HOTEL ACCESS

THE FOLLOWING GROUPS MAY ACCESS THE HOTEL AND PUBLIC AREAS:

HOTEL GUESTS

HOTEL GUESTS WILL ARRIVE IN THE BREEZEWAY COMING FROM COLLINS COURT OR WASHINGTON AVE. WHERE THEY MAY VALET THEIR CAR AND BE GREETED BY A HOTEL BELLMAN WHO WILL DIRECT THEM INTO HOTEL RECEPTION ON THE FIRST FLOOR. FROM THERE THEY WILL TAKE ONE OF THREE ELEVATORS UP TO THE LOBBY ON THE 3RD FLOOR WHERE THEY WILL FIND THE CONCIERGE, INDOOR RESTAURANT, OUTDOOR CAFE AND POOL ACCESS.

THE PUBLIC

RESTAURANT AND CAFE PATRONS WILL ARRIVE IN THE SAME FASHION AS DESCRIBED ABOVE FOR HOTEL GUESTS. MANGROVE PATRONS WILL ARRIVE FROM THE ENTRANCE ON 7TH AND COLLINS COURT THROUGH ON PROPERTY ARCADE AND UP THROUGH ELEVATORS TO THE 3RD FLOOR AND OPEN AIR SPACE. ANY QUEUEING TO BE ON PROPERTY AT THE ARCADE ON COLLINS COURT STARTING APPROXIMATELY 60 FEET SOUTH OF 7TH STREET.

DELIVERIES & COLLECTIONS

IN AN EFFORT TO ENSURE MINIMAL IMPACT ON LOCAL RESIDENTS, HOTEL GUESTS AND STREET TRAFFIC, THE FOLLOWING PROCEDURES WILL TAKE PLACE:

· FOOD & BEVERAGE DELIVERIES:

FOOD AND BEVERAGE DELIVERIES WILL BE RECEIVED ON COLLINS COURT THROUGH LOADING DOCK WHERE A RECEIVING AREA IS LOCATED. THE RECEIVING AREA HAS A SECURITY CHECK POINT AND RECEIVING PERSONNEL WHO WILL RECEIVE VENDORS AND VERIFY PRODUCT DELIVERIES THROUGH HOTEL OPERATIONAL PROCEDURES.

DELIVERIES WILL BE DIRECTED FROM THE HOURS OF 6AM TO 5PM. UNDERSTANDING THAT THERE MAY BE CERTAIN CIRCUMSTANCES THAT REQUIRE AUGMENTATION TO THE DELIVERY WINDOW, THE HOTEL MANAGEMENT WILL DO ITS VERY BEST TO ENSURE DELIVERIES HAVE LITTLE IMPACT ON THE ABOVE MENTIONED GROUPS.

·REFUSE & RECYCLING:

REFUSE AND RECYCLING COLLECTION WILL BE ACCEPTED FROM 8AM TO 10:30AM AT LOADING DOCK OFF COLLINS COURT. INTERNAL PROCEDURES WILL BE IMPLEMENTED BY MANAGEMENT TO ENSURE MINIMAL IMPACT IS FELT BY THE HOTEL GUESTS, LOCAL RESIDENTS AND STREET TRAFFIC. HOTEL ENGINEERING WILL BE RESPONSIBLE FOR THE MANAGEMENT OF THE REFUSE AND RECYCLING COLLECTION FOR THE HOTEL, RESTAURANT, CAFE AND MANGROVE. REFUSE RECYCLING WILL BE STORED IN DESIGNATED , SECURED AND REFRIGERATED AREA FOR PICK UP AT SCHEDULED TIMES FROM STAGING AREA IN LOADING DOCK ON PROPERTY OFF OF COLLINS COURT.

SECURITY

PURSUANT TO THE POLICIES OF THE HOTEL, ALL SECURITY WILL BE ADMINISTRATED BY HOTEL MANAGEMENT AND THE FOLLOWING MEASURES WILL BE IMPLEMENTED:

1. SECURITY WILL HAVE A 24 HOUR A DAY PRESENCE
2. SECURITY CAMERAS WILL BE LOCATED AT MAJOR ENTRANCE AND EXIT POINTS TO THE PROPERTY
3. SECURITY CAMERAS WILL BE INSTALLED TO MONITOR ALL POINTS OF SALE
4. SECURITY CAMERAS WILL BE INSTALLED IN ELEVATORS TO MONITOR GUEST FLOW
5. EXTRA SECURITY WILL BE SCHEDULED ON HIGH OCCUPANCY DAYS
6. SECURITY TO BE ASSIGNED TO POOL DECK AS REQUIRED

CONDITIONAL USE PERMIT - SUMMARY OF ACCESORY USES

VENUE NAME	FLOOR	INDOOR/ OUTDOOR	MAX OCCUPANT LOAD	HOURS OF OPERATION	HOURS OF ENTERTAINMENT	ENTERTAINMENT	DANCE HALL LICENSE	FOOD SERVICE AVAILABLE
CAFE, RESTAURANT & CAFE CART	3	INDOOR OUTDOOR OUTDOOR INDOOR	76 105 120 24	7AM-5AM 7AM-1AM 7AM -1AM 7AM - 5AM	11AM-1AM 11AM-8PM 11AM - 8PM NA	YES (LIVE MUSIC/DJ) YES (LIVE MUSIC/DJ) YES (LIVE MUSIC/DJ) NO	NO YES YES NO	YES YES YES YES
POOL VENUE	3	OUTDOOR	520	7AM-1AM	11AM-8PM	YES (LIVE MUSIC/DJ)	YES	YES
MANGROVE VENUE	3	OUTDOOR	336	11AM-1AM	11AM-8PM	YES (LIVE MUSIC/DJ)	YES	NO
	GRAND TOTALS		1181					

601 Washington

Miami Beach, Florida

traffic study

prepared for:
Imperial Companies

Traf Tech
ENGINEERING, INC.

January 2016
(Revised May 10, 2016)

Traf Tech
ENGINEERING, INC.

May 10, 2016

Mr. Charlie Loskant
Senior Vice President, Construction & Development Services
Imperial Companies
888 7th Avenue, 27th Floor
New York, NY 10019

Re: 601 Washington Avenue –Traffic Study (April Update)

Dear Charlie:

Traf Tech Engineering, Inc. is pleased to provide you with the results of the updated traffic study undertaken for the proposed 601 Washington project planned to be located east side of Washington Avenue between 6th Street and 7th Street in the City of Miami Beach in Miami-Dade County, Florida. The revised study addresses the traffic comments provided by the City of Miami Beach's Transportation Consultant.

It has been a pleasure working with Imperial Companies on this project.

Sincerely,

TRAF TECH ENGINEERING, INC.

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

8400 North University Drive, Suite 309, Tamarac, Florida 33321
Tel: (954) 582-0988 Fax: (954) 582-0989

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INTRODUCTION

601 Washington is a proposed development planned to be located at 601 Washigton Avene in the City of Miami Beach in Miami-Dade County, Florida. The location of the project site is illustrated in Figure 1 on the following page.

Traf Tech Engineering, Inc. was retained by Imperial Companies to conduct a traffic study [1] in connection with the proposed project. The study addresses trip generation and the traffic impacts created by the proposed project on the nearby transportation network. This study is divided into seven (7) sections, as listed below:

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

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

.

Traf Tech
ENGINEERING, INC.

PROJECT LOCATION MAP

FIGURE 1
601 Washington
Miami Beach, Florida

INVENTORY

Existing Land Use

The site is currently developed with commercial uses.

Proposed Land Uses and Access to Parking Garage

The proposed site will be re-developed with the following land uses and intensity:

- Retail – 55,425 square feet
- Hotel – 316 Rooms
- Restaurant – 472 seats

Access to the proposed parking structure will be provided via Collins Court (the alley located on the east side of the site). Appendix B contains a copy of the proposed site plan for the project site.

EXISTING CONDITIONS

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

Roadway System

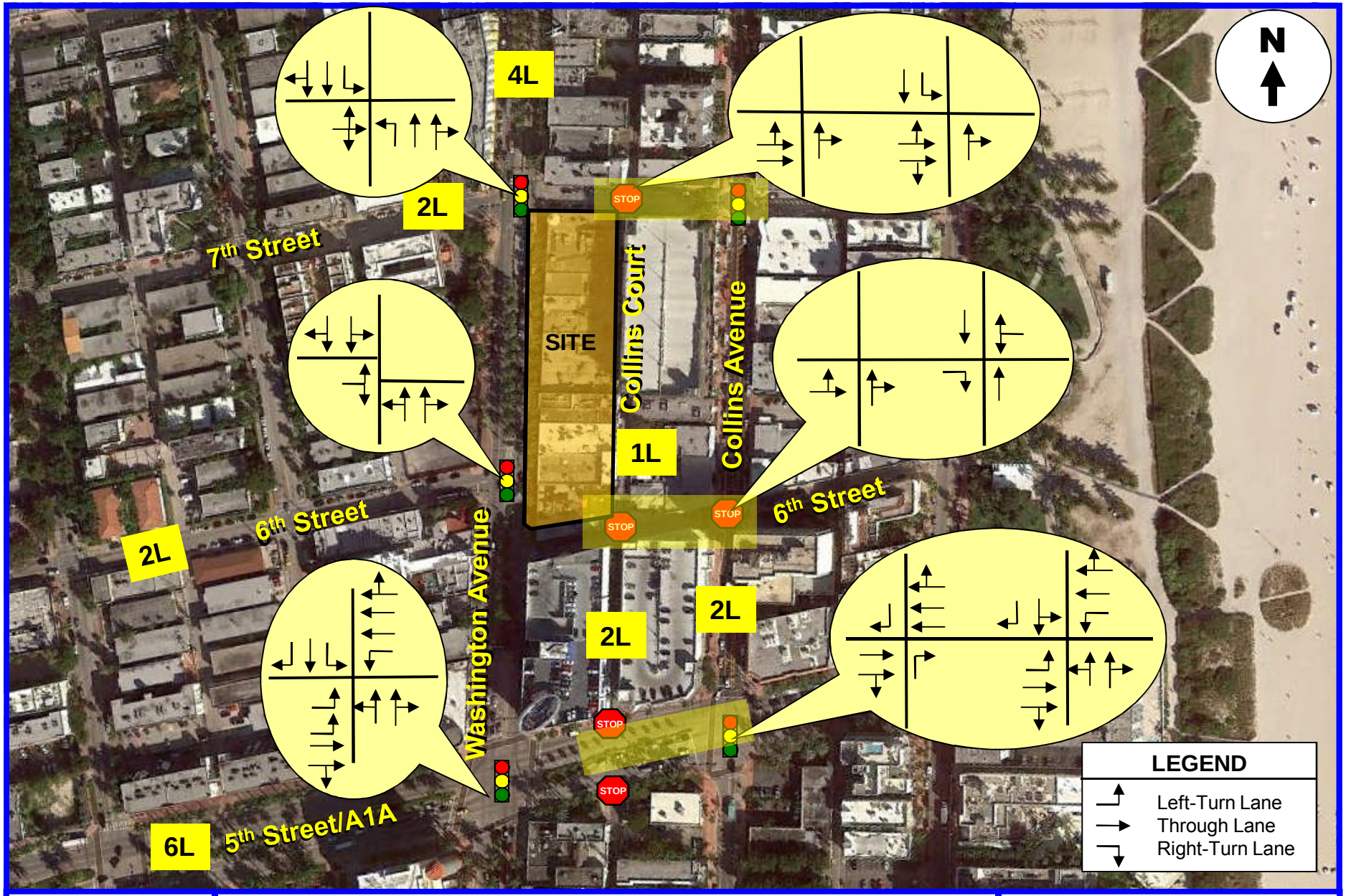
The roadway system located near the project site includes Collins Avenue, Washington Avenue, Collins Court, 5th Street/A1A, 6th Street, and 7th Street. Near the project site, Collins Avenue and Washington Avenue are two-lane and four-lane facilities in the north and south directions, respectively. Collins Court is a one-way, one-lane facility in the northbound direction between 6th Street and 7th Street. 5th Street/A1A is a six-lane facility in the east and west directions. 6th Street and 7th Street are one-way facilities in the east direction near the project site.

Nearby Intersections

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

1. Collins Avenue and 5th Street/A1A (signalized)
2. Collins Avenue and 6th Street (stop controlled)
3. Collins Avenue and 7th Street (signalized)
4. Washington Avenue and 5th Street/A1A (signalized)
5. Washington Avenue and 6th Street (signalized)
6. Washington Avenue and 7th Street (signalized)
7. Collins Court and 5th Street/A1A (stop controlled)
8. Collins Court and 6th Street (stop controlled)
9. Collins Court and 7th Street (stop controlled)

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



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EXISTING LANE GEOMETRY

FIGURE 2
601 Washington
Miami Beach, Florida

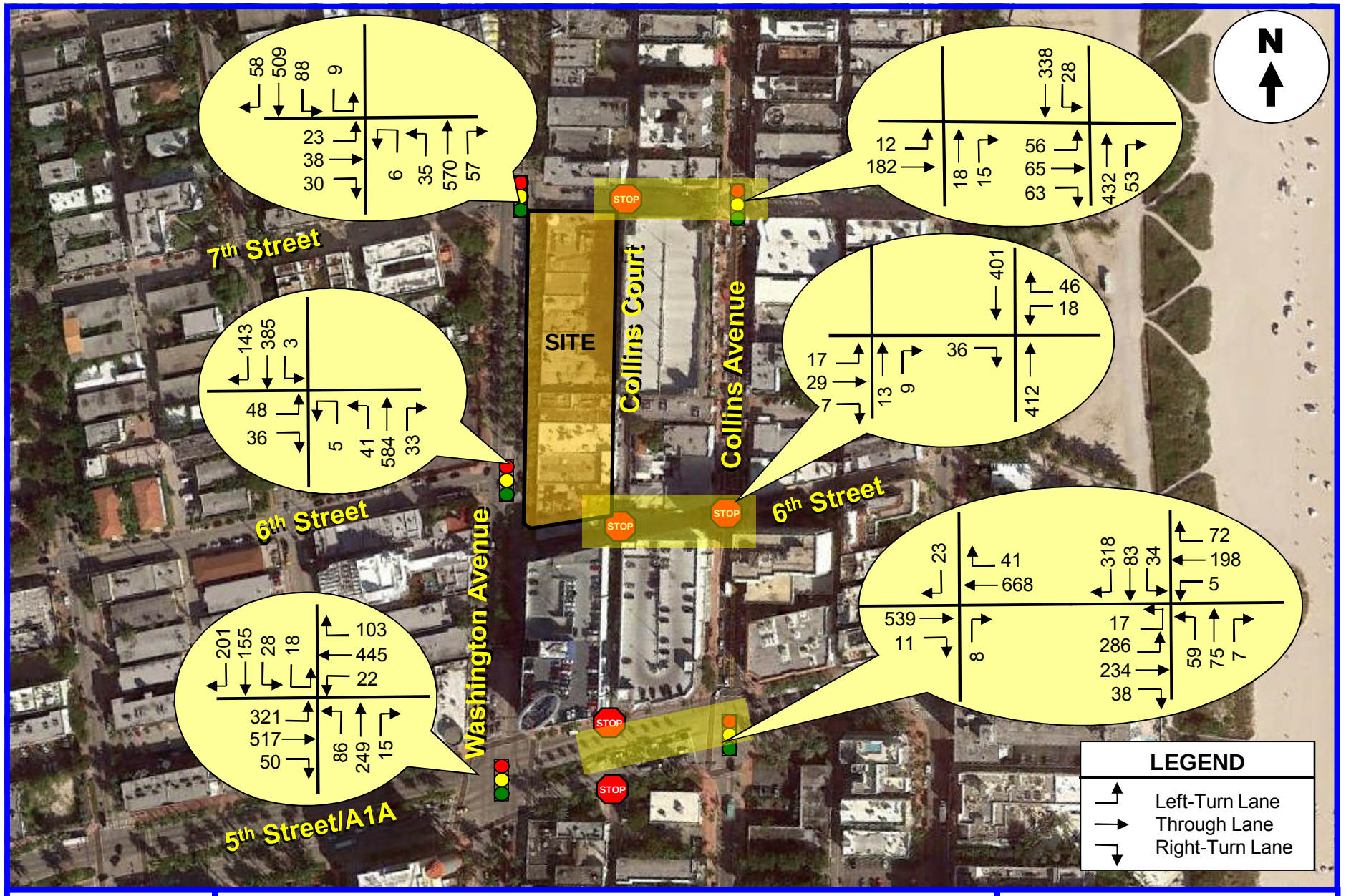
TRAFFIC COUNTS

Traf Tech Engineering, Inc., in association with Traffic Survey Specialists, Inc., collected traffic data at the following locations:

1. Collins Avenue and 5th Street/A1A (signalized)
2. Collins Avenue and 6th Street (stop controlled)
3. Collins Avenue and 7th Street (signalized)
4. Washington Avenue and 5th Street/A1A (signalized)
5. Washington Avenue and 6th Street (signalized)
6. Washington Avenue and 7th Street (signalized)
7. Collins Court and 5th Street/A1A (stop controlled)
8. Collins Court and 6th Street (stop controlled)
9. Collins Court and 7th Street (stop controlled)

The intersection turning movement counts performed by Traffic Survey Specialists, Inc.,were collected on Friday, December 11, 2015 during the PM peak period (4:00 PM to 6:00 PM).

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



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EXISTING TRAFFIC COUNTS – Peak Hour
(December 11, 2015)

FIGURE 3
601 Washington
Miami Beach, Florida

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 uses include Land Use 826 –Specialty Retail, Land Use 310 – Hotel, and Land Use 931 – Quality Restaurant. Table 1 summarizes the external trips associated with the proposed development.

TABLE 1
Trip Generation Summary (Proposed Uses)
601 Washington

Land Use	Size	Daily Trips	PM Peak Hour		
			Total Trips	Inbound	Outbound
Retail (LUC 826)	55,425	2,409	155	68	87
Hotel (LUC 310)	316	2,819	221	108	113
Restaurant/Bar (LUC 931)	472	1,350	123	83	40
Gross Trips		**6,578**	**499**	**259**	**240**
Restaurant Internal Trips (-30%)		-405	-37	-25	-12
External Trips		**6,173**	**462**	**234**	**228**
Pass-by (Retail - 25%) [1]		-602	-40	-20	-20
Pass-by (Restaurant/Bar - 25%) [1]		-236	-22	-11	-11
Subtotal		**5,335**	**400**	**203**	**197**
Transit and Pedestrian Reduction (-10%)[1]		-534	-40	-20	-20
Net New Vehicular Trips		**4,801**	**360**	**183**	**177**

Source: ITE Trip Generation Manual (9th Edition)

As indicated in Table 1, the external trips anticipated to be generated by the proposed 601 Washington project consist of approximately 6,173 daily trips and approximately 462 trips during the weekday peak hour (234 inbound and 228 outbound).

The trip generation rates used to determine the trips associated with the proposed use are presented below:

ITE Land Use 826 – Specialty Retail

Daily Trips

T = 42.78 (X) + 37.66

Where T = number of daily trips

X = 1,000 Square feet gross leasable area

PM Peak Hour of Adjacent Street (Typical Afternoon Peak Hour)

T = 2.40 (X) + 21.48 (44% inbound and 56% outbound)

Where T = number of PM peak hour trips

X = 1,000 Square feet gross leasable area

ITE Land Use 310 – Hotel

Daily Trips

T = 8.92 (X)

Where T = average daily vehicle trip ends

X = number of rooms on a weekday

PM Peak Hour of Adjacent Street (Typical Afternoon Peak Hour)

T = 0.70 (X) (49% inbound and 51% outbound)

Where T = average AM peak hour vehicle trip ends

X = number of rooms on a weekday

ITE Land Use 931 – Quality Restaurant

Weekday Daily Trip Generation

T = 2.86 (X)

Where T = number of weekday daily trips and

X = number of seats

PM Peak Hour of Adjacent Street (Typical Afternoon Peak Hour)

T = 0.26 (X) (67% inbound and 33% outbound)

Where T = number of weekday peak hour trips and

X = number of seats

TRIP DISTRUBUTION AND TRAFFIC ASSIGNMENT

The trip distribution and traffic assignment for the project were based on Miami-Dade County's Cardinal Distribution information for the study area. Table 2 summarizes the County's cardinal distribution data for Traffic Analysis Zone 655, which is applicable to the project site from the latest SERPM data published by Miami-Dade County.

TABLE 2
Project Trip Distribution
601 Washington

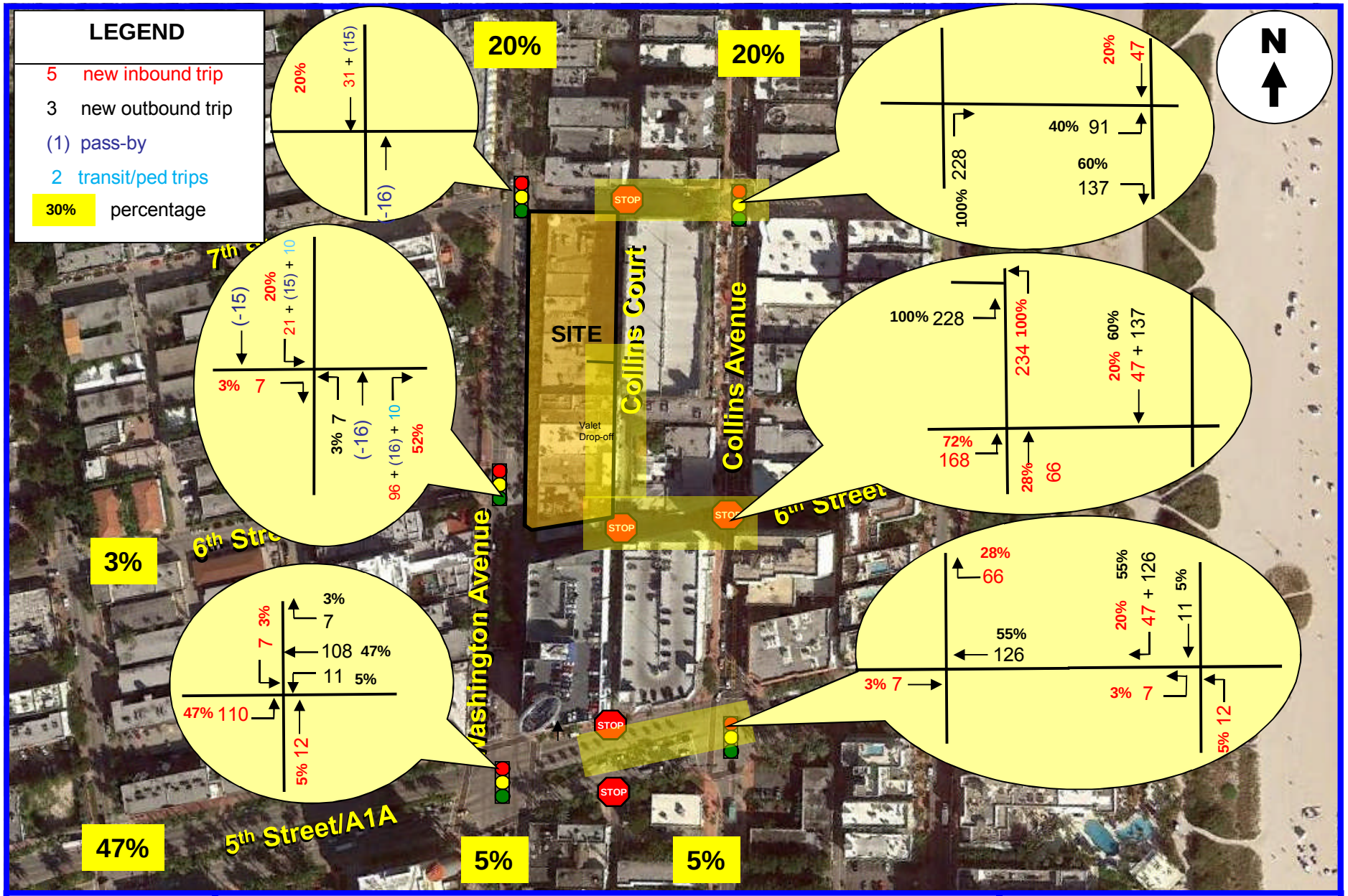
Direction		% of Total Trips
North:	Northwest	21.0
	Northeast	20.9
South:	Southwest	7.7
	Southeast	0.00
East:	Northeast	0.00
	Southeast	0.00
West:	Northwest	31.8
	Southwest	18.7
	Total	100.00%

Source: Miami-Dade County (2040 SERPM)

Based on the above, the following traffic assignment was assumed for the proposed 601 Washington project:

- 20% to and from the north via Collins Avenue
- 5% to and from the south via Collins Avenue
- 20% to and from the north via Washington Avenue
- 5% to and from the south via Washington Avenue
- 3% to and from the west via 6th Street
- 47% to and from the west via 5th Street/A1A

The new peak hour traffic generated by the project was assigned to the nearby transportation network using the traffic assignment documented above. The new project traffic assignment is summarized in Figure 4.



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NEW PROJECT TRAFFIC ASSIGNMENT
(Weekday New Peak Hour Trips)

FIGURE 4
601 Washington
Miami Beach, Florida

TRAFFIC ANALYSIS

This section of the study is divided into four parts. The first part consists of developing the future conditions traffic volumes for the study area. The second part includes level-of-service analyses for existing and future conditions. The third section addresses the projected operating conditions of the project's access driveways. The final section focusses on valet parking.

Future Conditions Traffic Volumes

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

In order to develop year 2018 traffic volumes (project anticipated to be built and occupied by the year 2018), without the proposed project, two separate analyses were undertaken. The first analysis converts the existing peak hour traffic counts collected in the field during the month of December to average peak season conditions. Based on FDOT's Peak Season Factor Category report, a factor of 1.05 is required to convert traffic counts collected in third week of December to average peak season conditions (refer to Appendix D). The second analysis includes a growth factor to project 2015 peak season traffic volumes to the year 2018. Based on traffic growth data published by the FDOT for a nearby traffic count stations, minimal traffic growth has occurred during the past five years (refer to Appendix D). However, in order to assess impacts with a conservative approach, and to account for unforeseen approved project (committed trips) that may impact the study intersections, a one percent (1.0%) growth rate was used for purposes of this study. Additionally, trips associated with future developments; The Anglers Hotel addition (660 Washington Avenue), The Torino (400 Collins Avenue) and, The Savoy Hotel were added to the background traffic. Committed development information is included in Appendix D.

The new trips generated by the 601 Washington project (refer to Figure 4) were added to the 2018 background traffic in order to develop total traffic conditions.

The future traffic projections for the study intersections (peak season adjustments, growth rates, committed developments and project traffic) are presented in tabular format in Appendix E. Figures 5 and 6 present the year 2018 future traffic volumes for the study area.

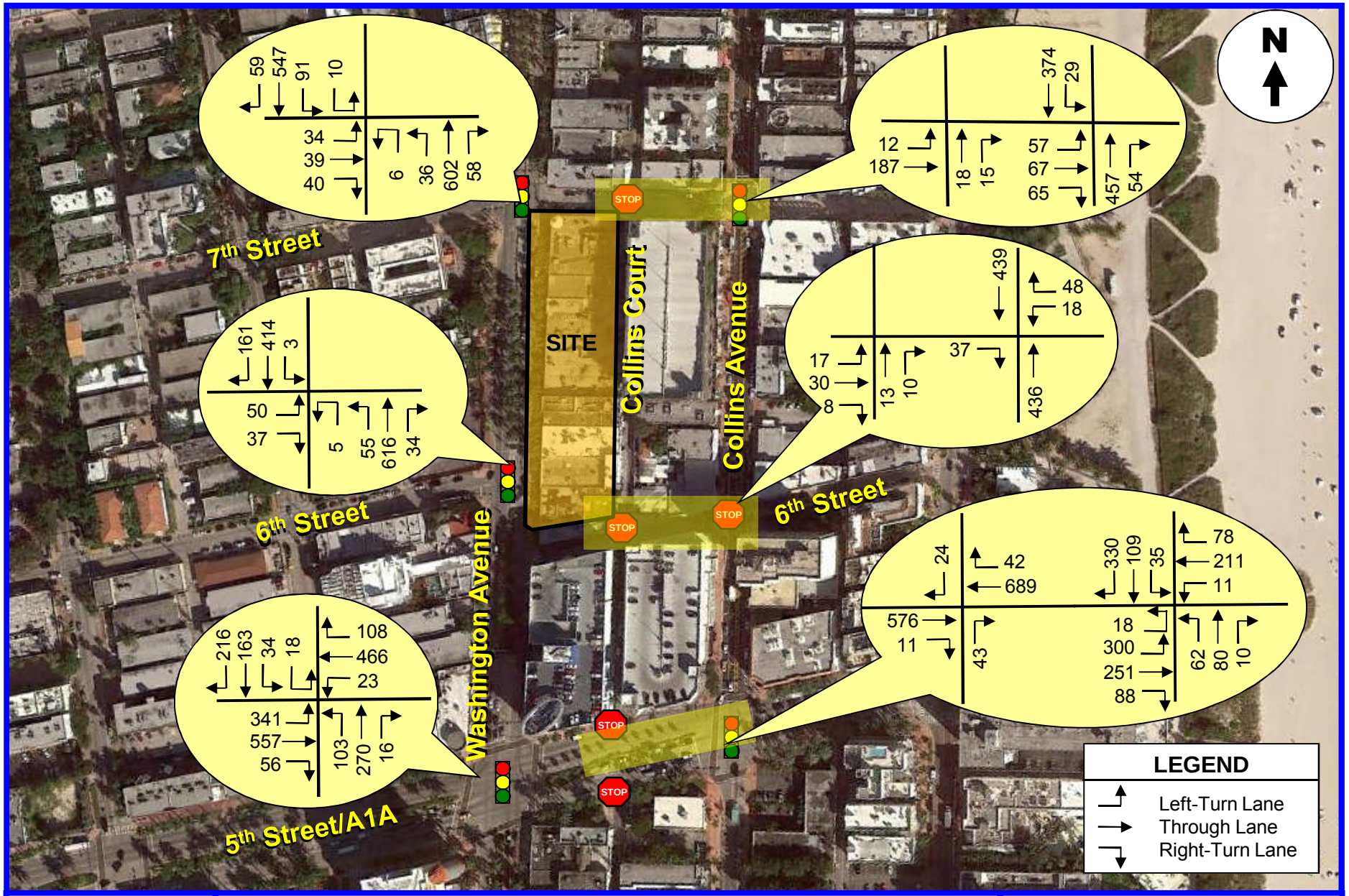
Figure 5 includes background traffic only (without the proposed project) and Figure 6 includes the additional traffic anticipated to be generated by the 601 Washington project.

Level of Service Analyses

Intersection capacity/level of service analyses were conducted for the nine study intersections. The analyses were undertaken following the capacity/level of service procedures outlined in the Highway Capacity Manual (HCS) using the SYNCHRO software. The results of the capacity analyses are summarized in Tables 3 and 4. As indicated in Tables 3 and 4, all study intersections are currently operating adequately and will continue to operate at a acceptable level of service in the year 2018 with the proposed project in place, with one exception (Collins Avenue and 5th Street). Note that the level of service at the intersection of Collins Avenue and 5th Street could be improved to LOS "D" by optimizing the intersection's splits and offset.

