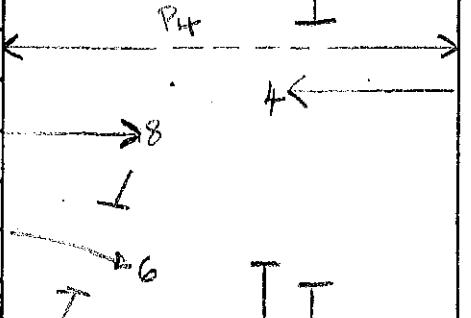
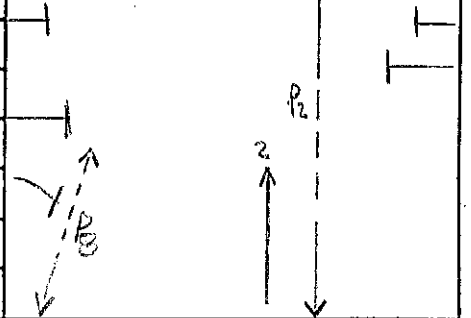
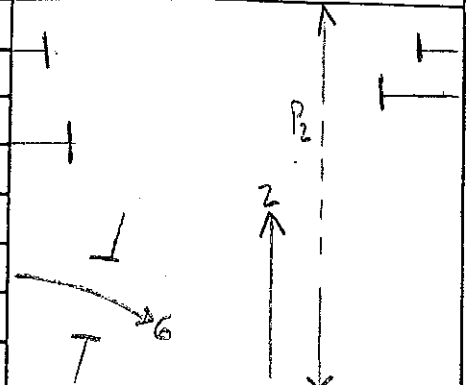
Current Time of Day Function			
Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	-----	SuM T W ThF S

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**

		SIGNAL HEAD NUMBER												
PHASE	INT.	2	4	6	8	P <sub>2</sub>	P <sub>4</sub>	P <sub>8</sub>						
$\Phi_{2+6}$ (2+6+P <sub>2</sub> ) NBND & SBND COLLINS AV RECALL	R/W.	G	R	G	R	W	DW	DW						
	PED. CL.	G	R	G	R	EW	DW	DW						
	TO CLEAR	$\Phi_3$	G	R	Y	R	DW	DW	DW					
		$\Phi_4$	Y	R	G	R	DW	DW	DW					
$\Phi_3$ (2+P <sub>2</sub> +P <sub>8</sub> ) NBND COLLINS AV & WEST SIDE PED ACTUATED BY P <sub>8</sub>	R/W.	G	R	R	R	W	DW	W						
	PED. CL.	G	R	R	R	EW	DW	EW						
	TO CLEAR	$\Phi_4$	Y	R	R	R	DW	DW	DW					
		$\Phi_2$	G	R	R	R	DW	DW	DW					
$\Phi_4$ (4+P <sub>4</sub> +8+6) EBND. & WBND & SBND 26 ST ACTUATED BY L <sub>4</sub>	R/W.	R	G	G	G	DW	W	DW						
	PED. CL.	R	G	G	G	DW	EW	DW						
	TO CLEAR	$\Phi_2$	R	Y	G	Y	DW	DW	DW					
FLASH OPERATION	R/W.													
	PED. CL.													
	TO CLEAR													



Drawn	Date	METROPOLITAN DADE COUNTY DEPARTMENT OF TRAFFIC AND TRANSPORTATION	
H. FRANCILLON	7/31/98	ASSET NO. 2672	
Check	Date	COLLINS AV & 26 ST	
H. HERNANDEZ	10/19/98		
Division Engineer	Date		
		Placed In Service	Phasing Number
		Date: -/94	By: MITCHELL
			6

**TOD Schedule Report**  
for 2698: Dade Blvd&23 St

Print Date:  
1/25/2016

Print Time:  
10:29 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>
2698	Dade Blvd&23 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	PED	NWT	SWL	NBT	-	-
0	0	0	0	0	0	0	0



N/A



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 SWT	5 - 5 - 0	25 - 25 - 0	5 - 7 - 7	1 - 1 - 1	20 - 20 - 20	0 - 22 - 22	4	2.9
3 PED	5 - 5 - 5	24 - 24 - 24	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
4 NWT	0 - 0 - 0	0 - 0 - 0	7 - 7 - 7	2.5 - 2.5 - 2.5	7 - 7 - 7	32 - 32 - 32	4	2.2
5 SWL	0 - 0 - 0	0 - 0 - 0	5 - 5 - 5	2 - 2 - 2	5 - 5 - 5	20 - 20 - 7	3.7	2.9
6 NBT	5 - 5 - 5	25 - 25 - 25	5 - 7 - 7	1 - 1 - 1	20 - 20 - 20	0 - 22 - 22	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 -23456-8  
External Permit 0 -----  
External Permit 1 -----  
External Permit 2 -----

<u>Current</u>	<u>Green Time</u>											
<u>TOD Schedule</u>	<u>Plan</u>	<u>Cycle</u>	1	2	3	4	5	6	7	8	<u>Ring Offset</u>	<u>Offset</u>
			-	SWT	PED	NWT	SWL	NBT	-	-		
	2	100	0	45	29	13	6	32	0	0	0	23
	3	100	0	45	29	13	6	32	0	0	0	50
	4	130	0	65	29	23	6	52	0	0	0	29
	6	120	0	65	29	13	6	52	0	0	0	70
	13	120	0	58	29	20	19	32	0	0	0	35
	14	130	0	68	29	20	7	54	0	0	0	23

**Local TOD Schedule**

<u>Time</u>	<u>Plan</u>	<u>DOW</u>
0000	Free	Su M T W Th F S
0600	13	M T W Th F
0700	2	M T W Th F
0830	13	M T W Th F
1000	13	Su S
1415	14	M T W Th F
1500	4	F
1645	4	M T W Th
1830	13	M T W Th F
2200	Free	Su S
2200	Free	M T W Th F

**TOD Schedule Report**  
**for 2698: Dade Blvd&23 St**

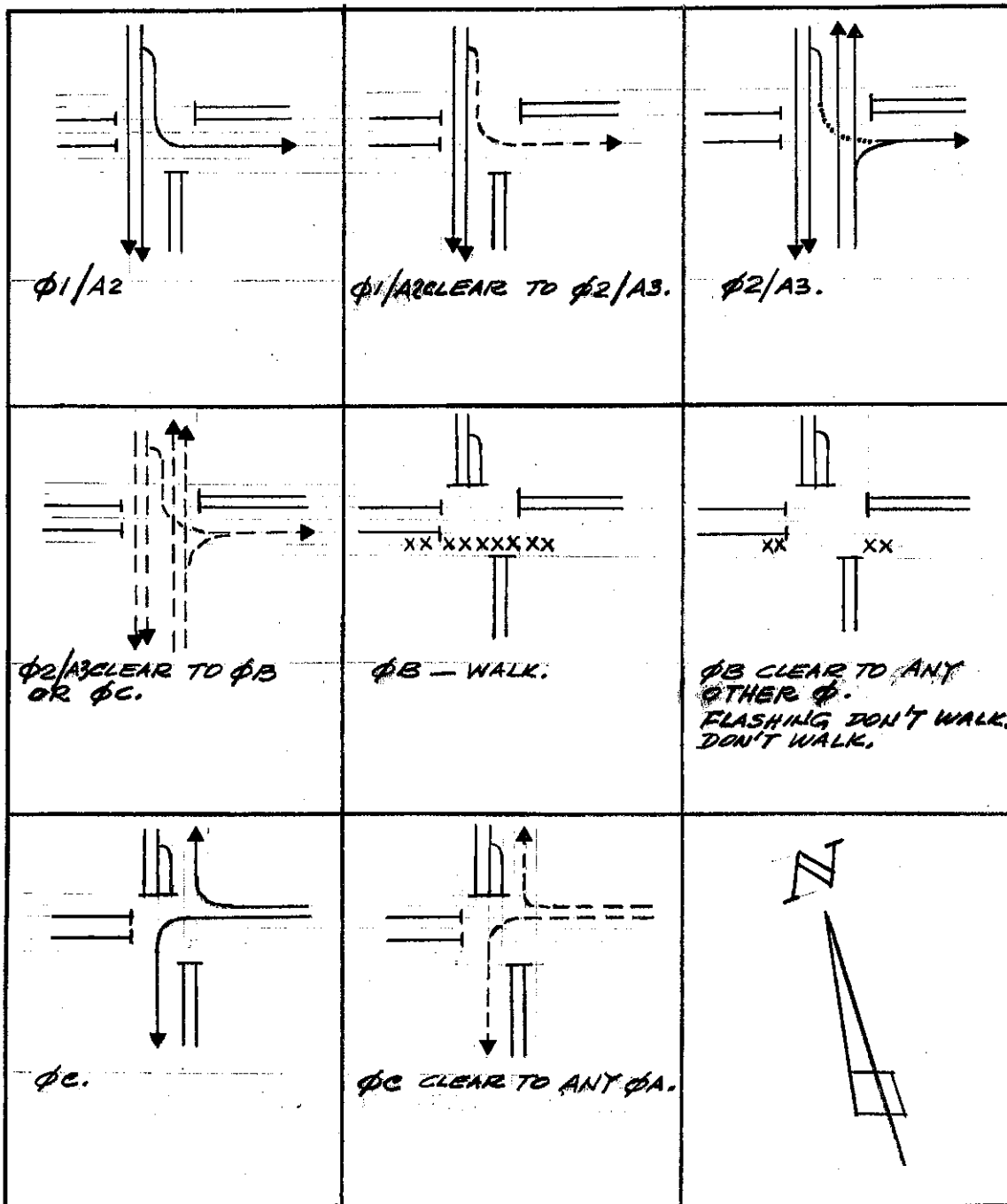
Print Date:  
**1/25/2016**

Print Time:  
**10:29 AM**

Current Time of Day Function				Local Time of Day Function				* Settings
<u>Time</u>	<u>Function</u>	<u>Settings *</u>	<u>Day of Week</u>	<u>Time</u>	<u>Function</u>	<u>Settings *</u>	<u>Day of Week</u>	
0000	TOD OUTPUTS	-----1	SuM T W ThF S	0000	TOD OUTPUTS	-----1	SuM T W ThF S	Blank - FREE - Phase Bank 1, Max 1
0600	TOD OUTPUTS	-----2-	SuM T W ThF S	0600	TOD OUTPUTS	-----2-	SuM T W ThF S	Blank - Plan - Phase Bank 1, Max 2
0630	TOD OUTPUTS	-----	M T W ThF	0630	TOD OUTPUTS	-----	M T W ThF	1 - Phase Bank 2, Max 1
0845	TOD OUTPUTS	-----2-	M T W ThF	0700	TOD OUTPUTS	-----1	Su S	2 - Phase Bank 2, Max 2
1415	TOD OUTPUTS	-----	M T W ThF	0845	TOD OUTPUTS	-----2-	M T W ThF	3 - Phase Bank 3, Max 1
1600	TOD OUTPUTS	-----3--	M T W Th	1000	TOD OUTPUTS	-----2-	Su S	4 - Phase Bank 3, Max 2
1830	TOD OUTPUTS	-----2-	M T W ThF	1415	TOD OUTPUTS	-----	M T W ThF	5 - EXTERNAL PERMIT 1
2200	TOD OUTPUTS	-----1	SuM T W ThF S	1500	TOD OUTPUTS	-----3--	F	6 - EXTERNAL PERMIT 2
				1600	TOD OUTPUTS	-----3--	M T W Th	7 - X-PED OMIT
				1830	TOD OUTPUTS	-----2-	M T W ThF	8 - TBA
				2200	TOD OUTPUTS	-----1	SuM T W ThF S	

**No Calendar Defined/Enabled**

# TRAFFIC SIGNAL INTERVAL DIAGRAMS



## LEGEND

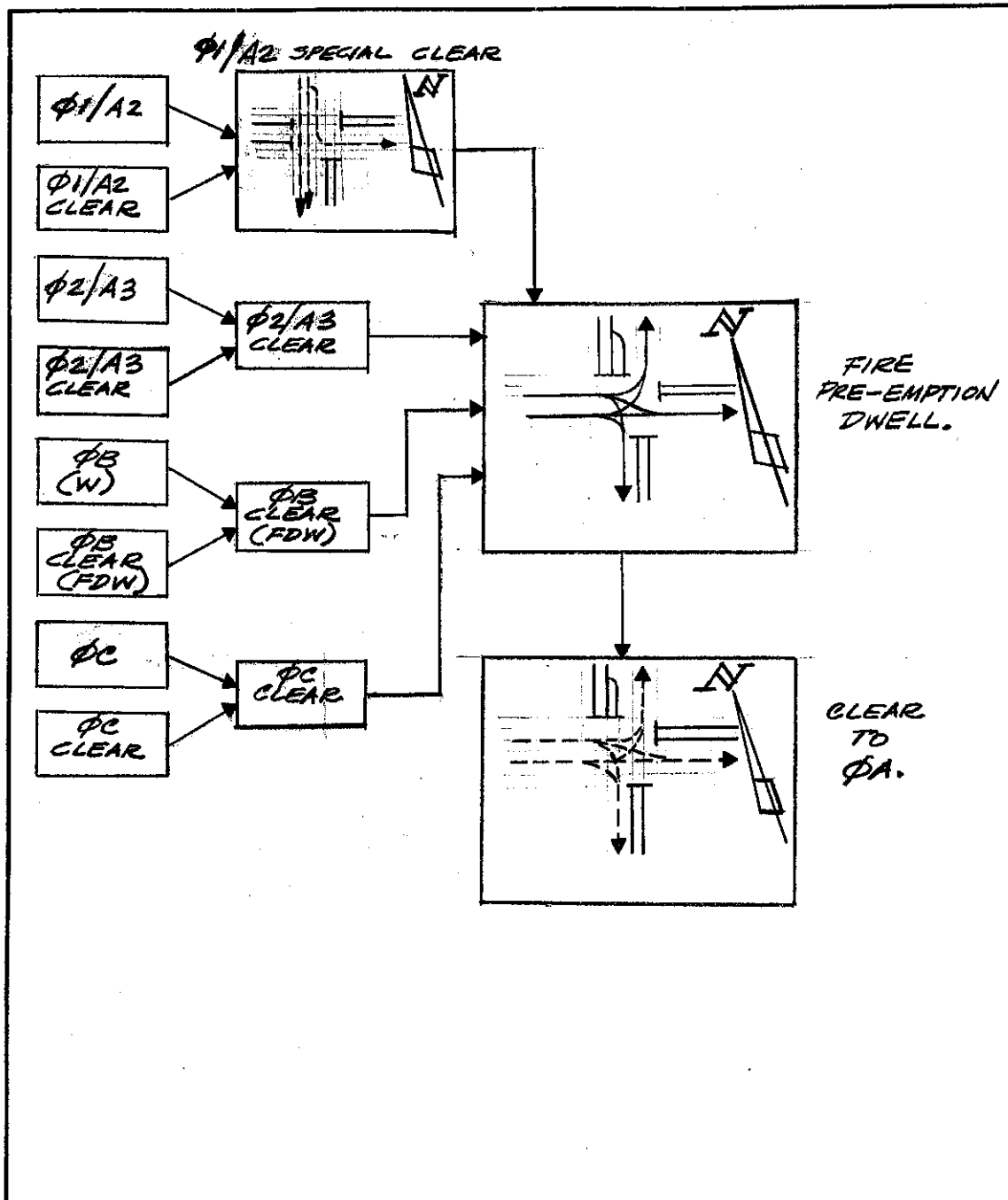
- |   |   |
|---|---|
| <p>— A legal movement on green indication.</p> <p>— A movement that must yield to green indication.</p> <p>— Movement on yellow indication.</p> | <p>— Stopped condition on red indication.</p> <p>XXXXXXXXXX Pedestrian movement</p> <p>XX XX Pedestrian clearance</p> |
|---|---|

ASSET # 3269B

<p>Drawn <b>C.L. ROQUE</b></p>	<p>Date <b>3/30/76</b></p>	<p>METROPOLITAN DADE COUNTY DEPARTMENT OF TRAFFIC AND TRANSPORTATION</p>		
<p>Check <b>Wadsworth</b></p>	<p>Date <b>3/31/76</b></p>	<p><b>DADE BOULEVARD &amp; 23 STREET</b></p>		
<p>Division Engineer</p>	<p>Date</p>	<p>Placed in Service Date: <b>11/19/75</b></p>	<p>Timing Number By: <b>CONTRACTOR</b></p>	<p>Phasing Number <b>3</b></p>



# TRAFFIC SIGNAL INTERVAL DIAGRAMS



## LEGEND

- ← A legal movement on green indication.
- ←..... A movement that must yield to green indication.
- ←----- Movement on yellow indication.
- Stopped condition on red indication.
- XXXXXX Pedestrian movement
- XX XX Pedestrian clearance

**ASSET # 3269B**

Drawn <b>C.L. ROQUE</b>		Date <b>3/30/76</b>		METROPOLITAN DADE COUNTY DEPARTMENT OF TRAFFIC AND TRANSPORTATION	
Check <b>Wadsworth</b>		Date <b>3/31/76</b>		<b>DADE BOULEVARD &amp; 29 STREET</b>	
Division Engineer		Date			
Placed in Service		Timing Number		Phasing Number	
Date: <b>11/19/75</b>		By: <b>CONTRACTOR</b>			

**FIRE PRE-EMPTION.**

## APPENDIX D: Background Area Growth

# Historical Growth Trend Analysis

Historic Growth Rate Comparison Table

Station No.	Description	Historic Trend Analysis (5-year) (Linear)	Historic Trend Analysis (10-year) (Linear)
5170	SR A1A/Collins Avenue -- North of 21st Street	0.80%	-0.17%

FLORIDA DEPARTMENT OF TRANSPORTATION  
TRANSPORTATION STATISTICS OFFICE  
2015 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

SITE: 5170 - SR A1A/COLLINS AV, N OF 21 ST (MIAMI BEACH)

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
----	-----		-----		-----	-----	-----	-----
2015	26500	C	N 12500		S 14000	9.00	54.70	4.20
2014	27000	C	N 12500		S 14500	9.00	54.50	4.10
2013	22500	C	N 10500		S 12000	9.00	52.40	9.00
2012	25000	C	N 12000		S 13000	9.00	55.70	4.30
2011	26500	C	N 13500		S 13000	9.00	55.10	2.80
2010	25000	C	N 12500		S 12500	8.98	54.08	2.80
2009	26500	C	N 13000		S 13500	8.99	53.24	2.70
2008	27000	C	N 13500		S 13500	9.09	55.75	4.60
2007	25500	C	N 12500		S 13000	8.01	54.34	5.10
2006	25500	C	N 12500		S 13000	7.97	54.22	2.70
2005	25500	C	N 13000		S 12500	8.80	53.80	11.60
2004	30500	C	N 15000		S 15500	9.00	53.30	11.60
2003	23500	C	N 11500		S 12000	8.80	53.40	6.90
2002	31500	C	N 16000		S 15500	9.80	52.30	4.00
2001	29500	F	N 14500		S 15000	8.20	53.50	6.00
2000	29500	C	N 14500		S 15000	8.20	53.10	4.90

AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE  
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; F = 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

SR A1A/Collins Avenue -- North of 21st Street

County:

