



First Baptist Church of Southwest Broward

Cooper City, Florida 33024

prepared for:

F.L. McMurtrey Construction, Inc

traffic study (school expansion)



August 29, 2022

TRAFTECH
ENGINEERING, INC.

November 2021

November 22, 2021

Mr. Fred McMurtrey
F.L. McMurtrey Construction, Inc.
5399 NE 14th Avenue, Bay 5
Ft. Lauderdale, Florida 33334

Re: First Baptist Church of Southwest Broward – Traffic Study (School Expansion)

Dear Fred:

Traf Tech Engineering, Inc. is pleased to provide you with the results of the traffic evaluation associated with proposed expansion of the private school located at 2700 N Palm Avenue in the City of Cooper City in Broward County, Florida.

Project Description and Access

There is an existing school at the site with 190 students. The proposed expansion of the existing education facility consists of the construction of a new separate building to house 200 additional students (K-8). The new school is anticipated to be built and occupied by the Fall of 2022. The site will be served by a full access driveway on Palm Avenue. Appendix A contains the proposed site plan. The following tasks were undertaken as part of this evaluation:

- o Documented the existing lane geometry of the study area. Four (4) intersections were identified as the locations that will be impacted the most by the proposed school expansion project. These four intersections include Palm Avenue at Stirling Road, at the Brian Piccolo Park entrance, at the project driveway, and at the Sheridan Street. Figure 1 illustrates the existing lane geometry of the four study intersections.
- o Collected intersection turning movement counts during the critical peak periods (7:00 AM to 9:00 AM) and (2:00 PM to 4:00 PM) at the following locations:
 - Palm Avenue and Stirling Road (Signalized)
 - Palm Avenue and Brian Piccolo Park entrance (Stop controlled)
 - Palm Avenue and Project Driveway (Stop controlled)
 - Palm Avenue and Sheridan Street Signalized)

- o The traffic counts were recorded on Thursday, August 26, 2021, and Thursday September 2, 2021. The traffic counts were adjusted by utilizing a peak season factor of 1.12 based on FDOT peak season adjustment factors. Figure 2 shows the 2021 peak season AM and PM peak hour traffic volumes. The traffic counts are included in Appendix B as well as the signal timing plans for the two signalized intersections. The peak season adjustment factors and historical traffic counts are provided in Appendix C.
- o Determined the trip generation of the proposed school expansion project based on the trip generation equations/rates published in the Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition). The school currently has a student population of 190 students, and it is planned to have a maximum student population of 390 students. Therefore, the existing student population will increase by 200 students. This report addresses the traffic impacts associated with the additional 200 students.
- o Tables 1 and 2 document the trip generation associated with the subject school. As presented in Table 2, the proposed school expansion is projected to generate approximately 822 new daily trips, approximately 182 AM peak hour trips (100 inbound and 82 outbound) and approximately 124 trips during the school's afternoon peak hour (59 inbound and 65 outbound). All students will arrive/depart via automobile (no buses).

TABLE 1 Trip Generation Summary (Existing School - Phase 1) First Baptist School of SW Broward								
Land Use	Size	Daily Trips	AM Peak Hour			PM Peak Hour		
			Total Trips	Inbound	Outbound	Total Trips	Inbound	Outbound
Private School (LUC 534)	190	781	173	95	78	118	55	63
Gross Trips		781	173	95	78	118	55	63

Source: ITE Trip Generation Manual (10th Edition)

TABLE 2 Trip Generation Summary (Proposed School Phase 2) First Baptist School of SW Broward								
Land Use	Size	Daily Trips	AM Peak Hour			PM Peak Hour		
			Total Trips	Inbound	Outbound	Total Trips	Inbound	Outbound
Private School (LUC 534)	390	1,603	355	195	160	242	114	128
Gross Trips		1,603	355	195	160	242	114	128

Source: ITE Trip Generation Manual (10th Edition)

	Size	Daily Trips	AM Peak Hour			PM Peak Hour		
			Total Trips	Inbound	Outbound	Total Trips	Inbound	Outbound
Difference	200	822	182	100	82	124	59	65

Daily Trips

T = 4.11 (X), where X = number of students

AM Peak Hour (Coincides with AM Peak Hour)

T = 0.91 (X), where X = number of students with 55% inbound and 45% outbound

PM Peak Hour (School PM Peak Hour)

T = 0.62 (X), where X = number of students with 47% inbound and 53% outbound

- The project's peak-hour trips documented in Table 2 were distributed and assigned to the study area based on examination of the surrounding roadway network characteristics, review of current traffic volumes, and nearby residential areas. The trip distribution assumed for the subject educational development is summarized on the following page:
 - 45% to and from the north via Palm Avenue
 - 20% continues north of Stirling Road
 - 15% on Stirling Road east of Palm Avenue
 - 10% on Stirling Road west of Palm Avenue
 - 55% to and from the south via Palm Avenue
 - 25% continues south of Sheridan Street
 - 15% on Sheridan Street east of Palm Avenue
 - 15% on Sheridan Street west of Palm Avenue

Figure 3 documents the project traffic assignment based on the above traffic percentages.

- Figures 4 and 5 present the future traffic volumes for the study area. Figure 4 includes background traffic only (without the proposed school expansion) and Figure 5 includes the additional traffic anticipated to be generated by the school expansion with the additional 200 students. The background traffic includes peak season adjustments, and traffic growth based on historical traffic data within the study area (refer to Appendix C).

As indicated in the growth analysis presented in Appendix C, a 2.57% growth rate, compounded annually was used to develop future traffic projections. The calculated growth rate also accounts for trips generated by committed developments in the vicinity of the project.

Please note that year 2020 volume was not considered in the growth rate analysis since the traffic volume is considerably low when compared to previous years. Therefore, it was not considered in the analysis to provide a more realistic approach. The future traffic volumes are also presented in Appendix D in tabular format.

- To determine the impacts created to the impacted intersections, capacity/level of service analyses were undertaken using the SYNCHRO software. The results of the capacity/level of service analyses and 95th percentile queues are presented in Tables 3A and 3B. As summarized in Table 3A, the signalized intersections of Palm Avenue and Stirling Road and

- Palm Avenue and Sheridan Street are expected to operate below the level of service standard with the proposed project in place. However, with signal timing optimization, these intersections are expected to operate at the same level of service as background conditions (school trips can be mitigated).

It is important to note that there is an existing Charter School located immediately north of the proposed school site (Renaissance Charter School Cooper City). The peak hour traffic volumes used for analysis purposes coincide with the morning and afternoon peak hours of the Renaissance Charter School. Hence, for purposes of this analysis, it was assumed that both schools' peak hours will coincide (conservative approach). The Renaissance Charter School starts at 8:00 AM and has three dismissal period shifts (at 2:45 PM, 3:05 PM and 3:25 PM).

The results of the capacity analysis also revealed that the school driveway is projected to operate at acceptable levels of services. The SYNCHRO outputs are contained in Appendix E.

TABLE 3A
Level of Service Analyses - Nearby Intersections
First Baptist School of Southwest Broward

Intersection	Time Period	EASTBOUND		WESTBOUND		NORTHBOUND		SOUTHBOUND		Intersection	
		Approach		Approach		Approach		Approach		LOS	Delay (sec)
		LOS	Delay	LOS	Delay	LOS	Delay	LOS	Delay		
Palm Ave & Stirling Rd	AM	D (D)[D]{D}	42.6 (44.3){45.2}{45.8}	D (D)[D]{D}	43.3 (44.2){45.6}{52.3}	E (E){E}{E}	64.9 (65.6){66.2}{60.9}	E (E){E}{E}	72.6 (75.1){78.0}{65.0}	E (E){E}{E}	55.0 (56.5){58.1}{55.3}
	PM	D (D)[D]	36.9 (37.6){37.7}	E (E){E}	56.8 (62.2){62.4}	E (E){E}	64 (64.9){65.9}	E (E){E}	72.6 (74.8){77.2}	E (E){E}	57.5 (60.1){61.1}
Palm Ave & Park Entrance	AM			C (C){D}	24.2 (24.3){26.9}						
	PM			C (C){D}	22.2 (24.7){25.9}						
Palm Ave/Median Opening/ School Ent	AM			C (C){D}	15.2 (15.5){31.1}						
	PM			C (C){C}	17.9 (18.4){21.4}						
Palm Ave & Sheridan St	AM	D (D)[D]{E}	47.5 (51.3){51.9}{64.7}	D (D)[D]{D}	35.1 (35.7){36.8}{45.7}	F (F){F}{F}	168.1 (176.1){174.8}{152.7}	F (F){F}{F}	101.3 (109.4){119.1}{83.0}	E (F){F}{F}	79.9 (84.5){87.2}{80.7}
	PM	D (D)[D]{E}	47.6 (50.8){51.0}{63.6}	D (D)[D]{D}	38.1 (39.8){40.0}{42.2}	F (F){F}{F}	86.6 (89.9){93.2}{84.0}	F (F){F}{F}	112.3 (120.0){125.7}{87.8}	E (E){E}{E}	66.2 (69.8){72.1}{66.1}

SOURCE: SYNCHRO. LEGEND: 2021 Existing (2022 Background){2022 Future Total}{2022 Future Total with Improvements}

Improvement: Minor signal optimization

TABLE 3B
95th Percentile Queue
First Baptist School of Southwest Broward

Intersection	Movement	Storage (ft)	Scenario		
			Existing	Background	Future
Palm Ave & Stirling Rd	EBR	330	85 (50)	94 (50)	107(#179)
	WBL	290	168 (175)	172 (181)	#190 (#192)
	NBL	340	161 (138)	164 (141)	172 (147)
	NBR	340	155 (69)	164 (70)	180 (77)
Palm Ave & Park Entrance/U-turn	NBU	200	48 (26)	52 (30)	58 (32)
Palm Ave & Median Opening/ School Ent	NBR	200	0 (0)	0 (0)	0 (2)
	SBL	260	10 (4)	12 (4)	24 (6)
Palm Ave & Sheridan St	EBL	200	139 (105)	142 (107)	154 (114)
	WBR	220	307(89)	326(94)	357(99)
	SBL	350	#323 (m158)	#332 (m161)	m#349 (#m173)
	SBR	350	241(m76)	252(m83)	271(m88)

- o Determined the stacking needs for the new 200-student school. The stacking needs for the new 200-student school were determined using two different methods, as outlined below.

Stacking Based on Actual Counts: A vehicle accumulation evaluation was conducted for the First Baptist Church of Southwest Broward. The vehicle accumulation analysis was based on results of vehicle stacking counts conducted by Traf Tech Engineering, Inc. at the existing 190-student school at the site (refer to Appendix F). Based on vehicles counts conducted at this school on October 21, 2021, during the AM and PM peak periods, 190 students resulted in 27 accumulated vehicles (parked vehicles and vehicles in queue) during the AM peak hour and 41 vehicles during the PM peak hour. Then 200 students (for one shift) would theoretically result in approximately 44 vehicles (parked and in queue) during the critical afternoon peak period. As shown in the Figure 6, the First Baptist Church of Southwest Broward School can accommodate approximately 77 on-site vehicles¹ with one (1) stacking lane and 105 on-site vehicles² with two (2) stacking lanes and therefore, stacking should not be a problem during the critical PM peak hour with one shift.

Stacking Based on South Florida Studies: Based on many studies conducted within South Florida, the maximum accumulation at public/private schools varies between 15% and 20% of the total population of the highest-student shift. As indicated above, approximately 200 students are anticipated via automobile with one shift. Hence, 30 to 40 on-site vehicles will be required during the critical afternoon pick-up period and a maximum of 105 on-site vehicles can be accommodated.

Traffic Operations Plan (TOP)

Figure 6 depicts the Traffic Operations Plan for the school. The TOP shows the recommended traffic circulation, parking areas, and drop-off/pick-up area. The TOP has been designed to maximize the on-site vehicle accumulation to avoid spillback conditions to on-site circulation aisles / parking areas or the public street (Palm Avenue).

¹ The proposed parent's queuing plan can accommodate approximately 44 vehicles (with one stacking lane) plus 33 new parking spaces are proposed for a total of 77 on-site vehicular capacity. With two stacking lanes, 72 queued vehicles can be accommodated plus 33 new parking spaces for a total on-site stacking capacity of 105 vehicles.

Recommendations

Based on the results of the traffic study, the following recommendations should be considered for the proposed school expansion:

- Request that Broward County Signals and Signs Division re-evaluate the signal timing plan at the following two intersections after the school is in operation:
 - Palm Avenue and Stirling Road
 - Palm Avenue and Sheridan Street
- If feasible, the start and end times of the First Baptist Church of Southwest Broward School should not coincide with the start and end times of the Renaissance Charter School Cooper City.
- Implement the Traffic Operations Plan depicted in Figure 6.

Adequacy of Southbound Left-Turn Lane

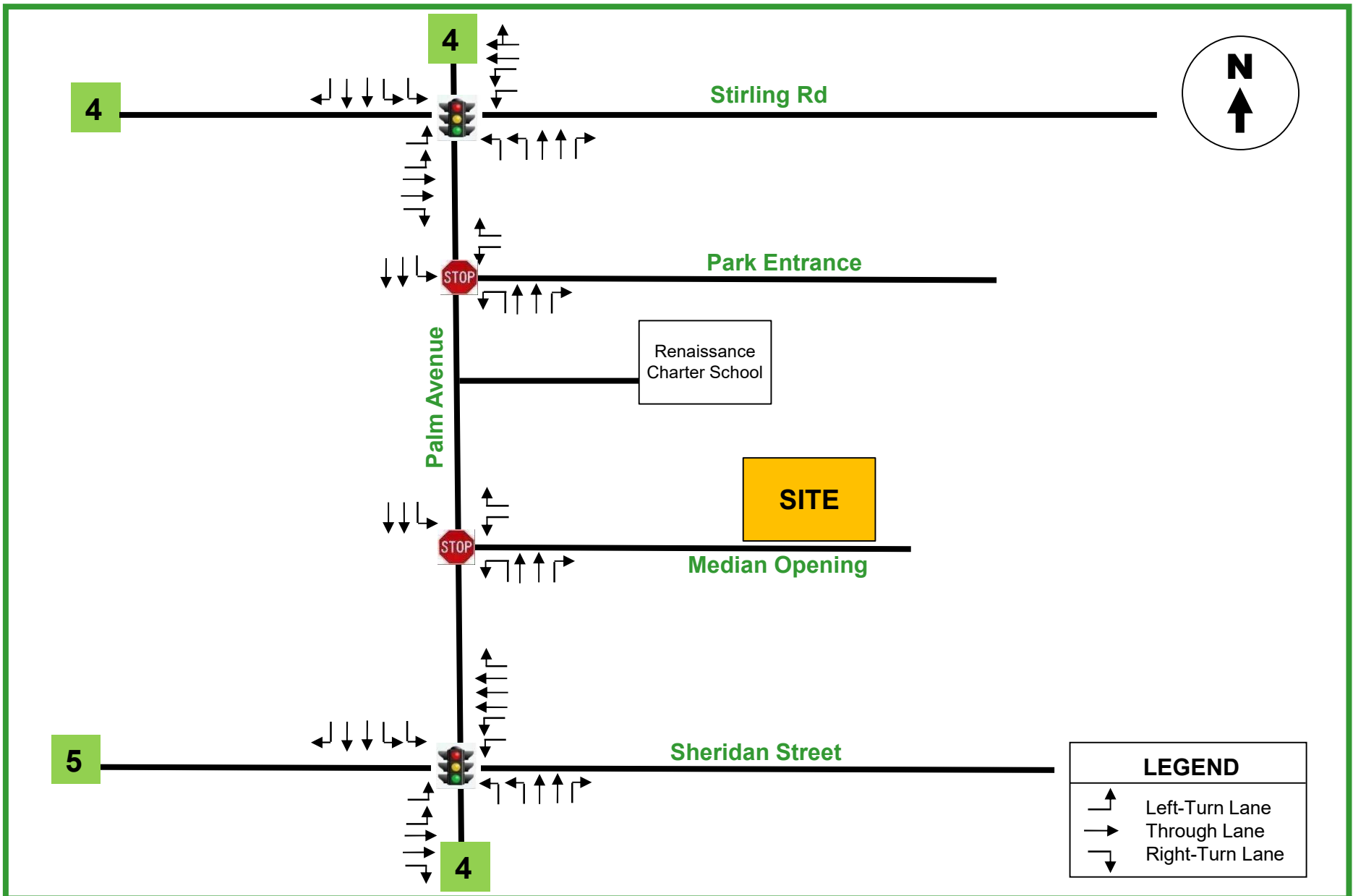
- The results of the queue counts (refer to Appendix G) indicate that a maximum queue of approximately 150 feet is expected on the southbound left-turn lane at the school's driveway off of Palm Avenue. The existing southbound left-turn lane provides over 250 feet of storage capacity. Therefore, extending the existing left-turn bay is not warranted. Finally, the expected northbound right-turn queue is negligible and 150 feet of storage is provided for right-turning vehicles.

Please give me a call if you have any questions.

Sincerely,

TRAF TECH ENGINEERING, INC.

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

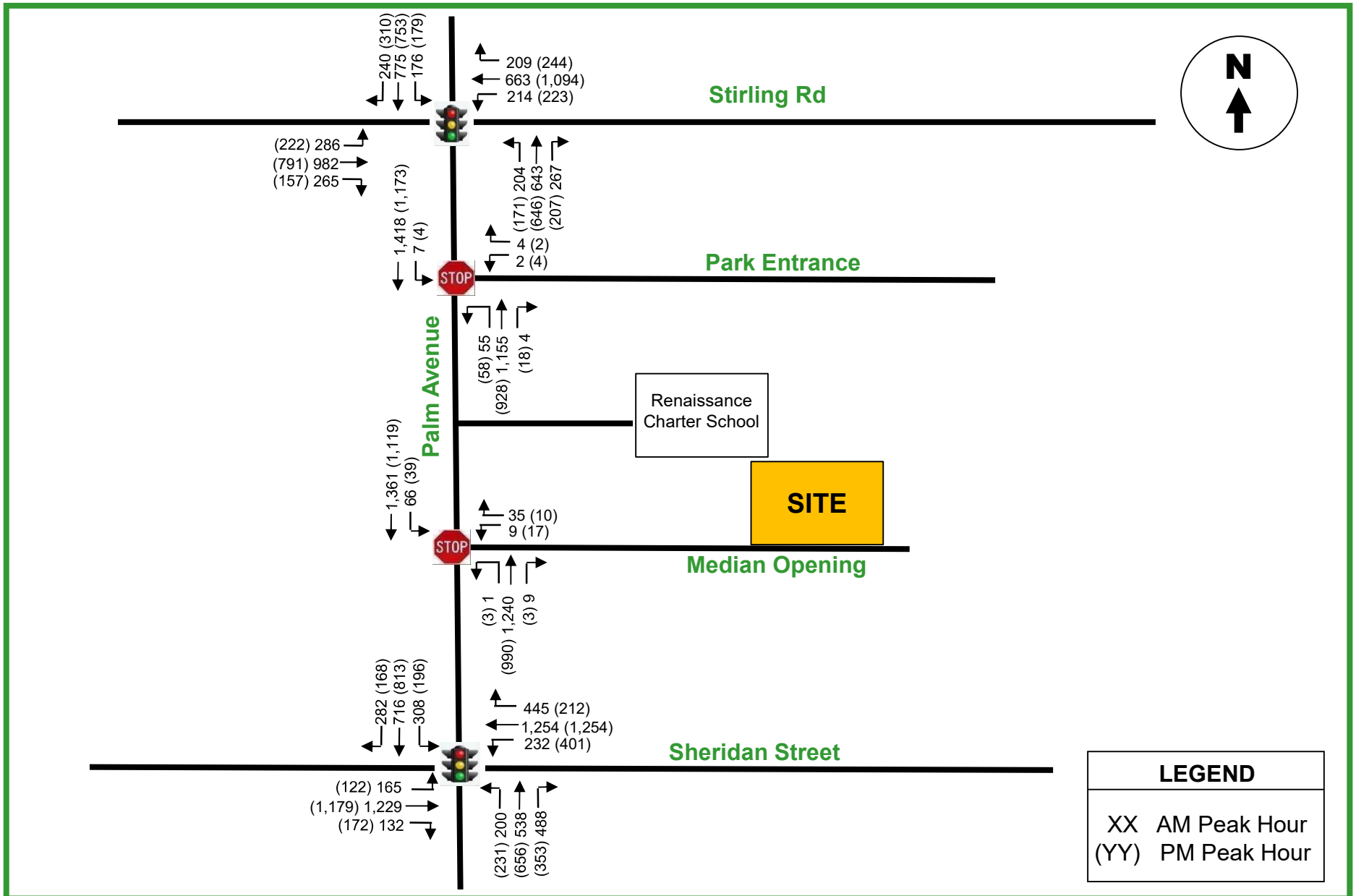


LEGEND	
	Left-Turn Lane
	Through Lane
	Right-Turn Lane



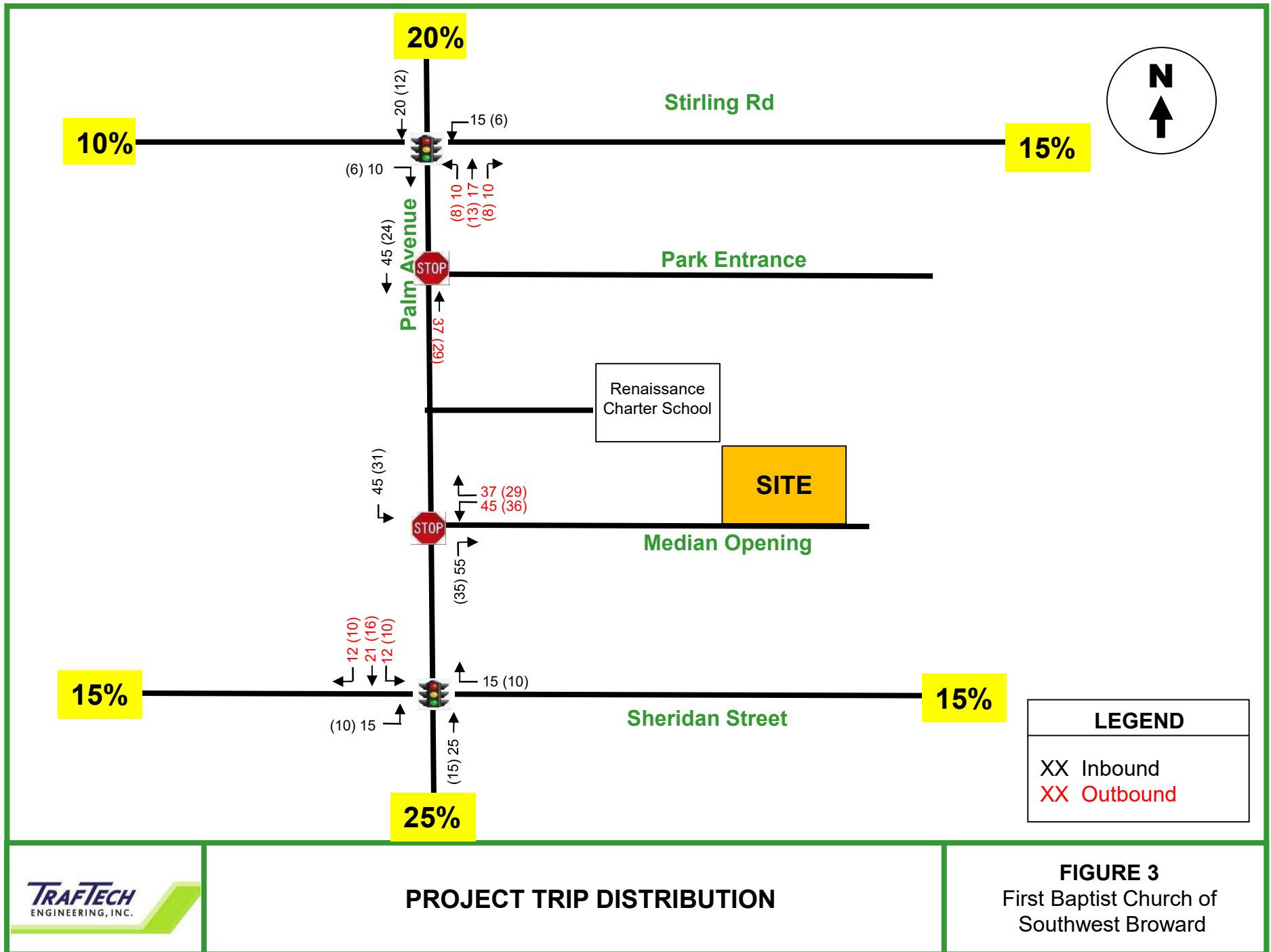
EXISTING LANE GEOMETRY

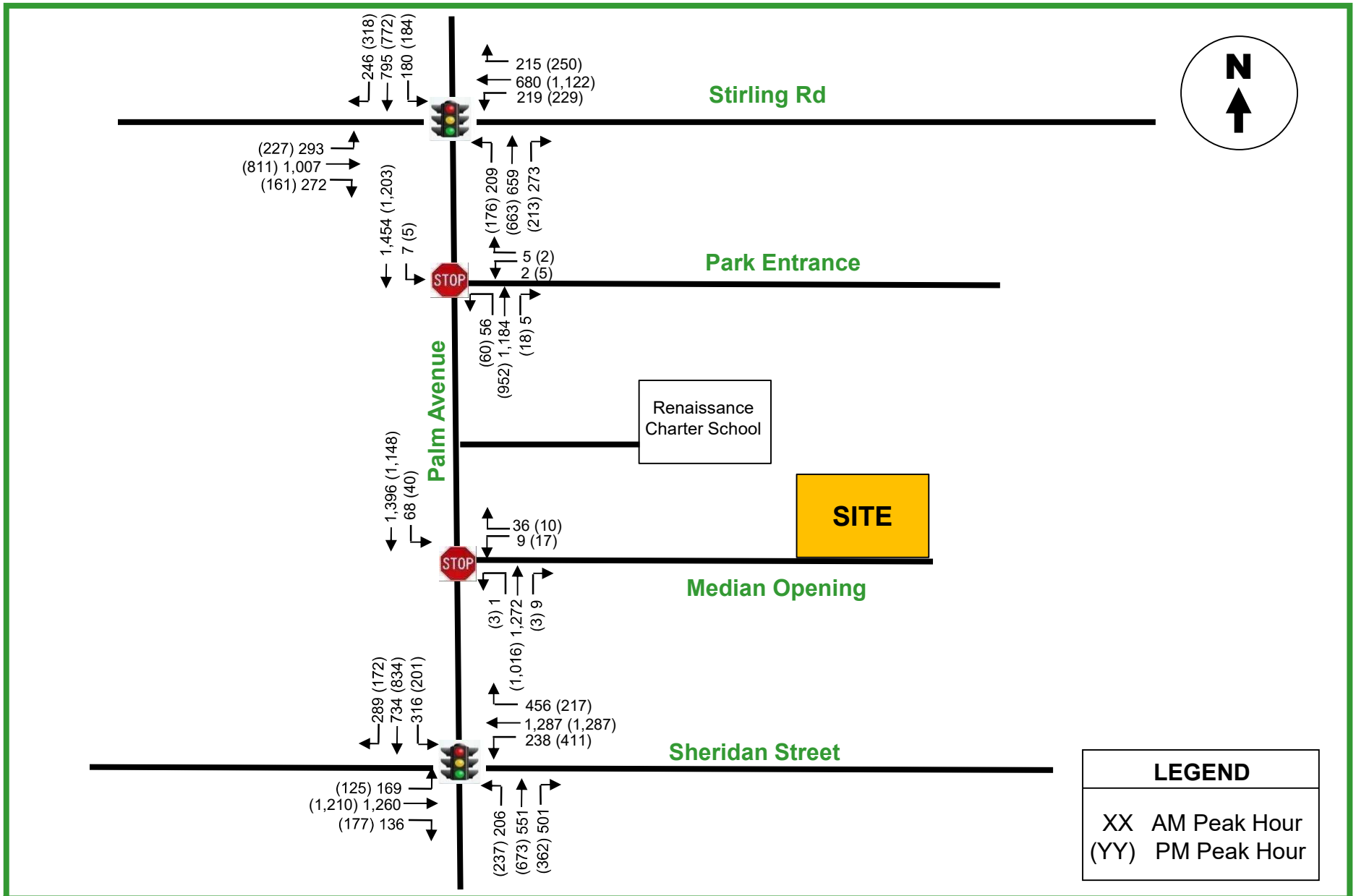
FIGURE 1
First Baptist Church of
Southwest Broward



**TRAFFIC COUNTS
(Year 2021 Peak Season)**

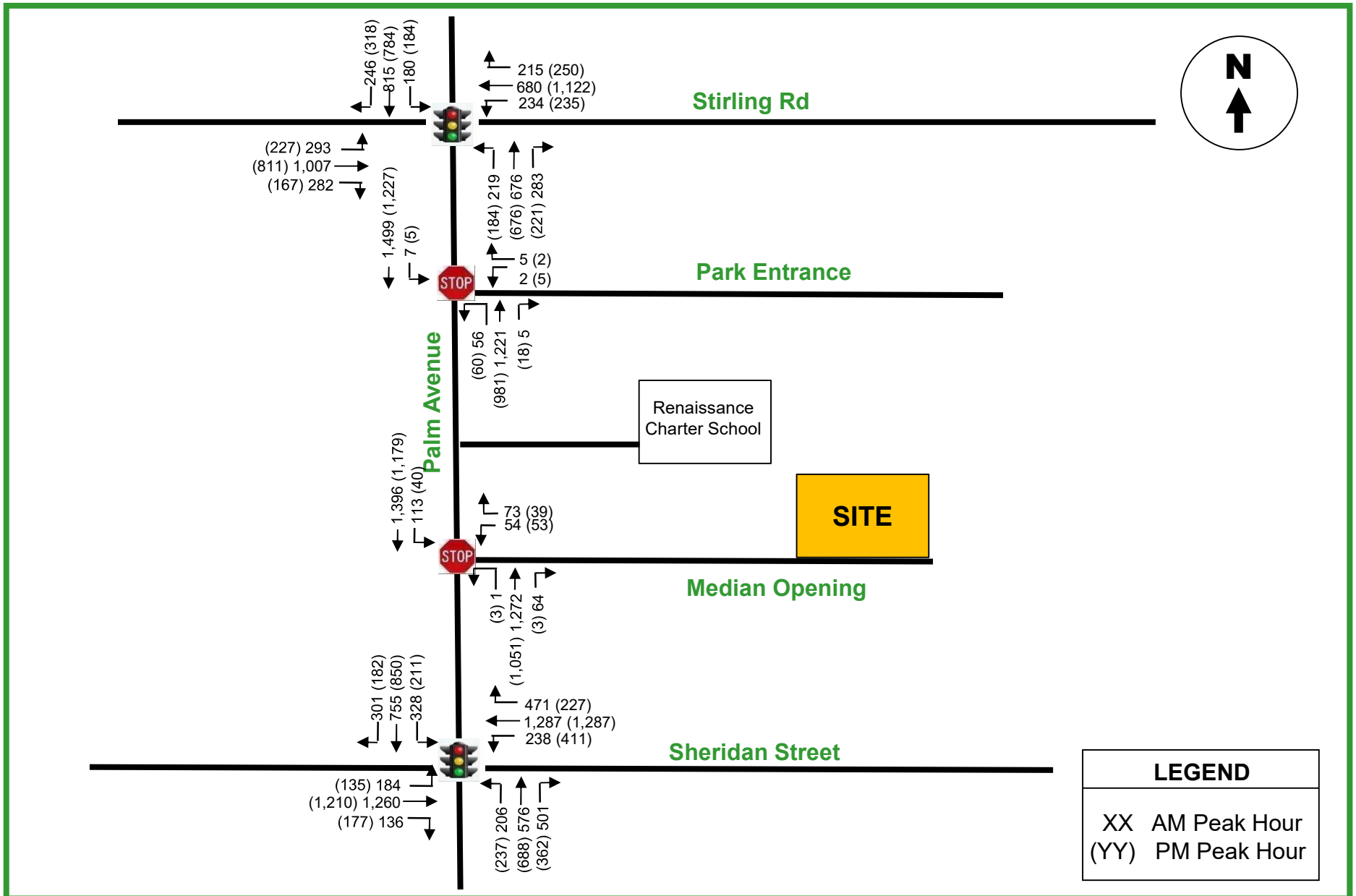
FIGURE 2
First Baptist Church of
Southwest Broward





**BACKGROUND TRAFFIC VOLUMES without Project Trips
 (Year 2022 Peak Season)**

FIGURE 4
 First Baptist Church of
 Southwest Broward

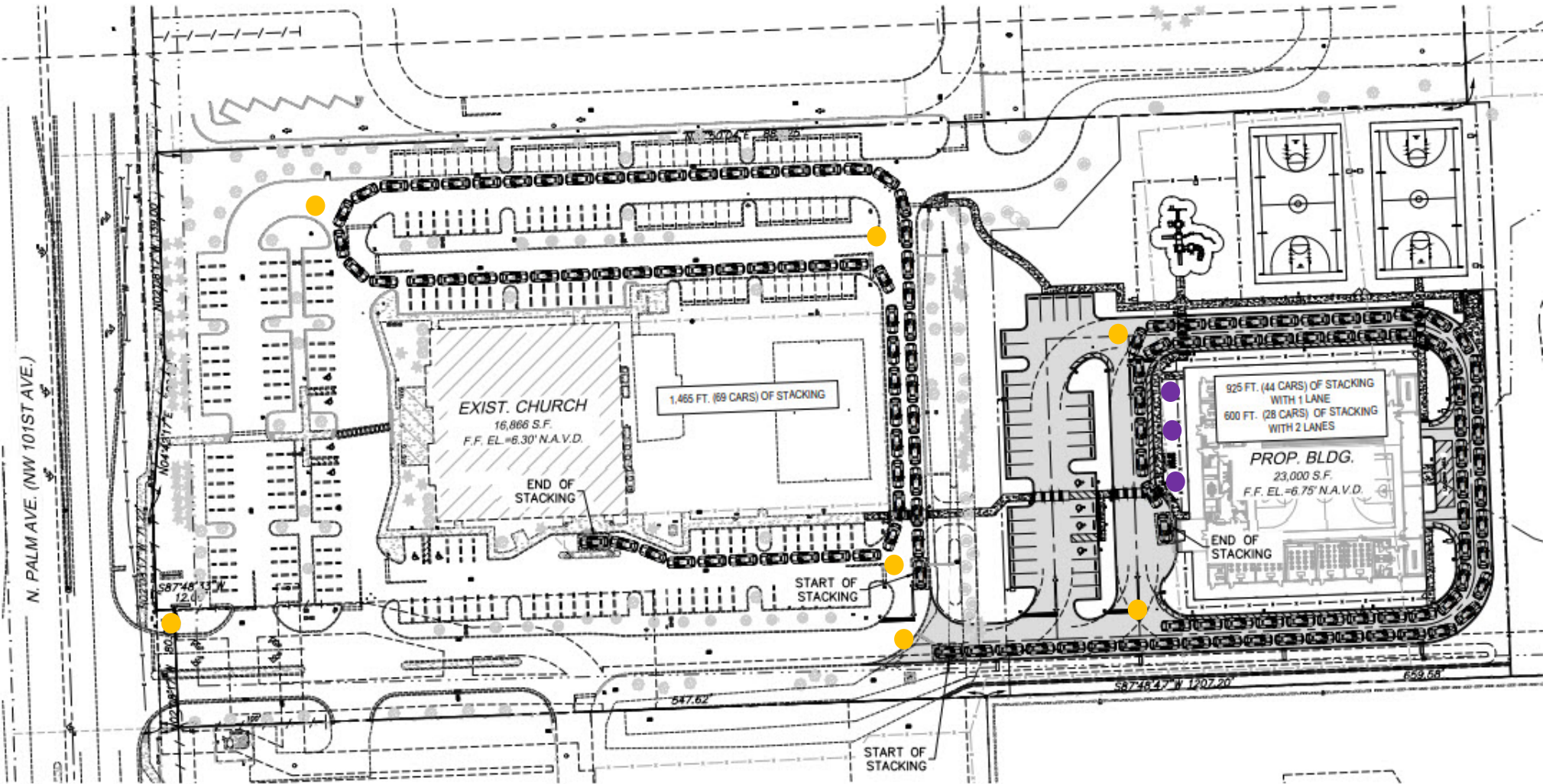
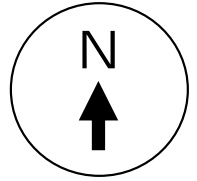