Access Driveway

The project access driveway is projected to operate at level of service "B"



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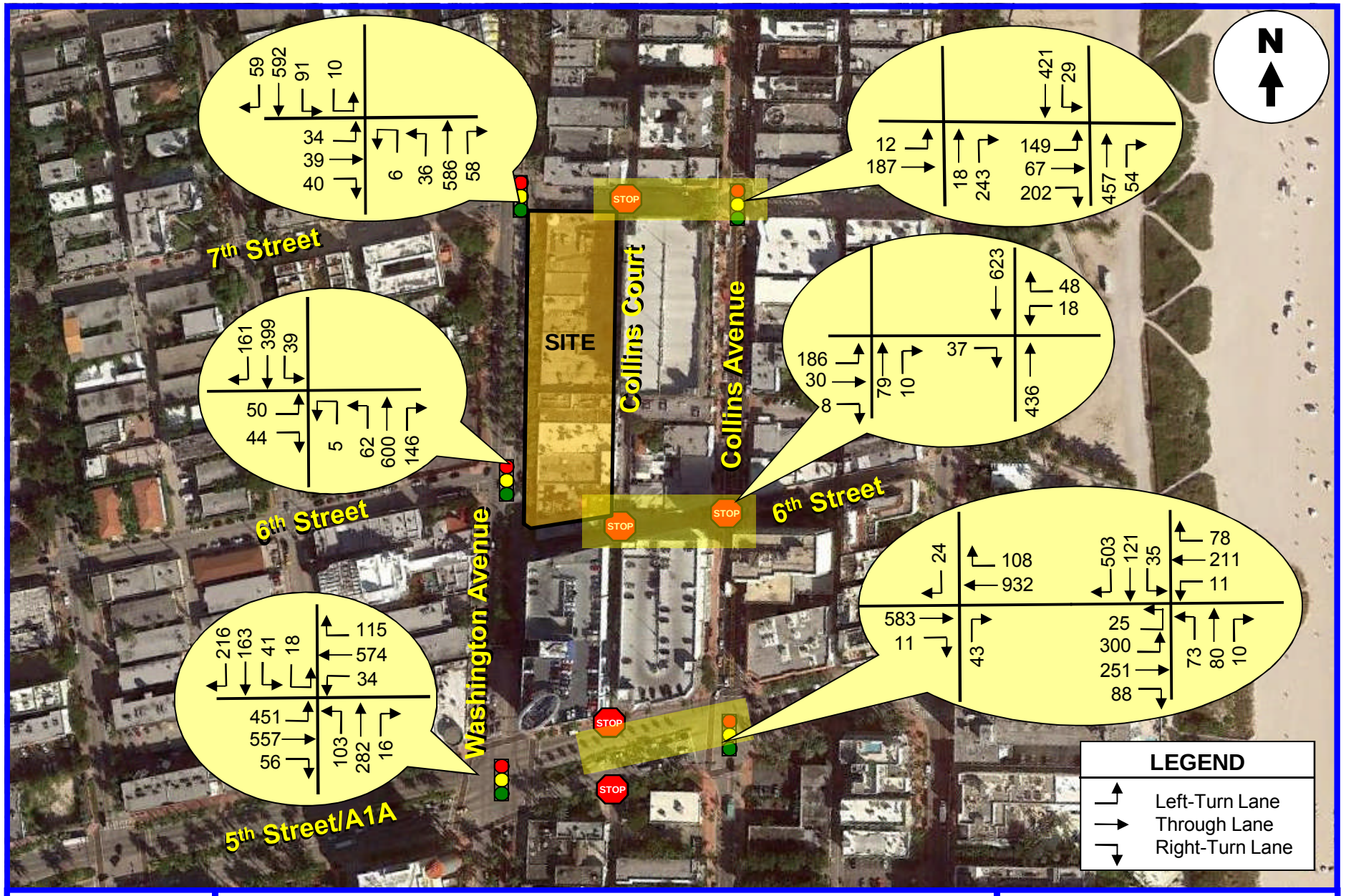
BACKGROUND TRAFFIC – Year 2018
(Weekdays Peak Hour Trips)

FIGURE 5
601 Washington
Miami Beach, Florida



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TOTAL TRAFFIC with PROJECT – Year 2018
(Weekdays Peak Hour Trips)

FIGURE 6
601 Washington
Miami Beach, Florida

TABLE 3 Intersection Level of Service 601 Washington – Signalized Intersections			
		Future Traffic Conditions	
Intersection	2015 Existing	2018 w/o Project	2018 With Project
Collins Avenue & 5th Street	C	C	D
Collins Avenue & 7th Street	B	B	B
Washington Avenue & 5th Street	D	D	D
Washington Avenue & 6th Street	B	B	B
Washington Avenue & 7th Street	B	B	B

Source: Highway Capacity Manual

TABLE 4 Intersection Level of Service 601 Washington – Unsignalized Intersections			
		Future Traffic Conditions	
Intersection	2015 Existing	2018 w/o Project	2018 With Project
Collins Avenue & 6th Street			
- EB	C	C	D
- WB	D	D	E
Collins Court & 5th Street			
- NB	C	C	C
- SB	C	C	D
Collins Court & 6th Street			
- NB	A	A	B
Collins Court & 7th Street			
- NB	B	B	B

Source: Highway Capacity Manual

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

Valet Operation

The 601 Washington project will provide two (2) passenger drop-off/pick-up areas (one on Washington Avenue and one on 7th Street) and one valet service area on Collins Court. All vehicles served by valet parking will stop at the valet station on Collins Court.

.

In order to determine the stacking requirements associated with the valet operation, a queuing analysis was undertaken. As indicated in Table 1, the maximum number of inbound/outbound vehicles associated with this project, during a one-hour period is approximately 234/228 vehicles.

A queuing analysis was conducted in order to ensure that the on-street stacking is sufficient to accommodate the maximum inbound/outbound vehicular demand anticipated at this facility. The length of queue anticipated on Collins Court was determined using information contained in ITE's *Transportation and Land Development*, Chapter 8 – Drive-In Facilities[2]. For this analysis, the following input variables were used:

Service Rate is the average time to park/unpark a vehicle by a valet runner. The distance between the valet station on Collins Court and the midpoint of the garage is approximately 500 feet. Assuming a driving speed of 10 mph, approximately 34 seconds are required for driving time. Additionally, the ticket transaction period was assumed to be approximately 60 seconds and the parking/unparking from the parking spaces within the parking structure was assumed to be approximately 120 seconds. With a walking/running speed of approximately 10 feet per seconds, approximately 50 seconds are required for a valet runner to return to the valet station (a distance of approximately 500 feet). Hence, the total service rate is approximately 4.4 minutes (34 seconds + 60 seconds + 120 seconds + 50 seconds), say five (5) minutes.

Demand Rate: As indicated above, a maximum of 234 vehicles will arrive and 228 will depart during the highest hour.

Using equation 8-9b and Table 8-11 of ITE's *Transportation and Land Development*, the maximum length of queue anticipated on Collins Court for inbound vehicles, at the 90% confidence level, is four (4) vehicles. Therefore, the valet station on Collins Court should provide parking for at least four (4) inbound vehicles.

[2] By Vergil G. Stover and Frank J. Koepke.

Similarly, the maximum length of queue anticipated on Collins Court for outbound vehicles, at the 90% confidence level, is three (3) vehicles. Therefore, the valet station on Collins Court should provide parking for at least three (3) outbound vehicles. The results of the ITE queuing procedure are contained in Appendix G.

All valet drop-off and pick-up, deliveries and waste collections will occur on the private property adjacent to Collins Court, with the exception of any delivery properly utilizing any of the City's designated on-street loading zones in the nearby area.

Building and hotel management and the valet operator will work together to ensure safe and efficient management of the valet, loading and waste collections operations. Dedicated delivery and waste collection times, as described below, will minimize conflicts.

Valet drop-off will occur at the east end of the breezeway with 6 parallel stacking spaces for a total of 126'. All spaces measure 10' x 21' and are suitable for parallel parking. The first space will be designated exclusively for valet drop-off. The other 5 spaces will double as loading spaces. The valet operators drive the short distance north to the garage ramp to store vehicles on the parking level.

Valet pick-up will occur at 3 spaces located north of the breezeway by the stair and elevator core towards the north end of the building. Patrons can access the pick-up location from the third level pool deck through the stair and elevator core or at ground level from the breezeway. The middle of the 3 spaces, which is in front of 2 internal loading spaces, will only be utilized during peak valet pick-up periods and shall not be used during 7:00 AM and 1:00 PM, which are dedicated delivery times. Stacking, as needed, will occur either on the ramp or internally on the parking level to avoid any impacts on Collins Court. The valet operator will drive vehicles down the ramp and pull into the valet pick-up spaces, using the middle space only during peak times and not during the dedicated delivery window.

Deliveries will occur mainly in 2 very large internal loading spaces (45' 4" deep by 26' 2" wide combined) located north of the garage ramp and 2 large internal loading spaces (one 45' 4" deep by 12' wide and one 28' by 10' wide) located immediately south of the garage ramp. These 4 loading spaces can accommodate vehicles of all sizes. Deliveries may also be accomplished in the 5 shared parallel spaces (each 10' by 21') at the valet drop-off area south of the breezeway. These spaces are meant to be used for smaller vehicles, such as vans, and only if the 4 main loading spaces are occupied. In the rare event that an extremely large truck makes a delivery, it can use the 105' of loading area south of the breezeway.

In the event of valet and loading occurring simultaneously in the 5 valet/loading spaces located south of the breezeway, building and hotel management and the valet operator will work together to keep the northern portion of this area open for valet and direct loading vehicles to the southern portion to minimize gaps and unusable areas between vehicles.

The refrigerated trash room is located adjacent to the northern 2 loading spaces and refuse and recycling collections will be made by taking the receptacles out of trash room to the collection vehicles on Collins Court. Due to an agreed collection window with the private waste hauler, building and hotel management will be ready to take refuse and recycling out as soon as the truck arrives to minimize the collection operation to only a few minutes.

Valet operations will be available 24 hours, 7 days per week, with peak hours for drop-off between 1:00 PM and 5:00 PM and pick-up between 5:00 PM and 8:30 PM.

Deliveries for the hotel and ground floor retail operations will be scheduled between 7:00 AM and 1:00 PM, which is outside the peak valet times. There may be circumstances that require delivers outside this specified delivery window and building and hotel management will do their very best to ensure that such deliveries do not adversely impact the valet operations, neighboring uses or guests and patrons of the Property. Refuse and recycling collections will be scheduled between 7:00 AM and 1:00 AM.

CONCLUSIONS AND RECOMMENDATIONS

601 Washington is a proposed re-development project planned to be located on the east side of Washington Avenue between 6th Street and 7th Street in the City of Miami Beach in Miami-Dade County, Florida. The project site currently consists of commercial uses. The proposed project will be developed with the following land uses and intensity:

- Retail – 55,425 square feet
- Hotel – 316 Rooms
- Restaurant – 472 seats

Access to the proposed parking garage will be provided via Collins Court.

Traf Tech Engineering, Inc. was retained by Imperial Companies to conduct a traffic study in connection with the 601 Washington project. The study addresses trip generation and the traffic impacts created by the proposed project on the nearby transportation network. The conclusions and recommendations of the traffic study are presented below:

- The external trips anticipated to be generated by the proposed 601 Washington project consist of approximately 6,173 daily trips and approximately 462 trips during the weekday peak hour (234 inbound and 228 outbound).

All study intersections are currently operating adequately and will continue to operate at an acceptable level of service in the year 2018 with the proposed project in place, with one exception (Collins Avenue and 5th Street). Note that the level of service at the intersection of Collins Avenue and 5th Street could be improved to LOS "D" by optimizing the intersection's splits and offset.

- The project access driveway on Collins Court is projected to operate at level of service “B”.

- The valet station on Collins Court for inbound vehicles should provide parking for at least four (4) vehicles.

- The valet station on Collins Court for outbound vehicles should provide parking for at least three (3) vehicles during the peak periods.

- Sufficient valet runners should be assigned to this facility during the anticipated peak periods in order to prevent inbound or outbound vehicles from blocking Collins Court.

Transportation Demand Management (TDM)

There are numerous Transportation Demand Management (TDM) strategies to influence travel decision. Some improve the transportation options available; some provide incentives to change travel mode, time or destination; others improve land use accessibility; some involve transportation policy reforms and new programs that provide a foundation for TDM. Some benefits provided by a well-thought TDM program include:

- Congestion reduction
- Road and parking savings
- Transportation Options (choices)
- Road safety
- Environmental protection
- Improved quality of life
- Economic development
- Healthy lifestyles

The 601 Washington project proposes the following incentives in order to provide an effective TDM plan for the project:

Bicycling

Bicycle racks are being proposed at the site in order to encourage non-automobile modes of transportation.

Carpool

The proposed hotel will encourage employees to carpool. The hotel will provide a minimum of one (1) complimentary valet parking for High Occupancy Vehicle being used for Carpooling.

Transit Use

The hotel will have an informational kiosk within the lobby of the hotel with information relative to bus schedules and routes (two bus routes travel along Washington Avenue and two along nearby Collins Avenue) and the location of the two closest City Bike Station 123 and 124 near the intersection of 7th Street and Washington Avenue.

APPENDIX A

Traffic Methodology

TO: 601 Washington Avenue

FROM: Joaquin Vargas

DATE: January 10, 2016

SUBJECT: Traffic Methodology for 601 Washington

---

601 Washington is a proposed mixed-use development consisting of retail, hotel and restaurant uses including a parking garage.

The proposed mixed-use project will have a driveway into the parking garage off of the Collins Court. The following is our proposed methodology for the traffic study associated with this project:

- The trip generation for the proposed facilities will be based on ITE's *Trip Generation Manual* (9th Edition). For the proposed restaurant seats, quality restaurant will be assumed (LUC 931). For the hotel use, LUC 310 will be used and for the retail LUC 826 (specialty retail), which is consistent with other commercial development within Miami Beach.

- The traffic study will evaluate nine (9) intersections in the immediate vicinity of the project. The analyses will be undertaken for the critical PM peak hour. These intersections are:

  1. Collins Avenue and 5th Street/A1A (signalized)
  2. Collins Avenue and 6th Street (stop controlled)
  3. Collins Avenue and 7th Street (signalized)
  4. Washington Avenue and 5th Street/A1A (signalized)
  5. Washington Avenue and 6th Street (signalized)
  6. Washington Avenue and 7th Street (signalized)
  7. Collins Court and 5th Street/A1A (stop controlled)
  8. Collins Court and 6th Street (stop controlled)
  9. Collins Court and 7th Street (stop controlled)

- Traffic circulation will be evaluated in the traffic study, including its impact to the surrounding street system and adjacent driveways, if any.

- The drop-off and pick-up lane will be evaluated from a queuing standpoint.

- For purposes of the traffic study, the build-out year will be 2017. For purposes of traffic growth, FDOT historical traffic data will be used.

- Existing traffic signal timing data and traffic counts will be included in the appendix of the traffic study.

- The traffic study will address any anticipated / proposed impacts onto the existing on-street vehicular parking, if applicable. Any impacts to on-street parking will be discussed with the City's Parking Department.

- Traffic figures will be prepared for the following trip generation scenarios for each of the intersections analyzed:

  1. Existing trips
  2. Proposed site trips distribution
  3. Existing + traffic growth
  4. Future or build-out + traffic growth + site trips

- The presence of transit and nearby routes will be discussed as will the provision and location of bicycle racks.

- Provide bicycle racks at the site to encourage other modes of transportation.

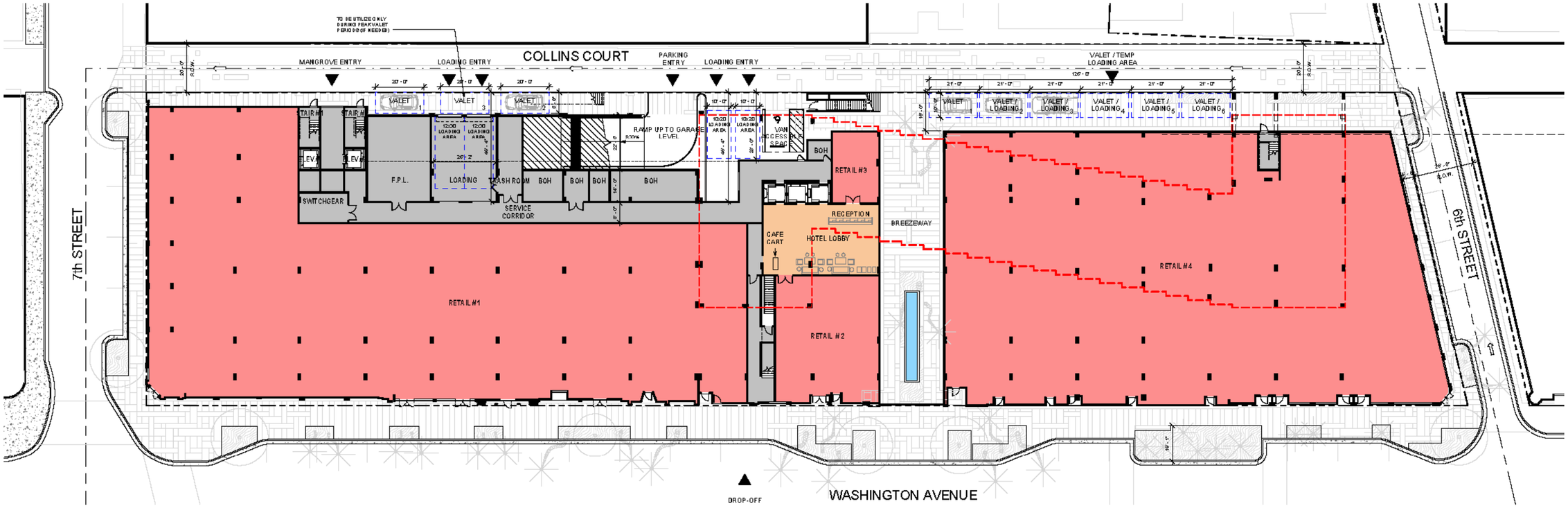
- The site plan will show the location of pick up/drop off for valet parking purposes.

- The site plan will also include the location of bicycle parking, garbage pick-up area and place designated for deliveries.

- The submittal of the study will include LOS calculations for review by the peer reviewer.

APPENDIX B

Site Plan
601 Washington


COLLINS COURT
MANGROVE ENTRY
LOADING ENTRY
PARKING ENTRY
LOADING ENTRY
VALET / TEMP LOADING AREA
TO BE UTILIZED ONLY DURING PEAK VALET PERIODS (IF NEEDED)
VALET 1
VALET 3
VALET 2
STAIR #1
STAIR #2
ELEV.
ELEV.
SWITCHGEAR
F.P.L.
LOADING
TRASH ROOM
BOH
BOH
BOH
BOH
SERVICE CORRIDOR
12'x30' LOADING AREA
12'x30' LOADING AREA
RAMP UP TO GARAGE LEVEL
10'x30' LOADING AREA
10'x30' LOADING AREA
VAN ACCESS. S.P.A.
BOH
RETAIL #3
RECEPTION
HOTEL LOBBY
CAFE CART
BREEZEWAY
RETAIL #1
RETAIL #2
RETAIL #4
VALET
VALET / LOADING 1
VALET / LOADING 2
VALET / LOADING 3
VALET / LOADING 4
VALET / LOADING 5
VALET / LOADING 6
7th STREET
6th STREET
DROP-OFF
WASHINGTON AVENUE

APPENDIX C

Signal Timing Plan and Traffic Counts

TOD Schedule Report
for 2658: Collins Av&5 St

Print Date: 3/5/2014

Print Time: 8:09 AM

Asset	Intersection	TOD Schedule	Op Mode	Plan #	Cycle	Offset	TOD Setting	Active PhaseBank	Active Maximum
2658	Collins Av&5 St	DOW-4		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
-	EBT	-	NBT	EBL	WBT	-	SBT
0	0	0	0	0	0	0	0

Active Phase Bank: Phase Bank 1

Phase	Walk Phase Bank 1 2 3	Don't Walk 1 2 3	Min Initial 1 2 3	Veh Ext 1 2 3	Max Limit 1 2 3	Max 2 1 2 3	Yellow	Red
1 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
2 EBT	0 - 0 - 0	0 - 0 - 0	16 - 16 - 16	1 - 1 - 1	20 - 20 - 20	0 - 20 - 20	4	2.3
3 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
4 NBT	0 - 0 - 0	0 - 0 - 0	7 - 7 - 7	2.5 - 2.5 - 2.5	12 - 7 - 7	55 - 20 - 20	4	3.2
5 EBL	0 - 0 - 0	0 - 0 - 0	5 - 5 - 5	2 - 2 - 2	11 - 7 - 7	25 - 15 - 15	4	2
6 WBT	0 - 0 - 0	0 - 0 - 0	16 - 16 - 16	1 - 1 - 1	20 - 20 - 20	0 - 20 - 20	4	2.3
7 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
8 SBT	0 - 0 - 0	0 - 0 - 0	7 - 7 - 7	5 - 2.5 - 2.5	12 - 7 - 7	55 - 20 - 20	4	3.2

Last In Service Date: unknown

Permitted Phases

	12345678
Default	-23456-8
External Permit 0	-2-4-6-8
External Permit 1	-2-4-6-8
External Permit 2	-2-4-6-8

Current TOD Schedule	Plan	Cycle	Green Time 1 -	2 EBT	3 -	4 NBT	5 EBL	6 WBT	7 -	8 SBT	Ring Offset	Offset
	1	120	0	47	0	60	13	28	0	60	0	52
	2	110	0	46	0	51	6	34	0	51	0	95
	3	110	0	46	0	51	6	34	0	51	0	36
	4	130	0	66	0	51	6	54	0	51	0	61
	5	130	0	44	0	73	19	19	0	73	0	39
	6	110	0	46	0	51	6	34	0	51	0	42
	7	120	0	47	0	60	13	28	0	60	0	57
	8	110	0	46	0	51	6	34	0	51	0	72
	9	160	0	76	0	71	6	64	0	71	0	39
	10	160	0	66	0	81	6	54	0	81	0	130
	11	160	0	96	0	51	6	84	0	51	0	6
	12	160	0	96	0	51	6	84	0	51	0	42
	13	160	0	96	0	51	6	84	0	51	0	130
	14	120	0	56	0	51	6	44	0	51	0	57
	15	130	0	46	0	71	16	24	0	71	0	51
	16	120	0	47	0	60	13	28	0	60	0	90
	21	110	0	46	0	51	6	34	0	51	0	95
	22	110	0	46	0	51	6	34	0	51	0	95
	23	110	0	46	0	51	6	34	0	51	0	73
	25	140	0	65	0	62	6	53	0	62	0	0
	26	180	0	105	0	62	6	93	0	62	0	0
	27	140	0	65	0	62	6	53	0	62	0	37

Local TOD Schedule

Time	Plan	DOW
0000	Free	Su M S
0000	1	T W Th F
0030	1	Su M S
0300	22	Su M T W Th F S
0500	1	Su M T W Th F S
0700	22	Su S
0800	5	M T W Th F
0800	5	S
1000	5	Su
1800	16	Su S
1800	15	M T W Th F
2200	1	M T W Th F
2300	Free	Su S

Current Time of Day Function

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

Local Time of Day Function

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

*** Settings**

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

No Calendar Defined/Enabled

TOD Schedule Report

for 2794: Washington Av&5 St

Print Date: 12/31/2013

Print Time: 8:15 AM

Asset	Intersection	TOD Schedule	Op Mode	Plan #	Cycle	Offset	TOD Setting	Active PhaseBank	Active Maximum
2794	Washington Av&5 St	DOW-3		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
EBL	WBT	-	NBT	WBL	EBT	-	SBT
0	0	0	0	0	0	0	0

Active Phase Bank: Phase Bank 1

Phase		Walk Phase Bank 1 2 3	Don't Walk 1 2 3	Min Initial 1 2 3	Veh Ext 1 2 3	Max Limit 1 2 3	Max 2 1 2 3	Yellow	Red
1	EBL	0 - 0 - 0	0 - 0 - 0	5 - 5 - 5	2 - 2 - 2	8 - 8 - 8	20 - 17 - 17	3.4	2.9
2	WBT	4 - 4 - 4	26 - 26 - 26	4 - 4 - 4	1 - 1 - 1	39 - 39 - 39	0 - 39 - 39	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	4 - 4 - 4	29 - 29 - 29	7 - 7 - 7	2.5 - 2.5 - 2.5	12 - 33 - 12	24 - 33 - 33	4	2.4
5	WBL	0 - 0 - 0	0 - 0 - 0	5 - 5 - 5	2 - 2 - 2	5 - 5 - 5	8 - 8 - 8	3.4	2.5
6	EBT	4 - 4 - 4	26 - 26 - 26	4 - 4 - 4	1 - 1 - 1	39 - 39 - 39	0 - 39 - 39	4	2
7	-	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
8	SBT	4 - 4 - 4	29 - 29 - 29	7 - 7 - 7	2.5 - 2.5 - 2.5	12 - 17 - 12	24 - 33 - 33	4	2.4

Last In Service Date: unknown

Permitted Phases

	12345678
Default	12-456-8
External Permit 0	--------
External Permit 1	--------
External Permit 2	--------

TOD Schedule Report

for 2796: Washington Av&7 St

Print Date: 3/24/2014

Print Time: 8:05 AM

Asset	Intersection	TOD Schedule	Op Mode	Plan #	Cycle	Offset	TOD Setting	Active PhaseBank	Active Maximum
2796	Washington Av&7 St	HOLIDAY-2		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
-	NBT	-	EBT	-	SBT	-	-
0	0	0	0	0	0	0	0

Active Phase Bank: Phase Bank 1

Phase	Walk (Phase Bank 1 2 3)	Don't Walk (1 2 3)	Min Initial (1 2 3)	Veh Ext (1 2 3)	Max Limit (1 2 3)	Max 2 (1 2 3)	Yellow	Red
1 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
2 NBT	7 - 7 - 7	16 - 16 - 16	7 - 7 - 7	1 - 1 - 1	52 - 50 - 50	0 - 50 - 50	4	1
3 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
4 EBT	7 - 7 - 7	17 - 17 - 17	7 - 7 - 7	1 - 1 - 1	24 - 24 - 24	24 - 24 - 24	4	1
5 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
6 SBT	7 - 7 - 7	16 - 16 - 16	7 - 7 - 7	1 - 1 - 1	52 - 50 - 50	0 - 50 - 50	4	1
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	--------

Current TOD Schedule	Plan	Cycle	Green Time 1 -	2 NBT	3 -	4 EBT	5 -	6 SBT	7 -	8 -	Ring Offset	Offset
	1	70	0	36	0	24	0	36	0	0	0	14
	2	90	0	56	0	24	0	56	0	0	0	11
	3	80	0	46	0	24	0	46	0	0	0	26
	4	90	0	56	0	24	0	56	0	0	0	76
	5	90	0	56	0	24	0	56	0	0	0	74
	6	90	0	56	0	24	0	56	0	0	0	74
	7	90	0	56	0	24	0	56	0	0	0	33
	8	80	0	46	0	24	0	46	0	0	0	59
	9	80	0	46	0	24	0	46	0	0	0	59
	10	80	0	46	0	24	0	46	0	0	0	59
	11	100	0	66	0	24	0	66	0	0	0	73
	12	90	0	56	0	24	0	56	0	0	0	44
	13	80	0	46	0	24	0	46	0	0	0	59
	14	90	0	56	0	24	0	56	0	0	0	74
	15	110	0	76	0	24	0	76	0	0	0	99
	16	150	0	116	0	24	0	116	0	0	0	76
	18	90	0	56	0	24	0	56	0	0	0	76
	19	100	0	64	0	26	0	64	0	0	0	0
	20	110	0	74	0	26	0	74	0	0	0	0
	21	110	0	74	0	26	0	74	0	0	0	0
	22	70	0	36	0	24	0	36	0	0	0	14
	23	70	0	36	0	24	0	36	0	0	0	14

Local TOD Schedule

Time	Plan	DOW
0000	22	Su S
0000	10	M T W Th F
0100	23	M T W Th F
0530	1	Su S
0600	1	M T W Th F
0715	2	M T W Th F
0800	11	M T W Th F
0900	4	M T W Th F
1000	4	Su S
1330	12	M T W Th F
1530	6	M T W Th F
1800	8	M T W Th F
2000	10	Su S

Current Time of Day Function

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

Local Time of Day Function

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

*** Settings**

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

No Calendar Defined/Enabled

Current TOD Schedule	Plan	Cycle	Green Time 1 EBL	2 WBT	3 -	4 NBT	5 WBL	6 EBT	7 -	8 SBT	Ring Offset	Offset
	1	120	14	42	0	46	7	49	0	46	0	51
	2	110	7	39	0	46	7	39	0	46	0	74
	3	110	7	39	0	46	7	39	0	46	0	15
	4	130	7	59	0	46	7	59	0	46	0	113
	5	110	7	39	0	46	7	39	0	46	0	35
	6	110	7	39	0	46	7	39	0	46	0	84
	7	110	7	39	0	46	7	39	0	46	0	23
	8	110	7	39	0	46	7	39	0	46	0	69
	9	160	7	89	0	46	7	89	0	46	0	29
	10	160	7	89	0	46	7	89	0	46	0	145
	11	160	7	89	0	46	7	89	0	46	0	15
	12	160	7	89	0	46	7	89	0	46	0	37
	13	160	7	89	0	46	7	89	0	46	0	145
	14	120	7	49	0	46	7	49	0	46	0	43
	15	130	18	48	0	46	7	59	0	46	0	46
	16	120	7	49	0	46	7	49	0	46	0	101
	17	130	18	48	0	46	7	59	0	46	0	46
	22	110	9	39	0	44	9	39	0	44	0	102
	23	110	7	39	0	46	7	39	0	46	0	80
	25	140	7	69	0	46	7	69	0	46	0	18
	26	180	7	109	0	46	7	109	0	46	0	17
	27	140	7	69	0	46	7	69	0	46	0	46

Local TOD Schedule

Time	Plan	DOW
0000	Free	Su M S
0000	1	T W Th F
0030	1	Su M S
0300	22	Su M T W Th F S
0500	1	Su M T W Th F S
0700	22	Su S
0800	4	M T W Th F
0800	14	S
1000	14	Su
1500	16	Su S
1500	15	M T W Th F
2200	1	M T W Th F
2300	Free	Su S

Current Time of Day Function

Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	8-------	SuM T W ThF S
0600	TOD OUTPUTS	--------	M T W ThF
1800	TOD OUTPUTS	8-------	M T W ThF

Local Time of Day Function

Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	8-------	SuM T W ThF S
0600	TOD OUTPUTS	--------	M T W ThF
0700	TOD OUTPUTS	-------1	Su S
0800	TOD OUTPUTS	--------	Su S
1800	TOD OUTPUTS	8-------	M T W ThF
1900	TOD OUTPUTS	8-------	Su 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 2795: Washington Av&6 St

Print Date: 3/24/2014

Print Time: 8:05 AM

Asset	Intersection	TOD Schedule	Op Mode	Plan #	Cycle	Offset	TOD Setting	Active PhaseBank	Active Maximum
2795	Washington Av&6 St	HOLIDAY-2		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
-	NBT	-	EBT	-	SBT	-	-
0	0	0	0	0	0	0	0

Active Phase Bank: Phase Bank 1

Phase	Walk Phase Bank 1 2 3	Don't Walk 1 2 3	Min Initial 1 2 3	Veh Ext 1 2 3	Max Limit 1 2 3	Max 2 1 2 3	Yellow	Red
1 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
2 NBT	7 - 7 - 7	11 - 11 - 11	7 - 7 - 7	1 - 1 - 1	40 - 40 - 40	40 - 40 - 40	4	1
3 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
4 EBT	7 - 7 - 7	19 - 19 - 19	7 - 7 - 7	2.5 - 2.5 - 2.5	12 - 12 - 12	12 - 12 - 12	4	1
5 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
6 SBT	7 - 7 - 7	11 - 11 - 11	7 - 7 - 7	1 - 1 - 1	40 - 40 - 40	40 - 40 - 40	4	1
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	--------

Current TOD Schedule	Plan	Cycle	Green Time 1 -	2 NBT	3 -	4 EBT	5 -	6 SBT	7 -	8 -	Ring Offset	Offset
	1	70	0	34	0	26	0	34	0	0	0	16
	2	90	0	54	0	26	0	54	0	0	0	13
	3	80	0	44	0	26	0	44	0	0	0	28
	4	90	0	54	0	26	0	54	0	0	0	78
	5	90	0	54	0	26	0	54	0	0	0	78
	6	90	0	54	0	26	0	54	0	0	0	76
	7	90	0	54	0	26	0	54	0	0	0	38
	8	80	0	44	0	26	0	44	0	0	0	59
	9	80	0	44	0	26	0	44	0	0	0	59
	10	80	0	44	0	26	0	44	0	0	0	59
	11	100	0	64	0	26	0	64	0	0	0	76
	12	90	0	54	0	26	0	54	0	0	0	44
	13	80	0	44	0	26	0	44	0	0	0	61
	14	90	0	54	0	26	0	54	0	0	0	76
	15	110	0	74	0	26	0	74	0	0	0	101
	16	150	0	114	0	26	0	114	0	0	0	83
	18	90	0	54	0	26	0	54	0	0	0	78
	19	100	0	64	0	26	0	64	0	0	0	0
	20	110	0	74	0	26	0	74	0	0	0	0
	21	110	0	74	0	26	0	74	0	0	0	0
	22	70	0	34	0	26	0	34	0	0	0	12
	23	70	0	34	0	26	0	34	0	0	0	12

Local TOD Schedule

Time	Plan	DOW
0000	22	Su S
0000	10	M T W Th F
0100	23	M T W Th F
0530	1	Su S
0600	1	M T W Th F
0715	2	M T W Th F
0800	11	M T W Th F
0900	4	M T W Th F
1000	4	Su S
1330	12	M T W Th F
1530	6	M T W Th F
1800	8	M T W Th F
2000	10	Su S

Current Time of Day Function

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

Local Time of Day Function

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

*** Settings**

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

No Calendar Defined/Enabled

TOD Schedule Report
for 6006: Collins Av&7 St

Print Date: 3/5/2014

Print Time: 8:41 AM

Asset	Intersection	TOD Schedule	Op Mode	Plan #	Cycle	Offset	TOD Setting	Active PhaseBank	Active Maximum
6006	Collins Av&7 St	DOW-4		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
-	SBT	-	-	-	NBT	-	EBT
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 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
2 SBT	7 - 7 - 7	6 - 6 - 6	7 - 7 - 7	1 - 1 - 1	50 - 50 - 50	0 - 0 - 0	4	0
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 NBT	7 - 7 - 7	8 - 8 - 8	7 - 7 - 7	1 - 1 - 1	50 - 50 - 50	0 - 0 - 0	4	2
7 -	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0 - 0 - 0	0	0
8 EBT	10 - 10 - 10	10 - 10 - 10	7 - 7 - 7	2.5 - 2.5 - 2.5	10 - 7 - 7	23 - 24 - 24	4	2

Current TOD Schedule	Plan	Cycle	Green Time 1 -	2 SBT	3 -	4 -	5 -	6 NBT	7 -	8 EBT	Ring Offset	Offset
	1	100	0	64	0	0	0	64	0	24	0	17
	2	95	0	59	0	0	0	59	0	24	0	39
	3	100	0	64	0	0	0	64	0	24	0	22
	4	90	0	54	0	0	0	54	0	24	0	85
	5	110	0	74	0	0	0	74	0	24	0	89
	6	120	0	84	0	0	0	84	0	24	0	27
	7	120	0	84	0	0	0	84	0	24	0	22
	9	65	0	29	0	0	0	29	0	24	0	62
	22	100	0	64	0	0	0	64	0	24	0	22

Last In Service Date: unknown

Permitted Phases

	12345678
Default	-2---6-8
External Permit 0	--------
External Permit 1	--------
External Permit 2	--------

Local TOD Schedule

Time	Plan	DOW
0000	1	Su M T W Th
0000	7	F S
0300	1	F S
0300	4	Su
0300	22	M T W Th
0700	1	M T W Th F S
0800	9	M T W Th
0800	5	Su
1000	5	Su F S
1800	1	M T W Th
1800	6	Su F S

