

BELLA ISLA APARTMENTS

Traffic Study

Project No. 14255

David Plummer & Associates



Responses to the FTE Comments on Behalf of City of Miami Beach (March 30, 2016)

Re: Bella Isla Apartments Traffic Impact Analysis Review

- 1. Exhibit 2 – The calculated peak hour volumes for the intersection of Venetian Causeway at West Island Avenue seems to be incorrect. Please review the calculations for the volumes entering the West Island Avenue.**

Response: The eastbound and westbound turn volumes headed to the south at this intersection were adjusted to match the southbound volumes on West Island Avenue. All other entering / exiting volumes were checked and they reflect the counts taken. The source volumes and the calculated volumes at the Island Avenue intersections have been graphically portrayed in Exhibit A-1 and included in Appendix C. Please note that the counts taken at these intersections reflected all traffic from Belle Isle travelling east due to the bridge closure. The approach volumes were adjusted to reflect a re-distribution of 50% eastbound / 50% westbound once the bridge is open.

- 2. Exhibit 2 – It is not clear how the volumes for the intersection of Venetian Causeway at Purdy Avenue and at Bay Road were determined. In addition, there was not 2015 count information provided for Bay Road in the appendix.**

Response: Counts at Purdy Avenue were collected in 2015 (with the Venetian Causeway closed) and diversions were taken to 'match' the FDOT directional volumes collected in 2014 (prior to closure). Counts used for Bay Road were collected in 2012 and grown to reflect 2015 conditions using the background growth rate. Diversions were also taken at this intersection to 'match' the FDOT directional volumes. The volume development sheet has been included in the appendix as reference and Exhibit A-1 also show the sources of counts and intersection volumes used.

- 3. Exhibit 3 – At the intersection with West Island Avenue, the figure shows two through lanes for the southbound movement; however there is only one receiving lane.**

Response: Lane geometry for the southbound movement at the intersection with West Island Avenue has been revised.

- 4. Exhibit 3 – The lane geometry for the westbound movement at the intersection with East Island Avenue is missing.**

Response: Lane geometry for the westbound movement at the intersection with East Island Avenue has been added to Exhibit 3.

5. Intersection Capacity Analysis – Please review the Synchro models as follows:

- Complete signal timing should be coded including offsets, minimum green, yellow and red times and walk and don't walk times.
- Please verify the correct phasing templates and control type for all intersections.
- Check the box for adjacent parking lane and area type CBD.
- Please verify the speed input.
- Please include a table summarizing existing turn lanes and expected queues.

Please note that the intersection LOS analysis was not reviewed since the items above need to be corrected first.

Response: Necessary changes to Synchro files have been made and updated Synchro reports have been included in the Appendix. Please note the Synchro HCM 2010 analysis supports speed limit in the range of 25 and 55 mph. Therefore, 25 mph was used as the lowest speed limit in the analysis.

6. A growth rate of 0.5% was used. Please provide the supporting documentation.

Response: Historical growth documentation has been included in the appendix.

7. Committed Development –

- a. The information used for Sunset Palau was not the latest approved documentation. Please update accordingly.
- b. There is two additional projects recently approved that need to be included:
 - 1750 Alton Road
 - 1824 Alton Road
- c. To facilitate the review process please, provide in the appendix summary tables of how the volumes were developed.

Response: As requested, the committed developments listed above have been included in the analysis. The information for Sunset Palau, 1750 Alton Road, and 1824 Alton Road was updated as provided by the city's consultant and included in Appendix E.

8. Trip Generation – Please verify that the land use code 220 is the most appropriate. Note that the land use Code 220 is for rented propertied.

Response: The proposed use is rental units (see Site Plan in Appendix A). Therefore, Land Use 220, Apartment is appropriate for the project.

9. Exhibit 8 – The distribution summarized in the table do not correspond to the percentages published in the Miami-Dade Long Range Transportation Plan.

Response: The MDC Long Range Plan publishes cardinal distributions for 2010 and 2040. These were extrapolated to reflect the 2017 buildout year. For clarification purposes, the exhibit was revised to show all years.

10. Trip assignment – Please provide a figure summarizing the trip assignment.

Response: Exhibit 10 has been added depicting the project trip assignment, as requested.

11. Future conditions with West Avenue Bridge – Please provide the necessary supportive documentation, i.e. the PD&E Peak hour 2015 volumes, how were the volumes shown on figure 13 developed, etc.

Response: The PD&E information is included in Appendix F.

12. Parking – Please indicate the type of parking will be provided (self-parking, valet parking, mechanical parking, etc.)

Response: The residents of the building will self-park in the garage. There will be valet parking for guests only. The project currently proposes a total of 33 tandem spaces which will be used by valet or by residents with 2 vehicles.

13. The following items need to be analyzed and discussed within the report.

- Internal Circulation of the garage.
- The operations for the loading area and the trash picked up.
- Driveway – Proper sight distance and turning radius.
- Any proposed signs.

Please provide Auto turn files where needed,

Response: Text has been added to Section 5.0 of the report discussing the items listed above and additional information has been included in Appendix G.

14. Please identify on the site plan where will the bike racks be provided.

Response: The project provides Short Term racks for a total of 33 Bikes in the subterranean level. These are located in two groups near both elevators one area has 15 bikes and the other 18 bikes as labeled. In addition to this, there are 172 long term bike spaces located in the subterranean, second and third floor (labeled as long term bike parking).

Additional Comments

1. The city parking in front of the property and the proposed driveway are cause for safety concerns

Response: This condition exists today. In addition, there are currently 13 tandem parking spaces directly along Island Avenue, which create greater concerns for parking safety. However, the project will eliminate the existing tandem spaces and replace with landscape. The proposed driveway approach will be stop controlled. Vehicles exiting the driveway will need to make a complete stop, giving them time to yield to opposing traffic and any possible parking maneuvers coming from the city parking spaces in front of the property. Therefore, conflicts are not expected to occur.

2. The proposed project will have some tandem spacing. Please clarify how will this be operated as it seems that no valet service will be provided

Response: The proposed tandem parking spaces will be used by valet for guest or assigned to residents with two vehicles and will be self-park. The project is providing valet parking for visitors only. A queuing analysis has been performed at the proposed valet drop-off pick-up area and is included in the report.

BELLA ISLA APARTMENTS

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Deforma Studio, INC.

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DATE:
May 2016

DPA JOB#
14255

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EXECUTIVE SUMMARY

The Bella Isla Apartments will be located at 31 Venetian Way in Miami Beach, Florida. The project proposes to replace an existing 120-unit apartment complex with a new 172-unit apartment building. Main access to the site will be via a two-way driveway accessing Island Avenue, providing access to the proposed parking garage. A second driveway also accessing Island Avenue will provide access to the drop-off / pick-up area. For the purpose of this traffic analysis, project build-out is anticipated by 2017.

An assessment of the traffic impacts associated with the proposed Bella Isla Apartments was performed in accordance with the requirements of the city of Miami Beach. The analysis shows that all intersections analyzed currently operate and will continue to operate within the City's LOS standards.

In addition, a mobility and circulation plan was completed as part of the study. The plan shows that the project area is currently served by various Miami-Dade Transit bus routes. The project is located in an area that is conducive for pedestrian and bicycle activities providing bike lanes, ample sidewalks, and crosswalks. An assessment of circulation as it relates to the valet services during the PM peak hour was performed. The queuing analysis shows that the anticipated queue at the designated valet drop-off / pick-up area during the typical PM peak traffic conditions can be accommodated within the project site.

1.0 INTRODUCTION

1.1 Project Background

The Bella Isla Apartments will be located at 31 Venetian Way in Miami Beach, Florida (See Exhibit 1). The project proposes to replace an existing 120-unit apartment complex with a new 172-unit apartment building. Main access to the site will be via a two-way driveway accessing Island Avenue, providing access to the proposed parking garage. A second driveway also accessing Island Avenue will provide access to the drop-off / pick-up area. For the purpose of this traffic analysis, project build-out is anticipated by 2017. The proposed site plan is included in Appendix A.

1.2 Study Objective

The purpose of this study is to assess the traffic impacts associated with the proposed project. This traffic study is consistent with the methodology provided to and approved by the city of Miami Beach. Appendix B includes the approved methodology provided to the city.



 Project Location

Exhibit 1

Location Map



1.3 Study Area and Methodology

The analysis undertaken follows the study methodology provided and approved by the city of Miami Beach (see Appendix B). The following is a brief description of the study methodology:

- Traffic Counts (Intersections) – Due to the construction in the study area and re-routing of traffic patterns, present day traffic counts could not be used for the analysis. Therefore, FDOT directional segment counts collected on Venetian Way west of Purdy Avenue prior to the causeway closure and construction were used to distribute directional eastbound/westbound approach volumes at each intersection. Furthermore, the two-hour turning movement counts were collected on Wednesday December 16th, 2015 during the PM peak hour (4-6 PM) at the Island Avenue intersections in order to distribute northbound/southbound approach volumes at each intersection. The following intersections were considered:
 - Venetian Way / Island Avenue East
 - Venetian Way / Island Avenue West
 - Purdy Avenue / Dade Boulevard
 - 17th Street / Bay Road/ Dade Boulevard
- Signal Location and Timing– Signal phasing and timing for the signalized intersections were obtained from Miami-Dade County. Signal Timings are included in Appendix C, Traffic Data.
- Future Transportation Projects – The 2015 Transportation Improvement Program (TIP) and the 2040 Long Range Transportation Plan (LRTP) were reviewed to include future transportation projects which add capacity to the network. The proposed West Avenue Bridge (between 17th Street and Dade Boulevard) was taken into consideration for future traffic analysis.
- Background Traffic – Available Florida Department of Transportation (FDOT) and Miami-Dade County (MDC) traffic counts were consulted to determine a growth factor consistent with historical annual growth in the area. The growth factor was applied to the existing traffic volumes to establish background traffic.
- Committed Developments – The following three projects were considered as committed developments:

- Sunset Palau
 - 1901 Alton Road
 - 17th Street Hotel
 - 1614-1634 Alton
- Project Trip Generation – Trip generation for the project was estimated using trip generation information published by the Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th edition.
- Project Trip Distribution / Trip Assignment – Net new external project traffic was assigned to the adjacent street network using the appropriate cardinal distribution from the Miami-Dade 2040 Long Range Transportation Plan, published by the Metropolitan Planning Organization. Area traffic patterns in the area were considered when assigning project trips. A figure showing all of the assigned trips to the adjacent transportation network was provided as part of the study.
- Future Traffic Conditions – Project traffic was combined with projections of background traffic to obtain future conditions with project. Intersection capacity analyses were performed for existing, future without project and future with project conditions.
- Circulation Analysis/Plan – A circulation plan is provided depicting the project site, driveways, delivery areas, location of street signs/signals, crosswalks, sidewalks, location of bus facilities, bike facilities, adjacent streets configuration (travel lanes, etc.) including names, on-street parking and any other pertinent transportation feature in the vicinity of this project.

1.4 Project Site Information

The Bella Isla Apartments will be located at 31 Venetian Way in Miami Beach, Florida. The project proposes to replace an existing 120-unit apartment complex with a new 172-unit apartment building. Main access to the site will be via a two-way driveway accessing Island Avenue, providing access to the proposed parking garage with 297 parking spaces. Delivery truck load/off-load access will also be provided on this driveway. A second driveway also accessing Island Avenue will provide access to the drop-off / pick-up area.

2.0 EXISTING CONDITIONS

Data collection for this study included roadway characteristics, intersection traffic counts, signal timing, and seasonal adjustment factors. The data collection effort is described in the following sections.

2.1 Roadway Characteristics

Venetian Way

Venetian Way is a minor arterial that provides east/west access. It is the only roadway connecting Biscayne Island, San Marco Island, Di Lido Island, Rivo Island, and Belle Island with the mainland and the city of Miami Beach. Within the project area, Venetian Way is a two-lane two-way undivided roadway with left turn lanes at major intersections. The posted speed limit is 30 mph. On-street parking is not permitted on the Venetian Way. The city of Miami Beach has jurisdiction over Venetian Way.

Island Avenue

Island Avenue is a local roadway that loops around Belle Island. Island Avenue is two-lane two-way undivided roadway that intersects with Venetian Way at the east end and west end of the island. There is on-street angled parking on Island Avenue. The speed limit is 20 mph. The city of Miami Beach has jurisdiction over Island Avenue.

Purdy Avenue

Purdy Avenue is a local roadway that provides north/south access between Dade Boulevard and 20th Street. Purdy Avenue is two-lane two-way divided roadway. There is on-street parallel parking on Purdy Avenue within the study area. There is no posted speed limit. The city of Miami Beach has jurisdiction over Purdy Avenue.

17th Street

17th Street is a local roadway that runs east/west across the city of Miami Beach between east of Collins Avenue (the boardwalk) and Dade Boulevard. 17th Street is a four-lane undivided two-way roadway with left turn lanes at major intersections. There is no posted speed limit. The city of Miami Beach has jurisdiction over 17th Street.

Dade Boulevard

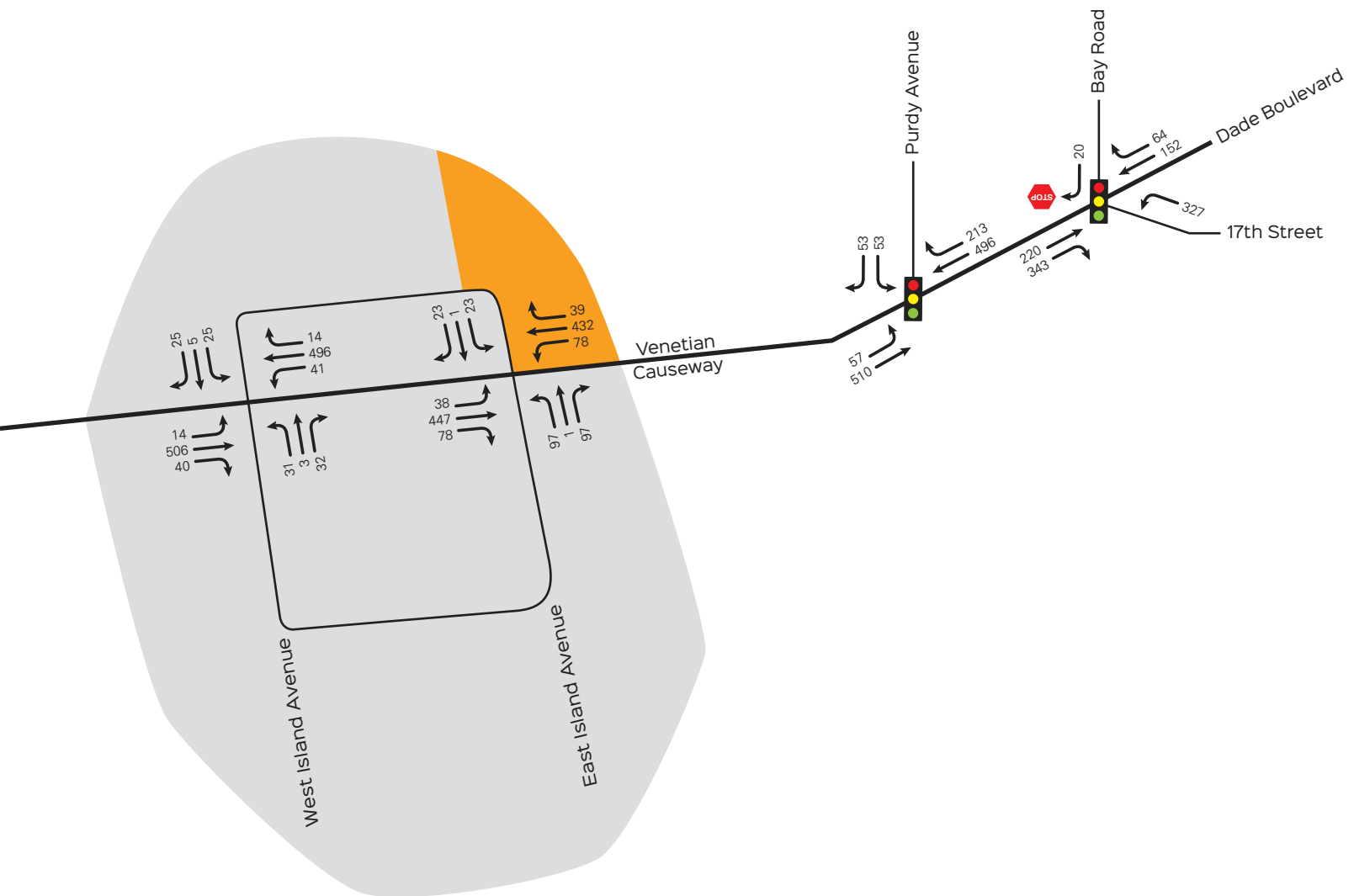
Dade Boulevard is a minor arterial that provides east/west access between Purdy Avenue and 23rd Street. Within the project area, Dade Boulevard is a four-lane undivided roadway with left turn lanes at major intersections. The posted speed limit is 30 mph. The city of Miami Beach has jurisdiction over Dade Boulevard.

2.2 Traffic Counts

Due to the construction in the study area and re-routing of traffic patterns, present day traffic counts could not be used for the analysis. Therefore, FDOT directional segment counts collected on Venetian Way west of Purdy Avenue prior to the causeway closure and construction were used to distribute directional eastbound/westbound approach volumes at each intersection. Furthermore, two-hour turning movement counts were collected on Wednesday December 16th, 2015 during the PM peak hour (4-6 PM) at the Island Avenue intersections in order to distribute northbound/southbound approach volumes at each intersection. A weekly volume adjustment factor of 1.06 (for Miami-Dade County North) corresponding to the dates of the counts was used to adjust the raw traffic counts to peak season conditions. The weekly factor was obtained from FDOT. The approach volumes based on the collected data were assigned as turning movement volumes using a 50% eastbound / 50% westbound distribution. The FDOT directional segment volumes were then carried through the intersections as the through movement volume. An exhibit showing collected data and volume distribution / assignment is included in Appendix C. Existing turning movement volumes used for the analysis at the intersections for weekday PM peak hour are graphically portrayed in Exhibits 2.

2.3 Intersection Data

Existing signal phasing and timing for all the intersections were obtained from Miami-Dade County. This information was used for the signal phasing and timing required for the intersection capacity analysis and can be seen in Appendix C. A field survey was conducted to obtain the intersection lane configurations to be used in the intersection analysis. Exhibit 3 shows the existing lane configurations at the analyzed intersections.

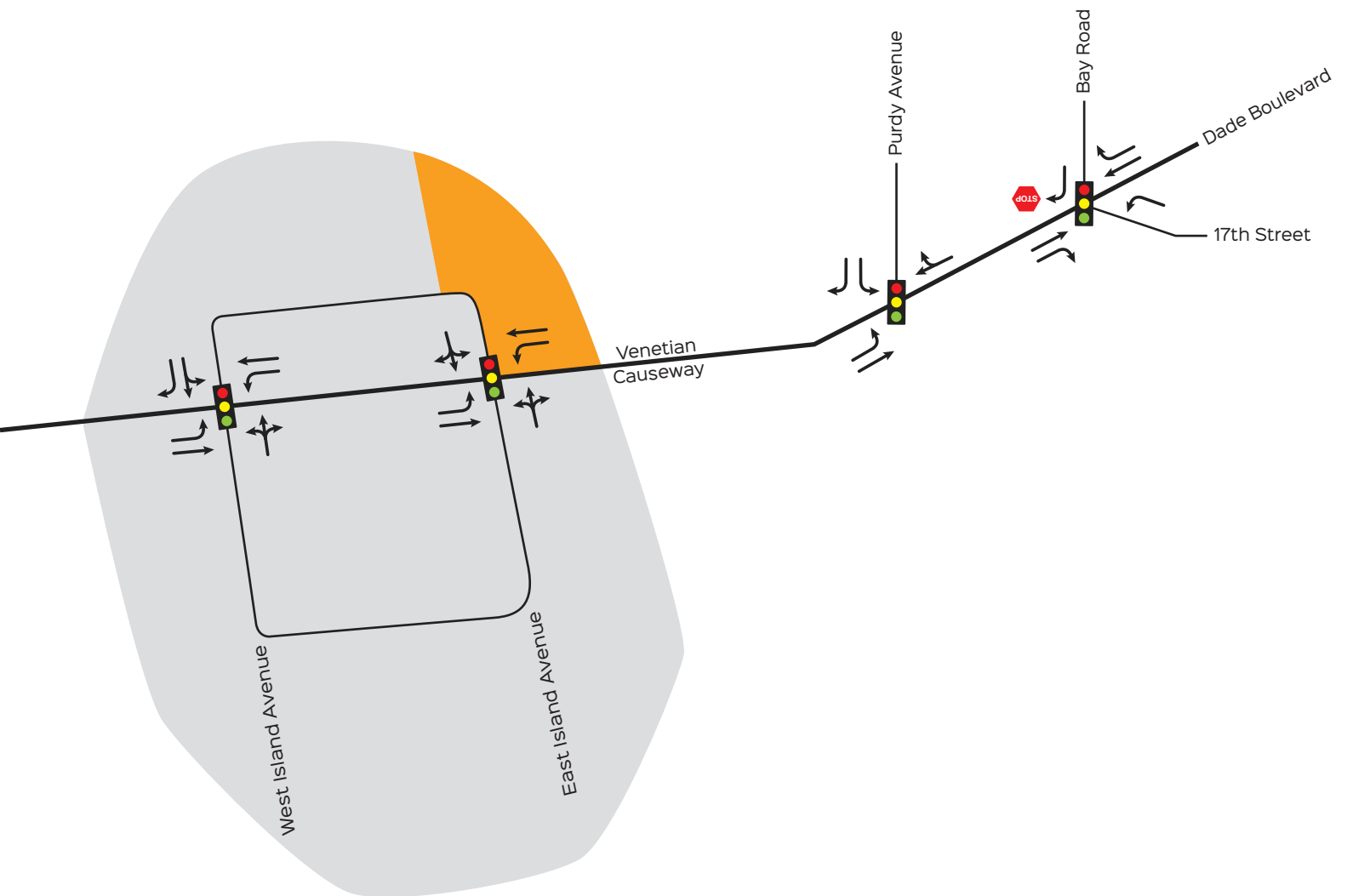


Project Location

Exhibit 2

Existing PM Peak Hour Traffic Volumes





Project Location

Exhibit 3

Existing Lane Configurations



2.4 Intersection Capacity Analysis

The Synchro software was used to perform intersection capacity analysis at the analyzed intersections. Synchro is a macroscopic analysis and optimization software application that implements the Intersection Capacity Utilization method for determining intersection capacity. Synchro also supports the Highway Capacity Manual's methodology for signalized / un-signalized intersections. Exhibit 4 shows the resulting LOS for existing weekday PM peak hour conditions. All analyzed intersections currently operate within the City's LOS standards. Analysis worksheets are included in Appendix D.

Exhibit 4
Existing Intersection Capacity Analysis
Weekday PM Peak Hour Conditions

Intersection	Signalized/ Unsignalized	Direction	PM Peak LOS
Island Avenue East / Venetian Way	S	NB SB EB WB <i>Overall</i>	B B D C C
Island Avenue West / Venetian Way	S	NB SB EB WB <i>Overall</i>	C C A C B
Purdy Avenue / Dade Boulevard	S	SB EB WB <i>Overall</i>	C C D C
17 th Street / Bay Road / Dade Boulevard	S	SB NEB SWB WB <i>Overall</i>	B E B D B

Source: David Plummer & Associates

3.0 PLANNED AND PROGRAMMED ROADWAY IMPROVEMENTS

The 2015 Miami-Dade County Transportation Improvement Program (TIP) and the 2040 Long Range Transportation Program (LRTP) were reviewed to identify any programmed project within the limits of the study area established. These documents identified the construction of a new bridge on West Avenue (between 17th Street and Dade Boulevard). This project was taken into consideration for future traffic analysis.

4.0 FUTURE TRAFFIC CONDITIONS

4.1 Background Traffic and Committed Developments

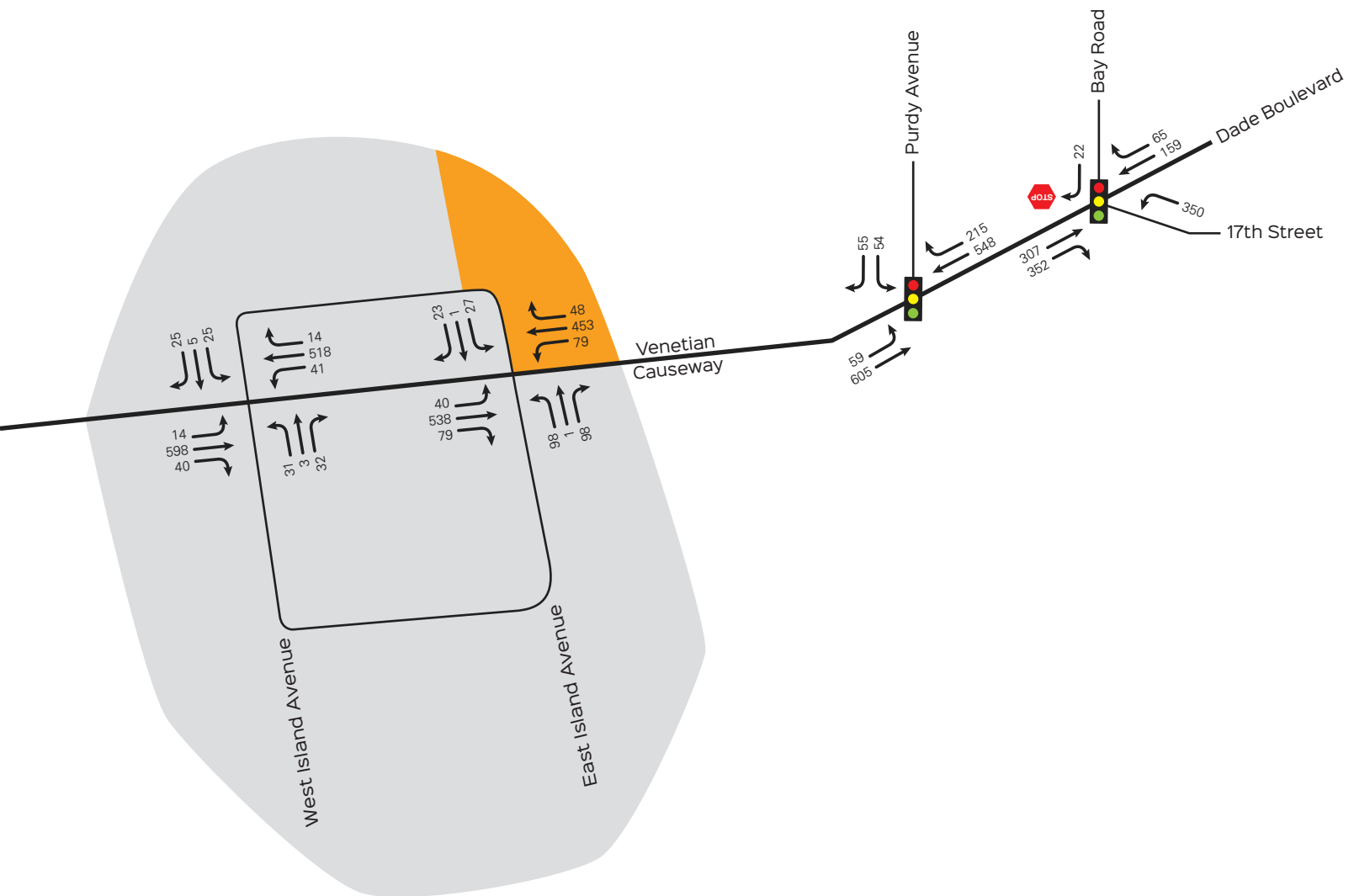
Average Daily Traffic counts published by FDOT were reviewed to determine historic growth in the area. This analysis indicated that traffic has generally decreased in the past five years. Consistent with Florida Department of Transportation (FDOT) procedure, a 0.5% annual growth rate was used to project future background traffic conditions.

The committed development information is included in Appendix E. The following four projects within the study area were considered as committed developments:

- Sunset Palau
- 1901 Alton Road
- 17th Street Hotel
- 1614-1634 Alton
- 1750 Alton Road
- 1824 (1800) Alton Road

4.2 Future without Project Intersection Capacity Analysis

Future without project turning movement volumes were obtained by applying two year of background growth and committed development traffic to existing conditions. Exhibits 5 show the projected PM peak hour turning movements for weekday for future without project. Exhibit 6 shows the resulting LOS for weekday PM peak hour conditions for future without project. All analyzed intersections continue to operate within the city's LOS standards. Intersection capacity worksheets are included in Appendix D.



Project Location

Exhibit 5

Future Without Project PM Peak Hour Traffic Volumes



Exhibit 6
Future without Project Intersection Capacity Analysis
Weekday PM Peak Hour Conditions

Intersection	Signalized/ Unsignalized	Direction	PM Peak LOS
Island Avenue East / Venetian Way	S	NB SB EB WB <i>Overall</i>	C B D C D
Island Avenue West / Venetian Way	S	NB SB EB WB <i>Overall</i>	C C B C B
Purdy Avenue / Dade Boulevard	S	SB EB WB <i>Overall</i>	C B D C
17 th Street / Bay Road / Dade Boulevard	S	SB NEB SWB WB <i>Overall</i>	C D C C C

Source: David Plummer & Associates

4.3 Project Trip Generation

Trip generation for the proposed project was estimated using the Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th Edition. This manual provides gross trip generation rates and/or equations by land use type. These rates and equations estimate vehicle trip ends at a free-standing site's driveways. Given the pedestrian friendly nature of the area, and available transit the study uses a 10% pedestrian/transit use for the project (see Section 5 of this report for additional pedestrian and transit information). The project trip generation summary is provided in Exhibit 7.

Exhibit 7
Project Trip Generation Summary

Proposed ITE Land Use Designation ¹	Size/Units	PM Peak Hour Vehicle Trips		
		In	Out	Total
Apartments (Land Use 220)	172 DU	73	39	112
Other Modes of Transportation	10%	-7	-4	-11
Net External Trips (Proposed)		66	35	101

Existing ITE Land Use Designation ¹	Size/Units	PM Peak Hour Vehicle Trips		
		In	Out	Total
Apartments (Land Use 220)	120 DU	54	30	84
Other Modes of Transportation	10%	-5	-3	-8
Net External Trips (Existing)		49	27	76

Proposed Uses	66	35	101
Existing Uses	-49	-27	-76
Net New External Trips	17	8	25

¹ Based on ITE Trip Generation Manual, Ninth Edition,

4.4 Project Trip Assignment

Project traffic was distributed and assigned to the study area using the Cardinal Distribution for TAZ 640 shown in Exhibit 8. The Cardinal Distribution gives a generalized distribution of trips from a TAZ to other parts of Miami-Dade County. For estimating trip distribution for the project traffic, consideration was given to conditions such as the roadway network accessed by the project traffic, roadways available to travel in the desired direction, and attractiveness of traveling on a specific roadway. Project trip distribution is shown in Exhibit 9 and the resulting assignment is graphically portrayed in Exhibit 10.

Exhibit 8
Cardinal Distribution (TAZ 640)

DIRECTION	2010	2040	2017
NNE	13.60%	12.60%	13.37%
ENE	7.60%	7.50%	7.58%
ESE	26.40%	20.00%	24.91%
SSE	3.10%	4.40%	3.40%
SSW	3.30%	2.10%	3.02%
WSW	20.70%	27.30%	22.24%
WNW	15.70%	15.10%	15.56%
NNW	9.50%	10.90%	9.83%

Source: Miami-Dade Long Range Transportation Plan

4.5 Future with Project Intersection Capacity Analysis

Future background traffic from the previous section and traffic projections for the project were combined to obtain future traffic with project at the analyzed intersections. The results of the analysis show that all intersections are projected to operate within the City's LOS standards. Exhibit 11 shows the resulting LOS for the weekday PM peak hour conditions for future with project, while Exhibit 12 shows the anticipated queues and available storage. Exhibit 13 shows the projected turning movement volumes. Capacity worksheets are included in Appendix D.

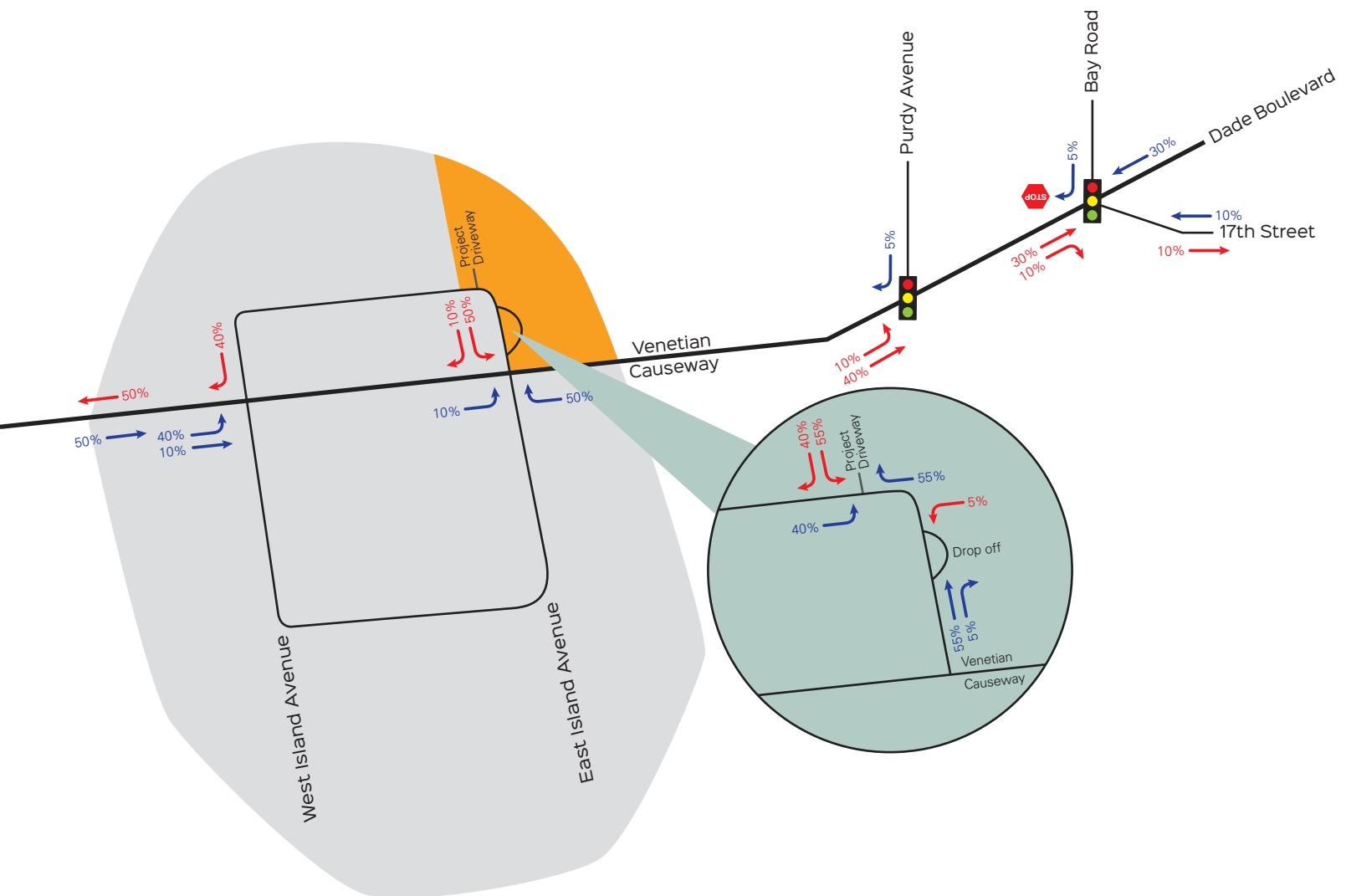


Exhibit 9

Project Trip Distribution



Project Location

Exhibit 10

Project Assignment - PM Peak Hour



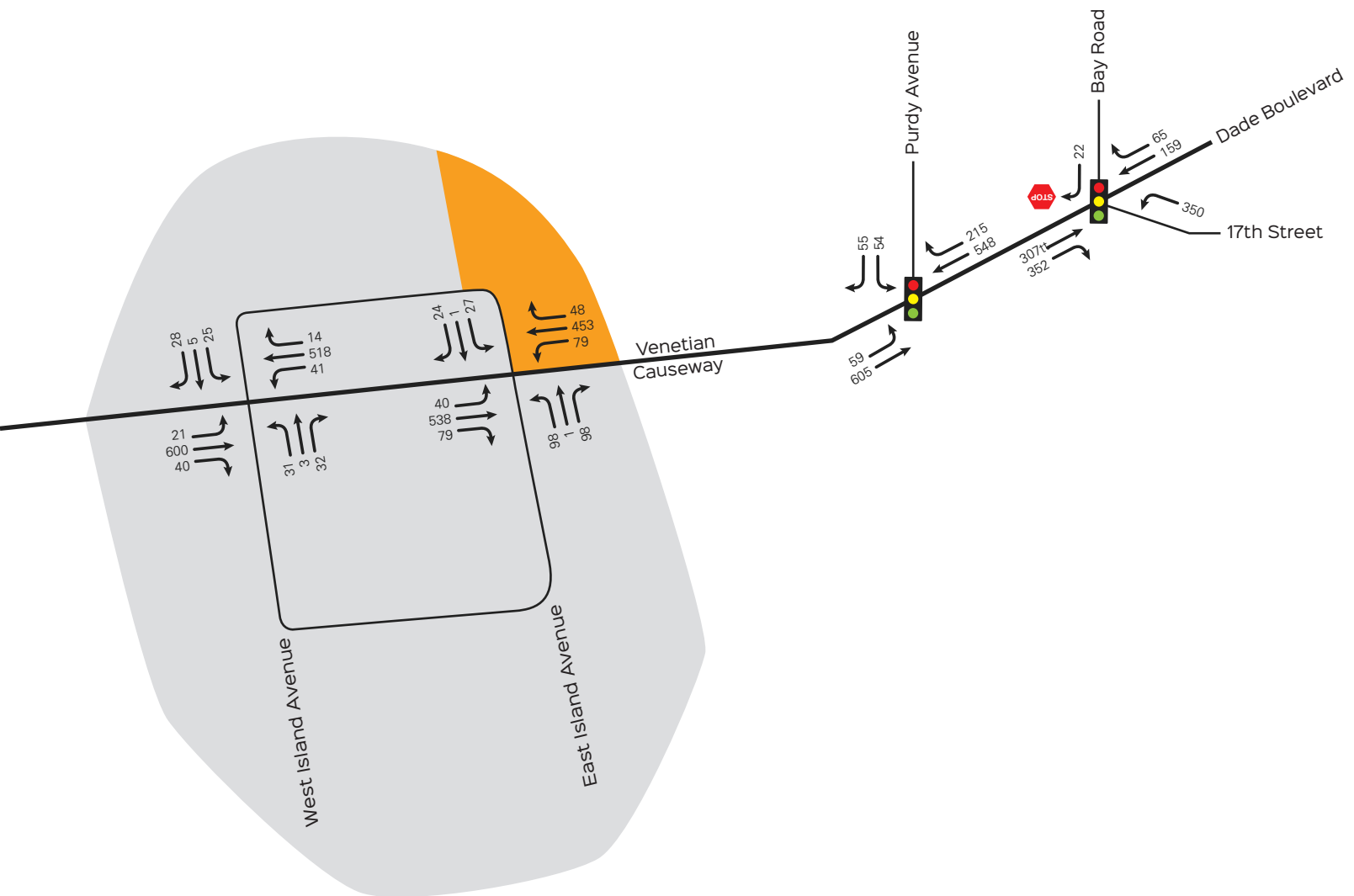
Exhibit 11
Future with Project Intersection Capacity Analysis
Weekday PM Peak Hour Conditions

Intersection	Signalized/ Unsignalized	Direction	PM Peak LOS
Island Avenue East / Venetian Way	S	NB SB EB WB <i>Overall</i>	C B D C D
Island Avenue West / Venetian Way	S	NB SB EB WB <i>Overall</i>	C C B C B
Purdy Avenue / Dade Boulevard	S	SB EB WB <i>Overall</i>	C C D C
17 th Street / Bay Road / Dade Boulevard	S	SB NEB SWB WB <i>Overall</i>	C C D C C

Source: David Plummer & Associates

Exhibit 12
Future with Project Queue Analysis
Weekday PM Peak Hour Conditions

Intersection	Movement	95% Back of Queue (ft)	Storage (ft)
Venetian Way/W Island Avenue	EBL	12	125
	WBL	38	150
Venetian Way/E Island Avenue	EBL	37	150
	WBL	113	125
Venetian Way/Purdy Avenue	EBL	57	50
	SBL	74	500
Dade Boulevard/17 Street/Bay Road	NEBR	352	250
	SWR	180	350
	WBR	0	500
	EBL	395	250



Project Location

Exhibit 13

Future With Project PM Peak Hour Traffic Volumes



4.6 Future with Project Intersection Capacity Analysis with West Avenue Bridge

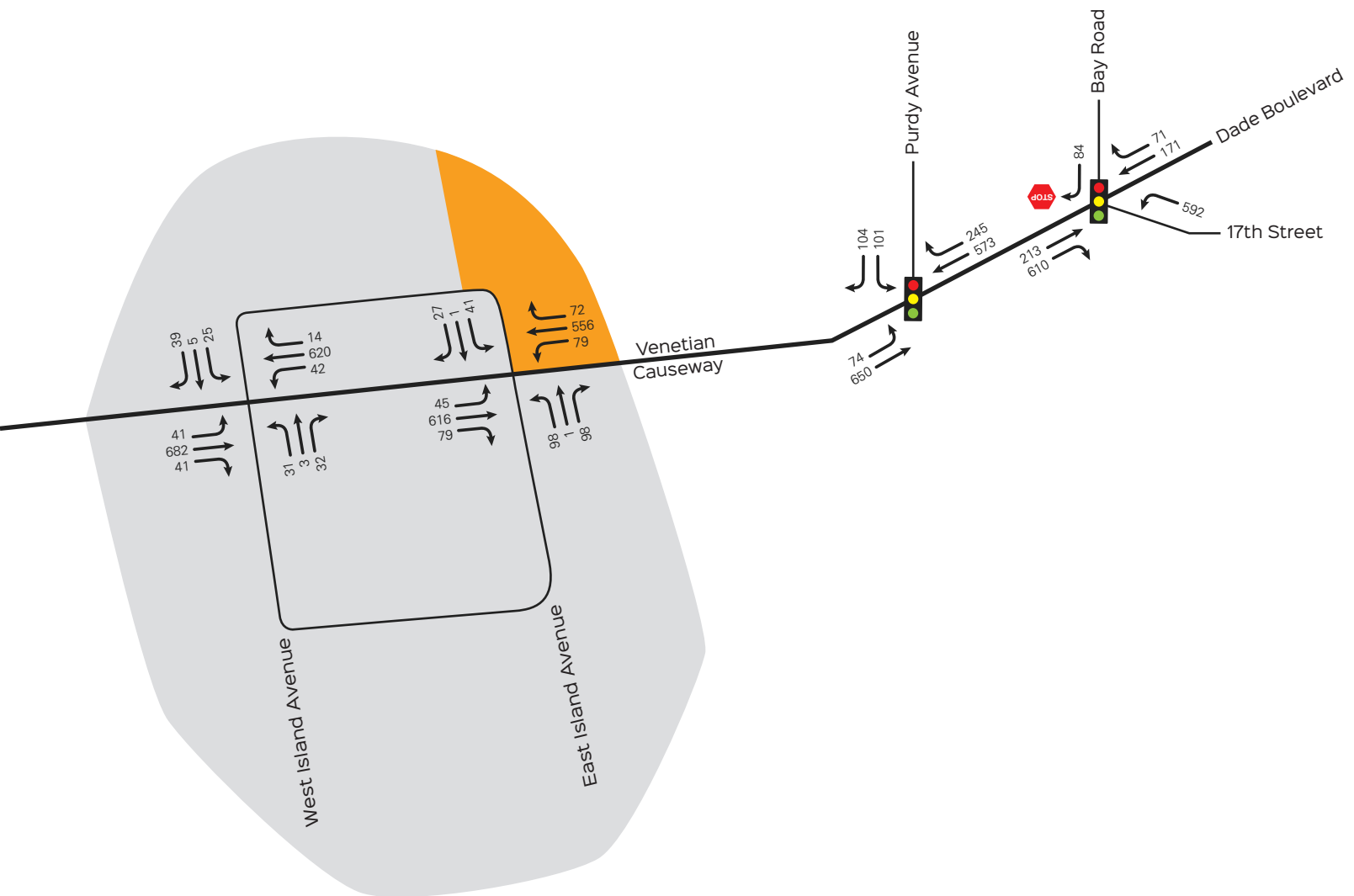
Improvements to the study area include the connection of West Avenue south of 17th Street with West Avenue north of Dade Boulevard with a bridge. This will be a three lane two-way roadway with a southbound through lane and exclusive left turn. This improvement will also add a northbound shared thru right turn lane. Analysis of all intersections in this study was done with the West Avenue Bridge addition.