**TOTAL TRAFFIC with PROJECT – Year 2022
 AM (PM) Peak Hour Trips**

FIGURE 5
 First Baptist Church of
 Southwest Broward

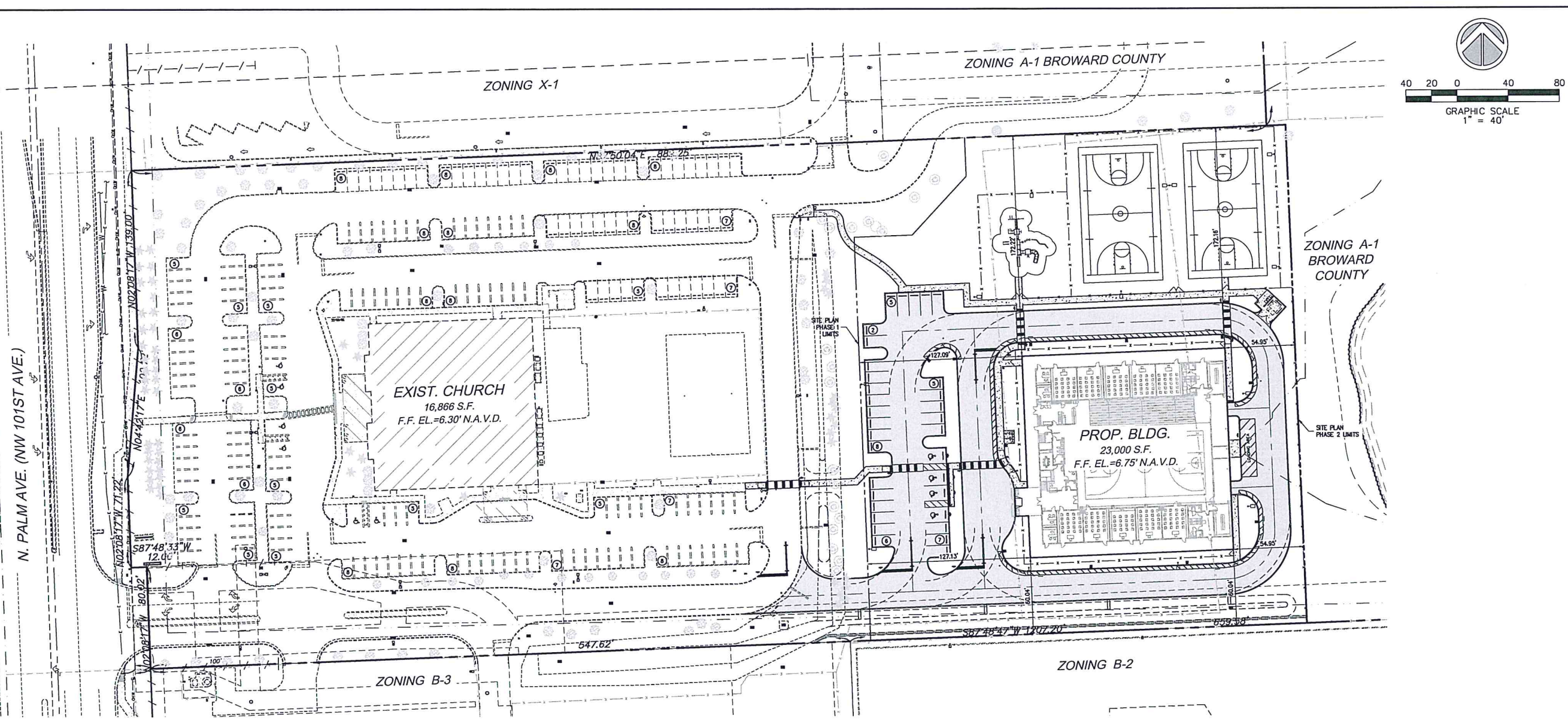
LEGEND

- Staff Member
- Traffic Control Person



APPENDIX A

Site Plan – First Baptist School of Southwest Broward



	SITE PLAN DATA								
	CHURCH / SCHOOL (PHASE 1)			SCHOOL / GYM (PHASE 2)			PHASE 1 & PHASE 2 (COMBINED)		
	S.F.	AC.	%	S.F.	AC.	%	S.F.	AC.	%
GREEN SPACE AREA	84,984 *	1.951	37.30%	31,962	0.734	26.30%	116,946	2.685	33.48%
PAVEMENT AREA	96,518 **	2.216	42.36%	36,380	0.835	29.94%	132,898	3.051	38.04%
CONCRETE AREA	6,093 ***	0.140	2.67%	3,764	0.086	3.10%	9,857	0.226	2.82%
PROP. BUILDING	16,866	0.387	7.40%	23,000	0.528	18.93%	39,866	0.915	11.41%
BASKETBALL COURT	11,643	0.267	5.11%	20,664	0.474	17.01%	32,307	0.742	9.25%
PLAYGROUND	11,730	0.269	5.15%	5,740	0.132	4.72%	17,470	0.401	5.00%
TOTAL AREA	227,834	5.230	100.00%	121,509	2.789	100.00%	349,343	8.020	100.00%

	PERVIOUS CALCULATIONS								
	S.F.	AC.	%	S.F.	AC.	%	S.F.	AC.	%
PERVIOUS	84,984	1.95	37.30%	31,962	0.73	26.30%	116,946	2.68	33.48%
IMPERVIOUS	142,850	3.28	62.70%	89,548	2.06	73.70%	232,398	5.34	66.52%

* SUBTRACTED 2,595 S.F.
 ** INCLUDES AN ADDITIONAL 1,916 S.F. FROM PHASE 2
 *** INCLUDES AN ADDITIONAL 679 S.F. FROM PHASE 2

	PARKING/STUDENT TABULATION					
	CHURCH / SCHOOL (PHASE 1)		SCHOOL / GYM (PHASE 2)		PHASE 1 & PHASE 2 (COMBINED)	
CHURCH REQUIRED PARKING: 16,866 S.F. @ 1 SPACE PER 100 S.F.	169 SPACES	BLEACHERS SEATING REQUIRED PARKING: 434 SEATS @ 1 SPACE PER 4 SEATS	109 SPACES			
ELEMENTARY REQUIRED PARKING: 2 CLASSROOMS @ 1 SPACE PER CLASSROOM 1 STUDENT @ 20 S.F. = 48 STUDENTS	2 SPACES	ELEMENTARY REQUIRED PARKING: 2 CLASSROOMS @ 1 SPACE PER CLASSROOM	2 SPACES			
MIDDLE SCHOOL REQUIRED PARKING: 4 CLASSROOMS @ 1.25 SPACES PER CLASSROOM 1 STUDENT @ 20 S.F. = 91 STUDENTS	5 SPACES	MIDDLE SCHOOL REQUIRED PARKING: 3 CLASSROOMS @ 1 SPACES PER CLASSROOM = 3 60 STUDENTS @ 1 SPACE PER 10 STUDENTS = 6	9 SPACES			
HIGH SCHOOL REQUIRED PARKING: 1,280 S.F. @ 1 SPACE PER 200 S.F. 1 STUDENT @ 20 S.F. = 51 STUDENTS	7 SPACES	HIGH SCHOOL REQUIRED PARKING: 5 CLASSROOMS @ 1 SPACE PER CLASSROOM = 5 100 STUDENTS @ 1 SPACE PER 10 STUDENTS = 10	15 SPACES			
OFFICES REQUIRED PARKING: 485 S.F. @ 1 SPACE PER 200 S.F.	3 SPACES	OFFICES REQUIRED PARKING: 1,250 S.F. @ 1 SPACE PER 200 S.F.	7 SPACES			
TOTAL PARKING REQUIRED	186 SPACES	TOTAL PARKING REQUIRED	142 SPACES	GRAND TOTAL PARKING REQUIRED	328 SPACES	
PARKING PROVIDED						
9'x18' STD. SPACES (PAVED)	138 SPACES	9'x18' STD. SPACES (PAVED)	29 SPACES			
9'x18' STD. SPACES (GRASS 20% OF REQ. ALLOWED)	34 SPACES	12'x18' HANDICAP SPACES (PAVED)	4 SPACES			
12'x18' HANDICAP SPACES (PAVED)	6 SPACES					
9'x18' STD. SPACES (ADDITIONAL GRASS PARKING)	25 SPACES					
TOTAL PARKING PROVIDED	203 SPACES	TOTAL PARKING PROVIDED	33 SPACES	GRAND TOTAL PARKING PROVIDED	236 SPACES *	

NOTES:
 * 1. THE REQUIRED PARKING FOR THE MAXIMUM 200 STUDENTS IN PHASE 2 IS 33 SPACES. THE REQUIRED PARKING HAS BEEN PROVIDED FOR ON-SITE WITHIN PHASE 2 LIMITS. THE REQUIRED PARKING FOR THE GYMNASIUM OF 109 SPACES WILL BE PROVIDED FOR ON THE CHURCH PROPERTY IN PHASE 1, AND ARE PART OF THE 203 SPACES WITHIN PHASE 1, ALONG WITH 33 SPACES WITHIN PHASE 2. ACTIVITIES WITHIN THE GYMNASIUM WILL BE LIMITED TO SCHOOL DAYS UNTIL 6 PM. THERE WILL BE NO GYMNASIUM ACTIVITIES ON WEEKENDS.
 2. PROPOSED BUILDING WILL PROVIDE SMOKE DETECTORS AND FIRE SPRINKLER SYSTEM.

DEVELOPMENT STANDARDS		
ITEM	REQUIRED	PROVIDED
MIN. LOT FRONTAGE	0'-0"	0'-0"
MIN. LOT SIZE (S.F.)	0.00	121,509
MAX. BUILDING COVERAGE	0.00	11.41%
SIDE SETBACK	0'-0"	60.04'
FRONT SETBACK	0'-0"	127.09'
REAR SETBACK	0'-0"	54.95'

APPLICABLE CODE REFERENCES	
EXIST. ZONING (PHASE 1)	X-1 (CIVIC DISTRICT)
EXIST. ZONING (PHASE 2)	A-1 (BROWARD COUNTY)
PROP. ZONING (PHASE 2)	X-1 (CIVIC DISTRICT)
EXIST. LAND USE	E-ESTATE
PROP. LAND USE	E-ESTATE
FLOOR AREA RATIO (PHASE 2)	0.189
BUILDING HEIGHT (PHASE 2)	42'-0"

4577 Nob Hill Road, Suite 102
 Sunrise, FL 33351
 www.sun-tech.com
 Certificate of Auth. #1007187013
 Phone (954) 777-3123
 Fax (954) 777-3114

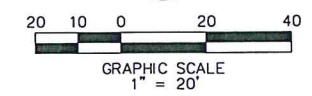
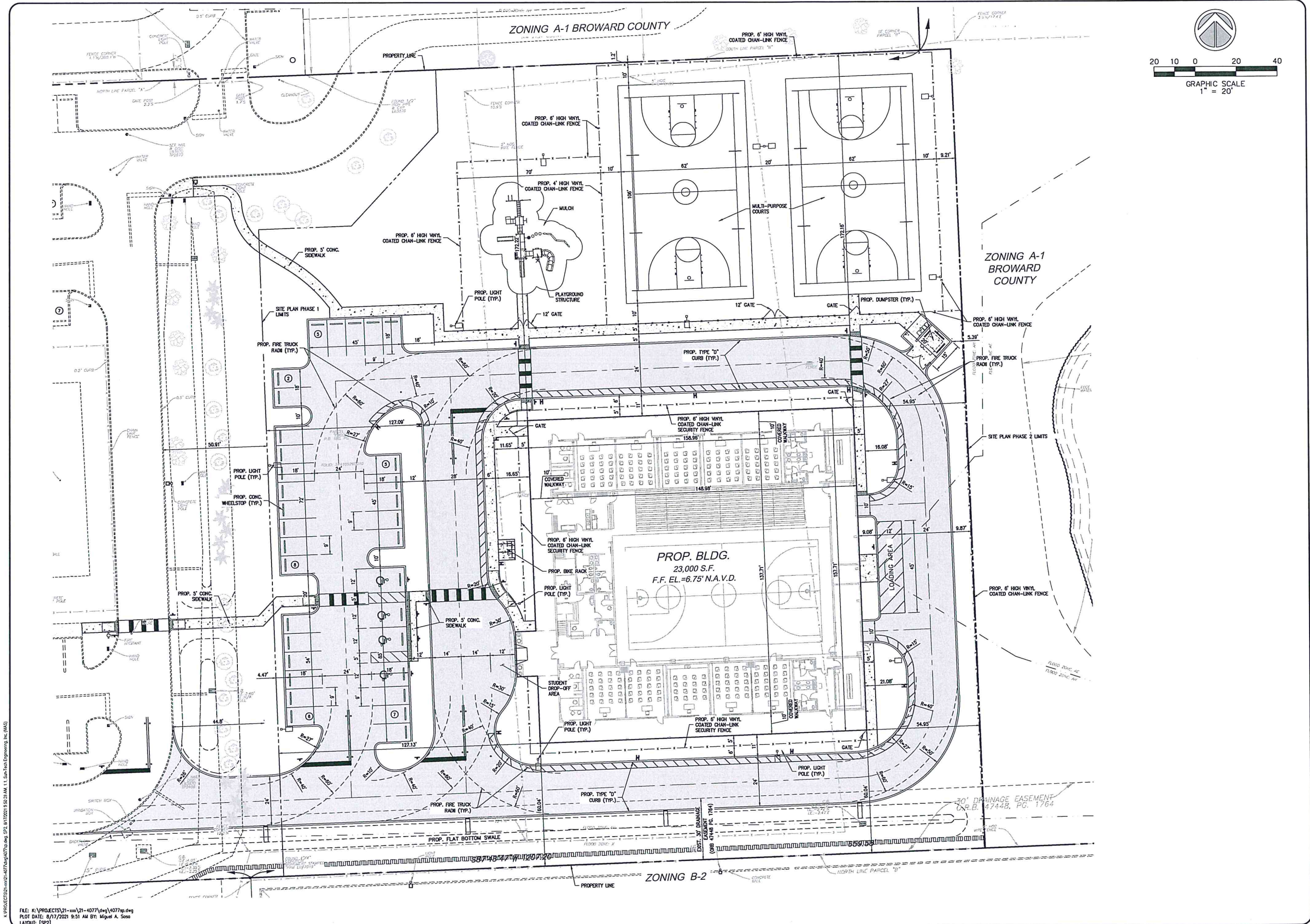


REVISIONS	
NO.	DESCRIPTION

FIRST BAPTIST CHURCH OF
 S.W. BROWARD
 COOPER CITY, FLORIDA
 OVERALL SITE PLAN

DATE: MAY 2021
 SCALE: 1"=40'
 DESIGNED BY: M.G.
 DRAWN BY: M.A.S.
 JOB #: 21-4077





4577 Nob Hill Road, Suite 102
 Sunrise, FL 33351
 www.sun-tech.com
 Certificate of Auth. #7097/LB 7019
 Phone (954) 777-3123
 Fax (954) 777-3114



REVISIONS	
NO.	DESCRIPTION

FIRST BAPTIST CHURCH OF
 S.W. BROWARD
 COOPER CITY, FLORIDA
 SITE PLAN

DATE: MAY 2021
 SCALE: 1"=20'
 DESIGNED BY: M.G.
 DRAWN BY: M.A.S.
 JOB #: 21-4077



Date August 16, 2021
 SHEET No.
 SP2

FILE: K:\PROJECTS\21-xxx\21-4077.dwg\4077sp.dwg
 PLOT DATE: 8/17/2021 9:51 AM BY: Miguel A. Sosa
 LAYOUT: [SP2]

APPENDIX B

Intersection Turning Movement Counts and Signal Timing Plans

Traf Tech Engineering Inc.

File Name : 1-Palm Ave & Brian Piccolo Park
 Site Code : 00000000
 Start Date : 8/26/2021
 Page No : 1

Groups Printed- Autos - Heavy Vehicles

Start Time	Palm Ave From North					Brian Piccolo Park From East					Palm Ave From South					Brian Piccolo Park From West					Int. Total
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	
07:00	0	155	1	0	156	0	0	0	0	0	1	173	0	2	176	0	0	0	0	0	332
07:15	0	336	0	0	336	0	1	0	0	1	1	264	0	7	272	0	0	0	0	0	609
07:30	0	292	1	0	293	2	1	0	0	3	2	232	0	9	243	0	0	0	0	0	539
07:45	0	315	4	0	319	0	0	0	0	0	0	199	0	12	211	0	0	0	0	0	530
Total	0	1098	6	0	1104	2	2	0	0	4	4	868	0	30	902	0	0	0	0	0	2010
08:00	0	323	1	0	324	2	0	0	0	2	1	336	0	21	358	0	0	0	0	0	684
08:15	0	269	0	0	269	1	0	0	0	1	0	240	0	18	258	0	0	0	0	0	528
08:30	0	170	0	0	170	2	1	0	0	3	0	212	0	13	225	0	0	0	0	0	398
08:45	0	156	4	0	160	0	1	0	0	1	2	155	0	15	172	0	0	0	0	0	333
Total	0	918	5	0	923	5	2	0	0	7	3	943	0	67	1013	0	0	0	0	0	1943
*** BREAK ***																					
16:00	0	199	1	0	200	0	0	0	0	0	2	184	0	14	200	0	0	0	0	0	400
16:15	0	214	0	0	214	0	0	0	0	0	1	205	0	23	229	0	0	0	0	0	443
16:30	0	174	0	0	174	0	2	0	0	2	1	183	0	12	196	0	0	0	0	0	372
16:45	0	232	0	0	232	0	0	0	0	0	4	215	0	14	233	0	0	0	0	0	465
Total	0	819	1	0	820	0	2	0	0	2	8	787	0	63	858	0	0	0	0	0	1680
17:00	0	237	1	0	238	0	3	0	0	3	2	200	0	10	212	0	0	0	0	0	453
17:15	0	298	0	0	298	0	0	0	0	0	0	240	0	16	256	0	0	0	0	0	554
17:30	0	252	0	0	252	0	0	0	0	0	1	211	0	16	228	0	0	0	0	0	480
17:45	0	260	3	0	263	2	1	0	0	3	13	178	0	10	201	0	0	0	0	0	467
Total	0	1047	4	0	1051	2	4	0	0	6	16	829	0	52	897	0	0	0	0	0	1954
Grand Total	0	3882	16	0	3898	9	10	0	0	19	31	3427	0	212	3670	0	0	0	0	0	7587
Apprch %	0	99.6	0.4	0		47.4	52.6	0	0		0.8	93.4	0	5.8		0	0	0	0		
Total %	0	51.2	0.2	0	51.4	0.1	0.1	0	0	0.3	0.4	45.2	0	2.8	48.4	0	0	0	0	0	
Autos	0	3882										3386									
% Autos	0	100	100	0	100	100	100	0	0	100	100	98.8	0	100	98.9	0	0	0	0	0	99.5
Heavy Vehicles																					
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	1.2	0	0	1.1	0	0	0	0	0	0.5

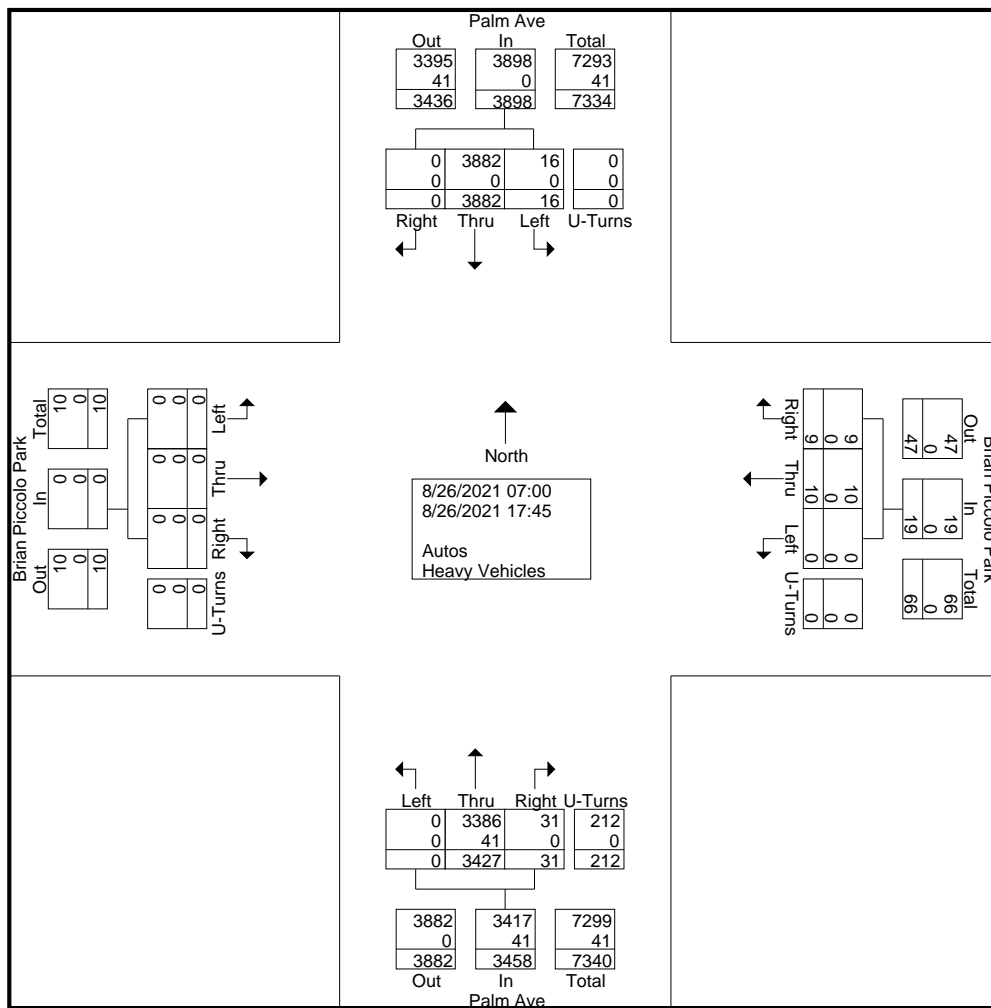
Traf Tech Engineering Inc.

File Name : 1-Palm Ave & Brian Piccolo Park

Site Code : 00000000

Start Date : 8/26/2021

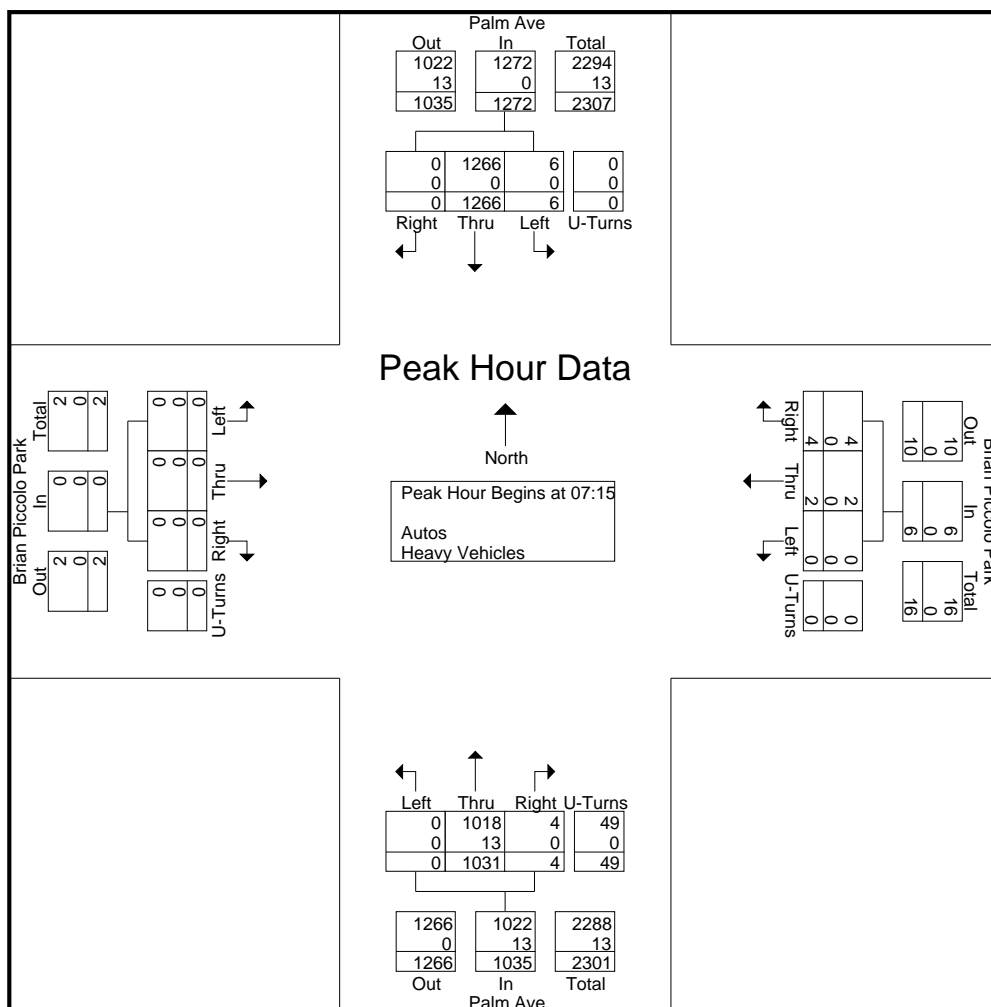
Page No : 2



Traf Tech Engineering Inc.

File Name : 1-Palm Ave & Brian Piccolo Park
 Site Code : 00000000
 Start Date : 8/26/2021
 Page No : 3

Start Time	Palm Ave From North					Brian Piccolo Park From East					Palm Ave From South					Brian Piccolo Park From West					Int. Total
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	
Peak Hour Analysis From 07:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	0	336	0	0	336	0	1	0	0	1	1	264	0	7	272	0	0	0	0	0	609
07:30	0	292	1	0	293	2	1	0	0	3	2	232	0	9	243	0	0	0	0	0	539
07:45	0	315	4	0	319	0	0	0	0	0	0	199	0	12	211	0	0	0	0	0	530
08:00	0	323	1	0	324	2	0	0	0	2	1	336	0	21	358	0	0	0	0	0	684
Total Volume	0	1266	6	0	1272	4	2	0	0	6	4	1031	0	49	1084	0	0	0	0	0	2362
% App. Total	0	99.5	0.5	0		66.7	33.3	0	0		0.4	95.1	0	4.5		0	0	0	0		
PHF	.000	.942	.375	.000	.946	.500	.500	.000	.000	.500	.500	.767	.000	.583	.757	.000	.000	.000	.000	.000	.863
Autos	0	1266										1018									
% Autos	0	100	100	0	100	100	100	0	0	100	100	98.7	0	100	98.8	0	0	0	0	0	99.4
Heavy Vehicles																					
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	1.3	0	0	1.2	0	0	0	0	0	0.6



Traf Tech Engineering Inc.

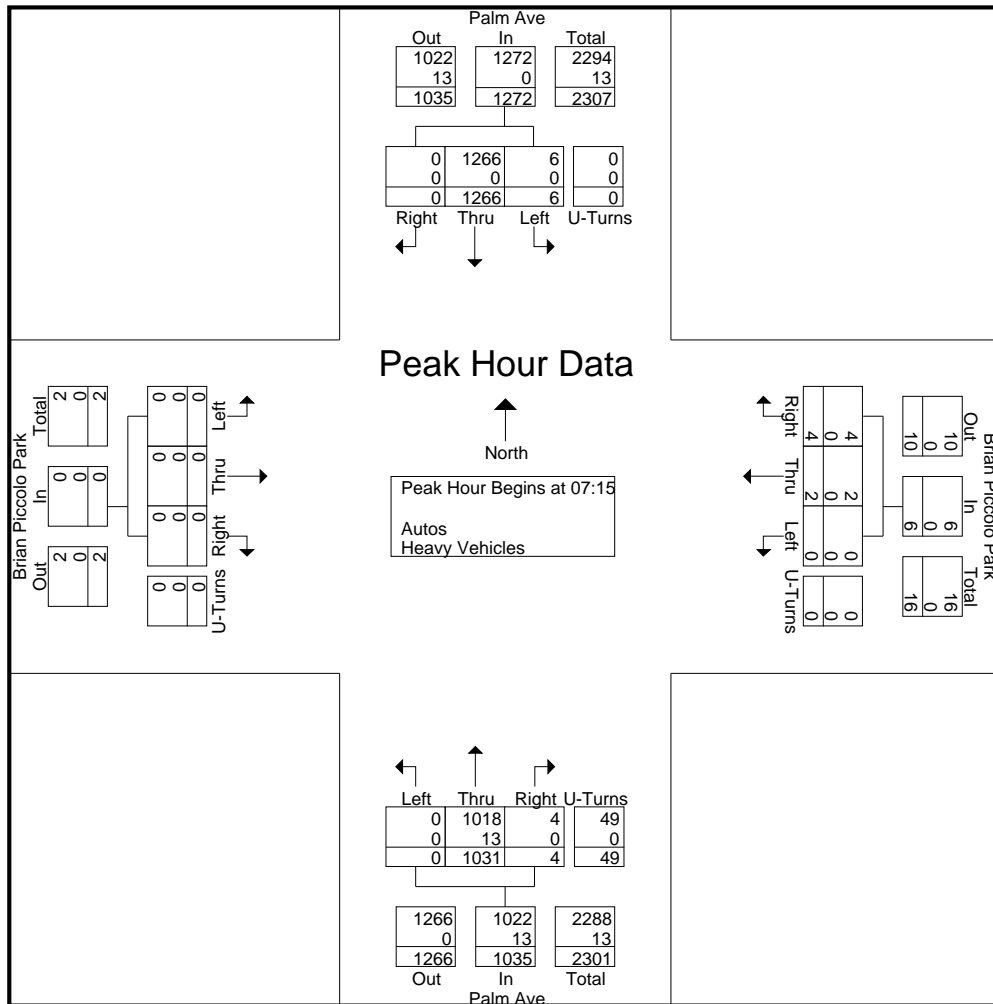
File Name : 1-Palm Ave & Brian Piccolo Park

Site Code : 00000000

Start Date : 8/26/2021

Page No : 4

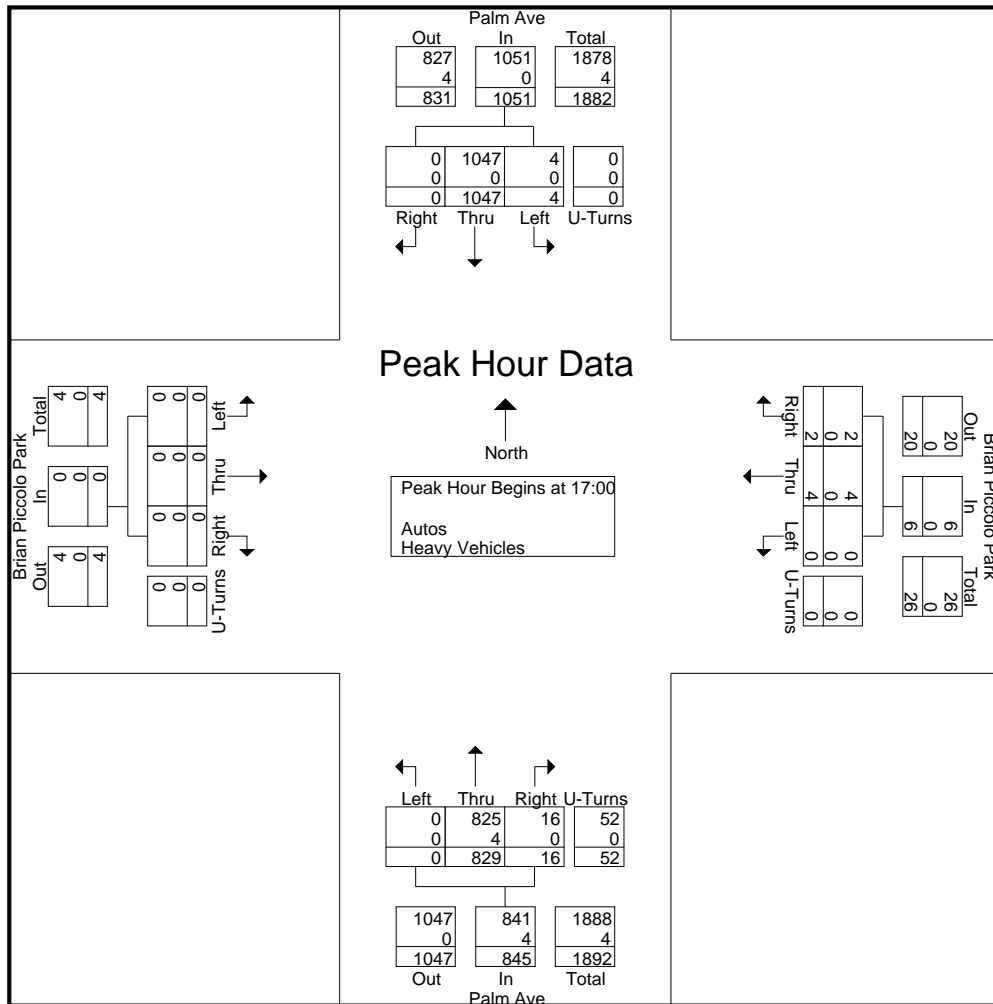
Start Time	Palm Ave From North					Brian Piccolo Park From East					Palm Ave From South					Brian Piccolo Park From West					Int. Total
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	0	336	0	0	336	0	1	0	0	1	1	264	0	7	272	0	0	0	0	0	609
07:30	0	292	1	0	293	2	1	0	0	3	2	232	0	9	243	0	0	0	0	0	539
07:45	0	315	4	0	319	0	0	0	0	0	0	199	0	12	211	0	0	0	0	0	530
08:00	0	323	1	0	324	2	0	0	0	2	1	336	0	21	358	0	0	0	0	0	684
Total Volume	0	1266	6	0	1272	4	2	0	0	6	4	1031	0	49	1084	0	0	0	0	0	2362
% App. Total	0	99.5	0.5	0		66.7	33.3	0	0		0.4	95.1	0	4.5		0	0	0	0		
PHF	.000	.942	.375	.000	.946	.500	.500	.000	.000	.500	.500	.767	.000	.583	.757	.000	.000	.000	.000	.000	.863
Autos	0	1266									1018										
% Autos	0	100	100	0	100	100	100	0	0	100	100	98.7	0	100	98.8	0	0	0	0	0	99.4
Heavy Vehicles																					
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	1.3	0	0	1.2	0	0	0	0	0	0.6



Traf Tech Engineering Inc.