Current Time of Day Function

Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	--------	SuM T W ThF S
0800	PED RECALL	8---4---	M T W ThF
1800	PED RECALL	--------	M T W ThF

Local Time of Day Function

Time	Function	Settings *	Day of Week
0000	TOD OUTPUTS	--------	SuM T W ThF S
0800	PED RECALL	8---4---	M T W ThF
1800	PED RECALL	--------	M T W ThF

*** Settings**

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

No Calendar Defined/Enabled

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

5TH STREET & COLLINS AVENUE
MIAMI BEACH, FLORIDA
COUNTED BY: S. SALVO & C. AUDIFFRED
SIGNALIZED

Site Code : 00150258
Start Date: 12/11/15
File I.D. : 5ST_COLL

ALL VEHICLES

	COLLINS AVENUE From North				5TH STREET From East				COLLINS AVENUE From South				5TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 12/11/15																	
16:00	0	4	16	98	0	1	61	16	0	14	12	3	6	84	69	10	394
16:15	0	10	18	78	0	0	45	13	0	17	17	0	5	55	43	8	309
16:30	0	12	24	66	0	3	48	23	0	18	24	2	2	67	60	8	357
16:45	0	6	21	61	0	1	35	17	0	7	18	2	4	66	51	10	299
Hr Total	0	32	79	303	0	5	189	69	0	56	71	7	17	272	223	36	1359
17:00	0	9	28	64	0	5	42	13	0	4	22	4	4	66	43	10	314
17:15	0	9	25	74	0	5	28	18	0	5	14	3	3	53	37	8	282
17:30	0	6	20	64	0	6	41	21	0	6	19	2	6	51	34	10	286
17:45	0	9	22	90	0	1	34	12	0	10	22	2	13	61	46	4	326
Hr Total	0	33	95	292	0	17	145	64	0	25	77	11	26	231	160	32	1208
TOTAL	0	65	174	595	0	22	334	133	0	81	148	18	43	503	383	68	2567

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85 SE 4th Avenue, Unit 109
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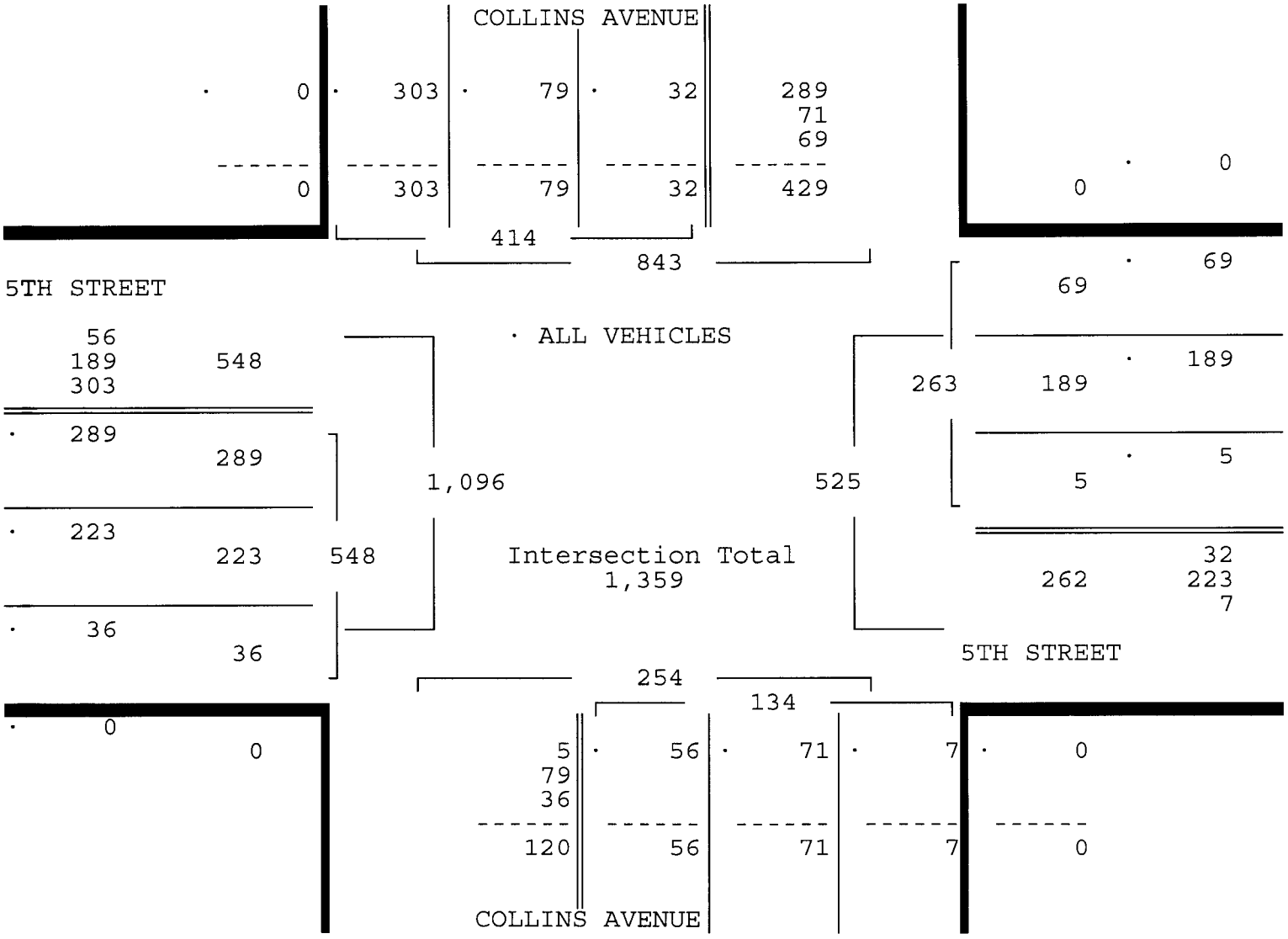
5TH STREET & COLLINS AVENUE
MIAMI BEACH, FLORIDA
COUNTED BY: S. SALVO & C. AUDIFFRED
SIGNALIZED

Site Code : 00150258
Start Date: 12/11/15
File I.D. : 5ST_COLL

ALL VEHICLES

	COLLINS AVENUE From North				5TH STREET From East				COLLINS AVENUE From South				5TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 12/11/15																	
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 12/11/15																	
Peak start	16:00				16:00				16:00				16:00				
Volume	0	32	79	303	0	5	189	69	0	56	71	7	17	272	223	36	
Percent	0%	8%	19%	73%	0%	2%	72%	26%	0%	42%	53%	5%	3%	50%	41%	7%	
Pk total	414				263				134				548				
Highest	16:00				16:00				16:30				16:00				
Volume	0	4	16	98	0	1	61	16	0	18	24	2	6	84	69	10	
Hi total	118				78				44				169				
PHF	.88				.84				.76				.81				



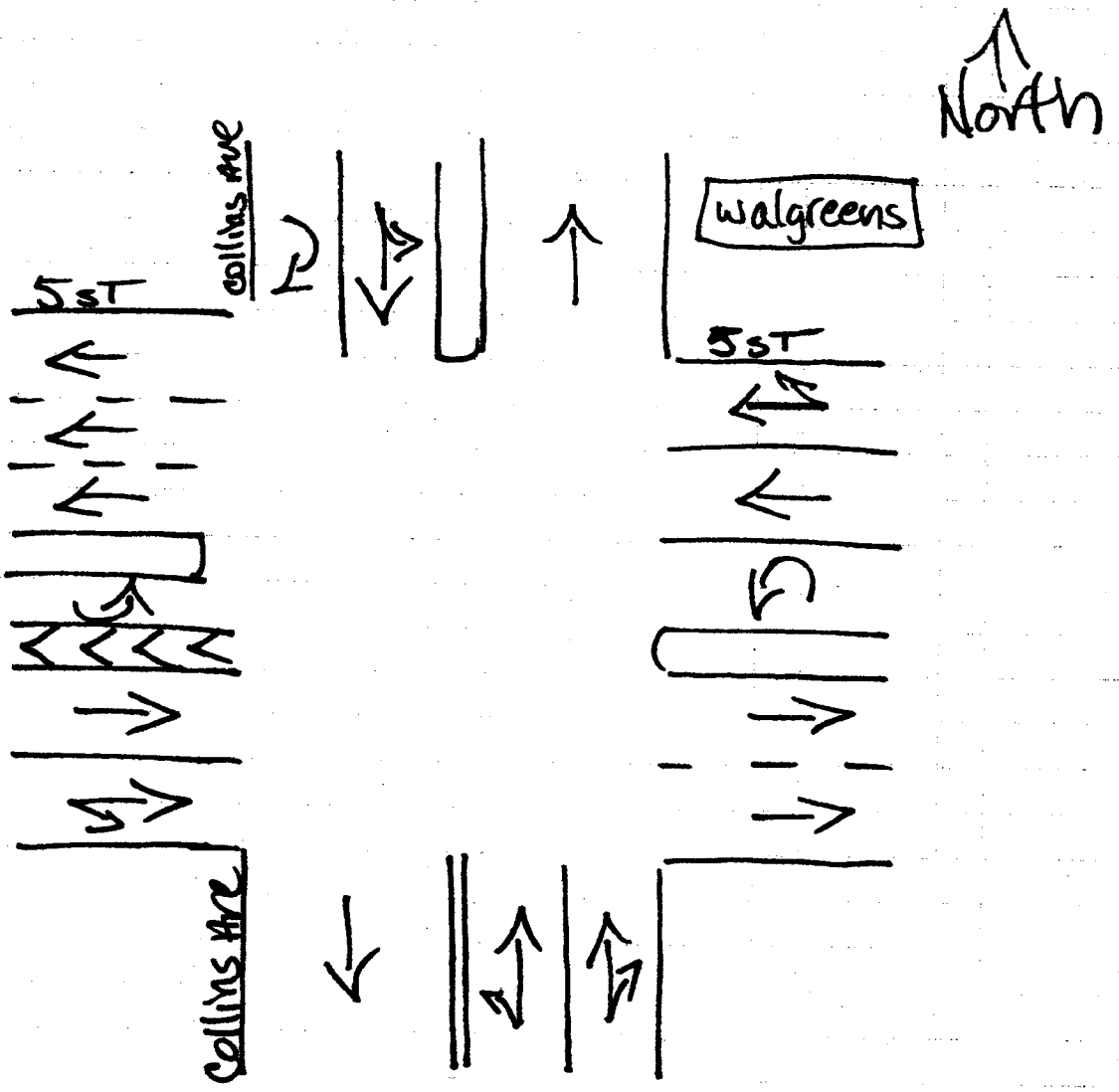
5TH STREET & COLLINS AVENUE
MIAMI BEACH, FLORIDA
COUNTED BY: S. SALVO & C. AUDIFFRED
SIGNALIZED

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

Site Code : 00150258
Start Date: 12/11/15
File I.D. : 5ST_COLL
Page : 1

PEDESTRIANS & BIKES

	COLLINS AVENUE From North				5TH STREET From East				COLLINS AVENUE From South				5TH STREET From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 12/11/15																	
16:00	0	0	0	61	0	0	0	24	0	0	0	11	0	2	0	16	114
16:15	0	0	0	66	0	0	0	30	0	1	0	12	0	2	0	8	119
16:30	0	0	0	67	0	0	0	12	0	3	0	20	0	1	0	15	118
16:45	0	0	0	99	0	0	0	24	0	1	0	13	0	2	0	16	155
Hr Total	0	0	0	293	0	0	0	90	0	5	0	56	0	7	0	55	506
17:00	0	0	0	91	0	0	0	23	0	3	0	19	0	1	0	9	146
17:15	0	0	0	91	0	0	0	29	0	0	0	14	0	4	0	16	154
17:30	0	0	0	91	0	0	0	37	0	2	0	18	0	4	0	13	165
17:45	0	0	0	79	0	0	0	25	0	2	0	2	0	1	0	21	130
Hr Total	0	0	0	352	0	0	0	114	0	7	0	53	0	10	0	59	595
TOTAL	0	0	0	645	0	0	0	204	0	12	0	109	0	17	0	114	1101



Miami Beach, Florida
March 31, 2015
drawn by: Luis Palomino
signalized

Traffic Survey Specialists, Inc.

6TH STREET & COLLINS AVENUE
MIAMI BEACH, FLORIDA
COUNTED BY: CRISTIAN PALOMINO
NOT SIGNALIZED

85 SE 4th Avenue, Unit 109
Delray Beach, Florida 33483
Phone (561) 272-3255

Site Code : 00150258
Start Date: 12/11/15
File I.D. : 6ST_COLL
Page : 1

ALL VEHICLES

	COLLINS AVENUE From North				6TH STREET From East				COLLINS AVENUE From South				6TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 12/11/15																	
16:00	0	1	97	1	0	6	0	10	0	0	98	0	0	2	0	13	228
16:15	0	0	104	0	0	3	0	14	0	0	87	0	0	2	0	8	218
16:30	2	0	91	1	0	1	1	11	0	0	111	0	0	1	0	10	229
16:45	0	0	90	0	0	7	0	9	0	0	96	0	0	1	0	3	206
Hr Total	2	1	382	2	0	17	1	44	0	0	392	0	0	6	0	34	881
17:00	0	0	79	1	0	1	0	7	0	0	94	1	0	0	0	5	188
17:15	0	0	99	0	0	6	0	6	0	0	85	0	0	0	0	12	208
17:30	0	0	84	0	0	5	0	12	0	0	86	0	0	0	0	10	197
17:45	0	0	99	2	0	3	0	11	0	0	91	1	0	3	0	12	222
Hr Total	0	0	361	3	0	15	0	36	0	0	356	2	0	3	0	39	815
TOTAL	2	1	743	5	0	32	1	80	0	0	748	2	0	9	0	73	1696

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85 SE 4th Avenue, Unit 109
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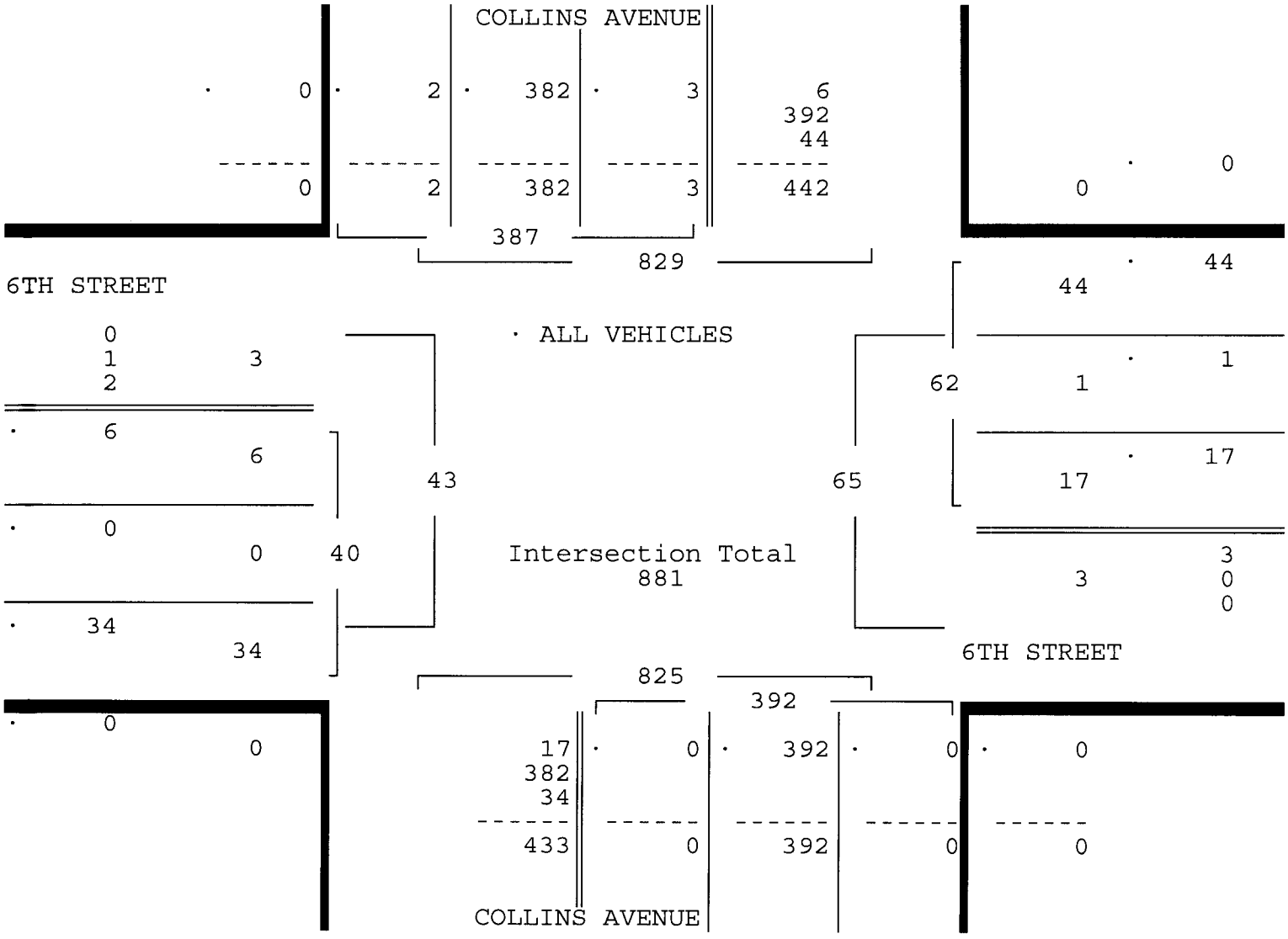
6TH STREET & COLLINS AVENUE
MIAMI BEACH, FLORIDA
COUNTED BY: CRISTIAN PALOMINO
NOT SIGNALIZED

Site Code : 00150258
Start Date: 12/11/15
File I.D. : 6ST_COLL

ALL VEHICLES

	COLLINS AVENUE From North				6TH STREET From East				COLLINS AVENUE From South				6TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 12/11/15																	
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 12/11/15																	
Peak start	16:00				16:00				16:00				16:00				
Volume	2	1	382	2	0	17	1	44	0	0	392	0	0	6	0	34	
Percent	1%	0%	99%	1%	0%	27%	2%	71%	0%	0%	100%	0%	0%	15%	0%	85%	
Pk total	387				62				392				40				
Highest	16:15				16:15				16:30				16:00				
Volume	0	0	104	0	0	3	0	14	0	0	111	0	0	2	0	13	
Hi total	104				17				111				15				
PHF	.93				.91				.88				.67				



Traffic Survey Specialists, Inc.

6TH STREET & COLLINS AVENUE
MIAMI BEACH, FLORIDA
COUNTED BY: CRISTIAN PALOMINO
NOT SIGNALIZED

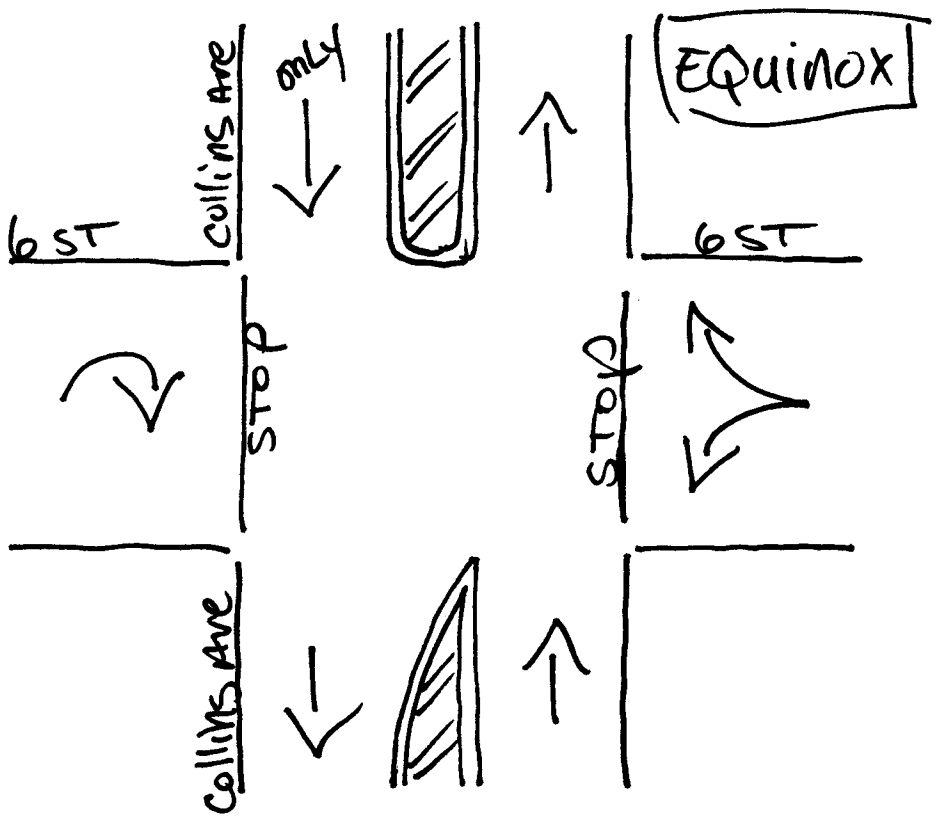
85 SE 4th Avenue, Unit 109
Delray Beach, Florida 33483
Phone (561) 272-3255

Site Code : 00150258
Start Date: 12/11/15
File I.D. : 6ST_COLL
Page : 1

PEDESTRIANS & BIKES

	COLLINS AVENUE From North				6TH STREET From East				COLLINS AVENUE From South				6TH STREET From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 12/11/15																	
16:00	0	0	0	33	0	1	0	34	0	3	0	4	0	3	0	60	138
16:15	0	0	0	20	0	3	0	29	0	2	0	2	0	2	0	46	104
16:30	0	2	0	29	0	1	0	32	0	0	0	1	0	4	0	47	116
16:45	0	1	0	50	0	2	0	22	0	1	0	0	0	1	0	75	152
Hr Total	0	3	0	132	0	7	0	117	0	6	0	7	0	10	0	228	510
17:00	0	4	0	34	0	2	0	15	0	0	0	0	0	0	0	57	112
17:15	0	1	0	31	0	0	0	21	0	0	0	5	0	5	0	49	112
17:30	0	2	0	27	0	2	0	30	0	0	0	2	0	4	0	48	115
17:45	0	0	0	37	0	4	0	14	0	0	0	0	0	3	0	71	129
Hr Total	0	7	0	129	0	8	0	80	0	0	0	7	0	12	0	225	468
TOTAL	0	10	0	261	0	15	0	197	0	6	0	14	0	22	0	453	978

North



Miami Beach, Florida
December 15, 2015
drawn by: Luis Palomino
not signalized

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

7TH STREET & COLLINS AVENUE
MIAMI BEACH, FLORIDA
COUNTED BY: LUIS PALOMINO
SIGNALIZED

Site Code : 00150258
Start Date: 12/11/15
File I.D. : 7ST_COLL
Page : 1

ALL VEHICLES

	COLLINS AVENUE From North				7TH STREET From East				COLLINS AVENUE From South				7TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 12/11/15																	
16:00	0	6	81	0	0	0	0	0	0	0	103	17	0	16	13	11	247
16:15	0	6	83	0	0	0	0	0	0	0	102	7	0	12	22	16	248
16:30	0	4	76	0	0	0	0	0	0	1	105	9	0	7	12	14	228
16:45	0	11	82	0	0	0	0	1	0	0	101	17	0	18	15	19	264
Hr Total	0	27	322	0	0	0	0	1	0	1	411	50	0	53	62	60	987
17:00	0	4	79	0	0	0	0	0	0	0	107	6	0	12	17	9	234
17:15	0	9	73	0	0	0	0	1	0	1	86	3	0	17	15	12	217
17:30	2	5	84	0	0	0	0	0	0	0	84	20	3	11	10	14	233
17:45	0	9	67	0	0	0	0	0	0	0	95	7	0	8	13	16	215
Hr Total	2	27	303	0	0	0	0	1	0	1	372	36	3	48	55	51	899
TOTAL	2	54	625	0	0	0	0	2	0	2	783	86	3	101	117	111	1886

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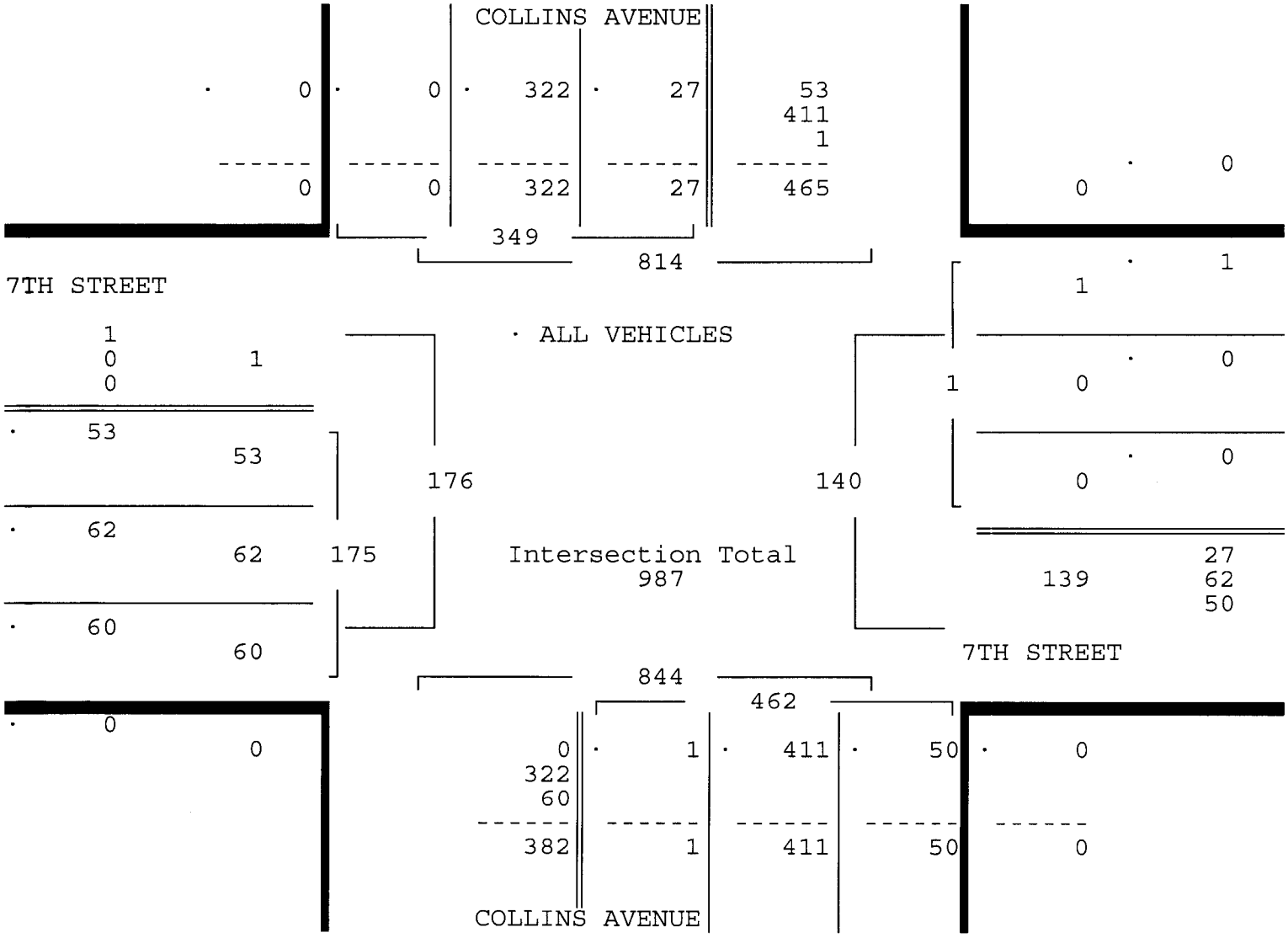
7TH STREET & COLLINS AVENUE
MIAMI BEACH, FLORIDA
COUNTED BY: LUIS PALOMINO
SIGNALIZED

Site Code : 00150258
Start Date: 12/11/15
File I.D. : 7ST_COLL

ALL VEHICLES

	COLLINS AVENUE From North				7TH STREET From East				COLLINS AVENUE From South				7TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 12/11/15																	
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 12/11/15																	
Peak start 16:00					16:00				16:00				16:00				
Volume	0	27	322	0	0	0	0	1	0	1	411	50	0	53	62	60	
Percent	0%	8%	92%	0%	0%	0%	0%	100%	0%	0%	89%	11%	0%	30%	35%	34%	
Pk total	349				1				462				175				
Highest	16:45				16:45				16:00				16:45				
Volume	0	11	82	0	0	0	0	1	0	0	103	17	0	18	15	19	
Hi total	93				1				120				52				
PHF	.94				.25				.96				.84				



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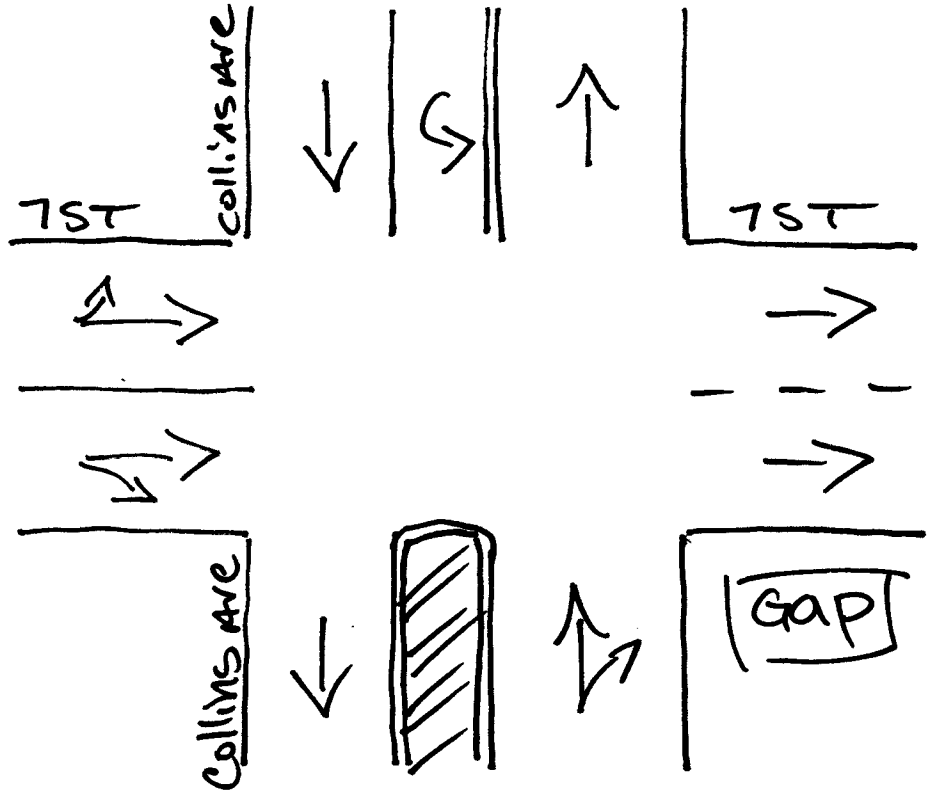
7TH STREET & COLLINS AVENUE
MIAMI BEACH, FLORIDA
COUNTED BY: LUIS PALOMINO
SIGNALIZED

Site Code : 00150258
Start Date: 12/11/15
File I.D. : 7ST_COLL
Page : 1

PEDESTRIANS & BIKES

	COLLINS AVENUE From North				7TH STREET From East				COLLINS AVENUE From South				7TH STREET From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 12/11/15																	
16:00	0	0	0	15	0	2	0	47	0	0	0	63	0	2	0	57	186
16:15	0	2	0	22	0	3	0	66	0	1	0	67	0	3	0	38	202
16:30	0	1	0	22	0	0	0	56	0	2	0	54	0	3	0	72	210
16:45	0	5	0	11	0	3	0	66	0	3	0	64	0	2	0	52	206
Hr Total	0	8	0	70	0	8	0	235	0	6	0	248	0	10	0	219	804
17:00	0	4	0	22	0	0	0	60	0	7	0	42	0	4	0	45	184
17:15	0	2	0	28	0	0	0	61	0	2	0	60	0	7	0	86	246
17:30	0	0	0	30	0	1	0	72	0	2	0	59	0	3	0	88	255
17:45	0	2	0	31	0	6	0	49	0	0	0	61	0	1	0	92	242
Hr Total	0	8	0	111	0	7	0	242	0	11	0	222	0	15	0	311	927
TOTAL	0	16	0	181	0	15	0	477	0	17	0	470	0	25	0	530	1731

North



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

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

5TH STREET & WASHINGTON AVENUE
MIAMI BEACH, FLORIDA
COUNTED BY: A. GONZALEZ & I. GONZALEZ
SIGNALIZED

Site Code : 00150258
Start Date: 12/11/15
File I.D. : 5ST_WASH

ALL VEHICLES

	WASHINGTON AVENUE From North				5TH STREET From East				WASHINGTON AVENUE From South				5TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 12/11/15																	
16:00	2	5	36	64	0	2	151	20	0	34	54	6	0	71	147	14	606
16:15	7	9	47	63	0	4	125	24	0	18	60	1	0	88	105	12	563
16:30	4	3	31	36	0	8	70	33	0	17	60	2	1	67	124	8	464
16:45	4	10	34	28	0	7	78	21	0	13	63	5	0	79	116	14	472
Hr Total	17	27	148	191	0	21	424	98	0	82	237	14	1	305	492	48	2105
17:00	4	9	34	48	0	3	104	23	1	20	49	3	2	94	102	9	505
17:15	1	11	40	44	1	2	89	28	1	12	43	2	0	73	91	13	451
17:30	5	7	49	47	0	4	93	30	0	14	49	3	2	69	95	15	482
17:45	4	7	50	85	0	6	100	24	0	18	47	8	0	80	109	7	545
Hr Total	14	34	173	224	1	15	386	105	2	64	188	16	4	316	397	44	1983
TOTAL	31	61	321	415	1	36	810	203	2	146	425	30	5	621	889	92	4088