The traffic volumes at the intersections were obtained from the West Avenue Bridge PD&E Study (Peak Hour 2015 with Bridge) for the Dade Boulevard/ Bay Road/ 17th Street intersection and a growth factor was applied. Documentation of the PD&E Study is provided in Appendix F. These projected volumes were distributed to the study intersections in a similar way as previously described in Section 2.2. The Bella Island Apartments project traffic was distributed and added to the Peak Hour with Bridge volumes grown to project build-out year. Exhibit 14 shows the resulting LOS for the weekday PM peak hour conditions for future with project. Exhibit 15 shows the projected turning movement volumes. Capacity worksheets are included in Appendix D.

Exhibit 14
Future with Project with West Avenue Bridge
Intersection Capacity Analysis
Weekday PM Peak Hour Conditions

Intersection	Signalized/ Unsignalized	Direction	PM Peak LOS
Island Avenue East / Venetian Way	S	NB SB EB WB <i>Overall</i>	C C D C D
Island Avenue West / Venetian Way	S	NB SB EB WB <i>Overall</i>	C C B C C
Purdy Avenue / Dade Boulevard	S	SB EB WB <i>Overall</i>	D B C C
17 th Street / Bay Road / Dade Boulevard	S	SB NEB SWB WB <i>Overall</i>	C D C C C

Source: DPA and FDOT West Avenue Bridge PD&E Study



Project Location

Exhibit 15

Future With Project With Bridge PM Peak Hour Traffic Volumes



5.0 CIRCULATION PLAN

As mentioned before, access to the parking garage will be from a two-way driveway located on Island Avenue. This driveway will also provide access to the delivery truck load/off-load area. A second driveway also accessing Island Avenue will provide access to the drop-off / pick-up area. The project driveway sight distance analysis and auto turn analysis is included in Appendix G.

The project is located in an area that is conducive for pedestrian and bicycle activities. Venetian Way, Purdy Avenue, and Dade Boulevard provide sidewalks on both sides of the road. Signalized intersections adjacent to the site have clearly marked crosswalks and provide pedestrian signals. A bike lane is provided on Venetian Way and Dade Boulevard.

The area surrounding the project is served by transit. There are two bus routes that traverse this area of Miami Beach (Routes: 101-A and 123-SB Local). The closest bus stops to the project site are located on Venetian Way west of Island Avenue. Exhibit 16 shows the available bus routes and bus stops in the area. Appendix G shows the bus route maps and schedules.

A circulation and mobility plan was prepared for the site (see Exhibit 17). The plan shows the project driveways, location of street signals, delivery areas, sidewalk connections, and pedestrian crosswalks.

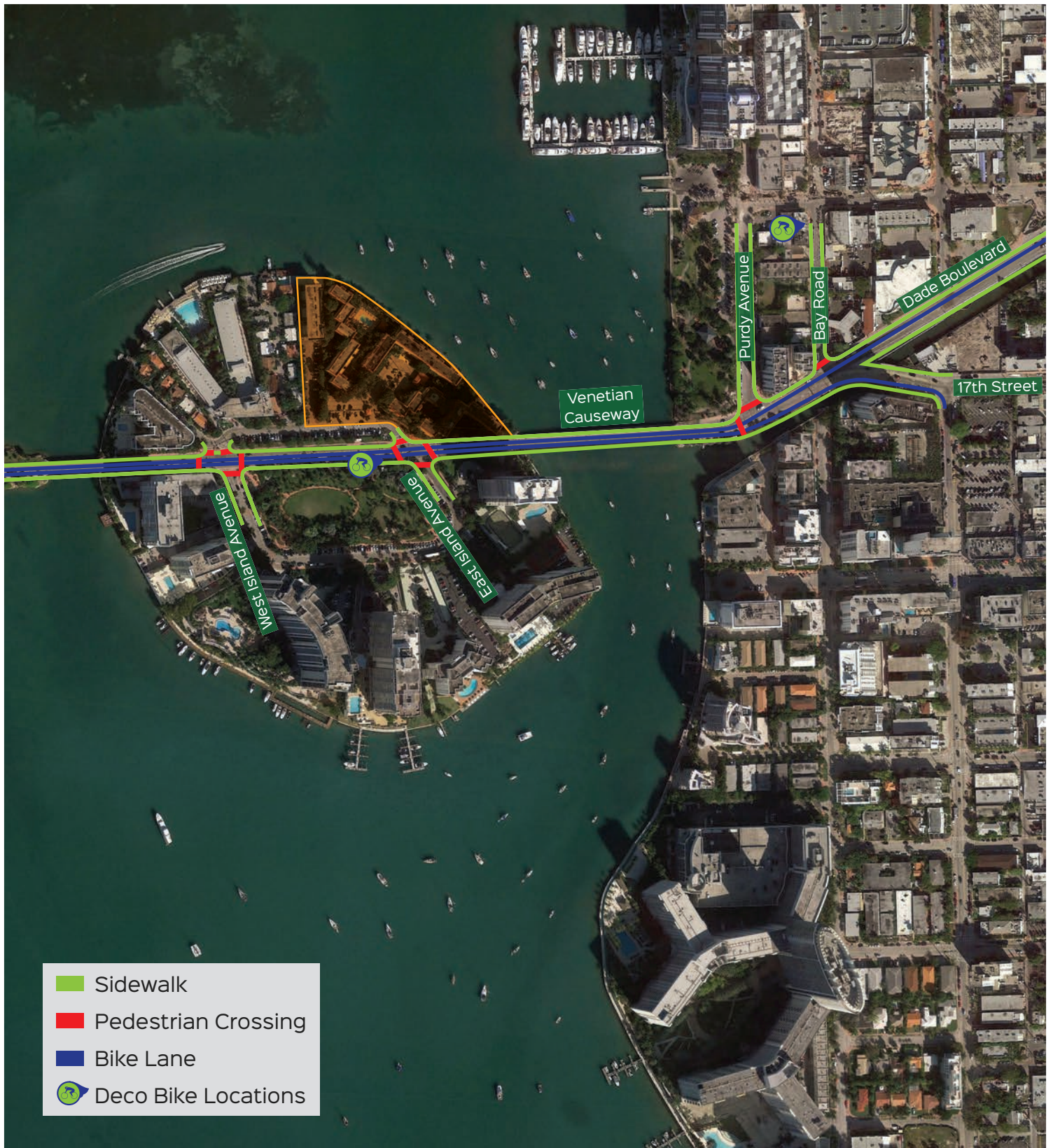


 Project Location

Exhibit 16

Circulation Plan - Bus Route





■ Project Location

Exhibit 17

Circulation Plan - Mobility



6.0 QUEUING ANALYSIS

6.1 Valet Drop-Off / Pick-Up Area

The queuing analysis was performed based on the methodology outlined in the *Institute of Transportation Engineers (ITE) Transportation and Land Development*. The analysis was performed to determine the number of valet parking attendants required during the peak period of a regular weekday so that the queue does not extend past the entrance (95% confidence level analysis). The potential queue at the drop-off area of the valet operations was calculated based on the peak hour traffic published by the Institute of Transportation Engineers (ITE) trip generation rates and/or equations for the proposed development plan. An overall 10% deduction was applied to account for transit/ pedestrian trips. The proposed valet will serve visitors and based on ULI's Shared Parking 2nd Edition, visitors represent 10% of the required parking for residential land uses. However for a conservative analysis, 15% of the project trip generation was used to calculate the demand at the valet drop-off area. Exhibit 18 provides the total project trip generation and calculated visitor trips for the drop-off / pick-up area during the weekday PM peak hour conditions (worst case scenario).

Exhibit 18
Bella Isla Trip Generation - PM Peak Hour

Proposed ITE Land Use Designation ¹	Size/Units	PM Peak Hour Vehicle Trips		
		In	Out	Total
Apartments (Land Use 220)	172 DU	73	39	112
Other Modes of Transportation	10%	-7	-4	-11
Net External Trips (Proposed)		66	35	101
Visitors (15%)		10	5	15

Source: ITE Trip Generation Manual, 9th Edition

The queuing analysis used the single-channel waiting line model with Poisson arrivals and exponential service times. The analysis is based on the coefficient of utilization (ρ) which is the ratio of the average arrival rate of vehicles to the average service rate.

$$\rho = \frac{\text{Average Demand Rate}}{\text{Average Service Rate}}$$

The average service rate corresponds to the time it will take a valet parking attendant to park or retrieve a vehicle. If the coefficient of utilization is greater than 1, then the calculation will yield an infinite queue length.

The required queue storage (M) is determined using the following equation:

$$M = \left\lceil \frac{\ln P(x > M) - \ln Q_M}{\ln \rho} \right\rceil - 1$$

In this equation, $P(x > M)$ is set at 5% to yield a 95% confidence that the queue will not back-up onto the adjacent street.

Since the driving distance differs for valet for inbound/outbound access, a weighted average of the inbound and outbound driving time was used. The weighted average was based on the trip generation in/out distribution, which was 65% inbound and 35% outbound.

The processing rate was calculated by adding the time it will take a valet attendant to process the vehicles (**processing time**), the time it will take him to drive to the parking space (**driving time**) and the time it will take him to walk to/from the parking area (**walking time**). A processing time of 51 seconds per vehicle was used in the analysis. This information is based on data collected on a hotel in Miami Beach (see Appendix H). The driving time for the valet attendant was calculated on a conservative speed of 10 mph, and the walking time for the valet attendant was calculated on a jogging speed of 6ft/sec. For a conservative analysis, distances approximated are based on the most distant parking spaces. Parking garage levels showing circulation are also included in Appendix H. The calculations for the valet drop-off/ pick-up area are presented in Exhibit 19.

Exhibit 19 **Valet Processing Rate**

Inbound Valet Time

<i>Processing time:</i>	$51 \text{ sec} / 60 \text{ sec} / 1 \text{ min} = 0.85 \text{ min}$
<i>Driving time (most distant space):</i>	$1600 \text{ ft} * 1 \text{ mile} / 5280 \text{ ft} * 1 \text{ hr} / 10 \text{ miles} * 60 \text{ min} / \text{hr} = 1.82 \text{ min}$
<i>Walking time:</i>	$341 \text{ ft} / 6 \text{ ft/sec} / 60 \text{ sec/min} = 0.95 \text{ min}$
Total	= <u>3.62 min</u>

Outbound Valet Time

<i>Processing time:</i>	$51 \text{ sec} / 60 \text{ sec} / 1 \text{ min} = 0.85 \text{ min}$
<i>Driving time (most distant space):</i>	$1700 \text{ ft} * 1 \text{ mile} / 5280 \text{ ft} * 1 \text{ hr} / 10 \text{ miles} * 60 \text{ min} / \text{hr} = 1.93 \text{ min}$
<i>Walking time:</i>	$341 \text{ ft} / 6 \text{ ft/sec} / 60 \text{ sec/min} = 0.95 \text{ min}$
Total	= <u>3.73 min</u>

Weighted Valet Time

<i>65% Inbound Valet parking:</i>	$0.65 * 3.62 \text{ min} = 2.35 \text{ min}$
<i>35% Outbound Valet parking:</i>	$0.35 * 3.73 \text{ min} = 1.31 \text{ min}$
Total	= <u>3.66 min</u>

An iterative approach was used to determine the minimum number of valet attendants required during the PM peak hour to serve the entering and exiting vehicles that will ensure that the average valet queue will not extend past the drop-off / pick-up area. Exhibit 20 shows the queuing calculations.

Exhibit 20
Bella Isla – Valet Drop-off / Pick-up
Queue Calculations

$$Q = \text{Processing rate} = \frac{60 \text{ min/hr}}{3.66 \text{ min/process}} = 16.39 \text{ process/hr}$$

$$q = \text{Demand Rate} = 15 \frac{\text{veh}}{\text{hr}}$$

$$N = \text{Service Positions} = 2 \text{ attendants}$$

$$\rho = \text{Utilization factor} = \frac{q}{(NQ)} = \frac{15 \text{ veh/hr}}{2 \times 16.39 \text{ process/hr}} = 0.4575$$

$$Q_m = \text{Table Value} = 0.2888$$

$$M = \text{queue length which is exceeded 5\% of the time } [P(x > M)]$$

$$M = \frac{\ln P(x > M) - \ln(Q_m)}{\ln(\rho)} - 1 = \frac{\ln(0.05) - \ln(0.2888)}{\ln(0.4575)} - 1 = 1.24, \text{ say 2 vehicles}$$

The results of the analysis show that 2 valet attendants would be able to handle the demand during PM peak hour with an average queue of approximately 2 vehicles or less. The proposed site drop-off / pick-up area can accommodate approximately 3 vehicles in queue. The site plan is included in Appendix H.

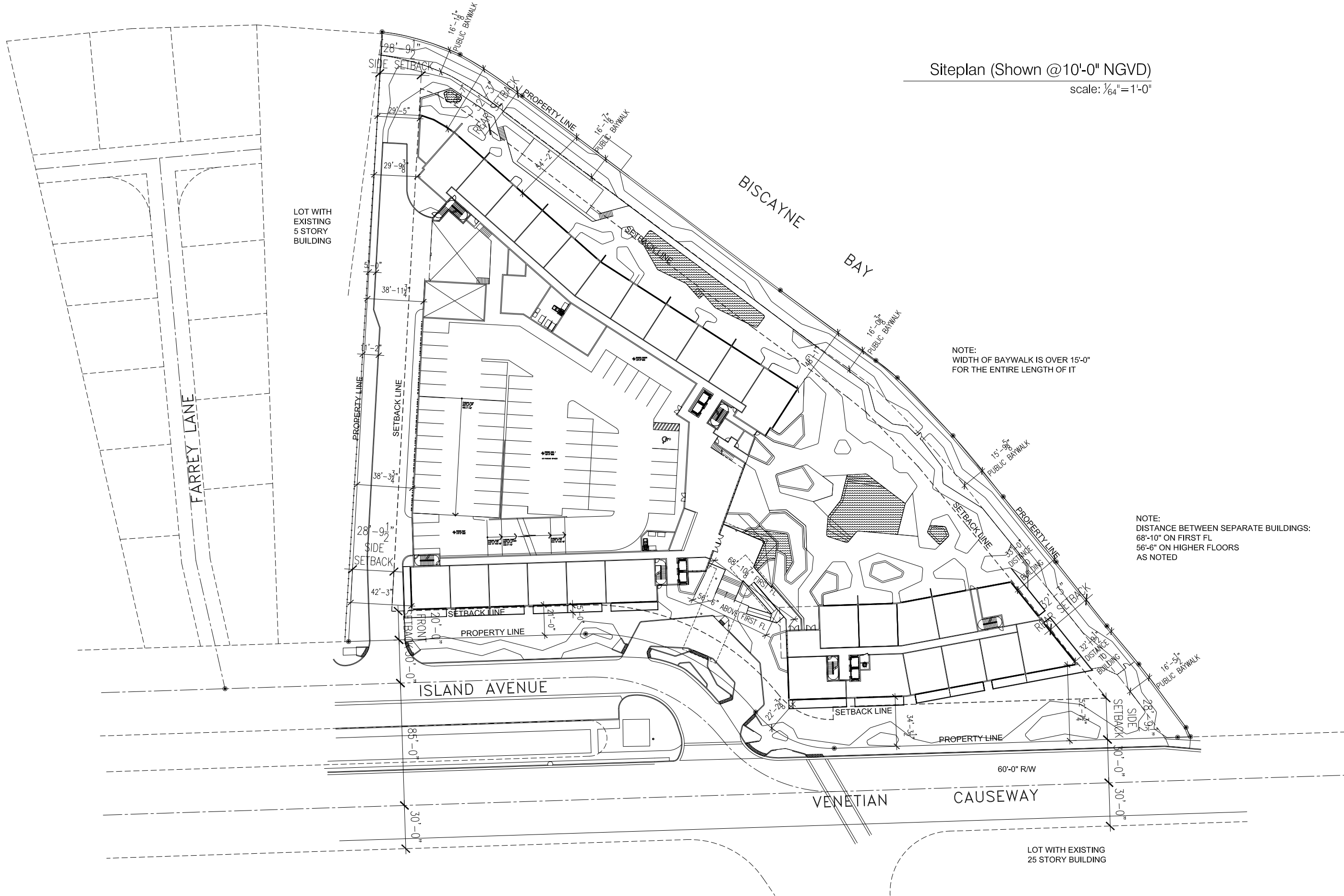
7.0 CONCLUSIONS

An assessment of the traffic impacts associated with the proposed Bella Isla Apartments was performed in accordance with the requirements of the city of Miami Beach. The analysis shows that all intersections analyzed currently operate and will continue to operate within the city's LOS standards.

In addition, a mobility and circulation plan was completed as part of the study. The plan shows that the project area is currently served by various Miami-Dade Transit bus routes. The project is located in an area that is conducive for pedestrian and bicycle activities providing bike lanes, ample sidewalks, and crosswalks. An assessment of circulation as it relates to the valet services during the PM peak hour was performed. The queuing analysis shows that the anticipated queue at the designated valet drop-off / pick-up area during the typical PM peak traffic conditions can be accommodated within the project site.

Appendix A

Site Plan



Siteplan (Shown @10'-0" NGVD)
scale: 1/64" = 1'-0"

NOTE:
WIDTH OF BAYWALK IS OVER 15'-0"
FOR THE ENTIRE LENGTH OF IT

NOTE:
DISTANCE BETWEEN SEPARATE BUILDINGS:
68'-10" ON FIRST FL
56'-6" ON HIGHER FLOORS
AS NOTED

Appendix B: Methodology

Bella Isla Apartments Transportation Impact Study Methodology

November 19, 2015
Revised: November 24, 2015

PROJECT LOCATION

The project will be located at 31 Venetian Way in Miami Beach, Florida. The project proposes to replace an existing 120-unit apartment complex with a new 170-unit apartment building.

PURPOSE

This methodology will provide the details of the Transportation Impact Study and Queuing Analysis for this proposed increase in development. This methodology is based on discussions from a methodology meeting held with city staff on November 17, 2015. Confirmation of this methodology will be requested from the city and/or its traffic consultant prior to performing the study.

TRAFFIC STUDY

- Traffic Counts (Intersections) – Because of construction activity in the area, traffic counts collected prior to the construction will be used. Counts will be projected to existing traffic conditions (2015) by applying a growth rate factor. The applicant traffic consultant and city staff will review the traffic counts for accuracy.
 - Intersection Analysis – The following intersections will be analyzed for the PM peak hour of a regular weekday:
 - Venetian Causeway / Island Avenue East (S)
 - Venetian Causeway / Island Avenue West (S)
 - Dade Boulevard / Sunset Harbour Drive (S)
 - 17th Street / Bay Road/ Dade Boulevard (S)
- S= Signalized

Traffic counts used as part of this project will be included in the appendix of the Transportation Impact Study submitted to the city.

- Signal Location and Timing – Existing signal phasing and timing for the signalized intersections will be obtained from Miami-Dade County. Signal data collected from the county will be included in the appendix of this study.
- Trip Generation – Trip generation for the project will be estimated using trip generation information published by the Institute of Transportation Engineers (ITE) Trip Generation Manual, 9th edition. As agreed with city staff, a 10% reduction will be applied to account for other modes of transportation. Credit for vehicle trips generated by the existing uses will be based on ITE Trip Generation Manual, 9th edition.
- Trip Distribution / Trip Assignment – Net new external project traffic will be assigned to the adjacent street network using the appropriate cardinal distribution from the Miami-Dade Long Range Transportation Plan Update, published by the Metropolitan Planning Organization. Normal area traffic patterns will also be considered when assigning project trips. A figure showing all of the assigned trips to the adjacent transportation network will be provided as part of the study.
- Background Traffic – Available Florida Department of Transportation (FDOT) and Miami-Dade County (MDC) traffic counts will be consulted to determine a growth factor consistent with historical annual growth in the area. The growth factor will be applied to the existing traffic volumes to establish background traffic. This will be documented in the study.
- Committed Developments – The following projects will be considered as committed developments: **1901 Alton Road (Whole Foods), 1614-1634 Alton Road**, Sunset Palau and 17th Street Hotel. Evidence of the data collected as part of the committed developments will be included in the appendix of the study.
- Future Transportation Projects – The 2015 TIP and the 2040 LRTP will be reviewed and considered in the analysis at project build-out. The proposed West Avenue Bridge

(between 17th Street and Dade Boulevard) will be taken into consideration for future traffic analysis as well as its impact on the West Avenue/Dade Boulevard intersection.

- Intersection Capacity Analysis – The intersection capacity analyses will be conducted for the following conditions:
 - Existing conditions
 - Future conditions with Committed Developments
 - Future conditions with Project and Committed Development

The analysis will be done on a regular weekday during PM peak hour (4-6 PM). Intersection analysis will be done using Highway Capacity Software (HCS 2010) or the Synchro software both based on the 2010 Highway Capacity Manual (HCM). Figures depicting trip distribution for each of these scenarios will be provided as part of this study. If the results of the analysis show any intersection operating below the City's Level of Service standards, specific mitigation measures will be recommended.

CIRCULATION ANALYSIS/PLAN

The study will provide a circulation plan depicting the parking garage circulation. The plan will also include a clear site plan defining all of the various land use categories assigned to the project site, driveways, delivery areas, location of street signs/signals, crosswalks, sidewalks, location of bus facilities, bike facilities, adjacent streets configuration (travel lanes, etc.) including names, on-street parking and any other pertinent transportation feature in the vicinity of this project.

As part of the study, any proposed/existing driveways will be analyzed. This analysis will include sight distance for vehicles entering/exiting the proposed driveway. An Auto-turn analysis will be conducted for the drop-off / pick-up area and the loading area. If deficiencies are determined, mitigation measures will be recommended.

Multimodal – Pedestrian, bicycle and transit facilities will be defined in the Circulation Plan. Existing bus routes including schedule and bus stop locations will be discussed as part of the

study. An effort will be made to include bicycle parking facilities within the project site to be utilized either by employees or tenants.

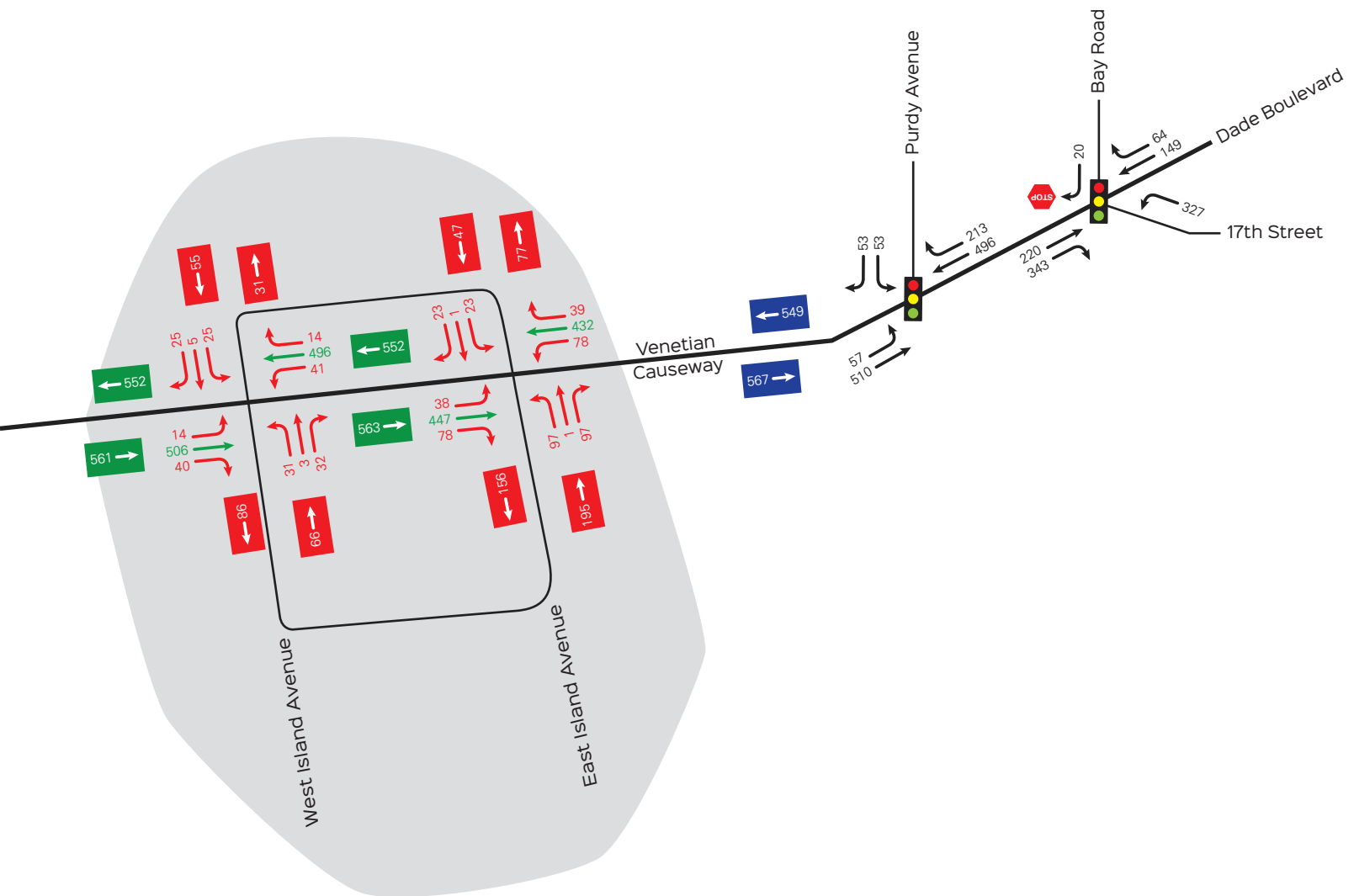
DOCUMENTATION

The applicant will submit one original, 13 hard copies and four CDs of the traffic study. The submittal will include a CD with the HCS 2010 or Synchro program output calculations for consideration/review by the consultant acting as the peer reviewer. Also included will be the latest version of the site plan, with an AutoCad version.

The City reserves the right to request additional analyses including but not limited to, additional traffic counts and level of service analysis for any intersection City staff feels is necessary in order to complete the review process.

w:\14\14255\bella isla apartment_methodology_rev.docx

Appendix C: Traffic Data



Approach / departure volumes bases on counts collected on December 16, 2015 distributed 50% Eastbound / 50% Westbound



Segment volume based on FDOT counts collected at Venetian Causeway west of Purdy Avenue on December 16, 2014 - December 22, 2014 (Prior to the closure of Venetian Causeway)



Approach / departure volumes calculated from FDOT segment volume and distributed turning volumes

Exhibit A-1

Existing Intersection Volume Distribution / Assignment



HBC Engineering Company

13155 SW 134th Street, Suite 207
Miami, Florida, 33186

Site Code: VEN 3
Station ID: 27638

VENETIAN CAUSEWAY PD&E STUDY (FM: 422713-2)

7-DAY TRAFFIC COUNT ON VENETIAN CAUSEWAY WEST OF PURDY AVENUE PLAZA (NEAR EASTERN LIMITS OF THE STUDY)

Start Time	16-Dec-14		17-Dec-14		18-Dec-14		19-Dec-14		20-Dec-14		21-Dec-14		22-Dec-14		Week Average	
	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB
12:00 AM	127	180	134	182	162	214	196	244	250	302	240	270	162	224	182	231
01:00	85	86	108	104	92	112	132	142	190	240	184	201	109	114	129	143
02:00	32	56	38	45	38	60	51	98	128	158	132	207	58	98	68	103
03:00	24	42	24	30	34	56	30	58	86	140	88	140	32	44	45	73
04:00	16	39	18	26	22	37	32	46	63	90	72	104	13	34	34	54
05:00	19	30	17	18	20	33	25	46	48	96	48	88	19	42	28	50
06:00	38	36	34	29	43	44	30	44	51	71	42	69	40	35	40	47
07:00	100	88	114	87	120	92	99	94	68	56	62	63	99	80	95	80
08:00	293	280	316	292	306	274	322	262	144	126	128	91	246	228	251	222
09:00	522	380	522	416	514	376	530	436	234	196	187	136	419	390	418	333
10:00	512	474	502	462	510	431	516	434	367	265	299	197	456	395	452	380
11:00	499	438	434	435	496	433	554	432	424	321	376	275	516	473	471	401
12:00 PM	437	440	490	448	497	478	531	506	492	432	399	328	472	513	474	449
01:00	525	518	514	489	526	496	740	550	496	459	404	408	546	558	536	497
02:00	464	474	530	469	495	536	654	555	469	474	442	408	509	554	509	496
03:00	504	468	510	502	536	488	536	658	475	470	400	417	574	567	505	510
04:00	498	535	532	530	585	550	605	654	550	507	473	458	522	590	538	546
05:00	564	514	586	578	598	587	616	688	488	577	414	447	576	576	549	567
06:00	584	668	564	646	610	654	668	754	470	540	436	514	622	598	565	625
07:00	526	587	585	672	606	618	608	689	530	536	400	496	512	561	538	594
08:00	373	436	448	462	478	536	476	531	410	482	322	364	398	454	415	466
09:00	277	343	332	362	348	380	344	362	336	352	284	319	311	422	319	363
10:00	204	290	248	276	280	314	301	342	276	366	249	304	214	352	253	321
11:00	184	262	250	288	242	290	332	296	281	325	180	257	204	268	239	284
Total	7407	7664	7850	7848	8158	8089	8928	8921	7326	7581	6261	6561	7629	8170	7653	7835
Day	15071		15698		16247		17849		14907		12822		15799		15488	
AM Peak	09:00	10:00	09:00	10:00	09:00	11:00	11:00	09:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00	11:00
Vol.	522	474	522	462	514	433	554	436	424	321	376	275	516	473	471	401
PM Peak	18:00	18:00	17:00	19:00	18:00	18:00	13:00	18:00	16:00	17:00	16:00	18:00	18:00	18:00	18:00	18:00
Vol.	584	668	586	672	610	654	740	754	550	577	473	514	622	598	565	625

TURNING MOVEMENT COUNTS

Project Name: Bella Isla Apartments
Location: Venetian Way / Island Avenue W
Observer: Traffic Survey Specialists, Inc.

Project Number: 14255
Count Date: 12/16/2015
Day of Week: Wednesday

		Island Avenue W / Century Lane								Venetian Way								
TIME INTERVAL		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				GRAND TOTAL
		L	T	R	TOTAL	L	T	R	TOTAL	L	T	R	TOTAL	L	T	R	TOTAL	
04:00 PM	04:15 PM	1	2	12	15	11	3	2	16	5	97	1	103	14	55	7	76	210
04:15 PM	04:30 PM	1	1	18	20	15	1	3	19	0	71	1	72	22	61	5	88	199
04:30 PM	04:45 PM	4	0	12	16	10	0	0	10	0	72	1	73	22	64	6	92	191
04:45 PM	05:00 PM	0	0	12	12	6	1	0	7	1	90	2	93	16	71	3	90	202
05:00 PM	05:15 PM	2	1	7	10	14	2	1	17	1	65	0	66	16	61	2	79	172
05:15 PM	05:30 PM	1	1	9	11	14	1	0	15	2	58	0	60	8	51	10	69	155
05:30 PM	05:45 PM	0	0	8	8	9	1	0	10	0	63	0	63	13	50	2	65	146
05:45 PM	06:00 PM	0	0	6	6	12	1	1	14	0	58	1	59	20	59	4	83	162

PM PEAK HOUR TURNING MOVEMENT COUNT SUMMARY ANNUAL AVERAGE DAILY TRAFFIC CONDITIONS

		Island Avenue W / Century Lane								Venetian Way								
TIME INTERVAL		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				GRAND TOTAL
		L	T	R	TOTAL	L	T	R	TOTAL	L	T	R	TOTAL	L	T	R	TOTAL	
04:00 PM	05:00 PM	6	3	57	67	45	5	5	55	6	350	5	361	78	266	22	367	850
PEAK HOUR FACTOR					0.79				0.68				0.83				0.94	0.95

Note: 2014 FDOT Peak Season Conversion Factor = 1.06

TURNING MOVEMENT COUNTS

Project Name: Bella Isla Apartments
Location: Venetian Way / Island Avenue E
Observer: Traffic Survey Specialists, Inc.

Project Number: 14255
Count Date: 12/16/2015
Day of Week: Wednesday

		Island Avenue E								Venetian Way									
TIME INTERVAL		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND					GRAND TOTAL
		L	T	R	TOTAL	L	T	R	TOTAL	L	T	R	TOTAL	U-Turn	L	T	R	TOTAL	
04:00 PM	04:15 PM	2	0	30	32	16	0	0	16	0	126	0	126	2	29	80	15	126	300
04:15 PM	04:30 PM	1	0	47	48	13	0	3	16	0	92	0	92	10	31	88	20	149	305
04:30 PM	04:45 PM	0	0	49	49	10	0	0	10	0	102	2	104	11	31	98	20	160	323
04:45 PM	05:00 PM	1	1	39	41	8	0	0	8	1	115	0	116	7	34	93	10	144	309
05:00 PM	05:15 PM	1	0	45	46	10	1	0	11	0	92	0	92	7	49	86	22	164	313
05:15 PM	05:30 PM	1	1	29	31	18	1	0	19	0	77	1	78	10	39	75	18	142	270
05:30 PM	05:45 PM	1	0	12	13	11	0	0	11	0	75	3	78	10	43	79	9	141	243
05:45 PM	06:00 PM	2	2	21	25	14	0	0	14	1	76	1	78	5	45	96	13	159	276

PM PEAK HOUR TURNING MOVEMENT COUNT SUMMARY ANNUAL AVERAGE DAILY TRAFFIC CONDITIONS

		Island Avenue E								Venetian Way									
TIME INTERVAL		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND					GRAND TOTAL
		L	T	R	TOTAL	L	T	R	TOTAL	L	T	R	TOTAL	U-Turn	L	T	R	TOTAL	
04:15 PM	05:15 PM	3	1	191	195	43	1	3	48	1	425	2	428	37	154	387	76	654	1,325
PEAK HOUR FACTOR					0.94				0.70				0.87				0.94		0.97

Note: 2014 FDOT Peak Season Conversion Factor = 1.06

TURNING MOVEMENT COUNTS

Project Name: Bella Isla Apartments
Location: Dade Boulevard / Purdy Avenue
Observer: Traffic Survey Specialists, Inc.