File Name : 1-Palm Ave & Brian Piccolo Park
 Site Code : 00000000
 Start Date : 8/26/2021
 Page No : 5

Start Time	Palm Ave From North					Brian Piccolo Park From East					Palm Ave From South					Brian Piccolo Park From West					Int. Total
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 17:00																					
17:00	0	237	1	0	238	0	3	0	0	3	2	200	0	10	212	0	0	0	0	0	453
17:15	0	298	0	0	298	0	0	0	0	0	0	240	0	16	256	0	0	0	0	0	554
17:30	0	252	0	0	252	0	0	0	0	0	1	211	0	16	228	0	0	0	0	0	480
17:45	0	260	3	0	263	2	1	0	0	3	13	178	0	10	201	0	0	0	0	0	467
Total Volume	0	1047	4	0	1051	2	4	0	0	6	16	829	0	52	897	0	0	0	0	0	1954
% App. Total	0	99.6	0.4	0		33.3	66.7	0	0		1.8	92.4	0	5.8		0	0	0	0		
PHF	.000	.878	.333	.000	.882	.250	.333	.000	.000	.500	.308	.864	.000	.813	.876	.000	.000	.000	.000	.000	.882
Autos	0	1047																			
% Autos	0	100	100	0	100	100	100	0	0	100	100	99.5	0	100	99.6	0	0	0	0	0	99.8
Heavy Vehicles																					
% Heavy Vehicles	0	0	0	0	0	0	0	0	0	0	0	0.5	0	0	0.4	0	0	0	0	0	0.2



Traf Tech Engineering Inc.

File Name : 2-Palm Ave & Median Opening

Site Code : 00000000

Start Date : 8/26/2021

Page No : 1

Groups Printed- Peds & Bikes

Start Time	Palm Ave From North				Median Opening/Church From East				Palm Ave From South				Median Opening/Church From West				Int. Total
	Bikes			Peds	Bikes			Peds	Bikes			Peds	Bikes			Peds	
*** BREAK ***																	
07:30	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
*** BREAK ***																	
Total	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	2
*** BREAK ***																	
08:45	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	1
*** BREAK ***																	
16:15	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
*** BREAK ***																	
16:45	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
Total	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	0	2
*** BREAK ***																	
Grand Total	0	0	0	0	1	0	0	3	1	0	0	0	0	0	0	0	5
Apprch %	0	0	0	0	25	0	0	75	100	0	0	0	0	0	0	0	
Total %	0	0	0	0	20	0	0	60	20	0	0	0	0	0	0	0	

Traf Tech Engineering Inc.

File Name : 2-Palm Ave & Median Opening

Site Code : 00000000

Start Date : 8/26/2021

Page No : 1

Groups Printed- Autos - Heavy Vehicles

Start Time	Palm Ave From North					Median Opening/Church From East					Palm Ave From South					Median Opening/Church From West					Int. Total
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	
07:00	0	143	0	14	157	1	0	1	0	2	1	245	0	3	249	0	0	0	0	0	408
07:15	0	319	9	8	336	1	0	0	0	1	3	322	0	0	325	0	0	0	0	0	662
07:30	0	280	9	5	294	9	0	2	0	11	1	236	0	1	238	0	0	0	0	0	543
07:45	0	297	9	11	317	12	0	2	0	14	0	209	0	0	209	0	0	0	0	0	540
Total	0	1039	27	38	1104	23	0	5	0	28	5	1012	0	4	1021	0	0	0	0	0	2153
08:00	0	319	2	6	327	9	0	3	1	13	4	340	0	0	344	0	0	0	0	0	684
08:15	0	252	18	1	271	14	0	15	1	30	19	171	0	1	191	0	0	0	0	0	492
08:30	0	163	10	2	175	20	0	25	0	45	12	168	0	1	181	0	0	0	0	0	401
08:45	0	160	1	1	162	1	0	9	0	10	2	173	0	1	176	0	0	0	0	0	348
Total	0	894	31	10	935	44	0	52	2	98	37	852	0	3	892	0	0	0	0	0	1925
*** BREAK ***																					
16:00	0	197	2	3	202	0	0	3	0	3	1	175	0	4	180	0	0	0	0	0	385
16:15	0	215	0	3	218	0	0	2	0	2	0	207	0	1	208	0	0	0	0	0	428
16:30	0	171	1	4	176	2	0	1	0	3	0	193	0	1	194	0	0	0	0	0	373
16:45	0	233	3	4	240	2	0	3	0	5	1	218	0	1	220	0	0	0	0	0	465
Total	0	816	6	14	836	4	0	9	0	13	2	793	0	7	802	0	0	0	0	0	1651
17:00	0	231	1	9	241	1	0	5	0	6	2	207	0	1	210	0	0	0	0	0	457
17:15	0	288	3	8	299	4	0	4	0	8	0	246	0	0	246	0	0	0	0	0	553
17:30	0	247	1	6	254	2	0	3	0	5	0	213	0	1	214	0	0	0	0	0	473
17:45	0	256	0	5	261	0	0	1	0	1	1	194	0	0	195	0	0	0	0	0	457
Total	0	1022	5	28	1055	7	0	13	0	20	3	860	0	2	865	0	0	0	0	0	1940
Grand Total	0	3771	69	90	3930	78	0	79	2	159	47	3517	0	16	3580	0	0	0	0	0	7669
Apprch %	0	96	1.8	2.3		49.1	0	49.7	1.3		1.3	98.2	0	0.4		0	0	0	0		
Total %	0	49.2	0.9	1.2	51.2	1	0	1	0	2.1	0.6	45.9	0	0.2	46.7	0	0	0	0	0	
Autos	0	3723										3487									
% Autos	0	98.7	100	100	98.8	100	0	100	100	100	100	99.1	0	100	99.2	0	0	0	0	0	99
Heavy Vehicles																					
% Heavy Vehicles	0	1.3	0	0	1.2	0	0	0	0	0	0	0.9	0	0	0.8	0	0	0	0	0	1

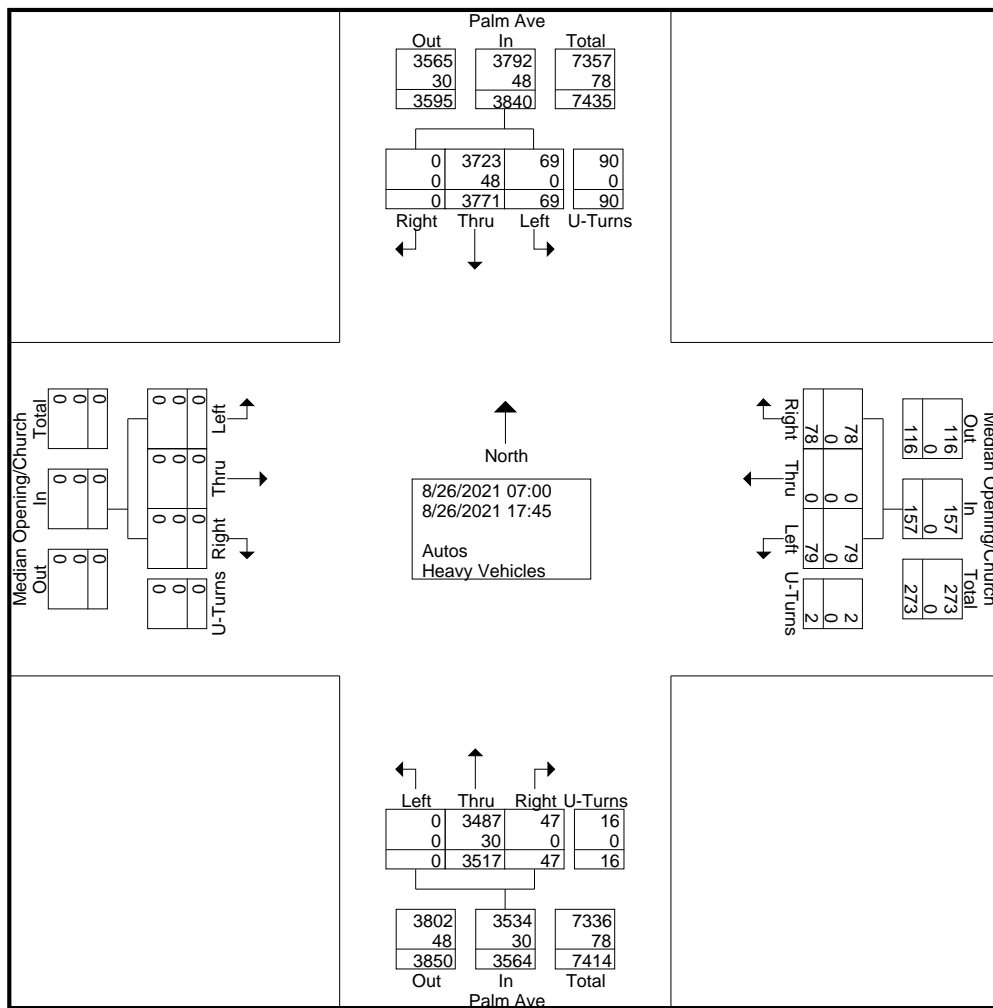
Traf Tech Engineering Inc.

File Name : 2-Palm Ave & Median Opening

Site Code : 00000000

Start Date : 8/26/2021

Page No : 2



Traf Tech Engineering Inc.

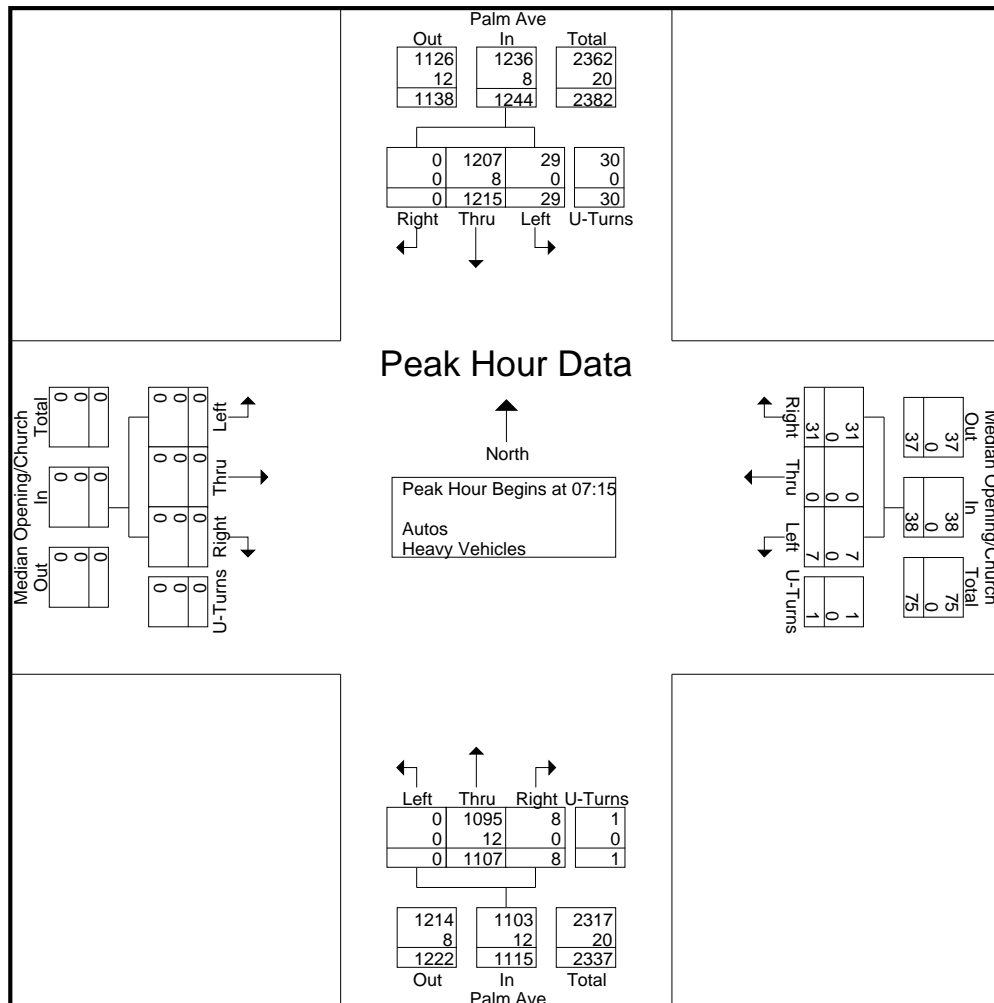
File Name : 2-Palm Ave & Median Opening

Site Code : 00000000

Start Date : 8/26/2021

Page No : 3

Start Time	Palm Ave From North					Median Opening/Church From East					Palm Ave From South					Median Opening/Church From West					Int. Total
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	
Peak Hour Analysis From 07:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	0	319	9	8	336	1	0	0	0	1	3	322	0	0	325	0	0	0	0	0	662
07:30	0	280	9	5	294	9	0	2	0	11	1	236	0	1	238	0	0	0	0	0	543
07:45	0	297	9	11	317	12	0	2	0	14	0	209	0	0	209	0	0	0	0	0	540
08:00	0	319	2	6	327	9	0	3	1	13	4	340	0	0	344	0	0	0	0	0	684
Total Volume	0	1215	29	30	1274	31	0	7	1	39	8	1107	0	1	1116	0	0	0	0	0	2429
% App. Total	0	95.4	2.3	2.4		79.5	0	17.9	2.6		0.7	99.2	0	0.1		0	0	0	0		
PHF	.000	.952	.806	.682	.948	.646	.000	.583	.250	.696	.500	.814	.000	.250	.811	.000	.000	.000	.000	.000	.888
Autos	0	1207										1095									
% Autos	0	99.3	100	100	99.4	100	0	100	100	100	100	98.9	0	100	98.9	0	0	0	0	0	99.2
Heavy Vehicles																					
% Heavy Vehicles	0	0.7	0	0	0.6	0	0	0	0	0	0	1.1	0	0	1.1	0	0	0	0	0	0.8



Traf Tech Engineering Inc.

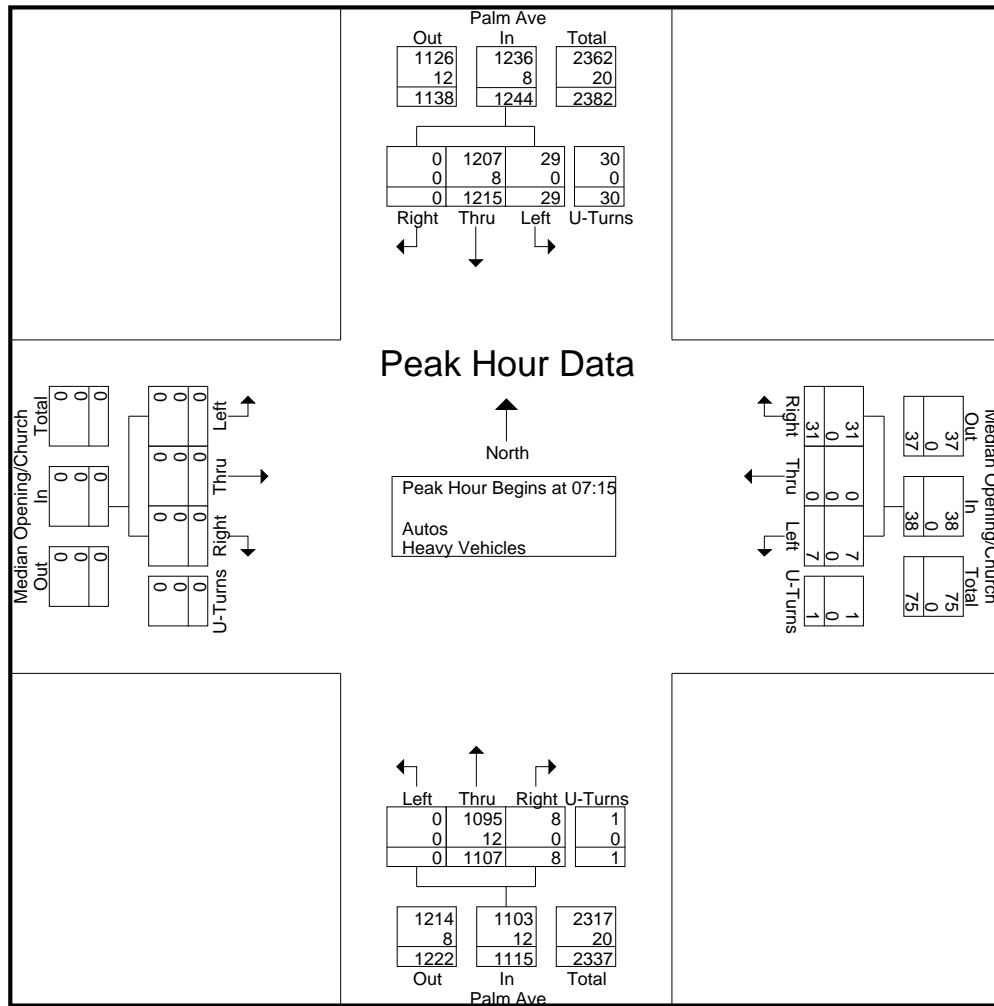
File Name : 2-Palm Ave & Median Opening

Site Code : 00000000

Start Date : 8/26/2021

Page No : 4

Start Time	Palm Ave From North					Median Opening/Church From East					Palm Ave From South					Median Opening/Church From West					Int. Total
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	0	319	9	8	336	1	0	0	0	1	3	322	0	0	325	0	0	0	0	0	662
07:30	0	280	9	5	294	9	0	2	0	11	1	236	0	1	238	0	0	0	0	0	543
07:45	0	297	9	11	317	12	0	2	0	14	0	209	0	0	209	0	0	0	0	0	540
08:00	0	319	2	6	327	9	0	3	1	13	4	340	0	0	344	0	0	0	0	0	684
Total Volume	0	1215	29	30	1274	31	0	7	1	39	8	1107	0	1	1116	0	0	0	0	0	2429
% App. Total	0	95.4	2.3	2.4		79.5	0	17.9	2.6		0.7	99.2	0	0.1		0	0	0	0		
PHF	.000	.952	.806	.682	.948	.646	.000	.583	.250	.696	.500	.814	.000	.250	.811	.000	.000	.000	.000	.000	.888
Autos	0	1207									1095										
% Autos	0	99.3	100	100	99.4	100	0	100	100	100	100	98.9	0	100	98.9	0	0	0	0	0	99.2
Heavy Vehicles																					
% Heavy Vehicles	0	0.7	0	0	0.6	0	0	0	0	0	0	1.1	0	0	1.1	0	0	0	0	0	0.8



Traf Tech Engineering Inc.

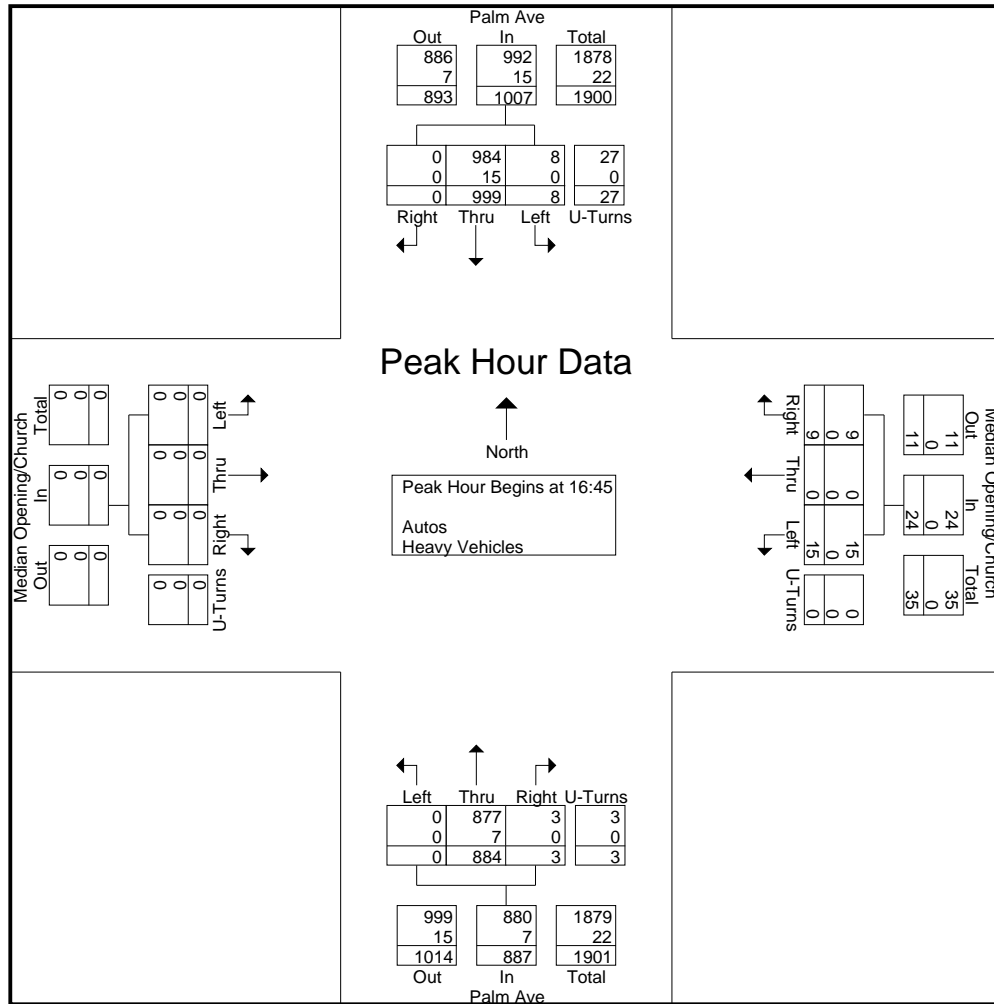
File Name : 2-Palm Ave & Median Opening

Site Code : 00000000

Start Date : 8/26/2021

Page No : 5

Start Time	Palm Ave From North					Median Opening/Church From East					Palm Ave From South					Median Opening/Church From West					Int. Total
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	0	233	3	4	240	2	0	3	0	5	1	218	0	1	220	0	0	0	0	0	465
17:00	0	231	1	9	241	1	0	5	0	6	2	207	0	1	210	0	0	0	0	0	457
17:15	0	288	3	8	299	4	0	4	0	8	0	246	0	0	246	0	0	0	0	0	553
17:30	0	247	1	6	254	2	0	3	0	5	0	213	0	1	214	0	0	0	0	0	473
Total Volume	0	999	8	27	1034	9	0	15	0	24	3	884	0	3	890	0	0	0	0	0	1948
% App. Total	0	96.6	0.8	2.6		37.5	0	62.5	0		0.3	99.3	0	0.3		0	0	0	0		
PHF	.000	.867	.667	.750	.865	.563	.000	.750	.000	.750	.375	.898	.000	.750	.904	.000	.000	.000	.000	.000	.881
Autos	0	984	8	27	1019	9	0	15	0	24	3	877	0	3	883	0	0	0	0	0	1926
% Autos	0	98.5	100	100	98.5	100	0	100	0	100	100	99.2	0	100	99.2	0	0	0	0	0	98.9
Heavy Vehicles																					
% Heavy Vehicles	0	1.5	0	0	1.5	0	0	0	0	0	0	0.8	0	0	0.8	0	0	0	0	0	1.1



Traf Tech Engineering Inc.

File Name : 3-Palm Ave & Sheridan St
 Site Code : 00000000
 Start Date : 8/26/2021
 Page No : 1

Groups Printed- Autos - Heavy Vehicles

Start Time	Palm Ave From North					Sheridan St From East					Palm Ave From South					Sheridan St From West					Int. Total
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	
07:00	23	93	45	1	162	70	244	40	0	354	81	151	64	0	296	19	225	29	0	273	1085
07:15	69	131	45	10	255	143	300	51	0	494	97	150	47	0	294	29	279	39	0	347	1390
07:30	93	154	65	11	323	62	223	52	0	337	100	90	46	0	236	27	293	48	0	368	1264
07:45	53	179	65	11	308	74	249	34	0	357	112	90	32	0	234	26	246	21	0	293	1192
Total	238	557	220	33	1048	349	1016	177	0	1542	390	481	189	0	1060	101	1043	137	0	1281	4931
08:00	37	175	66	2	280	118	348	70	0	536	127	150	53	1	331	36	279	38	1	354	1501
08:15	53	208	78	1	340	36	219	51	1	307	68	127	48	0	243	48	237	31	0	316	1206
08:30	40	102	36	0	178	35	233	63	0	331	75	132	42	0	249	41	277	14	0	332	1090
08:45	29	124	24	1	178	28	232	72	1	333	87	127	33	0	247	38	270	22	0	330	1088
Total	159	609	204	4	976	217	1032	256	2	1507	357	536	176	1	1070	163	1063	105	1	1332	4885
*** BREAK ***																					
16:00	35	115	27	0	177	42	267	88	0	397	96	124	49	0	269	60	264	19	0	343	1186
16:15	27	170	40	2	239	32	256	86	1	375	74	144	38	1	257	42	235	28	0	305	1176
16:30	29	105	29	0	163	49	307	64	1	421	67	125	42	0	234	39	275	22	0	336	1154
16:45	34	147	26	1	208	46	272	81	0	399	56	140	39	0	235	32	275	25	1	333	1175
Total	125	537	122	3	787	169	1102	319	2	1592	293	533	168	1	995	173	1049	94	1	1317	4691
17:00	43	173	42	0	258	40	243	66	0	349	87	138	43	0	268	31	229	28	0	288	1163
17:15	44	169	39	0	252	46	301	100	1	448	82	166	53	1	302	51	281	33	1	366	1368
17:30	36	192	53	0	281	48	274	100	0	422	74	154	56	1	285	35	246	18	0	299	1287
17:45	27	192	41	0	260	55	302	91	0	448	72	128	52	0	252	37	297	28	1	363	1323
Total	150	726	175	0	1051	189	1120	357	1	1667	315	586	204	2	1107	154	1053	107	2	1316	5141
Grand Total	672	2429	721	40	3862	924	4270	1109	5	6308	1355	2136	737	4	4232	591	4208	443	4	5246	19648
Apprch %	17.4	62.9	18.7	1		14.6	67.7	17.6	0.1		32	50.5	17.4	0.1		11.3	80.2	8.4	0.1		
Total %	3.4	12.4	3.7	0.2	19.7	4.7	21.7	5.6	0	32.1	6.9	10.9	3.8	0	21.5	3	21.4	2.3	0	26.7	
Autos	660	2413					4219	1086			1330	2117					4144				19381
% Autos	98.2	99.3	97.9	100	98.9	98.9	98.8	97.9	100	98.7	98.2	99.1	98	100	98.6	97.5	98.5	99.5	100	98.5	98.6
Heavy Vehicles																					
% Heavy Vehicles	1.8	0.7	2.1	0	1.1	1.1	1.2	2.1	0	1.3	1.8	0.9	2	0	1.4	2.5	1.5	0.5	0	1.5	1.4

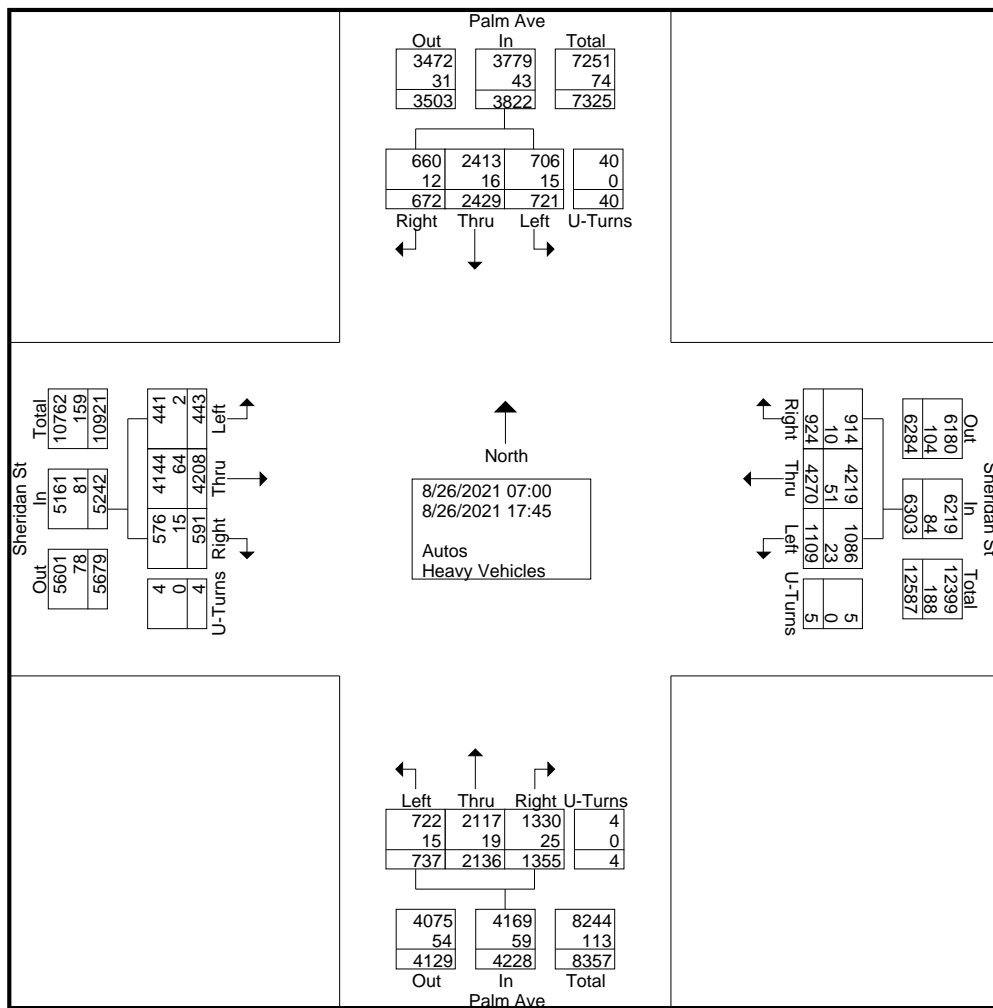
Traf Tech Engineering Inc.

File Name : 3-Palm Ave & Sheridan St

Site Code : 00000000

Start Date : 8/26/2021

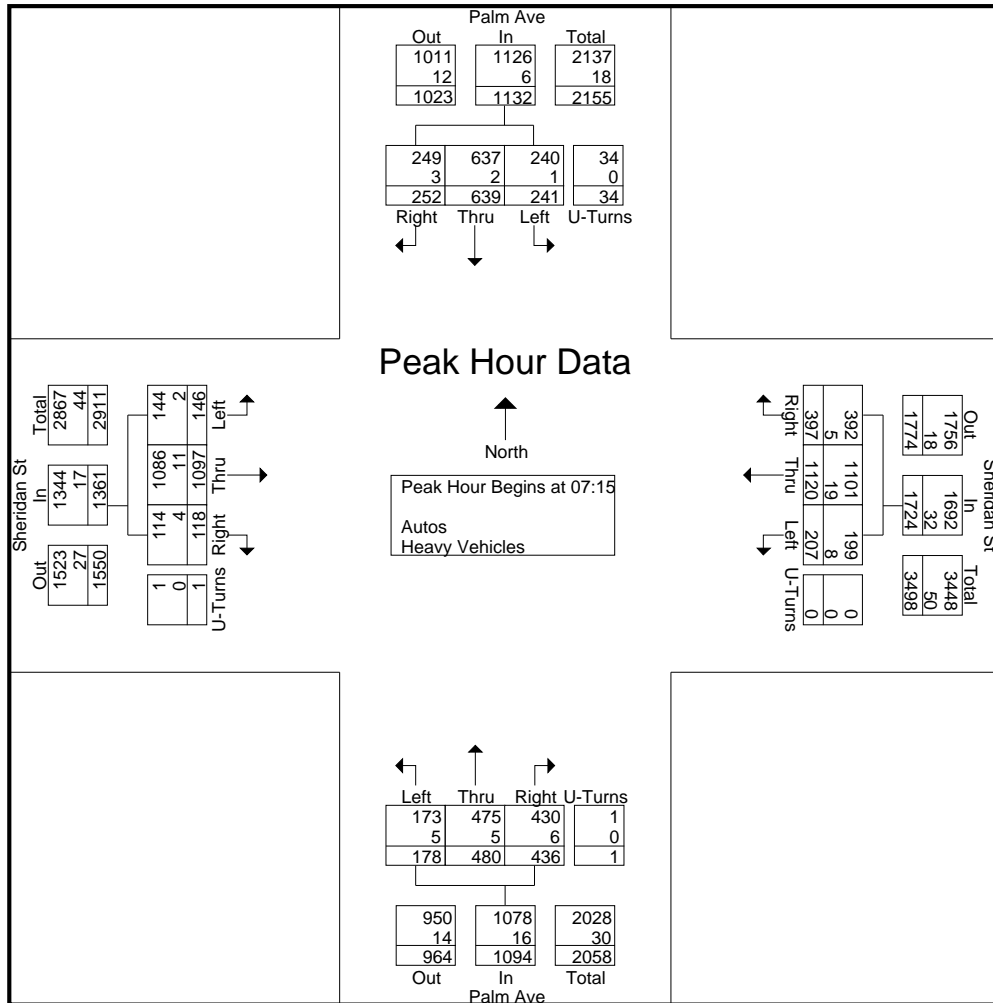
Page No : 2



Traf Tech Engineering Inc.