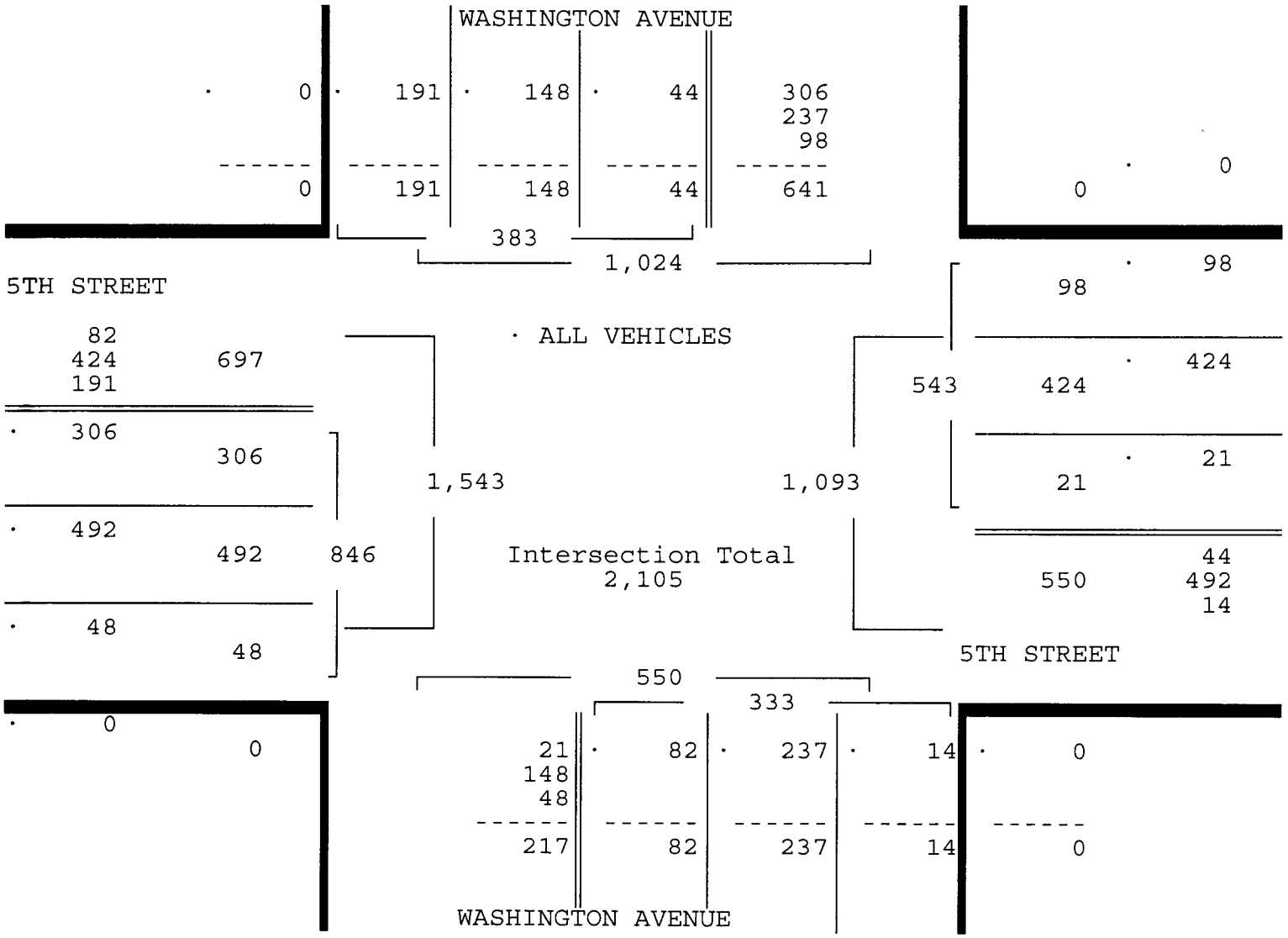
Traffic Survey Specialists, Inc.
85 SE 4th Avenue, Unit 109
Delray Beach, Florida 33483
Phone (561) 272-3255

5TH STREET & WASHINGTON AVENUE
MIAMI BEACH, FLORIDA
COUNTED BY: A. GONZALEZ & I. GONZALEZ
SIGNALIZED

Site Code : 00150258
Start Date: 12/11/15
File I.D. : 5ST_WASH

ALL VEHICLES

	WASHINGTON AVENUE From North				5TH STREET From East				WASHINGTON AVENUE From South				5TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 12/11/15																	
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 12/11/15																	
Peak start	16:00				16:00				16:00				16:00				
Volume	17	27	148	191	0	21	424	98	0	82	237	14	1	305	492	48	
Percent	4%	7%	39%	50%	0%	4%	78%	18%	0%	25%	71%	4%	0%	36%	58%	6%	
Pk total	383				543				333				846				
Highest	16:15				16:00				16:00				16:00				
Volume	7	9	47	63	0	2	151	20	0	34	54	6	0	71	147	14	
Hi total	126				173				94				232				
PHF	.76				.78				.89				.91				



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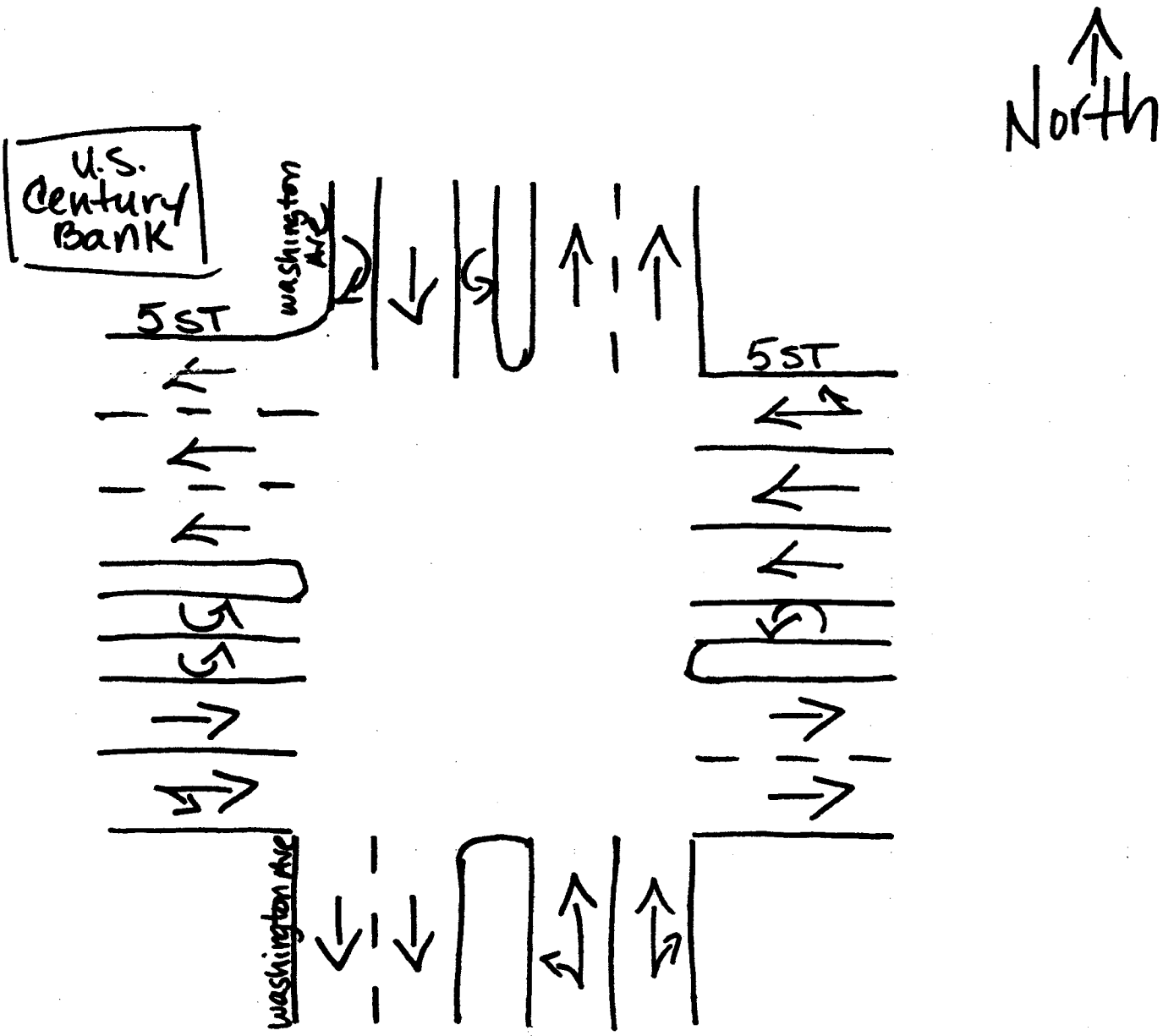
Phone (561) 272-3255

5TH STREET & WASHINGTON AVENUE
MIAMI BEACH, FLORIDA
COUNTED BY: A. GONZALEZ & I. GONZALEZ
SIGNALIZED

Site Code : 00150258
Start Date: 12/11/15
File I.D. : 5ST_WASH
Page : 1

PEDESTRIANS & BIKES

	WASHINGTON AVENUE From North				5TH STREET From East				WASHINGTON AVENUE From South				5TH STREET From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 12/11/15																	
16:00	0	0	0	33	0	1	0	6	0	5	0	22	0	2	0	11	80
16:15	0	3	0	49	0	1	0	12	0	2	0	16	0	4	0	14	101
16:30	0	2	0	60	0	3	0	8	0	0	0	20	0	1	0	4	98
16:45	0	16	0	58	0	1	0	16	0	3	0	30	0	4	0	10	138
Hr Total	0	21	0	200	0	6	0	42	0	10	0	88	0	11	0	39	417
17:00	0	5	0	86	0	2	0	9	0	2	0	12	0	4	0	25	145
17:15	0	1	0	64	0	1	0	24	0	4	0	13	0	1	0	26	134
17:30	0	5	0	55	0	1	0	25	0	4	0	15	0	2	0	19	126
17:45	0	4	0	52	0	1	0	13	0	5	0	2	0	1	0	19	97
Hr Total	0	15	0	257	0	5	0	71	0	15	0	42	0	8	0	89	502
TOTAL	0	36	0	457	0	11	0	113	0	25	0	130	0	19	0	128	919



Miamibeach, Florida
December 16, 2013
drawn by: Luis Palomino ✓
Signalized

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

6TH STREET & WASHINGTON AVENUE
MIAMI BEACH, FLORIDA
COUNTED BY: ROLANDO MARTINEZ
SIGNALIZED

Site Code : 00150258
Start Date: 12/11/15
File I.D. : 6ST_WASH
Page : 1

ALL VEHICLES

	WASHINGTON AVENUE From North				6TH STREET From East				WASHINGTON AVENUE From South				6TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 12/11/15																	
16:00	0	0	103	31	0	0	0	0	3	4	129	6	0	13	0	3	292
16:15	1	0	117	28	0	0	0	0	2	7	153	15	0	8	0	14	345
16:30	1	0	72	36	0	0	0	0	0	16	135	6	0	7	0	13	286
16:45	1	0	75	41	0	0	0	0	0	12	139	4	0	18	0	4	294
Hr Total	3	0	367	136	0	0	0	0	5	39	556	31	0	46	0	34	1217
17:00	3	0	86	27	0	0	0	0	1	13	141	8	0	7	0	10	296
17:15	2	0	87	27	0	0	0	0	1	10	134	8	0	11	0	12	292
17:30	1	0	93	33	0	0	0	0	1	10	124	8	0	7	0	6	283
17:45	1	0	119	14	0	0	0	0	3	7	131	7	0	12	0	4	298
Hr Total	7	0	385	101	0	0	0	0	6	40	530	31	0	37	0	32	1169
TOTAL	10	0	752	237	0	0	0	0	11	79	1086	62	0	83	0	66	2386

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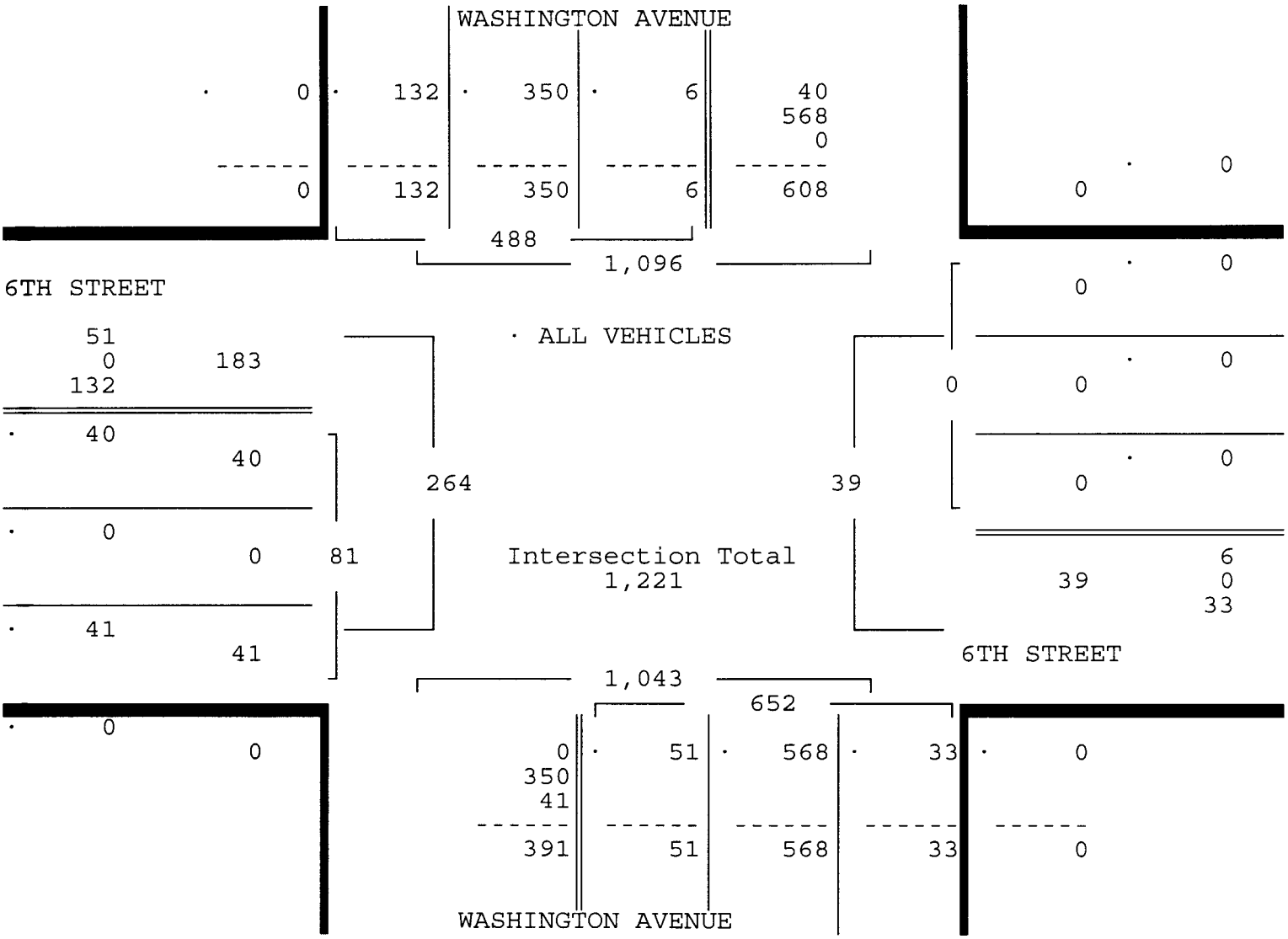
6TH STREET & WASHINGTON AVENUE
MIAMI BEACH, FLORIDA
COUNTED BY: ROLANDO MARTINEZ
SIGNALIZED

Site Code : 00150258
Start Date: 12/11/15
File I.D. : 6ST_WASH

ALL VEHICLES

	WASHINGTON AVENUE From North				6TH STREET From East				WASHINGTON AVENUE From South				6TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 12/11/15																	
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 12/11/15																	
Peak start	16:15				16:15				16:15				16:15				
Volume	6	0	350	132	0	0	0	0	3	48	568	33	0	40	0	41	
Percent	1%	0%	72%	27%	0%	0%	0%	0%	0%	7%	87%	5%	0%	49%	0%	51%	
Pk total	488				0				652				81				
Highest	16:15				16:00				16:15				16:15				
Volume	1	0	117	28	0	0	0	0	2	7	153	15	0	8	0	14	
Hi total	146				0				177				22				
PHF	.84				.0				.92				.92				



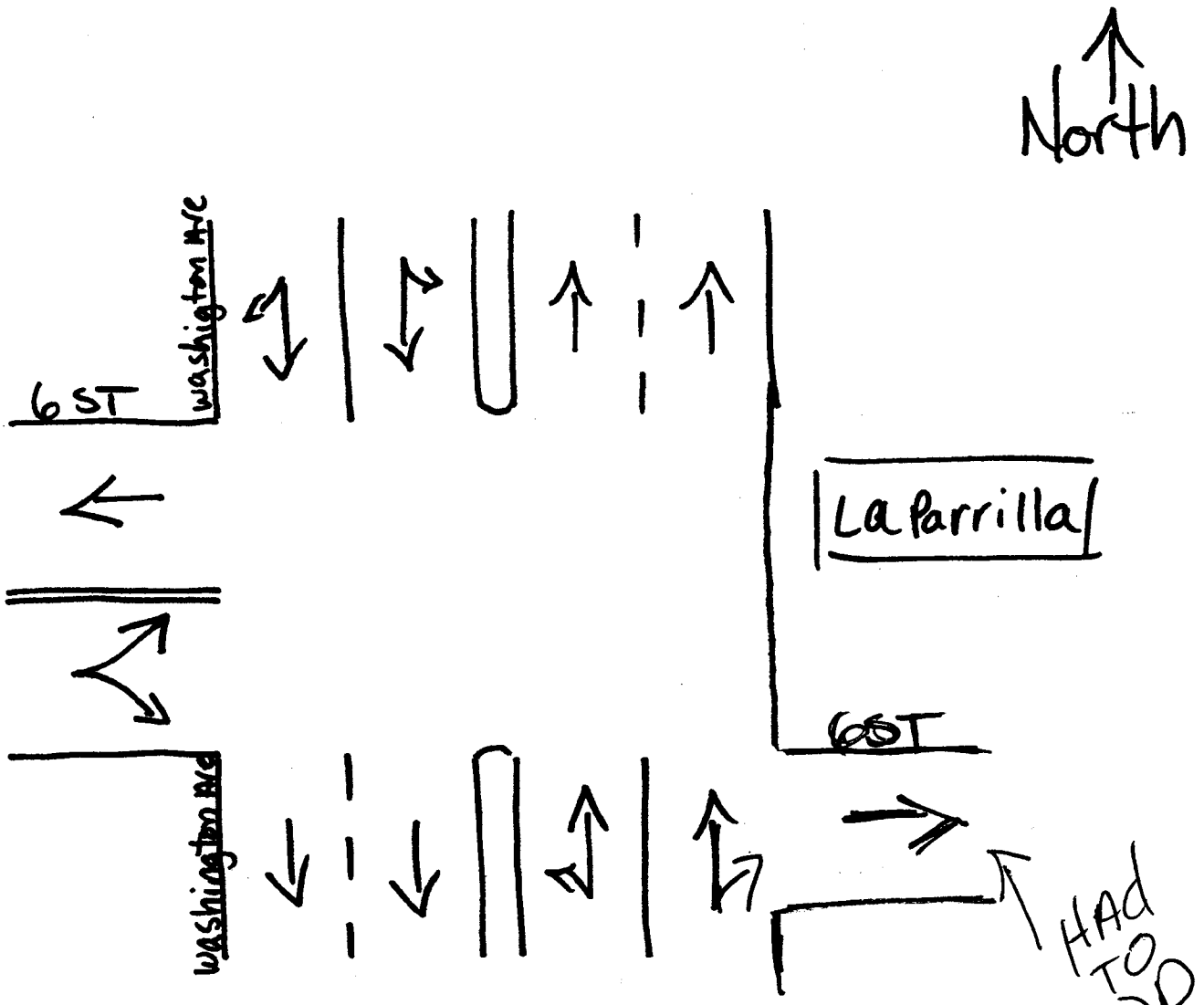
6TH STREET & WASHINGTON AVENUE
MIAMI BEACH, FLORIDA
COUNTED BY: ROLANDO MARTINEZ
SIGNALIZED

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

Site Code : 00150258
Start Date: 12/11/15
File I.D. : 6ST_WASH

PEDESTRIANS & BIKES

	WASHINGTON AVENUE From North				6TH STREET From East				WASHINGTON AVENUE From South				6TH STREET From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 12/11/15																	
16:00	0	0	0	6	0	8	0	26	0	3	0	22	0	2	0	21	88
16:15	0	1	0	3	0	5	0	13	0	9	0	15	0	3	0	17	66
16:30	0	0	0	2	0	6	0	39	0	2	0	26	0	0	0	10	85
16:45	0	2	0	0	0	3	0	25	0	2	0	14	0	0	0	6	52
Hr Total	0	3	0	11	0	22	0	103	0	16	0	77	0	5	0	54	291
17:00	0	0	0	2	0	7	0	18	0	2	0	10	0	0	0	10	49
17:15	0	0	0	1	0	2	0	31	0	2	0	33	0	0	0	5	74
17:30	0	0	0	9	0	5	0	25	0	1	0	20	0	0	0	14	74
17:45	0	0	0	4	0	4	0	54	0	0	0	17	0	4	0	17	100
Hr Total	0	0	0	16	0	18	0	128	0	5	0	80	0	4	0	46	297
TOTAL	0	3	0	27	0	40	0	231	0	21	0	157	0	9	0	100	588



Miami beach, FLorida
December 16, 2013
drawn by: Luis Palomino ✓
Signalized

Traffic Survey Specialists, Inc.
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Delray Beach, Florida 33483
Phone (561) 272-3255

7TH STREET & WASHINGTON AVENUE
MIAMI BEACH, FLORIDA
COUNTED BY: MARCELLO MINO-WILZEK
SIGNALIZED

Site Code : 00150258
Start Date: 12/11/15
File I.D. : 7ST_WASH
Page : 1

ALL VEHICLES

	WASHINGTON AVENUE From North				7TH STREET From East				WASHINGTON AVENUE From South				7TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 12/11/15																	
16:00	3	19	138	6	0	0	0	0	3	7	130	12	0	5	7	6	336
16:15	3	26	127	7	0	0	0	0	2	7	142	7	0	7	11	12	351
16:30	2	20	122	21	0	0	0	0	0	13	133	11	0	4	9	7	342
16:45	1	19	98	21	0	0	0	0	1	6	138	24	0	6	9	4	327
Hr Total	9	84	485	55	0	0	0	0	6	33	543	54	0	22	36	29	1356
17:00	2	14	107	17	0	0	0	0	1	7	129	12	0	6	11	4	310
17:15	5	14	111	9	0	0	0	0	1	6	134	13	0	10	12	2	317
17:30	8	21	108	13	0	0	0	0	0	5	125	6	0	2	5	5	298
17:45	4	21	126	9	0	0	0	0	1	4	126	12	0	6	8	5	322
Hr Total	19	70	452	48	0	0	0	0	3	22	514	43	0	24	36	16	1247
TOTAL	28	154	937	103	0	0	0	0	9	55	1057	97	0	46	72	45	2603

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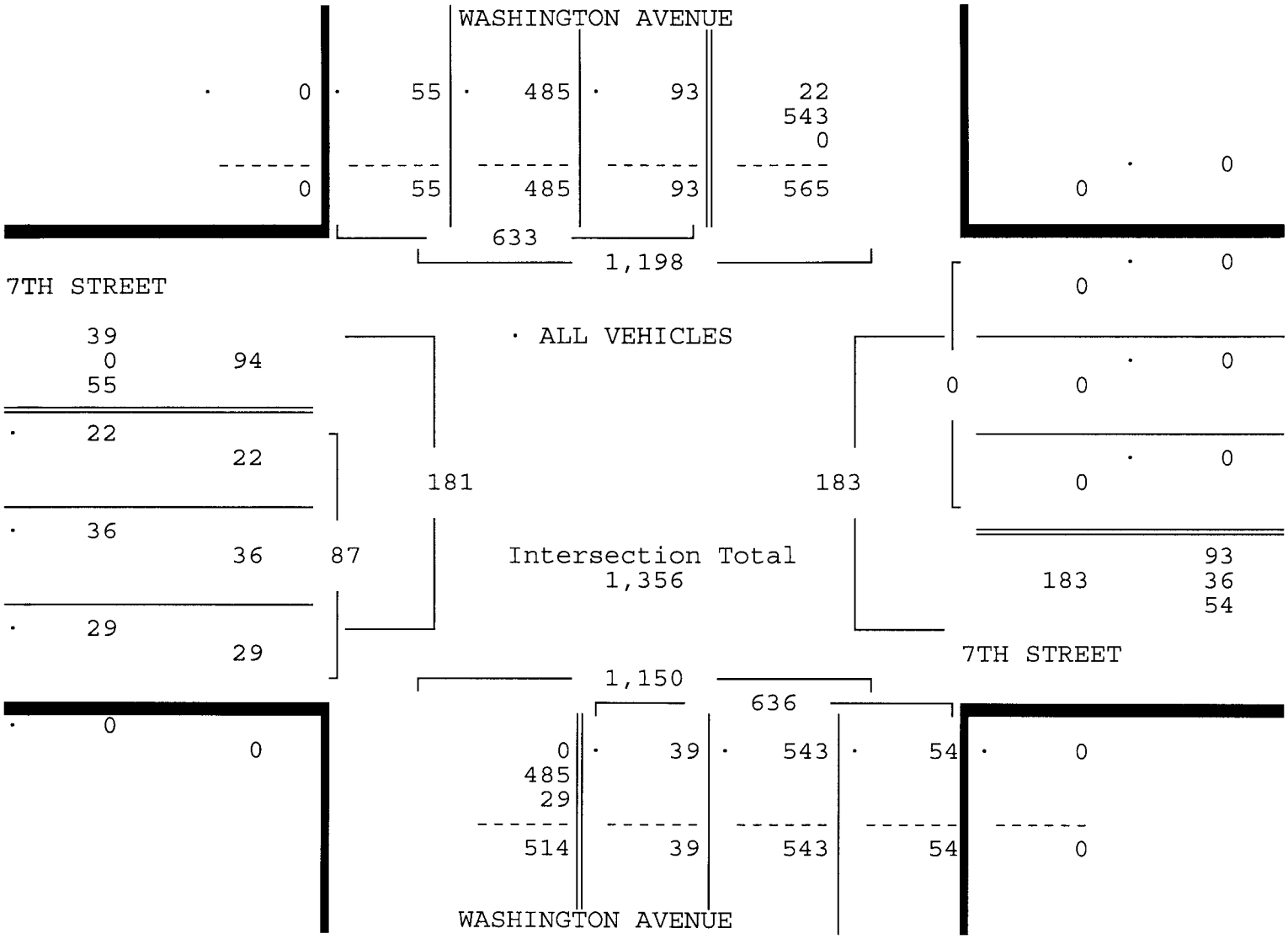
7TH STREET & WASHINGTON AVENUE
MIAMI BEACH, FLORIDA
COUNTED BY: MARCELLO MINO-WILZEK
SIGNALIZED

Site Code : 00150258
Start Date: 12/11/15
File I.D. : 7ST_WASH

ALL VEHICLES

	WASHINGTON AVENUE From North				7TH STREET From East				WASHINGTON AVENUE From South				7TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 12/11/15																	
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 12/11/15																	
Peak start	16:00				16:00				16:00				16:00				
Volume	9	84	485	55	0	0	0	0	6	33	543	54	0	22	36	29	
Percent	1%	13%	77%	9%	0%	0%	0%	0%	1%	5%	85%	8%	0%	25%	41%	33%	
Pk total	633				0				636				87				
Highest	16:00				16:00				16:45				16:15				
Volume	3	19	138	6	0	0	0	0	1	6	138	24	0	7	11	12	
Hi total	166				0				169				30				
PHF	.95				.0				.94				.72				



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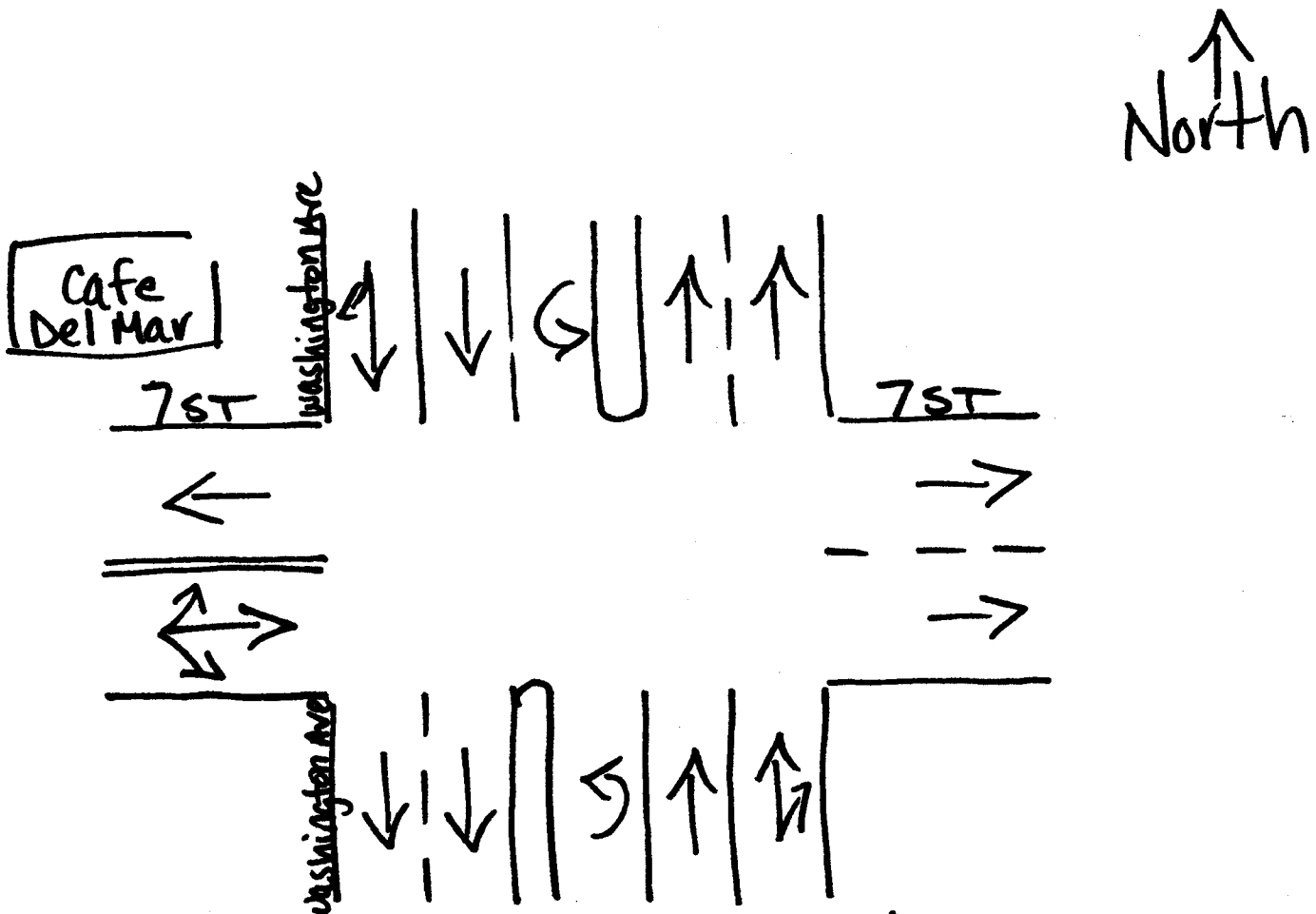
7TH STREET & WASHINGTON AVENUE
MIAMI BEACH, FLORIDA
COUNTED BY: MARCELLO MINO-WILZEK
SIGNALIZED

Site Code : 00150258
Start Date: 12/11/15
File I.D. : 7ST_WASH

PEDESTRIANS & BIKES

	WASHINGTON AVENUE From North				7TH STREET From East				WASHINGTON AVENUE From South				7TH STREET From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 12/11/15																	
16:00	0	3	0	14	0	4	0	7	0	3	0	19	0	4	0	21	75
16:15	0	2	0	18	0	2	0	14	0	4	0	12	0	0	0	14	66
16:30	0	0	0	22	0	1	0	0	0	1	0	11	0	0	0	16	51
16:45	0	0	0	7	0	4	0	11	0	2	0	17	0	0	0	5	46
Hr Total	0	5	0	61	0	11	0	32	0	10	0	59	0	4	0	56	238
17:00	0	1	0	15	0	0	0	11	0	4	0	6	0	0	0	2	39
17:15	0	1	0	2	0	0	0	11	0	0	0	9	0	0	0	5	28
17:30	0	0	0	5	0	0	0	14	0	1	0	9	0	2	0	1	32
17:45	0	0	0	0	0	1	0	17	0	0	0	7	0	0	0	0	25
Hr Total	0	2	0	22	0	1	0	53	0	5	0	31	0	2	0	8	124
TOTAL	0	7	0	83	0	12	0	85	0	15	0	90	0	6	0	64	362



