DC Engineers, Inc.

Traffic Impact Study

Woodmont Country Club Hotel

Tamarac, Florida

April, 2019

Prepared for:

Palmeira Holdings, LLC

Woodmont Country Club Hotel

NW 80 Avenue

Tamarac, Florida

Traffic Impact Study

April 2019

Prepared for:
Palmeira Holdings, LLC

Prepared by:
Danielsen Consulting Engineers, Inc.
12743 NW 13th Court
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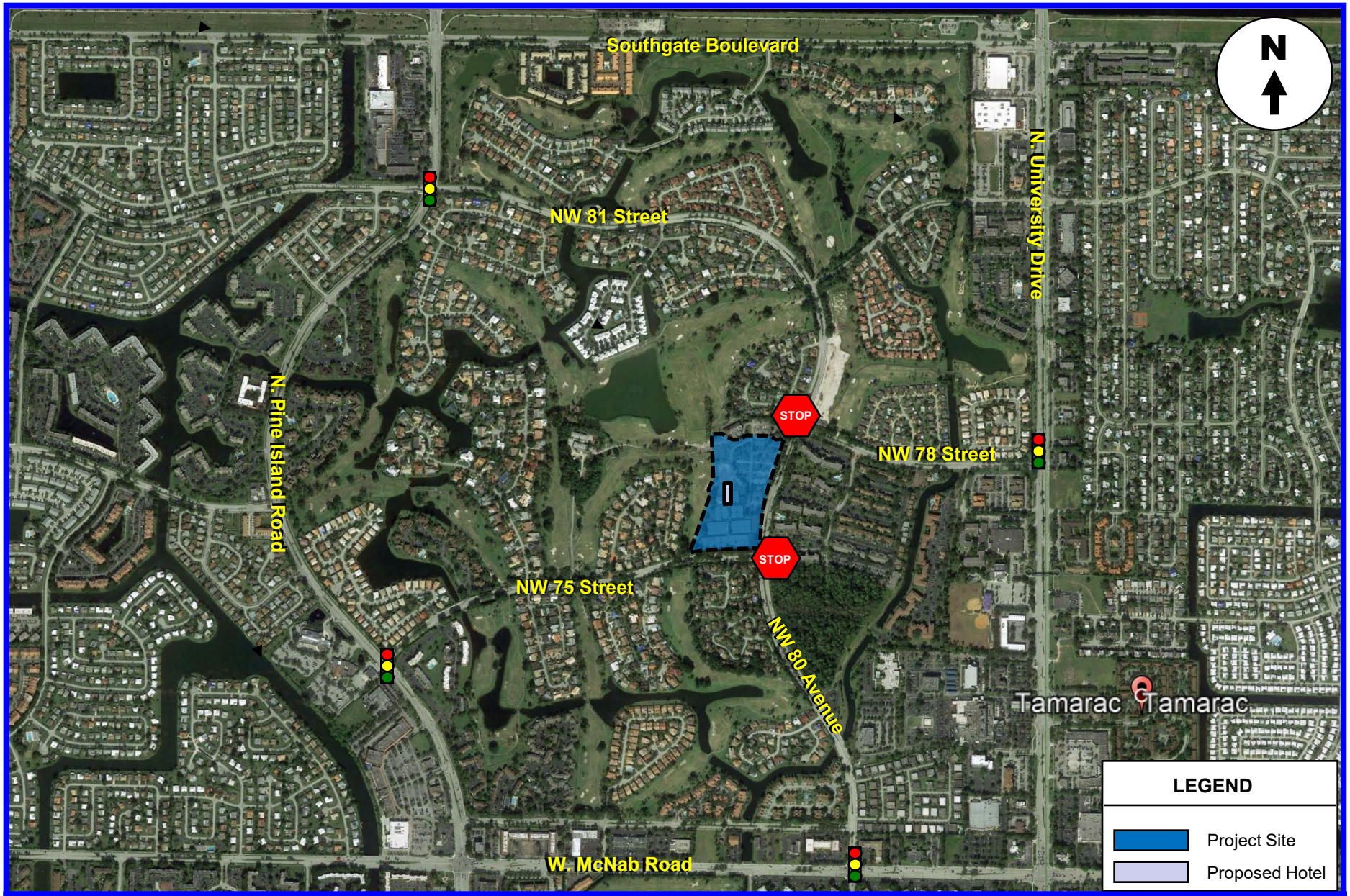
INTRODUCTION

A 127-suite hotel is proposed to be constructed along the west side of NW 80 Avenue north of NW 75 Street within municipal limits of the City of Tamarac, Florida. A new clubhouse is currently under construction immediately north of the hotel site and additional uses specific to the Woodmont Country Club including surface parking, a golf cart barn and multiple tennis courts are located in close proximity. Figure 1 on the following page shows the location of the project site as well as the transportation network adjacent to and within the immediate vicinity.

Danielsen Consulting Engineers, Inc. has been retained to complete a traffic study for submittal to the City of Tamarac assessing potential transportation-related impacts of the proposed development. This report summarizes the data collected, estimates project trip generation and distribution characteristics and assesses the impact of project trips at nearby intersections most affected by this development proposal. A traffic study methodology meeting was held with City staff and the City's traffic engineering consultant on Wednesday February 6, 2019. Methodology correspondence is included as Appendix A.

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 Analysis
7. Conclusions



DC Engineers, Inc.	**Projection Location Map**	**FIGURE 1** Woodmont Country Club Tamarac, Florida

INVENTORY

Existing Land Use and Access

The project site is located along the west side of NW 80 Avenue between NW 75 Street and NW 78 Street within municipal limits of the City of Tamarac, Florida. A new clubhouse is currently under construction immediately north of the hotel site and additional uses specific to the Woodmont Country Club including surface parking, a golf cart barn and multiple tennis courts are located in close proximity. Access is currently provided through two (2), two (2)-way driveways along NW 80 Avenue.

Proposed Land Use and Access

A 127-suite hotel is proposed to be constructed south of the new Woodmont Country Club clubhouse.

Access to the project site is proposed as follows:

- One (1), full access two (2)-way driveway along NW 80 Avenue between NW 75 Street and NW 78 Street. The driveway will have two (2) exiting lanes and two (2) lanes for entering vehicles.

For purposes of this traffic study, the project is anticipated to be built and occupied by the year 2021. A current site plan is included as Appendix B.

EXISTING CONDITIONS

This section addresses the roadway system adjacent to and surrounding the project site.

Roadway System

The transportation network within the study area includes one (1) state principal arterial (University Drive (SR 817)), two (2) county minor arterials (Pine Island Road and McNab Road), three city collectors (NW 81 Street, NW 80 Avenue, and Southgate Boulevard), and two local roadways (NW 75 Street and NW 78 Street).

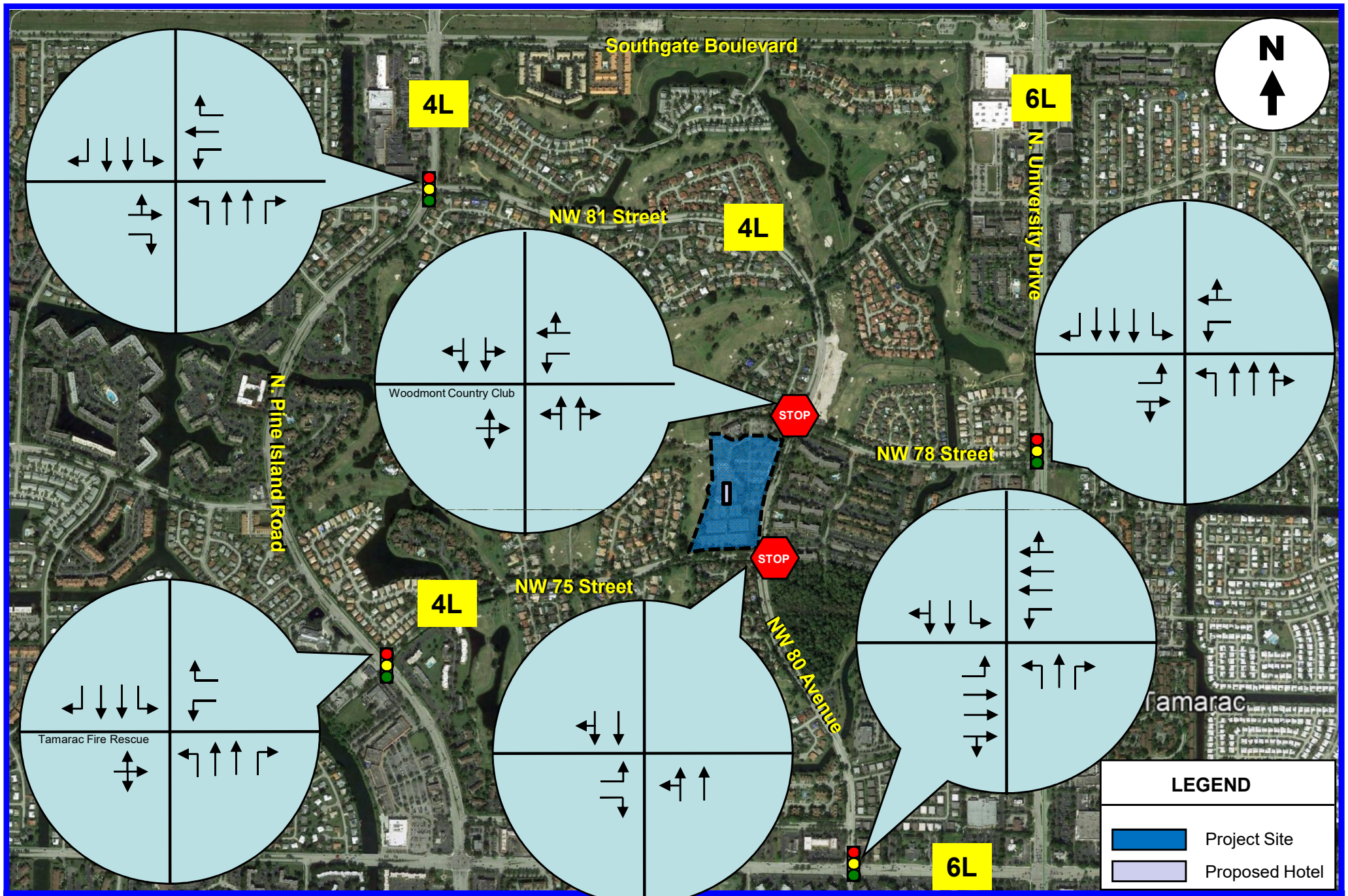
University Drive (SR 817) is a six (6)-lane north-south state principal arterial with a posted speed limit of 45 miles per hour (mph) and a current (2017) AADT of 54,500 vehicles per day (vpd). Pine Island Road is a four (4)-lane north-south county minor arterial with a posted speed limit of 45mph and a current AADT of 28,500 vpd. McNab Road is a six (6)-lane east-west county minor arterial with a posted speed limit of 45 mph and a current AADT of 37,000 vpd. NW 81 Street is a four (4)-lane east-west city collector with a posted limit of 35 mph and a current AADT of 3,500 vpd. NW 80 Avenue is a four (4)-lane north-south city collector with a posted speed limit of 35 mph and a current AADT of 7,400 vpd. Southgate Boulevard is a four (4)-lane east-west city collector with a posted speed limit of 45 mph and a current AADT of 16,200 vpd.

Study Intersections

For purposes of this report, the following intersections were selected for detailed analysis.

- N. Pine Island Road at NW 75 Street,
- N. Pine Island Road at NW 81 Street,
- NW 80 Avenue at W. McNab Road,
- NW 80 Avenue at NW 75 Street (unsignalized),
- NW 80 Avenue at project driveway (unsignalized),
- NW 80 Avenue at NW 78 Street (unsignalized), and
- University Drive (SR 817) at NW 78 Street.

Figure 2 shows approach lanes at the intersections under study and the number of through lanes on corresponding roadway segments.



DC Engineers, Inc.

Existing Geometry

FIGURE 2
Woodmont Country Club
Tamarac, Florida

Transit Service and Facilities

Four (4) traditional Broward County Transit Routes serve the project area as follows:

- **Route 2**: north and south along University Drive (SR 817),
- **Route 62**: east and west along McNab Road,
- **Route 88**: north and south along Pine Island Road, and
- **The Breeze**: north and south along University Drive (SR 817).

Bus stops are currently located along both sides of Pine Island Road, University Drive (SR 817), and McNab Road.

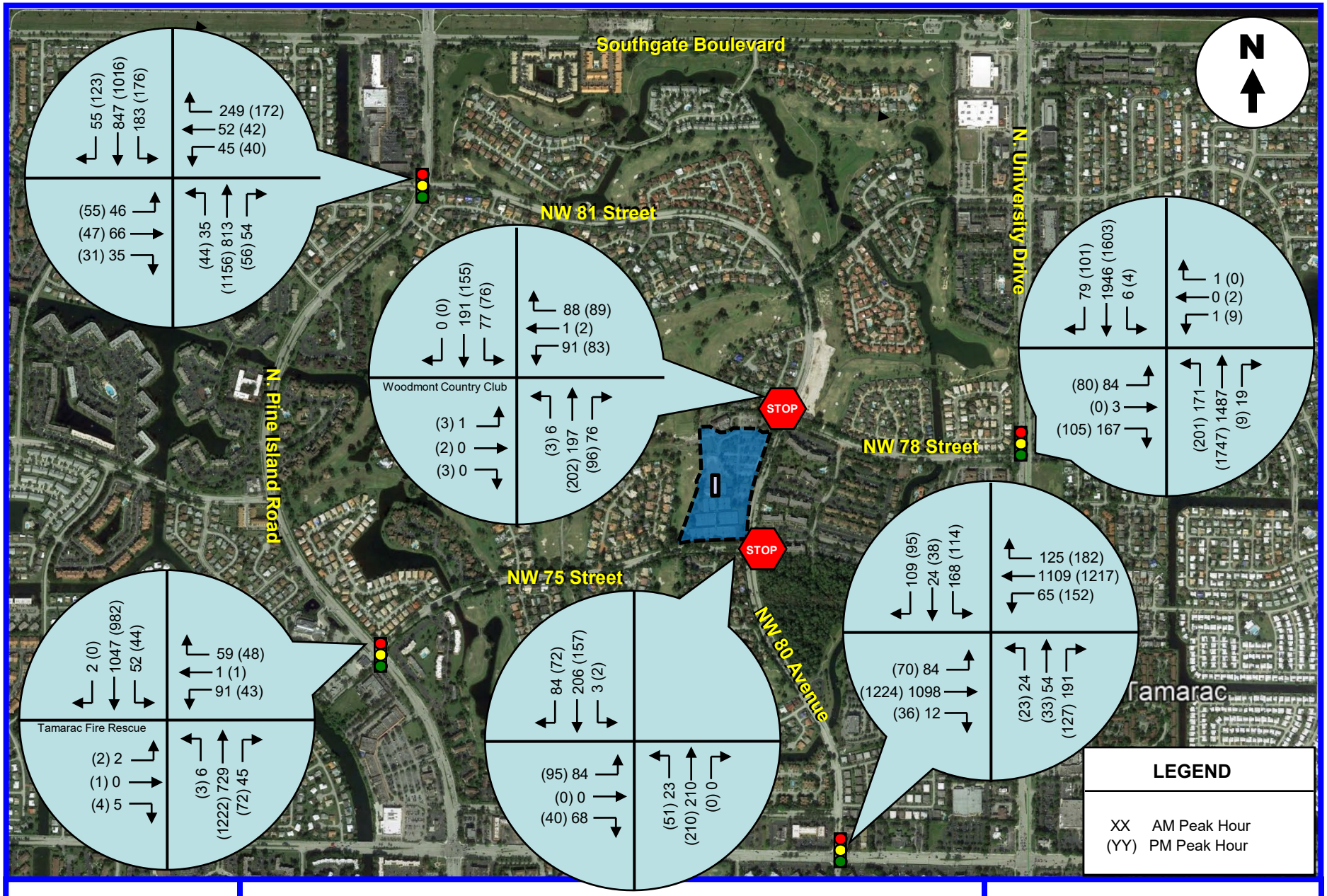
The City of Tamarac and Broward County Transit (BCT) have partnered to provide the RED and RED EXTENSION Routes. Destinations along the Tamarac routes include: the Tamarac Community Center and Library, Sands Point at Lagos De Campo Boulevard, CVS, Aldi Market, Winn-Dixie at McNab Road and University Drive, Bermuda Club, Commons Shaker Village, Sable Palm at Bailey Road, the Mainlands Community, Sunshine Plaza, Shaker Village at Commercial Boulevard, Publix at Midway Plaza, The Green Apartment Complex, Lime Bay Clubhouse, Market Place Movies, Super Walmart at Avon Lane and McNab Road, and the Veteran's Outpatient Clinic, for example. The Community Shuttle operates Monday through Friday 7:00 AM to 6:58 PM (Red Route) and Tuesday and Thursday 9:00 AM to 4:55 PM (Red Extension).

TRAFFIC COUNTS

Danielsen Consulting Engineers, Inc., in association with Traffic Survey Specialists, Inc., collected turning movement count data at the following locations:

- N. Pine Island Road at NW 75 Street,
- N. Pine Island Road at NW 81 Street,
- NW 80 Avenue at W. McNab Road,
- NW 80 Avenue at NW 75 Street (unsignalized),
- NW 80 Avenue at NW 78 Street (unsignalized), and
- University Drive (SR 817) at NW 78 Street.

Intersection turning movements were documented on Tuesday March 5, 2019 and Saturday March 9, 2019. Data was collected during both AM (7:00 to 9:00) and PM (4:00 to 6:00) peak periods on Tuesday March 5 and during the PM peak period on Saturday March 9. Existing peak hour traffic volumes are shown in Figures 3a and 3b and are included as Appendix C. Signal timing plans obtained from Broward County Traffic Engineering Division (BCTED) are also contained within Appendix C.



DC Engineers, Inc.

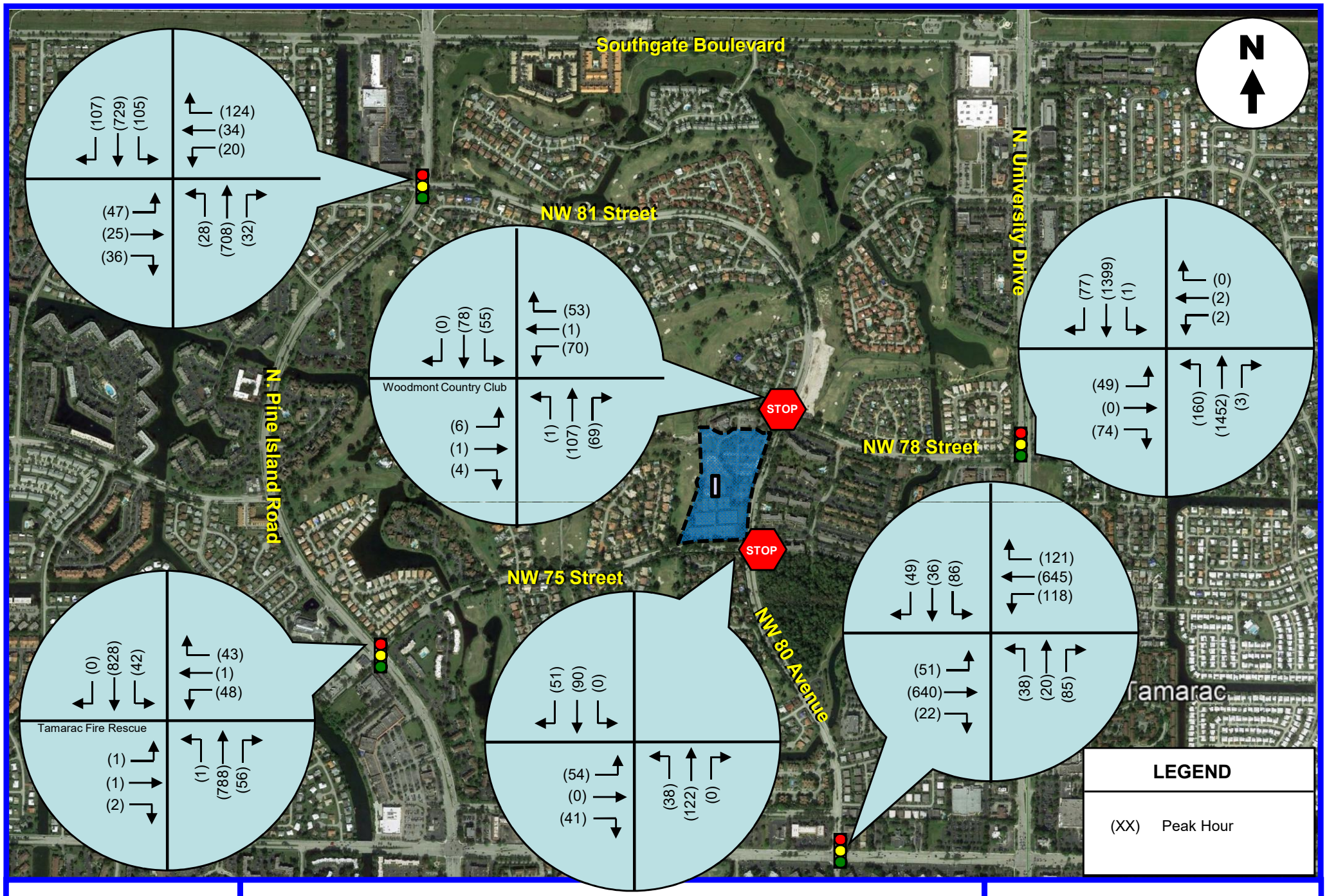
Existing AM and PM Peak Hour Traffic Counts

Source: Traffic Survey Specialists, Inc. 3/5/19

FIGURE 3a

Woodmont Country Club

Tamarac, Florida



DC Engineers, Inc.

Existing Saturday Peak Hour Traffic Counts
Source: Traffic Survey Specialists, Inc. 3/9/19

FIGURE 3b
Woodmont Country Club
Tamarac, Florida

TRIP GENERATION

Trip generation for the proposed development is based on rates and formulae published in the Institute of Transportation Engineer's (ITE) report *Trip Generation* (10th Edition). According to ITE, the most appropriate land use category for the proposed hotel is Land Use Code (LUC) 311 - All Suites Hotel. Trip generation rates for the proposed land use as published by ITE, are as follows:

All Suites Hotel - ITE Land Use #311

- Weekday: T = 5.20(X) - 119.26 (50% inbound and 50% outbound)
  where T = number of trips and X = rooms
- AM Peak Hour: T = 0.51(X) - 29.37 (53% inbound and 47% outbound)
- PM Peak Hour: T = 0.45(X) - 14.07 (48% inbound and 52% outbound)
- Saturday Peak Hour: *not available. See Table 1 for methodology.

Internal Capture

Internal capture is expected between complementary land uses within a multi-use project and are those vehicle trip ends that can be satisfied onsite without impact to the adjacent roadway network. Although interaction between the proposed hotel and the Woodmont Country Club (banquet facilities and golf course, for example) will most certainly occur, to provide a conservative analysis an internalization deduction has not been considered within this analysis.

New Vehicle Trips

Using the above trip generation rates from the ITE document, a trip generation analysis was undertaken for the proposed development. The results of this effort are documented in report Table 1. As shown in Table 1, the proposed Woodmont Country Club Hotel is expected to produce 541 vehicle trips per day with 35 trips occurring during the AM peak hour (19 inbound and 16 outbound), 43 trips occurring during the PM peak hour (21 inbound and 22 outbound), and 49 trips occurring during the Saturday peak hour (27 inbound and 22 outbound).

Table 1: Trip Generation Summary Proposed Uses

Land Use	Scale	Units	Daily	AM Peak Hour			PM Peak Hour			Saturday Peak Hour of Generator		
			Total Trips	Total Trips	Inbound	Outbound	Total Trips	Inbound	Outbound	Total Trips	Inbound	Outbound
All Suites Hotel LUC 311	127	rooms	541	35	19	16	43	21	22	49	27	22
Subtotal			**541**	**35**	**19**	**16**	**43**	**21**	**22**	**49**	**27**	**22**
Internal (0%)												
Subtotal			**541**	**35**	**19**	**16**	**43**	**21**	**22**	**49**	**27**	**22**
Pass-by (0%)												
Total			**541**	**35**	**19**	**16**	**43**	**21**	**22**	**49**	**27**	**22**

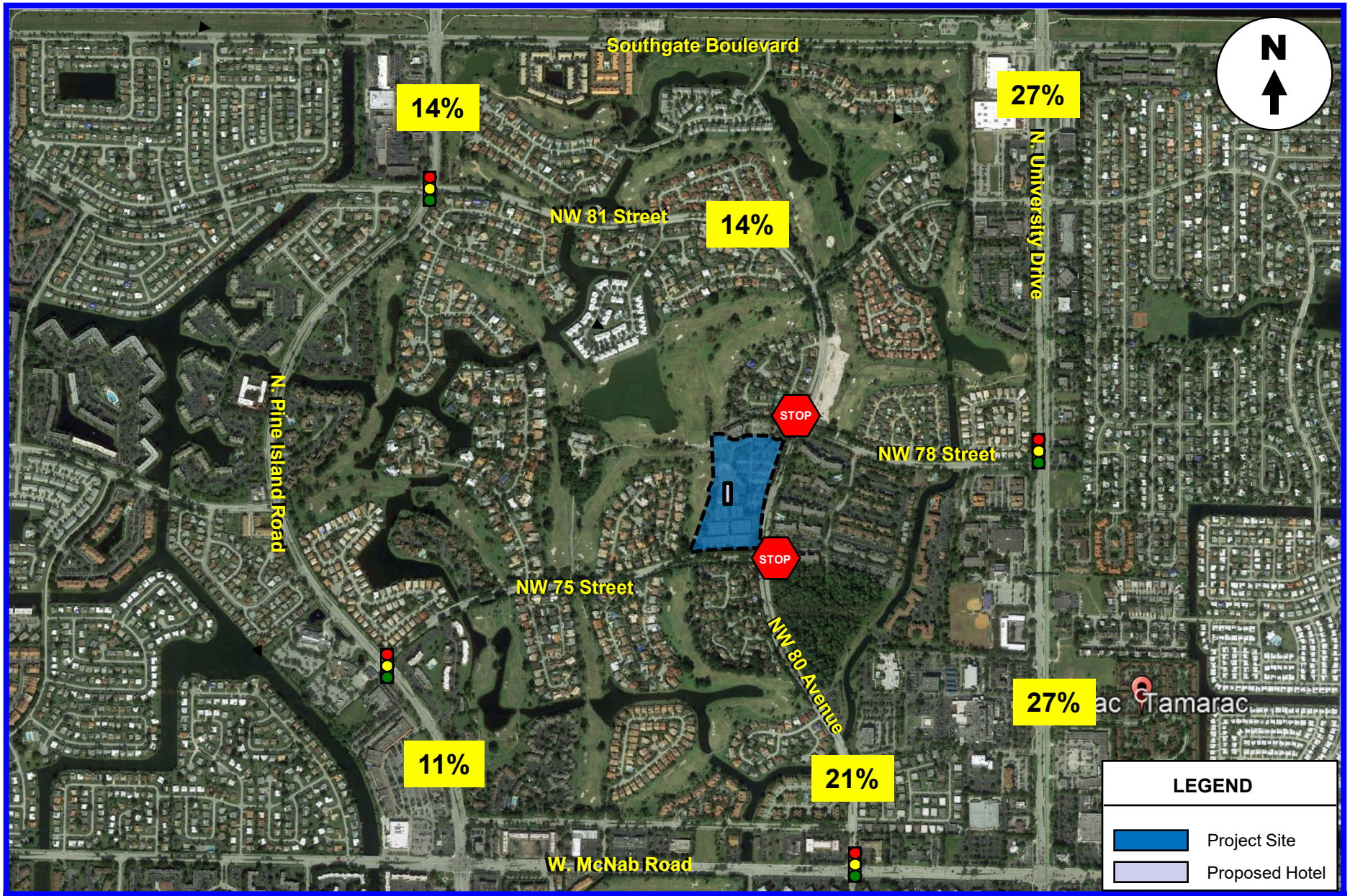
Source: ITE Trip Generation Manual (10th Edition)

LUC 311 - Saturday peak hour rate developed by applying peak to daily ratio specific to LUC 310 to daily trips noted above.

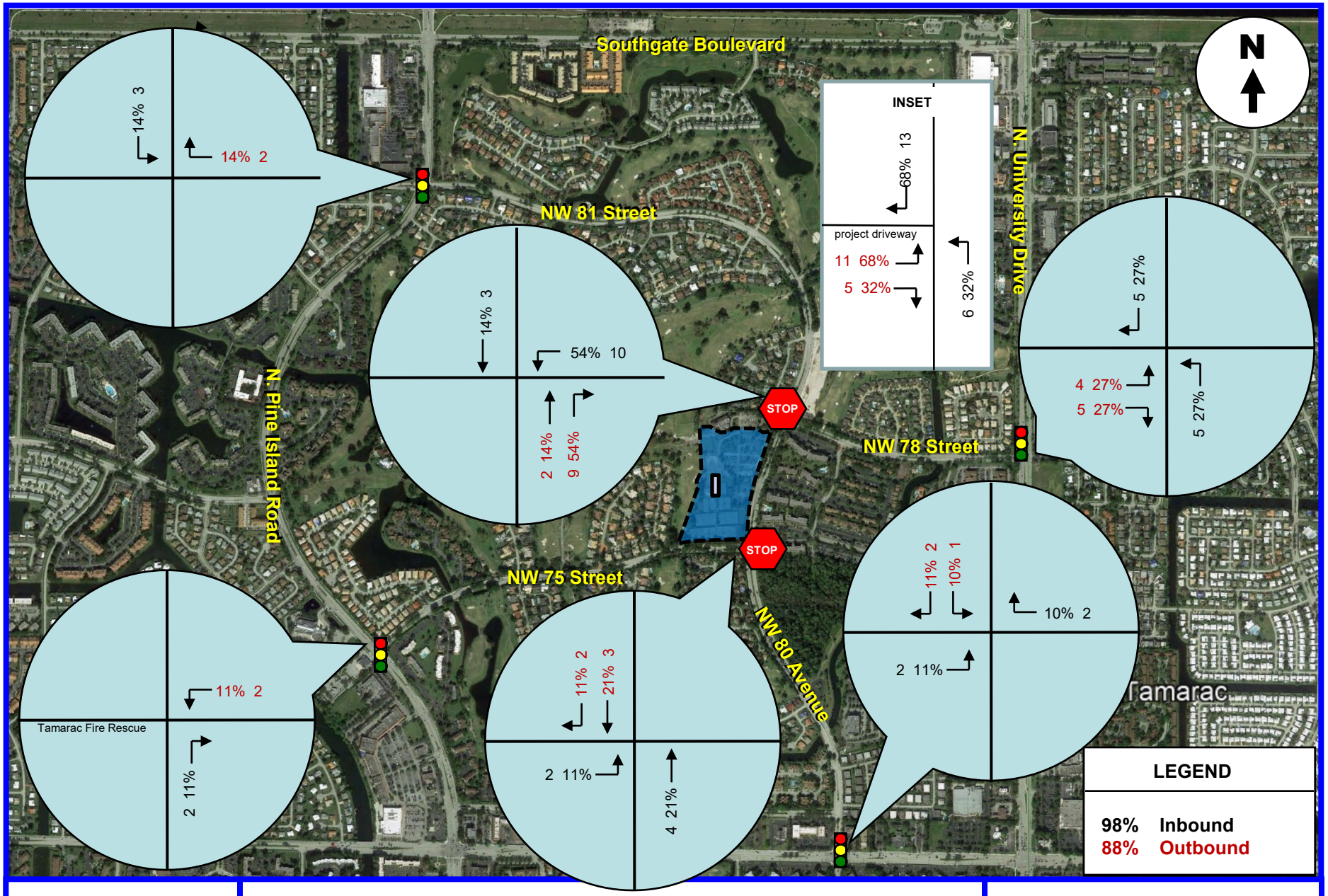
TRIP DISTRIBUTION AND TRAFFIC ASSIGNMENT

For purposes of this study, the distribution and assignment of project-related vehicle trips is based on current travel patterns and knowledge of the immediate area. A global distribution of 25 percent to and from the north, 32 percent to and from the south, 17 percent to and from the west and 26 percent to and from the east was utilized. Reference Figure 4.

Peak hour trips generated by the proposed development were assigned to area roadways and intersections using the traffic assignment detailed above and net new project trips shown in Table 1. Project traffic assignment is summarized in Figures 5a, b and c.



DC Engineers, Inc.	Trip Distribution	**FIGURE 4** Woodmont Country Club Tamarac, Florida



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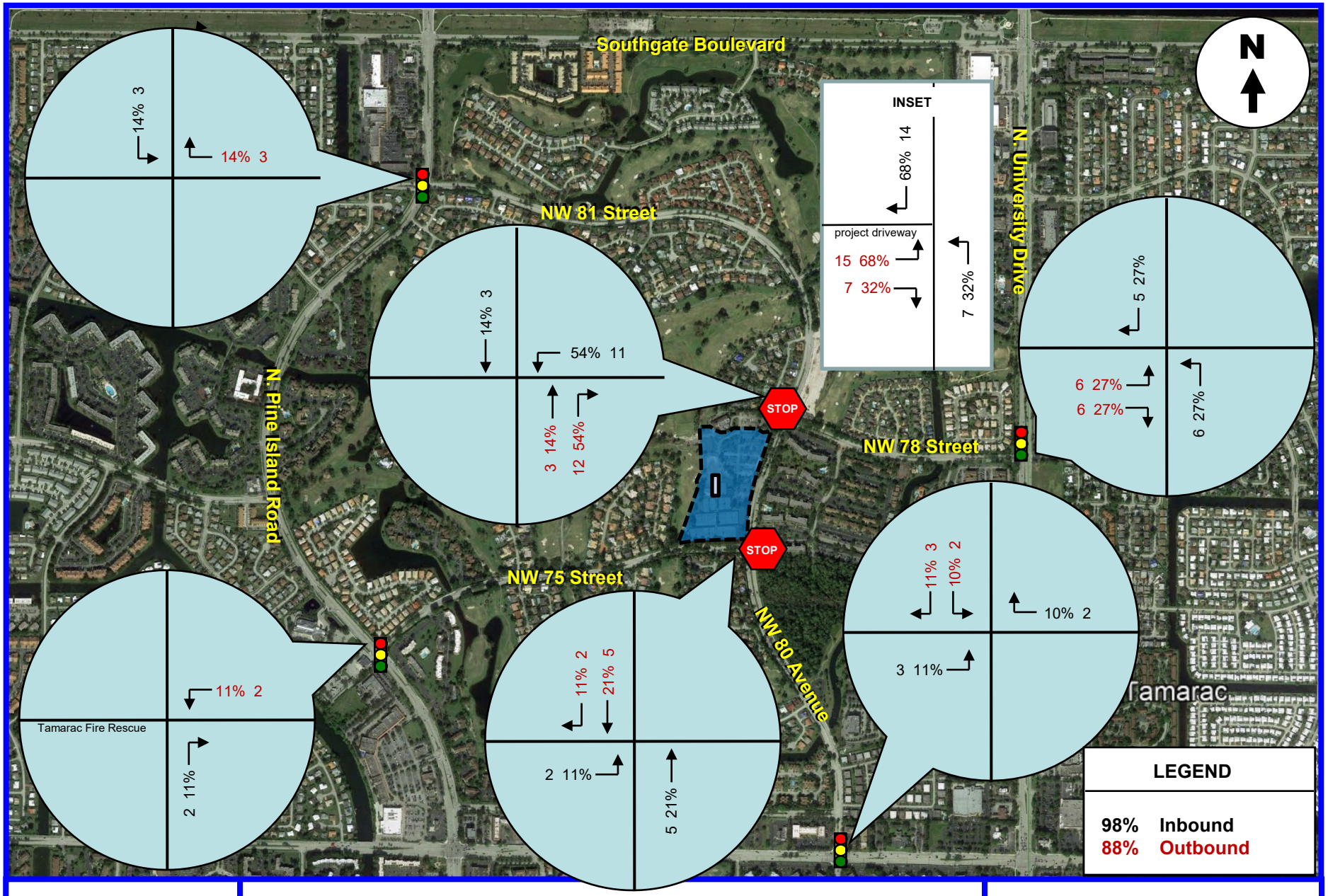
New Project Traffic Assignment
AM Peak Hour

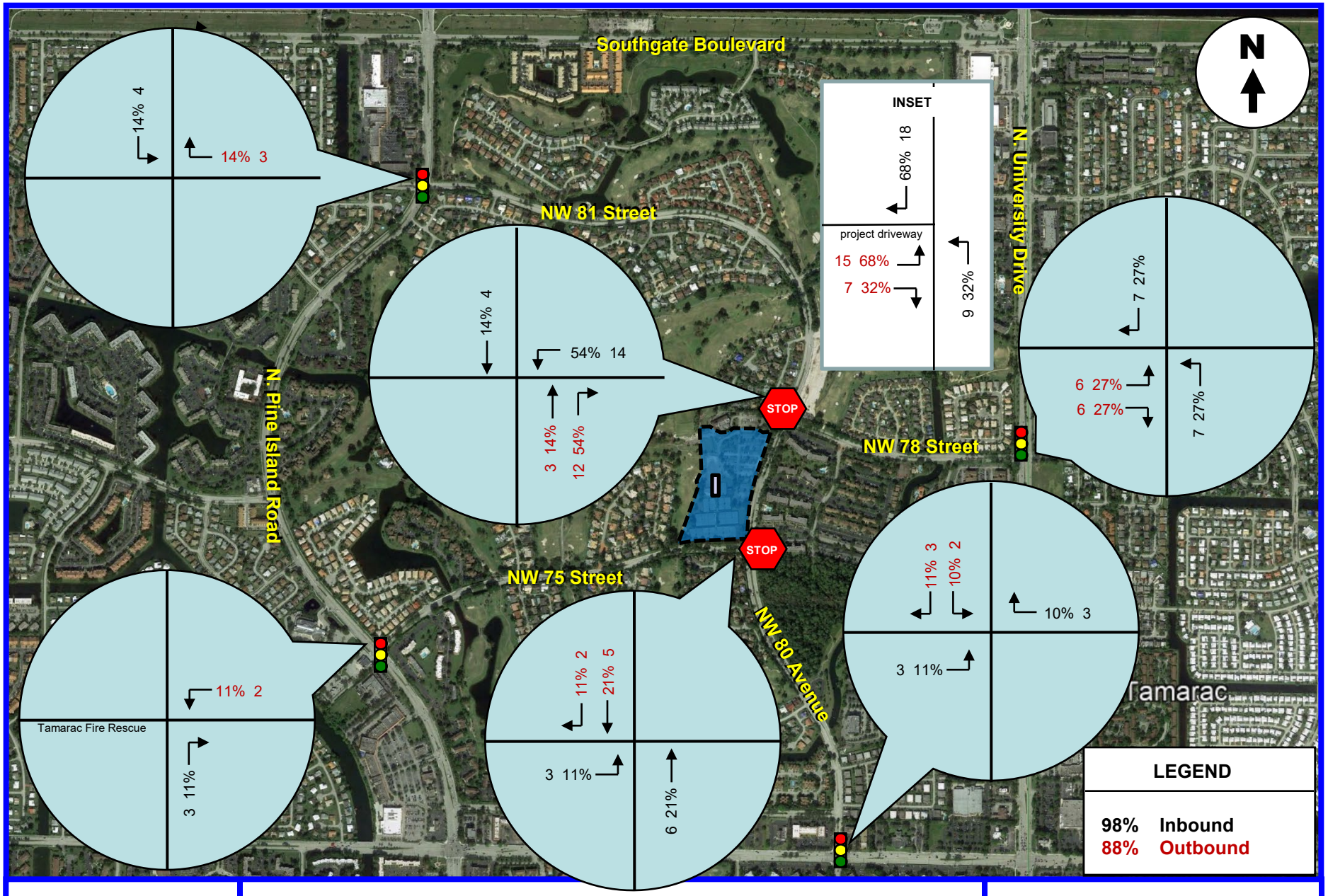
FIGURE 5a
Woodmont Country Club
Tamarac, Florida



DC Engineers, Inc.

New Project Traffic Assignment
PM Peak Hour

FIGURE 5b
Woodmont Country Club
Tamarac, Florida



DC Engineers, Inc.	**New Project Traffic Assignment** Saturday Peak Hour	**FIGURE 5c** Woodmont Country Club Tamarac, Florida

TRAFFIC ANALYSIS

This section of the study is divided into two (2) parts. The first part involves development of future (2021) traffic volumes for the study area. The second part includes level-of-service analyses for both existing and future year conditions.

Future Conditions Traffic Volumes

Future, build-out year (2021) traffic volumes were developed for the project study area in the following manner:

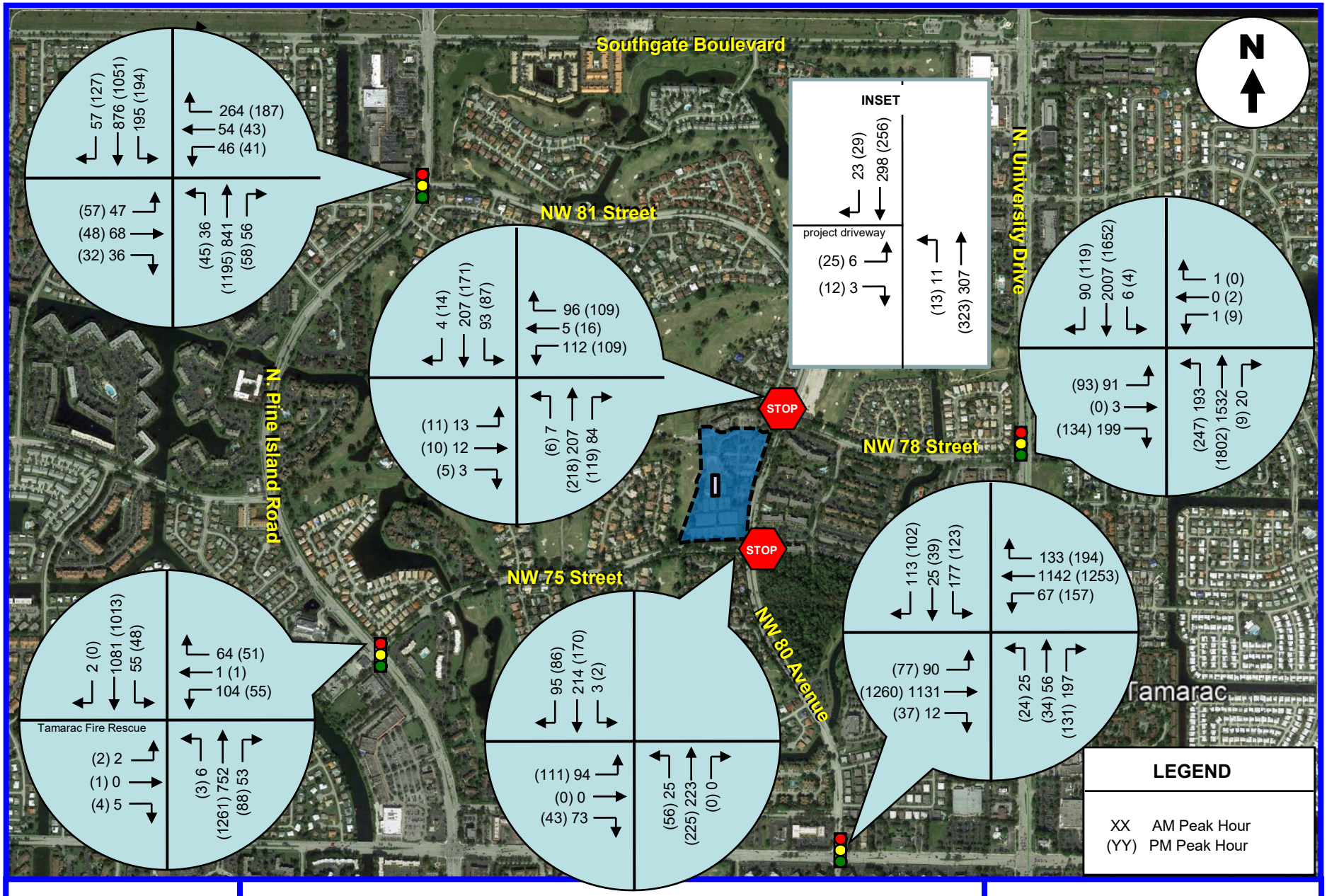
- **Average Peak Season Conversion Factor:** Traffic data collected on Tuesday March 5, 2019 and Saturday March 9, 2019 was reviewed with respect to average peak season conditions. According to the Florida Department of Transportation's (FDOT) Peak Season Factor Category (PSFC) report (reference Appendix D), an adjustment factor of 0.98 is required to convert traffic counts collected during this time period to average peak season conditions.

- **Historic Growth:** FDOT maintains five (5) traffic count stations in the immediate vicinity of the project. Annual Average Daily Traffic Volumes at these count stations for the past five (5) years yield an annual average growth of 2.43% (rounded up to 2.50%) per year. The data from FDOT and the growth rate analysis are included as Appendix E.

- **Committed Development:** Typically, vehicle trips attributable to approved but unbuilt development within the study area are added to peak season volumes to produce build out year background traffic conditions. At the request of City staff vehicle trips attributable to 151 new single family homes proposed or currently under construction throughout the Woodmont Country Club area have been added to peak season volumes as have vehicle trips associated with the new Woodmont Country Club clubhouse and revitalized golf course. Reference Appendix E.

Volume development worksheets (detailing peak season adjustments, traffic growth and traffic associated with the proposed development) for study intersections are attached as Appendix F.

Figure series 6 and 7 include future traffic volumes for the study area. Figures 6a and 6b provide background traffic (without the proposed project) and Figures 7a and 7b include the additional traffic expected to be generated by the proposed hotel.



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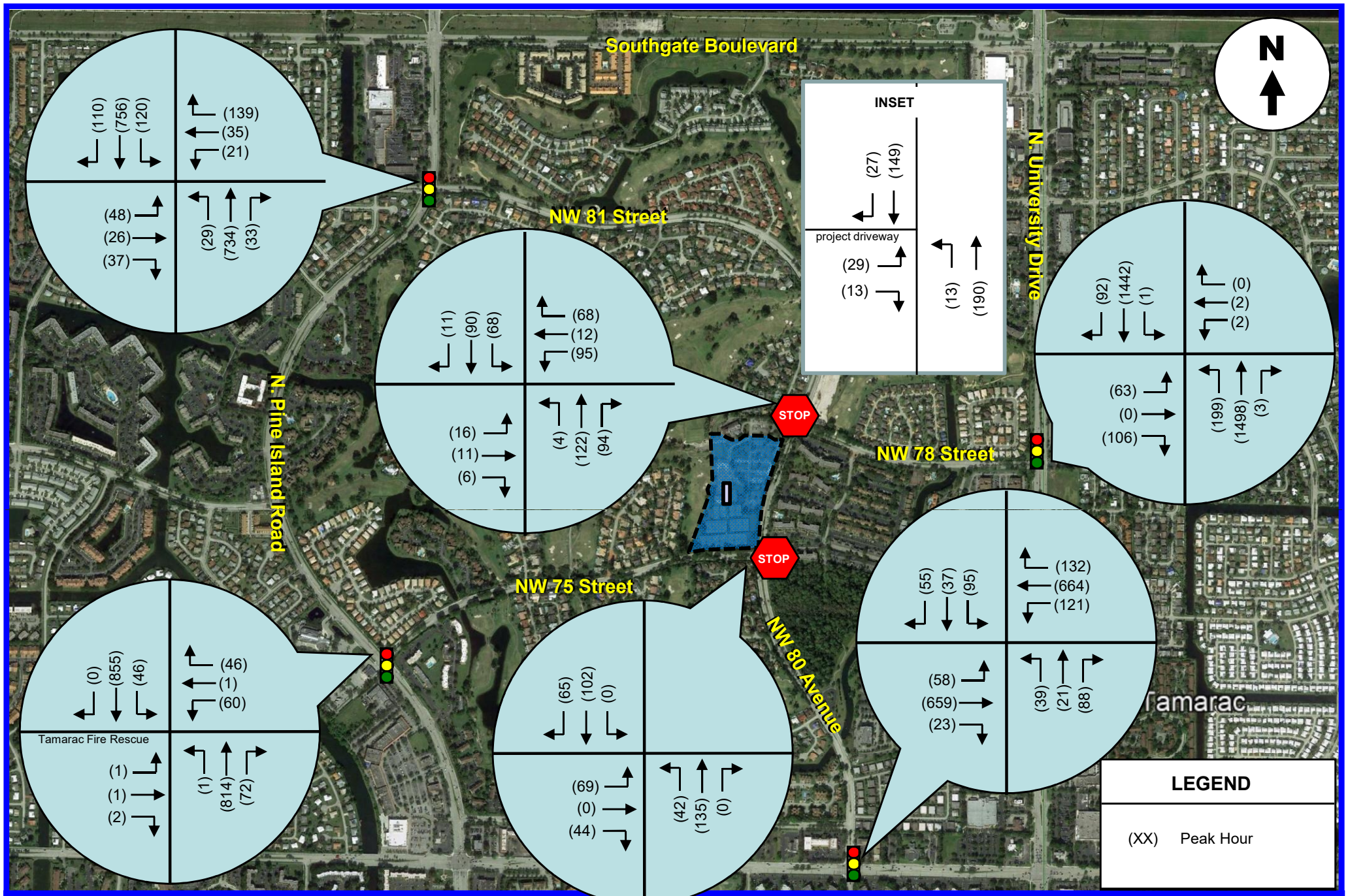
Future (2021) Background (w/out Project)
AM and PM Peak Hour Traffic Volumes

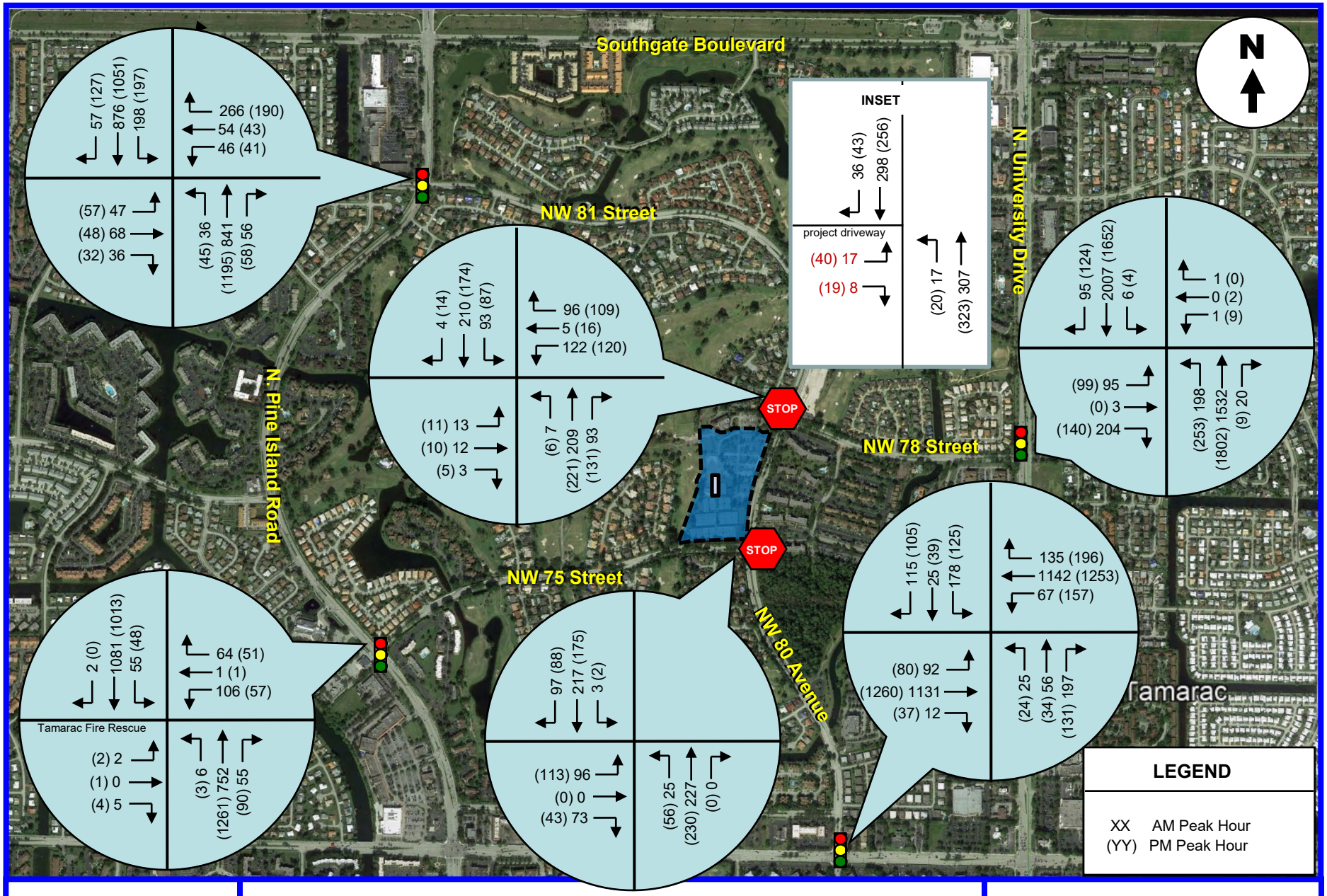
FIGURE 6a
Woodmont Country Club
Tamarac, Florida



DC Engineers, Inc.

Future (2021) Background (w/out Project)
Saturday Peak Hour Traffic Volumes

FIGURE 6b
Woodmont Country Club
Tamarac, Florida



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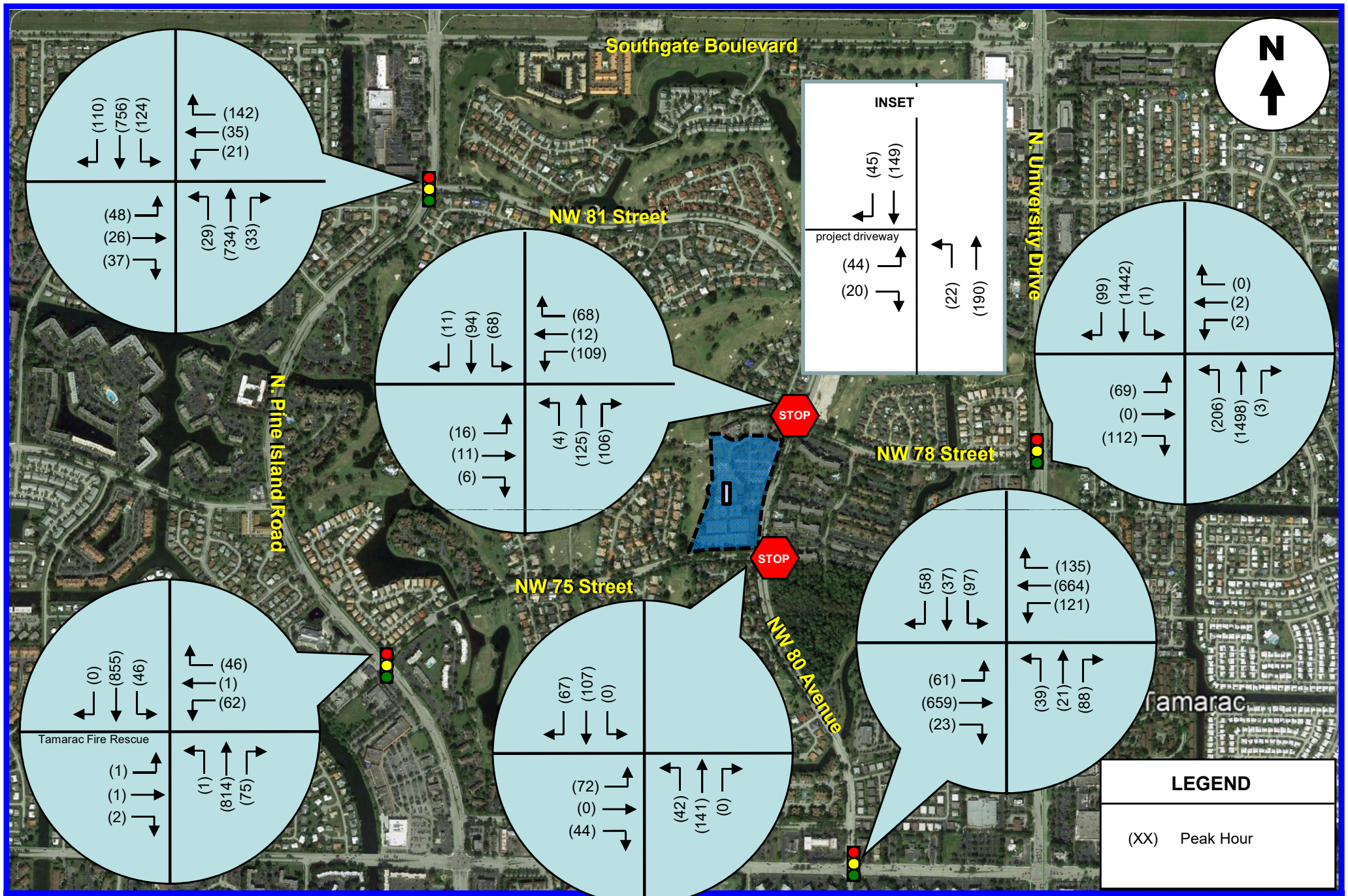
Future (2021) Total (with Project)
AM and PM Peak Hour Traffic Volumes

FIGURE 7a
Woodmont Country Club
Tamarac, Florida



DC Engineers, Inc.

Future (2021)Total (with Project)
Saturday Peak Hour Traffic Volumes

FIGURE 7b
Woodmont Country Club
Tamarac, Florida

Detailed Intersection and Driveway Level of Service Analyses

Intersection capacity analyses were performed for the study intersections. The analyses were undertaken following the capacity/level of service procedures outlined in the current edition of the Highway Capacity Manual using the SYNCHRO software package. The results of the intersection analyses are summarized in Table 2. Appendix G contains computer printouts of the intersection capacity analyses completed.

Table 2: Intersection Levels of Service

Intersection/Approaches	Existing (2019)	Future Traffic Conditions: Year 2021 Without Project	Future Traffic Conditions: Year 2021 With Project	Future Traffic Conditions: Year 2021 With Imp.
N Pine Island Rd at NW 75 St	B\14.3 (B\10.3) [A\8.5]	B\14.8 (C\20.6) [B\13.9]	B\14.8 (C\20.5) [B\13.9]	
- *EB Approach*	A(B)[B]	A(A)[A]	A(A)[A]	
- *WB Approach*	B(B)[B]	B(B)[B]	B(B)[B]	
- *NB Approach*	B(B)[A]	B(C)[B]	B(C)[B]	
- *SB Approach*	B(A)[A]	B(B)[B]	B(B)[B]	
N Pine Island Rd at NW 81 St	C\22.0 (B\18.0) [B\15.1]	C\23.3 (B\19.0) [B\15.5]	C\23.5 (B\19.1) [B\15.6]	
- *EB Approach*	E(E)[E]	E(E)[E]	E(E)[E]	
- *WB Approach*	E(E)[E]	E(E)[E]	E(E)[E]	
- *NB Approach*	B(B)[A]	B(B)[A]	B(B)[A]	
- *SB Approach*	B(B)[A]	B(B)[A]	B(B)[A]	
NW 80 Av at W McNab Rd	C\25.3 (C\20.4) [B\18.4]	C\26.6 (C\21.6) [B\19.1]	C\26.7 (C\21.8) [B\19.2]	
- *EB Approach*	B(B)[B]	B(B)[B]	B(B)[B]	
- *WB Approach*	B(B)[A]	C(B)[B]	C(B)[B]	
- *NB Approach*	E(E)[E]	E(E)[E]	E(E)[E]	
- *SB Approach*	D(E)[E]	D(D)[E]	D(D)[E]	
University Dr at NW 78 Av	B\13.1 (B\10.2) [A\6.0]	B\17.7 (B\15.3) [A\7.9]	B\18.5 (B\16.0) [A\8.3]	
- *EB Approach*	E(E)[E]	E(E)[E]	E(E)[E]	
- *WB Approach*	E(E)[E]	E(E)[E]	E(E)[E]	
- *NB Approach*	A(A)[A]	B(B)[A]	B(B)[A]	
- *SB Approach*	B(A)[A]	B(B)[A]	B(B)[A]	
NW 80 Av at NW 75 St (unsig)	A\ 2.9 (A\ 3.4) [A\3.2]	A\ 3.0 (A\ 3.8) [A\3.4]	A\ 3.0 (A\ 3.8) [A\3.3]	
- *EB Approach*	B(B)[B]	B(B)[B]	B(B)[B]	
NW 80 Av at NW 78 St (unsig)	A\9.6 (A\9.5) [A\8.5]	B\10.6 (B\10.8) [A\9.2]	B\10.9 (B\11.0) [A\9.4]	
- *EB Approach*	A(A)[A]	B(B)[A]	B(B)[A]	
- *WB Approach*	A(A)[A]	B(B)[A]	B(B)[A]	
- *NB Approach*	A(A)[A]	B(B)[A]	B(B)[A]	
- *SB Approach*	A(A)[A]	B(B)[A]	B(B)[A]	
NW 80 Av at Project Dwy (unsig)		A\0.3 (A\0.8) [A\1.3]	A\ 0.6 (A\ 1.3) [A\1.8]	
- *EB Approach*		B(B)[B]	B(B)[B]	

Source: HCM 2010. LEGEND: AM Peak Hour (PM Peak Hour) [Saturday Peak Hour];vehicular delay (sec\veh)
Legend: A\4.6 = LOS\vehicular delay in seconds per vehicle.

CONCLUSIONS AND RECOMMENDATONS

A 127-suite hotel is proposed to be constructed along the west side of NW 80 Avenue north of NW 75 Street within municipal limits of the City of Tamarac, Florida. A new clubhouse is currently under construction immediately north of the hotel site and additional uses specific to the Woodmont Country Club including surface parking, a golf cart barn and multiple tennis courts are located in close proximity.

Access to the project site is proposed as follows:

- One (1), full access two (2)-way driveway along NW 80 Avenue between NW 75 Street and NW 78 Street. The driveway will have two (2) exiting lanes and two (2) lanes for entering vehicles.

Conclusions and recommendations of the traffic study are detailed below:

- As shown in Table 1, the proposed Woodmont Country Club Hotel is expected to produce 541 vehicle trips per day with 35 trips occurring during the AM peak hour (19 inbound and 16 outbound), 43 trips occurring during the PM peak hour (21 inbound and 22 outbound) and 49 trips occurring during the Saturday peak hour (27 inbound and 22 outbound).

- All study intersections are shown to operate within acceptable parameters today and all are expected to operate within acceptable parameters in future year 2021 with and without traffic from the proposed hotel.

  The project driveway, once active, is expected to operate at LOS 'A' during AM, PM and Saturday peak hours in future (buildout) year 2021.

APPENDIX A

Methodology Statement

From: Suzanne Danielsen
Sent: Friday, February 15, 2019 2:55 PM
To: Frank Zickar
Cc: Robert Johnson III; Cecilia Bartman; Mustafa Albassam
Subject: RE: Woodmont Country Club Hotel

Thank you Frank. Have a terrific weekend.

J. Suzanne Danielsen, P.E.

DC Engineers, Inc.
12743 NW 13th Court
Coral Springs, FL 33071
(954) 798-0926

From: Frank Zickar <Frank.Zickar@tamarac.org>
Sent: Thursday, February 14, 2019 8:59:26 AM
To: Suzanne Danielsen
Cc: Robert Johnson III; Cecilia Bartman; Mustafa Albassam
Subject: FW: Woodmont Country Club Hotel

Suzanne,

We are good to go. See below.

The picture can't be displayed.

Frank L. Zickar
Assistant Director, Community Development
City of Tamarac
7525 NW 88th Ave, Tamarac, FL 33321
Tel: 954-597-3535 Fax: 954-597-3540
www.tamarac.org

From: Karl@traftech.biz [mailto:karl@traftech.biz]
Sent: Thursday, February 14, 2019 8:54 AM
To: Frank Zickar <Frank.Zickar@tamarac.org>
Subject: RE: Woodmont Country Club Hotel

Good morning Frank.

The proposed methodology and study area are consistent with our previous discussions and acceptable to me. Let me know if you have any questions.

Take care,

Karl

From: Frank Zickar <Frank.Zickar@tamarac.org>
Sent: Monday, February 11, 2019 10:01 AM
To: Karl@traftech.biz
Subject: FW: Woodmont Country Club Hotel

Karl let me know your thoughts, thanks.

The picture can't be displayed.

Frank L. Zickar
Assistant Director, Community Development
City of Tamarac
7525 NW 88th Ave, Tamarac, FL 33321
Tel: 954-597-3535 Fax: 954-597-3540
www.tamarac.org

From: Suzanne Danielsen [mailto:jsdanielsen12@outlook.com]
Sent: Monday, February 11, 2019 9:37 AM
To: Frank Zickar <Frank.Zickar@tamarac.org>
Cc: Karl@traftech.biz; Christina Bilenki <cbilenki@dmbblaw.com>; karim@palmeiraholdings.com; Seema Palmeira Holdings LLC <seema@palmeiraholdings.com>
Subject: FW: Woodmont Country Club Hotel

Good Morning Frank.

As a follow-up to our Wednesday methodology meeting, I have prepared the following traffic-specific methodology statement for the hotel proposed to be constructed within the Woodmont Country Club property. Please confirm that our proposed methodology is in accordance with our discussion.

Thank you!

Suzanne

Palmeira Holdings, LLC is proposing to construct a 127-suite hotel on property occupied by the new Woodmont Country Club clubhouse and ancillary uses including surface parking, a golf cart barn and multiple tennis courts. The project site is located west of NW 80th Avenue and north of NW 75 Street within municipal limits of the City of Tamarac, Broward County, Florida. Vehicular access to the site will be provided by one (1) driveway along NW 80 Avenue at the first median opening north of NW 75 Street. The following is a Traffic Study methodology for the proposed development.

Traffic Methodology

- The trip generation analysis will be based upon the Institute of Transportation Engineers (ITE) report *Trip Generation*, 10th Edition. A preliminary estimate of project traffic is shown in attached Table 1. Although Table 1 is specific to the proposed hotel, vehicle trips are also estimated for the Woodmont Country Club in an effort to provide a comprehensive estimate of trips associated with the entire site.

- Trip distribution at the project driveway and at adjacent intersections will be based upon existing nearby land uses and current travel patterns within the study area.

- The Traffic Study will evaluate the following intersections:

    - N. Pine Island Road at NW 75 Street,
    - N. Pine Island Road at NW 81 Street,
    - NW 80 Avenue at W. McNab Road,
    - NW 80 Avenue at NW 75 Street (unsignalized),
    - NW 80 Avenue at project driveway (unsignalized),
    - NW 80 Avenue at NW 78 Street (unsignalized), and
    - University Drive (SR 817) at NW 78 Street.

- Turning movement count data will be collected at the above locations on a typical weekday during AM (7-9 AM) and PM (4-6 PM) peak periods and on a typical Saturday during a two (2) hour peak period to be determined. These counts will include bicyclists and pedestrians.

- Turning movement counts will be adjusted to reflect average peak season conditions based upon the most recent available FDOT adjustment factors.

- A growth factor will be applied to the traffic counts to reflect future traffic conditions at project build-out. The growth factor will be based upon historic traffic data available for the area near the project site. A minimum annual growth rate of 0.5% will be considered.

- Traffic associated with approved but unbuilt development will be included within the Traffic Study. As requested by City staff, we will include traffic expected to be produced by 152 recently approved single family homes to be constructed in close proximity to the project site.

- Existing traffic signal timing data for the study intersections will be obtained from Broward County Traffic Engineering and will be included within the Appendix of the Traffic Study.

- Traffic analysis figures will be prepared for the following scenarios for the intersections analyzed:

    1. Existing traffic,
    2. Proposed project traffic distribution,
    3. Background conditions for buildout year,
    4. Future conditions with growth rate and project traffic.

- Intersection analyses will be conducted using the Synchro software for existing conditions, future conditions without the project, and future conditions with the proposed project in place.

- The project build-out year is estimated to be 2021.

- All of the above will be summarized in a Traffic Study for your review and comment.

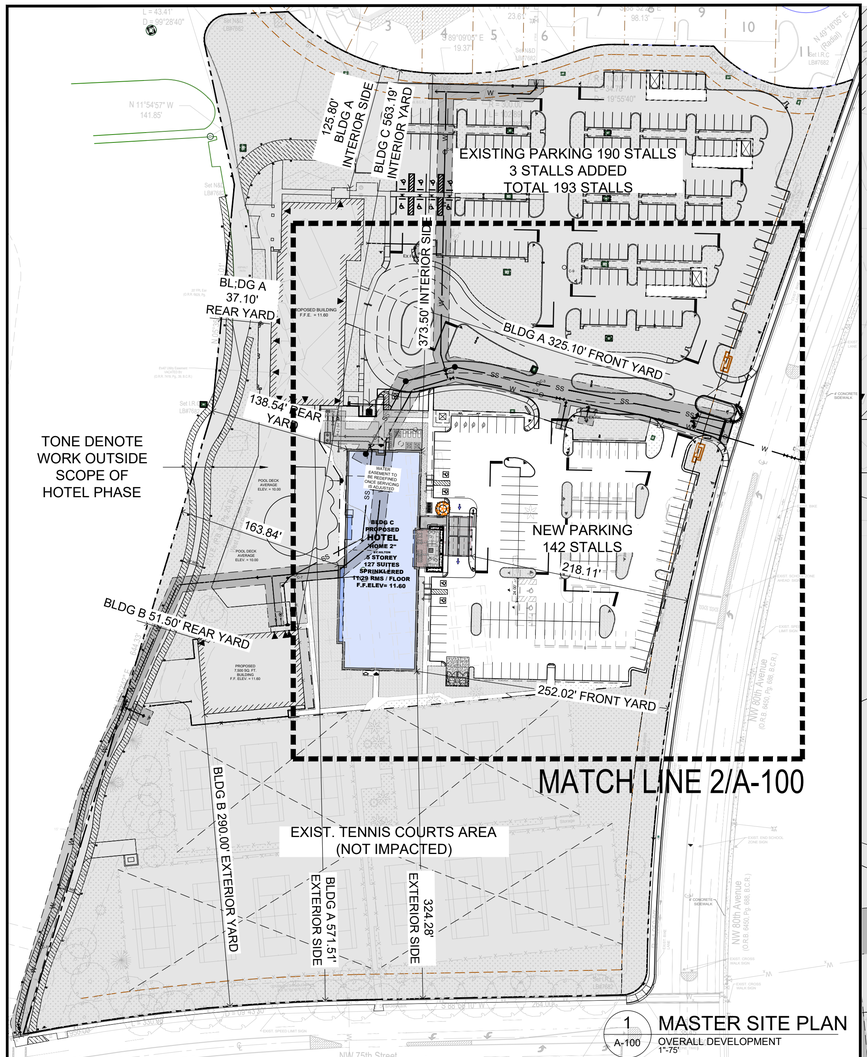
J. Suzanne Danielsen, P.E.

DC Engineers, Inc.
12743 NW 13th Court
Coral Springs, FL 33071
(954) 798-0926

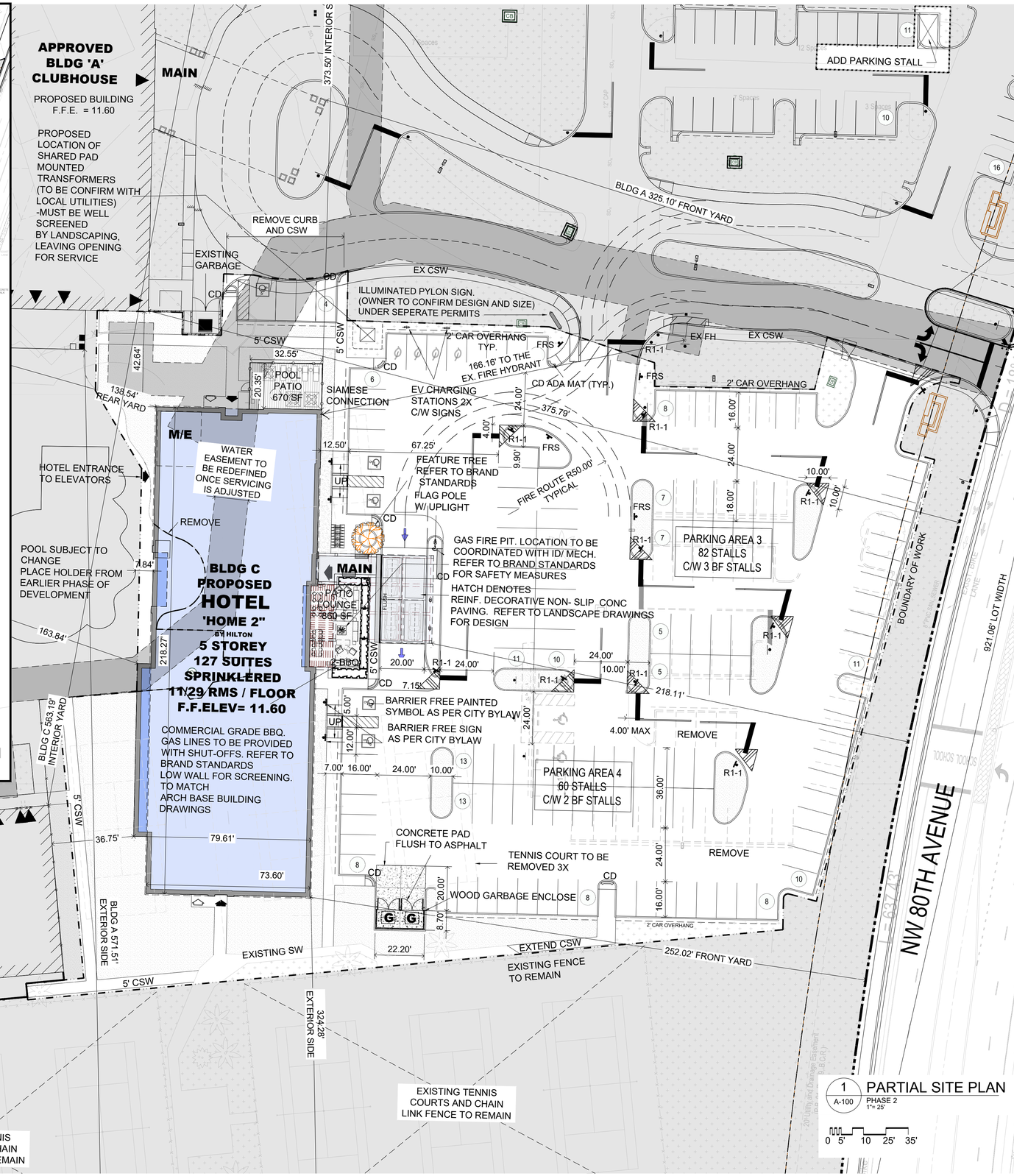
The City of Tamarac is a public entity subject to Chapter 119 of the Florida Statutes concerning public records. Email messages are covered under Chapter 119 and are thus subject to public records disclosure. All email messages sent and received are captured by our server and retained as public records.
The City of Tamarac is a public entity subject to Chapter 119 of the Florida Statutes concerning public records. Email messages are covered under Chapter 119 and are thus subject to public records disclosure. All email messages sent and received are captured by our server and retained as public records.