Project Number: 14255
Count Date: 12/16/2015
Day of Week: Wednesday

		Purdy Avenue								Dade Boulevard								
TIME INTERVAL		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				GRAND TOTAL
		L	T	R	TOTAL	L	T	R	TOTAL	L	T	R	TOTAL	L	T	R	TOTAL	
04:00 PM	04:15 PM				0	15	0	33	48	0	171	0	171	0	100	1	101	320
04:15 PM	04:30 PM				0	20	0	21	41	0	167	0	167	0	122	1	123	331
04:30 PM	04:45 PM				0	33	0	34	67	0	178	0	178	0	130	0	130	375
04:45 PM	05:00 PM				0	19	0	29	48	0	187	0	187	0	111	0	111	346
05:00 PM	05:15 PM				0	24	0	21	45	1	178	0	179	0	163	3	166	390
05:15 PM	05:30 PM				0	18	0	23	41	0	165	0	165	0	132	0	132	338
05:30 PM	05:45 PM				0	25	0	24	49	0	152	0	152	0	131	0	131	332
05:45 PM	06:00 PM				0	33	0	29	62	0	143	0	143	0	149	0	149	354

PM PEAK HOUR TURNING MOVEMENT COUNT SUMMARY ANNUAL AVERAGE DAILY TRAFFIC CONDITIONS

		Purdy Avenue								Dade Boulevard								
TIME INTERVAL		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				GRAND TOTAL
		L	T	R	TOTAL	L	T	R	TOTAL	L	T	R	TOTAL	L	T	R	TOTAL	
04:30 PM	05:30 PM	0	0	0	0	100	0	113	213	1	750	0	752	0	568	3	571	1,536
PEAK HOUR FACTOR					#DIV/0!				0.75				0.95				0.81	0.93

Note: 2014 FDOT Peak Season Conversion Factor = 1.06

VENETIAN WAY & ISLAND WAY W
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 : 00150249
Start Date: 12/16/15
File I.D. : WVENISLA
Page : 1

ALL VEHICLES

CENTURY LANE					VENETIAN WAY				ISLAND WAY W				VENETIAN WAY					
From North					From East				From South				From West					
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right		
Date 12/16/15																		Total
16:00	0	11	3	2	0	14	55	7	0	1	2	12	1	4	97	1	210	
16:15	0	15	1	3	1	21	61	5	0	1	1	18	0	0	71	1	199	
16:30	0	10	0	0	0	22	64	6	0	4	0	12	0	0	72	1	191	
16:45	0	6	1	0	0	16	71	3	0	0	0	12	0	1	90	2	202	
Hr Total	0	42	5	5	1	73	251	21	0	6	3	54	1	5	330	5	802	
17:00	0	14	2	1	0	16	61	2	0	2	1	7	0	1	65	0	172	
17:15	0	14	1	0	0	8	51	10	0	1	1	9	0	2	58	0	155	
17:30	0	9	1	0	0	13	50	2	0	0	0	8	0	0	63	0	146	
17:45	0	12	1	1	0	20	59	4	0	0	0	6	0	0	58	1	162	
Hr Total	0	49	5	2	0	57	221	18	0	3	2	30	0	3	244	1	635	
TOTAL	0	91	10	7	1	130	472	39	0	9	5	84	1	8	574	6	1437	

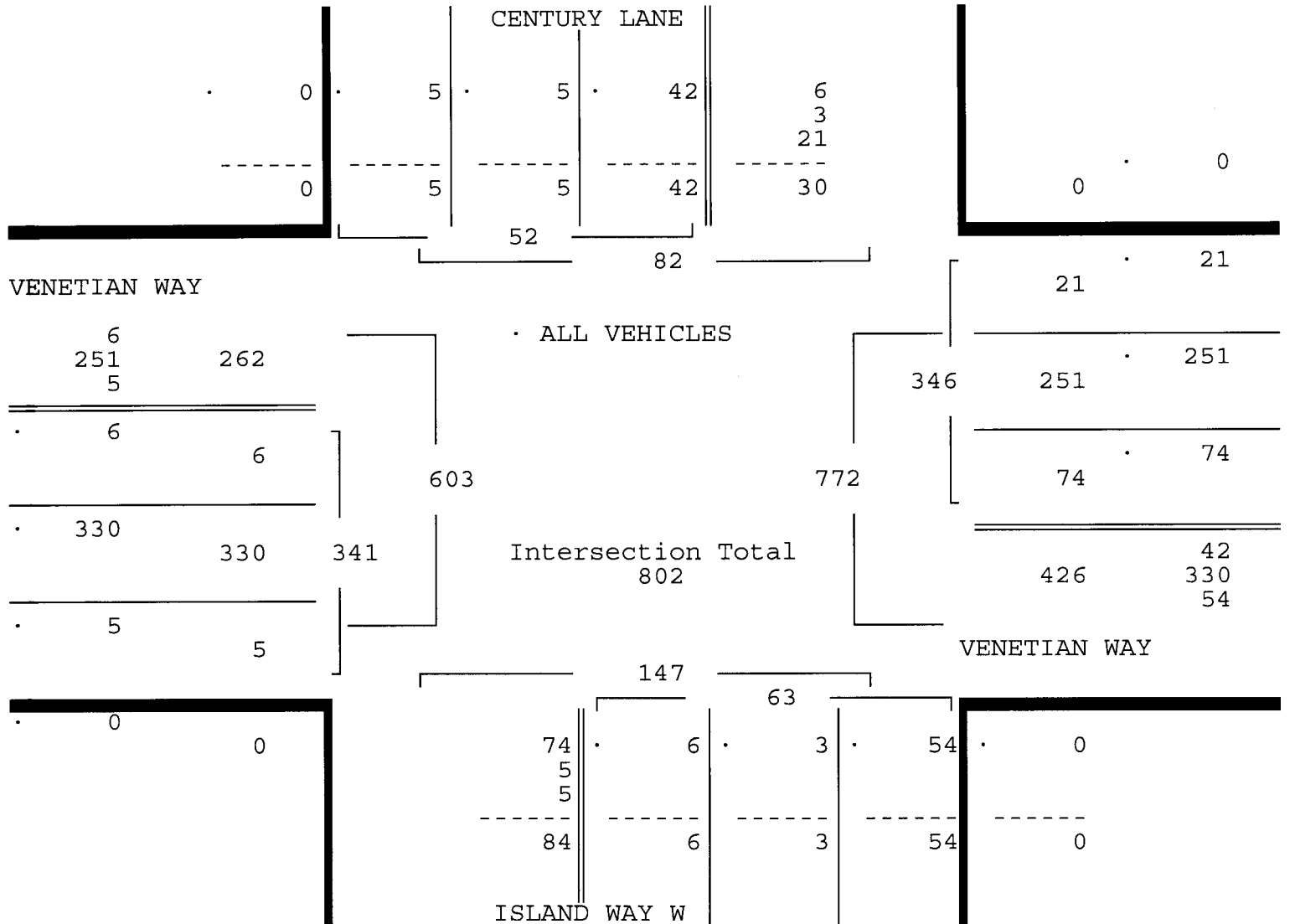
VENETIAN WAY & ISLAND WAY W
 MIAMI BEACH, FLORIDA
 COUNTED BY: ISIDRO GONZALEZ
 SIGNALIZED

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

Site Code : 00150249
 Start Date: 12/16/15
 File I.D. : WVENISLA
 Page : 2

ALL VEHICLES

CENTURY LANE					VENETIAN WAY				ISLAND WAY W				VENETIAN WAY				Total		
From North					From East				From South				From West						
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left		Thru	Right
Date 12/16/15 -----																			
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 12/16/15																			
Peak start 16:00					16:00				16:00				16:00						
Volume	0	42	5	5	1	73	251	21		0	6	3	54		1	5	330	5	
Percent	0%	81%	10%	10%	0%	21%	73%	6%		0%	10%	5%	86%		0%	1%	97%	1%	
Pk total	52				346					63					341				
Highest	16:15				16:30				16:15				16:00						
Volume	0	15	1	3	0	22	64	6		0	1	1	18		1	4	97	1	
Hi total	19				92					20					103				
PHF	.68				.94					.79					.83				



VENETIAN WAY & ISLAND WAY W
 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

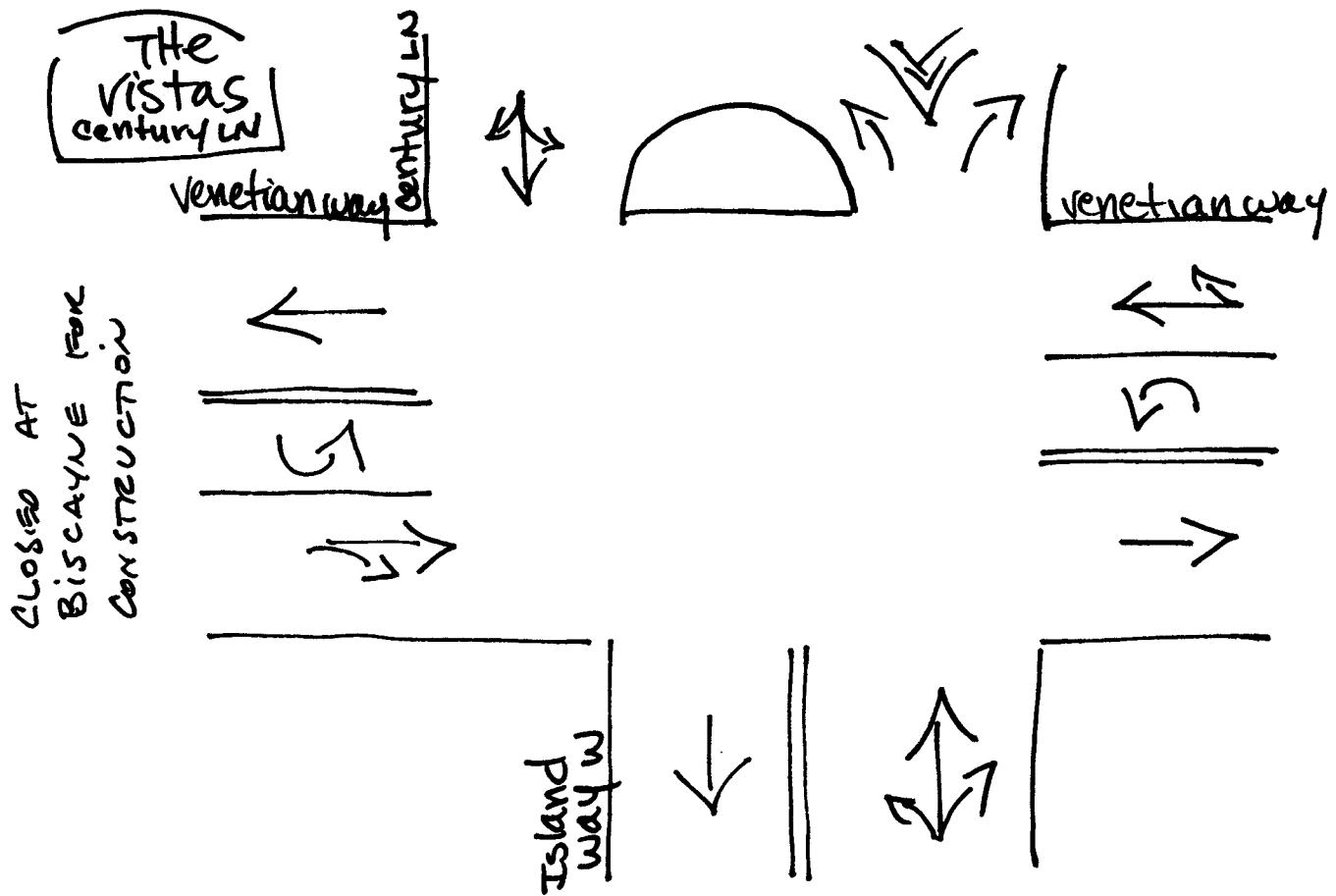
Site Code : 00150249
 Start Date: 12/16/15
 File I.D. : WVENISLA
 Page : 1

PEDESTRIANS & BIKES

	CENTURY LANE				VENETIAN WAY				ISLAND WAY W				VENETIAN WAY				
	From North				From East				From South				From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 12/16/15	-----																
16:00	0	2	0	5	0	0	0	9	0	2	0	1	0	0	0	0	19
16:15	0	0	0	0	0	0	0	4	0	3	0	2	0	0	0	7	16
16:30	0	5	0	5	0	0	0	4	0	3	0	3	0	0	0	1	21
16:45	0	0	0	2	0	0	0	12	0	3	0	0	0	1	0	1	19
Hr Total	0	7	0	12	0	0	0	29	0	11	0	6	0	1	0	9	75
17:00	0	1	0	4	0	0	0	6	0	2	0	6	0	0	0	2	21
17:15	0	2	0	9	0	0	0	7	0	3	0	3	0	0	0	0	24
17:30	0	3	0	9	0	0	0	7	0	2	0	5	0	0	0	0	26
17:45	0	1	0	4	0	0	0	7	0	2	0	5	0	0	0	0	19
Hr Total	0	7	0	26	0	0	0	27	0	9	0	19	0	0	0	2	90

TOTAL	0	14	0	38	0	0	0	56	0	20	0	25	0	1	0	11	165

North ↑



Miami Beach, Florida
December 15, 2015
drawn by: Luis Palomino
signalized

VENETIAN WAY & ISLAND AVENUE E
 MIAMI BEACH, FLORIDA
 COUNTED BY: ANDREW GONZALEZ
 SIGNALIZED

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

Site Code : 00150249
 Start Date: 12/16/15
 File I.D. : EVENISLA
 Page : 1

ALL VEHICLES

ISLAND AVENUE E					VENETIAN WAY				ISLAND AVENUE E				VENETIAN WAY						
From North					From East				From South				From West						
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right	Total
Date 12/16/15 -----																			
16:00	0	16	0	0	2	29	80	15		0	2	0	30		0	0	126	0	300
16:15	0	13	0	3	10	31	88	20		0	1	0	47		0	0	92	0	305
16:30	0	10	0	0	11	31	98	20		0	0	0	49		0	0	102	2	323
16:45	0	8	0	0	7	34	93	10		0	1	1	39		0	1	115	0	309
Hr Total	0	47	0	3	30	125	359	65		0	4	1	165		0	1	435	2	1237
17:00	0	10	1	0	7	49	86	22		0	1	0	45		0	0	92	0	313
17:15	0	18	1	0	10	39	75	18		0	1	1	29		0	0	77	1	270
17:30	0	11	0	0	10	43	79	9		0	1	0	12		0	0	75	3	243
17:45	0	14	0	0	5	45	96	13		0	2	2	21		0	1	76	1	276
Hr Total	0	53	2	0	32	176	336	62		0	5	3	107		0	1	320	5	1102

TOTAL	0	100	2	3	62	301	695	127		0	9	4	272		0	2	755	7	2339

VENETIAN WAY & ISLAND AVENUE E
MIAMI BEACH, FLORIDA
COUNTED BY: ANDREW GONZALEZ
SIGNALIZED

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

Site Code : 00150249
Start Date: 12/16/15
File I.D. : EVENISLA
Page : 2

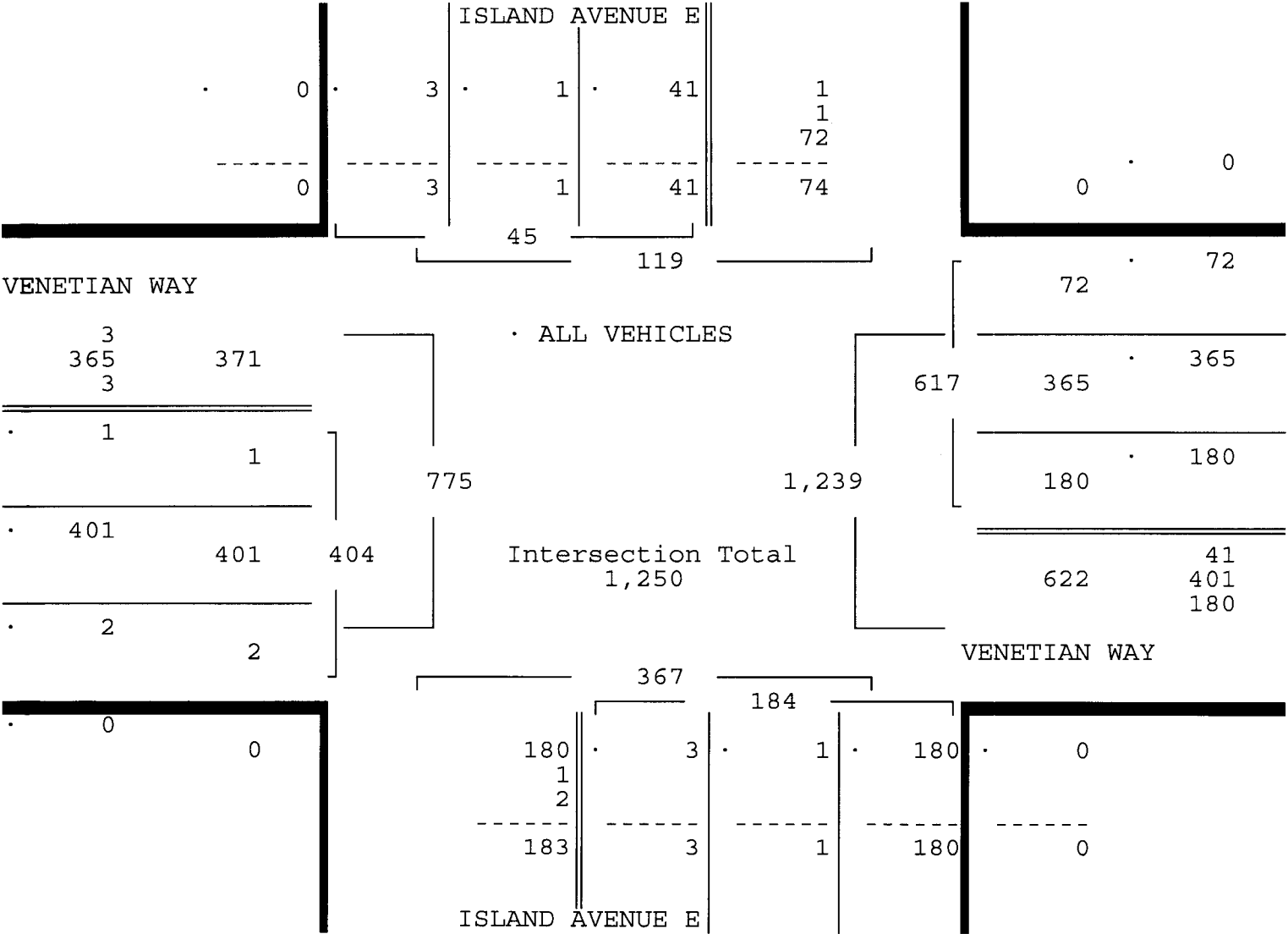
ALL VEHICLES

ISLAND AVENUE E					VENETIAN WAY					ISLAND AVENUE E					VENETIAN WAY					Total
From North					From East					From South					From West					
UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		UTurn	Left	Thru	Right		

Date 12/16/15

Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 12/16/15

Peak start 16:15					16:15					16:15					16:15					
Volume	0	41	1	3	35	145	365	72		0	3	1	180		0	1	401	2		
Percent	0%	91%	2%	7%	6%	24%	59%	12%		0%	2%	1%	98%		0%	0%	99%	0%		
Pk total	45				617					184					404					
Highest	16:15				17:00					16:30					16:45					
Volume	0	13	0	3	7	49	86	22		0	0	0	49		0	1	115	0		
Hi total	16				164					49					116					
PHF	.70				.94					.94					.87					



VENETIAN WAY & ISLAND AVENUE E
 MIAMI BEACH, FLORIDA
 COUNTED BY: ANDREW GONZALEZ
 SIGNALIZED

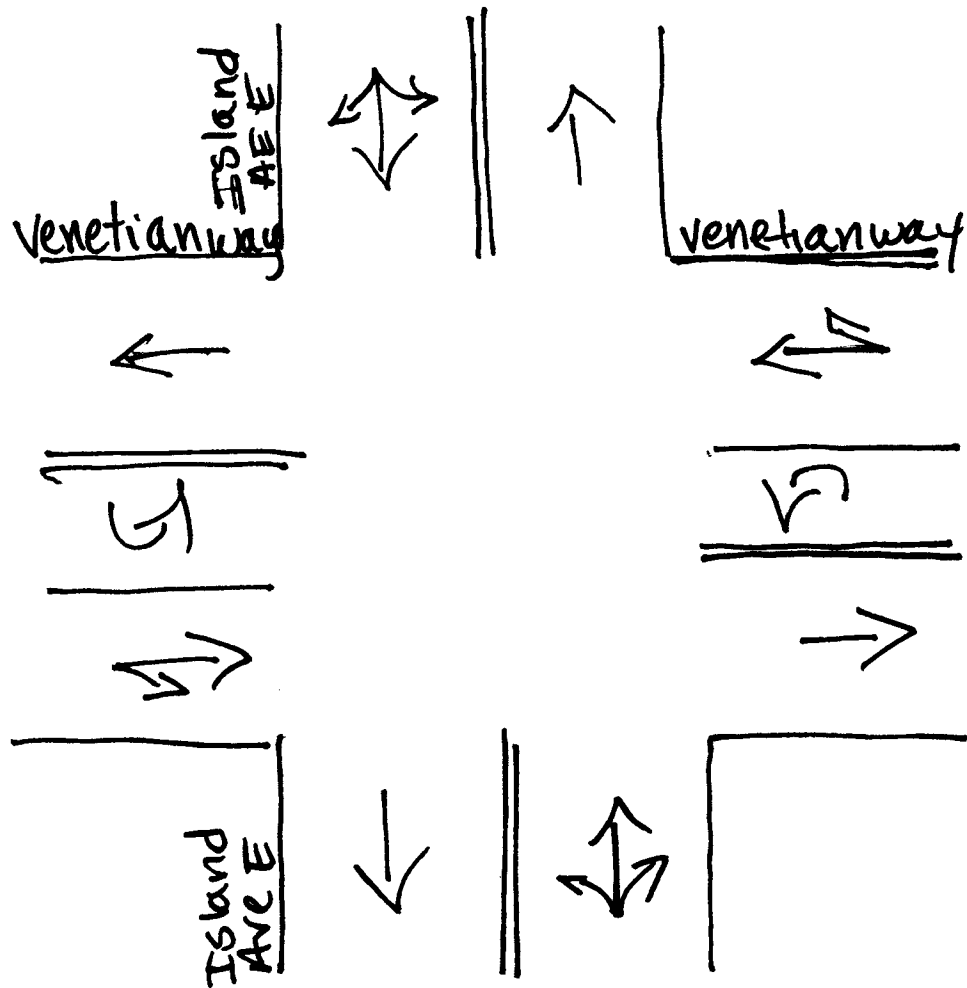
Traffic Survey Specialists, Inc.
 85 SE 4th Avenue, Unit 109
 Delray Beach, Florida 33483
 Phone (561) 272-3255

Site Code : 00150249
 Start Date: 12/16/15
 File I.D. : EVENISLA
 Page : 1

PEDESTRIANS & BIKES

Date 12/16/15	ISLAND AVENUE E From North				VENETIAN WAY From East				ISLAND AVENUE E From South				VENETIAN WAY From West				Total
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	
16:00	0	0	0	1	0	0	0	1	0	3	0	4	0	0	0	0	9
16:15	0	0	0	0	0	0	0	0	0	1	0	6	0	0	0	0	7
16:30	0	5	0	4	0	0	0	4	0	3	0	4	0	0	0	0	20
16:45	0	0	0	2	0	0	0	2	0	5	0	2	0	0	0	1	12
Hr Total	0	5	0	7	0	0	0	7	0	12	0	16	0	0	0	1	48
17:00	0	1	0	2	0	0	0	1	0	0	0	5	0	0	0	0	9
17:15	0	0	0	1	0	0	0	3	0	0	0	10	0	0	0	0	14
17:30	0	0	0	1	0	0	0	1	0	2	0	8	0	0	0	0	12
17:45	0	1	0	3	0	1	0	1	0	5	0	7	0	0	0	0	18
Hr Total	0	2	0	7	0	1	0	6	0	7	0	30	0	0	0	0	53
TOTAL	0	7	0	14	0	1	0	13	0	19	0	46	0	0	0	1	101

↑
North



Miami Beach, Florida
December 15, 2015
drawn by: Luis Palomino
signalized

DADE BOULEVARD & PURDY AVENUE
 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 : 00150249
 Start Date: 12/16/15
 File I.D. : DADEPURD
 Page : 1

ALL VEHICLES

PURDY AVENUE					DADE BOULEVARD				-----				DADE BOULEVARD				
From North					From East				From South				From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 12/16/15 -----																	
16:00	0	15	0	33	2	0	100	1	0	0	0	0	0	0	171	0	322
16:15	0	20	0	21	0	0	122	1	0	0	0	0	0	0	167	0	331
16:30	0	33	0	34	0	0	130	0	0	0	0	0	0	0	178	0	375
16:45	0	19	0	29	4	0	111	0	0	0	0	0	0	0	187	0	350
Hr Total	0	87	0	117	6	0	463	2	0	0	0	0	0	0	703	0	1378
17:00	0	24	0	21	0	0	163	3	0	0	0	0	1	0	178	0	390
17:15	0	18	0	23	2	0	132	0	0	0	0	0	0	0	165	0	340
17:30	0	25	0	24	1	0	131	0	0	0	0	0	0	0	152	0	333
17:45	0	33	0	29	1	0	149	0	0	0	0	0	0	0	143	0	355
Hr Total	0	100	0	97	4	0	575	3	0	0	0	0	1	0	638	0	1418

TOTAL	0	187	0	214	10	0	1038	5	0	0	0	0	1	0	1341	0	2796

DADE BOULEVARD & PURDY AVENUE
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 : 00150249
Start Date: 12/16/15
File I.D. : DADEPURD
Page : 2

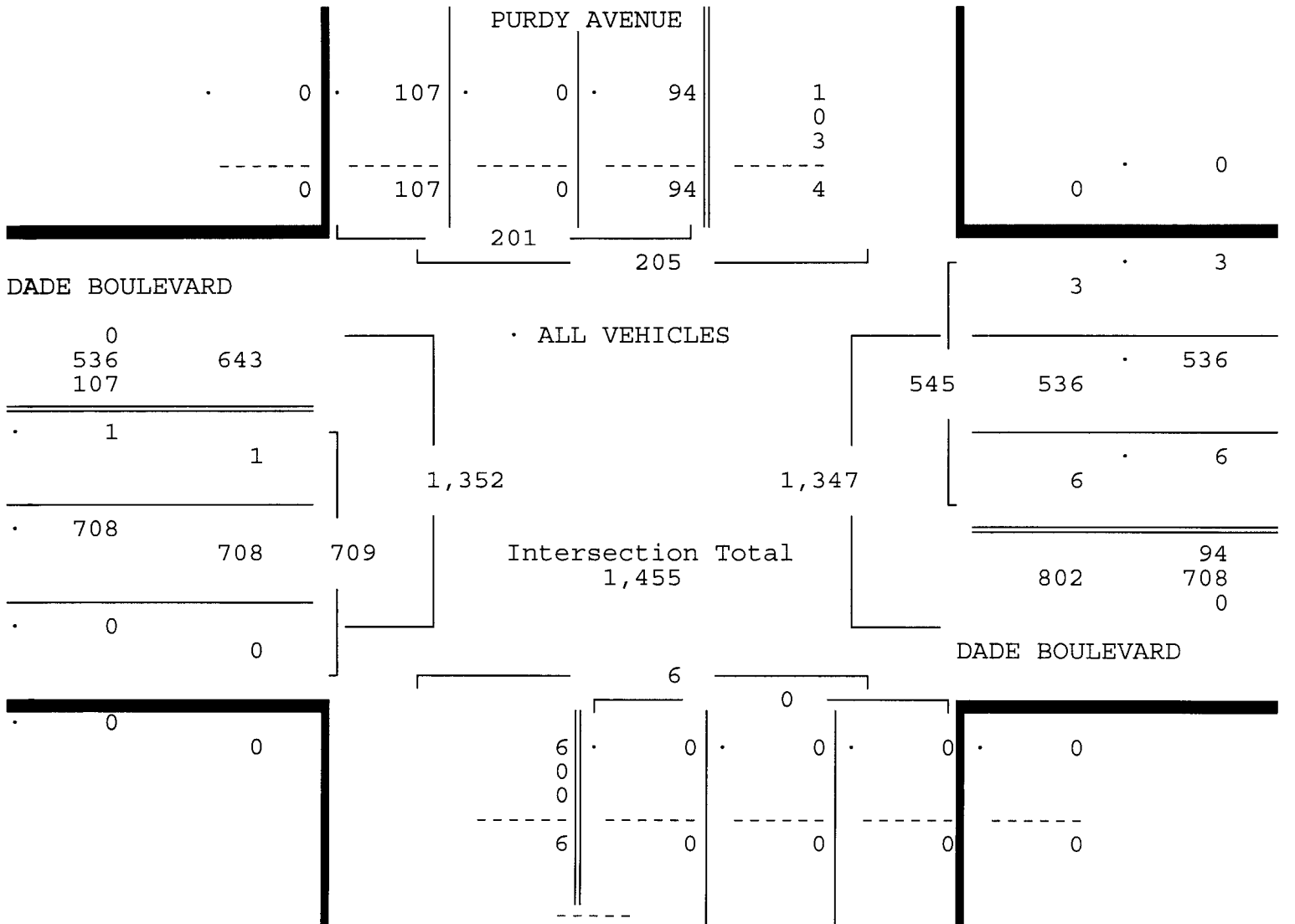
ALL VEHICLES

PURDY AVENUE				DADE BOULEVARD				-----				DADE BOULEVARD				Total
From North				From East				From South				From West				
UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	

Date 12/16/15

Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 12/16/15

Peak start 16:30				16:30				16:30				16:30				Total
Volume	0	94	0	107	6	0	536	3	0	0	0	0	1	0	708	0
Percent	0%	47%	0%	53%	1%	0%	98%	1%	0%	0%	0%	0%	0%	0%	100%	0%
Pk total	201				545				0				709			
Highest	16:30				17:00				16:00				16:45			
Volume	0	33	0	34	0	0	163	3	0	0	0	0	0	0	187	0
Hi total	67				166				0				187			
PHF	.75				.82				.0				.95			



DADE BOULEVARD & PURDY AVENUE
MIAMI BEACH, FLORIDA
COUNTED BY: SEBASTIAN SALVO
SIGNALIZED

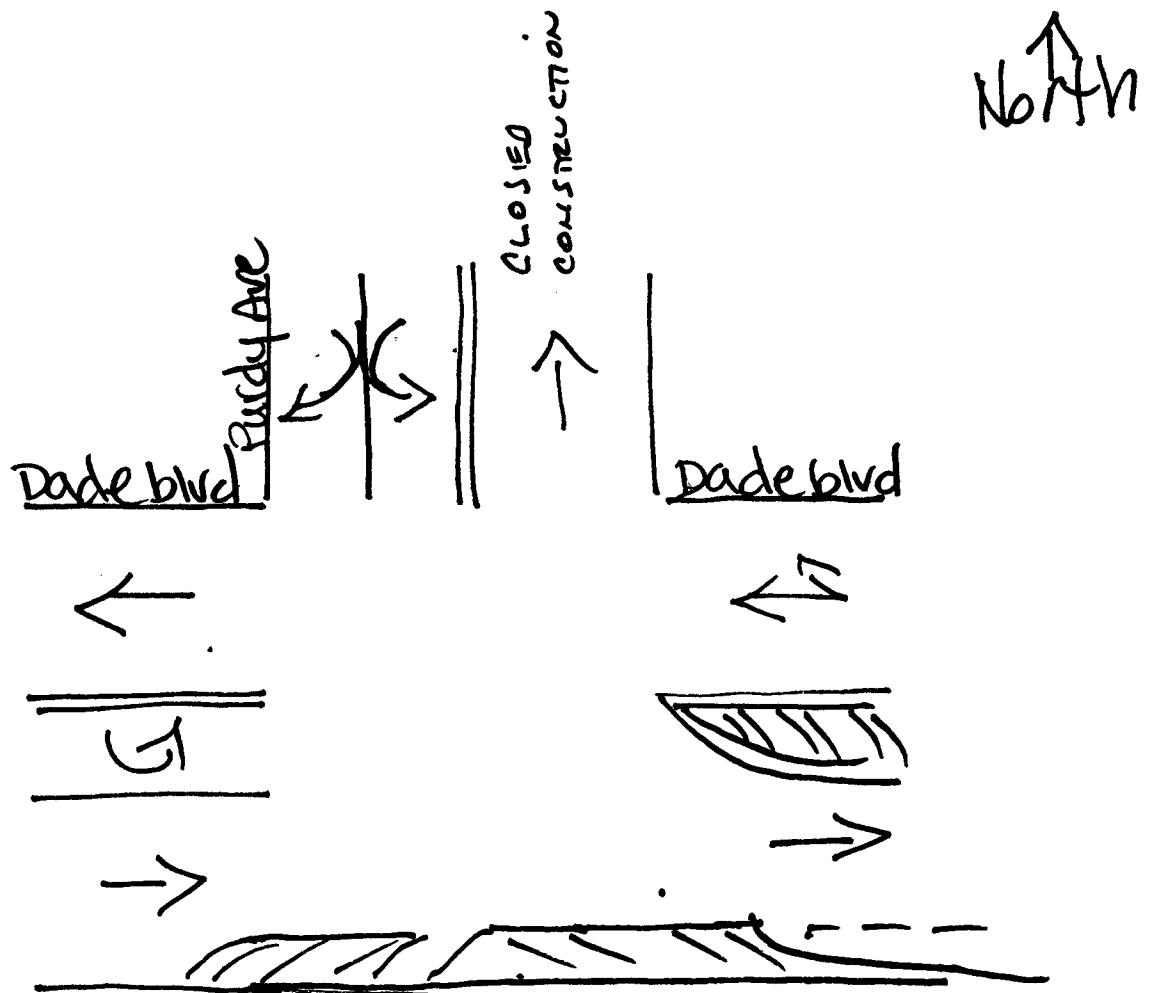
Traffic Survey Specialists, Inc.
85 SE 4th Avenue, Unit 109
Delray Beach, Florida 33483
Phone (561) 272-3255

Site Code : 00150249
Start Date: 12/16/15
File I.D. : DADEPURD
Page : 1

PEDESTRIANS & BIKES

Date	PURDY AVENUE				DADE BOULEVARD				-----				DADE BOULEVARD				Total	
	From North				From East				From South				From West					
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds		
12/16/15	-----																	
16:00	0	2	0	5	0	0	0	0	0	0	0	0	0	0	0	0	2	9
16:15	0	1	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4	9
16:30	0	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	13
16:45	0	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	8
Hr Total	0	12	0	9	0	0	0	0	0	0	0	0	0	0	0	0	18	39
17:00	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	8
17:15	0	3	0	2	0	0	0	0	0	0	0	0	0	0	0	0	5	10
17:30	0	8	0	1	0	0	0	0	0	0	0	0	0	0	0	0	6	15
17:45	0	3	0	1	0	0	0	0	0	0	0	0	0	0	2	0	6	12
Hr Total	0	18	0	4	0	0	0	0	0	0	0	0	0	0	2	0	21	45

TOTAL	0	30	0	13	0	0	0	0	0	0	0	0	0	0	2	0	39	84



Miami Beach, Florida
December 15, 2015
drawn by: Luis Palomino
signalized

Bella Isla Apartments- PM Intersection Assignment

INTERSECTION	MOVEMENT	EXISTING 2012	EXISTING (Peak Hour) 2015	Venetian Cswy Diversions	2015 with Diversion	BACKGROUND Growth rate: 0.5% No. of years: 2	1901 Alton	1750 Alton	1824 Alton	1614-1634 Alton (1212 Lincoln Road)	Sunset Palau	17th Str Hotel	COMMITTED DEVELOPMENTS	FUTURE W/O PROJECT	EXISTING USES			PROJECT			FUTURE WITH PROJECT
															Out 27	In 49	Total 76	Out 35	In 66	Total 101	
1. Venetian Causeway / Island Avenue West (S)	NBL		6	25	31	31							0	31	0%	0%	0	0%	0%	0	31
	NBT		3		3	3							0	3	0%	0%	0	0%	0%	0	3
	NBR		57	-25	32	32							0	32	0%	0%	0	0%	0%	0	32
	SBL		45	-20	25	25							0	25	0%	0%	0	0%	0%	0	25
	SBT		5		5	5							0	5	0%	0%	0	0%	0%	0	5
	SBR		5	20	25	25							0	25	40%	0%	11	40%	0%	14	28
	EBL		6	8	14	14							0	14	40%	40%	20	40%	40%	26	21
	EBT		350	156	506	511	58	5	12	5	12	12	87	598	0%	10%	5	0%	10%	7	600
	EBR		5	35	40	40							0	40	0%	0%	0	0%	0%	0	40
	WBL		78	-37	41	41							0	41	0%	0%	0	0%	0%	0	41
PHF = 0.95	WBT		266	230	496	501		3	11	6		11	17	518	0%	0%	0	0%	0%	0	518
	WBR		22	-8	14	14							0	14	0%	0%	0	0%	0%	0	14
TOTAL						1244							104	1348	40%	50%	35	40%	50%	47	1360
2. Venetian Causeway / Island Avenue East (S)	NBL*		3	94	97	98							0	98	0%	0%	0	0%	0%	0	98
	NBT		1		1	1							0	1	0%	0%	0	0%	0%	0	1
	NBR		191	-94	97	98							0	98	0%	0%	0	0%	0%	0	98
	SBL*		43	-20	23	23							0	23	50%	0%	14	50%	0%	18	27
	SBT		1		1	1							0	1	0%	0%	0	0%	0%	0	1
	SBR		3	20	23	23							0	23	10%	0%	3	10%	0%	4	24
	EBL		1	37	38	38							0	38	0%	10%	5	0%	10%	7	40
	EBT		425	22	447	451	58	5	12	5	12	12	87	538	0%	0%	0	0%	0%	0	538
	EBR		2	76	78	79							0	79	0%	0%	0	0%	0%	0	79
	WB UTurn		37		37	37							0	37	0%	0%	0	0%	0%	0	37
PHF = 0.97	WBL		154	-76	78	79							0	79	0%	0%	0	0%	0%	0	79
	WBT		387	45	432	436		3	11	6		11	17	453	0%	0%	0	0%	0%	0	453
WBR*			76	-37	39	39							0	39	0%	50%	25	0%	50%	33	48
TOTAL						1405							104	1509	60%	60%	46	60%	60%	61	1524
3. Dade Boulevard / Purdy Avenue (S)	NBL		0		0	0							0	0	0%	0%	0	0%	0%	0	0
	NBT		0		0	0							0	0	0%	0%	0	0%	0%	0	0
	NBR		0		0	0							0	0	0%	0%	0	0%	0%	0	0
	SBL		100	-47	53	54							0	54	0%	0%	0	0%	0%	0	54
	SBT		0		0	0							0	0	0%	0%	0	0%	0%	0	0
	SBR		113	-60	53	54							0	54	0%	5%	2	0%	5%	3	55
	EBL		1	56	57	58							0	58	10%	0%	3	10%	0%	4	59
	EBT		750	-240	510	515	58	5	12	5	12	12	87	602	40%	0%	11	40%	0%	14	605
	EBR		0		0	0							0	0	0%	0%	0	0%	0%	0	0
	WBL		0		0	0							0	0	0%	0%	0	0%	0%	0	0
PHF = 0.93	WBT		568	-72	496	501		3	11	6		11	17	518	0%	0%	0	0%	45%	30	548
	WBR		3	210	213	215							0	215	0%	0%	0	0%	0%	0	215
TOTAL						1396							104	1500	50%	5%	16	50%	50%	51	1536
4. Dade Boulevard / Bay Road / 17th Street (U)	NEBL	0	0		0	0							0	0	0%	0%	0	0%	0%	0	0
	NEBT	325	330	-110	220	222	58	5	13		12	12	82	304	30%	0%	8	30%	0%	11	307
	NEBR	516	524	-181	343	346				5			5	351	10%	0%	3	10%	0%	4	352
	SBL	0	0		0	0							0	0	0%	0%	0	0%	0%	0	0
	SBT	0	0		0	0							0	0	0%	0%	0	0%	0%	0	0
	SBR	23	23	-3	20	21							0	21	0%	5%	2	0%	5%	3	22
	SWBL	0	0		0	0							0	0	0%	0%	0	0%	0%	0	0
	SWBT	165	167	-15	152	154							0	154	0%	30%	15	0%	30%	20	159
	SWBR	70	71	-7	64	65			12				0	65	0%	0%	0	0%	0%	0	65
	WBL	364	369	-42	327	331	3	2	6			11	17	348	0%	10%	5	0%	10%	7	350
PHF = 0.90	WBT	0	0		0	0							0	0	0%	0%	0	0%	0%	0	0
	WBR	0	0		0	0							0	0	0%	0%	0	0%	0%	0	0
TOTAL						1138							104	1242	40%	45%	33	40%	45%	44	1254





TOD Schedule Report
for 2786: Island Av E&Venetian Way

Print Date:
11/13/2015

Print Time:
9:48 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>
2786	Island Av E&Venetian Way	DOW-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>
-	WBT	-	NBT	-	EBT	-	SBT
0	0	0	0	0	0	0	0
							

Active Phase Bank: Phase Bank 1

<u>Phase</u>	<u>Walk</u>	<u>Don't Walk</u>	<u>Min Initial</u>	<u>Veh Ext</u>	<u>Max Limit</u>	<u>Max 2</u>	<u>Yellow</u>	<u>Red</u>
<u>Phase Bank</u>								
	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3		
1 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
2 WBT	0 - 0 - 0	0 - 0 - 0	16 - 16 - 16	1 - 1 - 1	35 - 35 - 35	0 - 35 - 35	4	2
3 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
4 NBT	6 - 6 - 6	20 - 20 - 20	7 - 7 - 7	2.5 - 2.5 - 2.5	14 - 12 - 14	27 - 20 - 20	4	2
5 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
6 EBT	0 - 0 - 0	0 - 0 - 0	16 - 16 - 16	1 - 1 - 1	35 - 35 - 35	0 - 35 - 35	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 SBT	6 - 6 - 6	20 - 20 - 20	7 - 7 - 7	2.5 - 2.5 - 2.5	14 - 12 - 14	27 - 20 - 20	4	2

Last In Service Date: unknown

Permitted Phases

12345678

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

TOD Schedule Report

for 2786: Island Av E&Venetian Way

Print Date:
11/13/2015

Print Time:
9:48 AM

Current TOD Schedule	Plan	Cycle	Green Time								Ring Offset	Offset
			1 -	2 WBT	3 -	4 NBT	5 -	6 EBT	7 -	8 SBT		
1		100	0	61	0	27	0	61	0	27	0	77
2		90	0	51	0	27	0	51	0	27	0	79
3		100	0	61	0	27	0	61	0	27	0	77
5		80	0	41	0	27	0	41	0	27	0	67
6		100	0	61	0	27	0	61	0	27	0	77
7		100	0	61	0	27	0	61	0	27	0	77
8		140	0	101	0	27	0	101	0	27	0	0
9		180	0	141	0	27	0	141	0	27	0	143
10		140	0	101	0	27	0	101	0	27	0	90
25		140	0	101	0	27	0	101	0	27	0	6
26		180	0	141	0	27	0	141	0	27	0	4
27		140	0	101	0	27	0	101	0	27	0	90
28		140	0	101	0	27	0	101	0	27	0	60

Local TOD Schedule

Time	Plan	DOW
0000	Free	Su M T W Th F S
0530	5	M T W Th F
0700	2	M T W Th F
0930	5	Su M T W Th F
1000	5	S
1530	3	M T W Th F
1800	Free	Su
1830	5	M T W Th F
1830	Free	S
2200	Free	M T W Th F

Current Time of Day Function

Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	-----1	SuM T W ThF S
0530	TOD OUTPUTS	-----	M T W ThF
0930	TOD OUTPUTS	-----	SuM T W ThF
2200	TOD OUTPUTS	-----1	M T W ThF

Local Time of Day Function

Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	-----1	SuM T W ThF S
0530	TOD OUTPUTS	-----	M T W ThF
0930	TOD OUTPUTS	-----	SuM T W ThF
1000	TOD OUTPUTS	-----	S
1800	TOD OUTPUTS	-----1	Su
1830	TOD OUTPUTS	-----1	S
2200	TOD OUTPUTS	-----1	M T W ThF

* Settings

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

No Calendar Defined/Enabled

TOD Schedule Report
for 3478: Island Av W&Venetian Way

Print Date:
11/13/2015

Print Time:
10:58 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>
3478	Island Av W&Venetian Way	DOW-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>
-	WBT	SBT	NBT	-	EBT	-	-
0	0	0	0	0	0	0	0