Miami beach, FLorida
December 16, 2013
drawn by: Luis Palomino ✓
Signalized

5TH STREET & COLLINS COURT
MIAMI BEACH, FLORIDA
COUNTED BY: ISIDRO GONZALEZ
NOT SIGNALIZED

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

Site Code : 00150258
Start Date: 12/18/15
File I.D. : 5S_COLCT

ALL VEHICLES

	COLLINS COURT From North				5TH STREET From East				COLLINS COURT From South				5TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 12/18/15																	
16:00	0	0	0	4	0	0	161	12	0	0	0	1	0	0	142	2	322
16:15	0	0	0	5	0	0	157	12	0	0	0	2	0	0	132	0	308
16:30	0	0	0	5	1	0	160	11	0	0	0	2	0	0	120	5	304
16:45	0	0	0	8	0	0	158	4	1	0	0	3	1	0	119	3	297
Hr Total	0	0	0	22	1	0	636	39	1	0	0	8	1	0	513	10	1231
17:00	1	0	0	2	1	0	149	9	0	0	0	2	1	0	125	2	292
17:15	0	0	0	9	0	0	151	10	0	0	0	0	0	1	124	6	301
17:30	4	0	0	12	1	0	142	15	0	0	0	3	0	1	128	2	308
17:45	0	0	0	4	0	0	155	5	0	0	0	5	1	1	140	5	316
Hr Total	5	0	0	27	2	0	597	39	0	0	0	10	2	3	517	15	1217
TOTAL	5	0	0	49	3	0	1233	78	1	0	0	18	3	3	1030	25	2448

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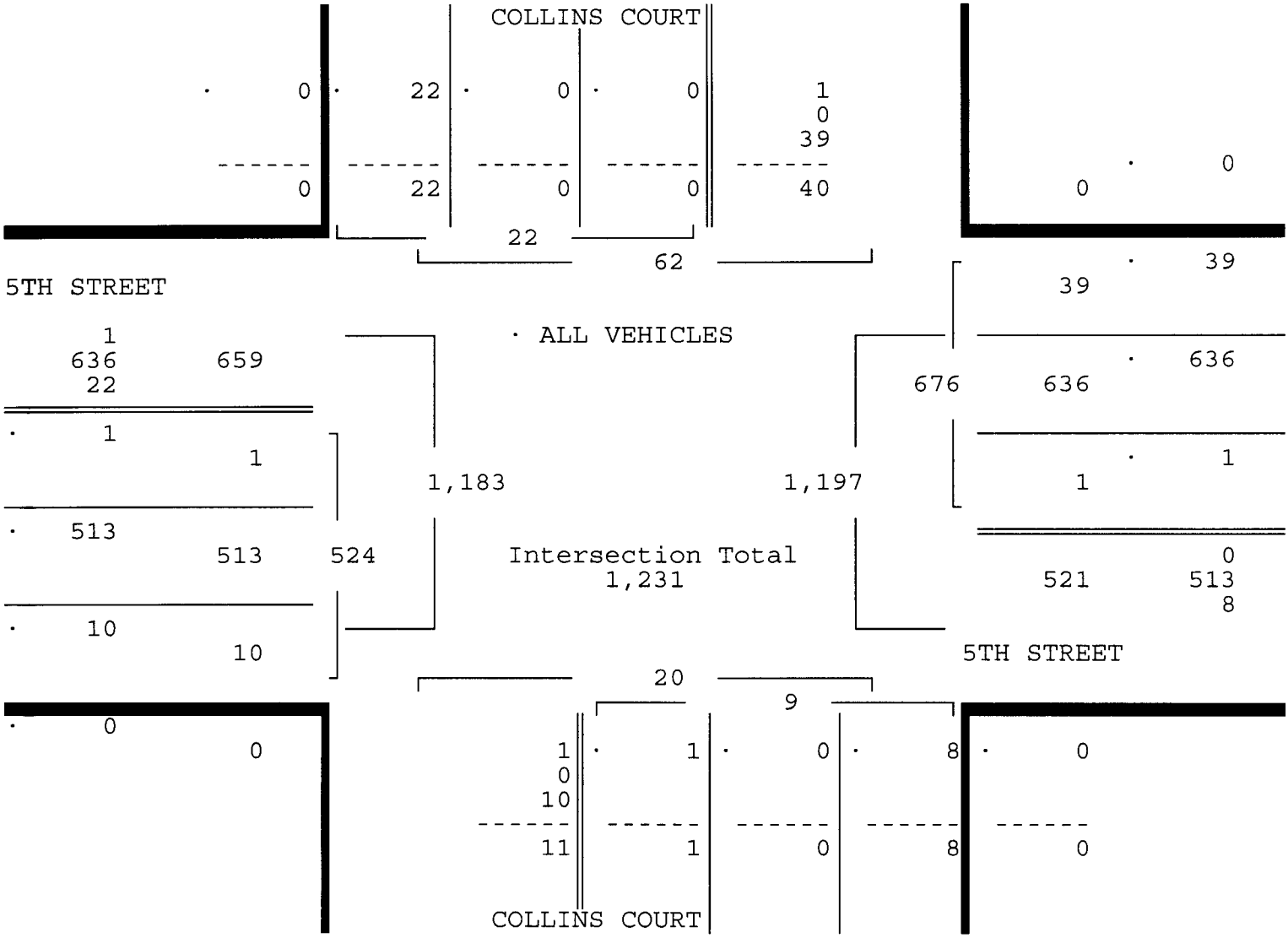
5TH STREET & COLLINS COURT
MIAMI BEACH, FLORIDA
COUNTED BY: ISIDRO GONZALEZ
NOT SIGNALIZED

Site Code : 00150258
Start Date: 12/18/15
File I.D. : 5S_COLCT

ALL VEHICLES

	COLLINS COURT From North				5TH STREET From East				COLLINS COURT From South				5TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 12/18/15																	
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 12/18/15																	
Peak start	16:00				16:00				16:00				16:00				
Volume	0	0	0	22	1	0	636	39	1	0	0	8	1	0	513	10	
Percent	0%	0%	0%	100%	0%	0%	94%	6%	11%	0%	0%	89%	0%	0%	98%	2%	
Pk total	22				676				9				524				
Highest	16:45				16:00				16:45				16:00				
Volume	0	0	0	8	0	0	161	12	1	0	0	3	0	0	142	2	
Hi total	8				173				4				144				
PHF	.69				.98				.56				.91				



5TH STREET & COLLINS COURT
MIAMI BEACH, FLORIDA
COUNTED BY: ISIDRO GONZALEZ
NOT SIGNALIZED

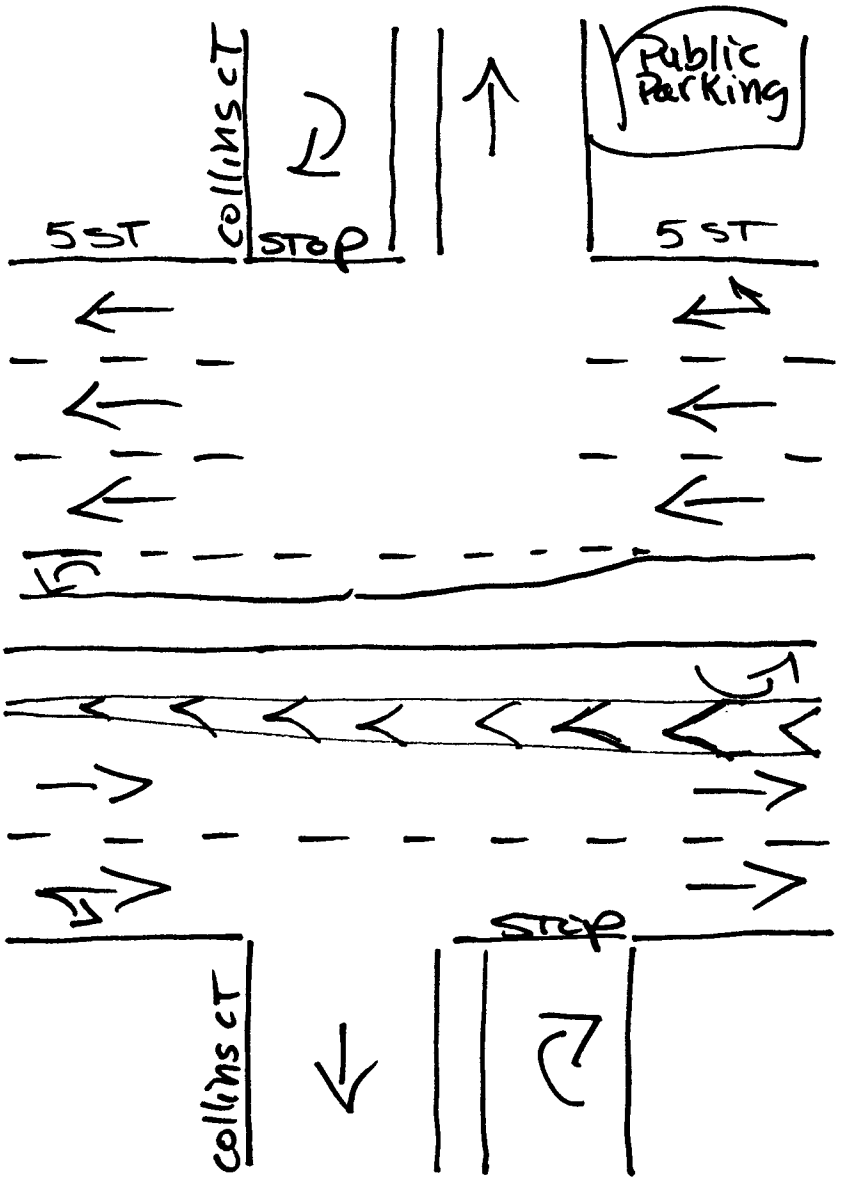
Traffic Survey Specialists, Inc.
85 SE 4th Avenue, Unit 109
Delray Beach, Florida 33483
Phone (561) 272-3255

Site Code : 00150258
Start Date: 12/18/15
File I.D. : 5S_COLCT
Page : 1

PEDESTRIANS & BIKES

	COLLINS COURT From North				5TH STREET From East				COLLINS COURT From South				5TH STREET From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 12/18/15																	
16:00	0	15	0	81	0	0	0	0	0	8	0	17	0	0	0	3	124
16:15	0	10	0	74	0	0	0	1	0	1	0	24	0	0	0	2	112
16:30	0	9	0	98	0	0	0	3	0	8	0	11	0	0	0	2	131
16:45	0	7	0	51	0	0	0	0	0	3	0	12	0	2	0	1	76
Hr Total	0	41	0	304	0	0	0	4	0	20	0	64	0	2	0	8	443
17:00	0	5	0	44	0	0	0	1	0	5	0	23	0	2	0	1	81
17:15	0	9	0	68	0	0	0	0	0	5	0	21	0	1	0	0	104
17:30	0	10	0	64	0	0	0	0	0	7	0	24	0	2	0	4	111
17:45	0	7	0	21	0	0	0	0	0	3	0	20	0	1	0	1	53
Hr Total	0	31	0	197	0	0	0	1	0	20	0	88	0	6	0	6	349
TOTAL	0	72	0	501	0	0	0	5	0	40	0	152	0	8	0	14	792

NORTH



Miami Beach, Florida
December 15, 2015
drawn by: Luis Palomino
not signalized

6 STREET & COLLINS COURT
MIAMI BEACH, FLORIDA
COUNTED BY: MARISA CRUZ
NOT SIGNALIZED

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

Site Code : 00150258
Start Date: 12/11/15
File I.D. : 6STCOLCT

ALL VEHICLES

	COLLINS COURT From North				6TH STREET From East				COLLINS COURT From South				6TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 12/11/15																	
16:00	0	1	0	0	0	0	0	0	0	1	2	4	0	3	8	2	21
16:15	0	0	1	0	0	0	1	0	0	1	4	2	0	2	8	3	22
16:30	0	0	0	0	0	0	1	1	0	2	2	3	0	7	8	1	25
16:45	0	0	0	0	0	0	0	0	0	2	4	0	0	4	4	1	15
Hr Total	0	1	1	0	0	0	2	1	0	6	12	9	0	16	28	7	83
17:00	0	1	1	0	0	0	0	1	0	0	2	4	0	9	2	2	22
17:15	0	0	0	0	0	0	0	0	0	3	3	1	0	0	8	2	17
17:30	0	0	0	0	0	0	0	0	0	3	3	3	0	4	6	2	21
17:45	0	1	0	0	0	1	0	0	0	0	2	4	0	3	9	6	26
Hr Total	0	2	1	0	0	1	0	1	0	6	10	12	0	16	25	12	86
TOTAL	0	3	2	0	0	1	2	2	0	12	22	21	0	32	53	19	169

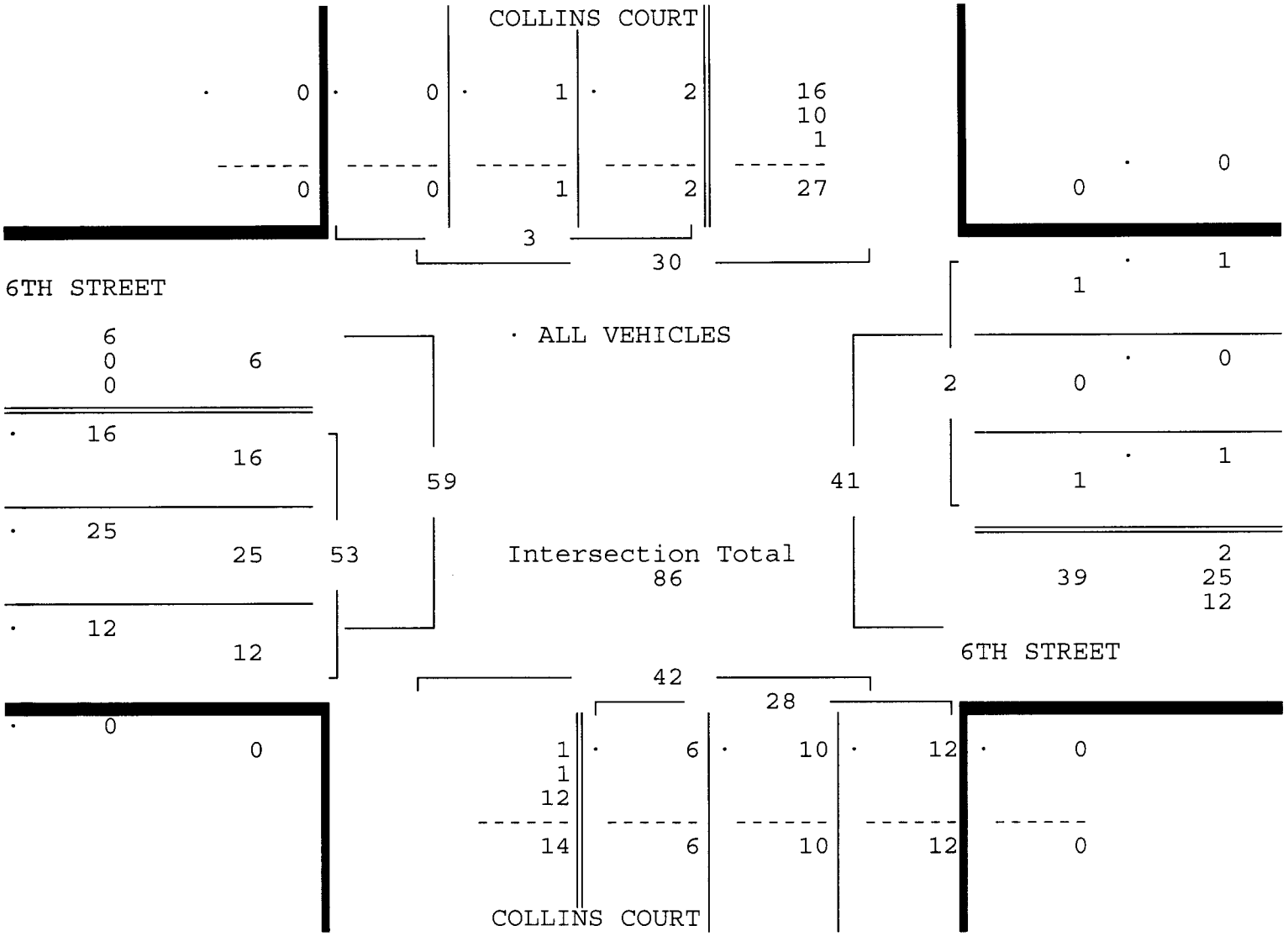
6 STREET & COLLINS COURT
MIAMI BEACH, FLORIDA
COUNTED BY: MARISA CRUZ
NOT SIGNALIZED

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

Site Code : 00150258
Start Date: 12/11/15
File I.D. : 6STCOLCT
Page : 2

ALL VEHICLES

	COLLINS COURT From North				6TH STREET From East				COLLINS COURT From South				6TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 12/11/15																	
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 12/11/15																	
Peak start	17:00				17:00				17:00				17:00				
Volume	0	2	1	0	0	1	0	1	0	6	10	12	0	16	25	12	
Percent	0%	67%	33%	0%	0%	50%	0%	50%	0%	21%	36%	43%	0%	30%	47%	23%	
Pk total	3				2				28				53				
Highest	17:00				17:00				17:30				17:45				
Volume	0	1	1	0	0	0	0	1	0	3	3	3	0	3	9	6	
Hi total	2				1				9				18				
PHF	.38				.50				.78				.74				



6 STREET & COLLINS COURT
MIAMI BEACH, FLORIDA
COUNTED BY: MARISA CRUZ
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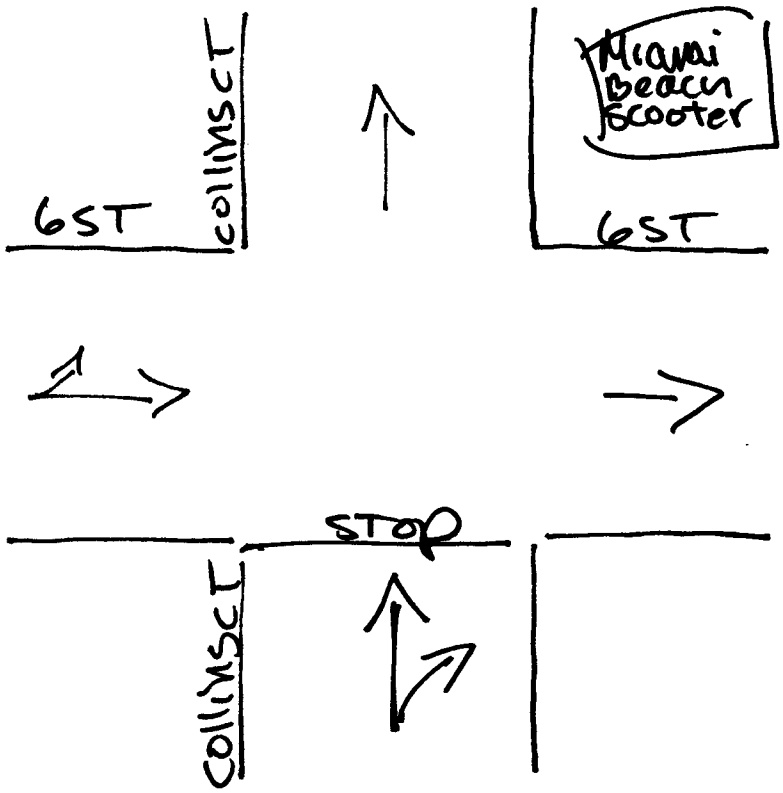
Phone (561) 272-3255

Site Code : 00150258
Start Date: 12/11/15
File I.D. : 6STCOLCT

PEDESTRIANS & BIKES

	COLLINS COURT From North				6TH STREET From East				COLLINS COURT From South				6TH STREET From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 12/11/15																	
16:00	0	0	0	24	0	0	0	2	0	2	0	19	0	2	0	1	50
16:15	0	1	0	26	0	0	0	1	0	0	0	11	0	0	0	8	47
16:30	0	1	0	27	0	0	0	1	0	2	0	20	0	0	0	0	51
16:45	0	0	0	26	0	0	0	0	0	2	0	18	0	0	0	0	46
Hr Total	0	2	0	103	0	0	0	4	0	6	0	68	0	2	0	9	194
17:00	0	2	0	33	0	1	0	0	0	5	0	14	0	0	0	0	55
17:15	0	0	0	14	0	0	0	0	0	0	0	8	0	0	0	1	23
17:30	0	2	0	13	0	0	0	3	0	2	0	12	0	0	0	4	36
17:45	0	3	0	21	0	0	0	0	0	0	0	13	0	0	0	1	38
Hr Total	0	7	0	81	0	1	0	3	0	7	0	47	0	0	0	6	152
TOTAL	0	9	0	184	0	1	0	7	0	13	0	115	0	2	0	15	346



Miami Beach, Florida
December 15, 2015
drawn by: Luis Palomino
NOT signalized

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

7TH STREET & COLLINS COURT
MIAMI BEACH, FLORIDA
COUNTED BY: ADAM JOHNSON
NOT SIGNALIZED

Site Code : 00150258
Start Date: 12/11/15
File I.D. : 7STCOLCT

ALL VEHICLES

	COLLINS COURT From North				7TH STREET From East				COLLINS COURT From South				7TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 12/11/15																	
16:00	0	0	0	0	0	0	0	2	0	0	3	3	0	3	46	0	57
16:15	0	0	0	0	0	0	0	2	2	0	2	4	0	5	41	0	56
16:30	0	0	0	0	0	0	1	0	0	0	6	3	0	2	37	0	49
16:45	0	0	1	0	0	0	0	0	0	0	6	4	0	1	49	0	61
Hr Total	0	0	1	0	0	0	1	4	2	0	17	14	0	11	173	0	223
17:00	0	0	1	0	0	0	0	0	0	0	6	5	0	3	33	0	48
17:15	0	0	0	0	0	0	0	2	0	0	1	2	0	5	43	1	54
17:30	0	0	0	0	0	0	1	1	0	0	7	1	0	2	27	0	39
17:45	0	0	0	0	0	0	0	1	0	0	3	1	0	5	41	1	52
Hr Total	0	0	1	0	0	0	1	4	0	0	17	9	0	15	144	2	193
TOTAL	0	0	2	0	0	0	2	8	2	0	34	23	0	26	317	2	416

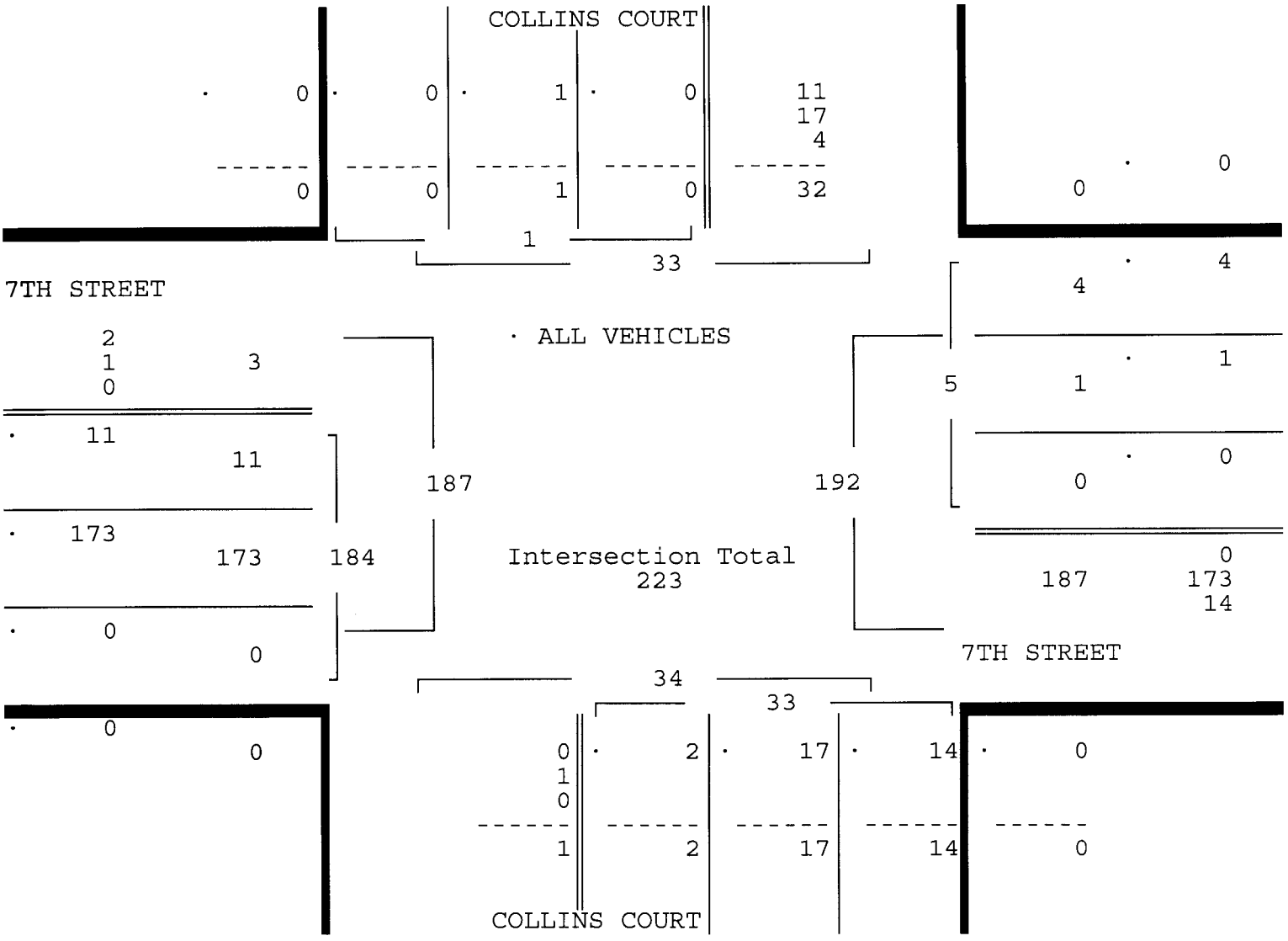
7TH STREET & COLLINS COURT
MIAMI BEACH, FLORIDA
COUNTED BY: ADAM JOHNSON
NOT SIGNALIZED

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

Site Code : 00150258
Start Date: 12/11/15
File I.D. : 7STCOLCT

ALL VEHICLES

	COLLINS COURT From North				7TH STREET From East				COLLINS COURT From South				7TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 12/11/15																	
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 12/11/15																	
Peak start	16:00				16:00				16:00				16:00				
Volume	0	0	1	0	0	0	1	4	2	0	17	14	0	11	173	0	
Percent	0%	0%	100%	0%	0%	0%	20%	80%	6%	0%	52%	42%	0%	6%	94%	0%	
Pk total	1				5				33				184				
Highest	16:45				16:00				16:45				16:45				
Volume	0	0	1	0	0	0	0	2	0	0	6	4	0	1	49	0	
Hi total	1				2				10				50				
PHF	.25				.62				.82				.92				



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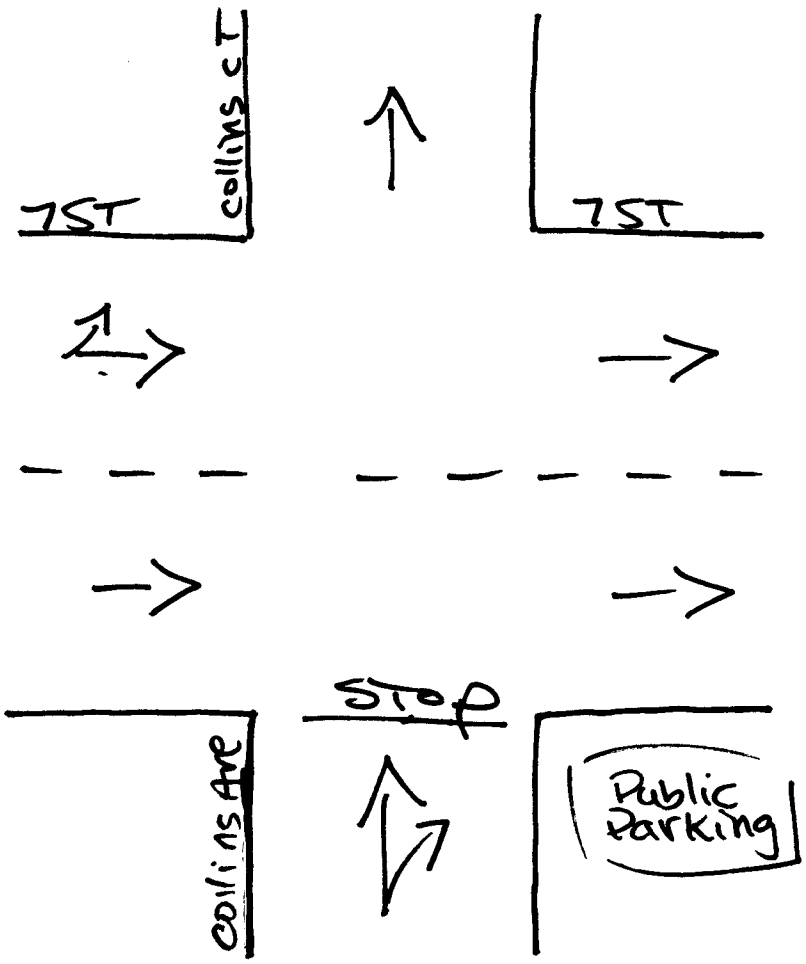
7TH STREET & COLLINS COURT
MIAMI BEACH, FLORIDA
COUNTED BY: ADAM JOHNSON
NOT SIGNALIZED

Site Code : 00150258
Start Date: 12/11/15
File I.D. : 7STCOLCT
Page : 1

PEDESTRIANS & BIKES

	COLLINS COURT From North				7TH STREET From East				COLLINS COURT From South				7TH STREET From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 12/11/15																	
16:00	0	1	0	19	0	1	0	4	0	0	0	23	0	2	0	4	54
16:15	0	4	0	31	0	0	0	0	0	1	0	33	0	1	0	6	76
16:30	0	5	0	36	0	1	0	6	0	4	0	18	0	2	0	6	78
16:45	0	7	0	27	0	0	0	4	0	5	0	25	0	3	0	3	74
Hr Total	0	17	0	113	0	2	0	14	0	10	0	99	0	8	0	19	282
17:00	0	7	0	29	0	1	0	6	0	4	0	31	0	0	0	5	83
17:15	0	3	0	20	0	0	0	3	0	1	0	31	0	0	0	8	66
17:30	0	0	0	45	0	0	0	7	0	3	0	50	0	0	0	4	109
17:45	0	1	0	44	0	0	0	3	0	2	0	30	0	1	0	8	89
Hr Total	0	11	0	138	0	1	0	19	0	10	0	142	0	1	0	25	347
TOTAL	0	28	0	251	0	3	0	33	0	20	0	241	0	9	0	44	629

North



Miami Beach, Florida
December 15, 2015
drawn by: Luis Palomino
NOT signalized

APPENDIX D

Peak Season Conversion Factors Historical Traffic Data, and Committed Developments

2013 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 8700 MIAMI-DADE NORTH

MOCF: 0.97

WEEK	DATES	SF	PSCF
1	01/01/2013 - 01/05/2013	1.03	1.06
2	01/06/2013 - 01/12/2013	1.03	1.06
3	01/13/2013 - 01/19/2013	1.03	1.06
4	01/20/2013 - 01/26/2013	1.01	1.04
5	01/27/2013 - 02/02/2013	1.00	1.03
6	02/03/2013 - 02/09/2013	0.99	1.02
* 7	02/10/2013 - 02/16/2013	0.97	1.00
* 8	02/17/2013 - 02/23/2013	0.96	0.99
* 9	02/24/2013 - 03/02/2013	0.96	0.99
*10	03/03/2013 - 03/09/2013	0.96	0.99
*11	03/10/2013 - 03/16/2013	0.96	0.99
*12	03/17/2013 - 03/23/2013	0.97	1.00
*13	03/24/2013 - 03/30/2013	0.97	1.00
*14	03/31/2013 - 04/06/2013	0.97	1.00
*15	04/07/2013 - 04/13/2013	0.98	1.01
*16	04/14/2013 - 04/20/2013	0.98	1.01
*17	04/21/2013 - 04/27/2013	0.98	1.01
*18	04/28/2013 - 05/04/2013	0.99	1.02
*19	05/05/2013 - 05/11/2013	0.99	1.02
20	05/12/2013 - 05/18/2013	1.00	1.03
21	05/19/2013 - 05/25/2013	1.00	1.03
22	05/26/2013 - 06/01/2013	1.00	1.03
23	06/02/2013 - 06/08/2013	1.01	1.04
24	06/09/2013 - 06/15/2013	1.01	1.04
25	06/16/2013 - 06/22/2013	1.02	1.05
26	06/23/2013 - 06/29/2013	1.02	1.05
27	06/30/2013 - 07/06/2013	1.03	1.06
28	07/07/2013 - 07/13/2013	1.04	1.07
29	07/14/2013 - 07/20/2013	1.05	1.08
30	07/21/2013 - 07/27/2013	1.04	1.07
31	07/28/2013 - 08/03/2013	1.03	1.06
32	08/04/2013 - 08/10/2013	1.03	1.06
33	08/11/2013 - 08/17/2013	1.02	1.05
34	08/18/2013 - 08/24/2013	1.02	1.05
35	08/25/2013 - 08/31/2013	1.02	1.05
36	09/01/2013 - 09/07/2013	1.02	1.05
37	09/08/2013 - 09/14/2013	1.02	1.05
38	09/15/2013 - 09/21/2013	1.02	1.05
39	09/22/2013 - 09/28/2013	1.02	1.05
40	09/29/2013 - 10/05/2013	1.01	1.04
41	10/06/2013 - 10/12/2013	1.01	1.04
42	10/13/2013 - 10/19/2013	1.01	1.04
43	10/20/2013 - 10/26/2013	1.01	1.04
44	10/27/2013 - 11/02/2013	1.01	1.04
45	11/03/2013 - 11/09/2013	1.01	1.04
46	11/10/2013 - 11/16/2013	1.01	1.04
47	11/17/2013 - 11/23/2013	1.02	1.05
48	11/24/2013 - 11/30/2013	1.02	1.05
49	12/01/2013 - 12/07/2013	1.02	1.05
50	12/08/2013 - 12/14/2013	1.02	1.05
51	12/15/2013 - 12/21/2013	1.03	1.06
52	12/22/2013 - 12/28/2013	1.03	1.06
53	12/29/2013 - 12/31/2013	1.03	1.06