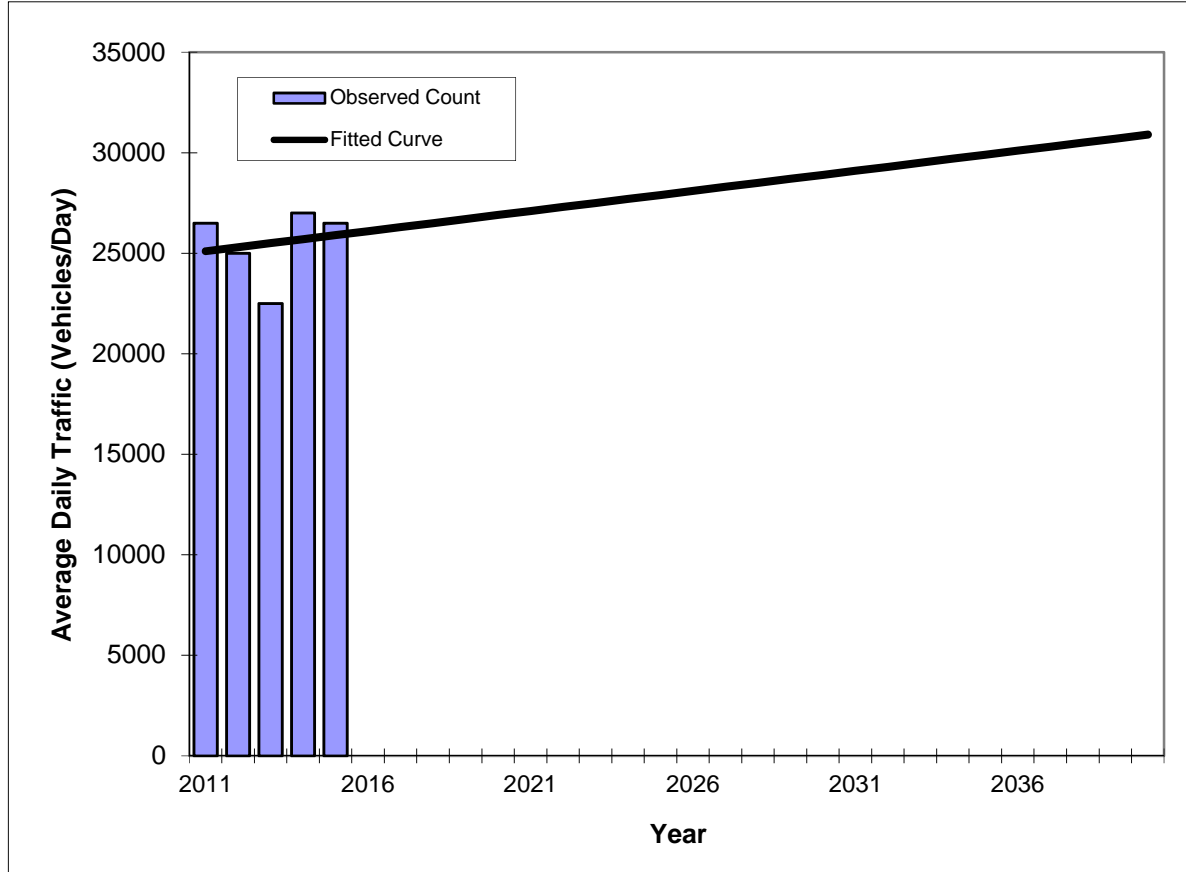
Miami-Dade

Station #:

5170

Highway:

SR A1A/Collins Avenue



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2011	26500	25100
2012	25000	25300
2013	22500	25500
2014	27000	25700
2015	26500	25900

\*\* Annual Trend Increase: 200

Trend Annual Historic Growth Rate: 0.80%

Printed: 21-Jun-16

**Straight Line Growth Option**

\*Axle-Adjusted

## TRAFFIC TRENDS

SR A1A/Collins Avenue -- North of 21st Street

County:

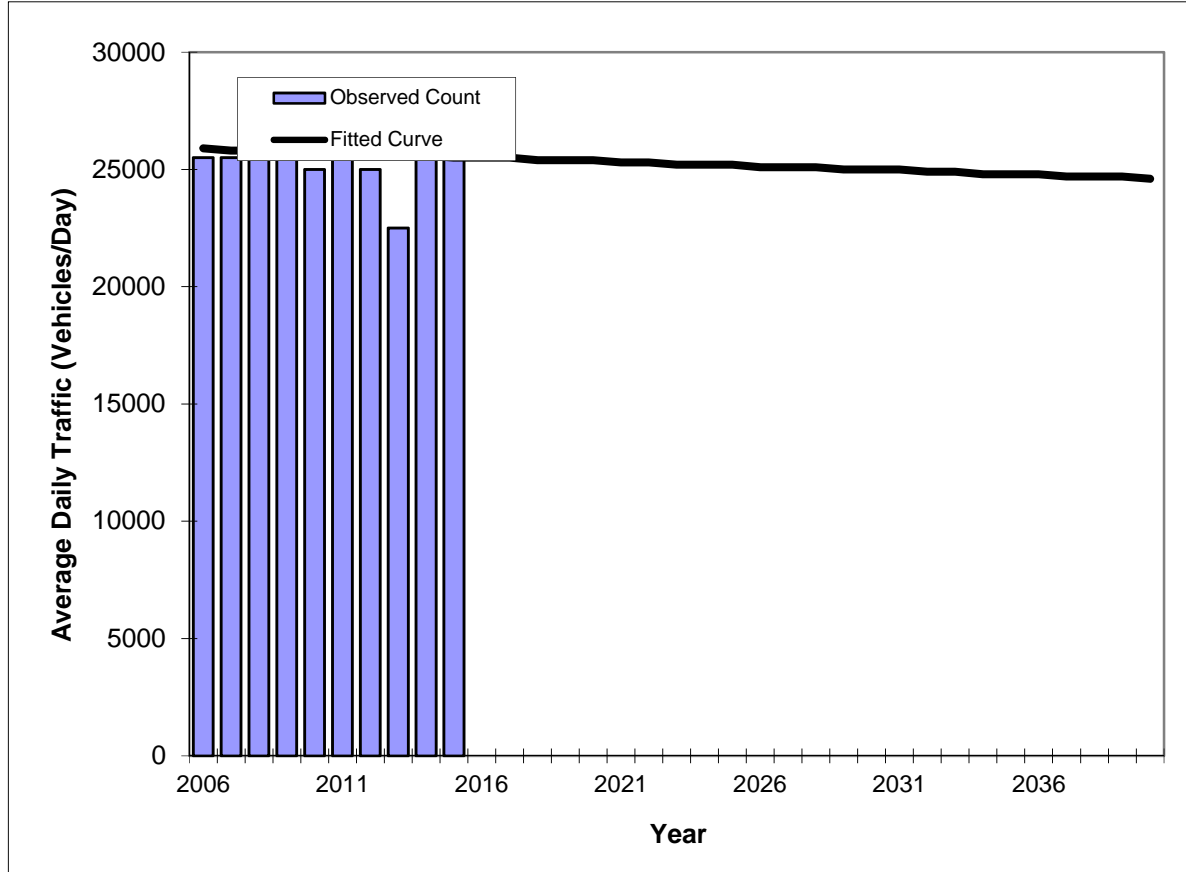
Miami-Dade

Station #:

5170

Highway:

SR A1A/Collins Avenue



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2006	25500	25900
2007	25500	25800
2008	27000	25800
2009	26500	25800
2010	25000	25700
2011	26500	25700
2012	25000	25600
2013	22500	25600
2014	27000	25600
2015	26500	25500

\*\* Annual Trend Increase: -36

Trend Annual Historic Growth Rate: -0.17%

Printed: 21-Jun-16

**Straight Line Growth Option**

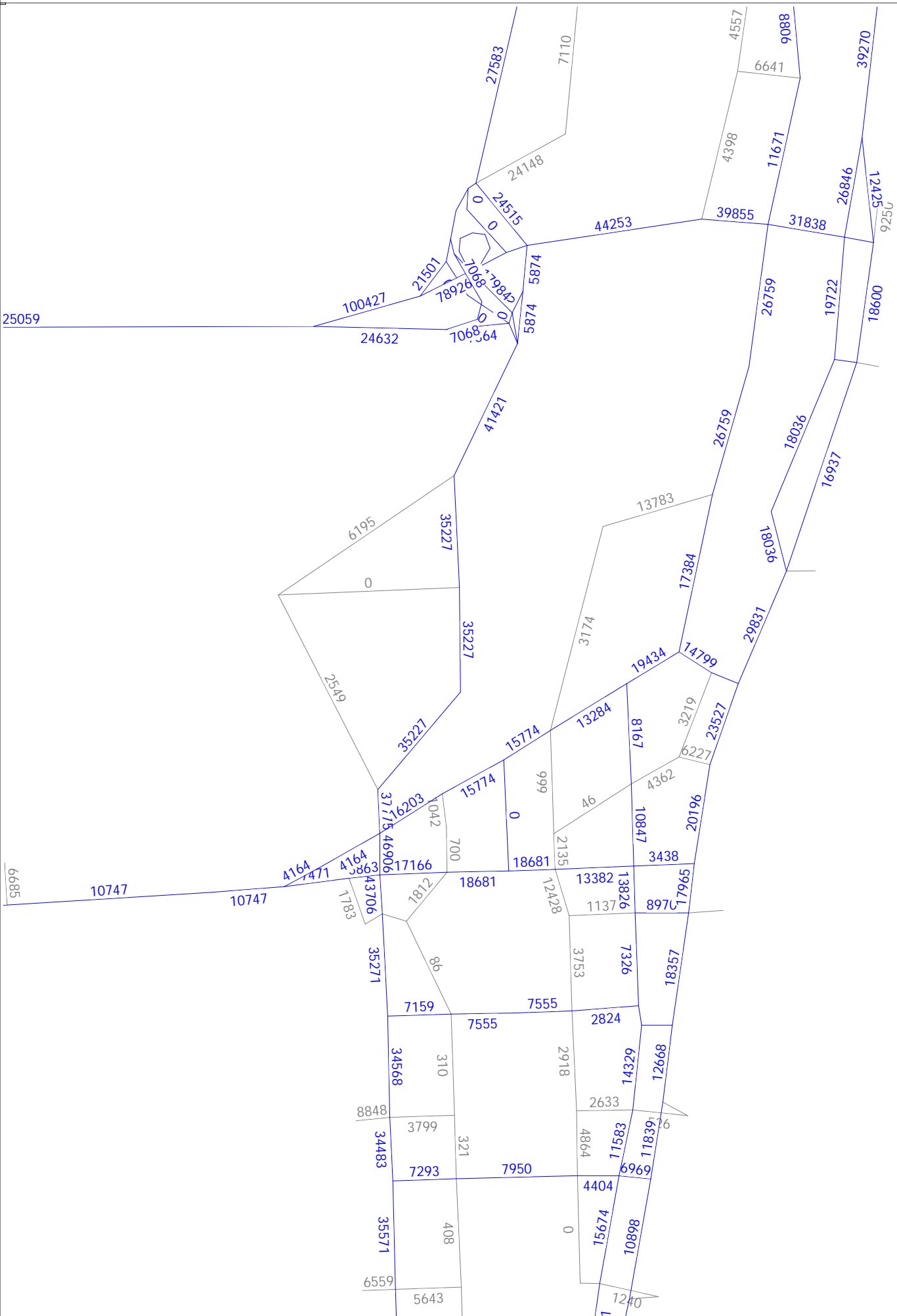
\*Axle-Adjusted

Florida Standard Urban Transportation Model  
Structure (FSUTMS) Southeast Florida Regional  
Planning Model (SERPM) Growth Trend  
Analysis

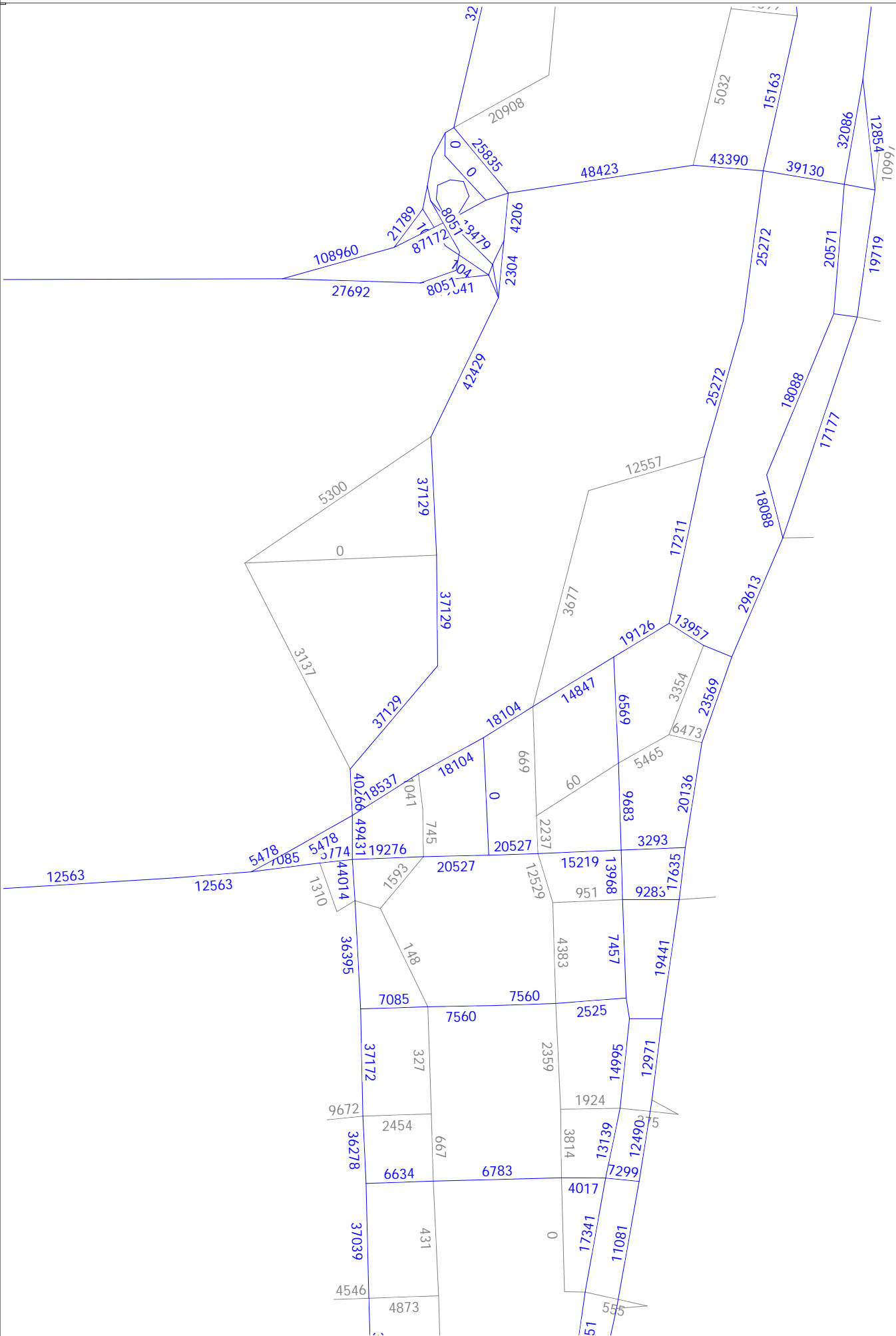


Area-Wide Growth Rate Calculations from 2010 and 2040 M-D MPO FSUTMS Model					
Street Name	2010	2040	Difference	Growth Rate	Annual Growth Rate
N-S					
Washington Avenue	10,847	9,683	-1,164	-10.73%	-0.36%
	8,167	6,569	-1,598	-19.57%	-0.65%
Collins Avenue	20,196	20,136	-60	-0.30%	-0.01%
	23,527	23,569	42	0.18%	0.01%
	29,831	29,613	-218	-0.73%	-0.02%
	16,937	17,177	240	1.42%	0.05%
Pine Tree Drive	17,384	17,211	-173	-1.00%	-0.03%
	26,759	25,272	-1,487	-5.56%	-0.19%
Indian Creek Drive	18,036	18,088	52	0.29%	0.01%
	18,036	18,088	52	0.29%	0.01%
E-W					
17th Street	18,681	20,527	1,846	9.88%	0.33%
	13,382	15,219	1,837	13.73%	0.46%
	3,438	3,293	-145	-4.22%	-0.14%
Dade Boulevard	15,774	18,104	2,330	14.77%	0.49%
	13,284	14,847	1,563	11.77%	0.39%
	19,434	19,126	-308	-1.58%	-0.05%
23rd Street	14,799	13,957	-842	-5.69%	-0.19%
Total	288,512	290,479	1,967		0.02%

## 2010 Volume Plot



# 2040 Volume Plot



## APPENDIX E:

### Committed Developments

# Versailles Hotel Miami Beach, Florida



043423000



- Legend**
- Study Roadway
  - Study Intersection
  - Site
  - 000 Net New Project Trips
  - (000) Valet Trips

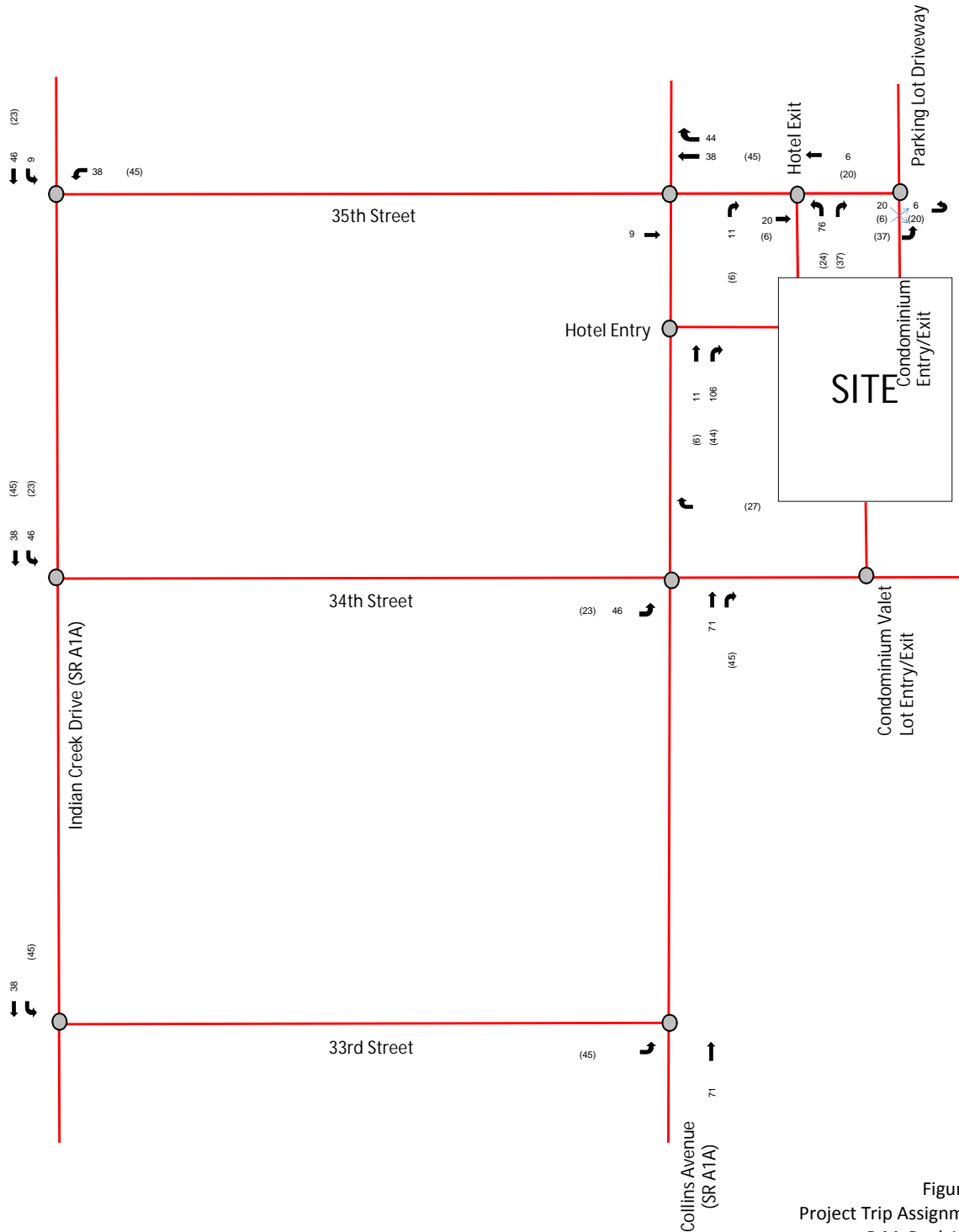


Figure 6  
Project Trip Assignment  
P.M. Peak Hour  
Versailles Hotel  
City of Miami Beach, Florida