Active Phase Bank: Phase Bank 1

<u>Phase</u>	<u>Walk</u>	<u>Don't Walk</u>	<u>Min Initial</u>	<u>Veh Ext</u>	<u>Max Limit</u>	<u>Max 2</u>	<u>Yellow</u>	<u>Red</u>
<u>Phase Bank</u>								
	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3		
1 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
2 WBT	0 - 0 - 0	0 - 0 - 0	16 - 16 - 16	1 - 1 - 1	28 - 30 - 35	0 - 0 - 0	4	2.5
3 SBT	4 - 4 - 4	17 - 17 - 17	10 - 7 - 7	2.5 - 2.5 - 2.5	14 - 12 - 10	20 - 0 - 0	4	2
4 NBT	4 - 4 - 4	14 - 14 - 14	7 - 7 - 7	2.5 - 2.5 - 2.5	10 - 12 - 10	18 - 0 - 0	4	2
5 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
6 EBT	0 - 0 - 0	0 - 0 - 0	16 - 16 - 16	1 - 1 - 1	28 - 30 - 35	0 - 0 - 0	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 -234-6--
External Permit 0 -----
External Permit 1 -----
External Permit 2 -----

TOD Schedule Report

for 3478: Island Av W&Venetian Way

Print Date:
11/13/2015

Print Time:
10:58 AM

Green Time												
Current			1	2	3	4	5	6	7	8		
TOD Schedule	Plan	Cycle	-	WBT	SBT	NBT	-	EBT	-	-	Ring Offset	Offset
	1	100	0	67	0	21	0	67	0	0	0	93
	2	90	0	57	0	21	0	57	0	0	0	80
	3	100	0	67	0	21	0	67	0	0	0	90
	5	80	0	47	0	21	0	47	0	0	0	70
	6	100	0	67	0	21	0	67	0	0	0	80
	7	100	0	67	0	21	0	67	0	0	0	80
	8	140	0	107	0	21	0	107	0	0	0	16
	9	180	0	147	0	21	0	147	0	0	0	162
	10	140	0	107	0	21	0	107	0	0	0	83
	25	140	0	107	0	21	0	107	0	0	0	137
	26	180	0	147	0	21	0	147	0	0	0	6
	27	140	0	107	0	21	0	107	0	0	0	101
	28	140	0	107	0	21	0	107	0	0	0	70

Local TOD Schedule

Time	Plan	DOW
0000	Free	Su M T W Th F S
0530	5	M T W Th F
0700	2	M T W Th F
0930	5	Su M T W Th F
1000	5	S
1530	3	M T W Th F
1800	Free	Su
1830	5	M T W Th F
1830	Free	S
2200	Free	M T W Th F

Current Time of Day Function

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

Local Time of Day Function

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

* Settings

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

No Calendar Defined/Enabled

TOD Schedule Report

for 4131: Bay Rd&Dade Blvd&17 St

Print Date:
11/13/2015

Print Time:
12:10 PM

Asset	Intersection	TOD Schedule	Op Mode	Plan #	Cycle	Offset	TOD Setting	Active PhaseBank	Active Maximum
4131	Bay Rd&Dade Blvd&17 St	DOW-6		N/A	0	0	N/A	0	Max 0

Splits

PH 1	PH 2	PH 3	PH 4	PH 5	PH 6	PH 7	PH 8
-	SWT	-	WBT	-	NET	-	-
0	0	0	0	0	0	0	0



Active Phase Bank: Phase Bank 1

Phase	Walk	Don't Walk	Min Initial	Veh Ext	Max Limit	Max 2	Yellow	Red
Phase Bank								
	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	1 2 3	
1 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
2 SWT	0 - 0 - 0	0 - 0 - 0	14 - 14 - 14	2.5 - 2.5 - 2.5	12 - 12 - 30	80 - 30 - 60	4	2.9
3 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
4 WBT	0 - 0 - 0	0 - 0 - 0	14 - 14 - 14	3.5 - 3.5 - 3.5	10 - 10 - 30	80 - 88 - 60	4	3.7
5 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
6 NET	0 - 0 - 0	0 - 0 - 0	14 - 14 - 14	2.5 - 2.5 - 2.5	12 - 12 - 30	80 - 30 - 60	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 -2-4-6--
External Permit 0 -----
External Permit 1 -----
External Permit 2 -----

Local TOD Schedule

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

Current TOD Schedule	Plan	Cycle	Green Time								Ring Offset	Offset
			1	2	3	4	5	6	7	8		
			-	SWT	-	WBT	-	NET	-	-		
1		65	0	24	0	26	0	24	0	0	0	64
2		65	0	24	0	26	0	24	0	0	0	19
3		130	0	58	0	57	0	58	0	0	0	5
4		75	0	37	0	23	0	37	0	0	0	0
5		80	0	42	0	23	0	42	0	0	0	0
6		90	0	52	0	23	0	52	0	0	0	68
13		90	0	32	0	43	0	32	0	0	0	0
25		140	0	62	0	63	0	62	0	0	0	122
26		180	0	82	0	83	0	82	0	0	0	58
27		140	0	62	0	63	0	62	0	0	0	64
28		140	0	62	0	63	0	62	0	0	0	113

TOD Schedule Report

for 4131: Bay Rd&Dade Blvd&17 St

Print Date:

11/13/2015

Print Time:

12:10 PM

Current Time of Day Function

<u>Time</u>	<u>Function</u>	<u>Settings *</u>	<u>Day of Week</u>
0000	TOD OUTPUTS	-----	SuM T W ThF S
0530	TOD OUTPUTS	-----3--	M T W ThF
2330	TOD OUTPUTS	-----	M T W ThF

Local Time of Day Function

<u>Time</u>	<u>Function</u>	<u>Settings *</u>	<u>Day of Week</u>
0000	TOD OUTPUTS	-----	SuM T W ThF S
0530	TOD OUTPUTS	-----3--	M T W ThF
0930	TOD OUTPUTS	-----2-	Su S
2030	TOD OUTPUTS	-----	Su S
2330	TOD OUTPUTS	-----	M T W ThF

* Settings

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

No Calendar Defined/Enabled

TOD Schedule Report
for 6593: Dade Blvd&Purdy Av

Print Date:
11/13/2015

Print Time:
3:36 PM

<u>Asset</u>	<u>Intersection</u>	<u>TOD Schedule</u>	<u>Op Mode</u>	<u>Plan #</u>	<u>Cycle</u>	<u>Offset</u>	<u>TOD Setting</u>	<u>Active PhaseBank</u>	<u>Active Maximum</u>
6593	Dade Blvd&Purdy Av	DOW-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>
-	WBT	-	-	-	EBT	-	SBT
0	0	0	0	0	0	0	0



Active Phase Bank: Phase Bank 1

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

Last In Service Date: unknown

Permitted Phases

12345678

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

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

Local TOD Schedule

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

TOD Schedule Report
for 6593: Dade Blvd&Purdy Av

Print Date:
11/13/2015

Print Time:
3:36 PM

Current Time of Day Function

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

Local Time of Day Function

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

*** Settings**

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

No Calendar Defined/Enabled

14255

Bella Isla Apartments

Station	Location	2009	2010	2011	2012	2013	2014
0012	SR 907/Alton RD 200' N of 20 St	47,000	46,000	47,000	48,500	47,500	47,500
2542	SR 907/Alton RD 200' S of Venetion cswy	38,500	39,000	39,500	37,000	30,500	30,500
2528	SR A1A/Macarthur cswy 150' E of Meridian ave	35,500	35,000	35,000	32,500	34,000	33,000
Total		121,000	120,000	121,500	118,000	112,000	111,000
Yearly Growth			-0.8%	1.3%	-2.9%	-5.1%	-0.9%
Growth Trend							-1.7%

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2014 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

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

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
----	-----	-----	-----	-----	-----	-----
2014	47500 S	N 22000	S 25500	9.00	54.50	2.50
2013	47500 F	N 22000	S 25500	9.00	52.40	2.50
2012	48500 C	N 22500	S 26000	9.00	55.70	2.50
2011	47000 C	N 22500	S 24500	9.00	55.10	3.50
2010	46000 C	N 23000	S 23000	8.98	54.08	3.50
2009	47000 C	N 23500	S 23500	8.99	53.24	3.90
2008	46500 C	N 23000	S 23500	9.09	55.75	2.10
2007	47500 C	N 23000	S 24500	8.01	54.34	2.20
2006	46500 C	N 23000	S 23500	7.97	54.22	3.00
2005	46500 F	N 22500	S 24000	8.80	53.80	5.30
2004	46500 C	N 22500	S 24000	9.00	53.30	5.30
2003	42500 C	N 20500	S 22000	8.80	53.40	4.80
2002	44000 C	N 21500	S 22500	9.80	52.30	1.70
2001	45500 C	N 22500	S 23000	8.20	53.50	5.00
2000	41500 C	N 20000	S 21500	8.20	53.10	1.70
1999	35500 C	N 18500	S 17000	9.10	52.70	1.90

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

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2014 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

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

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2014	30500 F	N 14000	S 16500	9.00	54.50	7.60
2013	30500 C	N 14000	S 16500	9.00	52.40	7.60
2012	37000 C	N 19000	S 18000	9.00	55.70	7.50
2011	39500 C	N 19000	S 20500	9.00	55.10	1.50
2010	39000 C	N 20000	S 19000	8.98	54.08	1.50
2009	38500 C	N 19000	S 19500	8.99	53.24	6.20
2008	37500 C	N 17500	S 20000	9.09	55.75	4.80
2007	39500 C	N 18500	S 21000	8.01	54.34	5.20
2006	36500 C	N 17500	S 19000	7.97	54.22	1.60
2005	34000 C	N 17000	S 17000	8.80	53.80	9.30
2004	39000 C	N 18500	S 20500	9.00	53.30	9.30
2003	32500 C	N 16000	S 16500	8.80	53.40	10.60
2002	33000 C	N 16000	S 17000	9.80	52.30	5.80
2001	32500 C	N 16500	S 16000	8.20	53.50	5.50
2000	32000 C	N 15000	S 17000	8.20	53.10	5.90
1999	29000 C	N 13500	S 15500	9.10	52.70	5.90

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

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2014 HISTORICAL AADT REPORT

COUNTY: 87 - MIAMI-DADE

SITE: 2528 - SR A1A/MACARTHUR CSWY, 150' N OF MERIDIAN AVE

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
----	-----	-----	-----	-----	-----	-----
2014	33000 C	E 17000	W 16000	9.00	54.30	5.10
2013	34000 C	E 17500	W 16500	9.00	54.10	6.10
2012	32500 C	E 14500	W 18000	9.00	53.40	8.40
2011	35000 C	E 16500	W 18500	9.00	51.90	7.50
2010	35000 C	E 16500	W 18500	7.16	52.27	8.80
2009	35500 C	E 16500	W 19000	9.21	57.60	8.40
2008	34500 C	E 16000	W 18500	7.42	52.15	5.30
2007	34000 C	E 16500	W 17500	7.11	53.51	4.90
2006	40500 C	E 19500	W 21000	7.18	52.50	2.20
2005	35000 C	E 16000	W 19000	7.30	52.50	5.50
2004	41500 C	E 20500	W 21000	7.40	52.00	8.20
2003	40500 C	E 18500	W 22000	7.30	54.00	4.90
2002	43500 C	E 21000	W 22500	9.20	68.00	2.60
2001	45500 C	E 22000	W 23500	8.20	53.50	3.00
2000	37000 C	E 18500	W 18500	8.20	53.10	3.50
1999	46000 C	E 24500	W 21500	9.10	52.70	3.20

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

Summary of Multi-Use Trip Generation
Average Weekday Driveway Volumes (Unadjusted for Internal Trips)

Project: Bella Isla Apartments
Phase:

Open Date:
Analysis Date:

Description: 14255 Existing

	24 Hour Two-Way Volume	AM Pk Hour	PM Pk Hour
ITE:Land Use		Enter	Exit
220: Apartments 120 Dwelling Units [E]	851	13	50
Total Driveway Volume	851	13	50
Total Peak Hour Pass-By Trips		0	0
Total Peak Hour Vol. Added to Adjacent Streets		13	50

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Manual, 9th Edition, 2012

TRIP GENERATION 2013, TRAFFICWARE, LLC

Summary of Multi-Use Trip Generation
Average Weekday Driveway Volumes (Unadjusted for Internal Trips)

Project: Bella Isla Apartments
Phase:

Open Date:
Analysis Date:

Description: 14255 Proposed

	24 Hour Two-Way Volume	AM Pk Hour	PM Pk Hour
ITE:Land Use		Enter Exit	Enter Exit
<hr/>			
220: Apartments 172 Dwelling Units [E]	1166	18 70	73 39
<hr/>			
Total Driveway Volume	1166	18 70	73 39
Total Peak Hour Pass-By Trips		0 0	0 0
Total Peak Hour Vol. Added to Adjacent Streets		18 70	73 39

Note: A zero indicates no data available.
Source: Institute of Transportation Engineers
Trip Generation Manual, 9th Edition, 2012

TRIP GENERATION 2013, TRAFFICWARE, LLC




















Appendix D:
Intersection Capacity Analysis Worksheets

Existing Conditions

HCM 2010 Signalized Intersection Summary

1: W Island Avenue/West Island Avenue & Venetian Way

5/12/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	506	40	41	496	14	31	3	32	25	5	25
Future Volume (veh/h)	14	506	40	41	496	14	31	3	32	25	5	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	15	533	42	43	522	15	33	3	34	26	5	26
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	435	1142	90	506	1207	35	171	29	139	324	57	272
Arrive On Green	0.67	0.67	0.67	0.22	0.22	0.22	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	864	1705	134	835	1802	52	563	136	660	1227	270	1297
Grp Volume(v), veh/h	15	0	575	43	0	537	70	0	0	31	0	26
Grp Sat Flow(s),veh/h/ln	864	0	1839	835	0	1854	1359	0	0	1497	0	1297
Q Serve(g_s), s	1.0	0.0	15.0	4.3	0.0	25.0	1.8	0.0	0.0	0.0	0.0	1.6
Cycle Q Clear(g_c), s	26.0	0.0	15.0	19.4	0.0	25.0	4.0	0.0	0.0	1.4	0.0	1.6
Prop In Lane	1.00		0.07	1.00		0.03	0.47		0.49	0.84		1.00
Lane Grp Cap(c), veh/h	435	0	1232	506	0	1242	338	0	0	381	0	272
V/C Ratio(X)	0.03	0.00	0.47	0.09	0.00	0.43	0.21	0.00	0.00	0.08	0.00	0.10
Avail Cap(c_a), veh/h	435	0	1232	506	0	1242	338	0	0	381	0	272
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.68	0.00	0.68	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.1	0.0	7.9	26.7	0.0	22.6	32.7	0.0	0.0	31.7	0.0	31.8
Incr Delay (d2), s/veh	0.1	0.0	1.3	0.2	0.0	0.8	1.4	0.0	0.0	0.4	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	7.9	1.0	0.0	13.1	1.7	0.0	0.0	0.7	0.0	0.6
LnGrp Delay(d),s/veh	17.2	0.0	9.2	26.9	0.0	23.3	34.1	0.0	0.0	32.2	0.0	32.5
LnGrp LOS	B		A	C		C	C			C		C
Approach Vol, veh/h		590			580			70			57	
Approach Delay, s/veh		9.4			23.6			34.1			32.3	
Approach LOS		A			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		27.0		73.0		27.0		73.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		21.0		67.0		21.0		67.0				
Max Q Clear Time (g_c+I1), s		6.0		28.0		3.6		27.0				
Green Ext Time (p_c), s		0.5		10.0		0.6		10.1				
Intersection Summary												
HCM 2010 Ctrl Delay				18.1								
HCM 2010 LOS				B								

Timing Report, Sorted By Phase

1: W Island Avenue/West Island Avenue & Venetian Way

5/11/2016

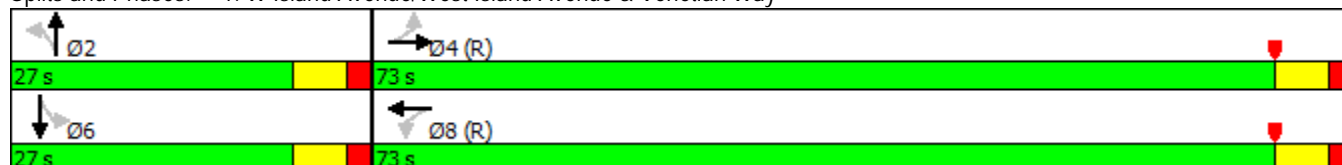


Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	Max	C-Max	Max	C-Max
Maximum Split (s)	27	73	27	73
Maximum Split (%)	27.0%	73.0%	27.0%	73.0%
Minimum Split (s)	13	22	16	22
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	7	16	10	16
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	4	0	4	0
Flash Dont Walk (s)	14	0	17	0
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	96	23	96	23
End Time (s)	23	96	23	96
Yield/Force Off (s)	17	90	17	90
Yield/Force Off 170(s)	3	90	0	90
Local Start Time (s)	6	33	6	33
Local Yield (s)	27	0	27	0
Local Yield 170(s)	13	0	10	0

Intersection Summary

Cycle Length	100
Control Type	Actuated-Coordinated
Natural Cycle	40
Offset: 90 (90%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow	



















Splits and Phases: 1: W Island Avenue/West Island Avenue & Venetian Way



HCM Signalized Intersection Capacity Analysis

2: E Island Avenue/East Island Avenue & Venetian Way

5/12/2016

												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	38	447	78	37	78	432	39	97	1	97	23	1
Future Volume (vph)	38	447	78	37	78	432	39	97	1	97	23	1
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			6.0			6.0
Lane Util. Factor	1.00	1.00			1.00	1.00			1.00			1.00
Frt	1.00	0.98			1.00	0.99			0.93			0.93
Flt Protected	0.95	1.00			0.95	1.00			0.98			0.98
Satd. Flow (prot)	1770	1821			1770	1840			1526			1528
Flt Permitted	0.28	1.00			0.22	1.00			0.83			0.84
Satd. Flow (perm)	521	1821			413	1840			1299			1322
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)	39	461	80	38	80	445	40	100	1	100	24	1
RTOR Reduction (vph)	0	10	0	0	0	5	0	0	25	0	0	12
Lane Group Flow (vph)	39	531	0	0	118	480	0	0	176	0	0	37
Parking (#/hr)								0	0	0	0	0
Turn Type	Perm	NA		Perm	Perm	NA		Perm	NA		Perm	NA
Protected Phases		4				8			2			6
Permitted Phases	4			8	8			2			6	
Actuated Green, G (s)	38.9	38.9			38.9	38.9			49.1			49.1
Effective Green, g (s)	38.9	38.9			38.9	38.9			49.1			49.1
Actuated g/C Ratio	0.39	0.39			0.39	0.39			0.49			0.49
Clearance Time (s)	6.0	6.0			6.0	6.0			6.0			6.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0			3.0			3.0
Lane Grp Cap (vph)	202	708			160	715			637			649
v/s Ratio Prot		c0.29				0.26						
v/s Ratio Perm	0.07				0.29				c0.14			0.03
v/c Ratio	0.19	0.75			0.74	0.67			0.28			0.06
Uniform Delay, d1	20.2	26.4			26.2	25.3			15.0			13.3
Progression Factor	1.50	1.37			1.00	1.00			1.00			1.00
Incremental Delay, d2	0.4	4.1			16.2	2.5			1.1			0.2
Delay (s)	30.6	40.3			42.4	27.8			16.1			13.5
Level of Service	C	D			D	C			B			B
Approach Delay (s)		39.6				30.6			16.1			13.5
Approach LOS		D				C			B			B
Intersection Summary												
HCM 2000 Control Delay			31.6			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.49									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			71.0%			ICU Level of Service			C			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2: E Island Avenue/East Island Avenue & Venetian Way

5/12/2016

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	23
Future Volume (vph)	23
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.97
Adj. Flow (vph)	24
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Parking (#/hr)	0
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Timing Report, Sorted By Phase

2: E Island Avenue/East Island Avenue & Venetian Way

5/11/2016

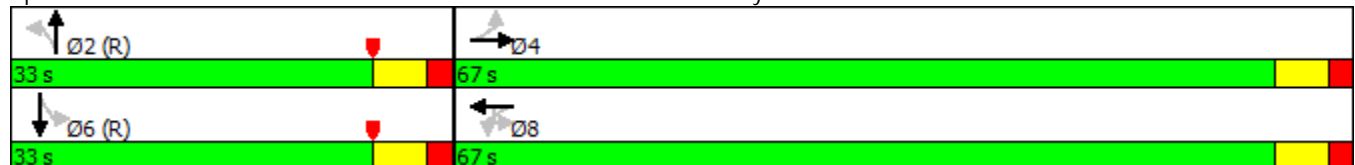


Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	C-Max	None	C-Max	None
Maximum Split (s)	33	67	33	67
Maximum Split (%)	33.0%	67.0%	33.0%	67.0%
Minimum Split (s)	24	24	24	24
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	7	16	7	16
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	50	83	50	83
End Time (s)	83	50	83	50
Yield/Force Off (s)	77	44	77	44
Yield/Force Off 170(s)	66	33	66	33
Local Start Time (s)	73	6	73	6
Local Yield (s)	0	67	0	67
Local Yield 170(s)	89	56	89	56

Intersection Summary

Cycle Length	100
Control Type	Actuated-Coordinated
Natural Cycle	50
Offset: 77 (77%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	












Splits and Phases: 2: E Island Avenue/East Island Avenue & Venetian Way



HCM 2010 Signalized Intersection Summary

3: Venetian Way/Dade Boulevard & Purdy Avenue

5/12/2016

								
Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	57	510	496	213	53	53		
Future Volume (veh/h)	57	510	496	213	53	53		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	0.90	0.90		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	61	548	533	229	57	57		
Adj No. of Lanes	1	1	1	0	1	1		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	173	1069	710	305	533	475		
Arrive On Green	0.57	0.57	0.19	0.19	0.33	0.33		
Sat Flow, veh/h	701	1863	1237	532	1597	1425		
Grp Volume(v), veh/h	61	548	0	762	57	57		
Grp Sat Flow(s),veh/h/ln	701	1863	0	1769	1597	1425		
Q Serve(g_s), s	10.3	23.1	0.0	52.9	3.2	3.6		
Cycle Q Clear(g_c), s	63.2	23.1	0.0	52.9	3.2	3.6		
Prop In Lane	1.00			0.30	1.00	1.00		
Lane Grp Cap(c), veh/h	173	1069	0	1016	533	475		
V/C Ratio(X)	0.35	0.51	0.00	0.75	0.11	0.12		
Avail Cap(c_a), veh/h	218	1189	0	1129	533	475		
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00		
Upstream Filter(I)	0.57	0.57	0.00	0.90	1.00	1.00		
Uniform Delay (d), s/veh	49.4	16.7	0.0	43.9	29.9	30.1		
Incr Delay (d2), s/veh	0.7	0.2	0.0	2.3	0.4	0.5		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.0	11.9	0.0	26.6	1.5	1.5		
LnGrp Delay(d),s/veh	50.1	16.9	0.0	46.2	30.3	30.6		
LnGrp LOS	D	B		D	C	C		
Approach Vol, veh/h		609	762		114			
Approach Delay, s/veh		20.2	46.2		30.5			
Approach LOS		C	D		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				80.6		49.4		80.6
Change Period (Y+Rc), s				6.0		6.0		6.0
Max Green Setting (Gmax), s				83.0		35.0		83.0
Max Q Clear Time (g_c+I1), s				65.2		5.6		54.9
Green Ext Time (p_c), s				9.4		0.3		12.0
Intersection Summary								
HCM 2010 Ctrl Delay			34.3					
HCM 2010 LOS			C					

Timing Report, Sorted By Phase

3: Venetian Way/Dade Boulevard & Purdy Avenue

5/11/2016

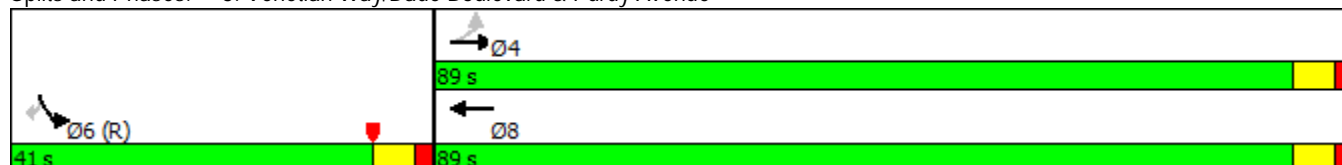


Phase Number	4	6	8
Movement	EBTL	SBL	WBT
Lead/Lag			
Lead-Lag Optimize			
Recall Mode	None	C-Max	None
Maximum Split (s)	89	41	89
Maximum Split (%)	68.5%	31.5%	68.5%
Minimum Split (s)	24	30	24
Yellow Time (s)	4	4	4
All-Red Time (s)	2	2	2
Minimum Initial (s)	14	14	7
Vehicle Extension (s)	3	3	3
Minimum Gap (s)	3	3	3
Time Before Reduce (s)	0	0	0
Time To Reduce (s)	0	0	0
Walk Time (s)	0	7	0
Flash Dont Walk (s)	0	17	0
Dual Entry	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes
Start Time (s)	92	51	92
End Time (s)	51	92	51
Yield/Force Off (s)	45	86	45
Yield/Force Off 170(s)	45	69	45
Local Start Time (s)	6	95	6
Local Yield (s)	89	0	89
Local Yield 170(s)	89	113	89

Intersection Summary

Cycle Length	130
Control Type	Actuated-Coordinated
Natural Cycle	65
Offset: 86 (66%), Referenced to phase 2: and 6:SBL, Start of Yellow	

Splits and Phases: 3: Venetian Way/Dade Boulevard & Purdy Avenue



HCM Signalized Intersection Capacity Analysis

4: Dade Boulevard & 17th Street & Bay Road

5/12/2016



Movement	EBL	EBT	WBT	WBR	SBL	SBR	SWL	SWR	SWR2
Lane Configurations									
Traffic Volume (vph)	220	343	327	0	0	20	0	152	64
Future Volume (vph)	220	343	327	0	0	20	0	152	64
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6	6.4			5.6		5.6	5.6
Lane Util. Factor	1.00	1.00	1.00			1.00		1.00	1.00
Frt	1.00	1.00	1.00			0.86		0.85	0.85
Flt Protected	0.95	1.00	1.00			1.00		1.00	1.00
Satd. Flow (prot)	1770	1863	1863			1450		1583	1583
Flt Permitted	0.36	1.00	1.00			1.00		1.00	1.00
Satd. Flow (perm)	664	1863	1863			1450		1583	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	239	373	355	0	0	22	0	165	70
RTOR Reduction (vph)	0	0	0	0	0	9	0	0	29
Lane Group Flow (vph)	239	373	355	0	0	13	0	165	41
Parking (#/hr)					0	0			
Turn Type	Perm	NA	NA			Perm		Perm	Perm
Protected Phases		4	8						
Permitted Phases	4					6		6	6
Actuated Green, G (s)	43.2	43.2	42.4			75.6		75.6	75.6
Effective Green, g (s)	43.2	43.2	42.4			75.6		75.6	75.6
Actuated g/C Ratio	0.33	0.33	0.33			0.58		0.58	0.58
Clearance Time (s)	5.6	5.6	6.4			5.6		5.6	5.6
Vehicle Extension (s)	3.0	3.0	3.0			3.0		3.0	3.0
Lane Grp Cap (vph)	220	619	607			843		920	920
v/s Ratio Prot		0.20	0.19						
v/s Ratio Perm	c0.36					0.01		c0.10	0.03
v/c Ratio	1.09	0.60	0.58			0.02		0.18	0.04
Uniform Delay, d1	43.4	36.2	36.5			11.5		12.7	11.7
Progression Factor	0.92	0.86	1.00			1.00		1.00	1.00
Incremental Delay, d2	83.2	1.5	1.4			0.0		0.4	0.1
Delay (s)	123.1	32.5	37.9			11.5		13.1	11.8
Level of Service	F	C	D			B		B	B
Approach Delay (s)		67.9	37.9		11.5		12.7		
Approach LOS		E	D		B		B		
Intersection Summary									
HCM 2000 Control Delay			47.6			HCM 2000 Level of Service			D
HCM 2000 Volume to Capacity ratio			0.51						
Actuated Cycle Length (s)			130.0			Sum of lost time (s)			12.0
Intersection Capacity Utilization			55.2%			ICU Level of Service			B
Analysis Period (min)			15						
c Critical Lane Group									

Timing Report, Sorted By Phase

4: Dade Boulevard & 17th Street & Bay Road

5/11/2016

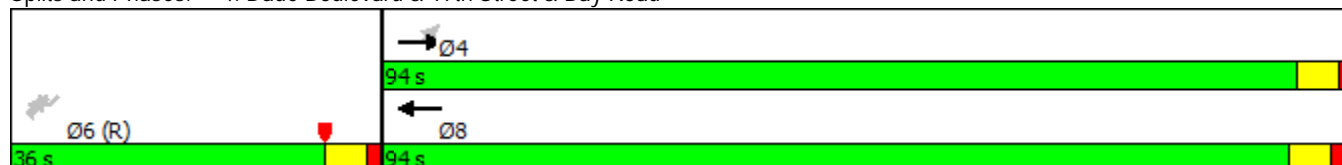


Phase Number	4	6	8
Movement	EBTL	SWR	WBT
Lead/Lag			
Lead-Lag Optimize			
Recall Mode	None	C-Max	None
Maximum Split (s)	94	36	94
Maximum Split (%)	72.3%	27.7%	72.3%
Minimum Split (s)	23.6	23.6	24.4
Yellow Time (s)	4	4	4
All-Red Time (s)	1.6	1.6	2.4
Minimum Initial (s)	14	14	14
Vehicle Extension (s)	3	3	3
Minimum Gap (s)	3	3	3
Time Before Reduce (s)	0	0	0
Time To Reduce (s)	0	0	0
Walk Time (s)	7	7	7
Flash Dont Walk (s)	11	11	11
Dual Entry	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes
Start Time (s)	10.6	104.6	10.6
End Time (s)	104.6	10.6	104.6
Yield/Force Off (s)	99	5	98.2
Yield/Force Off 170(s)	88	124	87.2
Local Start Time (s)	5.6	99.6	5.6
Local Yield (s)	94	0	93.2
Local Yield 170(s)	83	119	82.2

Intersection Summary

Cycle Length	130
Control Type	Actuated-Coordinated
Natural Cycle	55
Offset: 5 (4%), Referenced to phase 2: and 6:SWR, Start of Yellow	

Splits and Phases: 4: Dade Boulevard & 17th Street & Bay Road






















Future without Project

HCM 2010 Signalized Intersection Summary

1: W Island Avenue/West Island Avenue & Venetian Way

5/12/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	14	598	40	41	518	14	31	3	32	25	5	25
Future Volume (veh/h)	14	598	40	41	518	14	31	3	32	25	5	25
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	15	629	42	43	545	15	33	3	34	26	5	26
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	418	1157	77	439	1209	33	171	29	139	324	57	272
Arrive On Green	0.67	0.67	0.67	0.22	0.22	0.22	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	846	1727	115	763	1804	50	563	136	660	1227	270	1297
Grp Volume(v), veh/h	15	0	671	43	0	560	70	0	0	31	0	26
Grp Sat Flow(s),veh/h/ln	846	0	1842	763	0	1854	1359	0	0	1497	0	1297
Q Serve(g_s), s	1.1	0.0	18.9	4.8	0.0	26.1	1.8	0.0	0.0	0.0	0.0	1.6
Cycle Q Clear(g_c), s	27.2	0.0	18.9	23.7	0.0	26.1	4.0	0.0	0.0	1.4	0.0	1.6
Prop In Lane	1.00		0.06	1.00		0.03	0.47		0.49	0.84		1.00
Lane Grp Cap(c), veh/h	418	0	1234	439	0	1242	338	0	0	381	0	272
V/C Ratio(X)	0.04	0.00	0.54	0.10	0.00	0.45	0.21	0.00	0.00	0.08	0.00	0.10
Avail Cap(c_a), veh/h	418	0	1234	439	0	1242	338	0	0	381	0	272
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.76	0.00	0.76	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.8	0.0	8.6	30.2	0.0	23.0	32.7	0.0	0.0	31.7	0.0	31.8
Incr Delay (d2), s/veh	0.2	0.0	1.7	0.3	0.0	0.9	1.4	0.0	0.0	0.4	0.0	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.0	10.1	1.1	0.0	13.8	1.7	0.0	0.0	0.7	0.0	0.6
LnGrp Delay(d),s/veh	18.0	0.0	10.3	30.5	0.0	23.9	34.1	0.0	0.0	32.2	0.0	32.5
LnGrp LOS	B		B	C		C	C			C		C
Approach Vol, veh/h		686			603			70			57	
Approach Delay, s/veh		10.5			24.4			34.1			32.3	
Approach LOS		B			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		27.0		73.0		27.0		73.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		21.0		67.0		21.0		67.0				
Max Q Clear Time (g_c+I1), s		6.0		29.2		3.6		28.1				
Green Ext Time (p_c), s		0.5		11.7		0.6		11.8				
Intersection Summary												
HCM 2010 Ctrl Delay				18.4								
HCM 2010 LOS				B								

Timing Report, Sorted By Phase

1: W Island Avenue/West Island Avenue & Venetian Way

5/11/2016

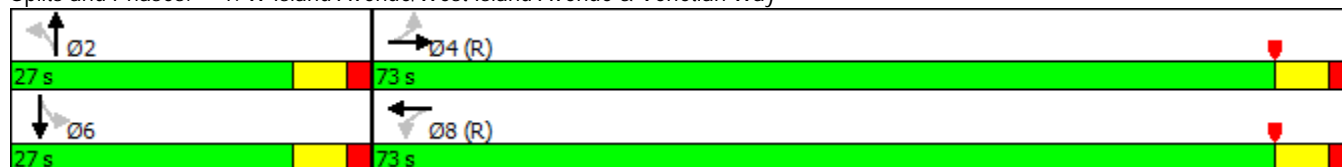


Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	Max	C-Max	Max	C-Max
Maximum Split (s)	27	73	27	73
Maximum Split (%)	27.0%	73.0%	27.0%	73.0%
Minimum Split (s)	13	22	16	22
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	7	16	10	16
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	4	0	4	0
Flash Dont Walk (s)	14	0	17	0
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	96	23	96	23
End Time (s)	23	96	23	96
Yield/Force Off (s)	17	90	17	90
Yield/Force Off 170(s)	3	90	0	90
Local Start Time (s)	6	33	6	33
Local Yield (s)	27	0	27	0
Local Yield 170(s)	13	0	10	0

Intersection Summary

Cycle Length	100
Control Type	Actuated-Coordinated
Natural Cycle	45
Offset: 90 (90%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow	



















Splits and Phases: 1: W Island Avenue/West Island Avenue & Venetian Way



HCM Signalized Intersection Capacity Analysis

2: E Island Avenue/East Island Avenue & Venetian Way

5/12/2016

												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	38	538	79	37	79	453	39	98	1	98	23	1
Future Volume (vph)	38	538	79	37	79	453	39	98	1	98	23	1
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			6.0			6.0
Lane Util. Factor	1.00	1.00			1.00	1.00			1.00			1.00
Frt	1.00	0.98			1.00	0.99			0.93			0.93
Flt Protected	0.95	1.00			0.95	1.00			0.98			0.98
Satd. Flow (prot)	1770	1827			1770	1841			1526			1528
Flt Permitted	0.31	1.00			0.20	1.00			0.83			0.84
Satd. Flow (perm)	586	1827			373	1841			1293			1314
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)	39	555	81	38	81	467	40	101	1	101	24	1
RTOR Reduction (vph)	0	7	0	0	0	4	0	0	28	0	0	14
Lane Group Flow (vph)	39	629	0	0	119	503	0	0	175	0	0	35
Parking (#/hr)								0	0	0	0	0
Turn Type	Perm	NA		Perm	Perm	NA		Perm	NA		Perm	NA
Protected Phases		4				8			2			6
Permitted Phases	4			8	8			2			6	
Actuated Green, G (s)	45.3	45.3			45.3	45.3			42.7			42.7
Effective Green, g (s)	45.3	45.3			45.3	45.3			42.7			42.7
Actuated g/C Ratio	0.45	0.45			0.45	0.45			0.43			0.43
Clearance Time (s)	6.0	6.0			6.0	6.0			6.0			6.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0			3.0			3.0
Lane Grp Cap (vph)	265	827			168	833			552			561
v/s Ratio Prot		c0.34				0.27						
v/s Ratio Perm	0.07				0.32				c0.14			0.03
v/c Ratio	0.15	0.76			0.71	0.60			0.32			0.06
Uniform Delay, d1	16.0	22.8			22.0	20.6			19.0			16.9
Progression Factor	1.71	1.58			1.00	1.00			1.00			1.00
Incremental Delay, d2	0.2	3.6			12.8	1.2			1.5			0.2
Delay (s)	27.6	39.7			34.8	21.8			20.5			17.1
Level of Service	C	D			C	C			C			B
Approach Delay (s)		39.0				24.3			20.5			17.1
Approach LOS		D				C			C			B
Intersection Summary												
HCM 2000 Control Delay			29.9			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.54									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			75.9%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2: E Island Avenue/East Island Avenue & Venetian Way

5/12/2016

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	23
Future Volume (vph)	23
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.97
Adj. Flow (vph)	24
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Parking (#/hr)	0
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Timing Report, Sorted By Phase

2: E Island Avenue/East Island Avenue & Venetian Way

5/11/2016

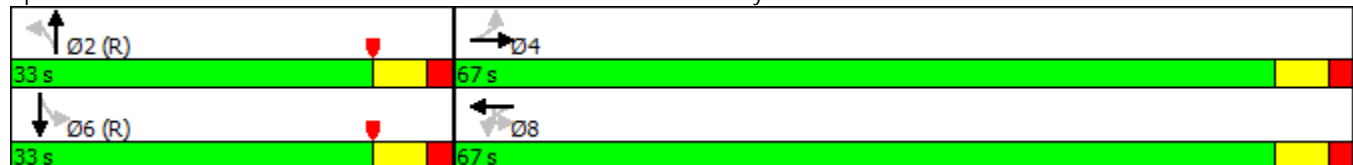


Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	C-Max	None	C-Max	None
Maximum Split (s)	33	67	33	67
Maximum Split (%)	33.0%	67.0%	33.0%	67.0%
Minimum Split (s)	24	24	24	24
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	7	16	7	16
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	50	83	50	83
End Time (s)	83	50	83	50
Yield/Force Off (s)	77	44	77	44
Yield/Force Off 170(s)	66	33	66	33
Local Start Time (s)	73	6	73	6
Local Yield (s)	0	67	0	67
Local Yield 170(s)	89	56	89	56

Intersection Summary

Cycle Length	100
Control Type	Actuated-Coordinated
Natural Cycle	60
Offset: 77 (77%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	












Splits and Phases: 2: E Island Avenue/East Island Avenue & Venetian Way



HCM 2010 Signalized Intersection Summary

3: Venetian Way/Dade Boulevard & Purdy Avenue

5/11/2016

								
Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	58	602	518	215	54	54		
Future Volume (veh/h)	58	602	518	215	54	54		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	0.90	0.90		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	62	647	557	231	58	58		
Adj No. of Lanes	1	1	1	0	1	1		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	173	1101	740	307	506	451		
Arrive On Green	0.59	0.59	0.20	0.20	0.32	0.32		
Sat Flow, veh/h	685	1863	1252	519	1597	1425		
Grp Volume(v), veh/h	62	647	0	788	58	58		
Grp Sat Flow(s),veh/h/ln	685	1863	0	1771	1597	1425		
Q Serve(g_s), s	10.7	28.3	0.0	54.6	3.3	3.8		
Cycle Q Clear(g_c), s	65.3	28.3	0.0	54.6	3.3	3.8		
Prop In Lane	1.00			0.29	1.00	1.00		
Lane Grp Cap(c), veh/h	173	1101	0	1047	506	451		
V/C Ratio(X)	0.36	0.59	0.00	0.75	0.11	0.13		
Avail Cap(c_a), veh/h	205	1189	0	1131	506	451		
HCM Platoon Ratio	1.00	1.00	0.33	0.33	1.00	1.00		
Upstream Filter(I)	0.56	0.56	0.00	0.94	1.00	1.00		
Uniform Delay (d), s/veh	49.1	16.7	0.0	43.4	31.5	31.6		
Incr Delay (d2), s/veh	0.7	0.4	0.0	2.5	0.5	0.6		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.1	14.5	0.0	27.5	1.5	1.6		
LnGrp Delay(d),s/veh	49.8	17.0	0.0	45.9	32.0	32.2		
LnGrp LOS	D	B		D	C	C		
Approach Vol, veh/h		709	788		116			
Approach Delay, s/veh		19.9	45.9		32.1			
Approach LOS		B	D		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				82.8		47.2		82.8
Change Period (Y+Rc), s				6.0		6.0		6.0
Max Green Setting (Gmax), s				83.0		35.0		83.0
Max Q Clear Time (g_c+I1), s				67.3		5.8		56.6
Green Ext Time (p_c), s				9.5		0.3		13.1
Intersection Summary								
HCM 2010 Ctrl Delay			33.5					
HCM 2010 LOS			C					