File Name : 3-Palm Ave & Sheridan St
 Site Code : 00000000
 Start Date : 8/26/2021
 Page No : 3

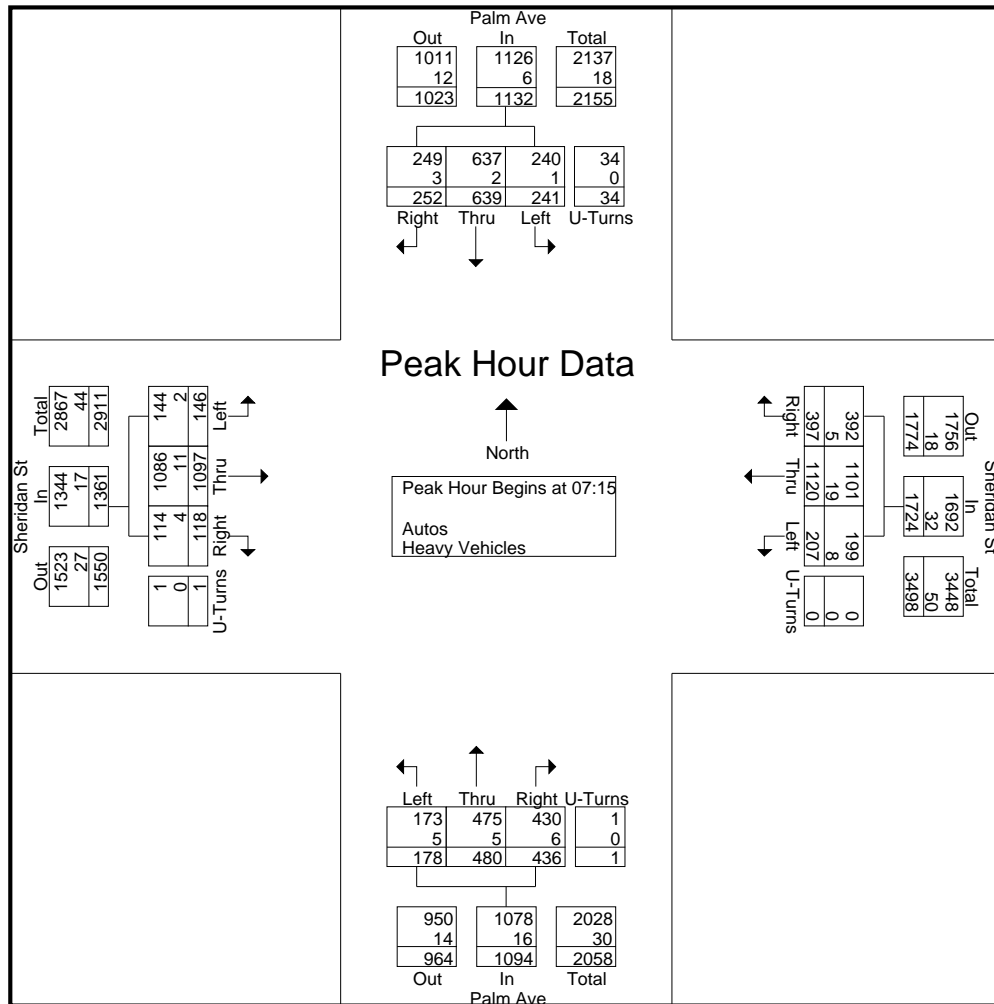
Start Time	Palm Ave From North					Sheridan St From East					Palm Ave From South					Sheridan St From West					Int. Total
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	
Peak Hour Analysis From 07:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	69	131	45	10	255	143	300	51	0	494	97	150	47	0	294	29	279	39	0	347	1390
07:30	93	154	65	11	323	62	223	52	0	337	100	90	46	0	236	27	293	48	0	368	1264
07:45	53	179	65	11	308	74	249	34	0	357	112	90	32	0	234	26	246	21	0	293	1192
08:00	37	175	66	2	280	118	348	70	0	536	127	150	53	1	331	36	279	38	1	354	1501
Total Volume	252	639	241	34	1166	397	1120	207	0	1724	436	480	178	1	1095	118	1097	146	1	1362	5347
% App. Total	21.6	54.8	20.7	2.9		23	65	12	0		39.8	43.8	16.3	0.1		8.7	80.5	10.7	0.1		
PHF	.677	.892	.913	.773	.902	.694	.805	.739	.000	.804	.858	.800	.840	.250	.827	.819	.936	.760	.250	.925	.891
Autos	249	637	240	34	1160	392	1101									1086					
% Autos	98.8	99.7	99.6	100	99.5	98.7	98.3	96.1	0	98.1	98.6	99.0	97.2	100	98.5	96.6	99.0	98.6	100	98.8	98.7
Heavy Vehicles																					
% Heavy Vehicles	1.2	0.3	0.4	0	0.5	1.3	1.7	3.9	0	1.9	1.4	1.0	2.8	0	1.5	3.4	1.0	1.4	0	1.2	1.3



Traf Tech Engineering Inc.

File Name : 3-Palm Ave & Sheridan St
 Site Code : 00000000
 Start Date : 8/26/2021
 Page No : 4

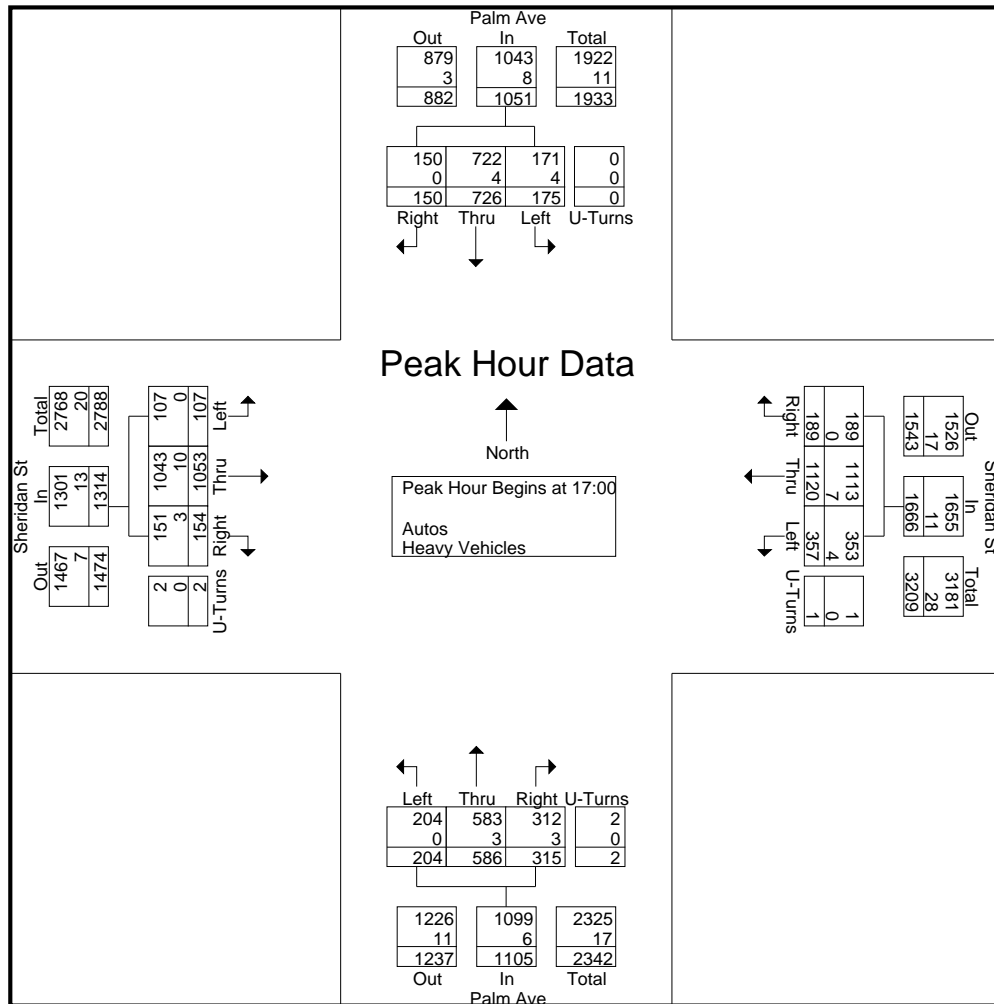
Start Time	Palm Ave From North					Sheridan St From East					Palm Ave From South					Sheridan St From West					Int. Total
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	69	131	45	10	255	143	300	51	0	494	97	150	47	0	294	29	279	39	0	347	1390
07:30	93	154	65	11	323	62	223	52	0	337	100	90	46	0	236	27	293	48	0	368	1264
07:45	53	179	65	11	308	74	249	34	0	357	112	90	32	0	234	26	246	21	0	293	1192
08:00	37	175	66	2	280	118	348	70	0	536	127	150	53	1	331	36	279	38	1	354	1501
Total Volume	252	639	241	34	1166	397	1120	207	0	1724	436	480	178	1	1095	118	1097	146	1	1362	5347
% App. Total	21.6	54.8	20.7	2.9		23	65	12	0		39.8	43.8	16.3	0.1		8.7	80.5	10.7	0.1		
PHF	.677	.892	.913	.773	.902	.694	.805	.739	.000	.804	.858	.800	.840	.250	.827	.819	.936	.760	.250	.925	.891
Autos	249	637	240	34	1160	392	1101									1086					
% Autos	98.8	99.7	99.6	100	99.5	98.7	98.3	96.1	0	98.1	98.6	99.0	97.2	100	98.5	96.6	99.0	98.6	100	98.8	98.7
Heavy Vehicles																					
% Heavy Vehicles	1.2	0.3	0.4	0	0.5	1.3	1.7	3.9	0	1.9	1.4	1.0	2.8	0	1.5	3.4	1.0	1.4	0	1.2	1.3



Traf Tech Engineering Inc.

File Name : 3-Palm Ave & Sheridan St
 Site Code : 00000000
 Start Date : 8/26/2021
 Page No : 5

Start Time	Palm Ave From North					Sheridan St From East					Palm Ave From South					Sheridan St From West					Int. Total
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 17:00																					
17:00	43	173	42	0	258	40	243	66	0	349	87	138	43	0	268	31	229	28	0	288	1163
17:15	44	169	39	0	252	46	301	100	1	448	82	166	53	1	302	51	281	33	1	366	1368
17:30	36	192	53	0	281	48	274	100	0	422	74	154	56	1	285	35	246	18	0	299	1287
17:45	27	192	41	0	260	55	302	91	0	448	72	128	52	0	252	37	297	28	1	363	1323
Total Volume	150	726	175	0	1051	189	1120	357	1	1667	315	586	204	2	1107	154	1053	107	2	1316	5141
% App. Total	14.3	69.1	16.7	0		11.3	67.2	21.4	0.1		28.5	52.9	18.4	0.2		11.7	80	8.1	0.2		
PHF	.852	.945	.825	.000	.935	.859	.927	.893	.250	.930	.905	.883	.911	.500	.916	.755	.886	.811	.500	.899	.940
Autos	150	722	171	0	1043	189	1113									1043					
% Autos	100	99.4	97.7	0	99.2	100	99.4	98.9	100	99.3	99.0	99.5	100	100	99.5	98.1	99.1	100	100	99.0	99.3
Heavy Vehicles																					
% Heavy Vehicles	0	0.6	2.3	0	0.8	0	0.6	1.1	0	0.7	1.0	0.5	0	0.5	1.9	0.9	0	0	0	1.0	0.7



Traf Tech Engineering Inc.

File Name : 4-Palm Ave & Stirling Rd
 Site Code : 00000000
 Start Date : 9/2/2021
 Page No : 1

Groups Printed- Peds & Bikes

Start Time	Palm Ave From North				Stirling Rd From East				Palm Ave From South				Stirling Rd From West				Int. Total
	Bikes			Peds	Bikes			Peds	Bikes			Peds	Bikes			Peds	
07:00	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
07:15	11	0	0	10	0	0	0	0	3	0	0	0	0	0	0	1	25
07:30	2	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	3
07:45	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	2
Total	13	0	0	10	0	0	0	0	6	0	0	2	0	0	0	1	32
08:00	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	2
08:15	1	0	0	0	0	0	0	0	3	0	0	0	0	0	0	0	4
08:30	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5
08:45	1	0	0	0	0	0	0	0	1	0	0	1	0	0	0	0	3
Total	7	0	0	2	0	0	0	0	4	0	0	1	0	0	0	0	14
*** BREAK ***																	
16:00	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
16:15	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1
16:30	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
16:45	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	2
Total	1	0	0	0	0	0	0	0	5	0	0	0	0	0	0	0	6
*** BREAK ***																	
17:15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
*** BREAK ***																	
17:45	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	1
Total	0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	2
Grand Total	21	0	0	12	0	0	0	0	15	0	0	3	2	0	0	1	54
Apprch %	63.6	0	0	36.4	0	0	0	0	83.3	0	0	16.7	66.7	0	0	33.3	
Total %	38.9	0	0	22.2	0	0	0	0	27.8	0	0	5.6	3.7	0	0	1.9	

Traf Tech Engineering Inc.

File Name : 4-Palm Ave & Stirling Rd
 Site Code : 00000000
 Start Date : 9/2/2021
 Page No : 1

Groups Printed- Autos - Heavy Vehicles

Start Time	Palm Ave From North					Stirling Rd From East					Palm Ave From South					Stirling Rd From West					Int. Total
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	
07:00	29	95	60	0	184	41	108	51	1	201	43	98	39	1	181	40	216	37	1	294	860
07:15	48	172	34	1	255	54	110	45	4	213	48	125	45	2	220	63	219	73	0	355	1043
07:30	53	175	50	1	279	62	193	50	1	306	70	141	43	2	256	61	155	68	2	286	1127
07:45	58	168	33	1	260	36	140	53	1	230	61	124	49	0	234	59	238	45	1	343	1067
Total	188	610	177	3	978	193	551	199	7	950	222	488	176	5	891	223	828	223	4	1278	4097
08:00	55	177	37	0	269	35	149	35	2	221	59	184	39	2	284	54	265	65	1	385	1159
08:15	38	162	35	0	235	33	121	36	1	191	42	139	25	1	207	38	230	56	0	324	957
08:30	41	118	48	0	207	36	133	21	0	190	46	117	30	2	195	37	235	60	1	333	925
08:45	59	116	36	0	211	35	153	29	1	218	38	111	22	0	171	24	204	46	0	274	874
Total	193	573	156	0	922	139	556	121	4	820	185	551	116	5	857	153	934	227	2	1316	3915
*** BREAK ***																					
16:00	47	81	36	0	164	42	220	55	1	318	44	105	43	0	192	39	182	33	0	254	928
16:15	51	134	31	0	216	44	213	43	1	301	43	130	34	2	209	36	196	34	1	267	993
16:30	48	137	38	0	223	48	200	51	2	301	36	121	38	2	197	29	135	27	1	192	913
16:45	46	124	23	0	193	51	240	39	0	330	40	118	31	2	191	26	188	41	1	256	970
Total	192	476	128	0	796	185	873	188	4	1250	163	474	146	6	789	130	701	135	3	969	3804
17:00	59	140	36	0	235	41	207	39	0	287	45	134	34	2	215	36	164	39	4	243	980
17:15	61	163	44	0	268	65	262	51	0	378	44	165	37	1	247	30	175	41	0	246	1139
17:30	78	173	35	0	286	54	268	54	0	376	41	145	32	4	222	34	198	60	2	294	1178
17:45	79	196	45	0	320	58	240	53	2	353	55	133	41	2	231	40	169	50	2	261	1165
Total	277	672	160	0	1109	218	977	197	2	1394	185	577	144	9	915	140	706	190	8	1044	4462
Grand Total	850	2331	621	3	3805	735	2957	705	17	4414	755	2090	582	25	3452	646	3169	775	17	4607	16278
Apprch %	22.3	61.3	16.3	0.1		16.7	67	16	0.4		21.9	60.5	16.9	0.7		14	68.8	16.8	0.4		
Total %	5.2	14.3	3.8	0	23.4	4.5	18.2	4.3	0.1	27.1	4.6	12.8	3.6	0.2	21.2	4	19.5	4.8	0.1	28.3	
Autos	835	2314					2913					2080					3107				16060
% Autos	98.2	99.3	98.2	100	98.9	99.2	98.5	99	100	98.7	98.7	99.5	98.3	100	99.1	98.3	98	98.1	100	98.1	98.7
Heavy Vehicles																					
% Heavy Vehicles	1.8	0.7	1.8	0	1.1	0.8	1.5	1	0	1.3	1.3	0.5	1.7	0	0.9	1.7	2	1.9	0	1.9	1.3

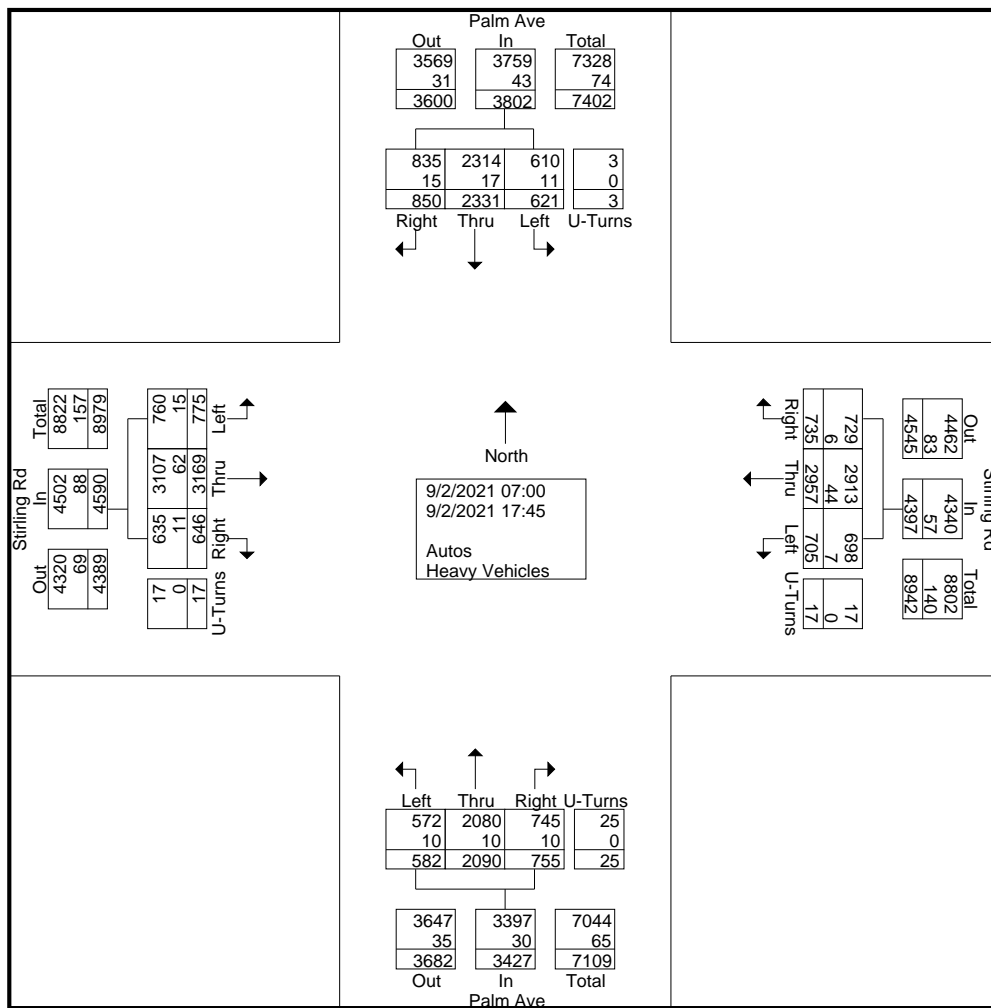
Traf Tech Engineering Inc.

File Name : 4-Palm Ave & Stirling Rd

Site Code : 00000000

Start Date : 9/2/2021

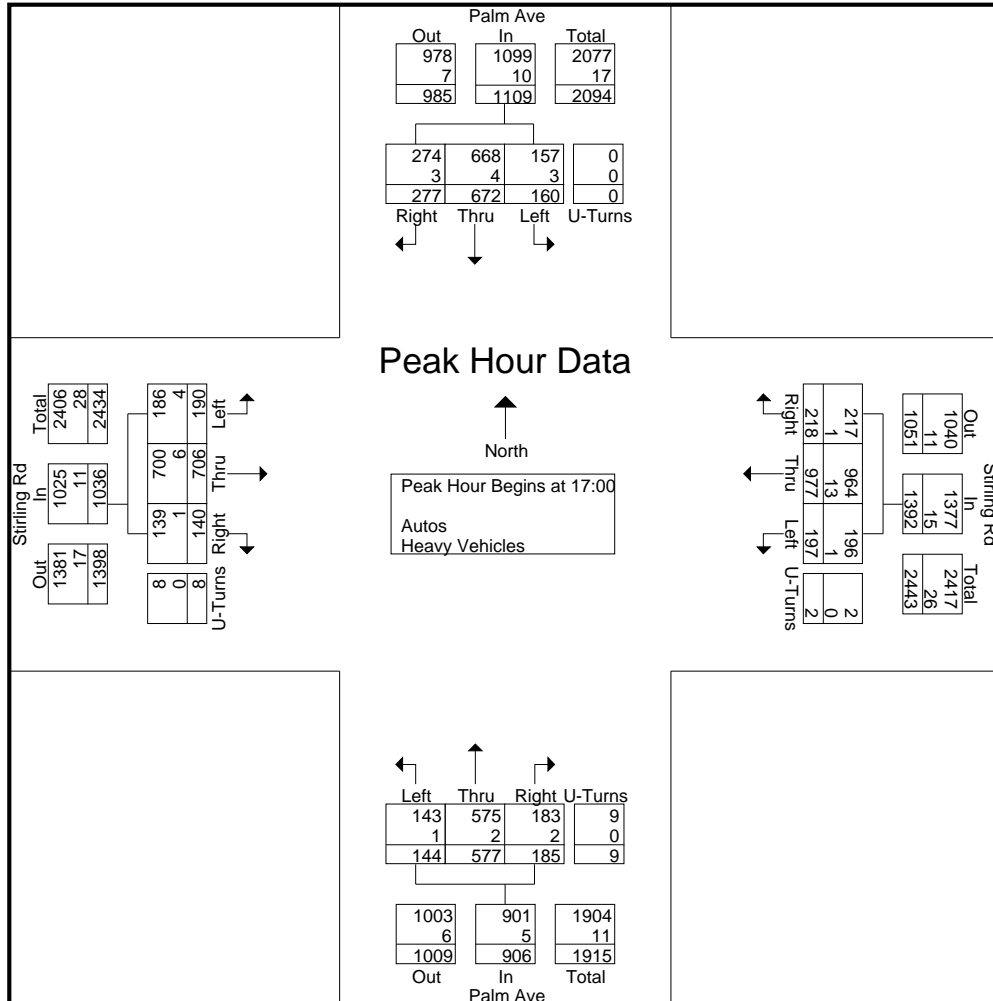
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Traf Tech Engineering Inc.

File Name : 4-Palm Ave & Stirling Rd
 Site Code : 00000000
 Start Date : 9/2/2021
 Page No : 3

Start Time	Palm Ave From North					Stirling Rd From East					Palm Ave From South					Stirling Rd From West					Int. Total
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	
Peak Hour Analysis From 07:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 17:00																					
17:00	59	140	36	0	235	41	207	39	0	287	45	134	34	2	215	36	164	39	4	243	980
17:15	61	163	44	0	268	65	262	51	0	378	44	165	37	1	247	30	175	41	0	246	1139
17:30	78	173	35	0	286	54	268	54	0	376	41	145	32	4	222	34	198	60	2	294	1178
17:45	79	196	45	0	320	58	240	53	2	353	55	133	41	2	231	40	169	50	2	261	1165
Total Volume	277	672	160	0	1109	218	977	197	2	1394	185	577	144	9	915	140	706	190	8	1044	4462
% App. Total	25	60.6	14.4	0		15.6	70.1	14.1	0.1		20.2	63.1	15.7	1		13.4	67.6	18.2	0.8		
PHF	.877	.857	.889	.000	.866	.838	.911	.912	.250	.922	.841	.874	.878	.563	.926	.875	.891	.792	.500	.888	.947
Autos	274	668	157	0	1099	217	964	196	2	1379	183	575	143	9	910	139	700	186	8	1033	4421
% Autos	98.9	99.4	98.1	0	99.1	99.5	98.7	99.5	100	98.9	98.9	99.7	99.3	100	99.5	99.3	99.2	97.9	100	98.9	99.1
Heavy Vehicles																					
% Heavy Vehicles	1.1	0.6	1.9	0	0.9	0.5	1.3	0.5	0	1.1	1.1	0.3	0.7	0	0.5	0.7	0.8	2.1	0	1.1	0.9



Traf Tech Engineering Inc.

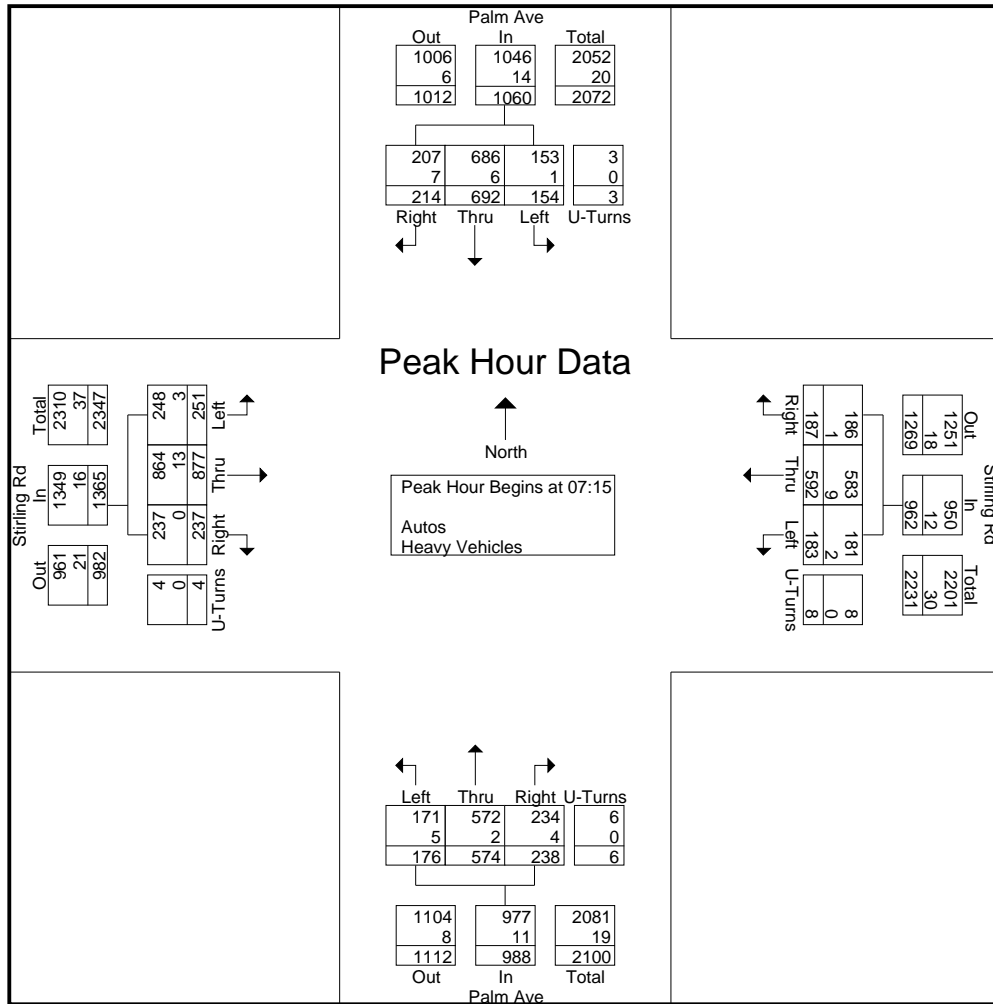
File Name : 4-Palm Ave & Stirling Rd

Site Code : 00000000

Start Date : 9/2/2021

Page No : 4

Start Time	Palm Ave From North					Stirling Rd From East					Palm Ave From South					Stirling Rd From West					Int. Total
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	48	172	34	1	255	54	110	45	4	213	48	125	45	2	220	63	219	73	0	355	1043
07:30	53	175	50	1	279	62	193	50	1	306	70	141	43	2	256	61	155	68	2	286	1127
07:45	58	168	33	1	260	36	140	53	1	230	61	124	49	0	234	59	238	45	1	343	1067
08:00	55	177	37	0	269	35	149	35	2	221	59	184	39	2	284	54	265	65	1	385	1159
Total Volume	214	692	154	3	1063	187	592	183	8	970	238	574	176	6	994	237	877	251	4	1369	4396
% App. Total	20.1	65.1	14.5	0.3		19.3	61	18.9	0.8		23.9	57.7	17.7	0.6		17.3	64.1	18.3	0.3		
PHF	.922	.977	.770	.750	.953	.754	.767	.863	.500	.792	.850	.780	.898	.750	.875	.940	.827	.860	.500	.889	.948
Autos	207	686	153	3	1049	186	583	181	8	958	234	572	171	6	983	237	864	248	4	1353	4343
% Autos	96.7	99.1	99.4	100	98.7	99.5	98.5	98.9	100	98.8	98.3	99.7	97.2	100	98.9	100	98.5	98.8	100	98.8	98.8
Heavy Vehicles																					
% Heavy Vehicles	3.3	0.9	0.6	0	1.3	0.5	1.5	1.1	0	1.2	1.7	0.3	2.8	0	1.1	0	1.5	1.2	0	1.2	1.2



Traf Tech Engineering Inc.