APPENDIX B

Site Plan

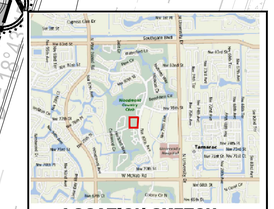


1 A-100 MASTER SITE PLAN
OVERALL DEVELOPMENT
1"-75'



1 A-100 PARTIAL SITE PLAN
PHASE 2
1"= 25'

0 5' 10 25' 35'



LOCATION SKETCH NTS

Parking Calculation				
BLDG	DESCRIPTION		SF/ Course	Per (SF) / Course	Total
A	Golf Coruse		1.5	75	112.5
	Causal Dining (Indoor)		1240	100	12.4
	Covered Dining (Outdoor)		2173	100	21.7
	Banquest Facility		5699	150	38.0
	Bar		325	100	3.3
	Gallery		745	500	1.5
	Fitness Centre		1620	200	8.1
	Office		576	300	1.9
	Retail		1658	300	5.5
SUBTOTAL * ROUNDING DONE AT END					205
B	Hotel		127.0	1	127
* Hotel Accessory Uses Exclusive to Guest Use Only					
SUBTOTAL					127
TOTAL PARKING REQUIRED					332
PARKING PROVIDED			Accessible	Reg. Stalls	TOTAL
PARKING AREA 1 - EXISTING			8	58	66
PARKING AREA 2 - EXISTING			0	121	121
PARKING AREA 2 - NEW			0	3	3
SUBTOTAL			8	179	190
PARKING AREA 3 - NEW			3	79	82
PARK			2	58	60
SUBTOTAL			5	137	142
TOTAL PARKING PROVIDED			13	316	332
PARKING DEFEIENCEY			100%		0
BICYCLING PARKING					
PROVIDED					6
ZONING INFORMATION - ZONING By-law 12800					
ZONED: Commercial Recreation					
			REQ'D	PROV.	COMPLY
MIN. LOT AREA			5,000.0	586,765.0	YES
MIN. LOT WIDTH			50.0	921.06'	YES
SETBACKS		REQ'D			
MIN. FRONT YARD - NW 80TH AVE(EAST)			325.1	356.7'	252.02'
MIN. EXTERIOR YARD - NW 75TH ST (SOUTH)		25'	571.51	290'	324.28'
MIN. INTERIOR SIDE YARD (NORTH)			125.8'	563.19'	373.5
MIN. REAR YARD (WEST)			37.1'	51'5	138.54'
BUILDING HEIGHT					
A	EXSTING CLUB HOUSE			33'6"	YES
B	EXISTING CART BARN		60'	11'6-3/4"	YES
C	NEW HOTEL - ROOF DECK			54.24	YES
	NEW HOTEL - TOP PARAPET			67.07	T.B.D.
BUFFERS					
ABUTTING STREET				6/4.5	

DRAWING LEGEND

LOCATION OF BLDG ENTRANCES, EXITS, ENTRANCES FOR PUBLIC, FIRE FIGHTERS AND B.F. USE
SERVICE EXITS/ ENTRANCE POINTS
BIKE RACKS EX & NEW
FIRE HYDRANT
(E.C.) SIAMESE CONNECTION
EX LOCATION OF L.S.
FREE STANDING SIGN
CURB DEPRESSION FLUSH
NUMBER OF PARKING STALLS IN A ROW
PAINTED ISLAND NO PARKING
PATH OF FIRE ROUTE CENTRE 50' RAD
DESIGNATED HANDICAPPED PARKING SPACE - REFER TO CITY STANDARDS FOR PAINTED PARKING
B.F DEPRESSED CURB RAMP CONFORMS PER CODE CW ADA MAT
AREA OF PROPOSED NEW BLDG
EXISTING BUILDING
SOFT LANDSCAPE AREA REFER TO LANDSCAPE DRAWINGS BY SBK
EXISTING LANDSCAPING
LIMIT AREA OF WORK PHASE 2
AREA OF SITE UNTOUCHED BY PHASE 2

Site Data Table				
		SF	ACRES	%
GROSS SITE AREA		586,765	13.470	100%
SITE AREA NET		522,354	12.003	89%
LANDSCAPE OPEN SPACE		168,170	3.861	32%
LANDSCAPING		165,853.9	3.807	31.7%
LANDSCAPING HARD - PAVERS (HOTEL)		2,315.8	0.053	0.4%
TOTAL ASPHALT		267,556.0	6.142	51.2%
EX NEW CLUBHOUSE PARKING AND CART PATH		115,169.4	2.644	22.0%
EX TENNIS COURTS		101,275.7	2.325	19.4%
NEW HOTEL PARKING		51,110.9	1.173	9.8%
MISC (CURBING & WALKWAYS)		47,607.65	1.093	9.1%
ACCESSORY STRUCTURE (GARBAGES AND SHED		554.7	0.013	0.1%
TOTAL LOT COVERAGE (A C)		38,966		7.5%
A	CLUBHOUSE	15,031	0.345	2.9%
B	CART BARN	7,500	0.172	1.4%
C	GROUND FLOOR AREA	16,435	0.377	3.1%
	SECOND FLOOR	16,172		
	THIRD FLOOR	16,172		
	FOURTH FLOOR	16,172		
	FIFTH FLOOR	15,898		
	GROSS FLOOR AREA	80,649	1.851	0.154
	TOTAL GROSS FLOOR AREA	103,180	2.369	0.197

PARKING STANDARDS		COMPLIANT
PARKING STALL	9'X 18' (16')	YES
ACCESSIBLE PARKING STALL	12' X 16'	YES
BICYCLE PARKING (SECTION 5.14)	2' X 6'	YES
DOUBLE LOADED DRIVE ISLE	24'	YES
DRIVE ISLE	20'	YES

ISSUE	BY	DESCRIPTION	DATE YY-MM-DD
1	DB	PRE-CONSULTATION - DESIGN REV 6	18-12-07

GENERAL NOTES:
DO NOT SCALE DRAWINGS. USE ONLY DRAWINGS MARKED "ISSUED FOR CONSTRUCTION". VERIFY CONFIGURATIONS & DIMENSIONS ON SITE BEFORE BEGINNING WORK. NOTIFY ARCHITECT IMMEDIATELY OF ANY ERRORS, OMISSIONS OR DISCREPANCIES.

DEVELOPMENT CONSULTANT:
610 FORD DRIVE, SUITE 338
OAKVILLE, ONTARIO, CANADA
L6J 7W4
API DEVELOPMENT CONSULTANTS INC.

ARCHITECT: LINAS SAPLYS
1280 CORNWALL RD.
OAKVILLE, ONTARIO, CANADA
L6J 7W5
P: 416.771.6460
E: linassaplys@cogi.com

OWNER:
OWNERSHIP: WOODMOUNT HOTEL LLC.
CLIENT: PALMEIRA HOLDINGS

8320 WEST SINRISE BLVD SUITE 207
PLANTATION, FLA ,, 333222

NW 75TH STREET
NW 80TH AVENUE
PROJECT NORTH & TRUE NORTH
PROFESSIONAL CERTIFICATION

PROJECT
HOME2 SUITES BY HILTON

7801 NW 81TH AVENUE
City of Tamarac , Florida , USA - Broward County
Closest Intersection : NW 80th Ave & NW 75th Street

DRAWING TITLE
SITE PLAN
PHASE 2

BY	CHECKED	ISSUED FOR
DB	LS	PRE-CONSULTATION

PROJECT No. 018-031
SHEET NO. A-100
SCALE AS NOTED
1.0 SHEET REV

PLOT DATE: December/07/18

File: S:\2018\31\018\031 Tamarac Golf Course Home2\LS - Drawings\LS - PA\18-12\31 | Design 6 | Pre-Con\LS-MAE - A100 | Dynamic Pre-Con1.dwg

APPENDIX C

Turning Movement Counts

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

NW 75TH STREET & PINE ISLAND ROAD
TAMARAC, FLORIDA
COUNTED BY: SEBASTIAN SALVO (V)
NOT SIGNALIZED, EMERGENCY SIGNAL

Site Code : 00190049
Start Date: 03/05/19
File I.D. : 75ST_PIN
Page : 1

ALL VEHICLES

	PINE ISLAND ROAD From North				NW 75TH STREET From East				PINE ISLAND ROAD From South				DRIVEWAY From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 03/05/19																	
07:00	1	6	180	1	0	13	0	11	0	0	178	4	0	0	1	3	398
07:15	0	12	227	0	0	19	1	23	0	3	233	6	0	0	0	0	524
07:30	0	10	280	1	0	29	0	13	0	2	155	10	0	0	0	1	501
07:45	0	17	267	0	0	21	0	15	0	0	182	15	0	0	0	0	517
Hr Total	1	45	954	2	0	82	1	62	0	5	748	35	0	0	1	4	1940
08:00	0	13	273	1	0	22	0	8	0	1	159	14	0	2	0	4	497
08:15	0	13	228	0	0	20	0	13	0	0	181	15	0	0	1	0	471
08:30	0	16	258	0	0	22	0	12	3	0	165	13	0	0	0	4	493
08:45	0	13	219	1	0	8	0	14	0	1	217	12	0	0	0	2	487
Hr Total	0	55	978	2	0	72	0	47	3	2	722	54	0	2	1	10	1948
* BREAK *																	
16:00	1	10	186	0	0	9	0	12	0	1	212	14	0	0	0	2	447
16:15	0	5	217	0	0	7	0	8	1	0	262	24	0	0	0	2	526
16:30	0	5	197	0	0	10	0	10	0	2	222	16	0	1	0	0	463
16:45	0	11	255	0	0	11	0	8	0	0	265	15	0	0	0	1	566
Hr Total	1	31	855	0	0	37	0	38	1	3	961	69	0	1	0	5	2002
17:00	0	9	239	0	0	12	0	10	0	1	265	19	0	1	0	2	558
17:15	0	13	248	0	1	11	0	11	1	1	365	18	0	0	0	0	669
17:30	0	11	261	0	0	11	0	15	0	0	303	20	0	0	1	0	622
17:45	0	11	234	0	0	8	1	12	0	0	289	15	0	1	0	2	573
Hr Total	0	44	982	0	1	42	1	48	1	2	1222	72	0	2	1	4	2422
TOTAL	2	175	3769	4	1	233	2	195	5	12	3653	230	0	5	3	23	8312

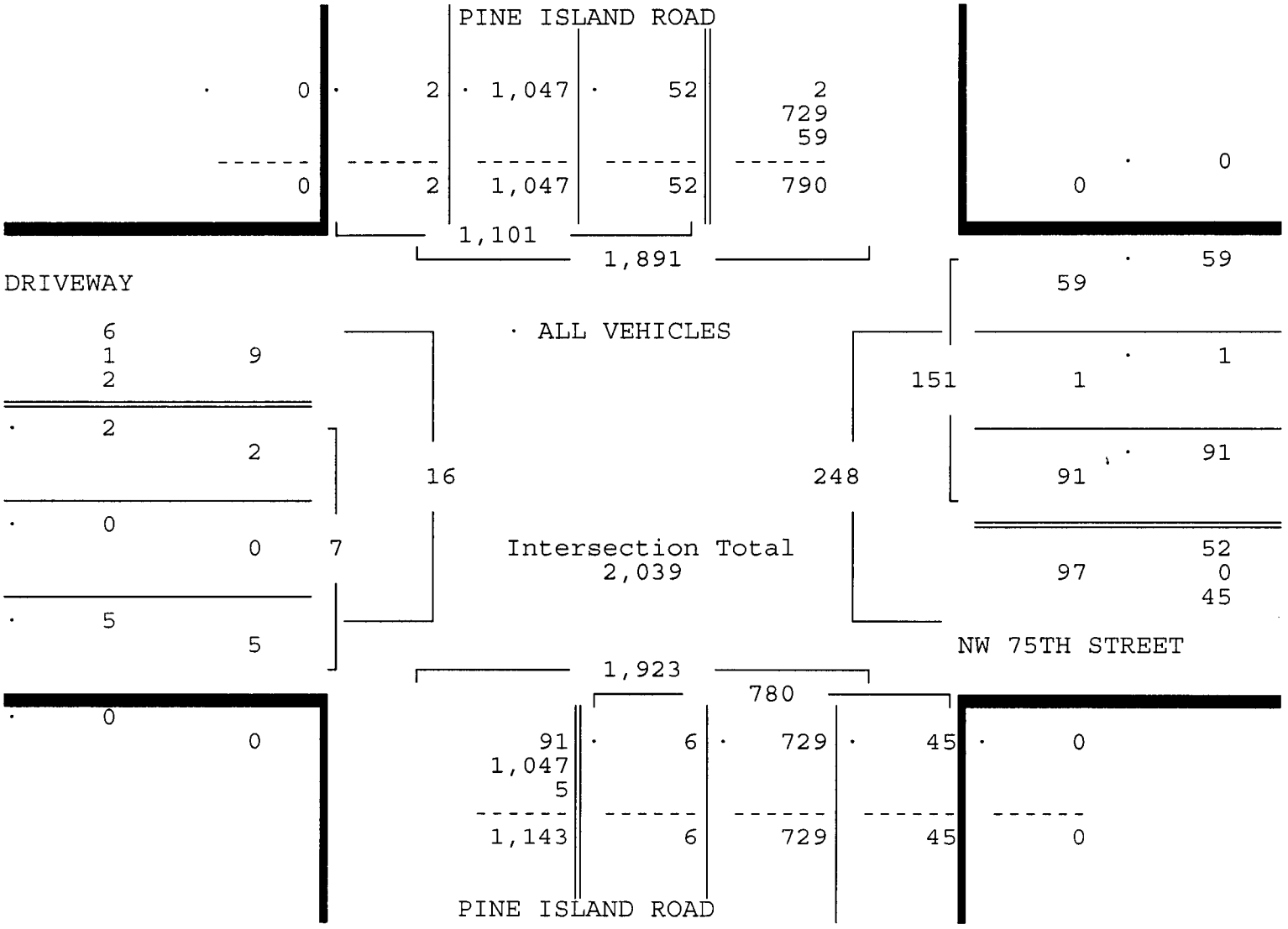
TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

NW 75TH STREET & PINE ISLAND ROAD
TAMARAC, FLORIDA
COUNTED BY: SEBASTIAN SALVO (V)
NOT SIGNALIZED, EMERGENCY SIGNAL

Site Code : 00190049
Start Date: 03/05/19
File I.D. : 75ST_PIN
Page : 2

ALL VEHICLES

	PINE ISLAND ROAD From North				NW 75TH STREET From East				PINE ISLAND ROAD From South				DRIVEWAY From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 03/05/19																	
Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 03/05/19																	
Peak start 07:15					07:15				07:15				07:15				
Volume	0	52	1047	2	0	91	1	59	0	6	729	45	0	2	0	5	
Percent	0%	5%	95%	0%	0%	60%	1%	39%	0%	1%	93%	6%	0%	29%	0%	71%	
Pk total	1101				151				780				7				
Highest	07:30				07:15				07:15				08:00				
Volume	0	10	280	1	0	19	1	23	0	3	233	6	0	2	0	4	
Hi total	291				43				242				6				
PHF	.95				.88				.81				.29				



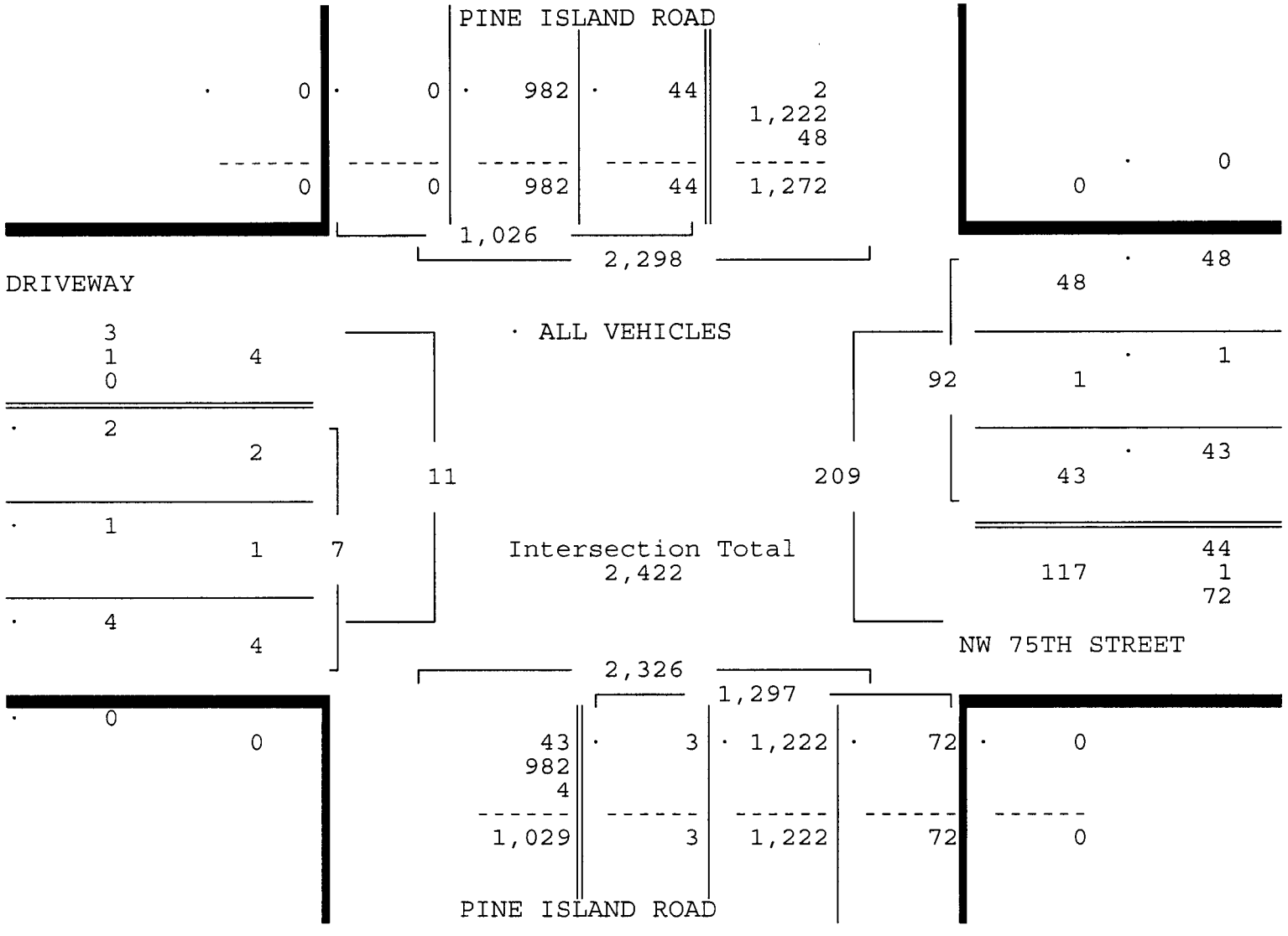
NW 75TH STREET & PINE ISLAND ROAD
TAMARAC, FLORIDA
COUNTED BY: SEBASTIAN SALVO (V)
NOT SIGNALIZED, EMERGENCY SIGNAL

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

Site Code : 00190049
Start Date: 03/05/19
File I.D. : 75ST_PIN
Page : 3

ALL VEHICLES

	PINE ISLAND ROAD From North				NW 75TH STREET From East				PINE ISLAND ROAD From South				DRIVEWAY From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 03/05/19																	
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 03/05/19																	
Peak start 17:00					17:00				17:00				17:00				
Volume	0	44	982	0	1	42	1	48	1	2	1222	72	0	2	1	4	
Percent	0%	4%	96%	0%	1%	46%	1%	52%	0%	0%	94%	6%	0%	29%	14%	57%	
Pk total	1026				92				1297				7				
Highest	17:30				17:30				17:15				17:00				
Volume	0	11	261	0	0	11	0	15	1	1	365	18	0	1	0	2	
Hi total	272				26				385				3				
PHF	.94				.88				.84				.58				



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

NW 75TH STREET & PINE ISLAND ROAD
TAMARAC, FLORIDA
COUNTED BY: SEBASTIAN SALVO (V)
NOT SIGNALIZED, EMERGENCY SIGNAL

Site Code : 00190049
Start Date: 03/05/19
File I.D. : 75ST_PIN
Page : 1

PEDESTRIANS & BIKES

	PINE ISLAND ROAD From North				NW 75TH STREET From East				PINE ISLAND ROAD From South				DRIVEWAY From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 03/05/19																	
07:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
07:15	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2
07:30	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	2
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
Hr Total	0	0	0	1	0	1	0	2	0	0	0	0	0	0	0	2	6
08:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:15	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
08:30	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
08:45	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
Hr Total	0	0	0	2	0	1	0	1	0	0	0	0	0	0	0	0	4
* BREAK *																	
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	2	4
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	3	5
17:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:30	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	0	2
17:45	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
Hr Total	0	0	0	1	0	2	0	2	0	0	0	0	0	0	0	0	5
TOTAL	0	0	0	4	0	4	0	5	0	0	0	0	0	2	0	5	20

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

NW 75TH STREET & PINE ISLAND ROAD
TAMARAC, FLORIDA
COUNTED BY: SEBASTIAN SALVO
NOT SIGNALIZED, EMERGENCY SIGNAL

Site Code : 00190049
Start Date: 03/09/19
File I.D. : 75STPINE
Page : 1

ALL VEHICLES

	PINE ISLAND ROAD From North				NW 75TH STREET From East				PINE ISLAND ROAD From South				DRIVEWAY From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 03/09/19																	
16:00	0	12	210	0	0	6	0	15	0	0	177	10	0	0	0	1	431
16:15	0	19	242	0	0	15	0	7	1	0	194	19	0	0	0	0	497
16:30	0	10	190	0	0	9	0	7	1	0	223	14	0	0	0	0	454
16:45	0	5	190	1	0	14	1	8	0	0	185	10	0	0	0	0	414
Hr Total	0	46	832	1	0	44	1	37	2	0	779	53	0	0	0	1	1796
17:00	0	8	168	0	0	18	0	12	0	0	203	14	0	1	0	1	425
17:15	1	11	233	0	0	14	0	9	0	0	203	14	0	0	0	1	486
17:30	0	9	214	0	0	8	1	11	0	0	182	15	0	0	1	0	441
17:45	1	12	213	0	0	8	0	11	0	1	200	13	0	0	0	0	459
Hr Total	2	40	828	0	0	48	1	43	0	1	788	56	0	1	1	2	1811
18:00	0	13	183	0	0	14	1	9	0	1	179	14	0	0	0	4	418
18:15	0	10	192	0	0	21	0	8	1	0	166	16	0	1	0	1	416
18:30	1	10	192	1	0	21	0	8	0	2	170	10	0	1	0	2	418
18:45	1	6	180	1	0	20	0	12	1	1	169	9	0	0	1	4	405
Hr Total	2	39	747	2	0	76	1	37	2	4	684	49	0	2	1	11	1657
TOTAL	4	125	2407	3	0	168	3	117	4	5	2251	158	0	3	2	14	5264

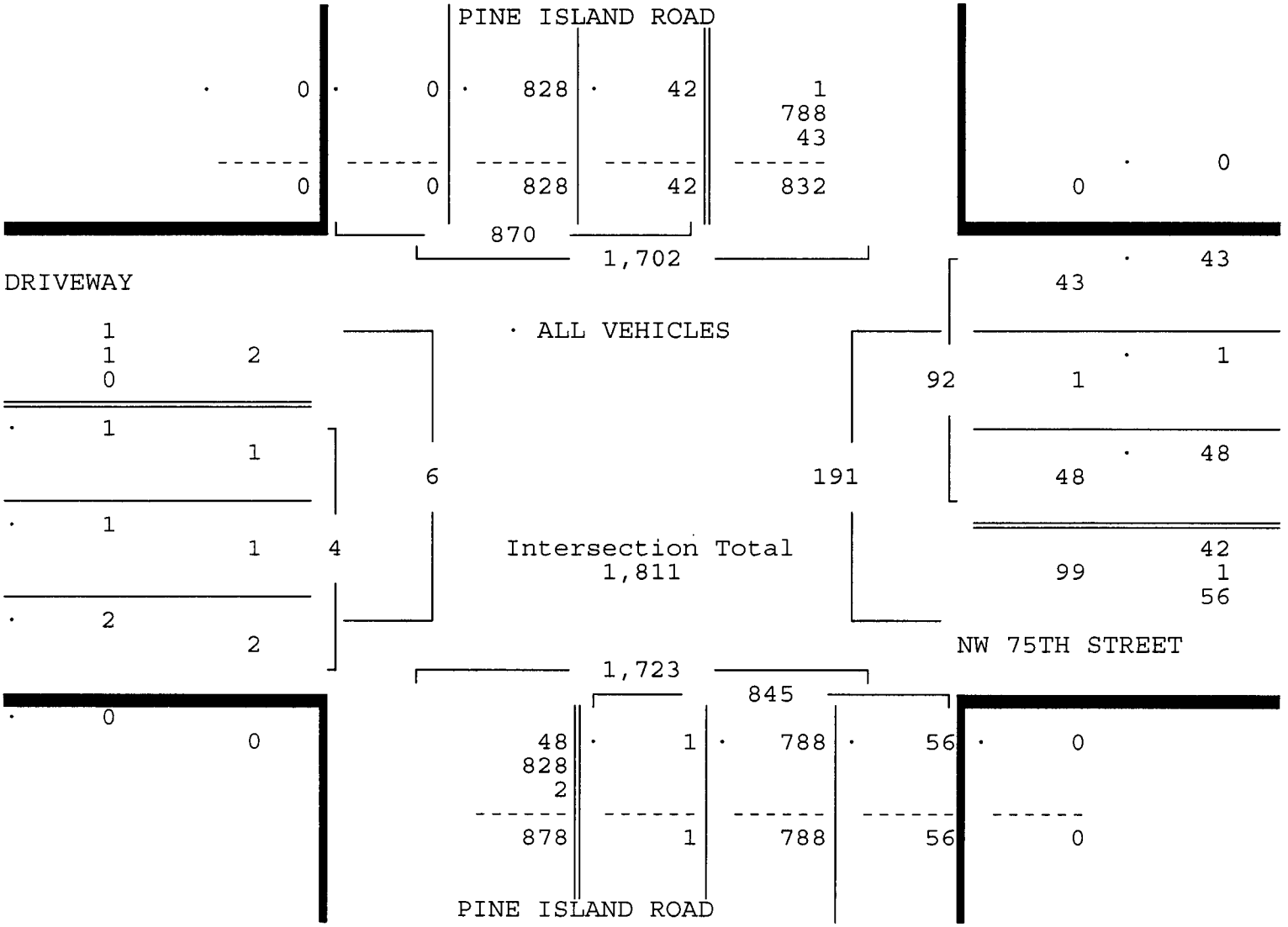
NW 75TH STREET & PINE ISLAND ROAD
TAMARAC, FLORIDA
COUNTED BY: SEBASTIAN SALVO
NOT SIGNALIZED, EMERGENCY SIGNAL

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

Site Code : 00190049
Start Date: 03/09/19
File I.D. : 75STPINE
Page : 2

ALL VEHICLES

	PINE ISLAND ROAD From North				NW 75TH STREET From East				PINE ISLAND ROAD From South				DRIVEWAY From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 03/09/19																	
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 19:00 on 03/09/19																	
Peak start	17:00				17:00				17:00				17:00				
Volume	2	40	828	0	0	48	1	43	0	1	788	56	0	1	1	2	
Percent	0%	5%	95%	0%	0%	52%	1%	47%	0%	0%	93%	7%	0%	25%	25%	50%	
Pk total	870				92				845				4				
Highest	17:15				17:00				17:00				17:00				
Volume	1	11	233	0	0	18	0	12	0	0	203	14	0	1	0	1	
Hi total	245				30				217				2				
PHF	.89				.77				.97				.50				



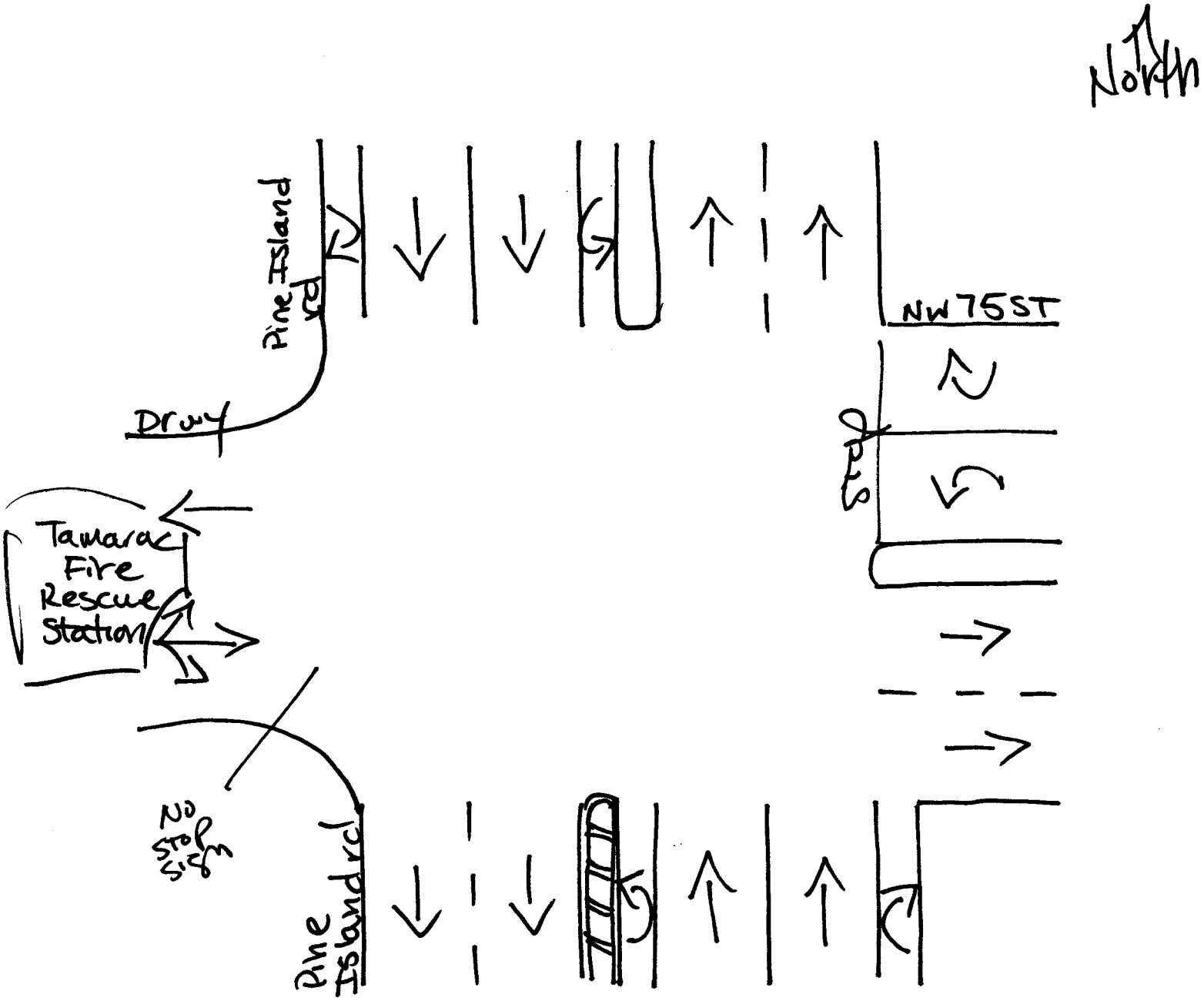
TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

NW 75TH STREET & PINE ISLAND ROAD
TAMARAC, FLORIDA
COUNTED BY: SEBASTIAN SALVO
NOT SIGNALIZED, EMERGENCY SIGNAL

Site Code : 00190049
Start Date: 03/09/19
File I.D. : 75STPINE
Page : 1

PEDESTRIANS & BIKES

	PINE ISLAND ROAD From North				NW 75TH STREET From East				PINE ISLAND ROAD From South				DRIVEWAY From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 03/09/19																	
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	3
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	3
---------- * BREAK * ----------																	
TOTAL	0	0	0	1	0	0	0	1	0	0	0	0	0	0	0	2	4



Tamarac, Florida
March 05, 2019
drawn by: Luis Palomino
not Signalized
Emergency Signal.

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

NW 81ST STREET & PINE ISLAND ROAD
TAMARAC, FLORIDA
COUNTED BY: JOHN FLOOD
SIGNALIZED

Site Code : 00190049
Start Date: 03/05/19
File I.D. : 81STPINE
Page : 1

ALL VEHICLES

	PINE ISLAND ROAD From North				NW 81ST STREET From East				PINE ISLAND ROAD From South				NW 81ST STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 03/05/19																	
07:00	0	23	116	9	0	7	14	60	1	3	220	2	0	8	3	14	480
07:15	0	39	193	8	0	8	14	106	2	6	277	13	0	17	15	9	707
07:30	0	51	213	18	0	11	18	52	2	8	182	23	0	10	24	10	622
07:45	0	51	205	11	0	8	9	54	1	10	177	13	0	8	18	9	574
Hr Total	0	164	727	46	0	34	55	272	6	27	856	51	0	43	60	42	2383
08:00	0	42	236	18	0	18	11	37	2	4	177	5	0	11	9	7	577
08:15	1	36	171	11	0	9	9	33	2	3	188	6	0	7	13	6	495
08:30	0	30	206	8	0	3	7	21	3	7	180	3	0	9	14	18	509
08:45	1	36	171	16	0	4	9	35	3	6	222	11	0	8	16	17	555
Hr Total	2	144	784	53	0	34	36	126	10	20	767	25	0	35	52	48	2136
* BREAK *																	
16:00	0	31	168	32	0	4	13	30	2	4	188	9	0	9	7	9	506
16:15	0	45	209	29	0	7	14	36	1	6	211	9	0	13	13	3	596
16:30	0	35	180	26	0	9	11	36	3	5	202	5	0	6	9	9	536
16:45	0	41	247	28	0	10	7	34	3	11	252	10	0	16	10	6	675
Hr Total	0	152	804	115	0	30	45	136	9	26	853	33	0	44	39	27	2313
17:00	0	49	237	36	0	8	14	50	0	10	250	20	0	15	12	11	712
17:15	2	35	257	32	0	15	9	47	1	5	354	15	0	11	15	6	804
17:30	0	49	275	27	0	7	12	41	0	14	300	11	0	13	10	8	767
17:45	0	49	217	32	0	9	10	42	0	10	250	5	0	10	12	14	660
Hr Total	2	182	986	127	0	39	45	180	1	39	1154	51	0	49	49	39	2943
TOTAL	4	642	3301	341	0	137	181	714	26	112	3630	160	0	171	200	156	9775

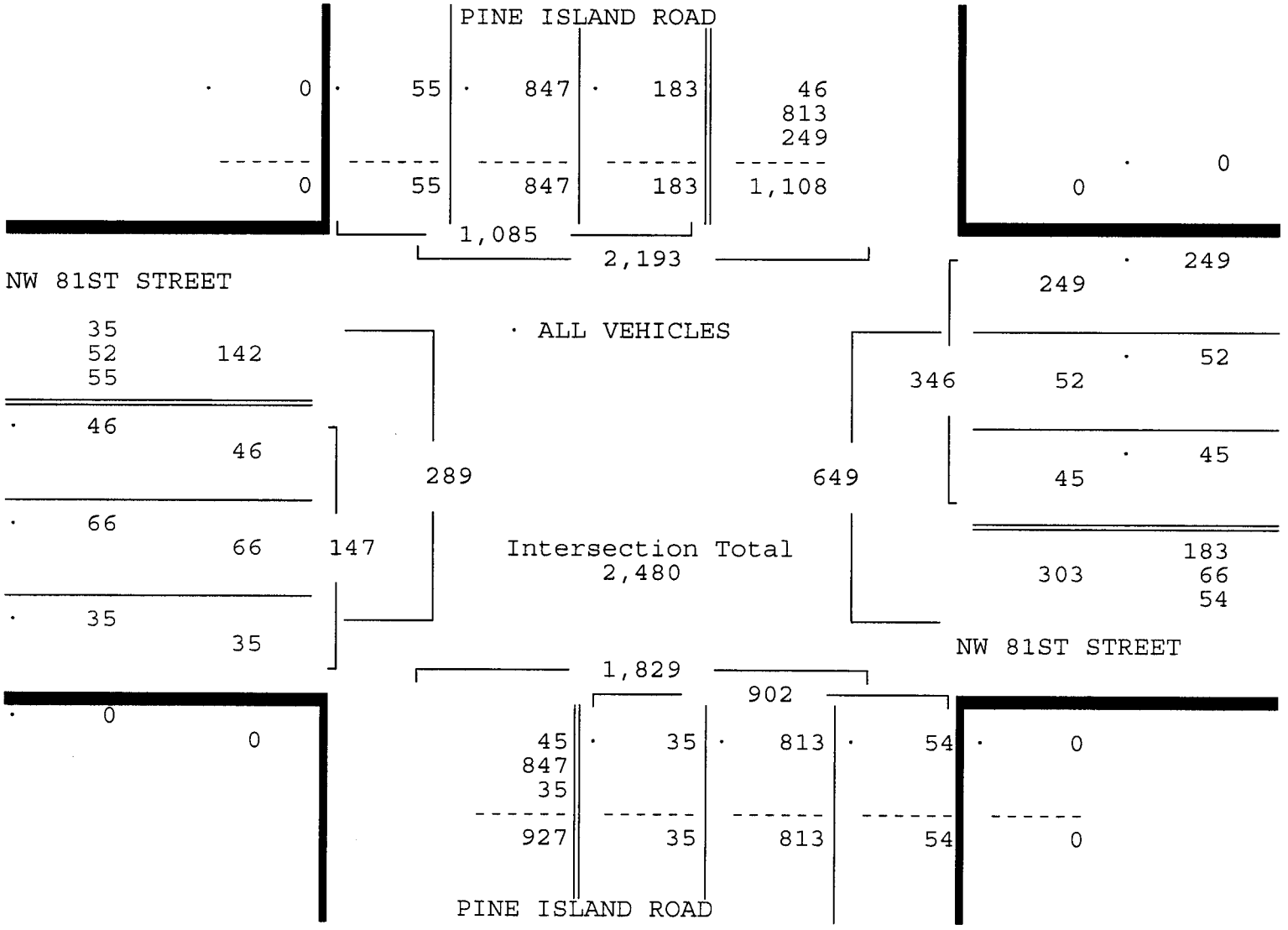
TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

NW 81ST STREET & PINE ISLAND ROAD
TAMARAC, FLORIDA
COUNTED BY: JOHN FLOOD
SIGNALIZED

Site Code : 00190049
Start Date: 03/05/19
File I.D. : 81STPINE
Page : 2

ALL VEHICLES

	PINE ISLAND ROAD From North				NW 81ST STREET From East				PINE ISLAND ROAD From South				NW 81ST STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 03/05/19																	
Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 03/05/19																	
Peak start 07:15					07:15				07:15				07:15				
Volume	0	183	847	55	0	45	52	249	7	28	813	54	0	46	66	35	
Percent	0%	17%	78%	5%	0%	13%	15%	72%	1%	3%	90%	6%	0%	31%	45%	24%	
Pk total	1085				346				902				147				
Highest	08:00				07:15				07:15				07:30				
Volume	0	42	236	18	0	8	14	106	2	6	277	13	0	10	24	10	
Hi total	296				128				298				44				
PHF	.92				.68				.76				.84				



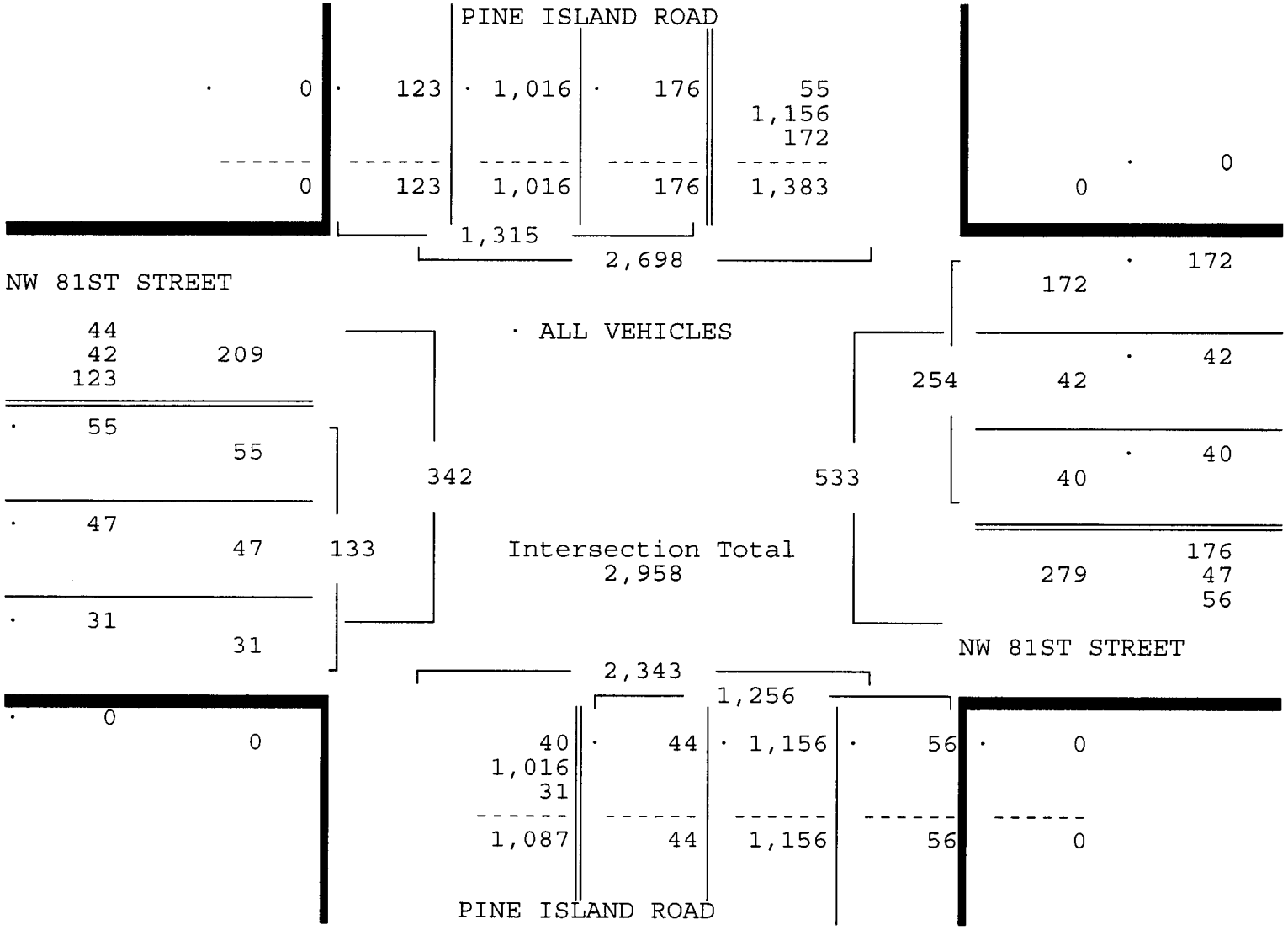
TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

NW 81ST STREET & PINE ISLAND ROAD
TAMARAC, FLORIDA
COUNTED BY: JOHN FLOOD
SIGNALIZED

Site Code : 00190049
Start Date: 03/05/19
File I.D. : 81STPINE
Page : 3

ALL VEHICLES

	PINE ISLAND ROAD From North				NW 81ST STREET From East				PINE ISLAND ROAD From South				NW 81ST STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 03/05/19																	
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 03/05/19																	
Peak start	16:45				16:45				16:45				16:45				
Volume	2	174	1016	123	0	40	42	172	4	40	1156	56	0	55	47	31	
Percent	0%	13%	77%	9%	0%	16%	17%	68%	0%	3%	92%	4%	0%	41%	35%	23%	
Pk total	1315				254				1256				133				
Highest	17:30				17:00				17:15				17:00				
Volume	0	49	275	27	0	8	14	50	1	5	354	15	0	15	12	11	
Hi total	351				72				375				38				
PHF	.94				.88				.84				.88				



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

NW 81ST STREET & PINE ISLAND ROAD
TAMARAC, FLORIDA
COUNTED BY: JOHN FLOOD
SIGNALIZED

Site Code : 00190049
Start Date: 03/05/19
File I.D. : 81STPINE
Page : 1

PEDESTRIANS & BIKES

	PINE ISLAND ROAD From North				NW 81ST STREET From East				PINE ISLAND ROAD From South				NW 81ST STREET From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 03/05/19																	
07:00	0	0	0	0	0	2	0	0	0	0	0	0	0	1	0	2	5
07:15	0	0	0	0	0	0	0	7	0	0	0	1	0	1	0	2	11
07:30	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Hr Total	0	0	0	0	0	3	0	7	0	0	0	1	0	3	0	4	18
08:00	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	1	3
08:15	0	4	0	0	0	0	0	2	0	0	0	3	0	0	0	1	10
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	1	0	0	0	9	0	0	0	0	0	1	11
Hr Total	0	4	0	0	0	3	0	2	0	9	0	3	0	0	0	3	24
* BREAK *																	
16:00	0	0	0	0	0	0	0	0	0	0	0	2	0	1	0	0	3
16:15	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
16:30	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	1	0	1	0	2	0	1	0	0	5
17:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
17:15	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	2
17:30	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	0	2
17:45	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Hr Total	0	1	0	0	0	1	0	2	0	1	0	1	0	0	0	0	6
TOTAL	0	5	0	0	0	7	0	12	0	11	0	7	0	4	0	7	53

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

NW 81ST STREET & PINE ISLAND ROAD
TAMARAC, FLORIDA
COUNTED BY: JOHN FLOOD
SIGNALIZED

Site Code : 00190049
Start Date: 03/09/19
File I.D. : 81ST_PIN
Page : 1

ALL VEHICLES

	PINE ISLAND ROAD From North				NW 81ST STREET From East				PINE ISLAND ROAD From South				NW 81ST STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 03/09/19																	
16:00	1	33	192	27	0	7	15	33	1	7	152	6	0	14	4	8	500
16:15	1	29	185	22	0	2	10	36	1	4	160	4	0	14	9	12	489
16:30	0	31	189	27	0	2	5	22	0	4	159	5	0	13	6	10	473
16:45	0	32	171	28	0	6	7	32	0	9	191	10	0	11	7	7	511
Hr Total	2	125	737	104	0	17	37	123	2	24	662	25	0	52	26	37	1973
17:00	0	26	184	28	0	4	6	39	4	1	186	6	1	12	3	5	505
17:15	0	23	189	26	0	2	10	24	1	5	174	11	0	10	8	10	493
17:30	0	24	185	25	1	7	11	29	1	7	157	5	0	13	7	14	486
17:45	0	20	186	21	0	5	4	27	0	10	152	7	0	10	5	10	457
Hr Total	0	93	744	100	1	18	31	119	6	23	669	29	1	45	23	39	1941
18:00	0	22	158	23	0	2	11	19	0	5	150	9	1	9	10	9	428
18:15	0	28	170	29	0	3	7	22	1	7	154	3	0	12	11	11	458
18:30	0	29	170	27	0	4	6	35	3	7	172	7	0	11	3	7	481
18:45	1	28	165	28	0	8	13	14	0	10	136	4	0	5	3	8	423
Hr Total	1	107	663	107	0	17	37	90	4	29	612	23	1	37	27	35	1790
TOTAL	3	325	2144	311	1	52	105	332	12	76	1943	77	2	134	76	111	5704

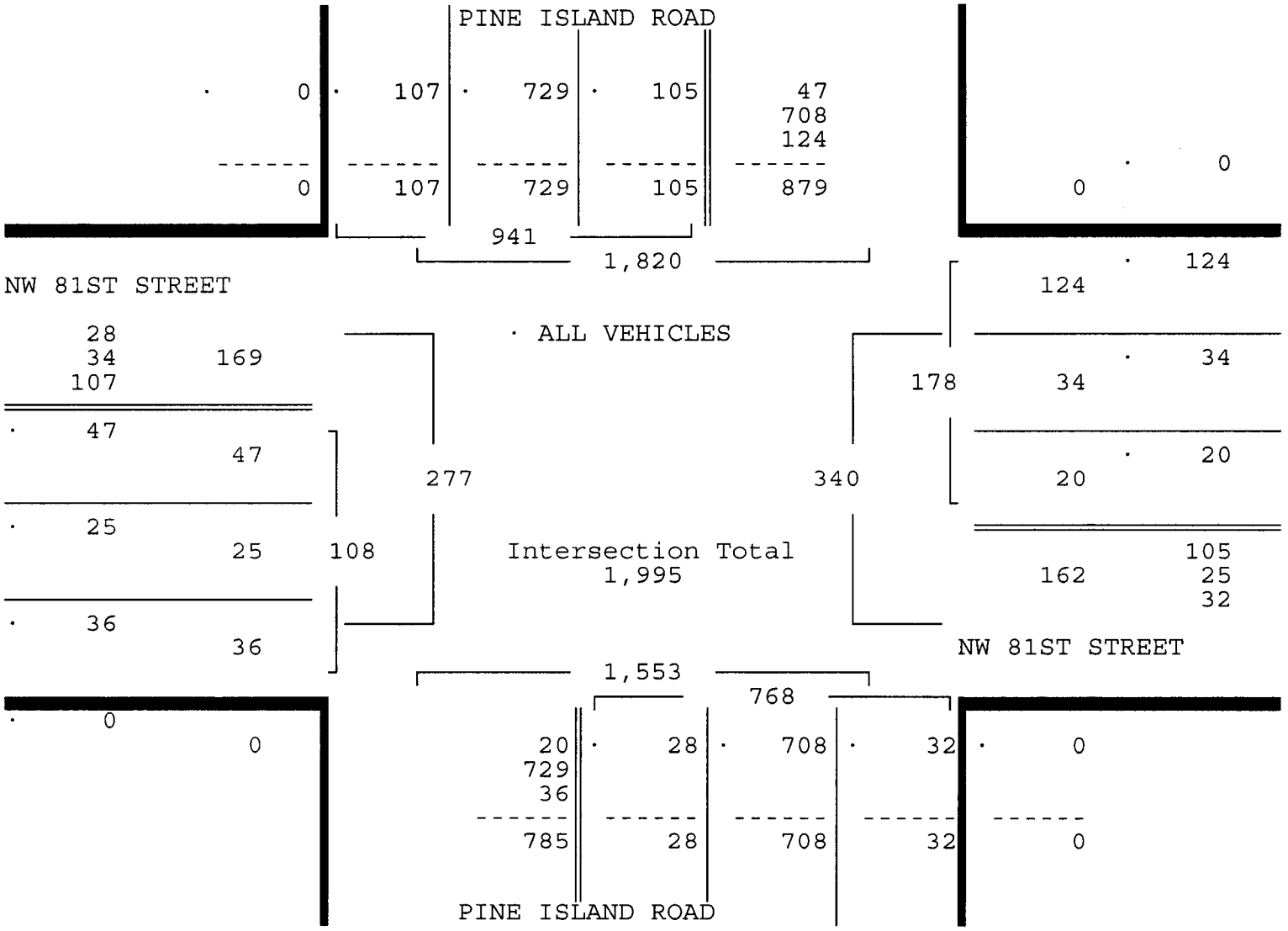
NW 81ST STREET & PINE ISLAND ROAD
TAMARAC, FLORIDA
COUNTED BY: JOHN FLOOD
SIGNALIZED

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

Site Code : 00190049
Start Date: 03/09/19
File I.D. : 81ST_PIN
Page : 2

ALL VEHICLES

	PINE ISLAND ROAD From North				NW 81ST STREET From East				PINE ISLAND ROAD From South				NW 81ST STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 03/09/19																	
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 19:00 on 03/09/19																	
Peak start 16:45					16:45				16:45				16:45				
Volume	0	105	729	107	1	19	34	124	6	22	708	32	1	46	25	36	
Percent	0%	11%	77%	11%	1%	11%	19%	70%	1%	3%	92%	4%	1%	43%	23%	33%	
Pk total	941				178				768				108				
Highest	17:00				17:00				16:45				17:30				
Volume	0	26	184	28	0	4	6	39	0	9	191	10	0	13	7	14	
Hi total	238				49				210				34				
PHF	.99				.91				.91				.79				



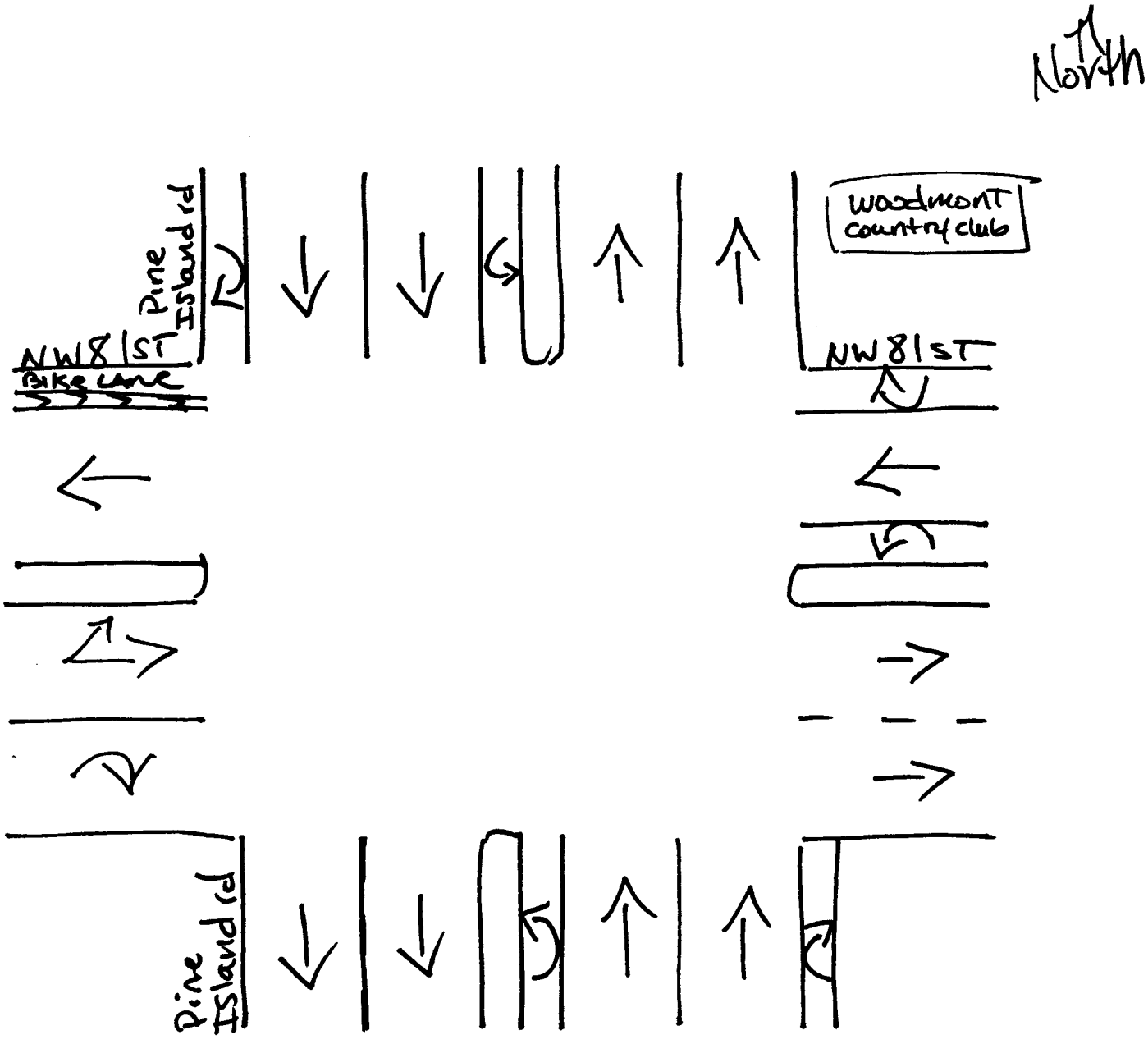
TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

NW 81ST STREET & PINE ISLAND ROAD
TAMARAC, FLORIDA
COUNTED BY: JOHN FLOOD
SIGNALIZED

Site Code : 00190049
Start Date: 03/09/19
File I.D. : 81ST_PIN
Page : 1

PEDESTRIANS & BIKES

	PINE ISLAND ROAD From North				NW 81ST STREET From East				PINE ISLAND ROAD From South				NW 81ST STREET From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 03/09/19																	
16:00	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2
16:45	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	2	4
Hr Total	0	1	0	0	0	1	0	1	0	0	0	0	0	2	0	2	7
* BREAK *																	
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
TOTAL	0	1	0	0	0	1	0	1	0	0	0	0	0	2	0	4	9



Tamarac, Florida

March 05, 2019

drawn by: Luis Palomino

signalized

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

W MCNAB ROAD & NW 80TH AVENUE
TAMARAC, FLORIDA
COUNTED BY: L. PALOMINO & S. SALVO
SIGNALIZED

Site Code : 00190049
Start Date: 03/05/19
File I.D. : MCNA80AV
Page : 1

ALL VEHICLES

	NW 80TH AVENUE From North				W MCNAB ROAD From East				LAGOS DE CAMPO BOULEVARD From South				W MCNAB ROAD From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 03/05/19																	
07:00	0	45	1	20	0	15	196	35	0	7	13	59	0	17	243	2	653
07:15	0	64	7	25	0	21	289	33	0	8	15	64	0	20	268	1	815
07:30	0	53	5	24	0	15	286	30	1	5	12	45	0	17	306	2	801
07:45	0	18	5	27	0	14	262	29	0	6	18	41	0	31	258	3	712
Hr Total	0	180	18	96	0	65	1033	127	1	26	58	209	0	85	1075	8	2981
08:00	0	33	7	33	2	13	272	33	1	3	9	41	0	16	266	6	735
08:15	0	37	6	23	1	14	258	26	0	4	4	35	0	19	295	3	725
08:30	0	44	6	18	2	15	234	31	0	3	12	41	0	31	251	5	693
08:45	1	23	9	15	2	9	234	34	0	6	8	39	0	16	263	7	666
Hr Total	1	137	28	89	7	51	998	124	1	16	33	156	0	82	1075	21	2819
* BREAK *																	
16:00	0	30	16	18	3	46	269	49	0	2	11	29	0	8	251	4	736
16:15	0	34	7	16	3	33	276	37	2	5	6	27	2	16	200	6	670
16:30	0	30	10	17	1	33	300	59	2	2	13	28	0	12	271	3	781
16:45	0	25	7	22	0	32	294	45	1	0	11	30	1	17	286	5	776
Hr Total	0	119	40	73	7	144	1139	190	5	9	41	114	3	53	1008	18	2963
17:00	0	42	15	28	2	41	265	39	2	12	6	36	2	12	289	9	800
17:15	0	24	8	27	0	44	332	51	0	3	6	25	0	16	335	7	878
17:30	0	23	8	18	1	32	326	47	1	4	10	36	1	21	314	15	857
17:45	0	39	18	20	3	55	247	41	0	4	7	27	0	19	274	9	763
Hr Total	0	128	49	93	6	172	1170	178	3	23	29	124	3	68	1212	40	3298
TOTAL	1	564	135	351	20	432	4340	619	10	74	161	603	6	288	4370	87	12061

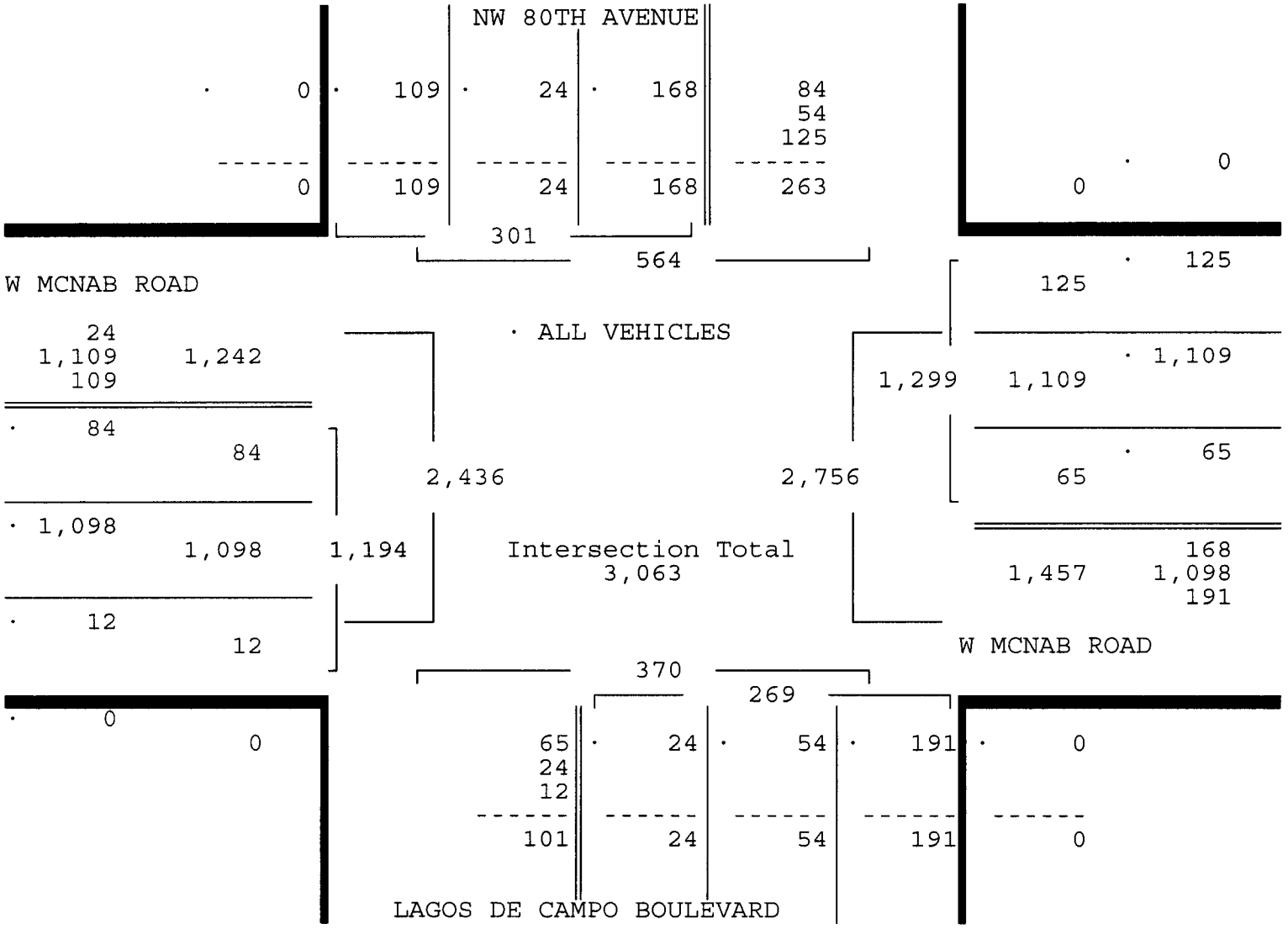
W MCNAB ROAD & NW 80TH AVENUE
TAMARAC, FLORIDA
COUNTED BY: L. PALOMINO & S. SALVO
SIGNALIZED

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

Site Code : 00190049
Start Date: 03/05/19
File I.D. : MCNA80AV
Page : 2

ALL VEHICLES

	NW 80TH AVENUE From North				W MCNAB ROAD From East				LAGOS DE CAMPO BOULEVARD From South				W MCNAB ROAD From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 03/05/19																	
Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 03/05/19																	
Peak start 07:15					07:15				07:15				07:15				
Volume	0	168	24	109	2	63	1109	125	2	22	54	191	0	84	1098	12	
Percent	0%	56%	8%	36%	0%	5%	85%	10%	1%	8%	20%	71%	0%	7%	92%	1%	
Pk total	301				1299				269				1194				
Highest	07:15				07:15				07:15				07:30				
Volume	0	64	7	25	0	21	289	33	0	8	15	64	0	17	306	2	
Hi total	96				343				87				325				
PHF	.78				.95				.77				.92				



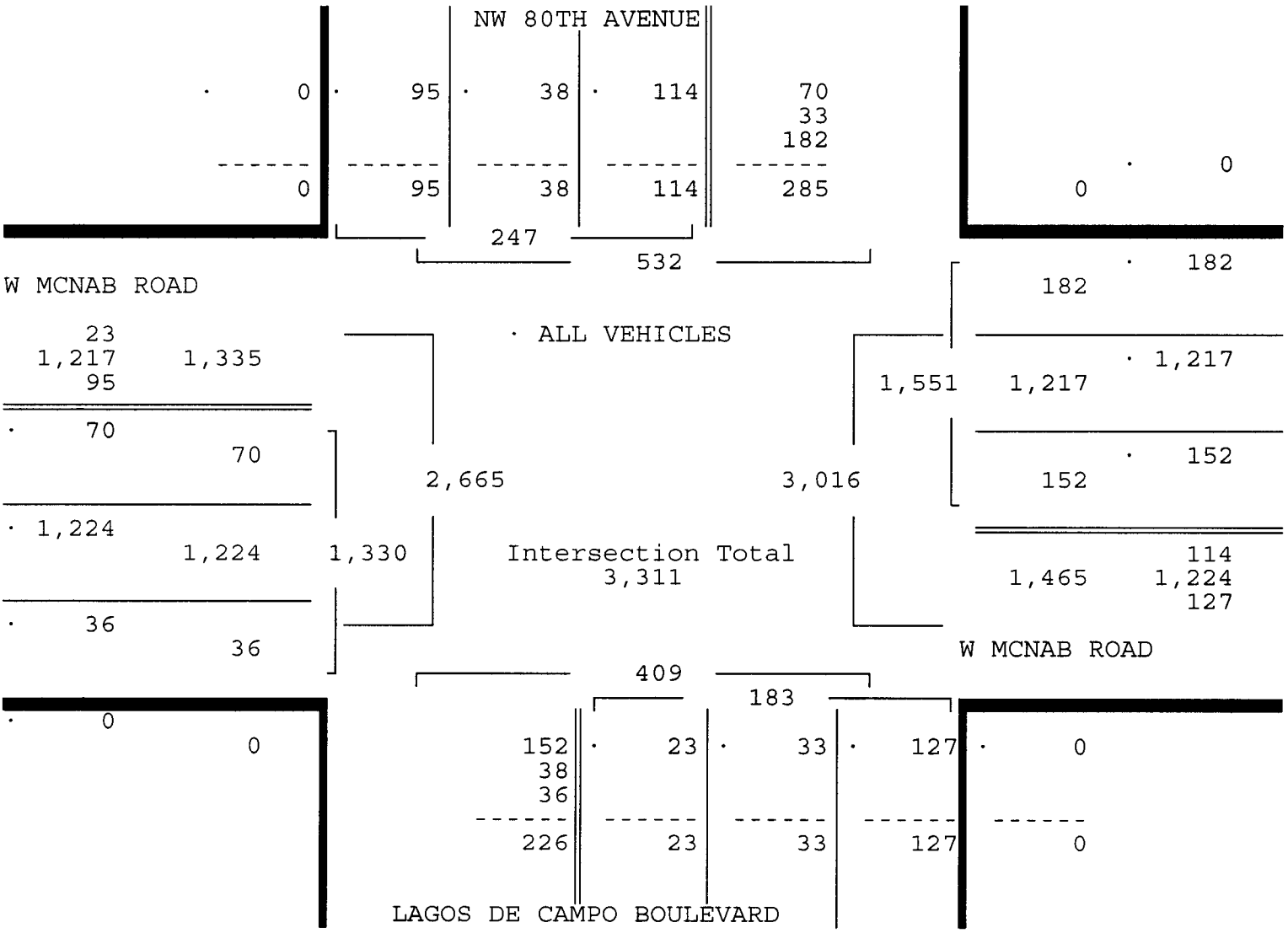
TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

W MCNAB ROAD & NW 80TH AVENUE
TAMARAC, FLORIDA
COUNTED BY: L. PALOMINO & S. SALVO
SIGNALIZED

Site Code : 00190049
Start Date: 03/05/19
File I.D. : MCNA80AV
Page : 3

ALL VEHICLES

	NW 80TH AVENUE From North				W MCNAB ROAD From East				LAGOS DE CAMPO BOULEVARD From South				W MCNAB ROAD From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 03/05/19																	
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 03/05/19																	
Peak start 16:45					16:45				16:45				16:45				
Volume	0	114	38	95	3	149	1217	182	4	19	33	127	4	66	1224	36	
Percent	0%	46%	15%	38%	0%	10%	78%	12%	2%	10%	18%	69%	0%	5%	92%	3%	
Pk total	247				1551				183				1330				
Highest	17:00				17:15				17:00				17:15				
Volume	0	42	15	28	0	44	332	51	2	12	6	36	0	16	335	7	
Hi total	85				427				56				358				
PHF	.73				.91				.82				.93				



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

W MCNAB ROAD & NW 80TH AVENUE
TAMARAC, FLORIDA
COUNTED BY: L. PALOMINO & S. SALVO
SIGNALIZED

Site Code : 00190049
Start Date: 03/05/19
File I.D. : MCNA80AV
Page : 1

PEDESTRIANS & BIKES

	NW 80TH AVENUE From North				W MCNAB ROAD From East				LAGOS DE CAMPO BOULEVARD From South				W MCNAB ROAD From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 03/05/19																	
07:00	0	0	0	0	0	1	0	1	0	1	0	2	0	0	0	0	5
07:15	0	0	0	0	0	0	0	1	0	1	0	1	0	0	0	0	3
07:30	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Hr Total	0	0	0	0	0	1	0	2	0	2	0	4	0	1	0	0	10
08:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1	2
08:15	0	0	0	0	0	0	0	0	0	1	0	1	0	1	0	1	4
08:30	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
Hr Total	0	0	0	1	0	0	0	0	0	2	0	2	0	1	0	2	8
* BREAK *																	
16:00	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	1
16:15	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	5	7
16:30	0	2	0	1	0	0	0	2	0	0	0	0	0	0	0	0	5
16:45	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	2	3
Hr Total	0	2	0	2	0	0	0	2	0	0	0	3	0	0	0	7	16
17:00	0	1	0	0	0	0	0	1	0	0	0	0	0	1	0	1	4
17:15	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	2
17:30	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	3
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	1	0	0	0	2	0	2	0	1	0	1	0	1	0	1	9
TOTAL	0	3	0	3	0	3	0	6	0	5	0	10	0	3	0	10	43

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

W MCNAB ROAD & NW 80TH AVENUE
TAMARAC, FLORIDA
COUNTED BY: MIKE MALONE
SIGNALIZED

Site Code : 00190049
Start Date: 03/09/19
File I.D. : MCN_80AV
Page : 1

ALL VEHICLES

	NW 80TH AVENUE From North				MCNAB ROAD From East				LAGOS DE CAMPO BOULEVARD From South				MCNAB ROAD From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 03/09/19																	
16:00	0	13	8	13	2	23	181	38	1	4	4	24	0	11	184	3	509
16:15	0	24	11	11	2	33	136	31	0	10	2	19	0	7	129	4	419
16:30	0	30	5	10	5	23	177	34	0	3	4	28	0	8	151	5	483
16:45	0	19	12	15	3	27	151	18	0	20	10	14	1	24	176	10	500
Hr Total	0	86	36	49	12	106	645	121	1	37	20	85	1	50	640	22	1911
17:00	0	14	7	5	4	23	153	10	2	5	8	14	2	8	164	13	432
17:15	0	8	5	7	0	16	168	5	6	5	6	10	0	7	146	11	400
17:30	1	7	8	5	4	6	129	14	1	5	7	5	3	12	151	6	364
17:45	0	7	3	8	1	9	134	13	0	19	6	14	0	11	151	5	381
Hr Total	1	36	23	25	9	54	584	42	9	34	27	43	5	38	612	35	1577
18:00	0	7	13	3	0	0	136	5	0	9	8	10	1	7	157	6	362
18:15	0	8	4	7	1	3	120	6	0	6	3	3	1	6	126	5	299
18:30	0	16	3	8	0	22	140	20	1	5	1	20	0	8	151	9	404
18:45	0	13	2	4	0	16	155	9	0	9	2	21	2	10	154	6	403
Hr Total	0	44	22	22	1	41	551	40	1	29	14	54	4	31	588	26	1468
TOTAL	1	166	81	96	22	201	1780	203	11	100	61	182	10	119	1840	83	4956

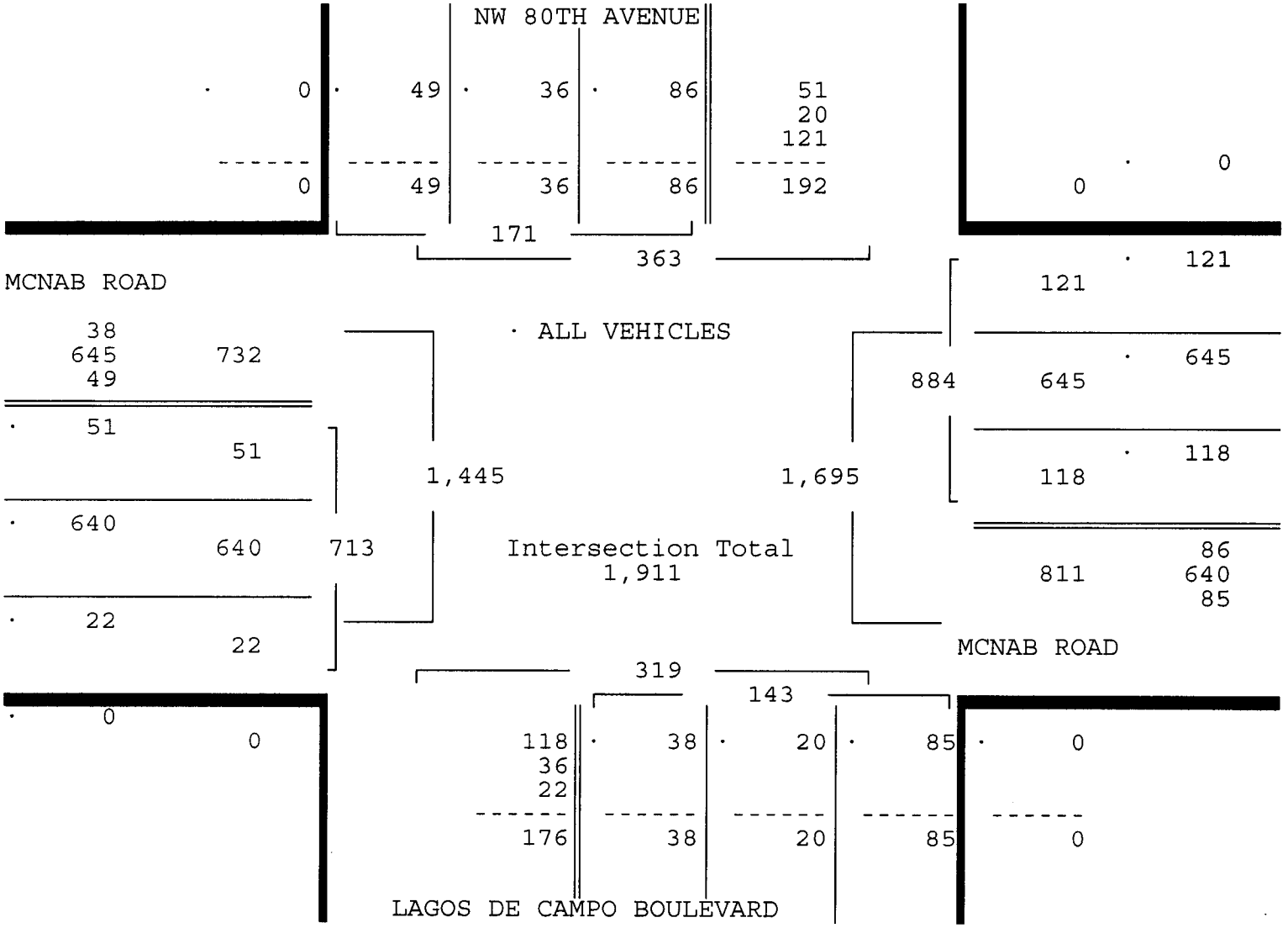
W MCNAB ROAD & NW 80TH AVENUE
TAMARAC, FLORIDA
COUNTED BY: MIKE MALONE
SIGNALIZED