Timing Report, Sorted By Phase

3: Venetian Way/Dade Boulevard & Purdy Avenue

5/11/2016

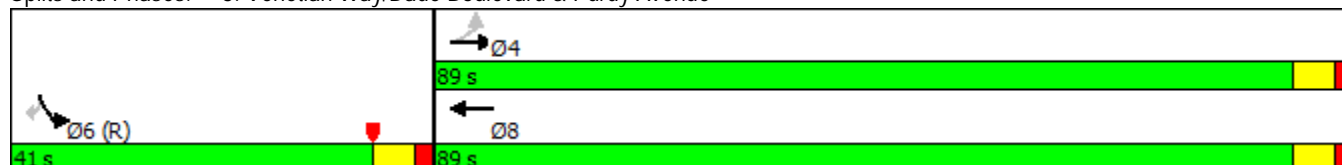


Phase Number	4	6	8
Movement	EBTL	SBL	WBT
Lead/Lag			
Lead-Lag Optimize			
Recall Mode	None	C-Max	None
Maximum Split (s)	89	41	89
Maximum Split (%)	68.5%	31.5%	68.5%
Minimum Split (s)	24	30	24
Yellow Time (s)	4	4	4
All-Red Time (s)	2	2	2
Minimum Initial (s)	14	14	7
Vehicle Extension (s)	3	3	3
Minimum Gap (s)	3	3	3
Time Before Reduce (s)	0	0	0
Time To Reduce (s)	0	0	0
Walk Time (s)	0	7	0
Flash Dont Walk (s)	0	17	0
Dual Entry	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes
Start Time (s)	92	51	92
End Time (s)	51	92	51
Yield/Force Off (s)	45	86	45
Yield/Force Off 170(s)	45	69	45
Local Start Time (s)	6	95	6
Local Yield (s)	89	0	89
Local Yield 170(s)	89	113	89

Intersection Summary

Cycle Length	130
Control Type	Actuated-Coordinated
Natural Cycle	65
Offset: 86 (66%), Referenced to phase 2: and 6:SBL, Start of Yellow	

Splits and Phases: 3: Venetian Way/Dade Boulevard & Purdy Avenue



HCM Signalized Intersection Capacity Analysis

4: Dade Boulevard & 17th Street & Bay Road

5/12/2016



Movement	EBL	EBT	WBT	WBR	SBL	SBR	SWL	SWR	SWR2
Lane Configurations									
Traffic Volume (vph)	304	351	348	0	0	21	0	154	65
Future Volume (vph)	304	351	348	0	0	21	0	154	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6	6.4			5.6		5.6	5.6
Lane Util. Factor	1.00	1.00	1.00			1.00		1.00	1.00
Frt	1.00	1.00	1.00			0.86		0.85	0.85
Flt Protected	0.95	1.00	1.00			1.00		1.00	1.00
Satd. Flow (prot)	1770	1863	1863			1450		1583	1583
Flt Permitted	0.43	1.00	1.00			1.00		1.00	1.00
Satd. Flow (perm)	806	1863	1863			1450		1583	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	330	382	378	0	0	23	0	167	71
RTOR Reduction (vph)	0	0	0	0	0	13	0	0	40
Lane Group Flow (vph)	330	382	378	0	0	10	0	167	31
Parking (#/hr)					0	0			
Turn Type	Perm	NA	NA			Perm		Perm	Perm
Protected Phases		4	8						
Permitted Phases	4					6		6	6
Actuated Green, G (s)	61.6	61.6	60.8			57.2		57.2	57.2
Effective Green, g (s)	61.6	61.6	60.8			57.2		57.2	57.2
Actuated g/C Ratio	0.47	0.47	0.47			0.44		0.44	0.44
Clearance Time (s)	5.6	5.6	6.4			5.6		5.6	5.6
Vehicle Extension (s)	3.0	3.0	3.0			3.0		3.0	3.0
Lane Grp Cap (vph)	381	882	871			638		696	696
v/s Ratio Prot		0.21	0.20						
v/s Ratio Perm	c0.41					0.01		c0.11	0.02
v/c Ratio	0.87	0.43	0.43			0.02		0.24	0.04
Uniform Delay, d1	30.5	22.6	23.1			20.5		22.8	20.8
Progression Factor	1.41	1.27	1.00			1.00		1.00	1.00
Incremental Delay, d2	16.4	0.3	0.3			0.0		0.8	0.1
Delay (s)	59.4	29.1	23.5			20.6		23.6	20.9
Level of Service	E	C	C			C		C	C
Approach Delay (s)		43.1	23.5		20.6		22.8		
Approach LOS		D	C		C		C		
Intersection Summary									
HCM 2000 Control Delay			33.7			HCM 2000 Level of Service			C
HCM 2000 Volume to Capacity ratio			0.57						
Actuated Cycle Length (s)			130.0			Sum of lost time (s)		12.0	
Intersection Capacity Utilization			56.3%			ICU Level of Service			B
Analysis Period (min)			15						
c Critical Lane Group									

Timing Report, Sorted By Phase

4: Dade Boulevard & 17th Street & Bay Road

5/11/2016

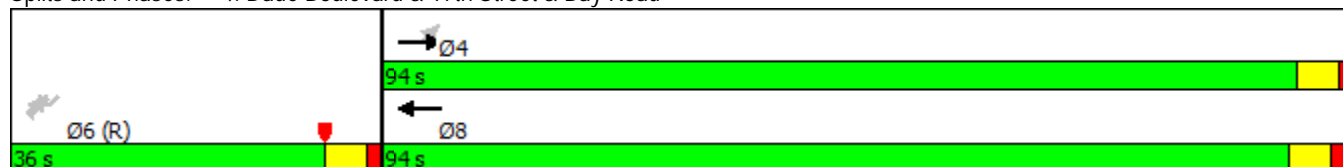


Phase Number	4	6	8
Movement	EBTL	SWR	WBT
Lead/Lag			
Lead-Lag Optimize			
Recall Mode	None	C-Max	None
Maximum Split (s)	94	36	94
Maximum Split (%)	72.3%	27.7%	72.3%
Minimum Split (s)	23.6	23.6	24.4
Yellow Time (s)	4	4	4
All-Red Time (s)	1.6	1.6	2.4
Minimum Initial (s)	14	14	14
Vehicle Extension (s)	3	3	3
Minimum Gap (s)	3	3	3
Time Before Reduce (s)	0	0	0
Time To Reduce (s)	0	0	0
Walk Time (s)	7	7	7
Flash Dont Walk (s)	11	11	11
Dual Entry	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes
Start Time (s)	10.6	104.6	10.6
End Time (s)	104.6	10.6	104.6
Yield/Force Off (s)	99	5	98.2
Yield/Force Off 170(s)	88	124	87.2
Local Start Time (s)	5.6	99.6	5.6
Local Yield (s)	94	0	93.2
Local Yield 170(s)	83	119	82.2

Intersection Summary

Cycle Length	130
Control Type	Actuated-Coordinated
Natural Cycle	60
Offset: 5 (4%), Referenced to phase 2: and 6:SWR, Start of Yellow	

Splits and Phases: 4: Dade Boulevard & 17th Street & Bay Road





















**Future with Project
Without West Avenue Bridge**

HCM 2010 Signalized Intersection Summary

1: W Island Avenue/West Island Avenue & Venetian Way

5/12/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	21	600	40	41	518	14	31	3	32	25	5	28
Future Volume (veh/h)	21	600	40	41	518	14	31	3	32	25	5	28
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	22	632	42	43	545	15	33	3	34	26	5	29
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	418	1158	77	437	1209	33	171	29	138	324	57	272
Arrive On Green	0.67	0.67	0.67	0.22	0.22	0.22	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	846	1728	115	761	1804	50	562	136	659	1227	270	1297
Grp Volume(v), veh/h	22	0	674	43	0	560	70	0	0	31	0	29
Grp Sat Flow(s),veh/h/ln	846	0	1842	761	0	1854	1357	0	0	1497	0	1297
Q Serve(g_s), s	1.6	0.0	19.0	4.8	0.0	26.1	1.8	0.0	0.0	0.0	0.0	1.8
Cycle Q Clear(g_c), s	27.7	0.0	19.0	23.9	0.0	26.1	4.0	0.0	0.0	1.4	0.0	1.8
Prop In Lane	1.00		0.06	1.00		0.03	0.47		0.49	0.84		1.00
Lane Grp Cap(c), veh/h	418	0	1234	437	0	1242	338	0	0	381	0	272
V/C Ratio(X)	0.05	0.00	0.55	0.10	0.00	0.45	0.21	0.00	0.00	0.08	0.00	0.11
Avail Cap(c_a), veh/h	418	0	1234	437	0	1242	338	0	0	381	0	272
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.75	0.00	0.75	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	17.9	0.0	8.6	30.3	0.0	23.0	32.7	0.0	0.0	31.7	0.0	31.9
Incr Delay (d2), s/veh	0.2	0.0	1.7	0.3	0.0	0.9	1.4	0.0	0.0	0.4	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.0	10.1	1.1	0.0	13.8	1.7	0.0	0.0	0.7	0.0	0.7
LnGrp Delay(d),s/veh	18.2	0.0	10.3	30.7	0.0	23.9	34.1	0.0	0.0	32.2	0.0	32.7
LnGrp LOS	B		B	C		C	C			C		C
Approach Vol, veh/h		696			603			70			60	
Approach Delay, s/veh		10.6			24.4			34.1			32.4	
Approach LOS		B			C			C			C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs		2		4		6		8				
Phs Duration (G+Y+Rc), s		27.0		73.0		27.0		73.0				
Change Period (Y+Rc), s		6.0		6.0		6.0		6.0				
Max Green Setting (Gmax), s		21.0		67.0		21.0		67.0				
Max Q Clear Time (g_c+I1), s		6.0		29.7		3.8		28.1				
Green Ext Time (p_c), s		0.6		11.8		0.6		11.9				
Intersection Summary												
HCM 2010 Ctrl Delay				18.5								
HCM 2010 LOS				B								

Timing Report, Sorted By Phase

1: W Island Avenue/West Island Avenue & Venetian Way

5/11/2016

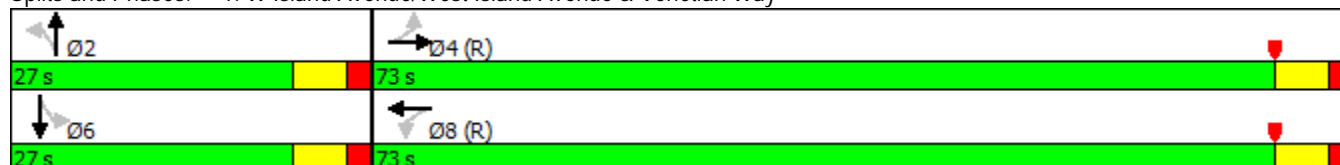


Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	Max	C-Max	Max	C-Max
Maximum Split (s)	27	73	27	73
Maximum Split (%)	27.0%	73.0%	27.0%	73.0%
Minimum Split (s)	13	22	16	22
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	7	16	10	16
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	4	0	4	0
Flash Dont Walk (s)	14	0	17	0
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	96	23	96	23
End Time (s)	23	96	23	96
Yield/Force Off (s)	17	90	17	90
Yield/Force Off 170(s)	3	90	0	90
Local Start Time (s)	6	33	6	33
Local Yield (s)	27	0	27	0
Local Yield 170(s)	13	0	10	0

Intersection Summary

Cycle Length	100
Control Type	Actuated-Coordinated
Natural Cycle	45
Offset: 90 (90%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow	

Splits and Phases: 1: W Island Avenue/West Island Avenue & Venetian Way



Queues

1: W Island Avenue/West Island Avenue & Venetian Way

5/12/2016



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	22	674	43	560	70	60
v/c Ratio	0.04	0.54	0.11	0.45	0.23	0.11
Control Delay	6.0	10.5	11.6	19.3	21.4	20.0
Queue Delay	0.0	0.0	0.0	0.8	0.3	0.0
Total Delay	6.0	10.5	11.6	20.2	21.7	20.0
Queue Length 50th (ft)	4	197	19	311	19	8
Queue Length 95th (ft)	12	285	m38	364	57	25
Internal Link Dist (ft)		421		492	175	123
Turn Bay Length (ft)	150		175			
Base Capacity (vph)	491	1239	405	1243	305	570
Starvation Cap Reductn	0	0	0	388	0	0
Spillback Cap Reductn	0	1	0	0	51	49
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.04	0.54	0.11	0.65	0.28	0.12



















Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM Signalized Intersection Capacity Analysis

2: E Island Avenue/East Island Avenue & Venetian Way

5/12/2016

												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	40	538	79	37	79	453	48	98	1	98	27	1
Future Volume (vph)	40	538	79	37	79	453	48	98	1	98	27	1
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			6.0			6.0
Lane Util. Factor	1.00	1.00			1.00	1.00			1.00			1.00
Frt	1.00	0.98			1.00	0.99			0.93			0.94
Flt Protected	0.95	1.00			0.95	1.00			0.98			0.97
Satd. Flow (prot)	1770	1827			1770	1836			1526			1532
Flt Permitted	0.31	1.00			0.20	1.00			0.82			0.82
Satd. Flow (perm)	570	1827			373	1836			1289			1294
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)	41	555	81	38	81	467	49	101	1	101	28	1
RTOR Reduction (vph)	0	7	0	0	0	5	0	0	28	0	0	14
Lane Group Flow (vph)	41	629	0	0	119	511	0	0	175	0	0	40
Parking (#/hr)								0	0	0	0	0
Turn Type	Perm	NA		Perm	Perm	NA		Perm	NA		Perm	NA
Protected Phases		4				8			2			6
Permitted Phases	4			8	8			2			6	
Actuated Green, G (s)	45.3	45.3			45.3	45.3			42.7			42.7
Effective Green, g (s)	45.3	45.3			45.3	45.3			42.7			42.7
Actuated g/C Ratio	0.45	0.45			0.45	0.45			0.43			0.43
Clearance Time (s)	6.0	6.0			6.0	6.0			6.0			6.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0			3.0			3.0
Lane Grp Cap (vph)	258	827			168	831			550			552
v/s Ratio Prot		c0.34				0.28						
v/s Ratio Perm	0.07				0.32				c0.14			0.03
v/c Ratio	0.16	0.76			0.71	0.61			0.32			0.07
Uniform Delay, d1	16.1	22.8			22.0	20.7			19.0			16.9
Progression Factor	1.71	1.58			1.00	1.00			1.00			1.00
Incremental Delay, d2	0.3	3.6			12.8	1.4			1.5			0.3
Delay (s)	27.8	39.6			34.8	22.1			20.5			17.2
Level of Service	C	D			C	C			C			B
Approach Delay (s)		38.9				24.5			20.5			17.2
Approach LOS		D				C			C			B
Intersection Summary												
HCM 2000 Control Delay			29.9			HCM 2000 Level of Service			C			
HCM 2000 Volume to Capacity ratio			0.55									
Actuated Cycle Length (s)			100.0			Sum of lost time (s)			12.0			
Intersection Capacity Utilization			75.5%			ICU Level of Service			D			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2: E Island Avenue/East Island Avenue & Venetian Way

5/12/2016

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	24
Future Volume (vph)	24
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.97
Adj. Flow (vph)	25
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Parking (#/hr)	0
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Timing Report, Sorted By Phase

2: E Island Avenue/East Island Avenue & Venetian Way

5/11/2016

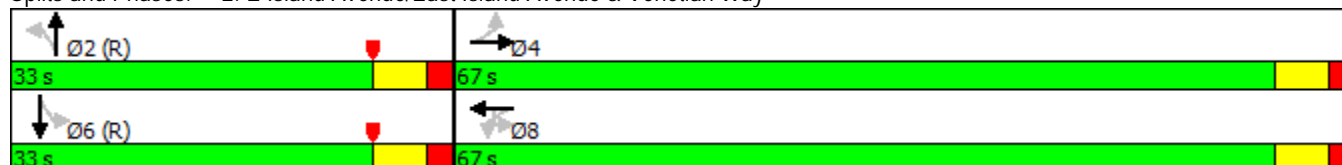


Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	C-Max	None	C-Max	None
Maximum Split (s)	33	67	33	67
Maximum Split (%)	33.0%	67.0%	33.0%	67.0%
Minimum Split (s)	24	24	24	24
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	7	16	7	16
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	50	83	50	83
End Time (s)	83	50	83	50
Yield/Force Off (s)	77	44	77	44
Yield/Force Off 170(s)	66	33	66	33
Local Start Time (s)	73	6	73	6
Local Yield (s)	0	67	0	67
Local Yield 170(s)	89	56	89	56

Intersection Summary

Cycle Length	100
Control Type	Actuated-Coordinated
Natural Cycle	60
Offset: 77 (77%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	

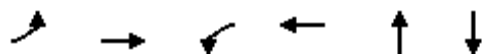
Splits and Phases: 2: E Island Avenue/East Island Avenue & Venetian Way



Queues

2: E Island Avenue/East Island Avenue & Venetian Way

5/12/2016



Lane Group	EBL	EBT	WBL	WBT	NBT	SBT
Lane Group Flow (vph)	41	636	119	516	203	54
v/c Ratio	0.16	0.76	0.71	0.62	0.35	0.10
Control Delay	23.6	39.4	43.0	22.6	19.3	14.7
Queue Delay	0.0	0.5	0.0	0.0	0.0	0.0
Total Delay	23.6	39.9	43.0	22.6	19.3	14.7
Queue Length 50th (ft)	21	427	58	235	63	11
Queue Length 95th (ft)	m37	490	113	258	150	42
Internal Link Dist (ft)		492		953	161	158
Turn Bay Length (ft)	175		150			
Base Capacity (vph)	347	1119	227	1124	578	566
Starvation Cap Reductn	0	162	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.12	0.66	0.52	0.46	0.35	0.10












Intersection Summary

m Volume for 95th percentile queue is metered by upstream signal.

HCM 2010 Signalized Intersection Summary

3: Venetian Way/Dade Boulevard & Purdy Avenue

5/12/2016

								
Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	59	605	548	215	54	55		
Future Volume (veh/h)	59	605	548	215	54	55		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	0.90	0.90		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	63	651	589	231	58	59		
Adj No. of Lanes	1	1	1	0	1	1		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	176	1094	748	293	512	457		
Arrive On Green	0.59	0.59	0.39	0.39	0.32	0.32		
Sat Flow, veh/h	664	1863	1275	500	1597	1425		
Grp Volume(v), veh/h	63	651	0	820	58	59		
Grp Sat Flow(s),veh/h/ln	664	1863	0	1775	1597	1425		
Q Serve(g_s), s	11.2	28.8	0.0	52.8	3.3	3.8		
Cycle Q Clear(g_c), s	63.9	28.8	0.0	52.8	3.3	3.8		
Prop In Lane	1.00			0.28	1.00	1.00		
Lane Grp Cap(c), veh/h	176	1094	0	1042	512	457		
V/C Ratio(X)	0.36	0.60	0.00	0.79	0.11	0.13		
Avail Cap(c_a), veh/h	210	1189	0	1133	512	457		
HCM Platoon Ratio	1.00	1.00	0.67	0.67	1.00	1.00		
Upstream Filter(I)	0.56	0.56	0.00	0.94	1.00	1.00		
Uniform Delay (d), s/veh	48.2	17.0	0.0	32.3	31.1	31.3		
Incr Delay (d2), s/veh	0.7	0.4	0.0	3.3	0.4	0.6		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.1	14.9	0.0	26.9	1.5	1.6		
LnGrp Delay(d),s/veh	48.8	17.4	0.0	35.6	31.6	31.9		
LnGrp LOS	D	B		D	C	C		
Approach Vol, veh/h		714	820		117			
Approach Delay, s/veh		20.2	35.6		31.7			
Approach LOS		C	D		C			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				82.3		47.7		82.3
Change Period (Y+Rc), s				6.0		6.0		6.0
Max Green Setting (Gmax), s				83.0		35.0		83.0
Max Q Clear Time (g_c+I1), s				65.9		5.8		54.8
Green Ext Time (p_c), s				10.4		0.3		14.0
Intersection Summary								
HCM 2010 Ctrl Delay			28.7					
HCM 2010 LOS			C					

Timing Report, Sorted By Phase

3: Venetian Way/Dade Boulevard & Purdy Avenue

5/11/2016

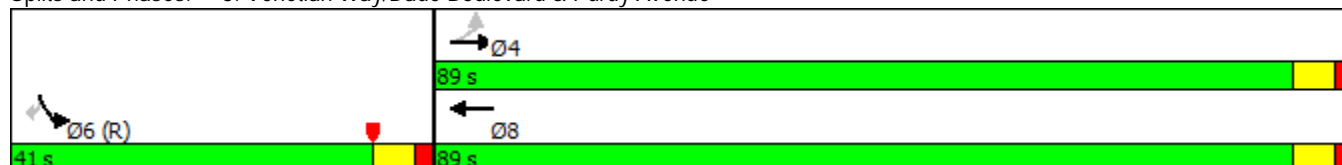


Phase Number	4	6	8
Movement	EBTL	SBL	WBT
Lead/Lag			
Lead-Lag Optimize			
Recall Mode	None	C-Max	None
Maximum Split (s)	89	41	89
Maximum Split (%)	68.5%	31.5%	68.5%
Minimum Split (s)	24	30	24
Yellow Time (s)	4	4	4
All-Red Time (s)	2	2	2
Minimum Initial (s)	14	14	7
Vehicle Extension (s)	3	3	3
Minimum Gap (s)	3	3	3
Time Before Reduce (s)	0	0	0
Time To Reduce (s)	0	0	0
Walk Time (s)	0	7	0
Flash Dont Walk (s)	0	17	0
Dual Entry	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes
Start Time (s)	92	51	92
End Time (s)	51	92	51
Yield/Force Off (s)	45	86	45
Yield/Force Off 170(s)	45	69	45
Local Start Time (s)	6	95	6
Local Yield (s)	89	0	89
Local Yield 170(s)	89	113	89

Intersection Summary

Cycle Length	130
Control Type	Actuated-Coordinated
Natural Cycle	65
Offset: 86 (66%), Referenced to phase 2: and 6:SBL, Start of Yellow	

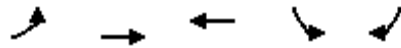
Splits and Phases: 3: Venetian Way/Dade Boulevard & Purdy Avenue



Queues

3: Venetian Way/Dade Boulevard & Purdy Avenue

5/12/2016



Lane Group	EBL	EBT	WBT	SBL	SBR
Lane Group Flow (vph)	63	651	820	58	59
v/c Ratio	0.38	0.62	0.80	0.11	0.11
Control Delay	20.3	20.6	26.9	34.2	9.3
Queue Delay	0.0	1.4	4.7	0.0	0.0
Total Delay	20.3	22.0	31.6	34.2	9.3
Queue Length 50th (ft)	26	329	360	35	0
Queue Length 95th (ft)	57	387	489	74	35
Internal Link Dist (ft)		953	158	553	
Turn Bay Length (ft)	100			100	
Base Capacity (vph)	188	1189	1154	540	522
Starvation Cap Reductn	0	0	261	0	0
Spillback Cap Reductn	0	330	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.34	0.76	0.92	0.11	0.11
Intersection Summary					

HCM Signalized Intersection Capacity Analysis

4: Dade Boulevard & 17th Street & Bay Road

5/12/2016



Movement	EBL	EBT	WBT	WBR	SBL	SBR	SWL	SWR	SWR2
Lane Configurations									
Traffic Volume (vph)	307	352	350	0	0	22	0	159	65
Future Volume (vph)	307	352	350	0	0	22	0	159	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6	6.4			5.6		5.6	5.6
Lane Util. Factor	1.00	1.00	1.00			1.00		1.00	1.00
Frt	1.00	1.00	1.00			0.86		0.85	0.85
Flt Protected	0.95	1.00	1.00			1.00		1.00	1.00
Satd. Flow (prot)	1770	1863	1863			1450		1583	1583
Flt Permitted	0.43	1.00	1.00			1.00		1.00	1.00
Satd. Flow (perm)	810	1863	1863			1450		1583	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	334	383	380	0	0	24	0	173	71
RTOR Reduction (vph)	0	0	0	0	0	14	0	0	40
Lane Group Flow (vph)	334	383	380	0	0	10	0	173	31
Parking (#/hr)					0	0			
Turn Type	Perm	NA	NA			Perm		Perm	Perm
Protected Phases		4	8						
Permitted Phases	4					6		6	6
Actuated Green, G (s)	62.6	62.6	61.8			56.2		56.2	56.2
Effective Green, g (s)	62.6	62.6	61.8			56.2		56.2	56.2
Actuated g/C Ratio	0.48	0.48	0.48			0.43		0.43	0.43
Clearance Time (s)	5.6	5.6	6.4			5.6		5.6	5.6
Vehicle Extension (s)	3.0	3.0	3.0			3.0		3.0	3.0
Lane Grp Cap (vph)	390	897	885			626		684	684
v/s Ratio Prot		0.21	0.20						
v/s Ratio Perm	c0.41					0.01		c0.11	0.02
v/c Ratio	0.86	0.43	0.43			0.02		0.25	0.04
Uniform Delay, d1	29.7	22.0	22.5			21.1		23.5	21.4
Progression Factor	1.44	1.30	1.00			1.00		1.00	1.00
Incremental Delay, d2	14.9	0.3	0.3			0.0		0.9	0.1
Delay (s)	57.8	29.0	22.8			21.1		24.4	21.5
Level of Service	E	C	C			C		C	C
Approach Delay (s)		42.4	22.8		21.1		23.6		
Approach LOS		D	C		C		C		
Intersection Summary									
HCM 2000 Control Delay			33.2			HCM 2000 Level of Service			C
HCM 2000 Volume to Capacity ratio			0.57						
Actuated Cycle Length (s)			130.0			Sum of lost time (s)			12.0
Intersection Capacity Utilization			56.4%			ICU Level of Service			B
Analysis Period (min)			15						
c Critical Lane Group									

Timing Report, Sorted By Phase

4: Dade Boulevard & 17th Street & Bay Road

5/11/2016

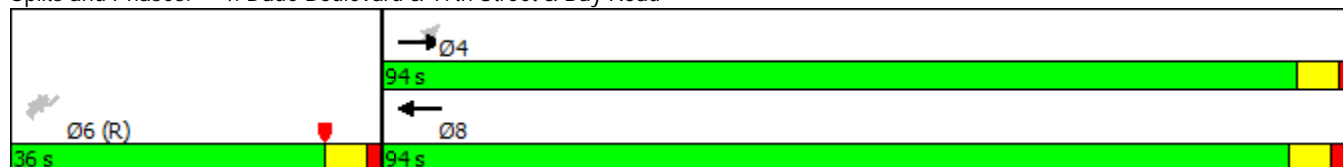


Phase Number	4	6	8
Movement	EBTL	SWR	WBT
Lead/Lag			
Lead-Lag Optimize			
Recall Mode	None	C-Max	None
Maximum Split (s)	94	36	94
Maximum Split (%)	72.3%	27.7%	72.3%
Minimum Split (s)	23.6	23.6	24.4
Yellow Time (s)	4	4	4
All-Red Time (s)	1.6	1.6	2.4
Minimum Initial (s)	14	14	14
Vehicle Extension (s)	3	3	3
Minimum Gap (s)	3	3	3
Time Before Reduce (s)	0	0	0
Time To Reduce (s)	0	0	0
Walk Time (s)	7	7	7
Flash Dont Walk (s)	11	11	11
Dual Entry	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes
Start Time (s)	10.6	104.6	10.6
End Time (s)	104.6	10.6	104.6
Yield/Force Off (s)	99	5	98.2
Yield/Force Off 170(s)	88	124	87.2
Local Start Time (s)	5.6	99.6	5.6
Local Yield (s)	94	0	93.2
Local Yield 170(s)	83	119	82.2

Intersection Summary

Cycle Length	130
Control Type	Actuated-Coordinated
Natural Cycle	60
Offset: 5 (4%), Referenced to phase 2: and 6:SWR, Start of Yellow	

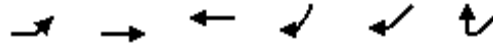
Splits and Phases: 4: Dade Boulevard & 17th Street & Bay Road



Queues

4: Dade Boulevard & 17th Street & Bay Road

5/12/2016






















Lane Group	EBL	EBT	WBT	SBR	SWR	SWR2
Lane Group Flow (vph)	334	383	380	24	173	71
v/c Ratio	0.86	0.43	0.43	0.03	0.25	0.10
Control Delay	57.9	27.6	22.5	0.0	30.1	8.1
Queue Delay	10.1	1.0	0.4	0.0	0.2	0.0
Total Delay	67.9	28.6	22.8	0.0	30.3	8.1
Queue Length 50th (ft)	299	277	206	0	92	0
Queue Length 95th (ft)	395	352	180	0	196	39
Internal Link Dist (ft)		158	317			
Turn Bay Length (ft)						
Base Capacity (vph)	550	1266	1255	927	684	724
Starvation Cap Reductn	183	617	0	0	0	0
Spillback Cap Reductn	0	0	419	212	158	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.91	0.59	0.45	0.03	0.33	0.10
Intersection Summary						

**Future with Project
With West Avenue Bridge**

HCM 2010 Signalized Intersection Summary

1: W Island Avenue/West Island Avenue & Venetian Way/.

5/12/2016

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	682	41	42	620	14	31	3	32	25	5	39
Future Volume (veh/h)	41	682	41	42	620	14	31	3	32	25	5	39
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.90	1.00	1.00	0.90
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1900	1863	1900	1900	1863	1900
Adj Flow Rate, veh/h	43	718	43	44	653	15	33	3	34	26	5	41
Adj No. of Lanes	1	1	0	1	1	0	0	1	0	0	2	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	341	1166	70	380	1215	28	168	28	136	324	57	272
Arrive On Green	0.67	0.67	0.67	0.22	0.22	0.22	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	766	1740	104	702	1814	42	549	135	646	1227	270	1297
Grp Volume(v), veh/h	43	0	761	44	0	668	70	0	0	31	0	41
Grp Sat Flow(s),veh/h/ln	766	0	1844	702	0	1855	1329	0	0	1497	0	1297
Q Serve(g_s), s	3.9	0.0	23.2	5.5	0.0	31.8	1.8	0.0	0.0	0.0	0.0	2.6
Cycle Q Clear(g_c), s	35.7	0.0	23.2	28.7	0.0	31.8	4.4	0.0	0.0	1.4	0.0	2.6
Prop In Lane	1.00		0.06	1.00		0.02	0.47		0.49	0.84		1.00
Lane Grp Cap(c), veh/h	341	0	1236	380	0	1243	332	0	0	381	0	272
V/C Ratio(X)	0.13	0.00	0.62	0.12	0.00	0.54	0.21	0.00	0.00	0.08	0.00	0.15
Avail Cap(c_a), veh/h	341	0	1236	380	0	1243	332	0	0	381	0	272
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	0.65	0.00	0.65	1.00	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.3	0.0	9.3	34.1	0.0	25.2	32.8	0.0	0.0	31.8	0.0	32.2
Incr Delay (d2), s/veh	0.8	0.0	2.3	0.4	0.0	1.1	1.4	0.0	0.0	0.4	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	12.4	1.1	0.0	16.7	1.7	0.0	0.0	0.7	0.0	1.0
LnGrp Delay(d),s/veh	23.0	0.0	11.6	34.5	0.0	26.3	34.3	0.0	0.0	32.2	0.0	33.4
LnGrp LOS	C		B	C		C	C			C		C
Approach Vol, veh/h	804				712		70				72	
Approach Delay, s/veh	12.2				26.8		34.3				32.9	
Approach LOS	B				C		C				C	
Timer	1	2	3	4	5	6	7	8				
Assigned Phs	2		4		6		8					
Phs Duration (G+Y+Rc), s	27.0		73.0		27.0		73.0					
Change Period (Y+Rc), s	6.0		6.0		6.0		6.0					
Max Green Setting (Gmax), s	21.0		67.0		21.0		67.0					
Max Q Clear Time (g_c+I1), s	6.4		37.7		4.6		33.8					
Green Ext Time (p_c), s	0.6		13.7		0.7		14.4					
Intersection Summary												
HCM 2010 Ctrl Delay			20.3									
HCM 2010 LOS			C									

Timing Report, Sorted By Phase

1: W Island Avenue/West Island Avenue & Venetian Way/.

5/12/2016

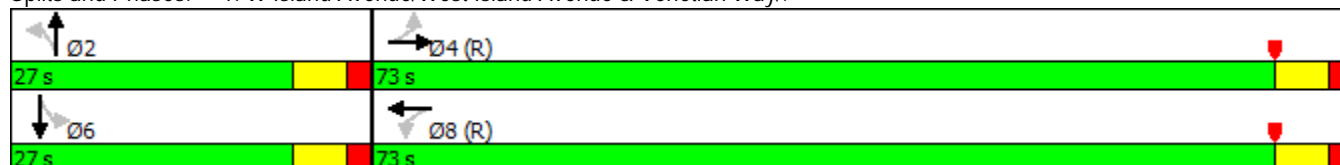


Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	Max	C-Max	Max	C-Max
Maximum Split (s)	27	73	27	73
Maximum Split (%)	27.0%	73.0%	27.0%	73.0%
Minimum Split (s)	13	22	16	22
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	7	16	10	16
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	4	0	4	0
Flash Dont Walk (s)	14	0	17	0
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	96	23	96	23
End Time (s)	23	96	23	96
Yield/Force Off (s)	17	90	17	90
Yield/Force Off 170(s)	3	90	0	90
Local Start Time (s)	6	33	6	33
Local Yield (s)	27	0	27	0
Local Yield 170(s)	13	0	10	0

Intersection Summary

Cycle Length	100
Control Type	Actuated-Coordinated
Natural Cycle	50
Offset: 90 (90%), Referenced to phase 4:EBTL and 8:WBTL, Start of Yellow	



















Splits and Phases: 1: W Island Avenue/West Island Avenue & Venetian Way/.



HCM Signalized Intersection Capacity Analysis

2: E Island Avenue/East Island Avenue & .Venetian Way

5/12/2016

												
Movement	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	45	616	79	37	79	556	72	98	1	98	41	1
Future Volume (vph)	45	616	79	37	79	556	72	98	1	98	41	1
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			6.0			6.0
Lane Util. Factor	1.00	1.00			1.00	1.00			1.00			1.00
Frt	1.00	0.98			1.00	0.98			0.93			0.95
Flt Protected	0.95	1.00			0.95	1.00			0.98			0.97
Satd. Flow (prot)	1770	1831			1770	1831			1526			1542
Flt Permitted	0.24	1.00			0.18	1.00			0.81			0.77
Satd. Flow (perm)	438	1831			338	1831			1271			1228
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)	46	635	81	38	81	573	74	101	1	101	42	1
RTOR Reduction (vph)	0	6	0	0	0	6	0	0	30	0	0	17
Lane Group Flow (vph)	46	710	0	0	119	641	0	0	173	0	0	54
Parking (#/hr)								0	0	0	0	0
Turn Type	Perm	NA		Perm	Perm	NA		Perm	NA		Perm	NA
Protected Phases		4				8			2			6
Permitted Phases	4			8	8			2			6	
Actuated Green, G (s)	50.1	50.1			50.1	50.1			37.9			37.9
Effective Green, g (s)	50.1	50.1			50.1	50.1			37.9			37.9
Actuated g/C Ratio	0.50	0.50			0.50	0.50			0.38			0.38
Clearance Time (s)	6.0	6.0			6.0	6.0			6.0			6.0
Vehicle Extension (s)	3.0	3.0			3.0	3.0			3.0			3.0
Lane Grp Cap (vph)	219	917			169	917			481			465
v/s Ratio Prot		c0.39				0.35						
v/s Ratio Perm	0.11				0.35				c0.14			0.04
v/c Ratio	0.21	0.77			0.70	0.70			0.36			0.12
Uniform Delay, d1	13.9	20.3			19.2	19.2			22.3			20.2
Progression Factor	1.83	1.72			1.00	1.00			1.00			1.00
Incremental Delay, d2	0.4	3.4			12.5	2.3			2.1			0.5
Delay (s)	25.9	38.5			31.7	21.5			24.4			20.7
Level of Service	C	D			C	C			C			C
Approach Delay (s)		37.7				23.1			24.4			20.7
Approach LOS		D				C			C			C
Intersection Summary												
HCM 2000 Control Delay			29.3		HCM 2000 Level of Service				C			
HCM 2000 Volume to Capacity ratio			0.59									
Actuated Cycle Length (s)			100.0		Sum of lost time (s)				12.0			
Intersection Capacity Utilization			78.6%		ICU Level of Service				D			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2: E Island Avenue/East Island Avenue & Venetian Way

5/12/2016

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	27
Future Volume (vph)	27
Ideal Flow (vphpl)	1900
Total Lost time (s)	
Lane Util. Factor	
Frt	
Flt Protected	
Satd. Flow (prot)	
Flt Permitted	
Satd. Flow (perm)	
Peak-hour factor, PHF	0.97
Adj. Flow (vph)	28
RTOR Reduction (vph)	0
Lane Group Flow (vph)	0
Parking (#/hr)	0
Turn Type	
Protected Phases	
Permitted Phases	
Actuated Green, G (s)	
Effective Green, g (s)	
Actuated g/C Ratio	
Clearance Time (s)	
Vehicle Extension (s)	
Lane Grp Cap (vph)	
v/s Ratio Prot	
v/s Ratio Perm	
v/c Ratio	
Uniform Delay, d1	
Progression Factor	
Incremental Delay, d2	
Delay (s)	
Level of Service	
Approach Delay (s)	
Approach LOS	
Intersection Summary	

Timing Report, Sorted By Phase

2: E Island Avenue/East Island Avenue & ./Venetian Way

5/12/2016

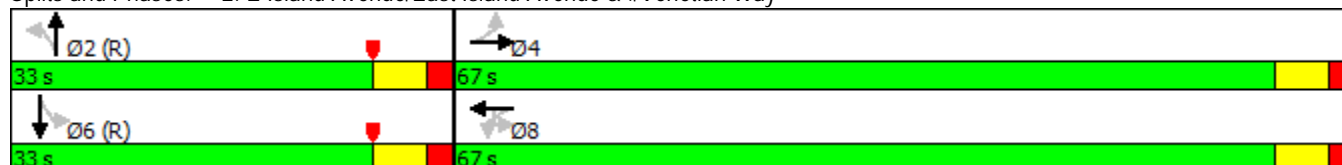


Phase Number	2	4	6	8
Movement	NBTL	EBTL	SBTL	WBTL
Lead/Lag				
Lead-Lag Optimize				
Recall Mode	C-Max	None	C-Max	None
Maximum Split (s)	33	67	33	67
Maximum Split (%)	33.0%	67.0%	33.0%	67.0%
Minimum Split (s)	24	24	24	24
Yellow Time (s)	4	4	4	4
All-Red Time (s)	2	2	2	2
Minimum Initial (s)	7	16	7	16
Vehicle Extension (s)	3	3	3	3
Minimum Gap (s)	3	3	3	3
Time Before Reduce (s)	0	0	0	0
Time To Reduce (s)	0	0	0	0
Walk Time (s)	7	7	7	7
Flash Dont Walk (s)	11	11	11	11
Dual Entry	Yes	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes	Yes
Start Time (s)	50	83	50	83
End Time (s)	83	50	83	50
Yield/Force Off (s)	77	44	77	44
Yield/Force Off 170(s)	66	33	66	33
Local Start Time (s)	73	6	73	6
Local Yield (s)	0	67	0	67
Local Yield 170(s)	89	56	89	56

Intersection Summary

Cycle Length	100
Control Type	Actuated-Coordinated
Natural Cycle	60
Offset: 77 (77%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	












Splits and Phases: 2: E Island Avenue/East Island Avenue & ./Venetian Way



HCM 2010 Signalized Intersection Summary

3: Venetian Way/Dade Boulevard & Purdy Avenue

5/12/2016

								
Movement	EBL	EBT	WBT	WBR	SBL	SBR		
Lane Configurations								
Traffic Volume (veh/h)	74	650	573	245	101	104		
Future Volume (veh/h)	74	650	573	245	101	104		
Number	7	4	8	18	1	16		
Initial Q (Qb), veh	0	0	0	0	0	0		
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00		
Parking Bus, Adj	1.00	1.00	1.00	1.00	0.90	0.90		
Adj Sat Flow, veh/h/ln	1863	1863	1863	1900	1863	1863		
Adj Flow Rate, veh/h	80	699	616	263	109	112		
Adj No. of Lanes	1	1	1	0	1	1		
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Percent Heavy Veh, %	2	2	2	2	2	2		
Cap, veh/h	173	1158	771	329	457	408		
Arrive On Green	0.62	0.62	0.42	0.42	0.29	0.29		
Sat Flow, veh/h	629	1863	1240	529	1597	1425		
Grp Volume(v), veh/h	80	699	0	879	109	112		
Grp Sat Flow(s),veh/h/ln	629	1863	0	1769	1597	1425		
Q Serve(g_s), s	15.4	29.6	0.0	56.5	6.8	7.9		
Cycle Q Clear(g_c), s	71.9	29.6	0.0	56.5	6.8	7.9		
Prop In Lane	1.00			0.30	1.00	1.00		
Lane Grp Cap(c), veh/h	173	1158	0	1100	457	408		
V/C Ratio(X)	0.46	0.60	0.00	0.80	0.24	0.27		
Avail Cap(c_a), veh/h	184	1189	0	1130	457	408		
HCM Platoon Ratio	1.00	1.00	0.67	0.67	1.00	1.00		
Upstream Filter(I)	0.54	0.54	0.00	0.82	1.00	1.00		
Uniform Delay (d), s/veh	49.2	14.9	0.0	30.8	35.5	35.9		
Incr Delay (d2), s/veh	1.0	0.4	0.0	3.4	1.2	1.7		
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0		
%ile BackOfQ(50%),veh/ln	2.7	15.3	0.0	28.7	3.2	3.3		
LnGrp Delay(d),s/veh	50.3	15.4	0.0	34.2	36.8	37.6		
LnGrp LOS	D	B		C	D	D		
Approach Vol, veh/h		779	879		221			
Approach Delay, s/veh		18.9	34.2		37.2			
Approach LOS		B	C		D			
Timer	1	2	3	4	5	6	7	8
Assigned Phs				4		6		8
Phs Duration (G+Y+Rc), s				86.8		43.2		86.8
Change Period (Y+Rc), s				6.0		6.0		6.0
Max Green Setting (Gmax), s				83.0		35.0		83.0
Max Q Clear Time (g_c+I1), s				73.9		9.9		58.5
Green Ext Time (p_c), s				6.9		0.6		14.5
Intersection Summary								
HCM 2010 Ctrl Delay			28.2					
HCM 2010 LOS			C					