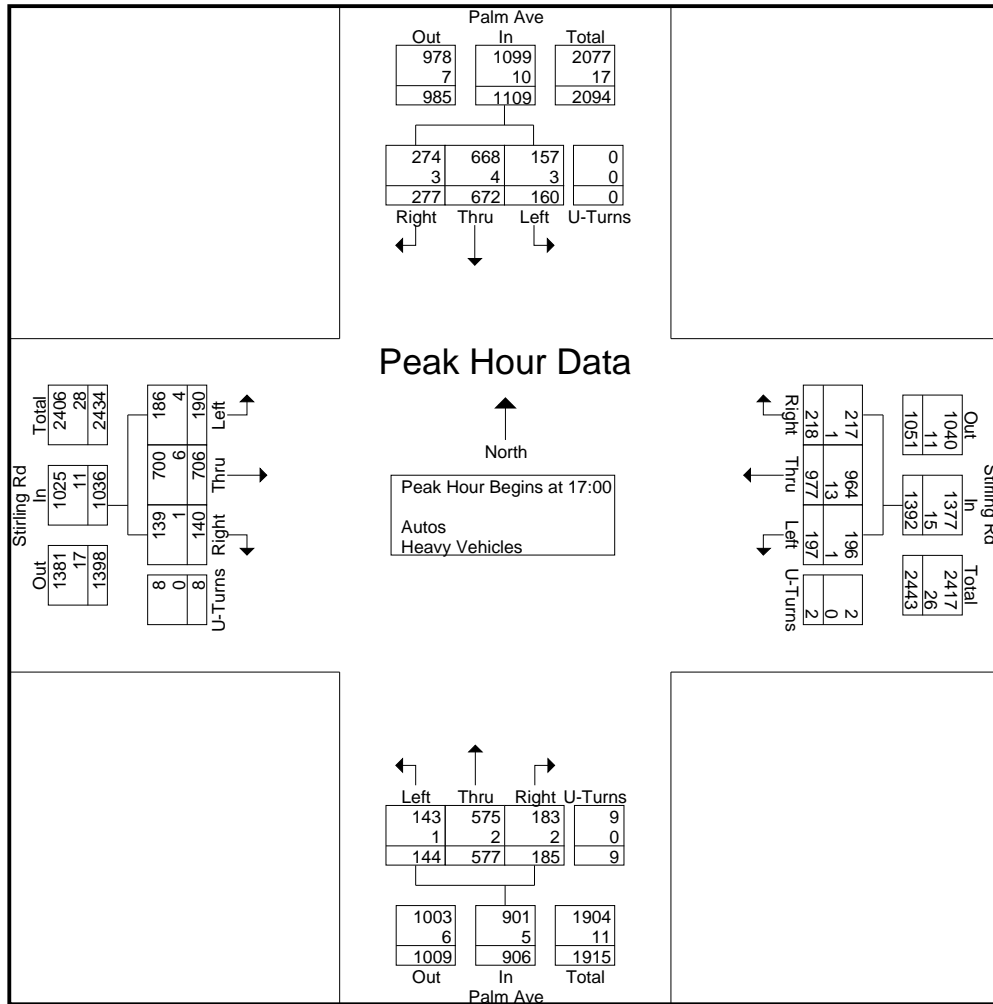
File Name : 4-Palm Ave & Stirling Rd

Site Code : 00000000

Start Date : 9/2/2021

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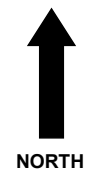
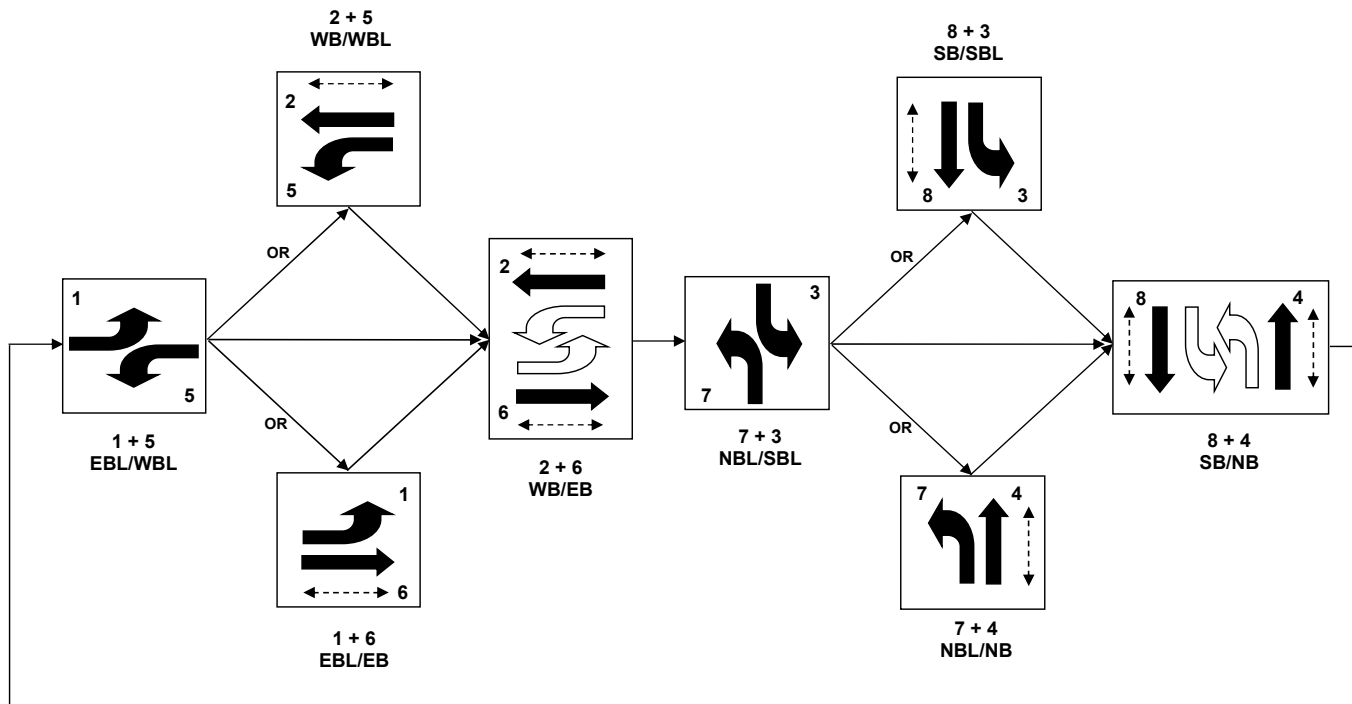
Start Time	Palm Ave From North					Stirling Rd From East					Palm Ave From South					Stirling Rd From West					Int. Total
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 17:00																					
17:00	59	140	36	0	235	41	207	39	0	287	45	134	34	2	215	36	164	39	4	243	980
17:15	61	163	44	0	268	65	262	51	0	378	44	165	37	1	247	30	175	41	0	246	1139
17:30	78	173	35	0	286	54	268	54	0	376	41	145	32	4	222	34	198	60	2	294	1178
17:45	79	196	45	0	320	58	240	53	2	353	55	133	41	2	231	40	169	50	2	261	1165
Total Volume	277	672	160	0	1109	218	977	197	2	1394	185	577	144	9	915	140	706	190	8	1044	4462
% App. Total	25	60.6	14.4	0		15.6	70.1	14.1	0.1		20.2	63.1	15.7	1		13.4	67.6	18.2	0.8		
PHF	.877	.857	.889	.000	.866	.838	.911	.912	.250	.922	.841	.874	.878	.563	.926	.875	.891	.792	.500	.888	.947
Autos	274	668	157	0	1099	217	964	196	2	1379	183	575	143	9	910	139	700	186	8	1033	4421
% Autos	98.9	99.4	98.1	0	99.1	99.5	98.7	99.5	100	98.9	98.9	99.7	99.3	100	99.5	99.3	99.2	97.9	100	98.9	99.1
Heavy Vehicles																					
% Heavy Vehicles	1.1	0.6	1.9	0	0.9	0.5	1.3	0.5	0	1.1	1.1	0.3	0.7	0	0.5	0.7	0.8	2.1	0	1.1	0.9





Sequence of Operation

Sheridan Street and Palm Avenue

Intersection Number 3351 (Cooper City) Mod 11 and Higher



 = Permissive
  = Pedestrian Crossing Phase

Station : 3351 - Sheridan St & Palm 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		30		33		30		31								
Min Green	5	10	5	6	5	10	5	6								
Gap Ext	1.5	3	1.5	2	1.5	3	1.5	2								
Max1	20	50	20	35	20	50	20	35								
Max2																
Yellow Clr	5	5	5	5	5	5	5	5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	2.5	2	3	2	2.5	2	3	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		ON		ON		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																

Preemption

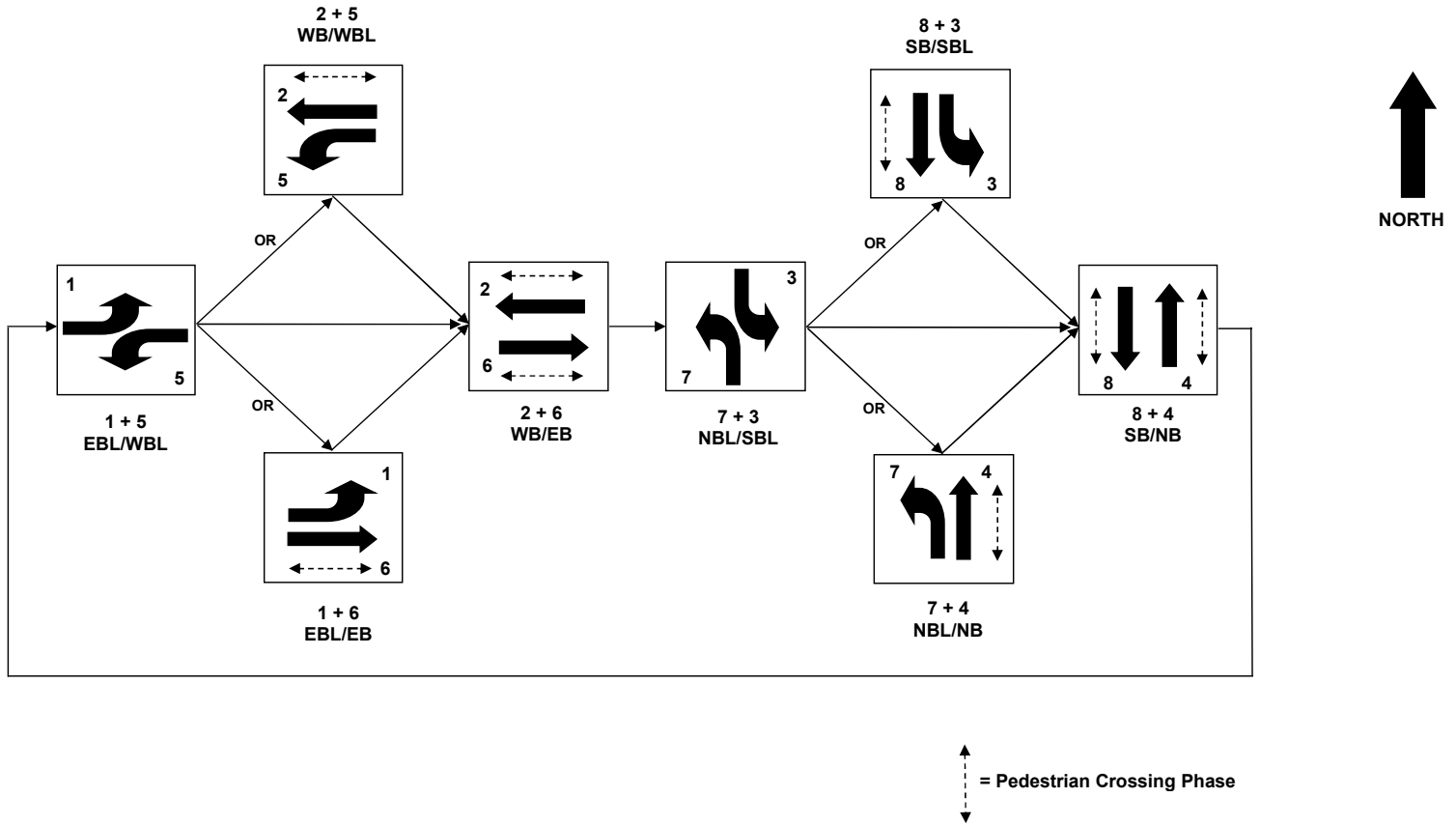
Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash						
Override Higher Preempt						
Flash in Dwell						
Link to Preempt						
Delay						
Min Duration						
Min Green	6	6	6	6	6	6
Min Walk						
Ped Clear						
Track Green						
Min Dwell	8	8	8	8	8	8
Max Presence	180	180	180	180	180	180
Track Veh 1						
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1	4	2	3	2	4	1
Dwell Cyc Veh 2	8	6	8	5	7	6
Dwell Cyc Veh 3						
Dwell Cyc Veh 4						
Dwell Cyc Veh 5						
Dwell Cyc Veh 6						

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				

Sequence of Operation

Stirling Road and SW 100 Avenue/Palm Avenue
Intersection Number 3368 (Cooper City) Mod 11 and Higher



Station : 3368 - Stirling Rd & SW 100/Palm 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		30		31		30		31								
Min Green	5	12	5	6	5	12	5	6								
Gap Ext	2	3	2	2	2	3	2	2								
Max1	15	40	15	40	15	40	15	40								
Max2																
Yellow Clr	5	5	5	5	5	5	5	5	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	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																

Preemption

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash					ON	ON
Override Higher Preempt					ON	ON
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						

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				

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									

Prepared By

Date Implemented

Reviewed By

Traffic Engineer

Broward County

Timing Sheet

9/1/2021 9:16:18 AM

Station : 3368 - Stirling Rd & SW 100/Palm 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	42	2	1	2	25		22	69	22	47	22	69	22	47									
9		3	3	160	42	3	1	2	25		22	69	22	47	22	69	22	47									
15	10	4	4	160	152	4	1	2	25		22	69	22	47	22	69	22	47									
20		3	3	160	42	3	1	2	25		22	69	22	47	22	69	22	47									

Day Plan 2

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 2											Easy																
		3	3	160	42	3	1	2	25		22	69	22	47	22	69	22	47									
1		100	254																								
6	30	3	3	160	42	3	1	2	25		22	69															



BROWARD COUNTY TRAFFIC ENGINEERING
ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	3351	Initial Operation Date	7/3/86
Controller Type	2070 LN2 (BIU)	System Number	3351
Modification Number	11	Modification Date	12/07/2017
Drawing/Project No	BC PROJECT # 5425	FPL Grid Number	86773164404
Intersection	SHERIDAN STREET and PALM AVENUE		
Municipality	COOPER CITY		

Controller Phase	1	2	3	4	5	6	7	8
Face Number	1	2	4	4	5	6	7	8
Direction	EBL	WB	SBL	NB	WBL	EB	NBL	SB
Initial Green(MIN)	5	10	5	6	5	10	5	6
Vehicle Ext.(GAP)	1.5	3.0	1.5	2.0	1.5	3.0	1.5	2.0
Maximum Green I	20	50	20	35	20	50	20	35
Maximum Green II								
Yellow Clearance	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
All Red Clearance	2.5	2.0	3.0	2.0	2.5	2.0	3.0	2.0
Phase Recall	OFF	MIN	OFF	OFF	OFF	MIN	OFF	OFF
Detector Delay								
Walk		7		7		7		7
Pedestrian Clearance		30		33		30		31
Permissive	DUAL		DUAL		DUAL		DUAL	
Flash Operation	RED	RED	RED	RED	RED	RED	RED	RED

Attachment

NOTES:

1. DUAL ENTRY HARDWIRED NORTH/SOUTH.
2. MOD. 11 UPDATES YELLOW CLEARANCES ON ALL PHASES, ALL RED ON PHASES 2, 4, 6 & 8, WALK VALUES AND PEDESTRIAN CLEARANCES ON PHASES 4 & 8 TO REFLECT INTERSECTION REBUILD AS WELL AS CURRENT STANDARDS.

Submitted By _____

Approved By _____



BROWARD COUNTY TRAFFIC ENGINEERING
ACTUATED TRAFFIC SIGNAL TIMING SHEET

Intersection Number	3368	Initial Operation Date	5/22/87
Controller Type	2070 TS2 (BIU)	System Number	3368
Modification Number	12	Modification Date	04/01/2021
Drawing/Project No	BC#3368	FPL Grid Number	86774174900
Intersection	STIRLING ROAD and SW 100 AVENUE/PALM AVE.		
Municipality	COOPER CITY		

Controller Phase	1	2	3	4	5	6	7	8
Face Number	1	2, 2V	3	4, 4V	5	6, 6V	7	8, 8V
Direction	EBL	WB	SBL	NB	WBL	EB	NBL	SB
Initial Green(MIN)	5	12	5	6	5	12	5	6
Vehicle Ext.(GAP)	2.0	3.0	2.0	2.0	2.0	3.0	2.0	2.0
Maximum Green I	15	40	15	40	15	40	15	40
Maximum Green II								
Yellow Clearance	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
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				30RT				30RT
Walk		7+A		7+A		7+A		7+A
Pedestrian Clearance		30		31		30		31
Permissive	DUAL		DUAL		DUAL		DUAL	
Flash Operation	RED	RED	RED	RED	RED	RED	RED	RED

Attachment

NOTES:

1. DUAL ENTRY NORTH/SOUTH.
2. AUDIBLE PEDS (APS).
3. MOD. 12 REFLECTS INTERSECTION REBUILD.

Submitted By _____

Approved By _____

APPENDIX C

Peak Season Conversion Factor and Historical Traffic Growth Analysis

2020 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
 CATEGORY: 8630 WEST-W OF US441

WEEK	DATES	SF	MOCF: 0.91 PSCF
* 1	01/01/2020 - 01/04/2020	0.95	1.04
* 2	01/05/2020 - 01/11/2020	0.90	0.99
* 3	01/12/2020 - 01/18/2020	0.85	0.93
* 4	01/19/2020 - 01/25/2020	0.84	0.92
* 5	01/26/2020 - 02/01/2020	0.83	0.91
* 6	02/02/2020 - 02/08/2020	0.83	0.91
* 7	02/09/2020 - 02/15/2020	0.82	0.90
* 8	02/16/2020 - 02/22/2020	0.86	0.95
* 9	02/23/2020 - 02/29/2020	0.89	0.98
*10	03/01/2020 - 03/07/2020	0.93	1.02
*11	03/08/2020 - 03/14/2020	0.97	1.07
*12	03/15/2020 - 03/21/2020	1.01	1.11
*13	03/22/2020 - 03/28/2020	1.11	1.22
14	03/29/2020 - 04/04/2020	1.22	1.34
15	04/05/2020 - 04/11/2020	1.32	1.45
16	04/12/2020 - 04/18/2020	1.42	1.56
17	04/19/2020 - 04/25/2020	1.36	1.49
18	04/26/2020 - 05/02/2020	1.29	1.42
19	05/03/2020 - 05/09/2020	1.23	1.35
20	05/10/2020 - 05/16/2020	1.16	1.27
21	05/17/2020 - 05/23/2020	1.14	1.25
22	05/24/2020 - 05/30/2020	1.11	1.22
23	05/31/2020 - 06/06/2020	1.08	1.19
24	06/07/2020 - 06/13/2020	1.05	1.15
25	06/14/2020 - 06/20/2020	1.02	1.12
26	06/21/2020 - 06/27/2020	1.03	1.13
27	06/28/2020 - 07/04/2020	1.04	1.14
28	07/05/2020 - 07/11/2020	1.04	1.14
29	07/12/2020 - 07/18/2020	1.05	1.15
30	07/19/2020 - 07/25/2020	1.05	1.15
31	07/26/2020 - 08/01/2020	1.04	1.14
32	08/02/2020 - 08/08/2020	1.04	1.14
33	08/09/2020 - 08/15/2020	1.03	1.13
34	08/16/2020 - 08/22/2020	1.03	1.13
35	08/23/2020 - 08/29/2020	1.02	1.12
36	08/30/2020 - 09/05/2020	1.02	1.12
37	09/06/2020 - 09/12/2020	1.01	1.11
38	09/13/2020 - 09/19/2020	1.01	1.11
39	09/20/2020 - 09/26/2020	1.00	1.10
40	09/27/2020 - 10/03/2020	0.99	1.09
41	10/04/2020 - 10/10/2020	0.98	1.08
42	10/11/2020 - 10/17/2020	0.97	1.07
43	10/18/2020 - 10/24/2020	0.97	1.07
44	10/25/2020 - 10/31/2020	0.97	1.07
45	11/01/2020 - 11/07/2020	0.97	1.07
46	11/08/2020 - 11/14/2020	0.98	1.08
47	11/15/2020 - 11/21/2020	0.98	1.08
48	11/22/2020 - 11/28/2020	0.97	1.07
49	11/29/2020 - 12/05/2020	0.97	1.07
50	12/06/2020 - 12/12/2020	0.96	1.05
51	12/13/2020 - 12/19/2020	0.95	1.04
52	12/20/2020 - 12/26/2020	0.90	0.99
53	12/27/2020 - 12/31/2020	0.85	0.93

* PEAK SEASON

27-FEB-2021 10:30:02

830UPD

4_8630_PKSEASON.TXT

FLORIDA DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION STATISTICS OFFICE
 2020 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 7749 - PALM AVE, N OF SHERIDAN ST

YEAR	AADT		DIRECTION 1		DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR	
2020	14900	C	N	7100	S	7800	9.00	55.10	8.80
2019	23000	R	N	11500	S	11500	9.00	56.00	5.50
2018	23000	T	N	11500	S	11500	9.00	56.30	6.00
2017	23000	S	N	11500	S	11500	9.00	57.10	6.20
2016	22000	F	N	11000	S	11000	9.00	56.10	2.90
2015	21000	C	N	10500	S	10500	9.00	56.20	3.40
2014	18000	X					9.00	56.80	7.40
2013	17500	X		0		0	9.00	56.20	7.60
2012	17500	T		0		0	9.00	57.00	5.90
2011	17300	S		0		0	9.00	59.10	6.30
2010	16900	F	N	8500	S	8400	9.60	57.92	9.30
2009	16500	C	N	8300	S	8200	9.71	58.42	5.30
2008	19300	C	N	9300	S	10000	9.67	56.67	6.50
2007	17600	C	N	8200	S	9400	10.19	60.63	4.80
2006	16100	C	N	7800	S	8300	9.61	59.08	2.90
2005	17700	C	N	8700	S	9000	10.00	58.10	0.00

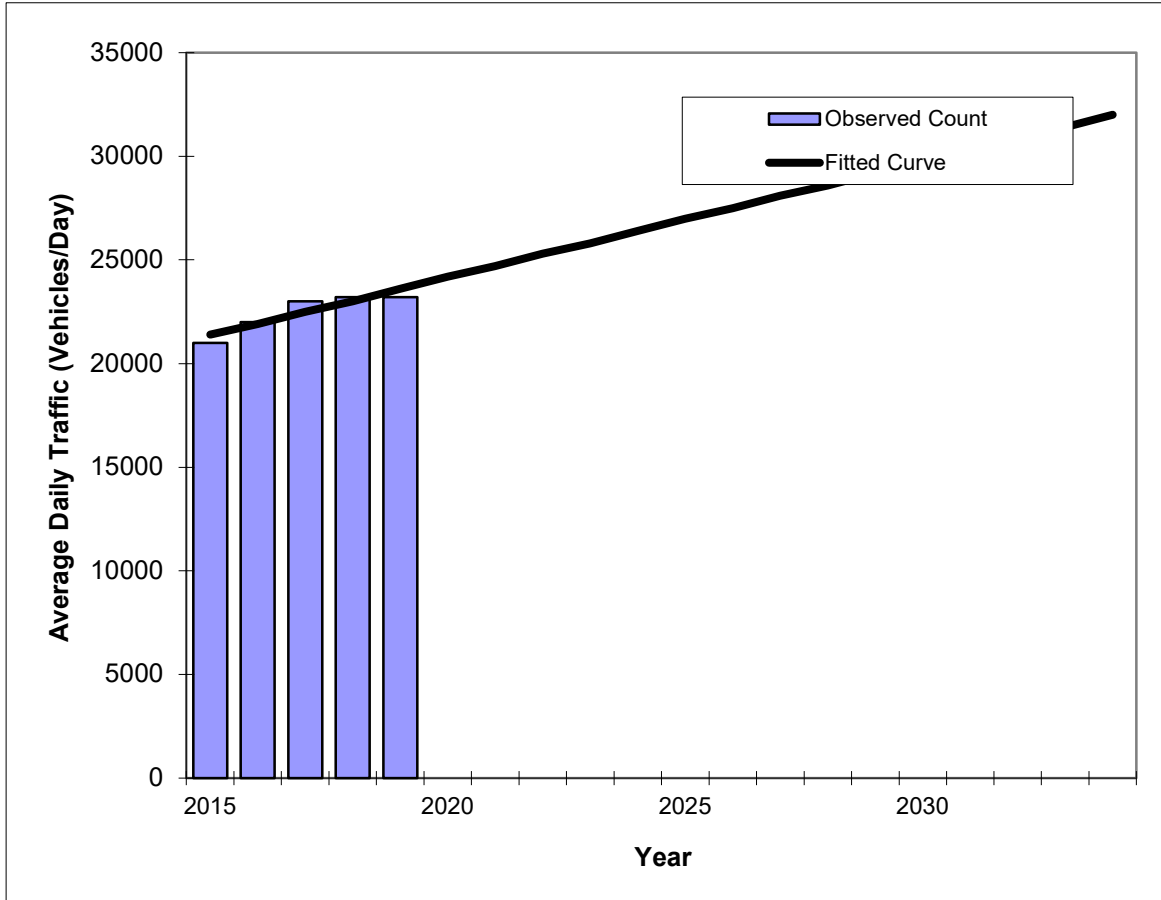
AADT FLAGS: C = COMPUTED; E = MANUAL ESTIMATE; F = FIRST YEAR ESTIMATE
 S = SECOND YEAR ESTIMATE; T = THIRD YEAR ESTIMATE; R = FOURTH YEAR ESTIMATE
 V = FIFTH YEAR ESTIMATE; 6 = SIXTH YEAR ESTIMATE; X = UNKNOWN

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

Traffic Trends - V03.a
PALM AVE/SW 101 AVE -- N. OF SHERIDAN ST

FIN#	1234
Location	1

County:	Broward (86)
Station #:	7749
Highway:	PALM AVE/SW 101 AVE



Year	Traffic (ADT/AADT)	
	Count*	Trend**
2015	21000	21400
2016	22000	21900
2017	23000	22500
2018	23200	23000
2019	23200	23600
2020 Opening Year Trend		
2020	N/A	24200
2021 Mid-Year Trend		
2021	N/A	24700
2022 Design Year Trend		
2022	N/A	25300
TRANPLAN Forecasts/Trends		

** Annual Trend Increase:	560
Trend R-squared:	84.12%
Trend Annual Historic Growth Rate:	2.57%
Trend Growth Rate (2019 to Design Year):	2.40%
Printed:	30-Aug-21

Straight Line Growth Option

*Axle-Adjusted

APPENDIX D

Future Turning Movement Volumes

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Palm Avenue and Stirling Road AM Peak Hour

Description	Palm Avenue Northbound			Palm Avenue Southbound			Stirling Road Eastbound			Stirling Road Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (9/2/2021)	182	574	238	157	692	214	255	877	237	191	592	187
Season Adjustment Factor	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
2021 Peak Season Traffic	204	643	267	176	775	240	286	982	265	214	663	209
Annual Growth Rate	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%
2022 Background Traffic	209	659	273	180	795	246	293	1,007	272	219	680	215
First Baptist Church Cooper City School	10	17	10	0	20	0	0	0	10	15	0	0
2022 Total Traffic	219	676	283	180	815	246	293	1,007	282	234	680	215

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Palm Avenue and Stirling Road PM Peak Hour

Description	Palm Avenue Northbound			Palm Avenue Southbound			Stirling Road Eastbound			Stirling Road Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (9/2/2021)	153	577	185	160	672	277	198	706	140	199	977	218
Season Adjustment Factor	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
2021 Peak Season Traffic	171	646	207	179	753	310	222	791	157	223	1,094	244
Annual Growth Rate	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%
2022 Background Traffic	176	663	213	184	772	318	227	811	161	229	1,122	250
First Baptist Church Cooper City School	8	13	8	0	12	0	0	0	6	6	0	0
2022 Total Traffic	184	676	221	184	784	318	227	811	167	235	1,122	250

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Palm Avenue and Park Entrance AM Peak Hour

Description	Palm Avenue Northbound			Palm Avenue Southbound			Park Entrance Eastbound			Park Entrance Westbound		
	U-turn	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (8/26/2021)	49	1,031	4	6	1,266					2		4
Season Adjustment Factor	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
2021 Peak Season Traffic	55	1,155	4	7	1,418	0	0	0	0	2	0	4
Annual Growth Rate	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%
2022 Background Traffic	56	1,184	5	7	1,454	0	0	0	0	2	0	5
First Baptist Church Cooper City School		37			45							
2022 Total Traffic	56	1,221	5	7	1,499	0	0	0	0	2	0	5

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Palm Avenue and Park Entrance PM Peak Hour

Description	Palm Avenue Northbound			Palm Avenue Southbound			Park Entrance Eastbound			Park Entrance Westbound		
	U-turn	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (8/26/2021)	52	829	16	4	1,047					4		2
Season Adjustment Factor	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
2021 Peak Season Traffic	58	928	18	4	1,173	0	0	0	0	4	0	2
Annual Growth Rate	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%
2022 Background Traffic	60	952	18	5	1,203	0	0	0	0	5	0	2
First Baptist Church Cooper City School		29			24							
2022 Total Traffic	60	981	18	5	1,227	0	0	0	0	5	0	2

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Palm Avenue and Median Opening/Church AM Peak Hour

Description	Palm Avenue Northbound			Palm Avenue Southbound			Median Opening/Church Eastbound			Median Opening/Church Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (8/26/2021)	1	1,107	8	59	1,215					8		31
Season Adjustment Factor	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
2021 Peak Season Traffic	1	1,240	9	66	1,361	0	0	0	0	9	0	35
Annual Growth Rate	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%
2022 Background Traffic	1	1,272	9	68	1,396	0	0	0	0	9	0	36
First Baptist Church Cooper City School			55	45						45		37
2022 Total Traffic	1	1,272	64	113	1,396	0	0	0	0	54	0	73

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Palm Avenue and Median Opening/Church PM Peak Hour

Description	Palm Avenue Northbound			Palm Avenue Southbound			Median Opening/Church Eastbound			Median Opening/Church Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (8/26/2021)	3	884	3	35	999					15	0	9
Season Adjustment Factor	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
2021 Peak Season Traffic	3	990	3	39	1,119	0	0	0	0	17	0	10
Annual Growth Rate	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%
2022 Background Traffic	3	1,016	3	40	1,148	0	0	0	0	17	0	10
First Baptist Church Cooper City School		35			31					36		29
2022 Total Traffic	3	1,051	3	40	1,179	0	0	0	0	53	0	39

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Palm Avenue and Sheridan Street AM Peak Hour

Description	Palm Avenue Northbound			Palm Avenue Southbound			Sheridan Street Eastbound			Sheridan Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (8/26/2021)	179	480	436	275	639	252	147	1,097	118	207	1,120	397
Season Adjustment Factor	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
2021 Peak Season Traffic	200	538	488	308	716	282	165	1,229	132	232	1,254	445
Annual Growth Rate	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%
2022 Background Traffic	206	551	501	316	734	289	169	1,260	136	238	1,287	456
First Baptist Church Cooper City School		25		12	21	12	15					15
2022 Total Traffic	206	576	501	328	755	301	184	1,260	136	238	1,287	471

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Palm Avenue and Sheridan Street PM Peak Hour

Description	Palm Avenue Northbound			Palm Avenue Southbound			Sheridan Street Eastbound			Sheridan Street Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (8/26/2021)	206	586	315	175	726	150	109	1,053	154	358	1,120	189
Season Adjustment Factor	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12	1.12
2021 Peak Season Traffic	231	656	353	196	813	168	122	1,179	172	401	1,254	212
Annual Growth Rate	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%	2.57%
2022 Background Traffic	237	673	362	201	834	172	125	1,210	177	411	1,287	217
First Baptist Church Cooper City School		15		10	16	10	10					10
2022 Total Traffic	237	688	362	211	850	182	135	1,210	177	411	1,287	227

APPENDIX E
SYNCHRO Analyses

Timings

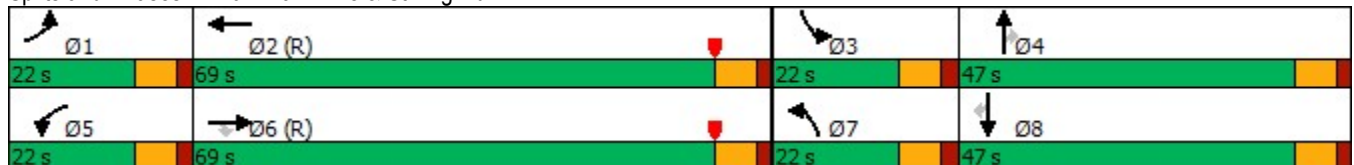
101: Palm Ave & Stirling Rd

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	286	982	265	214	663	204	643	267	176	775	240	
Future Volume (vph)	286	982	265	214	663	204	643	267	176	775	240	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	1	6		5	2	7	4		3	8		
Permitted Phases			6					4			8	
Detector Phase	1	6	6	5	2	7	4	4	3	8	8	
Switch Phase												
Minimum Initial (s)	5.0	12.0	12.0	5.0	12.0	5.0	6.0	6.0	5.0	6.0	6.0	
Minimum Split (s)	12.0	44.0	44.0	12.0	44.0	12.0	45.0	45.0	12.0	45.0	45.0	
Total Split (s)	22.0	69.0	69.0	22.0	69.0	22.0	47.0	47.0	22.0	47.0	47.0	
Total Split (%)	13.8%	43.1%	43.1%	13.8%	43.1%	13.8%	29.4%	29.4%	13.8%	29.4%	29.4%	
Yellow Time (s)	5.0	5.0	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	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	None	Max	Max	None	Max	Max	
Act Effct Green (s)	15.0	63.3	63.3	13.7	62.0	13.5	42.4	42.4	12.6	41.5	41.5	
Actuated g/C Ratio	0.09	0.40	0.40	0.09	0.39	0.08	0.26	0.26	0.08	0.26	0.26	
v/c Ratio	0.94	0.74	0.36	0.77	0.69	0.75	0.72	0.49	0.69	0.89	0.43	
Control Delay	107.5	45.5	6.7	88.9	42.8	87.5	59.1	16.4	84.7	69.7	8.1	
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	107.5	45.5	6.7	88.9	42.8	87.5	59.1	16.4	84.7	69.7	8.1	
LOS	F	D	A	F	D	F	E	B	F	E	A	
Approach Delay		50.3			51.8		54.1			59.5		
Approach LOS		D			D		D			E		

Intersection Summary

Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 42 (26%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.94	
Intersection Signal Delay: 53.7	Intersection LOS: D
Intersection Capacity Utilization 99.8%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 101: Palm Ave & Stirling Rd



Queues

101: Palm Ave & Stirling Rd


























Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	301	1034	279	225	918	215	677	281	185	816	253
v/c Ratio	0.94	0.74	0.36	0.77	0.69	0.75	0.72	0.49	0.69	0.89	0.43
Control Delay	107.5	45.5	6.7	88.9	42.8	87.5	59.1	16.4	84.7	69.7	8.1
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	107.5	45.5	6.7	88.9	42.8	87.5	59.1	16.4	84.7	69.7	8.1
Queue Length 50th (ft)	163	490	19	120	408	114	342	58	98	439	4
Queue Length 95th (ft)	#258	578	85	168	488	161	425	155	141	#562	79
Internal Link Dist (ft)		488			562		484			381	
Turn Bay Length (ft)	330		330	290		340		340	350		380
Base Capacity (vph)	321	1400	767	321	1330	321	937	573	321	918	589
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	0.94	0.74	0.36	0.70	0.69	0.67	0.72	0.49	0.58	0.89	0.43

Intersection Summary

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

HCM 6th Signalized Intersection Summary

101: Palm Ave & Stirling Rd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	286	982	265	214	663	209	204	643	267	176	775	240
Future Volume (veh/h)	286	982	265	214	663	209	204	643	267	176	775	240
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		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	301	1034	279	225	698	220	215	677	281	185	816	253
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	324	1504	656	267	1073	338	258	919	409	229	888	396
Arrive On Green	0.12	0.56	0.56	0.10	0.54	0.54	0.07	0.26	0.26	0.07	0.25	0.25
Sat Flow, veh/h	3456	3554	1550	3456	2638	831	3456	3554	1583	3456	3554	1583
Grp Volume(v), veh/h	301	1034	279	225	470	448	215	677	281	185	816	253
Grp Sat Flow(s),veh/h/ln	1728	1777	1550	1728	1777	1693	1728	1777	1583	1728	1777	1583
Q Serve(g_s), s	13.8	33.2	16.6	10.2	30.0	30.0	9.8	27.9	25.6	8.5	35.8	22.8
Cycle Q Clear(g_c), s	13.8	33.2	16.6	10.2	30.0	30.0	9.8	27.9	25.6	8.5	35.8	22.8
Prop In Lane	1.00		1.00	1.00		0.49	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	324	1504	656	267	722	688	258	919	409	229	888	396
V/C Ratio(X)	0.93	0.69	0.43	0.84	0.65	0.65	0.83	0.74	0.69	0.81	0.92	0.64
Avail Cap(c_a), veh/h	324	1504	656	324	722	688	324	919	409	324	888	396
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	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	69.5	27.4	23.8	70.8	28.7	28.7	73.0	54.3	53.5	73.7	58.4	53.6
Incr Delay (d2), s/veh	31.7	2.6	2.0	13.4	4.5	4.7	11.5	5.3	9.1	6.6	15.9	7.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.4	13.7	6.1	4.9	12.9	12.4	4.8	13.2	11.3	4.0	18.1	10.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	101.2	30.0	25.8	84.2	33.2	33.4	84.6	59.6	62.5	80.3	74.3	61.3
LnGrp LOS	F	C	C	F	C	C	F	E	E	F	E	E
Approach Vol, veh/h		1614			1143			1173			1254	
Approach Delay, s/veh		42.6			43.3			64.9			72.6	
Approach LOS		D			D			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.0	72.1	17.6	48.4	19.4	74.7	18.9	47.0				
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0				
Max Green Setting (Gmax), s	15.0	62.0	15.0	40.0	15.0	62.0	15.0	40.0				
Max Q Clear Time (g_c+I1), s	15.8	32.0	10.5	29.9	12.2	35.2	11.8	37.8				
Green Ext Time (p_c), s	0.0	7.0	0.1	2.8	0.1	9.9	0.1	1.1				
Intersection Summary												
HCM 6th Ctrl Delay			55.0									
HCM 6th LOS			E									

HCM 6th TWSC
 102: Palm Ave & Park Entrance/U-turn

Intersection							
Int Delay, s/veh	1.3						
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	2	4	55	1155	4	7	1418
Future Vol, veh/h	2	4	55	1155	4	7	1418
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	0	200	-	200	215	-
Veh in Median Storage, #	1	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	2	5	64	1343	5	8	1649

Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	2312	672	1649	0	0	1348
Stage 1	1471	-	-	-	-	-
Stage 2	841	-	-	-	-	-
Critical Hdwy	5	5	6.44	-	-	4.14
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3	3	2.52	-	-	2.22
Pot Cap-1 Maneuver	109	616	126	-	-	507
Stage 1	191	-	-	-	-	-
Stage 2	427	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	53	616	126	-	-	507
Mov Cap-2 Maneuver	81	-	-	-	-	-
Stage 1	94	-	-	-	-	-
Stage 2	420	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24.2	2.7	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBU	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	126	-	-	81	616	507
HCM Lane V/C Ratio	0.508	-	-	0.029	0.008	0.016
HCM Control Delay (s)	59.9	-	-	50.8	10.9	12.2
HCM Lane LOS	F	-	-	F	B	B
HCM 95th %tile Q(veh)	2.4	-	-	0.1	0	0