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

Site Code : 00190049
Start Date: 03/09/19
File I.D. : MCN_80AV
Page : 2

ALL VEHICLES

	NW 80TH AVENUE From North				MCNAB ROAD From East				LAGOS DE CAMPO BOULEVARD From South				MCNAB ROAD From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 03/09/19																	
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 19:00 on 03/09/19																	
Peak start 16:00					16:00				16:00				16:00				
Volume	0	86	36	49	12	106	645	121	1	37	20	85	1	50	640	22	
Percent	0%	50%	21%	29%	1%	12%	73%	14%	1%	26%	14%	59%	0%	7%	90%	3%	
Pk total	171				884				143				713				
Highest	16:15				16:00				16:45				16:45				
Volume	0	24	11	11	2	23	181	38	0	20	10	14	1	24	176	10	
Hi total	46				244				44				211				
PHF	.93				.91				.81				.84				



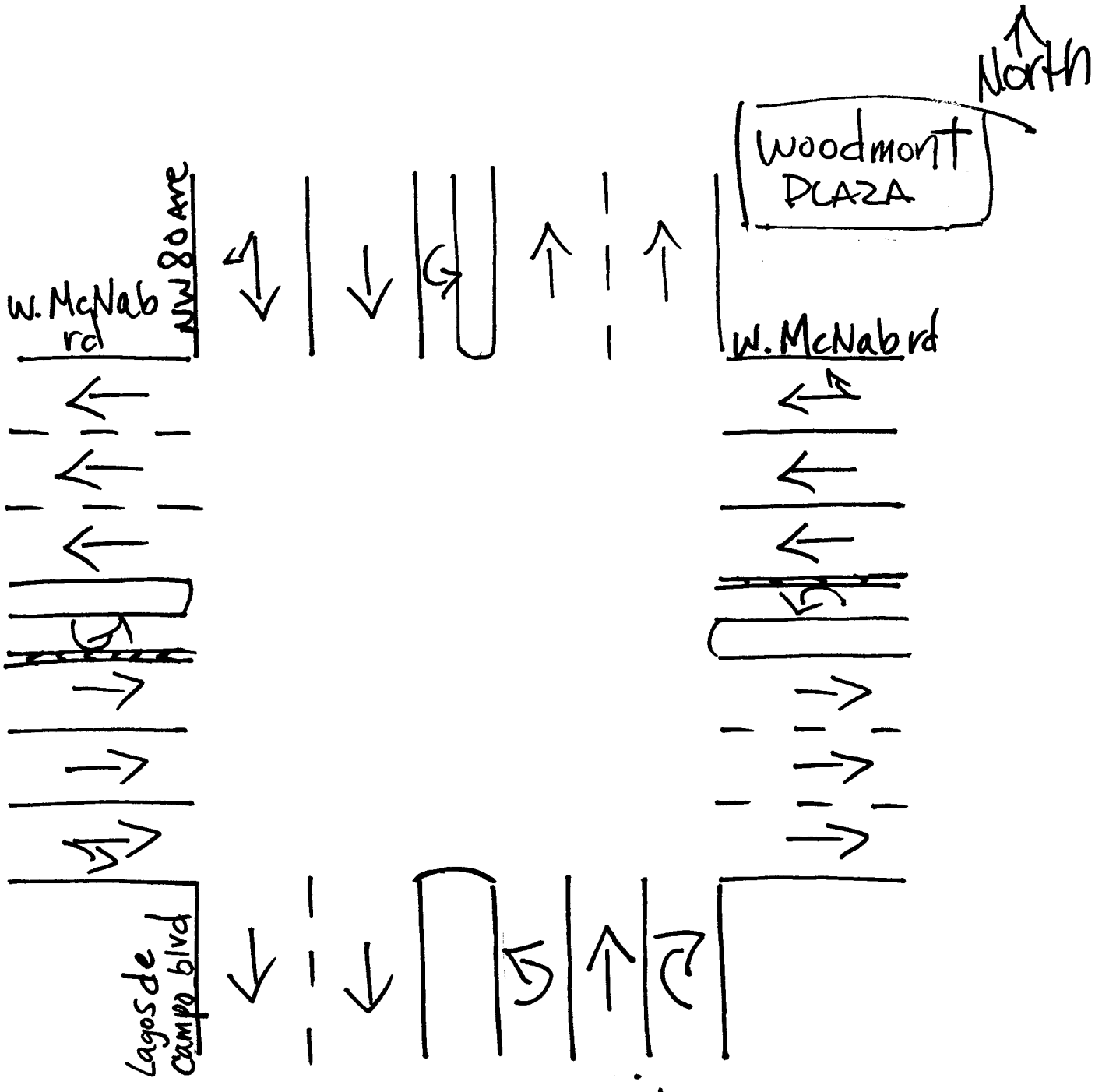
TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

W MCNAB ROAD & NW 80TH AVENUE
TAMARAC, FLORIDA
COUNTED BY: MIKE MALONE
SIGNALIZED

Site Code : 00190049
Start Date: 03/09/19
File I.D. : MCN_80AV
Page : 1

PEDESTRIANS & BIKES

	NW 80TH AVENUE From North				MCNAB ROAD From East				LAGOS DE CAMPO BOULEVARD From South				MCNAB ROAD From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 03/09/19																	
16:00	0	1	0	0	0	0	0	1	0	0	0	0	0	0	0	0	2
16:15	0	0	0	1	0	0	0	1	0	1	0	0	0	0	0	0	3
16:30	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
16:45	0	0	0	1	0	0	0	2	0	0	0	0	0	0	0	0	3
Hr Total	0	1	0	2	0	0	0	5	0	1	0	0	0	0	0	0	9
17:00	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	0	3
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	2	0	0	0	2	0	0	0	0	0	0	0	0	4
Hr Total	0	0	0	2	0	0	0	4	0	0	0	0	0	1	0	1	8
18:00	0	0	0	3	0	0	0	0	0	0	0	2	0	0	0	0	5
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	2
Hr Total	0	0	0	4	0	0	0	0	0	0	0	2	0	0	0	1	7
TOTAL	0	1	0	8	0	0	0	9	0	1	0	2	0	1	0	2	24



Tamarac, Florida
March 05, 2019
drawn by: Luis Palomino
Signalized

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

NW 75TH STREET & NW 80TH AVENUE
TAMARAC, FLORIDA
COUNTED BY: LUIS PALOMINO (V)
NOT SIGNALIZED

Site Code : 00190049
Start Date: 03/05/19
File I.D. : 75ST80AV
Page : 1

ALL VEHICLES

	NW 80TH AVENUE From North				----- From East				NW 80TH AVENUE From South				NW 75TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 03/05/19																	
07:00	0	0	25	8	0	0	0	0	0	2	52	0	0	14	0	22	123
07:15	1	0	49	13	0	0	0	0	0	8	63	0	0	14	0	21	169
07:30	0	0	42	24	0	0	0	0	0	4	56	0	0	15	0	16	157
07:45	0	0	51	24	0	0	0	0	0	2	56	0	0	29	0	14	176
Hr Total	1	0	167	69	0	0	0	0	0	16	227	0	0	72	0	73	625
08:00	2	0	64	23	0	0	0	0	1	8	35	0	0	26	0	17	176
08:15	0	0	47	21	0	0	0	0	0	7	25	0	0	19	0	17	136
08:30	1	0	35	17	0	0	0	0	1	9	46	0	0	30	0	12	151
08:45	0	0	44	18	0	0	0	0	5	9	36	0	0	25	0	13	150
Hr Total	3	0	190	79	0	0	0	0	7	33	142	0	0	100	0	59	613
* BREAK *																	
16:00	0	0	33	16	0	0	0	0	0	15	35	0	0	28	0	13	140
16:15	0	0	40	16	0	0	0	0	1	11	39	0	0	23	0	9	139
16:30	1	0	40	16	0	0	0	0	0	19	57	0	0	19	0	9	161
16:45	0	0	30	15	0	0	0	0	0	10	38	0	0	17	0	9	119
Hr Total	1	0	143	63	0	0	0	0	1	55	169	0	0	87	0	40	559
17:00	0	0	39	12	0	0	0	0	0	13	55	0	0	23	0	10	152
17:15	2	0	43	22	0	0	0	0	0	16	59	0	1	24	0	9	176
17:30	0	0	30	25	0	0	0	0	0	9	54	0	0	20	0	9	147
17:45	0	0	45	13	0	0	0	0	1	12	42	0	0	27	0	12	152
Hr Total	2	0	157	72	0	0	0	0	1	50	210	0	1	94	0	40	627
TOTAL	7	0	657	283	0	0	0	0	9	154	748	0	1	353	0	212	2424

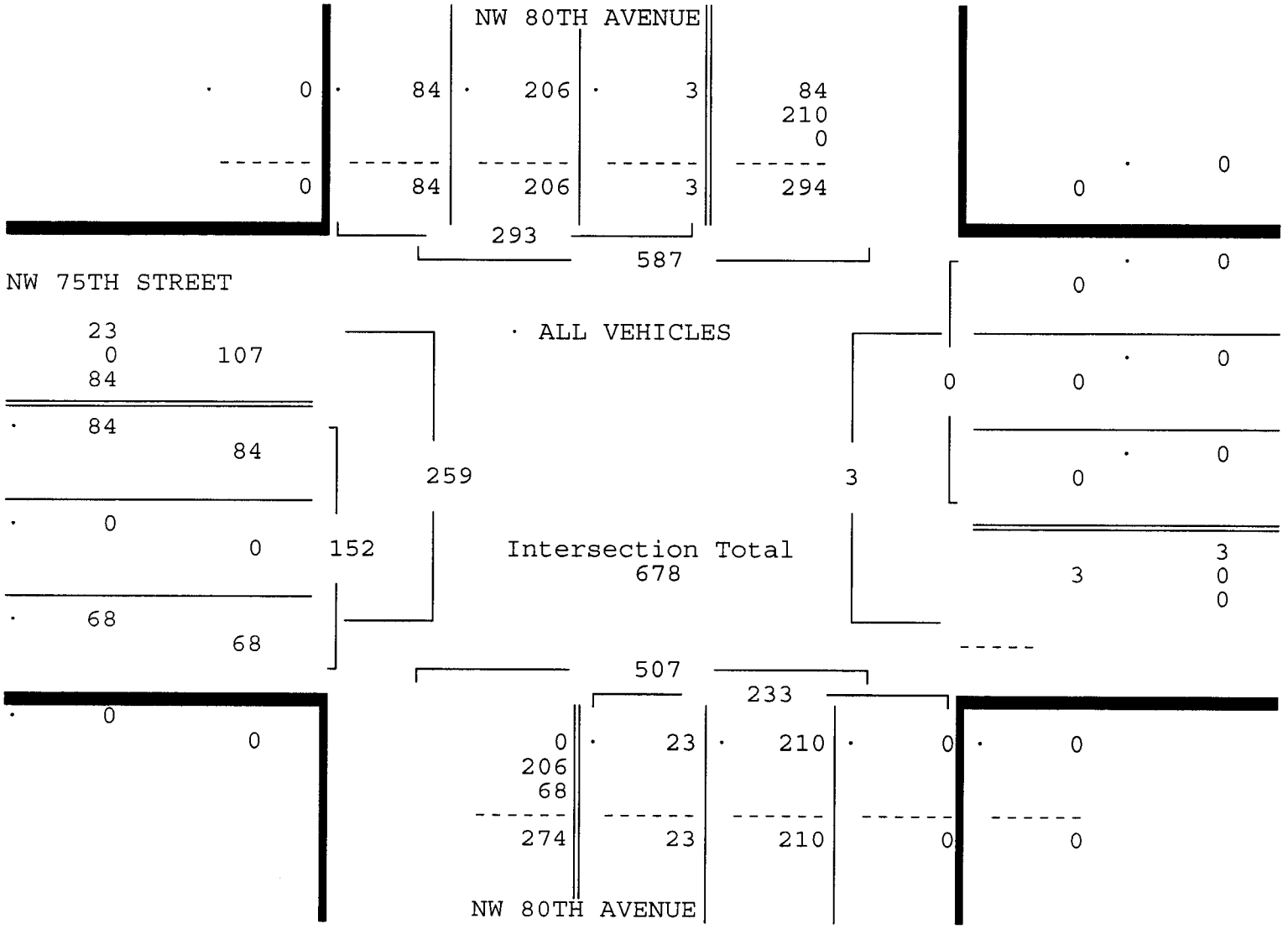
TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

NW 75TH STREET & NW 80TH AVENUE
TAMARAC, FLORIDA
COUNTED BY: LUIS PALOMINO (V)
NOT SIGNALIZED

Site Code : 00190049
Start Date: 03/05/19
File I.D. : 75ST80AV
Page : 2

ALL VEHICLES

	NW 80TH AVENUE From North				----- From East				NW 80TH AVENUE From South				NW 75TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 03/05/19																	
Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 03/05/19																	
Peak start 07:15					07:15				07:15				07:15				
Volume	3	0	206	84	0	0	0	0	1	22	210	0	0	84	0	68	
Percent	1%	0%	70%	29%	0%	0%	0%	0%	0%	9%	90%	0%	0%	55%	0%	45%	
Pk total	293				0				233				152				
Highest	08:00				07:00				07:15				07:45				
Volume	2	0	64	23	0	0	0	0	0	8	63	0	0	29	0	14	
Hi total	89				0				71				43				
PHF	.82				.0				.82				.88				



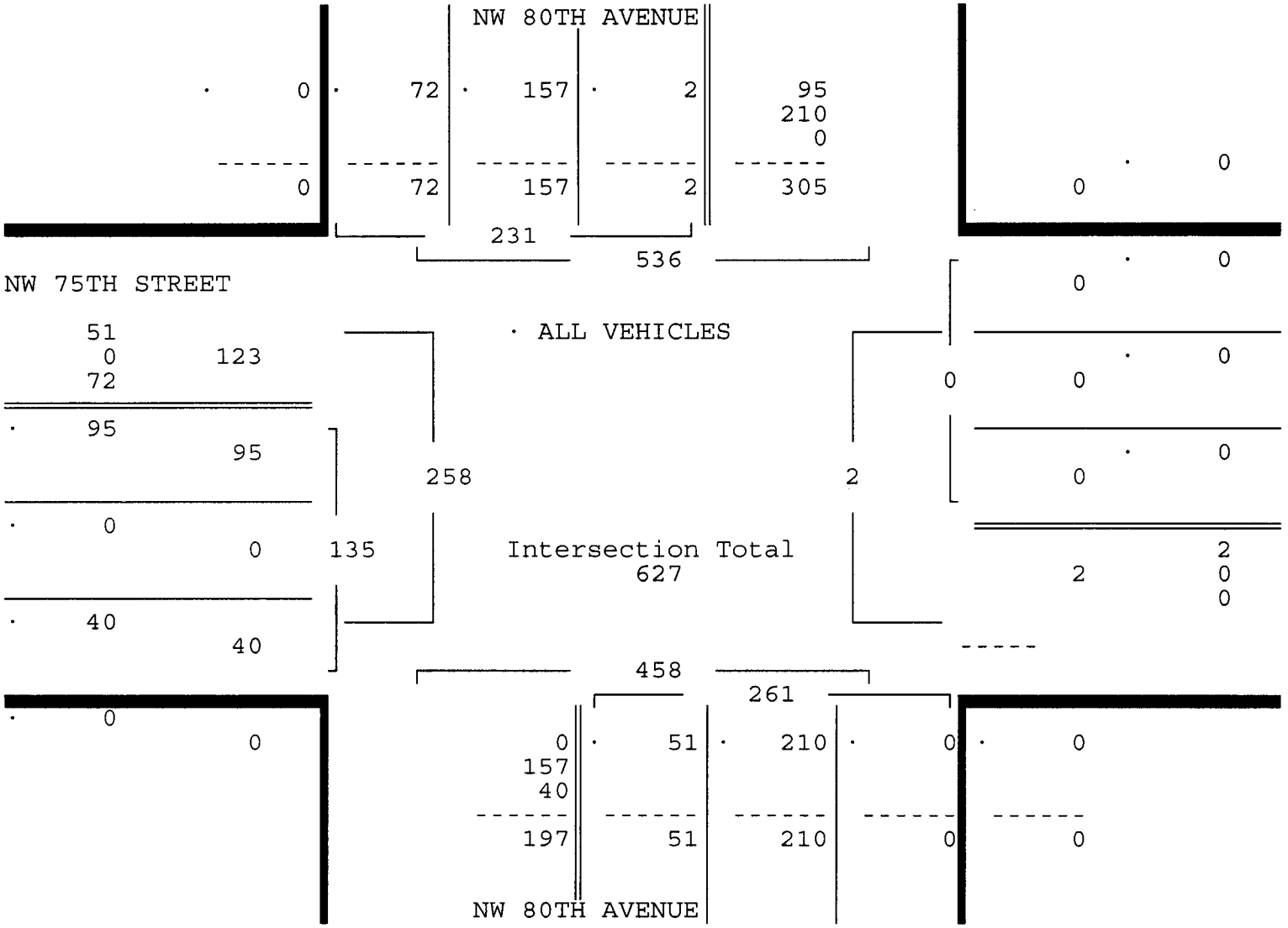
TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

NW 75TH STREET & NW 80TH AVENUE
TAMARAC, FLORIDA
COUNTED BY: LUIS PALOMINO (V)
NOT SIGNALIZED

Site Code : 00190049
Start Date: 03/05/19
File I.D. : 75ST80AV
Page : 3

ALL VEHICLES

	NW 80TH AVENUE From North				----- From East				NW 80TH AVENUE From South				NW 75TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 03/05/19																	
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 03/05/19																	
Peak start 17:00					17:00				17:00				17:00				
Volume	2	0	157	72	0	0	0	0	1	50	210	0	1	94	0	40	
Percent	1%	0%	68%	31%	0%	0%	0%	0%	0%	19%	80%	0%	1%	70%	0%	30%	
Pk total	231				0				261				135				
Highest	17:15				07:00				17:15				17:45				
Volume	2	0	43	22	0	0	0	0	0	16	59	0	0	27	0	12	
Hi total	67				0				75				39				
PHF	.86				.0				.87				.87				



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

NW 75TH STREET & NW 80TH AVENUE
TAMARAC, FLORIDA
COUNTED BY: LUIS PALOMINO (V)
NOT SIGNALIZED

Site Code : 00190049
Start Date: 03/05/19
File I.D. : 75ST80AV
Page : 1

PEDESTRIANS & BIKES

	NW 80TH AVENUE From North				----- From East				NW 80TH AVENUE From South				NW 75TH STREET From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 03/05/19																	
07:00	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	1	3
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
Hr Total	0	0	0	0	0	0	0	0	0	2	0	0	0	2	0	1	5
08:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	2
08:15	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2
08:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	2
Hr Total	0	2	0	1	0	0	0	0	0	0	0	0	0	0	0	3	6
---------- * BREAK * ----------																	
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	3	0	0	0	0	0	0	0	0	0	1	0	0	4
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	4
Hr Total	0	0	0	3	0	0	0	0	0	0	0	0	0	2	0	3	8
TOTAL	0	2	0	4	0	0	0	0	0	2	0	0	0	5	0	7	20

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

NW 75TH STREET & NW 80TH AVENUE
TAMARAC, FLORIDA
COUNTED BY: LUIS PALOMINO (V)
NOT SIGNALIZED

Site Code : 00190049
Start Date: 03/09/19
File I.D. : 75ST_80A
Page : 1

ALL VEHICLES

	NW 80TH AVENUE From North				----- From East				NW 80TH AVENUE From South				NW 75TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 03/09/19																	
16:00	0	0	23	10	0	0	0	0	0	9	38	0	0	15	0	10	105
16:15	0	0	30	12	0	0	0	0	0	10	29	0	1	15	0	11	108
16:30	0	0	18	18	0	0	0	0	0	7	20	0	0	7	0	10	80
16:45	0	0	19	11	0	0	0	0	1	11	35	0	0	16	0	10	103
Hr Total	0	0	90	51	0	0	0	0	1	37	122	0	1	53	0	41	396
17:00	1	0	21	20	0	0	0	0	0	8	33	0	0	11	0	6	100
17:15	0	0	25	12	0	0	0	0	0	7	22	0	0	18	0	8	92
17:30	1	0	22	15	0	0	0	0	0	12	24	0	0	17	0	6	97
17:45	0	0	17	12	0	0	0	0	0	13	28	0	0	11	0	10	91
Hr Total	2	0	85	59	0	0	0	0	0	40	107	0	0	57	0	30	380
18:00	0	0	17	14	0	0	0	0	0	7	21	0	0	13	0	14	86
18:15	0	0	24	22	0	0	0	0	0	10	22	0	0	12	0	14	104
18:30	0	0	15	12	0	0	0	0	0	12	17	0	0	20	0	11	87
18:45	1	0	21	24	0	0	0	0	0	10	21	0	0	17	0	9	103
Hr Total	1	0	77	72	0	0	0	0	0	39	81	0	0	62	0	48	380
TOTAL	3	0	252	182	0	0	0	0	1	116	310	0	1	172	0	119	1156

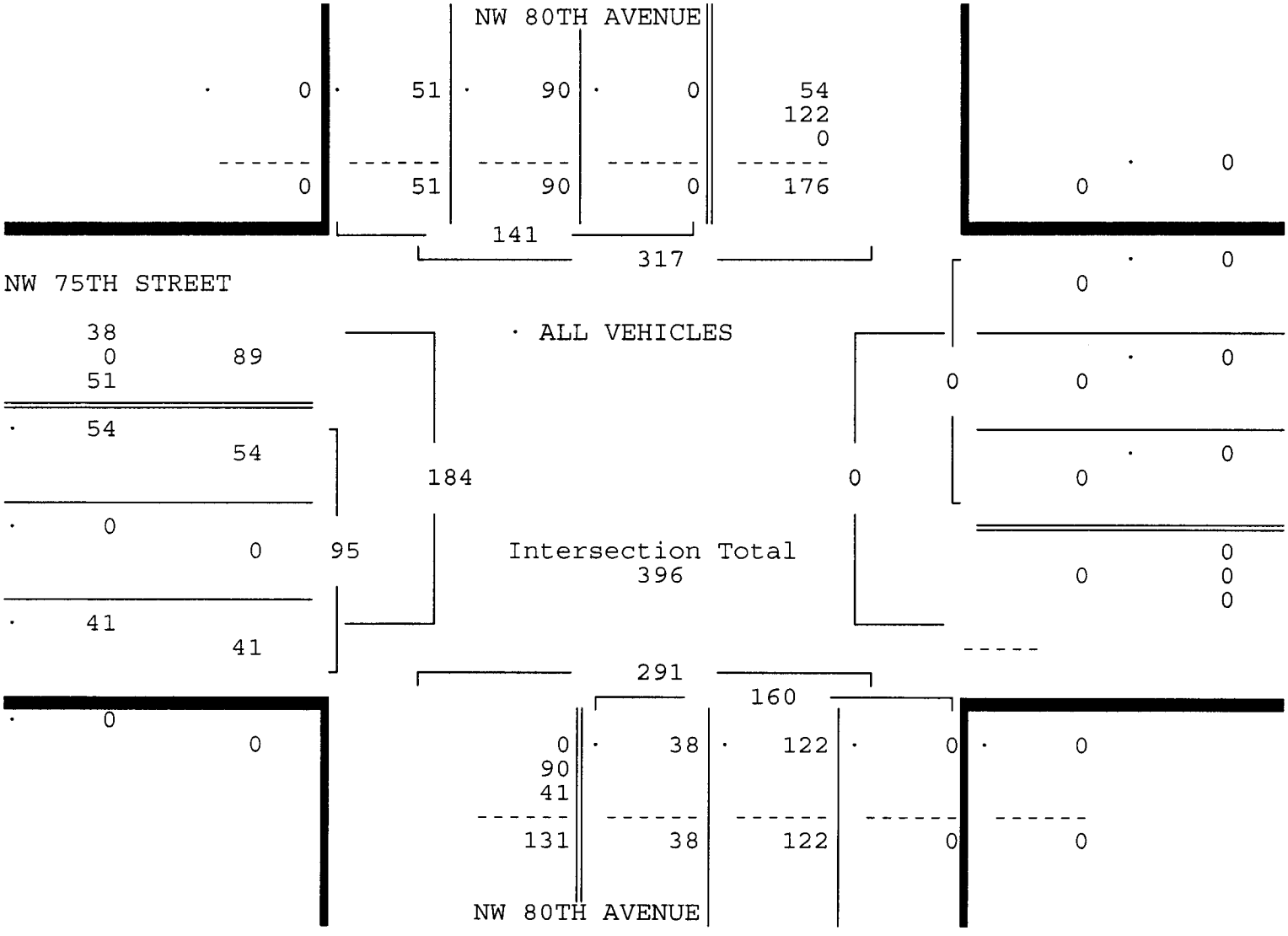
TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

NW 75TH STREET & NW 80TH AVENUE
TAMARAC, FLORIDA
COUNTED BY: LUIS PALOMINO (V)
NOT SIGNALIZED

Site Code : 00190049
Start Date: 03/09/19
File I.D. : 75ST_80A
Page : 2

ALL VEHICLES

	NW 80TH AVENUE From North				----- From East				NW 80TH AVENUE From South				NW 75TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 03/09/19																	
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 19:00 on 03/09/19																	
Peak start 16:00					16:00				16:00				16:00				
Volume	0	0	90	51	0	0	0	0	1	37	122	0	1	53	0	41	
Percent	0%	0%	64%	36%	0%	0%	0%	0%	1%	23%	76%	0%	1%	56%	0%	43%	
Pk total	141				0				160				95				
Highest	16:15				16:00				16:00				16:15				
Volume	0	0	30	12	0	0	0	0	0	9	38	0	1	15	0	11	
Hi total	42				0				47				27				
PHF	.84				.0				.85				.88				



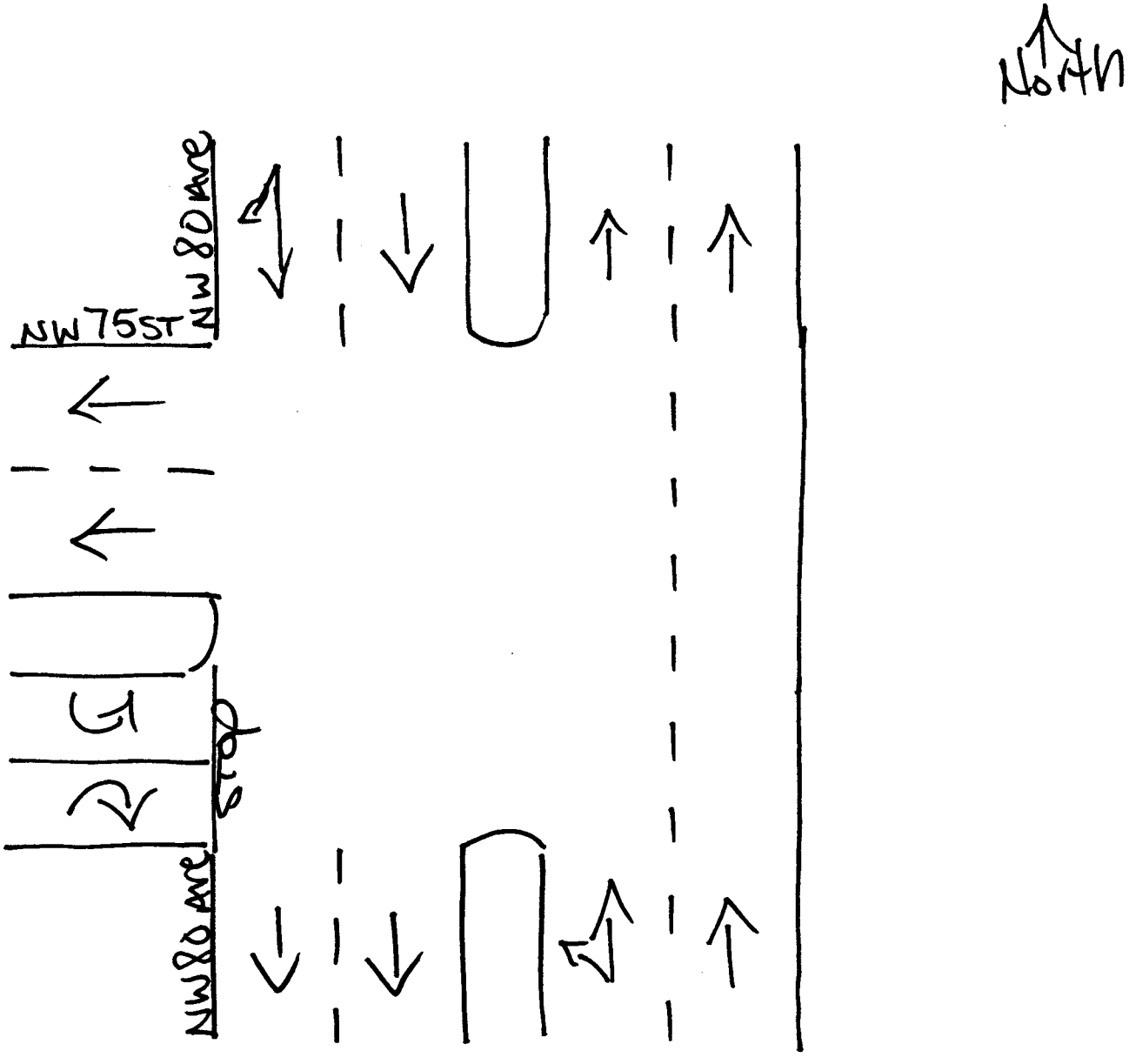
TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

NW 75TH STREET & NW 80TH AVENUE
TAMARAC, FLORIDA
COUNTED BY: LUIS PALOMINO (V)
NOT SIGNALIZED

Site Code : 00190049
Start Date: 03/09/19
File I.D. : 75ST_80A
Page : 1

PEDESTRIANS & BIKES

	NW 80TH AVENUE From North				----- From East				NW 80TH AVENUE From South				NW 75TH STREET From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 03/09/19																	
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1
16:30	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
16:45	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
Hr Total	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	1	4
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	1
18:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:15	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
18:30	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	4	0	0	0	0	0	0	0	0	0	0	0	0	4
TOTAL	0	0	0	7	0	0	0	0	0	1	0	0	0	0	0	1	9



Tamarac, Florida
March 05, 2019
drawn by: Luis Palomino
NOT signalized

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

NW 78TH STREET & NW 80TH AVENUE
TAMARAC, FLORIDA
COUNTED BY: SEBASTIAN SALVO (V)
NOT SIGNALIZED

Site Code : 00190049
Start Date: 03/05/19
File I.D. : 78ST_80A
Page : 1

ALL VEHICLES

	NW 80TH AVENUE From North				NW 78TH STREET From East				NW 80TH AVENUE From South				DRIVEWAY From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 03/05/19																	
07:00	0	16	25	3	0	14	0	21	0	1	47	11	0	1	0	0	139
07:15	0	15	38	0	0	22	1	40	0	1	61	16	0	0	0	0	194
07:30	0	21	46	0	0	19	0	14	0	3	42	20	0	0	0	0	165
07:45	0	21	53	0	0	18	0	17	0	2	57	20	0	1	0	0	189
Hr Total	0	73	162	3	0	73	1	92	0	7	207	67	0	2	0	0	687
08:00	0	20	54	0	0	32	0	17	0	0	37	20	0	0	0	0	180
08:15	0	19	36	1	1	30	1	13	0	4	22	20	0	1	0	0	148
08:30	0	31	34	2	0	17	1	10	0	8	28	41	0	0	0	3	175
08:45	0	37	37	1	0	21	3	16	0	3	27	34	0	1	1	1	182
Hr Total	0	107	161	4	1	100	5	56	0	15	114	115	0	2	1	4	685
* BREAK *																	
16:00	0	14	27	0	0	23	0	15	0	2	42	14	0	0	0	1	138
16:15	0	14	36	0	0	18	1	20	0	0	44	21	0	3	0	1	158
16:30	0	15	33	0	0	20	0	14	2	0	51	23	0	1	0	1	160
16:45	0	15	28	0	0	17	1	9	1	0	43	14	0	0	0	0	128
Hr Total	0	58	124	0	0	78	2	58	3	2	180	72	0	4	0	3	584
17:00	0	26	32	0	0	24	0	22	0	2	48	24	0	2	0	1	181
17:15	0	13	43	0	1	20	2	23	0	1	54	30	0	1	0	1	189
17:30	0	19	39	0	0	20	0	26	0	0	52	19	0	0	1	0	176
17:45	0	18	41	0	0	18	0	18	0	0	48	23	0	0	1	1	168
Hr Total	0	76	155	0	1	82	2	89	0	3	202	96	0	3	2	3	714
TOTAL	0	314	602	7	2	333	10	295	3	27	703	350	0	11	3	10	2670

NW 78TH STREET & NW 80TH AVENUE
TAMARAC, FLORIDA
COUNTED BY: SEBASTIAN SALVO (V)
NOT SIGNALIZED

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

Site Code : 00190049
Start Date: 03/05/19
File I.D. : 78ST_80A
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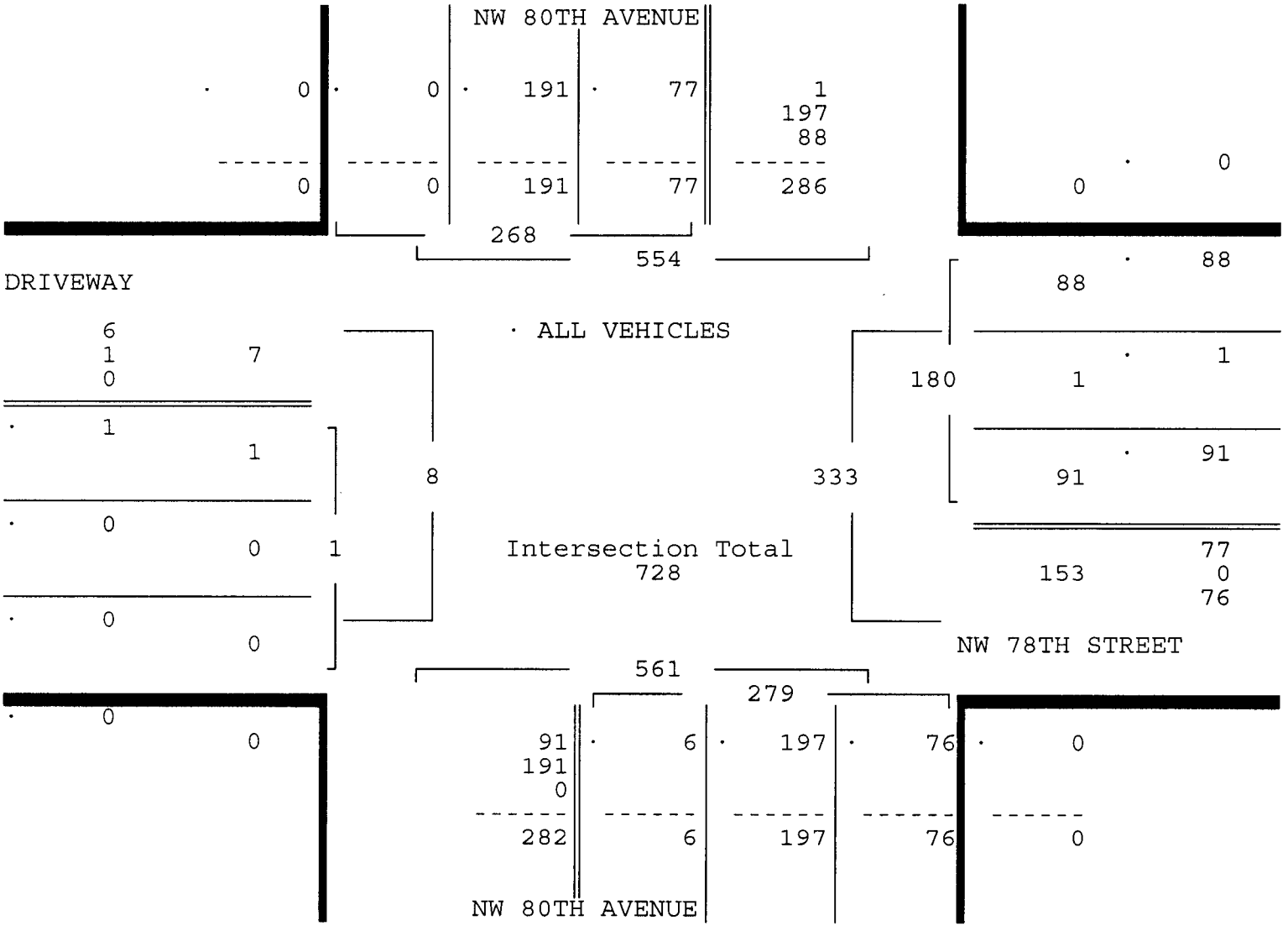
ALL VEHICLES

	NW 80TH AVENUE From North				NW 78TH STREET From East				NW 80TH AVENUE From South				DRIVEWAY From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 03/05/19																	
Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 03/05/19																	
Peak start	07:15				07:15				07:15				07:15				
Volume	0	77	191	0	0	91	1	88	0	6	197	76	0	1	0	0	
Percent	0%	29%	71%	0%	0%	51%	1%	49%	0%	2%	71%	27%	0%	100%	0%	0%	
Pk total	268				180				279				1				
Highest	07:45				07:15				07:45				07:45				
Volume	0	21	53	0	0	22	1	40	0	2	57	20	0	1	0	0	
Hi total	74				63				79				1				
PHF	.91				.71				.88				.25				



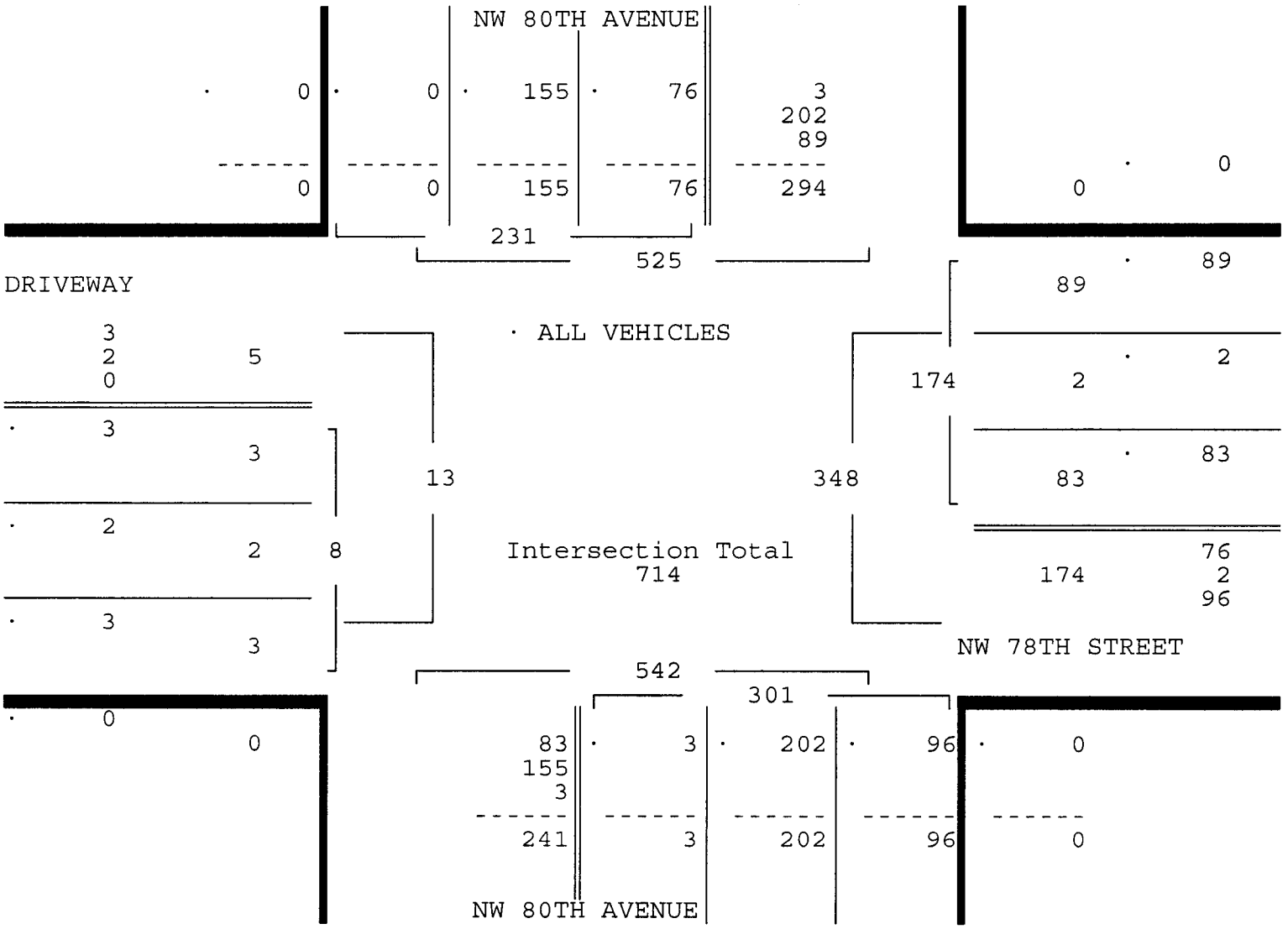
NW 78TH STREET & NW 80TH AVENUE
TAMARAC, FLORIDA
COUNTED BY: SEBASTIAN SALVO (V)
NOT SIGNALIZED

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

Site Code : 00190049
Start Date: 03/05/19
File I.D. : 78ST_80A
Page : 3

ALL VEHICLES

	NW 80TH AVENUE From North				NW 78TH STREET From East				NW 80TH AVENUE From South				DRIVEWAY From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 03/05/19																	
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 03/05/19																	
Peak start 17:00					17:00				17:00				17:00				
Volume	0	76	155	0	1	82	2	89	0	3	202	96	0	3	2	3	
Percent	0%	33%	67%	0%	1%	47%	1%	51%	0%	1%	67%	32%	0%	38%	25%	38%	
Pk total	231				174				301				8				
Highest	17:45				17:00				17:15				17:00				
Volume	0	18	41	0	0	24	0	22	0	1	54	30	0	2	0	1	
Hi total	59				46				85				3				
PHF	.98				.95				.89				.67				



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

NW 78TH STREET & NW 80TH AVENUE
TAMARAC, FLORIDA
COUNTED BY: SEBASTIAN SALVO (V)
NOT SIGNALIZED

Site Code : 00190049
Start Date: 03/05/19
File I.D. : 78ST_80A
Page : 1

PEDESTRIANS & BIKES

	NW 80TH AVENUE From North				NW 78TH STREET From East				NW 80TH AVENUE From South				DRIVEWAY From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 03/05/19																	
07:00	0	0	0	0	0	2	0	3	0	0	0	0	0	0	0	0	5
07:15	0	0	0	0	0	1	0	2	0	0	0	0	0	0	0	0	3
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:45	0	0	0	0	0	0	0	3	0	0	0	0	0	1	0	0	4
Hr Total	0	0	0	0	0	3	0	8	0	0	0	0	0	1	0	0	12
08:00	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
08:15	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	2
08:30	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Hr Total	0	0	0	1	0	1	0	4	0	0	0	0	0	0	0	0	6
* BREAK *																	
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
17:00	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
17:15	0	0	0	0	0	0	0	2	0	0	0	0	0	1	0	0	3
17:30	0	0	0	2	0	1	0	0	0	0	0	2	0	0	0	0	5
17:45	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Hr Total	0	1	0	2	0	1	0	3	0	0	0	2	0	1	0	0	10
TOTAL	0	1	0	3	0	6	0	15	0	0	0	2	0	2	0	0	29

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

NW 78TH STREET & NW 80TH AVENUE
TAMARAC, FLORIDA
COUNTED BY: MELISSA INOJOSA
NOT SIGNALIZED

Site Code : 00190049
Start Date: 03/09/19
File I.D. : 78ST80AV
Page : 1

ALL VEHICLES

	NW 80TH AVENUE From North				NW 78TH STREET From East				NW 80TH AVENUE From South				DRIVEWAY From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 03/09/19																	
16:00	0	12	18	0	0	12	0	16	1	0	31	19	0	1	1	2	113
16:15	0	16	21	2	0	19	0	24	0	0	31	15	0	0	0	0	128
16:30	0	7	22	0	0	13	0	13	0	0	18	10	0	2	2	0	87
16:45	0	16	19	0	0	11	0	13	0	0	35	15	0	1	0	0	110
Hr Total	0	51	80	2	0	55	0	66	1	0	115	59	0	4	3	2	438
17:00	0	12	22	0	0	22	1	12	1	0	31	15	0	1	0	1	118
17:15	0	16	18	0	0	20	0	9	0	0	16	25	0	1	0	1	106
17:30	0	11	19	0	0	17	0	19	0	0	25	14	0	3	1	2	111
17:45	2	14	21	0	0	9	0	12	0	0	30	11	0	3	0	1	103
Hr Total	2	53	80	0	0	68	1	52	1	0	102	65	0	8	1	5	438
18:00	0	10	14	0	0	14	0	13	0	0	22	13	0	1	2	3	92
18:15	0	16	21	0	0	24	0	14	0	0	22	8	0	2	0	1	108
18:30	0	6	17	0	0	9	0	14	0	0	20	16	0	2	0	1	85
18:45	1	14	26	0	0	21	0	15	0	0	21	24	0	0	0	0	122
Hr Total	1	46	78	0	0	68	0	56	0	0	85	61	0	5	2	5	407
TOTAL	3	150	238	2	0	191	1	174	2	0	302	185	0	17	6	12	1283

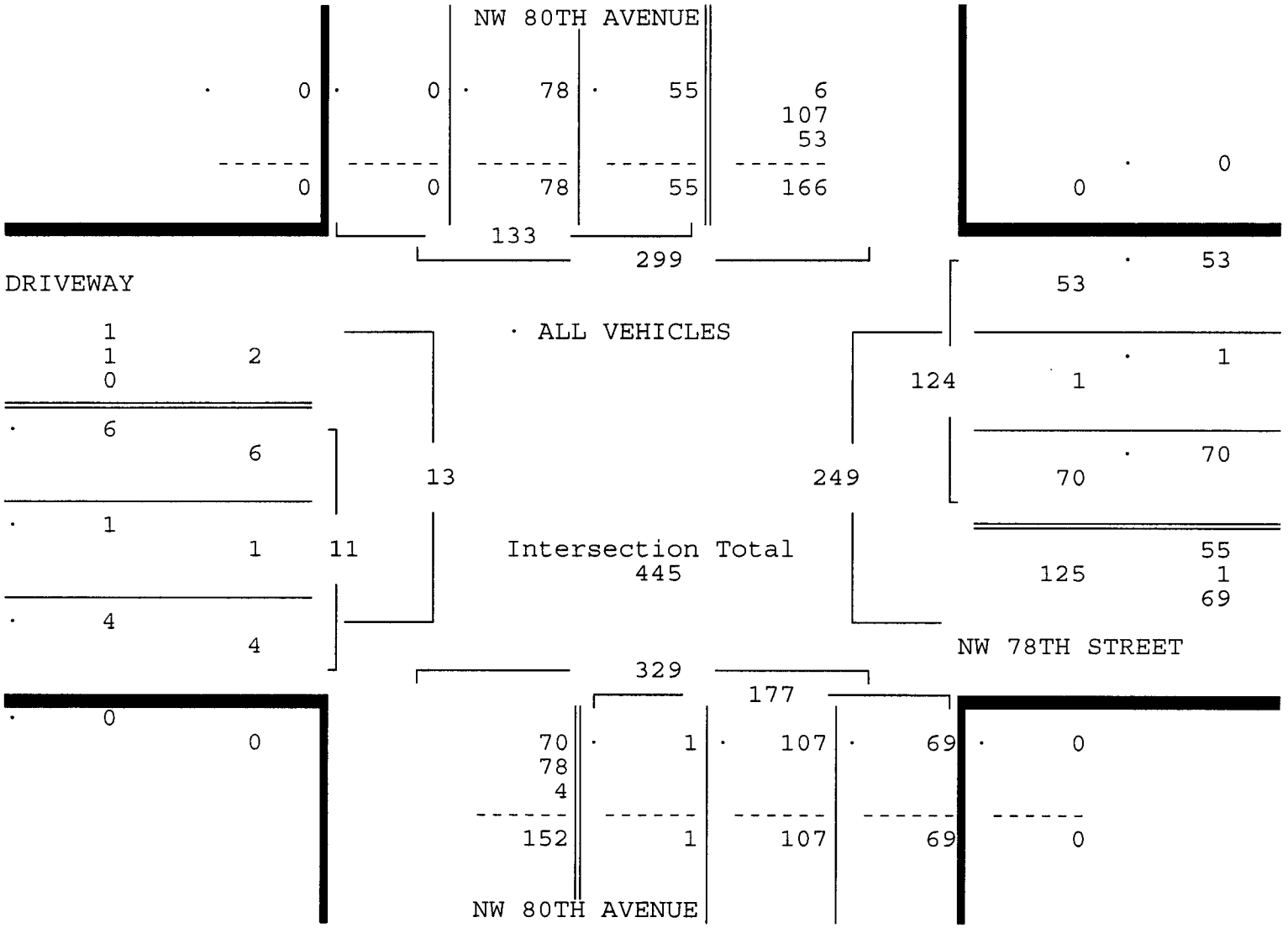
NW 78TH STREET & NW 80TH AVENUE
TAMARAC, FLORIDA
COUNTED BY: MELISSA INOJOSA
NOT SIGNALIZED

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

Site Code : 00190049
Start Date: 03/09/19
File I.D. : 78ST80AV
Page : 2

ALL VEHICLES

	NW 80TH AVENUE From North				NW 78TH STREET From East				NW 80TH AVENUE From South				DRIVEWAY From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 03/09/19																	
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 19:00 on 03/09/19																	
Peak start	16:45				16:45				16:45				16:45				
Volume	0	55	78	0	0	70	1	53	1	0	107	69	0	6	1	4	
Percent	0%	41%	59%	0%	0%	56%	1%	43%	1%	0%	60%	39%	0%	55%	9%	36%	
Pk total	133				124				177				11				
Highest	16:45				17:30				16:45				17:30				
Volume	0	16	19	0	0	17	0	19	0	0	35	15	0	3	1	2	
Hi total	35				36				50				6				
PHF	.95				.86				.88				.46				



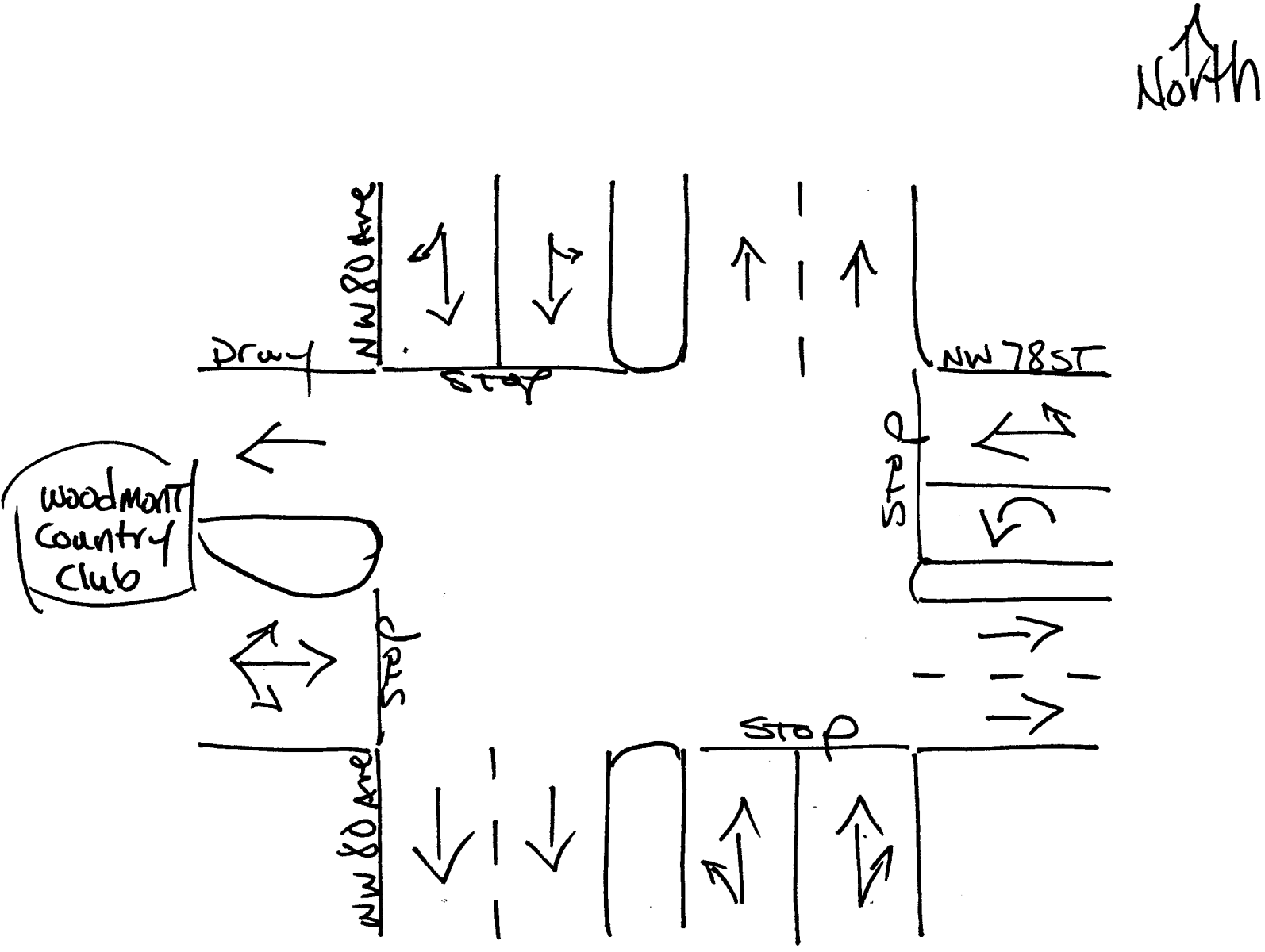
TRAFFIC SURVEY SPECIALISTS, INC.
85 SE 4TH AVENUE, UNIT 109
DELRAY BEACH, FLORIDA
PHONE (561)272-3255

NW 78TH STREET & NW 80TH AVENUE
TAMARAC, FLORIDA
COUNTED BY: MELISSA INOJOSA
NOT SIGNALIZED

Site Code : 00190049
Start Date: 03/09/19
File I.D. : 78ST80AV
Page : 1

PEDESTRIANS & BIKES

	NW 80TH AVENUE From North				NW 78TH STREET From East				NW 80TH AVENUE From South				DRIVEWAY From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 03/09/19																	
16:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:15	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
17:00	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	1
17:15	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	2
17:30	0	0	0	0	0	2	0	1	0	0	0	0	0	0	0	0	3
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	1	0	4	0	1	0	0	0	0	0	0	0	0	6
18:00	0	0	0	0	0	0	0	0	0	3	0	0	0	0	0	0	3
18:15	0	0	0	0	0	2	0	1	0	0	0	2	0	0	0	0	5
18:30	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
18:45	0	0	0	0	0	4	0	0	0	0	0	0	0	0	0	0	4
Hr Total	0	0	0	0	0	6	0	2	0	3	0	2	0	0	0	0	13
TOTAL	0	0	0	1	0	10	0	5	0	3	0	2	0	0	0	0	21



Tamarac, Florida
March 05, 2019
drawn by: Luis Palomino
not Signalized

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

NW 78TH STREET & UNIVERSITY DRIVE
TAMARAC, FLORIDA
COUNTED BY: RICH MENDEZ
SIGNALIZED

Site Code : 00190049
Start Date: 03/05/19
File I.D. : 78STUNIV
Page : 1

ALL VEHICLES

	UNIVERSITY DRIVE From North				DRIVEWAY From East				UNIVERSITY DRIVE From South				NW 78TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 03/05/19																	
07:00	0	0	355	9	0	2	0	0	15	30	316	0	0	21	0	37	785
07:15	1	2	466	21	0	0	0	0	21	32	389	0	0	22	1	35	990
07:30	0	0	481	17	0	0	0	0	19	24	429	1	0	26	1	45	1043
07:45	0	2	484	22	0	0	0	0	14	19	367	10	0	17	0	45	980
Hr Total	1	4	1786	69	0	2	0	0	69	105	1501	11	0	86	2	162	3798
08:00	1	0	515	19	0	1	0	1	21	21	302	8	0	19	1	42	951
08:15	1	0	397	15	0	2	2	0	17	24	400	7	0	18	1	24	908
08:30	0	0	429	35	0	3	2	0	26	34	356	6	1	45	1	68	1006
08:45	0	2	451	40	0	3	1	1	35	39	337	6	3	42	1	77	1038
Hr Total	2	2	1792	109	0	9	5	2	99	118	1395	27	4	124	4	211	3903
* BREAK *																	
16:00	0	1	352	19	0	11	2	1	13	33	396	2	0	17	0	18	865
16:15	1	1	377	13	0	4	2	0	19	29	382	1	0	20	1	26	876
16:30	0	0	402	26	0	5	1	0	16	28	386	2	0	19	0	20	905
16:45	1	0	370	20	0	3	2	0	11	26	381	3	0	13	1	13	844
Hr Total	2	2	1501	78	0	23	7	1	59	116	1545	8	0	69	2	77	3490
17:00	2	0	348	20	0	3	0	0	12	31	437	3	0	23	0	27	906
17:15	1	0	459	29	0	0	0	0	12	42	462	3	0	24	0	21	1053
17:30	1	0	383	23	0	4	2	0	10	39	407	3	0	16	0	27	915
17:45	0	0	413	29	0	2	0	0	16	39	441	0	1	16	0	30	987
Hr Total	4	0	1603	101	0	9	2	0	50	151	1747	9	1	79	0	105	3861
TOTAL	9	8	6682	357	0	43	14	3	277	490	6188	55	5	358	8	555	15052

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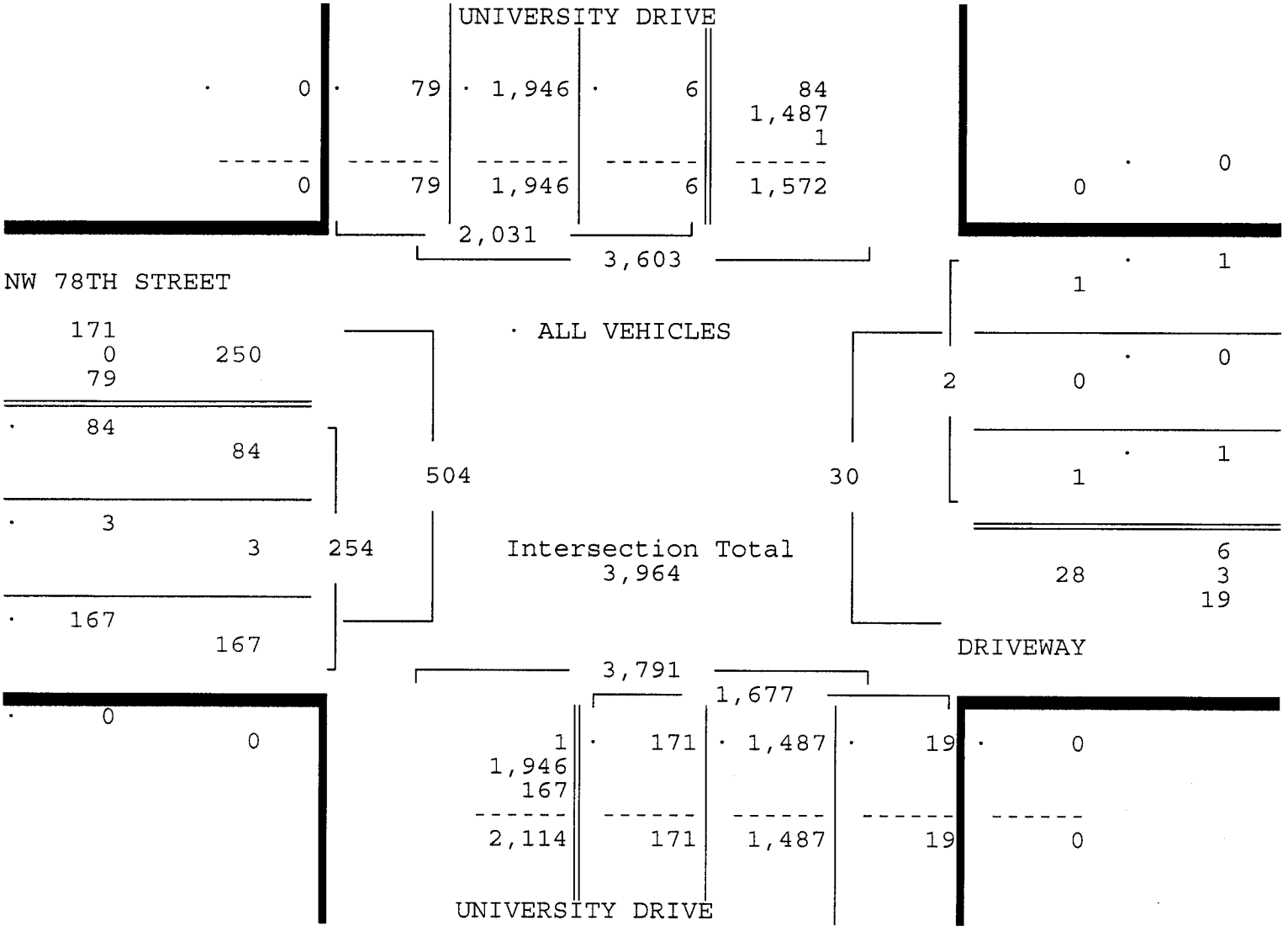
COUNTED BY: RICH MENDEZ
SIGNALIZED

Site Code : 00190049
Start Date: 03/05/19
File I.D. : 78STUNIV
Page : 2

ALL VEHICLES

	UNIVERSITY DRIVE From North				DRIVEWAY From East				UNIVERSITY DRIVE From South				NW 78TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 03/05/19																	
Peak Hour Analysis By Entire Intersection for the Period: 07:00 to 09:00 on 03/05/19																	
Peak start 07:15					07:15				07:15				07:15				
Volume	2	4	1946	79	0	1	0	1	75	96	1487	19	0	84	3	167	
Percent	0%	0%	96%	4%	0%	50%	0%	50%	4%	6%	89%	1%	0%	33%	1%	66%	
Pk total	2031				2				1677				254				
Highest	08:00				08:00				07:30				07:30				
Volume	1	0	515	19	0	1	0	1	19	24	429	1	0	26	1	45	
Hi total	535				2				473				72				
PHF	.95				.25				.89				.88				



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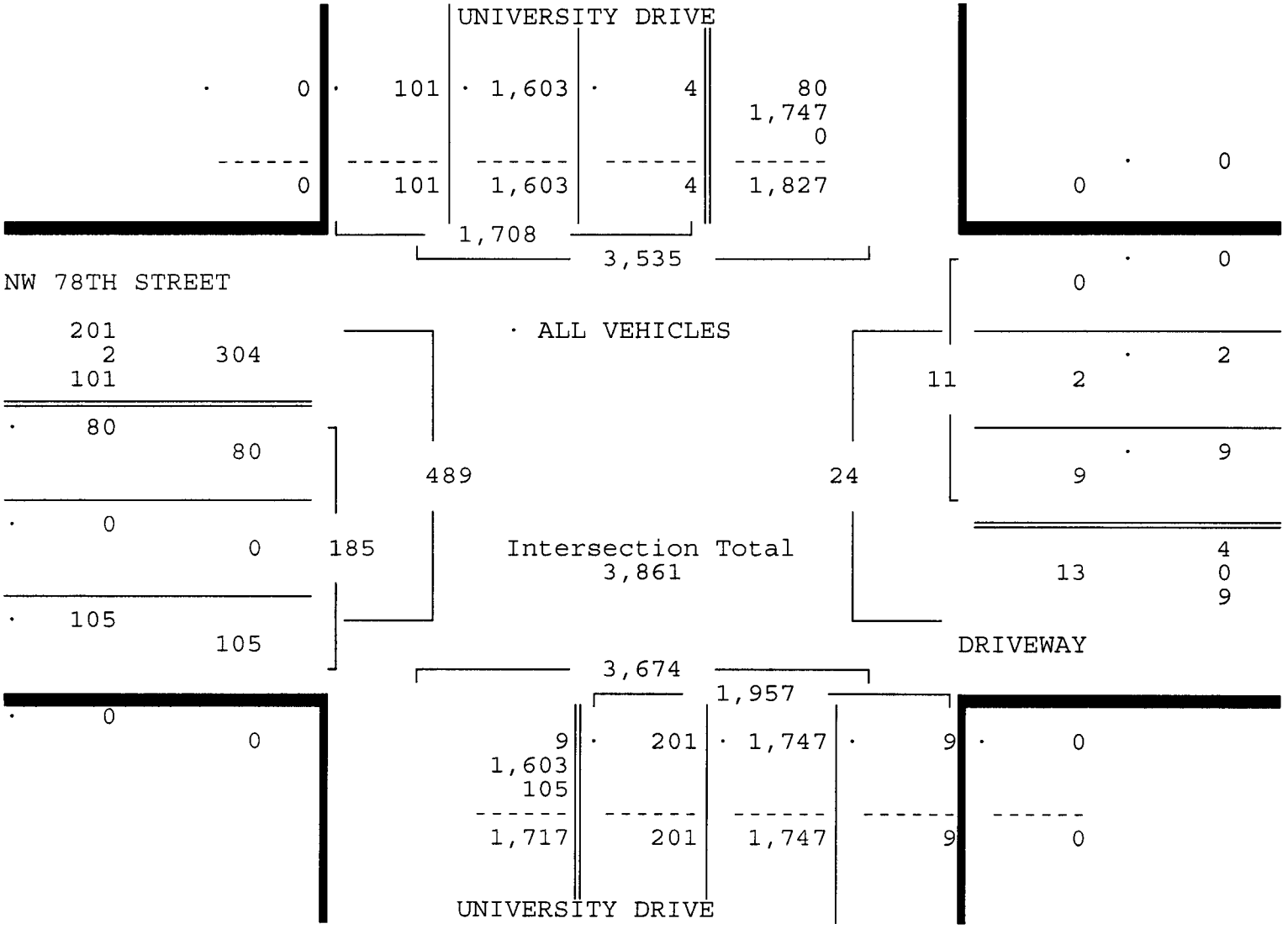
NW 78TH STREET & UNIVERSITY DRIVE
TAMARAC, FLORIDA
COUNTED BY: RICH MENDEZ
SIGNALIZED

Site Code : 00190049
Start Date: 03/05/19
File I.D. : 78STUNIV
Page : 3

ALL VEHICLES

	UNIVERSITY DRIVE From North				DRIVEWAY From East				UNIVERSITY DRIVE From South				NW 78TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 03/05/19																	
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 18:00 on 03/05/19																	
Peak start 17:00					17:00				17:00				17:00				
Volume	4	0	1603	101	0	9	2	0	50	151	1747	9	1	79	0	105	
Percent	0%	0%	94%	6%	0%	82%	18%	0%	3%	8%	89%	0%	1%	43%	0%	57%	
Pk total	1708				11				1957				185				
Highest	17:15				17:30				17:15				17:00				
Volume	1	0	459	29	0	4	2	0	12	42	462	3	0	23	0	27	
Hi total	489				6				519				50				
PHF	.87				.46				.94				.92				



NW 78TH STREET & UNIVERSITY DRIVE
TAMARAC, FLORIDA
COUNTED BY: RICH MENDEZ
SIGNALIZED

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

Site Code : 00190049
Start Date: 03/05/19
File I.D. : 78STUNIV
Page : 1

PEDESTRIANS & BIKES

	UNIVERSITY DRIVE From North				DRIVEWAY From East				UNIVERSITY DRIVE From South				NW 78TH STREET From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 03/05/19																	
07:00	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1	2
07:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
07:30	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	0	3
07:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	3
Hr Total	0	0	0	1	0	0	0	0	0	0	0	0	0	4	0	3	8
08:00	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
08:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
08:30	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
08:45	0	0	0	0	0	2	0	0	0	0	0	1	0	0	0	2	5
Hr Total	0	1	0	0	0	4	0	0	0	0	0	1	0	0	0	2	8
* BREAK *																	
16:00	0	1	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	2	4
16:45	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	1	3
Hr Total	0	1	0	1	0	1	0	0	0	0	0	1	0	2	0	3	9
17:00	0	0	0	2	0	0	0	2	0	0	0	0	0	1	0	0	5
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
17:30	0	0	0	0	0	0	0	1	0	0	0	0	0	1	0	1	3
17:45	0	0	0	0	0	2	0	2	0	0	0	0	0	0	0	1	5
Hr Total	0	0	0	2	0	2	0	5	0	0	0	0	0	3	0	2	14
TOTAL	0	2	0	4	0	7	0	5	0	0	0	2	0	9	0	10	39

TRAFFIC SURVEY SPECIALISTS, INC.
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NW 78TH STREET & UNIVERSITY DRIVE
TAMARAC, FLORIDA
COUNTED BY: RICH MENDEZ
SIGNALIZED

Site Code : 00190049
Start Date: 03/09/19
File I.D. : 78ST_UNI
Page : 1

ALL VEHICLES

	UNIVERSITY DRIVE From North				DRIVEWAY From East				UNIVERSITY DRIVE From South				NW 78TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 03/09/19																	
16:00	1	0	347	15	1	0	0	0	7	25	343	0	0	12	0	26	777
16:15	0	0	357	13	0	0	0	0	16	28	363	0	1	10	0	16	804
16:30	0	0	336	21	0	0	0	0	11	27	370	0	0	14	0	13	792
16:45	0	0	361	19	0	1	2	0	8	24	344	0	0	11	0	23	793
Hr Total	1	0	1401	68	1	1	2	0	42	104	1420	0	1	47	0	78	3166
17:00	1	0	345	24	0	1	0	0	17	29	375	3	0	13	0	22	830
17:15	0	0	348	18	0	0	0	0	12	21	286	0	0	15	0	26	726
17:30	2	0	328	23	0	0	0	0	13	33	351	0	0	14	0	27	791
17:45	0	0	305	21	0	5	0	0	11	25	324	0	0	12	0	24	727
Hr Total	3	0	1326	86	0	6	0	0	53	108	1336	3	0	54	0	99	3074
18:00	1	0	358	14	0	0	1	0	8	32	291	0	0	15	0	22	742
18:15	1	0	333	25	0	0	0	0	10	23	328	0	1	15	0	26	762
18:30	0	0	358	14	0	0	0	0	15	28	343	0	0	20	0	26	804
18:45	0	0	318	22	0	0	0	0	12	29	313	0	0	14	0	26	734
Hr Total	2	0	1367	75	0	0	1	0	45	112	1275	0	1	64	0	100	3042
TOTAL	6	0	4094	229	1	7	3	0	140	324	4031	3	2	165	0	277	9282

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NW 78TH STREET & UNIVERSITY DRIVE
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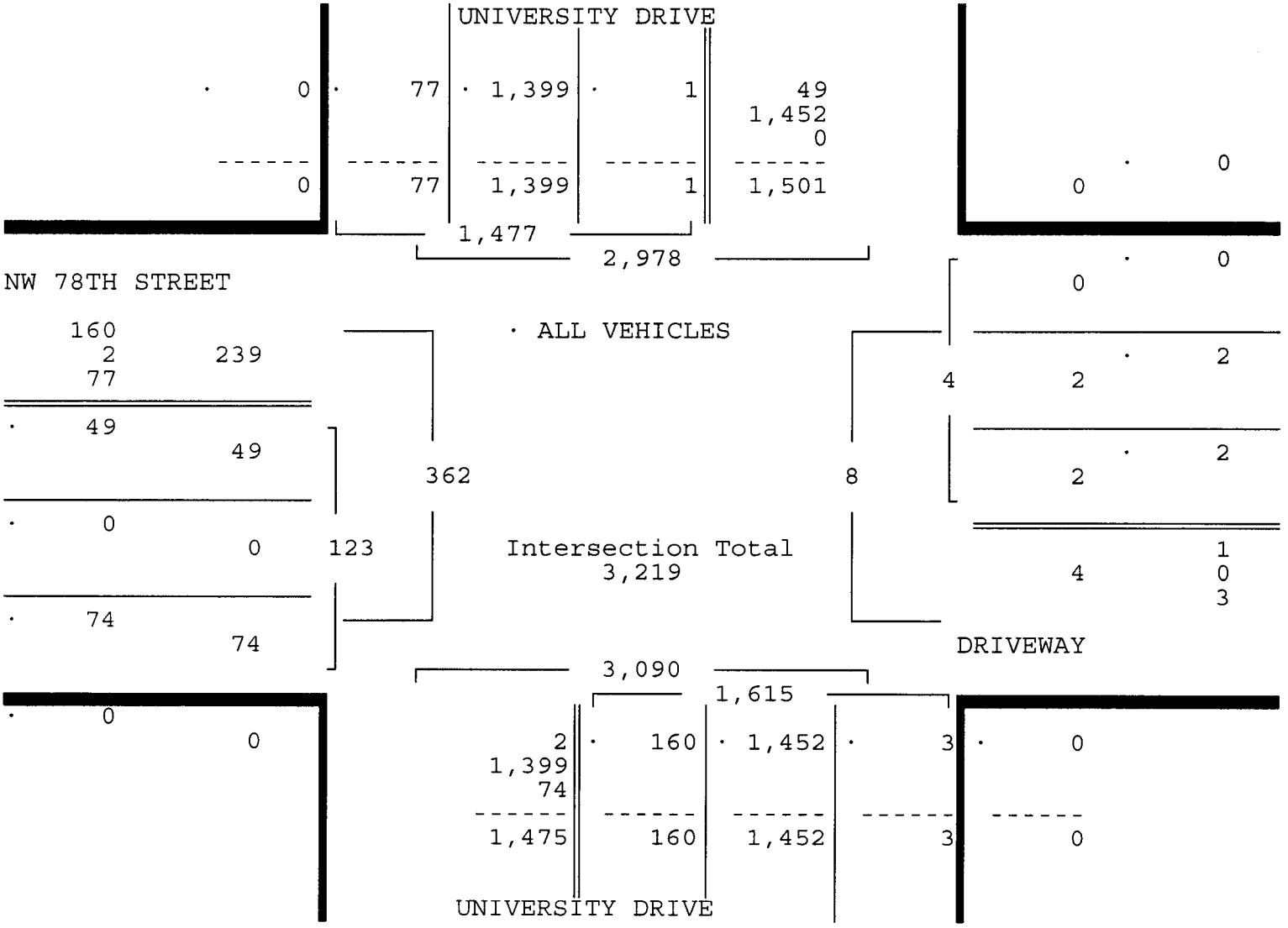
COUNTED BY: RICH MENDEZ
SIGNALIZED

Site Code : 00190049
Start Date: 03/09/19
File I.D. : 78ST_UNI
Page : 2

ALL VEHICLES

	UNIVERSITY DRIVE From North				DRIVEWAY From East				UNIVERSITY DRIVE From South				NW 78TH STREET From West				
	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	UTurn	Left	Thru	Right	Total
Date 03/09/19																	
Peak Hour Analysis By Entire Intersection for the Period: 16:00 to 19:00 on 03/09/19																	
Peak start	16:15				16:15				16:15				16:15				
Volume	1	0	1399	77	0	2	2	0	52	108	1452	3	1	48	0	74	
Percent	0%	0%	95%	5%	0%	50%	50%	0%	3%	7%	90%	0%	1%	39%	0%	60%	
Pk total	1477				4				1615				123				
Highest	16:45				16:45				17:00				17:00				
Volume	0	0	361	19	0	1	2	0	17	29	375	3	0	13	0	22	
Hi total	380				3				424				35				
PHF	.97				.33				.95				.88				



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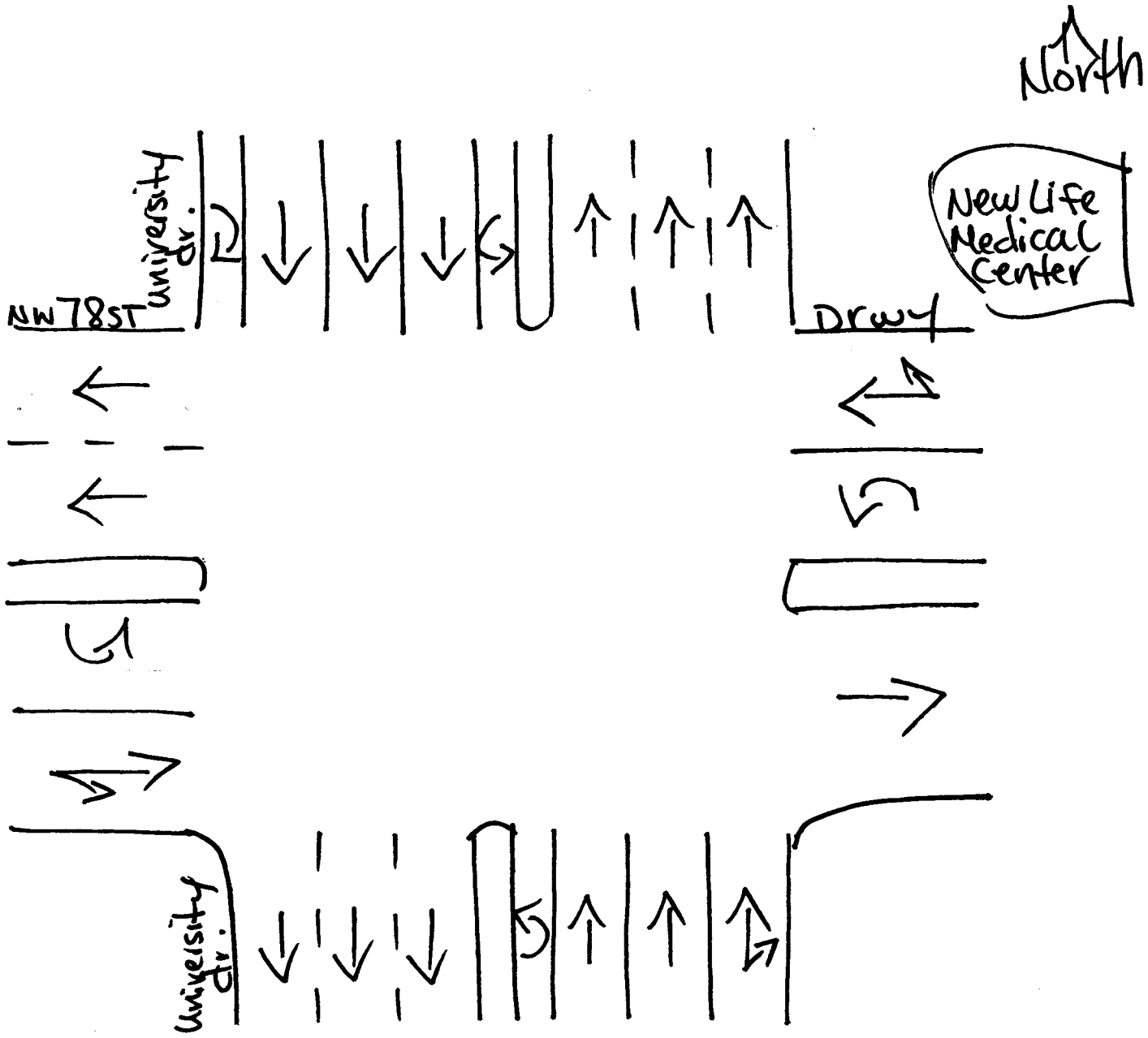
PEDESTRIANS & BIKES

	UNIVERSITY DRIVE From North				DRIVEWAY From East				UNIVERSITY DRIVE From South				NW 78TH STREET From West				
	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Left	BIKES	Right	Peds	Total
Date 03/09/19																	
16:00	0	0	0	0	0	1	0	0	0	0	0	0	0	2	0	0	3
16:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
16:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
16:45	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
Hr Total	0	0	0	0	0	1	0	0	0	0	0	0	0	3	0	3	7
17:00	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
17:15	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3
17:30	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	1
17:45	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	3	4
18:00	0	0	0	0	0	1	0	0	0	0	0	0	0	1	0	0	2
18:15	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
18:30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
18:45	0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	2
Hr Total	0	0	0	0	0	1	0	0	0	0	0	0	0	5	0	0	6
TOTAL	0	0	0	0	0	2	0	0	0	0	0	0	0	9	0	6	17



Tamarac, Florida
March 05, 2019
drawn by: Luis Palomino
Signalized

Laukaitis, Benjamin

From: Suzanne Danielsen <jsdanielsen12@outlook.com>
Sent: Friday, March 08, 2019 1:56 PM
To: Laukaitis, Benjamin
Subject: Signal Timing Request - Woodmont Country Club

[redacted]

Hi Benjamin.