Timing Report, Sorted By Phase

3: Venetian Way/Dade Boulevard & Purdy Avenue

5/12/2016

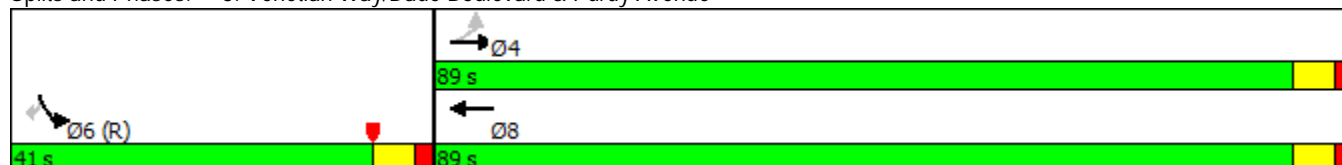


Phase Number	4	6	8
Movement	EBTL	SBL	WBT
Lead/Lag			
Lead-Lag Optimize			
Recall Mode	None	C-Max	None
Maximum Split (s)	89	41	89
Maximum Split (%)	68.5%	31.5%	68.5%
Minimum Split (s)	24	30	24
Yellow Time (s)	4	4	4
All-Red Time (s)	2	2	2
Minimum Initial (s)	14	14	7
Vehicle Extension (s)	3	3	3
Minimum Gap (s)	3	3	3
Time Before Reduce (s)	0	0	0
Time To Reduce (s)	0	0	0
Walk Time (s)	0	7	0
Flash Dont Walk (s)	0	17	0
Dual Entry	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes
Start Time (s)	92	51	92
End Time (s)	51	92	51
Yield/Force Off (s)	45	86	45
Yield/Force Off 170(s)	45	69	45
Local Start Time (s)	6	95	6
Local Yield (s)	89	0	89
Local Yield 170(s)	89	113	89

Intersection Summary

Cycle Length	130
Control Type	Actuated-Coordinated
Natural Cycle	80
Offset: 86 (66%), Referenced to phase 2: and 6:SBL, Start of Yellow	

Splits and Phases: 3: Venetian Way/Dade Boulevard & Purdy Avenue



HCM Signalized Intersection Capacity Analysis

4: Dade Boulevard & 17th Street & Bay Road

5/12/2016



Movement	EBL	EBT	WBT	WBR	SBL	SBR	SWL	SWR	SWR2
Lane Configurations									
Traffic Volume (vph)	213	610	592	0	0	84	0	171	71
Future Volume (vph)	213	610	592	0	0	84	0	171	71
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.6	5.6	6.4			5.6		5.6	5.6
Lane Util. Factor	1.00	1.00	1.00			1.00		1.00	1.00
Frt	1.00	1.00	1.00			0.86		0.85	0.85
Flt Protected	0.95	1.00	1.00			1.00		1.00	1.00
Satd. Flow (prot)	1770	1863	1863			1450		1583	1583
Flt Permitted	0.24	1.00	1.00			1.00		1.00	1.00
Satd. Flow (perm)	444	1863	1863			1450		1583	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	232	663	643	0	0	91	0	186	77
RTOR Reduction (vph)	0	0	0	0	0	55	0	0	46
Lane Group Flow (vph)	232	663	643	0	0	36	0	186	31
Parking (#/hr)					0	0			
Turn Type	Perm	NA	NA			Perm		Perm	Perm
Protected Phases		4	8						
Permitted Phases	4					6		6	6
Actuated Green, G (s)	67.0	67.0	66.2			51.8		51.8	51.8
Effective Green, g (s)	67.0	67.0	66.2			51.8		51.8	51.8
Actuated g/C Ratio	0.52	0.52	0.51			0.40		0.40	0.40
Clearance Time (s)	5.6	5.6	6.4			5.6		5.6	5.6
Vehicle Extension (s)	3.0	3.0	3.0			3.0		3.0	3.0
Lane Grp Cap (vph)	228	960	948			577		630	630
v/s Ratio Prot		0.36	0.35						
v/s Ratio Perm	c0.52					0.03		c0.12	0.02
v/c Ratio	1.02	0.69	0.68			0.06		0.30	0.05
Uniform Delay, d1	31.5	23.7	23.9			24.1		26.7	24.0
Progression Factor	1.35	1.30	1.00			1.00		1.00	1.00
Incremental Delay, d2	60.7	1.9	1.9			0.2		1.2	0.1
Delay (s)	103.3	32.7	25.9			24.3		27.8	24.1
Level of Service	F	C	C			C		C	C
Approach Delay (s)		51.0	25.9		24.3		26.8		
Approach LOS		D	C		C		C		
Intersection Summary									
HCM 2000 Control Delay			37.8			HCM 2000 Level of Service			D
HCM 2000 Volume to Capacity ratio			0.71						
Actuated Cycle Length (s)			130.0			Sum of lost time (s)			12.0
Intersection Capacity Utilization			69.2%			ICU Level of Service			C
Analysis Period (min)			15						
c Critical Lane Group									

Timing Report, Sorted By Phase

4: Dade Boulevard & 17th Street & Bay Road

5/12/2016

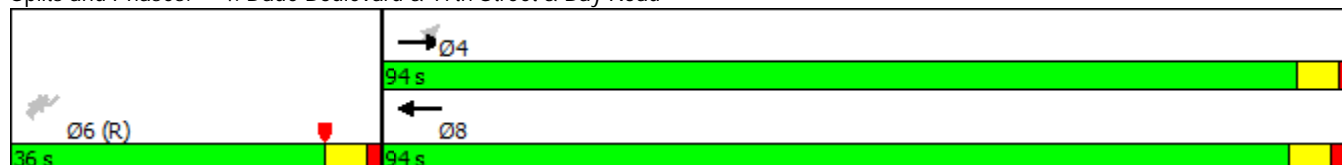


Phase Number	4	6	8
Movement	EBTL	SWR	WBT
Lead/Lag			
Lead-Lag Optimize			
Recall Mode	None	C-Max	None
Maximum Split (s)	94	36	94
Maximum Split (%)	72.3%	27.7%	72.3%
Minimum Split (s)	23.6	23.6	24.4
Yellow Time (s)	4	4	4
All-Red Time (s)	1.6	1.6	2.4
Minimum Initial (s)	14	14	14
Vehicle Extension (s)	3	3	3
Minimum Gap (s)	3	3	3
Time Before Reduce (s)	0	0	0
Time To Reduce (s)	0	0	0
Walk Time (s)	7	7	7
Flash Dont Walk (s)	11	11	11
Dual Entry	Yes	Yes	Yes
Inhibit Max	Yes	Yes	Yes
Start Time (s)	10.6	104.6	10.6
End Time (s)	104.6	10.6	104.6
Yield/Force Off (s)	99	5	98.2
Yield/Force Off 170(s)	88	124	87.2
Local Start Time (s)	5.6	99.6	5.6
Local Yield (s)	94	0	93.2
Local Yield 170(s)	83	119	82.2

Intersection Summary

Cycle Length	130
Control Type	Actuated-Coordinated
Natural Cycle	65
Offset: 5 (4%), Referenced to phase 2: and 6:SWR, Start of Yellow	

Splits and Phases: 4: Dade Boulevard & 17th Street & Bay Road

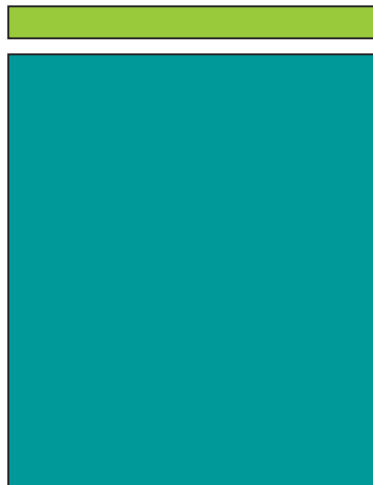


Appendix E:

Committed Development

1901 Alton (Whole Foods) Miami Beach, Florida

traffic study



prepared for:
Crescent Heights

Traf Tech
ENGINEERING, INC.

December 2014

TRIP GENERATION

The trip generation for the project was based on information contained in the Institute of Transportation Engineer's (ITE) *Trip Generation Manual* (9th Edition). According to the subject ITE manual, the most appropriate "land use" categories for the proposed land uses includes Land Use 850 – Supermarket and Land Use 912 – Drive-in Bank. Table 1 summarizes the external trips associated with the proposed 1901 Alton development.

TABLE 1 Trip Generation Summary 1901 Alton (Proposed Land Use)					
Land Use	Size	Daily Trips	Weekday Peak Hour Trips		
			Inbound	Outbound	Total
PROPOSED USES					
Supermarket	49,328 sf	4,694	236	226	462
Drive-in Bank	4,490 sf	665	55	54	109
Total	-	5,359	291	280	571

Source: ITE Trip Generation Manual (9th Edition)

As indicated in Table 1, the external trips anticipated to be generated by the proposed 1901 Alton project consist of approximately 5,359 daily trips and approximately 571 trips (291 inbound and 280 outbound) during the typical PM peak hour. In order to assess impacts with a conservative approach, no deductions were made to account for trips associated with the existing land use (bank and parking lot), internal trips, and passer-by traffic. The trip generation rates used to determine the trips associated with the proposed uses are presented below:

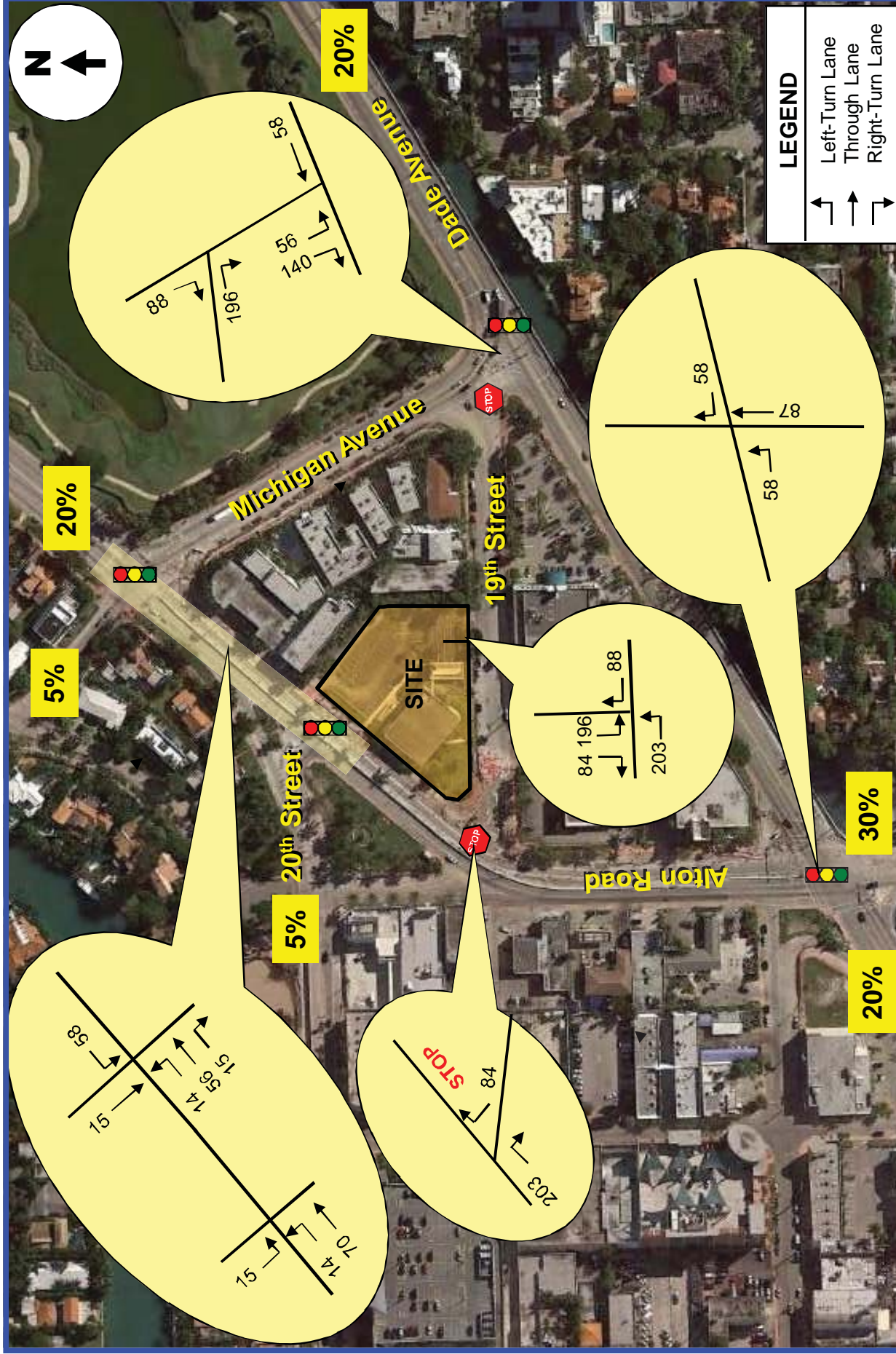
ITE Land Use 850 – Supermarket

Daily Trips

$$T = 66.95 (X) + 1391.56$$

Where T = number of weekday daily trips and

X = 1000 Sq feet gross floor area



NEW PROJECT TRAFFIC ASSIGNMENT
(Weekday New Peak Hour Trips)

FIGURE 4
1901 Alton
Miami Beach, Florida

Traffic Impact Study

Sunset Palau at Miami Beach



1201 – 1225 20th Street
Miami Beach, Florida



Richard Garcia & Associates, Inc.

December 5th, 2011

Table 9: AM/PM Trip Generation Summary

LAND USE (LU)	UNITS	AM / PM PEAK HOUR TRIPS				
		ITE LU CODE	ITE TRIP GENERATION RATE / EQN	TRIPS		
				IN	OUT	TOTAL
Existing						
Quality Cleaners	14.893 Th.Sq.Ft	*	3.56	27	26	53
		*	4.63	32	37	69
Existing Gross Vehicle Trips				27	26	53
				32	37	69
Proposed - New Project						
Residential Condo	70 DU	230	0.8LN(X)+.26	7	33	40
			0.82LN(X)+.32	30	15	45
Specialty Retail **	8.298 Th.Sq.Ft	814	1.00	5	3	8
			2.71	10	13	23
Quality Restaurant	4.758 Th.Sq.Ft	931	0.81	3	1	4
			7.49	24	12	36
<i>Restaurant Pass-By (As Per ITE)</i>				0	0	0
				11	5	16
<i>Sub-Total</i>				3	1	4
<i>(Rest. Gross Trips - Pass-by Trips)</i>				13	7	20
Proposed Gross Vehicle Trips (Driveways Trips)				15	37	52
				64	40	104
Net Vehicle Trips (Proposed - Existing - Pass-By)				-12	11	-1
				21	-2	19

NOTES:Source(s): ITE Trip Generation, 8th Edition and ITE Trip Generation Handbook, 2nd Edition.

* Trip Generation rates were obtained from empirical data collected at the existing Cleaners (Mark's - Quality Cleaning Laundry).

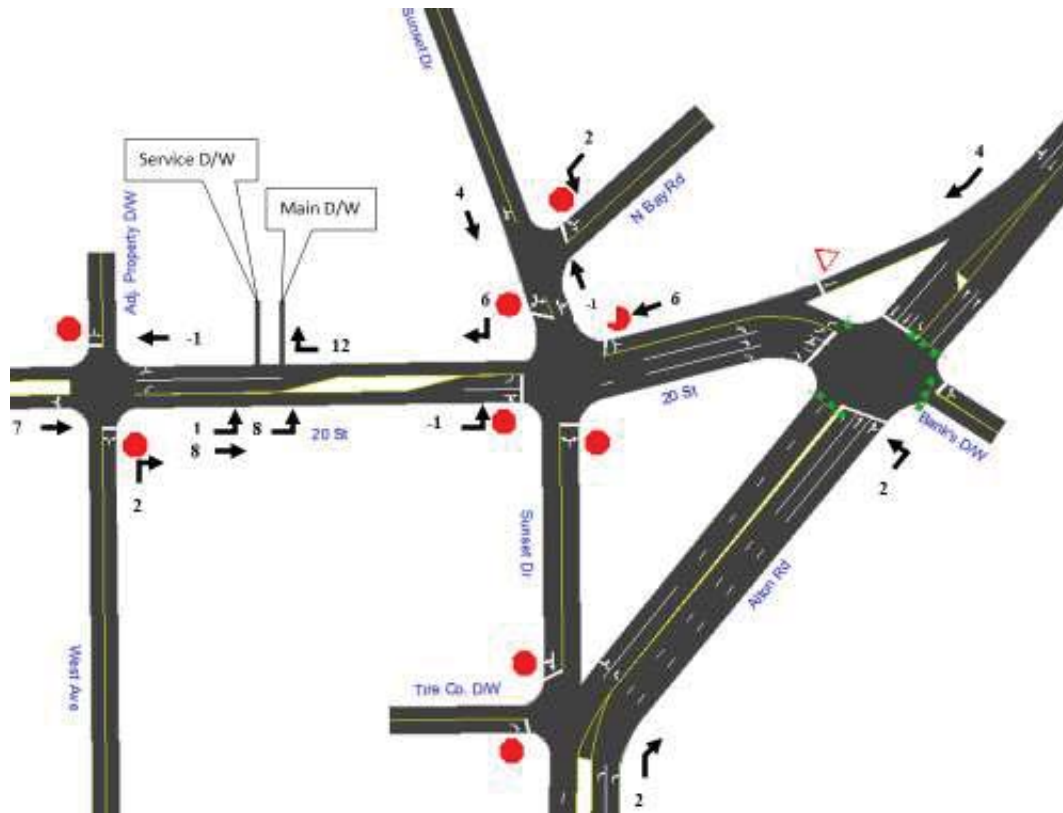
** Since ITE does not provide AM data for Specialty Retail (LU 814), LU 820 (Shopping Center) was used to calculate the AM peak hour trips.

Table 10: Midday Peak Hour (AM Peak Hour of Generator) Trip Generation Summary

LAND USE (LU)	UNITS	AM PEAK HOUR OF THE GENERATOR				
		ITE LU CODE	ITE TRIP GENERATION RATE / EQN	TRIPS		
				IN	OUT	TOTAL
Existing						
Quality Cleaners	14.893 Th.Sq.Ft	*	4.47	34	33	67
Existing Gross Vehicle Trips				34	33	67
Proposed - New Project						
Residential Condo	70 DU	230	0.82LN(X)+.15	7	30	37
Specialty Retail	8.298 Th.Sq.Ft	814	6.84	27	30	57
Quality Restaurant	4.758 Th.Sq.Ft	931	5.57	22	5	27
Proposed Gross Vehicle Trips (Driveways Trips)				56	65	121
Net Vehicle Trips (Proposed - Existing)				22	32	54

NOTES:Source(s): ITE Trip Generation, 8th Edition and ITE Trip Generation Handbook, 2nd Edition.

* The AM trip generation rate from empirical data was adjusted by 25.5% percent to calculate the existing trips (AM Peak Hour of the Generator).



#14112

RGA

Richard Garcia & Associates, Inc.

Traffic Impact Study



17TH STREET HOTEL

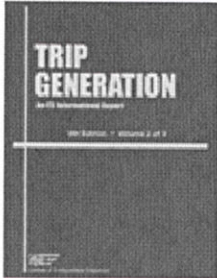
1231 17th Street
Miami Beach, Florida

July 20th, 2012

Project Traffic

This section of the report will cover the project traffic for the proposed project. In addition to calculating the trip generation, growth trends and site traffic were utilized to determine the future project traffic in the subsequent sections.

Trip Generation



The trip generation characteristics for the subject project were obtained from ITE's **Trip Generation Manual, 8th Ed.** The following land uses most closely resemble the proposed development. ITE's Land Use (LU) 310: Hotel and LU 814: Specialty Retail was utilized to determine the trip generation rates and totals for the subject project. As a result, the Trip Generation calculations for the PM peak hour yielded 63 net vehicle trips of which 33 vehicles are entering the site and 30 vehicles will exit. Please note the proposed gross vehicle trips were adjusted by subtracting the project internalization trips, transit trips and pedestrian trips. Transit and pedestrian trips were limited to 10% as stated in the MOU.

The project internalization trips were calculated following the methodology of Multi-Use Development Trip Generation and Internal Capture obtained from the ITE Trip Generation Handbook, 2nd Edition. This methodology estimates an internal capture rate between each pair of land uses within a multi-use development. The analysis yielded 2.8% of internalization trips for the PM peak hour. Table 3 below summarizes the Trip Generation while Appendix B contains the supporting documentation.

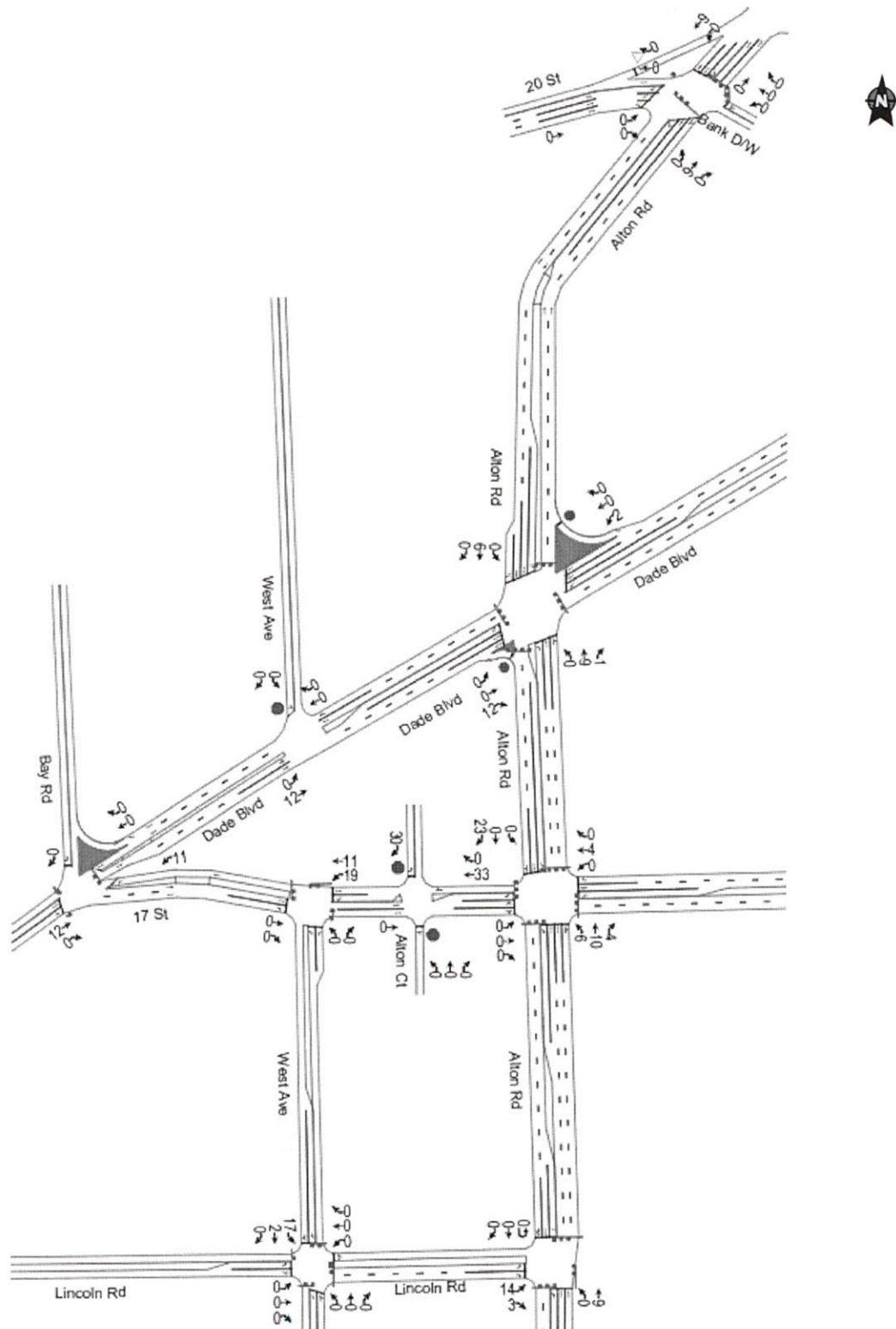
Table 3: PM Peak Hour Trip Generation Summary

LAND USE (LU)	UNITS	PM PEAK HOUR TRIPS				
		ITE LU CODE	ITE TRIP GENERATION RATE	TRIPS		
				IN	OUT	TOTAL
Existing						
Vacant						
Proposed						
Hotel (includes incidental dining area)	116 Rooms	310	0.59	36	32	68
Specialty Retail	1,600 Th.Sq.Ft	814	2.71	2	2	4
Proposed Gross Vehicle Trips				38	34	72
Transit & Pedestrian Trips				4	3	7
Project Internalization Trips				1	1	2
Total Vehicle Trips Adjustments				5	4	9
Net Vehicle Trips (Proposed Gross - Adjustments)				33	30	63

NOTES:

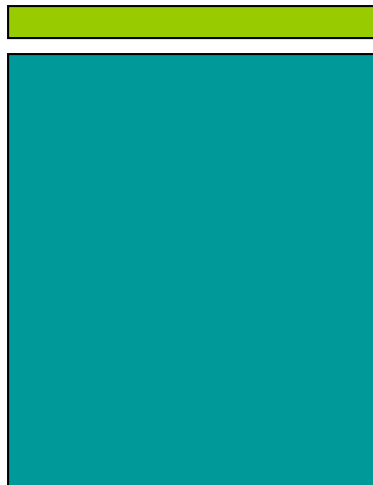
Sources: ITE Trip Generation, 8th Edition.

Figure 9: PM Peak Hour Site Traffic



1212 Lincoln Miami Beach, Florida

traffic study



prepared for:
Crescent Heights

Traf Tech
ENGINEERING, INC.

July 2014

TRIP GENERATION

The trip generation for the project was based on information contained in the Institute of Transportation Engineer's (ITE) *Trip Generation Manual (9th Edition)*. According to the subject ITE manual, the most appropriate "land use" category for the proposed land use is Land Use 826 – Specialty Retail Center. Table 1 below summarizes the external trips associated with the proposed 1212 Lincoln development.

TABLE 1			
Trip Generation Summary			
1212 Lincoln			
		Number of Trips	
Land Use	Size	Daily	PM Peak
EXISTING DEVELOPMENT			
Specialty Retail	55,800 sf	2,425	155
PROPOSED DEVELOPMENT			
Specialty Retail	83,700 sf	3,618	222
Difference		+1,193	+67

Source: ITE Trip Generation Manual (9th Edition)

As indicated in Table 1, the proposed 1212 Lincoln development is anticipated to generate approximately 3,618 gross daily trips and approximately 222 gross trips (98 inbound and 124 outbound) during the typical PM peak hour. The net new trips (proposed trips minus existing trips) include approximately 1,193 new daily trips and approximately 67 additional PM peak hour trips (29 inbound and 38 outbound).

ITE Land Use 826 – Specialty Retail Center

Weekday Trip Generation

$$T = 42.78 (X) + 37.66$$

Where T = number of weekday trips and

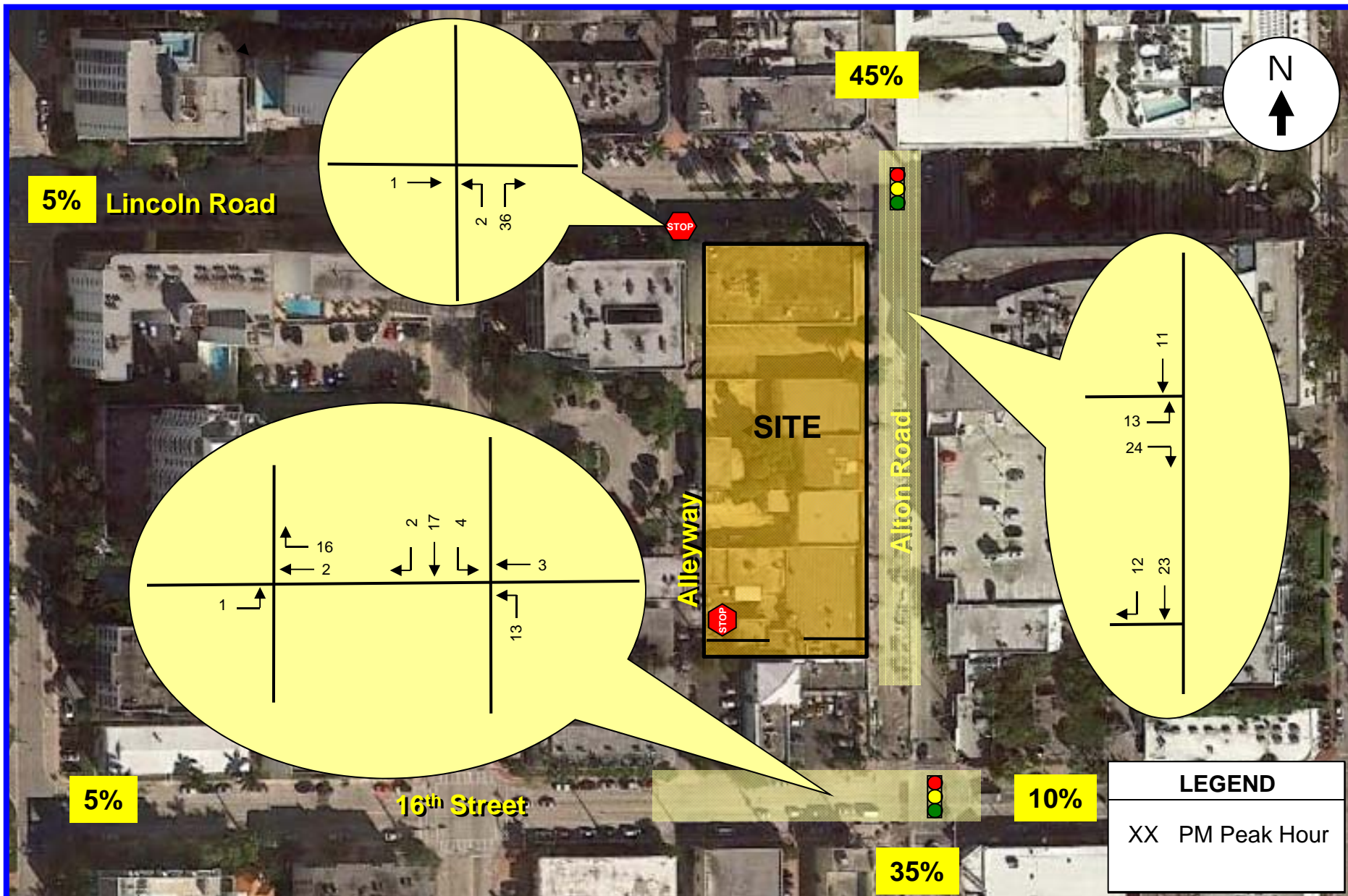
X = 1,000 square feet of gross leasable area

Weekday PM Peak Hour of Adjacent Street

$$T = 2.40 (X) + 21.48 \text{ (44\% inbound and 56\% outbound)}$$

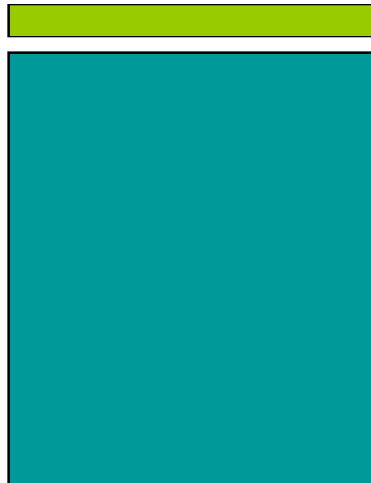
Where T = number of weekday PM peak hour trips and

X = 1,000 square feet of gross leasable area



1750 Alton Miami Beach, Florida

traffic study



prepared for:
SOBE Alton, LLC

Traf Tech
ENGINEERING, INC.

July 2015
Updated December 1, 2015

TRIP GENERATION

The trip generation for the project was based on information contained in the Institute of Transportation Engineer's (ITE) *Trip Generation Manual* (9th Edition). According to the subject ITE manual, the most appropriate "land use" category for the existing and proposed land uses includes: Land Use 310 – Hotel and Land Use 932 – High Turnover Restaurant. Table 1 summarizes the trips associated with the existing and proposed developments.

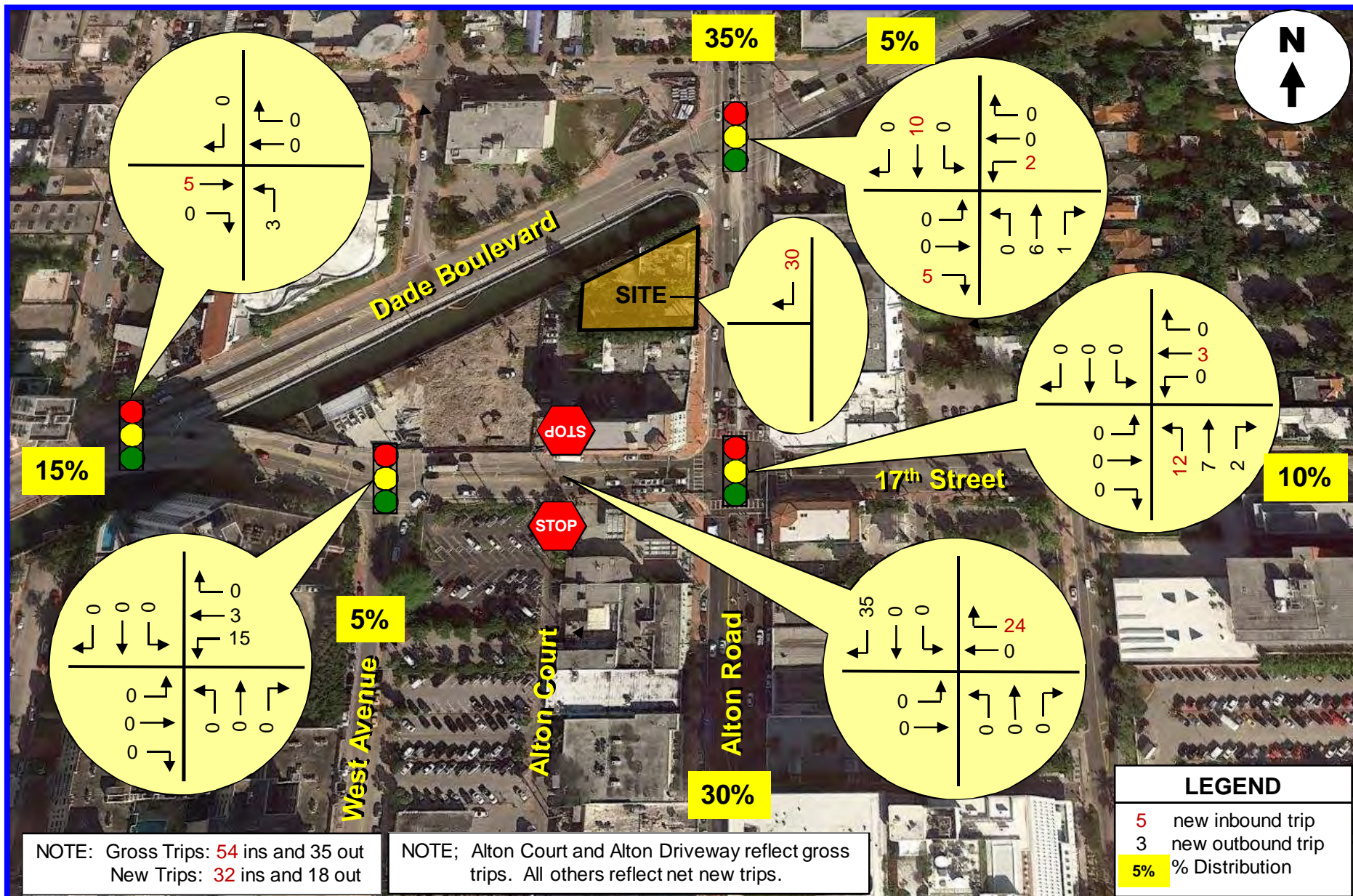
TABLE 1 Trip Generation Summary 1750 Alton Road					
Land Use	Size	Daily Trips	Weekday Peak Hour Trips		
			Inbound	Outbound	Total
EXISTING USE					
Restaurant	94 seats	454	22	17	39
PROPOSED USE					
Hotel	96 Rooms	784	34	25	59
Restaurant	160 seats	458	28	14	42
SubTotal		1,242	62	39	101
Internal Trips ¹ (30%)		-137	-8	-4	-12
Total		1,105	54	35	89
Difference	-	651	32	18	50

Source: ITE Trip Generation Manual (9th Edition)

As indicated in Table 1, the new (excluding the existing restaurant) trips anticipated to be generated by the proposed development consist of approximately 651 daily trips and approximately 50 trips during the weekday peak hour (32 inbound and 18 outbound). The trips associated with the restaurant are already accounted for in the traffic counts.

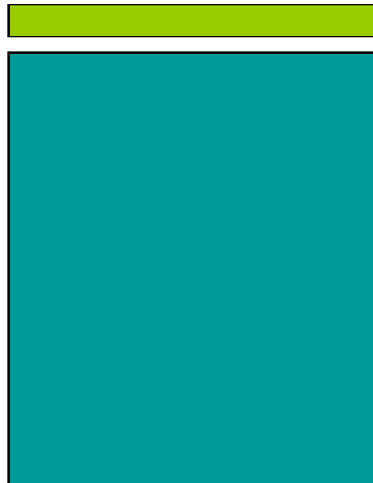
The trip generation rates used to determine the trips associated with the existing and proposed land uses are presented below:

¹ According to ITE's *Trip Generation Handbook* (Third Edition), up to 71% of restaurant trips within a hotel are internal trips. For purposes of this study, we have assumed that only 30% of the restaurant trips are internal to the project.



1800 Alton Miami Beach, Florida

traffic study



prepared for:
SABER 1800 ALTON, LLC

Traf Tech
ENGINEERING, INC.

October 2015
Update January 21, 2016

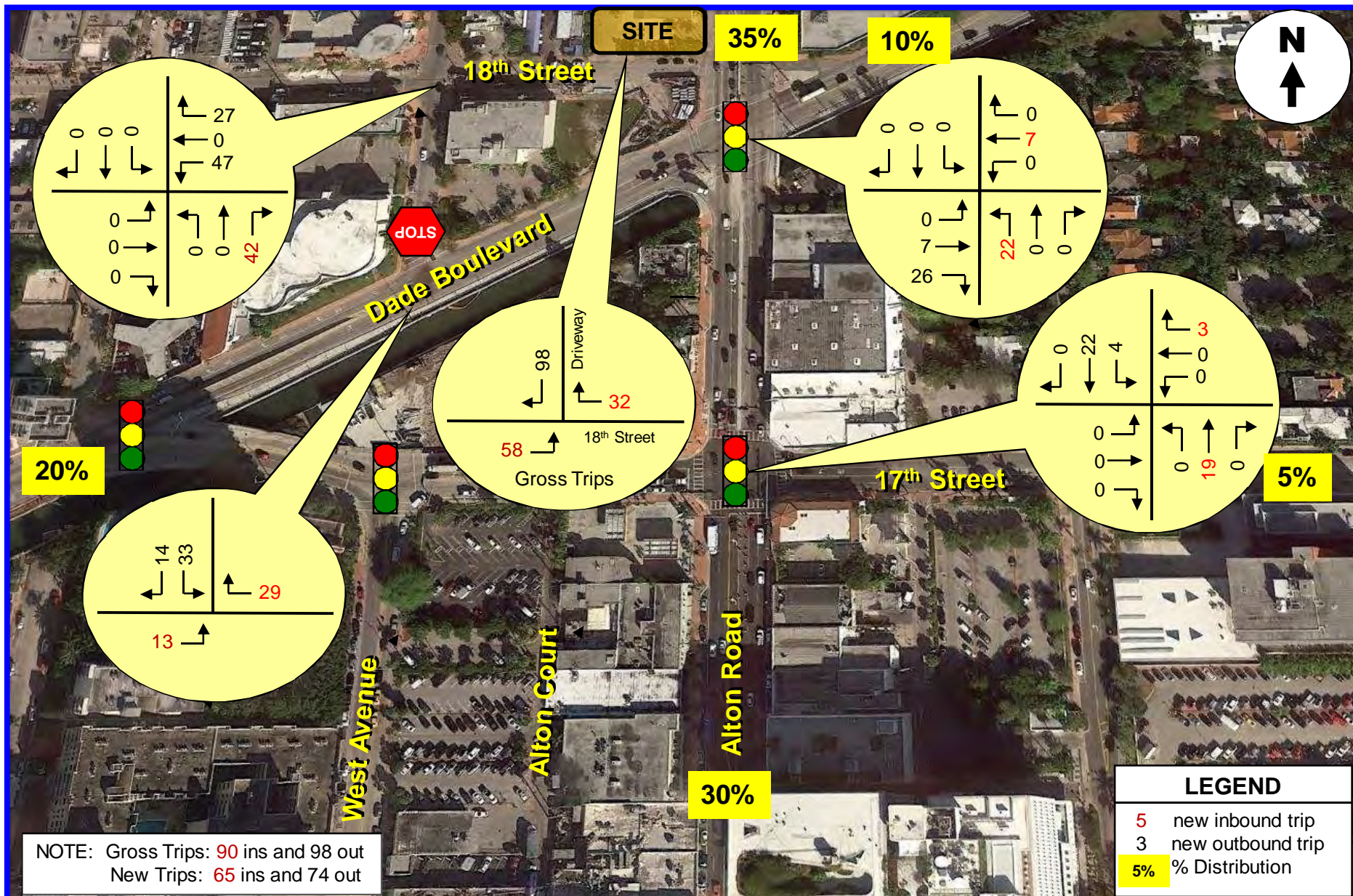
TRIP GENERATION

The trip generation for the project was based on information contained in the Institute of Transportation Engineer's (ITE) *Trip Generation Manual* (9th Edition). According to the subject ITE manual, the most appropriate "land use" category for the existing and proposed land uses includes: Land Use 820 – Shopping Center and Land Use 946 – Gasoline Service Station with Convenience Market and Car Wash. Table 1 summarizes the trips associated with the existing and proposed developments.