HCM 6th TWSC
 103: Median Opening/ Church & Palm Ave

Intersection							
Int Delay, s/veh	0.6						
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations	↙	↗	↘	↑↑	↗	↙	↑↑
Traffic Vol, veh/h	9	35	1	1240	9	66	1361
Future Vol, veh/h	9	35	1	1240	9	66	1361
Conflicting Peds, #/hr	0	0	0	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	0	100	-	200	260	-
Veh in Median Storage, #	1	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	89	89	92	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	10	39	1	1393	10	74	1529

Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	2310	699	1529	0	0	1405
Stage 1	1397	-	-	-	-	-
Stage 2	913	-	-	-	-	-
Critical Hdwy	5	5	6.44	-	-	4.14
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3	3	2.52	-	-	2.22
Pot Cap-1 Maneuver	109	600	151	-	-	482
Stage 1	211	-	-	-	-	-
Stage 2	390	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	91	599	151	-	-	481
Mov Cap-2 Maneuver	155	-	-	-	-	-
Stage 1	209	-	-	-	-	-
Stage 2	330	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.2	0	0.6
HCM LOS	C		

Minor Lane/Major Mvmt	NBU	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	151	-	-	155	599	481
HCM Lane V/C Ratio	0.007	-	-	0.065	0.066	0.154
HCM Control Delay (s)	29	-	-	29.8	11.4	13.8
HCM Lane LOS	D	-	-	D	B	B
HCM 95th %tile Q(veh)	0	-	-	0.2	0.2	0.5

Timings

104: Palm Ave & Sheridan St

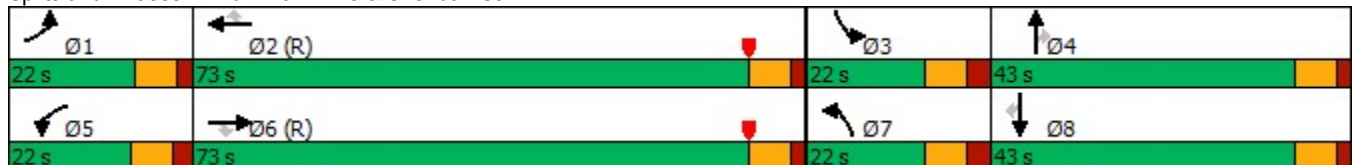
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	165	1229	132	232	1254	445	200	538	488	308	716	282
Future Volume (vph)	165	1229	132	232	1254	445	200	538	488	308	716	282
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2			4			8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	12.0	44.0	44.0	12.5	45.0	45.0	13.0	43.0	43.0	13.0	45.0	45.0
Total Split (s)	22.0	73.0	73.0	22.0	73.0	73.0	22.0	43.0	43.0	22.0	43.0	43.0
Total Split (%)	13.8%	45.6%	45.6%	13.8%	45.6%	45.6%	13.8%	26.9%	26.9%	13.8%	26.9%	26.9%
Yellow Time (s)	5.0	5.0	5.0	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	2.5	2.0	2.0	3.0	2.0	2.0	3.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.5	7.0	7.0	8.0	7.0	7.0	8.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	12.2	66.5	66.5	14.0	68.8	68.8	13.0	36.0	36.0	14.0	37.0	37.0
Actuated g/C Ratio	0.08	0.42	0.42	0.09	0.43	0.43	0.08	0.22	0.22	0.09	0.23	0.23
v/c Ratio	0.71	0.94	0.20	0.87	0.64	0.60	0.81	0.76	1.13	1.15	0.98	0.63
Control Delay	86.7	57.8	6.4	98.6	38.0	18.7	93.6	65.0	116.6	161.2	88.2	29.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.7	57.8	6.4	98.6	38.0	18.7	93.6	65.0	116.6	161.2	88.2	29.9
LOS	F	E	A	F	D	B	F	E	F	F	F	C
Approach Delay		56.5			40.8			90.2			92.8	
Approach LOS		E			D			F			F	

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 35 (22%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
 Natural Cycle: 145
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.15
 Intersection Signal Delay: 66.3
 Intersection Capacity Utilization 91.5%
 Analysis Period (min) 15













Intersection LOS: E
 ICU Level of Service F

Splits and Phases: 104: Palm Ave & Sheridan St



Queues

104: Palm Ave & Sheridan St


































												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	185	1381	148	261	1409	500	225	604	548	346	804	317
v/c Ratio	0.71	0.94	0.20	0.87	0.64	0.60	0.81	0.76	1.13	1.15	0.98	0.63
Control Delay	86.7	57.8	6.4	98.6	38.0	18.7	93.6	65.0	116.6	161.2	88.2	29.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	86.7	57.8	6.4	98.6	38.0	18.7	93.6	65.0	116.6	161.2	88.2	29.9
Queue Length 50th (ft)	98	728	9	141	423	184	120	314	~509	~218	~455	133
Queue Length 95th (ft)	139	#863	54	#210	483	307	#169	381	#735	#323	#587	241
Internal Link Dist (ft)		486			492			458			780	
Turn Bay Length (ft)	200		200	315		220	320		320	350		350
Base Capacity (vph)	321	1470	735	311	2185	834	300	796	487	300	818	503
Starvation Cap Reductn	0	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	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.58	0.94	0.20	0.84	0.64	0.60	0.75	0.76	1.13	1.15	0.98	0.63

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 6th Signalized Intersection Summary

104: Palm Ave & Sheridan St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	  		 	 		 	 	
Traffic Volume (veh/h)	165	1229	132	232	1254	445	200	538	488	308	716	282
Future Volume (veh/h)	165	1229	132	232	1254	445	200	538	488	308	716	282
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	185	1381	148	261	1409	500	225	604	548	346	804	317
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	227	1479	660	300	2250	698	266	800	356	302	836	373
Arrive On Green	0.09	0.55	0.55	0.12	0.59	0.59	0.08	0.22	0.22	0.09	0.24	0.24
Sat Flow, veh/h	3456	3554	1585	3456	5106	1585	3456	3554	1583	3456	3554	1583
Grp Volume(v), veh/h	185	1381	148	261	1409	500	225	604	548	346	804	317
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1702	1585	1728	1777	1583	1728	1777	1583
Q Serve(g_s), s	8.4	57.5	7.6	11.9	28.9	36.0	10.3	25.4	36.0	14.0	35.8	30.6
Cycle Q Clear(g_c), s	8.4	57.5	7.6	11.9	28.9	36.0	10.3	25.4	36.0	14.0	35.8	30.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	227	1479	660	300	2250	698	266	800	356	302	836	373
V/C Ratio(X)	0.82	0.93	0.22	0.87	0.63	0.72	0.84	0.76	1.54	1.14	0.96	0.85
Avail Cap(c_a), veh/h	324	1479	660	313	2250	698	302	800	356	302	836	373
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	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	72.1	33.7	22.6	69.9	24.5	26.0	72.9	57.9	62.0	73.0	60.4	58.5
Incr Delay (d2), s/veh	6.8	12.2	0.8	20.5	1.3	6.2	15.8	3.7	256.0	96.6	21.9	16.1
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	3.9	25.4	3.0	6.0	11.1	13.7	5.2	11.9	39.8	10.3	18.7	14.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.9	45.8	23.3	90.3	25.8	32.2	88.7	61.6	318.0	169.6	82.4	74.6
LnGrp LOS	E	D	C	F	C	C	F	E	F	F	F	E
Approach Vol, veh/h		1714			2170			1377			1467	
Approach Delay, s/veh		47.5			35.1			168.1			101.3	
Approach LOS		D			D			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.5	77.5	22.0	43.0	21.4	73.6	20.3	44.7				
Change Period (Y+Rc), s	7.0	7.0	8.0	7.0	7.5	7.0	8.0	7.0				
Max Green Setting (Gmax), s	15.0	66.0	14.0	36.0	14.5	66.0	14.0	36.0				
Max Q Clear Time (g_c+I1), s	10.4	38.0	16.0	38.0	13.9	59.5	12.3	37.8				
Green Ext Time (p_c), s	0.1	15.3	0.0	0.0	0.0	4.8	0.1	0.0				
Intersection Summary												
HCM 6th Ctrl Delay				79.9								
HCM 6th LOS				E								
Notes												
User approved pedestrian interval to be less than phase max green.												

Timings

101: Palm Ave & Stirling Rd

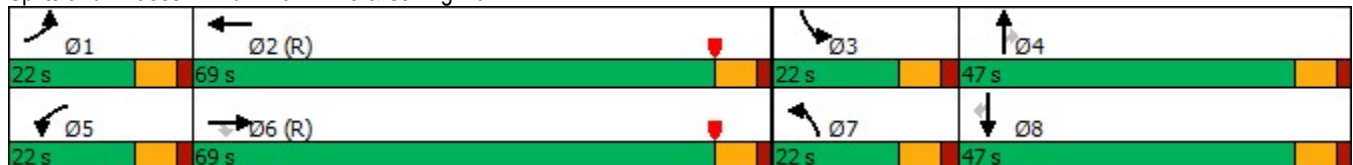
Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	293	1007	272	219	680	209	659	273	180	795	246	
Future Volume (vph)	293	1007	272	219	680	209	659	273	180	795	246	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	1	6		5	2	7	4		3	8		
Permitted Phases			6					4			8	
Detector Phase	1	6	6	5	2	7	4	4	3	8	8	
Switch Phase												
Minimum Initial (s)	5.0	12.0	12.0	5.0	12.0	5.0	6.0	6.0	5.0	6.0	6.0	
Minimum Split (s)	12.0	44.0	44.0	12.0	44.0	12.0	45.0	45.0	12.0	45.0	45.0	
Total Split (s)	22.0	69.0	69.0	22.0	69.0	22.0	47.0	47.0	22.0	47.0	47.0	
Total Split (%)	13.8%	43.1%	43.1%	13.8%	43.1%	13.8%	29.4%	29.4%	13.8%	29.4%	29.4%	
Yellow Time (s)	5.0	5.0	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	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	None	Max	Max	None	Max	Max	
Act Effct Green (s)	15.0	63.1	63.1	13.9	62.0	13.6	42.2	42.2	12.8	41.4	41.4	
Actuated g/C Ratio	0.09	0.39	0.39	0.09	0.39	0.08	0.26	0.26	0.08	0.26	0.26	
v/c Ratio	0.96	0.76	0.37	0.78	0.71	0.76	0.74	0.50	0.69	0.91	0.44	
Control Delay	111.7	46.4	7.3	89.6	43.4	88.2	60.0	17.5	84.9	72.5	9.4	
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	111.7	46.4	7.3	89.6	43.4	88.2	60.0	17.5	84.9	72.5	9.4	
LOS	F	D	A	F	D	F	E	B	F	E	A	
Approach Delay		51.8			52.5		55.0			61.6		
Approach LOS		D			D		E			E		

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 42 (26%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
 Natural Cycle: 115
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 0.96
 Intersection Signal Delay: 55.1
 Intersection Capacity Utilization 100.2%
 Analysis Period (min) 15

Intersection LOS: E
 ICU Level of Service G

Splits and Phases: 101: Palm Ave & Stirling Rd



Queues

101: Palm Ave & Stirling Rd


























Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	308	1060	286	231	942	220	694	287	189	837	259
v/c Ratio	0.96	0.76	0.37	0.78	0.71	0.76	0.74	0.50	0.69	0.91	0.44
Control Delay	111.7	46.4	7.3	89.6	43.4	88.2	60.0	17.5	84.9	72.5	9.4
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	111.7	46.4	7.3	89.6	43.4	88.2	60.0	17.5	84.9	72.5	9.4
Queue Length 50th (ft)	168	509	25	123	423	117	354	65	101	455	13
Queue Length 95th (ft)	#268	597	94	172	505	164	437	164	143	#586	93
Internal Link Dist (ft)		488			562		484			381	
Turn Bay Length (ft)	330		330	290		340		340	350		380
Base Capacity (vph)	321	1396	764	321	1330	321	934	570	321	916	584
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	0.96	0.76	0.37	0.72	0.71	0.69	0.74	0.50	0.59	0.91	0.44

Intersection Summary

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

HCM 6th Signalized Intersection Summary

101: Palm Ave & Stirling Rd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	293	1007	272	219	680	215	209	659	273	180	795	246
Future Volume (veh/h)	293	1007	272	219	680	215	209	659	273	180	795	246
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		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	308	1060	286	231	716	226	220	694	287	189	837	259
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	324	1493	651	273	1068	337	263	920	410	232	888	396
Arrive On Green	0.12	0.56	0.56	0.10	0.54	0.54	0.08	0.26	0.26	0.07	0.25	0.25
Sat Flow, veh/h	3456	3554	1549	3456	2637	832	3456	3554	1583	3456	3554	1583
Grp Volume(v), veh/h	308	1060	286	231	482	460	220	694	287	189	837	259
Grp Sat Flow(s),veh/h/ln	1728	1777	1549	1728	1777	1693	1728	1777	1583	1728	1777	1583
Q Serve(g_s), s	14.2	34.9	17.3	10.5	31.4	31.4	10.1	28.8	26.3	8.6	37.0	23.5
Cycle Q Clear(g_c), s	14.2	34.9	17.3	10.5	31.4	31.4	10.1	28.8	26.3	8.6	37.0	23.5
Prop In Lane	1.00		1.00	1.00		0.49	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	324	1493	651	273	720	686	263	920	410	232	888	396
V/C Ratio(X)	0.95	0.71	0.44	0.85	0.67	0.67	0.84	0.75	0.70	0.81	0.94	0.65
Avail Cap(c_a), veh/h	324	1493	651	324	720	686	324	920	410	324	888	396
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	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	69.7	28.2	24.3	70.7	29.2	29.2	72.9	54.6	53.7	73.6	58.9	53.8
Incr Delay (d2), s/veh	36.7	2.9	2.1	14.3	4.9	5.2	12.3	5.7	9.6	7.2	19.0	8.2
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	7.8	14.4	6.4	5.1	13.5	12.9	4.9	13.7	11.6	4.1	19.0	10.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	106.4	31.1	26.4	85.0	34.1	34.3	85.3	60.3	63.3	80.9	77.9	62.0
LnGrp LOS	F	C	C	F	C	C	F	E	E	F	E	E
Approach Vol, veh/h		1654			1173			1201			1285	
Approach Delay, s/veh		44.3			44.2			65.6			75.1	
Approach LOS		D			D			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.0	71.8	17.8	48.4	19.6	74.2	19.2	47.0				
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0				
Max Green Setting (Gmax), s	15.0	62.0	15.0	40.0	15.0	62.0	15.0	40.0				
Max Q Clear Time (g_c+I1), s	16.2	33.4	10.6	30.8	12.5	36.9	12.1	39.0				
Green Ext Time (p_c), s	0.0	7.2	0.1	2.8	0.1	10.0	0.1	0.6				
Intersection Summary												
HCM 6th Ctrl Delay			56.5									
HCM 6th LOS			E									

HCM 6th TWSC
 102: Palm Ave & Park Entrance/U-turn

Intersection							
Int Delay, s/veh	1.5						
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations	↙	↗	↘	↑↑	↗	↙	↑↑
Traffic Vol, veh/h	2	5	56	1184	5	7	1454
Future Vol, veh/h	2	5	56	1184	5	7	1454
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	0	200	-	200	215	-
Veh in Median Storage, #	1	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	2	6	65	1377	6	8	1691

Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	2369	689	1691	0	0	1383
Stage 1	1507	-	-	-	-	-
Stage 2	862	-	-	-	-	-
Critical Hdwy	5	5	6.44	-	-	4.14
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3	3	2.52	-	-	2.22
Pot Cap-1 Maneuver	102	606	118	-	-	491
Stage 1	183	-	-	-	-	-
Stage 2	415	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	45	606	118	-	-	491
Mov Cap-2 Maneuver	71	-	-	-	-	-
Stage 1	82	-	-	-	-	-
Stage 2	408	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24.3	3.1	0.1
HCM LOS	C		

Minor Lane/Major Mvmt	NBU	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	118	-	-	71	606	491
HCM Lane V/C Ratio	0.552	-	-	0.033	0.01	0.017
HCM Control Delay (s)	67.9	-	-	57.4	11	12.5
HCM Lane LOS	F	-	-	F	B	B
HCM 95th %tile Q(veh)	2.6	-	-	0.1	0	0.1

HCM 6th TWSC
 103: Median Opening/ Church & Palm Ave

Intersection							
Int Delay, s/veh	0.6						
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↘	↑↑	↗	↘	↑↑
Traffic Vol, veh/h	9	36	1	1272	9	68	1396
Future Vol, veh/h	9	36	1	1272	9	68	1396
Conflicting Peds, #/hr	0	0	0	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	0	100	-	200	260	-
Veh in Median Storage, #	1	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	89	89	92	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	10	40	1	1429	10	76	1569

Major/Minor	Minor1	Major1	Major2	Major2	Major2	Major2	Major2
Conflicting Flow All	2370	717	1569	0	0	1441	0
Stage 1	1433	-	-	-	-	-	-
Stage 2	937	-	-	-	-	-	-
Critical Hdwy	5	5	6.44	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-	-
Follow-up Hdwy	3	3	2.52	-	-	2.22	-
Pot Cap-1 Maneuver	102	589	142	-	-	467	-
Stage 1	201	-	-	-	-	-	-
Stage 2	378	-	-	-	-	-	-
Platoon blocked, %				-	-	-	-
Mov Cap-1 Maneuver	85	588	142	-	-	466	-
Mov Cap-2 Maneuver	147	-	-	-	-	-	-
Stage 1	199	-	-	-	-	-	-
Stage 2	316	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	15.5	0	0.7
HCM LOS	C		

Minor Lane/Major Mvmt	NBU	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	142	-	-	147	588	466
HCM Lane V/C Ratio	0.008	-	-	0.069	0.069	0.164
HCM Control Delay (s)	30.5	-	-	31.3	11.6	14.2
HCM Lane LOS	D	-	-	D	B	B
HCM 95th %tile Q(veh)	0	-	-	0.2	0.2	0.6

Timings

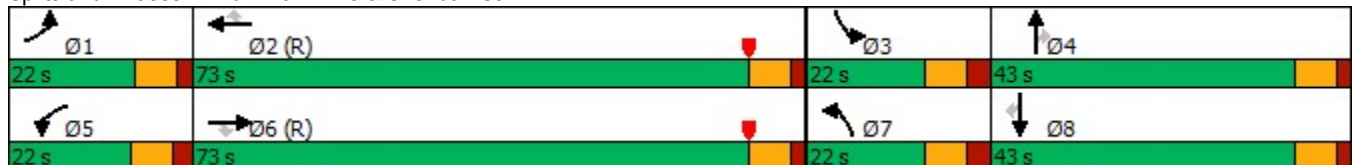
104: Palm Ave & Sheridan St

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	169	1260	136	238	1287	456	206	551	501	316	734	289
Future Volume (vph)	169	1260	136	238	1287	456	206	551	501	316	734	289
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2			4			8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	12.0	44.0	44.0	12.5	45.0	45.0	13.0	43.0	43.0	13.0	45.0	45.0
Total Split (s)	22.0	73.0	73.0	22.0	73.0	73.0	22.0	43.0	43.0	22.0	43.0	43.0
Total Split (%)	13.8%	45.6%	45.6%	13.8%	45.6%	45.6%	13.8%	26.9%	26.9%	13.8%	26.9%	26.9%
Yellow Time (s)	5.0	5.0	5.0	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	2.5	2.0	2.0	3.0	2.0	2.0	3.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.5	7.0	7.0	8.0	7.0	7.0	8.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	12.4	66.4	66.4	14.1	68.6	68.6	13.1	36.0	36.0	14.0	36.9	36.9
Actuated g/C Ratio	0.08	0.42	0.42	0.09	0.43	0.43	0.08	0.22	0.22	0.09	0.23	0.23
v/c Ratio	0.71	0.96	0.21	0.88	0.66	0.62	0.82	0.78	1.16	1.18	1.01	0.65
Control Delay	87.0	61.9	6.9	100.5	38.6	19.7	94.7	66.0	127.7	170.7	94.5	31.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	87.0	61.9	6.9	100.5	38.6	19.7	94.7	66.0	127.7	170.7	94.5	31.5
LOS	F	E	A	F	D	B	F	E	F	F	F	C
Approach Delay		59.8			41.7			95.3			98.9	
Approach LOS		E			D			F			F	

Intersection Summary













Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 35 (22%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
 Natural Cycle: 145
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.18
 Intersection Signal Delay: 69.7
 Intersection LOS: E
 Intersection Capacity Utilization 93.4%
 ICU Level of Service F
 Analysis Period (min) 15

Splits and Phases: 104: Palm Ave & Sheridan St



Queues

104: Palm Ave & Sheridan St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	190	1416	153	267	1446	512	231	619	563	355	825	325
v/c Ratio	0.71	0.96	0.21	0.88	0.66	0.62	0.82	0.78	1.16	1.18	1.01	0.65
Control Delay	87.0	61.9	6.9	100.5	38.6	19.7	94.7	66.0	127.7	170.7	94.5	31.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	87.0	61.9	6.9	100.5	38.6	19.7	94.7	66.0	127.7	170.7	94.5	31.5
Queue Length 50th (ft)	102	758	12	144	440	198	124	323	~544	~229	~486	144
Queue Length 95th (ft)	142	#903	58	#219	499	326	#180	392	#770	#332	#613	252
Internal Link Dist (ft)		486			492			458			780	
Turn Bay Length (ft)	200		200	315		220	320		320	350		350
Base Capacity (vph)	321	1468	735	311	2179	831	300	796	487	300	815	501
Starvation Cap Reductn	0	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	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.59	0.96	0.21	0.86	0.66	0.62	0.77	0.78	1.16	1.18	1.01	0.65

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 6th Signalized Intersection Summary

104: Palm Ave & Sheridan St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	  		 	 		 	 	
Traffic Volume (veh/h)	169	1260	136	238	1287	456	206	551	501	316	734	289
Future Volume (veh/h)	169	1260	136	238	1287	456	206	551	501	316	734	289
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	190	1416	153	267	1446	512	231	619	563	355	825	325
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	232	1473	657	306	2242	696	272	800	356	302	831	370
Arrive On Green	0.09	0.55	0.55	0.12	0.58	0.58	0.08	0.22	0.22	0.09	0.23	0.23
Sat Flow, veh/h	3456	3554	1585	3456	5106	1585	3456	3554	1583	3456	3554	1583
Grp Volume(v), veh/h	190	1416	153	267	1446	512	231	619	563	355	825	325
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1702	1585	1728	1777	1583	1728	1777	1583
Q Serve(g_s), s	8.6	60.8	7.9	12.2	30.2	37.7	10.6	26.2	36.0	14.0	37.1	31.7
Cycle Q Clear(g_c), s	8.6	60.8	7.9	12.2	30.2	37.7	10.6	26.2	36.0	14.0	37.1	31.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	232	1473	657	306	2242	696	272	800	356	302	831	370
V/C Ratio(X)	0.82	0.96	0.23	0.87	0.64	0.74	0.85	0.77	1.58	1.17	0.99	0.88
Avail Cap(c_a), veh/h	324	1473	657	313	2242	696	302	800	356	302	831	370
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	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	71.9	34.7	22.8	69.7	24.9	26.5	72.8	58.2	62.0	73.0	61.2	59.1
Incr Delay (d2), s/veh	7.7	15.9	0.8	21.4	1.4	6.8	16.8	4.3	274.4	107.6	29.5	20.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	27.5	3.1	6.2	11.6	14.4	5.3	12.3	41.6	10.8	20.2	14.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	79.6	50.5	23.6	91.0	26.4	33.3	89.5	62.5	336.4	180.6	90.7	79.1
LnGrp LOS	E	D	C	F	C	C	F	E	F	F	F	E
Approach Vol, veh/h		1759			2225			1413			1505	
Approach Delay, s/veh		51.3			35.7			176.1			109.4	
Approach LOS		D			D			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.7	77.3	22.0	43.0	21.7	73.3	20.6	44.4				
Change Period (Y+Rc), s	7.0	7.0	8.0	7.0	7.5	7.0	8.0	7.0				
Max Green Setting (Gmax), s	15.0	66.0	14.0	36.0	14.5	66.0	14.0	36.0				
Max Q Clear Time (g_c+I1), s	10.6	39.7	16.0	38.0	14.2	62.8	12.6	39.1				
Green Ext Time (p_c), s	0.1	15.2	0.0	0.0	0.0	2.5	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			84.5									
HCM 6th LOS			F									
Notes												
User approved pedestrian interval to be less than phase max green.												

Timings

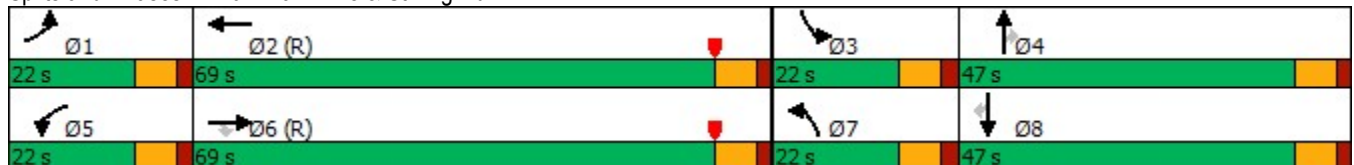
101: Palm Ave & Stirling Rd

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	293	1007	282	234	680	219	676	283	180	815	246	
Future Volume (vph)	293	1007	282	234	680	219	676	283	180	815	246	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	1	6		5	2	7	4		3	8		
Permitted Phases			6					4			8	
Detector Phase	1	6	6	5	2	7	4	4	3	8	8	
Switch Phase												
Minimum Initial (s)	5.0	12.0	12.0	5.0	12.0	5.0	6.0	6.0	5.0	6.0	6.0	
Minimum Split (s)	12.0	44.0	44.0	12.0	44.0	12.0	45.0	45.0	12.0	45.0	45.0	
Total Split (s)	22.0	69.0	69.0	22.0	69.0	22.0	47.0	47.0	22.0	47.0	47.0	
Total Split (%)	13.8%	43.1%	43.1%	13.8%	43.1%	13.8%	29.4%	29.4%	13.8%	29.4%	29.4%	
Yellow Time (s)	5.0	5.0	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	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	None	Max	Max	None	Max	Max	
Act Effct Green (s)	15.0	62.8	62.8	14.2	62.0	13.9	42.2	42.2	12.8	41.1	41.1	
Actuated g/C Ratio	0.09	0.39	0.39	0.09	0.39	0.09	0.26	0.26	0.08	0.26	0.26	
v/c Ratio	0.96	0.76	0.39	0.81	0.71	0.78	0.76	0.52	0.69	0.94	0.45	
Control Delay	111.7	46.7	8.4	92.0	43.4	89.6	60.9	18.9	84.9	76.8	9.5	
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	111.7	46.7	8.4	92.0	43.4	89.6	60.9	18.9	84.9	76.8	9.5	
LOS	F	D	A	F	D	F	E	B	F	E	A	
Approach Delay		51.9			53.5		56.2			64.7		
Approach LOS		D			D		E			E		

Intersection Summary

Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 42 (26%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.96	
Intersection Signal Delay: 56.3	Intersection LOS: E
Intersection Capacity Utilization 100.4%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 101: Palm Ave & Stirling Rd



Queues

101: Palm Ave & Stirling Rd


























Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	308	1060	297	246	942	231	712	298	189	858	259
v/c Ratio	0.96	0.76	0.39	0.81	0.71	0.78	0.76	0.52	0.69	0.94	0.45
Control Delay	111.7	46.7	8.4	92.0	43.4	89.6	60.9	18.9	84.9	76.8	9.5
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	111.7	46.7	8.4	92.0	43.4	89.6	60.9	18.9	84.9	76.8	9.5
Queue Length 50th (ft)	168	509	34	131	423	123	365	76	101	472	14
Queue Length 95th (ft)	#268	597	107	#190	505	172	450	180	143	#611	94
Internal Link Dist (ft)		488			562		484			381	
Turn Bay Length (ft)	330		330	290		340		340	350		380
Base Capacity (vph)	321	1390	761	321	1330	321	934	570	321	909	581
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	0.96	0.76	0.39	0.77	0.71	0.72	0.76	0.52	0.59	0.94	0.45

Intersection Summary

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

HCM 6th Signalized Intersection Summary

101: Palm Ave & Stirling Rd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	293	1007	282	234	680	215	219	676	283	180	815	246
Future Volume (veh/h)	293	1007	282	234	680	215	219	676	283	180	815	246
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		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	308	1060	297	246	716	226	231	712	298	189	858	259
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	324	1467	640	287	1060	335	274	931	415	232	888	396
Arrive On Green	0.12	0.55	0.55	0.11	0.53	0.53	0.08	0.26	0.26	0.07	0.25	0.25
Sat Flow, veh/h	3456	3554	1549	3456	2637	832	3456	3554	1583	3456	3554	1583
Grp Volume(v), veh/h	308	1060	297	246	482	460	231	712	298	189	858	259
Grp Sat Flow(s),veh/h/ln	1728	1777	1549	1728	1777	1692	1728	1777	1583	1728	1777	1583
Q Serve(g_s), s	14.2	35.7	18.6	11.2	31.6	31.6	10.6	29.6	27.4	8.6	38.2	23.5
Cycle Q Clear(g_c), s	14.2	35.7	18.6	11.2	31.6	31.6	10.6	29.6	27.4	8.6	38.2	23.5
Prop In Lane	1.00		1.00	1.00		0.49	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	324	1467	640	287	714	681	274	931	415	232	888	396
V/C Ratio(X)	0.95	0.72	0.46	0.86	0.68	0.68	0.84	0.77	0.72	0.81	0.97	0.65
Avail Cap(c_a), veh/h	324	1467	640	324	714	681	324	931	415	324	888	396
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	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	69.7	29.2	25.4	70.2	29.6	29.6	72.7	54.5	53.7	73.6	59.3	53.8
Incr Delay (d2), s/veh	36.7	3.1	2.4	16.7	5.1	5.3	14.1	6.0	10.3	7.2	23.0	8.2
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	7.8	14.9	6.9	5.5	13.7	13.1	5.2	14.1	12.2	4.1	20.0	10.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	106.4	32.3	27.8	86.9	34.7	34.9	86.7	60.5	64.0	80.9	82.3	62.0
LnGrp LOS	F	C	C	F	C	C	F	E	E	F	F	E
Approach Vol, veh/h		1665			1188			1241			1306	
Approach Delay, s/veh		45.2			45.6			66.2			78.0	
Approach LOS		D			D			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.0	71.3	17.8	48.9	20.3	73.1	19.7	47.0				
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0				
Max Green Setting (Gmax), s	15.0	62.0	15.0	40.0	15.0	62.0	15.0	40.0				
Max Q Clear Time (g_c+I1), s	16.2	33.6	10.6	31.6	13.2	37.7	12.6	40.2				
Green Ext Time (p_c), s	0.0	7.2	0.1	2.7	0.1	9.9	0.1	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			58.1									
HCM 6th LOS			E									

HCM 6th TWSC
102: Palm Ave & Park Entrance/U-turn

Intersection							
Int Delay, s/veh	1.7						
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations	↙	↗	↘	↑↑	↗	↙	↑↑
Traffic Vol, veh/h	2	5	56	1221	5	7	1499
Future Vol, veh/h	2	5	56	1221	5	7	1499
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	0	200	-	200	215	-
Veh in Median Storage, #	1	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	86	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	2	6	65	1420	6	8	1743

Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	2438	710	1743	0	0	1426
Stage 1	1550	-	-	-	-	-
Stage 2	888	-	-	-	-	-
Critical Hdwy	5	5	6.44	-	-	4.14
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3	3	2.52	-	-	2.22
Pot Cap-1 Maneuver	95	593	109	-	-	473
Stage 1	173	-	-	-	-	-
Stage 2	402	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	38	593	109	-	-	473
Mov Cap-2 Maneuver	61	-	-	-	-	-
Stage 1	70	-	-	-	-	-
Stage 2	395	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	26.9	3.4	0.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBU	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	109	-	-	61	593	473
HCM Lane V/C Ratio	0.597	-	-	0.038	0.01	0.017
HCM Control Delay (s)	78.2	-	-	66.3	11.1	12.7
HCM Lane LOS	F	-	-	F	B	B
HCM 95th %tile Q(veh)	2.9	-	-	0.1	0	0.1

HCM 6th TWSC
 103: Median Opening/ Church & Palm Ave

Intersection							
Int Delay, s/veh	1.9						
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	54	73	1	1272	64	113	1396
Future Vol, veh/h	54	73	1	1272	64	113	1396
Conflicting Peds, #/hr	0	0	0	0	2	2	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	0	100	-	200	260	-
Veh in Median Storage, #	1	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	89	89	92	89	89	89	89
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	61	82	1	1429	72	127	1569

Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	2472	717	1569	0	0	1503
Stage 1	1433	-	-	-	-	-
Stage 2	1039	-	-	-	-	-
Critical Hdwy	5	5	6.44	-	-	4.14
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3	3	2.52	-	-	2.22
Pot Cap-1 Maneuver	91	589	142	-	-	442
Stage 1	201	-	-	-	-	-
Stage 2	332	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	64	588	142	-	-	441
Mov Cap-2 Maneuver	127	-	-	-	-	-
Stage 1	199	-	-	-	-	-
Stage 2	236	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	31.1	0	1.2
HCM LOS	D		

Minor Lane/Major Mvmt	NBU	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	142	-	-	127	588	441
HCM Lane V/C Ratio	0.008	-	-	0.478	0.139	0.288
HCM Control Delay (s)	30.5	-	-	56.9	12.1	16.4
HCM Lane LOS	D	-	-	F	B	C
HCM 95th %tile Q(veh)	0	-	-	2.2	0.5	1.2

Timings

104: Palm Ave & Sheridan St

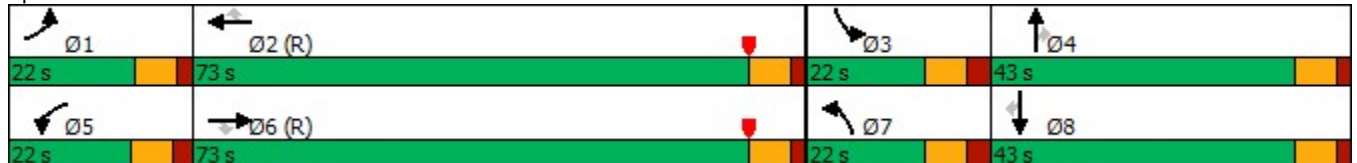
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	184	1260	136	238	1287	471	206	576	501	328	755	301
Future Volume (vph)	184	1260	136	238	1287	471	206	576	501	328	755	301
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2			4			8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	12.0	44.0	44.0	12.5	45.0	45.0	13.0	43.0	43.0	13.0	45.0	45.0
Total Split (s)	22.0	73.0	73.0	22.0	73.0	73.0	22.0	43.0	43.0	22.0	43.0	43.0
Total Split (%)	13.8%	45.6%	45.6%	13.8%	45.6%	45.6%	13.8%	26.9%	26.9%	13.8%	26.9%	26.9%
Yellow Time (s)	5.0	5.0	5.0	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	2.5	2.0	2.0	3.0	2.0	2.0	3.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.5	7.0	7.0	8.0	7.0	7.0	8.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	13.0	66.4	66.4	14.1	68.0	68.0	13.1	36.0	36.0	14.0	36.9	36.9
Actuated g/C Ratio	0.08	0.42	0.42	0.09	0.42	0.42	0.08	0.22	0.22	0.09	0.23	0.23
v/c Ratio	0.74	0.96	0.21	0.88	0.67	0.64	0.82	0.81	1.16	1.23	1.04	0.67
Control Delay	88.2	61.9	6.9	100.5	39.1	21.7	94.7	68.1	127.7	186.1	100.9	33.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	88.2	61.9	6.9	100.5	39.1	21.7	94.7	68.1	127.7	186.1	100.9	33.6
LOS	F	E	A	F	D	C	F	E	F	F	F	C
Approach Delay		60.2			42.3			95.6			106.5	
Approach LOS		E			D			F			F	

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 35 (22%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
 Natural Cycle: 145
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.23
 Intersection Signal Delay: 72.0
 Intersection Capacity Utilization 93.7%
 Analysis Period (min) 15

Intersection LOS: E
 ICU Level of Service F

Splits and Phases: 104: Palm Ave & Sheridan St



Queues

104: Palm Ave & Sheridan St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	207	1416	153	267	1446	529	231	647	563	369	848	338
v/c Ratio	0.74	0.96	0.21	0.88	0.67	0.64	0.82	0.81	1.16	1.23	1.04	0.67
Control Delay	88.2	61.9	6.9	100.5	39.1	21.7	94.7	68.1	127.7	186.1	100.9	33.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	88.2	61.9	6.9	100.5	39.1	21.7	94.7	68.1	127.7	186.1	100.9	33.6
Queue Length 50th (ft)	110	758	12	144	444	226	124	341	~544	~245	~513	158
Queue Length 95th (ft)	154	#903	58	#219	499	357	#180	412	#770	m#349	#640	m271
Internal Link Dist (ft)		486			492			458			780	
Turn Bay Length (ft)	200		200	315		220	320		320	350		350
Base Capacity (vph)	321	1468	735	311	2161	822	300	796	487	300	815	501
Starvation Cap Reductn	0	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	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.64	0.96	0.21	0.86	0.67	0.64	0.77	0.81	1.16	1.23	1.04	0.67

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.