I have been retained to prepare a traffic impact study for partial redevelopment of the Woodmont Country Club property located along the west side of NW 80 Avenue north of NW 75 Street in Tamarac. We anticipate analyzing the following signalized intersections:

- N. Pine Island Road at NW 75 Street, 1546
- N. Pine Island Road at NW 81 Street, 1223
- NW 80 Avenue at W. McNab Road, and 1286
- University Drive (SR 817) at NW 78 Street. 1287

Please provide the signal timing plans for the above intersections at your earliest convenience. As always, please call or email with any questions.

Thank you!

J. Suzanne Danielsen, P.E.

DC Engineers, Inc.
12743 NW 13th Court
Coral Springs, FL 33071
(954) 798-0926

BROWARD COUNTY TRAFFIC ENGINEERING

ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	1546	**Initial Operation Date**	
Controller Type	NEMA 4 PHASE	**System Number**	1546
Modification Number	2	**Modification Date**	10/25/2018
Drawing/Project No		**FPL Grid Number**	86786968001
Intersection	PINE ISLAND ROAD and NW 75 STREET		
Municipality	TAMARAC		

Controller Phase	1	2	3	4	5	6	7	8
Face Number	2,6	4,8*						
Direction	N/S	WB						
Initial Green(MIN)	7.0	45						
Vehicle Ext.(GAP)	1.0	1.0						
Maximum Green I	15	45						
Maximum Green II								
Yellow Clearance	5.0	5.0						
All Red Clearance	2.0	2.0						
Phase Recall	MAX	OFF						
Detector Delay								
Walk								
Pedestrian Clearance								
Permissive								
Flash Operation	YELLOW	RED						

Attachment

NOTES:

1. * HEAD 8 IS SINGLE SECTION 12" RED AND FLASHES AT ALL TIMES.
2. MOD. 2 UPDATES YELLOW AND ALL RED CLEARANCE VALUES.

Submitted By _____ **Approved By** _____

Broward County Timing Sheet 3/8/2019 5:03:07 PM

Station : 1546 - Pine Island Rd & NW 75 St (Firehouse) (Standard File)

Phase	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Walk																
Ped Clearance																
Min Green	7	45														
Gap Ext	1	1														
Max1	30	45														
Max2																
Yellow Clr	5	5							3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	2	2							1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON	ON														
Auto Flash Entry		ON														
Auto Flash Exit	ON															
Non-Actuated 1																
Non-Actuated 2																
Lock Call		ON							ON	ON	ON	ON	ON	ON	ON	ON
Min Recall																
Max Recall	ON															
Ped Recall																
Soft Recall																
Dual Entry																
Sim Gap Enable									ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk																
Cond Service																
Add Init Calc																
Concurrent Ps	1	1	1	1	2	2	2	2								

Preemption

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash						
Override Higher Preempt						
Flash in Dwell						
Link to Preempt						
Delay						
Min Duration						
Min Green	6	6	6	6		
Min Walk						
Ped Clear						
Track Green						
Min Dwell	8	8	8	8		
Max Presence	180	180	180	180		
Track Veh 1						
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1						
Dwell Cyc Veh 2						
Dwell Cyc Veh 3						
Dwell Cyc Veh 4						
Dwell Cyc Veh 5						
Dwell Cyc Veh 6						
Dwell Cyc Veh 7						
Dwell Cyc Veh 8						
Dwell Cyc Veh 9						
Dwell Cyc Veh 10						
Dwell Cyc Veh 11						
Dwell Cyc Veh 12						
Dwell Cyc Ped1						
Dwell Cyc Ped2						
Dwell Cyc Ped3						
Dwell Cyc Ped4						
Dwell Cyc Ped5						
Dwell Cyc Ped6						
Dwell vPed7						
Dwell Cyc Ped8						
Exit 1						
Exit 2						
Exit 3						
Exit 4						

Preempt LP

Channel	1	2	3	4
Min				
Max				
Enable				
Lock Mode	MAX	MAX	MAX	MAX
Coord in Preempt				
No Skip				
Priority P1				
Priority P2				
Priority P3				
Priority P4				
Lock				
Headway				
Group Lock				
Queue Jump				
Free Mode				
Alt Table				

Station : 1546 - Pine Island Rd & NW 75 St (Firehouse) (Standard File)

Coordination

Hour	Minute	Action	Pattern	Cycle	Offset	Split	Seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 1											**Easy**															
Day Plan 2											**Easy**															
Day Plan 3											**Easy**															

Station : 1546 - Pine Island Rd & NW 75 St (Firehouse) (Standard File)

Hour	Minute	Action	Pattern	Cycle	Offset	Split	Seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 4											Easy															

Scheduler

	Month											Day of Week							Day of Month									1									2									3			
Plan	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	Day Plan
1																																																			1
2																																																				1
3																																																				1
4																																																				1
5																																																				1
6																																																				1
7																																																				1
8																																																				1
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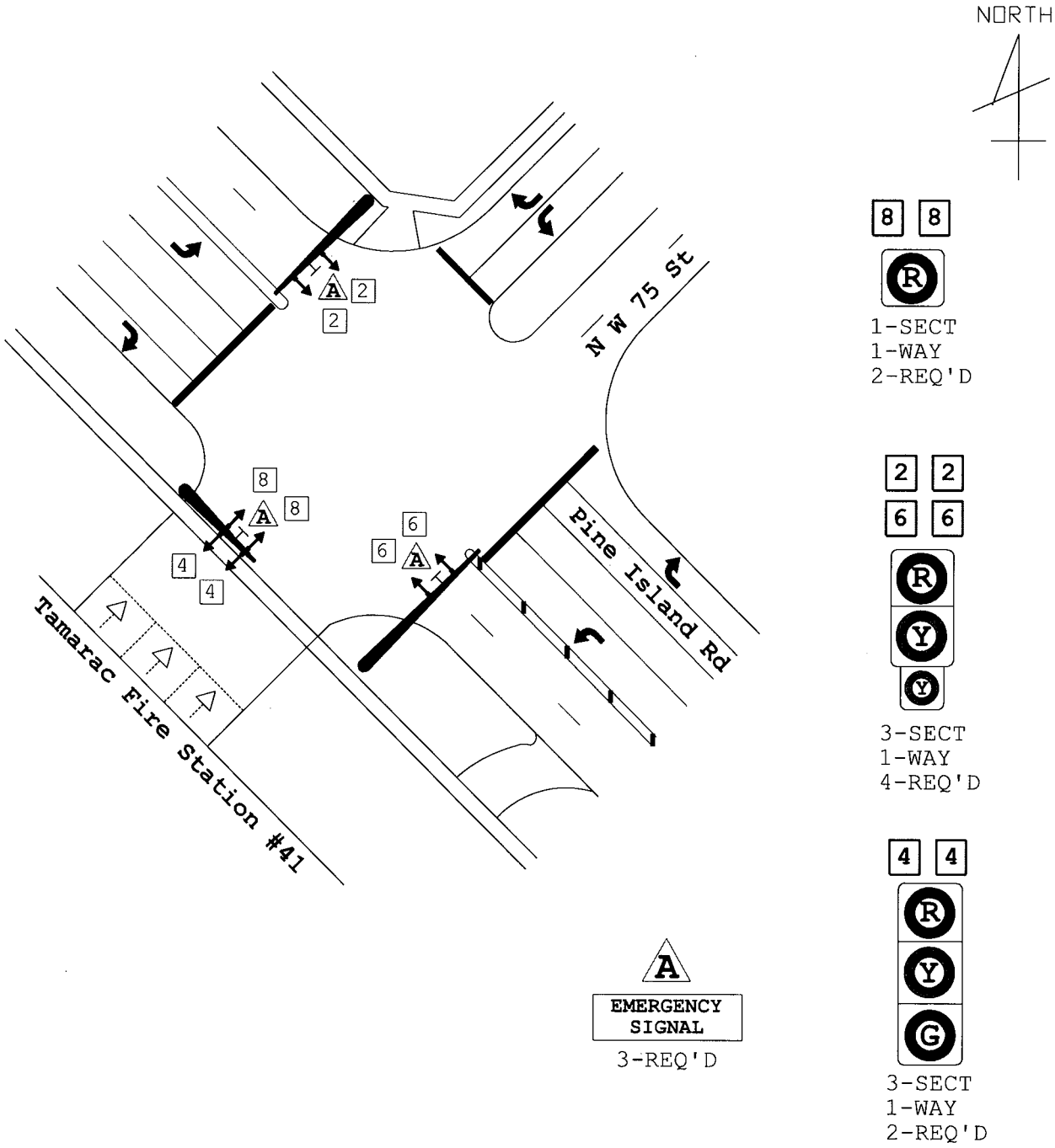
User Comments:

BROWARD COUNTY TRAFFIC ENGINEERING DIVISION

LOCATION **PINE ISLAND RD & NW 75 ST**

ORDER NO ____ ISSUE DATE _____ REVISION NO. _____ COMPLETION DATE _____

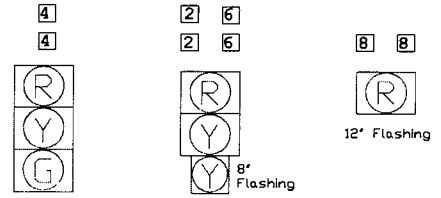
DWG. NO. _____ FILE NO. **1546** CITY **TAMARAC** SCALE: 1" = 50'



traffic engineering

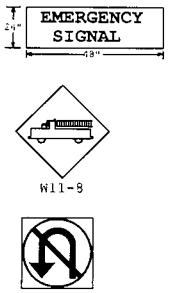
TED NO. 97-12-02-0

SIGNAL HEAD DETAILS



3-Sect 1-Way 2-Req'd | 3-Sect 1-Way 4-Req'd | 1-Sect 1-Way 2-Req'd

SIGN DETAILS

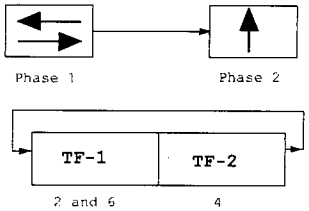


A 3-Req'd (Black on yellow)

B 3-Existing

C 1-Req'd

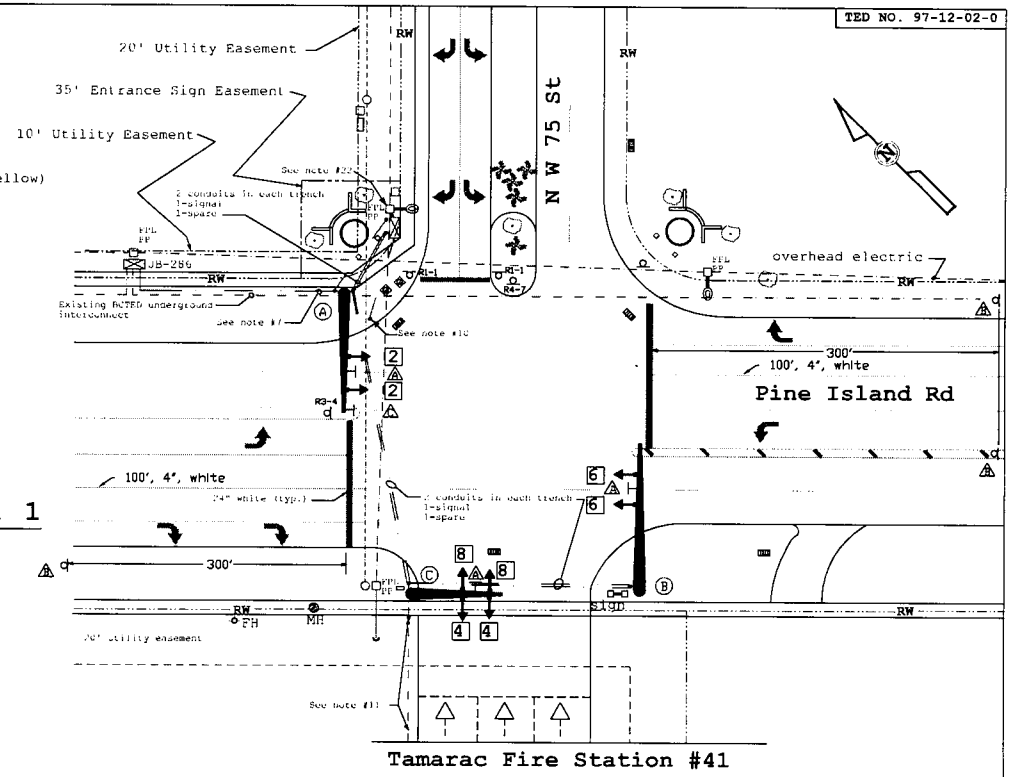
SIGNAL OPERATING PLAN NO. 1



Pre-empt Operating Plan No.1

NOTES

1. Major Street is Pine Island Road. (Flash yellow)
2. Minor Street is North West 75 St./Station No. 41 Drive. (Flash red)
3. Employ Signal Operating Plan Number 1.
4. Employ Pre-empt Operating Plan Number 1.
5. Two timing functions, push button activated in a four timing function frame.
6. Type 5 cabinet wired for future operation on the Broward County Central Computer System.
7. Stub out conduit to a separate pull box for interconnect cable. Install 6 pair cable and conduit from new cabinet to existing junction box approximately 100' north. Notify Systems personnel when ready for hook-up.
8. Normal operation shall consist of flashing 6" Yellow indications on Pine Island Road, solid 12" Red indications for Station No. 41 Drive, and flashing 12" Red indications for North West 75th Street.
9. When Station No. 41 button is activated, there shall be a minimum delay before pre-empt of 60 seconds, followed by a 12" Yellow clearance on Pine Island Road of 4.0 seconds, followed by an All Red clearance of 0.0 seconds, followed by a Green exiting Station No. 41 of 0.0 seconds, followed by a Yellow exiting Station No. 41 of 4.0 seconds, and then back to Normal Operation. The signal display exiting N. W. 75th Street shall remain Flashing Red throughout this sequence.
10. Provide sufficient conductors for future expansion to a full color signal operating four phases with an overlap and two concurrent pedestrian movements. Install conduit and pull box for future loop lead-ins to north corner as shown.
11. Install conduit and cable to within Station No. 41. (By others) Install call button within station as directed by the Fire Chief.
12. Install separate time switch for future Night Flash and Max II operations.
13. Install backplates on heads 6 and 8. (East and West heads)
14. Install tunnel visors on all signal faces.
15. Align signal heads on lane lines or lane centers as shown.
16. Location of pull boxes shall be determined in field to prevent conflicts with utilities.
17. All conduit under roadway shall be installed by jack and bore, with a minimum cover of 36".
18. Stop signs to remain on N.W. 75 Street upon full color activation of signals.
19. Remove all markings in conflict with those proposed.
20. Install new R/R's signal separators and through project limits as per typical Broward County Detail.
21. Underground and Overhead electric present. Use EXTREME CAUTION when setting poles and trenching. Call "Sunshine" at 1-800-432-4770 for underground locations before digging. Also contact the City of Tamarac at 724-2400 for water and sewer locations.
22. Install service riser on west face of FPL pole east of control cabinet to a height providing 40" minimum clearance below FPL's lowest conductor. Provide 10' of additional conductors for FPL connection.
23. 10' minimum clearance must be maintained at all times between our equipment and FPL's conductors. If this clearance cannot be maintained, contact Steve Yavkey of FPL at 371-7057 for coordination of joint crews.



LINE LEGEND

LINE	MEANING
	Right-of-way, Easement
	Overhead Telephone
	Overhead Electric
	Underground conduit
	Existing Underground conduit

date	revisions
03-98	General review comments.
04-98	Revised note #22.
07-98	Revised note #11, add pullbox for firehouse conduit.

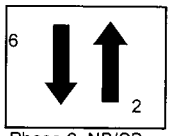
broward county public works department

drawn by: RIO	12/97	K. Smith designer	SIGNALIZATION PLAN
designed by: K. S.	12/97	R. Childs systems engineer	PINE ISLAND ROAD AND N. W. 75 ST
checked by: L. M.	date		
5 sec / 49 twp / 41 rge		Tamarac municipality	1"=20' scale / sheet 1 of 3 / dwg no. 97-12-02-01 / file no. A-546

Sequence of Operation

Pine Island Road and NW 75 Street (1546)

Tamarac

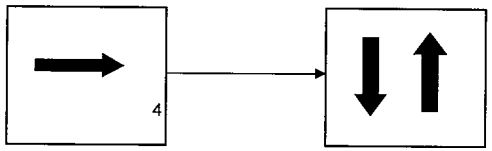


Phase 2, NB/SB

NORMAL OPERATION: HEADS 2 AND 6 FLASH YELLOW

HEAD 8 (WB) IS A SINGLE SECTION 12" RED AND FLASHES AT ALL TIMES

PRE-EMPTION OPERATION: Phase 2 (Head 4 EB) then back to normal operation.



BROWARD COUNTY TRAFFIC ENGINEERING

ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	1223	**Initial Operation Date**	2/21/84
Controller Type	2070 LN	**System Number**	1223
Modification Number	8	**Modification Date**	07/10/2015
Drawing/Project No	0080301	**FPL Grid Number**	86887076004
Intersection	PINE ISLAND ROAD and NW 81 STREET		
Municipality	TAMARAC		

Controller Phase	1	2	3	4	5	6	7	8
Face Number	1	2	3	4	5	6		8
Direction	SBL	NB	WBL	EB	NBL	SB		WB
Initial Green(MIN)	4	10	4	6	4	10		6
Vehicle Ext.(GAP)	1.5	3.0	1.5	2.0	1.5	3.0		2.0
Maximum Green I	18	50	12	25	12	50		25
Maximum Green II								
Yellow Clearance	5.0	5.0	4.0	4.0	5.0	5.0		4.0
All Red Clearance	2.0	2.0	2.0	2.0	2.0	2.0		2.0
Phase Recall	OFF	MIN	OFF	OFF	OFF	MIN		OFF
Detector Delay			3.0					
Walk		7		7		7		7
Pedestrian Clearance		23		23		23		23
Permissive	YES		YES		YES			
Flash Operation		YELLOW		RED		YELLOW		RED

Attachment

NOTES:

1. ANTI-BACKDOWN NORTH/SOUTH: PHASES 2+6 ON--->OMIT PHASES 1+5.
2. DUAL ENTRY HARDWIRED EAST/WEST.
3. MOD. 8 REMOVE NIGHT FLASH OPERATION.

Submitted By _____ **Approved By** _____

Station : 1223 - Pine Island Rd & NW 81 St (Standard File)

Phase	1 (SL)	2 (NT)	3 (WL)	4 (ET)	5 (NL)	6 (ST)	7	8 (WT)	9	10	11	12	13	14	15	16
Walk		7		7		7		7								
Ped Clearance		23		23		23		23								
Min Green	4	10	4	6	4	10		6								
Gap Ext	1.5	3	1.5	2	1.5	3		2								
Max1	18	50	12	25	12	50		25								
Max2																
Yellow Clr	5	5	4	4	5	5		4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	2	2	2	2	2	2		2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON	ON	ON	ON	ON	ON		ON								
Auto Flash Entry				ON				ON								
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call									ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry				ON				ON								
Sim Gap Enable									ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk		ON				ON										
Cond Service																
Add Init Calc																
Concurrent Ps	1	1	1	1	2	2	2	2								

Preemption

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash						ON
Override Higher Preempt						ON
Flash in Dwell						
Link to Preempt						
Delay						
Min Duration						
Min Green	6	6	6	6	6	
Min Walk						
Ped Clear						
Track Green						
Min Dwell	6	6	6	6	6	
Max Presence	180	180	180		180	
Track Veh 1						
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1	2	4	1		2	
Dwell Cyc Veh 2	6	8	6		5	
Dwell Cyc Veh 3						
Dwell Cyc Veh 4						
Dwell Cyc Veh 5						
Dwell Cyc Veh 6						
Dwell Cyc Veh 7						
Dwell Cyc Veh 8						
Dwell Cyc Veh 9						
Dwell Cyc Veh 10						
Dwell Cyc Veh 11						
Dwell Cyc Veh 12						
Dwell Cyc Ped1						
Dwell Cyc Ped2						
Dwell Cyc Ped3						
Dwell Cyc Ped4						
Dwell Cyc Ped5						
Dwell Cyc Ped6						
Dwell vPed7						
Dwell Cyc Ped8						
Exit 1	3	1	2		2	
Exit 2	8	6	6		6	
Exit 3						
Exit 4						

Preempt LP

Channel	1	2	3	4
Min				
Max				
Enable				
Lock Mode	MAX	MAX	MAX	MAX
Coord in Preempt				
No Skip				
Priority P1				
Priority P2				
Priority P3				
Priority P4				
Lock				
Headway				
Group Lock				
Queue Jump				
Free Mode				
Alt Table				

Station : 1223 - Pine Island Rd & NW 81 St (Standard File)

Coordination

Hour	Minute	Action	Pattern	Cycle	Offset	Split	Seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 1											**Easy**															
		100	254																							
6		2	2	160	97	2	1	10	50		19	80	20	41	19	80		61								
9		3	3	160	81	3	1	10	50		21	75	20	44	21	75		64								
15		4	4	160	94	4	1	10	50		19	83	18	40	19	83		58								
20		3	3	160	81	3	1	10	50		21	75	20	44	21	75		64								
Day Plan 2											**Easy**															
		100	254																							
6		100	254																							
6	30	3	3	160	81	3	1	10	50		21	75	20	44	21	75		64								
Day Plan 3											**Easy**															
		100	254																							
6		100	254																							
6	30	3	3	160	81	3	1	10	50		21	75	20	44	21	75		64								
23		100	254																							

Station : 1223 - Pine Island Rd & NW 81 St (Standard File)

Hour	Minute	Action	Pattern	Cycle	Offset	Split	Seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 4											Easy															

Scheduler

	Month												Day of Week							Day of Month										1									2									3		
Plan	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	Day Plan
1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
3	1	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
4	1													1	1	1	1	1		1																																2
5	1													1							1																																2
6					1									1																																1	1	1	1	1	1	1	2
7							1											1				1																															2
8							1							1	1	1	1	1					1																														2
9							1							1										1																													2
10									1					1						1	1	1	1	1	1	1																											2
11											1						1																								1	1	1	1	1	1	1					2
12											1							1																								1	1	1	1	1	1	1				2
13												1		1				1																										1									2
14												1		1	1	1	1	1																											1								2
15												1		1																																1							2
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User Comments:

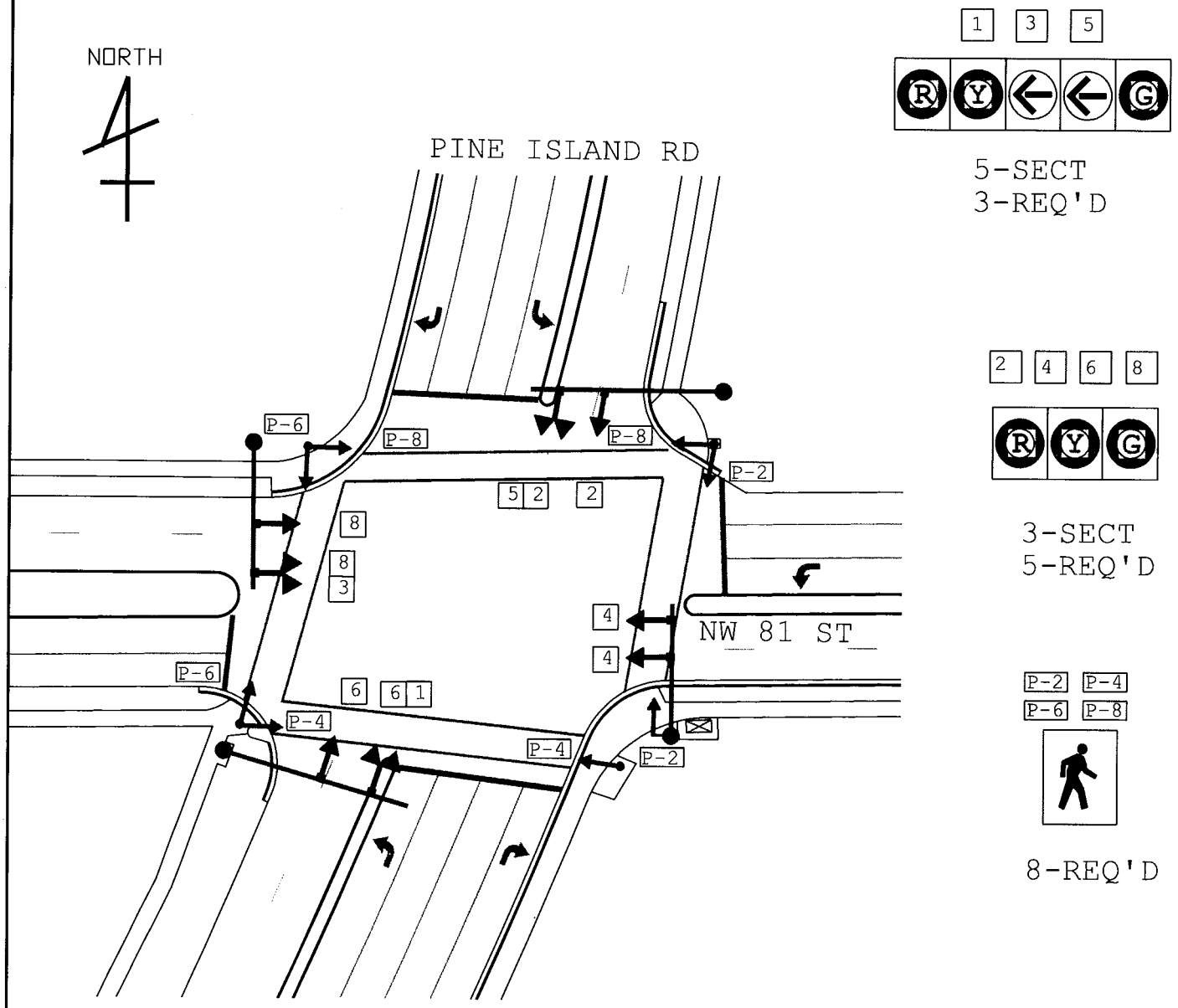
BROWARD COUNTY TRAFFIC ENGINEERING DIVISION
SIGNALIZED INTERSECTION

LOCATION **PINE ISLAND RD AND NW 81 ST**

ORDER NO -- ISSUE DATE -- REV NO. 1 COMPLETION DATE 3/19/08

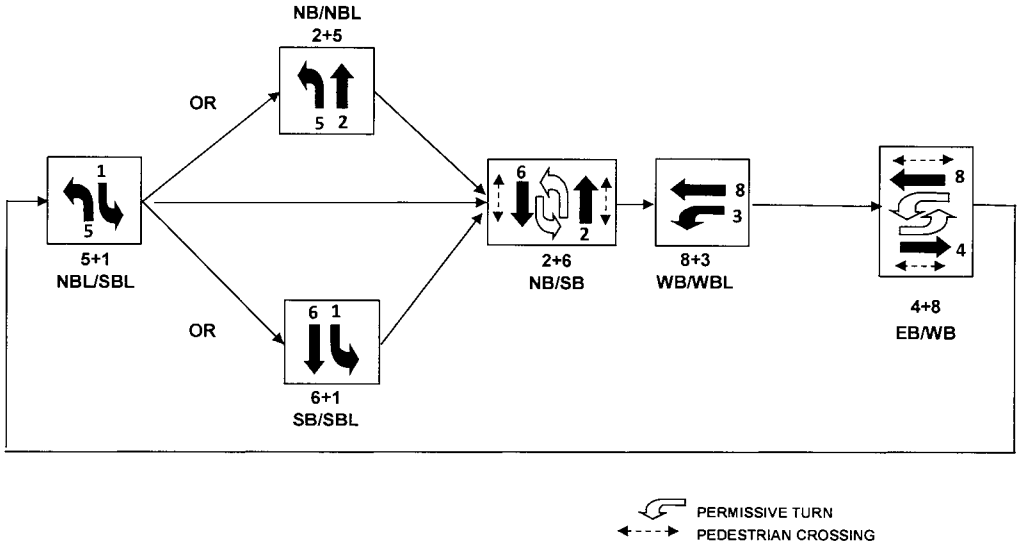
DWG. NO. 12-04-02-01 FILE NO. 1223 CITY TAMARAC SCALE: 1' = 50'

DWN BY: RIO



1. THIS REVISION REBUILDS TRAFFIC SIGNAL BY COUNTY
2. VIDEO DETECTION INSTALLED 10-7-09

Sequence of Operation for (1223) PINE ISLAND ROAD AND NW 81 STREET



BROWARD COUNTY TRAFFIC ENGINEERING

ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	1286	**Initial Operation Date**	4/13/83
Controller Type	2070 LN2 (BIU)	**System Number**	1286
Modification Number	11	**Modification Date**	09/23/2015
Drawing/Project No	N1030013P1	**FPL Grid Number**	86886784005
Intersection	McNAB ROAD and NW 80 AVE./LAGOS de CAMPO		
Municipality	TAMARAC		

Controller Phase	1	2	3	4	5	6	7	8
Face Number	1	2	3	4	5	6	7	8
Direction	EBL	WB	SBL	NB	WBL	EB	NBL	SB
Initial Green(MIN)	4	10	4	6	4	10	4	6
Vehicle Ext.(GAP)	1.5	3.0	1.5	2.0	1.5	3.0	1.5	2.0
Maximum Green I	12	50	12	30	12	50	12	30
Maximum Green II								
Yellow Clearance	5.0	5.0	4.0	4.0	5.0	5.0	4.0	4.0
All Red Clearance	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Phase Recall	OFF	MIN	OFF	OFF	OFF	MIN	OFF	OFF
Detector Delay								
Walk		7		7		7		7
Pedestrian Clearance		24		28		24		26
Permissive	5 SECT		5 SECT		5 SECT		5 SECT	
Flash Operation		YELLOW		RED		YELLOW		RED

Attachment

NOTES:

1. ANTI-BACKDOWN EAST/WEST: PHASES 2+6 ON--->OMIT PAHSES 1+5.
2. DUAL ENTRY HARDWIRED NORTH/SOUTH.
3. DIODE STRAPPING: PHASE 3 CALL EXTENDS PHASE 8 (SBL CALLS SB).
4. MOD. 11 UPDATES YELLOW CLEARANCES VALUES ON PHASES 1, 2, 5 & 6 AND PEDESTRIAN CLEARANCE ON PHASE 4 PER CURRENT BCTED STANDARDS.

Submitted By _____ **Approved By** _____

Station : 1286 - McNab Rd & NW 80 Ave (Standard File)

Phase	1 (EL)	2 (WT)	3 (SL)	4 (NT)	5 (WL)	6 (ET)	7 (NL)	8 (ST)	9	10	11	12	13	14	15	16
Walk		7		7		7		7								
Ped Clearance		24		28		24		26								
Min Green	4	10	4	6	4	10	4	6								
Gap Ext	1.5	3	1.5	2	1.5	3	1.5	2								
Max1	12	50	12	30	12	50	12	30								
Max2																
Yellow Clr	5	5	4	4	5	5	4	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	2	2	2	2	2	2	2	2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON	ON	ON	ON	ON	ON	ON	ON								
Auto Flash Entry				ON				ON								
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call			ON				ON									
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry				ON				ON								
Sim Gap Enable																
Guar Passage																
Rest In Walk		ON				ON										
Cond Service																
Add Init Calc																
Concurrent Ps	1	1	1	1	2	2	2	2								

Preemption

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash						
Override Higher Preempt						
Flash in Dwell						
Link to Preempt						
Delay						
Min Duration						
Min Green	6	6	6	6	6	6
Min Walk						
Ped Clear						
Track Green						
Min Dwell	8	8	8	8	8	8
Max Presence	180	180	180	180	180	180
Track Veh 1						
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1						
Dwell Cyc Veh 2						
Dwell Cyc Veh 3						
Dwell Cyc Veh 4						
Dwell Cyc Veh 5						
Dwell Cyc Veh 6						
Dwell Cyc Veh 7						
Dwell Cyc Veh 8						
Dwell Cyc Veh 9						
Dwell Cyc Veh 10						
Dwell Cyc Veh 11						
Dwell Cyc Veh 12						
Dwell Cyc Ped1						
Dwell Cyc Ped2						
Dwell Cyc Ped3						
Dwell Cyc Ped4						
Dwell Cyc Ped5						
Dwell Cyc Ped6						
Dwell vPed7						
Dwell Cyc Ped8						
Exit 1						
Exit 2						
Exit 3						
Exit 4						

Preempt LP

Channel	1	2	3	4
Min				
Max				
Enable				
Lock Mode	MAX	MAX	MAX	MAX
Coord in Preempt				
No Skip				
Priority P1				
Priority P2				
Priority P3				
Priority P4				
Lock				
Headway				
Group Lock				
Queue Jump				
Free Mode				
Alt Table				

Station : 1286 - McNab Rd & NW 80 Ave (Standard File)

Coordination

Hour	Minute	Action	Pattern	Cycle	Offset	Split	Seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 1											**Easy**															
		100	254																							
6		2	2	160	98	2	1	10	50		15	79	24	42	15	79	24	42								
9		3	3	160	132	3	1	10	50		23	68	24	45	23	68	24	45								
15		4	4	160	134	4	1	10	50		20	74	24	42	20	74	24	42								
20		3	3	160	132	3	1	10	50		23	68	24	45	23	68	24	45								
Day Plan 2											**Easy**															
		3	3	160	132	3	1	10	50		23	68	24	45	23	68	24	45								
1		100	254																							
6	30	3	3	160	132	3	1	10	50		23	68	24	45	23	68	24	45								
Day Plan 3											**Easy**															
		3	3	160	132	3	1	10	50		23	68	24	45	23	68	24	45								
1		100	254																							
6	30	3	3	160	132	3	1	10	50		23	68	24	45	23	68	24	45								
23		100	254																							

Station : 1286 - McNab Rd & NW 80 Ave (Standard File)

Hour	Minute	Action	Pattern	Cycle	Offset	Split	Seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 4											Easy															

Scheduler

	Month											Day of Week							Day of Month									1									2									3		
Plan	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	Day Plan
1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
3	1	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
4	1													1	1	1	1	1		1																																2
5	1													1							1																															2
6					1									1																														1	1	1	1	1	1	1	2
7							1											1				1																														2
8							1							1	1	1	1	1					1																													2
9							1							1										1																												2
10									1					1						1	1	1	1	1	1	1																										2
11											1						1																								1	1	1	1	1	1	1				2
12											1							1																								1	1	1	1	1	1	1				2
13												1		1				1																										1								2
14												1		1	1	1	1	1																											1							2
15												1		1																																1						2
16												1		1				1																																	1	2
17																																																				1
18																																																				1
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28																																																				1
29																																																				1
30																																																				1
31																																																				1
32																																																				1

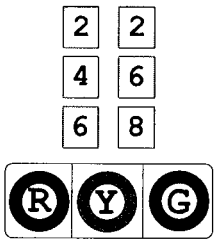
User Comments:

BROWARD COUNTY
TRAFFIC ENGINEERING DIVISION

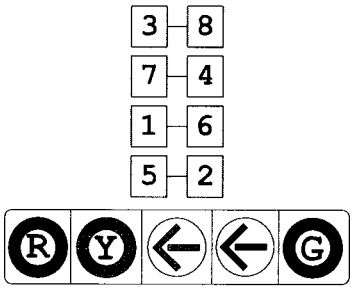
LOCATION **McNab Rd & NW 80 Ave/Lagos De Campo Blvd**

ORDER NO ____ ISSUE DATE _____ REVISION NO. **Mod 11** COMPLETION DATE _____

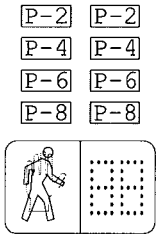
DWG. NO. _____ FILE NO. **1286** CITY **TAMARAC** SCALE: 1" = 50'



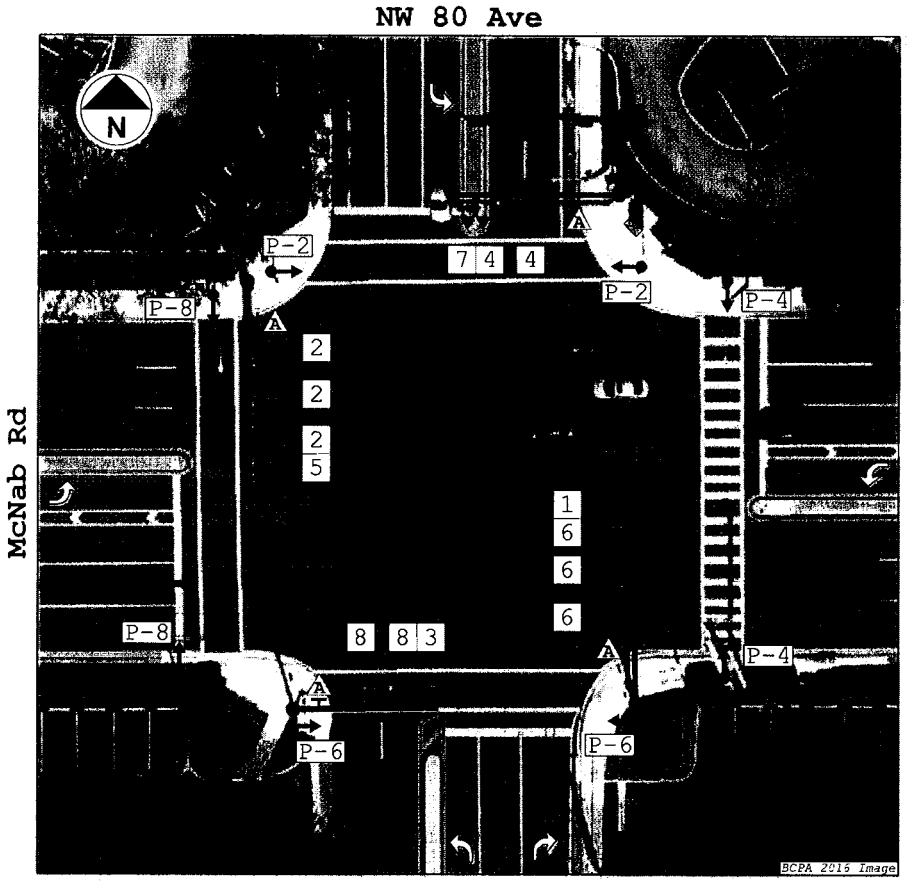
3-SECT
1-WAY
6-REQ'D



5-SECT
1-WAY
4-REQ'D



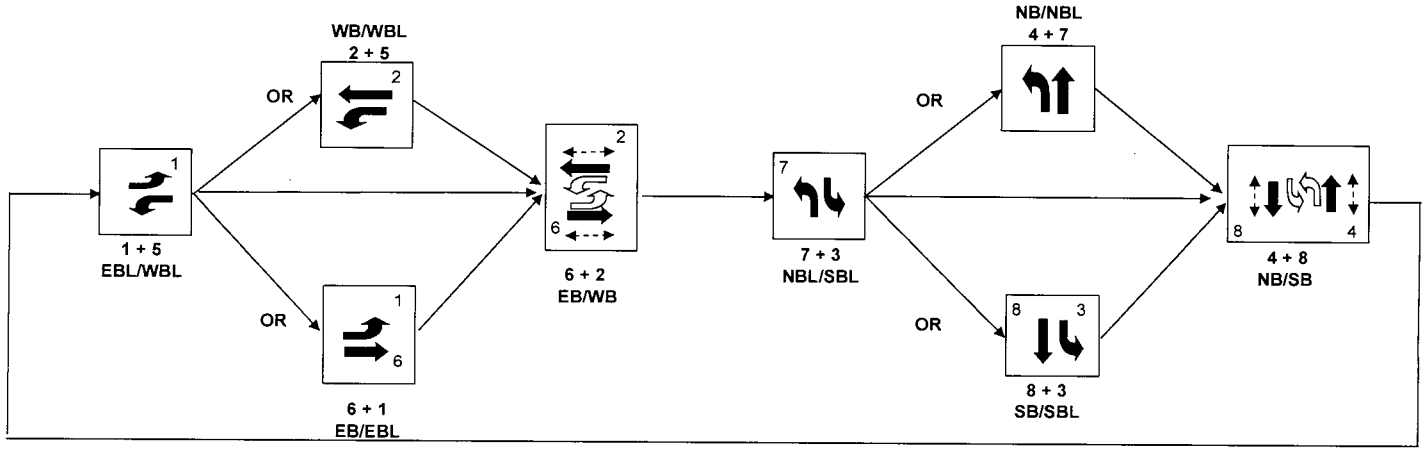
1-WAY
8-REQ'D



Illuminated
Street Name

4-REQ'D

Sequence of Operation for (1286) McNab Road & NW 80 Ave/Lagos de Campo



BROWARD COUNTY TRAFFIC ENGINEERING

ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	1287	**Initial Operation Date**	12/28/88
Controller Type	2070 LN	**System Number**	1287
Modification Number	8	**Modification Date**	10/28/2015
Drawing/Project No	415322-1-52-01	**FPL Grid Number**	86987111304
Intersection	UNIVERSITY DRIVE (SR 817) and NW 78 STREET		
Municipality	TAMARAC		

Controller Phase	1	2	3	4	5	6	7	8
Face Number		2		4	5	6		8
Direction		NB		EB	NBL	SB		WB
Initial Green(MIN)		15		6	4	15		6
Vehicle Ext.(GAP)		3.0		2.0	1.5	3.0		2.0
Maximum Green I		55		25	15	55		25
Maximum Green II								
Yellow Clearance		5.0		4.0	5.0	5.0		4.0
All Red Clearance		2.0		2.0	2.0	2.0		2.0
Phase Recall		MIN		OFF	OFF	MIN		OFF
Detector Delay								
Walk		7				7		7
Pedestrian Clearance						18		33
Permissive					5 SECT			
Flash Operation		YELLOW		RED		YELLOW		RED

Attachment

NOTES:

1. ANTI-BACKDOWN NORTHBOUND: PHASES 2+6 ON---> OMIT PHASE 5.
2. MOD. 8 UPDATES PEDESTRIAN TIMING.

Submitted By _____ **Approved By** _____

Broward County Timing Sheet 3/8/2019 5:04:10 PM

Station : 1287 - University Dr & NW 78 St (Standard File)

Phase	1	2 (NT)	3	4 (ET)	5 (NL)	6 (ST)	7	8 (WT)	9	10	11	12	13	14	15	16
Walk						7		7								
Ped Clearance						18		33								
Min Green		15		6	4	15		6								
Gap Ext		3		2	1.5	3		2								
Max1		55		25	15	55		25								
Max2																
Yellow Clr	3.5	5	3.5	4	5	5	3.5	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr		2		2	2	2		2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable		ON		ON	ON	ON		ON								
Auto Flash Entry				ON				ON								
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call									ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry				ON				ON								
Sim Gap Enable										ON		ON		ON		ON
Guar Passage																
Rest In Walk		ON				ON										
Cond Service																
Add Init Calc																
Concurrent Ps	1	1	1	1	2	2	2	2								

Preemption

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash						
Override Higher Preempt						
Flash in Dwell						
Link to Preempt						
Delay						
Min Duration						
Min Green	6	6	6	6	6	6
Min Walk						
Ped Clear						
Track Green					1	
Min Dwell	8	8	8	8	8	8
Max Presence	180	180	180	180	180	180
Track Veh 1					9	
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1	2	4			2	
Dwell Cyc Veh 2	6	8			5	
Dwell Cyc Veh 3						
Dwell Cyc Veh 4						
Dwell Cyc Veh 5						
Dwell Cyc Veh 6						
Dwell Cyc Veh 7						
Dwell Cyc Veh 8						
Dwell Cyc Veh 9						
Dwell Cyc Veh 10						
Dwell Cyc Veh 11						
Dwell Cyc Veh 12						
Dwell Cyc Ped1						
Dwell Cyc Ped2						
Dwell Cyc Ped3						
Dwell Cyc Ped4						
Dwell Cyc Ped5						
Dwell Cyc Ped6						
Dwell vPed7						
Dwell Cyc Ped8						
Exit 1	4	2			2	
Exit 2	8	6			6	
Exit 3						
Exit 4						

Preempt LP

Channel	1	2	3	4
Min				
Max				
Enable				
Lock Mode	MAX	MAX	MAX	MAX
Coord in Preempt				
No Skip				
Priority P1				
Priority P2				
Priority P3				
Priority P4				
Lock				
Headway				
Group Lock				
Queue Jump				
Free Mode				
Alt Table				

Station : 1287 - University Dr & NW 78 St (Standard File)

Coordination

Hour	Minute	Action	Pattern	Cycle	Offset	Split	Seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 1											**Easy**															
		100	254																							
6		2	2	160	138	2	1	10	50			114		46	23	91		46								
9		3	3	160	148	3	1	10	50			114		46	23	91		46								
15		4	4	160	58	4	1	10	50			114		46	23	91		46								
20		3	3	160	148	3	1	10	50			114		46	23	91		46								
Day Plan 2											**Easy**															
		3	3	160	148	3	1	10	50			114		46	23	91		46								
1		100	254																							
6	30	3	3	160	148	3	1	10	50			114		46	23	91		46								
Day Plan 3											**Easy**															
		3	3	160	148	3	1	10	50			114		46	23	91		46								
1		100	254																							
6	30	3	3	160	148	3	1	10	50			114		46	23	91		46								
23		100	254																							

Station : 1287 - University Dr & NW 78 St (Standard File)

Hour	Minute	Action	Pattern	Cycle	Offset	Split	Seqnc	Short	Long	Dwell	Split 1	Split 2	Split 3	Split 4	Split 5	Split 6	Split 7	Split 8	Split 9	Split 10	Split 11	Split 12	Split 13	Split 14	Split 15	Split 16
Day Plan 4											Easy															

Scheduler

	Month												Day of Week							Day of Month									1									2									3		
Plan	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	Day Plan
1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
3	1	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
4	1													1	1	1	1	1		1																																2
5	1													1							1																																2
6					1									1																															1	1	1	1	1	1	1	1	2
7							1											1				1																														2
8							1							1	1	1	1	1					1																														2
9							1							1										1																													2
10									1					1						1	1	1	1	1	1	1																											2
11											1						1																									1	1	1	1	1	1	1				2
12											1							1																									1	1	1	1	1	1	1				2
13												1		1				1																											1								2
14												1		1	1	1	1	1																												1							2
15												1		1																																	1							2
16												1		1				1																																		1		2
17																																																					1
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30																																																					1
31																																																					1
32																																																					1

User Comments:

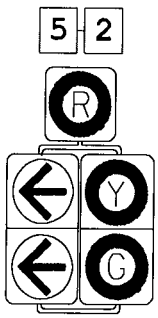
TRAFFIC ENGINEERING DIVISION
SIGNALIZED INTERSECTION

LOCATION: UNIVERSITY DR & NW 78 ST

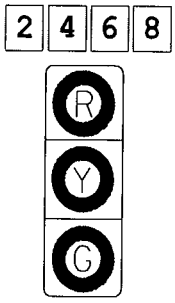
ORDER NO --- **ISSUE DATE** --- **REVISION NO.** --- **COMPLETION DATE** 12/06/18

DWG. NO. 18-12-01-01 **FILE NO.** 1287 **CITY** TAMARAC

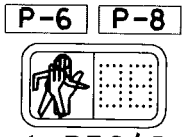
DWN BY: LPATTERSON



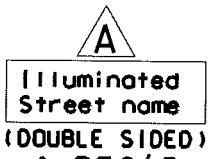
5-SECT
1-WAY
1-REQ'D



3-SECT
1-WAY
7-REQ'D



4-REQ'D

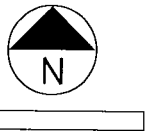


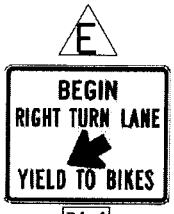
4-REQ'D

1-REQ'D

1-REQ'D

1-REQ'D

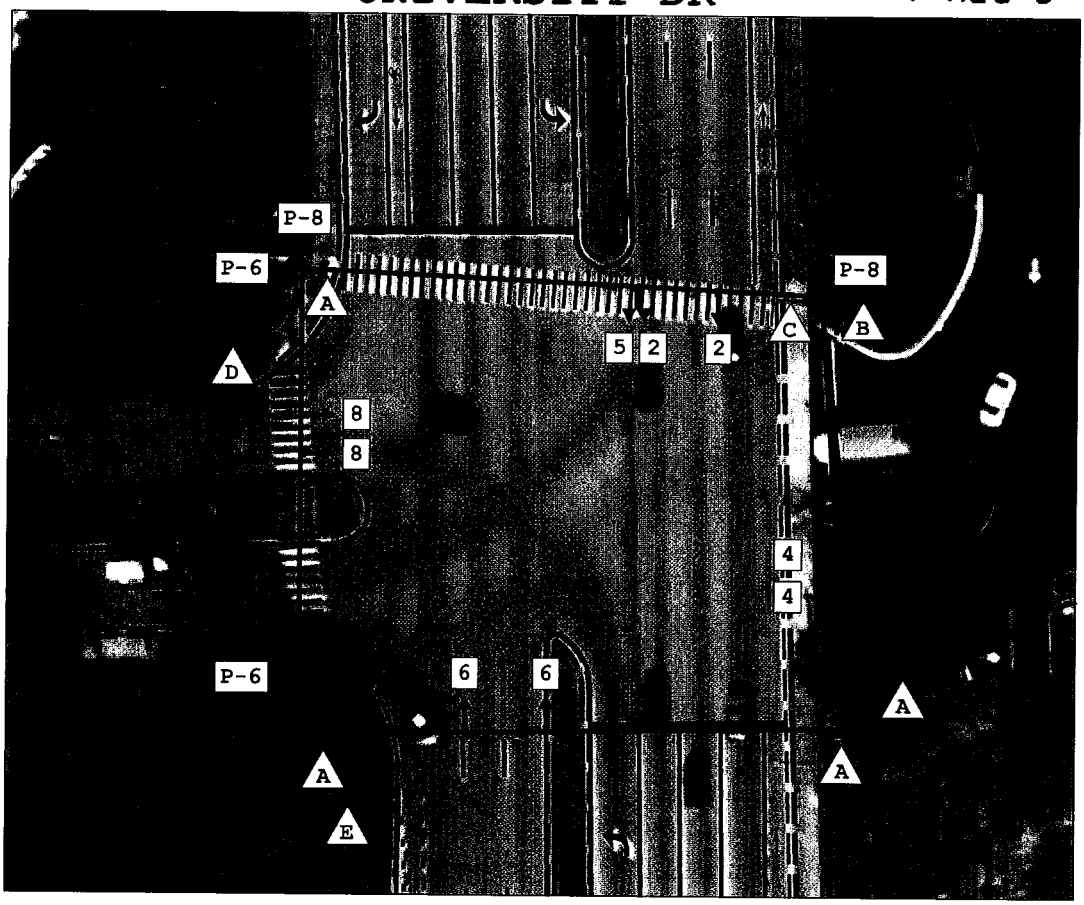




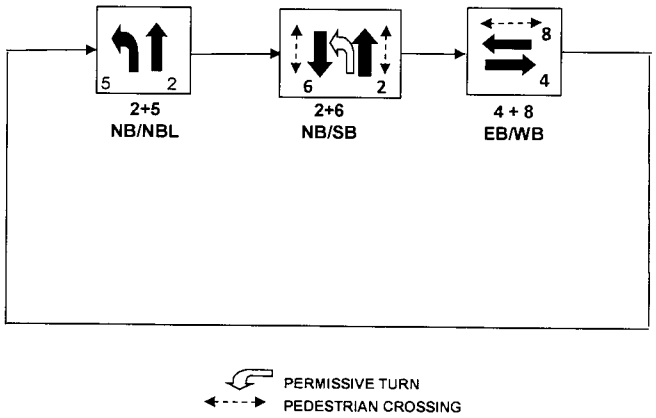
1-REQ'D

UNIVERSITY DR

NW 78 ST



Sequence of Operation for (1287) UNIVERSITY DRIVE (SR 817) AND NW 78 STREET



APPENDIX D

Peak Season Conversion Factors

2017 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 8600 EAST-A1A TO US1

MOCF: 0.91

WEEK	DATES	SF	PSCF
1	01/01/2017 - 01/07/2017	0.99	1.09
2	01/08/2017 - 01/14/2017	0.97	1.07
3	01/15/2017 - 01/21/2017	0.94	1.03
* 4	01/22/2017 - 01/28/2017	0.93	1.02
* 5	01/29/2017 - 02/04/2017	0.91	1.00
* 6	02/05/2017 - 02/11/2017	0.90	0.99
* 7	02/12/2017 - 02/18/2017	0.88	0.97
* 8	02/19/2017 - 02/25/2017	0.88	0.97
* 9	02/26/2017 - 03/04/2017	0.89	0.98
*10	03/05/2017 - 03/11/2017	0.89	0.98
*11	03/12/2017 - 03/18/2017	0.89	0.98
*12	03/19/2017 - 03/25/2017	0.90	0.99
*13	03/26/2017 - 04/01/2017	0.91	1.00
*14	04/02/2017 - 04/08/2017	0.92	1.01
*15	04/09/2017 - 04/15/2017	0.93	1.02
*16	04/16/2017 - 04/22/2017	0.94	1.03
17	04/23/2017 - 04/29/2017	0.95	1.04
18	04/30/2017 - 05/06/2017	0.95	1.04
19	05/07/2017 - 05/13/2017	0.96	1.05
20	05/14/2017 - 05/20/2017	0.97	1.07
21	05/21/2017 - 05/27/2017	1.00	1.10
22	05/28/2017 - 06/03/2017	1.02	1.12
23	06/04/2017 - 06/10/2017	1.04	1.14
24	06/11/2017 - 06/17/2017	1.06	1.16
25	06/18/2017 - 06/24/2017	1.05	1.15
26	06/25/2017 - 07/01/2017	1.04	1.14
27	07/02/2017 - 07/08/2017	1.02	1.12
28	07/09/2017 - 07/15/2017	1.01	1.11
29	07/16/2017 - 07/22/2017	1.02	1.12
30	07/23/2017 - 07/29/2017	1.03	1.13
31	07/30/2017 - 08/05/2017	1.04	1.14
32	08/06/2017 - 08/12/2017	1.05	1.15
33	08/13/2017 - 08/19/2017	1.06	1.16
34	08/20/2017 - 08/26/2017	1.12	1.23
35	08/27/2017 - 09/02/2017	1.17	1.29
36	09/03/2017 - 09/09/2017	1.23	1.35
37	09/10/2017 - 09/16/2017	1.28	1.41
38	09/17/2017 - 09/23/2017	1.25	1.37
39	09/24/2017 - 09/30/2017	1.21	1.33
40	10/01/2017 - 10/07/2017	1.18	1.30
41	10/08/2017 - 10/14/2017	1.14	1.25
42	10/15/2017 - 10/21/2017	1.10	1.21
43	10/22/2017 - 10/28/2017	1.09	1.20
44	10/29/2017 - 11/04/2017	1.07	1.18
45	11/05/2017 - 11/11/2017	1.05	1.15
46	11/12/2017 - 11/18/2017	1.04	1.14
47	11/19/2017 - 11/25/2017	1.03	1.13
48	11/26/2017 - 12/02/2017	1.02	1.12
49	12/03/2017 - 12/09/2017	1.00	1.10
50	12/10/2017 - 12/16/2017	0.99	1.09
51	12/17/2017 - 12/23/2017	0.98	1.08
52	12/24/2017 - 12/30/2017	0.96	1.05
53	12/31/2017 - 12/31/2017	0.94	1.03

* PEAK SEASON

2017 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 8601 CEN.-W OF US1 TO SR7

MOCF: 0.97

WEEK	DATES	SF	PSCF
1	01/01/2017 - 01/07/2017	0.96	0.99
2	01/08/2017 - 01/14/2017	0.98	1.01
3	01/15/2017 - 01/21/2017	0.99	1.02
4	01/22/2017 - 01/28/2017	0.99	1.02
* 5	01/29/2017 - 02/04/2017	0.98	1.01
* 6	02/05/2017 - 02/11/2017	0.98	1.01
* 7	02/12/2017 - 02/18/2017	0.97	1.00
* 8	02/19/2017 - 02/25/2017	0.97	1.00
* 9	02/26/2017 - 03/04/2017	0.96	0.99
*10	03/05/2017 - 03/11/2017	0.96	0.99
*11	03/12/2017 - 03/18/2017	0.96	0.99
*12	03/19/2017 - 03/25/2017	0.96	0.99
*13	03/26/2017 - 04/01/2017	0.97	1.00
*14	04/02/2017 - 04/08/2017	0.97	1.00
*15	04/09/2017 - 04/15/2017	0.98	1.01
*16	04/16/2017 - 04/22/2017	0.98	1.01
*17	04/23/2017 - 04/29/2017	0.99	1.02
18	04/30/2017 - 05/06/2017	0.99	1.02
19	05/07/2017 - 05/13/2017	0.99	1.02
20	05/14/2017 - 05/20/2017	1.00	1.03
21	05/21/2017 - 05/27/2017	1.00	1.03
22	05/28/2017 - 06/03/2017	1.00	1.03
23	06/04/2017 - 06/10/2017	1.01	1.04
24	06/11/2017 - 06/17/2017	1.01	1.04
25	06/18/2017 - 06/24/2017	1.01	1.04
26	06/25/2017 - 07/01/2017	1.01	1.04
27	07/02/2017 - 07/08/2017	1.01	1.04
28	07/09/2017 - 07/15/2017	1.02	1.05
29	07/16/2017 - 07/22/2017	1.01	1.04
30	07/23/2017 - 07/29/2017	1.01	1.04
31	07/30/2017 - 08/05/2017	1.01	1.04
32	08/06/2017 - 08/12/2017	1.01	1.04
33	08/13/2017 - 08/19/2017	1.01	1.04
34	08/20/2017 - 08/26/2017	1.05	1.08
35	08/27/2017 - 09/02/2017	1.08	1.11
36	09/03/2017 - 09/09/2017	1.12	1.15
37	09/10/2017 - 09/16/2017	1.16	1.20
38	09/17/2017 - 09/23/2017	1.13	1.16
39	09/24/2017 - 09/30/2017	1.10	1.13
40	10/01/2017 - 10/07/2017	1.08	1.11
41	10/08/2017 - 10/14/2017	1.05	1.08
42	10/15/2017 - 10/21/2017	1.03	1.06
43	10/22/2017 - 10/28/2017	1.02	1.05
44	10/29/2017 - 11/04/2017	1.01	1.04
45	11/05/2017 - 11/11/2017	1.00	1.03
46	11/12/2017 - 11/18/2017	0.99	1.02
47	11/19/2017 - 11/25/2017	0.98	1.01
48	11/26/2017 - 12/02/2017	0.98	1.01
49	12/03/2017 - 12/09/2017	0.97	1.00
50	12/10/2017 - 12/16/2017	0.96	0.99
51	12/17/2017 - 12/23/2017	0.97	1.00
52	12/24/2017 - 12/30/2017	0.98	1.01
53	12/31/2017 - 12/31/2017	0.99	1.02

* PEAK SEASON

2017 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 8630 WEST-W OF US441

MOCF: 0.97

WEEK	DATES	SF	PSCF
1	01/01/2017 - 01/07/2017	1.02	1.05
2	01/08/2017 - 01/14/2017	1.01	1.04
3	01/15/2017 - 01/21/2017	1.00	1.03
4	01/22/2017 - 01/28/2017	0.99	1.02
5	01/29/2017 - 02/04/2017	0.98	1.01
* 6	02/05/2017 - 02/11/2017	0.97	1.00
* 7	02/12/2017 - 02/18/2017	0.96	0.99
* 8	02/19/2017 - 02/25/2017	0.95	0.98
* 9	02/26/2017 - 03/04/2017	0.95	0.98
*10	03/05/2017 - 03/11/2017	0.95	0.98
*11	03/12/2017 - 03/18/2017	0.95	0.98
*12	03/19/2017 - 03/25/2017	0.96	0.99
*13	03/26/2017 - 04/01/2017	0.97	1.00
*14	04/02/2017 - 04/08/2017	0.97	1.00
*15	04/09/2017 - 04/15/2017	0.98	1.01
*16	04/16/2017 - 04/22/2017	0.98	1.01
*17	04/23/2017 - 04/29/2017	0.98	1.01
*18	04/30/2017 - 05/06/2017	0.98	1.01
19	05/07/2017 - 05/13/2017	0.98	1.01
20	05/14/2017 - 05/20/2017	0.98	1.01
21	05/21/2017 - 05/27/2017	0.99	1.02
22	05/28/2017 - 06/03/2017	1.01	1.04
23	06/04/2017 - 06/10/2017	1.02	1.05
24	06/11/2017 - 06/17/2017	1.03	1.06
25	06/18/2017 - 06/24/2017	1.04	1.07
26	06/25/2017 - 07/01/2017	1.05	1.08
27	07/02/2017 - 07/08/2017	1.05	1.08
28	07/09/2017 - 07/15/2017	1.06	1.09
29	07/16/2017 - 07/22/2017	1.05	1.08
30	07/23/2017 - 07/29/2017	1.04	1.07
31	07/30/2017 - 08/05/2017	1.03	1.06
32	08/06/2017 - 08/12/2017	1.02	1.05
33	08/13/2017 - 08/19/2017	1.01	1.04
34	08/20/2017 - 08/26/2017	1.04	1.07
35	08/27/2017 - 09/02/2017	1.07	1.10
36	09/03/2017 - 09/09/2017	1.10	1.13
37	09/10/2017 - 09/16/2017	1.13	1.16
38	09/17/2017 - 09/23/2017	1.10	1.13
39	09/24/2017 - 09/30/2017	1.07	1.10
40	10/01/2017 - 10/07/2017	1.04	1.07
41	10/08/2017 - 10/14/2017	1.01	1.04
42	10/15/2017 - 10/21/2017	0.98	1.01
43	10/22/2017 - 10/28/2017	0.98	1.01
44	10/29/2017 - 11/04/2017	0.98	1.01
45	11/05/2017 - 11/11/2017	0.98	1.01
46	11/12/2017 - 11/18/2017	0.98	1.01
47	11/19/2017 - 11/25/2017	0.99	1.02
48	11/26/2017 - 12/02/2017	1.00	1.03
49	12/03/2017 - 12/09/2017	1.01	1.04
50	12/10/2017 - 12/16/2017	1.02	1.05
51	12/17/2017 - 12/23/2017	1.01	1.04
52	12/24/2017 - 12/30/2017	1.01	1.04
53	12/31/2017 - 12/31/2017	1.00	1.03

* PEAK SEASON

2017 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 8659 BROWARD I595

MOCF: 0.98

WEEK	DATES	SF	PSCF
1	01/01/2017 - 01/07/2017	0.98	1.00
2	01/08/2017 - 01/14/2017	1.00	1.02
3	01/15/2017 - 01/21/2017	1.02	1.04
4	01/22/2017 - 01/28/2017	1.01	1.03
5	01/29/2017 - 02/04/2017	1.00	1.02
6	02/05/2017 - 02/11/2017	0.99	1.01
* 7	02/12/2017 - 02/18/2017	0.98	1.00
* 8	02/19/2017 - 02/25/2017	0.98	1.00
* 9	02/26/2017 - 03/04/2017	0.97	0.99
*10	03/05/2017 - 03/11/2017	0.97	0.99
*11	03/12/2017 - 03/18/2017	0.96	0.98
*12	03/19/2017 - 03/25/2017	0.97	0.99
*13	03/26/2017 - 04/01/2017	0.97	0.99
*14	04/02/2017 - 04/08/2017	0.98	1.00
*15	04/09/2017 - 04/15/2017	0.98	1.00
*16	04/16/2017 - 04/22/2017	0.98	1.00
*17	04/23/2017 - 04/29/2017	0.98	1.00
*18	04/30/2017 - 05/06/2017	0.99	1.01
*19	05/07/2017 - 05/13/2017	0.99	1.01
20	05/14/2017 - 05/20/2017	0.99	1.01
21	05/21/2017 - 05/27/2017	1.00	1.02
22	05/28/2017 - 06/03/2017	1.01	1.03
23	06/04/2017 - 06/10/2017	1.02	1.04
24	06/11/2017 - 06/17/2017	1.03	1.05
25	06/18/2017 - 06/24/2017	1.03	1.05
26	06/25/2017 - 07/01/2017	1.03	1.05
27	07/02/2017 - 07/08/2017	1.03	1.05
28	07/09/2017 - 07/15/2017	1.03	1.05
29	07/16/2017 - 07/22/2017	1.02	1.04
30	07/23/2017 - 07/29/2017	1.02	1.04
31	07/30/2017 - 08/05/2017	1.01	1.03
32	08/06/2017 - 08/12/2017	1.01	1.03
33	08/13/2017 - 08/19/2017	1.00	1.02
34	08/20/2017 - 08/26/2017	1.04	1.06
35	08/27/2017 - 09/02/2017	1.08	1.10
36	09/03/2017 - 09/09/2017	1.11	1.13
37	09/10/2017 - 09/16/2017	1.15	1.17
38	09/17/2017 - 09/23/2017	1.12	1.14
39	09/24/2017 - 09/30/2017	1.08	1.10
40	10/01/2017 - 10/07/2017	1.05	1.07
41	10/08/2017 - 10/14/2017	1.01	1.03
42	10/15/2017 - 10/21/2017	0.98	1.00
43	10/22/2017 - 10/28/2017	0.98	1.00
44	10/29/2017 - 11/04/2017	0.98	1.00
45	11/05/2017 - 11/11/2017	0.97	0.99
46	11/12/2017 - 11/18/2017	0.97	0.99
47	11/19/2017 - 11/25/2017	0.97	0.99
48	11/26/2017 - 12/02/2017	0.98	1.00
49	12/03/2017 - 12/09/2017	0.98	1.00
50	12/10/2017 - 12/16/2017	0.98	1.00
51	12/17/2017 - 12/23/2017	0.99	1.01
52	12/24/2017 - 12/30/2017	1.01	1.03
53	12/31/2017 - 12/31/2017	1.02	1.04

* PEAK SEASON

2017 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 8675 BROWARD I75 URBAN

MOCF: 0.97

WEEK	DATES	SF	PSCF
1	01/01/2017 - 01/07/2017	0.99	1.02
2	01/08/2017 - 01/14/2017	1.00	1.03
3	01/15/2017 - 01/21/2017	1.01	1.04
4	01/22/2017 - 01/28/2017	1.00	1.03
5	01/29/2017 - 02/04/2017	0.99	1.02
6	02/05/2017 - 02/11/2017	0.98	1.01
* 7	02/12/2017 - 02/18/2017	0.97	1.00
* 8	02/19/2017 - 02/25/2017	0.97	1.00
* 9	02/26/2017 - 03/04/2017	0.97	1.00
*10	03/05/2017 - 03/11/2017	0.96	0.99
*11	03/12/2017 - 03/18/2017	0.96	0.99
*12	03/19/2017 - 03/25/2017	0.96	0.99
*13	03/26/2017 - 04/01/2017	0.97	1.00
*14	04/02/2017 - 04/08/2017	0.97	1.00
*15	04/09/2017 - 04/15/2017	0.97	1.00
*16	04/16/2017 - 04/22/2017	0.97	1.00
*17	04/23/2017 - 04/29/2017	0.97	1.00
*18	04/30/2017 - 05/06/2017	0.98	1.01
*19	05/07/2017 - 05/13/2017	0.98	1.01
20	05/14/2017 - 05/20/2017	0.98	1.01
21	05/21/2017 - 05/27/2017	0.99	1.02
22	05/28/2017 - 06/03/2017	1.00	1.03
23	06/04/2017 - 06/10/2017	1.00	1.03
24	06/11/2017 - 06/17/2017	1.01	1.04
25	06/18/2017 - 06/24/2017	1.02	1.05
26	06/25/2017 - 07/01/2017	1.02	1.05
27	07/02/2017 - 07/08/2017	1.03	1.06
28	07/09/2017 - 07/15/2017	1.03	1.06
29	07/16/2017 - 07/22/2017	1.02	1.05
30	07/23/2017 - 07/29/2017	1.01	1.04
31	07/30/2017 - 08/05/2017	1.01	1.04
32	08/06/2017 - 08/12/2017	1.00	1.03
33	08/13/2017 - 08/19/2017	0.99	1.02
34	08/20/2017 - 08/26/2017	1.03	1.06
35	08/27/2017 - 09/02/2017	1.08	1.11
36	09/03/2017 - 09/09/2017	1.12	1.15
37	09/10/2017 - 09/16/2017	1.16	1.20
38	09/17/2017 - 09/23/2017	1.12	1.15
39	09/24/2017 - 09/30/2017	1.08	1.11
40	10/01/2017 - 10/07/2017	1.05	1.08
41	10/08/2017 - 10/14/2017	1.01	1.04
42	10/15/2017 - 10/21/2017	0.97	1.00
43	10/22/2017 - 10/28/2017	0.97	1.00
44	10/29/2017 - 11/04/2017	0.98	1.01
45	11/05/2017 - 11/11/2017	0.98	1.01
46	11/12/2017 - 11/18/2017	0.98	1.01
47	11/19/2017 - 11/25/2017	0.98	1.01
48	11/26/2017 - 12/02/2017	0.99	1.02
49	12/03/2017 - 12/09/2017	0.99	1.02
50	12/10/2017 - 12/16/2017	0.99	1.02
51	12/17/2017 - 12/23/2017	1.00	1.03
52	12/24/2017 - 12/30/2017	1.00	1.03
53	12/31/2017 - 12/31/2017	1.01	1.04

* PEAK SEASON

2017 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 8676 BROWARD I75 RURAL