* PEAK SEASON

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

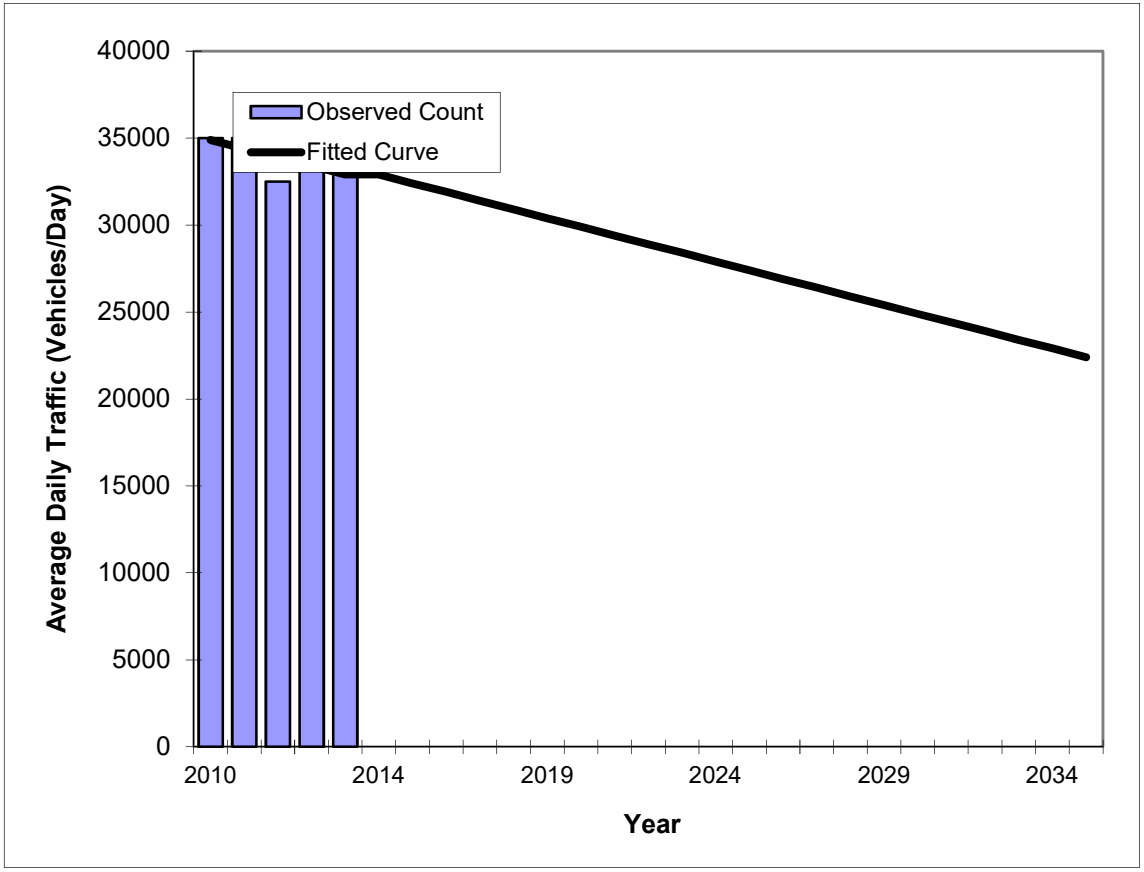
AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; F = FOURTH YEAR ESTIMATE
V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN
*K FACTOR: STARTING WITH YEAR 2011 IS STANDARDK, PRIOR YEARS ARE K30 VALUES

Traffic Trends - V2.0

SR A1A/MACARTHUR CSWY -- N OF MERIDIAN AVENUE

PIN#	0
Location	1

County:	Miami-dade
Station #:	2528
Highway:	SR A1A/MACARTHUR CSWY

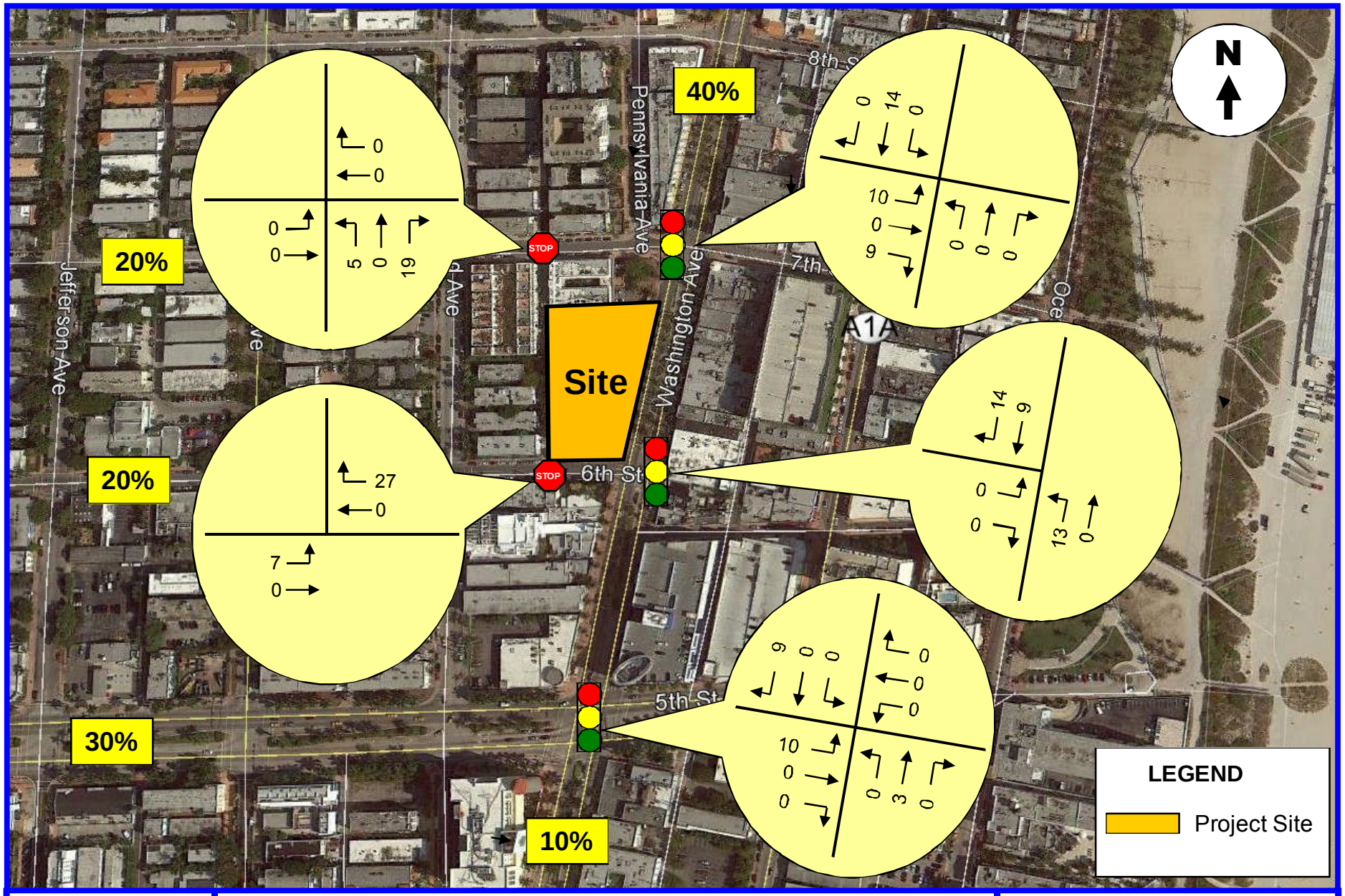


Year	Traffic (ADT/AADT) Count*	Trend**
2010	35000	34900
2011	35000	34400
2012	32500	33900
2013	34000	33400
2014	33000	32900
2015 Opening Year Trend		
2015	N/A	32400
2016 Mid-Year Trend		
2016	N/A	31900
2017 Design Year Trend		
2017	N/A	31400
TRANPLAN Forecasts/Trends		

**** Annual Trend Increase:**	-500
Trend R-squared:	48.08%
Trend Annual Historic Growth Rate:	-1.43%
Trend Growth Rate (2014 to Design Year):	-1.52%
Printed:	23-Mar-16

Straight Line Growth Option

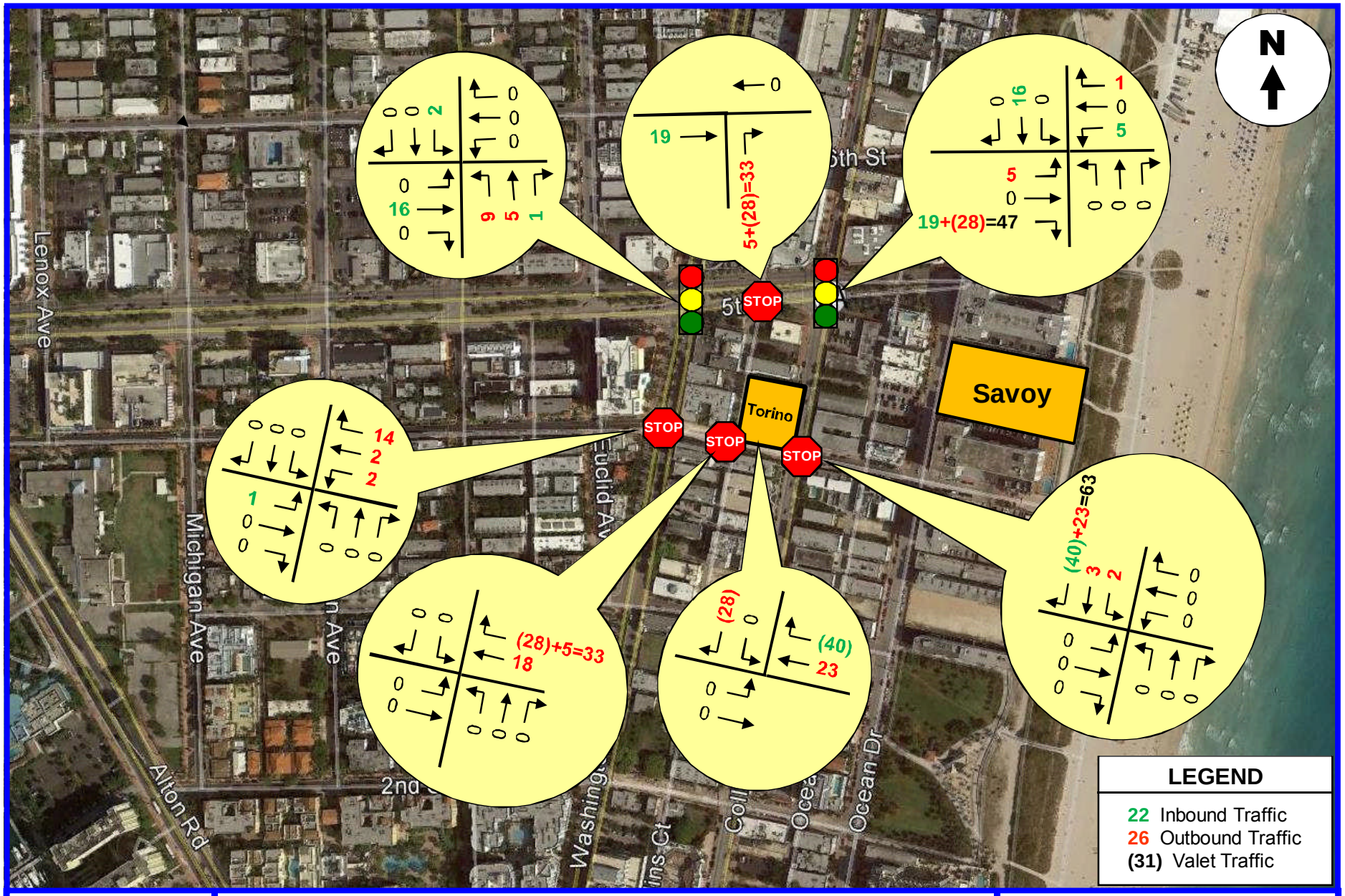
***Axle-Adjusted**



TrafTech ENGINEERING, INC.

NET NEW PROJECT TRAFFIC ASSIGNMENT

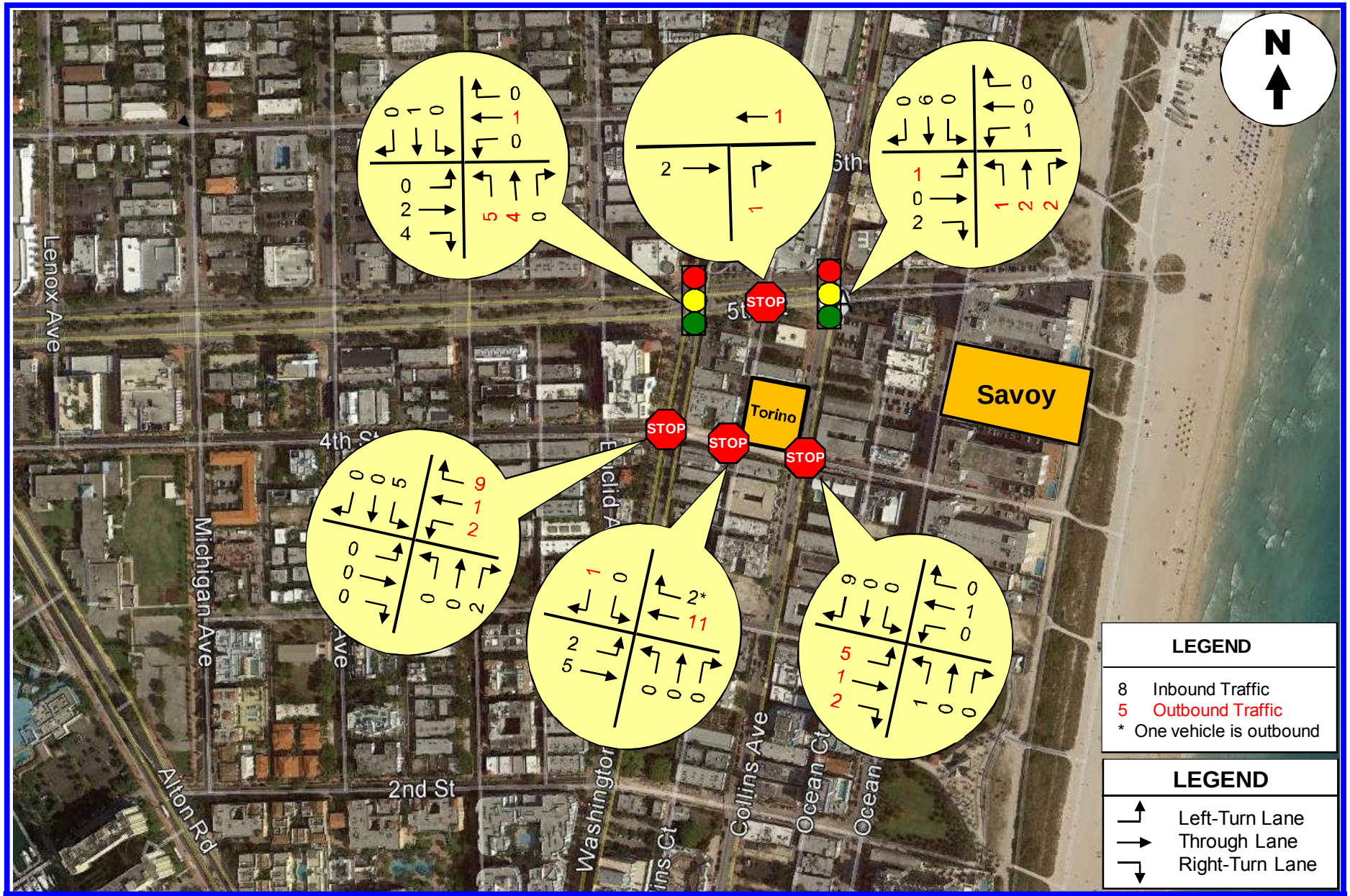
FIGURE 4
The Angler's Hotel
Miami Beach, Florida



Traf Tech
ENGINEERING, INC.

New PM Peak Hour Project (Torino)
Traffic Assignment

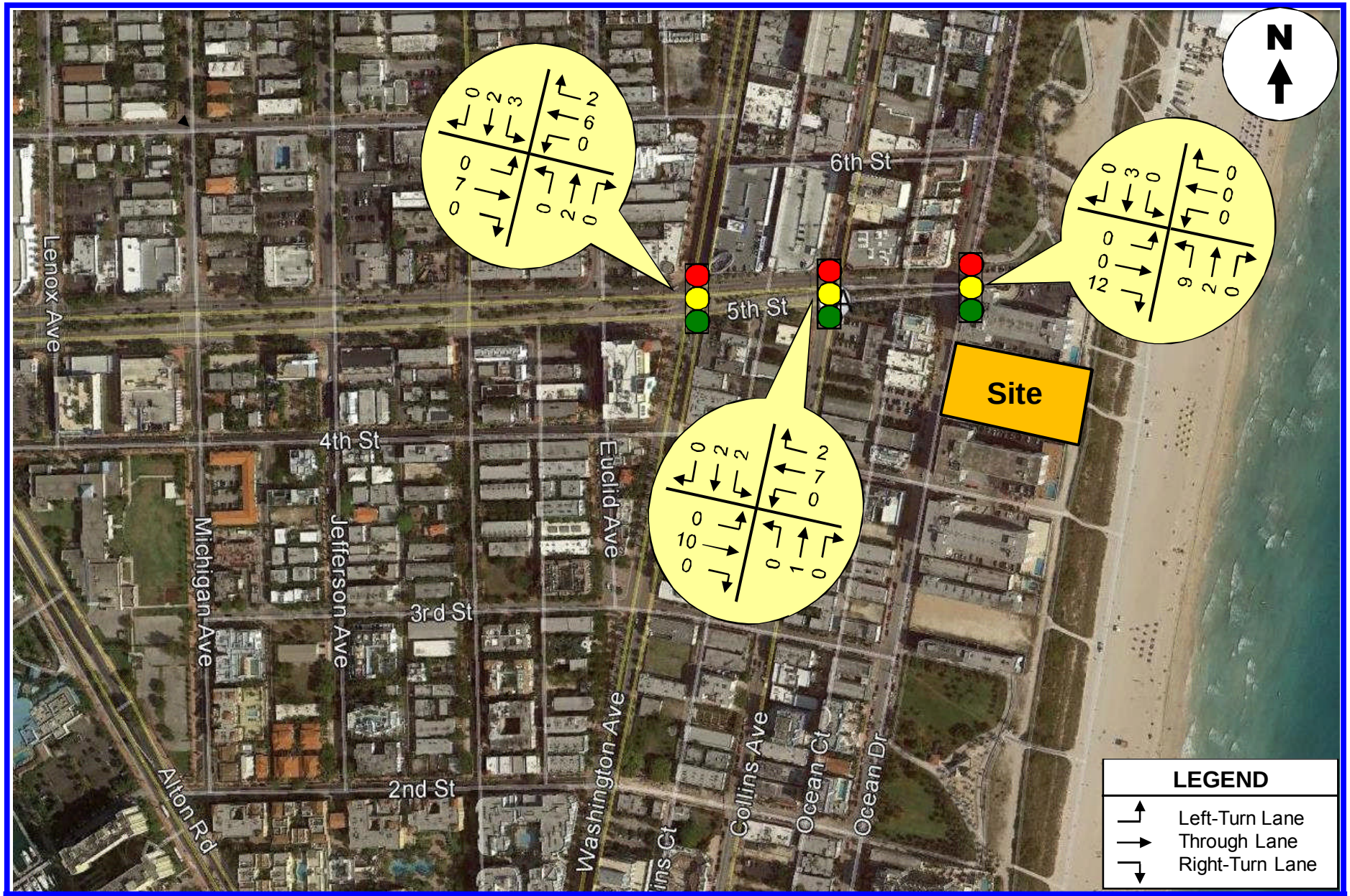
FIGURE 4
Torino at 400 Collins Avenue
Miami Beach, Florida



Traf Tech
ENGINEERING, INC.

New PM Peak Hour Project (Torino)
Trip Distribution

FIGURE 4A
Torino at 400 Collins Avenue
Miami Beach, Florida



Traf Tech
ENGINEERING, INC.

New Peak Hour Project Traffic Assignment

FIGURE 4
Savoy / Arlington Hotel
Miami Beach, Florida

APPENDIX E

Future Turning Movement Volumes

INTERSECTION PEAK HOUR FACTOR CALCULATION

	INTERSECTION								
TIME	Collins& 5 st	Collins 6 st	Collins & 7 St	Wash & 5 st	Wash& 6 st	Wash& 7 st	Collins& 5 st	collins ct & 6 st	Collins CT & 7 st
16:00	394	228	247	606	292	336	322	21	57
16:15	309	218	248	563	345	351	308	22	56
16:30	357	229	228	464	286	342	304	25	49
16:45	299	206	264	472	294	327	297	15	61
Total Hr	1359	881	987	2105	1217	1356	1231	83	223
Max 15-min	394	229	264	606	345	351	322	25	61
PHF	0.86	0.96	0.93	0.87	0.88	0.97	0.96	0.83	0.91

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Collins Avenue and 5th Street
PM Peak Hour (4:00 PM - 5:00 PM)

Description	Collins Avenue Northbound			Collins Avenue Southbound			5th Street Eastbound				5th Street Westbound		
	Left	Through	Right	Left	Through	Right	U-turn	Left	Through	Right	Left	Through	Right
Existing Traffic (12/11/2015)	56	71	7	32	79	303	17	272	223	36	5	189	69
Season Adjustment Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
2015 Peak Season Traffic	59	75	7	34	83	318	18	286	234	38	5	198	72
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments:													
• The Anglers Hotel addition													
• The Torino (400 Collins Avenue)	1	2	2		22			6		49	6		1
• The Savoy Hotel		1			2	2			10			7	2
2018 Background Traffic	62	80	10	35	109	330	18	300	251	88	11	211	78
601 Washington													
- Percentages (Ins/Out)	5%				5%	20%/55%	3%						
- Trips	12				11	173	7						
2018 Total Traffic	**73**	**80**	**10**	**35**	**121**	**503**	**25**	**300**	**251**	**88**	**11**	**211**	**78**

	PM Peak		
	INS	OUT	Total
New External Trips	**234**	**228**	**462**

Traf Tech
ENGINEERING, INC.

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Collins Avenue and 6th Street
PM Peak Hour (4:00 PM - 5:00 PM)

Description	Collins Avenue Northbound			Collins Avenue Southbound			6th Street Eastbound			6th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (12/11/2015)	0	392	0	0	382	0	0	0	34	17	0	44
Season Adjustment Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
2015 Peak Season Traffic	0	412	0	0	401	0	0	0	36	18	0	46
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments:												
• The Anglers Hotel addition												
• The Torino (400 Collins Avenue)		9			22							
• The Savoy Hotel		3			4							
2018 Background Traffic	0	436	0	0	439	0	0	0	37	18	0	48
601 Washington												
- Percentages (Ins/Out)					20%/60%							
- Trips					184							
2018 Total Traffic	**0**	**436**	**0**	**0**	**623**	**0**	**0**	**0**	**37**	**18**	**0**	**48**

	PM Peak		
	INS	OUT	Total
New External Trips	**234**	**228**	**462**

Traf Tech
ENGINEERING, INC.

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Collins Avenue and 7th Street
PM Peak Hour (4:00 PM - 5:00 PM)

Description	Collins Avenue Northbound			Collins Avenue Southbound			7th Street Eastbound			7th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (12/11/2015)	0	411	50	27	322	0	53	62	60	0	0	0
Season Adjustment Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
2015 Peak Season Traffic	0	432	53	28	338	0	56	65	63	0	0	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments:												
• The Anglers Hotel addition												
• The Torino (400 Collins Avenue)		9			22							
• The Savoy Hotel		3			4							
2018 Background Traffic	0	457	54	29	374	0	57	67	65	0	0	0
601 Washington												
- Percentages (Ins/Out)					20%		40%		60%			
- Trips					47		91		137			
- Pass-by												
2018 Total Traffic	**0**	**457**	**54**	**29**	**421**	**0**	**149**	**67**	**202**	**0**	**0**	**0**

	PM Peak		
	INS	OUT	Total
New External Trips	**234**	**228**	**462**

Traf Tech
ENGINEERING, INC.

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Washington Avenue and 5th Street
PM Peak Hour (4:00 PM - 5:00 PM)

Description	Washington Avenue Northbound			Washington Avenue Southbound				5th Street Eastbound			5th Street Westbound		
	Left	Through	Right	U-turn	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (12/11/2015)	82	237	14	17	27	148	191	306	492	48	21	424	98
Season Adjustment Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
2015 Peak Season Traffic	86	249	15	18	28	155	201	321	517	50	22	445	103
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments:													
• The Anglers Hotel addition		3					9	10					
• The Torino (400 Collins Avenue)	14	9	1		2	1			18	4		1	
• The Savoy Hotel		2			3	2			7			6	2
2018 Background Traffic	103	270	16	18	34	163	216	341	557	56	23	466	108
601 Washington													
- Percentages (Ins/Out)		5%			3%			47%			5%	47%	3%
- Trips		12			7			110			11	108	7
2018 Total Traffic	**103**	**282**	**16**	**18**	**41**	**163**	**216**	**451**	**557**	**56**	**34**	**574**	**115**

	PM Peak		
	INS	OUT	Total
New External Trips	**234**	**228**	**462**

Traf Tech
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Washington Avenue and 6th Street
PM Peak Hour (4:00 PM - 5:00 PM)

Description	Washington Avenue Northbound				Washington Avenue Southbound			6th Street Eastbound			6th Street Westbound		
	U-turn	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (12/11/2015)	5	39	556	31	3	367	136	46	0	34	0	0	0
Season Adjustment Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
2015 Peak Season Traffic	5	41	584	33	3	385	143	48	0	36	0	0	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments:													
• The Anglers Hotel addition		13				9	14						
• The Torino (400 Collins Avenue)			11			3							
• The Savoy Hotel			4			5							
2018 Background Traffic	5	55	616	34	3	414	161	50	0	37	0	0	0
601 Washington													
- Percentages (Ins/Out)		3%								3%			
- Trips		7		96	21					7			
- Pass-by Trips			-16	16	15	-15							
- Ped/Transit				10	10								
2018 Total Traffic	**5**	**62**	**600**	**146**	**39**	**399**	**161**	**50**	**0**	**44**	**0**	**0**	**0**

		PM Peak	
		OUT	Total
New External Trips	**183**	**177**	**360**

	PM Peak		
	INS	OUT	Total
Pass-by	**31**	**31**	**62**

Traf Tech
ENGINEERING, INC.

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Washington Avenue and 7th Street
PM Peak Hour (4:00 PM - 5:00 PM)

Description	Washington Avenue Northbound				Washington Avenue Southbound				7th Street Eastbound			7th Street Westbound		
	U-Turn	Left	Through	Right	U-turn	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (12/11/2015)	6	33	543	54	9	84	485	55	22	36	29	0	0	0
Season Adjustment Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
2015 Peak Season Traffic	6	35	570	57	9	88	509	58	23	38	30	0	0	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments:														
• The Anglers Hotel addition							14		10		9			
• The Torino (400 Collins Avenue)			11				3							
• The Savoy Hotel			4				5							
2018 Background Traffic	6	36	602	58	10	91	547	59	34	39	40	0	0	0
601 Washington														
- Percentages (Ins/Out)							20%							
- Trips							31							
- Pass-by Trips			-16				15							
2018 Total Traffic	**6**	**36**	**586**	**58**	**10**	**91**	**592**	**59**	**34**	**39**	**40**	**0**	**0**	**0**

	PM Peak		
	INS	OUT	Total
New External Trips	**234**	**228**	**462**

Traf Tech
ENGINEERING, INC.

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Collins Court and 5th Street
PM Peak Hour (4:00 PM - 5:00 PM)

Description	Collins Court Northbound			Collins Court Southbound			5th Street Eastbound			5th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (12/11/2015)	0	0	8	0	0	22	0	513	10	0	636	39
Season Adjustment Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
2015 Peak Season Traffic	0	0	8	0	0	23	0	539	11	0	668	41
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments:												
• The Anglers Hotel addition												
• The Torino (400 Collins Avenue)			34					21			1	
• The Savoy Hotel												
2018 Background Traffic	0	0	43	0	0	24	0	576	11	0	689	42
601 Washington												
- Percentages (Ins/Out)								3%			55%	28%
- Trips								7			126	66
2018 Total Traffic	**0**	**0**	**43**	**0**	**0**	**24**	**0**	**583**	**11**	**0**	**815**	**108**

	PM Peak		
	INS	OUT	Total
New External Trips	**234**	**228**	**462**

Traf Tech
ENGINEERING, INC.

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Collins Court and 6th Street
PM Peak Hour (4:00 PM - 5:00 PM)

Description	Collins Court Northbound			Collins Court Southbound			6th Street Eastbound			6th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (12/11/2015)	0	12	9	0	0	0	16	28	7	0	0	0
Season Adjustment Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
2015 Peak Season Traffic	0	13	9	0	0	0	17	29	7	0	0	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments:												
• The Anglers Hotel addition												
• The Torino (400 Collins Avenue)												
• The Savoy Hotel												
2018 Background Traffic	0	13	10	0	0	0	17	30	8	0	0	0
601 Washington												
- Percentages (Ins/Out)		28%					72%					
- Trips		66					168					
- Pass-by												
2018 Total Traffic	**0**	**79**	**10**	**0**	**0**	**0**	**186**	**30**	**8**	**0**	**0**	**0**

	PM Peak		
	INS	OUT	Total
New External Trips	**234**	**228**	**462**

Traf Tech
ENGINEERING, INC.

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Collins Court and 7th Street
PM Peak Hour (4:00 PM - 5:00 PM)

Description	Collins Court Northbound			Collins Court Southbound			7th Street Eastbound			7th Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (12/11/2015)	0	17	14	0	0	0	11	173	0	0	0	0
Season Adjustment Factor	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05	1.05
2015 Peak Season Traffic	0	18	15	0	0	0	12	182	0	0	0	0
Annual Growth Rate	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%	1.0%
Committed Developments:												
• The Anglers Hotel addition												
• The Torino (400 Collins Avenue)												
• The Savoy Hotel												
2018 Background Traffic	0	18	15	0	0	0	12	187	0	0	0	0
601 Washington												
- Percentages (Ins/Out)			100%									
- Trips			228									
2018 Total Traffic	**0**	**18**	**243**	**0**	**0**	**0**	**12**	**187**	**0**	**0**	**0**	**0**

	PM Peak		
	INS	OUT	Total
New External Trips	**234**	**228**	**462**

Traf Tech
ENGINEERING, INC.