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

HCM 6th Signalized Intersection Summary

104: Palm Ave & Sheridan St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	  		 	 		 	 	
Traffic Volume (veh/h)	184	1260	136	238	1287	471	206	576	501	328	755	301
Future Volume (veh/h)	184	1260	136	238	1287	471	206	576	501	328	755	301
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	207	1416	153	267	1446	529	231	647	563	369	848	338
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	249	1473	657	306	2218	688	272	800	356	302	831	370
Arrive On Green	0.10	0.55	0.55	0.12	0.58	0.58	0.08	0.22	0.22	0.09	0.23	0.23
Sat Flow, veh/h	3456	3554	1585	3456	5106	1585	3456	3554	1583	3456	3554	1583
Grp Volume(v), veh/h	207	1416	153	267	1446	529	231	647	563	369	848	338
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1702	1585	1728	1777	1583	1728	1777	1583
Q Serve(g_s), s	9.4	60.8	7.9	12.2	30.7	40.6	10.6	27.6	36.0	14.0	37.4	33.3
Cycle Q Clear(g_c), s	9.4	60.8	7.9	12.2	30.7	40.6	10.6	27.6	36.0	14.0	37.4	33.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	249	1473	657	306	2218	688	272	800	356	302	831	370
V/C Ratio(X)	0.83	0.96	0.23	0.87	0.65	0.77	0.85	0.81	1.58	1.22	1.02	0.91
Avail Cap(c_a), veh/h	324	1473	657	313	2218	688	302	800	356	302	831	370
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	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	71.4	34.7	22.8	69.7	25.6	27.7	72.8	58.7	62.0	73.0	61.3	59.7
Incr Delay (d2), s/veh	10.6	15.9	0.8	21.4	1.5	8.1	16.8	5.8	274.4	125.3	36.6	26.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	27.5	3.1	6.2	11.9	15.7	5.3	13.1	41.6	11.5	21.1	16.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	82.0	50.5	23.6	91.0	27.1	35.7	89.5	64.5	336.4	198.3	97.9	85.7
LnGrp LOS	F	D	C	F	C	D	F	E	F	F	F	F
Approach Vol, veh/h		1776			2242			1441			1555	
Approach Delay, s/veh		51.9			36.8			174.8			119.1	
Approach LOS		D			D			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.5	76.5	22.0	43.0	21.7	73.3	20.6	44.4				
Change Period (Y+Rc), s	7.0	7.0	8.0	7.0	7.5	7.0	8.0	7.0				
Max Green Setting (Gmax), s	15.0	66.0	14.0	36.0	14.5	66.0	14.0	36.0				
Max Q Clear Time (g_c+I1), s	11.4	42.6	16.0	38.0	14.2	62.8	12.6	39.4				
Green Ext Time (p_c), s	0.1	14.3	0.0	0.0	0.0	2.5	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay				87.2								
HCM 6th LOS				F								
Notes												
User approved pedestrian interval to be less than phase max green.												

Timings

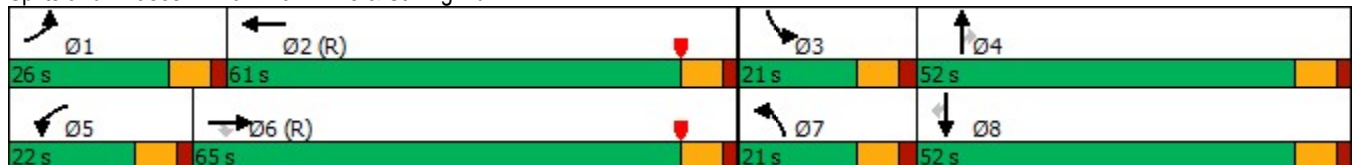
101: Palm Ave & Stirling Rd

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	293	1007	282	234	680	219	676	283	180	815	246	
Future Volume (vph)	293	1007	282	234	680	219	676	283	180	815	246	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	1	6		5	2	7	4		3	8		
Permitted Phases			6					4			8	
Detector Phase	1	6	6	5	2	7	4	4	3	8	8	
Switch Phase												
Minimum Initial (s)	5.0	12.0	12.0	5.0	12.0	5.0	6.0	6.0	5.0	6.0	6.0	
Minimum Split (s)	12.0	44.0	44.0	12.0	44.0	12.0	45.0	45.0	12.0	45.0	45.0	
Total Split (s)	26.0	65.0	65.0	22.0	61.0	21.0	52.0	52.0	21.0	52.0	52.0	
Total Split (%)	16.3%	40.6%	40.6%	13.8%	38.1%	13.1%	32.5%	32.5%	13.1%	32.5%	32.5%	
Yellow Time (s)	5.0	5.0	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	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	None	Max	Max	None	Max	Max	
Act Effct Green (s)	17.4	58.8	58.8	14.2	55.6	13.3	46.6	46.6	12.4	45.7	45.7	
Actuated g/C Ratio	0.11	0.37	0.37	0.09	0.35	0.08	0.29	0.29	0.08	0.29	0.29	
v/c Ratio	0.82	0.81	0.42	0.81	0.79	0.81	0.69	0.48	0.71	0.85	0.42	
Control Delay	87.9	52.0	11.5	92.0	51.6	93.1	54.8	15.5	86.8	63.2	8.8	
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	87.9	52.0	11.5	92.0	51.6	93.1	54.8	15.5	86.8	63.2	8.8	
LOS	F	D	B	F	D	F	D	B	F	E	A	
Approach Delay		51.4			59.9		52.5			55.9		
Approach LOS		D			E		D			E		

Intersection Summary

Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 42 (26%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 115	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 0.85	
Intersection Signal Delay: 54.6	Intersection LOS: D
Intersection Capacity Utilization 100.4%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 101: Palm Ave & Stirling Rd



Queues

101: Palm Ave & Stirling Rd


























Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	308	1060	297	246	942	231	712	298	189	858	259
v/c Ratio	0.82	0.81	0.42	0.81	0.79	0.81	0.69	0.48	0.71	0.85	0.42
Control Delay	87.9	52.0	11.5	92.0	51.6	93.1	54.8	15.5	86.8	63.2	8.8
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	87.9	52.0	11.5	92.0	51.6	93.1	54.8	15.5	86.8	63.2	8.8
Queue Length 50th (ft)	163	531	52	131	460	124	352	62	101	451	15
Queue Length 95th (ft)	219	623	134	#190	550	#184	431	158	144	538	91
Internal Link Dist (ft)		488			562		484			381	
Turn Bay Length (ft)	330		330	290		340		340	350		380
Base Capacity (vph)	407	1301	713	321	1193	300	1030	616	300	1010	617
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	0.76	0.81	0.42	0.77	0.79	0.77	0.69	0.48	0.63	0.85	0.42

Intersection Summary

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

HCM 6th Signalized Intersection Summary

101: Palm Ave & Stirling Rd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	293	1007	282	234	680	215	219	676	283	180	815	246
Future Volume (veh/h)	293	1007	282	234	680	215	219	676	283	180	815	246
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		0.97	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	308	1060	297	246	716	226	231	712	298	189	858	259
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	350	1357	591	287	958	302	273	1041	464	232	999	445
Arrive On Green	0.13	0.51	0.51	0.11	0.48	0.48	0.08	0.29	0.29	0.07	0.28	0.28
Sat Flow, veh/h	3456	3554	1548	3456	2636	832	3456	3554	1583	3456	3554	1583
Grp Volume(v), veh/h	308	1060	297	246	483	459	231	712	298	189	858	259
Grp Sat Flow(s),veh/h/ln	1728	1777	1548	1728	1777	1691	1728	1777	1583	1728	1777	1583
Q Serve(g_s), s	14.0	38.9	20.3	11.2	35.1	35.1	10.6	28.3	26.2	8.6	36.6	22.5
Cycle Q Clear(g_c), s	14.0	38.9	20.3	11.2	35.1	35.1	10.6	28.3	26.2	8.6	36.6	22.5
Prop In Lane	1.00		1.00	1.00		0.49	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	350	1357	591	287	646	615	273	1041	464	232	999	445
V/C Ratio(X)	0.88	0.78	0.50	0.86	0.75	0.75	0.85	0.68	0.64	0.81	0.86	0.58
Avail Cap(c_a), veh/h	410	1357	591	324	646	615	302	1041	464	302	999	445
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	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	68.3	33.9	29.3	70.2	35.4	35.4	72.7	50.0	49.3	73.6	54.5	49.4
Incr Delay (d2), s/veh	15.8	4.5	3.0	16.7	7.7	8.1	16.7	3.6	6.7	9.5	9.5	5.5
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	6.8	16.7	7.7	5.5	15.8	15.1	5.3	13.2	11.3	4.2	17.7	9.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	84.1	38.5	32.4	86.9	43.1	43.4	89.4	53.6	55.9	83.2	64.0	54.9
LnGrp LOS	F	D	C	F	D	D	F	D	E	F	E	D
Approach Vol, veh/h		1665			1188			1241			1306	
Approach Delay, s/veh		45.8			52.3			60.9			65.0	
Approach LOS		D			D			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.2	65.2	17.7	53.9	20.3	68.1	19.6	52.0				
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0				
Max Green Setting (Gmax), s	19.0	54.0	14.0	45.0	15.0	58.0	14.0	45.0				
Max Q Clear Time (g_c+I1), s	16.0	37.1	10.6	30.3	13.2	40.9	12.6	38.6				
Green Ext Time (p_c), s	0.2	5.9	0.1	3.5	0.1	8.3	0.1	2.6				
Intersection Summary												
HCM 6th Ctrl Delay			55.3									
HCM 6th LOS			E									

Timings

104: Palm Ave & Sheridan St

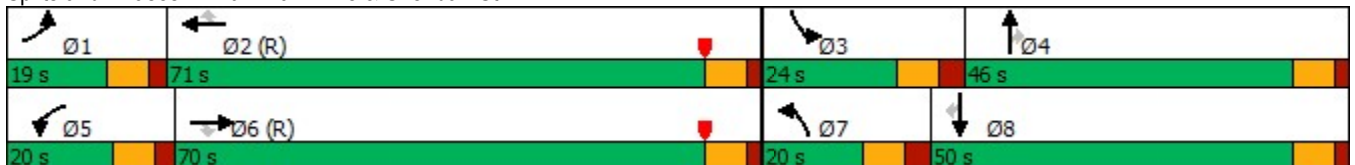
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	184	1260	136	238	1287	471	206	576	501	328	755	301
Future Volume (vph)	184	1260	136	238	1287	471	206	576	501	328	755	301
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2			4			8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	12.0	44.0	44.0	12.5	45.0	45.0	13.0	43.0	43.0	13.0	45.0	45.0
Total Split (s)	19.0	70.0	70.0	20.0	71.0	71.0	20.0	46.0	46.0	24.0	50.0	50.0
Total Split (%)	11.9%	43.8%	43.8%	12.5%	44.4%	44.4%	12.5%	28.8%	28.8%	15.0%	31.3%	31.3%
Yellow Time (s)	5.0	5.0	5.0	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	2.5	2.0	2.0	3.0	2.0	2.0	3.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.5	7.0	7.0	8.0	7.0	7.0	8.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	11.6	63.0	63.0	12.5	64.4	64.4	11.9	39.0	39.0	16.0	43.1	43.1
Actuated g/C Ratio	0.07	0.39	0.39	0.08	0.40	0.40	0.07	0.24	0.24	0.10	0.27	0.27
v/c Ratio	0.83	1.02	0.22	1.00	0.71	0.68	0.91	0.75	1.13	1.08	0.89	0.62
Control Delay	99.6	75.6	7.8	125.9	42.3	26.4	108.7	62.3	118.7	135.4	68.5	32.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	99.6	75.6	7.8	125.9	42.3	26.4	108.7	62.3	118.7	135.4	68.5	32.2
LOS	F	E	A	F	D	C	F	E	F	F	E	C
Approach Delay		72.6			48.5			91.8			76.5	
Approach LOS		E			D			F			E	

Intersection Summary

Cycle Length: 160
 Actuated Cycle Length: 160
 Offset: 35 (22%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
 Natural Cycle: 145
 Control Type: Actuated-Coordinated
 Maximum v/c Ratio: 1.13
 Intersection Signal Delay: 69.7
 Intersection Capacity Utilization 93.7%
 Analysis Period (min) 15













Intersection LOS: E
 ICU Level of Service F

Splits and Phases: 104: Palm Ave & Sheridan St



Queues

104: Palm Ave & Sheridan St

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	207	1416	153	267	1446	529	231	647	563	369	848	338
v/c Ratio	0.83	1.02	0.22	1.00	0.71	0.68	0.91	0.75	1.13	1.08	0.89	0.62
Control Delay	99.6	75.6	7.8	125.9	42.3	26.4	108.7	62.3	118.7	135.4	68.5	32.2
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	99.6	75.6	7.8	125.9	42.3	26.4	108.7	62.3	118.7	135.4	68.5	32.2
Queue Length 50th (ft)	111	~820	15	146	462	265	125	332	~549	~220	452	168
Queue Length 95th (ft)	#173	#941	63	#243	510	398	#204	401	#775	#324	#536	276
Internal Link Dist (ft)		486			492			458			350	
Turn Bay Length (ft)	200		200	315		220	320		320	350		350
Base Capacity (vph)	257	1393	702	268	2047	775	257	862	499	343	953	541
Starvation Cap Reductn	0	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	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.81	1.02	0.22	1.00	0.71	0.68	0.90	0.75	1.13	1.08	0.89	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 6th Signalized Intersection Summary

104: Palm Ave & Sheridan St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	  		 	 		 	 	
Traffic Volume (veh/h)	184	1260	136	238	1287	471	206	576	501	328	755	301
Future Volume (veh/h)	184	1260	136	238	1287	471	206	576	501	328	755	301
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	207	1416	153	267	1446	529	231	647	563	369	848	338
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	247	1399	624	270	2060	640	259	866	386	346	955	426
Arrive On Green	0.10	0.52	0.52	0.10	0.54	0.54	0.08	0.24	0.24	0.10	0.27	0.27
Sat Flow, veh/h	3456	3554	1585	3456	5106	1585	3456	3554	1583	3456	3554	1583
Grp Volume(v), veh/h	207	1416	153	267	1446	529	231	647	563	369	848	338
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1702	1585	1728	1777	1583	1728	1777	1583
Q Serve(g_s), s	9.4	63.0	8.4	12.3	33.7	44.5	10.6	26.9	39.0	16.0	36.7	31.8
Cycle Q Clear(g_c), s	9.4	63.0	8.4	12.3	33.7	44.5	10.6	26.9	39.0	16.0	36.7	31.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	247	1399	624	270	2060	640	259	866	386	346	955	426
V/C Ratio(X)	0.84	1.01	0.25	0.99	0.70	0.83	0.89	0.75	1.46	1.07	0.89	0.79
Avail Cap(c_a), veh/h	259	1399	624	270	2060	640	259	866	386	346	955	426
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	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	71.5	38.1	25.1	71.6	29.9	32.4	73.4	55.9	60.5	72.0	56.2	54.4
Incr Delay (d2), s/veh	18.8	27.0	0.9	51.5	2.0	11.7	28.7	3.2	220.4	67.6	9.9	9.2
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	30.7	3.3	7.3	13.3	18.0	5.8	12.5	39.3	10.4	17.8	13.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	90.3	65.1	26.0	123.1	31.9	44.1	102.1	59.1	280.9	139.6	66.1	63.6
LnGrp LOS	F	F	C	F	C	D	F	E	F	F	E	E
Approach Vol, veh/h		1776			2242			1441			1555	
Approach Delay, s/veh		64.7			45.7			152.7			83.0	
Approach LOS		E			D			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.4	71.6	24.0	46.0	20.0	70.0	20.0	50.0				
Change Period (Y+Rc), s	7.0	7.0	8.0	7.0	7.5	7.0	8.0	7.0				
Max Green Setting (Gmax), s	12.0	64.0	16.0	39.0	12.5	63.0	12.0	43.0				
Max Q Clear Time (g_c+I1), s	11.4	46.5	18.0	41.0	14.3	65.0	12.6	38.7				
Green Ext Time (p_c), s	0.0	11.7	0.0	0.0	0.0	0.0	0.0	2.0				
Intersection Summary												
HCM 6th Ctrl Delay			80.7									
HCM 6th LOS			F									
Notes												
User approved pedestrian interval to be less than phase max green.												

Timings

101: Palm Ave & Stirling Rd

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	222	791	157	223	1094	171	646	207	179	753	310	
Future Volume (vph)	222	791	157	223	1094	171	646	207	179	753	310	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	1	6		5	2	7	4		3	8		
Permitted Phases			6					4			8	
Detector Phase	1	6	6	5	2	7	4	4	3	8	8	
Switch Phase												
Minimum Initial (s)	5.0	12.0	12.0	5.0	12.0	5.0	6.0	6.0	5.0	6.0	6.0	
Minimum Split (s)	12.0	44.0	44.0	12.0	44.0	12.0	45.0	45.0	12.0	45.0	45.0	
Total Split (s)	22.0	69.0	69.0	22.0	69.0	22.0	47.0	47.0	22.0	47.0	47.0	
Total Split (%)	13.8%	43.1%	43.1%	13.8%	43.1%	13.8%	29.4%	29.4%	13.8%	29.4%	29.4%	
Yellow Time (s)	5.0	5.0	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	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	None	Max	Max	None	Max	Max	
Act Effct Green (s)	13.9	63.1	63.1	13.9	63.1	12.4	42.3	42.3	12.7	42.6	42.6	
Actuated g/C Ratio	0.09	0.39	0.39	0.09	0.39	0.08	0.26	0.26	0.08	0.27	0.27	
v/c Ratio	0.79	0.60	0.23	0.79	1.03	0.68	0.73	0.38	0.69	0.84	0.58	
Control Delay	90.1	40.8	4.9	90.2	78.2	84.5	59.3	7.4	84.9	65.0	23.1	
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	90.1	40.8	4.9	90.2	78.2	84.5	59.3	7.4	84.9	65.0	23.1	
LOS	F	D	A	F	E	F	E	A	F	E	C	
Approach Delay		45.4			79.9		53.0			57.4		
Approach LOS		D			E		D			E		

Intersection Summary

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 152 (95%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow

Natural Cycle: 135

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 60.7

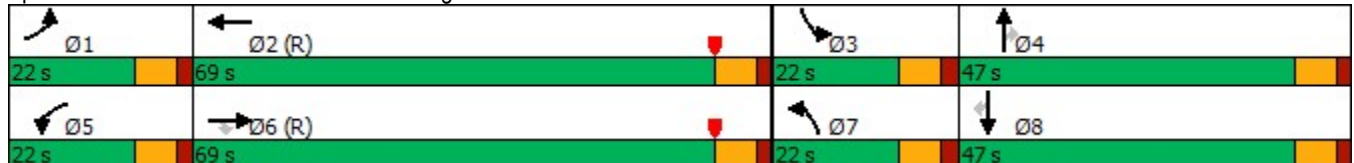
Intersection LOS: E

Intersection Capacity Utilization 93.4%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 101: Palm Ave & Stirling Rd



Queues

101: Palm Ave & Stirling Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	234	833	165	235	1409	180	680	218	188	793	326
v/c Ratio	0.79	0.60	0.23	0.79	1.03	0.68	0.73	0.38	0.69	0.84	0.58
Control Delay	90.1	40.8	4.9	90.2	78.2	84.5	59.3	7.4	84.9	65.0	23.1
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	90.1	40.8	4.9	90.2	78.2	84.5	59.3	7.4	84.9	65.0	23.1
Queue Length 50th (ft)	125	366	0	125	~833	95	344	0	100	417	109
Queue Length 95th (ft)	174	437	50	175	#975	138	427	69	143	#535	222
Internal Link Dist (ft)		488			562		484			381	
Turn Bay Length (ft)	330		330	290		340		340	350		380
Base Capacity (vph)	321	1394	723	321	1369	321	935	578	321	941	565
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	0.73	0.60	0.23	0.73	1.03	0.56	0.73	0.38	0.59	0.84	0.58

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 6th Signalized Intersection Summary

101: Palm Ave & Stirling Rd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	222	791	157	223	1094	244	171	646	207	179	753	310
Future Volume (veh/h)	222	791	157	223	1094	244	171	646	207	179	753	310
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		0.99
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	234	833	165	235	1152	257	180	680	218	188	793	326
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	275	1521	678	276	1239	274	224	888	396	232	897	394
Arrive On Green	0.11	0.57	0.57	0.11	0.57	0.57	0.06	0.25	0.25	0.07	0.25	0.25
Sat Flow, veh/h	3456	3554	1585	3456	2892	640	3456	3554	1585	3456	3554	1563
Grp Volume(v), veh/h	234	833	165	235	704	705	180	680	218	188	793	326
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1755	1728	1777	1585	1728	1777	1563
Q Serve(g_s), s	10.6	23.5	8.3	10.7	57.8	59.3	8.2	28.4	19.1	8.6	34.4	31.5
Cycle Q Clear(g_c), s	10.6	23.5	8.3	10.7	57.8	59.3	8.2	28.4	19.1	8.6	34.4	31.5
Prop In Lane	1.00		1.00	1.00		0.36	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	275	1521	678	276	761	752	224	888	396	232	897	394
V/C Ratio(X)	0.85	0.55	0.24	0.85	0.93	0.94	0.81	0.77	0.55	0.81	0.88	0.83
Avail Cap(c_a), veh/h	324	1521	678	324	761	752	324	888	396	324	897	394
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	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	70.6	24.8	21.5	70.5	32.1	32.4	73.8	55.6	52.2	73.6	57.6	56.5
Incr Delay (d2), s/veh	14.8	1.4	0.9	15.0	18.8	20.7	5.7	6.2	5.4	7.1	12.4	17.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.2	9.6	3.2	5.2	26.8	27.4	3.8	13.6	8.3	4.1	17.0	14.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	85.4	26.2	22.4	85.5	50.9	53.1	79.5	61.9	57.6	80.7	70.0	74.2
LnGrp LOS	F	C	C	F	D	D	E	E	E	F	E	E
Approach Vol, veh/h		1232			1644			1078			1307	
Approach Delay, s/veh		36.9			56.8			64.0			72.6	
Approach LOS		D			E			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.8	75.5	17.7	47.0	19.8	75.5	17.4	47.4				
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0				
Max Green Setting (Gmax), s	15.0	62.0	15.0	40.0	15.0	62.0	15.0	40.0				
Max Q Clear Time (g_c+I1), s	12.6	61.3	10.6	30.4	12.7	25.5	10.2	36.4				
Green Ext Time (p_c), s	0.1	0.6	0.1	2.7	0.1	7.7	0.1	1.7				
Intersection Summary												
HCM 6th Ctrl Delay				57.5								
HCM 6th LOS				E								

HCM 6th TWSC
 102: Palm Ave & Park Entrance/U-turn

Intersection							
Int Delay, s/veh	0.9						
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↘	↗	↗	↘	↗
Traffic Vol, veh/h	4	2	58	928	18	4	1173
Future Vol, veh/h	4	2	58	928	18	4	1173
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	0	200	-	200	215	-
Veh in Median Storage, #	1	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	5	2	66	1055	20	5	1333

Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1864	528	1333	0	0	1075
Stage 1	1187	-	-	-	-	-
Stage 2	677	-	-	-	-	-
Critical Hdwy	5	5	6.44	-	-	4.14
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3	3	2.52	-	-	2.22
Pot Cap-1 Maneuver	178	712	202	-	-	644
Stage 1	276	-	-	-	-	-
Stage 2	524	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	119	712	202	-	-	644
Mov Cap-2 Maneuver	160	-	-	-	-	-
Stage 1	186	-	-	-	-	-
Stage 2	520	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	22.2	1.8	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBU	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	202	-	-	160	712	644
HCM Lane V/C Ratio	0.326	-	-	0.028	0.003	0.007
HCM Control Delay (s)	31.2	-	-	28.2	10.1	10.6
HCM Lane LOS	D	-	-	D	B	B
HCM 95th %tile Q(veh)	1.3	-	-	0.1	0	0

HCM 6th TWSC
 103: Median Opening/ Church & Palm Ave

Intersection							
Int Delay, s/veh	0.5						
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↘	↑↑	↗	↘	↑↑
Traffic Vol, veh/h	17	10	3	990	3	39	1119
Future Vol, veh/h	17	10	3	990	3	39	1119
Conflicting Peds, #/hr	0	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	0	100	-	200	260	-
Veh in Median Storage, #	1	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	88	88	92	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	19	11	3	1125	3	44	1272

Major/Minor	Minor1	Major1	Major2				
Conflicting Flow All	1856	564	1272	0	0	1129	0
Stage 1	1132	-	-	-	-	-	-
Stage 2	724	-	-	-	-	-	-
Critical Hdwy	5	5	6.44	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-	-
Follow-up Hdwy	3	3.32	2.52	-	-	2.22	-
Pot Cap-1 Maneuver	179	635	222	-	-	615	-
Stage 1	295	-	-	-	-	-	-
Stage 2	494	-	-	-	-	-	-
Platoon blocked, %				-	-	-	-
Mov Cap-1 Maneuver	164	634	222	-	-	614	-
Mov Cap-2 Maneuver	230	-	-	-	-	-	-
Stage 1	291	-	-	-	-	-	-
Stage 2	458	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	17.9	0.1	0.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBU	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	222	-	-	230	634	614
HCM Lane V/C Ratio	0.015	-	-	0.084	0.018	0.072
HCM Control Delay (s)	21.5	-	-	22.1	10.8	11.3
HCM Lane LOS	C	-	-	C	B	B
HCM 95th %tile Q(veh)	0	-	-	0.3	0.1	0.2

Timings

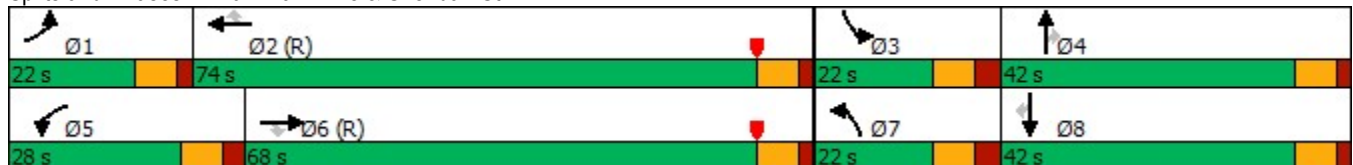
104: Palm Ave & Sheridan St

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	122	1179	172	401	1254	212	231	656	353	196	813	168
Future Volume (vph)	122	1179	172	401	1254	212	231	656	353	196	813	168
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2			4			8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	12.0	44.0	44.0	12.5	45.0	45.0	13.0	42.0	42.0	13.0	42.0	42.0
Total Split (s)	22.0	68.0	68.0	28.0	74.0	74.0	22.0	42.0	42.0	22.0	42.0	42.0
Total Split (%)	13.8%	42.5%	42.5%	17.5%	46.3%	46.3%	13.8%	26.3%	26.3%	13.8%	26.3%	26.3%
Yellow Time (s)	5.0	5.0	5.0	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	2.5	2.0	2.0	3.0	2.0	2.0	3.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.5	7.0	7.0	8.0	7.0	7.0	8.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	10.0	61.0	61.0	20.5	72.0	72.0	13.5	36.4	36.4	12.6	35.5	35.5
Actuated g/C Ratio	0.06	0.38	0.38	0.13	0.45	0.45	0.08	0.23	0.23	0.08	0.22	0.22
v/c Ratio	0.61	0.93	0.27	0.97	0.58	0.28	0.85	0.87	0.73	0.77	1.10	0.37
Control Delay	85.0	60.1	11.5	104.9	34.3	8.0	97.6	71.8	36.4	91.0	119.8	10.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.0	60.1	11.5	104.9	34.3	8.0	97.6	71.8	36.4	91.0	119.8	10.6
LOS	F	E	B	F	C	A	F	E	D	F	F	B
Approach Delay		56.5			46.5			66.5			99.4	
Approach LOS		E			D			E			F	

Intersection Summary













Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 27 (17%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.10	
Intersection Signal Delay: 64.2	Intersection LOS: E
Intersection Capacity Utilization 97.7%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 104: Palm Ave & Sheridan St



Queues

104: Palm Ave & Sheridan St


































												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	130	1254	183	427	1334	226	246	698	376	209	865	179
v/c Ratio	0.61	0.93	0.27	0.97	0.58	0.28	0.85	0.87	0.73	0.77	1.10	0.37
Control Delay	85.0	60.1	11.5	104.9	34.3	8.0	97.6	71.8	36.4	91.0	119.8	10.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.0	60.1	11.5	104.9	34.3	8.0	97.6	71.8	36.4	91.0	119.8	10.6
Queue Length 50th (ft)	69	660	35	232	377	30	132	376	182	111	~547	9
Queue Length 95th (ft)	105	#801	94	#345	442	89	#202	#486	315	m158	#685	m76
Internal Link Dist (ft)		248			269			208			780	
Turn Bay Length (ft)	200		200	315		220	320		320	350		350
Base Capacity (vph)	321	1349	683	439	2288	808	300	805	512	300	785	484
Starvation Cap Reductn	0	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	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.40	0.93	0.27	0.97	0.58	0.28	0.82	0.87	0.73	0.70	1.10	0.37

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

HCM 6th Signalized Intersection Summary

104: Palm Ave & Sheridan St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	  		 	 		 	 	
Traffic Volume (veh/h)	122	1179	172	401	1254	212	231	656	353	196	813	168
Future Volume (veh/h)	122	1179	172	401	1254	212	231	656	353	196	813	168
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	130	1254	183	427	1334	226	246	698	376	209	865	179
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	172	1371	611	443	2386	741	287	814	363	251	777	347
Arrive On Green	0.07	0.51	0.51	0.17	0.62	0.62	0.08	0.23	0.23	0.07	0.22	0.22
Sat Flow, veh/h	3456	3554	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	130	1254	183	427	1334	226	246	698	376	209	865	179
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	5.9	51.8	10.6	19.6	24.3	10.7	11.2	30.1	36.7	9.6	35.0	15.9
Cycle Q Clear(g_c), s	5.9	51.8	10.6	19.6	24.3	10.7	11.2	30.1	36.7	9.6	35.0	15.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	172	1371	611	443	2386	741	287	814	363	251	777	347
V/C Ratio(X)	0.76	0.91	0.30	0.96	0.56	0.31	0.86	0.86	1.04	0.83	1.11	0.52
Avail Cap(c_a), veh/h	324	1371	611	443	2386	741	302	814	363	302	777	347
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	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	73.7	36.5	26.5	66.0	20.7	18.2	72.4	59.2	61.7	73.2	62.5	55.0
Incr Delay (d2), s/veh	2.5	11.0	1.3	33.4	1.0	1.1	19.2	8.6	56.7	13.1	67.8	0.6
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	2.7	23.1	4.1	10.5	9.1	3.9	5.8	14.6	20.5	4.7	23.2	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.3	47.5	27.8	99.4	21.7	19.2	91.6	67.8	118.4	86.4	130.3	55.7
LnGrp LOS	E	D	C	F	C	B	F	E	F	F	F	E
Approach Vol, veh/h		1567			1987			1320			1253	
Approach Delay, s/veh		47.6			38.1			86.6			112.3	
Approach LOS		D			D			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	81.8	19.6	43.7	28.0	68.7	21.3	42.0				
Change Period (Y+Rc), s	7.0	7.0	8.0	7.0	7.5	7.0	8.0	7.0				
Max Green Setting (Gmax), s	15.0	67.0	14.0	35.0	20.5	61.0	14.0	35.0				
Max Q Clear Time (g_c+I1), s	7.9	26.3	11.6	38.7	21.6	53.8	13.2	37.0				
Green Ext Time (p_c), s	0.1	14.8	0.1	0.0	0.0	4.9	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay				66.2								
HCM 6th LOS				E								
Notes												
User approved pedestrian interval to be less than phase max green.												