MOCF: 0.93

WEEK	DATES	SF	PSCF
1	01/01/2017 - 01/07/2017	0.96	1.03
2	01/08/2017 - 01/14/2017	0.97	1.04
3	01/15/2017 - 01/21/2017	0.98	1.05
* 4	01/22/2017 - 01/28/2017	0.97	1.04
* 5	01/29/2017 - 02/04/2017	0.95	1.02
* 6	02/05/2017 - 02/11/2017	0.94	1.01
* 7	02/12/2017 - 02/18/2017	0.92	0.99
* 8	02/19/2017 - 02/25/2017	0.91	0.98
* 9	02/26/2017 - 03/04/2017	0.91	0.98
*10	03/05/2017 - 03/11/2017	0.90	0.97
*11	03/12/2017 - 03/18/2017	0.90	0.97
*12	03/19/2017 - 03/25/2017	0.91	0.98
*13	03/26/2017 - 04/01/2017	0.92	0.99
*14	04/02/2017 - 04/08/2017	0.93	1.00
*15	04/09/2017 - 04/15/2017	0.95	1.02
*16	04/16/2017 - 04/22/2017	0.96	1.03
17	04/23/2017 - 04/29/2017	0.98	1.05
18	04/30/2017 - 05/06/2017	0.99	1.06
19	05/07/2017 - 05/13/2017	1.01	1.09
20	05/14/2017 - 05/20/2017	1.02	1.10
21	05/21/2017 - 05/27/2017	1.03	1.11
22	05/28/2017 - 06/03/2017	1.04	1.12
23	06/04/2017 - 06/10/2017	1.05	1.13
24	06/11/2017 - 06/17/2017	1.07	1.15
25	06/18/2017 - 06/24/2017	1.06	1.14
26	06/25/2017 - 07/01/2017	1.05	1.13
27	07/02/2017 - 07/08/2017	1.04	1.12
28	07/09/2017 - 07/15/2017	1.03	1.11
29	07/16/2017 - 07/22/2017	1.04	1.12
30	07/23/2017 - 07/29/2017	1.05	1.13
31	07/30/2017 - 08/05/2017	1.06	1.14
32	08/06/2017 - 08/12/2017	1.07	1.15
33	08/13/2017 - 08/19/2017	1.08	1.16
34	08/20/2017 - 08/26/2017	1.13	1.22
35	08/27/2017 - 09/02/2017	1.17	1.26
36	09/03/2017 - 09/09/2017	1.22	1.31
37	09/10/2017 - 09/16/2017	1.26	1.35
38	09/17/2017 - 09/23/2017	1.22	1.31
39	09/24/2017 - 09/30/2017	1.17	1.26
40	10/01/2017 - 10/07/2017	1.13	1.22
41	10/08/2017 - 10/14/2017	1.08	1.16
42	10/15/2017 - 10/21/2017	1.04	1.12
43	10/22/2017 - 10/28/2017	1.02	1.10
44	10/29/2017 - 11/04/2017	1.00	1.08
45	11/05/2017 - 11/11/2017	0.97	1.04
46	11/12/2017 - 11/18/2017	0.95	1.02
47	11/19/2017 - 11/25/2017	0.95	1.02
48	11/26/2017 - 12/02/2017	0.95	1.02
49	12/03/2017 - 12/09/2017	0.95	1.02
50	12/10/2017 - 12/16/2017	0.96	1.03
51	12/17/2017 - 12/23/2017	0.96	1.03
52	12/24/2017 - 12/30/2017	0.97	1.04
53	12/31/2017 - 12/31/2017	0.98	1.05

* PEAK SEASON

2017 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 8695 BROWARD I95

MOCF: 0.97

WEEK	DATES	SF	PSCF
1	01/01/2017 - 01/07/2017	0.97	1.00
2	01/08/2017 - 01/14/2017	0.99	1.02
3	01/15/2017 - 01/21/2017	1.00	1.03
4	01/22/2017 - 01/28/2017	0.99	1.02
5	01/29/2017 - 02/04/2017	0.99	1.02
6	02/05/2017 - 02/11/2017	0.98	1.01
* 7	02/12/2017 - 02/18/2017	0.97	1.00
* 8	02/19/2017 - 02/25/2017	0.97	1.00
* 9	02/26/2017 - 03/04/2017	0.97	1.00
*10	03/05/2017 - 03/11/2017	0.96	0.99
*11	03/12/2017 - 03/18/2017	0.96	0.99
*12	03/19/2017 - 03/25/2017	0.97	1.00
*13	03/26/2017 - 04/01/2017	0.97	1.00
*14	04/02/2017 - 04/08/2017	0.98	1.01
*15	04/09/2017 - 04/15/2017	0.98	1.01
*16	04/16/2017 - 04/22/2017	0.98	1.01
*17	04/23/2017 - 04/29/2017	0.98	1.01
*18	04/30/2017 - 05/06/2017	0.98	1.01
*19	05/07/2017 - 05/13/2017	0.98	1.01
20	05/14/2017 - 05/20/2017	0.98	1.01
21	05/21/2017 - 05/27/2017	0.99	1.02
22	05/28/2017 - 06/03/2017	1.00	1.03
23	06/04/2017 - 06/10/2017	1.00	1.03
24	06/11/2017 - 06/17/2017	1.01	1.04
25	06/18/2017 - 06/24/2017	1.01	1.04
26	06/25/2017 - 07/01/2017	1.01	1.04
27	07/02/2017 - 07/08/2017	1.00	1.03
28	07/09/2017 - 07/15/2017	1.00	1.03
29	07/16/2017 - 07/22/2017	1.00	1.03
30	07/23/2017 - 07/29/2017	1.00	1.03
31	07/30/2017 - 08/05/2017	1.00	1.03
32	08/06/2017 - 08/12/2017	1.00	1.03
33	08/13/2017 - 08/19/2017	1.00	1.03
34	08/20/2017 - 08/26/2017	1.05	1.08
35	08/27/2017 - 09/02/2017	1.11	1.14
36	09/03/2017 - 09/09/2017	1.16	1.20
37	09/10/2017 - 09/16/2017	1.21	1.25
38	09/17/2017 - 09/23/2017	1.17	1.21
39	09/24/2017 - 09/30/2017	1.13	1.16
40	10/01/2017 - 10/07/2017	1.09	1.12
41	10/08/2017 - 10/14/2017	1.05	1.08
42	10/15/2017 - 10/21/2017	1.01	1.04
43	10/22/2017 - 10/28/2017	1.00	1.03
44	10/29/2017 - 11/04/2017	1.00	1.03
45	11/05/2017 - 11/11/2017	0.99	1.02
46	11/12/2017 - 11/18/2017	0.98	1.01
47	11/19/2017 - 11/25/2017	0.98	1.01
48	11/26/2017 - 12/02/2017	0.98	1.01
49	12/03/2017 - 12/09/2017	0.97	1.00
50	12/10/2017 - 12/16/2017	0.97	1.00
51	12/17/2017 - 12/23/2017	0.98	1.01
52	12/24/2017 - 12/30/2017	0.99	1.02
53	12/31/2017 - 12/31/2017	1.00	1.03

* PEAK SEASON

APPENDIX E

Historic Growth

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2017 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 7518 - SOUTHGATE BLVD, W OF UNIVERSITY DR

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2017	16200 S	E 8200	W 8000	9.00	57.10	6.20
2016	15800 F	E 8000	W 7800	9.00	56.10	2.90
2015	15400 C	E 7800	W 7600	9.00	56.20	3.40
2014	15000 X			9.00	56.80	7.40
2013	14500 X	0	0	9.00	56.20	7.60
2012	14500 T	0	0	9.00	57.00	5.90
2011	14500 S	0	0	9.00	59.10	6.30
2010	14100 F	E 7400	W 6700	9.60	57.92	9.30
2009	13800 C	E 7200	W 6600	9.71	58.42	5.30
2008	15300 C	E 8300	W 7000	9.67	56.67	6.50
2007	15400 C	E 8000	W 7400	10.19	60.63	4.80
2006	15900 C	E 8000	W 7900	9.61	59.08	2.90
2005	14600 C	E 7100	W 7500	10.00	58.10	0.00

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

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2017 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 7520 - PINE ISLAND RD, S OF SOUTHGATE BLVD

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2017	26000 F	N 12500	S 13500	9.00	57.10	6.20
2016	25000 C	N 12000	S 13000	9.00	56.10	2.90
2015	26000 V	0	0	9.00	56.20	3.40
2014	25500 R			9.00	56.80	7.40
2013	25000 T	0	0	9.00	56.20	7.60
2012	24500 S	0	0	9.00	57.00	5.90
2011	24000 F	0	0	9.00	59.10	6.30
2010	23000 C	N 11000	S 12000	9.60	57.92	9.30
2009	23500 F	N 11500	S 12000	9.71	58.42	5.30
2008	23500 C	N 11500	S 12000	9.67	56.67	6.50
2007	28000 C	N 14000	S 14000	10.19	60.63	4.80
2006	24500 C	N 11500	S 13000	9.61	59.08	2.90
2005	25000 C	N 12500	S 12500	10.00	58.10	0.00

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

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2017 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 7532 - MCNAB RD, W OF UNIVERSITY DR

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2017	37000 S	E 18500	W 18500	9.00	57.10	6.20
2016	36000 F	E 18000	W 18000	9.00	56.10	2.90
2015	35000 C	E 17500	W 17500	9.00	56.20	3.40
2014	37000 X			9.00	56.80	7.40
2013	36000 X	0	0	9.00	56.20	7.60
2012	35500 T	0	0	9.00	57.00	5.90
2011	35000 S	0	0	9.00	59.10	6.30
2010	34000 F	E 17000	W 17000	9.60	57.92	9.30
2009	33000 C	E 16500	W 16500	9.71	58.42	5.30
2008	38500 F	E 19000	W 19500	9.67	56.67	6.50
2007	38500 C	E 19000	W 19500	10.19	60.63	4.80
2006	31500 C	E 17500	W 14000	9.61	59.08	2.90
2005	31500 C	E 16000	W 15500	10.00	58.10	0.00

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

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2017 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 7602 - PINE ISLAND RD, N OF MCNAB RD

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2017	28500 S	N 14500	S 14000	9.00	57.10	6.20
2016	27500 F	N 14000	S 13500	9.00	56.10	2.90
2015	26500 C	N 13500	S 13000	9.00	56.20	3.40
2014	24000 T	N 12000	S 12000	9.00	56.80	7.40
2013	23000 S	N 11500	S 11500	9.00	56.20	7.60
2012	23000 F	N 11500	S 11500	9.00	57.00	5.90
2011	23000 C	N 11500	S 11500	9.00	59.10	6.30
2010	25000 F	N 12500	S 12500	9.60	57.92	9.30
2009	24000 C	N 12000	S 12000	9.71	58.42	5.30
2008	27500 C	N 14000	S 13500	9.67	56.67	6.50
2007	28500 C	N 14500	S 14000	10.19	60.63	4.80
2006	31500 C	N 16000	S 15500	9.61	59.08	2.90
2005	29000 C	N 14500	S 14500	10.00	58.10	0.00

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

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2017 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 9540 - NW 80TH AVENUE, N OF MCNAB ROAD

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2017	7400 S	N 3500	S 3900	9.00	57.10	6.20
2016	7200 F	N 3400	S 3800	9.00	56.10	2.90
2015	7000 C	N 3300	S 3700	9.00	56.20	3.40
2014	4700 T	N 2500	S 2200	9.00	56.80	7.40
2013	4600 S	N 2400	S 2200	9.00	56.20	7.60
2012	4600 F	N 2400	S 2200	9.00	57.00	5.90
2011	4600 C	N 2400	S 2200	9.00	59.10	6.30
2010	6900 F	N 3300	S 3600	9.60	57.92	9.30
2009	6700 C	N 3200	S 3500	9.71	58.42	5.30
2008	7300 C	N 3100	S 4200	9.67	56.67	6.50
2007	5300 C	N 2600	S 2700	10.19	60.63	4.80
2006	5200 C	N 2500	S 2700	9.61	59.08	2.90
2005	6000 C	N 3200	S 2800	10.00	58.10	0.00

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

Woodmont Country Club Hotel
NW 80 Av between NW 75 St and NW 78 St
Tamarac

Areawide Growth Rate Analysis

Site #7602 - Pine Island Rd north of McNab Rd

Year	Volume	Growth Rate
2012	23000	
2017	28500	4.38%

Site #7520 - Pine Island Rd south of Southgate Blvd

Year	Volume	Growth Rate
2012	24500	
2017	26000	1.20%

Site #9540 - NW 80 Av north of McNab Rd

Year	Volume	Growth Rate
2012	4600	
2017	7400	9.98%

Site #7532 - McNab Rd west of University Dr

Year	Volume	Growth Rate
2012	35500	
2017	37000	0.83%

Site #7518 - Southgate Blvd west of University Dr

Year	Volume	Growth Rate
2012	14500	
2017	16200	2.24%

Total - All Count Stations

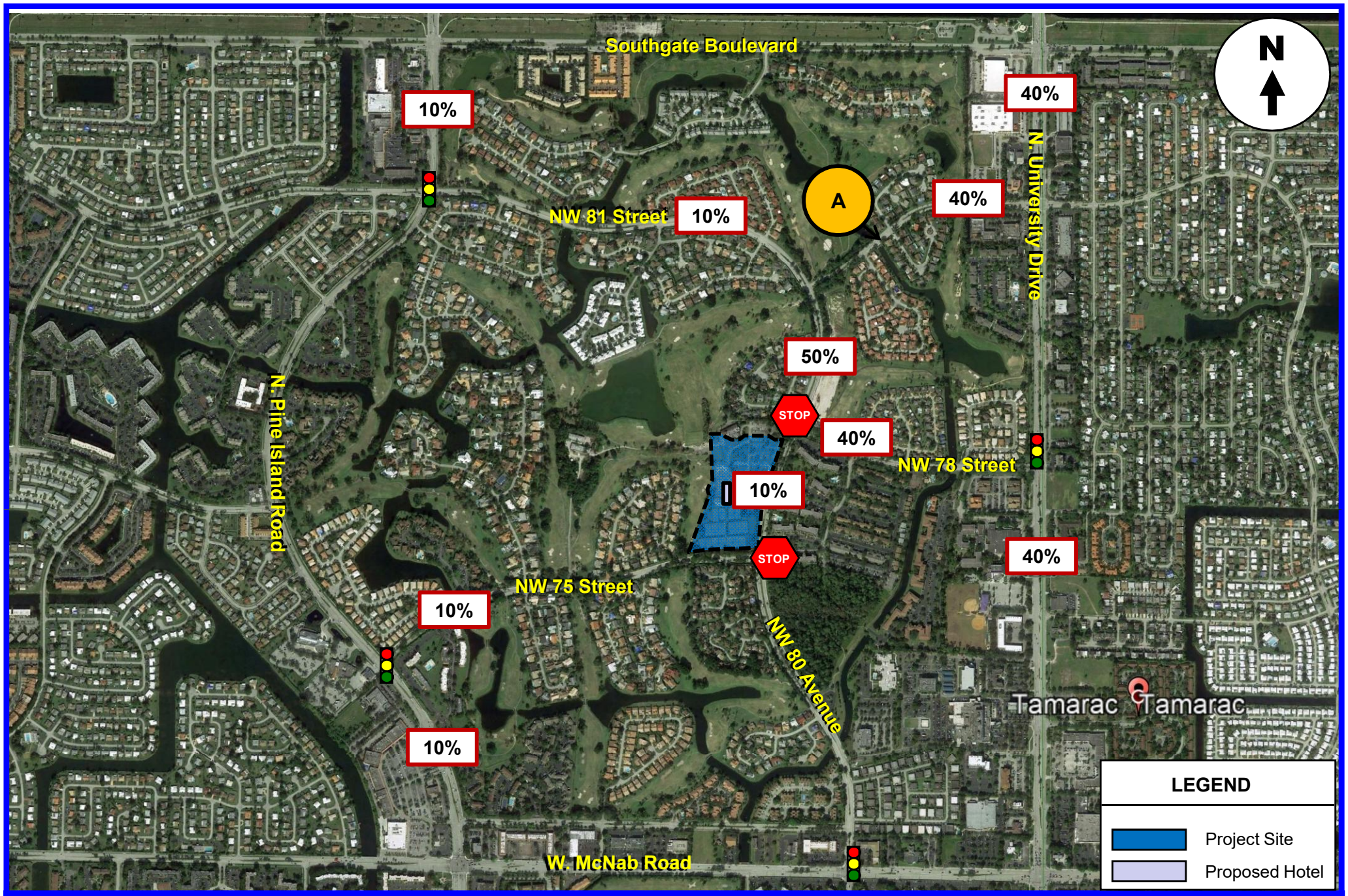
Year	Volume	Growth Rate
2012	102100	
2017	115100	2.43%

Table: Trip Generation Summary Approved Development

Land Use	Scale	Units	Daily Trips	AM Peak Hour			PM Peak Hour			Saturday Peak Hour of Generator		
				Total Trips	Inbound	Outbound	Total Trips	Inbound	Outbound	Total Trips	Inbound	Outbound
Single-Family Detached Housing (LUC 210)												
POD A	50	ksf	472	37	9	28	50	32	18	47	25	22
POD B	30	ksf	283	22	6	16	30	19	11	28	15	13
POD C	19	ksf	179	14	4	10	19	12	7	18	10	8
POD D	0	ksf	0	0	0	0	0	0	0	0	0	0
POD E	20	ksf	189	15	4	11	20	13	7	19	10	9
POD F	14	ksf	132	10	3	7	14	9	5	13	7	6
POD G	18	ksf	170	13	3	10	18	11	7	17	9	8
Total			**1,425**	**111**	**29**	**82**	**151**	**96**	**55**	**142**	**76**	**66**

Source: ITE Trip Generation Manual (10th Edition)

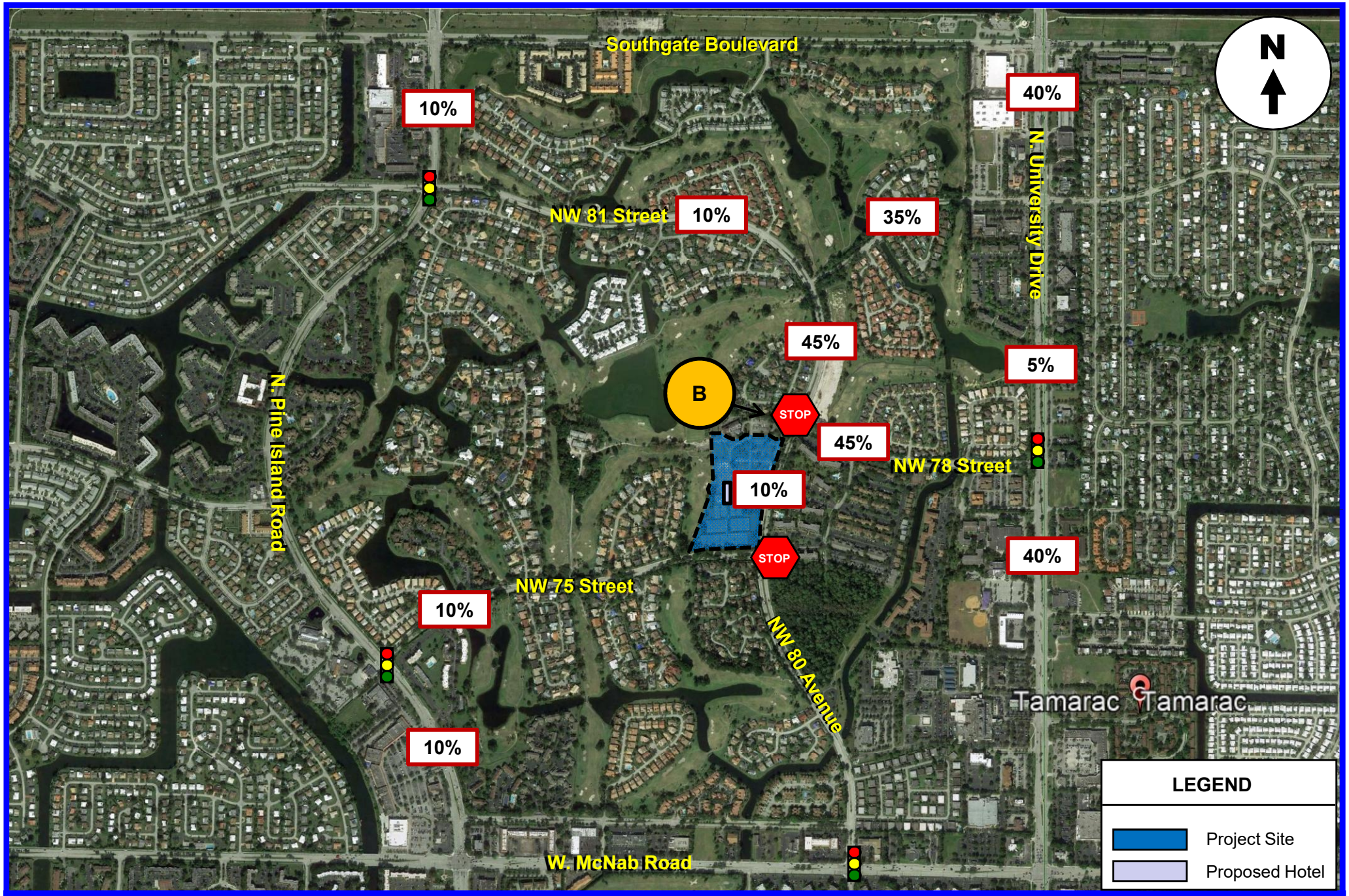
T = 9.44(x)	50% in, 50% out	Daily
T= 0.74(x)	25% in, 75% out	AM Peak
T = 0.99(x)	63% in, 37% out	PM Peak
T = 0.93(x)	54% in, 46% out	Saturday



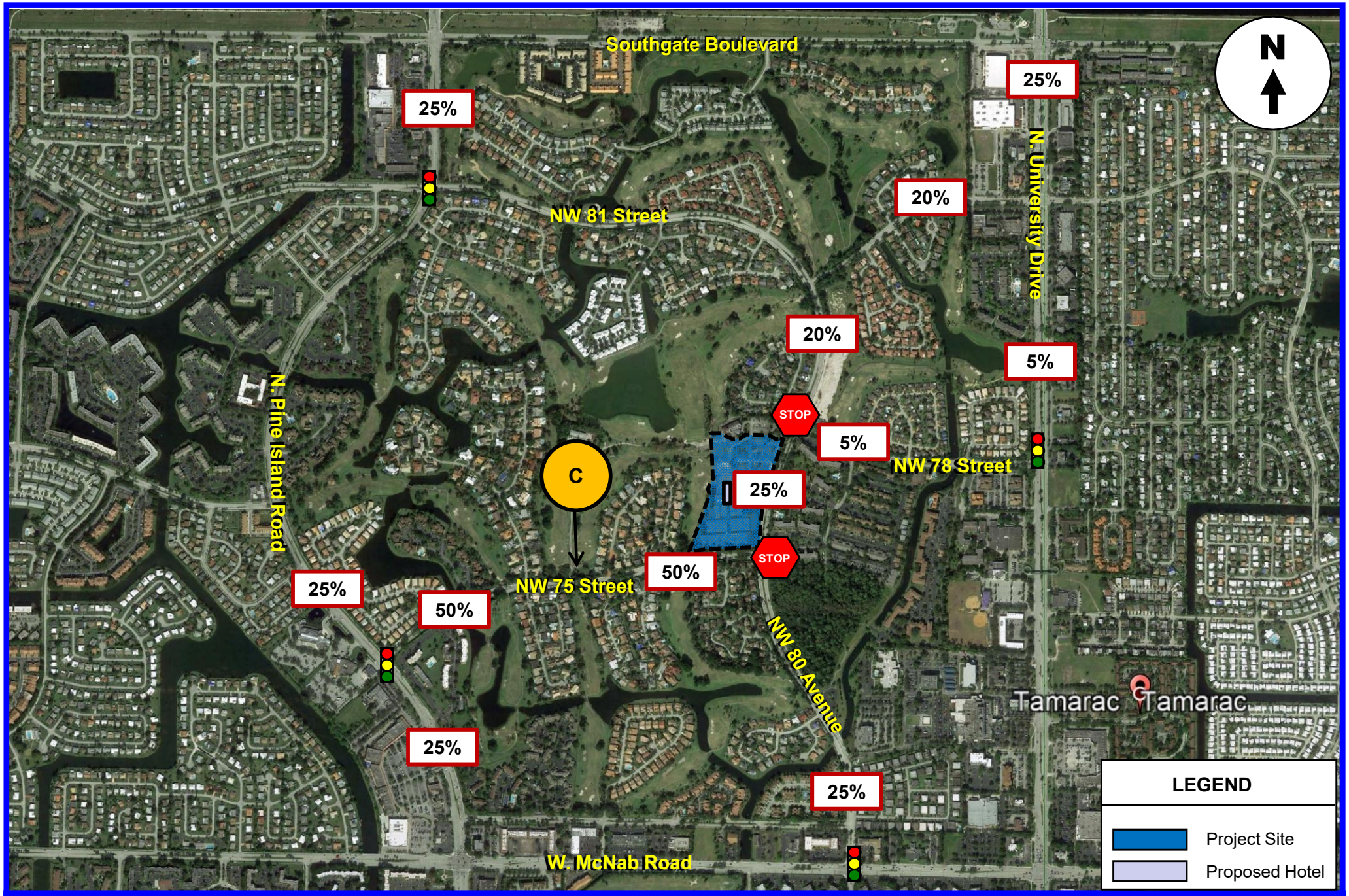
DC Engineers, Inc.

Approved Development – POD A

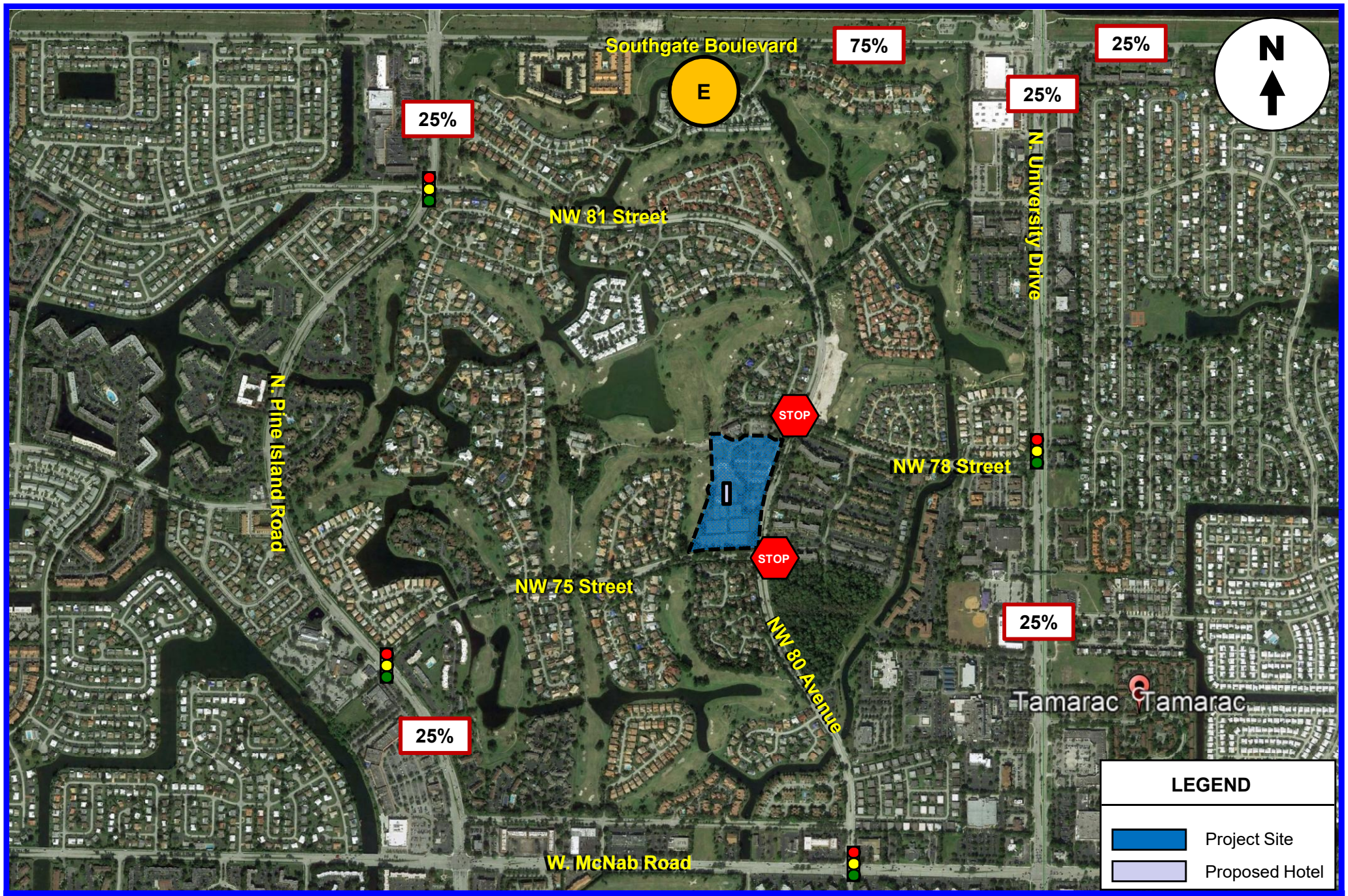
FIGURE
Woodmont Country Club
Tamarac, Florida



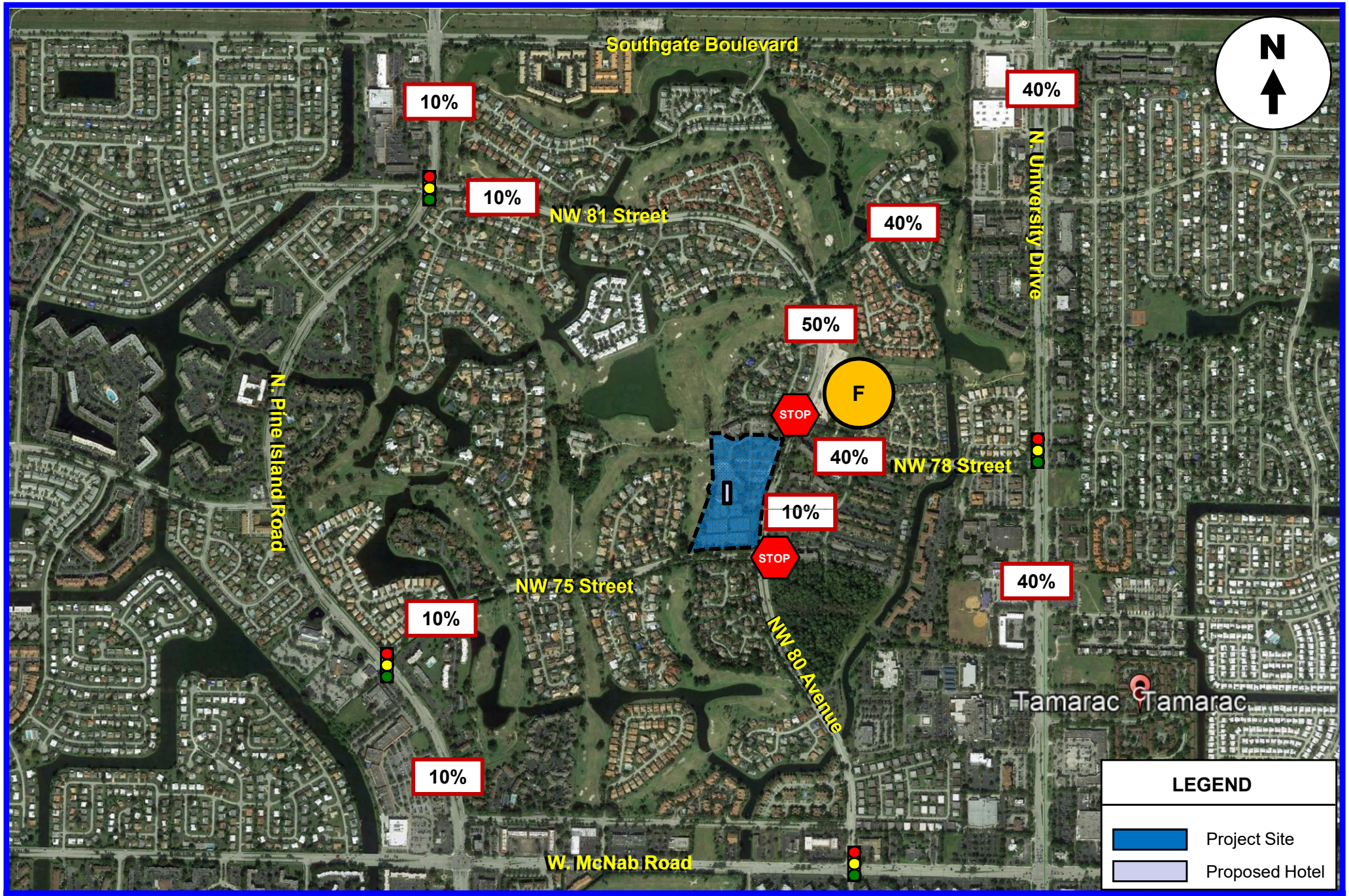
DC Engineers, Inc.	Approved Development – POD B	FIGURE Woodmont Country Club Tamarac, Florida



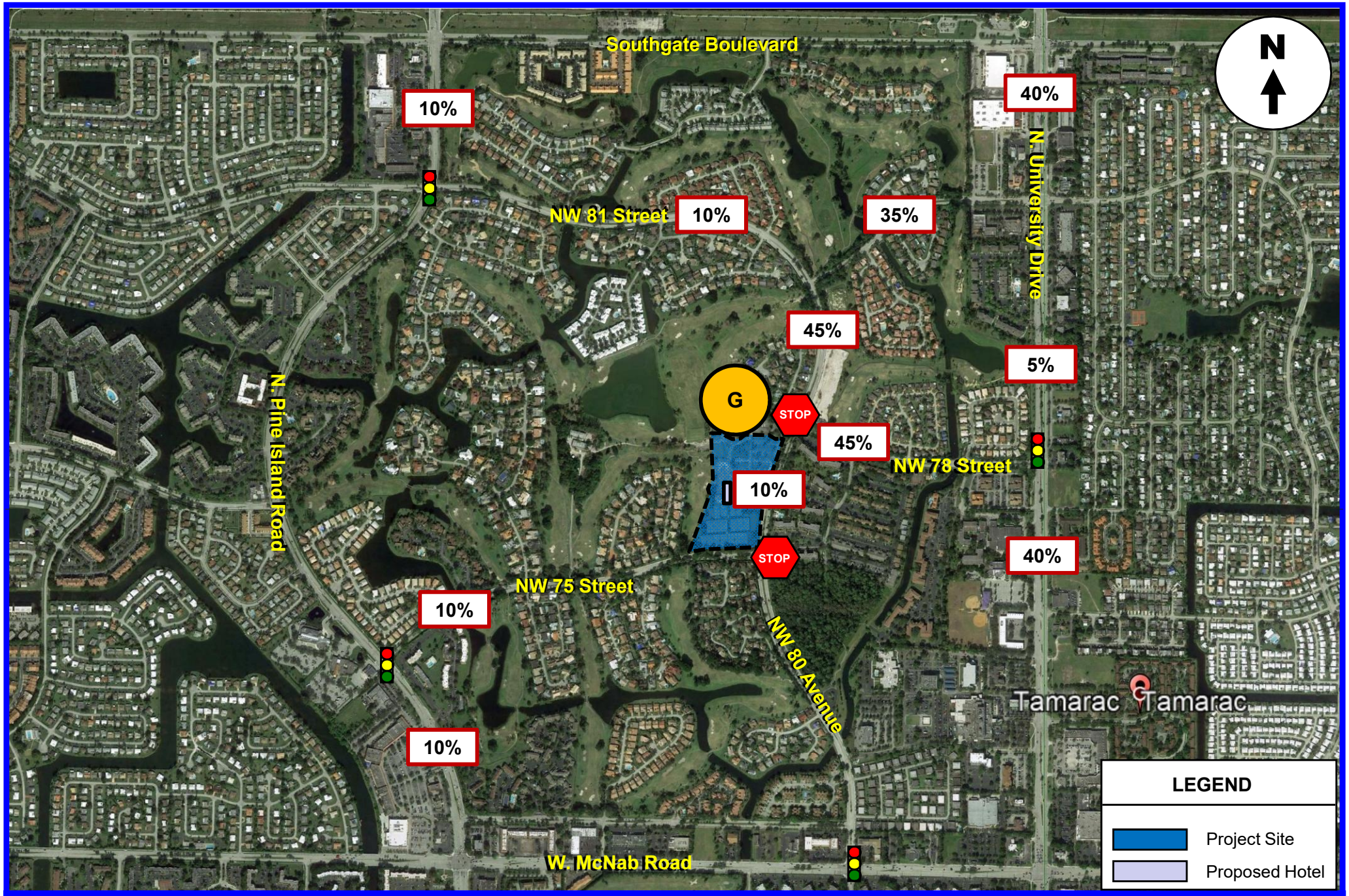
DC Engineers, Inc.	Approved Development – POD C	FIGURE Woodmont Country Club Tamarac, Florida



DC Engineers, Inc.	Approved Development – POD E	FIGURE Woodmont Country Club Tamarac, Florida



DC Engineers, Inc.	Approved Development – POD F	FIGURE Woodmont Country Club Tamarac, Florida

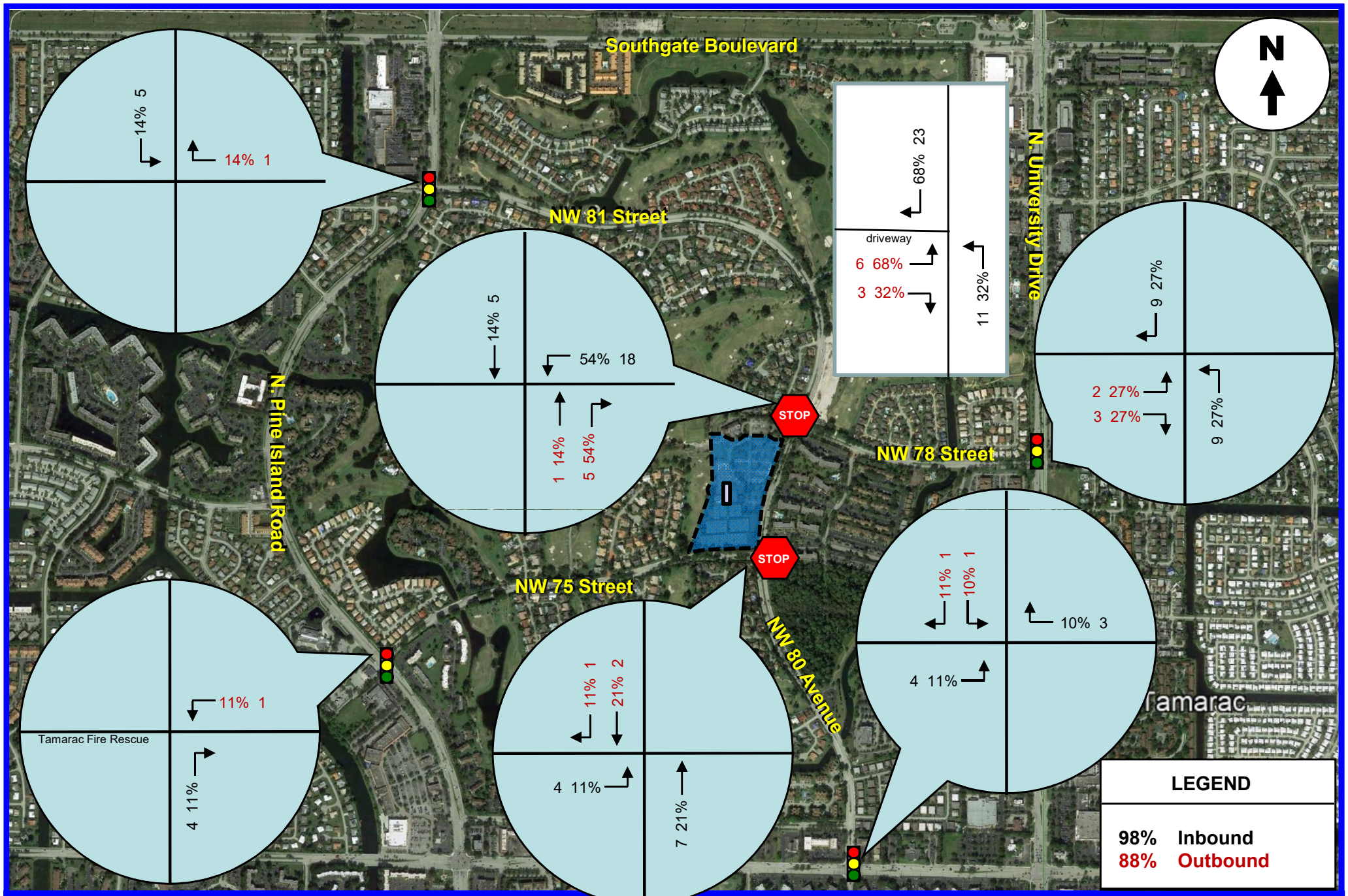


DC Engineers, Inc.	**Approved Development – POD G**	**FIGURE** Woodmont Country Club Tamarac, Florida

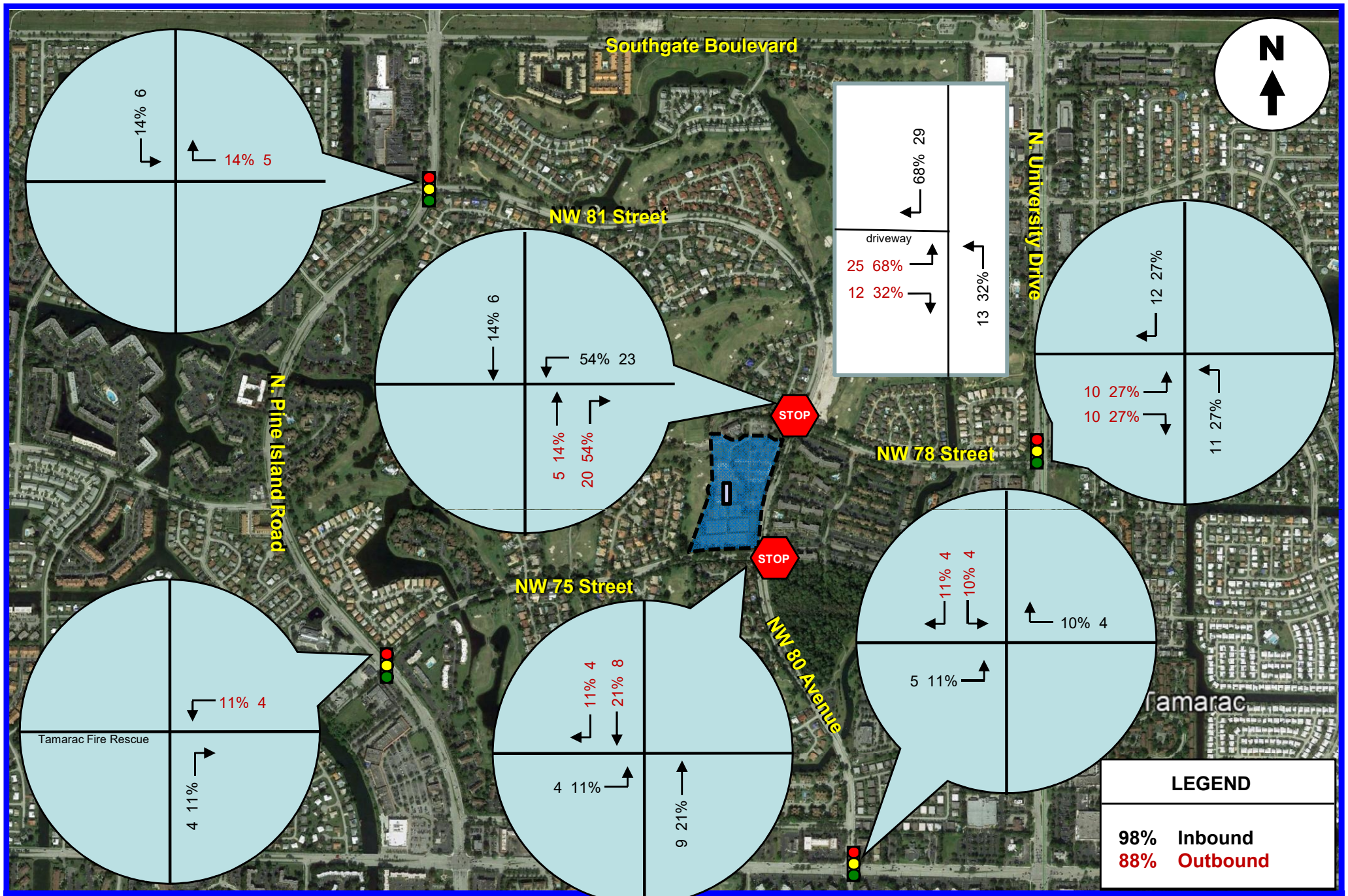
Table: Trip Generation Summary Woodmont Country Club

Land Use	Scale	Units	Daily	AM Peak Hour			PM Peak Hour			Saturday Peak Hour of Generator		
			Total Trips	Total Trips	Inbound	Outbound	Total Trips	Inbound	Outbound	Total Trips	Inbound	Outbound
Golf Course LUC 430	27	holes	841	43	34	9	79	42	37	82	40	42
Subtotal			**841**	**43**	**34**	**9**	**79**	**42**	**37**	**82**	**40**	**42**
Internal (0%)												
Subtotal			**841**	**43**	**34**	**9**	**79**	**42**	**37**	**82**	**40**	**42**
Pass-by (0%)												
Total			**841**	**43**	**34**	**9**	**79**	**42**	**37**	**82**	**40**	**42**

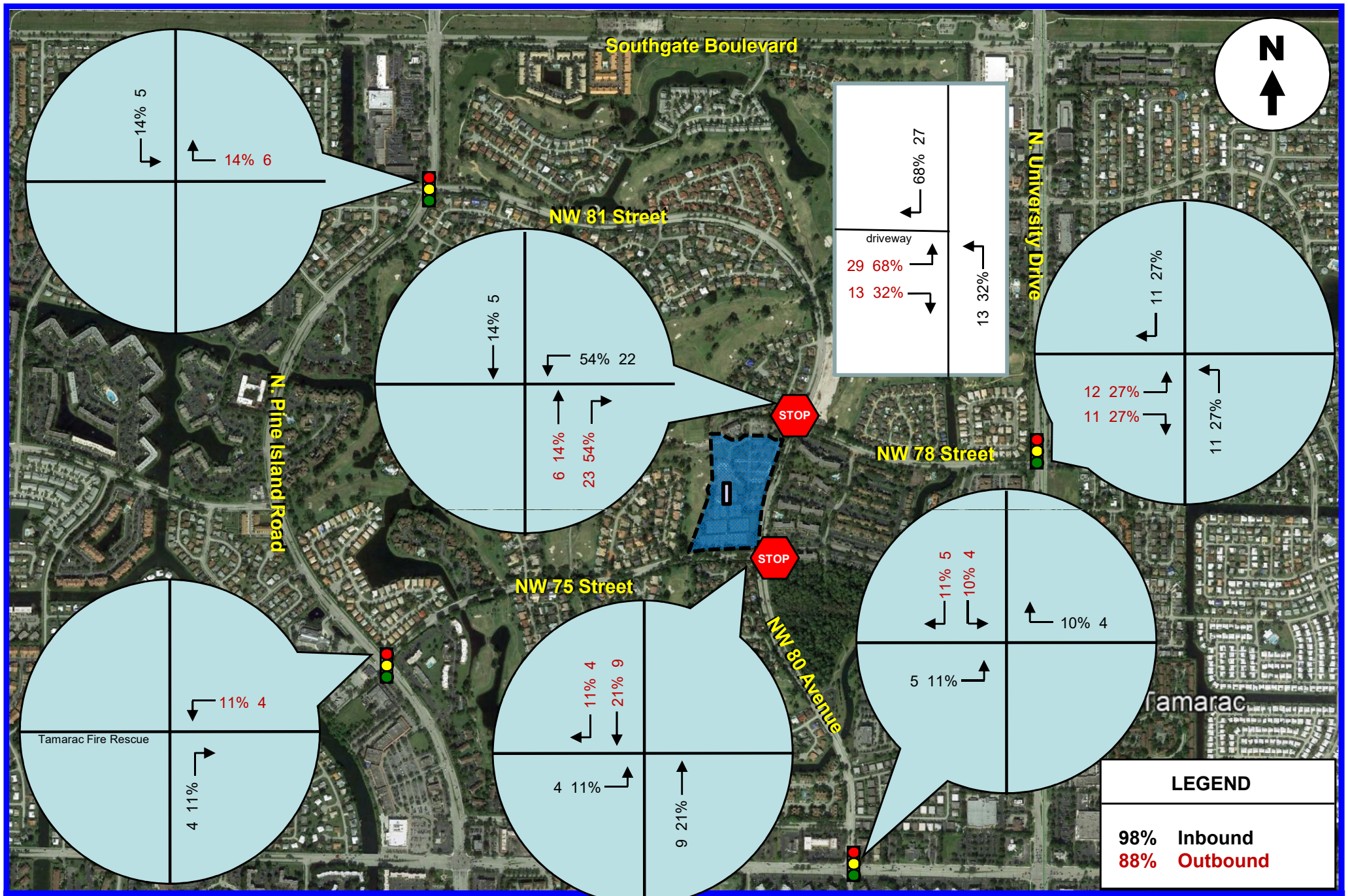
Source: ITE Trip Generation Manual (10th Edition)



DC Engineers, Inc.	**Woodmont Country Club** AM Peak Hour	**FIGURE** Woodmont Country Club Tamarac, Florida



DC Engineers, Inc.	**Woodmont Country Club** PM Peak Hour	**FIGURE** Woodmont Country Club Tamarac, Florida



DC Engineers, Inc.

Woodmont Country Club
Saturday Peak Hour

FIGURE
Woodmont Country Club
Tamarac, Florida

APPENDIX F

Volume Development Worksheets

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

N. Pine Island Road at NW 75 Street
AM Peak Hour

WEEKDAY

	N. Pine Island Road Northbound			N. Pine Island Road Southbound			Driveway Eastbound			NW 75 Street Westbound		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (3/5/2019)	6	729	45	52	1,047	2	2	0	5	91	1	59
Season Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
2019 Peak Season Traffic	6	714	44	51	1026	2	2	0	5	89	1	58
Annual Growth Rate	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Committed Developments:												
Woodmont Country Club (new clubhouse + golf courses)			4							1		
New Single Family Homes												
POD A			1							3		
POD B			1							2		
POD C			1	1						2		3
POD E		1			3							
POD F			0							1		
POD G			0							1		
2021 Background Traffic	6	752	53	55	1,081	2	2	0	5	104	1	64
Existing Development												
Woodmont Country Club Hotel												
Primary Trip			2							2		
Pass-by Capture												
2021 Total Traffic	**6**	**752**	**55**	**55**	**1,081**	**2**	**2**	**0**	**5**	**106**	**1**	**64**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

N. Pine Island Road at NW 75 Street
PM Peak Hour

WEEKDAY

	N. Pine Island Road Northbound			N. Pine Island Road Southbound			Driveway Eastbound			NW 75 Street Westbound		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (3/5/2019)	3	1,222	72	44	982	0	2	1	4	43	1	48
Season Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
2019 Peak Season Traffic	3	1198	71	43	962	0	2	1	4	42	1	47
Annual Growth Rate	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Committed Developments:												
Woodmont Country Club (new clubhouse + golf courses)			4							4		
New Single Family Homes												
POD A			3							2		
POD B			2							1		
POD C			3	3						2		2
POD E		3			2							
POD F			1							1		
POD G			1							1		
2021 Background Traffic	3	1,261	88	48	1,013	0	2	1	4	55	1	51
Existing Development												
Woodmont Country Club Hotel												
Primary Trip			2							2		
Pass-by Capture												
2021 Total Traffic	**3**	**1,261**	**90**	**48**	**1,013**	**0**	**2**	**1**	**4**	**57**	**1**	**51**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

N. Pine Island Road at NW 75 Street
Saturday Peak Hour of the Generator

WEEKDAY

	N. Pine Island Road Northbound			N. Pine Island Road Southbound			Driveway Eastbound			NW 75 Street Westbound		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (3/9/2019)	1	788	56	42	828	0	1	1	2	48	1	43
Season Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
2019 Peak Season Traffic	1	772	55	41	811	0	1	1	2	47	1	42
Annual Growth Rate	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Committed Developments:												
Woodmont Country Club (new clubhouse + golf courses)			4							4		
New Single Family Homes												
POD A			3							2		
POD B			2							1		
POD C			3	3						2		2
POD E		3			2							
POD F			1							1		
POD G			1							1		
2021 Background Traffic	1	814	72	46	855	0	1	1	2	60	1	46
Existing Development												
Woodmont Country Club Hotel												
Primary Trip			3							2		
Pass-by Capture												
2021 Total Traffic	**1**	**814**	**75**	**46**	**855**	**0**	**1**	**1**	**2**	**62**	**1**	**46**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

N. Pine Island Road at NW 81 Street
AM Peak Hour

WEEKDAY

	N. Pine Island Road Northbound			N. Pine Island Road Southbound			NW 81 Street Eastbound			NW 81 Street Westbound		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (3/5/2019)	35	813	54	183	847	55	46	66	35	45	52	249
Season Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
2019 Peak Season Traffic	34	797	53	179	830	54	45	65	34	44	51	244
Annual Growth Rate	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Committed Developments:												
Woodmont Country Club (new clubhouse + golf courses)				5								1
New Single Family Homes												
POD A				1								3
POD B				1								2
POD C		3			1							
POD E		1			3							
POD F				0								1
POD G				0								1
2021 Background Traffic	36	841	56	195	876	57	47	68	36	46	54	264
Existing Development												
Woodmont Country Club Hotel												
Primary Trip				3								2
Pass-by Capture												
2021 Total Traffic	**36**	**841**	**56**	**198**	**876**	**57**	**47**	**68**	**36**	**46**	**54**	**266**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

N. Pine Island Road at NW 81 Street
PM Peak Hour

WEEKDAY

	N. Pine Island Road Northbound			N. Pine Island Road Southbound			NW 81 Street Eastbound			NW 81 Street Westbound		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (3/5/2019)	44	1,156	56	176	1,016	123	55	47	31	40	42	172
Season Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
2019 Peak Season Traffic	43	1133	55	172	996	121	54	46	30	39	41	169
Annual Growth Rate	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Committed Developments:												
Woodmont Country Club (new clubhouse + golf courses)				6								5
New Single Family Homes												
POD A				3								2
POD B				2								1
POD C		2			3							
POD E		3			2							
POD F				1								1
POD G				1								1
2021 Background Traffic	45	1,195	58	194	1,051	127	57	48	32	41	43	187
Existing Development												
Woodmont Country Club Hotel												
Primary Trip				3								3
Pass-by Capture												
2021 Total Traffic	**45**	**1,195**	**58**	**197**	**1,051**	**127**	**57**	**48**	**32**	**41**	**43**	**190**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

N. Pine Island Road at NW 81 Street
Saturday Peak Hour of the Generator

WEEKDAY

	N. Pine Island Road Northbound			N. Pine Island Road Southbound			NW 81 Street Eastbound			NW 81 Street Westbound		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (3/9/2019)	28	708	32	105	729	107	47	25	36	20	34	124
Season Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
2019 Peak Season Traffic	27	694	31	103	714	105	46	25	35	20	33	122
Annual Growth Rate	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Committed Developments:												
Woodmont Country Club (new clubhouse + golf courses)				5								6
New Single Family Homes												
POD A				3								2
POD B				2								1
POD C		2			3							
POD E		3			2							
POD F				1								1
POD G				1								1
2021 Background Traffic	29	734	33	120	756	110	48	26	37	21	35	139
Existing Development												
Woodmont Country Club Hotel												
Primary Trip				4								3
Pass-by Capture												
2021 Total Traffic	**29**	**734**	**33**	**124**	**756**	**110**	**48**	**26**	**37**	**21**	**35**	**142**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

NW 80 Avenue at McNab Road
AM Peak Hour

WEEKDAY

	Lagos de Campo Northbound			NW 80 Avenue Southbound			McNab Road Eastbound			McNab Road Westbound		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (3/5/2019)	24	54	191	168	24	109	84	1,098	12	65	1,109	125
Season Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
2019 Peak Season Traffic	24	53	187	165	24	107	82	1076	12	64	1087	123
Annual Growth Rate	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Committed Developments:												
Woodmont Country Club (new clubhouse + golf courses)				1		1	4					3
New Single Family Homes												
POD A												
POD B												
POD C				3								1
POD E												
POD F												
POD G												
2021 Background Traffic	25	56	197	177	25	113	90	1,131	12	67	1,142	133
Existing Development												
Woodmont Country Club Hotel												
Primary Trip				1		2	2					2
Pass-by Capture												
2021 Total Traffic	**25**	**56**	**197**	**178**	**25**	**115**	**92**	**1,131**	**12**	**67**	**1,142**	**135**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

NW 80 Avenue at McNab Road
PM Peak Hour

WEEKDAY

	Lagos de Campo Northbound			NW 80 Avenue Southbound			McNab Road Eastbound			McNab Road Westbound		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (3/5/2019)	23	33	127	114	38	95	70	1,224	36	152	1,217	182
Season Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
2019 Peak Season Traffic	23	32	124	112	37	93	69	1200	35	149	1193	178
Annual Growth Rate	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Committed Developments:												
Woodmont Country Club (new clubhouse + golf courses)				4		4	5					4
New Single Family Homes												
POD A												
POD B												
POD C				2								3
POD E												
POD F												
POD G												
2021 Background Traffic	24	34	131	123	39	102	77	1,260	37	157	1,253	194
Existing Development												
Woodmont Country Club Hotel												
Primary Trip				2		3	3					2
Pass-by Capture												
2021 Total Traffic	**24**	**34**	**131**	**125**	**39**	**105**	**80**	**1,260**	**37**	**157**	**1,253**	**196**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

NW 80 Avenue at McNab Road
Saturday Peak Hour of the Generator

WEEKDAY

	Lagos de Campo Northbound			NW 80 Avenue Southbound			McNab Road Eastbound			McNab Road Westbound		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (3/9/2019)	38	20	85	86	36	49	51	640	22	118	645	121
Season Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
2019 Peak Season Traffic	37	20	83	84	35	48	50	627	22	116	632	119
Annual Growth Rate	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Committed Developments:												
Woodmont Country Club (new clubhouse + golf courses)				4		5	5					4
New Single Family Homes												
POD A												
POD B												
POD C				2								3
POD E												
POD F												
POD G												
2021 Background Traffic	39	21	88	95	37	55	58	659	23	121	664	132
Existing Development												
Woodmont Country Club Hotel												
Primary Trip				2		3	3					3
Pass-by Capture												
2021 Total Traffic	**39**	**21**	**88**	**97**	**37**	**58**	**61**	**659**	**23**	**121**	**664**	**135**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

NW 80 Avenue at NW 75 Street
AM Peak Hour

WEEKDAY

	NW 80 Avenue Northbound			NW 80 Avenue Southbound			NW 75 Street Eastbound			- Westbound		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (3/5/2019)	23	210	0	3	206	84	84	0	68	0	0	0
Season Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
2019 Peak Season Traffic	23	206	0	3	202	82	82	0	67	0	0	0
Annual Growth Rate	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Committed Developments:												
Woodmont Country Club (new clubhouse + golf courses)		7			2	1	4					
New Single Family Homes												
POD A						3	1					
POD B						2	1					
POD C	1					1	2		3			
POD E												
POD F						1	0					
POD G						1	0					
2021 Background Traffic	25	223	0	3	214	95	94	0	73	0	0	0
Existing Development												
Woodmont Country Club Hotel												
Primary Trip		4			3	2	2					
Pass-by Capture												
2021 Total Traffic	**25**	**227**	**0**	**3**	**217**	**97**	**96**	**0**	**73**	**0**	**0**	**0**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

NW 80 Avenue at NW 75 Street
PM Peak Hour

WEEKDAY

	NW 80 Avenue Northbound			NW 80 Avenue Southbound			NW 75 Street Eastbound			- Westbound		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (3/5/2019)	51	210	0	2	157	72	95	0	40	0	0	0
Season Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
2019 Peak Season Traffic	50	206	0	2	154	71	93	0	39	0	0	0
Annual Growth Rate	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Committed Developments:												
Woodmont Country Club (new clubhouse + golf courses)		9			8	4	4					
New Single Family Homes												
POD A						2	3					
POD B						1	2					
POD C	3					3	2		2			
POD E												
POD F						1	1					
POD G						1	1					
2021 Background Traffic	56	225	0	2	170	86	111	0	43	0	0	0
Existing Development												
Woodmont Country Club Hotel												
Primary Trip		5			5	2	2					
Pass-by Capture												
2021 Total Traffic	**56**	**230**	**0**	**2**	**175**	**88**	**113**	**0**	**43**	**0**	**0**	**0**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

NW 80 Avenue at NW 75 Street
Saturday Peak Hour of the Generator

WEEKDAY

	NW 80 Avenue Northbound			NW 80 Avenue Southbound			NW 75 Street Eastbound			- Westbound		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (3/9/2019)	38	122	0	0	90	51	54	0	41	0	0	0
Season Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
2019 Peak Season Traffic	37	120	0	0	88	50	53	0	40	0	0	0
Annual Growth Rate	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Committed Developments:												
Woodmont Country Club (new clubhouse + golf courses)		9			9	4	4					
New Single Family Homes												
POD A						2	3					
POD B						1	2					
POD C	3					3	2		2			
POD E												
POD F						1	1					
POD G						1	1					
2021 Background Traffic	42	135	0	0	102	65	69	0	44	0	0	0
Existing Development												
Woodmont Country Club Hotel												
Primary Trip		6			5	2	3					
Pass-by Capture												
2021 Total Traffic	**42**	**141**	**0**	**0**	**107**	**67**	**72**	**0**	**44**	**0**	**0**	**0**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

NW 80 Avenue at NW 78 Street
AM Peak Hour

WEEKDAY

	NW 80 Avenue Northbound			NW 80 Avenue Southbound			Driveway Eastbound			NW 78 Street Westbound		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (3/5/2019)	6	197	76	77	191	0	1	0	0	91	1	88
Season Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
2019 Peak Season Traffic	6	193	74	75	187	0	1	0	0	89	1	86
Annual Growth Rate	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Committed Developments:												
Woodmont Country Club (new clubhouse + golf courses)		1	5		5					18		
New Single Family Homes												
POD A		1		11	3							4
POD B	1					3	7	7	2		3	
POD C		2	1		1					0		
POD E												
POD F		0		3	1							1
POD G	0					1	5	5	1		1	
2021 Background Traffic	7	207	84	93	207	4	13	12	3	112	5	96
Existing Development												
Woodmont Country Club Hotel												
Primary Trip		2	9		3					10		
Pass-by Capture												
2021 Total Traffic	**7**	**209**	**93**	**93**	**210**	**4**	**13**	**12**	**3**	**122**	**5**	**96**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

NW 80 Avenue at NW 78 Street
PM Peak Hour

WEEKDAY

	NW 80 Avenue Northbound			NW 80 Avenue Southbound			Driveway Eastbound			NW 78 Street Westbound		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (3/5/2019)	3	202	96	76	155	0	3	2	3	83	2	89
Season Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
2019 Peak Season Traffic	3	198	94	74	152	0	3	2	3	81	2	87
Annual Growth Rate	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Committed Developments:												
Woodmont Country Club (new clubhouse + golf courses)		5	20		6					23		
New Single Family Homes												
POD A		3		7	2							13
POD B	2					9	5	5	1		9	
POD C		1	0		2					1		
POD E												
POD F		1		2	1							4
POD G	1					5	3	3	1		5	
2021 Background Traffic	6	218	119	87	171	14	11	10	5	109	16	109
Existing Development												
Woodmont Country Club Hotel												
Primary Trip		3	12		3					11		
Pass-by Capture												
2021 Total Traffic	**6**	**221**	**131**	**87**	**174**	**14**	**11**	**10**	**5**	**120**	**16**	**109**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

NW 80 Avenue at NW 78 Street
Saturday Peak Hour of the Generator

WEEKDAY

	NW 80 Avenue Northbound			NW 80 Avenue Southbound			Driveway Eastbound			NW 78 Street Westbound		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (3/9/2019)	1	107	69	55	78	0	6	1	4	70	1	53
Season Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
2019 Peak Season Traffic	1	105	68	54	76	0	6	1	4	69	1	52
Annual Growth Rate	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Committed Developments:												
Woodmont Country Club (new clubhouse + golf courses)		6	23		5					22		
New Single Family Homes												
POD A		3		9	2							10
POD B	2					7	6	6	1		7	
POD C		2	0		2					1		
POD E												
POD F		1		2	1							3
POD G	1					4	4	4	1		4	
2021 Background Traffic	4	122	94	68	90	11	16	11	6	95	12	68
Existing Development												
Woodmont Country Club Hotel												
Primary Trip		3	12		4					14		
Pass-by Capture												
2021 Total Traffic	**4**	**125**	**106**	**68**	**94**	**11**	**16**	**11**	**6**	**109**	**12**	**68**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

University Drive at NW 78 Street
AM Peak Hour

WEEKDAY

	University Drive Northbound			University Drive Southbound			NW 78 Street Eastbound			Driveway Westbound		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (3/5/2019)	171	1,487	19	6	1,946	79	84	3	167	1	0	1
Season Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
2019 Peak Season Traffic	168	1457	19	6	1907	77	82	3	164	1	0	1
Annual Growth Rate	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Committed Developments:												
Woodmont Country Club (new clubhouse + golf courses)	9					9	2		3			
New Single Family Homes												
POD A	4								11			
POD B	2					0	1		6			
POD C						0	1					
POD E		1			3							
POD F	1								3			
POD G	1					0	1		4			
2021 Background Traffic	193	1,532	20	6	2,007	90	91	3	199	1	0	1
Existing Development												
Woodmont Country Club Hotel												
Primary Trip	5					5	4		5			
Pass-by Capture												
2021 Total Traffic	**198**	**1,532**	**20**	**6**	**2,007**	**95**	**95**	**3**	**204**	**1**	**0**	**1**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

University Drive at NW 78 Street
PM Peak Hour

WEEKDAY

Description	University Drive Northbound			University Drive Southbound			NW 78 Street Eastbound			Driveway Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (3/5/2019)	201	1,747	9	4	1,603	101	80	0	105	9	2	0
Season Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
2019 Peak Season Traffic	197	1712	9	4	1571	99	78	0	103	9	2	0
Annual Growth Rate	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Committed Developments:												
Woodmont Country Club (new clubhouse + golf courses)	11					12	10		10			
New Single Family Homes												
POD A	13								7			
POD B	8					1	1		4			
POD C						1	0					
POD E		3			2							
POD F	4								2			
POD G	4					1	0		3			
2021 Background Traffic	247	1,802	9	4	1,652	119	93	0	134	9	2	0
Existing Development												
Woodmont Country Club Hotel												
Primary Trip	6					5	6		6			
Pass-by Capture												
2021 Total Traffic	**253**	**1,802**	**9**	**4**	**1,652**	**124**	**99**	**0**	**140**	**9**	**2**	**0**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

University Drive at NW 78 Street
Saturday Peak Hour of the Generator

WEEKDAY

	University Drive Northbound			University Drive Southbound			NW 78 Street Eastbound			Driveway Westbound		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (3/9/2019)	160	1,452	3	1	1,399	77	49	0	74	2	2	0
Season Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
2019 Peak Season Traffic	157	1423	3	1	1371	75	48	0	73	2	2	0
Annual Growth Rate	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Committed Developments:												
Woodmont Country Club (new clubhouse + golf courses)	11					11	12		11			
New Single Family Homes												
POD A	10								9			
POD B	6					1	1		5			
POD C						1	0					
POD E		3			2							
POD F	3								2			
POD G	4					0	0		3			
2021 Background Traffic	199	1,498	3	1	1,442	92	63	0	106	2	2	0
Existing Development												
Woodmont Country Club Hotel												
Primary Trip	7					7	6		6			
Pass-by Capture												
2021 Total Traffic	**206**	**1,498**	**3**	**1**	**1,442**	**99**	**69**	**0**	**112**	**2**	**2**	**0**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

NW 80 Avenue at Driveway
AM Peak Hour

WEEKDAY

	NW 80 Avenue Northbound			NW 80 Avenue Southbound			Driveway Eastbound			- Westbound		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (3/5/2019)	0	294	0	0	282	0	0	0	0	0	0	0
Season Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
2019 Peak Season Traffic	0	288	0	0	276	0	0	0	0	0	0	0
Annual Growth Rate	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Committed Developments:												
Woodmont Country Club (new clubhouse + golf courses)	11					23	6		3			
New Single Family Homes												
POD A		1			3							
POD B		1			2							
POD C		2			1							
POD E												
POD F		0			1							
POD G		0			1							
2021 Background Traffic	11	307	0	0	298	23	6	0	3	0	0	0
Existing Development												
Woodmont Country Club Hotel												
Primary Trip	6					13	11		5			
Pass-by Capture												
2021 Total Traffic	**17**	**307**	**0**	**0**	**298**	**36**	**17**	**0**	**8**	**0**	**0**	**0**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

NW 80 Avenue at Driveway
PM Peak Hour

WEEKDAY

	NW 80 Avenue Northbound			NW 80 Avenue Southbound			Driveway Eastbound			- Westbound		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (3/5/2019)	0	305	0	0	241	0	0	0	0	0	0	0
Season Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
2019 Peak Season Traffic	0	299	0	0	236	0	0	0	0	0	0	0
Annual Growth Rate	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Committed Developments:												
Woodmont Country Club (new clubhouse + golf courses)	13					29	25		12			
New Single Family Homes												
POD A		3			2							
POD B		2			1							
POD C		2			3							
POD E												
POD F		1			1							
POD G		1			1							
2021 Background Traffic	13	323	0	0	256	29	25	0	12	0	0	0
Existing Development												
Woodmont Country Club Hotel												
Primary Trip	7					14	15		7			
Pass-by Capture												
2021 Total Traffic	**20**	**323**	**0**	**0**	**256**	**43**	**40**	**0**	**19**	**0**	**0**	**0**

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

NW 80 Avenue at Driveway
Saturday Peak Hour of the Generator

WEEKDAY

	NW 80 Avenue Northbound			NW 80 Avenue Southbound			Driveway Eastbound			- Westbound		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (3/9/2019)	0	176	0	0	137	0	0	0	0	0	0	0
Season Adjustment Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
2019 Peak Season Traffic	0	172	0	0	134	0	0	0	0	0	0	0
Annual Growth Rate	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%	2.50%
Committed Developments:												
Woodmont Country Club (new clubhouse + golf courses)	13					27	29		13			
New Single Family Homes												
POD A		3			2							
POD B		2			1							
POD C		2			3							
POD E												
POD F		1			1							
POD G		1			1							
2021 Background Traffic	13	190	0	0	149	27	29	0	13	0	0	0
Existing Development												
Woodmont Country Club Hotel												
Primary Trip	9					18	15		7			
Pass-by Capture												
2021 Total Traffic	**22**	**190**	**0**	**0**	**149**	**45**	**44**	**0**	**20**	**0**	**0**	**0**

APPENDIX G

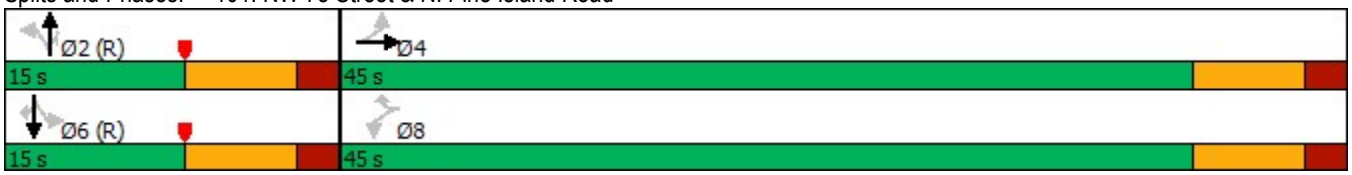
Intersection Capacity Analysis

Timings
101: NW 75 Street & N. Pine Island Road

Lane Group	EBT	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	0	89	58	6	714	44	51	1026	2
Future Volume (vph)	0	89	58	6	714	44	51	1026	2
Turn Type	NA	Perm	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	4				2			6	
Permitted Phases		8	8	2		2	6		6
Detector Phase	4	8	8	2	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	7.0	38.0	38.0	7.0	7.0	7.0	8.0	8.0	8.0
Minimum Split (s)	45.0	45.0	45.0	15.0	15.0	15.0	15.0	15.0	15.0
Total Split (s)	45.0	45.0	45.0	15.0	15.0	15.0	15.0	15.0	15.0
Total Split (%)	75.0%	75.0%	75.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	28.6	41.0	41.0	30.6	30.6	30.6	30.6	30.6	30.6
Actuated g/C Ratio	0.48	0.68	0.68	0.51	0.51	0.51	0.51	0.51	0.51
v/c Ratio	0.01	0.10	0.05	0.04	0.41	0.05	0.19	0.59	0.00
Control Delay	0.0	3.5	0.9	22.2	24.1	3.4	26.2	29.5	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	0.0	3.5	0.9	22.2	24.1	3.4	26.2	29.5	0.0
LOS	A	A	A	C	C	A	C	C	A
Approach Delay					22.9			29.3	
Approach LOS					C			C	

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 24.8	Intersection LOS: C
Intersection Capacity Utilization 67.2%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 101: NW 75 Street & N. Pine Island Road



Queues
101: NW 75 Street & N. Pine Island Road

Lane Group	EBT	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	7	92	60	6	736	45	53	1058	2
v/c Ratio	0.01	0.10	0.05	0.04	0.41	0.05	0.19	0.59	0.00
Control Delay	0.0	3.5	0.9	22.2	24.1	3.4	26.2	29.5	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	0.0	3.5	0.9	22.2	24.1	3.4	26.2	29.5	0.0
Queue Length 50th (ft)	0	9	0	2	~168	0	18	~300	0
Queue Length 95th (ft)	0	20	7	11	#266	14	#63	#410	0
Internal Link Dist (ft)	618				536			2010	
Turn Bay Length (ft)				160		160	200		90
Base Capacity (vph)	1157	958	1091	147	1804	825	282	1804	822
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.10	0.05	0.04	0.41	0.05	0.19	0.59	0.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

HCM Signalized Intersection Capacity Analysis
101: NW 75 Street & N. Pine Island Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	5	89	0	58	6	714	44	51	1026	2
Future Volume (vph)	2	0	5	89	0	58	6	714	44	51	1026	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		1.00		1.00		1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00		1.00		0.99	1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes		1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.90		1.00		0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99		0.95		1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1659		1770		1563	1769	3539	1550	1769	3539	1548
Flt Permitted		0.99		0.75		1.00	0.16	1.00	1.00	0.30	1.00	1.00
Satd. Flow (perm)		1659		1403		1563	290	3539	1550	554	3539	1548
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	2	0	5	92	0	60	6	736	45	53	1058	2
RTOR Reduction (vph)	0	4	0	0	0	34	0	0	25	0	0	1
Lane Group Flow (vph)	0	3	0	92	0	26	6	736	20	53	1058	1
Confl. Peds. (#/hr)	1					1	2		1	1		2
Turn Type	Perm	NA		Perm		Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4						2			6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)		22.8		22.8		22.8	23.2	23.2	23.2	23.2	23.2	23.2
Effective Green, g (s)		25.8		25.8		25.8	26.2	26.2	26.2	26.2	26.2	26.2
Actuated g/C Ratio		0.43		0.43		0.43	0.44	0.44	0.44	0.44	0.44	0.44
Clearance Time (s)		7.0		7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0
Vehicle Extension (s)		1.0		1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lane Grp Cap (vph)		713		603		672	126	1545	676	241	1545	675
v/s Ratio Prot								0.21			c0.30	
v/s Ratio Perm		0.00		c0.07		0.02	0.02		0.01	0.10		0.00
v/c Ratio		0.00		0.15		0.04	0.05	0.48	0.03	0.22	0.68	0.00
Uniform Delay, d1		9.8		10.4		9.9	9.7	12.0	9.6	10.5	13.6	9.5
Progression Factor		1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.0		0.0		0.0	0.7	1.1	0.1	2.1	2.5	0.0
Delay (s)		9.8		10.5		9.9	10.4	13.1	9.7	12.6	16.1	9.5
Level of Service		A		B		A	B	B	A	B	B	A
Approach Delay (s)		9.8			10.3			12.9			15.9	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	67.2%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

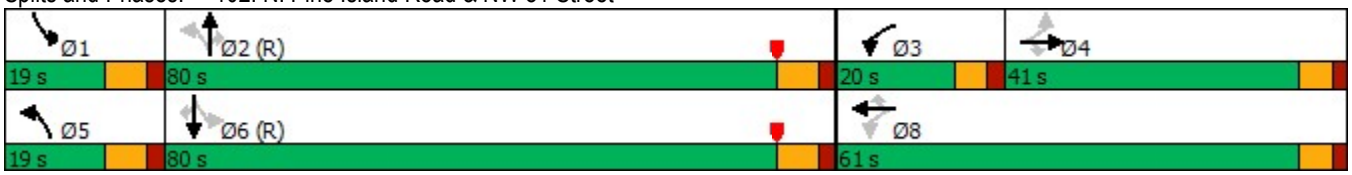
HCM 2010 Research does not support Non-NEMA phasing.