*Traffic Impact Analysis  
for Submittal to the  
City of Miami Beach*

Saxony Development  
Miami Beach, Florida



**Kimley-Horn  
and Associates, Inc.**

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Updated January 2012

November 2011

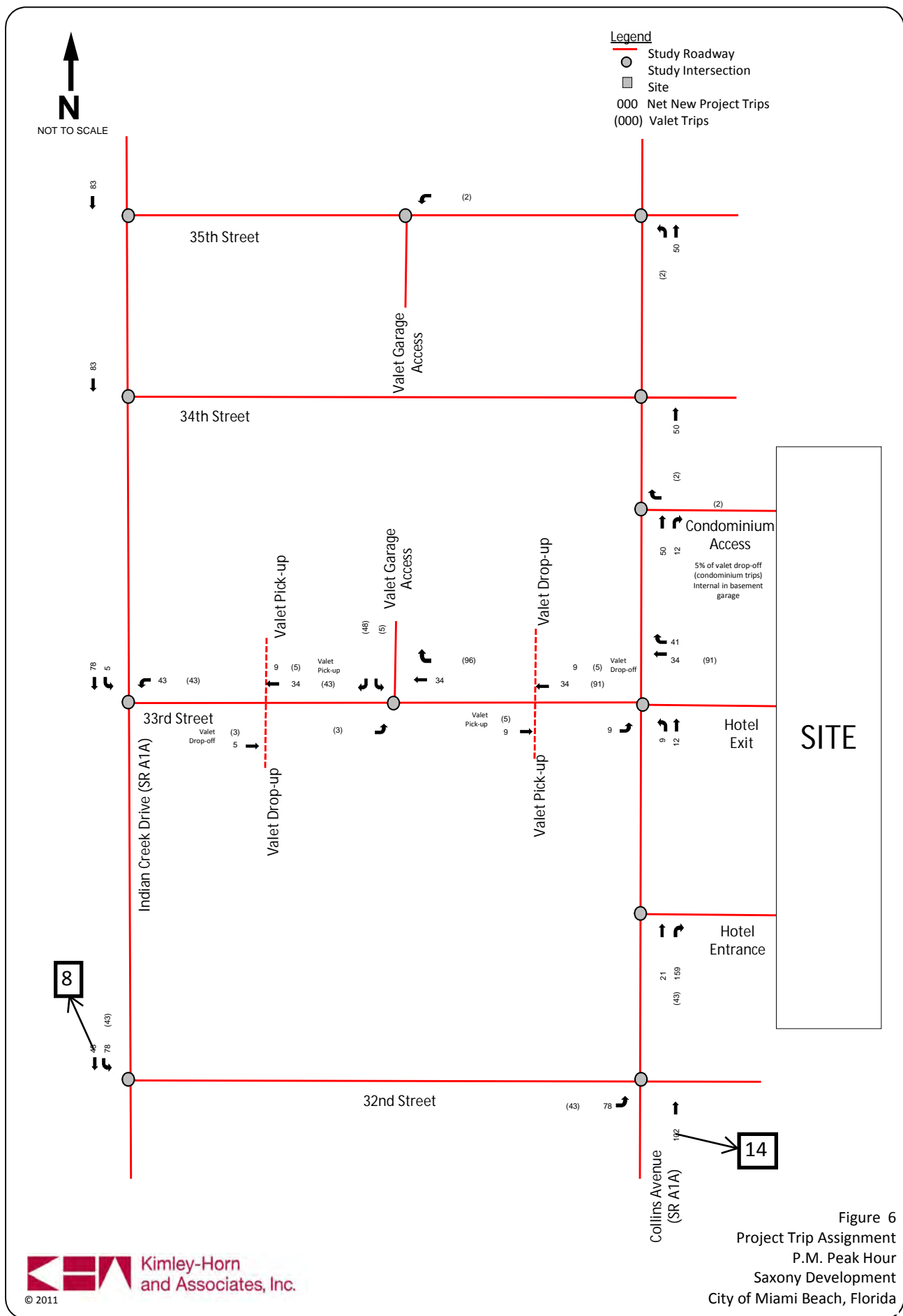
043403000

Table 1: P.M. Peak Hour Trip Generation

Proposed Land Use	ITE Code	Scale	Gross Project Trips			Internal Capture Trips		Multimodal 10% Reduction factor		Net New Project Trips		
			Enter	Exit	Total	%	Trips	%	Trips	Enter	Exit	Total
Saxony Development												
Hotel	310	210 rooms	66	58	124	19.7%	24	10.0%	10	49	41	90
Residential Condominium/Townhouse	230	57 units	25	13	38	62.2%	24	10.0%	2	12	0	12
Drinking Place	925	4,500 s.f.	34	17	51	42.5%	22	10.0%	2	22	5	27
Quality Restaurant	931	673 seats	117	58	175	24.9%	44	10.0%	14	88	29	117
Atlantic Hotels Development												
Hotel	310	18 rooms	6	5	11	19.7%	2	10.0%	0	5	4	9
Ballroom	310	7,551 s.f.	3	3	6	19.7%	2	10.0%	0	2	2	4
Specialty Retail	814	12,889 s.f.	15	20	35	42.5%	14	10.0%	2	7	12	19
Net New Peak Hour Trips			266	174	440	30.0%	132	10.0%	30	176	93	278

26 18 44





APPENDIX F:  
Trip Generation, Taxi Trip Data, and  
Transit Service Information

### EXISTING WEEKEND PEAK HOUR OF GENERATOR TRIP GENERATION

	ITE TRIP GENERATION CHARACTERISTICS					DIRECTIONAL DISTRIBUTION		GROSS VOLUMES			INTERNAL CAPTURE		EXTERNAL TRIPS			10% MULTIMODAL REDUCTION		NET NEW EXTERNAL TRIPS			
	Land Use	ITE Edition	ITE Code	Scale	ITE Units	Percent		In	Out	Total	Percent	IC Trips	In	Out	Total	Percent	PB Trips	In	Out	Total	
						In	Out														
GROUP 1	1	High-Rise Residential Condominium/Townhouse	9	232	828	du	43%	57%	119	158	277	7.9%	22	111	144	255	10.0%	26	100	129	229
	2	Hotel	9	310	333	room	56%	44%	131	103	234	4.7%	11	123	100	223	10.0%	22	111	90	201
	3	Quality Restaurant	9	931	10	ksf	59%	41%	64	44	108	21.3%	23	52	33	85	10.0%	9	47	29	76
	4																				
	5																				
	6																				
	7																				
	8																				
	9																				
	10																				
	11																				
	12																				
	13																				
	14																				
	15																				
		ITE Land Use Code		Rate or Equation		Total:		314	305	619	9.0%	56	286	277	563	10.0%	57	258	248	506	
		232		Y=0.3*(X)+28.85																	
		310		Y=0.69*(X)+4.32																	
		931		Y=10.87*(X)+0.46																	

### PROPOSED WEEKEND PEAK HOUR OF GENERATOR TRIP GENERATION

ITE TRIP GENERATION CHARACTERISTICS					DIRECTIONAL DISTRIBUTION		GROSS VOLUMES			INTERNAL CAPTURE		EXTERNAL TRIPS			10% MULTIMODAL REDUCTION		NET NEW EXTERNAL TRIPS					
Land Use	ITE Edition	ITE Code	Scale	ITE Units	Percent		In	Out	Total	Percent	IC Trips	In	Out	Total	Percent	PB Trips	In	Out	Total			
					In	Out																
1 High-Rise Residential Condominium/Townhouse	9	232	828	du	43%	57%	119	158	277	8.7%	24	109	144	253	10.0%	25	98	130	228			
2 Hotel	9	310	333	room	56%	44%	131	103	234	5.1%	12	122	100	222	10.0%	22	110	90	200			
3 Quality Restaurant	9	931	10	ksf	59%	41%	64	44	108	26.9%	29	50	29	79	10.0%	8	45	26	71			
4 Beach Club <sup>(1)</sup>	N/A	N/A	N/A	N/A	81%	19%	122	29	151	6.0%	9	118	24	142	10.0%	14	106	22	128			
5																						
6																						
7																						
8																						
9																						
10																						
11																						
12																						
13																						
14																						
15																						
ITE Land Use Code					Rate or Equation		Total:		436	334	770	9.6%	74	399	297	696	10.0%	69	359	268	627	
232					Y=0.3*(X)+28.85																	
310					Y=0.69*(X)+4.32																	
931					Y=10.87*(X)+0.46																	
N/A					N/A																	
																	NET NEW TRIPS			101	20	121
																	42.6% TAX/SHARED-RIDE REDUCTION			43	9	52

	IN	OUT	TOTAL
NET NEW TRIPS	101	20	121
42.6% TAXI/SHARED-RIDE REDUCTION	43	9	52
NET NEW VALET TRIPS	58	11	69

	IN	OUT	TOTAL
COLLINS AVENUE NET NEW VALET TRIPS	30	6	36
24TH STREET NET NEW VALET TRIPS	28	5	33

Note: <sup>(1)</sup>Trip generation data based on valet parking projections and weekly event capacities. Detailed trip generation is attached.

<sup>(2)</sup>Taxi/shared-ride reduction based on data collected at Cadillac Hotel. Detailed calculations are attached.

Table 1

**1 Hotel South Beach - Private Beach - Valet Parking Projections**

Saturday Party Hourly Valet Projections	Saturday Event Capacity (person-trips)	Saturday Event Capacity (vehicle-trips) 2 persons per vehicle	Hourly Drop-off Valet Breakdown (1pm-2pm)		Hourly Drop-off Valet Breakdown (2pm-3pm)		Hourly Drop-off Valet Breakdown (3pm-4pm)		Hourly Drop-off Valet Breakdown (4pm-5pm)		Hourly Drop-off Valet Breakdown (5pm-6pm)		Hourly Drop-off Valet Breakdown (6pm-7pm)		Hourly Drop-off Valet Breakdown (7 pm-8pm)		Weekly Event Occupancy
January	408	204	5%	10	15%	31	25%	51	30%	61	20%	41	5%	10	0%	0	408
February	510	255	5%	13	15%	38	25%	64	30%	77	20%	51	5%	13	0%	0	510
March (Daylight Saving Start)	510	255	5%	13	5%	13	20%	51	30%	77	25%	64	10%	26	5%	13	510
April	595	298	5%	15	5%	15	20%	60	30%	89	25%	74	10%	30	5%	15	595
May	595	298	5%	15	5%	15	20%	60	30%	89	25%	74	10%	30	5%	15	595
June	574	287	5%	14	5%	14	20%	57	30%	86	25%	72	10%	29	5%	14	574
July	574	287	5%	14	5%	14	20%	57	30%	86	25%	72	10%	29	5%	14	574
August	574	287	5%	14	5%	14	20%	57	30%	86	25%	72	10%	29	5%	14	574
September	574	287	5%	14	5%	14	20%	57	30%	86	25%	72	10%	29	5%	14	574
October	638	319	5%	16	5%	16	20%	64	30%	96	25%	80	10%	32	5%	16	638
November (Daylight Savings End)	638	319	5%	16	15%	48	25%	80	30%	96	20%	64	5%	16	0%	0	638
December	816	408	5%	20	15%	61	25%	102	30%	122	20%	82	5%	20	0%	0	816

Assumptions: projections made with help from Zac Courtney, who opened the Beach Club at Soho House. The use of valet parking is correlated to the price charged. Charging \$25 will likely generate a 10% utilization of this service. Charging \$10-\$12 will generate aprox 50% utilization. Projections made for the Saturday parties are based on 50% utilization.

December Saturday Peak Hour Valet Trips	Drop-off Valet	Pick-up Valet	Total Valet	
1 to 2 PM	20	0	20	Pick-up valet trips represent 0% of 1 to 2 pm drop-off valet trips
2 to 3 PM	61	4	65	Pick-up valet trips represent 20% of 1 to 2 pm drop-off valet trips
3 to 4 PM	102	18	120	Pick-up valet trips represent 30% of 1 to 2 pm drop-off valet trips and 20% of 2 to 3 pm drop-off valet trips
4 to 5 PM	122	29	151	Pick-up valet trips represent 50% of 1 to 2 pm drop-off valet trips and 30% of 2 to 3 pm drop-off valet trips
5 to 6 PM	82	51	133	Pick-up valet trips represent 50% of 2 to 3 pm drop-off valet trips and 20% of 3 to 4 pm drop-off valet trips
6 to 7 PM	20	55	75	Pick-up valet trips represent 30% of 3 to 4 pm drop-off valet trips and 20% of 4 to 5 pm drop-off valet trips
7 to 8 PM	0	104	104	Pick-up valet trips represent 50% of 3 to 4 pm drop-off valet trips, 30% of 4 to 5 pm drop-off valet trips, and 20% of 5 to 6 pm drop-off valet trips
8 to 9 PM	0	90	90	Pick-up valet trips represent 50% of 4 to 5 pm drop-off valet trips, 30% of 5 to 6 pm drop-off valet trips, and 20% of 6 to 7 pm drop-off valet trips
9 to 10 PM	0	57	57	Pick-up valet trips represent 50% of 5 to 6 pm drop-off valet trips and 80% of 6 to 7 pm drop-off valet trips

Table 1

**1 Hotel South Beach - Private Beach - Valet Parking Projections**

Day of the Week	Annual Number of Public Guests	Annual Number of Members	Annual Total Number of Public and Members	Daily Total Number of Public and Members			
Monday	2409	2,560	4968.57	124			
Tuesday	2409	2,560	4968.57	124			
Wednesday	2409	2,560	4968.57	124			
Thursday	2810	2,987	5796.67	144			
Friday	4817	5,120	9937.15	248	<b>Total</b>	<b>Public</b>	<b>Member</b>
Saturday	4817	5,120	9937.15	248	9937	48%	52%
Sunday	3211	3,413	6624.77	165			
<b>Total</b>	22881	24320	47201.45	1176			

# Internal Capture Reduction Calculations

Methodology for A.M. Peak Hour and P.M. Peak Hour  
based on the *Trip Generation Handbook*, 3rd Edition, published by the Institute of Transportation Engineers

Methodology for Daily  
based on the average of the Unconstrained Rates for the A.M. Peak Hour and P.M. Peak Hour

## SUMMARY (EXISTING)

GROSS TRIP GENERATION							
INPUT	Land Use	Daily		A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit	Enter	Exit
	Office						
	Retail						
	Restaurant					64	44
	Cinema/Entertainment						
	Residential					119	158
	Hotel					131	103
		0	0	0	0	314	305
INTERNAL TRIPS							
OUTPUT	Land Use	Daily		A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit	Enter	Exit
	Office	0	0	0	0	0	0
	Retail	0	0	0	0	0	0
	Restaurant	0	0	0	0	12	11
	Cinema/Entertainment	0	0	0	0	0	0
	Residential	0	0	0	0	8	14
	Hotel	0	0	0	0	8	3
		0	0	0	0	28	28
OUTPUT	Total % Reduction	0.0%		0.0%		9.0%	
	Office						
	Retail						
	Restaurant					21.3%	
	Cinema/Entertainment						
	Residential					7.9%	
	Hotel					4.7%	
EXTERNAL TRIPS							
OUTPUT	Land Use	Daily		A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit	Enter	Exit
	Office	0	0	0	0	0	0
	Retail	0	0	0	0	0	0
	Restaurant	0	0	0	0	52	33
	Cinema/Entertainment	0	0	0	0	0	0
	Residential	0	0	0	0	111	144
	Hotel	0	0	0	0	123	100
		0	0	0	0	286	277

# Internal Capture Reduction Calculations

Methodology for A.M. Peak Hour and P.M. Peak Hour  
based on the *Trip Generation Handbook*, 3rd Edition, published by the Institute of Transportation Engineers

Methodology for Daily  
based on the average of the Unconstrained Rates for the A.M. Peak Hour and P.M. Peak Hour

## SUMMARY (PROPOSED)

GROSS TRIP GENERATION							
INPUT	Land Use	Daily		A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit	Enter	Exit
	Office						
	Retail						
	Restaurant					64	44
	Cinema/Entertainment					122	29
	Residential					119	158
	Hotel					131	103
		0	0	0	0	436	334
INTERNAL TRIPS							
OUTPUT	Land Use	Daily		A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit	Enter	Exit
	Office	0	0	0	0	0	0
	Retail	0	0	0	0	0	0
	Restaurant	0	0	0	0	14	15
	Cinema/Entertainment	0	0	0	0	4	5
	Residential	0	0	0	0	10	14
	Hotel	0	0	0	0	9	3
		0	0	0	0	37	37
OUTPUT	Total % Reduction	0.0%		0.0%		9.6%	
	Office						
	Retail						
	Restaurant					26.9%	
	Cinema/Entertainment					6.0%	
	Residential					8.7%	
	Hotel					5.1%	
EXTERNAL TRIPS							
OUTPUT	Land Use	Daily		A.M. Peak Hour		P.M. Peak Hour	
		Enter	Exit	Enter	Exit	Enter	Exit
	Office	0	0	0	0	0	0
	Retail	0	0	0	0	0	0
	Restaurant	0	0	0	0	50	29
	Cinema/Entertainment	0	0	0	0	118	24
	Residential	0	0	0	0	109	144
	Hotel	0	0	0	0	122	100
		0	0	0	0	399	297

Hotel and Restaurant Valet Drop-off and Pick-up Traffic Data Summary  
Friday October 22, 2010

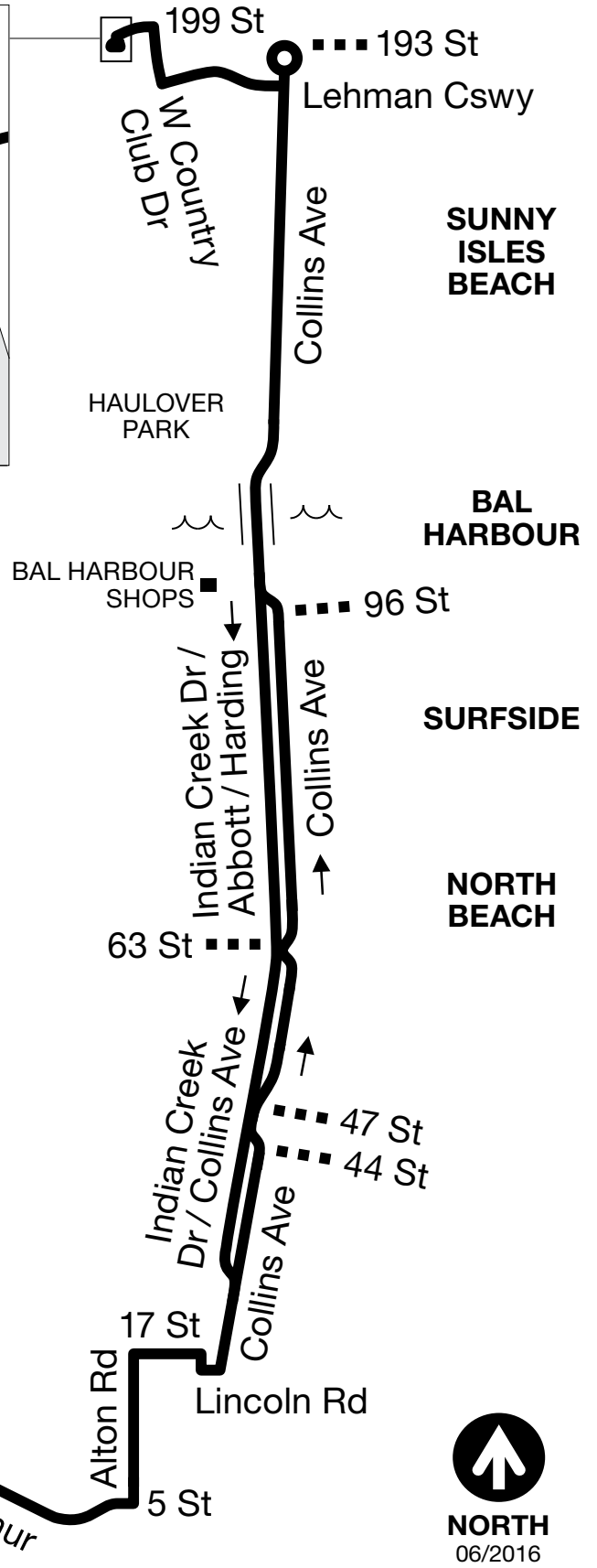
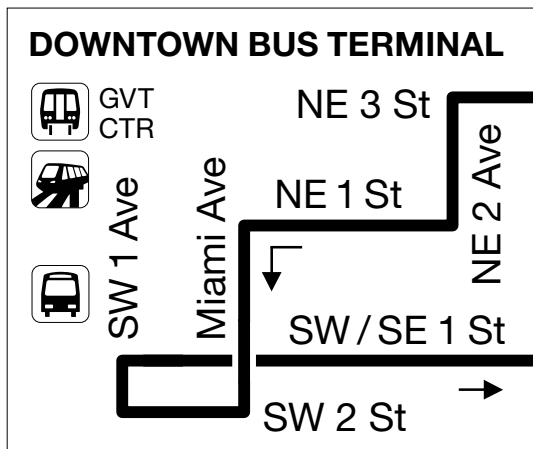
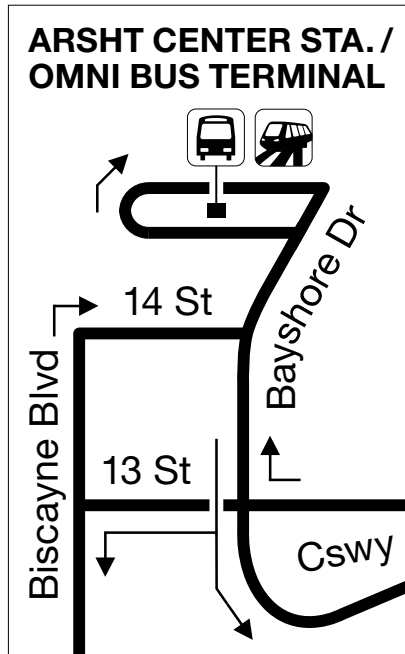
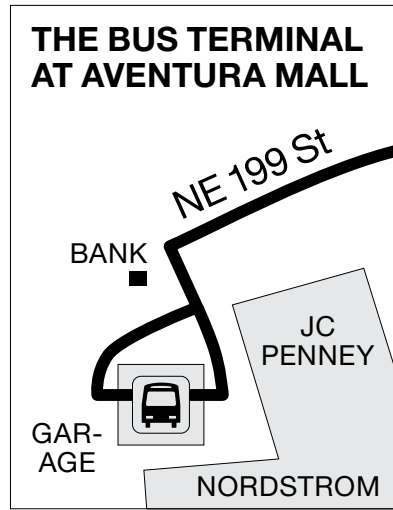
Hotel Valet Area Observations									
Time	Hotel Pick-up Maximum Queue	Hotel Pick-Up Volume	Hotel Pick-Up Peak Hour Volume	Hotel Drop-off Maximum Queue	Hotel Drop-off Volume	Hotel Drop-Off Peak Hour Volume	Total Hotel Volume		Total Hotel Peak Hour Volume
18:00	0	0		3	18		18		
18:15	2	4		2	3		7		
18:30	2	6		3	7		13		
18:45	4	23	40	4	13	37	36		77
19:00	3	9		1	3		12		
19:15	2	6		2	7		13		
19:30	1	2		3	14		16		
19:45	0	0		2	4		4		
20:00	1	3		2	7		10		
20:15	1	3		1	2		5		
20:30	3	11		2	7		18		
20:45	3	13		2	6		19		