APPENDIX F

Intersection Capacity Analyses

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	18	286	234	38	5	198	72	59	75	7	34	83
Future Volume (vph)	18	286	234	38	5	198	72	59	75	7	34	83
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		6.3	6.3		6.3	6.3			7.2			7.2
Lane Util. Factor		1.00	0.95		1.00	0.95			0.95			1.00
Frpb, ped/bikes		1.00	0.99		1.00	0.95			1.00			1.00
Flpb, ped/bikes		0.98	1.00		0.94	1.00			0.91			0.99
Frt		1.00	0.98		1.00	0.96			0.99			1.00
Flt Protected		0.95	1.00		0.95	1.00			0.98			0.99
Satd. Flow (prot)		1553	3069		1481	2892			2787			1623
Flt Permitted		0.43	1.00		0.56	1.00			0.77			0.87
Satd. Flow (perm)		707	3069		873	2892			2200			1429
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	21	333	272	44	6	230	84	69	87	8	40	97
RTOR Reduction (vph)	0	0	7	0	0	25	0	0	4	0	0	0
Lane Group Flow (vph)	0	354	309	0	6	289	0	0	160	0	0	137
Confl. Peds. (#/hr)		90		55	55		90	293		56	56	
Confl. Bikes (#/hr)				7						5		
Turn Type	custom	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA
Protected Phases		5	2			6			4			8
Permitted Phases	5	2			6			4			8	
Actuated Green, G (s)		73.2	73.2		35.5	35.5			43.3			43.3
Effective Green, g (s)		73.2	73.2		35.5	35.5			43.3			43.3
Actuated g/C Ratio		0.56	0.56		0.27	0.27			0.33			0.33
Clearance Time (s)		6.3	6.3		6.3	6.3			7.2			7.2
Vehicle Extension (s)		2.0	1.0		1.0	1.0			2.5			5.0
Lane Grp Cap (vph)		602	1728		238	789			732			475
v/s Ratio Prot		c0.14	0.10			0.10						
v/s Ratio Perm		c0.19			0.01				0.07			0.10
v/c Ratio		0.59	0.18		0.03	0.37			0.22			0.29
Uniform Delay, d1		16.6	13.8		34.6	38.2			31.2			32.0
Progression Factor		0.56	0.45		1.00	1.00			1.00			1.15
Incremental Delay, d2		0.9	0.2		0.2	1.3			0.1			0.7
Delay (s)		10.2	6.4		34.8	39.5			31.3			37.4
Level of Service		B	A		C	D			C			D
Approach Delay (s)			8.4			39.4			31.3			62.6
Approach LOS			A			D			C			E

Intersection Summary			
HCM 2000 Control Delay	33.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	19.8
Intersection Capacity Utilization	91.1%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	318
Future Volume (vph)	318
Ideal Flow (vphpl)	1700
Total Lost time (s)	7.2
Lane Util. Factor	1.00
Frpb, ped/bikes	0.73
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1033
Flt Permitted	1.00
Satd. Flow (perm)	1033
Peak-hour factor, PHF	0.86
Adj. Flow (vph)	370
RTOR Reduction (vph)	69
Lane Group Flow (vph)	301
Confl. Peds. (#/hr)	293
Confl. Bikes (#/hr)	
Turn Type	Perm
Protected Phases	
Permitted Phases	8
Actuated Green, G (s)	43.3
Effective Green, g (s)	43.3
Actuated g/C Ratio	0.33
Clearance Time (s)	7.2
Vehicle Extension (s)	5.0
Lane Grp Cap (vph)	344
v/s Ratio Prot	
v/s Ratio Perm	c0.29
v/c Ratio	0.87
Uniform Delay, d1	40.8
Progression Factor	1.22
Incremental Delay, d2	22.1
Delay (s)	72.0
Level of Service	E
Approach Delay (s)	
Approach LOS	

Intersection Summary

HCM Signalized Intersection Capacity Analysis
102: Collins Avenue & 7 Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	56	65	63	0	0	0	0	432	53	28	338	0
Future Volume (vph)	56	65	63	0	0	0	0	432	53	28	338	0
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		6.0						6.0		6.0	6.0	
Lane Util. Factor		0.95						1.00		1.00	1.00	
Frpb, ped/bikes		0.85						0.97		1.00	1.00	
Flpb, ped/bikes		1.00						1.00		0.86	1.00	
Frt		0.95						0.99		1.00	1.00	
Flt Protected		0.99						1.00		0.95	1.00	
Satd. Flow (prot)		2505						1586		1369	1667	
Flt Permitted		0.99						1.00		0.44	1.00	
Satd. Flow (perm)		2505						1586		640	1667	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	60	70	68	0	0	0	0	465	57	30	363	0
RTOR Reduction (vph)	0	59	0	0	0	0	0	4	0	0	0	0
Lane Group Flow (vph)	0	139	0	0	0	0	0	518	0	30	363	0
Confl. Peds. (#/hr)			219	219		235	70		248	248		70
Confl. Bikes (#/hr)			10			8			6			8
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		8						6			2	
Permitted Phases	8									2		
Actuated Green, G (s)		8.8						44.2		44.2	44.2	
Effective Green, g (s)		8.8						44.2		44.2	44.2	
Actuated g/C Ratio		0.14						0.68		0.68	0.68	
Clearance Time (s)		6.0						6.0		6.0	6.0	
Vehicle Extension (s)		2.5						2.5		2.5	2.5	
Lane Grp Cap (vph)		339						1078		435	1133	
v/s Ratio Prot								c0.33			0.22	
v/s Ratio Perm		0.06								0.05		
v/c Ratio		0.41						0.48		0.07	0.32	
Uniform Delay, d1		25.7						4.9		3.5	4.3	
Progression Factor		1.00						1.59		1.00	1.00	
Incremental Delay, d2		0.6						1.4		0.3	0.7	
Delay (s)		26.3						9.3		3.8	5.0	
Level of Service		C						A		A	A	
Approach Delay (s)		26.3			0.0			9.3			4.9	
Approach LOS		C			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.47		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
103: Washington Avenue & SR-A1A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	321	517	50	22	445	103	86	249	15	18	28	155
Future Volume (vph)	321	517	50	22	445	103	86	249	15	18	28	155
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Lane Width	11	11	11	11	11	11	11	11	11	12	11	11
Total Lost time (s)	6.3	6.0		5.9	6.0			6.4			6.4	6.4
Lane Util. Factor	0.97	0.95		1.00	0.91			0.95			1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99			0.99			1.00	1.00
Flpb, ped/bikes	1.00	1.00		0.99	1.00			0.96			0.95	1.00
Frt	1.00	0.99		1.00	0.97			0.99			1.00	1.00
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.95	1.00
Satd. Flow (prot)	2969	2992		1511	4220			2683			1448	1611
Flt Permitted	0.95	1.00		0.40	1.00			0.77			0.42	1.00
Satd. Flow (perm)	2969	2992		643	4220			2081			638	1611
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.95	0.87	0.87
Adj. Flow (vph)	369	594	57	25	511	118	99	286	17	19	32	178
RTOR Reduction (vph)	0	4	0	0	26	0	0	3	0	0	0	0
Lane Group Flow (vph)	369	647	0	25	603	0	0	399	0	0	51	178
Confl. Peds. (#/hr)	42		39	39		42	200		88		88	
Confl. Bikes (#/hr)			11			6			10			
Parking (#/hr)								5	5			
Turn Type	Prot	NA		pm+pt	NA		Perm	NA		Perm	Perm	NA
Protected Phases	1	6		5	2			4				8
Permitted Phases				2			4			8	8	
Actuated Green, G (s)	21.5	72.2		61.3	55.8			34.0			34.0	34.0
Effective Green, g (s)	21.5	72.2		61.3	55.8			34.0			34.0	34.0
Actuated g/C Ratio	0.17	0.56		0.47	0.43			0.26			0.26	0.26
Clearance Time (s)	6.3	6.0		5.9	6.0			6.4			6.4	6.4
Vehicle Extension (s)	2.0	1.0		2.0	1.0			2.5			2.5	2.5
Lane Grp Cap (vph)	491	1661		339	1811			544			166	421
v/s Ratio Prot	c0.12	c0.22		0.00	0.14							0.11
v/s Ratio Perm				0.03				c0.19			0.08	
v/c Ratio	0.75	0.39		0.07	0.33			0.73			0.31	0.42
Uniform Delay, d1	51.7	16.4		18.5	24.7			43.9			38.5	39.9
Progression Factor	1.00	1.00		1.38	1.36			1.00			1.00	1.00
Incremental Delay, d2	5.7	0.7		0.0	0.5			4.8			0.8	0.5
Delay (s)	57.4	17.1		25.6	34.1			48.7			39.3	40.4
Level of Service	E	B		C	C			D			D	D
Approach Delay (s)		31.7			33.8			48.7				39.1
Approach LOS		C			C			D				D

Intersection Summary			
HCM 2000 Control Delay	36.2	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.7
Intersection Capacity Utilization	110.3%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	201
Future Volume (vph)	201
Ideal Flow (vphpl)	1700
Lane Width	11
Total Lost time (s)	6.4
Lane Util. Factor	1.00
Frpb, ped/bikes	0.75
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1021
Flt Permitted	1.00
Satd. Flow (perm)	1021
Peak-hour factor, PHF	0.87
Adj. Flow (vph)	231
RTOR Reduction (vph)	171
Lane Group Flow (vph)	60
Confl. Peds. (#/hr)	200
Confl. Bikes (#/hr)	21
Parking (#/hr)	
Turn Type	Perm
Protected Phases	
Permitted Phases	8
Actuated Green, G (s)	34.0
Effective Green, g (s)	34.0
Actuated g/C Ratio	0.26
Clearance Time (s)	6.4
Vehicle Extension (s)	2.5
Lane Grp Cap (vph)	267
v/s Ratio Prot	
v/s Ratio Perm	0.06
v/c Ratio	0.23
Uniform Delay, d1	37.7
Progression Factor	1.00
Incremental Delay, d2	0.3
Delay (s)	38.0
Level of Service	D
Approach Delay (s)	
Approach LOS	

Intersection Summary

HCM Signalized Intersection Capacity Analysis
104: Washington Avenue & 6 Street

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	48	36	46	584	385	143
Future Volume (vph)	48	36	46	584	385	143
Ideal Flow (vphpl)	1700	1700	1200	1700	1700	1700
Lane Width	12	12	11	11	11	11
Total Lost time (s)	5.0			5.0	5.0	
Lane Util. Factor	1.00			0.95	0.95	
Frpb, ped/bikes	0.97			1.00	0.99	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.94			1.00	0.96	
Flt Protected	0.97			1.00	1.00	
Satd. Flow (prot)	1481			2828	2869	
Flt Permitted	0.97			0.87	1.00	
Satd. Flow (perm)	1481			2463	2869	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	55	41	52	664	438	162
RTOR Reduction (vph)	31	0	0	0	38	0
Lane Group Flow (vph)	65	0	0	716	563	0
Confl. Peds. (#/hr)	103	54	11			11
Confl. Bikes (#/hr)		5				3
Bus Blockages (#/hr)	0	0	0	5	5	0
Parking (#/hr)		5		5		
Turn Type	Prot		Perm	NA	NA	
Protected Phases	8			6	2	
Permitted Phases			6			
Actuated Green, G (s)	22.2			57.8	57.8	
Effective Green, g (s)	22.2			57.8	57.8	
Actuated g/C Ratio	0.25			0.64	0.64	
Clearance Time (s)	5.0			5.0	5.0	
Vehicle Extension (s)	2.5			1.0	1.0	
Lane Grp Cap (vph)	365			1581	1842	
v/s Ratio Prot	c0.04				0.20	
v/s Ratio Perm				c0.29		
v/c Ratio	0.18			0.45	0.31	
Uniform Delay, d1	26.7			8.1	7.2	
Progression Factor	1.00			1.00	1.87	
Incremental Delay, d2	0.2			0.9	0.4	
Delay (s)	26.9			9.1	13.8	
Level of Service	C			A	B	
Approach Delay (s)	26.9			9.1	13.8	
Approach LOS	C			A	B	

Intersection Summary			
HCM 2000 Control Delay	12.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	68.6%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
105: Washington Avenue & 7 Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	23	38	30	0	0	0	6	35	570	57	9	88
Future Volume (vph)	23	38	30	0	0	0	6	35	570	57	9	88
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1200	1700	1700	1700	1700
Lane Width	12	12	12	12	12	12	12	10	11	12	12	12
Total Lost time (s)		5.0						5.0	5.0			5.0
Lane Util. Factor		1.00						1.00	0.95			1.00
Frpb, ped/bikes		0.97						1.00	0.99			1.00
Flpb, ped/bikes		0.99						0.95	1.00			0.97
Frt		0.96						1.00	0.99			1.00
Flt Protected		0.99						0.95	1.00			0.95
Satd. Flow (prot)		1518						989	2781			1541
Flt Permitted		0.99						0.42	1.00			0.39
Satd. Flow (perm)		1518						439	2781			635
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.95	0.97
Adj. Flow (vph)	24	39	31	0	0	0	6	36	588	59	9	91
RTOR Reduction (vph)	0	21	0	0	0	0	0	0	7	0	0	0
Lane Group Flow (vph)	0	73	0	0	0	0	0	42	640	0	0	100
Confl. Peds. (#/hr)	32		56	56		32		61		59		59
Confl. Bikes (#/hr)			4			11				10		
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	5	0	0	0
Parking (#/hr)									5			
Turn Type	custom	NA						Perm	NA			Perm
Protected Phases		8							2			
Permitted Phases	4							2				6
Actuated Green, G (s)		20.6						59.4	59.4			59.4
Effective Green, g (s)		20.6						59.4	59.4			59.4
Actuated g/C Ratio		0.23						0.66	0.66			0.66
Clearance Time (s)		5.0						5.0	5.0			5.0
Vehicle Extension (s)		2.5						1.0	1.0			1.0
Lane Grp Cap (vph)		347						289	1835			419
v/s Ratio Prot									c0.23			
v/s Ratio Perm		0.05						0.10				0.16
v/c Ratio		0.21						0.15	0.35			0.24
Uniform Delay, d1		28.1						5.8	6.8			6.2
Progression Factor		1.00						1.89	1.81			1.00
Incremental Delay, d2		0.2						1.0	0.5			1.3
Delay (s)		28.3						11.8	12.7			7.5
Level of Service		C						B	B			A
Approach Delay (s)		28.3			0.0				12.7			
Approach LOS		C			A				B			

Intersection Summary			
HCM 2000 Control Delay	11.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.31		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	57.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	509	58
Future Volume (vph)	509	58
Ideal Flow (vphpl)	1700	1700
Lane Width	11	11
Total Lost time (s)	5.0	
Lane Util. Factor	0.95	
Frpb, ped/bikes	0.99	
Flpb, ped/bikes	1.00	
Frt	0.98	
Flt Protected	1.00	
Satd. Flow (prot)	2971	
Flt Permitted	1.00	
Satd. Flow (perm)	2971	
Peak-hour factor, PHF	0.97	0.97
Adj. Flow (vph)	525	60
RTOR Reduction (vph)	9	0
Lane Group Flow (vph)	576	0
Confl. Peds. (#/hr)		61
Confl. Bikes (#/hr)		5
Bus Blockages (#/hr)	0	5
Parking (#/hr)		5
Turn Type	NA	
Protected Phases	6	
Permitted Phases		
Actuated Green, G (s)	59.4	
Effective Green, g (s)	59.4	
Actuated g/C Ratio	0.66	
Clearance Time (s)	5.0	
Vehicle Extension (s)	1.0	
Lane Grp Cap (vph)	1960	
v/s Ratio Prot	0.19	
v/s Ratio Perm		
v/c Ratio	0.29	
Uniform Delay, d1	6.5	
Progression Factor	1.00	
Incremental Delay, d2	0.4	
Delay (s)	6.8	
Level of Service	A	
Approach Delay (s)	6.9	
Approach LOS	A	

Intersection Summary

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	0	36	18	0	46	0	412	0	0	401	0
Future Vol, veh/h	0	0	36	18	0	46	0	412	0	0	401	0
Conflicting Peds, #/hr	117	0	228	228	0	117	132	0	7	7	0	132
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	0	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	38	19	0	48	0	429	0	0	418	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1303	1303	778	1303	1303	789	646	0	0	657	0	0
Stage 1	646	646	-	657	657	-	-	-	-	-	-	-
Stage 2	657	657	-	646	646	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	138	161	396	138	161	391	939	-	-	931	-	-
Stage 1	460	467	-	454	462	-	-	-	-	-	-	-
Stage 2	454	462	-	460	467	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	83	106	285	86	106	282	836	-	-	829	-	-
Mov Cap-2 Maneuver	83	106	-	86	106	-	-	-	-	-	-	-
Stage 1	373	378	-	368	374	-	-	-	-	-	-	-
Stage 2	335	374	-	356	378	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	19.5	31	0	0
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	836	-	-	285	86	282	829	-	-
HCM Lane V/C Ratio	-	-	-	0.132	0.218	0.17	-	-	-
HCM Control Delay (s)	0	-	-	19.5	58.2	20.4	0	-	-
HCM Lane LOS	A	-	-	C	F	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.4	0.8	0.6	0	-	-

Intersection	
Int Delay, s/veh	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	539	11	0	668	41	0	0	8	0	0	23
Future Vol, veh/h	0	539	11	0	668	41	0	0	8	0	0	23
Conflicting Peds, #/hr	4	0	2	0	0	4	304	0	34	0	0	304
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	561	11	0	696	43	0	0	8	0	0	24

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1043	0	0	877	0	0	1453	1914	594	1606	1898	677
Stage 1	-	-	-	-	-	-	871	871	-	1021	1021	-
Stage 2	-	-	-	-	-	-	582	1043	-	585	877	-
Critical Hdwy	5.34	-	-	4.14	-	-	6.99	6.54	6.94	6.99	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.74	5.54	-	6.54	5.54	-
Follow-up Hdwy	3.12	-	-	2.22	-	-	3.67	4.02	3.32	3.67	4.02	3.92
Pot Cap-1 Maneuver	373	-	-	766	-	-	112	67	448	88	69	339
Stage 1	-	-	-	-	-	-	304	367	-	197	312	-
Stage 2	-	-	-	-	-	-	437	305	-	450	364	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	372	-	-	763	-	-	75	37	333	64	38	252
Mov Cap-2 Maneuver	-	-	-	-	-	-	75	37	-	64	38	-
Stage 1	-	-	-	-	-	-	227	274	-	147	233	-
Stage 2	-	-	-	-	-	-	394	228	-	437	272	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	16.1	20.8
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	333	372	-	-	763	-	-	252
HCM Lane V/C Ratio	0.025	-	-	-	-	-	-	0.095
HCM Control Delay (s)	16.1	0	-	-	0	-	-	20.8
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.1	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	17	29	7	0	0	0	0	13	9	0	0	0
Future Vol, veh/h	17	29	7	0	0	0	0	13	9	0	0	0
Conflicting Peds, #/hr	4	0	9	9	0	4	103	0	68	68	0	103
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	35	8	0	0	0	0	16	11	0	0	0

Major/Minor	Major1			Minor1		
Conflicting Flow All	0	0	0	183	183	142
Stage 1	-	-	-	183	183	-
Stage 2	-	-	-	0	0	-
Critical Hdwy	-	-	-	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	778	711	906
Stage 1	-	-	-	819	748	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	706	0	828
Mov Cap-2 Maneuver	-	-	-	706	0	-
Stage 1	-	-	-	749	0	-
Stage 2	-	-	-	-	0	-

Approach	EB	NB
HCM Control Delay, s		9.5
HCM LOS		A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR
Capacity (veh/h)	828	-	-	-
HCM Lane V/C Ratio	0.032	-	-	-
HCM Control Delay (s)	9.5	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	12	182	0	0	0	0	0	18	15	0	0	0
Future Vol, veh/h	12	182	0	0	0	0	0	18	15	0	0	0
Conflicting Peds, #/hr	14	0	19	19	0	14	113	0	99	99	0	113
Sign Control	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	1080	434	688	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	200	0	0	0	0	0	20	16	0	0	0

Major/Minor	Major1			Minor1		
Conflicting Flow All	0	0	0	339	339	212
Stage 1	-	-	-	339	339	-
Stage 2	-	-	-	0	0	-
Critical Hdwy	-	-	-	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	3.52	4.02	3.32
Pot Cap-1 Maneuver	-	-	-	591	581	793
Stage 1	-	-	-	649	638	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	527	0	718
Mov Cap-2 Maneuver	-	-	-	527	0	-
Stage 1	-	-	-	588	0	-
Stage 2	-	-	-	-	0	-

Approach	EB	NB
HCM Control Delay, s		10.3
HCM LOS		B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR
Capacity (veh/h)	718	-	-	-
HCM Lane V/C Ratio	0.051	-	-	-
HCM Control Delay (s)	10.3	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-

HCM Signalized Intersection Capacity Analysis
101: Collins Avenue & SR-A1A

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	18	300	251	88	11	211	78	62	80	10	35	109
Future Volume (vph)	18	300	251	88	11	211	78	62	80	10	35	109
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		6.3	6.3		6.3	6.3			7.2			7.2
Lane Util. Factor		1.00	0.95		1.00	0.95			0.95			1.00
Frpb, ped/bikes		1.00	0.98		1.00	0.94			1.00			1.00
Flpb, ped/bikes		0.98	1.00		0.93	1.00			0.92			0.99
Frt		1.00	0.96		1.00	0.96			0.99			1.00
Flt Protected		0.95	1.00		0.95	1.00			0.98			0.99
Satd. Flow (prot)		1557	2985		1470	2858			2817			1632
Flt Permitted		0.38	1.00		0.52	1.00			0.76			0.88
Satd. Flow (perm)		619	2985		804	2858			2181			1459
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	21	349	292	102	13	245	91	72	93	12	41	127
RTOR Reduction (vph)	0	0	19	0	0	26	0	0	6	0	0	0
Lane Group Flow (vph)	0	370	375	0	13	310	0	0	171	0	0	168
Confl. Peds. (#/hr)		90		55	55		90	293		56	56	
Confl. Bikes (#/hr)				7						5		
Turn Type	custom	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA
Protected Phases		5	2			6			4			8
Permitted Phases	5	2			6			4			8	
Actuated Green, G (s)		70.8	70.8		28.9	28.9			45.7			45.7
Effective Green, g (s)		70.8	70.8		28.9	28.9			45.7			45.7
Actuated g/C Ratio		0.54	0.54		0.22	0.22			0.35			0.35
Clearance Time (s)		6.3	6.3		6.3	6.3			7.2			7.2
Vehicle Extension (s)		2.0	1.0		1.0	1.0			2.5			5.0
Lane Grp Cap (vph)		593	1625		178	635			766			512
v/s Ratio Prot		c0.17	0.13			0.11						
v/s Ratio Perm		c0.17			0.02				0.08			0.12
v/c Ratio		0.62	0.23		0.07	0.49			0.22			0.33
Uniform Delay, d1		18.5	15.4		40.0	44.1			29.7			30.9
Progression Factor		0.56	0.44		1.00	1.00			1.00			1.17
Incremental Delay, d2		1.4	0.3		0.8	2.7			0.1			0.8
Delay (s)		11.8	7.1		40.8	46.8			29.8			37.0
Level of Service		B	A		D	D			C			D
Approach Delay (s)			9.4			46.5			29.8			58.4
Approach LOS			A			D			C			E

Intersection Summary			
HCM 2000 Control Delay	33.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	19.8
Intersection Capacity Utilization	92.8%	ICU Level of Service	F
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	330
Future Volume (vph)	330
Ideal Flow (vphpl)	1700
Total Lost time (s)	7.2
Lane Util. Factor	1.00
Frpb, ped/bikes	0.74
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1053
Flt Permitted	1.00
Satd. Flow (perm)	1053
Peak-hour factor, PHF	0.86
Adj. Flow (vph)	384
RTOR Reduction (vph)	66
Lane Group Flow (vph)	318
Confl. Peds. (#/hr)	293
Confl. Bikes (#/hr)	
Turn Type	Perm
Protected Phases	
Permitted Phases	8
Actuated Green, G (s)	45.7
Effective Green, g (s)	45.7
Actuated g/C Ratio	0.35
Clearance Time (s)	7.2
Vehicle Extension (s)	5.0
Lane Grp Cap (vph)	370
v/s Ratio Prot	
v/s Ratio Perm	c0.30
v/c Ratio	0.86
Uniform Delay, d1	39.2
Progression Factor	1.25
Incremental Delay, d2	18.8
Delay (s)	67.8
Level of Service	E
Approach Delay (s)	
Approach LOS	

Intersection Summary

HCM Signalized Intersection Capacity Analysis
102: Collins Avenue & 7 Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	67	65	0	0	0	0	457	54	29	374	0
Future Volume (vph)	57	67	65	0	0	0	0	457	54	29	374	0
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		6.0						6.0		6.0	6.0	
Lane Util. Factor		0.95						1.00		1.00	1.00	
Frpb, ped/bikes		0.85						0.97		1.00	1.00	
Flpb, ped/bikes		1.00						1.00		0.87	1.00	
Frt		0.95						0.99		1.00	1.00	
Flt Protected		0.99						1.00		0.95	1.00	
Satd. Flow (prot)		2503						1589		1382	1667	
Flt Permitted		0.99						1.00		0.43	1.00	
Satd. Flow (perm)		2503						1589		620	1667	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	61	72	70	0	0	0	0	491	58	31	402	0
RTOR Reduction (vph)	0	60	0	0	0	0	0	4	0	0	0	0
Lane Group Flow (vph)	0	143	0	0	0	0	0	545	0	31	402	0
Confl. Peds. (#/hr)			219	219		235	70		248	248		70
Confl. Bikes (#/hr)			10			8			6			8
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		8						6			2	
Permitted Phases	8									2		
Actuated Green, G (s)		8.9						44.1		44.1	44.1	
Effective Green, g (s)		8.9						44.1		44.1	44.1	
Actuated g/C Ratio		0.14						0.68		0.68	0.68	
Clearance Time (s)		6.0						6.0		6.0	6.0	
Vehicle Extension (s)		2.5						2.5		2.5	2.5	
Lane Grp Cap (vph)		342						1078		420	1130	
v/s Ratio Prot								c0.34			0.24	
v/s Ratio Perm		0.06								0.05		
v/c Ratio		0.42						0.51		0.07	0.36	
Uniform Delay, d1		25.7						5.1		3.5	4.4	
Progression Factor		1.00						1.61		1.00	1.00	
Incremental Delay, d2		0.6						1.6		0.3	0.9	
Delay (s)		26.3						9.8		3.9	5.3	
Level of Service		C						A		A	A	
Approach Delay (s)		26.3			0.0			9.8			5.2	
Approach LOS		C			A			A			A	

Intersection Summary			
HCM 2000 Control Delay	10.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	55.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
103: Washington Avenue & SR-A1A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	341	557	56	23	466	108	103	270	16	18	34	163
Future Volume (vph)	341	557	56	23	466	108	103	270	16	18	34	163
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Lane Width	11	11	11	11	11	11	11	11	11	12	11	11
Total Lost time (s)	6.3	6.0		5.9	6.0			6.4			6.4	6.4
Lane Util. Factor	0.97	0.95		1.00	0.91			0.95			1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99			1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00		0.99	1.00			0.96			0.95	1.00
Frt	1.00	0.99		1.00	0.97			0.99			1.00	1.00
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.95	1.00
Satd. Flow (prot)	2969	2989		1513	4219			2676			1455	1611
Flt Permitted	0.95	1.00		0.38	1.00			0.75			0.39	1.00
Satd. Flow (perm)	2969	2989		612	4219			2043			590	1611
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.95	0.87	0.87
Adj. Flow (vph)	392	640	64	26	536	124	118	310	18	19	39	187
RTOR Reduction (vph)	0	5	0	0	27	0	0	3	0	0	0	0
Lane Group Flow (vph)	392	699	0	26	633	0	0	443	0	0	58	187
Confl. Peds. (#/hr)	42		39	39		42	200		88		88	
Confl. Bikes (#/hr)			11			6			10			
Parking (#/hr)								5	5			
Turn Type	Prot	NA		pm+pt	NA		Perm	NA		Perm	Perm	NA
Protected Phases	1	6		5	2			4				8
Permitted Phases				2			4			8	8	
Actuated Green, G (s)	23.3	70.8		58.1	52.6			35.4			35.4	35.4
Effective Green, g (s)	23.3	70.8		58.1	52.6			35.4			35.4	35.4
Actuated g/C Ratio	0.18	0.54		0.45	0.40			0.27			0.27	0.27
Clearance Time (s)	6.3	6.0		5.9	6.0			6.4			6.4	6.4
Vehicle Extension (s)	2.0	1.0		2.0	1.0			2.5			2.5	2.5
Lane Grp Cap (vph)	532	1627		311	1707			556			160	438
v/s Ratio Prot	c0.13	c0.23		0.00	0.15							0.12
v/s Ratio Perm				0.03				c0.22			0.10	
v/c Ratio	0.74	0.43		0.08	0.37			0.80			0.36	0.43
Uniform Delay, d1	50.5	17.6		20.2	27.1			44.0			38.2	38.9
Progression Factor	1.00	1.00		1.49	1.43			1.00			1.00	1.00
Incremental Delay, d2	4.6	0.8		0.0	0.6			7.6			1.0	0.5
Delay (s)	55.0	18.4		30.1	39.2			51.5			39.2	39.4
Level of Service	E	B		C	D			D			D	D
Approach Delay (s)		31.5			38.9			51.5				38.3
Approach LOS		C			D			D				D

Intersection Summary			
HCM 2000 Control Delay	37.9	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.62		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.7
Intersection Capacity Utilization	111.0%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	216
Future Volume (vph)	216
Ideal Flow (vphpl)	1700
Lane Width	11
Total Lost time (s)	6.4
Lane Util. Factor	1.00
Frpb, ped/bikes	0.75
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1022
Flt Permitted	1.00
Satd. Flow (perm)	1022
Peak-hour factor, PHF	0.87
Adj. Flow (vph)	248
RTOR Reduction (vph)	180
Lane Group Flow (vph)	68
Confl. Peds. (#/hr)	200
Confl. Bikes (#/hr)	21
Parking (#/hr)	
Turn Type	Perm
Protected Phases	
Permitted Phases	8
Actuated Green, G (s)	35.4
Effective Green, g (s)	35.4
Actuated g/C Ratio	0.27
Clearance Time (s)	6.4
Vehicle Extension (s)	2.5
Lane Grp Cap (vph)	278
v/s Ratio Prot	
v/s Ratio Perm	0.07
v/c Ratio	0.24
Uniform Delay, d1	36.9
Progression Factor	1.00
Incremental Delay, d2	0.3
Delay (s)	37.2
Level of Service	D
Approach Delay (s)	
Approach LOS	

Intersection Summary

HCM Signalized Intersection Capacity Analysis
104: Washington Avenue & 6 Street

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	50	37	60	601	417	161
Future Volume (vph)	50	37	60	601	417	161
Ideal Flow (vphpl)	1700	1700	1200	1700	1700	1700
Lane Width	12	12	11	11	11	11
Total Lost time (s)	5.0			5.0	5.0	
Lane Util. Factor	1.00			0.95	0.95	
Frpb, ped/bikes	0.97			1.00	0.99	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.94			1.00	0.96	
Flt Protected	0.97			1.00	1.00	
Satd. Flow (prot)	1481			2826	2865	
Flt Permitted	0.97			0.83	1.00	
Satd. Flow (perm)	1481			2353	2865	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	57	42	68	683	474	183
RTOR Reduction (vph)	31	0	0	0	40	0
Lane Group Flow (vph)	68	0	0	751	617	0
Confl. Peds. (#/hr)	103	54	11			11
Confl. Bikes (#/hr)		5				3
Bus Blockages (#/hr)	0	0	0	5	5	0
Parking (#/hr)		5		5		
Turn Type	Prot		Perm	NA	NA	
Protected Phases	8			6	2	
Permitted Phases			6			
Actuated Green, G (s)	22.2			57.8	57.8	
Effective Green, g (s)	22.2			57.8	57.8	
Actuated g/C Ratio	0.25			0.64	0.64	
Clearance Time (s)	5.0			5.0	5.0	
Vehicle Extension (s)	2.5			1.0	1.0	
Lane Grp Cap (vph)	365			1511	1839	
v/s Ratio Prot	c0.05				0.22	
v/s Ratio Perm				c0.32		
v/c Ratio	0.19			0.50	0.34	
Uniform Delay, d1	26.8			8.5	7.3	
Progression Factor	1.00			1.00	1.82	
Incremental Delay, d2	0.2			1.2	0.5	
Delay (s)	27.0			9.6	13.9	
Level of Service	C			A	B	
Approach Delay (s)	27.0			9.6	13.9	
Approach LOS	C			A	B	

Intersection Summary			
HCM 2000 Control Delay	12.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.41		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
105: Washington Avenue & 7 Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	34	39	40	0	0	0	6	36	602	58	10	91
Future Volume (vph)	34	39	40	0	0	0	6	36	602	58	10	91
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1200	1700	1700	1700	1700
Lane Width	12	12	12	12	12	12	12	10	11	12	12	12
Total Lost time (s)		5.0						5.0	5.0			5.0
Lane Util. Factor		1.00						1.00	0.95			1.00
Frpb, ped/bikes		0.97						1.00	0.99			1.00
Flpb, ped/bikes		0.99						0.95	1.00			0.97
Frt		0.95						1.00	0.99			1.00
Flt Protected		0.99						0.95	1.00			0.95
Satd. Flow (prot)		1504						993	2783			1543
Flt Permitted		0.99						0.40	1.00			0.38
Satd. Flow (perm)		1504						420	2783			610
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.95	0.97
Adj. Flow (vph)	35	40	41	0	0	0	6	37	621	60	11	94
RTOR Reduction (vph)	0	23	0	0	0	0	0	0	7	0	0	0
Lane Group Flow (vph)	0	93	0	0	0	0	0	43	674	0	0	105
Confl. Peds. (#/hr)	32		56	56		32		61		59		59
Confl. Bikes (#/hr)			4			11				10		
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	5	0	0	0
Parking (#/hr)									5			
Turn Type	custom	NA						Perm	NA			Perm
Protected Phases		8							2			
Permitted Phases	4							2				6
Actuated Green, G (s)		20.6						59.4	59.4			59.4
Effective Green, g (s)		20.6						59.4	59.4			59.4
Actuated g/C Ratio		0.23						0.66	0.66			0.66
Clearance Time (s)		5.0						5.0	5.0			5.0
Vehicle Extension (s)		2.5						1.0	1.0			1.0
Lane Grp Cap (vph)		344						277	1836			402
v/s Ratio Prot									c0.24			
v/s Ratio Perm		0.06						0.10				0.17
v/c Ratio		0.27						0.16	0.37			0.26
Uniform Delay, d1		28.5						5.8	6.9			6.3
Progression Factor		1.00						1.96	1.90			1.00
Incremental Delay, d2		0.3						1.1	0.5			1.6
Delay (s)		28.8						12.4	13.6			7.9
Level of Service		C						B	B			A
Approach Delay (s)		28.8			0.0				13.5			
Approach LOS		C			A				B			

Intersection Summary			
HCM 2000 Control Delay	11.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.34		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	59.1%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	547	59
Future Volume (vph)	547	59
Ideal Flow (vphpl)	1700	1700
Lane Width	11	11
Total Lost time (s)	5.0	
Lane Util. Factor	0.95	
Frpb, ped/bikes	0.99	
Flpb, ped/bikes	1.00	
Frt	0.99	
Flt Protected	1.00	
Satd. Flow (prot)	2975	
Flt Permitted	1.00	
Satd. Flow (perm)	2975	
Peak-hour factor, PHF	0.97	0.97
Adj. Flow (vph)	564	61
RTOR Reduction (vph)	8	0
Lane Group Flow (vph)	617	0
Confl. Peds. (#/hr)		61
Confl. Bikes (#/hr)		5
Bus Blockages (#/hr)	0	5
Parking (#/hr)		5
Turn Type	NA	
Protected Phases	6	
Permitted Phases		
Actuated Green, G (s)	59.4	
Effective Green, g (s)	59.4	
Actuated g/C Ratio	0.66	
Clearance Time (s)	5.0	
Vehicle Extension (s)	1.0	
Lane Grp Cap (vph)	1963	
v/s Ratio Prot	0.21	
v/s Ratio Perm		
v/c Ratio	0.31	
Uniform Delay, d1	6.6	
Progression Factor	1.00	
Incremental Delay, d2	0.4	
Delay (s)	7.0	
Level of Service	A	
Approach Delay (s)	7.1	
Approach LOS	A	