Timings
102: N. Pine Island Road & NW 81 Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	65	34	44	51	244	34	797	53	179	830	54
Future Volume (vph)	45	65	34	44	51	244	34	797	53	179	830	54
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	4.0	6.0	6.0	4.0	10.0	10.0	4.0	10.0	10.0
Minimum Split (s)	37.0	37.0	37.0	11.0	37.0	37.0	19.0	37.0	37.0	19.0	57.0	57.0
Total Split (s)	41.0	41.0	41.0	20.0	61.0	61.0	19.0	80.0	80.0	19.0	80.0	80.0
Total Split (%)	25.6%	25.6%	25.6%	12.5%	38.1%	38.1%	11.9%	50.0%	50.0%	11.9%	50.0%	50.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		-2.0	-2.0	-2.0	-2.0	-2.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		19.1	19.1	30.8	30.8	30.8	112.7	104.7	104.7	121.1	111.4	111.4
Actuated g/C Ratio		0.12	0.12	0.19	0.19	0.19	0.70	0.65	0.65	0.76	0.70	0.70
v/c Ratio		0.68	0.14	0.26	0.16	0.58	0.09	0.40	0.06	0.45	0.39	0.06
Control Delay		84.8	1.0	52.8	51.0	16.3	7.6	15.3	0.1	9.8	12.6	0.1
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		84.8	1.0	52.8	51.0	16.3	7.6	15.3	0.1	9.8	12.6	0.1
LOS		F	A	D	D	B	A	B	A	A	B	A
Approach Delay		65.1			26.3			14.1			11.5	
Approach LOS		E			C			B			B	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 97 (61%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 125	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.68	
Intersection Signal Delay: 17.7	Intersection LOS: B
Intersection Capacity Utilization 54.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 102: N. Pine Island Road & NW 81 Street



Queues
102: N. Pine Island Road & NW 81 Street

Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	127	39	51	59	280	39	916	61	206	954	62
v/c Ratio	0.68	0.14	0.26	0.16	0.58	0.09	0.40	0.06	0.45	0.39	0.06
Control Delay	84.8	1.0	52.8	51.0	16.3	7.6	15.3	0.1	9.8	12.6	0.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.8	1.0	52.8	51.0	16.3	7.6	15.3	0.1	9.8	12.6	0.1
Queue Length 50th (ft)	130	0	44	51	47	10	231	0	56	223	0
Queue Length 95th (ft)	189	0	76	85	120	25	336	0	102	312	0
Internal Link Dist (ft)	409			578			2010			316	
Turn Bay Length (ft)		100	200		130	190		250	200		200
Base Capacity (vph)	361	449	242	663	709	492	2315	1050	480	2465	1103
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.35	0.09	0.21	0.09	0.39	0.08	0.40	0.06	0.43	0.39	0.06

Intersection Summary

HCM 2010 Signalized Intersection Summary
102: N. Pine Island Road & NW 81 Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	65	34	44	51	244	34	797	53	179	830	54
Future Volume (veh/h)	45	65	34	44	51	244	34	797	53	179	830	54
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	52	75	39	51	59	280	39	916	61	206	954	62
Adj No. of Lanes	0	1	1	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	101	120	204	187	375	318	433	2326	1016	471	2407	1052
Arrive On Green	0.13	0.13	0.13	0.05	0.20	0.20	0.04	0.66	0.66	0.07	0.68	0.68
Sat Flow, veh/h	526	918	1558	1774	1863	1581	1774	3539	1545	1774	3539	1547
Grp Volume(v), veh/h	127	0	39	51	59	280	39	916	61	206	954	62
Grp Sat Flow(s),veh/h/ln	1443	0	1558	1774	1863	1581	1774	1770	1545	1774	1770	1547
Q Serve(g_s), s	11.4	0.0	3.6	3.8	4.2	27.5	1.1	19.2	2.3	5.6	18.9	2.1
Cycle Q Clear(g_c), s	13.2	0.0	3.6	3.8	4.2	27.5	1.1	19.2	2.3	5.6	18.9	2.1
Prop In Lane	0.41		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	221	0	204	187	375	318	433	2326	1016	471	2407	1052
V/C Ratio(X)	0.58	0.00	0.19	0.27	0.16	0.88	0.09	0.39	0.06	0.44	0.40	0.06
Avail Cap(c_a), veh/h	361	0	360	284	664	563	522	2326	1016	519	2407	1052
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93	1.00	1.00	1.00
Uniform Delay (d), s/veh	65.9	0.0	62.0	55.0	52.7	62.0	8.1	12.7	9.8	8.5	11.2	8.5
Incr Delay (d2), s/veh	0.9	0.0	0.2	0.3	0.1	3.2	0.0	0.5	0.1	0.2	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.4	0.0	1.5	1.9	2.2	12.3	0.5	9.4	1.0	2.7	9.3	0.9
LnGrp Delay(d),s/veh	66.8	0.0	62.1	55.3	52.8	65.2	8.1	13.2	9.9	8.7	11.7	8.6
LnGrp LOS	E		E	E	D	E	A	B	A	A	B	A
Approach Vol, veh/h		166			390			1016			1222	
Approach Delay, s/veh		65.7			62.0			12.8			11.0	
Approach LOS		E			E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	14.7	109.1	11.2	24.9	11.0	112.8		36.2
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0		6.0
Max Green Setting (Gmax), s	12.0	73.0	14.0	35.0	12.0	73.0		55.0
Max Q Clear Time (g_c+I1), s	7.6	21.2	5.8	15.2	3.1	20.9		29.5
Green Ext Time (p_c), s	0.1	7.4	0.0	0.5	0.0	7.8		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	22.0
HCM 2010 LOS	C

Timings
103: NW 80 Avenue & W. McNab Road

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	82	1076	64	1087	24	53	187	165	24
Future Volume (vph)	82	1076	64	1087	24	53	187	165	24
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	1	6	5	2	7	4		3	8
Permitted Phases	6		2		4		4	8	
Detector Phase	1	6	5	2	7	4	4	3	8
Switch Phase									
Minimum Initial (s)	4.0	10.0	4.0	10.0	4.0	6.0	6.0	4.0	6.0
Minimum Split (s)	11.0	38.0	11.0	38.0	10.0	41.0	41.0	11.0	39.0
Total Split (s)	15.0	79.0	15.0	79.0	24.0	42.0	42.0	24.0	42.0
Total Split (%)	9.4%	49.4%	9.4%	49.4%	15.0%	26.3%	26.3%	15.0%	26.3%
Yellow Time (s)	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	None	None	None	None	None
Act Effct Green (s)	114.6	105.3	113.5	104.8	19.5	11.7	11.7	33.9	26.3
Actuated g/C Ratio	0.72	0.66	0.71	0.66	0.12	0.07	0.07	0.21	0.16
v/c Ratio	0.29	0.35	0.20	0.40	0.15	0.42	0.67	0.59	0.23
Control Delay	9.0	13.1	8.0	13.7	50.4	79.3	20.0	62.8	15.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.0	13.1	8.0	13.7	50.4	79.3	20.0	62.8	15.7
LOS	A	B	A	B	D	E	B	E	B
Approach Delay		12.8		13.4		34.7			41.9
Approach LOS		B		B		C			D

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 98 (61%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 17.9	Intersection LOS: B
Intersection Capacity Utilization 57.6%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 103: NW 80 Avenue & W. McNab Road

Queues
103: NW 80 Avenue & W. McNab Road

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	88	1170	69	1301	26	57	201	177	141
v/c Ratio	0.29	0.35	0.20	0.40	0.15	0.42	0.67	0.59	0.23
Control Delay	9.0	13.1	8.0	13.7	50.4	79.3	20.0	62.8	15.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.0	13.1	8.0	13.7	50.4	79.3	20.0	62.8	15.7
Queue Length 50th (ft)	24	193	19	222	22	58	1	162	12
Queue Length 95th (ft)	47	251	38	288	48	105	84	233	46
Internal Link Dist (ft)		201		271		371			819
Turn Bay Length (ft)	190		180		160		220	150	
Base Capacity (vph)	326	3339	365	3285	307	442	523	307	817
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.35	0.19	0.40	0.08	0.13	0.38	0.58	0.17

Intersection Summary

HCM 2010 Signalized Intersection Summary
103: NW 80 Avenue & W. McNab Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	1076	12	64	1087	123	24	53	187	165	24	107
Future Volume (veh/h)	82	1076	12	64	1087	123	24	53	187	165	24	107
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	88	1157	13	69	1169	132	26	57	201	177	26	115
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	323	3083	35	353	2736	309	289	288	244	375	408	360
Arrive On Green	0.05	0.59	0.58	0.04	0.59	0.57	0.03	0.15	0.15	0.11	0.23	0.22
Sat Flow, veh/h	1774	5183	58	1774	4636	523	1774	1863	1580	1774	1770	1561
Grp Volume(v), veh/h	88	757	413	69	855	446	26	57	201	177	26	115
Grp Sat Flow(s),veh/h/ln	1774	1695	1852	1774	1695	1769	1774	1863	1580	1774	1770	1561
Q Serve(g_s), s	3.0	18.6	18.7	2.4	22.1	22.4	1.9	4.3	19.7	12.9	1.8	9.9
Cycle Q Clear(g_c), s	3.0	18.6	18.7	2.4	22.1	22.4	1.9	4.3	19.7	12.9	1.8	9.9
Prop In Lane	1.00		0.03	1.00		0.30	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	323	2016	1101	353	2000	1044	289	288	244	375	408	360
V/C Ratio(X)	0.27	0.38	0.38	0.20	0.43	0.43	0.09	0.20	0.82	0.47	0.06	0.32
Avail Cap(c_a), veh/h	357	2016	1101	395	2000	1044	459	442	375	409	420	371
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.9	16.9	16.9	12.3	18.0	18.3	54.0	59.0	65.5	47.1	48.0	52.0
Incr Delay (d2), s/veh	0.2	0.5	1.0	0.1	0.7	1.3	0.0	0.1	4.7	0.3	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	8.9	9.8	1.2	10.5	11.2	1.0	2.2	8.9	6.3	0.9	4.3
LnGrp Delay(d),s/veh	13.1	17.4	17.9	12.4	18.6	19.6	54.1	59.1	70.2	47.5	48.1	52.2
LnGrp LOS	B	B	B	B	B	B	D	E	E	D	D	D
Approach Vol, veh/h		1258			1370			284			318	
Approach Delay, s/veh		17.3			18.6			66.5			49.2	
Approach LOS		B			B			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.9	98.4	20.9	28.7	11.2	99.2	8.7	40.9
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0	6.0	6.0
Max Green Setting (Gmax), s	8.0	72.0	18.0	36.0	8.0	72.0	18.0	36.0
Max Q Clear Time (g_c+I1), s	5.0	24.4	14.9	21.7	4.4	20.7	3.9	11.9
Green Ext Time (p_c), s	0.0	10.7	0.0	0.5	0.0	9.0	0.0	0.5

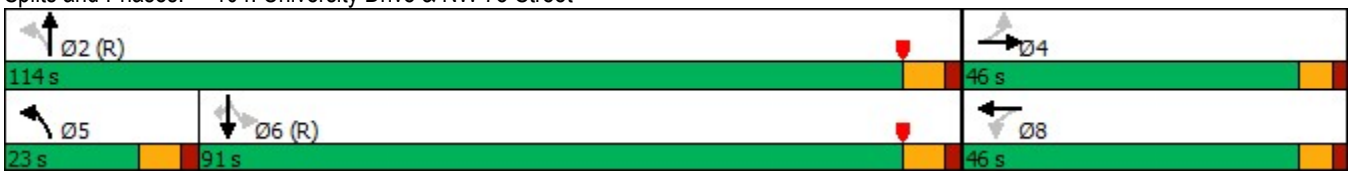
Intersection Summary	
HCM 2010 Ctrl Delay	25.3
HCM 2010 LOS	C

Timings
104: University Drive & NW 78 Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	82	3	1	0	168	1457	6	1907	77
Future Volume (vph)	82	3	1	0	168	1457	6	1907	77
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	NA	Perm
Protected Phases		4		8	5	2		6	
Permitted Phases	4		8		2		6		6
Detector Phase	4	4	8	8	5	2	6	6	6
Switch Phase									
Minimum Initial (s)	6.0	6.0	6.0	6.0	4.0	15.0	15.0	15.0	15.0
Minimum Split (s)	24.0	24.0	46.0	46.0	11.0	25.0	32.0	32.0	32.0
Total Split (s)	46.0	46.0	46.0	46.0	23.0	114.0	91.0	91.0	91.0
Total Split (%)	28.8%	28.8%	28.8%	28.8%	14.4%	71.3%	56.9%	56.9%	56.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag					Lead		Lag	Lag	Lag
Lead-Lag Optimize?					Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	16.8	16.8	16.8	16.8	135.2	135.2	113.0	113.0	113.0
Actuated g/C Ratio	0.10	0.10	0.10	0.10	0.84	0.84	0.71	0.71	0.71
v/c Ratio	0.62	0.57	0.02	0.00	0.67	0.38	0.04	0.59	0.08
Control Delay	85.4	16.1	61.0	0.0	41.3	3.4	11.2	14.0	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.4	16.1	61.0	0.0	41.3	3.4	11.2	14.0	3.4
LOS	F	B	E	A	D	A	B	B	A
Approach Delay		39.0		30.5		7.2		13.6	
Approach LOS		D		C		A		B	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 138 (86%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 12.5	Intersection LOS: B
Intersection Capacity Utilization 67.4%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 104: University Drive & NW 78 Street



Queues
104: University Drive & NW 78 Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	91	185	1	1	187	1640	7	2119	86
v/c Ratio	0.62	0.57	0.02	0.00	0.67	0.38	0.04	0.59	0.08
Control Delay	85.4	16.1	61.0	0.0	41.3	3.4	11.2	14.0	3.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.4	16.1	61.0	0.0	41.3	3.4	11.2	14.0	3.4
Queue Length 50th (ft)	93	6	1	0	99	116	2	380	5
Queue Length 95th (ft)	151	81	7	0	187	173	11	560	30
Internal Link Dist (ft)		290		265		388		380	
Turn Bay Length (ft)					180		160		160
Base Capacity (vph)	370	548	116	470	308	4287	183	3591	1105
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.34	0.01	0.00	0.61	0.38	0.04	0.59	0.08

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	82	3	164	1	0	1	168	1457	19	6	1907	77
Future Volume (veh/h)	82	3	164	1	0	1	168	1457	19	6	1907	77
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	91	3	182	1	0	1	187	1619	21	7	2119	86
Adj No. of Lanes	1	1	0	1	1	0	1	3	0	1	3	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	247	4	224	81	0	227	238	4173	54	264	3688	1121
Arrive On Green	0.14	0.14	0.13	0.14	0.00	0.13	0.06	0.81	0.79	0.73	0.73	0.73
Sat Flow, veh/h	1410	26	1561	1194	0	1583	1774	5174	67	304	5085	1546
Grp Volume(v), veh/h	91	0	185	1	0	1	187	1061	579	7	2119	86
Grp Sat Flow(s),veh/h/ln	1410	0	1587	1194	0	1583	1774	1695	1851	304	1695	1546
Q Serve(g_s), s	9.5	0.0	18.1	0.1	0.0	0.1	3.9	14.1	14.1	1.1	31.4	2.6
Cycle Q Clear(g_c), s	9.5	0.0	18.1	18.3	0.0	0.1	3.9	14.1	14.1	2.2	31.4	2.6
Prop In Lane	1.00		0.98	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	247	0	228	81	0	227	238	2734	1493	264	3688	1121
V/C Ratio(X)	0.37	0.00	0.81	0.01	0.00	0.00	0.79	0.39	0.39	0.03	0.57	0.08
Avail Cap(c_a), veh/h	414	0	417	223	0	416	348	2734	1493	264	3688	1121
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.8	0.0	67.4	75.3	0.0	59.6	26.4	4.4	4.4	6.5	10.4	6.4
Incr Delay (d2), s/veh	0.3	0.0	2.7	0.0	0.0	0.0	4.0	0.4	0.8	0.2	0.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	0.0	8.2	0.0	0.0	0.0	8.3	6.6	7.4	0.1	14.7	1.1
LnGrp Delay(d),s/veh	63.2	0.0	70.1	75.3	0.0	59.6	30.4	4.8	5.1	6.7	11.0	6.5
LnGrp LOS	E		E	E		E	C	A	A	A	B	A
Approach Vol, veh/h		276			2			1827			2212	
Approach Delay, s/veh		67.8			67.5			7.5			10.8	
Approach LOS		E			E			A			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		133.0		27.0	13.0	120.0		27.0
Change Period (Y+Rc), s		7.0		6.0	7.0	7.0		6.0
Max Green Setting (Gmax), s		107.0		40.0	16.0	84.0		40.0
Max Q Clear Time (g_c+I1), s		16.1		20.1	5.9	33.4		20.3
Green Ext Time (p_c), s		16.7		0.8	0.1	27.3		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	13.1
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	2.9

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	82	67	23	206	202	82
Future Vol, veh/h	82	67	23	206	202	82
Conflicting Peds, #/hr	1	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	85	70	24	215	210	85

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	412	150	297	0	-	0
Stage 1	255	-	-	-	-	-
Stage 2	157	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	568	870	1261	-	-	-
Stage 1	764	-	-	-	-	-
Stage 2	855	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	553	868	1259	-	-	-
Mov Cap-2 Maneuver	553	-	-	-	-	-
Stage 1	746	-	-	-	-	-
Stage 2	853	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.3	0.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1259	-	553	868	-	-
HCM Lane V/C Ratio	0.019	-	0.154	0.08	-	-
HCM Control Delay (s)	7.9	0.1	12.7	9.5	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	0.3	-	-

Intersection	
Intersection Delay, s/veh	9.6
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	1	0	0	89	1	86	6	193	74	75	187	0
Future Vol, veh/h	1	0	0	89	1	86	6	193	74	75	187	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	1	0	0	96	1	92	6	208	80	81	201	0
Number of Lanes	0	1	0	1	1	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	9.5	9.7	9.4	9.8
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	6%	0%	100%	100%	0%	55%	0%
Vol Thru, %	94%	57%	0%	0%	1%	45%	100%
Vol Right, %	0%	43%	0%	0%	99%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	103	171	1	89	87	137	125
LT Vol	6	0	1	89	0	75	0
Through Vol	97	97	0	0	1	62	125
RT Vol	0	74	0	0	86	0	0
Lane Flow Rate	110	183	1	96	94	148	134
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.165	0.258	0.002	0.17	0.135	0.231	0.199
Departure Headway (Hd)	5.394	5.058	6.493	6.39	5.189	5.631	5.356
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	661	706	554	558	685	634	666
Service Time	3.16	2.824	4.493	4.168	2.966	3.4	3.125
HCM Lane V/C Ratio	0.166	0.259	0.002	0.172	0.137	0.233	0.201
HCM Control Delay	9.2	9.6	9.5	10.5	8.8	10.1	9.5
HCM Lane LOS	A	A	A	B	A	B	A
HCM 95th-tile Q	0.6	1	0	0.6	0.5	0.9	0.7

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	288	276	0
Future Vol, veh/h	0	0	0	288	276	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	160	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	313	300	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	457	150	300	0	-	0
Stage 1	300	-	-	-	-	-
Stage 2	157	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	532	870	1258	-	-	-
Stage 1	725	-	-	-	-	-
Stage 2	855	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	532	870	1258	-	-	-
Mov Cap-2 Maneuver	532	-	-	-	-	-
Stage 1	725	-	-	-	-	-
Stage 2	855	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

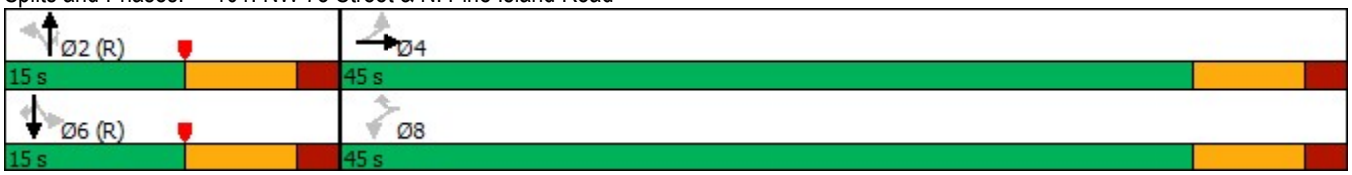
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1258	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	0	0	-	-
HCM Lane LOS	A	-	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-	-

Timings
101: NW 75 Street & N. Pine Island Road

Lane Group	EBT	WBL	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	1	42	47	3	1198	71	43	962
Future Volume (vph)	1	42	47	3	1198	71	43	962
Turn Type	NA	Perm	Perm	Perm	NA	Perm	Perm	NA
Protected Phases	4				2			6
Permitted Phases		8	8	2		2	6	
Detector Phase	4	8	8	2	2	2	6	6
Switch Phase								
Minimum Initial (s)	7.0	38.0	38.0	7.0	7.0	7.0	8.0	8.0
Minimum Split (s)	45.0	45.0	45.0	15.0	15.0	15.0	15.0	15.0
Total Split (s)	45.0	45.0	45.0	15.0	15.0	15.0	15.0	15.0
Total Split (%)	75.0%	75.0%	75.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	22.4	41.0	41.0	40.4	40.4	40.4	40.4	40.4
Actuated g/C Ratio	0.37	0.68	0.68	0.67	0.67	0.67	0.67	0.67
v/c Ratio	0.01	0.05	0.05	0.01	0.56	0.07	0.30	0.45
Control Delay	5.2	3.3	0.7	19.0	22.6	7.2	37.4	21.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.2	3.3	0.7	19.0	22.6	7.2	37.4	21.1
LOS	A	A	A	B	C	A	D	C
Approach Delay	5.2				21.8			21.8
Approach LOS	A				C			C

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.56	
Intersection Signal Delay: 21.0	Intersection LOS: C
Intersection Capacity Utilization 80.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 101: NW 75 Street & N. Pine Island Road



Queues
101: NW 75 Street & N. Pine Island Road

Lane Group	EBT	WBL	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	7	47	52	3	1331	79	48	1069
v/c Ratio	0.01	0.05	0.05	0.01	0.56	0.07	0.30	0.45
Control Delay	5.2	3.3	0.7	19.0	22.6	7.2	37.4	21.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.2	3.3	0.7	19.0	22.6	7.2	37.4	21.1
Queue Length 50th (ft)	2	4	0	0	0	0	0	0
Queue Length 95th (ft)	3	12	5	7	#528	32	#78	#414
Internal Link Dist (ft)	618				536			2010
Turn Bay Length (ft)				160		160	200	
Base Capacity (vph)	1158	958	1091	257	2383	1063	160	2383
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.05	0.05	0.01	0.56	0.07	0.30	0.45

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis
101: NW 75 Street & N. Pine Island Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	1	4	42	0	47	3	1198	71	43	962	0
Future Volume (vph)	2	1	4	42	0	47	3	1198	71	43	962	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0		4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00		1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		1.00		1.00		0.99	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes		1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.92		1.00		0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99		0.95		1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1694		1770		1563	1770	3539	1549	1769	3539	
Flt Permitted		0.99		0.75		1.00	0.20	1.00	1.00	0.13	1.00	
Satd. Flow (perm)		1694		1403		1563	382	3539	1549	239	3539	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2	1	4	47	0	52	3	1331	79	48	1069	0
RTOR Reduction (vph)	0	0	0	0	0	36	0	0	32	0	0	0
Lane Group Flow (vph)	0	7	0	47	0	16	3	1331	47	48	1069	0
Confl. Peds. (#/hr)	1					1			2	2		
Turn Type	Perm	NA		Perm		Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4						2			6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)		15.2		15.2		15.2	30.8	30.8	30.8	30.8	30.8	
Effective Green, g (s)		18.2		18.2		18.2	33.8	33.8	33.8	33.8	33.8	
Actuated g/C Ratio		0.30		0.30		0.30	0.56	0.56	0.56	0.56	0.56	
Clearance Time (s)		7.0		7.0		7.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)		1.0		1.0		1.0	1.0	1.0	1.0	1.0	1.0	
Lane Grp Cap (vph)		513		425		474	215	1993	872	134	1993	
v/s Ratio Prot								c0.38			0.30	
v/s Ratio Perm		0.00		c0.03		0.01	0.01		0.03	0.20		
v/c Ratio		0.01		0.11		0.03	0.01	0.67	0.05	0.36	0.54	
Uniform Delay, d1		14.6		15.1		14.7	5.8	9.2	5.9	7.2	8.2	
Progression Factor		1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.0		0.0		0.0	0.1	1.8	0.1	7.3	1.0	
Delay (s)		14.6		15.1		14.7	5.9	11.0	6.0	14.5	9.2	
Level of Service		B		B		B	A	B	A	B	A	
Approach Delay (s)		14.6			14.9			10.7			9.5	
Approach LOS		B			B			B			A	

Intersection Summary			
HCM 2000 Control Delay	10.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.50		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	80.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			

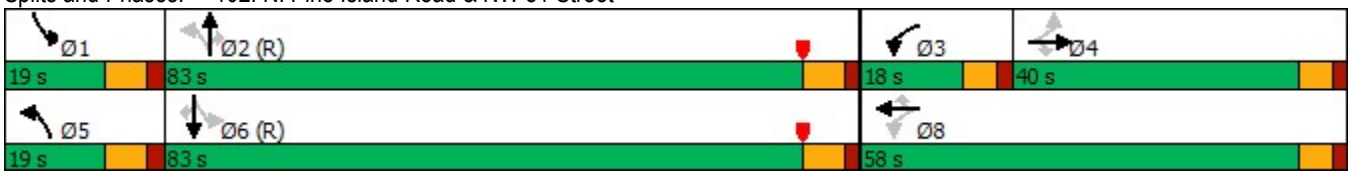
HCM 2010 Research does not support Non-NEMA phasing.

Timings
102: N. Pine Island Road & NW 81 Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	54	46	30	39	41	169	43	1133	55	172	996	121
Future Volume (vph)	54	46	30	39	41	169	43	1133	55	172	996	121
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	4.0	6.0	6.0	4.0	10.0	10.0	4.0	10.0	10.0
Minimum Split (s)	37.0	37.0	37.0	11.0	37.0	37.0	19.0	37.0	37.0	19.0	57.0	57.0
Total Split (s)	40.0	40.0	40.0	18.0	58.0	58.0	19.0	83.0	83.0	19.0	83.0	83.0
Total Split (%)	25.0%	25.0%	25.0%	11.3%	36.3%	36.3%	11.9%	51.9%	51.9%	11.9%	51.9%	51.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		-2.0	-2.0	-2.0	-2.0	-2.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		17.9	17.9	29.0	29.0	29.0	111.7	103.5	103.5	123.0	113.1	113.1
Actuated g/C Ratio		0.11	0.11	0.18	0.18	0.18	0.70	0.65	0.65	0.77	0.71	0.71
v/c Ratio		0.65	0.12	0.22	0.13	0.43	0.13	0.54	0.06	0.52	0.44	0.12
Control Delay		85.4	0.9	53.3	51.5	10.2	7.5	18.9	0.1	11.1	12.5	3.1
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		85.4	0.9	53.3	51.5	10.2	7.5	18.9	0.1	11.1	12.5	3.1
LOS		F	A	D	D	B	A	B	A	B	B	A
Approach Delay		65.9			23.8			17.7			11.5	
Approach LOS		E			C			B			B	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 94 (59%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 125	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.65	
Intersection Signal Delay: 17.6	Intersection LOS: B
Intersection Capacity Utilization 63.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 102: N. Pine Island Road & NW 81 Street



Queues
102: N. Pine Island Road & NW 81 Street

Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	110	33	43	45	186	47	1245	60	189	1095	133
v/c Ratio	0.65	0.12	0.22	0.13	0.43	0.13	0.54	0.06	0.52	0.44	0.12
Control Delay	85.4	0.9	53.3	51.5	10.2	7.5	18.9	0.1	11.1	12.5	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.4	0.9	53.3	51.5	10.2	7.5	18.9	0.1	11.1	12.5	3.1
Queue Length 50th (ft)	112	0	38	39	5	11	369	0	49	261	8
Queue Length 95th (ft)	176	0	70	72	70	28	562	0	93	380	38
Internal Link Dist (ft)	409			578			2010			316	
Turn Bay Length (ft)		100	200		130	190		250	200		200
Base Capacity (vph)	338	440	226	628	646	444	2290	1038	382	2501	1150
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.07	0.19	0.07	0.29	0.11	0.54	0.06	0.49	0.44	0.12

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	46	30	39	41	169	43	1133	55	172	996	121
Future Volume (veh/h)	54	46	30	39	41	169	43	1133	55	172	996	121
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	59	51	33	43	45	186	47	1245	60	189	1095	133
Adj No. of Lanes	0	1	1	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	112	74	167	159	323	270	384	2446	1071	373	2506	1120
Arrive On Green	0.11	0.11	0.11	0.04	0.17	0.17	0.04	0.69	0.69	0.06	0.71	0.71
Sat Flow, veh/h	720	688	1557	1774	1863	1560	1774	3539	1550	1774	3539	1582
Grp Volume(v), veh/h	110	0	33	43	45	186	47	1245	60	189	1095	133
Grp Sat Flow(s),veh/h/ln	1409	0	1557	1774	1863	1560	1774	1770	1550	1774	1770	1582
Q Serve(g_s), s	11.4	0.0	3.1	3.3	3.3	17.9	1.2	26.8	2.0	4.6	20.9	4.3
Cycle Q Clear(g_c), s	12.0	0.0	3.1	3.3	3.3	17.9	1.2	26.8	2.0	4.6	20.9	4.3
Prop In Lane	0.54		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	186	0	167	159	323	270	384	2446	1071	373	2506	1120
V/C Ratio(X)	0.59	0.00	0.20	0.27	0.14	0.69	0.12	0.51	0.06	0.51	0.44	0.12
Avail Cap(c_a), veh/h	350	0	350	242	629	526	472	2446	1071	431	2506	1120
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.83	0.83	0.83	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.1	0.0	65.2	58.4	56.0	62.1	6.9	11.8	7.9	9.6	9.9	7.4
Incr Delay (d2), s/veh	1.1	0.0	0.2	0.3	0.1	1.2	0.0	0.6	0.1	0.4	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	0.0	1.3	1.6	1.7	7.8	0.6	13.2	0.9	2.6	10.4	2.0
LnGrp Delay(d),s/veh	70.2	0.0	65.4	58.7	56.1	63.3	7.0	12.4	8.0	10.0	10.4	7.7
LnGrp LOS	E		E	E	E	E	A	B	A	B	B	A
Approach Vol, veh/h		143			274			1352			1417	
Approach Delay, s/veh		69.1			61.4			12.0			10.1	
Approach LOS		E			E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	13.7	114.6	10.6	21.1	11.0	117.3		31.7
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0		6.0
Max Green Setting (Gmax), s	12.0	76.0	12.0	34.0	12.0	76.0		52.0
Max Q Clear Time (g_c+I1), s	6.6	28.8	5.3	14.0	3.2	22.9		19.9
Green Ext Time (p_c), s	0.1	11.5	0.0	0.4	0.0	10.0		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	18.0
HCM 2010 LOS	B

Timings
103: NW 80 Avenue & W. McNab Road

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	69	1200	149	1193	23	32	124	112	37
Future Volume (vph)	69	1200	149	1193	23	32	124	112	37
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	1	6	5	2	7	4		3	8
Permitted Phases	6		2		4		4	8	
Detector Phase	1	6	5	2	7	4	4	3	8
Switch Phase									
Minimum Initial (s)	4.0	10.0	4.0	10.0	4.0	6.0	6.0	4.0	6.0
Minimum Split (s)	11.0	38.0	11.0	38.0	10.0	41.0	41.0	11.0	39.0
Total Split (s)	20.0	74.0	20.0	74.0	24.0	42.0	42.0	24.0	42.0
Total Split (%)	12.5%	46.3%	12.5%	46.3%	15.0%	26.3%	26.3%	15.0%	26.3%
Yellow Time (s)	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	None	None	None	None	None
Act Effct Green (s)	116.4	107.4	120.8	109.6	17.9	10.1	10.1	29.4	21.8
Actuated g/C Ratio	0.73	0.67	0.76	0.68	0.11	0.06	0.06	0.18	0.14
v/c Ratio	0.26	0.39	0.48	0.43	0.15	0.29	0.60	0.46	0.27
Control Delay	7.9	12.9	10.4	12.2	53.6	77.0	21.9	61.6	21.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.9	12.9	10.4	12.2	53.6	77.0	21.9	61.6	21.5
LOS	A	B	B	B	D	E	C	E	C
Approach Delay		12.6		12.0		35.7			40.1
Approach LOS		B		B		D			D

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 134 (84%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 15.6	Intersection LOS: B
Intersection Capacity Utilization 60.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 103: NW 80 Avenue & W. McNab Road

Queues
103: NW 80 Avenue & W. McNab Road

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	73	1314	159	1458	24	34	132	119	138
v/c Ratio	0.26	0.39	0.48	0.43	0.15	0.29	0.60	0.46	0.27
Control Delay	7.9	12.9	10.4	12.2	53.6	77.0	21.9	61.6	21.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	7.9	12.9	10.4	12.2	53.6	77.0	21.9	61.6	21.5
Queue Length 50th (ft)	16	204	37	223	21	35	0	111	20
Queue Length 95th (ft)	38	304	74	325	46	72	69	165	53
Internal Link Dist (ft)		201		271		371			819
Turn Bay Length (ft)	190		180		160		220	150	
Base Capacity (vph)	354	3400	380	3419	284	442	470	281	816
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.39	0.42	0.43	0.08	0.08	0.28	0.42	0.17

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	1200	35	149	1193	178	23	32	124	112	37	93
Future Volume (veh/h)	69	1200	35	149	1193	178	23	32	124	112	37	93
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	73	1277	37	159	1269	189	24	34	132	119	39	99
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	308	3216	93	366	2902	432	245	231	192	319	312	274
Arrive On Green	0.04	0.63	0.61	0.06	0.65	0.63	0.03	0.12	0.12	0.08	0.18	0.16
Sat Flow, veh/h	1774	5078	147	1774	4461	664	1774	1863	1547	1774	1770	1554
Grp Volume(v), veh/h	73	853	461	159	964	494	24	34	132	119	39	99
Grp Sat Flow(s),veh/h/ln	1774	1695	1835	1774	1695	1735	1774	1863	1547	1774	1770	1554
Q Serve(g_s), s	2.2	19.7	19.8	4.7	22.2	22.6	1.9	2.6	13.1	9.0	3.0	9.1
Cycle Q Clear(g_c), s	2.2	19.7	19.8	4.7	22.2	22.6	1.9	2.6	13.1	9.0	3.0	9.1
Prop In Lane	1.00		0.08	1.00		0.38	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	308	2147	1162	366	2205	1129	245	231	192	319	312	274
V/C Ratio(X)	0.24	0.40	0.40	0.43	0.44	0.44	0.10	0.15	0.69	0.37	0.12	0.36
Avail Cap(c_a), veh/h	407	2147	1162	435	2205	1129	415	442	368	397	420	369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	10.2	14.4	14.4	10.1	13.7	14.0	58.2	62.5	67.1	52.5	55.5	58.9
Incr Delay (d2), s/veh	0.1	0.6	1.0	0.3	0.6	1.2	0.1	0.1	1.6	0.3	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	9.4	10.4	2.3	10.5	11.2	0.9	1.3	5.7	4.5	1.5	3.9
LnGrp Delay(d),s/veh	10.4	14.9	15.4	10.4	14.3	15.2	58.2	62.6	68.7	52.8	55.5	59.2
LnGrp LOS	B	B	B	B	B	B	E	E	E	D	E	E
Approach Vol, veh/h		1387			1617			190			257	
Approach Delay, s/veh		14.9			14.2			66.3			55.7	
Approach LOS		B			B			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.1	108.1	17.0	23.9	13.8	105.3	8.6	32.2
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0	6.0	6.0
Max Green Setting (Gmax), s	13.0	67.0	18.0	36.0	13.0	67.0	18.0	36.0
Max Q Clear Time (g_c+I1), s	4.2	24.6	11.0	15.1	6.7	21.8	3.9	11.1
Green Ext Time (p_c), s	0.0	12.6	0.0	0.3	0.1	10.6	0.0	0.5

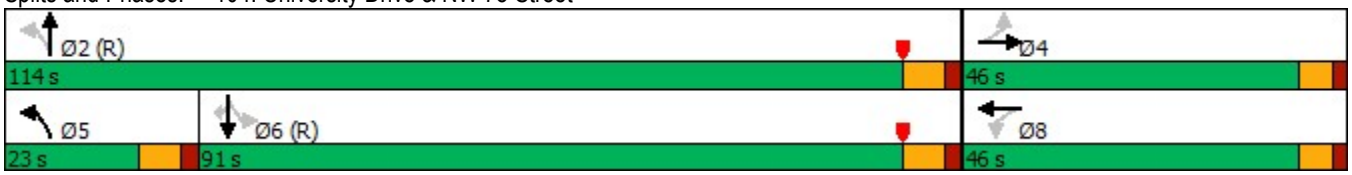
Intersection Summary	
HCM 2010 Ctrl Delay	20.4
HCM 2010 LOS	C

Timings
104: University Drive & NW 78 Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	78	0	9	2	197	1712	4	1571	99
Future Volume (vph)	78	0	9	2	197	1712	4	1571	99
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	NA	Perm
Protected Phases		4		8	5	2		6	
Permitted Phases	4		8		2		6		6
Detector Phase	4	4	8	8	5	2	6	6	6
Switch Phase									
Minimum Initial (s)	6.0	6.0	6.0	6.0	4.0	15.0	15.0	15.0	15.0
Minimum Split (s)	24.0	24.0	46.0	46.0	11.0	25.0	32.0	32.0	32.0
Total Split (s)	46.0	46.0	46.0	46.0	23.0	114.0	91.0	91.0	91.0
Total Split (%)	28.8%	28.8%	28.8%	28.8%	14.4%	71.3%	56.9%	56.9%	56.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag					Lead		Lag	Lag	Lag
Lead-Lag Optimize?					Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	16.7	16.7	16.7	16.7	135.3	135.3	111.3	111.3	111.3
Actuated g/C Ratio	0.10	0.10	0.10	0.10	0.85	0.85	0.70	0.70	0.70
v/c Ratio	0.62	0.36	0.12	0.01	0.67	0.46	0.04	0.51	0.10
Control Delay	85.5	3.0	65.2	60.5	30.8	3.8	12.5	13.4	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.5	3.0	65.2	60.5	30.8	3.8	12.5	13.4	4.9
LOS	F	A	E	E	C	A	B	B	A
Approach Delay		38.7		64.4		6.6		12.9	
Approach LOS		D		E		A		B	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 58 (36%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 11.0	Intersection LOS: B
Intersection Capacity Utilization 66.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 104: University Drive & NW 78 Street



Queues
104: University Drive & NW 78 Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	90	118	10	2	226	1978	5	1806	114
v/c Ratio	0.62	0.36	0.12	0.01	0.67	0.46	0.04	0.51	0.10
Control Delay	85.5	3.0	65.2	60.5	30.8	3.8	12.5	13.4	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.5	3.0	65.2	60.5	30.8	3.8	12.5	13.4	4.9
Queue Length 50th (ft)	92	0	10	2	90	154	2	305	14
Queue Length 95th (ft)	144	0	28	10	175	216	9	429	44
Internal Link Dist (ft)		290		265		388		380	
Turn Bay Length (ft)					180		160		160
Base Capacity (vph)	369	551	212	489	360	4294	125	3538	1091
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.24	0.21	0.05	0.00	0.63	0.46	0.04	0.51	0.10

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	0	103	9	2	0	197	1712	9	4	1571	99
Future Volume (veh/h)	78	0	103	9	2	0	197	1712	9	4	1571	99
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	0.99		0.99	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	90	0	118	10	2	0	226	1968	10	5	1806	114
Adj No. of Lanes	1	1	0	1	1	0	1	3	0	1	3	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	209	0	186	104	220	0	290	4343	22	205	3806	1156
Arrive On Green	0.12	0.00	0.11	0.12	0.12	0.00	0.06	0.83	0.81	0.75	0.75	0.75
Sat Flow, veh/h	1402	0	1574	1265	1863	0	1774	5221	27	219	5085	1544
Grp Volume(v), veh/h	90	0	118	10	2	0	226	1278	700	5	1806	114
Grp Sat Flow(s),veh/h/ln	1402	0	1574	1265	1863	0	1774	1695	1857	219	1695	1544
Q Serve(g_s), s	9.7	0.0	11.5	1.2	0.2	0.0	4.2	16.3	16.3	1.0	22.2	3.2
Cycle Q Clear(g_c), s	9.8	0.0	11.5	12.7	0.2	0.0	4.2	16.3	16.3	4.0	22.2	3.2
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	209	0	186	104	220	0	290	2820	1545	205	3806	1156
V/C Ratio(X)	0.43	0.00	0.63	0.10	0.01	0.00	0.78	0.45	0.45	0.02	0.47	0.10
Avail Cap(c_a), veh/h	412	0	413	286	489	0	397	2820	1545	205	3806	1156
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.6	0.0	68.2	73.3	62.3	0.0	18.8	3.6	3.6	6.0	7.9	5.5
Incr Delay (d2), s/veh	0.5	0.0	1.3	0.1	0.0	0.0	4.3	0.5	1.0	0.2	0.4	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.8	0.0	5.1	0.4	0.1	0.0	7.9	7.7	8.6	0.1	10.4	1.4
LnGrp Delay(d),s/veh	67.1	0.0	69.6	73.5	62.3	0.0	23.1	4.2	4.6	6.2	8.3	5.6
LnGrp LOS	E		E	E	E		C	A	A	A	A	A
Approach Vol, veh/h		208			12			2204			1925	
Approach Delay, s/veh		68.5			71.6			6.2			8.1	
Approach LOS		E			E			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		137.1		22.9	13.3	123.7		22.9
Change Period (Y+Rc), s		7.0		6.0	7.0	7.0		6.0
Max Green Setting (Gmax), s		107.0		40.0	16.0	84.0		40.0
Max Q Clear Time (g_c+I1), s		18.3		13.5	6.2	24.2		14.7
Green Ext Time (p_c), s		24.9		0.6	0.1	22.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	10.2
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	93	39	50	206	154	71
Future Vol, veh/h	93	39	50	206	154	71
Conflicting Peds, #/hr	3	0	3	0	0	3
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	104	44	56	231	173	80

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	447	130	256	0	-	0
Stage 1	216	-	-	-	-	-
Stage 2	231	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	540	896	1306	-	-	-
Stage 1	799	-	-	-	-	-
Stage 2	785	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	510	893	1302	-	-	-
Mov Cap-2 Maneuver	510	-	-	-	-	-
Stage 1	757	-	-	-	-	-
Stage 2	783	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12.5	1.6	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1302	-	510	893	-	-
HCM Lane V/C Ratio	0.043	-	0.205	0.049	-	-
HCM Control Delay (s)	7.9	0.1	13.9	9.2	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.8	0.2	-	-

Intersection	
Intersection Delay, s/veh	9.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	2	3	81	2	87	3	198	94	74	152	0
Future Vol, veh/h	3	2	3	81	2	87	3	198	94	74	152	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	3	2	3	86	2	93	3	211	100	79	162	0
Number of Lanes	0	1	0	1	1	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	9.1	9.5	9.5	9.6
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	3%	0%	38%	100%	0%	59%	0%
Vol Thru, %	97%	51%	25%	0%	2%	41%	100%
Vol Right, %	0%	49%	38%	0%	98%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	102	193	8	81	89	125	101
LT Vol	3	0	3	81	0	74	0
Through Vol	99	99	2	0	2	51	101
RT Vol	0	94	3	0	87	0	0
Lane Flow Rate	109	205	9	86	95	133	108
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.161	0.283	0.014	0.152	0.136	0.209	0.161
Departure Headway (Hd)	5.328	4.97	6.062	6.352	5.159	5.664	5.365
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	670	719	594	562	689	630	664
Service Time	3.09	2.732	4.062	4.126	2.932	3.431	3.132
HCM Lane V/C Ratio	0.163	0.285	0.015	0.153	0.138	0.211	0.163
HCM Control Delay	9.1	9.7	9.1	10.3	8.8	9.9	9.2
HCM Lane LOS	A	A	A	B	A	A	A
HCM 95th-tile Q	0.6	1.2	0	0.5	0.5	0.8	0.6

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	299	236	0
Future Vol, veh/h	0	0	0	299	236	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	160	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	325	257	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	420	129	257	0	-	0
Stage 1	257	-	-	-	-	-
Stage 2	163	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	561	897	1305	-	-	-
Stage 1	762	-	-	-	-	-
Stage 2	849	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	561	897	1305	-	-	-
Mov Cap-2 Maneuver	561	-	-	-	-	-
Stage 1	762	-	-	-	-	-
Stage 2	849	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

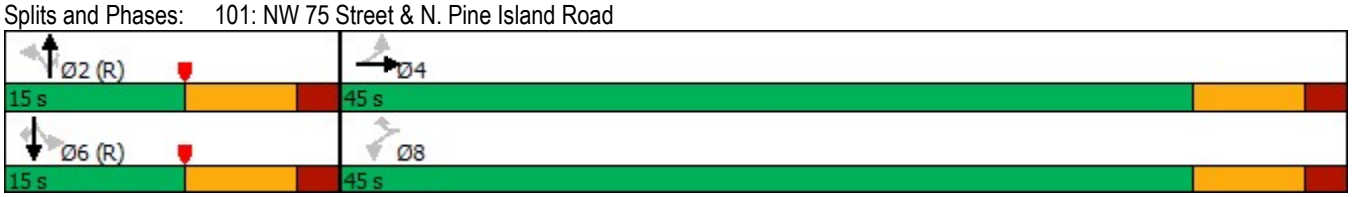
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1305	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	0	0	-	-
HCM Lane LOS	A	-	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-	-

Timings
101: NW 75 Street & N. Pine Island Road

Lane Group	EBT	WBL	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	1	47	42	1	772	55	41	811
Future Volume (vph)	1	47	42	1	772	55	41	811
Turn Type	NA	Perm	Perm	Perm	NA	Perm	Perm	NA
Protected Phases	4				2			6
Permitted Phases		8	8	2		2	6	
Detector Phase	4	8	8	2	2	2	6	6
Switch Phase								
Minimum Initial (s)	7.0	38.0	38.0	7.0	7.0	7.0	8.0	8.0
Minimum Split (s)	45.0	45.0	45.0	15.0	15.0	15.0	15.0	15.0
Total Split (s)	45.0	45.0	45.0	15.0	15.0	15.0	15.0	15.0
Total Split (%)	75.0%	75.0%	75.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	22.4	41.0	41.0	40.4	40.4	40.4	40.4	40.4
Actuated g/C Ratio	0.37	0.68	0.68	0.67	0.67	0.67	0.67	0.67
v/c Ratio	0.01	0.05	0.04	0.00	0.35	0.05	0.12	0.37
Control Delay	4.2	3.3	0.5	19.0	19.1	5.3	20.0	19.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.2	3.3	0.5	19.0	19.1	5.3	20.0	19.6
LOS	A	A	A	B	B	A	B	B
Approach Delay	4.3				18.2			19.6
Approach LOS	A				B			B

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.37	
Intersection Signal Delay: 18.0	Intersection LOS: B
Intersection Capacity Utilization 68.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 101: NW 75 Street & N. Pine Island Road



Queues
101: NW 75 Street & N. Pine Island Road

Lane Group	EBT	WBL	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	4	51	45	1	830	59	44	872
v/c Ratio	0.01	0.05	0.04	0.00	0.35	0.05	0.12	0.37
Control Delay	4.2	3.3	0.5	19.0	19.1	5.3	20.0	19.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.2	3.3	0.5	19.0	19.1	5.3	20.0	19.6
Queue Length 50th (ft)	1	5	0	0	0	0	0	0
Queue Length 95th (ft)	2	13	4	4	#308	21	#51	#327
Internal Link Dist (ft)	618				536			2010
Turn Bay Length (ft)				160		160	200	
Base Capacity (vph)	1172	960	1091	348	2383	1089	370	2383
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.05	0.04	0.00	0.35	0.05	0.12	0.37

Intersection Summary

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

HCM Signalized Intersection Capacity Analysis
101: NW 75 Street & N. Pine Island Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	2	47	0	42	1	772	55	41	811	0
Future Volume (vph)	1	1	2	47	0	42	1	772	55	41	811	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0		4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00		1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		1.00		1.00		0.99	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes		1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.93		1.00		0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99		0.95		1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1715		1770		1563	1769	3539	1583	1770	3539	
Flt Permitted		0.99		0.76		1.00	0.28	1.00	1.00	0.30	1.00	
Satd. Flow (perm)		1715		1407		1563	517	3539	1583	550	3539	
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)	1	1	2	51	0	45	1	830	59	44	872	0
RTOR Reduction (vph)	0	1	0	0	0	31	0	0	26	0	0	0
Lane Group Flow (vph)	0	3	0	51	0	14	1	830	33	44	872	0
Confl. Peds. (#/hr)	1					1	2					2
Turn Type	Perm	NA		Perm		Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4						2			6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)		15.2		15.2		15.2	30.8	30.8	30.8	30.8	30.8	
Effective Green, g (s)		18.2		18.2		18.2	33.8	33.8	33.8	33.8	33.8	
Actuated g/C Ratio		0.30		0.30		0.30	0.56	0.56	0.56	0.56	0.56	
Clearance Time (s)		7.0		7.0		7.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)		1.0		1.0		1.0	1.0	1.0	1.0	1.0	1.0	
Lane Grp Cap (vph)		520		426		474	291	1993	891	309	1993	
v/s Ratio Prot								0.23			c0.25	
v/s Ratio Perm		0.00		c0.04		0.01	0.00		0.02	0.08		
v/c Ratio		0.01		0.12		0.03	0.00	0.42	0.04	0.14	0.44	
Uniform Delay, d1		14.6		15.1		14.7	5.7	7.5	5.8	6.2	7.6	
Progression Factor		1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.0		0.0		0.0	0.0	0.6	0.1	1.0	0.7	
Delay (s)		14.6		15.2		14.7	5.8	8.1	5.9	7.2	8.3	
Level of Service		B		B		B	A	A	A	A	A	
Approach Delay (s)		14.6			14.9			8.0			8.2	
Approach LOS		B			B			A			A	

Intersection Summary			
HCM 2000 Control Delay	8.5	HCM 2000 Level of Service	A
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	68.8%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM 2010 Research does not support Non-NEMA phasing.

Timings
102: N. Pine Island Road & NW 81 Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	25	35	20	33	122	27	694	31	103	714	105
Future Volume (vph)	46	25	35	20	33	122	27	694	31	103	714	105
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	4.0	6.0	6.0	4.0	10.0	10.0	4.0	10.0	10.0
Minimum Split (s)	37.0	37.0	37.0	11.0	37.0	37.0	19.0	37.0	37.0	19.0	57.0	57.0
Total Split (s)	44.0	44.0	44.0	20.0	64.0	64.0	21.0	75.0	75.0	21.0	75.0	75.0
Total Split (%)	27.5%	27.5%	27.5%	12.5%	40.0%	40.0%	13.1%	46.9%	46.9%	13.1%	46.9%	46.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		-2.0	-2.0	-2.0	-2.0	-2.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		14.1	14.1	21.6	21.6	21.6	124.8	117.3	117.3	129.3	123.2	123.2
Actuated g/C Ratio		0.09	0.09	0.14	0.14	0.14	0.78	0.73	0.73	0.81	0.77	0.77
v/c Ratio		0.57	0.15	0.13	0.14	0.39	0.05	0.28	0.03	0.18	0.27	0.09
Control Delay		86.2	1.3	56.8	57.1	11.7	4.6	8.6	0.0	4.7	7.3	1.6
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		86.2	1.3	56.8	57.1	11.7	4.6	8.6	0.0	4.7	7.3	1.6
LOS		F	A	E	E	B	A	A	A	A	A	A
Approach Delay		58.1			25.5			8.1			6.4	
Approach LOS		E			C			A			A	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 81 (51%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 125	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.57	
Intersection Signal Delay: 11.6	Intersection LOS: B
Intersection Capacity Utilization 48.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 102: N. Pine Island Road & NW 81 Street

Queues
102: N. Pine Island Road & NW 81 Street

Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	73	36	21	34	126	28	715	32	106	736	108
v/c Ratio	0.57	0.15	0.13	0.14	0.39	0.05	0.28	0.03	0.18	0.27	0.09
Control Delay	86.2	1.3	56.8	57.1	11.7	4.6	8.6	0.0	4.7	7.3	1.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.2	1.3	56.8	57.1	11.7	4.6	8.6	0.0	4.7	7.3	1.6
Queue Length 50th (ft)	75	0	19	31	0	6	133	0	22	133	0
Queue Length 95th (ft)	129	0	44	62	59	16	201	0	45	195	21
Internal Link Dist (ft)	409			578			2010			316	
Turn Bay Length (ft)		100	200		130	190		250	200		200
Base Capacity (vph)	365	482	220	698	664	659	2593	1189	642	2725	1206
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.20	0.07	0.10	0.05	0.19	0.04	0.28	0.03	0.17	0.27	0.09

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	25	35	20	33	122	27	694	31	103	714	105
Future Volume (veh/h)	46	25	35	20	33	122	27	694	31	103	714	105
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	47	26	36	21	34	126	28	715	32	106	736	108
Adj No. of Lanes	0	1	1	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	104	41	122	130	242	203	568	2656	1185	613	2659	1162
Arrive On Green	0.08	0.08	0.08	0.03	0.13	0.13	0.04	0.75	0.75	0.04	0.75	0.75
Sat Flow, veh/h	873	531	1583	1774	1863	1562	1774	3539	1579	1774	3539	1547
Grp Volume(v), veh/h	73	0	36	21	34	126	28	715	32	106	736	108
Grp Sat Flow(s),veh/h/ln	1404	0	1583	1774	1863	1562	1774	1770	1579	1774	1770	1547
Q Serve(g_s), s	7.7	0.0	3.4	1.7	2.6	12.2	0.5	10.1	0.8	2.1	10.4	3.0
Cycle Q Clear(g_c), s	8.1	0.0	3.4	1.7	2.6	12.2	0.5	10.1	0.8	2.1	10.4	3.0
Prop In Lane	0.64		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	146	0	122	130	242	203	568	2656	1185	613	2659	1162
V/C Ratio(X)	0.50	0.00	0.29	0.16	0.14	0.62	0.05	0.27	0.03	0.17	0.28	0.09
Avail Cap(c_a), veh/h	386	0	396	258	699	586	679	2656	1185	722	2659	1162
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.95	0.95	0.95	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.8	0.0	69.7	63.4	61.7	65.9	3.8	6.2	5.1	3.9	6.2	5.3
Incr Delay (d2), s/veh	1.0	0.0	0.5	0.2	0.1	1.2	0.0	0.2	0.0	0.0	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.2	0.0	1.5	0.8	1.3	5.4	0.3	5.0	0.4	1.0	5.1	1.3
LnGrp Delay(d),s/veh	72.8	0.0	70.2	63.6	61.8	67.0	3.8	6.5	5.1	4.0	6.5	5.5
LnGrp LOS	E		E	E	E	E	A	A	A	A	A	A
Approach Vol, veh/h		109			181			775			950	
Approach Delay, s/veh		71.9			65.6			6.3			6.1	
Approach LOS		E			E			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	11.1	124.1	8.4	16.4	11.0	124.2		24.8
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0		6.0
Max Green Setting (Gmax), s	14.0	68.0	14.0	38.0	14.0	68.0		58.0
Max Q Clear Time (g_c+I1), s	4.1	12.1	3.7	10.1	2.5	12.4		14.2
Green Ext Time (p_c), s	0.0	5.2	0.0	0.3	0.0	5.8		0.3

Intersection Summary	
HCM 2010 Ctrl Delay	15.1
HCM 2010 LOS	B

Timings
103: NW 80 Avenue & W. McNab Road

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	50	627	116	632	37	20	83	84	35
Future Volume (vph)	50	627	116	632	37	20	83	84	35
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	1	6	5	2	7	4		3	8
Permitted Phases	6		2		4		4	8	
Detector Phase	1	6	5	2	7	4	4	3	8
Switch Phase									
Minimum Initial (s)	4.0	10.0	4.0	10.0	4.0	6.0	6.0	4.0	6.0
Minimum Split (s)	11.0	38.0	11.0	38.0	10.0	41.0	41.0	11.0	39.0
Total Split (s)	23.0	68.0	23.0	68.0	24.0	45.0	45.0	24.0	45.0
Total Split (%)	14.4%	42.5%	14.4%	42.5%	15.0%	28.1%	28.1%	15.0%	28.1%
Yellow Time (s)	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	None	None	None	None	None
Act Effct Green (s)	120.4	112.3	124.2	116.1	17.9	8.9	8.9	25.9	15.1
Actuated g/C Ratio	0.75	0.70	0.78	0.73	0.11	0.06	0.06	0.16	0.09
v/c Ratio	0.10	0.20	0.22	0.22	0.23	0.21	0.46	0.40	0.26
Control Delay	4.9	8.8	5.3	7.8	59.0	76.8	12.3	63.4	33.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.9	8.8	5.3	7.8	59.0	76.8	12.3	63.4	33.1
LOS	A	A	A	A	E	E	B	E	C
Approach Delay		8.6		7.5		34.1			48.3
Approach LOS		A		A		C			D

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 132 (83%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.46	
Intersection Signal Delay: 13.5	Intersection LOS: B
Intersection Capacity Utilization 51.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 103: NW 80 Avenue & W. McNab Road

Queues
103: NW 80 Avenue & W. McNab Road

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	54	698	125	808	40	22	89	90	90
v/c Ratio	0.10	0.20	0.22	0.22	0.23	0.21	0.46	0.40	0.26
Control Delay	4.9	8.8	5.3	7.8	59.0	76.8	12.3	63.4	33.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	4.9	8.8	5.3	7.8	59.0	76.8	12.3	63.4	33.1
Queue Length 50th (ft)	11	83	26	93	37	23	0	85	20
Queue Length 95th (ft)	26	124	52	134	71	54	31	136	49
Internal Link Dist (ft)		201		271		371			819
Turn Bay Length (ft)	190		180		160		220	150	
Base Capacity (vph)	616	3550	650	3599	267	477	484	258	866
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.09	0.20	0.19	0.22	0.15	0.05	0.18	0.35	0.10

Intersection Summary

HCM 2010 Signalized Intersection Summary
103: NW 80 Avenue & W. McNab Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	627	22	116	632	119	37	20	83	84	35	48
Future Volume (veh/h)	50	627	22	116	632	119	37	20	83	84	35	48
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		0.99	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	54	674	24	125	680	128	40	22	89	90	38	52
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	534	3373	120	598	2926	544	255	206	173	291	246	217
Arrive On Green	0.04	0.67	0.65	0.05	0.68	0.66	0.04	0.11	0.11	0.07	0.14	0.13
Sat Flow, veh/h	1774	5040	179	1774	4300	799	1774	1863	1562	1774	1770	1565
Grp Volume(v), veh/h	54	453	245	125	534	274	40	22	89	90	38	52
Grp Sat Flow(s),veh/h/ln	1774	1695	1828	1774	1695	1709	1774	1863	1562	1774	1770	1565
Q Serve(g_s), s	1.5	8.2	8.2	3.4	9.6	10.0	3.1	1.7	8.6	6.9	3.0	4.8
Cycle Q Clear(g_c), s	1.5	8.2	8.2	3.4	9.6	10.0	3.1	1.7	8.6	6.9	3.0	4.8
Prop In Lane	1.00		0.10	1.00		0.47	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	534	2269	1224	598	2307	1163	255	206	173	291	246	217
V/C Ratio(X)	0.10	0.20	0.20	0.21	0.23	0.24	0.16	0.11	0.51	0.31	0.15	0.24
Avail Cap(c_a), veh/h	671	2269	1224	715	2307	1163	407	477	400	393	453	401
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.1	10.1	10.2	6.9	9.7	10.0	59.1	64.0	67.1	55.3	60.6	62.3
Incr Delay (d2), s/veh	0.0	0.2	0.4	0.1	0.2	0.5	0.1	0.1	0.9	0.2	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	3.9	4.3	1.6	4.5	4.9	1.5	0.9	3.8	3.4	1.5	2.1
LnGrp Delay(d),s/veh	7.2	10.3	10.5	7.0	9.9	10.5	59.2	64.1	68.0	55.5	60.7	62.5
LnGrp LOS	A	B	B	A	A	B	E	E	E	E	E	E
Approach Vol, veh/h		752			933			151			180	
Approach Delay, s/veh		10.1			9.7			65.1			58.6	
Approach LOS		B			A			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	112.9	14.8	21.7	12.4	111.1	10.3	26.2
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0	6.0	6.0
Max Green Setting (Gmax), s	16.0	61.0	18.0	39.0	16.0	61.0	18.0	39.0
Max Q Clear Time (g_c+I1), s	3.5	12.0	8.9	10.6	5.4	10.2	5.1	6.8
Green Ext Time (p_c), s	0.0	5.6	0.0	0.2	0.1	4.6	0.0	0.3

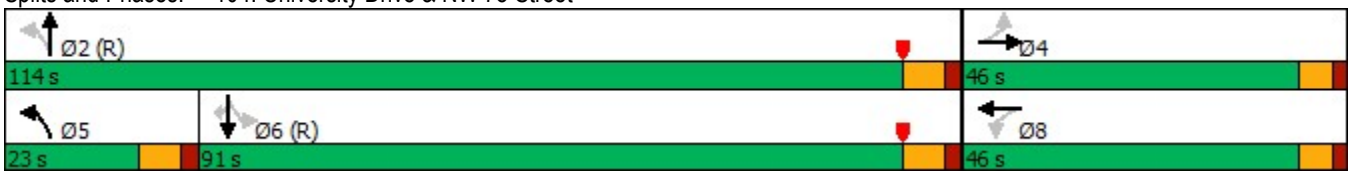
Intersection Summary	
HCM 2010 Ctrl Delay	18.4
HCM 2010 LOS	B

Timings
104: University Drive & NW 78 Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	48	0	2	2	157	1423	1	1371	75
Future Volume (vph)	48	0	2	2	157	1423	1	1371	75
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	NA	Perm
Protected Phases		4		8	5	2		6	
Permitted Phases	4		8		2		6		6
Detector Phase	4	4	8	8	5	2	6	6	6
Switch Phase									
Minimum Initial (s)	6.0	6.0	6.0	6.0	4.0	15.0	15.0	15.0	15.0
Minimum Split (s)	24.0	24.0	46.0	46.0	11.0	25.0	32.0	32.0	32.0
Total Split (s)	46.0	46.0	46.0	46.0	23.0	114.0	91.0	91.0	91.0
Total Split (%)	28.8%	28.8%	28.8%	28.8%	14.4%	71.3%	56.9%	56.9%	56.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag					Lead		Lag	Lag	Lag
Lead-Lag Optimize?					Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	12.3	12.3	12.3	12.3	139.7	139.7	126.2	126.2	126.2
Actuated g/C Ratio	0.08	0.08	0.08	0.08	0.87	0.87	0.79	0.79	0.79
v/c Ratio	0.46	0.25	0.03	0.01	0.48	0.33	0.00	0.36	0.06
Control Delay	83.6	1.9	66.5	65.5	6.4	2.2	5.0	5.6	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	83.6	1.9	66.5	65.5	6.4	2.2	5.0	5.6	1.5
LOS	F	A	E	E	A	A	A	A	A
Approach Delay		34.3		66.0		2.6		5.3	
Approach LOS		C		E		A		A	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 148 (93%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay: 5.1	Intersection LOS: A
Intersection Capacity Utilization 59.4%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 104: University Drive & NW 78 Street



Queues
104: University Drive & NW 78 Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	50	76	2	2	164	1485	1	1428	78
v/c Ratio	0.46	0.25	0.03	0.01	0.48	0.33	0.00	0.36	0.06
Control Delay	83.6	1.9	66.5	65.5	6.4	2.2	5.0	5.6	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	83.6	1.9	66.5	65.5	6.4	2.2	5.0	5.6	1.5
Queue Length 50th (ft)	51	0	2	2	18	75	0	136	2
Queue Length 95th (ft)	97	0	12	12	36	113	2	202	17
Internal Link Dist (ft)		290		265		388		380	
Turn Bay Length (ft)					180		160		160
Base Capacity (vph)	370	563	275	489	429	4441	242	4011	1226
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.14	0.13	0.01	0.00	0.38	0.33	0.00	0.36	0.06

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	0	73	2	2	0	157	1423	3	1	1371	75
Future Volume (veh/h)	48	0	73	2	2	0	157	1423	3	1	1371	75
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	50	0	76	2	2	0	164	1482	3	1	1428	78
Adj No. of Lanes	1	1	0	1	1	0	1	3	0	1	3	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	148	0	117	81	138	0	379	4591	9	330	4096	1247
Arrive On Green	0.07	0.00	0.06	0.07	0.07	0.00	0.05	0.88	0.86	0.81	0.81	0.81
Sat Flow, veh/h	1409	0	1583	1318	1863	0	1774	5240	11	353	5085	1548
Grp Volume(v), veh/h	50	0	76	2	2	0	164	959	526	1	1428	78
Grp Sat Flow(s),veh/h/ln	1409	0	1583	1318	1863	0	1774	1695	1861	353	1695	1548
Q Serve(g_s), s	5.5	0.0	7.5	0.2	0.2	0.0	2.2	7.8	7.8	0.1	12.2	1.7
Cycle Q Clear(g_c), s	5.6	0.0	7.5	7.7	0.2	0.0	2.2	7.8	7.8	0.1	12.2	1.7
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	148	0	117	81	138	0	379	2970	1630	330	4096	1247
V/C Ratio(X)	0.34	0.00	0.65	0.02	0.01	0.00	0.43	0.32	0.32	0.00	0.35	0.06
Avail Cap(c_a), veh/h	414	0	416	329	489	0	508	2970	1630	330	4096	1247
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.3	0.0	73.1	75.9	68.7	0.0	2.8	1.7	1.7	3.0	4.2	3.2
Incr Delay (d2), s/veh	0.5	0.0	2.3	0.0	0.0	0.0	0.3	0.3	0.5	0.0	0.2	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	0.0	3.4	0.1	0.1	0.0	1.2	3.7	4.2	0.0	5.6	0.7
LnGrp Delay(d),s/veh	71.8	0.0	75.3	75.9	68.7	0.0	3.1	2.0	2.2	3.1	4.4	3.3
LnGrp LOS	E		E	E	E		A	A	A	A	A	A
Approach Vol, veh/h		126			4			1649			1507	
Approach Delay, s/veh		73.9			72.3			2.2			4.4	
Approach LOS		E			E			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		144.2		15.8	11.3	132.9		15.8
Change Period (Y+Rc), s		7.0		6.0	7.0	7.0		6.0
Max Green Setting (Gmax), s		107.0		40.0	16.0	84.0		40.0
Max Q Clear Time (g_c+I1), s		9.8		9.5	4.2	14.2		9.7
Green Ext Time (p_c), s		13.7		0.3	0.1	14.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	6.0
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	53	40	37	120	88	50
Future Vol, veh/h	53	40	37	120	88	50
Conflicting Peds, #/hr	3	0	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	58	44	41	132	97	55

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	277	77	153	0	-	0
Stage 1	126	-	-	-	-	-
Stage 2	151	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	690	968	1425	-	-	-
Stage 1	886	-	-	-	-	-
Stage 2	861	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	667	967	1424	-	-	-
Mov Cap-2 Maneuver	667	-	-	-	-	-
Stage 1	858	-	-	-	-	-
Stage 2	860	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10	1.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1424	-	667	967	-	-
HCM Lane V/C Ratio	0.029	-	0.087	0.045	-	-
HCM Control Delay (s)	7.6	0.1	10.9	8.9	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	0.1	-	-

Intersection	
Intersection Delay, s/veh	8.5
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	6	1	4	69	1	52	1	105	68	54	76	0
Future Vol, veh/h	6	1	4	69	1	52	1	105	68	54	76	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	6	1	4	73	1	55	1	112	72	57	81	0
Number of Lanes	0	1	0	1	1	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	8.5	8.6	8.3	8.6
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	2%	0%	55%	100%	0%	68%	0%
Vol Thru, %	98%	44%	9%	0%	2%	32%	100%
Vol Right, %	0%	56%	36%	0%	98%	0%	0%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	54	121	11	69	53	79	51
LT Vol	1	0	6	69	0	54	0
Through Vol	53	53	1	0	1	25	51
RT Vol	0	68	4	0	52	0	0
Lane Flow Rate	57	128	12	73	56	84	54
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.08	0.166	0.017	0.119	0.073	0.127	0.076
Departure Headway (Hd)	5.055	4.649	5.374	5.823	4.631	5.416	5.074
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	710	772	665	616	773	663	707
Service Time	2.78	2.374	3.414	3.554	2.362	3.143	2.801
HCM Lane V/C Ratio	0.08	0.166	0.018	0.119	0.072	0.127	0.076
HCM Control Delay	8.2	8.3	8.5	9.3	7.7	8.9	8.2
HCM Lane LOS	A	A	A	A	A	A	A
HCM 95th-tile Q	0.3	0.6	0.1	0.4	0.2	0.4	0.2

Intersection	
Int Delay, s/veh	0

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	0	0	0	172	134	0
Future Vol, veh/h	0	0	0	172	134	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	160	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	0	0	0	187	146	0

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	240	73	146	0	-	0
Stage 1	146	-	-	-	-	-
Stage 2	94	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	727	974	1434	-	-	-
Stage 1	866	-	-	-	-	-
Stage 2	919	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	727	974	1434	-	-	-
Mov Cap-2 Maneuver	727	-	-	-	-	-
Stage 1	866	-	-	-	-	-
Stage 2	919	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	0	0	0
HCM LOS	A		

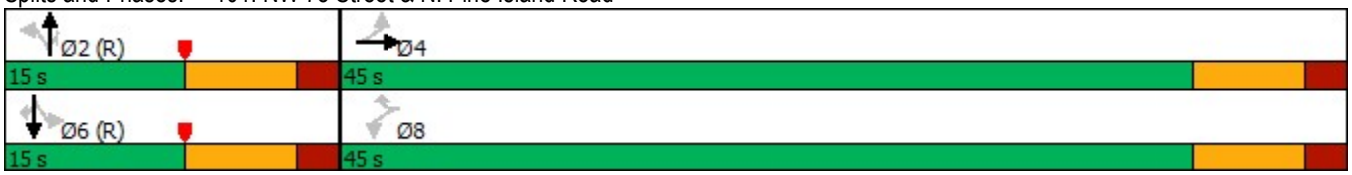
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1434	-	-	-	-	-
HCM Lane V/C Ratio	-	-	-	-	-	-
HCM Control Delay (s)	0	-	0	0	-	-
HCM Lane LOS	A	-	A	A	-	-
HCM 95th %tile Q(veh)	0	-	-	-	-	-

Timings
101: NW 75 Street & N. Pine Island Road

Lane Group	EBT	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	0	104	64	6	752	53	55	1081	2
Future Volume (vph)	0	104	64	6	752	53	55	1081	2
Turn Type	NA	Perm	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	4				2			6	
Permitted Phases		8	8	2		2	6		6
Detector Phase	4	8	8	2	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	7.0	38.0	38.0	7.0	7.0	7.0	8.0	8.0	8.0
Minimum Split (s)	45.0	45.0	45.0	15.0	15.0	15.0	15.0	15.0	15.0
Total Split (s)	45.0	45.0	45.0	15.0	15.0	15.0	15.0	15.0	15.0
Total Split (%)	75.0%	75.0%	75.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	28.6	41.0	41.0	30.6	30.6	30.6	30.6	30.6	30.6
Actuated g/C Ratio	0.48	0.68	0.68	0.51	0.51	0.51	0.51	0.51	0.51
v/c Ratio	0.01	0.11	0.06	0.04	0.43	0.07	0.22	0.62	0.00
Control Delay	0.0	3.6	1.0	22.3	24.9	4.9	28.2	30.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	0.0	3.6	1.0	22.3	24.9	4.9	28.2	30.2	0.0
LOS	A	A	A	C	C	A	C	C	A
Approach Delay					23.6			30.1	
Approach LOS					C			C	

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 25.3	Intersection LOS: C
Intersection Capacity Utilization 68.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 101: NW 75 Street & N. Pine Island Road



Queues
101: NW 75 Street & N. Pine Island Road

Lane Group	EBT	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	7	107	66	6	775	55	57	1114	2
v/c Ratio	0.01	0.11	0.06	0.04	0.43	0.07	0.22	0.62	0.00
Control Delay	0.0	3.6	1.0	22.3	24.9	4.9	28.2	30.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	0.0	3.6	1.0	22.3	24.9	4.9	28.2	30.2	0.0
Queue Length 50th (ft)	0	11	0	2	~184	0	19	~323	0
Queue Length 95th (ft)	0	23	8	11	#283	19	#71	#434	0
Internal Link Dist (ft)	618				536			2010	
Turn Bay Length (ft)				160		160	200		90
Base Capacity (vph)	1157	958	1091	145	1804	825	263	1804	822
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.11	0.06	0.04	0.43	0.07	0.22	0.62	0.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

HCM Signalized Intersection Capacity Analysis
101: NW 75 Street & N. Pine Island Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	5	104	0	64	6	752	53	55	1081	2
Future Volume (vph)	2	0	5	104	0	64	6	752	53	55	1081	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		1.00		1.00		1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00		1.00		0.99	1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes		1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.90		1.00		0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99		0.95		1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1659		1770		1563	1769	3539	1550	1769	3539	1548
Flt Permitted		0.99		0.75		1.00	0.15	1.00	1.00	0.28	1.00	1.00
Satd. Flow (perm)		1659		1403		1563	284	3539	1550	517	3539	1548
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	2	0	5	107	0	66	6	775	55	57	1114	2
RTOR Reduction (vph)	0	4	0	0	0	38	0	0	31	0	0	1
Lane Group Flow (vph)	0	3	0	107	0	28	6	775	24	57	1114	1
Confl. Peds. (#/hr)	1					1	2		1	1		2
Turn Type	Perm	NA		Perm		Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4						2			6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)		22.8		22.8		22.8	23.2	23.2	23.2	23.2	23.2	23.2
Effective Green, g (s)		25.8		25.8		25.8	26.2	26.2	26.2	26.2	26.2	26.2
Actuated g/C Ratio		0.43		0.43		0.43	0.44	0.44	0.44	0.44	0.44	0.44
Clearance Time (s)		7.0		7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0
Vehicle Extension (s)		1.0		1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lane Grp Cap (vph)		713		603		672	124	1545	676	225	1545	675
v/s Ratio Prot								0.22			c0.31	
v/s Ratio Perm		0.00		c0.08		0.02	0.02		0.02	0.11		0.00
v/c Ratio		0.00		0.18		0.04	0.05	0.50	0.04	0.25	0.72	0.00
Uniform Delay, d1		9.8		10.6		9.9	9.7	12.2	9.7	10.7	13.9	9.5
Progression Factor		1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.0		0.1		0.0	0.7	1.2	0.1	2.7	2.9	0.0
Delay (s)		9.8		10.6		9.9	10.5	13.4	9.8	13.4	16.8	9.5
Level of Service		A		B		A	B	B	A	B	B	A
Approach Delay (s)		9.8			10.3			13.1			16.7	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

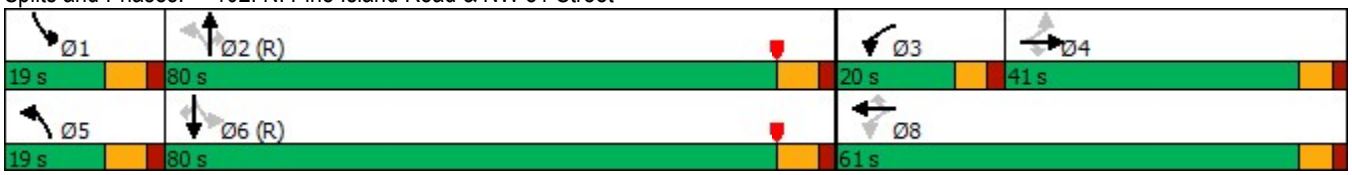
HCM 2010 Research does not support Non-NEMA phasing.