Restaurant Valet Area Observations						
Time	Restaurant Pick-up Maximum Queue	Restaurant Pick-Up Volume	Restaurant Pick-Up Peak Hour Volume	Restaurant Drop-off Maximum Queue	Restaurant Drop-off Volume	Restaurant Drop-off Peak Hour Volume
18:00	5	17		0	0	
18:15	4	13		2	7	8
18:30	3	9		0	0	
18:45	3	18		0	0	
19:00	4	15		1	1	
19:15	4	14		1	1	
19:30	5	18		1	1	
19:45	6	27		1	2	
20:00	5	18	81	1	1	
20:15	5	15		0	0	
20:30	5	15		0	1	
20:45	6	33		0	0	

Taxi vs Valet Trips									
Time	Valet Pick-up Trips	Valet Drop-off Trips	Total Valet Trips	Taxi Pick-up Trips	Taxi Drop-off Trips	Total Taxi Trips	Total Site Pick-up Trips	Total Site Drop-off Trips	Total Site Trips
18:00	1	11	12	16	7	23	17	18	35
18:15	5	6	11	12	4	16	17	10	27
18:30	3	3	6	12	4	16	15	7	22
18:45	32	10	42	9	3	12	41	13	54
19:00	17	1	18	7	3	10	24	4	28
19:15	12	5	17	8	3	11	20	8	28
19:30	12	12	24	8	3	11	20	15	35
19:45	20	4	24	7	2	9	27	6	33
20:00	10	4	14	11	4	15	21	8	29
20:15	3	1	4	15	1	16	18	2	20
20:30	15	4	19	11	4	15	26	8	34
20:45	35	2	37	11	4	15	46	6	52

Taxi Trips Observed 42.6%





[www.miamidade.gov/transit](http://www.miamidade.gov/transit) **311** (305.468.5900) TDD: 305.468.5402

MiamiDadeTransit @IRideMDT @IRideMDT MDT TRACKER / MDT TRANSIT WATCH



DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

# Routes Schedule



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1



## 119 (Northbound) SATURDAY

SW 1 AV & SW 1 ST	OMNI TERMINAL / ARSHT METROMOVER	ALTON RD & 6 ST MIAMI BEACH	17 ST & LENOX AV	Lincoln Rd & James Ave	COLLINS AVE & 41 ST	COLLINS AVE & 69 ST	COLLINS AVE & 96 ST MIAMI BEACH	COLLINS AVE & SUNNY ISLES BLVD	COLLINS AVE & 193 ST	Bus Terminal at Aventura Mall
05:00AM	05:09AM	05:17AM	05:22AM	05:26AM	05:33AM	05:42AM	05:47AM	05:54AM	06:02AM	06:09AM
05:18AM	05:27AM	05:35AM	05:40AM	05:44AM	05:51AM	06:02AM	06:09AM	06:17AM	06:25AM	06:32AM
05:34AM	05:43AM	05:51AM	05:56AM	06:00AM	06:08AM	06:19AM	06:26AM	06:34AM	06:42AM	06:49AM
05:49AM	05:58AM	06:07AM	06:13AM	06:17AM	06:25AM	06:36AM	06:43AM	06:51AM	06:59AM	07:07AM
06:04AM	06:14AM	06:23AM	06:29AM	06:33AM	06:41AM	06:52AM	06:59AM	07:07AM	07:16AM	07:24AM
06:19AM	06:29AM	06:38AM	06:44AM	06:48AM	06:56AM	07:07AM	07:14AM	07:22AM	07:31AM	07:39AM
06:34AM	06:44AM	06:53AM	06:59AM	07:04AM	07:12AM	07:23AM	07:30AM	07:38AM	07:47AM	07:55AM
06:49AM	06:59AM	07:08AM	07:15AM	07:20AM	07:28AM	07:39AM	07:46AM	07:54AM	08:03AM	08:11AM
07:04AM	07:15AM	07:24AM	07:31AM	07:36AM	07:44AM	07:55AM	08:04AM	08:12AM	08:21AM	08:29AM
07:19AM	07:30AM	07:39AM	07:46AM	07:51AM	07:59AM	08:12AM	08:21AM	08:29AM	08:38AM	08:46AM
07:34AM	07:45AM	07:54AM	08:02AM	08:07AM	08:17AM	08:30AM	08:39AM	08:47AM	08:56AM	09:04AM
07:49AM	08:01AM	08:10AM	08:18AM	08:23AM	08:33AM	08:46AM	08:55AM	09:03AM	09:13AM	09:21AM
08:04AM	08:16AM	08:25AM	08:33AM	08:38AM	08:48AM	09:01AM	09:10AM	09:18AM	09:28AM	09:36AM
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08:34AM	08:46AM	08:55AM	09:04AM	09:11AM	09:23AM	09:36AM	09:45AM	09:53AM	10:03AM	10:11AM
08:49AM	09:03AM	09:16AM	09:25AM	09:32AM	09:44AM	09:57AM	10:06AM	10:14AM	10:24AM	10:32AM

09:04AM	09:18AM	09:31AM	09:40AM	09:47AM	09:59AM	10:12AM	10:21AM	10:29AM	10:39AM	10:47AM
09:19AM	09:33AM	09:46AM	09:55AM	10:02AM	10:14AM	10:27AM	10:36AM	10:44AM	10:54AM	11:02AM
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04:04PM	04:18PM	04:32PM	04:41PM	04:48PM	05:00PM	05:13PM	05:22PM	05:30PM	05:40PM	05:48PM
04:19PM	04:33PM	04:47PM	04:56PM	05:03PM	05:15PM	05:28PM	05:37PM	05:45PM	05:55PM	06:03PM

04:34PM	04:48PM	05:02PM	05:11PM	05:18PM	05:30PM	05:43PM	05:52PM	06:00PM	06:10PM	06:18PM
04:49PM	05:03PM	05:17PM	05:26PM	05:33PM	05:45PM	05:58PM	06:07PM	06:15PM	06:25PM	06:33PM
05:04PM	05:18PM	05:32PM	05:41PM	05:48PM	06:00PM	06:13PM	06:22PM	06:30PM	06:40PM	06:48PM
05:19PM	05:33PM	05:47PM	05:56PM	06:03PM	06:15PM	06:28PM	06:37PM	06:45PM	06:55PM	07:03PM
05:34PM	05:48PM	06:02PM	06:11PM	06:18PM	06:30PM	06:43PM	06:52PM	07:00PM	07:09PM	07:17PM
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06:34PM	06:48PM	07:02PM	07:12PM	07:18PM	07:29PM	07:41PM	07:50PM	07:58PM	08:07PM	08:15PM
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09:05PM	09:18PM	09:28PM	09:38PM	09:44PM	09:55PM	10:07PM	10:14PM	10:21PM	10:28PM	10:35PM
09:25PM	09:38PM	09:48PM	09:58PM	10:04PM	10:13PM	10:24PM	10:31PM	10:38PM	10:45PM	10:52PM
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01:10AM	01:19AM	01:27AM	01:33AM	01:37AM	01:44AM	01:53AM	01:58AM	02:05AM	02:12AM	02:18AM
02:10AM	02:19AM	02:27AM	02:33AM	02:37AM	02:44AM	02:53AM	02:58AM	03:05AM	03:12AM	03:18AM
03:10AM	03:19AM	03:27AM	03:33AM	03:37AM	03:44AM	03:53AM	03:58AM	04:05AM	04:12AM	04:18AM

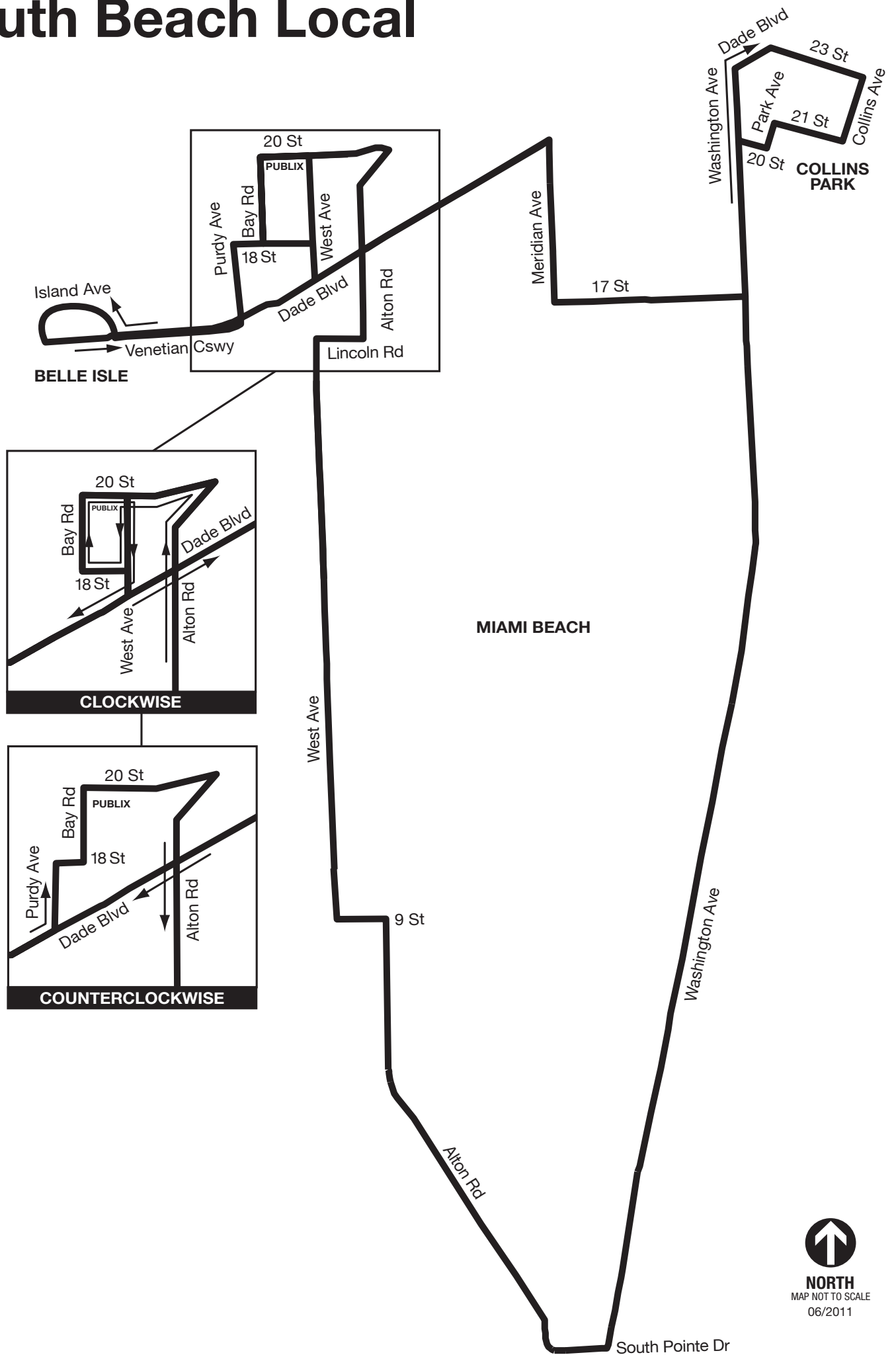
04:10AM      04:19AM      04:27AM      04:33AM      04:37AM      04:44AM      04:53AM      04:58AM      05:05AM      05:12AM      05:18AM

[Back to previous page \(javascript: history.go\(-1\) \)](#)

Page Last Edited: Mon Dec 21, 2015 11:21:25 PM



# South Beach Local



# Routes Schedule



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123 (Clockwise) SATURDAY

WEST AVE & 20 ST MIAMI BEACH	VENETIAN WAY & E ISLAND AVE	23 ST & LIBERTY AVE	WASHINGTON AVE & LINCOLN RD	WASHINGTON AVE & 5 ST	ALTON RD & 2 ST	WEST AVE & 15 TERR	WEST AVE & 20 ST MIAMI BEACH
07:50AM	07:53AM	08:05AM	08:11AM	08:20AM	08:24AM	08:32AM	08:38AM
08:20AM	08:24AM	08:36AM	08:42AM	08:51AM	08:55AM	09:03AM	09:09AM
08:40AM	08:44AM	08:56AM	09:02AM	09:11AM	09:15AM	09:23AM	09:29AM
09:00AM	09:04AM	09:16AM	09:22AM	09:31AM	09:35AM	09:43AM	09:49AM
09:20AM	09:24AM	09:36AM	09:42AM	09:51AM	09:55AM	10:04AM	10:11AM
09:40AM	09:44AM	09:56AM	10:02AM	10:12AM	10:16AM	10:25AM	10:32AM
10:00AM	10:04AM	10:17AM	10:23AM	10:33AM	10:37AM	10:46AM	10:53AM
10:13AM	10:17AM	10:30AM	10:36AM	10:46AM	10:50AM	10:59AM	11:06AM
10:26AM	10:30AM	10:43AM	10:49AM	10:59AM	11:03AM	11:12AM	11:19AM
10:39AM	10:43AM	10:56AM	11:02AM	11:12AM	11:16AM	11:25AM	11:32AM
10:52AM	10:56AM	11:09AM	11:15AM	11:25AM	11:29AM	11:38AM	11:45AM
11:05AM	11:09AM	11:22AM	11:28AM	11:38AM	11:42AM	11:51AM	11:58AM
11:18AM	11:22AM	11:35AM	11:41AM	11:51AM	11:55AM	12:04PM	12:11PM
11:31AM	11:35AM	11:48AM	11:54AM	12:04PM	12:08PM	12:17PM	12:24PM
11:44AM	11:48AM	12:01PM	12:07PM	12:17PM	12:21PM	12:30PM	12:37PM
11:57AM	12:01PM	12:14PM	12:20PM	12:30PM	12:34PM	12:43PM	12:50PM

12:10PM	12:14PM	12:27PM	12:33PM	12:43PM	12:47PM	12:56PM	01:03PM
12:23PM	12:27PM	12:40PM	12:46PM	12:56PM	01:00PM	01:09PM	01:16PM
12:36PM	12:40PM	12:53PM	12:59PM	01:09PM	01:13PM	01:22PM	01:29PM
12:49PM	12:53PM	01:06PM	01:12PM	01:22PM	01:26PM	01:35PM	01:42PM
01:02PM	01:06PM	01:19PM	01:25PM	01:35PM	01:39PM	01:48PM	01:55PM
01:15PM	01:19PM	01:32PM	01:38PM	01:48PM	01:52PM	02:01PM	02:08PM
01:28PM	01:32PM	01:45PM	01:51PM	02:01PM	02:05PM	02:14PM	02:21PM
01:41PM	01:45PM	01:58PM	02:04PM	02:14PM	02:18PM	02:27PM	02:34PM
01:54PM	01:58PM	02:11PM	02:17PM	02:27PM	02:31PM	02:40PM	02:47PM
02:07PM	02:11PM	02:24PM	02:30PM	02:40PM	02:44PM	02:53PM	03:00PM
02:20PM	02:24PM	02:37PM	02:43PM	02:53PM	02:57PM	03:06PM	03:13PM
02:33PM	02:37PM	02:50PM	02:56PM	03:06PM	03:10PM	03:19PM	03:26PM
02:46PM	02:50PM	03:03PM	03:09PM	03:19PM	03:23PM	03:32PM	03:39PM
02:59PM	03:03PM	03:16PM	03:22PM	03:32PM	03:36PM	03:45PM	03:52PM
03:12PM	03:16PM	03:29PM	03:35PM	03:45PM	03:49PM	03:58PM	04:05PM
03:25PM	03:29PM	03:42PM	03:48PM	03:58PM	04:02PM	04:11PM	04:18PM
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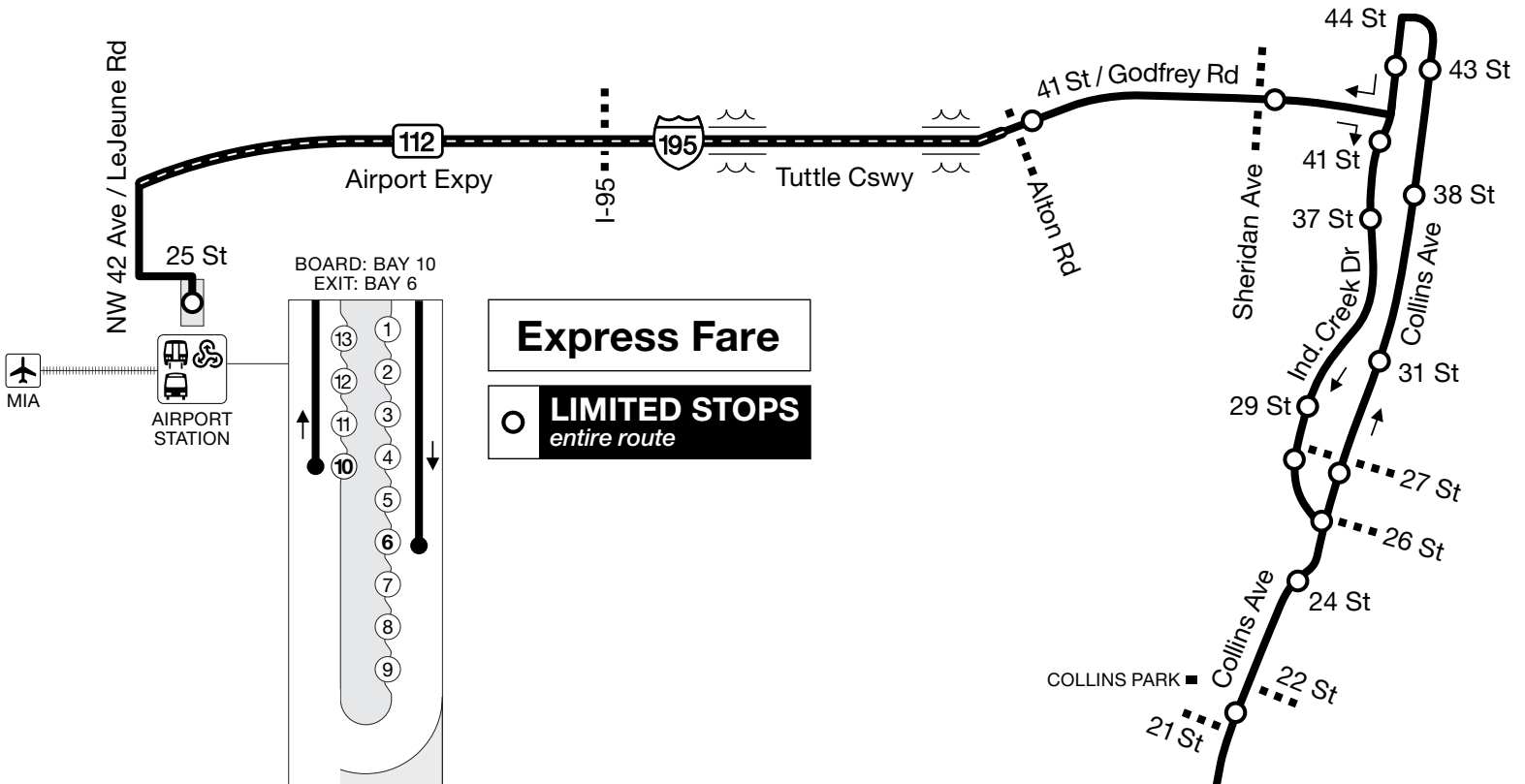


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# 150

MIAMI BEACH  
AIRPORT EXPRESS

**BUS SERVICE  
EVERY 20  
MINUTES**

SERVICIO DE AUTOBUSES  
CADA 20 MINUTOS  
SEVIS BIS CHAK 20 MINIT

## SCHEDULE HORARIO • ORÈ

EASTBOUND RUMBO ESTE DIREKSYON IS	FROM DESDE • DE	UNTIL HASTA • A
MIA METRORAIL STATION	6:00 a.m.	11:40 p.m.
41 ST & ALTON RD	6:14 a.m.	11:52 p.m.
41 ST & INDIAN CREEK	6:20 a.m.	11:57 p.m.
LINCOLN RD & WASHINGTON AVE	6:29 a.m.	12:06 a.m.
SOUTH POINTE DR & WASHINGTON AVE	6:39 a.m.	12:16 a.m.