TABLE 1 Trip Generation Summary 1800 Alton Road					
Land Use	Size	Daily Trips	Weekday Peak Hour Trips		
			Inbound	Outbound	Total
EXISTING USE					
Gasoline Service	8 FP	1,222	56	54	110
Pass-by (56%)		-684	-31	-30	-61
External Trips		538	25	24	49
PROPOSED USE – Scenario 1					
Commercial	25,397 sf	2,786	115	124	239
Restaurant	160 seats	458	28	14	42
SubTotal 1		3,244	143	138	281
Pass-by (34%)		-1,103	-49	-47	-96
External Trips		2,141	94	91	185
PROPOSED USE – Scenario 2					
Commercial	32,897 sf	3,298	136	148	284
Pass-by (34%)		-1,121	-46	-50	-96
External Trips		2,177	90	98	188
Difference (Worse)	-	1,639	65	74	139

Source: ITE Trip Generation Manual (9th Edition)

If valet service is provided for the restaurant, no new trips will be generated. The drop-off and pickup locations are at the entrance into and out of the parking garage.



Proposed Condition (2013)

The proposed condition includes background growth, committed trips and site traffic. The following sections describe the constraints utilized to calculate the proposed peak hour volumes. Please note this project has a design year of 2013.

Background Growth

The background growth rate was obtained by performing a regression analysis utilizing the two (2) sources as follows:

- Available historical data from the FDOT Count Station 0012 – **Growth rate 0.64 percent.**
- Vehicle trips from the Miami-Dade County MPO Long Range Transportation Plan (SERPM) travel demand model for 2005 and 2035 – **Growth Rate 0.83 percent.**

Moreover, the most conservative rate was used in the analysis and therefore, an annual growth rate of 0.83 percent was applied to the existing traffic counts to address background growth in the area. Appendix C contains the supporting documentation.

Committed Development

As described in the Traffic Impact Study Methodology, all the committed development within the study area was quantified and utilized in the analysis. Please note this committed data was obtained from the City of Miami Beach and additional analysis performed by Richard Garcia & Associates, Inc. (RGA). As a result, the following projects were identified:

- The Fresh Market
- Sunset Harbor Garage and Retail Development
- Remodeling To Premises at 1920 Alton Road (RGA)

Please note the committed trips from the above projects were included in the proposed condition analysis. Appendix D contains the supporting documentation.

Proposed Condition with & without Project Traffic

Intersection Analysis

The intersections previously identified were augmented with the background growth rate, committed trips and project traffic. This forms the basis for the proposed future condition analysis with project traffic in 2013. Please note this condition includes the redistribution of traffic for the driveway on Sunset Drive since such driveway will be removed. Moreover, the proposed condition analysis was performed consistent with the future FDOT roadway improvements for the Alton Road project as described in the subsequent sections. The calculations for the specific movements at each intersection are contained in Appendix D. Figure 10 depicts the proposed AM peak hour volumes with project traffic while Figure 11 illustrates the PM peak hour volumes. Appendix E contains the supporting documentation including the volumes for the proposed condition without project traffic.

TABLE: A6

Sunset Palau - Revised

PM PEAK HOUR INTERSECTION APPROACH VOLUMES

INTERSECTION NO.	INTERSECTION NAME	APPROACH	MOVEMENT	PM PEAK HR COUNT	DATE OF COUNT	PHF	SF	PM PEAK SEASONALLY ADJUSTED (EXISTING) (2011)	BACKGROUND GROWTH @ 0.83% FOR 2 YEARS	COMMITTED DEVELOPMENT	NET TRAFFIC W/O PROJECT	SITE TRAFFIC (VPH)	TOTAL TRAFFIC (VPH) (PROPOSED) (2013)	
1	Alton Road & 20th Street	SOUTHBOUND	SBR	204	Tuesday, October 11, 2011	0.900	0.97	198	3	76	277	4	274	
			SBT	912				885	15	0	898	0	898	
			SBL	28				27	0	0	0	0	0	
			TOTAL	1144				1110	18	76	1175	4	1172	
		WESTBOUND	WBR	20		0.583	0.97	19	0	0	20	0	20	
			WBT	2				2	0	2	0	2		
			WBL	6				6	0	6	0	6		
			TOTAL	28				27	0	0	28	0	28	
		NORTHBOUND	NBR	24		0.956	0.97	23	0	0	24	0	24	
			NBT	1168				1133	19	0	1152	0	1152	
			NBL	119				115	2	15	132	2	131	
			TOTAL	1311				1272	21	15	1308	2	1307	
EASTBOUND	EBR	14	0.914	0.97	14	0	0	14	0	14				
	EBT	9			9	0	9	0	9					
	EBL	195			189	3	66	258	0	258				
	TOTAL	218			211	4	66	281	0	281				
TOTAL		2701		0.974		2620	44	157	2792	6	2788			
2	Alton Road & Sunset Drive	SOUTHBOUND	SBR	0	Tuesday, October 11, 2011	0.835	0.97	0	0	0	0	0	0	
			SBT	147				143	2	9	154	0	154	
			SBL	0				0	0	0	0	0	0	
			TOTAL	147				143	2	9	154	0	154	
		SOUTHWESTBOUND	SWBHR	1		0.956	0.97	1	0	0	0	0	0	0
			SWBTR	1				1	0	0	1	0	1	
			SWBL	977				948	16	0	963	0	963	
			TOTAL	979				950	16	0	964	0	964	
		NORTHBOUND	NBR	1319		0.948	0.97	1279	21	15	1316	2	1315	
			NBT	0				0	0	0	0	0	0	
			NBL	0				0	0	0	0	0	0	
			TOTAL	1319				1279	21	15	1316	2	1315	
EASTBOUND	EBR	7	0.667	0.97	7	0	0	7	0	7				
	EBT	0			0	0	0	0	0	0				
	EBL	0			0	0	0	0	0	0				
	TOTAL	7			7	0	0	7	0	7				
TOTAL		2452		0.975		2378	40	24	2441	2	2440			

TABLE: A6

Sunset Palau - Revised

PM PEAK HOUR INTERSECTION APPROACH VOLUMES

INTERSECTION NO	INTERSECTION NAME	APPROACH	MOVEMENT	PM PEAK HR COUNT	DATE OF COUNT	PHF	SF	PM PEAK SEASONALLY ADJUSTED (EXISTING) (2011)	BACKGROUND GROWTH @ 0.83% FOR 2 YEARS	COMMITTED DEVELOPMENT	NET TRAFFIC W/O PROJECT	SITE TRAFFIC (VPH)	TOTAL TRAFFIC (VPH) (PROPOSED) (2013)
3	20th Street & Sunset Drive	SOUTHBOUND	SBR	24	Tuesday, October 11, 2011	0.743	0.97	23	0	7	31	6	37
			SBT	46									
			SBL	26									
			TOTAL	96									
			WBR	56									
		WESTBOUND	WBT	229		0.834	0.97	222	4	91	317	6	323
			WBL	40									
			TOTAL	325									
			NBR	1									
		NORTHBOUND	NBT	2		0.626	0.97	2	0	0	0	0	0
			NBL	1									
			TOTAL	4									
		EASTBOUND	EBR	69	0.945	0.97	67	1	9	77	0	77	
			EBT	191									
			EBL	61									
			TOTAL	321									
		TOTAL		746	0.929		724	12	185	917	11	902	
4	20th Street & West Avenue	SOUTHBOUND	SBR	0	Tuesday, October 11, 2011	0.583	0.97	0	0	0	0	0	0
			SBT	0									
			SBL	7									
			TOTAL	7									
		WESTBOUND	WBR	1		0.859	0.97	1	0	0	1	0	1
			WBT	153									
			WBL	110									
			TOTAL	264									
		NORTHBOUND	NBR	84	0.884	0.97	81	1	21	104	2	102	
			NBT	0									
			NBL	14									
			TOTAL	98									
		EASTBOUND	EBR	72	0.885	0.97	70	1	58	287	7	282	
			EBT	232									
			EBL	1									
			TOTAL	305									
		TOTAL		674	0.913		654	11	178	843	8	835	

TABLE: A6

Sunset Palau - Revised

PM PEAK HOUR INTERSECTION APPROACH VOLUMES

INTERSECTION NO.	INTERSECTION NAME	APPROACH	MOVEMENT	PM PEAK HR COUNT	DATE OF COUNT	PHF	SF	PM PEAK SEASONALLY ADJUSTED (EXISTING) (2011)	BACKGROUND GROWTH @ 0.83% FOR 2 YEARS	COMMITTED DEVELOPMENT	NET TRAFFIC W/O PROJECT	SITE TRAFFIC (VPH)	TOTAL TRAFFIC (VPH) (PROPOSED) (2013)
5	Sunset Drive & North Bay Road	SOUTHBOUND	SBR	4	Tuesday, October 11, 2011	0.680	0.97	54	0	0	63	4	67
			SBT	56									
			SBL	11									
			TOTAL	68									
		SOUTHWESTBOUND	SWBR	3		0.719	0.97	3	0	0	3	0	0
			SWBT	2									
			SWBL	41									
			TOTAL	46									
		NORTHBOUND	NBR	50		0.787	0.97	49	1	2	51	0	51
			NBT	53									
			NBL	26									
			TOTAL	129									
		EASTBOUND (MARK'S DRIVEWAY) (Not Allowed)	EBR	0	0.563	0.97	0	0	0	0	0	0	0
			EBT	0									
			EBL	0									
			TOTAL	0									
		TOTAL	243		0.863		236	4	19	259	5	235	

Notes:

- 1 Intersection Name
 - 2 Intersection Approach
 - 3 Intersection Approach Movement
 - 4 TMC data provided by RGA, Inc.
 - 5 Date of Count
 - 6 Peak Hour Factor
 - 7 Seasonal Factor obtained from FDOT
 - 8 Seasonally Adjusted TMC = Count * SF (These are the volumes utilized in the existing condition intersection LOS)
 - 9 A 0.83 percent background growth was utilized with a project build-out of two years.
 - 10 Committed Traffic
 - 11 Proposed Traffic w/o Project = Peak Seasonally Adjusted TMC + Background + Committed
 - 12 Site traffic assignment
 - 13 Total Traffic = Net Traffic + Site Traffic (These are the volumes utilized in the proposed intersection LOS analysis)
- Volume was redistributed due to removal of driveway on Sunset Drive
- Adjusted volumes with redistribution of traffic.

Mickey Marrero

Subject: FW: Finvarb - Responses to Comments from Xavier Falconi (17th Street Marriott Residence Inn)
Attachments: 17th Street Hotel_Analysis_rev3_A4.pdf

From: Richard [mailto:rgarcia@rgattraffic.com]
Sent: Friday, December 07, 2012 11:41 AM
To: Mickey Marrero
Cc: "Richard Finvarb"; "Ronald Finvarb"
Subject: RE: Finvarb - Responses to Comments from Xavier Falconi (17th Street Marriott Residence Inn)

Here you go, my responses are in CAPS.

Comments (Salman Rathore): Although your previously submitted valet analysis showed over 90% operating capability, it is important to perform the same analysis based on the revised site plan. Your analysis may or may not yield the same results but it needs to be documented based on the new internal traffic pattern. Also provide an updated site plan clearly showing the pick-up and drop-off location.

THE STATISTICAL ANALYSIS PROVIDED DOES NOT CHANGE SINCE THE VARIABLES HAVE NOT CHANGED. THE NUMBER OF TRIPS ARE STILL THE SAME AND THE SERVICES RATES USED ARE CONSERVATIVE.

Comments (Salman Rathore): In regards to the 33 re-assigned entering and 30 existing trips (submitted as part of the memo) some questions still remain unanswered for the following intersections:

- **Alton Ct/17th Street:** WB Left Turning trips are reduced from 44 to 11 which makes sense. Those reduced trips (33) should be added to the WB through movement of 492 (becomes 525).
- **17th Street/West Avenue:** WB Left Turning trips are reduced from 365 to 332. The WB through trips remains the same (201). This doesn't make sense keeping in mind that 58 Southbound right turning trips (From Alton Ct/17th Street) are going WB and reach 17th Street/West Avenue. Please adjust the WB through/left turning traffic to include the 58 trips coming from the project site.
- **17th Street/Alton Road:** The NB left turning trips are reduced from 100 to 67 (33 short that is the project entering traffic) but are not added back to any other intersection movement since the remaining trips (all directions) remain the same as before. Please add these 33 project entering trips to either NB Left turn trips or WB Through trips or Southbound right trips.
- **West Avenue/Lincoln Rd, Alton Road/Lincoln Rd:** Similar to above comment please explain reduction of SB Left turning traffic at **West Avenue/Lincoln Rd** and EB Left turning traffic at **Alton Road/Lincoln Rd**. It seems to have been reduced by 33 entering trips, show where those trips get added to before it reaches the project driveway.

Please revise and reassign all the above intersection traffic and resubmit Proposed PM Peak Hour with project figure along with the revised synchro analysis.

THE 33 TRIPS ARE NOT BEING RE-ASSIGNED AS STATED BY THE REVIEWER, THEY ARE BEING ELIMINATED SINCE THE VALET NO LONGER MUST CIRCULATE AROUND THE BLOCK. PLEASE SEE THE ATTACHED INTERSECTION VOLUME SPREADSHEET WITH THE VALET TRAFFIC COLUMN 13 HIGHLIGHTED.

PLEASE NOTE, IN OUR ORIGINAL ANALYSIS, WE FIRST ASSIGNED THE TRIPS IN AND OUT OF THE SITE USING THE STANDARD TAZ METHOD AS SHOWN ON COLUMN 12. THEN WE CIRCULATED THE VALET TRIPS ON COLUMN 13. THOSE TRIPS ON COLUMN 13 WERE SUBSEQUENTLY ZERO, SINCE THESE TRIPS NO LONGERE NEED TO RE-CIRCULATE AROUND THE BLOCK. WE HAVE RE-CHECKED OUR ANALYSIS AND FIND IT IS CORRECT.

Comments (Salman Rathore): See my comment 2 above. Provide an updated site plan clearly showing the pick-up and drop-off location.

PLEASE HAVE THE ARCHITECT PROVIDE.

Respectfully,

Richard Garcia, P.E.



Richard Garcia & Associates Inc.
13117 NW 107th Avenue, Suite 4
Hialeah Gardens, FL 33018
PH: 305-595-7505
FAX: 305-675-6474

TABLE A-4

17th Street Hotel

PM PEAK HOUR INTERSECTION APPROACH VOLUMES

INTERSECTION NO.	INTERSECTION NAME	APPROACH	MOVEMENT	PM PEAK HOUR COUNT	DATE OF COUNT	PHF	SF	PM PEAK SEASONALLY ADJUSTED (EXISTING) (2012)	BACKGROUND GROWTH @ 0.62% FOR 3 YEARS	COMMITTED DEVELOPMENT	TOTAL TRAFFIC (VPH) PROPOSED W/O PROJECT (2015)	SITE TRAFFIC (VPH) VALET OPERATION	TOTAL TRAFFIC (VPH) (PROPOSED W/ PROJECT) (2015)
1	Allen Road & 17th Street	SOUTHBOUND	SBR	171	Tuesday, July 10, 2012	0.983	1.02	174	3	0	178	23	201
			SBL	810			1.02	828	15	0	842	0	842
			TOTAL	981			1.02	1002	18	0	1020	0	1020
			WBR	301			1.02	307	6	0	313	0	313
		WESTBOUND	WBL	144			1.02	147	3	0	150	4	154
			TOTAL	272			1.02	277	9	0	283	0	283
			NBR	717			1.02	731	14	0	745	4	749
			NBL	786			1.02	802	15	0	817	10	827
		NORTHBOUND	TOTAL	1503			1.02	1538	19	0	1557	6	1563
			EBR	76			1.02	78	1	0	79	0	79
			EBL	142			1.02	145	3	0	148	0	148
			TOTAL	318			1.02	323	4	0	327	0	327
		EASTBOUND	TOTAL	590			1.02	602	11	0	613	0	613
			TOTAL	3515			1.02	3585	67	0	3652	47	3699
2	17 Street & West Avenue	SOUTHBOUND	SBR	0	Tuesday, July 10, 2012	0.958	1.02	0	0	0	0	0	0
			SBL	0			1.02	0	0	0	0	0	0
			TOTAL	0			1.02	0	0	0	0	0	0
		WESTBOUND	WBR	0			1.02	0	0	0	0	0	0
			WBL	176			1.02	180	3	7	190	11	201
			TOTAL	301			1.02	307	6	7	313	19	332
		NORTHBOUND	NBR	255			1.02	260	5	0	265	0	265
			NBL	0			1.02	0	0	0	0	0	0
			TOTAL	255			1.02	260	5	0	265	0	265
		EASTBOUND	EBR	259			1.02	264	5	13	282	0	282
			EBL	228			1.02	233	4	7	244	0	244
			TOTAL	487			1.02	497	9	20	526	0	526
		TOTAL	TOTAL	1444			1.02	1473	28	41	1541	30	1571

TABLE: A4

17th Street Hotel

PM PEAK HOUR INTERSECTION APPROACH VOLUMES

INTERSECTION NO.	INTERSECTION NAME	APPROACH	MOVEMENT	PM PEAK HR COUNT	DATE OF COUNT	PHF	SF	PM PEAK SEASONALLY ADJUSTED (EXISTING) (2012)	BACKGROUND GROWTH @ 0.62% FOR 3 YEARS	COMMITTED DEVELOPMENT	TOTAL TRAFFIC (PROPOSED W/O PROJECT) (2015)	SITE TRAFFIC (VPH) VALET OPERATION	TOTAL TRAFFIC (VPH) (PROPOSED W/ PROJECT) (2015)			
3	Dade Boulevard & West Avenue	SOUTHBOUND	SBR	50	Tuesday, July 10, 2012	0.887	1.02	51	1	0	52	0	52			
			SBT	0			1.02	0	0	0	0	0				
			*SBL	90			1.02	92	2	7	101	0	101			
		TOTAL	140				143	3	7	152	0	152				
		SWBR	91	1.02			93	2	0	95	0	95				
		SWBT	181	1.02			185	3	14	202	0	202				
		SWBL	0	1.02			0	0	0	0	0	0				
		TOTAL	272				277	5	14	297	0	297				
		NORTHBOUND	NBR	0			1.02	0	0	0	0	0	0	0	0	0
			NBT	0			1.02	0	0	0	0	0	0	0	0	0
NBL	0		1.02	0	0	0	0	0	0	0	0	0				
NORTHEASTBOUND	TOTAL	0		0		0	0	0	0	0	0	0				
	NEBR	0	1.02	0	0	0	0	0	0	0	0	0	0			
	*NEBT	237	1.02	242	5	0	245	12	258	0	258	0	258			
	*NEBL	25	1.02	26	0	21	47	0	47	0	47	0	47			
	TOTAL	282		287	5	21	293	12	305	0	305	0	305			
	TOTAL			674				887	13	42	742	12	754			
4	Allon Road & Dade Boulevard	SOUTHBOUND	SBR	43	Tuesday, July 10, 2012	0.985	1.02	44	1	0	45	0	45			
			SBT	900			1.02	918	17	13	948	9	957			
			SBL	50			1.02	51	1	7	59	0	59			
		SBU	22	1.02			22	0	0	23	0	23				
		TOTAL	1015				1013	19	20	1075	9	1084				
		WBR	96	1.02			98	2	0	100	0	100				
		WBT	110	1.02			112	2	7	121	0	121				
		WBL	269	1.02			274	5	0	280	2	282				
		TOTAL	475				485	9	7	501	2	503				
		NBR	224	1.02			229	4	0	233	1	234				
NORTHBOUND	NBT	1141	1.02	1164	22	7	1193	9	1202							
	NBL	74	1.02	75	1	84	1	84								
	TOTAL	1439		1468	27	14	1509	10	1519							
EASTBOUND	*EBR	59	1.02	60	1	61	12	73								
	*EBT	101	1.02	102	103	2	112	0	112							
	*EBL	97	1.02	98	2	0	101	0	101							
	TOTAL	257		262	5	7	274	12	286							
	TOTAL			3186			3227	61	3359	33	3392					

TABLE A-4

17th Street Hotel

PM PEAK HOUR INTERSECTION APPROACH VOLUMES

INTERSECTION NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
INTERSECTION NAME	APPROACH	MOVEMENT	PM PEAK HR COUNT	DATE OF COUNT	PHF	SF	PM PEAK SEASONALLY ADJUSTED (EXISTING) (2012)	BACKGROUND GROWTH @ 0.62% FOR 3 YEARS	COMMITTED DEVELOPMENT	TOTAL TRAFFIC (VPH) W/O PROJECT (2015)	SITE TRAFFIC (VPH) VALET OPERATION	TOTAL TRAFFIC (VPH) (PROPOSED W/ PROJECT) (2015)			
5	17 Street / Bay Road & Dade Boulevard	SOUTH-BOUND	SBR	Tuesday, July 10, 2012	0.963	1.02	23	0	27	51	0	51			
			SBT			0	0	0	0	0					
			SBL			0	0	0	0	0					
		TOTAL	23			1.02	23	0	27	51	0	51			
		WEST-BOUND	WBR			0	1.02	0	0	0	0	0	0	0	0
			WBT			0	1.02	0	0	0	0	0	0	0	0
			WBL			357	1.02	354	7	21	392	11	0	403	
		TOTAL	357			1.02	354	7	21	392	11	0	403		
		NORTH-EAST-BOUND	NBR			506	1.02	516	10	20	546	0	0	546	
			*NEBT			319	1.02	325	6	0	331	12	0	343	
			NEBL			0	1.02	0	0	0	0	0	0	0	
		TOTAL	825			1.02	842	16	20	877	12	0	889		
		SOUTH-WEST-BOUND	SWBR			69	1.02	70	1	14	86	0	0	86	
SWBT	162		1.02	165	3	0	168	0	0	168					
SWBL	0		1.02	0	0	0	0	0	0	0					
TOTAL	231	1.02	236	4	14	254	0	0	254						
TOTAL	1436	1.02	1465	27	82	1574	23	0	1597						
6	Allen Road & 20 Street	SOUTH-BOUND	SBR	Tuesday, July 10, 2012	0.994	1.02	209	4	52	265	0	265			
			SBT			846	1.02	853	16	0	879	0	883		
			SBL			23	1.02	23	0	24	0	0	24		
		TOTAL	1074			1.02	1074	21	52	1168	9	0	1177		
		WEST-BOUND	WBR			12	1.02	12	0	0	12	0	0	12	
			WBT			1	1.02	1	0	0	1	0	0	1	
			WBL			2	1.02	2	0	0	2	0	0	2	
		TOTAL	15			1.02	15	0	0	15	0	0	15		
		NORTH-BOUND	NBR			13	1.02	13	0	0	13	0	0	13	
			NBT			1089	1.02	1111	21	0	1132	9	0	1141	
			NBL			107	1.02	109	2	16	127	0	0	127	
		NEBL	19			1.02	19	0	0	20	0	0	20		
		TOTAL	1228			1.02	1253	23	16	1292	9	0	1301		
		EAST-BOUND	EBR			22	1.02	22	0	0	23	0	0	23	
			EBT			8	1.02	8	0	0	8	0	0	8	
EBL	247		1.02	252	5	45	302	0	0	302					
TOTAL	277	1.02	283	5	45	333	0	0	333						
TOTAL	2594	1.02	2646	50	113	2808	18	0	2826						

TABLE A4

17th Street Hotel

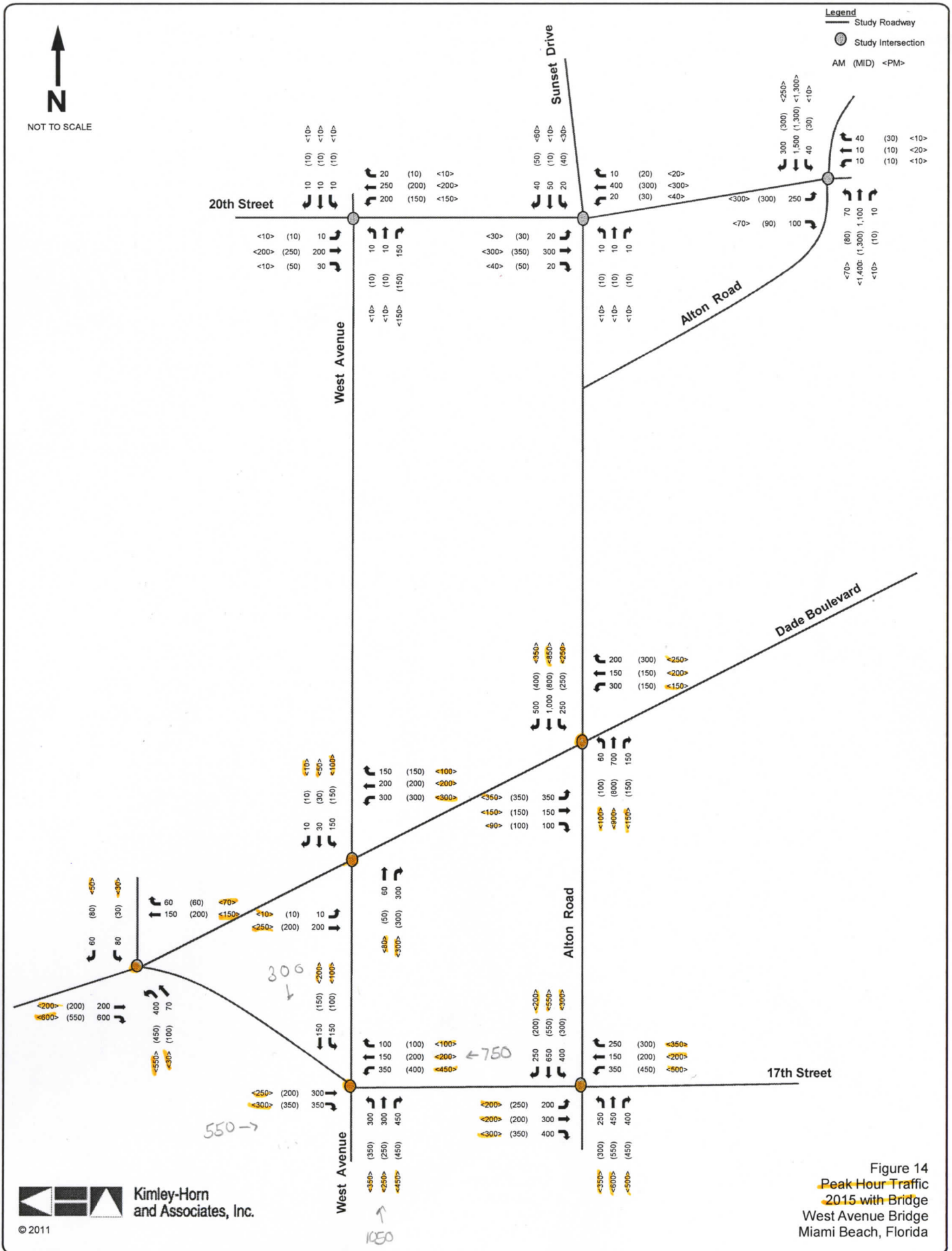
PM PEAK HOUR INTERSECTION APPROACH VOLUMES

INTERSECTION NO.	INTERSECTION NAME	APPROACH	MOVEMENT	PM PEAK HR COUNT	DATE OF COUNT	PHF	SF	PM PEAK SEASONALLY ADJUSTED (EXISTING) (2012)	BACKGROUND GROWTH @ 0.62% FOR 3 YEARS	COMMITTED DEVELOPMENT	TOTAL TRAFFIC (VPH) PROPOSED W/O PROJECT (2015)	SITE TRAFFIC (VPH) OPERATION	TOTAL TRAFFIC (VPH) PROPOSED W/ PROJECT (2015)
7	Allon Road & Lincoln Road	SOUTHBOUND	SBRT	100	Tuesday, July 10, 2012	0.975	1.02	102	2	0	104	0	104
			SBT	1025			1.02	1048	20	0	1065	0	1065
			SBL	25			1.02	26	0	0	26	0	26
			TOTAL	1150			1.02	1173	22	0	1195	0	1195
		WESTBOUND	WBRT	0			1.02	0	0	0	0	0	0
			WBT	0			1.02	0	0	0	0	0	0
			WBL	0			1.02	0	0	0	0	0	0
			TOTAL	0			1.02	0	0	0	0	0	0
		NORTHBOUND	NBRT	0			1.02	0	0	0	0	0	0
			NBT	938			1.02	957	18	0	975	9	984
8	Lincoln Road & West Avenue	SOUTHBOUND	NBL	70			1.02	71	1	0	73	0	73
			TOTAL	1008			1.02	1028	19	0	1047	9	1056
		WESTBOUND	EBRT	65			1.02	66	1	0	68	3	71
			EBT	0			1.02	0	0	0	0	0	0
		EASTBOUND	EBL	68			1.02	69	1	0	71	14	85
			TOTAL	133			1.02	136	3	0	138	17	155
		TOTAL		2297			1.02	2337	44	0	2381	26	2407
		SOUTHBOUND	SBRT	89			1.02	91	2	0	92	0	92
			SBT	397			1.02	405	8	0	413	2	415
			SBL	25			1.02	26	0	0	26	0	26
9	17 Street & Allon Court	SOUTHBOUND	TOTAL	511			1.02	521	10	0	531	19	550
		WESTBOUND	WBRT	42			1.02	43	1	0	44	0	44
			WBT	45			1.02	46	1	0	47	0	47
			WBL	46			1.02	47	1	0	48	0	48
		NORTHBOUND	TOTAL	133			1.02	136	3	0	138	0	138
			NBRT	46			1.02	47	1	0	48	0	48
			NBT	411			1.02	419	8	0	427	0	427
			NBL	13			1.02	13	0	0	14	0	14
		EASTBOUND	TOTAL	470			1.02	479	9	0	488	0	488
			EBRT	23			1.02	23	0	0	24	0	24
9	17 Street & Allon Court	SOUTHBOUND	EBT	29			1.02	30	1	0	30	0	30
			EBL	54			1.02	55	1	0	56	0	56
			TOTAL	106			1.02	108	2	0	110	0	110
		WESTBOUND	SBRT	15			1.02	15	23	0	38	19	57
			SBT	0			1.02	0	0	0	0	0	0
			SBL	12			1.02	12	0	0	12	0	12
			TOTAL	27			1.02	27	1	0	28	0	28
		WESTBOUND	WBRT	11			1.02	11	0	0	11	0	11
			WBT	435			1.02	444	8	7	459	33	492
			WBL	0			1.02	0	0	0	0	0	0
9	17 Street & Allon Court	SOUTHBOUND	TOTAL	446			1.02	455	9	7	470	33	503
		WESTBOUND	NBRT	78			1.02	80	1	0	81	0	81
			NBT	1			1.02	1	0	0	1	0	1
			NBL	26			1.02	27	0	0	27	0	27
		EASTBOUND	TOTAL	105			1.02	107	2	0	109	0	109
			EBRT	0			1.02	0	0	0	0	0	0
			EBT	489			1.02	489	9	0	508	0	508
			EBL	4			1.02	4	0	0	4	0	4
		EASTBOUND	TOTAL	493			1.02	503	9	0	512	0	512
			TOTAL	1071			1.02	1092	20	7	1120	63	1183

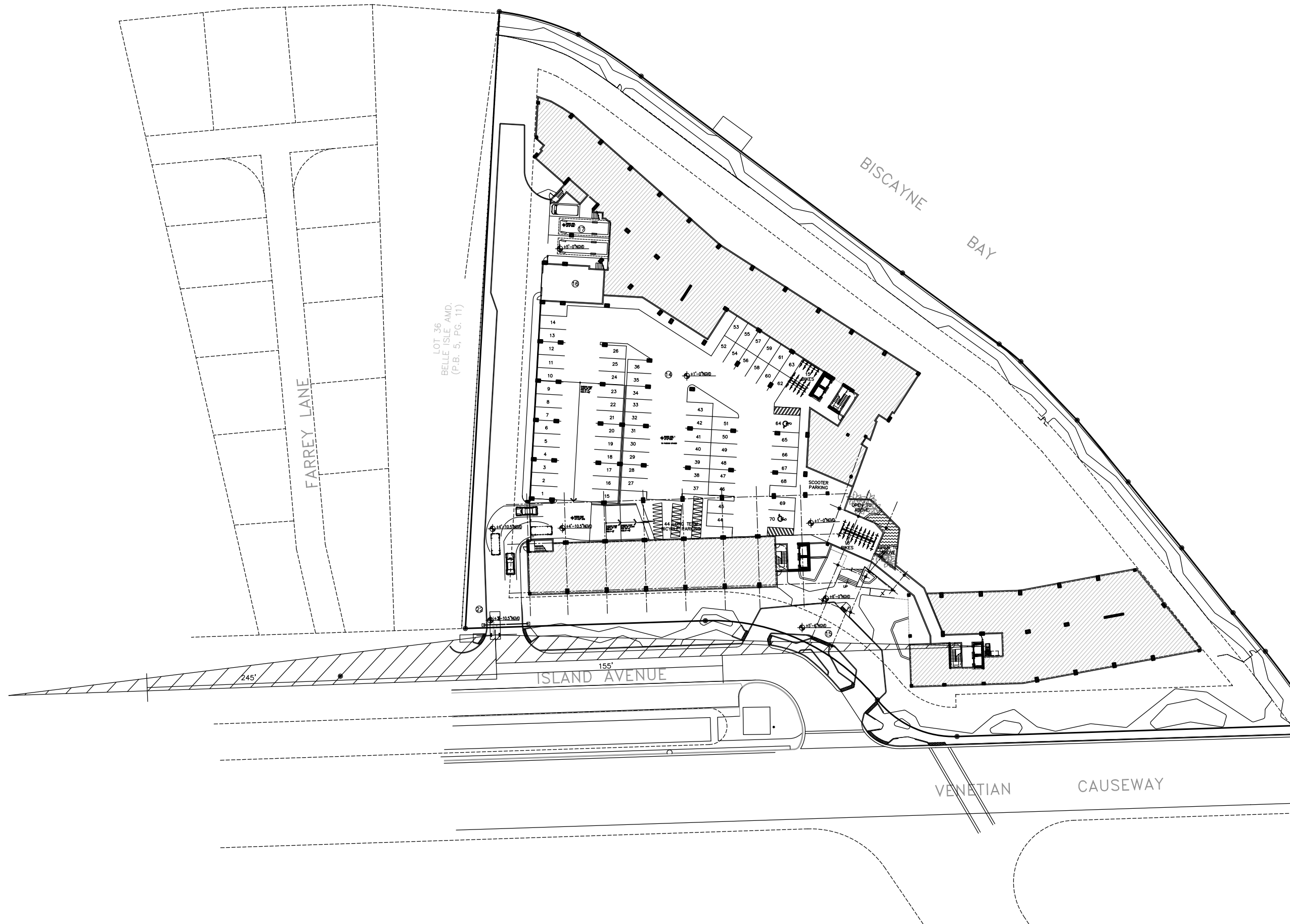
Notes:

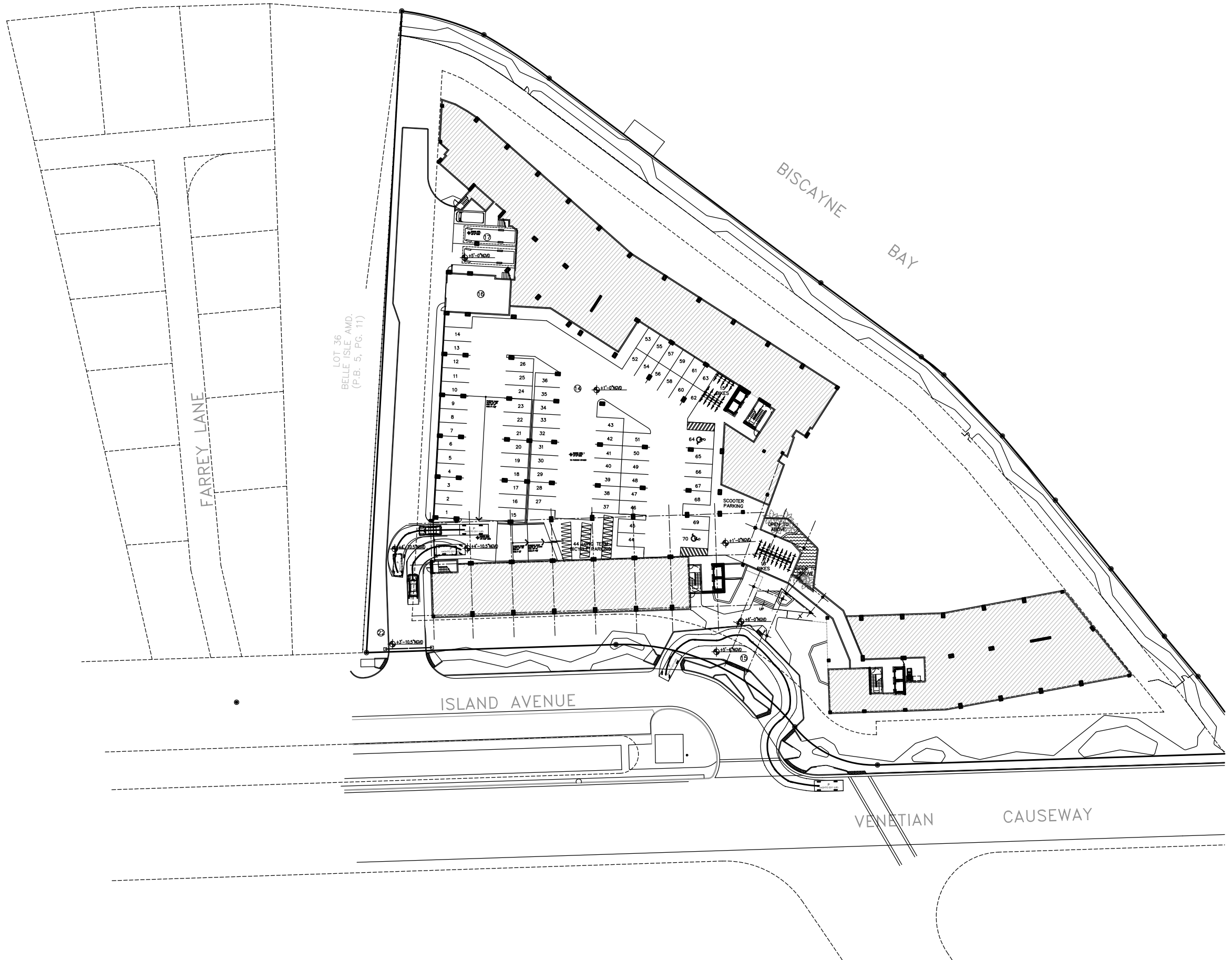
- * Volumes extrapolated from POKE TMC data.
- 1 Intersection Name
- 2 Intersection Approach
- 3 Intersection Approach Movement
- 4 TMC data provided by RGA, Inc.
- 5 Date of Count
- 6 Peak Hour Factor
- 7 Seasonal Factor obtained from FDOT
- 8 Seasonally Adjusted TMC = Count * SF (These are the volumes utilized in the existing condition Intersection LOS).
- 9 A 0.62 percent background growth was utilized with a project build-out of three years.
- 10 Committed Traffic.
- 11 Proposed Traffic w/o Project = Peak Seasonally Adjusted TMC + Background+Committed
- 12 Site traffic assignment.
- 13 Site traffic assignment for Valet Operation.
- 14 Total Traffic = Net Traffic + Site Traffic (These are the volumes utilized in the proposed intersection LOS analysis)