Timings
102: N. Pine Island Road & NW 81 Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	68	36	46	54	264	36	841	56	195	876	57
Future Volume (vph)	47	68	36	46	54	264	36	841	56	195	876	57
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	4.0	6.0	6.0	4.0	10.0	10.0	4.0	10.0	10.0
Minimum Split (s)	37.0	37.0	37.0	11.0	37.0	37.0	19.0	37.0	37.0	19.0	57.0	57.0
Total Split (s)	41.0	41.0	41.0	20.0	61.0	61.0	19.0	80.0	80.0	19.0	80.0	80.0
Total Split (%)	25.6%	25.6%	25.6%	12.5%	38.1%	38.1%	11.9%	50.0%	50.0%	11.9%	50.0%	50.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		-2.0	-2.0	-2.0	-2.0	-2.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		19.7	19.7	31.4	31.4	31.4	110.9	102.8	102.8	120.6	110.7	110.7
Actuated g/C Ratio		0.12	0.12	0.20	0.20	0.20	0.69	0.64	0.64	0.75	0.69	0.69
v/c Ratio		0.69	0.14	0.27	0.17	0.63	0.10	0.43	0.06	0.51	0.41	0.06
Control Delay		84.6	1.0	52.5	50.7	21.4	8.0	16.9	0.3	11.0	13.2	0.4
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		84.6	1.0	52.5	50.7	21.4	8.0	16.9	0.3	11.0	13.2	0.4
LOS		F	A	D	D	C	A	B	A	B	B	A
Approach Delay		64.8			29.7			15.6			12.2	
Approach LOS		E			C			B			B	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 97 (61%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 125	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 18.9	Intersection LOS: B
Intersection Capacity Utilization 57.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 102: N. Pine Island Road & NW 81 Street



Queues
102: N. Pine Island Road & NW 81 Street

Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	132	41	53	62	303	41	967	64	224	1007	66
v/c Ratio	0.69	0.14	0.27	0.17	0.63	0.10	0.43	0.06	0.51	0.41	0.06
Control Delay	84.6	1.0	52.5	50.7	21.4	8.0	16.9	0.3	11.0	13.2	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.6	1.0	52.5	50.7	21.4	8.0	16.9	0.3	11.0	13.2	0.4
Queue Length 50th (ft)	135	0	46	54	79	10	256	0	63	244	0
Queue Length 95th (ft)	195	0	78	87	156	26	383	1	113	340	1
Internal Link Dist (ft)	409			578			2010			316	
Turn Bay Length (ft)		100	200		130	190		250	200		200
Base Capacity (vph)	361	449	243	663	702	467	2273	1033	461	2449	1097
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.09	0.22	0.09	0.43	0.09	0.43	0.06	0.49	0.41	0.06

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	68	36	46	54	264	36	841	56	195	876	57
Future Volume (veh/h)	47	68	36	46	54	264	36	841	56	195	876	57
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	54	78	41	53	62	303	41	967	64	224	1007	66
Adj No. of Lanes	0	1	1	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	106	132	225	202	402	341	402	2257	985	446	2356	1029
Arrive On Green	0.14	0.14	0.14	0.05	0.22	0.22	0.04	0.64	0.64	0.07	0.67	0.67
Sat Flow, veh/h	517	911	1559	1774	1863	1581	1774	3539	1545	1774	3539	1546
Grp Volume(v), veh/h	132	0	41	53	62	303	41	967	64	224	1007	66
Grp Sat Flow(s),veh/h/ln	1428	0	1559	1774	1863	1581	1774	1770	1545	1774	1770	1546
Q Serve(g_s), s	11.6	0.0	3.7	3.9	4.3	29.8	1.2	21.8	2.5	6.4	21.3	2.4
Cycle Q Clear(g_c), s	13.6	0.0	3.7	3.9	4.3	29.8	1.2	21.8	2.5	6.4	21.3	2.4
Prop In Lane	0.41		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	238	0	225	202	402	341	402	2257	985	446	2356	1029
V/C Ratio(X)	0.55	0.00	0.18	0.26	0.15	0.89	0.10	0.43	0.06	0.50	0.43	0.06
Avail Cap(c_a), veh/h	358	0	360	297	664	563	490	2257	985	484	2356	1029
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.92	0.92	0.92	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.1	0.0	60.1	53.2	50.9	60.9	9.3	14.5	11.0	10.1	12.5	9.3
Incr Delay (d2), s/veh	0.8	0.0	0.1	0.3	0.1	5.7	0.0	0.6	0.1	0.3	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	0.0	1.6	1.9	2.2	13.6	0.6	10.8	1.1	3.1	10.5	1.0
LnGrp Delay(d),s/veh	64.9	0.0	60.3	53.4	51.0	66.6	9.3	15.0	11.1	10.4	13.1	9.5
LnGrp LOS	E		E	D	D	E	A	B	B	B	B	A
Approach Vol, veh/h		173			418			1072			1297	
Approach Delay, s/veh		63.8			62.6			14.6			12.4	
Approach LOS		E			E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	15.5	106.0	11.4	27.1	11.0	110.5		38.5
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0		6.0
Max Green Setting (Gmax), s	12.0	73.0	14.0	35.0	12.0	73.0		55.0
Max Q Clear Time (g_c+I1), s	8.4	23.8	5.9	15.6	3.2	23.3		31.8
Green Ext Time (p_c), s	0.1	8.0	0.0	0.5	0.0	8.4		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	23.3
HCM 2010 LOS	C

Timings
103: NW 80 Avenue & W. McNab Road

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	90	1131	67	1142	25	56	197	177	25
Future Volume (vph)	90	1131	67	1142	25	56	197	177	25
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	1	6	5	2	7	4		3	8
Permitted Phases	6		2		4		4	8	
Detector Phase	1	6	5	2	7	4	4	3	8
Switch Phase									
Minimum Initial (s)	4.0	10.0	4.0	10.0	4.0	6.0	6.0	4.0	6.0
Minimum Split (s)	11.0	38.0	11.0	38.0	10.0	41.0	41.0	11.0	39.0
Total Split (s)	15.0	79.0	15.0	79.0	24.0	42.0	42.0	24.0	42.0
Total Split (%)	9.4%	49.4%	9.4%	49.4%	15.0%	26.3%	26.3%	15.0%	26.3%
Yellow Time (s)	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	None	None	None	None	None
Act Effct Green (s)	114.0	104.3	112.5	103.6	20.1	12.2	12.2	34.8	27.0
Actuated g/C Ratio	0.71	0.65	0.70	0.65	0.13	0.08	0.08	0.22	0.17
v/c Ratio	0.34	0.37	0.22	0.42	0.15	0.43	0.72	0.62	0.24
Control Delay	10.0	13.8	8.6	14.6	49.8	78.6	27.1	63.5	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.0	13.8	8.6	14.6	49.8	78.6	27.1	63.5	15.2
LOS	B	B	A	B	D	E	C	E	B
Approach Delay		13.5		14.3		39.5			42.3
Approach LOS		B		B		D			D

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 98 (61%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 19.0	Intersection LOS: B
Intersection Capacity Utilization 58.9%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 103: NW 80 Avenue & W. McNab Road

Queues
103: NW 80 Avenue & W. McNab Road

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	97	1229	72	1371	27	60	212	190	149
v/c Ratio	0.34	0.37	0.22	0.42	0.15	0.43	0.72	0.62	0.24
Control Delay	10.0	13.8	8.6	14.6	49.8	78.6	27.1	63.5	15.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.0	13.8	8.6	14.6	49.8	78.6	27.1	63.5	15.2
Queue Length 50th (ft)	27	208	20	242	23	61	23	175	13
Queue Length 95th (ft)	53	275	41	321	49	108	111	246	46
Internal Link Dist (ft)		201		271		371			819
Turn Bay Length (ft)	190		180		160		220	150	
Base Capacity (vph)	307	3308	344	3245	311	442	515	311	821
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.37	0.21	0.42	0.09	0.14	0.41	0.61	0.18

Intersection Summary

HCM 2010 Signalized Intersection Summary
103: NW 80 Avenue & W. McNab Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	1131	12	67	1142	133	25	56	197	177	25	113
Future Volume (veh/h)	90	1131	12	67	1142	133	25	56	197	177	25	113
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	97	1216	13	72	1228	143	27	60	212	190	27	122
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	304	3017	32	332	2658	309	297	300	255	389	429	378
Arrive On Green	0.05	0.58	0.56	0.05	0.58	0.56	0.03	0.16	0.16	0.11	0.24	0.23
Sat Flow, veh/h	1774	5187	55	1774	4619	538	1774	1863	1580	1774	1770	1561
Grp Volume(v), veh/h	97	795	434	72	901	470	27	60	212	190	27	122
Grp Sat Flow(s),veh/h/ln	1774	1695	1852	1774	1695	1767	1774	1863	1580	1774	1770	1561
Q Serve(g_s), s	3.4	20.5	20.5	2.6	24.6	24.8	2.0	4.5	20.8	13.7	1.9	10.4
Cycle Q Clear(g_c), s	3.4	20.5	20.5	2.6	24.6	24.8	2.0	4.5	20.8	13.7	1.9	10.4
Prop In Lane	1.00		0.03	1.00		0.30	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	304	1972	1077	332	1951	1017	297	300	255	389	429	378
V/C Ratio(X)	0.32	0.40	0.40	0.22	0.46	0.46	0.09	0.20	0.83	0.49	0.06	0.32
Avail Cap(c_a), veh/h	333	1972	1077	372	1951	1017	465	442	375	414	429	378
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.3	18.3	18.3	13.4	19.6	20.0	53.1	58.2	65.0	46.0	46.7	50.7
Incr Delay (d2), s/veh	0.2	0.6	1.1	0.1	0.8	1.5	0.0	0.1	6.4	0.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	9.8	10.8	1.3	11.7	12.5	1.0	2.3	9.5	6.7	0.9	4.5
LnGrp Delay(d),s/veh	14.5	18.9	19.4	13.5	20.4	21.5	53.2	58.3	71.5	46.4	46.7	50.9
LnGrp LOS	B	B	B	B	C	C	D	E	E	D	D	D
Approach Vol, veh/h		1326			1443			299			339	
Approach Delay, s/veh		18.8			20.4			67.2			48.0	
Approach LOS		B			C			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.4	96.1	21.8	29.8	11.4	97.1	8.8	42.7
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0	6.0	6.0
Max Green Setting (Gmax), s	8.0	72.0	18.0	36.0	8.0	72.0	18.0	36.0
Max Q Clear Time (g_c+I1), s	5.4	26.8	15.7	22.8	4.6	22.5	4.0	12.4
Green Ext Time (p_c), s	0.0	11.5	0.0	0.5	0.0	9.7	0.0	0.6

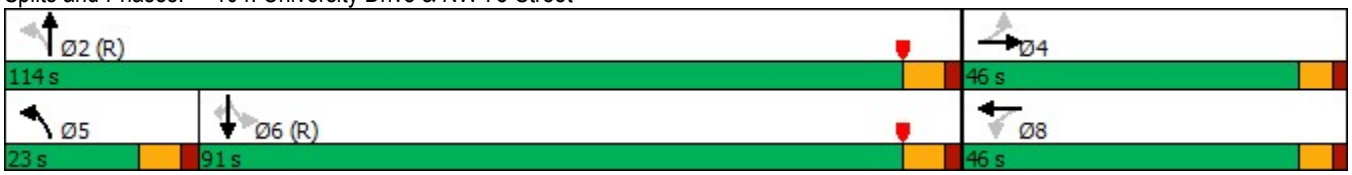
Intersection Summary	
HCM 2010 Ctrl Delay	26.6
HCM 2010 LOS	C

Timings
104: University Drive & NW 78 Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	91	3	1	0	193	1532	6	2007	90
Future Volume (vph)	91	3	1	0	193	1532	6	2007	90
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	NA	Perm
Protected Phases		4		8	5	2		6	
Permitted Phases	4		8		2		6		6
Detector Phase	4	4	8	8	5	2	6	6	6
Switch Phase									
Minimum Initial (s)	6.0	6.0	6.0	6.0	4.0	15.0	15.0	15.0	15.0
Minimum Split (s)	24.0	24.0	46.0	46.0	11.0	25.0	32.0	32.0	32.0
Total Split (s)	46.0	46.0	46.0	46.0	23.0	114.0	91.0	91.0	91.0
Total Split (%)	28.8%	28.8%	28.8%	28.8%	14.4%	71.3%	56.9%	56.9%	56.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag					Lead		Lag	Lag	Lag
Lead-Lag Optimize?					Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	17.9	17.9	17.9	17.9	134.1	134.1	108.6	108.6	108.6
Actuated g/C Ratio	0.11	0.11	0.11	0.11	0.84	0.84	0.68	0.68	0.68
v/c Ratio	0.64	0.67	0.02	0.00	0.72	0.41	0.04	0.65	0.09
Control Delay	85.2	25.8	60.0	0.0	53.8	3.8	13.3	17.3	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.2	25.8	60.0	0.0	53.8	3.8	13.3	17.3	4.7
LOS	F	C	E	A	D	A	B	B	A
Approach Delay		44.3		30.0		9.3		16.8	
Approach LOS		D		C		A		B	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 138 (86%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 15.6	Intersection LOS: B
Intersection Capacity Utilization 71.9%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 104: University Drive & NW 78 Street



Queues
104: University Drive & NW 78 Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	101	224	1	1	214	1724	7	2230	100
v/c Ratio	0.64	0.67	0.02	0.00	0.72	0.41	0.04	0.65	0.09
Control Delay	85.2	25.8	60.0	0.0	53.8	3.8	13.3	17.3	4.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.2	25.8	60.0	0.0	53.8	3.8	13.3	17.3	4.7
Queue Length 50th (ft)	103	45	1	0	147	131	2	461	10
Queue Length 95th (ft)	163	134	7	0	237	197	12	659	41
Internal Link Dist (ft)		290		265		388		380	
Turn Bay Length (ft)					180		160		160
Base Capacity (vph)	370	547	108	470	311	4250	161	3450	1064
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.27	0.41	0.01	0.00	0.69	0.41	0.04	0.65	0.09

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	3	199	1	0	1	193	1532	20	6	2007	90
Future Volume (veh/h)	91	3	199	1	0	1	193	1532	20	6	2007	90
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	101	3	221	1	0	1	214	1702	22	7	2230	100
Adj No. of Lanes	1	1	0	1	1	0	1	3	0	1	3	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	281	4	263	81	0	266	264	4046	52	233	3405	1035
Arrive On Green	0.17	0.17	0.16	0.17	0.00	0.16	0.09	0.78	0.76	0.67	0.67	0.67
Sat Flow, veh/h	1410	21	1565	1152	0	1583	1774	5174	67	281	5085	1546
Grp Volume(v), veh/h	101	0	224	1	0	1	214	1115	609	7	2230	100
Grp Sat Flow(s),veh/h/ln	1410	0	1587	1152	0	1583	1774	1695	1851	281	1695	1546
Q Serve(g_s), s	10.3	0.0	21.9	0.1	0.0	0.1	8.9	17.1	17.2	1.4	41.3	3.7
Cycle Q Clear(g_c), s	10.4	0.0	21.9	22.1	0.0	0.1	8.9	17.1	17.2	1.4	41.3	3.7
Prop In Lane	1.00		0.99	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	281	0	267	81	0	266	264	2651	1447	233	3405	1035
V/C Ratio(X)	0.36	0.00	0.84	0.01	0.00	0.00	0.81	0.42	0.42	0.03	0.65	0.10
Avail Cap(c_a), veh/h	415	0	416	189	0	416	319	2651	1447	233	3405	1035
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.7	0.0	65.5	75.2	0.0	56.2	39.9	5.7	5.7	9.0	15.5	9.3
Incr Delay (d2), s/veh	0.3	0.0	5.0	0.0	0.0	0.0	10.3	0.5	0.9	0.2	1.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.0	10.0	0.0	0.0	0.0	9.9	8.1	9.0	0.1	19.5	1.6
LnGrp Delay(d),s/veh	60.0	0.0	70.4	75.2	0.0	56.2	50.2	6.2	6.6	9.2	16.5	9.5
LnGrp LOS	E		E	E		E	D	A	A	A	B	A
Approach Vol, veh/h		325			2			1938			2337	
Approach Delay, s/veh		67.2			65.7			11.2			16.2	
Approach LOS		E			E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		129.1		30.9	18.0	111.1		30.9
Change Period (Y+Rc), s		7.0		6.0	7.0	7.0		6.0
Max Green Setting (Gmax), s		107.0		40.0	16.0	84.0		40.0
Max Q Clear Time (g_c+I1), s		19.2		23.9	10.9	43.3		24.1
Green Ext Time (p_c), s		18.4		1.0	0.1	26.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	17.7
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	94	73	25	223	214	95
Future Vol, veh/h	94	73	25	223	214	95
Conflicting Peds, #/hr	1	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	98	76	26	232	223	99

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	444	163	324	0	-	0
Stage 1	275	-	-	-	-	-
Stage 2	169	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	542	853	1233	-	-	-
Stage 1	747	-	-	-	-	-
Stage 2	843	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	527	851	1231	-	-	-
Mov Cap-2 Maneuver	527	-	-	-	-	-
Stage 1	728	-	-	-	-	-
Stage 2	841	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.7	0.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1231	-	527	851	-	-
HCM Lane V/C Ratio	0.021	-	0.186	0.089	-	-
HCM Control Delay (s)	8	0.1	13.4	9.6	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.7	0.3	-	-

Intersection	
Intersection Delay, s/veh	10.6
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	12	3	112	5	96	7	207	84	93	207	4
Future Vol, veh/h	13	12	3	112	5	96	7	207	84	93	207	4
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	13	3	120	5	103	8	223	90	100	223	4
Number of Lanes	0	1	0	1	1	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	10.1	10.5	10.3	11.1
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	6%	0%	46%	100%	0%	47%	0%
Vol Thru, %	94%	55%	43%	0%	5%	53%	96%
Vol Right, %	0%	45%	11%	0%	95%	0%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	111	188	28	112	101	197	108
LT Vol	7	0	13	112	0	93	0
Through Vol	104	104	12	0	5	104	104
RT Vol	0	84	3	0	96	0	4
Lane Flow Rate	119	202	30	120	109	211	116
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.192	0.305	0.056	0.226	0.168	0.351	0.183
Departure Headway (Hd)	5.803	5.454	6.662	6.76	5.582	5.98	5.714
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	619	659	538	532	643	602	629
Service Time	3.529	3.179	4.7	4.491	3.312	3.705	3.44
HCM Lane V/C Ratio	0.192	0.307	0.056	0.226	0.17	0.35	0.184
HCM Control Delay	9.9	10.6	10.1	11.5	9.4	11.9	9.7
HCM Lane LOS	A	B	B	B	A	B	A
HCM 95th-tile Q	0.7	1.3	0.2	0.9	0.6	1.6	0.7

Intersection	
Int Delay, s/veh	0.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	6	3	11	307	298	23
Future Vol, veh/h	6	3	11	307	298	23
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	160	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	7	3	12	334	324	25

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	528	175	349	0	-	0
Stage 1	337	-	-	-	-	-
Stage 2	191	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	480	838	1207	-	-	-
Stage 1	695	-	-	-	-	-
Stage 2	822	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	475	838	1207	-	-	-
Mov Cap-2 Maneuver	475	-	-	-	-	-
Stage 1	688	-	-	-	-	-
Stage 2	822	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.6	0.3	0
HCM LOS	B		

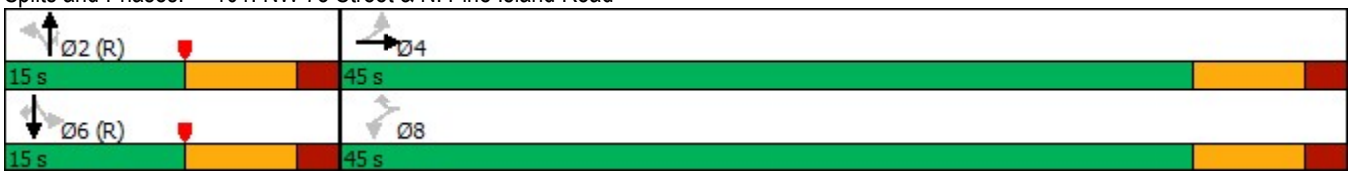
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1207	-	475	838	-	-
HCM Lane V/C Ratio	0.01	-	0.014	0.004	-	-
HCM Control Delay (s)	8	-	12.7	9.3	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0	0	-	-

Timings
101: NW 75 Street & N. Pine Island Road

Lane Group	EBT	WBL	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	1	55	51	3	1261	88	48	1013
Future Volume (vph)	1	55	51	3	1261	88	48	1013
Turn Type	NA	Perm	Perm	Perm	NA	Perm	Perm	NA
Protected Phases	4				2			6
Permitted Phases		8	8	2		2	6	
Detector Phase	4	8	8	2	2	2	6	6
Switch Phase								
Minimum Initial (s)	7.0	38.0	38.0	7.0	7.0	7.0	8.0	8.0
Minimum Split (s)	45.0	45.0	45.0	15.0	15.0	15.0	15.0	15.0
Total Split (s)	45.0	45.0	45.0	15.0	15.0	15.0	15.0	15.0
Total Split (%)	75.0%	75.0%	75.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	28.6	41.0	41.0	30.6	30.6	30.6	30.6	30.6
Actuated g/C Ratio	0.48	0.68	0.68	0.51	0.51	0.51	0.51	0.51
v/c Ratio	0.01	0.06	0.05	0.02	0.78	0.12	0.37	0.62
Control Delay	3.0	3.4	0.8	21.3	34.0	9.6	42.6	30.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.0	3.4	0.8	21.3	34.0	9.6	42.6	30.4
LOS	A	A	A	C	C	A	D	C
Approach Delay	3.0				32.4			30.9
Approach LOS	A				C			C

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 30.4	Intersection LOS: C
Intersection Capacity Utilization 82.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 101: NW 75 Street & N. Pine Island Road



Queues
101: NW 75 Street & N. Pine Island Road

Lane Group	EBT	WBL	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	7	61	57	3	1401	98	53	1126
v/c Ratio	0.01	0.06	0.05	0.02	0.78	0.12	0.37	0.62
Control Delay	3.0	3.4	0.8	21.3	34.0	9.6	42.6	30.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.0	3.4	0.8	21.3	34.0	9.6	42.6	30.4
Queue Length 50th (ft)	1	6	0	1	~441	8	~20	~328
Queue Length 95th (ft)	3	15	6	8	#559	42	#82	#440
Internal Link Dist (ft)	618				536			2010
Turn Bay Length (ft)				160		160	200	
Base Capacity (vph)	1158	958	1091	145	1804	822	145	1804
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.06	0.05	0.02	0.78	0.12	0.37	0.62

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

HCM Signalized Intersection Capacity Analysis
101: NW 75 Street & N. Pine Island Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	1	4	55	0	51	3	1261	88	48	1013	0
Future Volume (vph)	2	1	4	55	0	51	3	1261	88	48	1013	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0		4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00		1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		1.00		1.00		0.99	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes		1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.92		1.00		0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99		0.95		1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1694		1770		1563	1770	3539	1548	1769	3539	
Flt Permitted		0.99		0.75		1.00	0.15	1.00	1.00	0.15	1.00	
Satd. Flow (perm)		1694		1403		1563	284	3539	1548	284	3539	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2	1	4	61	0	57	3	1401	98	53	1126	0
RTOR Reduction (vph)	0	0	0	0	0	32	0	0	41	0	0	0
Lane Group Flow (vph)	0	7	0	61	0	25	3	1401	57	53	1126	0
Confl. Peds. (#/hr)	1					1			2	2		
Turn Type	Perm	NA		Perm		Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4						2			6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)		22.8		22.8		22.8	23.2	23.2	23.2	23.2	23.2	
Effective Green, g (s)		25.8		25.8		25.8	26.2	26.2	26.2	26.2	26.2	
Actuated g/C Ratio		0.43		0.43		0.43	0.44	0.44	0.44	0.44	0.44	
Clearance Time (s)		7.0		7.0		7.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)		1.0		1.0		1.0	1.0	1.0	1.0	1.0	1.0	
Lane Grp Cap (vph)		728		603		672	124	1545	675	124	1545	
v/s Ratio Prot								c0.40			0.32	
v/s Ratio Perm		0.00		c0.04		0.02	0.01		0.04	0.19		
v/c Ratio		0.01		0.10		0.04	0.02	0.91	0.08	0.43	0.73	
Uniform Delay, d1		9.8		10.2		9.9	9.6	15.8	9.9	11.7	14.0	
Progression Factor		1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.0		0.0		0.0	0.4	9.3	0.2	10.4	3.1	
Delay (s)		9.8		10.2		9.9	10.0	25.0	10.1	22.1	17.0	
Level of Service		A		B		A	A	C	B	C	B	
Approach Delay (s)		9.8			10.1			24.0			17.2	
Approach LOS		A			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	20.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	82.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

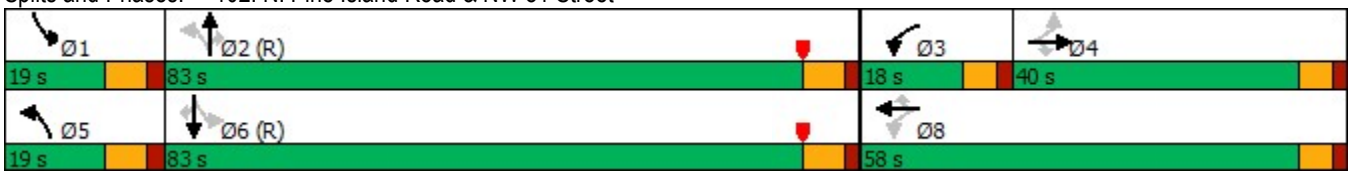
HCM 2010 Research does not support Non-NEMA phasing.

Timings
102: N. Pine Island Road & NW 81 Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	48	32	41	43	187	45	1195	58	194	1051	127
Future Volume (vph)	57	48	32	41	43	187	45	1195	58	194	1051	127
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	4.0	6.0	6.0	4.0	10.0	10.0	4.0	10.0	10.0
Minimum Split (s)	37.0	37.0	37.0	11.0	37.0	37.0	19.0	37.0	37.0	19.0	57.0	57.0
Total Split (s)	40.0	40.0	40.0	18.0	58.0	58.0	19.0	83.0	83.0	19.0	83.0	83.0
Total Split (%)	25.0%	25.0%	25.0%	11.3%	36.3%	36.3%	11.9%	51.9%	51.9%	11.9%	51.9%	51.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		-2.0	-2.0	-2.0	-2.0	-2.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		18.6	18.6	29.8	29.8	29.8	106.3	98.1	98.1	122.2	112.2	112.2
Actuated g/C Ratio		0.12	0.12	0.19	0.19	0.19	0.66	0.61	0.61	0.76	0.70	0.70
v/c Ratio		0.67	0.12	0.23	0.14	0.47	0.14	0.61	0.06	0.57	0.47	0.12
Control Delay		85.3	0.9	52.8	50.9	14.1	8.4	23.1	0.4	16.3	13.4	3.5
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		85.3	0.9	52.8	50.9	14.1	8.4	23.1	0.4	16.3	13.4	3.5
LOS		F	A	D	D	B	A	C	A	B	B	A
Approach Delay		65.8			25.8			21.6			12.9	
Approach LOS		E			C			C			B	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 94 (59%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 125	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 20.1	Intersection LOS: C
Intersection Capacity Utilization 66.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 102: N. Pine Island Road & NW 81 Street



Queues
102: N. Pine Island Road & NW 81 Street

Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	116	35	45	47	205	49	1313	64	213	1155	140
v/c Ratio	0.67	0.12	0.23	0.14	0.47	0.14	0.61	0.06	0.57	0.47	0.12
Control Delay	85.3	0.9	52.8	50.9	14.1	8.4	23.1	0.4	16.3	13.4	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.3	0.9	52.8	50.9	14.1	8.4	23.1	0.4	16.3	13.4	3.5
Queue Length 50th (ft)	118	0	39	41	27	12	447	0	57	287	10
Queue Length 95th (ft)	183	0	72	74	97	30	652	2	146	418	42
Internal Link Dist (ft)	409			578			2010			316	
Turn Bay Length (ft)		100	200		130	190		250	200		200
Base Capacity (vph)	337	440	227	628	642	420	2169	990	378	2481	1142
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.08	0.20	0.07	0.32	0.12	0.61	0.06	0.56	0.47	0.12

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	48	32	41	43	187	45	1195	58	194	1051	127
Future Volume (veh/h)	57	48	32	41	43	187	45	1195	58	194	1051	127
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	63	53	35	45	47	205	49	1313	64	213	1155	140
Adj No. of Lanes	0	1	1	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	116	75	175	161	335	280	359	2407	1054	353	2483	1110
Arrive On Green	0.11	0.11	0.11	0.04	0.18	0.18	0.04	0.68	0.68	0.07	0.70	0.70
Sat Flow, veh/h	722	663	1557	1774	1863	1560	1774	3539	1550	1774	3539	1582
Grp Volume(v), veh/h	116	0	35	45	47	205	49	1313	64	213	1155	140
Grp Sat Flow(s),veh/h/ln	1385	0	1557	1774	1863	1560	1774	1770	1550	1774	1770	1582
Q Serve(g_s), s	12.4	0.0	3.3	3.5	3.4	19.9	1.3	30.2	2.2	5.4	23.1	4.6
Cycle Q Clear(g_c), s	12.9	0.0	3.3	3.5	3.4	19.9	1.3	30.2	2.2	5.4	23.1	4.6
Prop In Lane	0.54		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	191	0	175	161	335	280	359	2407	1054	353	2483	1110
V/C Ratio(X)	0.61	0.00	0.20	0.28	0.14	0.73	0.14	0.55	0.06	0.60	0.47	0.13
Avail Cap(c_a), veh/h	345	0	350	242	629	526	448	2407	1054	404	2483	1110
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.58	0.58	0.58	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.6	0.0	64.4	57.6	55.2	62.0	7.6	13.0	8.5	12.3	10.6	7.8
Incr Delay (d2), s/veh	1.2	0.0	0.2	0.3	0.1	1.4	0.0	0.5	0.1	1.0	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	0.0	1.4	1.7	1.8	8.7	0.6	14.8	1.0	4.1	11.4	2.1
LnGrp Delay(d),s/veh	69.8	0.0	64.6	58.0	55.3	63.4	7.7	13.5	8.6	13.3	11.2	8.1
LnGrp LOS	E		E	E	E	E	A	B	A	B	B	A
Approach Vol, veh/h		151			297			1426			1508	
Approach Delay, s/veh		68.6			61.3			13.1			11.2	
Approach LOS		E			E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	14.4	112.8	10.7	22.0	11.0	116.2		32.8
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0		6.0
Max Green Setting (Gmax), s	12.0	76.0	12.0	34.0	12.0	76.0		52.0
Max Q Clear Time (g_c+I1), s	7.4	32.2	5.5	14.9	3.3	25.1		21.9
Green Ext Time (p_c), s	0.1	12.4	0.0	0.5	0.0	10.8		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	19.0
HCM 2010 LOS	B

Timings
103: NW 80 Avenue & W. McNab Road

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	77	1260	157	1253	24	34	131	123	39
Future Volume (vph)	77	1260	157	1253	24	34	131	123	39
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	1	6	5	2	7	4		3	8
Permitted Phases	6		2		4		4	8	
Detector Phase	1	6	5	2	7	4	4	3	8
Switch Phase									
Minimum Initial (s)	4.0	10.0	4.0	10.0	4.0	6.0	6.0	4.0	6.0
Minimum Split (s)	11.0	38.0	11.0	38.0	10.0	41.0	41.0	11.0	39.0
Total Split (s)	20.0	74.0	20.0	74.0	24.0	42.0	42.0	24.0	42.0
Total Split (%)	12.5%	46.3%	12.5%	46.3%	15.0%	26.3%	26.3%	15.0%	26.3%
Yellow Time (s)	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	None	None	None	None	None
Act Effct Green (s)	115.5	105.6	120.0	107.9	18.1	10.2	10.2	30.3	22.5
Actuated g/C Ratio	0.72	0.66	0.75	0.67	0.11	0.06	0.06	0.19	0.14
v/c Ratio	0.31	0.41	0.52	0.46	0.16	0.31	0.61	0.49	0.28
Control Delay	8.9	14.1	11.7	13.4	53.2	77.2	21.6	61.9	20.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.9	14.1	11.7	13.4	53.2	77.2	21.6	61.9	20.6
LOS	A	B	B	B	D	E	C	E	C
Approach Delay		13.8		13.3		35.7			39.9
Approach LOS		B		B		D			D

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 134 (84%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 16.8	Intersection LOS: B
Intersection Capacity Utilization 61.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 103: NW 80 Avenue & W. McNab Road

Queues
103: NW 80 Avenue & W. McNab Road

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	82	1379	167	1539	26	36	139	131	150
v/c Ratio	0.31	0.41	0.52	0.46	0.16	0.31	0.61	0.49	0.28
Control Delay	8.9	14.1	11.7	13.4	53.2	77.2	21.6	61.9	20.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	8.9	14.1	11.7	13.4	53.2	77.2	21.6	61.9	20.6
Queue Length 50th (ft)	19	225	41	250	23	37	0	122	20
Queue Length 95th (ft)	42	339	79	364	49	76	71	179	55
Internal Link Dist (ft)		201		271		371			819
Turn Bay Length (ft)	190		180		160		220	150	
Base Capacity (vph)	331	3343	364	3361	288	442	475	287	822
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.41	0.46	0.46	0.09	0.08	0.29	0.46	0.18

Intersection Summary

HCM 2010 Signalized Intersection Summary
103: NW 80 Avenue & W. McNab Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	1260	37	157	1253	194	24	34	131	123	39	102
Future Volume (veh/h)	77	1260	37	157	1253	194	24	34	131	123	39	102
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	82	1340	39	167	1333	206	26	36	139	131	41	109
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	289	3155	92	348	2832	438	248	239	198	332	328	288
Arrive On Green	0.05	0.62	0.60	0.06	0.64	0.62	0.03	0.13	0.13	0.09	0.19	0.17
Sat Flow, veh/h	1774	5077	148	1774	4436	685	1774	1863	1548	1774	1770	1554
Grp Volume(v), veh/h	82	895	484	167	1019	520	26	36	139	131	41	109
Grp Sat Flow(s),veh/h/ln	1774	1695	1834	1774	1695	1731	1774	1863	1548	1774	1770	1554
Q Serve(g_s), s	2.6	21.7	21.8	5.2	24.8	25.2	2.0	2.7	13.8	9.9	3.1	9.9
Cycle Q Clear(g_c), s	2.6	21.7	21.8	5.2	24.8	25.2	2.0	2.7	13.8	9.9	3.1	9.9
Prop In Lane	1.00		0.08	1.00		0.40	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	289	2107	1140	348	2165	1105	248	239	198	332	328	288
V/C Ratio(X)	0.28	0.42	0.42	0.48	0.47	0.47	0.10	0.15	0.70	0.39	0.13	0.38
Avail Cap(c_a), veh/h	384	2107	1140	412	2165	1105	417	442	368	400	420	369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.3	15.6	15.7	11.3	14.9	15.3	57.6	62.0	66.8	51.7	54.4	58.1
Incr Delay (d2), s/veh	0.2	0.6	1.2	0.4	0.7	1.4	0.1	0.1	1.7	0.3	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	10.3	11.4	2.5	11.8	12.4	1.0	1.4	6.0	4.8	1.5	4.3
LnGrp Delay(d),s/veh	11.5	16.2	16.8	11.6	15.7	16.8	57.7	62.1	68.5	51.9	54.5	58.4
LnGrp LOS	B	B	B	B	B	B	E	E	E	D	D	E
Approach Vol, veh/h		1461			1706			201			281	
Approach Delay, s/veh		16.1			15.6			66.0			54.8	
Approach LOS		B			B			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.5	106.2	17.9	24.5	14.2	103.4	8.7	33.6
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0	6.0	6.0
Max Green Setting (Gmax), s	13.0	67.0	18.0	36.0	13.0	67.0	18.0	36.0
Max Q Clear Time (g_c+I1), s	4.6	27.2	11.9	15.8	7.2	23.8	4.0	11.9
Green Ext Time (p_c), s	0.0	13.5	0.0	0.3	0.1	11.4	0.0	0.6

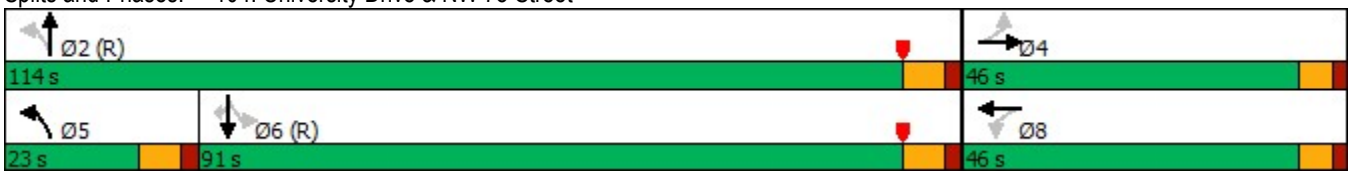
Intersection Summary	
HCM 2010 Ctrl Delay	21.6
HCM 2010 LOS	C

Timings
104: University Drive & NW 78 Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	93	0	9	2	247	1802	4	1652	119
Future Volume (vph)	93	0	9	2	247	1802	4	1652	119
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	NA	Perm
Protected Phases		4		8	5	2		6	
Permitted Phases	4		8		2		6		6
Detector Phase	4	4	8	8	5	2	6	6	6
Switch Phase									
Minimum Initial (s)	6.0	6.0	6.0	6.0	4.0	15.0	15.0	15.0	15.0
Minimum Split (s)	24.0	24.0	46.0	46.0	11.0	25.0	32.0	32.0	32.0
Total Split (s)	46.0	46.0	46.0	46.0	23.0	114.0	91.0	91.0	91.0
Total Split (%)	28.8%	28.8%	28.8%	28.8%	14.4%	71.3%	56.9%	56.9%	56.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag					Lead		Lag	Lag	Lag
Lead-Lag Optimize?					Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	18.6	18.6	18.6	18.6	133.4	133.4	96.5	96.5	96.5
Actuated g/C Ratio	0.12	0.12	0.12	0.12	0.83	0.83	0.60	0.60	0.60
v/c Ratio	0.66	0.45	0.14	0.01	0.65	0.49	0.05	0.62	0.14
Control Delay	85.3	7.9	64.8	58.5	42.5	4.5	17.8	21.9	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.3	7.9	64.8	58.5	42.5	4.5	17.8	21.9	7.8
LOS	F	A	E	E	D	A	B	C	A
Approach Delay		39.7		63.7		9.1		21.0	
Approach LOS		D		E		A		C	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 58 (36%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.66	
Intersection Signal Delay: 16.1	Intersection LOS: B
Intersection Capacity Utilization 69.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 104: University Drive & NW 78 Street



Queues
104: University Drive & NW 78 Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	107	154	10	2	284	2081	5	1899	137
v/c Ratio	0.66	0.45	0.14	0.01	0.65	0.49	0.05	0.62	0.14
Control Delay	85.3	7.9	64.8	58.5	42.5	4.5	17.8	21.9	7.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.3	7.9	64.8	58.5	42.5	4.5	17.8	21.9	7.8
Queue Length 50th (ft)	109	0	10	2	187	184	2	434	27
Queue Length 95th (ft)	165	33	28	10	280	258	10	538	64
Internal Link Dist (ft)		290		265		388		380	
Turn Bay Length (ft)					180		160		160
Base Capacity (vph)	369	549	162	489	438	4233	97	3068	957
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.28	0.06	0.00	0.65	0.49	0.05	0.62	0.14

Intersection Summary

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	0	134	9	2	0	247	1802	9	4	1652	119
Future Volume (veh/h)	93	0	134	9	2	0	247	1802	9	4	1652	119
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	107	0	154	10	2	0	284	2071	10	5	1899	137
Adj No. of Lanes	1	1	0	1	1	0	1	3	0	1	3	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	238	0	218	100	258	0	331	4238	20	180	3472	1054
Arrive On Green	0.14	0.00	0.13	0.14	0.14	0.00	0.10	0.81	0.79	0.68	0.68	0.68
Sat Flow, veh/h	1403	0	1576	1225	1863	0	1774	5223	25	198	5085	1543
Grp Volume(v), veh/h	107	0	154	10	2	0	284	1344	737	5	1899	137
Grp Sat Flow(s),veh/h/ln	1403	0	1576	1225	1863	0	1774	1695	1858	198	1695	1543
Q Serve(g_s), s	11.4	0.0	15.0	1.3	0.1	0.0	11.5	19.8	19.8	1.3	30.2	4.9
Cycle Q Clear(g_c), s	11.5	0.0	15.0	16.3	0.1	0.0	11.5	19.8	19.8	1.3	30.2	4.9
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	238	0	218	100	258	0	331	2751	1508	180	3472	1054
V/C Ratio(X)	0.45	0.00	0.71	0.10	0.01	0.00	0.86	0.49	0.49	0.03	0.55	0.13
Avail Cap(c_a), veh/h	412	0	414	252	489	0	358	2751	1508	180	3472	1054
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.4	0.0	66.8	73.6	59.4	0.0	35.6	4.7	4.7	8.3	12.8	8.8
Incr Delay (d2), s/veh	0.5	0.0	1.6	0.2	0.0	0.0	16.2	0.6	1.1	0.3	0.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	0.0	6.6	0.4	0.1	0.0	13.6	9.4	10.5	0.1	14.3	2.2
LnGrp Delay(d),s/veh	64.9	0.0	68.4	73.8	59.5	0.0	51.7	5.3	5.9	8.5	13.5	9.1
LnGrp LOS	E		E	E	E		D	A	A	A	B	A
Approach Vol, veh/h		261			12			2365			2041	
Approach Delay, s/veh		67.0			71.4			11.1			13.2	
Approach LOS		E			E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		133.9		26.1	20.6	113.3		26.1
Change Period (Y+Rc), s		7.0		6.0	7.0	7.0		6.0
Max Green Setting (Gmax), s		107.0		40.0	16.0	84.0		40.0
Max Q Clear Time (g_c+I1), s		21.8		17.0	13.5	32.2		18.3
Green Ext Time (p_c), s		27.7		0.7	0.1	23.6		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	15.3
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	111	43	56	225	170	86
Future Vol, veh/h	111	43	56	225	170	86
Conflicting Peds, #/hr	3	0	3	0	0	3
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	125	48	63	253	191	97

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	499	147	291	0	-	0
Stage 1	243	-	-	-	-	-
Stage 2	256	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	501	873	1268	-	-	-
Stage 1	775	-	-	-	-	-
Stage 2	763	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	469	871	1264	-	-	-
Mov Cap-2 Maneuver	469	-	-	-	-	-
Stage 1	728	-	-	-	-	-
Stage 2	761	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	13.7	1.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1264	-	469	871	-	-
HCM Lane V/C Ratio	0.05	-	0.266	0.055	-	-
HCM Control Delay (s)	8	0.2	15.4	9.4	-	-
HCM Lane LOS	A	A	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	1.1	0.2	-	-

Intersection	
Intersection Delay, s/veh	10.8
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	10	5	109	16	109	6	218	119	87	171	14
Future Vol, veh/h	11	10	5	109	16	109	6	218	119	87	171	14
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	11	5	116	17	116	6	232	127	93	182	15
Number of Lanes	0	1	0	1	1	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	10.1	10.6	10.8	10.9
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	5%	0%	42%	100%	0%	50%	0%
Vol Thru, %	95%	48%	38%	0%	13%	50%	86%
Vol Right, %	0%	52%	19%	0%	87%	0%	14%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	115	228	26	109	125	173	100
LT Vol	6	0	11	109	0	87	0
Through Vol	109	109	10	0	16	86	86
RT Vol	0	119	5	0	109	0	14
Lane Flow Rate	122	243	28	116	133	184	106
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.197	0.364	0.051	0.218	0.208	0.311	0.169
Departure Headway (Hd)	5.801	5.405	6.649	6.767	5.644	6.096	5.741
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	619	667	538	531	636	591	626
Service Time	3.527	3.131	4.693	4.5	3.377	3.823	3.468
HCM Lane V/C Ratio	0.197	0.364	0.052	0.218	0.209	0.311	0.169
HCM Control Delay	10	11.2	10.1	11.4	9.9	11.6	9.6
HCM Lane LOS	A	B	B	B	A	B	A
HCM 95th-tile Q	0.7	1.7	0.2	0.8	0.8	1.3	0.6

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	25	12	13	323	256	29
Future Vol, veh/h	25	12	13	323	256	29
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	160	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	27	13	14	351	278	32

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	498	155	310	0	-	0
Stage 1	294	-	-	-	-	-
Stage 2	204	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	502	863	1247	-	-	-
Stage 1	730	-	-	-	-	-
Stage 2	810	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	496	863	1247	-	-	-
Mov Cap-2 Maneuver	496	-	-	-	-	-
Stage 1	722	-	-	-	-	-
Stage 2	810	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.6	0.3	0
HCM LOS	B		

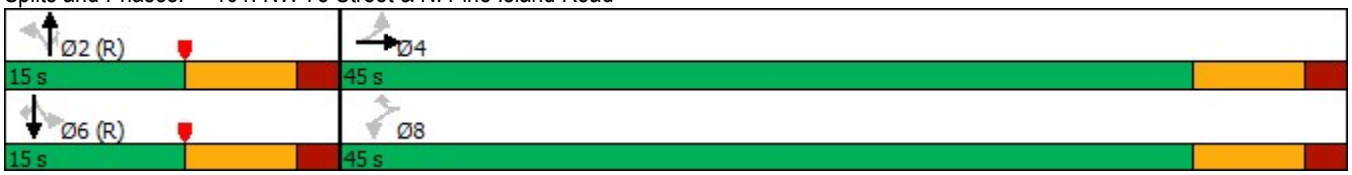
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1247	-	496	863	-	-
HCM Lane V/C Ratio	0.011	-	0.055	0.015	-	-
HCM Control Delay (s)	7.9	-	12.7	9.2	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	0	-	-

Timings
101: NW 75 Street & N. Pine Island Road

Lane Group	EBT	WBL	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	1	60	46	1	814	72	46	855
Future Volume (vph)	1	60	46	1	814	72	46	855
Turn Type	NA	Perm	Perm	Perm	NA	Perm	Perm	NA
Protected Phases	4				2			6
Permitted Phases		8	8	2		2	6	
Detector Phase	4	8	8	2	2	2	6	6
Switch Phase								
Minimum Initial (s)	7.0	38.0	38.0	7.0	7.0	7.0	8.0	8.0
Minimum Split (s)	45.0	45.0	45.0	15.0	15.0	15.0	15.0	15.0
Total Split (s)	45.0	45.0	45.0	15.0	15.0	15.0	15.0	15.0
Total Split (%)	75.0%	75.0%	75.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	28.6	41.0	41.0	30.6	30.6	30.6	30.6	30.6
Actuated g/C Ratio	0.48	0.68	0.68	0.51	0.51	0.51	0.51	0.51
v/c Ratio	0.00	0.07	0.04	0.01	0.49	0.09	0.22	0.51
Control Delay	2.8	3.4	0.7	20.0	26.8	6.8	30.0	27.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.8	3.4	0.7	20.0	26.8	6.8	30.0	27.5
LOS	A	A	A	B	C	A	C	C
Approach Delay	2.8				25.2			27.7
Approach LOS	A				C			C

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 25.0	Intersection LOS: C
Intersection Capacity Utilization 70.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 101: NW 75 Street & N. Pine Island Road



Queues
101: NW 75 Street & N. Pine Island Road

Lane Group	EBT	WBL	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	4	65	49	1	875	77	49	919
v/c Ratio	0.00	0.07	0.04	0.01	0.49	0.09	0.22	0.51
Control Delay	2.8	3.4	0.7	20.0	26.8	6.8	30.0	27.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.8	3.4	0.7	20.0	26.8	6.8	30.0	27.5
Queue Length 50th (ft)	0	6	0	0	~225	0	17	~243
Queue Length 95th (ft)	2	15	5	4	#328	30	#66	#348
Internal Link Dist (ft)	618				536			2010
Turn Bay Length (ft)				160		160	200	
Base Capacity (vph)	1172	960	1091	200	1804	845	218	1804
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.07	0.04	0.01	0.49	0.09	0.22	0.51

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

HCM Signalized Intersection Capacity Analysis
101: NW 75 Street & N. Pine Island Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	2	60	0	46	1	814	72	46	855	0
Future Volume (vph)	1	1	2	60	0	46	1	814	72	46	855	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0		4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00		1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		1.00		1.00		0.99	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes		1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.93		1.00		0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99		0.95		1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1715		1770		1563	1769	3539	1583	1770	3539	
Flt Permitted		0.99		0.76		1.00	0.21	1.00	1.00	0.23	1.00	
Satd. Flow (perm)		1715		1407		1563	392	3539	1583	429	3539	
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)	1	1	2	65	0	49	1	875	77	49	919	0
RTOR Reduction (vph)	0	1	0	0	0	28	0	0	43	0	0	0
Lane Group Flow (vph)	0	3	0	65	0	21	1	875	34	49	919	0
Confl. Peds. (#/hr)	1					1	2					2
Turn Type	Perm	NA		Perm		Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4						2			6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)		22.8		22.8		22.8	23.2	23.2	23.2	23.2	23.2	
Effective Green, g (s)		25.8		25.8		25.8	26.2	26.2	26.2	26.2	26.2	
Actuated g/C Ratio		0.43		0.43		0.43	0.44	0.44	0.44	0.44	0.44	
Clearance Time (s)		7.0		7.0		7.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)		1.0		1.0		1.0	1.0	1.0	1.0	1.0	1.0	
Lane Grp Cap (vph)		737		605		672	171	1545	691	187	1545	
v/s Ratio Prot								0.25			c0.26	
v/s Ratio Perm		0.00		c0.05		0.01	0.00		0.02	0.11		
v/c Ratio		0.00		0.11		0.03	0.01	0.57	0.05	0.26	0.59	
Uniform Delay, d1		9.8		10.2		9.9	9.5	12.6	9.7	10.8	12.9	
Progression Factor		1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.0		0.0		0.0	0.1	1.5	0.1	3.4	1.7	
Delay (s)		9.8		10.2		9.9	9.6	14.2	9.9	14.1	14.6	
Level of Service		A		B		A	A	B	A	B	B	
Approach Delay (s)		9.8			10.1			13.8			14.5	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	13.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	70.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM 2010 Research does not support Non-NEMA phasing.

Timings
102: N. Pine Island Road & NW 81 Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	26	37	21	35	139	29	734	33	120	756	110
Future Volume (vph)	48	26	37	21	35	139	29	734	33	120	756	110
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	4.0	6.0	6.0	4.0	10.0	10.0	4.0	10.0	10.0
Minimum Split (s)	37.0	37.0	37.0	11.0	37.0	37.0	19.0	37.0	37.0	19.0	57.0	57.0
Total Split (s)	44.0	44.0	44.0	20.0	64.0	64.0	21.0	75.0	75.0	21.0	75.0	75.0
Total Split (%)	27.5%	27.5%	27.5%	12.5%	40.0%	40.0%	13.1%	46.9%	46.9%	13.1%	46.9%	46.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		-2.0	-2.0	-2.0	-2.0	-2.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		14.5	14.5	22.1	22.1	22.1	124.0	116.4	116.4	128.5	120.5	120.5
Actuated g/C Ratio		0.09	0.09	0.14	0.14	0.14	0.78	0.73	0.73	0.80	0.75	0.75
v/c Ratio		0.58	0.15	0.13	0.14	0.42	0.06	0.29	0.03	0.22	0.29	0.10
Control Delay		86.0	1.3	56.3	56.8	11.5	4.8	9.2	0.0	5.1	8.1	1.8
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		86.0	1.3	56.3	56.8	11.5	4.8	9.2	0.0	5.1	8.1	1.8
LOS		F	A	E	E	B	A	A	A	A	A	A
Approach Delay		57.7			24.5			8.6			7.0	
Approach LOS		E			C			A			A	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 81 (51%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 125	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 11.9	Intersection LOS: B
Intersection Capacity Utilization 49.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 102: N. Pine Island Road & NW 81 Street

Queues
102: N. Pine Island Road & NW 81 Street

Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	76	38	22	36	143	30	757	34	124	779	113
v/c Ratio	0.58	0.15	0.13	0.14	0.42	0.06	0.29	0.03	0.22	0.29	0.10
Control Delay	86.0	1.3	56.3	56.8	11.5	4.8	9.2	0.0	5.1	8.1	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.0	1.3	56.3	56.8	11.5	4.8	9.2	0.0	5.1	8.1	1.8
Queue Length 50th (ft)	78	0	20	33	0	6	146	0	26	144	1
Queue Length 95th (ft)	133	0	46	65	60	17	221	0	53	212	24
Internal Link Dist (ft)	409			578			2010			316	
Turn Bay Length (ft)		100	200		130	190		250	200		200
Base Capacity (vph)	364	482	221	698	675	631	2574	1181	619	2665	1182
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.08	0.10	0.05	0.21	0.05	0.29	0.03	0.20	0.29	0.10

Intersection Summary

HCM 2010 Signalized Intersection Summary
102: N. Pine Island Road & NW 81 Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	26	37	21	35	139	29	734	33	120	756	110
Future Volume (veh/h)	48	26	37	21	35	139	29	734	33	120	756	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	49	27	38	22	36	143	30	757	34	124	779	113
Adj No. of Lanes	0	1	1	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	106	42	127	131	248	208	543	2635	1176	589	2647	1157
Arrive On Green	0.08	0.08	0.08	0.03	0.13	0.13	0.04	0.74	0.74	0.05	0.75	0.75
Sat Flow, veh/h	864	522	1583	1774	1863	1562	1774	3539	1579	1774	3539	1547
Grp Volume(v), veh/h	76	0	38	22	36	143	30	757	34	124	779	113
Grp Sat Flow(s),veh/h/ln	1386	0	1583	1774	1863	1562	1774	1770	1579	1774	1770	1547
Q Serve(g_s), s	8.2	0.0	3.6	1.8	2.7	14.0	0.6	11.1	0.9	2.5	11.4	3.2
Cycle Q Clear(g_c), s	8.5	0.0	3.6	1.8	2.7	14.0	0.6	11.1	0.9	2.5	11.4	3.2
Prop In Lane	0.64		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	0	127	131	248	208	543	2635	1176	589	2647	1157
V/C Ratio(X)	0.51	0.00	0.30	0.17	0.15	0.69	0.06	0.29	0.03	0.21	0.29	0.10
Avail Cap(c_a), veh/h	381	0	396	258	699	586	654	2635	1176	694	2647	1157
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.89	0.89	0.89	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.5	0.0	69.4	63.0	61.3	66.2	4.0	6.6	5.3	4.2	6.5	5.5
Incr Delay (d2), s/veh	1.0	0.0	0.5	0.2	0.1	1.5	0.0	0.2	0.0	0.1	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	1.6	0.9	1.4	6.1	0.3	5.5	0.4	1.2	5.6	1.4
LnGrp Delay(d),s/veh	72.6	0.0	69.8	63.2	61.4	67.7	4.0	6.9	5.4	4.3	6.8	5.6
LnGrp LOS	E		E	E	E	E	A	A	A	A	A	A
Approach Vol, veh/h		114			201			821			1016	
Approach Delay, s/veh		71.7			66.1			6.7			6.4	
Approach LOS		E			E			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	11.6	123.1	8.5	16.8	11.0	123.7		25.3
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0		6.0
Max Green Setting (Gmax), s	14.0	68.0	14.0	38.0	14.0	68.0		58.0
Max Q Clear Time (g_c+I1), s	4.5	13.1	3.8	10.5	2.6	13.4		16.0
Green Ext Time (p_c), s	0.1	5.6	0.0	0.3	0.0	6.2		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	15.5
HCM 2010 LOS	B

Timings
103: NW 80 Avenue & W. McNab Road

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	58	659	121	664	39	21	88	95	37
Future Volume (vph)	58	659	121	664	39	21	88	95	37
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	1	6	5	2	7	4		3	8
Permitted Phases	6		2		4		4	8	
Detector Phase	1	6	5	2	7	4	4	3	8
Switch Phase									
Minimum Initial (s)	4.0	10.0	4.0	10.0	4.0	6.0	6.0	4.0	6.0
Minimum Split (s)	11.0	38.0	11.0	38.0	10.0	41.0	41.0	11.0	39.0
Total Split (s)	23.0	68.0	23.0	68.0	24.0	45.0	45.0	24.0	45.0
Total Split (%)	14.4%	42.5%	14.4%	42.5%	15.0%	28.1%	28.1%	15.0%	28.1%
Yellow Time (s)	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	None	None	None	None	None
Act Effct Green (s)	119.3	111.0	123.1	114.8	18.1	8.9	8.9	27.1	16.0
Actuated g/C Ratio	0.75	0.69	0.77	0.72	0.11	0.06	0.06	0.17	0.10
v/c Ratio	0.13	0.21	0.23	0.24	0.24	0.22	0.48	0.43	0.26
Control Delay	5.3	9.4	5.7	8.3	58.4	76.9	14.5	63.3	31.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.3	9.4	5.7	8.3	58.4	76.9	14.5	63.3	31.3
LOS	A	A	A	A	E	E	B	E	C
Approach Delay		9.1		8.0		35.0			47.5
Approach LOS		A		A		D			D

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 132 (83%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay: 14.1	Intersection LOS: B
Intersection Capacity Utilization 51.1%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 103: NW 80 Avenue & W. McNab Road

Queues
103: NW 80 Avenue & W. McNab Road

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	62	734	130	856	42	23	95	102	99
v/c Ratio	0.13	0.21	0.23	0.24	0.24	0.22	0.48	0.43	0.26
Control Delay	5.3	9.4	5.7	8.3	58.4	76.9	14.5	63.3	31.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.3	9.4	5.7	8.3	58.4	76.9	14.5	63.3	31.3
Queue Length 50th (ft)	13	91	28	103	38	24	0	96	21
Queue Length 95th (ft)	30	135	56	148	74	55	39	150	51
Internal Link Dist (ft)		201		271		371			819
Turn Bay Length (ft)	190		180		160		220	150	
Base Capacity (vph)	589	3510	627	3557	272	477	484	264	870
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.21	0.21	0.24	0.15	0.05	0.20	0.39	0.11

Intersection Summary

HCM 2010 Signalized Intersection Summary
103: NW 80 Avenue & W. McNab Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	58	659	23	121	664	132	39	21	88	95	37	55
Future Volume (veh/h)	58	659	23	121	664	132	39	21	88	95	37	55
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		0.99	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	62	709	25	130	714	142	42	23	95	102	40	59
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	506	3321	117	575	2855	561	261	212	178	304	259	229
Arrive On Green	0.04	0.66	0.64	0.05	0.67	0.65	0.04	0.11	0.11	0.07	0.15	0.13
Sat Flow, veh/h	1774	5042	177	1774	4256	836	1774	1863	1562	1774	1770	1566
Grp Volume(v), veh/h	62	476	258	130	567	289	42	23	95	102	40	59
Grp Sat Flow(s),veh/h/ln	1774	1695	1829	1774	1695	1702	1774	1863	1562	1774	1770	1566
Q Serve(g_s), s	1.7	8.9	9.0	3.6	10.6	11.0	3.3	1.8	9.2	7.8	3.2	5.4
Cycle Q Clear(g_c), s	1.7	8.9	9.0	3.6	10.6	11.0	3.3	1.8	9.2	7.8	3.2	5.4
Prop In Lane	1.00		0.10	1.00		0.49	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	506	2233	1205	575	2274	1142	261	212	178	304	259	229
V/C Ratio(X)	0.12	0.21	0.21	0.23	0.25	0.25	0.16	0.11	0.53	0.34	0.15	0.26
Avail Cap(c_a), veh/h	642	2233	1205	689	2274	1142	411	477	400	396	453	401
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.7	10.8	10.9	7.4	10.4	10.8	58.6	63.6	66.9	54.4	59.6	61.5
Incr Delay (d2), s/veh	0.0	0.2	0.4	0.1	0.3	0.5	0.1	0.1	0.9	0.2	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	4.2	4.7	1.7	5.0	5.3	1.6	0.9	4.0	3.8	1.6	2.4
LnGrp Delay(d),s/veh	7.7	11.1	11.3	7.5	10.7	11.3	58.7	63.7	67.8	54.7	59.7	61.7
LnGrp LOS	A	B	B	A	B	B	E	E	E	D	E	E
Approach Vol, veh/h		796			986			160			201	
Approach Delay, s/veh		10.9			10.4			64.9			57.7	
Approach LOS		B			B			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.7	111.3	15.7	22.2	12.7	109.4	10.5	27.5
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0	6.0	6.0
Max Green Setting (Gmax), s	16.0	61.0	18.0	39.0	16.0	61.0	18.0	39.0
Max Q Clear Time (g_c+I1), s	3.7	13.0	9.8	11.2	5.6	11.0	5.3	7.4
Green Ext Time (p_c), s	0.0	6.0	0.0	0.2	0.1	4.8	0.0	0.4

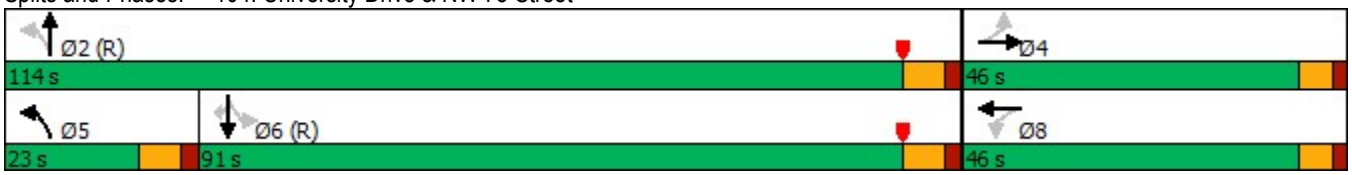
Intersection Summary	
HCM 2010 Ctrl Delay	19.1
HCM 2010 LOS	B

Timings
104: University Drive & NW 78 Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	63	0	2	2	199	1498	1	1442	92
Future Volume (vph)	63	0	2	2	199	1498	1	1442	92
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	NA	Perm
Protected Phases		4		8	5	2		6	
Permitted Phases	4		8		2		6		6
Detector Phase	4	4	8	8	5	2	6	6	6
Switch Phase									
Minimum Initial (s)	6.0	6.0	6.0	6.0	4.0	15.0	15.0	15.0	15.0
Minimum Split (s)	24.0	24.0	46.0	46.0	11.0	25.0	32.0	32.0	32.0
Total Split (s)	46.0	46.0	46.0	46.0	23.0	114.0	91.0	91.0	91.0
Total Split (%)	28.8%	28.8%	28.8%	28.8%	14.4%	71.3%	56.9%	56.9%	56.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag					Lead		Lag	Lag	Lag
Lead-Lag Optimize?					Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	13.9	13.9	13.9	13.9	138.1	138.1	121.5	121.5	121.5
Actuated g/C Ratio	0.09	0.09	0.09	0.09	0.86	0.86	0.76	0.76	0.76
v/c Ratio	0.54	0.35	0.03	0.01	0.60	0.36	0.00	0.39	0.08
Control Delay	85.0	3.0	64.5	63.5	11.6	2.6	7.0	7.6	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.0	3.0	64.5	63.5	11.6	2.6	7.0	7.6	2.7
LOS	F	A	E	E	B	A	A	A	A
Approach Delay		33.8		64.0		3.6		7.3	
Approach LOS		C		E		A		A	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 148 (93%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.60	
Intersection Signal Delay: 6.9	Intersection LOS: A
Intersection Capacity Utilization 61.7%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 104: University Drive & NW 78 Street



Queues
104: University Drive & NW 78 Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	66	110	2	2	207	1563	1	1502	96
v/c Ratio	0.54	0.35	0.03	0.01	0.60	0.36	0.00	0.39	0.08
Control Delay	85.0	3.0	64.5	63.5	11.6	2.6	7.0	7.6	2.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.0	3.0	64.5	63.5	11.6	2.6	7.0	7.6	2.7
Queue Length 50th (ft)	67	0	2	2	26	91	0	166	6
Queue Length 95th (ft)	118	0	11	11	75	138	3	277	29
Internal Link Dist (ft)		290		265		388		380	
Turn Bay Length (ft)					180		160		160
Base Capacity (vph)	370	560	202	489	406	4388	215	3861	1182
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.18	0.20	0.01	0.00	0.51	0.36	0.00	0.39	0.08

Intersection Summary

HCM 2010 Signalized Intersection Summary
104: University Drive & NW 78 Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	0	106	2	2	0	199	1498	3	1	1442	92
Future Volume (veh/h)	63	0	106	2	2	0	199	1498	3	1	1442	92
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	66	0	110	2	2	0	207	1560	3	1	1502	96
Adj No. of Lanes	1	1	0	1	1	0	1	3	0	1	3	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	179	0	152	81	179	0	355	4476	9	300	3947	1202
Arrive On Green	0.10	0.00	0.08	0.10	0.10	0.00	0.05	0.85	0.84	0.78	0.78	0.78
Sat Flow, veh/h	1409	0	1583	1278	1863	0	1774	5241	10	328	5085	1548
Grp Volume(v), veh/h	66	0	110	2	2	0	207	1009	554	1	1502	96
Grp Sat Flow(s),veh/h/ln	1409	0	1583	1278	1863	0	1774	1695	1861	328	1695	1548
Q Serve(g_s), s	7.1	0.0	10.8	0.2	0.2	0.0	3.3	9.9	9.9	0.1	15.0	2.4
Cycle Q Clear(g_c), s	7.3	0.0	10.8	11.1	0.2	0.0	3.3	9.9	9.9	0.1	15.0	2.4
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	179	0	152	81	179	0	355	2896	1589	300	3947	1202
V/C Ratio(X)	0.37	0.00	0.72	0.02	0.01	0.00	0.58	0.35	0.35	0.00	0.38	0.08
Avail Cap(c_a), veh/h	414	0	416	294	489	0	472	2896	1589	300	3947	1202
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.8	0.0	71.3	75.7	65.5	0.0	4.9	2.4	2.4	4.0	5.7	4.3
Incr Delay (d2), s/veh	0.5	0.0	2.5	0.0	0.0	0.0	0.6	0.3	0.6	0.0	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.8	0.0	4.9	0.1	0.1	0.0	2.8	4.6	5.2	0.0	7.1	1.1
LnGrp Delay(d),s/veh	69.2	0.0	73.7	75.7	65.5	0.0	5.4	2.8	3.0	4.0	6.0	4.4
LnGrp LOS	E		E	E	E		A	A	A	A	A	A
Approach Vol, veh/h		176			4			1770			1599	
Approach Delay, s/veh		72.0			70.6			3.2			5.9	
Approach LOS		E			E			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		140.7		19.3	12.5	128.2		19.3
Change Period (Y+Rc), s		7.0		6.0	7.0	7.0		6.0
Max Green Setting (Gmax), s		107.0		40.0	16.0	84.0		40.0
Max Q Clear Time (g_c+I1), s		11.9		12.8	5.3	17.0		13.1
Green Ext Time (p_c), s		15.1		0.5	0.1	16.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	7.9
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	3.4

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	69	44	42	135	102	65
Future Vol, veh/h	69	44	42	135	102	65
Conflicting Peds, #/hr	3	0	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	76	48	46	148	112	71

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	318	93	184	0	-	0
Stage 1	149	-	-	-	-	-
Stage 2	169	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	650	946	1388	-	-	-
Stage 1	863	-	-	-	-	-
Stage 2	843	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	625	945	1387	-	-	-
Mov Cap-2 Maneuver	625	-	-	-	-	-
Stage 1	831	-	-	-	-	-
Stage 2	842	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.6	1.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1387	-	625	945	-	-
HCM Lane V/C Ratio	0.033	-	0.121	0.051	-	-
HCM Control Delay (s)	7.7	0.1	11.6	9	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	0.2	-	-

Intersection	
Intersection Delay, s/veh	9.2
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	11	6	95	12	68	4	122	94	68	90	11
Future Vol, veh/h	16	11	6	95	12	68	4	122	94	68	90	11
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	12	6	101	13	72	4	130	100	72	96	12
Number of Lanes	0	1	0	1	1	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	9.2	9.3	9	9.4
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	6%	0%	48%	100%	0%	60%	0%
Vol Thru, %	94%	39%	33%	0%	15%	40%	80%
Vol Right, %	0%	61%	18%	0%	85%	0%	20%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	65	155	33	95	80	113	56
LT Vol	4	0	16	95	0	68	0
Through Vol	61	61	11	0	12	45	45
RT Vol	0	94	6	0	68	0	11
Lane Flow Rate	69	165	35	101	85	120	60
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.103	0.225	0.056	0.171	0.118	0.189	0.087
Departure Headway (Hd)	5.363	4.904	5.792	6.085	4.983	5.672	5.23
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	665	729	613	587	715	630	682
Service Time	3.12	2.661	3.874	3.849	2.747	3.433	2.991
HCM Lane V/C Ratio	0.104	0.226	0.057	0.172	0.119	0.19	0.088
HCM Control Delay	8.7	9.1	9.2	10.1	8.4	9.8	8.5
HCM Lane LOS	A	A	A	B	A	A	A
HCM 95th-tile Q	0.3	0.9	0.2	0.6	0.4	0.7	0.3

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	29	13	13	190	149	27
Future Vol, veh/h	29	13	13	190	149	27
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	160	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	14	14	207	162	29

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	309	96	191	0	-	0
Stage 1	177	-	-	-	-	-
Stage 2	132	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	659	942	1380	-	-	-
Stage 1	836	-	-	-	-	-
Stage 2	880	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	652	942	1380	-	-	-
Mov Cap-2 Maneuver	652	-	-	-	-	-
Stage 1	828	-	-	-	-	-
Stage 2	880	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.2	0.5	0
HCM LOS	B		

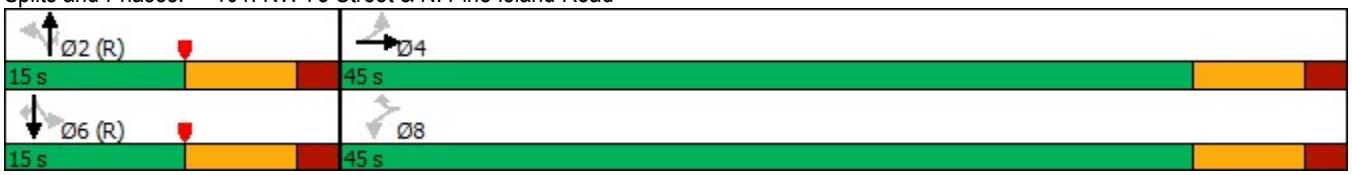
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1380	-	652	942	-	-
HCM Lane V/C Ratio	0.01	-	0.048	0.015	-	-
HCM Control Delay (s)	7.6	-	10.8	8.9	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.2	0	-	-

Timings
101: NW 75 Street & N. Pine Island Road

Lane Group	EBT	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	0	106	64	6	752	55	55	1081	2
Future Volume (vph)	0	106	64	6	752	55	55	1081	2
Turn Type	NA	Perm	Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases	4				2			6	
Permitted Phases		8	8	2		2	6		6
Detector Phase	4	8	8	2	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	7.0	38.0	38.0	7.0	7.0	7.0	8.0	8.0	8.0
Minimum Split (s)	45.0	45.0	45.0	15.0	15.0	15.0	15.0	15.0	15.0
Total Split (s)	45.0	45.0	45.0	15.0	15.0	15.0	15.0	15.0	15.0
Total Split (%)	75.0%	75.0%	75.0%	25.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	28.6	41.0	41.0	30.6	30.6	30.6	30.6	30.6	30.6
Actuated g/C Ratio	0.48	0.68	0.68	0.51	0.51	0.51	0.51	0.51	0.51
v/c Ratio	0.01	0.11	0.06	0.04	0.43	0.07	0.22	0.62	0.00
Control Delay	0.0	3.6	1.0	22.3	24.9	5.2	28.2	30.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	0.0	3.6	1.0	22.3	24.9	5.2	28.2	30.2	0.0
LOS	A	A	A	C	C	A	C	C	A
Approach Delay					23.6			30.1	
Approach LOS					C			C	

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 70	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 25.3	Intersection LOS: C
Intersection Capacity Utilization 68.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 101: NW 75 Street & N. Pine Island Road



Queues
101: NW 75 Street & N. Pine Island Road

Lane Group	EBT	WBL	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	7	109	66	6	775	57	57	1114	2
v/c Ratio	0.01	0.11	0.06	0.04	0.43	0.07	0.22	0.62	0.00
Control Delay	0.0	3.6	1.0	22.3	24.9	5.2	28.2	30.2	0.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	0.0	3.6	1.0	22.3	24.9	5.2	28.2	30.2	0.0
Queue Length 50th (ft)	0	11	0	2	~184	0	19	~323	0
Queue Length 95th (ft)	0	23	8	11	#283	20	#71	#434	0
Internal Link Dist (ft)	618				536			2010	
Turn Bay Length (ft)				160		160	200		90
Base Capacity (vph)	1157	958	1091	145	1804	825	263	1804	822
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.11	0.06	0.04	0.43	0.07	0.22	0.62	0.00

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

HCM Signalized Intersection Capacity Analysis
101: NW 75 Street & N. Pine Island Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	0	5	106	0	64	6	752	55	55	1081	2
Future Volume (vph)	2	0	5	106	0	64	6	752	55	55	1081	2
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0		4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lane Util. Factor		1.00		1.00		1.00	1.00	0.95	1.00	1.00	0.95	1.00
Frpb, ped/bikes		1.00		1.00		0.99	1.00	1.00	0.98	1.00	1.00	0.98
Flpb, ped/bikes		1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00
Frt		0.90		1.00		0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected		0.99		0.95		1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)		1659		1768		1563	1769	3539	1550	1769	3539	1548
Flt Permitted		0.99		0.75		1.00	0.15	1.00	1.00	0.28	1.00	1.00
Satd. Flow (perm)		1659		1402		1563	284	3539	1550	517	3539	1548
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	2	0	5	109	0	66	6	775	57	57	1114	2
RTOR Reduction (vph)	0	4	0	0	0	38	0	0	32	0	0	1
Lane Group Flow (vph)	0	3	0	109	0	28	6	775	25	57	1114	1
Confl. Peds. (#/hr)	1			1		1	2		1	1		2
Turn Type	Perm	NA		Perm		Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4						2			6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)		22.8		22.8		22.8	23.2	23.2	23.2	23.2	23.2	23.2
Effective Green, g (s)		25.8		25.8		25.8	26.2	26.2	26.2	26.2	26.2	26.2
Actuated g/C Ratio		0.43		0.43		0.43	0.44	0.44	0.44	0.44	0.44	0.44
Clearance Time (s)		7.0		7.0		7.0	7.0	7.0	7.0	7.0	7.0	7.0
Vehicle Extension (s)		1.0		1.0		1.0	1.0	1.0	1.0	1.0	1.0	1.0
Lane Grp Cap (vph)		713		602		672	124	1545	676	225	1545	675
v/s Ratio Prot								0.22			c0.31	
v/s Ratio Perm		0.00		c0.08		0.02	0.02		0.02	0.11		0.00
v/c Ratio		0.00		0.18		0.04	0.05	0.50	0.04	0.25	0.72	0.00
Uniform Delay, d1		9.8		10.6		9.9	9.7	12.2	9.7	10.7	13.9	9.5
Progression Factor		1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2		0.0		0.1		0.0	0.7	1.2	0.1	2.7	2.9	0.0
Delay (s)		9.8		10.6		9.9	10.5	13.4	9.8	13.4	16.8	9.5
Level of Service		A		B		A	B	B	A	B	B	A
Approach Delay (s)		9.8			10.4			13.1			16.7	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

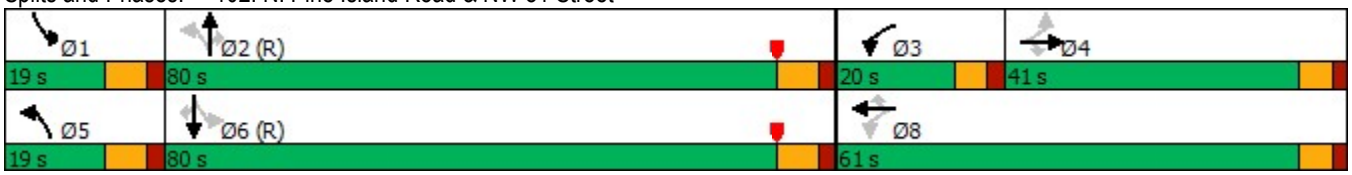
HCM 2010 Research does not support Non-NEMA phasing.