WESTBOUND RUMBO OESTE DIREKSYON WES	FROM DESDE • DE	UNTIL HASTA • A
SOUTH POINTE DR & WASHINGTON AVE	5:10 a.m.	10:55 p.m.
LINCOLN RD & WASHINGTON AVE	5:20 a.m.	11:05 p.m.
41 ST & INDIAN CREEK	5:29 a.m.	11:14 p.m.
41 ST & ALTON RD	5:33 a.m.	11:18 p.m.
MIA METRORAIL STATION	5:45 a.m.	11:30 p.m.



[www.miamidade.gov/transit](http://www.miamidade.gov/transit)

**311** (305.468.5900) TDD: 305.468.5402

MiamiDadeTransit

@IRideMDT

@IRideMDT

MDT TRACKER / MDT TRANSIT WATCH



DEPARTMENT OF TRANSPORTATION AND PUBLIC WORKS

# Routes Schedule



<https://www.facebook.cc>



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1



150 (Eastbound) SATURDAY

Airport Station	41 ST & ALTON RD MIAMI BEACH	INDIAN CREEK DR & 40 ST	WASHINGTON AVE & LINCOLN RD	WASHINGTON AVE & SOUTH POINTE DR
06:00AM	06:14AM	06:20AM	06:29AM	06:39AM
06:20AM	06:34AM	06:40AM	06:49AM	06:59AM
06:40AM	06:54AM	07:00AM	07:09AM	07:19AM
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05:57PM	06:12PM	06:18PM	06:27PM	06:40PM
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11:10PM	11:22PM	11:27PM	11:36PM	11:46PM
11:40PM	11:52PM	11:57PM	12:06AM	12:16AM

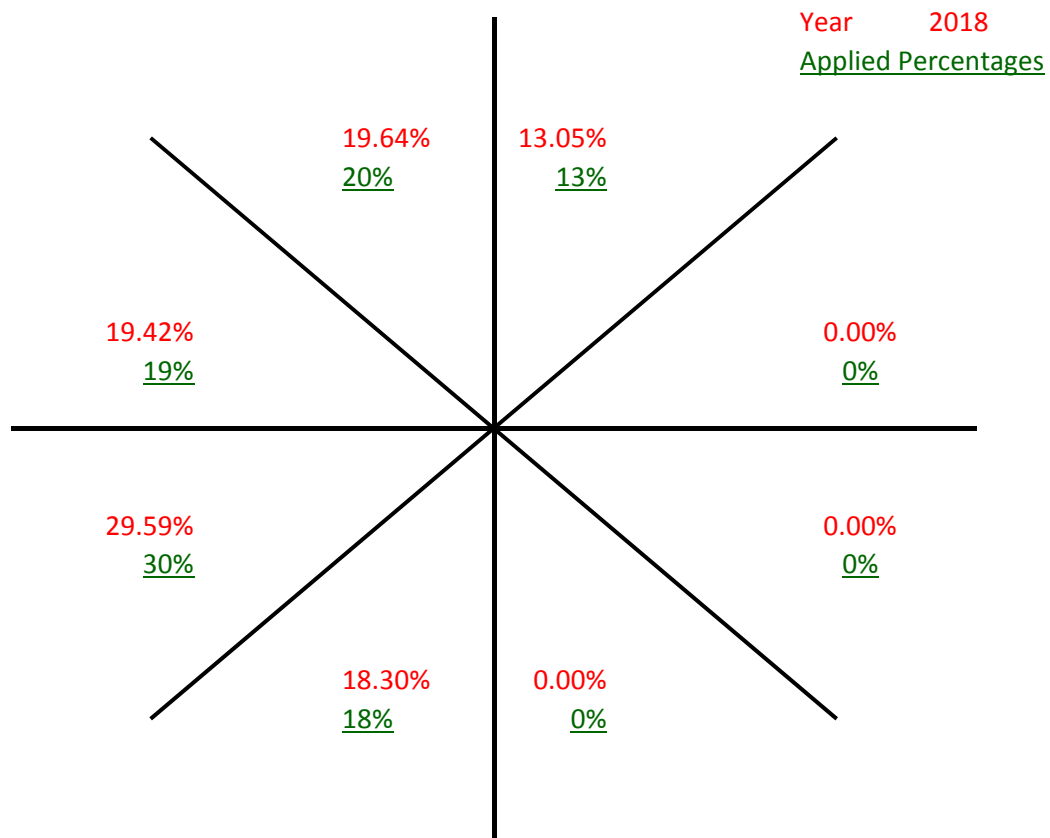
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## APPENDIX G:

### Trip Distribution and Assignment

# Cardinal Distribution for TAZ 635



## Cardinal Trip Distribution

Cardinal Direction	Percentage of Trips		2018 Interpolated	2018 Rounded
	2010	2040		
North-Northeast	12.2%	15.4%	13.05%	13.00%
East-Northeast	0.0%	0.0%	0.00%	0.00%
East-Southeast	0.0%	0.0%	0.00%	0.00%
South-Southeast	0.0%	0.0%	0.00%	0.00%
South-Southwest	17.5%	20.5%	18.30%	18.00%
West-Southwest	30.2%	27.9%	29.59%	30.00%
West-Northwest	20.3%	17.0%	19.42%	19.00%
North-Northwest	19.8%	19.2%	19.64%	20.00%
Total	100.0%	100.0%	100.00%	100.00%

Miami-Dade 2010 Directional Distribution Summary											
Origin TAZ			Cardinal Directions								Total
County TAZ	Regional TAZ		NNE	ENE	ESE	SSE	SSW	WSW	WNW	NNW	
616	3516	TRIPS	703	540	0	1,630	1,842	1,537	1,127	1,812	9,191
616	3516	PERCENT	7.7	5.9	0.0	17.7	20.0	16.7	12.3	19.7	
617	3517	TRIPS	0	10	0	0	10	0	0	20	40
617	3517	PERCENT	0.0	25.0	0.0	0.0	25.0	0.0	0.0	50.0	
618	3518	TRIPS	330	165	0	322	542	490	234	755	2,838
618	3518	PERCENT	11.6	5.8	0.0	11.4	19.1	17.3	8.3	26.6	
619	3519	TRIPS	158	0	0	588	1,822	1,431	915	2,017	6,931
619	3519	PERCENT	2.3	0.0	0.0	8.5	26.3	20.7	13.2	29.1	
620	3520	TRIPS	173	0	0	481	2,563	2,285	1,185	2,715	9,402
620	3520	PERCENT	1.8	0.0	0.0	5.1	27.3	24.3	12.6	28.9	
621	3521	TRIPS	750	0	271	730	1,325	1,008	570	1,178	5,832
621	3521	PERCENT	12.9	0.0	4.7	12.5	22.7	17.3	9.8	20.2	
622	3522	TRIPS	846	0	0	547	1,669	2,238	881	1,779	7,960
622	3522	PERCENT	10.6	0.0	0.0	6.9	21.0	28.1	11.1	22.4	
623	3523	TRIPS	865	314	362	1,036	918	2,053	953	915	7,416
623	3523	PERCENT	11.7	4.2	4.9	14.0	12.4	27.7	12.9	12.3	
624	3524	TRIPS	1,510	1,185	279	1,139	2,348	3,798	2,999	2,480	15,738
624	3524	PERCENT	9.6	7.5	1.8	7.2	14.9	24.1	19.1	15.8	
625	3525	TRIPS	904	151	0	713	469	1,573	902	1,029	5,741
625	3525	PERCENT	15.8	2.6	0.0	12.4	8.2	27.4	15.7	17.9	
626	3526	TRIPS	86	0	0	0	2,128	2,780	1,523	2,730	9,247
626	3526	PERCENT	0.9	0.0	0.0	0.0	23.0	30.1	16.5	29.5	
627	3527	TRIPS	268	0	0	0	2,782	2,384	1,028	1,982	8,444
627	3527	PERCENT	3.2	0.0	0.0	0.0	33.0	28.2	12.2	23.5	
628	3528	TRIPS	572	0	107	174	1,417	1,412	675	755	5,112
628	3528	PERCENT	11.2	0.0	2.1	3.4	27.7	27.6	13.2	14.8	
629	3529	TRIPS	2,040	549	224	1,939	1,885	5,257	2,755	2,552	17,201
629	3529	PERCENT	11.9	3.2	1.3	11.3	11.0	30.6	16.0	14.8	
630	3530	TRIPS	1,018	0	101	231	1,694	2,664	1,198	1,047	7,953
630	3530	PERCENT	12.8	0.0	1.3	2.9	21.3	33.5	15.1	13.2	
631	3531	TRIPS	422	0	0	0	1,119	1,636	433	741	4,351
631	3531	PERCENT	9.7	0.0	0.0	0.0	25.7	37.6	10.0	17.0	
632	3532	TRIPS	250	0	0	0	528	1,486	568	688	3,520
632	3532	PERCENT	7.1	0.0	0.0	0.0	15.0	42.2	16.1	19.6	
633	3533	TRIPS	330	0	0	0	1,045	1,375	758	776	4,284
633	3533	PERCENT	7.7	0.0	0.0	0.0	24.4	32.1	17.7	18.1	
634	3534	TRIPS	1,649	138	246	667	1,620	2,236	1,335	1,553	9,444
634	3534	PERCENT	17.5	1.5	2.6	7.1	17.2	23.7	14.1	16.4	
635	3535	TRIPS	768	0	0	0	1,106	1,912	1,284	1,253	6,323
635	3535	PERCENT	12.2	0.0	0.0	0.0	17.5	30.2	20.3	19.8	
636	3536	TRIPS	775	0	0	320	731	2,473	1,515	1,466	7,280



## Miami-Dade 2040 Directional Distribution Summary

Origin TAZ			Cardinal Directions								Total
County TAZ	Regional TAZ		NNE	ENE	ESE	SSE	SSW	WSW	WNW	NNW	
616	3516	TRIPS	887	556	0	1,876	1,859	1,836	1,423	2,112	10,549
616	3516	PERCENT	8.4	5.3	0.0	17.8	17.6	17.4	13.5	20.0	
617	3517	TRIPS	81	36	8	61	50	65	48	56	405
617	3517	PERCENT	20.0	8.9	2.0	15.1	12.4	16.1	11.9	13.8	
618	3518	TRIPS	245	194	0	283	618	438	292	527	2,597
618	3518	PERCENT	9.4	7.5	0.0	10.9	23.8	16.9	11.2	20.3	
619	3519	TRIPS	297	0	0	1,202	2,738	1,949	1,188	3,411	10,785
619	3519	PERCENT	2.8	0.0	0.0	11.2	25.4	18.1	11.0	31.6	
620	3520	TRIPS	59	0	0	691	2,586	2,659	1,388	3,229	10,612
620	3520	PERCENT	0.6	0.0	0.0	6.5	24.4	25.1	13.1	30.4	
621	3521	TRIPS	641	0	207	652	1,069	897	507	931	4,904
621	3521	PERCENT	13.1	0.0	4.2	13.3	21.8	18.3	10.3	19.0	
622	3522	TRIPS	1,041	0	0	1,013	1,705	2,290	939	1,768	8,756
622	3522	PERCENT	11.9	0.0	0.0	11.6	19.5	26.2	10.7	20.2	
623	3523	TRIPS	660	379	254	1,131	910	1,892	857	961	7,044
623	3523	PERCENT	9.4	5.4	3.6	16.1	12.9	26.9	12.2	13.6	
624	3524	TRIPS	1,731	1,417	382	1,244	2,520	3,891	3,312	2,764	17,261
624	3524	PERCENT	10.0	8.2	2.2	7.2	14.6	22.5	19.2	16.0	
625	3525	TRIPS	919	266	0	846	669	1,872	1,085	1,165	6,822
625	3525	PERCENT	13.5	3.9	0.0	12.4	9.8	27.4	15.9	17.1	
626	3526	TRIPS	108	0	0	0	3,832	3,818	1,879	4,428	14,065
626	3526	PERCENT	0.8	0.0	0.0	0.0	27.2	27.2	13.4	31.5	
627	3527	TRIPS	667	0	0	0	4,525	3,711	1,836	3,520	14,259
627	3527	PERCENT	4.7	0.0	0.0	0.0	31.7	26.0	12.9	24.7	
628	3528	TRIPS	555	0	175	168	1,097	1,212	405	514	4,126
628	3528	PERCENT	13.5	0.0	4.2	4.1	26.6	29.4	9.8	12.5	
629	3529	TRIPS	1,948	557	335	1,556	1,577	4,662	2,347	1,892	14,874
629	3529	PERCENT	13.1	3.7	2.3	10.5	10.6	31.3	15.8	12.7	
630	3530	TRIPS	1,398	0	223	373	1,797	2,860	1,105	1,164	8,920
630	3530	PERCENT	15.7	0.0	2.5	4.2	20.2	32.1	12.4	13.1	
631	3531	TRIPS	802	0	0	0	2,347	2,348	855	1,454	7,806
631	3531	PERCENT	10.3	0.0	0.0	0.0	30.1	30.1	11.0	18.6	
632	3532	TRIPS	603	0	0	0	1,583	2,022	1,057	919	6,184
632	3532	PERCENT	9.8	0.0	0.0	0.0	25.6	32.7	17.1	14.9	
633	3533	TRIPS	573	0	0	0	1,534	1,830	876	1,027	5,840
633	3533	PERCENT	9.8	0.0	0.0	0.0	26.3	31.3	15.0	17.6	
634	3534	TRIPS	1,445	71	167	680	1,389	1,930	1,212	1,265	8,159
634	3534	PERCENT	17.7	0.9	2.1	8.3	17.0	23.7	14.9	15.5	
635	3535	TRIPS	1,380	0	0	0	1,833	2,491	1,518	1,720	8,942
635	3535	PERCENT	15.4	0.0	0.0	0.0	20.5	27.9	17.0	19.2	
636	3536	TRIPS	1,729	0	0	727	1,308	2,610	1,308	1,181	8,863

## APPENDIX H:

### Volume Development Worksheets

# TRAFFIC VOLUMES AT STUDY INTERSECTIONS

INTERSECTION: 26th Street and Collins Avenue  
COUNT DATE: June 18, 2016  
WEEKEND PM PEAK HOUR FACTOR: 0.97

"WEEKEND PM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
WEEKEND PM Raw Turning Movements			58	17	991				36			998	16				
Peak Season Correction Factor		1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110
WEEKEND PM EXISTING CONDITIONS			64	19	1,100				40			1,108	18				
"WEEKEND PM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Saxony (Faena)					8							14					
Versailles Hotel					38							71					
TOTAL "VESTED" TRAFFIC		0	0	0	46	0	0	0	0	0	0	85	0	0	0	0	0
Years To Buildout		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Yearly Growth Rate		0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%
PM BACKGROUND TRAFFIC GROWTH			1	0	18				1			18	0				
WEEKEND PM NON-PROJECT TRAFFIC		0	65	19	1,164	0	0	0	41	0	0	1,211	18	0	0	0	0
"PROJECT DISTRUBUTION"																	
LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Valet Distribution	Entering																
	Exiting																
Net New Distribution	Entering				15.0%												
	Exiting											42.0%					
"WEEKEND PM PROJECT TRAFFIC"																	
LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Project Trips	Valet																
	Net New				15							9					
PM TOTAL PROJECT TRAFFIC					15							9					
WEEKEND PM TOTAL TRAFFIC		0	65	19	1,179	0	0	0	41	0	0	1,220	18	0	0	0	0

# TRAFFIC VOLUMES AT STUDY INTERSECTIONS

INTERSECTION: 24th Street and Collins Avenue  
COUNT DATE: June 18, 2016  
WEEKEND PM PEAK HOUR FACTOR: 0.99

"WEEKEND PM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
WEEKEND PM Raw Turning Movements							45		30			1,038	60		8	973	
Peak Season Correction Factor		1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110
WEEKEND PM EXISTING CONDITIONS							50		33			1,152	67		9	1,080	
"WEEKEND PM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Saxony (Faena)												14				8	
Versailles Hotel												71				38	
TOTAL "VESTED" TRAFFIC		0	0	0	0	0	0	0	0	0	0	85	0	0	0	46	0
Years To Buildout		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Yearly Growth Rate		0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%
PM BACKGROUND TRAFFIC GROWTH							1		1			19	1		0	17	
WEEKEND PM NON-PROJECT TRAFFIC		0	0	0	0	0	51	0	34	0	0	1,256	68	0	9	1,143	0
"PROJECT DISTRUBUTION"																	
LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Valet Distribution	Entering												52.0%				
	Exiting												45.0%				
Net New Distribution	Entering												13.0%		15.0%		
	Exiting						58.0%		3.0%			39.0%	36.0%				
"WEEKEND PM PROJECT TRAFFIC"																	
LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Project Trips	Valet												35				
	Net New						11		1			8	20		15		
PM TOTAL PROJECT TRAFFIC							11		1			8	55		15		
WEEKEND PM TOTAL TRAFFIC		0	0	0	0	0	62	0	35	0	0	1,264	123	0	24	1,143	0

# TRAFFIC VOLUMES AT STUDY INTERSECTIONS

INTERSECTION: 1 Hotel driveway exit and Collins Avenue  
COUNT DATE: June 18, 2016  
WEEKEND PM PEAK HOUR FACTOR: 0.85

"WEEKEND PM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
WEEKEND PM Raw Turning Movements									147			1,011				1,020			
Peak Season Correction Factor		1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110		
WEEKEND PM EXISTING CONDITIONS									163			1,122				1,132			
"WEEKEND PM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR		
Saxony (Faena)												14				8			
Versailles Hotel												71				38			
TOTAL "VESTED" TRAFFIC		0	0	0	0	0	0	0	0	0	0	85	0	0	0	46	0		
Years To Buildout		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2		
Yearly Growth Rate		0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%		
PM BACKGROUND TRAFFIC GROWTH									0			18				18			
WEEKEND PM NON-PROJECT TRAFFIC		0	0	0	0	0	0	0	163	0	0	1,225	0	0	0	1,196	0		
"PROJECT DISTRUBUTION"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Valet Distribution	Entering									52.0%									
	Exiting													45.0%					
Net New Distribution	Entering													13.0%					
	Exiting									75.0%								58.0%	
"WEEKEND PM PROJECT TRAFFIC"		LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Project Trips	Valet										30			5					
	Net New										15			13				11	
PM TOTAL PROJECT TRAFFIC											45			18				11	
WEEKEND PM TOTAL TRAFFIC		0	0	0	0	0	0	0	208	0	0	1,243	0	0	0	1,207	0		

# TRAFFIC VOLUMES AT STUDY INTERSECTIONS

INTERSECTION: 1 Hotel driveway entrance and Collins Avenue  
COUNT DATE: June 18, 2016  
WEEKEND PM PEAK HOUR FACTOR: 0.81

"WEEKEND PM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
WEEKEND PM Raw Turning Movements												1,011	123			1,020	
Peak Season Correction Factor		1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110
WEEKEND PM EXISTING CONDITIONS												1,122	137			1,132	
"WEEKEND PM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Saxony (Faena)												14				8	
Versailles Hotel												71				38	
TOTAL "VESTED" TRAFFIC		0	0	0	0	0	0	0	0	0	0	85	0	0	0	46	0
Years To Buildout		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Yearly Growth Rate		0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%
PM BACKGROUND TRAFFIC GROWTH												18	0			18	
WEEKEND PM NON-PROJECT TRAFFIC		0	0	0	0	0	0	0	0	0	0	1,225	137	0	0	1,196	0
"PROJECT DISTRIBUTION"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Valet Distribution	Entering																
	Exiting											45.0%	55.0%				
Net New Distribution	Entering											13.0%	72.0%				
	Exiting															58.0%	
"WEEKEND PM PROJECT TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Project Trips	Valet											5	6				
	Net New											13	73			11	
PM TOTAL PROJECT TRAFFIC												18	79			11	
WEEKEND PM TOTAL TRAFFIC		0	0	0	0	0	0	0	0	0	0	1,243	216	0	0	1,207	0

# TRAFFIC VOLUMES AT STUDY INTERSECTIONS

INTERSECTION: 23rd Street and Collins Avenue  
COUNT DATE: June 18, 2016  
WEEKEND PM PEAK HOUR FACTOR: 0.96