Intersection Summary

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	0	37	18	0	48	0	436	0	0	439	0
Future Vol, veh/h	0	0	37	18	0	48	0	436	0	0	439	0
Conflicting Peds, #/hr	117	0	228	228	0	117	132	0	7	7	0	132
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	0	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	39	19	0	50	0	454	0	0	457	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1367	1367	817	1367	1367	814	685	0	0	682	0	0
Stage 1	685	685	-	682	682	-	-	-	-	-	-	-
Stage 2	682	682	-	685	685	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	124	147	376	124	147	378	908	-	-	911	-	-
Stage 1	438	448	-	440	450	-	-	-	-	-	-	-
Stage 2	440	450	-	438	448	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	73	96	271	77	96	273	808	-	-	811	-	-
Mov Cap-2 Maneuver	73	96	-	77	96	-	-	-	-	-	-	-
Stage 1	355	363	-	356	365	-	-	-	-	-	-	-
Stage 2	320	365	-	334	363	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	20.5	33.4	0	0
HCM LOS	C	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	808	-	-	271	77	273	811	-	-
HCM Lane V/C Ratio	-	-	-	0.142	0.244	0.183	-	-	-
HCM Control Delay (s)	0	-	-	20.5	66.2	21.1	0	-	-
HCM Lane LOS	A	-	-	C	F	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.5	0.9	0.7	0	-	-

Intersection	
Int Delay, s/veh	0.9

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	576	11	0	689	42	0	0	43	0	0	24
Future Vol, veh/h	0	576	11	0	689	42	0	0	43	0	0	24
Conflicting Peds, #/hr	4	0	2	0	0	4	304	0	34	64	0	304
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	600	11	0	718	44	0	0	45	0	0	25

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1065	0	0	915	0	0	1501	1975	614	1648	1959	689
Stage 1	-	-	-	-	-	-	910	910	-	1044	1044	-
Stage 2	-	-	-	-	-	-	591	1065	-	604	915	-
Critical Hdwy	5.34	-	-	4.14	-	-	6.99	6.54	6.94	6.99	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.74	5.54	-	6.54	5.54	-
Follow-up Hdwy	3.12	-	-	2.22	-	-	3.67	4.02	3.32	3.67	4.02	3.92
Pot Cap-1 Maneuver	364	-	-	741	-	-	104	61	435	83	63	333
Stage 1	-	-	-	-	-	-	288	352	-	190	304	-
Stage 2	-	-	-	-	-	-	432	297	-	438	350	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	363	-	-	739	-	-	70	34	324	53	35	248
Mov Cap-2 Maneuver	-	-	-	-	-	-	70	34	-	53	35	-
Stage 1	-	-	-	-	-	-	215	263	-	142	227	-
Stage 2	-	-	-	-	-	-	387	222	-	376	261	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	17.9	21.1
HCM LOS			C	C

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	324	363	-	-	739	-	-	248
HCM Lane V/C Ratio	0.138	-	-	-	-	-	-	0.101
HCM Control Delay (s)	17.9	0	-	-	0	-	-	21.1
HCM Lane LOS	C	A	-	-	A	-	-	C
HCM 95th %tile Q(veh)	0.5	0	-	-	0	-	-	0.3

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	17	30	8	0	0	0	0	13	10	0	0	0
Future Vol, veh/h	17	30	8	0	0	0	0	13	10	0	0	0
Conflicting Peds, #/hr	4	0	9	9	0	4	103	0	68	68	0	103
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	36	10	0	0	0	0	16	12	0	0	0

Major/Minor	Major1			Minor1		
Conflicting Flow All	0	0	0	185	185	144
Stage 1	-	-	-	185	185	-
Stage 2	-	-	-	0	0	-
Critical Hdwy	-	-	-	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	776	709	903
Stage 1	-	-	-	817	747	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	704	0	825
Mov Cap-2 Maneuver	-	-	-	704	0	-
Stage 1	-	-	-	747	0	-
Stage 2	-	-	-	-	0	-

Approach	EB	NB
HCM Control Delay, s		9.5
HCM LOS		A

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR
Capacity (veh/h)	825	-	-	-
HCM Lane V/C Ratio	0.034	-	-	-
HCM Control Delay (s)	9.5	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

Intersection	
Int Delay, s/veh	1.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	12	187	0	0	0	0	0	18	15	0	0	0
Future Vol, veh/h	12	187	0	0	0	0	0	18	15	0	0	0
Conflicting Peds, #/hr	14	0	19	19	0	14	113	0	99	99	0	113
Sign Control	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	1080	434	688	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	205	0	0	0	0	0	20	16	0	0	0

Major/Minor	Major1			Minor1		
Conflicting Flow All	0	0	0	345	345	215
Stage 1	-	-	-	345	345	-
Stage 2	-	-	-	0	0	-
Critical Hdwy	-	-	-	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	3.52	4.02	3.32
Pot Cap-1 Maneuver	-	-	-	585	577	790
Stage 1	-	-	-	644	635	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	522	0	716
Mov Cap-2 Maneuver	-	-	-	522	0	-
Stage 1	-	-	-	583	0	-
Stage 2	-	-	-	-	0	-

Approach	EB	NB
HCM Control Delay, s		10.3
HCM LOS		B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR
Capacity (veh/h)	716	-	-	-
HCM Lane V/C Ratio	0.051	-	-	-
HCM Control Delay (s)	10.3	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.2	-	-	-

HCM Signalized Intersection Capacity Analysis
101: Collins Avenue & SR-A1A

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	25	300	251	88	11	211	78	73	80	10	35	121
Future Volume (vph)	25	300	251	88	11	211	78	73	80	10	35	121
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		6.3	6.3		6.3	6.3			7.2			7.2
Lane Util. Factor		1.00	0.95		1.00	0.95			0.95			1.00
Frpb, ped/bikes		1.00	0.97		1.00	0.91			1.00			1.00
Flpb, ped/bikes		0.99	1.00		0.88	1.00			0.94			0.99
Frt		1.00	0.96		1.00	0.96			0.99			1.00
Flt Protected		0.95	1.00		0.95	1.00			0.98			0.99
Satd. Flow (prot)		1560	2967		1396	2752			2877			1639
Flt Permitted		0.27	1.00		0.52	1.00			0.75			0.89
Satd. Flow (perm)		438	2967		763	2752			2204			1483
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	29	349	292	102	13	245	91	85	93	12	41	141
RTOR Reduction (vph)	0	0	25	0	0	29	0	0	4	0	0	0
Lane Group Flow (vph)	0	378	369	0	13	307	0	0	186	0	0	182
Confl. Peds. (#/hr)		90		55	55		90	293		56	56	
Confl. Bikes (#/hr)				7						5		
Turn Type	custom	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA
Protected Phases		5	2			6			4			8
Permitted Phases	5	2			6			4			8	
Actuated Green, G (s)		49.7	49.7		17.5	17.5			66.8			66.8
Effective Green, g (s)		49.7	49.7		17.5	17.5			66.8			66.8
Actuated g/C Ratio		0.38	0.38		0.13	0.13			0.51			0.51
Clearance Time (s)		6.3	6.3		6.3	6.3			7.2			7.2
Vehicle Extension (s)		2.0	1.0		1.0	1.0			2.5			5.0
Lane Grp Cap (vph)		390	1134		102	370			1132			762
v/s Ratio Prot		c0.19	0.12			0.11						
v/s Ratio Perm		c0.18			0.02				0.08			0.12
v/c Ratio		0.97	0.33		0.13	0.83			0.16			0.24
Uniform Delay, d1		33.7	28.3		49.5	54.8			16.8			17.5
Progression Factor		0.72	0.64		1.00	1.00			1.00			1.05
Incremental Delay, d2		35.9	0.7		2.6	18.9			0.0			0.3
Delay (s)		60.3	18.8		52.1	73.7			16.8			18.6
Level of Service		E	B		D	E			B			B
Approach Delay (s)			39.1			72.9			16.8			39.8
Approach LOS			D			E			B			D

Intersection Summary			
HCM 2000 Control Delay	43.0	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	19.8
Intersection Capacity Utilization	105.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	503
Future Volume (vph)	503
Ideal Flow (vphpl)	1700
Total Lost time (s)	7.2
Lane Util. Factor	1.00
Frpb, ped/bikes	0.82
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1162
Flt Permitted	1.00
Satd. Flow (perm)	1162
Peak-hour factor, PHF	0.86
Adj. Flow (vph)	585
RTOR Reduction (vph)	47
Lane Group Flow (vph)	538
Confl. Peds. (#/hr)	293
Confl. Bikes (#/hr)	
Turn Type	Perm
Protected Phases	
Permitted Phases	8
Actuated Green, G (s)	66.8
Effective Green, g (s)	66.8
Actuated g/C Ratio	0.51
Clearance Time (s)	7.2
Vehicle Extension (s)	5.0
Lane Grp Cap (vph)	597
v/s Ratio Prot	
v/s Ratio Perm	c0.46
v/c Ratio	0.90
Uniform Delay, d1	28.6
Progression Factor	1.07
Incremental Delay, d2	15.8
Delay (s)	46.4
Level of Service	D
Approach Delay (s)	
Approach LOS	

Intersection Summary

HCM Signalized Intersection Capacity Analysis
101: Collins Avenue & SR-A1A

Movement	EBU	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	25	300	251	88	11	211	78	73	80	10	35	121
Future Volume (vph)	25	300	251	88	11	211	78	73	80	10	35	121
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		6.3	6.3		6.3	6.3			7.2			7.2
Lane Util. Factor		1.00	0.95		1.00	0.95			0.95			1.00
Frpb, ped/bikes		1.00	0.98		1.00	0.93			1.00			1.00
Flpb, ped/bikes		0.97	1.00		0.92	1.00			0.93			0.99
Frt		1.00	0.96		1.00	0.96			0.99			1.00
Flt Protected		0.95	1.00		0.95	1.00			0.98			0.99
Satd. Flow (prot)		1541	2975		1461	2834			2857			1638
Flt Permitted		0.46	1.00		0.45	1.00			0.75			0.89
Satd. Flow (perm)		746	2975		695	2834			2181			1479
Peak-hour factor, PHF	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Adj. Flow (vph)	29	349	292	102	13	245	91	85	93	12	41	141
RTOR Reduction (vph)	0	0	25	0	0	28	0	0	4	0	0	0
Lane Group Flow (vph)	0	378	369	0	13	308	0	0	186	0	0	182
Confl. Peds. (#/hr)		90		55	55		90	293		56	56	
Confl. Bikes (#/hr)				7						5		
Turn Type	pm+pt	pm+pt	NA		Perm	NA		Perm	NA		Perm	NA
Protected Phases	5	5	2			6			4			8
Permitted Phases	2	2			6			4			8	
Actuated Green, G (s)		56.6	56.6		25.1	25.1			59.9			59.9
Effective Green, g (s)		56.6	56.6		25.1	25.1			59.9			59.9
Actuated g/C Ratio		0.44	0.44		0.19	0.19			0.46			0.46
Clearance Time (s)		6.3	6.3		6.3	6.3			7.2			7.2
Vehicle Extension (s)		2.0	1.0		1.0	1.0			2.5			5.0
Lane Grp Cap (vph)		478	1295		134	547			1004			681
v/s Ratio Prot		c0.15	0.12			0.11						
v/s Ratio Perm		c0.19			0.02				0.09			0.12
v/c Ratio		0.79	0.28		0.10	0.56			0.18			0.27
Uniform Delay, d1		34.1	23.7		43.1	47.5			20.7			21.6
Progression Factor		0.92	0.78		1.00	1.00			1.00			0.98
Incremental Delay, d2		7.8	0.5		1.4	4.1			0.1			0.4
Delay (s)		39.2	19.1		44.6	51.6			20.7			21.5
Level of Service		D	B		D	D			C			C
Approach Delay (s)			28.9			51.4			20.7			46.9
Approach LOS			C			D			C			D

Intersection Summary			
HCM 2000 Control Delay	38.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.91		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	19.8
Intersection Capacity Utilization	105.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	503
Future Volume (vph)	503
Ideal Flow (vphpl)	1700
Total Lost time (s)	7.2
Lane Util. Factor	1.00
Frpb, ped/bikes	0.80
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1135
Flt Permitted	1.00
Satd. Flow (perm)	1135
Peak-hour factor, PHF	0.86
Adj. Flow (vph)	585
RTOR Reduction (vph)	95
Lane Group Flow (vph)	490
Confl. Peds. (#/hr)	293
Confl. Bikes (#/hr)	
Turn Type	Perm
Protected Phases	
Permitted Phases	8
Actuated Green, G (s)	59.9
Effective Green, g (s)	59.9
Actuated g/C Ratio	0.46
Clearance Time (s)	7.2
Vehicle Extension (s)	5.0
Lane Grp Cap (vph)	522
v/s Ratio Prot	
v/s Ratio Perm	c0.43
v/c Ratio	0.94
Uniform Delay, d1	33.3
Progression Factor	0.95
Incremental Delay, d2	23.1
Delay (s)	54.8
Level of Service	D
Approach Delay (s)	
Approach LOS	

Intersection Summary

HCM Signalized Intersection Capacity Analysis
102: Collins Avenue & 7 Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	149	67	202	0	0	0	0	457	54	29	421	0
Future Volume (vph)	149	67	202	0	0	0	0	457	54	29	421	0
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Total Lost time (s)		6.0						6.0		6.0	6.0	
Lane Util. Factor		0.95						1.00		1.00	1.00	
Frpb, ped/bikes		0.79						0.97		1.00	1.00	
Flpb, ped/bikes		1.00						1.00		0.88	1.00	
Frt		0.93						0.99		1.00	1.00	
Flt Protected		0.98						1.00		0.95	1.00	
Satd. Flow (prot)		2271						1589		1397	1667	
Flt Permitted		0.98						1.00		0.40	1.00	
Satd. Flow (perm)		2271						1589		588	1667	
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	160	72	217	0	0	0	0	491	58	31	453	0
RTOR Reduction (vph)	0	152	0	0	0	0	0	5	0	0	0	0
Lane Group Flow (vph)	0	297	0	0	0	0	0	544	0	31	453	0
Confl. Peds. (#/hr)			219	219		235	70		248	248		70
Confl. Bikes (#/hr)			10			8			6			8
Turn Type	Perm	NA						NA		Perm	NA	
Protected Phases		8						6			2	
Permitted Phases	8									2		
Actuated Green, G (s)		13.3						39.7		39.7	39.7	
Effective Green, g (s)		13.3						39.7		39.7	39.7	
Actuated g/C Ratio		0.20						0.61		0.61	0.61	
Clearance Time (s)		6.0						6.0		6.0	6.0	
Vehicle Extension (s)		2.5						2.5		2.5	2.5	
Lane Grp Cap (vph)		464						970		359	1018	
v/s Ratio Prot								c0.34			0.27	
v/s Ratio Perm		0.13								0.05		
v/c Ratio		0.64						0.56		0.09	0.44	
Uniform Delay, d1		23.7						7.5		5.2	6.8	
Progression Factor		1.00						1.28		1.00	1.00	
Incremental Delay, d2		2.7						1.8		0.5	1.4	
Delay (s)		26.3						11.3		5.7	8.2	
Level of Service		C						B		A	A	
Approach Delay (s)		26.3			0.0			11.3			8.0	
Approach LOS		C			A			B			A	

Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.58		
Actuated Cycle Length (s)	65.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	62.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

HCM Signalized Intersection Capacity Analysis
103: Washington Avenue & SR-A1A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBU	SBL	SBT
Lane Configurations												
Traffic Volume (vph)	451	557	56	34	574	115	103	282	16	18	41	163
Future Volume (vph)	451	557	56	34	574	115	103	282	16	18	41	163
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700	1700
Lane Width	11	11	11	11	11	11	11	11	11	12	11	11
Total Lost time (s)	6.3	6.0		5.9	6.0			6.4			6.4	6.4
Lane Util. Factor	0.97	0.95		1.00	0.91			0.95			1.00	1.00
Frpb, ped/bikes	1.00	0.99		1.00	0.99			1.00			1.00	1.00
Flpb, ped/bikes	1.00	1.00		0.99	1.00			0.96			0.95	1.00
Frt	1.00	0.99		1.00	0.97			0.99			1.00	1.00
Flt Protected	0.95	1.00		0.95	1.00			0.99			0.95	1.00
Satd. Flow (prot)	2969	2989		1513	4239			2681			1457	1611
Flt Permitted	0.95	1.00		0.38	1.00			0.76			0.38	1.00
Satd. Flow (perm)	2969	2989		612	4239			2057			575	1611
Peak-hour factor, PHF	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.95	0.87	0.87
Adj. Flow (vph)	518	640	64	39	660	132	118	324	18	19	47	187
RTOR Reduction (vph)	0	5	0	0	26	0	0	2	0	0	0	0
Lane Group Flow (vph)	518	699	0	39	766	0	0	458	0	0	66	187
Confl. Peds. (#/hr)	42		39	39		42	200		88		88	
Confl. Bikes (#/hr)			11			6			10			
Parking (#/hr)								5	5			
Turn Type	Prot	NA		pm+pt	NA		Perm	NA		Perm	Perm	NA
Protected Phases	1	6		5	2			4				8
Permitted Phases				2			4			8	8	
Actuated Green, G (s)	35.7	70.0		45.7	39.8			35.8			35.8	35.8
Effective Green, g (s)	35.7	70.0		45.7	39.8			35.8			35.8	35.8
Actuated g/C Ratio	0.27	0.54		0.35	0.31			0.28			0.28	0.28
Clearance Time (s)	6.3	6.0		5.9	6.0			6.4			6.4	6.4
Vehicle Extension (s)	2.0	1.0		2.0	1.0			2.5			2.5	2.5
Lane Grp Cap (vph)	815	1609		256	1297			566			158	443
v/s Ratio Prot	c0.17	0.23		0.01	c0.18							0.12
v/s Ratio Perm				0.05				c0.22			0.11	
v/c Ratio	0.64	0.43		0.15	0.59			0.81			0.42	0.42
Uniform Delay, d1	41.4	18.1		28.1	38.2			43.9			38.6	38.6
Progression Factor	1.00	1.00		1.34	1.36			1.00			1.00	1.00
Incremental Delay, d2	1.2	0.9		0.0	0.9			8.1			1.3	0.5
Delay (s)	42.6	18.9		37.6	53.1			52.0			39.9	39.1
Level of Service	D	B		D	D			D			D	D
Approach Delay (s)		29.0			52.3			52.0				38.1
Approach LOS		C			D			D				D

Intersection Summary			
HCM 2000 Control Delay	40.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	130.0	Sum of lost time (s)	18.7
Intersection Capacity Utilization	114.5%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Movement	SBR
Lane Configurations	
Traffic Volume (vph)	216
Future Volume (vph)	216
Ideal Flow (vphpl)	1700
Lane Width	11
Total Lost time (s)	6.4
Lane Util. Factor	1.00
Frpb, ped/bikes	0.75
Flpb, ped/bikes	1.00
Frt	0.85
Flt Protected	1.00
Satd. Flow (prot)	1022
Flt Permitted	1.00
Satd. Flow (perm)	1022
Peak-hour factor, PHF	0.87
Adj. Flow (vph)	248
RTOR Reduction (vph)	180
Lane Group Flow (vph)	68
Confl. Peds. (#/hr)	200
Confl. Bikes (#/hr)	21
Parking (#/hr)	
Turn Type	Perm
Protected Phases	
Permitted Phases	8
Actuated Green, G (s)	35.8
Effective Green, g (s)	35.8
Actuated g/C Ratio	0.28
Clearance Time (s)	6.4
Vehicle Extension (s)	2.5
Lane Grp Cap (vph)	281
v/s Ratio Prot	
v/s Ratio Perm	0.07
v/c Ratio	0.24
Uniform Delay, d1	36.6
Progression Factor	1.00
Incremental Delay, d2	0.3
Delay (s)	36.9
Level of Service	D
Approach Delay (s)	
Approach LOS	

Intersection Summary

HCM Signalized Intersection Capacity Analysis
104: Washington Avenue & 6 Street

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	50	44	67	600	399	161
Future Volume (vph)	50	44	67	600	399	161
Ideal Flow (vphpl)	1700	1700	1200	1700	1700	1700
Lane Width	12	12	11	11	11	11
Total Lost time (s)	5.0			5.0	5.0	
Lane Util. Factor	1.00			0.95	0.95	
Frpb, ped/bikes	0.97			1.00	0.99	
Flpb, ped/bikes	1.00			1.00	1.00	
Frt	0.94			1.00	0.96	
Flt Protected	0.97			1.00	1.00	
Satd. Flow (prot)	1471			2824	2859	
Flt Permitted	0.97			0.82	1.00	
Satd. Flow (perm)	1471			2319	2859	
Peak-hour factor, PHF	0.88	0.88	0.88	0.88	0.88	0.88
Adj. Flow (vph)	57	50	76	682	453	183
RTOR Reduction (vph)	37	0	0	0	43	0
Lane Group Flow (vph)	70	0	0	758	593	0
Confl. Peds. (#/hr)	103	54	11			11
Confl. Bikes (#/hr)		5				3
Bus Blockages (#/hr)	0	0	0	5	5	0
Parking (#/hr)		5		5		
Turn Type	Prot		Perm	NA	NA	
Protected Phases	8			6	2	
Permitted Phases			6			
Actuated Green, G (s)	22.2			57.8	57.8	
Effective Green, g (s)	22.2			57.8	57.8	
Actuated g/C Ratio	0.25			0.64	0.64	
Clearance Time (s)	5.0			5.0	5.0	
Vehicle Extension (s)	2.5			1.0	1.0	
Lane Grp Cap (vph)	362			1489	1836	
v/s Ratio Prot	c0.05				0.21	
v/s Ratio Perm				c0.33		
v/c Ratio	0.19			0.51	0.32	
Uniform Delay, d1	26.8			8.6	7.3	
Progression Factor	1.00			1.00	1.95	
Incremental Delay, d2	0.2			1.2	0.4	
Delay (s)	27.0			9.8	14.6	
Level of Service	C			A	B	
Approach Delay (s)	27.0			9.8	14.6	
Approach LOS	C			A	B	

Intersection Summary			
HCM 2000 Control Delay	13.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.42		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
105: Washington Avenue & 7 Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL
Lane Configurations												
Traffic Volume (vph)	34	39	40	0	0	0	6	36	586	58	10	91
Future Volume (vph)	34	39	40	0	0	0	6	36	586	58	10	91
Ideal Flow (vphpl)	1700	1700	1700	1700	1700	1700	1700	1200	1700	1700	1700	1700
Lane Width	12	12	12	12	12	12	12	10	11	12	12	12
Total Lost time (s)		5.0						5.0	5.0			5.0
Lane Util. Factor		1.00						1.00	0.95			1.00
Frpb, ped/bikes		0.97						1.00	0.99			1.00
Flpb, ped/bikes		0.99						0.96	1.00			0.97
Frt		0.95						1.00	0.99			1.00
Flt Protected		0.99						0.95	1.00			0.95
Satd. Flow (prot)		1504						997	2782			1542
Flt Permitted		0.99						0.38	1.00			0.38
Satd. Flow (perm)		1504						399	2782			622
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.95	0.97
Adj. Flow (vph)	35	40	41	0	0	0	6	37	604	60	11	94
RTOR Reduction (vph)	0	23	0	0	0	0	0	0	7	0	0	0
Lane Group Flow (vph)	0	93	0	0	0	0	0	43	657	0	0	105
Confl. Peds. (#/hr)	32		56	56		32		61		59		59
Confl. Bikes (#/hr)			4			11				10		
Bus Blockages (#/hr)	0	0	0	0	0	0	0	0	5	0	0	0
Parking (#/hr)									5			
Turn Type	custom	NA						Perm	NA			Perm
Protected Phases		8							2			
Permitted Phases	4							2				6
Actuated Green, G (s)		20.6						59.4	59.4			59.4
Effective Green, g (s)		20.6						59.4	59.4			59.4
Actuated g/C Ratio		0.23						0.66	0.66			0.66
Clearance Time (s)		5.0						5.0	5.0			5.0
Vehicle Extension (s)		2.5						1.0	1.0			1.0
Lane Grp Cap (vph)		344						263	1836			410
v/s Ratio Prot									c0.24			
v/s Ratio Perm		0.06						0.11				0.17
v/c Ratio		0.27						0.16	0.36			0.26
Uniform Delay, d1		28.5						5.8	6.8			6.3
Progression Factor		1.00						1.97	1.93			1.00
Incremental Delay, d2		0.3						1.2	0.5			1.5
Delay (s)		28.8						12.7	13.6			7.8
Level of Service		C						B	B			A
Approach Delay (s)		28.8			0.0				13.6			
Approach LOS		C			A				B			

Intersection Summary			
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.33		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.0
Intersection Capacity Utilization	58.6%	ICU Level of Service	B
Analysis Period (min)	15		
c Critical Lane Group			

Movement	SBT	SBR
Lane Configurations		
Traffic Volume (vph)	592	59
Future Volume (vph)	592	59
Ideal Flow (vphpl)	1700	1700
Lane Width	11	11
Total Lost time (s)	5.0	
Lane Util. Factor	0.95	
Frpb, ped/bikes	0.99	
Flpb, ped/bikes	1.00	
Frt	0.99	
Flt Protected	1.00	
Satd. Flow (prot)	2981	
Flt Permitted	1.00	
Satd. Flow (perm)	2981	
Peak-hour factor, PHF	0.97	0.97
Adj. Flow (vph)	610	61
RTOR Reduction (vph)	7	0
Lane Group Flow (vph)	664	0
Confl. Peds. (#/hr)		61
Confl. Bikes (#/hr)		5
Bus Blockages (#/hr)	0	5
Parking (#/hr)		5
Turn Type	NA	
Protected Phases	6	
Permitted Phases		
Actuated Green, G (s)	59.4	
Effective Green, g (s)	59.4	
Actuated g/C Ratio	0.66	
Clearance Time (s)	5.0	
Vehicle Extension (s)	1.0	
Lane Grp Cap (vph)	1967	
v/s Ratio Prot	0.22	
v/s Ratio Perm		
v/c Ratio	0.34	
Uniform Delay, d1	6.7	
Progression Factor	1.00	
Incremental Delay, d2	0.5	
Delay (s)	7.2	
Level of Service	A	
Approach Delay (s)	7.2	
Approach LOS	A	

Intersection Summary

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	0	37	18	0	48	0	436	0	0	623	0
Future Vol, veh/h	0	0	37	18	0	48	0	436	0	0	623	0
Conflicting Peds, #/hr	117	0	228	228	0	117	132	0	7	7	0	132
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	0	0	-	0	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	39	19	0	50	0	454	0	0	649	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1559	1559	1009	1559	1559	814	877	0	0	682	0	0
Stage 1	877	877	-	682	682	-	-	-	-	-	-	-
Stage 2	682	682	-	877	877	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	91	112	292	91	112	378	770	-	-	911	-	-
Stage 1	343	366	-	440	450	-	-	-	-	-	-	-
Stage 2	440	450	-	343	366	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	54	73	211	54	73	273	685	-	-	811	-	-
Mov Cap-2 Maneuver	54	73	-	54	73	-	-	-	-	-	-	-
Stage 1	278	296	-	356	365	-	-	-	-	-	-	-
Stage 2	320	365	-	250	296	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	25.8	43.6	0	0
HCM LOS	D	E		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (veh/h)	685	-	-	211	54	273	811	-	-
HCM Lane V/C Ratio	-	-	-	0.183	0.347	0.183	-	-	-
HCM Control Delay (s)	0	-	-	25.8	103.6	21.1	0	-	-
HCM Lane LOS	A	-	-	D	F	C	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.7	1.2	0.7	0	-	-

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	0	583	11	0	932	108	0	0	43	0	0	24
Future Vol, veh/h	0	583	11	0	932	108	0	0	43	0	0	24
Conflicting Peds, #/hr	4	0	2	0	0	4	304	0	34	64	0	304
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	0	-	-	0
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	607	11	0	971	113	0	0	45	0	0	25

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	1387	0	0	923	0	0	1609	2304	617	1939	2254	850
Stage 1	-	-	-	-	-	-	917	917	-	1331	1331	-
Stage 2	-	-	-	-	-	-	692	1387	-	608	923	-
Critical Hdwy	5.34	-	-	4.14	-	-	6.99	6.54	6.94	6.99	6.54	7.14
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	7.34	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.74	5.54	-	6.54	5.54	-
Follow-up Hdwy	3.12	-	-	2.22	-	-	3.67	4.02	3.32	3.67	4.02	3.92
Pot Cap-1 Maneuver	253	-	-	736	-	-	88	38	433	52	41	261
Stage 1	-	-	-	-	-	-	285	349	-	119	222	-
Stage 2	-	-	-	-	-	-	374	208	-	436	347	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	252	-	-	734	-	-	57	21	322	33	23	194
Mov Cap-2 Maneuver	-	-	-	-	-	-	57	21	-	33	23	-
Stage 1	-	-	-	-	-	-	213	261	-	89	166	-
Stage 2	-	-	-	-	-	-	325	155	-	374	259	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	0	18	26.3
HCM LOS			C	D

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	322	252	-	-	734	-	-	194
HCM Lane V/C Ratio	0.139	-	-	-	-	-	-	0.129
HCM Control Delay (s)	18	0	-	-	0	-	-	26.3
HCM Lane LOS	C	A	-	-	A	-	-	D
HCM 95th %tile Q(veh)	0.5	0	-	-	0	-	-	0.4

Intersection	
Int Delay, s/veh	2.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	186	30	8	0	0	0	0	79	10	0	0	0
Future Vol, veh/h	186	30	8	0	0	0	0	79	10	0	0	0
Conflicting Peds, #/hr	4	0	9	9	0	4	103	0	68	68	0	103
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	83	83	83	83	83	83	83	83	83	83	83	83
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	224	36	10	0	0	0	0	95	12	0	0	0

Major/Minor	Major1			Minor1		
Conflicting Flow All	0	0	0	592	592	144
Stage 1	-	-	-	592	592	-
Stage 2	-	-	-	0	0	-
Critical Hdwy	-	-	-	7.12	6.52	6.22
Critical Hdwy Stg 1	-	-	-	6.12	5.52	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	3.518	4.018	3.318
Pot Cap-1 Maneuver	-	-	-	418	419	903
Stage 1	-	-	-	493	494	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	379	0	825
Mov Cap-2 Maneuver	-	-	-	379	0	-
Stage 1	-	-	-	451	0	-
Stage 2	-	-	-	-	0	-

Approach	EB	NB
HCM Control Delay, s		10
HCM LOS		B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR
Capacity (veh/h)	825	-	-	-
HCM Lane V/C Ratio	0.13	-	-	-
HCM Control Delay (s)	10	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.4	-	-	-

Intersection	
Int Delay, s/veh	7.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Traffic Vol, veh/h	12	187	0	0	0	0	0	18	243	0	0	0
Future Vol, veh/h	12	187	0	0	0	0	0	18	243	0	0	0
Conflicting Peds, #/hr	14	0	19	19	0	14	113	0	99	99	0	113
Sign Control	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	1080	434	688	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	13	205	0	0	0	0	0	20	267	0	0	0

Major/Minor	Major1			Minor1		
Conflicting Flow All	0	0	0	345	345	215
Stage 1	-	-	-	345	345	-
Stage 2	-	-	-	0	0	-
Critical Hdwy	-	-	-	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	-	3.52	4.02	3.32
Pot Cap-1 Maneuver	-	-	-	585	577	790
Stage 1	-	-	-	644	635	-
Stage 2	-	-	-	-	-	-
Platoon blocked, %		-	-			
Mov Cap-1 Maneuver	-	-	-	522	0	716
Mov Cap-2 Maneuver	-	-	-	522	0	-
Stage 1	-	-	-	583	0	-
Stage 2	-	-	-	-	0	-

Approach	EB	NB
HCM Control Delay, s		13.3
HCM LOS		B

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR
Capacity (veh/h)	716	-	-	-
HCM Lane V/C Ratio	0.401	-	-	-
HCM Control Delay (s)	13.3	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	1.9	-	-	-

APPENDIX G

Queuing Analyses

Queuing Analysis based on ITE Procedures For Inbound Vehicles

q = 234 veh/hr (demand rate)

Q = 12 veh/hr (service rate)

$$p = \frac{q}{NQ} = 0.65 \text{ (N = 30 valet runners)}$$

$$Q_M = 0.65$$

Using Acceptable Probability of 10% (90% Confidence Level)

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

$$M = \left(\frac{\text{Ln}(0.10) - \text{Ln}(0.65)}{\text{Ln}(0.65)} \right) - 1$$

$$M = \left(\frac{-2.3026 - (-0.4308)}{-0.4308} \right) - 1$$

M = 4.345 – 1 = 3.345, say 4 vehicles

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Queuing Analysis based on ITE Procedures For Outbound Vehicles

q = 228 veh/hr (demand rate)

Q = 12 veh/hr (service rate)

$$p = \frac{q}{NQ} = 0.65 \text{ (N = 30 valet runners)}$$

$$Q_M = 0.6333$$

Using Acceptable Probability of 10% (90% Confidence Level)

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

$$M = \left(\frac{\text{Ln}(0.10) - \text{Ln}(0.6333)}{\text{Ln}(0.6333)} \right) - 1$$

$$M = \left(\frac{-2.3026 - (-0.4568)}{-0.4568} \right) - 1$$

M = 4.04 – 1 = 3.04, say 3 vehicles

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