Timings
102: N. Pine Island Road & NW 81 Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	47	68	36	46	54	266	36	841	56	198	876	57
Future Volume (vph)	47	68	36	46	54	266	36	841	56	198	876	57
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	4.0	6.0	6.0	4.0	10.0	10.0	4.0	10.0	10.0
Minimum Split (s)	37.0	37.0	37.0	11.0	37.0	37.0	19.0	37.0	37.0	19.0	57.0	57.0
Total Split (s)	41.0	41.0	41.0	20.0	61.0	61.0	19.0	80.0	80.0	19.0	80.0	80.0
Total Split (%)	25.6%	25.6%	25.6%	12.5%	38.1%	38.1%	11.9%	50.0%	50.0%	11.9%	50.0%	50.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		-2.0	-2.0	-2.0	-2.0	-2.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		19.7	19.7	31.4	31.4	31.4	110.7	102.6	102.6	120.6	110.7	110.7
Actuated g/C Ratio		0.12	0.12	0.20	0.20	0.20	0.69	0.64	0.64	0.75	0.69	0.69
v/c Ratio		0.69	0.14	0.27	0.17	0.63	0.10	0.43	0.06	0.52	0.41	0.06
Control Delay		84.6	1.0	52.5	50.7	21.8	8.0	17.0	0.3	11.2	13.2	0.4
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		84.6	1.0	52.5	50.7	21.8	8.0	17.0	0.3	11.2	13.2	0.4
LOS		F	A	D	D	C	A	B	A	B	B	A
Approach Delay		64.8			29.9			15.7			12.2	
Approach LOS		E			C			B			B	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 97 (61%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 125	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 19.0	Intersection LOS: B
Intersection Capacity Utilization 57.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 102: N. Pine Island Road & NW 81 Street



Queues
102: N. Pine Island Road & NW 81 Street

Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	132	41	53	62	306	41	967	64	228	1007	66
v/c Ratio	0.69	0.14	0.27	0.17	0.63	0.10	0.43	0.06	0.52	0.41	0.06
Control Delay	84.6	1.0	52.5	50.7	21.8	8.0	17.0	0.3	11.2	13.2	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.6	1.0	52.5	50.7	21.8	8.0	17.0	0.3	11.2	13.2	0.4
Queue Length 50th (ft)	135	0	46	54	82	10	256	0	65	244	0
Queue Length 95th (ft)	195	0	78	87	159	26	385	1	115	340	1
Internal Link Dist (ft)	409			578			2010			316	
Turn Bay Length (ft)		100	200		130	190		250	200		200
Base Capacity (vph)	361	449	243	663	702	467	2269	1031	461	2449	1097
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.37	0.09	0.22	0.09	0.44	0.09	0.43	0.06	0.49	0.41	0.06

Intersection Summary

HCM 2010 Signalized Intersection Summary
102: N. Pine Island Road & NW 81 Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	68	36	46	54	266	36	841	56	198	876	57
Future Volume (veh/h)	47	68	36	46	54	266	36	841	56	198	876	57
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		1.00	1.00		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	54	78	41	53	62	306	41	967	64	228	1007	66
Adj No. of Lanes	0	1	1	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	107	133	228	204	405	344	400	2246	981	445	2349	1027
Arrive On Green	0.15	0.15	0.15	0.05	0.22	0.22	0.04	0.63	0.63	0.07	0.66	0.66
Sat Flow, veh/h	515	911	1559	1774	1863	1581	1774	3539	1545	1774	3539	1546
Grp Volume(v), veh/h	132	0	41	53	62	306	41	967	64	228	1007	66
Grp Sat Flow(s),veh/h/ln	1427	0	1559	1774	1863	1581	1774	1770	1545	1774	1770	1546
Q Serve(g_s), s	11.5	0.0	3.7	3.9	4.3	30.0	1.2	22.0	2.5	6.6	21.4	2.4
Cycle Q Clear(g_c), s	13.6	0.0	3.7	3.9	4.3	30.0	1.2	22.0	2.5	6.6	21.4	2.4
Prop In Lane	0.41		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	241	0	228	204	405	344	400	2246	981	445	2349	1027
V/C Ratio(X)	0.55	0.00	0.18	0.26	0.15	0.89	0.10	0.43	0.07	0.51	0.43	0.06
Avail Cap(c_a), veh/h	358	0	360	300	664	563	489	2246	981	482	2349	1027
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.92	0.92	0.92	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.8	0.0	59.9	52.9	50.7	60.7	9.4	14.7	11.1	10.3	12.6	9.4
Incr Delay (d2), s/veh	0.7	0.0	0.1	0.2	0.1	6.0	0.0	0.6	0.1	0.3	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.5	0.0	1.6	1.9	2.2	13.8	0.6	10.9	1.1	3.2	10.5	1.1
LnGrp Delay(d),s/veh	64.6	0.0	60.0	53.2	50.7	66.8	9.5	15.3	11.3	10.6	13.2	9.6
LnGrp LOS	E		E	D	D	E	A	B	B	B	B	A
Approach Vol, veh/h		173			421			1072			1301	
Approach Delay, s/veh		63.5			62.7			14.8			12.6	
Approach LOS		E			E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	15.7	105.5	11.4	27.4	11.0	110.2		38.8
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0		6.0
Max Green Setting (Gmax), s	12.0	73.0	14.0	35.0	12.0	73.0		55.0
Max Q Clear Time (g_c+I1), s	8.6	24.0	5.9	15.6	3.2	23.4		32.0
Green Ext Time (p_c), s	0.1	8.0	0.0	0.5	0.0	8.4		0.7

Intersection Summary	
HCM 2010 Ctrl Delay	23.5
HCM 2010 LOS	C

Timings
103: NW 80 Avenue & W. McNab Road

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	92	1131	67	1142	25	56	197	178	25
Future Volume (vph)	92	1131	67	1142	25	56	197	178	25
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	1	6	5	2	7	4		3	8
Permitted Phases	6		2		4		4	8	
Detector Phase	1	6	5	2	7	4	4	3	8
Switch Phase									
Minimum Initial (s)	4.0	10.0	4.0	10.0	4.0	6.0	6.0	4.0	6.0
Minimum Split (s)	11.0	38.0	11.0	38.0	10.0	41.0	41.0	11.0	39.0
Total Split (s)	15.0	79.0	15.0	79.0	24.0	42.0	42.0	24.0	42.0
Total Split (%)	9.4%	49.4%	9.4%	49.4%	15.0%	26.3%	26.3%	15.0%	26.3%
Yellow Time (s)	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	None	None	None	None	None
Act Effct Green (s)	114.0	104.3	112.4	103.5	20.1	12.2	12.2	34.8	27.1
Actuated g/C Ratio	0.71	0.65	0.70	0.65	0.13	0.08	0.08	0.22	0.17
v/c Ratio	0.34	0.37	0.23	0.42	0.15	0.43	0.72	0.63	0.24
Control Delay	10.1	13.8	8.6	14.7	49.8	78.6	27.1	63.6	15.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.1	13.8	8.6	14.7	49.8	78.6	27.1	63.6	15.1
LOS	B	B	A	B	D	E	C	E	B
Approach Delay		13.5		14.4		39.5			42.2
Approach LOS		B		B		D			D

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 98 (61%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 19.0	Intersection LOS: B
Intersection Capacity Utilization 59.2%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 103: NW 80 Avenue & W. McNab Road

Queues
103: NW 80 Avenue & W. McNab Road

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	99	1229	72	1373	27	60	212	191	151
v/c Ratio	0.34	0.37	0.23	0.42	0.15	0.43	0.72	0.63	0.24
Control Delay	10.1	13.8	8.6	14.7	49.8	78.6	27.1	63.6	15.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	10.1	13.8	8.6	14.7	49.8	78.6	27.1	63.6	15.1
Queue Length 50th (ft)	27	208	20	242	23	61	23	176	13
Queue Length 95th (ft)	54	275	41	323	49	108	111	247	46
Internal Link Dist (ft)		201		271		371			819
Turn Bay Length (ft)	190		180		160		220	150	
Base Capacity (vph)	306	3307	344	3242	311	442	515	311	822
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.32	0.37	0.21	0.42	0.09	0.14	0.41	0.61	0.18

Intersection Summary

HCM 2010 Signalized Intersection Summary
103: NW 80 Avenue & W. McNab Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	92	1131	12	67	1142	135	25	56	197	178	25	115
Future Volume (veh/h)	92	1131	12	67	1142	135	25	56	197	178	25	115
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		1.00	1.00		1.00	1.00		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	99	1216	13	72	1228	145	27	60	212	191	27	124
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	304	3014	32	331	2649	313	296	300	255	390	429	379
Arrive On Green	0.05	0.58	0.56	0.05	0.57	0.56	0.03	0.16	0.16	0.11	0.24	0.23
Sat Flow, veh/h	1774	5187	55	1774	4611	544	1774	1863	1580	1774	1770	1561
Grp Volume(v), veh/h	99	795	434	72	903	470	27	60	212	191	27	124
Grp Sat Flow(s),veh/h/ln	1774	1695	1852	1774	1695	1766	1774	1863	1580	1774	1770	1561
Q Serve(g_s), s	3.5	20.5	20.5	2.6	24.7	25.0	2.0	4.5	20.8	13.8	1.9	10.6
Cycle Q Clear(g_c), s	3.5	20.5	20.5	2.6	24.7	25.0	2.0	4.5	20.8	13.8	1.9	10.6
Prop In Lane	1.00		0.03	1.00		0.31	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	304	1970	1076	331	1948	1014	296	300	255	390	429	379
V/C Ratio(X)	0.33	0.40	0.40	0.22	0.46	0.46	0.09	0.20	0.83	0.49	0.06	0.33
Avail Cap(c_a), veh/h	332	1970	1076	371	1948	1014	465	442	375	414	429	379
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.4	18.3	18.4	13.4	19.7	20.1	53.1	58.2	65.0	46.0	46.6	50.7
Incr Delay (d2), s/veh	0.2	0.6	1.1	0.1	0.8	1.5	0.0	0.1	6.4	0.4	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	9.8	10.8	1.3	11.8	12.5	1.0	2.3	9.5	6.8	0.9	4.6
LnGrp Delay(d),s/veh	14.6	18.9	19.5	13.5	20.5	21.6	53.2	58.3	71.5	46.3	46.6	50.9
LnGrp LOS	B	B	B	B	C	C	D	E	E	D	D	D
Approach Vol, veh/h		1328			1445			299			342	
Approach Delay, s/veh		18.8			20.5			67.2			48.0	
Approach LOS		B			C			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.5	95.9	21.8	29.8	11.4	97.0	8.8	42.8
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0	6.0	6.0
Max Green Setting (Gmax), s	8.0	72.0	18.0	36.0	8.0	72.0	18.0	36.0
Max Q Clear Time (g_c+I1), s	5.5	27.0	15.8	22.8	4.6	22.5	4.0	12.6
Green Ext Time (p_c), s	0.0	11.5	0.0	0.5	0.0	9.7	0.0	0.6

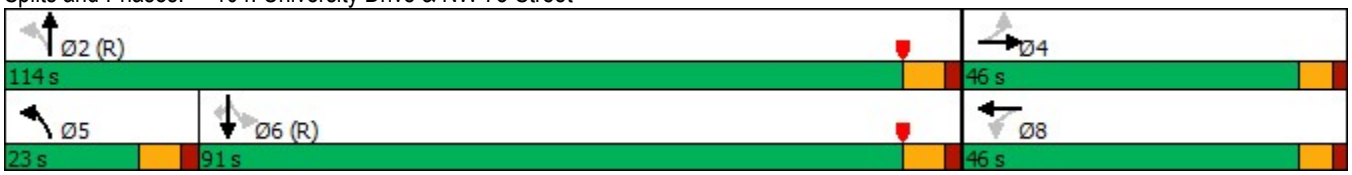
Intersection Summary	
HCM 2010 Ctrl Delay	26.7
HCM 2010 LOS	C

Timings
104: University Drive & NW 78 Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	95	3	1	0	198	1532	6	2007	95
Future Volume (vph)	95	3	1	0	198	1532	6	2007	95
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	NA	Perm
Protected Phases		4		8	5	2		6	
Permitted Phases	4		8		2		6		6
Detector Phase	4	4	8	8	5	2	6	6	6
Switch Phase									
Minimum Initial (s)	6.0	6.0	6.0	6.0	4.0	15.0	15.0	15.0	15.0
Minimum Split (s)	24.0	24.0	46.0	46.0	11.0	25.0	32.0	32.0	32.0
Total Split (s)	46.0	46.0	46.0	46.0	23.0	114.0	91.0	91.0	91.0
Total Split (%)	28.8%	28.8%	28.8%	28.8%	14.4%	71.3%	56.9%	56.9%	56.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag					Lead		Lag	Lag	Lag
Lead-Lag Optimize?					Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	18.5	18.5	18.5	18.5	133.5	133.5	107.1	107.1	107.1
Actuated g/C Ratio	0.12	0.12	0.12	0.12	0.83	0.83	0.67	0.67	0.67
v/c Ratio	0.65	0.68	0.02	0.00	0.72	0.41	0.04	0.66	0.10
Control Delay	85.2	26.9	60.0	0.0	54.4	3.9	14.0	18.3	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.2	26.9	60.0	0.0	54.4	3.9	14.0	18.3	5.3
LOS	F	C	E	A	D	A	B	B	A
Approach Delay		45.3		30.0		9.7		17.7	
Approach LOS		D		C		A		B	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 138 (86%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 110	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.72	
Intersection Signal Delay: 16.3	Intersection LOS: B
Intersection Capacity Utilization 72.5%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 104: University Drive & NW 78 Street



Queues
104: University Drive & NW 78 Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	106	230	1	1	220	1724	7	2230	106
v/c Ratio	0.65	0.68	0.02	0.00	0.72	0.41	0.04	0.66	0.10
Control Delay	85.2	26.9	60.0	0.0	54.4	3.9	14.0	18.3	5.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.2	26.9	60.0	0.0	54.4	3.9	14.0	18.3	5.3
Queue Length 50th (ft)	108	51	1	0	155	135	2	479	13
Queue Length 95th (ft)	169	141	7	0	246	204	12	675	45
Internal Link Dist (ft)		290		265		388		380	
Turn Bay Length (ft)					180		160		160
Base Capacity (vph)	370	547	105	470	316	4232	159	3403	1051
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.42	0.01	0.00	0.70	0.41	0.04	0.66	0.10

Intersection Summary

HCM 2010 Signalized Intersection Summary
104: University Drive & NW 78 Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	3	204	1	0	1	198	1532	20	6	2007	95
Future Volume (veh/h)	95	3	204	1	0	1	198	1532	20	6	2007	95
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	106	3	227	1	0	1	220	1702	22	7	2230	106
Adj No. of Lanes	1	1	0	1	1	0	1	3	0	1	3	1
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	287	4	269	81	0	272	269	4026	52	231	3362	1022
Arrive On Green	0.17	0.17	0.16	0.17	0.00	0.16	0.09	0.78	0.76	0.66	0.66	0.66
Sat Flow, veh/h	1410	21	1566	1146	0	1583	1774	5174	67	281	5085	1546
Grp Volume(v), veh/h	106	0	230	1	0	1	220	1115	609	7	2230	106
Grp Sat Flow(s),veh/h/ln	1410	0	1586	1146	0	1583	1774	1695	1851	281	1695	1546
Q Serve(g_s), s	10.8	0.0	22.5	0.1	0.0	0.1	9.7	17.4	17.5	1.4	42.4	4.0
Cycle Q Clear(g_c), s	10.9	0.0	22.5	22.7	0.0	0.1	9.7	17.4	17.5	1.4	42.4	4.0
Prop In Lane	1.00		0.99	1.00		1.00	1.00		0.04	1.00		1.00
Lane Grp Cap(c), veh/h	287	0	273	81	0	272	269	2638	1440	231	3362	1022
V/C Ratio(X)	0.37	0.00	0.84	0.01	0.00	0.00	0.82	0.42	0.42	0.03	0.66	0.10
Avail Cap(c_a), veh/h	415	0	416	184	0	416	317	2638	1440	231	3362	1022
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.4	0.0	65.1	75.2	0.0	55.7	41.1	5.9	5.9	9.4	16.4	9.9
Incr Delay (d2), s/veh	0.3	0.0	5.8	0.0	0.0	0.0	11.5	0.5	0.9	0.2	1.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	0.0	10.3	0.0	0.0	0.0	10.3	8.2	9.2	0.1	19.9	1.8
LnGrp Delay(d),s/veh	59.7	0.0	70.9	75.2	0.0	55.7	52.6	6.4	6.8	9.7	17.4	10.1
LnGrp LOS	E		E	E		E	D	A	A	A	B	B
Approach Vol, veh/h		336			2			1944			2343	
Approach Delay, s/veh		67.4			65.5			11.7			17.1	
Approach LOS		E			E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		128.5		31.5	18.7	109.8		31.5
Change Period (Y+Rc), s		7.0		6.0	7.0	7.0		6.0
Max Green Setting (Gmax), s		107.0		40.0	16.0	84.0		40.0
Max Q Clear Time (g_c+I1), s		19.5		24.5	11.7	44.4		24.7
Green Ext Time (p_c), s		18.4		1.0	0.1	25.7		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	18.5
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	96	73	25	227	217	97
Future Vol, veh/h	96	73	25	227	217	97
Conflicting Peds, #/hr	1	0	2	0	0	2
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	100	76	26	236	226	101

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	450	166	329	0	-	0
Stage 1	279	-	-	-	-	-
Stage 2	171	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	538	849	1227	-	-	-
Stage 1	743	-	-	-	-	-
Stage 2	842	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	523	847	1225	-	-	-
Mov Cap-2 Maneuver	523	-	-	-	-	-
Stage 1	724	-	-	-	-	-
Stage 2	840	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	11.9	0.9	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1225	-	523	847	-	-
HCM Lane V/C Ratio	0.021	-	0.191	0.09	-	-
HCM Control Delay (s)	8	0.1	13.5	9.7	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.7	0.3	-	-

Intersection	
Intersection Delay, s/veh	10.9
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	13	12	3	122	5	96	7	209	93	93	210	4
Future Vol, veh/h	13	12	3	122	5	96	7	209	93	93	210	4
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	14	13	3	131	5	103	8	225	100	100	226	4
Number of Lanes	0	1	0	1	1	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	10.2	10.8	10.5	11.3
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	6%	0%	46%	100%	0%	47%	0%
Vol Thru, %	94%	53%	43%	0%	5%	53%	96%
Vol Right, %	0%	47%	11%	0%	95%	0%	4%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	112	198	28	122	101	198	109
LT Vol	7	0	13	122	0	93	0
Through Vol	105	105	12	0	5	105	105
RT Vol	0	93	3	0	96	0	4
Lane Flow Rate	120	212	30	131	109	213	117
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.195	0.324	0.056	0.248	0.17	0.357	0.188
Departure Headway (Hd)	5.856	5.49	6.736	6.805	5.626	6.04	5.776
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	614	656	531	529	637	596	622
Service Time	3.584	3.218	4.78	4.537	3.358	3.768	3.504
HCM Lane V/C Ratio	0.195	0.323	0.056	0.248	0.171	0.357	0.188
HCM Control Delay	10	10.8	10.2	11.8	9.5	12.1	9.8
HCM Lane LOS	A	B	B	B	A	B	A
HCM 95th-tile Q	0.7	1.4	0.2	1	0.6	1.6	0.7

Intersection	
Int Delay, s/veh	0.6

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	17	8	17	307	298	36
Future Vol, veh/h	17	8	17	307	298	36
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	160	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	18	9	18	334	324	39

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	547	182	363	0	-	0
Stage 1	344	-	-	-	-	-
Stage 2	203	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	467	829	1192	-	-	-
Stage 1	689	-	-	-	-	-
Stage 2	811	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	460	829	1192	-	-	-
Mov Cap-2 Maneuver	460	-	-	-	-	-
Stage 1	679	-	-	-	-	-
Stage 2	811	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12	0.4	0
HCM LOS	B		

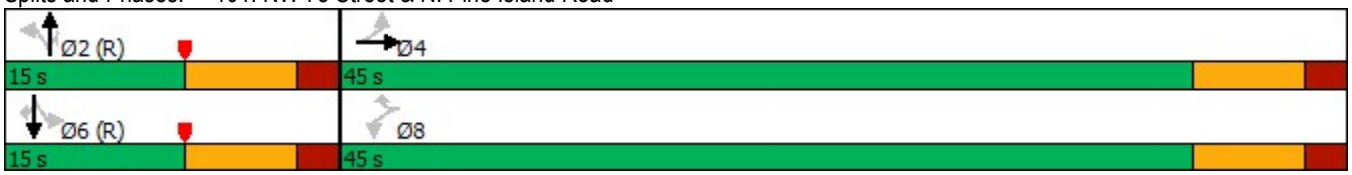
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1192	-	460	829	-	-
HCM Lane V/C Ratio	0.016	-	0.04	0.01	-	-
HCM Control Delay (s)	8.1	-	13.2	9.4	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0	-	0.1	0	-	-

Timings
101: NW 75 Street & N. Pine Island Road

Lane Group	EBT	WBL	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	1	57	51	3	1261	90	48	1013
Future Volume (vph)	1	57	51	3	1261	90	48	1013
Turn Type	NA	Perm	Perm	Perm	NA	Perm	Perm	NA
Protected Phases	4				2			6
Permitted Phases		8	8	2		2	6	
Detector Phase	4	8	8	2	2	2	6	6
Switch Phase								
Minimum Initial (s)	7.0	38.0	38.0	7.0	7.0	7.0	8.0	8.0
Minimum Split (s)	45.0	45.0	45.0	15.0	15.0	15.0	15.0	15.0
Total Split (s)	45.0	45.0	45.0	15.0	15.0	15.0	15.0	15.0
Total Split (%)	75.0%	75.0%	75.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	28.6	41.0	41.0	30.6	30.6	30.6	30.6	30.6
Actuated g/C Ratio	0.48	0.68	0.68	0.51	0.51	0.51	0.51	0.51
v/c Ratio	0.01	0.07	0.05	0.02	0.78	0.12	0.37	0.62
Control Delay	3.0	3.4	0.8	21.3	34.0	9.6	42.6	30.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.0	3.4	0.8	21.3	34.0	9.6	42.6	30.4
LOS	A	A	A	C	C	A	D	C
Approach Delay	3.0				32.3			30.9
Approach LOS	A				C			C

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 80	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 30.4	Intersection LOS: C
Intersection Capacity Utilization 82.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 101: NW 75 Street & N. Pine Island Road



Queues
101: NW 75 Street & N. Pine Island Road

Lane Group	EBT	WBL	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	7	63	57	3	1401	100	53	1126
v/c Ratio	0.01	0.07	0.05	0.02	0.78	0.12	0.37	0.62
Control Delay	3.0	3.4	0.8	21.3	34.0	9.6	42.6	30.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	3.0	3.4	0.8	21.3	34.0	9.6	42.6	30.4
Queue Length 50th (ft)	1	6	0	1	~441	8	~20	~328
Queue Length 95th (ft)	3	15	6	8	#559	42	#82	#440
Internal Link Dist (ft)	618				536			2010
Turn Bay Length (ft)				160		160	200	
Base Capacity (vph)	1158	958	1091	145	1804	823	145	1804
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.01	0.07	0.05	0.02	0.78	0.12	0.37	0.62

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

HCM Signalized Intersection Capacity Analysis
101: NW 75 Street & N. Pine Island Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	2	1	4	57	0	51	3	1261	90	48	1013	0
Future Volume (vph)	2	1	4	57	0	51	3	1261	90	48	1013	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0		4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00		1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		1.00		1.00		0.99	1.00	1.00	0.98	1.00	1.00	
Flpb, ped/bikes		1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.92		1.00		0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99		0.95		1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1694		1770		1563	1770	3539	1548	1769	3539	
Flt Permitted		0.99		0.75		1.00	0.15	1.00	1.00	0.15	1.00	
Satd. Flow (perm)		1694		1403		1563	284	3539	1548	284	3539	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	2	1	4	63	0	57	3	1401	100	53	1126	0
RTOR Reduction (vph)	0	0	0	0	0	32	0	0	42	0	0	0
Lane Group Flow (vph)	0	7	0	63	0	25	3	1401	58	53	1126	0
Confl. Peds. (#/hr)	1					1			2	2		
Turn Type	Perm	NA		Perm		Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4						2			6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)		22.8		22.8		22.8	23.2	23.2	23.2	23.2	23.2	
Effective Green, g (s)		25.8		25.8		25.8	26.2	26.2	26.2	26.2	26.2	
Actuated g/C Ratio		0.43		0.43		0.43	0.44	0.44	0.44	0.44	0.44	
Clearance Time (s)		7.0		7.0		7.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)		1.0		1.0		1.0	1.0	1.0	1.0	1.0	1.0	
Lane Grp Cap (vph)		728		603		672	124	1545	675	124	1545	
v/s Ratio Prot								c0.40			0.32	
v/s Ratio Perm		0.00		c0.04		0.02	0.01		0.04	0.19		
v/c Ratio		0.01		0.10		0.04	0.02	0.91	0.09	0.43	0.73	
Uniform Delay, d1		9.8		10.2		9.9	9.6	15.8	9.9	11.7	14.0	
Progression Factor		1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.0		0.0		0.0	0.4	9.3	0.3	10.4	3.1	
Delay (s)		9.8		10.2		9.9	10.0	25.0	10.1	22.1	17.0	
Level of Service		A		B		A	A	C	B	C	B	
Approach Delay (s)		9.8			10.1			24.0			17.2	
Approach LOS		A			B			C			B	

Intersection Summary			
HCM 2000 Control Delay	20.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	82.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			

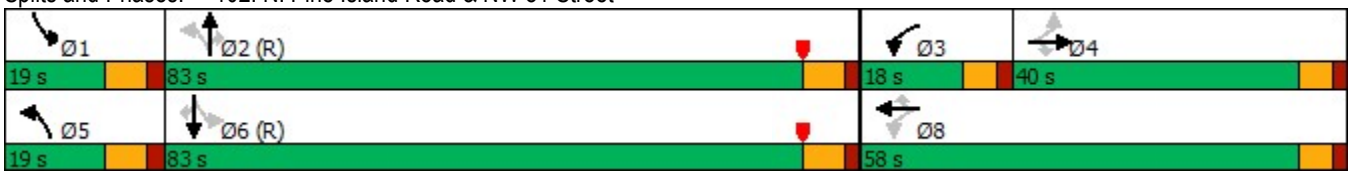
HCM 2010 Research does not support Non-NEMA phasing.

Timings
102: N. Pine Island Road & NW 81 Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	57	48	32	41	43	190	45	1195	58	197	1051	127
Future Volume (vph)	57	48	32	41	43	190	45	1195	58	197	1051	127
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	4.0	6.0	6.0	4.0	10.0	10.0	4.0	10.0	10.0
Minimum Split (s)	37.0	37.0	37.0	11.0	37.0	37.0	19.0	37.0	37.0	19.0	57.0	57.0
Total Split (s)	40.0	40.0	40.0	18.0	58.0	58.0	19.0	83.0	83.0	19.0	83.0	83.0
Total Split (%)	25.0%	25.0%	25.0%	11.3%	36.3%	36.3%	11.9%	51.9%	51.9%	11.9%	51.9%	51.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		-2.0	-2.0	-2.0	-2.0	-2.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		18.6	18.6	29.8	29.8	29.8	105.9	97.7	97.7	122.2	112.2	112.2
Actuated g/C Ratio		0.12	0.12	0.19	0.19	0.19	0.66	0.61	0.61	0.76	0.70	0.70
v/c Ratio		0.67	0.12	0.23	0.14	0.48	0.14	0.61	0.06	0.57	0.47	0.12
Control Delay		85.3	0.9	52.8	50.9	14.7	8.5	23.4	0.4	16.7	13.4	3.5
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		85.3	0.9	52.8	50.9	14.7	8.5	23.4	0.4	16.7	13.4	3.5
LOS		F	A	D	D	B	A	C	A	B	B	A
Approach Delay		65.8			26.1			21.8			12.9	
Approach LOS		E			C			C			B	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 94 (59%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 125	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 20.2	Intersection LOS: C
Intersection Capacity Utilization 66.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 102: N. Pine Island Road & NW 81 Street



Queues
102: N. Pine Island Road & NW 81 Street

Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	116	35	45	47	209	49	1313	64	216	1155	140
v/c Ratio	0.67	0.12	0.23	0.14	0.48	0.14	0.61	0.06	0.57	0.47	0.12
Control Delay	85.3	0.9	52.8	50.9	14.7	8.5	23.4	0.4	16.7	13.4	3.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.3	0.9	52.8	50.9	14.7	8.5	23.4	0.4	16.7	13.4	3.5
Queue Length 50th (ft)	118	0	39	41	30	12	451	0	58	287	10
Queue Length 95th (ft)	183	0	72	74	102	30	654	2	151	418	42
Internal Link Dist (ft)	409			578			2010			316	
Turn Bay Length (ft)		100	200		130	190		250	200		200
Base Capacity (vph)	337	440	227	628	642	420	2161	986	381	2481	1142
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.34	0.08	0.20	0.07	0.33	0.12	0.61	0.06	0.57	0.47	0.12

Intersection Summary

HCM 2010 Signalized Intersection Summary
102: N. Pine Island Road & NW 81 Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	57	48	32	41	43	190	45	1195	58	197	1051	127
Future Volume (veh/h)	57	48	32	41	43	190	45	1195	58	197	1051	127
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	1.00		0.99	1.00		0.98	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	63	53	35	45	47	209	49	1313	64	216	1155	140
Adj No. of Lanes	0	1	1	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	116	75	176	161	335	281	359	2404	1053	354	2482	1110
Arrive On Green	0.11	0.11	0.11	0.04	0.18	0.18	0.04	0.68	0.68	0.07	0.70	0.70
Sat Flow, veh/h	720	661	1557	1774	1863	1560	1774	3539	1550	1774	3539	1582
Grp Volume(v), veh/h	116	0	35	45	47	209	49	1313	64	216	1155	140
Grp Sat Flow(s),veh/h/ln	1382	0	1557	1774	1863	1560	1774	1770	1550	1774	1770	1582
Q Serve(g_s), s	12.4	0.0	3.3	3.5	3.4	20.3	1.3	30.3	2.2	5.4	23.1	4.6
Cycle Q Clear(g_c), s	13.0	0.0	3.3	3.5	3.4	20.3	1.3	30.3	2.2	5.4	23.1	4.6
Prop In Lane	0.54		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	191	0	176	161	335	281	359	2404	1053	354	2482	1110
V/C Ratio(X)	0.61	0.00	0.20	0.28	0.14	0.74	0.14	0.55	0.06	0.61	0.47	0.13
Avail Cap(c_a), veh/h	344	0	350	242	629	526	447	2404	1053	404	2482	1110
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.58	0.58	0.58	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.6	0.0	64.4	57.6	55.2	62.1	7.7	13.1	8.6	12.5	10.6	7.8
Incr Delay (d2), s/veh	1.2	0.0	0.2	0.3	0.1	1.5	0.0	0.5	0.1	1.1	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	0.0	1.4	1.7	1.8	8.9	0.6	14.9	1.0	4.3	11.4	2.1
LnGrp Delay(d),s/veh	69.8	0.0	64.6	58.0	55.3	63.6	7.7	13.6	8.6	13.7	11.2	8.1
LnGrp LOS	E		E	E	E	E	A	B	A	B	B	A
Approach Vol, veh/h		151			301			1426			1511	
Approach Delay, s/veh		68.6			61.5			13.2			11.3	
Approach LOS		E			E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	14.5	112.7	10.7	22.1	11.0	116.2		32.8
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0		6.0
Max Green Setting (Gmax), s	12.0	76.0	12.0	34.0	12.0	76.0		52.0
Max Q Clear Time (g_c+I1), s	7.4	32.3	5.5	15.0	3.3	25.1		22.3
Green Ext Time (p_c), s	0.1	12.4	0.0	0.5	0.0	10.8		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	19.1
HCM 2010 LOS	B

Timings
103: NW 80 Avenue & W. McNab Road

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	80	1260	157	1253	24	34	131	125	39
Future Volume (vph)	80	1260	157	1253	24	34	131	125	39
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	1	6	5	2	7	4		3	8
Permitted Phases	6		2		4		4	8	
Detector Phase	1	6	5	2	7	4	4	3	8
Switch Phase									
Minimum Initial (s)	4.0	10.0	4.0	10.0	4.0	6.0	6.0	4.0	6.0
Minimum Split (s)	11.0	38.0	11.0	38.0	10.0	41.0	41.0	11.0	39.0
Total Split (s)	20.0	74.0	20.0	74.0	24.0	42.0	42.0	24.0	42.0
Total Split (%)	12.5%	46.3%	12.5%	46.3%	15.0%	26.3%	26.3%	15.0%	26.3%
Yellow Time (s)	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	None	None	None	None	None
Act Effct Green (s)	115.5	105.4	119.7	107.5	18.1	10.2	10.2	30.4	22.7
Actuated g/C Ratio	0.72	0.66	0.75	0.67	0.11	0.06	0.06	0.19	0.14
v/c Ratio	0.32	0.41	0.52	0.46	0.16	0.31	0.61	0.49	0.29
Control Delay	9.1	14.2	11.7	13.6	53.1	77.2	21.6	61.9	20.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.1	14.2	11.7	13.6	53.1	77.2	21.6	61.9	20.3
LOS	A	B	B	B	D	E	C	E	C
Approach Delay		13.9		13.4		35.7			39.7
Approach LOS		B		B		D			D

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 134 (84%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 16.9	Intersection LOS: B
Intersection Capacity Utilization 61.3%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 103: NW 80 Avenue & W. McNab Road

Queues
103: NW 80 Avenue & W. McNab Road

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	85	1379	167	1542	26	36	139	133	153
v/c Ratio	0.32	0.41	0.52	0.46	0.16	0.31	0.61	0.49	0.29
Control Delay	9.1	14.2	11.7	13.6	53.1	77.2	21.6	61.9	20.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	9.1	14.2	11.7	13.6	53.1	77.2	21.6	61.9	20.3
Queue Length 50th (ft)	20	226	41	254	23	37	0	124	20
Queue Length 95th (ft)	43	339	79	367	49	76	71	182	55
Internal Link Dist (ft)		201		271		371			819
Turn Bay Length (ft)	190		180		160		220	150	
Base Capacity (vph)	329	3337	364	3349	288	442	475	288	824
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.41	0.46	0.46	0.09	0.08	0.29	0.46	0.19

Intersection Summary

HCM 2010 Signalized Intersection Summary
103: NW 80 Avenue & W. McNab Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	80	1260	37	157	1253	196	24	34	131	125	39	105
Future Volume (veh/h)	80	1260	37	157	1253	196	24	34	131	125	39	105
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		0.98	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	85	1340	39	167	1333	209	26	36	139	133	41	112
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	2	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	289	3149	92	348	2819	442	247	239	198	333	329	289
Arrive On Green	0.05	0.62	0.60	0.06	0.64	0.62	0.03	0.13	0.13	0.09	0.19	0.17
Sat Flow, veh/h	1774	5077	148	1774	4426	694	1774	1863	1548	1774	1770	1554
Grp Volume(v), veh/h	85	895	484	167	1021	521	26	36	139	133	41	112
Grp Sat Flow(s),veh/h/ln	1774	1695	1834	1774	1695	1730	1774	1863	1548	1774	1770	1554
Q Serve(g_s), s	2.7	21.8	21.9	5.2	25.0	25.4	2.0	2.7	13.8	10.0	3.1	10.2
Cycle Q Clear(g_c), s	2.7	21.8	21.9	5.2	25.0	25.4	2.0	2.7	13.8	10.0	3.1	10.2
Prop In Lane	1.00		0.08	1.00		0.40	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	289	2103	1138	348	2159	1101	247	239	198	333	329	289
V/C Ratio(X)	0.29	0.43	0.43	0.48	0.47	0.47	0.11	0.15	0.70	0.40	0.12	0.39
Avail Cap(c_a), veh/h	382	2103	1138	412	2159	1101	416	442	368	400	420	369
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.5	15.7	15.7	11.3	15.1	15.5	57.6	62.0	66.8	51.6	54.3	58.0
Incr Delay (d2), s/veh	0.2	0.6	1.2	0.4	0.7	1.5	0.1	0.1	1.7	0.3	0.1	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	10.4	11.4	2.5	11.9	12.6	1.0	1.4	6.0	4.9	1.5	4.4
LnGrp Delay(d),s/veh	11.7	16.3	16.9	11.7	15.8	16.9	57.7	62.1	68.5	51.9	54.3	58.4
LnGrp LOS	B	B	B	B	B	B	E	E	E	D	D	E
Approach Vol, veh/h		1464			1709			201			286	
Approach Delay, s/veh		16.2			15.8			66.0			54.8	
Approach LOS		B			B			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.6	105.9	18.0	24.5	14.2	103.2	8.7	33.8
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0	6.0	6.0
Max Green Setting (Gmax), s	13.0	67.0	18.0	36.0	13.0	67.0	18.0	36.0
Max Q Clear Time (g_c+I1), s	4.7	27.4	12.0	15.8	7.2	23.9	4.0	12.2
Green Ext Time (p_c), s	0.0	13.5	0.0	0.3	0.1	11.4	0.0	0.6

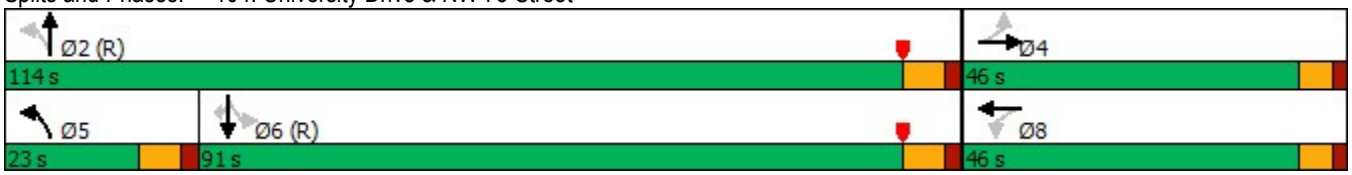
Intersection Summary	
HCM 2010 Ctrl Delay	21.8
HCM 2010 LOS	C

Timings
104: University Drive & NW 78 Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	99	0	9	2	253	1802	4	1652	124
Future Volume (vph)	99	0	9	2	253	1802	4	1652	124
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	NA	Perm
Protected Phases		4		8	5	2		6	
Permitted Phases	4		8		2		6		6
Detector Phase	4	4	8	8	5	2	6	6	6
Switch Phase									
Minimum Initial (s)	6.0	6.0	6.0	6.0	4.0	15.0	15.0	15.0	15.0
Minimum Split (s)	24.0	24.0	46.0	46.0	11.0	25.0	32.0	32.0	32.0
Total Split (s)	46.0	46.0	46.0	46.0	23.0	114.0	91.0	91.0	91.0
Total Split (%)	28.8%	28.8%	28.8%	28.8%	14.4%	71.3%	56.9%	56.9%	56.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag					Lead		Lag	Lag	Lag
Lead-Lag Optimize?					Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	19.4	19.4	19.4	19.4	132.6	132.6	94.5	94.5	94.5
Actuated g/C Ratio	0.12	0.12	0.12	0.12	0.83	0.83	0.59	0.59	0.59
v/c Ratio	0.67	0.46	0.14	0.01	0.65	0.49	0.05	0.63	0.15
Control Delay	85.2	9.1	63.9	57.5	43.9	4.8	18.0	23.2	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.2	9.1	63.9	57.5	43.9	4.8	18.0	23.2	8.0
LOS	F	A	E	E	D	A	B	C	A
Approach Delay		40.6		62.8		9.6		22.1	
Approach LOS		D		E		A		C	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 58 (36%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 100	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.67	
Intersection Signal Delay: 17.0	Intersection LOS: B
Intersection Capacity Utilization 69.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 104: University Drive & NW 78 Street



Queues
104: University Drive & NW 78 Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	114	161	10	2	291	2081	5	1899	143
v/c Ratio	0.67	0.46	0.14	0.01	0.65	0.49	0.05	0.63	0.15
Control Delay	85.2	9.1	63.9	57.5	43.9	4.8	18.0	23.2	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.2	9.1	63.9	57.5	43.9	4.8	18.0	23.2	8.0
Queue Length 50th (ft)	116	0	10	2	198	192	2	449	29
Queue Length 95th (ft)	172	40	28	10	297	267	10	538	66
Internal Link Dist (ft)		290		265		388		380	
Turn Bay Length (ft)					180		160		160
Base Capacity (vph)	369	549	158	489	447	4207	95	3003	939
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.31	0.29	0.06	0.00	0.65	0.49	0.05	0.63	0.15

Intersection Summary

HCM 2010 Signalized Intersection Summary
104: University Drive & NW 78 Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	99	0	140	9	2	0	253	1802	9	4	1652	124
Future Volume (veh/h)	99	0	140	9	2	0	253	1802	9	4	1652	124
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		0.98	1.00		0.97
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	114	0	161	10	2	0	291	2071	10	5	1899	143
Adj No. of Lanes	1	1	0	1	1	0	1	3	0	1	3	1
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	244	0	224	99	265	0	338	4218	20	178	3423	1039
Arrive On Green	0.14	0.00	0.13	0.14	0.14	0.00	0.11	0.81	0.79	0.67	0.67	0.67
Sat Flow, veh/h	1403	0	1576	1217	1863	0	1774	5223	25	198	5085	1543
Grp Volume(v), veh/h	114	0	161	10	2	0	291	1344	737	5	1899	143
Grp Sat Flow(s),veh/h/ln	1403	0	1576	1217	1863	0	1774	1695	1858	198	1695	1543
Q Serve(g_s), s	12.1	0.0	15.7	1.3	0.1	0.0	12.5	20.2	20.3	1.4	31.2	5.3
Cycle Q Clear(g_c), s	12.3	0.0	15.7	17.0	0.1	0.0	12.5	20.2	20.3	1.4	31.2	5.3
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	244	0	224	99	265	0	338	2738	1500	178	3423	1039
V/C Ratio(X)	0.47	0.00	0.72	0.10	0.01	0.00	0.86	0.49	0.49	0.03	0.55	0.14
Avail Cap(c_a), veh/h	412	0	414	245	489	0	354	2738	1500	178	3423	1039
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.2	0.0	66.5	73.7	58.9	0.0	36.8	4.9	4.9	8.8	13.7	9.4
Incr Delay (d2), s/veh	0.5	0.0	1.6	0.2	0.0	0.0	17.4	0.6	1.2	0.3	0.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	0.0	6.9	0.4	0.1	0.0	14.1	9.6	10.7	0.1	14.8	2.3
LnGrp Delay(d),s/veh	64.7	0.0	68.1	73.8	58.9	0.0	54.2	5.5	6.1	9.1	14.3	9.7
LnGrp LOS	E		E	E	E		D	A	A	A	B	A
Approach Vol, veh/h		275			12			2372			2047	
Approach Delay, s/veh		66.7			71.3			11.7			14.0	
Approach LOS		E			E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		133.2		26.8	21.5	111.7		26.8
Change Period (Y+Rc), s		7.0		6.0	7.0	7.0		6.0
Max Green Setting (Gmax), s		107.0		40.0	16.0	84.0		40.0
Max Q Clear Time (g_c+I1), s		22.3		17.7	14.5	33.2		19.0
Green Ext Time (p_c), s		27.7		0.8	0.0	23.4		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	16.0
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	3.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	113	43	56	230	175	88
Future Vol, veh/h	113	43	56	230	175	88
Conflicting Peds, #/hr	3	0	3	0	0	3
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	89	89	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	127	48	63	258	197	99

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	508	151	299	0	-	0
Stage 1	250	-	-	-	-	-
Stage 2	258	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	494	868	1259	-	-	-
Stage 1	768	-	-	-	-	-
Stage 2	761	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	462	866	1255	-	-	-
Mov Cap-2 Maneuver	462	-	-	-	-	-
Stage 1	720	-	-	-	-	-
Stage 2	759	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	14	1.7	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1255	-	462	866	-	-
HCM Lane V/C Ratio	0.05	-	0.275	0.056	-	-
HCM Control Delay (s)	8	0.2	15.7	9.4	-	-
HCM Lane LOS	A	A	C	A	-	-
HCM 95th %tile Q(veh)	0.2	-	1.1	0.2	-	-

Intersection	
Intersection Delay, s/veh	11
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	11	10	5	120	16	109	6	221	131	87	174	14
Future Vol, veh/h	11	10	5	120	16	109	6	221	131	87	174	14
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	12	11	5	128	17	116	6	235	139	93	185	15
Number of Lanes	0	1	0	1	1	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	10.2	10.8	11.1	11
HCM LOS	B	B	B	B

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	5%	0%	42%	100%	0%	50%	0%
Vol Thru, %	95%	46%	38%	0%	13%	50%	86%
Vol Right, %	0%	54%	19%	0%	87%	0%	14%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	117	242	26	120	125	174	101
LT Vol	6	0	11	120	0	87	0
Through Vol	111	111	10	0	16	87	87
RT Vol	0	131	5	0	109	0	14
Lane Flow Rate	124	257	28	128	133	185	107
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.202	0.388	0.052	0.242	0.21	0.317	0.173
Departure Headway (Hd)	5.854	5.443	6.735	6.821	5.697	6.163	5.811
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	613	660	531	527	630	583	618
Service Time	3.585	3.175	4.783	4.557	3.433	3.896	3.545
HCM Lane V/C Ratio	0.202	0.389	0.053	0.243	0.211	0.317	0.173
HCM Control Delay	10.1	11.6	10.2	11.7	10	11.7	9.8
HCM Lane LOS	B	B	B	B	A	B	A
HCM 95th-tile Q	0.8	1.8	0.2	0.9	0.8	1.4	0.6

Intersection	
Int Delay, s/veh	1.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	40	19	20	323	256	43
Future Vol, veh/h	40	19	20	323	256	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	160	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	43	21	22	351	278	47

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	522	163	325	0	-	0
Stage 1	302	-	-	-	-	-
Stage 2	220	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	484	853	1231	-	-	-
Stage 1	724	-	-	-	-	-
Stage 2	795	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	475	853	1231	-	-	-
Mov Cap-2 Maneuver	475	-	-	-	-	-
Stage 1	711	-	-	-	-	-
Stage 2	795	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	12	0.5	0
HCM LOS	B		

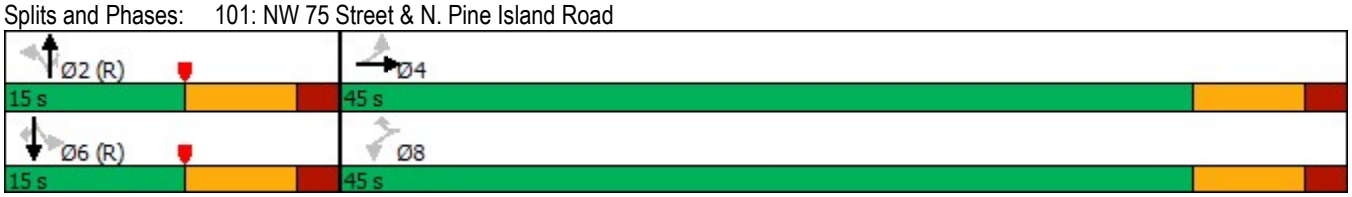
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1231	-	475	853	-	-
HCM Lane V/C Ratio	0.018	-	0.092	0.024	-	-
HCM Control Delay (s)	8	-	13.3	9.3	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.3	0.1	-	-

Timings
101: NW 75 Street & N. Pine Island Road

Lane Group	EBT	WBL	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	1	62	46	1	814	75	46	855
Future Volume (vph)	1	62	46	1	814	75	46	855
Turn Type	NA	Perm	Perm	Perm	NA	Perm	Perm	NA
Protected Phases	4				2			6
Permitted Phases		8	8	2		2	6	
Detector Phase	4	8	8	2	2	2	6	6
Switch Phase								
Minimum Initial (s)	7.0	38.0	38.0	7.0	7.0	7.0	8.0	8.0
Minimum Split (s)	45.0	45.0	45.0	15.0	15.0	15.0	15.0	15.0
Total Split (s)	45.0	45.0	45.0	15.0	15.0	15.0	15.0	15.0
Total Split (%)	75.0%	75.0%	75.0%	25.0%	25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	C-Max	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	28.6	41.0	41.0	30.6	30.6	30.6	30.6	30.6
Actuated g/C Ratio	0.48	0.68	0.68	0.51	0.51	0.51	0.51	0.51
v/c Ratio	0.00	0.07	0.04	0.01	0.49	0.10	0.22	0.51
Control Delay	2.8	3.4	0.7	20.0	26.8	6.6	30.0	27.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.8	3.4	0.7	20.0	26.8	6.6	30.0	27.5
LOS	A	A	A	B	C	A	C	C
Approach Delay	2.8				25.1			27.7
Approach LOS	A				C			C

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 60	
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 65	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.51	
Intersection Signal Delay: 25.0	Intersection LOS: C
Intersection Capacity Utilization 70.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 101: NW 75 Street & N. Pine Island Road



Queues
101: NW 75 Street & N. Pine Island Road

Lane Group	EBT	WBL	WBR	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	4	67	49	1	875	81	49	919
v/c Ratio	0.00	0.07	0.04	0.01	0.49	0.10	0.22	0.51
Control Delay	2.8	3.4	0.7	20.0	26.8	6.6	30.0	27.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	2.8	3.4	0.7	20.0	26.8	6.6	30.0	27.5
Queue Length 50th (ft)	0	6	0	0	~225	0	17	~243
Queue Length 95th (ft)	2	16	5	4	#328	30	#66	#348
Internal Link Dist (ft)	618				536			2010
Turn Bay Length (ft)				160		160	200	
Base Capacity (vph)	1172	960	1091	200	1804	847	218	1804
Starvation Cap Reductn	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.00	0.07	0.04	0.01	0.49	0.10	0.22	0.51

Intersection Summary

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

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

HCM Signalized Intersection Capacity Analysis
101: NW 75 Street & N. Pine Island Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	1	1	2	62	0	46	1	814	75	46	855	0
Future Volume (vph)	1	1	2	62	0	46	1	814	75	46	855	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		4.0		4.0		4.0	4.0	4.0	4.0	4.0	4.0	
Lane Util. Factor		1.00		1.00		1.00	1.00	0.95	1.00	1.00	0.95	
Frpb, ped/bikes		1.00		1.00		0.99	1.00	1.00	1.00	1.00	1.00	
Flpb, ped/bikes		1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00	
Frt		0.93		1.00		0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.99		0.95		1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1715		1770		1563	1769	3539	1583	1770	3539	
Flt Permitted		0.99		0.76		1.00	0.21	1.00	1.00	0.23	1.00	
Satd. Flow (perm)		1715		1407		1563	392	3539	1583	429	3539	
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)	1	1	2	67	0	49	1	875	81	49	919	0
RTOR Reduction (vph)	0	1	0	0	0	28	0	0	46	0	0	0
Lane Group Flow (vph)	0	3	0	67	0	21	1	875	35	49	919	0
Confl. Peds. (#/hr)	1					1	2					2
Turn Type	Perm	NA		Perm		Perm	Perm	NA	Perm	Perm	NA	Perm
Protected Phases		4						2			6	
Permitted Phases	4			8		8	2		2	6		6
Actuated Green, G (s)		22.8		22.8		22.8	23.2	23.2	23.2	23.2	23.2	
Effective Green, g (s)		25.8		25.8		25.8	26.2	26.2	26.2	26.2	26.2	
Actuated g/C Ratio		0.43		0.43		0.43	0.44	0.44	0.44	0.44	0.44	
Clearance Time (s)		7.0		7.0		7.0	7.0	7.0	7.0	7.0	7.0	
Vehicle Extension (s)		1.0		1.0		1.0	1.0	1.0	1.0	1.0	1.0	
Lane Grp Cap (vph)		737		605		672	171	1545	691	187	1545	
v/s Ratio Prot								0.25			c0.26	
v/s Ratio Perm		0.00		c0.05		0.01	0.00		0.02	0.11		
v/c Ratio		0.00		0.11		0.03	0.01	0.57	0.05	0.26	0.59	
Uniform Delay, d1		9.8		10.2		9.9	9.5	12.6	9.7	10.8	12.9	
Progression Factor		1.00		1.00		1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.0		0.0		0.0	0.1	1.5	0.1	3.4	1.7	
Delay (s)		9.8		10.3		9.9	9.6	14.2	9.9	14.1	14.6	
Level of Service		A		B		A	A	B	A	B	B	
Approach Delay (s)		9.8			10.1			13.8			14.5	
Approach LOS		A			B			B			B	

Intersection Summary			
HCM 2000 Control Delay	13.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.38		
Actuated Cycle Length (s)	60.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	70.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

HCM 2010 Research does not support Non-NEMA phasing.

Timings
102: N. Pine Island Road & NW 81 Street

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	48	26	37	21	35	142	29	734	33	124	756	110
Future Volume (vph)	48	26	37	21	35	142	29	734	33	124	756	110
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm
Protected Phases		4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		6
Detector Phase	4	4	4	3	8	8	5	2	2	1	6	6
Switch Phase												
Minimum Initial (s)	6.0	6.0	6.0	4.0	6.0	6.0	4.0	10.0	10.0	4.0	10.0	10.0
Minimum Split (s)	37.0	37.0	37.0	11.0	37.0	37.0	19.0	37.0	37.0	19.0	57.0	57.0
Total Split (s)	44.0	44.0	44.0	20.0	64.0	64.0	21.0	75.0	75.0	21.0	75.0	75.0
Total Split (%)	27.5%	27.5%	27.5%	12.5%	40.0%	40.0%	13.1%	46.9%	46.9%	13.1%	46.9%	46.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		-2.0	-2.0	-2.0	-2.0	-2.0	-3.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)		4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes			Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	None	C-Max	C-Max	None	C-Max	C-Max
Act Effct Green (s)		14.5	14.5	22.1	22.1	22.1	123.9	116.3	116.3	128.6	120.5	120.5
Actuated g/C Ratio		0.09	0.09	0.14	0.14	0.14	0.77	0.73	0.73	0.80	0.75	0.75
v/c Ratio		0.58	0.15	0.13	0.14	0.43	0.06	0.29	0.03	0.23	0.29	0.10
Control Delay		86.0	1.3	56.3	56.8	11.4	4.9	9.2	0.0	5.1	8.1	1.8
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay		86.0	1.3	56.3	56.8	11.4	4.9	9.2	0.0	5.1	8.1	1.8
LOS		F	A	E	E	B	A	A	A	A	A	A
Approach Delay		57.7			24.2			8.7			7.0	
Approach LOS		E			C			A			A	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 81 (51%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 125	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.58	
Intersection Signal Delay: 11.9	Intersection LOS: B
Intersection Capacity Utilization 49.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 102: N. Pine Island Road & NW 81 Street

Queues
102: N. Pine Island Road & NW 81 Street

Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	76	38	22	36	146	30	757	34	128	779	113
v/c Ratio	0.58	0.15	0.13	0.14	0.43	0.06	0.29	0.03	0.23	0.29	0.10
Control Delay	86.0	1.3	56.3	56.8	11.4	4.9	9.2	0.0	5.1	8.1	1.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.0	1.3	56.3	56.8	11.4	4.9	9.2	0.0	5.1	8.1	1.8
Queue Length 50th (ft)	78	0	20	33	0	6	147	0	27	144	1
Queue Length 95th (ft)	133	0	46	65	61	17	221	0	54	212	24
Internal Link Dist (ft)	409			578			2010			316	
Turn Bay Length (ft)		100	200		130	190		250	200		200
Base Capacity (vph)	364	482	221	698	677	631	2571	1180	617	2665	1182
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.21	0.08	0.10	0.05	0.22	0.05	0.29	0.03	0.21	0.29	0.10

Intersection Summary

HCM 2010 Signalized Intersection Summary
102: N. Pine Island Road & NW 81 Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	26	37	21	35	142	29	734	33	124	756	110
Future Volume (veh/h)	48	26	37	21	35	142	29	734	33	124	756	110
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		0.99	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863
Adj Flow Rate, veh/h	49	27	38	22	36	146	30	757	34	128	779	113
Adj No. of Lanes	0	1	1	1	1	1	1	2	1	1	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	106	42	127	131	248	208	543	2633	1175	590	2647	1157
Arrive On Green	0.08	0.08	0.08	0.03	0.13	0.13	0.04	0.74	0.74	0.05	0.75	0.75
Sat Flow, veh/h	862	522	1583	1774	1863	1562	1774	3539	1579	1774	3539	1547
Grp Volume(v), veh/h	76	0	38	22	36	146	30	757	34	128	779	113
Grp Sat Flow(s),veh/h/ln	1383	0	1583	1774	1863	1562	1774	1770	1579	1774	1770	1547
Q Serve(g_s), s	8.2	0.0	3.6	1.8	2.7	14.3	0.6	11.2	0.9	2.6	11.4	3.2
Cycle Q Clear(g_c), s	8.5	0.0	3.6	1.8	2.7	14.3	0.6	11.2	0.9	2.6	11.4	3.2
Prop In Lane	0.64		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	148	0	127	131	248	208	543	2633	1175	590	2647	1157
V/C Ratio(X)	0.51	0.00	0.30	0.17	0.14	0.70	0.06	0.29	0.03	0.22	0.29	0.10
Avail Cap(c_a), veh/h	381	0	396	258	699	586	654	2633	1175	693	2647	1157
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	1.00	0.89	0.89	0.89	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.5	0.0	69.3	63.0	61.3	66.3	4.1	6.7	5.4	4.2	6.5	5.5
Incr Delay (d2), s/veh	1.0	0.0	0.5	0.2	0.1	1.6	0.0	0.2	0.0	0.1	0.3	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.3	0.0	1.6	0.9	1.4	6.3	0.3	5.5	0.4	1.2	5.6	1.4
LnGrp Delay(d),s/veh	72.6	0.0	69.8	63.2	61.4	67.9	4.1	6.9	5.4	4.3	6.8	5.7
LnGrp LOS	E		E	E	E	E	A	A	A	A	A	A
Approach Vol, veh/h		114			204			821			1020	
Approach Delay, s/veh		71.6			66.2			6.8			6.4	
Approach LOS		E			E			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	11.6	123.0	8.5	16.8	11.0	123.7		25.3
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0		6.0
Max Green Setting (Gmax), s	14.0	68.0	14.0	38.0	14.0	68.0		58.0
Max Q Clear Time (g_c+I1), s	4.6	13.2	3.8	10.5	2.6	13.4		16.3
Green Ext Time (p_c), s	0.1	5.6	0.0	0.3	0.0	6.2		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	15.6
HCM 2010 LOS	B

Timings
103: NW 80 Avenue & W. McNab Road

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	61	659	121	664	39	21	88	97	37
Future Volume (vph)	61	659	121	664	39	21	88	97	37
Turn Type	pm+pt	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	1	6	5	2	7	4		3	8
Permitted Phases	6		2		4		4	8	
Detector Phase	1	6	5	2	7	4	4	3	8
Switch Phase									
Minimum Initial (s)	4.0	10.0	4.0	10.0	4.0	6.0	6.0	4.0	6.0
Minimum Split (s)	11.0	38.0	11.0	38.0	10.0	41.0	41.0	11.0	39.0
Total Split (s)	23.0	68.0	23.0	68.0	24.0	45.0	45.0	24.0	45.0
Total Split (%)	14.4%	42.5%	14.4%	42.5%	15.0%	28.1%	28.1%	15.0%	28.1%
Yellow Time (s)	5.0	5.0	5.0	5.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-3.0	-3.0	-3.0	-3.0	-2.0	-2.0	-2.0	-2.0	-2.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	None	C-Max	None	None	None	None	None
Act Effct Green (s)	119.2	110.8	122.2	112.3	18.1	8.9	8.9	27.3	16.1
Actuated g/C Ratio	0.74	0.69	0.76	0.70	0.11	0.06	0.06	0.17	0.10
v/c Ratio	0.14	0.21	0.23	0.25	0.24	0.22	0.48	0.44	0.27
Control Delay	5.4	9.5	5.7	8.9	58.2	76.9	14.5	63.3	30.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.4	9.5	5.7	8.9	58.2	76.9	14.5	63.3	30.4
LOS	A	A	A	A	E	E	B	E	C
Approach Delay		9.1		8.5		35.0			47.0
Approach LOS		A		A		C			D

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 132 (83%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow	
Natural Cycle: 105	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.48	
Intersection Signal Delay: 14.4	Intersection LOS: B
Intersection Capacity Utilization 51.3%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 103: NW 80 Avenue & W. McNab Road

Queues
103: NW 80 Avenue & W. McNab Road

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	66	734	130	859	42	23	95	104	102
v/c Ratio	0.14	0.21	0.23	0.25	0.24	0.22	0.48	0.44	0.27
Control Delay	5.4	9.5	5.7	8.9	58.2	76.9	14.5	63.3	30.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	5.4	9.5	5.7	8.9	58.2	76.9	14.5	63.3	30.4
Queue Length 50th (ft)	14	92	28	104	38	24	0	98	21
Queue Length 95th (ft)	31	135	56	149	73	55	39	152	51
Internal Link Dist (ft)		201		271		371			819
Turn Bay Length (ft)	190		180		160		220	150	
Base Capacity (vph)	584	3504	629	3480	273	477	484	265	870
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.11	0.21	0.21	0.25	0.15	0.05	0.20	0.39	0.12

Intersection Summary

HCM 2010 Signalized Intersection Summary
103: NW 80 Avenue & W. McNab Road

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	659	23	121	664	135	39	21	88	97	37	58
Future Volume (veh/h)	61	659	23	121	664	135	39	21	88	97	37	58
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.99	1.00		0.99	0.99		0.99	0.99		0.99
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	66	709	25	130	714	145	42	23	95	104	40	62
Adj No. of Lanes	1	3	0	1	3	0	1	1	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	504	3315	117	574	2838	569	259	212	178	306	261	231
Arrive On Green	0.04	0.66	0.64	0.05	0.67	0.65	0.04	0.11	0.11	0.07	0.15	0.14
Sat Flow, veh/h	1774	5042	177	1774	4239	851	1774	1863	1562	1774	1770	1566
Grp Volume(v), veh/h	66	476	258	130	569	290	42	23	95	104	40	62
Grp Sat Flow(s),veh/h/ln	1774	1695	1829	1774	1695	1699	1774	1863	1562	1774	1770	1566
Q Serve(g_s), s	1.9	8.9	9.0	3.6	10.7	11.1	3.3	1.8	9.2	8.0	3.2	5.7
Cycle Q Clear(g_c), s	1.9	8.9	9.0	3.6	10.7	11.1	3.3	1.8	9.2	8.0	3.2	5.7
Prop In Lane	1.00		0.10	1.00		0.50	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	504	2229	1203	574	2270	1138	259	212	178	306	261	231
V/C Ratio(X)	0.13	0.21	0.21	0.23	0.25	0.25	0.16	0.11	0.53	0.34	0.15	0.27
Avail Cap(c_a), veh/h	640	2229	1203	688	2270	1138	409	477	400	396	453	401
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	7.8	10.9	11.0	7.5	10.5	10.9	58.6	63.6	66.9	54.4	59.5	61.4
Incr Delay (d2), s/veh	0.0	0.2	0.4	0.1	0.3	0.5	0.1	0.1	0.9	0.2	0.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	4.2	4.7	1.7	5.1	5.3	1.6	0.9	4.0	3.9	1.6	2.5
LnGrp Delay(d),s/veh	7.8	11.1	11.4	7.5	10.8	11.4	58.7	63.7	67.8	54.6	59.6	61.7
LnGrp LOS	A	B	B	A	B	B	E	E	E	D	E	E
Approach Vol, veh/h		800			989			160			206	
Approach Delay, s/veh		10.9			10.5			64.9			57.7	
Approach LOS		B			B			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.8	111.1	15.9	22.2	12.7	109.2	10.5	27.6
Change Period (Y+Rc), s	7.0	7.0	6.0	6.0	7.0	7.0	6.0	6.0
Max Green Setting (Gmax), s	16.0	61.0	18.0	39.0	16.0	61.0	18.0	39.0
Max Q Clear Time (g_c+I1), s	3.9	13.1	10.0	11.2	5.6	11.0	5.3	7.7
Green Ext Time (p_c), s	0.0	6.0	0.0	0.2	0.1	4.8	0.0	0.4

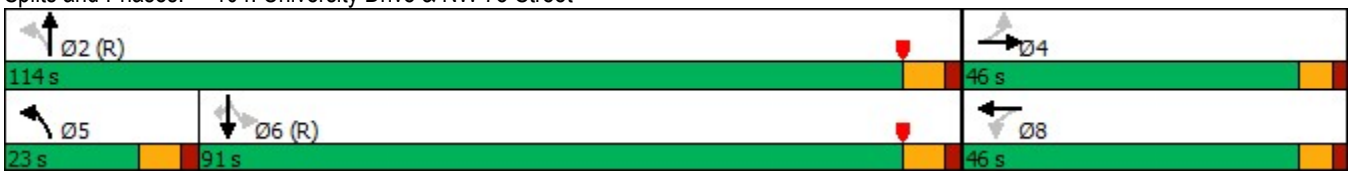
Intersection Summary	
HCM 2010 Ctrl Delay	19.2
HCM 2010 LOS	B

Timings
104: University Drive & NW 78 Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	69	0	2	2	206	1498	1	1442	99
Future Volume (vph)	69	0	2	2	206	1498	1	1442	99
Turn Type	Perm	NA	Perm	NA	pm+pt	NA	Perm	NA	Perm
Protected Phases		4		8	5	2		6	
Permitted Phases	4		8		2		6		6
Detector Phase	4	4	8	8	5	2	6	6	6
Switch Phase									
Minimum Initial (s)	6.0	6.0	6.0	6.0	4.0	15.0	15.0	15.0	15.0
Minimum Split (s)	24.0	24.0	46.0	46.0	11.0	25.0	32.0	32.0	32.0
Total Split (s)	46.0	46.0	46.0	46.0	23.0	114.0	91.0	91.0	91.0
Total Split (%)	28.8%	28.8%	28.8%	28.8%	14.4%	71.3%	56.9%	56.9%	56.9%
Yellow Time (s)	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	-2.0	-2.0	-2.0	-2.0	-3.0	-3.0	-3.0	-3.0	-3.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag					Lead		Lag	Lag	Lag
Lead-Lag Optimize?					Yes		Yes	Yes	Yes
Recall Mode	None	None	None	None	None	C-Max	C-Max	C-Max	C-Max
Act Effct Green (s)	14.6	14.6	14.6	14.6	137.4	137.4	120.2	120.2	120.2
Actuated g/C Ratio	0.09	0.09	0.09	0.09	0.86	0.86	0.75	0.75	0.75
v/c Ratio	0.56	0.36	0.03	0.01	0.62	0.36	0.00	0.39	0.09
Control Delay	85.3	3.2	64.0	62.5	12.8	2.7	8.0	8.2	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.3	3.2	64.0	62.5	12.8	2.7	8.0	8.2	3.1
LOS	F	A	E	E	B	A	A	A	A
Approach Delay		34.4		63.3		4.0		7.9	
Approach LOS		C		E		A		A	

Intersection Summary	
Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 148 (93%), Referenced to phase 2:NBTL and 6:SBTL, Start of Yellow	
Natural Cycle: 90	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.62	
Intersection Signal Delay: 7.4	Intersection LOS: A
Intersection Capacity Utilization 62.0%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 104: University Drive & NW 78 Street



Queues
104: University Drive & NW 78 Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Group Flow (vph)	72	117	2	2	215	1563	1	1502	103
v/c Ratio	0.56	0.36	0.03	0.01	0.62	0.36	0.00	0.39	0.09
Control Delay	85.3	3.2	64.0	62.5	12.8	2.7	8.0	8.2	3.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.3	3.2	64.0	62.5	12.8	2.7	8.0	8.2	3.1
Queue Length 50th (ft)	74	0	2	2	28	95	0	175	8
Queue Length 95th (ft)	126	0	11	11	90	144	3	290	34
Internal Link Dist (ft)		290		265		388		380	
Turn Bay Length (ft)					180		160		160
Base Capacity (vph)	370	560	194	489	406	4366	212	3819	1170
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.19	0.21	0.01	0.00	0.53	0.36	0.00	0.39	0.09

Intersection Summary

HCM 2010 Signalized Intersection Summary
104: University Drive & NW 78 Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	0	112	2	2	0	206	1498	3	1	1442	99
Future Volume (veh/h)	69	0	112	2	2	0	206	1498	3	1	1442	99
Number	7	4	14	3	8	18	5	2	12	1	6	16
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		0.98
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1900	1863	1863	1863
Adj Flow Rate, veh/h	72	0	117	2	2	0	215	1560	3	1	1502	103
Adj No. of Lanes	1	1	0	1	1	0	1	3	0	1	3	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	185	0	159	81	187	0	354	4453	9	298	3916	1192
Arrive On Green	0.10	0.00	0.09	0.10	0.10	0.00	0.05	0.85	0.83	0.77	0.77	0.77
Sat Flow, veh/h	1409	0	1583	1270	1863	0	1774	5241	10	328	5085	1548
Grp Volume(v), veh/h	72	0	117	2	2	0	215	1009	554	1	1502	103
Grp Sat Flow(s),veh/h/ln	1409	0	1583	1270	1863	0	1774	1695	1861	328	1695	1548
Q Serve(g_s), s	7.8	0.0	11.5	0.2	0.2	0.0	3.6	10.2	10.2	0.1	15.4	2.6
Cycle Q Clear(g_c), s	7.9	0.0	11.5	11.8	0.2	0.0	3.6	10.2	10.2	0.1	15.4	2.6
Prop In Lane	1.00		1.00	1.00		0.00	1.00		0.01	1.00		1.00
Lane Grp Cap(c), veh/h	185	0	159	81	187	0	354	2880	1581	298	3916	1192
V/C Ratio(X)	0.39	0.00	0.74	0.02	0.01	0.00	0.61	0.35	0.35	0.00	0.38	0.09
Avail Cap(c_a), veh/h	414	0	416	287	489	0	468	2880	1581	298	3916	1192
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.4	0.0	70.9	75.6	64.8	0.0	5.4	2.6	2.6	4.2	6.0	4.5
Incr Delay (d2), s/veh	0.5	0.0	2.5	0.0	0.0	0.0	0.6	0.3	0.6	0.0	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	0.0	5.2	0.1	0.1	0.0	3.2	4.8	5.3	0.0	7.2	1.2
LnGrp Delay(d),s/veh	68.9	0.0	73.4	75.7	64.8	0.0	6.0	2.9	3.2	4.3	6.3	4.7
LnGrp LOS	E		E	E	E		A	A	A	A	A	A
Approach Vol, veh/h		189			4			1778			1606	
Approach Delay, s/veh		71.7			70.3			3.4			6.2	
Approach LOS		E			E			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		139.9		20.1	12.7	127.2		20.1
Change Period (Y+Rc), s		7.0		6.0	7.0	7.0		6.0
Max Green Setting (Gmax), s		107.0		40.0	16.0	84.0		40.0
Max Q Clear Time (g_c+I1), s		12.2		13.5	5.6	17.4		13.8
Green Ext Time (p_c), s		15.1		0.5	0.1	16.1		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	8.3
HCM 2010 LOS	A

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	72	44	42	141	107	67
Future Vol, veh/h	72	44	42	141	107	67
Conflicting Peds, #/hr	3	0	1	0	0	1
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	91	91	91	91	91	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	79	48	46	155	118	74

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	329	97	193	0	-	0
Stage 1	156	-	-	-	-	-
Stage 2	173	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	640	940	1378	-	-	-
Stage 1	856	-	-	-	-	-
Stage 2	840	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	615	939	1377	-	-	-
Mov Cap-2 Maneuver	615	-	-	-	-	-
Stage 1	823	-	-	-	-	-
Stage 2	839	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.7	1.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1377	-	615	939	-	-
HCM Lane V/C Ratio	0.034	-	0.129	0.051	-	-
HCM Control Delay (s)	7.7	0.1	11.7	9	-	-
HCM Lane LOS	A	A	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.4	0.2	-	-

Intersection	
Intersection Delay, s/veh	9.4
Intersection LOS	A

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	16	11	6	109	12	68	4	125	106	68	94	11
Future Vol, veh/h	16	11	6	109	12	68	4	125	106	68	94	11
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	17	12	6	116	13	72	4	133	113	72	100	12
Number of Lanes	0	1	0	1	1	0	0	2	0	0	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	2	1	2	2
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	2	2	1	2
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	2	2	2	1
HCM Control Delay	9.3	9.6	9.2	9.5
HCM LOS	A	A	A	A

Lane	NBLn1	NBLn2	EBLn1	WBLn1	WBLn2	SBLn1	SBLn2
Vol Left, %	6%	0%	48%	100%	0%	59%	0%
Vol Thru, %	94%	37%	33%	0%	15%	41%	81%
Vol Right, %	0%	63%	18%	0%	85%	0%	19%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	67	169	33	109	80	115	58
LT Vol	4	0	16	109	0	68	0
Through Vol	63	63	11	0	12	47	47
RT Vol	0	106	6	0	68	0	11
Lane Flow Rate	71	179	35	116	85	122	62
Geometry Grp	7	7	6	7	7	7	7
Degree of Util (X)	0.107	0.246	0.057	0.198	0.119	0.195	0.091
Departure Headway (Hd)	5.421	4.947	5.87	6.135	5.033	5.737	5.305
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	658	722	604	582	706	621	671
Service Time	3.183	2.708	3.963	3.908	2.805	3.504	3.072
HCM Lane V/C Ratio	0.108	0.248	0.058	0.199	0.12	0.196	0.092
HCM Control Delay	8.8	9.3	9.3	10.4	8.5	9.9	8.6
HCM Lane LOS	A	A	A	B	A	A	A
HCM 95th-tile Q	0.4	1	0.2	0.7	0.4	0.7	0.3

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	44	20	22	190	149	45
Future Vol, veh/h	44	20	22	190	149	45
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	160	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	48	22	24	207	162	49

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	339	106	211	0	-	0
Stage 1	187	-	-	-	-	-
Stage 2	152	-	-	-	-	-
Critical Hdwy	6.84	6.94	4.14	-	-	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3.52	3.32	2.22	-	-	-
Pot Cap-1 Maneuver	631	928	1357	-	-	-
Stage 1	826	-	-	-	-	-
Stage 2	860	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	620	928	1357	-	-	-
Mov Cap-2 Maneuver	620	-	-	-	-	-
Stage 1	811	-	-	-	-	-
Stage 2	860	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	10.6	0.8	0
HCM LOS	B		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	EBLn2	SBT	SBR
Capacity (veh/h)	1357	-	620	928	-	-
HCM Lane V/C Ratio	0.018	-	0.077	0.023	-	-
HCM Control Delay (s)	7.7	-	11.3	9	-	-
HCM Lane LOS	A	-	B	A	-	-
HCM 95th %tile Q(veh)	0.1	-	0.2	0.1	-	-