"WEEKEND PM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
WEEKEND PM Raw Turning Movements			231	35	166		11	34	38		49	770	32		11	775	235
Peak Season Correction Factor		1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110
WEEKEND PM EXISTING CONDITIONS			256	39	184		12	38	42		54	855	36		12	860	261
"WEEKEND PM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Saxony (Faena)												14				8	
Versailles Hotel												71				38	
TOTAL "VESTED" TRAFFIC		0	0	0	0	0	0	0	0	0	0	85	0	0	0	46	0
Years To Buildout		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Yearly Growth Rate		0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%
PM BACKGROUND TRAFFIC GROWTH			4	1	3		0	0	0		1	14	1		0	14	4
WEEKEND PM NON-PROJECT TRAFFIC		0	260	40	187	0	12	38	42	0	55	954	37	0	12	920	265
"PROJECT DISTRUBUTION"																	
LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Valet Distribution	Entering																
	Exiting								100.0%								
Net New Distribution	Entering		67.0%									18.0%					
	Exiting															18.0%	40.0%
"WEEKEND PM PROJECT TRAFFIC"																	
LAND USE	TYPE	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Project Trips	Valet								11								
	Net New		68									18				3	8
PM TOTAL PROJECT TRAFFIC			68						11			18				3	8
WEEKEND PM TOTAL TRAFFIC		0	328	40	187	0	12	38	53	0	55	972	37	0	12	923	273

# TRAFFIC VOLUMES AT STUDY INTERSECTIONS

INTERSECTION: 23rd Street and Collins Avenue (South Leg)  
COUNT DATE: June 18, 2016  
WEEKEND PM PEAK HOUR FACTOR: 0.96

"WEEKEND PM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
WEEKEND PM Raw Turning Movements				10		5	10	7				22		5			
Peak Season Correction Factor		1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110
WEEKEND PM EXISTING CONDITIONS				11		6	11	8				24		6			
"WEEKEND PM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Saxony (Faena)																	
Versailles Hotel																	
TOTAL "VESTED" TRAFFIC		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Years To Buildout		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Yearly Growth Rate		0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%
PM BACKGROUND TRAFFIC GROWTH				0		0	0	0				0		0			
WEEKEND PM NON-PROJECT TRAFFIC		0	0	11	0	0	6	11	8	0	0	0	24	0	6	0	0
"PROJECT DISTRIBUTION"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
LAND USE	TYPE																
Valet Distribution	Entering																
	Exiting																
Net New Distribution	Entering																
	Exiting																
"WEEKEND PM PROJECT TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
LAND USE	TYPE																
Project Trips	Valet																
	Net New																
PM TOTAL PROJECT TRAFFIC																	
WEEKEND PM TOTAL TRAFFIC		0	0	11	0	0	6	11	8	0	0	0	24	0	6	0	0



# TRAFFIC VOLUMES AT STUDY INTERSECTIONS

INTERSECTION: 23rd Street and Dade Boulevard  
COUNT DATE: June 18, 2016  
WEEKEND PM PEAK HOUR FACTOR: 0.96

"WEEKEND PM EXISTING TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
WEEKEND PM Raw Turning Movements							272		355			250	340		244	309	
Peak Season Correction Factor		1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110	1.110
WEEKEND PM EXISTING CONDITIONS							302		394			278	377		271	343	
"WEEKEND PM BACKGROUND TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Saxony (Faena)																	
Versailles Hotel																	
TOTAL "VESTED" TRAFFIC		0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Years To Buildout		2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
Yearly Growth Rate		0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%	0.8%
PM BACKGROUND TRAFFIC GROWTH							5		6			4	6		4	6	
WEEKEND PM NON-PROJECT TRAFFIC		0	0	0	0	0	307	0	400	0	0	282	383	0	275	349	0
"PROJECT DISTRIBUTION"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
LAND USE	TYPE																
Valet Distribution	Entering																
	Exiting																
Net New Distribution	Entering												30.0%		37.0%		
	Exiting						30.0%		10.0%								
"WEEKEND PM PROJECT TRAFFIC"		EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
LAND USE	TYPE																
Project Trips	Valet																
	Net New						6		2				30		38		
PM TOTAL PROJECT TRAFFIC							6		2				30		38		
WEEKEND PM TOTAL TRAFFIC		0	0	0	0	0	313	0	402	0	0	282	413	0	313	349	0

# APPENDIX I: Intersection Capacity Analyses

## Existing Conditions

# Timings

## 1: Collins Avenue & 26th Street

Existing  
Weekend Peak Hour

	→	↘	↗	↑		
Lane Group	EBT	EBR	WBR	NBT	ø3	ø6
Lane Configurations	↖	↖↖	↖	↑↑↑		
Traffic Volume (vph)	19	1100	40	1108		
Future Volume (vph)	19	1100	40	1108		
Turn Type	NA	custom	Perm	NA		
Protected Phases	4	4 6		2	3	6
Permitted Phases			4			
Detector Phase	4	4 6	4	2		
Switch Phase						
Minimum Initial (s)	7.0		7.0	7.0	1.0	7.0
Minimum Split (s)	26.3		26.3	24.3	20.0	24.3
Total Split (s)	32.0		32.0	58.0	20.0	58.0
Total Split (%)	29.1%		29.1%	52.7%	18%	53%
Yellow Time (s)	4.0		4.0	4.0	2.0	4.0
All-Red Time (s)	2.3		2.3	2.3	0.0	2.3
Lost Time Adjust (s)	0.0		0.0	0.0		
Total Lost Time (s)	6.3		6.3	6.3		
Lead/Lag	Lag		Lag		Lead	
Lead-Lag Optimize?	Yes		Yes		Yes	
Recall Mode	None		None	C-Min	None	C-Min

### Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 96 (87%), Referenced to phase 2:NBT and 6:EBR, Start of Green  
 Natural Cycle: 75  
 Control Type: Actuated-Coordinated




















### Splits and Phases: 1: Collins Avenue & 26th Street

↑ ø2 (R)		↖ ø3	↗ ø4
58 s		20 s	32 s
↘ ø6 (R)			
58 s			

# HCM Signalized Intersection Capacity Analysis








## 1: Collins Avenue & 26th Street

Existing  
Weekend Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			 					  				
Traffic Volume (vph)	64	19	1100	0	0	40	0	1108	18	0	0	0
Future Volume (vph)	64	19	1100	0	0	40	0	1108	18	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.3	6.3			6.3		6.3				
Lane Util. Factor		1.00	0.88			1.00		0.91				
Frpb, ped/bikes		1.00	1.00			0.96		1.00				
Flpb, ped/bikes		0.98	1.00			1.00		1.00				
Frt		1.00	0.85			0.86		1.00				
Flt Protected		0.96	1.00			1.00		1.00				
Satd. Flow (prot)		1758	2787			1550		5052				
Flt Permitted		0.96	1.00			1.00		1.00				
Satd. Flow (perm)		1758	2787			1550		5052				
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	66	20	1134	0	0	41	0	1142	19	0	0	0
RTOR Reduction (vph)	0	57	234	0	0	36	0	1	0	0	0	0
Lane Group Flow (vph)	0	29	900	0	0	5	0	1160	0	0	0	0
Confl. Peds. (#/hr)	16		5	5		16	73		75	75		73
Confl. Bikes (#/hr)									14			21
Turn Type	Perm	NA	custom			Perm		NA				
Protected Phases		4	4 6					2				
Permitted Phases	4					4						
Actuated Green, G (s)		14.2	87.3			14.2		66.8				
Effective Green, g (s)		14.2	87.3			14.2		66.8				
Actuated g/C Ratio		0.13	0.79			0.13		0.61				
Clearance Time (s)		6.3				6.3		6.3				
Vehicle Extension (s)		2.5				2.5		1.0				
Lane Grp Cap (vph)		226	2211			200		3067				
v/s Ratio Prot			c0.32					0.23				
v/s Ratio Perm		0.02				0.00						
v/c Ratio		0.13	0.41			0.03		0.38				
Uniform Delay, d1		42.4	3.5			41.9		11.0				
Progression Factor		1.00	1.00			1.00		1.09				
Incremental Delay, d2		0.2	0.1			0.0		0.3				
Delay (s)		42.6	3.5			41.9		12.4				
Level of Service		D	A			D		B				
Approach Delay (s)		6.3			41.9			12.4			0.0	
Approach LOS		A			D			B			A	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			9.8									
HCM 2000 Volume to Capacity ratio			0.37									
Actuated Cycle Length (s)			110.0									
Intersection Capacity Utilization			55.4%									
Analysis Period (min)			15									
c Critical Lane Group												

# Timings 2: Collins Avenue & 24th Street























































































































































Existing  
Weekend Peak Hour

				
Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	50	1152	9	1080
Future Volume (vph)	50	1152	9	1080
Turn Type	Perm	NA	Perm	NA
Protected Phases		6		2
Permitted Phases	4		2	
Detector Phase	4	6	2	2
Switch Phase				
Minimum Initial (s)	5.0	7.0	7.0	7.0
Minimum Split (s)	22.5	25.0	25.0	25.0
Total Split (s)	31.0	79.0	79.0	79.0
Total Split (%)	28.2%	71.8%	71.8%	71.8%
Yellow Time (s)	3.5	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0
Total Lost Time (s)	4.5	6.0		6.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	C-Min	C-Min	C-Min

## Intersection Summary

Cycle Length: 110  
Actuated Cycle Length: 110  
Offset: 32 (29%), Referenced to phase 2:SBTL and 6:NBT, Start of Green  
Natural Cycle: 55  
Control Type: Actuated-Coordinated












## Splits and Phases: 2: Collins Avenue & 24th Street

                                         	           
                                         	           
79 s	31 s
                                         	
79 s	

# HCM Signalized Intersection Capacity Analysis

## 2: Collins Avenue & 24th Street

Existing  
Weekend Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations			 			 
Traffic Volume (vph)	50	33	1152	67	9	1080
Future Volume (vph)	50	33	1152	67	9	1080
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		6.0			6.0
Lane Util. Factor	1.00		0.95			0.95
Frpb, ped/bikes	0.95		0.98			1.00
Flpb, ped/bikes	0.98		1.00			1.00
Frt	0.95		0.99			1.00
Flt Protected	0.97		1.00			1.00
Satd. Flow (prot)	1593		3449			3536
Flt Permitted	0.97		1.00			0.94
Satd. Flow (perm)	1593		3449			3334
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	51	33	1164	68	9	1091
RTOR Reduction (vph)	26	0	2	0	0	0
Lane Group Flow (vph)	58	0	1230	0	0	1100
Confl. Peds. (#/hr)	15	63		102	102	
Confl. Bikes (#/hr)		5		10		
Turn Type	Perm		NA		Perm	NA
Protected Phases			6			2
Permitted Phases	4				2	
Actuated Green, G (s)	8.4		91.1			91.1
Effective Green, g (s)	8.4		91.1			91.1
Actuated g/C Ratio	0.08		0.83			0.83
Clearance Time (s)	4.5		6.0			6.0
Vehicle Extension (s)	3.0		1.0			1.0
Lane Grp Cap (vph)	121		2856			2761
v/s Ratio Prot			c0.36			
v/s Ratio Perm	c0.04					0.33
v/c Ratio	0.48		0.43			0.40
Uniform Delay, d1	48.7		2.5			2.4
Progression Factor	1.00		2.28			1.15
Incremental Delay, d2	3.0		0.4			0.4
Delay (s)	51.7		6.2			3.2
Level of Service	D		A			A
Approach Delay (s)	51.7		6.2			3.2
Approach LOS	D		A			A
<b>Intersection Summary</b>						
HCM 2000 Control Delay			6.4		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.43			
Actuated Cycle Length (s)			110.0		Sum of lost time (s)	10.5
Intersection Capacity Utilization			58.9%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						

HCM 2010 TWSC  
3: Collins Avenue & 1 Hotel Driveway Exit

Existing  
Weekend Peak Hour

Intersection

Int Delay, s/veh 0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	0	163	1122	0	0	1132
Future Vol, veh/h	0	163	1122	0	0	1132
Conflicting Peds, #/hr	0	0	0	6	6	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	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	192	1320	0	0	1332

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1986	666	0	0	1320	0
Stage 1	1320	-	-	-	-	-
Stage 2	666	-	-	-	-	-
Critical Hdwy	5	5	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3	3	-	-	2.22	-
Pot Cap-1 Maneuver	156	620	-	-	519	-
Stage 1	232	-	-	-	-	-
Stage 2	531	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	155	616	-	-	516	-
Mov Cap-2 Maneuver	155	-	-	-	-	-
Stage 1	232	-	-	-	-	-
Stage 2	528	-	-	-	-	-




















Approach	WB		NB		SB
HCM Control Delay, s	13.5		0		0
HCM LOS	B				

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 616	516	-
HCM Lane V/C Ratio	-	- 0.311	-	-
HCM Control Delay (s)	-	- 13.5	0	-
HCM Lane LOS	-	- B	A	-
HCM 95th %tile Q(veh)	-	- 1.3	0	-



# Timings 5: Collins Avenue & 23rd Street






Existing  
Weekend Peak Hour

											
Lane Group	EBL	EBT	EBR2	WBT	NBL	NBT	SBL2	SBL	SBT	SBR	NWL
Lane Configurations											
Traffic Volume (vph)	256	39	184	38	54	855	12	6	860	261	11
Future Volume (vph)	256	39	184	38	54	855	12	6	860	261	11
Turn Type	Split	NA	Perm	NA	Perm	NA	Perm	Perm	NA	pm+ov	Prot
Protected Phases	3	3		4		6			2	3	1
Permitted Phases			3		6		2	2		2	
Detector Phase	3	3	3	4	6	6	2	2	2	3	1
Switch Phase											
Minimum Initial (s)	7.0	7.0	7.0	7.0	5.0	5.0	5.0	5.0	5.0	7.0	6.0
Minimum Split (s)	22.5	22.5	22.5	26.0	31.5	31.5	31.5	31.5	31.5	22.5	13.0
Total Split (s)	23.0	23.0	23.0	26.0	48.0	48.0	48.0	48.0	48.0	23.0	13.0
Total Split (%)	20.9%	20.9%	20.9%	23.6%	43.6%	43.6%	43.6%	43.6%	43.6%	20.9%	11.8%
Yellow Time (s)	4.0	4.0	4.0	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	2.5	2.5	2.5	2.5	2.5	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0			0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0		6.5			6.5	6.0	6.0
Lead/Lag	Lead	Lead	Lead	Lag						Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes						Yes	
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min	None	None

## Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 41 (37%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green  
 Natural Cycle: 115  
 Control Type: Actuated-Coordinated



















## Splits and Phases: 5: Collins Avenue & 23rd Street

 ø2 (R)	 ø3	 ø4	 ø1
48 s	23 s	26 s	13 s
 ø6 (R)			
48 s			

# HCM Signalized Intersection Capacity Analysis

## 5: Collins Avenue & 23rd Street










Existing  
Weekend Peak Hour

												
Movement	EBL	EBT	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2	SBL2
Lane Configurations												
Traffic Volume (vph)	256	39	11	184	12	38	42	54	855	36	24	12
Future Volume (vph)	256	39	11	184	12	38	42	54	855	36	24	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0		6.0			6.5			
Lane Util. Factor	0.95	0.95		1.00		1.00			0.95			
Frpb, ped/bikes	1.00	0.97		0.83		0.91			0.97			
Flpb, ped/bikes	1.00	1.00		1.00		1.00			1.00			
Frt	1.00	0.99		0.85		0.94			0.99			
Flt Protected	0.95	0.97		1.00		0.99			1.00			
Satd. Flow (prot)	1681	1652		1315		1579			3391			
Flt Permitted	0.95	0.97		1.00		0.99			0.73			
Satd. Flow (perm)	1681	1652		1315		1579			2490			
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	267	41	11	192	12	40	44	56	891	38	25	12
RTOR Reduction (vph)	0	0	0	165	0	27	0	0	2	0	0	0
Lane Group Flow (vph)	160	159	0	27	0	70	0	0	1008	0	0	0
Confl. Peds. (#/hr)	117		102	78	78		117	105		102	102	102
Turn Type	Split	NA		Perm	Split	NA		Perm	NA			Perm
Protected Phases	3	3			4	4			6			
Permitted Phases				3				6				2
Actuated Green, G (s)	15.3	15.3		15.3		20.0			46.1			
Effective Green, g (s)	15.3	15.3		15.3		20.0			46.1			
Actuated g/C Ratio	0.14	0.14		0.14		0.18			0.42			
Clearance Time (s)	6.0	6.0		6.0		6.0			6.5			
Vehicle Extension (s)	2.5	2.5		2.5		2.5			1.0			
Lane Grp Cap (vph)	233	229		182		287			1043			
v/s Ratio Prot	0.10	c0.10				c0.04						
v/s Ratio Perm				0.02					c0.40			
v/c Ratio	0.69	0.69		0.15		0.24			0.97			
Uniform Delay, d1	45.1	45.1		41.6		38.5			31.2			
Progression Factor	1.00	1.00		1.00		1.00			1.00			
Incremental Delay, d2	7.5	8.1		0.3		0.3			20.9			
Delay (s)	52.5	53.2		41.9		38.9			52.1			
Level of Service	D	D		D		D			D			
Approach Delay (s)		48.8				38.9			52.1			
Approach LOS		D				D			D			
<b>Intersection Summary</b>												
HCM 2000 Control Delay			42.1									
HCM 2000 Volume to Capacity ratio			0.72									
Actuated Cycle Length (s)			110.0						24.5			
Intersection Capacity Utilization			94.2%						F			
Analysis Period (min)			15									
c Critical Lane Group												

# HCM Signalized Intersection Capacity Analysis











## 5: Collins Avenue & 23rd Street

Existing  
Weekend Peak Hour

						
Movement	SBL	SBT	SBR	NWL2	NWL	NWR
Lane Configurations						
Traffic Volume (vph)	6	860	261	6	11	8
Future Volume (vph)	6	860	261	6	11	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.5	6.0		6.0	
Lane Util. Factor		0.95	1.00		1.00	
Frpb, ped/bikes		1.00	0.83		0.86	
Flpb, ped/bikes		1.00	1.00		1.00	
Frt		1.00	0.85		0.96	
Flt Protected		1.00	1.00		0.97	
Satd. Flow (prot)		3531	1317		1486	
Flt Permitted		0.90	1.00		0.97	
Satd. Flow (perm)		3187	1317		1486	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	6	896	272	6	11	8
RTOR Reduction (vph)	0	0	49	0	0	0
Lane Group Flow (vph)	0	915	223	0	25	0
Confl. Peds. (#/hr)	102		105	78	105	117
Turn Type	Perm	NA	pm+ov	Prot	Prot	
Protected Phases		2	3	1	1	
Permitted Phases	2		2			
Actuated Green, G (s)		46.1	61.4		4.1	
Effective Green, g (s)		46.1	61.4		4.1	
Actuated g/C Ratio		0.42	0.56		0.04	
Clearance Time (s)		6.5	6.0		6.0	
Vehicle Extension (s)		1.0	2.5		2.5	
Lane Grp Cap (vph)		1335	735		55	
v/s Ratio Prot			0.04		c0.02	
v/s Ratio Perm		0.29	0.13			
v/c Ratio		0.69	0.30		0.45	
Uniform Delay, d1		26.0	12.9		51.9	
Progression Factor		1.23	1.24		1.00	
Incremental Delay, d2		2.8	0.2		4.3	
Delay (s)		34.9	16.2		56.1	
Level of Service		C	B		E	
Approach Delay (s)		30.6			56.1	
Approach LOS		C			E	
Intersection Summary						

# Timings 7: Dade Boulevard & 23rd Street






Existing  
Weekend Peak Hour

						
Lane Group	NBT	SBL	SBT	NWL	NWR	ø3
Lane Configurations						
Traffic Volume (vph)	278	271	343	302	394	
Future Volume (vph)	278	271	343	302	394	
Turn Type	NA	pm+pt	NA	Prot	Prot	
Protected Phases	6	5	2	4	4	3
Permitted Phases		2				
Detector Phase	6	5	2	4	4	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	7.0	7.0	1.0
Minimum Split (s)	36.9	11.6	36.9	24.2	24.2	29.0
Total Split (s)	39.0	26.0	65.0	26.0	26.0	29.0
Total Split (%)	32.5%	21.7%	54.2%	21.7%	21.7%	24%
Yellow Time (s)	4.0	3.7	4.0	4.0	4.0	2.0
All-Red Time (s)	2.9	2.9	2.9	2.2	2.2	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.9	6.6	6.9	6.2	6.2	
Lead/Lag	Lag	Lead		Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes
Recall Mode	C-Min	None	C-Min	None	None	None

## Intersection Summary

Cycle Length: 120  
Actuated Cycle Length: 120  
Offset: 35 (29%), Referenced to phase 2:SBTL and 6:NBT, Start of Green  
Natural Cycle: 105  
Control Type: Actuated-Coordinated