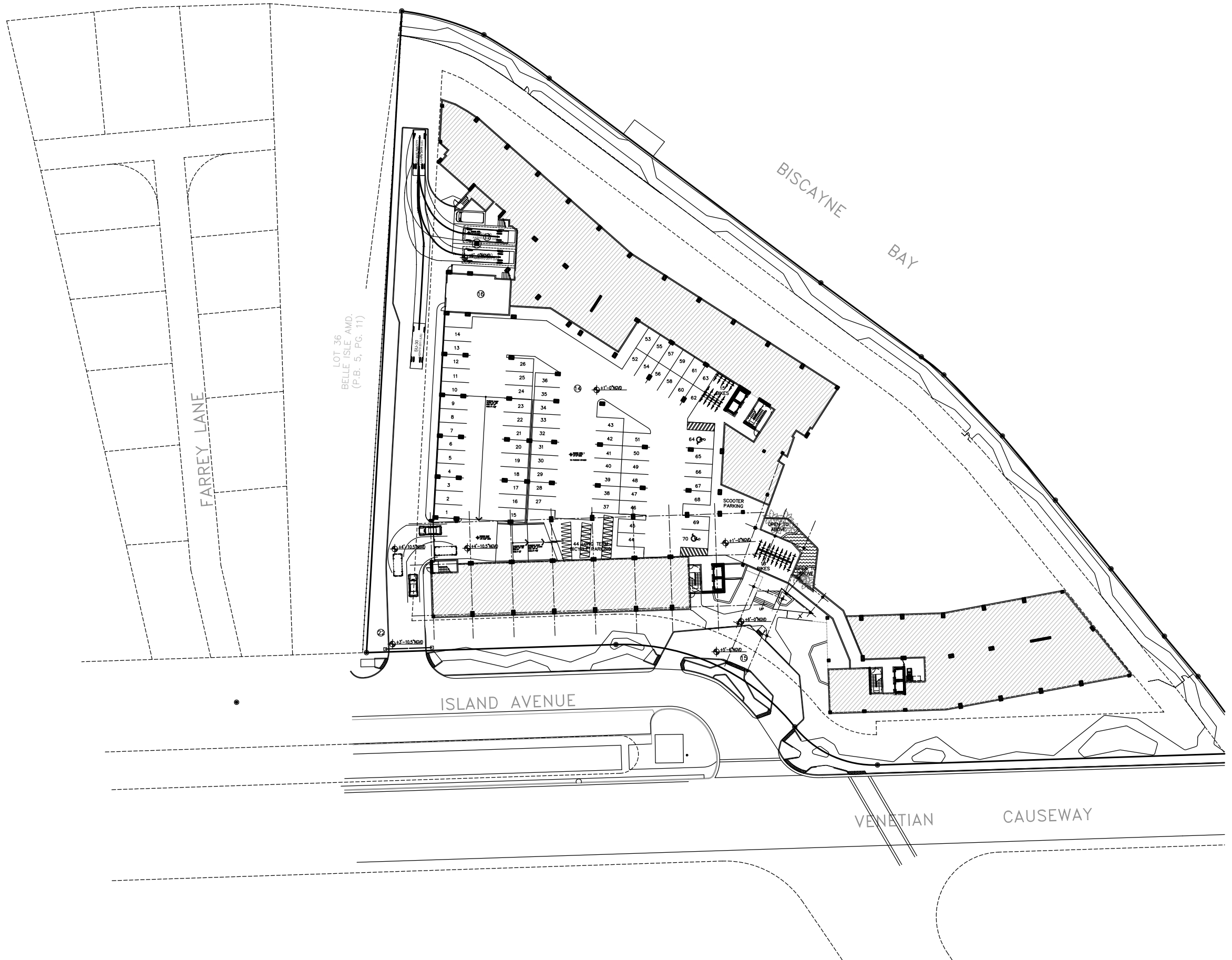
Appendix F
West Bridge PD&E Documentation

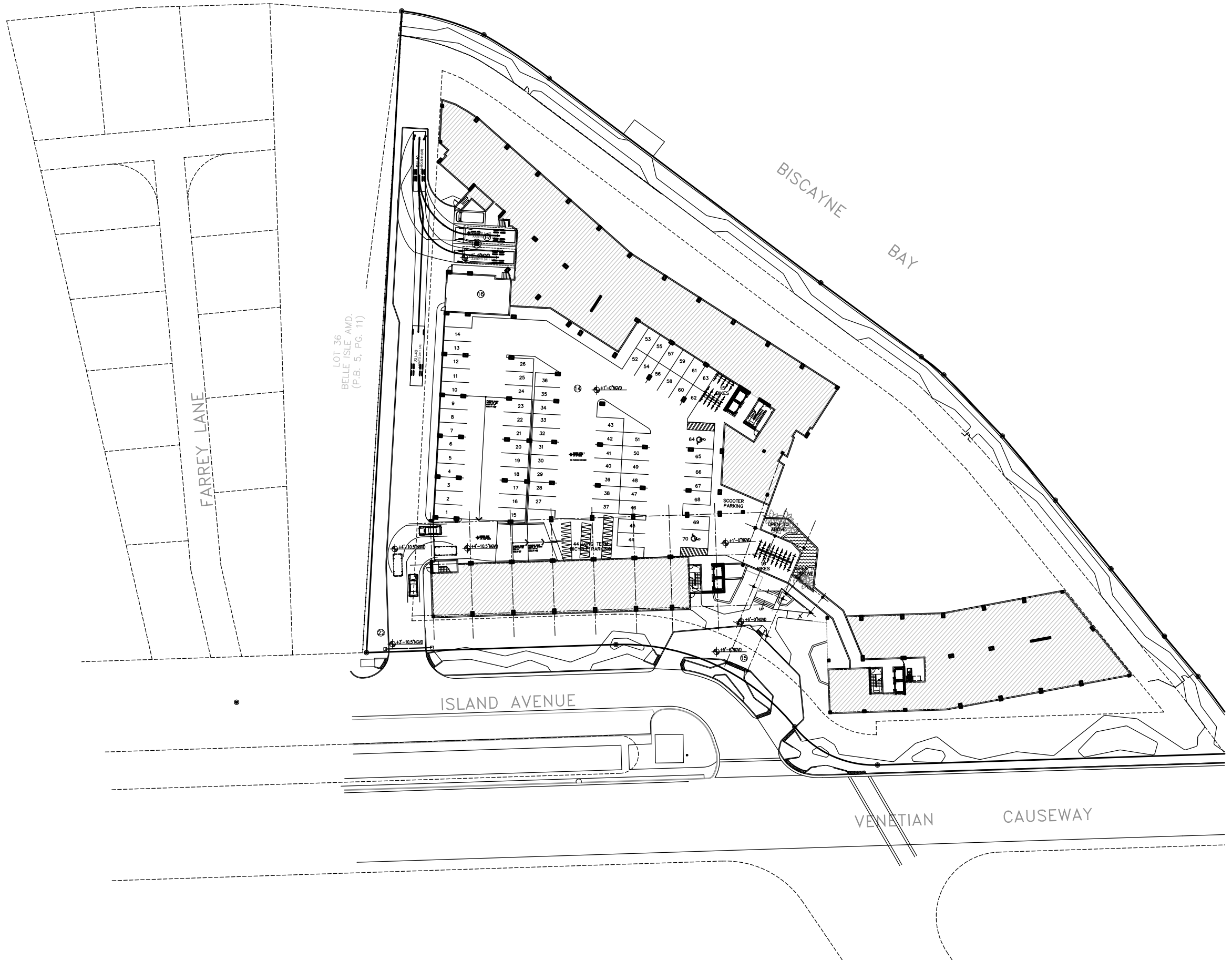


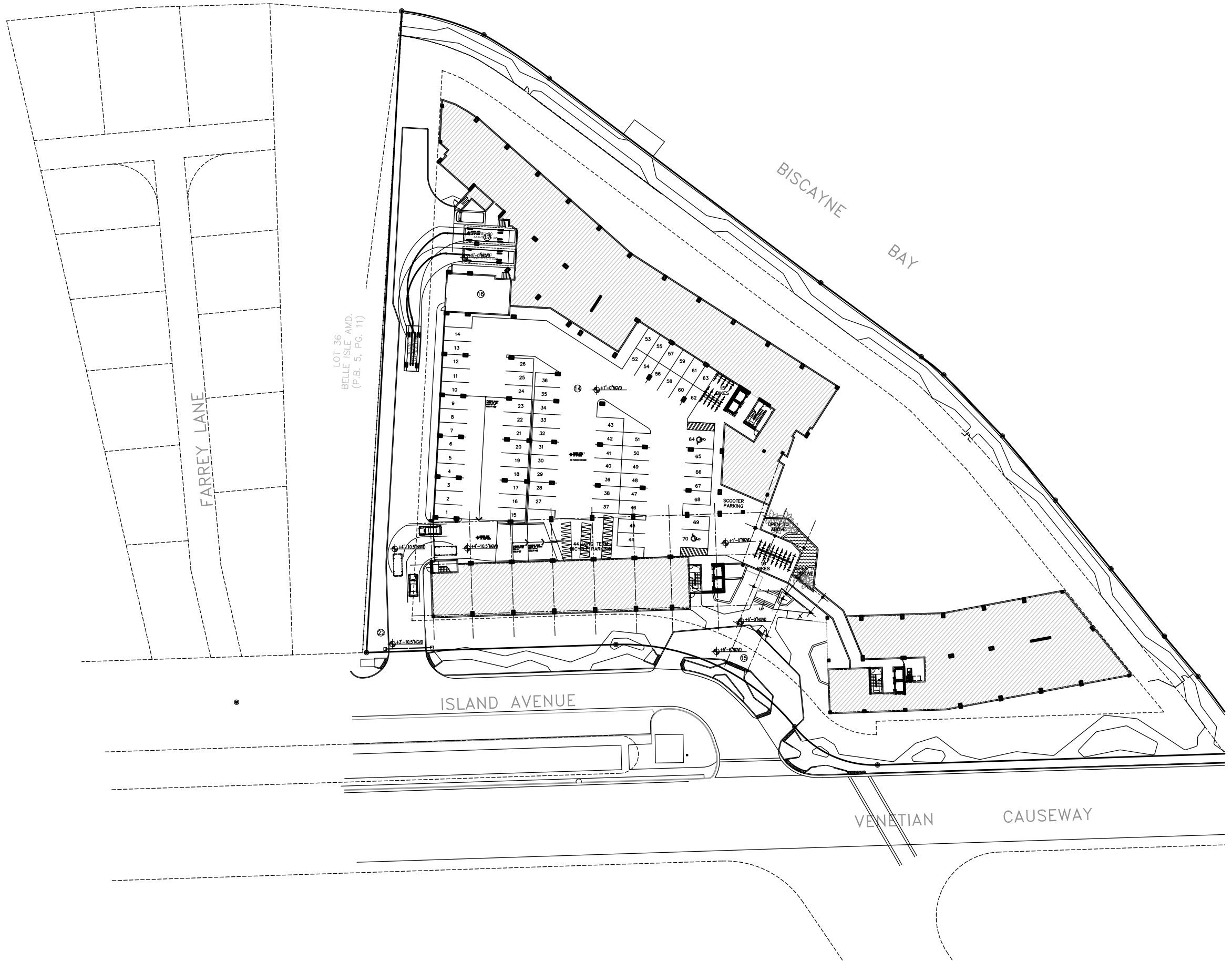
Appendix G
Circulation / Bus Route Information

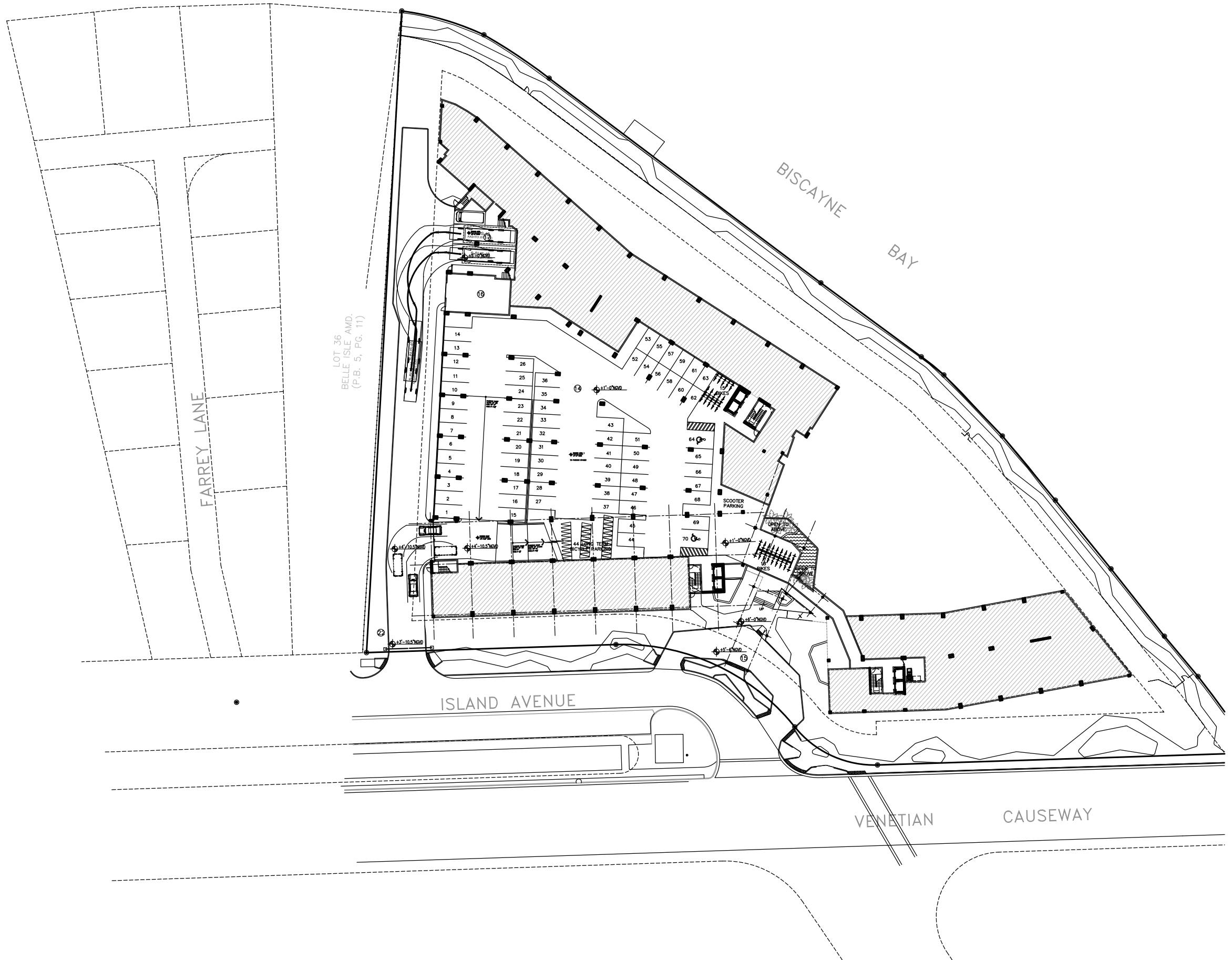




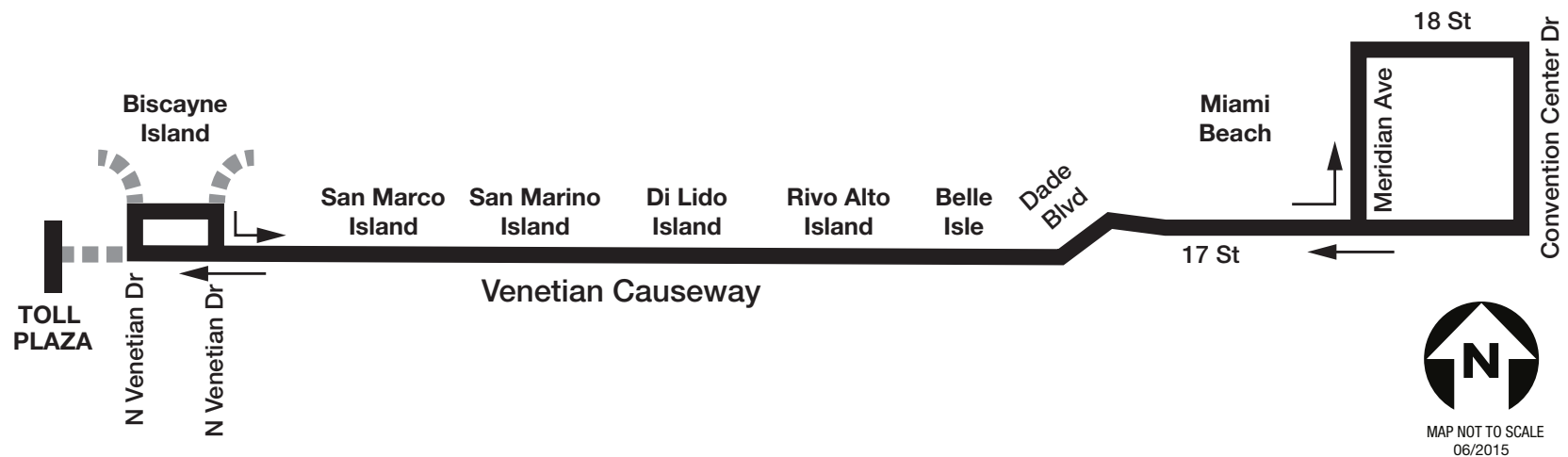




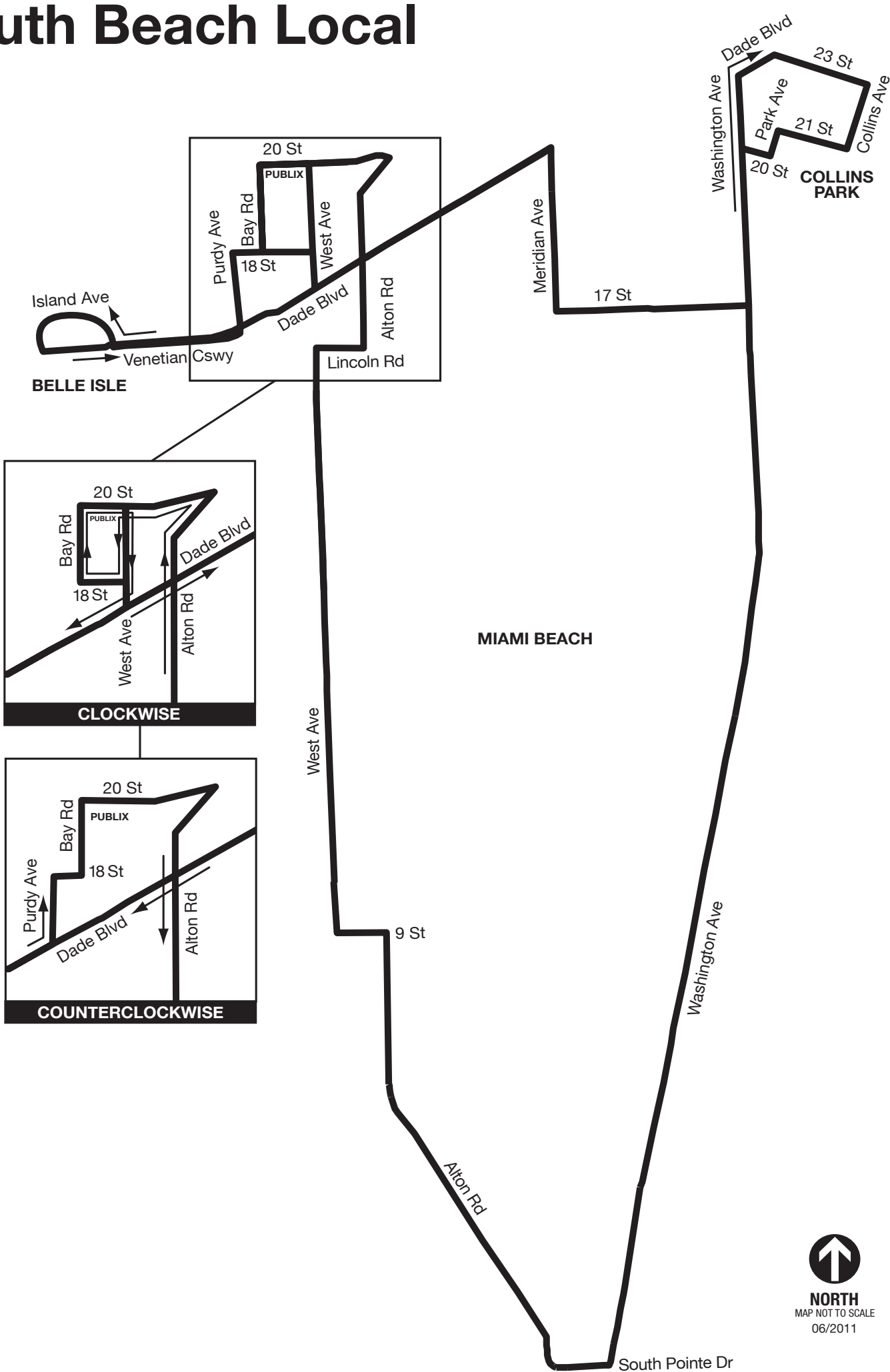




Route A Detour



South Beach Local



Appendix H

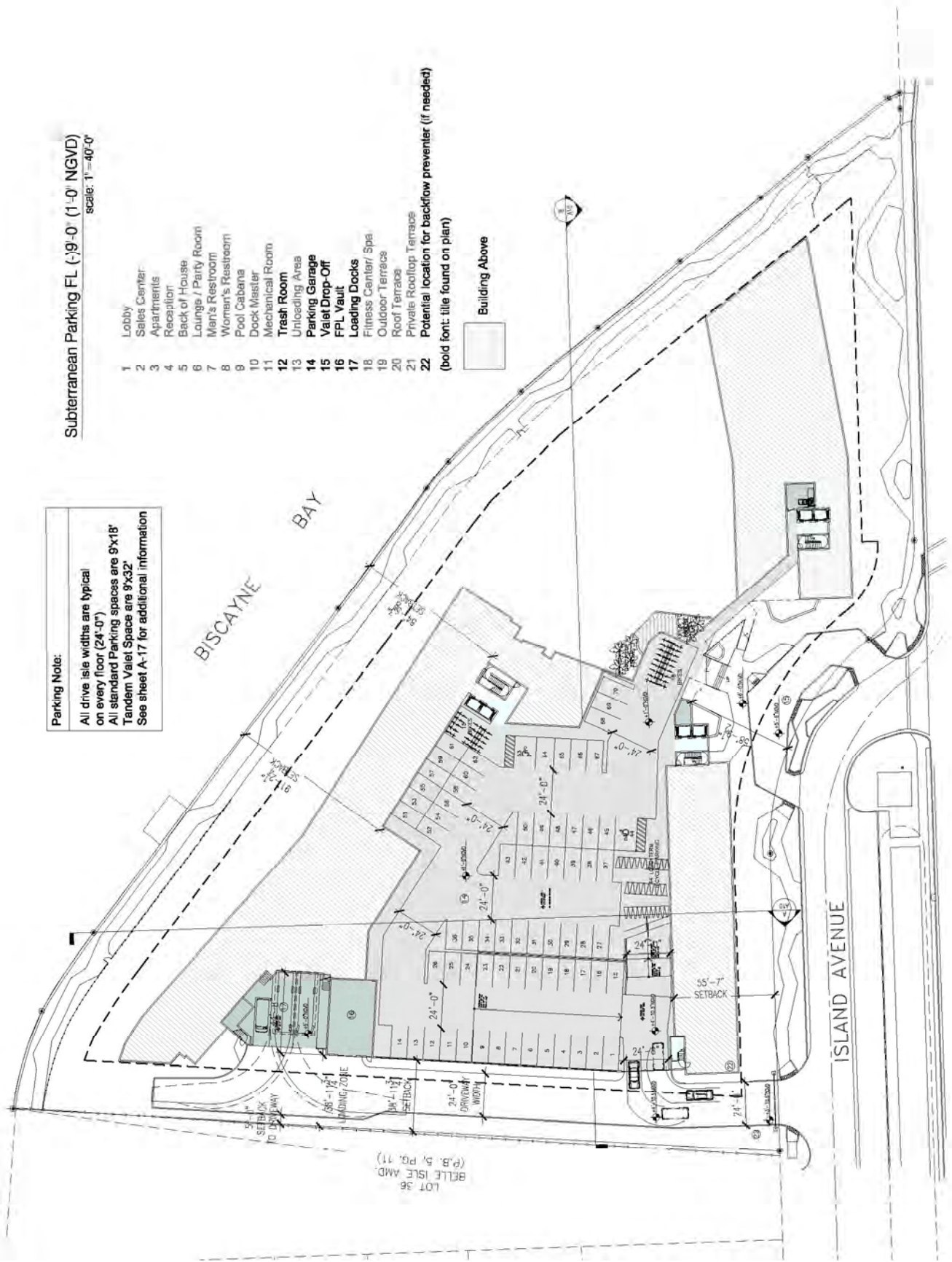
Queuing Documentation

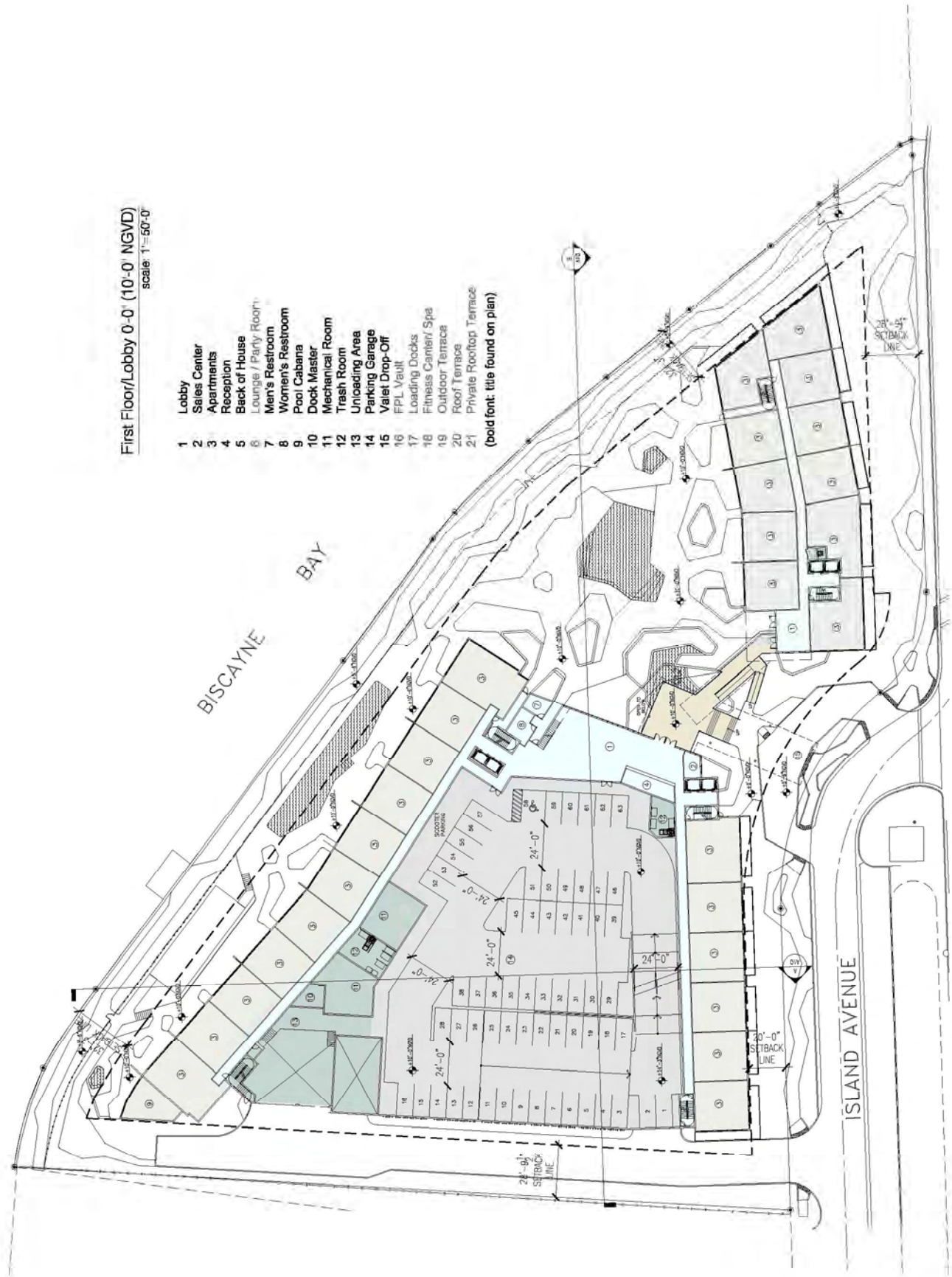
Parking Note:
All drive aisle widths are typical on every floor (24'-0")
All standard parking spaces are 9'x18'
Tandem Valet Space are 9'x32'
See sheet A-17 for additional information

Subterranean Parking FL (-) 9'-0" (1'-0" NGVD)
scale: 1"=40'-0"

- 1 Lobby
- 2 Sales Center/ Apartments
- 3 Reception
- 4 Back of House
- 5 Lounge / Party Room
- 6 Men's Restroom
- 7 Women's Restroom
- 8 Pool Cabana
- 9 Dock Master
- 10 Mechanical Room
- 11 Trash Room
- 12 Unloading Area
- 13 Parking Garage
- 14 Valet Drop-Off
- 15 FPL Vault
- 16 Loading Docks
- 17 Fitness Center/ Spa
- 18 Outdoor Terrace
- 19 Roof Terrace
- 20 Private Rooftop Terrace
- 21
- 22 Potential location for backflow preventer (if needed)
(bold font: title found on plan)

Building Above





First Floor/Lobby 0'-0" (10'-0" NGVD)
scale: 1"=50'-0"

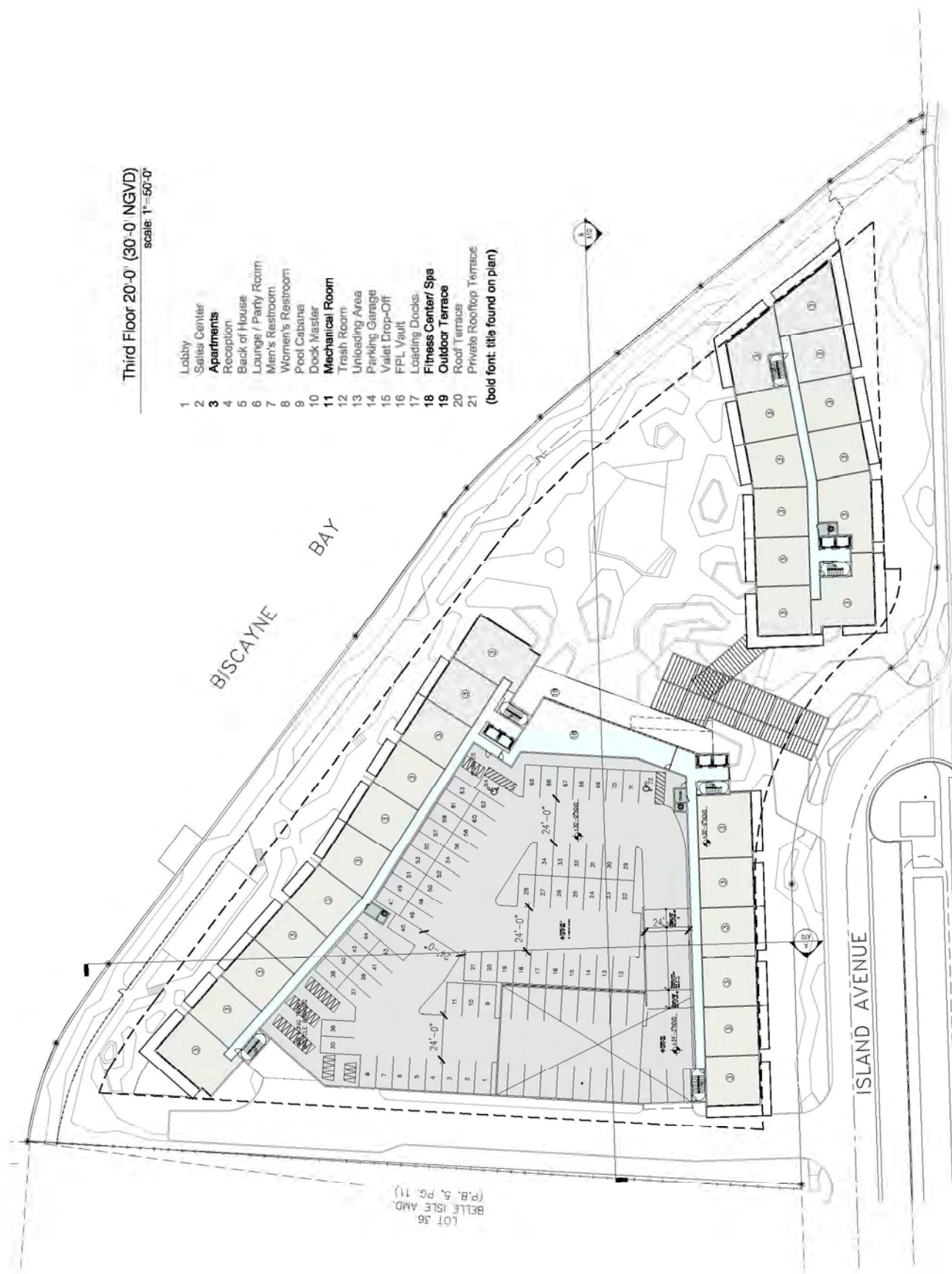
- 1 Lobby
 - 2 Sales Center
 - 3 Apartments
 - 4 Reception
 - 5 Back of House
 - 6 Lounge / Party Room
 - 7 Men's Restroom
 - 8 Women's Restroom
 - 9 Pool Cabana
 - 10 Dock Master
 - 11 Mechanical Room
 - 12 Trash Room
 - 13 Unloading Area
 - 14 Parking Garage
 - 15 Valet Drop-Off
 - 16 FPL Vault
 - 17 Loading Docks
 - 18 Fitness Center/ Spa
 - 19 Outdoor Terrace
 - 20 Roof Terrace
 - 21 Private Rooftop Terrace
- (bold font: title found on plan)



Second Floor 10'-0" (20'-0" NGVD)
scale: 1"=50'-0"

- 1 Lobby
 - 2 Sales Center
 - 3 Apartments
 - 4 Reception
 - 5 Back of House
 - 6 Lounge / Party Room
 - 7 Men's Restroom
 - 8 Women's Restroom
 - 9 Pool Cabana
 - 10 Dock Master
 - 11 Mechanical Room
 - 12 Trash Room
 - 13 Unloading Area
 - 14 Parking Garage
 - 15 Valet Drop-Off
 - 16 FPL Vault
 - 17 Loading Docks
 - 18 Fitness Center/ Spa
 - 19 Outdoor Terrace
 - 20 Roof Terrace
 - 21 Private Rooftop Terrace
- (bold font: title found on plan)

LOT 36
BELLE ISLE AMD.
(P.B. 5, PG. 11)



Attachment 2

Grand Beach Hotel

Date: July 20, 2011
Observer: J. Espinosa (DPA)

Vehicle	In	Out	Type	Arrival Time	Processing Time	Notes
1		X	Car	8:34 AM	0:00:37	Valet Return
2		X	Car	8:35 AM	0:01:06	Valet Return
3		X	Car	8:36 AM	0:00:25	Valet Return
4		X	Car	8:36 AM	0:00:38	Pick Up (Personal)
5	X		Car	8:41 AM	0:00:18	Guest In
6		X	Car	8:45 AM	0:00:30	Valet Return
7	X		Car	8:52 AM	0:01:17	Check In
8		X	Car	9:02 AM	0:01:46	Check Out
9	X		Car	9:04 AM	0:01:01	Check In
10	X		Car	9:05 AM	0:00:51	Check In
11		X	Van	9:06 AM	0:00:32	Tour
12		X	Taxi	9:09 AM	0:00:26	Guest Out
13	X		Car	9:09 AM	0:02:34	Check In
14		X	Car	9:10 AM	0:00:26	Valet Return
15		X	Car	9:11 AM	0:00:37	Valet Return
16	X		Car	9:14 AM	0:00:28	Guest In
17		X	Car	9:14 AM	0:00:22	Valet Return
18	X		Car	9:18 AM	0:01:02	Check In
19		X	Car	9:18 AM	0:00:36	Valet Return
20		X	Taxi	9:21 AM	0:00:22	Guest Out
21		X	Car	9:21 AM	0:01:26	Check Out
22		X	Car	9:22 AM	0:00:44	Valet Return
23	X		Car	9:25 AM	0:01:21	Check In
24		X	Car	9:25 AM	0:01:06	Valet Return
25		X	Car	9:26 AM	0:00:23	Valet Return
26		X	Car	9:28 AM	0:00:25	Valet Return
27		X	Car	9:29 AM	0:00:22	Valet Return
28		X	Car	9:29 AM	0:00:21	Valet Return
29		X	Car	9:34 AM	0:00:46	Valet Return
30	X		Car	9:38 AM	0:01:04	Check In
31		X	Car	9:38 AM	0:00:36	Valet Return
32		X	Car	9:39 AM	0:00:21	Valet Return
33		X	Car	9:41 AM	0:00:34	Guest Out
34		X	Car	9:43 AM	0:00:14	Valet Return
35		X	Car	9:45 AM	0:02:04	Check Out
36	X		Car	9:45 AM	0:01:20	Check In
37		X	Taxi	9:48 AM	0:00:48	Check Out
38		X	Car	9:49 AM	0:00:26	Guest Out
39		X	Car	9:49 AM	0:00:48	Valet Return
40	X		Car	9:51 AM	0:00:37	Check In
41		X	Car	9:51 AM	0:00:30	Valet Return
42		X	Car	9:57 AM	0:00:28	Valet Return
43		X	Car	9:58 AM	0:01:22	Check Out
44		X	Car	10:02 AM	0:00:32	Valet Return
45		X	Car	10:03 AM	0:00:35	Valet Return
46		X	Van	10:04 AM	0:00:46	Valet Return
47	X		Car	10:06 AM	0:00:39	Check In
48		X	Car	10:08 AM	0:01:58	Check Out
49		X	Taxi	10:08 AM	0:01:48	Check Out
50		X	Car	10:09 AM	0:00:41	Valet Return
51		X	Car	10:10 AM	0:00:44	Valet Return
52		X	Car	10:12 AM	0:00:26	Valet Return
53	X		Taxi	10:13 AM	0:00:42	Check In
54		X	Taxi	10:14 AM	0:02:21	Check Out
55			Taxi	10:16 AM	0:01:48	Check Out
56		X	Car	10:18 AM	0:00:37	Valet Return
57		X	Car	10:18 AM	0:00:56	Valet Return
58	X		Car	10:20 AM	0:00:40	Guest In
59		X	Car	10:24 AM	0:00:57	Valet Return
Total Processing Time:					0:50:10	
Average Processing Time:					0:00:51	

The first vehicle dropping-off children arrived at school at 8:30 AM. Data collection began at this time.

location, a 5% probability of back-up onto the adjacent street is judged to be acceptable. Demand on the system for design is expected to be 110 vehicles in a 45-minute period. Average service time was expected to be 2.2 minutes. Is the queue storage adequate?

Such problems can be quickly solved using Equation (8-9b) given in Table 8-10 and repeated below for convenience.

$$M = \left[\frac{\ln P(x > M) - \ln Q_M}{\ln \rho} \right] - 1$$

where:

M = queue length which is exceeded p percent of the time

N = number of service channels (drive-in positions)

Q = service rate per channel (vehicles per hour)

$\rho = \frac{\text{demand rate}}{\text{service rate}} = \frac{q}{NQ}$ = utilization factor

q = demand rate on the system (vehicles per hour)

Q_M = tabled values of the relationship between queue length, number of channels, and utilization factor (see Table 8.11)

TABLE 8-11
Table of Q_M Values

ρ	$N = 1$	2	3	4	6	8	10
0.0	0.0000	0.0000	0.0000	0.0000			
0.1	.1000	.0182	.0037	.0008	.0000	0.0000	0.0000
.2	.2000	.0666	.0247	.0096	.0015	.0002	.0000
.3	.3000	.1385	.0700	.0370	.0111	.0036	.0011
.4	.4000	.2286	.1411	.0907	.0400	.0185	.0088
.5	.5000	.3333	.2368	.1739	.0991	.0591	.0360
.6	.6000	.4501	.3548	.2870	.1965	.1395	.1013
.7	.7000	.5766	.4923	.4286	.3359	.2706	.2218
.8	.8000	.7111	.6472	.5964	.5178	.4576	.4093
.9	.9000	.8526	.8172	.7878	.7401	.7014	.6687
1.0	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

$$\rho = \frac{q}{NQ} = \frac{\text{arrival rate, total}}{(\text{number of channels})(\text{service rate per channel})}$$

N = number of channels (service positions)

Solution

Step 1: $Q = \frac{60 \text{ min/hr}}{2.2 \text{ min/service}} = 27.3 \text{ services per hour}$

Step 2: $q = (110 \text{ veh/45 min}) \times (60 \text{ min/hr}) = 146.7 \text{ vehicles per hour}$

Step 3: $\rho = \frac{q}{NQ} = \frac{146.7}{(6)(27.3)} = 0.8956$

Step 4: $Q_M = 0.7303$ by interpolation between 0.8 and 0.9 for $N = 6$ from the table of Q_M values (see Table 8-11).

Step 5: The acceptable probability of the queue, M , being longer than the storage, 18 spaces in this example, was stated to be 5%. $P(x > M) = 0.05$, and:

$$M = \left[\frac{\ln 0.05 - \ln 0.7303}{\ln 0.8956} \right] - 1 = \left[\frac{-2.996 - (-0.314)}{-0.110} \right] - 1$$

$$= 24.38 - 1 = 23.38, \text{ say } 23 \text{ vehicles.}$$