## Splits and Phases: 7: Dade Boulevard & 23rd Street

 ø2 (R)		
65 s	29 s	26 s
 ø5	 ø6 (R)	
26 s	39 s	

# HCM Signalized Intersection Capacity Analysis

## 7: Dade Boulevard & 23rd Street

Existing  
Weekend Peak Hour

						
Movement	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Traffic Volume (vph)	278	377	271	343	302	394
Future Volume (vph)	278	377	271	343	302	394
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.9		6.6	6.9	6.2	6.2
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frpb, ped/bikes	0.99		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.91		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3209		1769	3539	1770	1583
Flt Permitted	1.00		0.29	1.00	0.95	1.00
Satd. Flow (perm)	3209		540	3539	1770	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	290	393	282	357	315	410
RTOR Reduction (vph)	151	0	0	0	0	302
Lane Group Flow (vph)	532	0	282	357	315	108
Confl. Peds. (#/hr)		1	1		4	
Turn Type	NA		pm+pt	NA	Prot	Prot
Protected Phases	6		5	2	4	4
Permitted Phases			2			
Actuated Green, G (s)	54.8		75.3	75.3	31.6	31.6
Effective Green, g (s)	54.8		75.3	75.3	31.6	31.6
Actuated g/C Ratio	0.46		0.63	0.63	0.26	0.26
Clearance Time (s)	6.9		6.6	6.9	6.2	6.2
Vehicle Extension (s)	1.0		2.0	1.0	2.5	2.5
Lane Grp Cap (vph)	1465		481	2220	466	416
v/s Ratio Prot	0.17		c0.07	0.10	c0.18	0.07
v/s Ratio Perm			c0.30			
v/c Ratio	0.36		0.59	0.16	0.68	0.26
Uniform Delay, d1	21.2		11.6	9.3	39.6	34.9
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.7		1.2	0.2	3.5	0.2
Delay (s)	21.9		12.8	9.4	43.1	35.2
Level of Service	C		B	A	D	D
Approach Delay (s)	21.9			10.9	38.6	
Approach LOS	C			B	D	
<b>Intersection Summary</b>						
HCM 2000 Control Delay			24.4		HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.65			
Actuated Cycle Length (s)			120.0		Sum of lost time (s)	21.7
Intersection Capacity Utilization			73.2%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						

Future Background Conditions

# Timings

## 1: Collins Avenue & 26th Street

# Future Background

Weekend Peak Hour

	→	↘	↗	↑	ø3	ø6
Lane Group	EBT	EBR	WBR	NBT		
Lane Configurations	↖	↖↖	↖	↑↑↑		
Traffic Volume (vph)	19	1164	41	1211		
Future Volume (vph)	19	1164	41	1211		
Turn Type	NA	custom	Perm	NA		
Protected Phases	4	4 6		2	3	6
Permitted Phases			4			
Detector Phase	4	4 6	4	2		
Switch Phase						
Minimum Initial (s)	7.0		7.0	7.0	1.0	7.0
Minimum Split (s)	26.3		26.3	24.3	20.0	24.3
Total Split (s)	32.0		32.0	58.0	20.0	58.0
Total Split (%)	29.1%		29.1%	52.7%	18%	53%
Yellow Time (s)	4.0		4.0	4.0	2.0	4.0
All-Red Time (s)	2.3		2.3	2.3	0.0	2.3
Lost Time Adjust (s)	0.0		0.0	0.0		
Total Lost Time (s)	6.3		6.3	6.3		
Lead/Lag	Lag		Lag		Lead	
Lead-Lag Optimize?	Yes		Yes		Yes	
Recall Mode	None		None	C-Min	None	C-Min

### Intersection Summary

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 96 (87%), Referenced to phase 2:NBT and 6:EBR, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

### Splits and Phases: 1: Collins Avenue & 26th Street




















↑ ø2 (R)		↖ ø3	↗ ø4
58 s		20 s	32 s
↘ ø6 (R)			
58 s			

# HCM Signalized Intersection Capacity Analysis

## 1: Collins Avenue & 26th Street

# Future Background

Weekend Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			 					  				
Traffic Volume (vph)	65	19	1164	0	0	41	0	1211	18	0	0	0
Future Volume (vph)	65	19	1164	0	0	41	0	1211	18	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.3	6.3			6.3		6.3				
Lane Util. Factor		1.00	0.88			1.00		0.91				
Frpb, ped/bikes		1.00	1.00			0.96		1.00				
Flpb, ped/bikes		0.98	1.00			1.00		1.00				
Frt		1.00	0.85			0.86		1.00				
Flt Protected		0.96	1.00			1.00		1.00				
Satd. Flow (prot)		1757	2787			1550		5055				
Flt Permitted		0.96	1.00			1.00		1.00				
Satd. Flow (perm)		1757	2787			1550		5055				
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	67	20	1200	0	0	42	0	1248	19	0	0	0
RTOR Reduction (vph)	0	58	248	0	0	36	0	1	0	0	0	0
Lane Group Flow (vph)	0	29	952	0	0	6	0	1266	0	0	0	0
Confl. Peds. (#/hr)	16		5	5		16	73		75	75		73
Confl. Bikes (#/hr)									14			21
Turn Type	Perm	NA	custom			Perm		NA				
Protected Phases		4	4 6					2				
Permitted Phases	4					4						
Actuated Green, G (s)		14.8	87.3			14.8		66.2				
Effective Green, g (s)		14.8	87.3			14.8		66.2				
Actuated g/C Ratio		0.13	0.79			0.13		0.60				
Clearance Time (s)		6.3				6.3		6.3				
Vehicle Extension (s)		2.5				2.5		1.0				
Lane Grp Cap (vph)		236	2211			208		3042				
v/s Ratio Prot			c0.34					0.25				
v/s Ratio Perm		0.02				0.00						
v/c Ratio		0.12	0.43			0.03		0.42				
Uniform Delay, d1		41.9	3.6			41.3		11.6				
Progression Factor		1.00	1.00			1.00		1.11				
Incremental Delay, d2		0.2	0.1			0.0		0.4				
Delay (s)		42.1	3.7			41.4		13.3				
Level of Service		D	A			D		B				
Approach Delay (s)		6.3			41.4			13.3			0.0	
Approach LOS		A			D			B			A	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			10.3			HCM 2000 Level of Service			B			
HCM 2000 Volume to Capacity ratio			0.39									
Actuated Cycle Length (s)			110.0			Sum of lost time (s)			14.6			
Intersection Capacity Utilization			57.4%			ICU Level of Service			B			
Analysis Period (min)			15									
c Critical Lane Group												










# Timings

## 2: Collins Avenue & 24th Street

# Future Background

Weekend Peak Hour

				
Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	51	1256	9	1143
Future Volume (vph)	51	1256	9	1143
Turn Type	Perm	NA	Perm	NA
Protected Phases		6		2
Permitted Phases	4		2	
Detector Phase	4	6	2	2
Switch Phase				
Minimum Initial (s)	5.0	7.0	7.0	7.0
Minimum Split (s)	22.5	25.0	25.0	25.0
Total Split (s)	31.0	79.0	79.0	79.0
Total Split (%)	28.2%	71.8%	71.8%	71.8%
Yellow Time (s)	3.5	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0
Total Lost Time (s)	4.5	6.0		6.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	C-Min	C-Min	C-Min

### Intersection Summary

Cycle Length: 110















































Actuated Cycle Length: 110

Offset: 32 (29%), Referenced to phase 2:SBTL and 6:NBT, Start of Green

Natural Cycle: 55

Control Type: Actuated-Coordinated

Splits and Phases: 2: Collins Avenue & 24th Street










                                             
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# HCM Signalized Intersection Capacity Analysis

## 2: Collins Avenue & 24th Street

Future Background

Weekend Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	51	34	1256	68	9	1143
Future Volume (vph)	51	34	1256	68	9	1143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		6.0			6.0
Lane Util. Factor	1.00		0.95			0.95
Frpb, ped/bikes	0.95		0.98			1.00
Flpb, ped/bikes	0.98		1.00			1.00
Frt	0.95		0.99			1.00
Flt Protected	0.97		1.00			1.00
Satd. Flow (prot)	1592		3455			3537
Flt Permitted	0.97		1.00			0.94
Satd. Flow (perm)	1592		3455			3331
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	52	34	1269	69	9	1155
RTOR Reduction (vph)	26	0	2	0	0	0
Lane Group Flow (vph)	60	0	1336	0	0	1164
Confl. Peds. (#/hr)	15	63		102	102	
Confl. Bikes (#/hr)		5		10		
Turn Type	Perm		NA		Perm	NA
Protected Phases			6			2
Permitted Phases	4				2	
Actuated Green, G (s)	8.5		91.0			91.0
Effective Green, g (s)	8.5		91.0			91.0
Actuated g/C Ratio	0.08		0.83			0.83
Clearance Time (s)	4.5		6.0			6.0
Vehicle Extension (s)	3.0		1.0			1.0
Lane Grp Cap (vph)	123		2858			2755
v/s Ratio Prot			c0.39			
v/s Ratio Perm	c0.04					0.35
v/c Ratio	0.49		0.47			0.42
Uniform Delay, d1	48.7		2.7			2.5
Progression Factor	1.00		2.52			1.14
Incremental Delay, d2	3.0		0.4			0.4
Delay (s)	51.7		7.2			3.3
Level of Service	D		A			A
Approach Delay (s)	51.7		7.2			3.3
Approach LOS	D		A			A
<b>Intersection Summary</b>						
HCM 2000 Control Delay			6.9		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.47			
Actuated Cycle Length (s)			110.0		Sum of lost time (s)	10.5
Intersection Capacity Utilization			60.6%		ICU Level of Service	B
Analysis Period (min)			15			
c Critical Lane Group						

HCM 2010 TWSC  
3: Collins Avenue & 1 Hotel Driveway Exit

Future Background  
Weekend Peak Hour

Intersection

Int Delay, s/veh 0.9

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	0	163	1225	0	0	1196
Future Vol, veh/h	0	163	1225	0	0	1196
Conflicting Peds, #/hr	0	0	0	6	6	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	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	192	1441	0	0	1407




















Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2145	727	0	0	1441	0
Stage 1	1441	-	-	-	-	-
Stage 2	704	-	-	-	-	-
Critical Hdwy	5	5	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3	3	-	-	2.22	-
Pot Cap-1 Maneuver	131	583	-	-	467	-
Stage 1	199	-	-	-	-	-
Stage 2	506	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	130	580	-	-	464	-
Mov Cap-2 Maneuver	199	-	-	-	-	-
Stage 1	199	-	-	-	-	-
Stage 2	503	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	14.2		0		0
HCM LOS	B				

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 580	464	-
HCM Lane V/C Ratio	-	- 0.331	-	-
HCM Control Delay (s)	-	- 14.2	0	-
HCM Lane LOS	-	- B	A	-
HCM 95th %tile Q(veh)	-	- 1.4	0	-

# Timings 5: Collins Avenue & 23rd Street






Future Background  
Weekend Peak Hour

											
Lane Group	EBL	EBT	EBR2	WBT	NBL	NBT	SBL2	SBL	SBT	SBR	NWL
Lane Configurations											
Traffic Volume (vph)	260	40	187	38	55	954	12	6	920	265	11
Future Volume (vph)	260	40	187	38	55	954	12	6	920	265	11
Turn Type	Split	NA	Perm	NA	Perm	NA	Perm	Perm	NA	pm+ov	Prot
Protected Phases	3	3		4		6			2	3	1
Permitted Phases			3		6		2	2		2	
Detector Phase	3	3	3	4	6	6	2	2	2	3	1
Switch Phase											
Minimum Initial (s)	7.0	7.0	7.0	7.0	5.0	5.0	5.0	5.0	5.0	7.0	6.0
Minimum Split (s)	22.5	22.5	22.5	26.0	31.5	31.5	31.5	31.5	31.5	22.5	13.0
Total Split (s)	23.0	23.0	23.0	26.0	48.0	48.0	48.0	48.0	48.0	23.0	13.0
Total Split (%)	20.9%	20.9%	20.9%	23.6%	43.6%	43.6%	43.6%	43.6%	43.6%	20.9%	11.8%
Yellow Time (s)	4.0	4.0	4.0	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	2.5	2.5	2.5	2.5	2.5	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0			0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0		6.5			6.5	6.0	6.0
Lead/Lag	Lead	Lead	Lead	Lag						Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes						Yes	
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min	None	None

## Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 41 (37%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green  
 Natural Cycle: 125  
 Control Type: Actuated-Coordinated

## Splits and Phases: 5: Collins Avenue & 23rd Street



















 ø2 (R)	 ø3	 ø4	 ø1
48 s	23 s	26 s	13 s
 ø6 (R)			
48 s			

# HCM Signalized Intersection Capacity Analysis

## 5: Collins Avenue & 23rd Street

# Future Background

Weekend Peak Hour










												
Movement	EBL	EBT	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2	SBL2
Lane Configurations												
Traffic Volume (vph)	260	40	11	187	12	38	42	55	954	37	24	12
Future Volume (vph)	260	40	11	187	12	38	42	55	954	37	24	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0		6.0			6.5			
Lane Util. Factor	0.95	0.95		1.00		1.00			0.95			
Frpb, ped/bikes	1.00	0.98		0.83		0.91			0.97			
Flpb, ped/bikes	1.00	1.00		1.00		1.00			1.00			
Frt	1.00	0.99		0.85		0.94			0.99			
Flt Protected	0.95	0.97		1.00		0.99			1.00			
Satd. Flow (prot)	1681	1653		1315		1579			3404			
Flt Permitted	0.95	0.97		1.00		0.99			0.71			
Satd. Flow (perm)	1681	1653		1315		1579			2424			
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	271	42	11	195	12	40	44	57	994	39	25	12
RTOR Reduction (vph)	0	0	0	168	0	27	0	0	1	0	0	0
Lane Group Flow (vph)	163	161	0	27	0	70	0	0	1114	0	0	0
Confl. Peds. (#/hr)	117		102	78	78		117	105		102	102	102
Turn Type	Split	NA		Perm	Split	NA		Perm	NA			Perm
Protected Phases	3	3			4	4			6			
Permitted Phases				3				6				2
Actuated Green, G (s)	15.3	15.3		15.3		20.0			46.1			
Effective Green, g (s)	15.3	15.3		15.3		20.0			46.1			
Actuated g/C Ratio	0.14	0.14		0.14		0.18			0.42			
Clearance Time (s)	6.0	6.0		6.0		6.0			6.5			
Vehicle Extension (s)	2.5	2.5		2.5		2.5			1.0			
Lane Grp Cap (vph)	233	229		182		287			1015			
v/s Ratio Prot	0.10	c0.10				c0.04						
v/s Ratio Perm				0.02					c0.46			
v/c Ratio	0.70	0.70		0.15		0.24			1.10			
Uniform Delay, d1	45.2	45.2		41.6		38.5			31.9			
Progression Factor	1.00	1.00		1.00		1.00			1.00			
Incremental Delay, d2	8.2	8.7		0.3		0.3			58.7			
Delay (s)	53.3	53.9		41.9		38.9			90.7			
Level of Service	D	D		D		D			F			
Approach Delay (s)		49.2				38.9			90.7			
Approach LOS		D				D			F			
<b>Intersection Summary</b>												
HCM 2000 Control Delay			57.5									
HCM 2000 Volume to Capacity ratio			0.80									
Actuated Cycle Length (s)			110.0						24.5			
Intersection Capacity Utilization			98.7%						F			
Analysis Period (min)			15									
c Critical Lane Group												

# HCM Signalized Intersection Capacity Analysis

## 5: Collins Avenue & 23rd Street











# Future Background

Weekend Peak Hour

						
Movement	SBL	SBT	SBR	NWL2	NWL	NWR
Lane Configurations						
Traffic Volume (vph)	6	920	265	6	11	8
Future Volume (vph)	6	920	265	6	11	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.5	6.0		6.0	
Lane Util. Factor		0.95	1.00		1.00	
Frpb, ped/bikes		1.00	0.83		0.86	
Flpb, ped/bikes		1.00	1.00		1.00	
Frt		1.00	0.85		0.96	
Flt Protected		1.00	1.00		0.97	
Satd. Flow (prot)		3532	1317		1486	
Flt Permitted		0.86	1.00		0.97	
Satd. Flow (perm)		3040	1317		1486	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	6	958	276	6	11	8
RTOR Reduction (vph)	0	0	49	0	0	0
Lane Group Flow (vph)	0	977	227	0	25	0
Confl. Peds. (#/hr)	102		105	78	105	117
Turn Type	Perm	NA	pm+ov	Prot	Prot	
Protected Phases		2	3	1	1	
Permitted Phases	2		2			
Actuated Green, G (s)		46.1	61.4		4.1	
Effective Green, g (s)		46.1	61.4		4.1	
Actuated g/C Ratio		0.42	0.56		0.04	
Clearance Time (s)		6.5	6.0		6.0	
Vehicle Extension (s)		1.0	2.5		2.5	
Lane Grp Cap (vph)		1274	735		55	
v/s Ratio Prot			0.04		c0.02	
v/s Ratio Perm		0.32	0.13			
v/c Ratio		0.77	0.31		0.45	
Uniform Delay, d1		27.4	13.0		51.9	
Progression Factor		1.20	1.36		1.00	
Incremental Delay, d2		4.3	0.2		4.3	
Delay (s)		37.1	17.9		56.1	
Level of Service		D	B		E	
Approach Delay (s)		32.9			56.1	
Approach LOS		C			E	
Intersection Summary						

# Timings 7: Dade Boulevard & 23rd Street






Future Background  
Weekend Peak Hour

						
Lane Group	NBT	SBL	SBT	NWL	NWR	ø3
Lane Configurations						
Traffic Volume (vph)	282	275	349	307	400	
Future Volume (vph)	282	275	349	307	400	
Turn Type	NA	pm+pt	NA	Prot	Prot	
Protected Phases	6	5	2	4	4	3
Permitted Phases		2				
Detector Phase	6	5	2	4	4	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	7.0	7.0	1.0
Minimum Split (s)	36.9	11.6	36.9	24.2	24.2	29.0
Total Split (s)	39.0	26.0	65.0	26.0	26.0	29.0
Total Split (%)	32.5%	21.7%	54.2%	21.7%	21.7%	24%
Yellow Time (s)	4.0	3.7	4.0	4.0	4.0	2.0
All-Red Time (s)	2.9	2.9	2.9	2.2	2.2	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.9	6.6	6.9	6.2	6.2	
Lead/Lag	Lag	Lead		Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes
Recall Mode	C-Min	None	C-Min	None	None	None

## Intersection Summary

Cycle Length: 120  
Actuated Cycle Length: 120  
Offset: 35 (29%), Referenced to phase 2:SBTL and 6:NBT, Start of Green  
Natural Cycle: 105  
Control Type: Actuated-Coordinated

## Splits and Phases: 7: Dade Boulevard & 23rd Street












 ø2 (R)	 ø3	 ø4
65 s	29 s	26 s
 ø5	 ø6 (R)	
26 s	39 s	

# HCM Signalized Intersection Capacity Analysis

## 7: Dade Boulevard & 23rd Street

# Future Background

Weekend Peak Hour

						
Movement	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Traffic Volume (vph)	282	383	275	349	307	400
Future Volume (vph)	282	383	275	349	307	400
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.9		6.6	6.9	6.2	6.2
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frpb, ped/bikes	0.99		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.91		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3209		1769	3539	1770	1583
Flt Permitted	1.00		0.28	1.00	0.95	1.00
Satd. Flow (perm)	3209		523	3539	1770	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	294	399	286	364	320	417
RTOR Reduction (vph)	156	0	0	0	0	305
Lane Group Flow (vph)	537	0	286	364	320	112
Confl. Peds. (#/hr)		1	1		4	
Turn Type	NA		pm+pt	NA	Prot	Prot
Protected Phases	6		5	2	4	4
Permitted Phases			2			
Actuated Green, G (s)	53.5		74.6	74.6	32.3	32.3
Effective Green, g (s)	53.5		74.6	74.6	32.3	32.3
Actuated g/C Ratio	0.45		0.62	0.62	0.27	0.27
Clearance Time (s)	6.9		6.6	6.9	6.2	6.2
Vehicle Extension (s)	1.0		2.0	1.0	2.5	2.5
Lane Grp Cap (vph)	1430		475	2200	476	426
v/s Ratio Prot	0.17		c0.07	0.10	c0.18	0.07
v/s Ratio Perm			c0.30			
v/c Ratio	0.38		0.60	0.17	0.67	0.26
Uniform Delay, d1	22.1		12.1	9.6	39.1	34.5
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	0.8		1.5	0.2	3.4	0.2
Delay (s)	22.9		13.6	9.7	42.5	34.7
Level of Service	C		B	A	D	C
Approach Delay (s)	22.9			11.4	38.1	
Approach LOS	C			B	D	
<b>Intersection Summary</b>						
HCM 2000 Control Delay			24.7		HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio			0.66			
Actuated Cycle Length (s)			120.0		Sum of lost time (s)	21.7
Intersection Capacity Utilization			73.7%		ICU Level of Service	D
Analysis Period (min)			15			
c Critical Lane Group						



Future Total Conditions

# Timings

## 1: Collins Avenue & 26th Street

Future Total

Weekend Peak Hour

	→	↘	↖	↑		
Lane Group	EBT	EBR	WBR	NBT	ø3	ø6
Lane Configurations	↖	↖↖	↖	↑↑↑		
Traffic Volume (vph)	19	1179	41	1220		
Future Volume (vph)	19	1179	41	1220		
Turn Type	NA	custom	Perm	NA		
Protected Phases	4	4 6		2	3	6
Permitted Phases			4			
Detector Phase	4	4 6	4	2		
Switch Phase						
Minimum Initial (s)	7.0		7.0	7.0	1.0	7.0
Minimum Split (s)	26.3		26.3	24.3	20.0	24.3
Total Split (s)	32.0		32.0	58.0	20.0	58.0
Total Split (%)	29.1%		29.1%	52.7%	18%	53%
Yellow Time (s)	4.0		4.0	4.0	2.0	4.0
All-Red Time (s)	2.3		2.3	2.3	0.0	2.3
Lost Time Adjust (s)	0.0		0.0	0.0		
Total Lost Time (s)	6.3		6.3	6.3		
Lead/Lag	Lag		Lag		Lead	
Lead-Lag Optimize?	Yes		Yes		Yes	
Recall Mode	None		None	C-Min	None	C-Min

### Intersection Summary

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 96 (87%), Referenced to phase 2:NBT and 6:EBR, Start of Green

Natural Cycle: 75

Control Type: Actuated-Coordinated

### Splits and Phases: 1: Collins Avenue & 26th Street




















↑ ø2 (R)		↖ ø3	↖ ø4
58 s		20 s	32 s
↖ ø6 (R)			
58 s			

# HCM Signalized Intersection Capacity Analysis

## 1: Collins Avenue & 26th Street








Future Total

Weekend Peak Hour

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations			 					  				
Traffic Volume (vph)	65	19	1179	0	0	41	0	1220	18	0	0	0
Future Volume (vph)	65	19	1179	0	0	41	0	1220	18	0	0	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.3	6.3			6.3		6.3				
Lane Util. Factor		1.00	0.88			1.00		0.91				
Frpb, ped/bikes		1.00	1.00			0.96		1.00				
Flpb, ped/bikes		0.98	1.00			1.00		1.00				
Frt		1.00	0.85			0.86		1.00				
Flt Protected		0.96	1.00			1.00		1.00				
Satd. Flow (prot)		1757	2787			1550		5055				
Flt Permitted		0.96	1.00			1.00		1.00				
Satd. Flow (perm)		1757	2787			1550		5055				
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	67	20	1215	0	0	42	0	1258	19	0	0	0
RTOR Reduction (vph)	0	58	251	0	0	36	0	1	0	0	0	0
Lane Group Flow (vph)	0	29	964	0	0	6	0	1276	0	0	0	0
Confl. Peds. (#/hr)	16		5	5		16	73		75	75		73
Confl. Bikes (#/hr)									14			21
Turn Type	Perm	NA	custom			Perm		NA				
Protected Phases		4	4 6					2				
Permitted Phases	4					4						
Actuated Green, G (s)		14.8	87.3			14.8		66.2				
Effective Green, g (s)		14.8	87.3			14.8		66.2				
Actuated g/C Ratio		0.13	0.79			0.13		0.60				
Clearance Time (s)		6.3				6.3		6.3				
Vehicle Extension (s)		2.5				2.5		1.0				
Lane Grp Cap (vph)		236	2211			208		3042				
v/s Ratio Prot			c0.35					0.25				
v/s Ratio Perm		0.02				0.00						
v/c Ratio		0.12	0.44			0.03		0.42				
Uniform Delay, d1		41.9	3.6			41.3		11.7				
Progression Factor		1.00	1.00			1.00		1.29				
Incremental Delay, d2		0.2	0.1			0.0		0.4				
Delay (s)		42.1	3.7			41.4		15.5				
Level of Service		D	A			D		B				
Approach Delay (s)		6.2			41.4			15.5			0.0	
Approach LOS		A			D			B			A	
<b>Intersection Summary</b>												
HCM 2000 Control Delay			11.3									
HCM 2000 Volume to Capacity ratio			0.40									
Actuated Cycle Length (s)			110.0									
Intersection Capacity Utilization			57.6%									
Analysis Period (min)			15									
c Critical Lane Group												

# Timings 2: Collins Avenue & 24th Street




Future Total  
Weekend Peak Hour

				
Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	62	1264	24	1143
Future Volume (vph)	62	1264	24	1143
Turn Type	Perm	NA	Perm	NA
Protected Phases		6		2
Permitted Phases	4		2	
Detector Phase	4	6	2	2
Switch Phase				
Minimum Initial (s)	5.0	7.0	7.0	7.0
Minimum Split (s)	22.5	25.0	25.0	25.0
Total Split (s)	31.0	79.0	79.0	79.0
Total Split (%)	28.2%	71.8%	71.8%	71.8%
Yellow Time (s)	3.5	4.0	4.0	4.0
All-Red Time (s)	1.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0
Total Lost Time (s)	4.5	6.0		6.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	C-Min	C-Min	C-Min

## Intersection Summary

Cycle Length: 110  
Actuated Cycle Length: 110  
Offset: 32 (29%), Referenced to phase 2:SBTL and 6:NBT, Start of Green  
Natural Cycle: 60  
Control Type: Actuated-Coordinated

## Splits and Phases: 2: Collins Avenue & 24th Street










 2 (R)	 4
79 s	31 s
 6 (R)	
79 s	

# HCM Signalized Intersection Capacity Analysis

## 2: Collins Avenue & 24th Street

Future Total

Weekend Peak Hour

						
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	62	35	1264	123	24	1143
Future Volume (vph)	62	35	1264	123	24	1143
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.5		6.0			6.0
Lane Util. Factor	1.00		0.95			0.95
Frpb, ped/bikes	0.95		0.97			1.00
Flpb, ped/bikes	0.98		1.00			1.00
Frt	0.95		0.99			1.00
Flt Protected	0.97		1.00			1.00
Satd. Flow (prot)	1606		3396			3533
Flt Permitted	0.97		1.00			0.89
Satd. Flow (perm)	1606		3396			3161
Peak-hour factor, PHF	0.99	0.99	0.99	0.99	0.99	0.99
Adj. Flow (vph)	63	35	1277	124	24	1155
RTOR Reduction (vph)	22	0	4	0	0	0
Lane Group Flow (vph)	76	0	1397	0	0	1179
Confl. Peds. (#/hr)	15	63		102	102	
Confl. Bikes (#/hr)		5		10		
Turn Type	Perm		NA		Perm	NA
Protected Phases			6			2
Permitted Phases	4				2	
Actuated Green, G (s)	10.5		89.0			89.0
Effective Green, g (s)	10.5		89.0			89.0
Actuated g/C Ratio	0.10		0.81			0.81
Clearance Time (s)	4.5		6.0			6.0
Vehicle Extension (s)	3.0		1.0			1.0
Lane Grp Cap (vph)	153		2747			2557
v/s Ratio Prot			c0.41			
v/s Ratio Perm	c0.05					0.37
v/c Ratio	0.50		0.51			0.46
Uniform Delay, d1	47.3		3.4			3.2
Progression Factor	1.00		2.32			1.17
Incremental Delay, d2	2.5		0.5			0.5
Delay (s)	49.8		8.4			4.3
Level of Service	D		A			A
Approach Delay (s)	49.8		8.4			4.3
Approach LOS	D		A			A
<b>Intersection Summary</b>						
HCM 2000 Control Delay			8.1		HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio			0.51			
Actuated Cycle Length (s)			110.0		Sum of lost time (s)	10.5
Intersection Capacity Utilization			71.5%		ICU Level of Service	C
Analysis Period (min)			15			
c Critical Lane Group						

HCM 2010 TWSC  
3: Collins Avenue & 1 Hotel Driveway Exit

Future Total  
Weekend Peak Hour

Intersection

Int Delay, s/veh 1.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Vol, veh/h	0	208	1243	0	0	1207
Future Vol, veh/h	0	208	1243	0	0	1207
Conflicting Peds, #/hr	0	0	0	6	6	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	85	85	85	85	85	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	245	1462	0	0	1420




















Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	2172	737	0	0	1462	0
Stage 1	1462	-	-	-	-	-
Stage 2	710	-	-	-	-	-
Critical Hdwy	5	5	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3	3	-	-	2.22	-
Pot Cap-1 Maneuver	127	577	-	-	458	-
Stage 1	194	-	-	-	-	-
Stage 2	502	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	126	574	-	-	455	-
Mov Cap-2 Maneuver	126	-	-	-	-	-
Stage 1	194	-	-	-	-	-
Stage 2	499	-	-	-	-	-

Approach	WB		NB		SB
HCM Control Delay, s	15.9		0		0
HCM LOS	C				

Minor Lane/Major Mvmt	NBT	NBRWBLn1	SBL	SBT
Capacity (veh/h)	-	- 574	455	-
HCM Lane V/C Ratio	-	- 0.426	-	-
HCM Control Delay (s)	-	- 15.9	0	-
HCM Lane LOS	-	- C	A	-
HCM 95th %tile Q(veh)	-	- 2.1	0	-

# Timings 5: Collins Avenue & 23rd Street






Future Total  
Weekend Peak Hour

											
Lane Group	EBL	EBT	EBR2	WBT	NBL	NBT	SBL2	SBL	SBT	SBR	NWL
Lane Configurations											
Traffic Volume (vph)	328	40	187	38	55	972	12	6	923	273	11
Future Volume (vph)	328	40	187	38	55	972	12	6	923	273	11
Turn Type	Split	NA	Perm	NA	Perm	NA	Perm	Perm	NA	pm+ov	Prot
Protected Phases	3	3		4		6			2	3	1
Permitted Phases			3		6		2	2		2	
Detector Phase	3	3	3	4	6	6	2	2	2	3	1
Switch Phase											
Minimum Initial (s)	7.0	7.0	7.0	7.0	5.0	5.0	5.0	5.0	5.0	7.0	6.0
Minimum Split (s)	22.5	22.5	22.5	26.0	31.5	31.5	31.5	31.5	31.5	22.5	13.0
Total Split (s)	23.0	23.0	23.0	26.0	48.0	48.0	48.0	48.0	48.0	23.0	13.0
Total Split (%)	20.9%	20.9%	20.9%	23.6%	43.6%	43.6%	43.6%	43.6%	43.6%	20.9%	11.8%
Yellow Time (s)	4.0	4.0	4.0	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	2.5	2.5	2.5	2.5	2.5	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0			0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0		6.5			6.5	6.0	6.0
Lead/Lag	Lead	Lead	Lead	Lag						Lead	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes						Yes	
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min	None	None

## Intersection Summary

Cycle Length: 110  
 Actuated Cycle Length: 110  
 Offset: 41 (37%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green  
 Natural Cycle: 125  
 Control Type: Actuated-Coordinated

## Splits and Phases: 5: Collins Avenue & 23rd Street


















 ø2 (R)	 ø3	 ø4	 ø1
48 s	23 s	26 s	13 s
 ø6 (R)			
48 s			

# HCM Signalized Intersection Capacity Analysis

## 5: Collins Avenue & 23rd Street

Future Total

Weekend Peak Hour

												
Movement	EBL	EBT	EBR	EBR2	WBL	WBT	WBR	NBL	NBT	NBR	NBR2	SBL2
Lane Configurations												
Traffic Volume (vph)	328	40	11	187	12	38	53	55	972	37	24	12
Future Volume (vph)	328	40	11	187	12	38	53	55	972	37	24	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0		6.0			6.5			
Lane Util. Factor	0.95	0.95		1.00		1.00			0.95			
Frpb, ped/bikes	1.00	0.98		0.83		0.90			0.97			
Flpb, ped/bikes	1.00	1.00		1.00		1.00			1.00			
Frt	1.00	0.99		0.85		0.93			0.99			
Flt Protected	0.95	0.96		1.00		0.99			1.00			
Satd. Flow (prot)	1681	1659		1315		1548			3406			
Flt Permitted	0.95	0.96		1.00		0.99			0.71			
Satd. Flow (perm)	1681	1659		1315		1548			2408			
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	342	42	11	195	12	40	55	57	1012	39	25	12
RTOR Reduction (vph)	0	0	0	167	0	34	0	0	1	0	0	0
Lane Group Flow (vph)	198	197	0	28	0	74	0	0	1133	0	0	0
Confl. Peds. (#/hr)	117		102	78	78		117	105		102	102	102
Turn Type	Split	NA		Perm	Split	NA		Perm	NA			Perm
Protected Phases	3	3			4	4			6			
Permitted Phases				3				6				2
Actuated Green, G (s)	15.9	15.9		15.9		20.0			45.5			
Effective Green, g (s)	15.9	15.9		15.9		20.0			45.5			
Actuated g/C Ratio	0.14	0.14		0.14		0.18			0.41			
Clearance Time (s)	6.0	6.0		6.0		6.0			6.5			
Vehicle Extension (s)	2.5	2.5		2.5		2.5			1.0			
Lane Grp Cap (vph)	242	239		190		281			996			
v/s Ratio Prot	0.12	c0.12				c0.05						
v/s Ratio Perm				0.02					c0.47			
v/c Ratio	0.82	0.82		0.15		0.26			1.14			
Uniform Delay, d1	45.6	45.7		41.1		38.7			32.2			
Progression Factor	1.00	1.00		1.00		1.00			1.00			
Incremental Delay, d2	18.5	19.7		0.3		0.4			74.3			
Delay (s)	64.2	65.4		41.4		39.0			106.5			
Level of Service	E	E		D		D			F			
Approach Delay (s)		57.0				39.0			106.5			
Approach LOS		E				D			F			
<b>Intersection Summary</b>												
HCM 2000 Control Delay			64.9									
HCM 2000 Volume to Capacity ratio			0.84									
Actuated Cycle Length (s)			110.0						24.5			
Intersection Capacity Utilization			99.9%						F			
Analysis Period (min)			15									
c Critical Lane Group												












# HCM Signalized Intersection Capacity Analysis

## 5: Collins Avenue & 23rd Street











Future Total

Weekend Peak Hour

						
Movement	SBL	SBT	SBR	NWL2	NWL	NWR
Lane Configurations						
Traffic Volume (vph)	6	923	273	6	11	8
Future Volume (vph)	6	923	273	6	11	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.5	6.0		6.0	
Lane Util. Factor		0.95	1.00		1.00	
Frpb, ped/bikes		1.00	0.83		0.86	
Flpb, ped/bikes		1.00	1.00		1.00	
Frt		1.00	0.85		0.96	
Flt Protected		1.00	1.00		0.97	
Satd. Flow (prot)		3536	1320		1486	
Flt Permitted		0.84	1.00		0.97	
Satd. Flow (perm)		2990	1320		1486	
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	6	961	284	6	11	8
RTOR Reduction (vph)	0	0	49	0	0	0
Lane Group Flow (vph)	0	980	235	0	25	0
Confl. Peds. (#/hr)	102		105	78	105	117
Turn Type	Perm	NA	pm+ov	Prot	Prot	
Protected Phases		2	3	1	1	
Permitted Phases	2		2			
Actuated Green, G (s)		45.5	61.4		4.1	
Effective Green, g (s)		45.5	61.4		4.1	
Actuated g/C Ratio		0.41	0.56		0.04	
Clearance Time (s)		6.5	6.0		6.0	
Vehicle Extension (s)		1.0	2.5		2.5	
Lane Grp Cap (vph)		1236	736		55	
v/s Ratio Prot			0.05		c0.02	
v/s Ratio Perm		0.33	0.13			
v/c Ratio		0.79	0.32		0.45	
Uniform Delay, d1		28.1	13.1		51.9	
Progression Factor		1.14	1.59		1.00	
Incremental Delay, d2		5.0	0.2		4.3	
Delay (s)		37.2	20.9		56.1	
Level of Service		D	C		E	
Approach Delay (s)		33.5			56.1	
Approach LOS		C			E	
Intersection Summary						

# Timings 7: Dade Boulevard & 23rd Street






Future Total  
Weekend Peak Hour

						
Lane Group	NBT	SBL	SBT	NWL	NWR	ø3
Lane Configurations						
Traffic Volume (vph)	282	313	349	313	402	
Future Volume (vph)	282	313	349	313	402	
Turn Type	NA	pm+pt	NA	Prot	Prot	
Protected Phases	6	5	2	4	4	3
Permitted Phases		2				
Detector Phase	6	5	2	4	4	
Switch Phase						
Minimum Initial (s)	5.0	5.0	5.0	7.0	7.0	1.0
Minimum Split (s)	36.9	11.6	36.9	24.2	24.2	29.0
Total Split (s)	39.0	26.0	65.0	26.0	26.0	29.0
Total Split (%)	32.5%	21.7%	54.2%	21.7%	21.7%	24%
Yellow Time (s)	4.0	3.7	4.0	4.0	4.0	2.0
All-Red Time (s)	2.9	2.9	2.9	2.2	2.2	0.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.9	6.6	6.9	6.2	6.2	
Lead/Lag	Lag	Lead		Lag	Lag	Lead
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes
Recall Mode	C-Min	None	C-Min	None	None	None

## Intersection Summary

Cycle Length: 120  
 Actuated Cycle Length: 120  
 Offset: 35 (29%), Referenced to phase 2:SBTL and 6:NBT, Start of Green  
 Natural Cycle: 115  
 Control Type: Actuated-Coordinated

## Splits and Phases: 7: Dade Boulevard & 23rd Street












 ø2 (R)	 ø3	 ø4
65 s	29 s	26 s
 ø5	 ø6 (R)	
26 s	39 s	

# HCM Signalized Intersection Capacity Analysis

## 7: Dade Boulevard & 23rd Street

Future Total

Weekend Peak Hour

						
Movement	NBT	NBR	SBL	SBT	NWL	NWR
Lane Configurations						
Traffic Volume (vph)	282	413	313	349	313	402
Future Volume (vph)	282	413	313	349	313	402
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.9		6.6	6.9	6.2	6.2
Lane Util. Factor	0.95		1.00	0.95	1.00	1.00
Frpb, ped/bikes	0.99		1.00	1.00	1.00	1.00
Flpb, ped/bikes	1.00		1.00	1.00	1.00	1.00
Frt	0.91		1.00	1.00	1.00	0.85
Flt Protected	1.00		0.95	1.00	0.95	1.00
Satd. Flow (prot)	3199		1769	3539	1770	1583
Flt Permitted	1.00		0.25	1.00	0.95	1.00
Satd. Flow (perm)	3199		458	3539	1770	1583
Peak-hour factor, PHF	0.96	0.96	0.96	0.96	0.96	0.96
Adj. Flow (vph)	294	430	326	364	326	419
RTOR Reduction (vph)	182	0	0	0	0	303
Lane Group Flow (vph)	542	0	326	364	326	116
Confl. Peds. (#/hr)		1	1		4	
Turn Type	NA		pm+pt	NA	Prot	Prot
Protected Phases	6		5	2	4	4
Permitted Phases			2			
Actuated Green, G (s)	48.1		73.7	73.7	33.2	33.2
Effective Green, g (s)	48.1		73.7	73.7	33.2	33.2
Actuated g/C Ratio	0.40		0.61	0.61	0.28	0.28
Clearance Time (s)	6.9		6.6	6.9	6.2	6.2
Vehicle Extension (s)	1.0		2.0	1.0	2.5	2.5
Lane Grp Cap (vph)	1282		488	2173	489	437
v/s Ratio Prot	0.17		c0.11	0.10	c0.18	0.07
v/s Ratio Perm			c0.30			
v/c Ratio	0.42		0.67	0.17	0.67	0.27
Uniform Delay, d1	25.9		13.8	10.0	38.5	33.9
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	1.0		2.7	0.2	3.1	0.2
Delay (s)	27.0		16.4	10.1	41.6	34.1
Level of Service	C		B	B	D	C
Approach Delay (s)	27.0			13.1	37.4	
Approach LOS	C			B	D	
<b>Intersection Summary</b>						
HCM 2000 Control Delay		26.1		HCM 2000 Level of Service		C
HCM 2000 Volume to Capacity ratio		0.70				
Actuated Cycle Length (s)		120.0		Sum of lost time (s)		21.7
Intersection Capacity Utilization		76.1%		ICU Level of Service		D
Analysis Period (min)		15				
c Critical Lane Group						