Timings

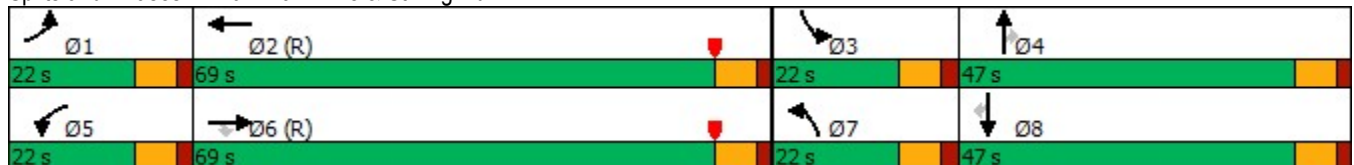
101: Palm Ave & Stirling Rd

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	227	811	161	229	1122	176	663	213	184	772	318	
Future Volume (vph)	227	811	161	229	1122	176	663	213	184	772	318	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	1	6		5	2	7	4		3	8		
Permitted Phases			6					4			8	
Detector Phase	1	6	6	5	2	7	4	4	3	8	8	
Switch Phase												
Minimum Initial (s)	5.0	12.0	12.0	5.0	12.0	5.0	6.0	6.0	5.0	6.0	6.0	
Minimum Split (s)	12.0	44.0	44.0	12.0	44.0	12.0	45.0	45.0	12.0	45.0	45.0	
Total Split (s)	22.0	69.0	69.0	22.0	69.0	22.0	47.0	47.0	22.0	47.0	47.0	
Total Split (%)	13.8%	43.1%	43.1%	13.8%	43.1%	13.8%	29.4%	29.4%	13.8%	29.4%	29.4%	
Yellow Time (s)	5.0	5.0	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	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	None	Max	Max	None	Max	Max	
Act Effct Green (s)	14.0	62.9	62.9	14.1	63.0	12.6	42.1	42.1	12.9	42.4	42.4	
Actuated g/C Ratio	0.09	0.39	0.39	0.09	0.39	0.08	0.26	0.26	0.08	0.26	0.26	
v/c Ratio	0.80	0.61	0.23	0.80	1.06	0.69	0.75	0.39	0.70	0.87	0.60	
Control Delay	90.8	41.3	4.9	91.1	86.2	84.7	60.5	7.4	85.2	67.1	24.8	
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	90.8	41.3	4.9	91.1	86.2	84.7	60.5	7.4	85.2	67.1	24.8	
LOS	F	D	A	F	F	F	E	A	F	E	C	
Approach Delay		45.8			86.9		53.8			59.1		
Approach LOS		D			F		D			E		

Intersection Summary

Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 152 (95%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.06	
Intersection Signal Delay: 63.6	Intersection LOS: E
Intersection Capacity Utilization 95.2%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 101: Palm Ave & Stirling Rd



Queues

101: Palm Ave & Stirling Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	239	854	169	241	1444	185	698	224	194	813	335
v/c Ratio	0.80	0.61	0.23	0.80	1.06	0.69	0.75	0.39	0.70	0.87	0.60
Control Delay	90.8	41.3	4.9	91.1	86.2	84.7	60.5	7.4	85.2	67.1	24.8
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	90.8	41.3	4.9	91.1	86.2	84.7	60.5	7.4	85.2	67.1	24.8
Queue Length 50th (ft)	127	378	0	128	~874	98	356	0	103	432	121
Queue Length 95th (ft)	#179	452	50	#181	#1016	141	440	70	147	#558	238
Internal Link Dist (ft)		488			562		484			381	
Turn Bay Length (ft)	330		330	290		340		340	350		380
Base Capacity (vph)	321	1392	724	321	1367	321	930	581	321	937	562
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	0.74	0.61	0.23	0.75	1.06	0.58	0.75	0.39	0.60	0.87	0.60

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 6th Signalized Intersection Summary

101: Palm Ave & Stirling Rd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	227	811	161	229	1122	250	176	663	213	184	772	318
Future Volume (veh/h)	227	811	161	229	1122	250	176	663	213	184	772	318
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		0.99
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	239	854	169	241	1181	263	185	698	224	194	813	335
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	280	1509	673	282	1230	272	229	888	396	237	898	395
Arrive On Green	0.11	0.56	0.56	0.11	0.57	0.57	0.07	0.25	0.25	0.07	0.25	0.25
Sat Flow, veh/h	3456	3554	1585	3456	2894	639	3456	3554	1585	3456	3554	1563
Grp Volume(v), veh/h	239	854	169	241	721	723	185	698	224	194	813	335
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1755	1728	1777	1585	1728	1777	1563
Q Serve(g_s), s	10.9	24.6	8.7	11.0	61.3	63.3	8.5	29.3	19.7	8.9	35.5	32.6
Cycle Q Clear(g_c), s	10.9	24.6	8.7	11.0	61.3	63.3	8.5	29.3	19.7	8.9	35.5	32.6
Prop In Lane	1.00		1.00	1.00		0.36	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	280	1509	673	282	756	746	229	888	396	237	898	395
V/C Ratio(X)	0.85	0.57	0.25	0.85	0.95	0.97	0.81	0.79	0.57	0.82	0.91	0.85
Avail Cap(c_a), veh/h	324	1509	673	324	756	746	324	888	396	324	898	395
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	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	70.4	25.4	21.9	70.4	33.3	33.7	73.7	56.0	52.4	73.5	57.9	56.9
Incr Delay (d2), s/veh	15.6	1.5	0.9	15.9	23.4	26.1	6.6	6.9	5.7	8.1	14.4	19.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.3	10.1	3.3	5.4	29.1	30.1	4.0	14.1	8.6	4.2	17.8	15.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.0	26.9	22.8	86.3	56.6	59.8	80.3	62.9	58.1	81.6	72.3	76.7
LnGrp LOS	F	C	C	F	E	E	F	E	E	F	E	E
Approach Vol, veh/h		1262			1685			1107			1342	
Approach Delay, s/veh		37.6			62.2			64.9			74.8	
Approach LOS		D			E			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	75.0	18.0	47.0	20.1	74.9	17.6	47.4				
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0				
Max Green Setting (Gmax), s	15.0	62.0	15.0	40.0	15.0	62.0	15.0	40.0				
Max Q Clear Time (g_c+l1), s	12.9	65.3	10.9	31.3	13.0	26.6	10.5	37.5				
Green Ext Time (p_c), s	0.1	0.0	0.1	2.6	0.1	7.9	0.1	1.3				
Intersection Summary												
HCM 6th Ctrl Delay			60.1									
HCM 6th LOS			E									

HCM 6th TWSC
 102: Palm Ave & Park Entrance/U-turn

Intersection							
Int Delay, s/veh	1						
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations	↘	↗	↘	↑↑	↗	↘	↑↑
Traffic Vol, veh/h	5	2	60	952	18	5	1203
Future Vol, veh/h	5	2	60	952	18	5	1203
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	0	200	-	200	215	-
Veh in Median Storage, #	1	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	6	2	68	1082	20	6	1367

Major/Minor	Minor1	Major1		Major2			
Conflicting Flow All	1914	541	1367	0	0	1102	0
Stage 1	1218	-	-	-	-	-	-
Stage 2	696	-	-	-	-	-	-
Critical Hdwy	5	5	6.44	-	-	4.14	-
Critical Hdwy Stg 1	5.84	-	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-	-
Follow-up Hdwy	3	3	2.52	-	-	2.22	-
Pot Cap-1 Maneuver	168	703	192	-	-	629	-
Stage 1	265	-	-	-	-	-	-
Stage 2	511	-	-	-	-	-	-
Platoon blocked, %				-	-	-	-
Mov Cap-1 Maneuver	108	703	192	-	-	629	-
Mov Cap-2 Maneuver	147	-	-	-	-	-	-
Stage 1	171	-	-	-	-	-	-
Stage 2	506	-	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	24.7	2	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBU	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	192	-	-	147	703	629
HCM Lane V/C Ratio	0.355	-	-	0.039	0.003	0.009
HCM Control Delay (s)	33.7	-	-	30.5	10.1	10.8
HCM Lane LOS	D	-	-	D	B	B
HCM 95th %tile Q(veh)	1.5	-	-	0.1	0	0

HCM 6th TWSC
 103: Median Opening/ Church & Palm Ave

Intersection							
Int Delay, s/veh	0.5						
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations	↙	↗	↘	↕	↗	↙	↕
Traffic Vol, veh/h	17	10	3	1016	3	40	1148
Future Vol, veh/h	17	10	3	1016	3	40	1148
Conflicting Peds, #/hr	0	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	0	100	-	200	260	-
Veh in Median Storage, #	1	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	88	88	92	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	19	11	3	1155	3	45	1305

Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1905	579	1305	0	0	1159
Stage 1	1162	-	-	-	-	-
Stage 2	743	-	-	-	-	-
Critical Hdwy	5	5	6.44	-	-	4.14
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3	3.32	2.52	-	-	2.22
Pot Cap-1 Maneuver	170	626	211	-	-	599
Stage 1	284	-	-	-	-	-
Stage 2	482	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	155	625	211	-	-	598
Mov Cap-2 Maneuver	221	-	-	-	-	-
Stage 1	280	-	-	-	-	-
Stage 2	446	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.4	0.1	0.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBU	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	211	-	-	221	625	598
HCM Lane V/C Ratio	0.015	-	-	0.087	0.018	0.076
HCM Control Delay (s)	22.3	-	-	22.8	10.9	11.5
HCM Lane LOS	C	-	-	C	B	B
HCM 95th %tile Q(veh)	0	-	-	0.3	0.1	0.2

Timings

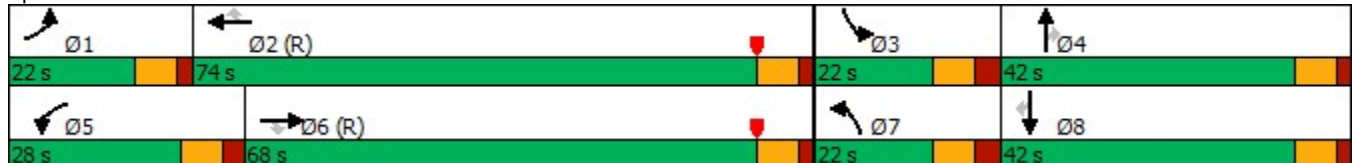
104: Palm Ave & Sheridan St

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	125	1210	177	411	1287	217	237	673	362	201	834	172
Future Volume (vph)	125	1210	177	411	1287	217	237	673	362	201	834	172
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2			4			8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	12.0	44.0	44.0	12.5	45.0	45.0	13.0	42.0	42.0	13.0	42.0	42.0
Total Split (s)	22.0	68.0	68.0	28.0	74.0	74.0	22.0	42.0	42.0	22.0	42.0	42.0
Total Split (%)	13.8%	42.5%	42.5%	17.5%	46.3%	46.3%	13.8%	26.3%	26.3%	13.8%	26.3%	26.3%
Yellow Time (s)	5.0	5.0	5.0	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	2.5	2.0	2.0	3.0	2.0	2.0	3.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.5	7.0	7.0	8.0	7.0	7.0	8.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	10.1	61.0	61.0	20.5	71.9	71.9	13.6	36.2	36.2	12.8	35.4	35.4
Actuated g/C Ratio	0.06	0.38	0.38	0.13	0.45	0.45	0.08	0.23	0.23	0.08	0.22	0.22
v/c Ratio	0.62	0.95	0.28	1.00	0.60	0.29	0.87	0.89	0.76	0.78	1.13	0.38
Control Delay	85.1	63.7	12.0	110.1	34.8	8.4	99.4	74.5	38.6	91.3	129.8	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.1	63.7	12.0	110.1	34.8	8.4	99.4	74.5	38.6	91.3	129.8	11.5
LOS	F	E	B	F	C	A	F	E	D	F	F	B
Approach Delay		59.4			48.0			69.0			106.5	
Approach LOS		E			D			E			F	

Intersection Summary

Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 27 (17%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.13	
Intersection Signal Delay: 67.4	Intersection LOS: E
Intersection Capacity Utilization 99.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 104: Palm Ave & Sheridan St



Queues

104: Palm Ave & Sheridan St




































Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	133	1287	188	437	1369	231	252	716	385	214	887	183
v/c Ratio	0.62	0.95	0.28	1.00	0.60	0.29	0.87	0.89	0.76	0.78	1.13	0.38
Control Delay	85.1	63.7	12.0	110.1	34.8	8.4	99.4	74.5	38.6	91.3	129.8	11.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.1	63.7	12.0	110.1	34.8	8.4	99.4	74.5	38.6	91.3	129.8	11.5
Queue Length 50th (ft)	71	687	39	239	391	33	136	390	197	114	~572	13
Queue Length 95th (ft)	107	#838	99	#357	458	94	#209	#508	332	m161	m#711	m83
Internal Link Dist (ft)		248			269			208				780
Turn Bay Length (ft)	200		200	315		220	320		320	350		350
Base Capacity (vph)	321	1349	683	439	2285	807	300	801	509	300	784	482
Starvation Cap Reductn	0	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	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.41	0.95	0.28	1.00	0.60	0.29	0.84	0.89	0.76	0.71	1.13	0.38

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

HCM 6th Signalized Intersection Summary

104: Palm Ave & Sheridan St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	  		 	 		 	 	
Traffic Volume (veh/h)	125	1210	177	411	1287	217	237	673	362	201	834	172
Future Volume (veh/h)	125	1210	177	411	1287	217	237	673	362	201	834	172
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	133	1287	188	437	1369	231	252	716	385	214	887	183
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	175	1365	609	443	2373	737	292	815	364	256	777	347
Arrive On Green	0.07	0.51	0.51	0.17	0.62	0.62	0.08	0.23	0.23	0.07	0.22	0.22
Sat Flow, veh/h	3456	3554	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	133	1287	188	437	1369	231	252	716	385	214	887	183
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	6.1	54.7	11.0	20.2	25.5	11.0	11.5	31.1	36.7	9.8	35.0	16.3
Cycle Q Clear(g_c), s	6.1	54.7	11.0	20.2	25.5	11.0	11.5	31.1	36.7	9.8	35.0	16.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	175	1365	609	443	2373	737	292	815	364	256	777	347
V/C Ratio(X)	0.76	0.94	0.31	0.99	0.58	0.31	0.86	0.88	1.06	0.84	1.14	0.53
Avail Cap(c_a), veh/h	324	1365	609	443	2373	737	302	815	364	302	777	347
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	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	73.6	37.5	26.8	66.2	21.2	18.5	72.3	59.5	61.7	73.1	62.5	55.2
Incr Delay (d2), s/veh	2.5	14.1	1.3	39.2	1.0	1.1	20.1	10.4	63.6	14.0	78.6	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	24.9	4.3	11.1	9.5	4.1	6.0	15.3	21.2	4.9	24.3	6.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.2	51.5	28.1	105.4	22.2	19.6	92.4	69.9	125.3	87.1	141.1	56.0
LnGrp LOS	E	D	C	F	C	B	F	E	F	F	F	E
Approach Vol, veh/h		1608			2037			1353			1284	
Approach Delay, s/veh		50.8			39.8			89.9			120.0	
Approach LOS		D			D			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.1	81.4	19.8	43.7	28.0	68.5	21.5	42.0				
Change Period (Y+Rc), s	7.0	7.0	8.0	7.0	7.5	7.0	8.0	7.0				
Max Green Setting (Gmax), s	15.0	67.0	14.0	35.0	20.5	61.0	14.0	35.0				
Max Q Clear Time (g_c+I1), s	8.1	27.5	11.8	38.7	22.2	56.7	13.5	37.0				
Green Ext Time (p_c), s	0.1	15.2	0.1	0.0	0.0	3.2	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay				69.8								
HCM 6th LOS				E								
Notes												
User approved pedestrian interval to be less than phase max green.												

Timings

101: Palm Ave & Stirling Rd

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations												
Traffic Volume (vph)	227	811	167	235	1122	184	676	221	184	784	318	
Future Volume (vph)	227	811	167	235	1122	184	676	221	184	784	318	
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	
Protected Phases	1	6		5	2	7	4		3	8		
Permitted Phases			6					4			8	
Detector Phase	1	6	6	5	2	7	4	4	3	8	8	
Switch Phase												
Minimum Initial (s)	5.0	12.0	12.0	5.0	12.0	5.0	6.0	6.0	5.0	6.0	6.0	
Minimum Split (s)	12.0	44.0	44.0	12.0	44.0	12.0	45.0	45.0	12.0	45.0	45.0	
Total Split (s)	22.0	69.0	69.0	22.0	69.0	22.0	47.0	47.0	22.0	47.0	47.0	
Total Split (%)	13.8%	43.1%	43.1%	13.8%	43.1%	13.8%	29.4%	29.4%	13.8%	29.4%	29.4%	
Yellow Time (s)	5.0	5.0	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	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0	
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Max	C-Max	None	C-Max	None	Max	Max	None	Max	Max	
Act Effct Green (s)	14.0	62.8	62.8	14.2	63.0	12.9	42.1	42.1	12.9	42.1	42.1	
Actuated g/C Ratio	0.09	0.39	0.39	0.09	0.39	0.08	0.26	0.26	0.08	0.26	0.26	
v/c Ratio	0.80	0.61	0.24	0.81	1.06	0.70	0.77	0.40	0.70	0.89	0.60	
Control Delay	90.8	41.4	4.9	91.9	86.2	85.2	61.2	8.1	85.2	69.1	25.3	
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	90.8	41.4	4.9	91.9	86.2	85.2	61.2	8.1	85.2	69.1	25.3	
LOS	F	D	A	F	F	F	E	A	F	E	C	
Approach Delay		45.7			87.1		54.4			60.5		
Approach LOS		D			F		D			E		

Intersection Summary

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 152 (95%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.06

Intersection Signal Delay: 64.0

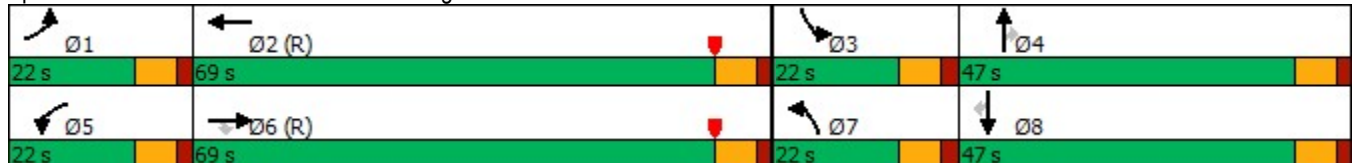
Intersection LOS: E

Intersection Capacity Utilization 95.7%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 101: Palm Ave & Stirling Rd



Queues

101: Palm Ave & Stirling Rd



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	239	854	176	247	1444	194	712	233	194	825	335
v/c Ratio	0.80	0.61	0.24	0.81	1.06	0.70	0.77	0.40	0.70	0.89	0.60
Control Delay	90.8	41.4	4.9	91.9	86.2	85.2	61.2	8.1	85.2	69.1	25.3
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	90.8	41.4	4.9	91.9	86.2	85.2	61.2	8.1	85.2	69.1	25.3
Queue Length 50th (ft)	127	378	0	132	~874	103	366	5	103	442	124
Queue Length 95th (ft)	#179	452	51	#192	#1016	147	450	77	147	#572	240
Internal Link Dist (ft)		488			562		484			381	
Turn Bay Length (ft)	330		330	290		340		340	350		380
Base Capacity (vph)	321	1389	728	321	1367	321	930	583	321	930	558
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	0.74	0.61	0.24	0.77	1.06	0.60	0.77	0.40	0.60	0.89	0.60

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 6th Signalized Intersection Summary

101: Palm Ave & Stirling Rd

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	227	811	167	235	1122	250	184	676	221	184	784	318
Future Volume (veh/h)	227	811	167	235	1122	250	184	676	221	184	784	318
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		0.99
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
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	239	854	176	247	1181	263	194	712	233	194	825	335
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	280	1503	670	288	1230	272	237	888	396	237	888	391
Arrive On Green	0.11	0.56	0.56	0.11	0.57	0.57	0.07	0.25	0.25	0.07	0.25	0.25
Sat Flow, veh/h	3456	3554	1585	3456	2894	639	3456	3554	1585	3456	3554	1563
Grp Volume(v), veh/h	239	854	176	247	721	723	194	712	233	194	825	335
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1777	1755	1728	1777	1585	1728	1777	1563
Q Serve(g_s), s	10.9	24.7	9.1	11.2	61.3	63.3	8.9	30.1	20.7	8.9	36.3	32.7
Cycle Q Clear(g_c), s	10.9	24.7	9.1	11.2	61.3	63.3	8.9	30.1	20.7	8.9	36.3	32.7
Prop In Lane	1.00		1.00	1.00		0.36	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	280	1503	670	288	756	746	237	888	396	237	888	391
V/C Ratio(X)	0.85	0.57	0.26	0.86	0.95	0.97	0.82	0.80	0.59	0.82	0.93	0.86
Avail Cap(c_a), veh/h	324	1503	670	324	756	746	324	888	396	324	888	391
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	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	70.4	25.6	22.2	70.2	33.3	33.7	73.5	56.3	52.8	73.5	58.6	57.3
Incr Delay (d2), s/veh	15.6	1.6	1.0	16.8	23.4	26.1	8.1	7.5	6.3	8.1	17.2	20.9
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	5.3	10.1	3.5	5.5	29.1	30.1	4.2	14.5	9.0	4.2	18.5	15.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.0	27.2	23.1	87.0	56.6	59.8	81.6	63.8	59.0	81.6	75.8	78.1
LnGrp LOS	F	C	C	F	E	E	F	E	E	F	E	E
Approach Vol, veh/h		1269			1691			1139			1354	
Approach Delay, s/veh		37.7			62.4			65.9			77.2	
Approach LOS		D			E			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	75.0	18.0	47.0	20.3	74.7	18.0	47.0				
Change Period (Y+Rc), s	7.0	7.0	7.0	7.0	7.0	7.0	7.0	7.0				
Max Green Setting (Gmax), s	15.0	62.0	15.0	40.0	15.0	62.0	15.0	40.0				
Max Q Clear Time (g_c+I1), s	12.9	65.3	10.9	32.1	13.2	26.7	10.9	38.3				
Green Ext Time (p_c), s	0.1	0.0	0.1	2.5	0.1	8.0	0.1	0.9				
Intersection Summary												
HCM 6th Ctrl Delay				61.1								
HCM 6th LOS				E								

HCM 6th TWSC
 102: Palm Ave & Park Entrance/U-turn

Intersection							
Int Delay, s/veh	1						
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	5	2	60	981	18	5	1227
Future Vol, veh/h	5	2	60	981	18	5	1227
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	0	200	-	200	215	-
Veh in Median Storage, #	1	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	6	2	68	1115	20	6	1394

Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1960	558	1394	0	0	1135
Stage 1	1251	-	-	-	-	-
Stage 2	709	-	-	-	-	-
Critical Hdwy	5	5	6.44	-	-	4.14
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3	3	2.52	-	-	2.22
Pot Cap-1 Maneuver	160	691	185	-	-	611
Stage 1	254	-	-	-	-	-
Stage 2	503	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	100	691	185	-	-	611
Mov Cap-2 Maneuver	138	-	-	-	-	-
Stage 1	161	-	-	-	-	-
Stage 2	498	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	25.9	2	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBU	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	185	-	-	138	691	611
HCM Lane V/C Ratio	0.369	-	-	0.041	0.003	0.009
HCM Control Delay (s)	35.4	-	-	32.2	10.2	10.9
HCM Lane LOS	E	-	-	D	B	B
HCM 95th %tile Q(veh)	1.6	-	-	0.1	0	0

HCM 6th TWSC
 103: Median Opening/ Church & Palm Ave

Intersection							
Int Delay, s/veh	1.1						
Movement	WBL	WBR	NBU	NBT	NBR	SBL	SBT
Lane Configurations							
Traffic Vol, veh/h	53	39	3	1051	3	40	1179
Future Vol, veh/h	53	39	3	1051	3	40	1179
Conflicting Peds, #/hr	0	0	0	0	1	1	0
Sign Control	Stop	Stop	Free	Free	Free	Free	Free
RT Channelized	-	None	-	-	None	-	None
Storage Length	0	0	100	-	200	260	-
Veh in Median Storage, #	1	-	-	0	-	-	0
Grade, %	0	-	-	0	-	-	0
Peak Hour Factor	88	88	92	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2
Mvmt Flow	60	44	3	1194	3	45	1340

Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	1961	598	1340	0	0	1198
Stage 1	1201	-	-	-	-	-
Stage 2	760	-	-	-	-	-
Critical Hdwy	5	5	6.44	-	-	4.14
Critical Hdwy Stg 1	5.84	-	-	-	-	-
Critical Hdwy Stg 2	5.84	-	-	-	-	-
Follow-up Hdwy	3	3.32	2.52	-	-	2.22
Pot Cap-1 Maneuver	160	615	200	-	-	578
Stage 1	271	-	-	-	-	-
Stage 2	472	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	145	614	200	-	-	577
Mov Cap-2 Maneuver	210	-	-	-	-	-
Stage 1	267	-	-	-	-	-
Stage 2	435	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	21.4	0.1	0.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBU	NBT	NBRWBLn1	WBLn2	SBL	SBT
Capacity (veh/h)	200	-	-	210	614	577
HCM Lane V/C Ratio	0.016	-	-	0.287	0.072	0.079
HCM Control Delay (s)	23.3	-	-	28.9	11.3	11.8
HCM Lane LOS	C	-	-	D	B	B
HCM 95th %tile Q(veh)	0.1	-	-	1.1	0.2	0.3

Timings

104: Palm Ave & Sheridan St

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	135	1210	177	411	1287	227	237	688	362	211	850	182
Future Volume (vph)	135	1210	177	411	1287	227	237	688	362	211	850	182
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2			4			8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	12.0	44.0	44.0	12.5	45.0	45.0	13.0	42.0	42.0	13.0	42.0	42.0
Total Split (s)	22.0	68.0	68.0	28.0	74.0	74.0	22.0	42.0	42.0	22.0	42.0	42.0
Total Split (%)	13.8%	42.5%	42.5%	17.5%	46.3%	46.3%	13.8%	26.3%	26.3%	13.8%	26.3%	26.3%
Yellow Time (s)	5.0	5.0	5.0	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	2.5	2.0	2.0	3.0	2.0	2.0	3.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.5	7.0	7.0	8.0	7.0	7.0	8.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	10.6	61.0	61.0	20.5	71.4	71.4	13.6	36.0	36.0	13.0	35.4	35.4
Actuated g/C Ratio	0.07	0.38	0.38	0.13	0.45	0.45	0.08	0.22	0.22	0.08	0.22	0.22
v/c Ratio	0.63	0.95	0.28	1.00	0.60	0.30	0.87	0.92	0.76	0.80	1.15	0.40
Control Delay	85.1	63.7	12.0	110.1	35.3	8.6	99.4	77.9	39.1	92.8	137.2	12.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.1	63.7	12.0	110.1	35.3	8.6	99.4	77.9	39.1	92.8	137.2	12.0
LOS	F	E	B	F	D	A	F	E	D	F	F	B
Approach Delay		59.6			48.1			70.9			111.3	
Approach LOS		E			D			E			F	

Intersection Summary

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 27 (17%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.15

Intersection Signal Delay: 69.1

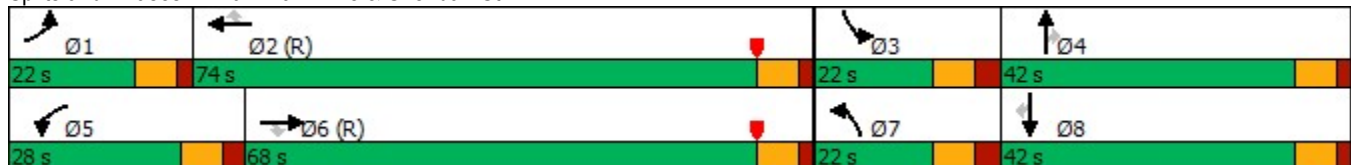
Intersection LOS: E

Intersection Capacity Utilization 100.0%

ICU Level of Service G

Analysis Period (min) 15

Splits and Phases: 104: Palm Ave & Sheridan St



Queues

104: Palm Ave & Sheridan St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	144	1287	188	437	1369	241	252	732	385	224	904	194
v/c Ratio	0.63	0.95	0.28	1.00	0.60	0.30	0.87	0.92	0.76	0.80	1.15	0.40
Control Delay	85.1	63.7	12.0	110.1	35.3	8.6	99.4	77.9	39.1	92.8	137.2	12.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	85.1	63.7	12.0	110.1	35.3	8.6	99.4	77.9	39.1	92.8	137.2	12.0
Queue Length 50th (ft)	77	687	39	239	393	35	136	401	198	120	~591	16
Queue Length 95th (ft)	114	#838	99	#357	462	99	#209	#526	334	m#173	m#730	m88
Internal Link Dist (ft)		248			269			208			780	
Turn Bay Length (ft)	200		200	315		220	320		320	350		350
Base Capacity (vph)	321	1349	683	439	2269	807	300	795	506	300	784	487
Starvation Cap Reductn	0	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	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.45	0.95	0.28	1.00	0.60	0.30	0.84	0.92	0.76	0.75	1.15	0.40

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.

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

HCM 6th Signalized Intersection Summary

104: Palm Ave & Sheridan St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	135	1210	177	411	1287	227	237	688	362	211	850	182
Future Volume (veh/h)	135	1210	177	411	1287	227	237	688	362	211	850	182
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	144	1287	188	437	1369	241	252	732	385	224	904	194
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	186	1365	609	443	2356	731	292	805	359	266	777	347
Arrive On Green	0.07	0.51	0.51	0.17	0.61	0.61	0.08	0.23	0.23	0.08	0.22	0.22
Sat Flow, veh/h	3456	3554	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	144	1287	188	437	1369	241	252	732	385	224	904	194
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	6.6	54.7	11.0	20.2	25.7	11.8	11.5	32.1	36.2	10.2	35.0	17.4
Cycle Q Clear(g_c), s	6.6	54.7	11.0	20.2	25.7	11.8	11.5	32.1	36.2	10.2	35.0	17.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	186	1365	609	443	2356	731	292	805	359	266	777	347
V/C Ratio(X)	0.77	0.94	0.31	0.99	0.58	0.33	0.86	0.91	1.07	0.84	1.16	0.56
Avail Cap(c_a), veh/h	324	1365	609	443	2356	731	302	805	359	302	777	347
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	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	73.3	37.5	26.8	66.2	21.6	18.9	72.3	60.3	61.9	72.9	62.5	55.6
Incr Delay (d2), s/veh	2.6	14.1	1.3	39.2	1.1	1.2	20.1	13.9	68.0	15.7	87.2	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	24.9	4.3	11.1	9.7	4.3	6.0	16.1	21.4	5.1	25.2	7.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	75.9	51.5	28.1	105.4	22.7	20.1	92.4	74.2	129.9	88.6	149.7	56.9
LnGrp LOS	E	D	C	F	C	C	F	E	F	F	F	E
Approach Vol, veh/h		1619			2047			1369			1322	
Approach Delay, s/veh		51.0			40.0			93.2			125.7	
Approach LOS		D			D			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.6	80.8	20.3	43.2	28.0	68.5	21.5	42.0				
Change Period (Y+Rc), s	7.0	7.0	8.0	7.0	7.5	7.0	8.0	7.0				
Max Green Setting (Gmax), s	15.0	67.0	14.0	35.0	20.5	61.0	14.0	35.0				
Max Q Clear Time (g_c+I1), s	8.6	27.7	12.2	38.2	22.2	56.7	13.5	37.0				
Green Ext Time (p_c), s	0.1	15.3	0.1	0.0	0.0	3.2	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay				72.1								
HCM 6th LOS				E								
Notes												
User approved pedestrian interval to be less than phase max green.												

Timings

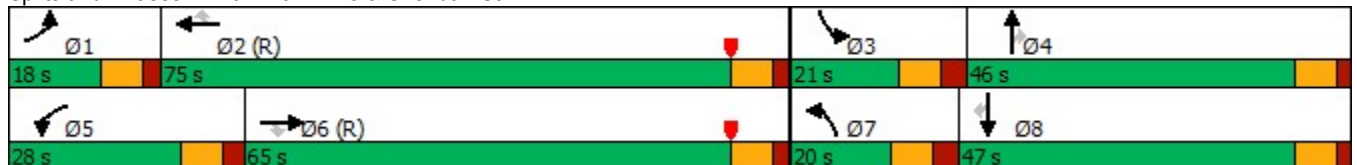
104: Palm Ave & Sheridan St

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	135	1210	177	411	1287	227	237	688	362	211	850	182
Future Volume (vph)	135	1210	177	411	1287	227	237	688	362	211	850	182
Turn Type	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6			2			4			8
Detector Phase	1	6	6	5	2	2	7	4	4	3	8	8
Switch Phase												
Minimum Initial (s)	5.0	10.0	10.0	5.0	10.0	10.0	5.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	12.0	44.0	44.0	12.5	45.0	45.0	13.0	42.0	42.0	13.0	42.0	42.0
Total Split (s)	18.0	65.0	65.0	28.0	75.0	75.0	20.0	46.0	46.0	21.0	47.0	47.0
Total Split (%)	11.3%	40.6%	40.6%	17.5%	46.9%	46.9%	12.5%	28.8%	28.8%	13.1%	29.4%	29.4%
Yellow Time (s)	5.0	5.0	5.0	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	2.5	2.0	2.0	3.0	2.0	2.0	3.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.0	7.0	7.0	7.5	7.0	7.0	8.0	7.0	7.0	8.0	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	None	C-Max	C-Max	None	None	None	None	None	None
Act Effct Green (s)	9.8	58.0	58.0	20.5	69.2	69.2	12.0	39.5	39.5	12.5	40.0	40.0
Actuated g/C Ratio	0.06	0.36	0.36	0.13	0.43	0.43	0.08	0.25	0.25	0.08	0.25	0.25
v/c Ratio	0.69	1.00	0.27	1.00	0.62	0.31	0.98	0.84	0.73	0.84	1.02	0.37
Control Delay	90.2	76.2	6.0	110.1	37.0	8.7	123.5	67.0	36.8	97.9	94.0	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	90.2	76.2	6.0	110.1	37.0	8.7	123.5	67.0	36.8	97.9	94.0	9.7
LOS	F	E	A	F	D	A	F	E	D	F	F	A
Approach Delay		69.3			49.3			68.9			82.3	
Approach LOS		E			D			E			F	

Intersection Summary

Cycle Length: 160	
Actuated Cycle Length: 160	
Offset: 27 (17%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow	
Natural Cycle: 145	
Control Type: Actuated-Coordinated	
Maximum v/c Ratio: 1.02	
Intersection Signal Delay: 65.5	Intersection LOS: E
Intersection Capacity Utilization 100.0%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 104: Palm Ave & Sheridan St



Queues

104: Palm Ave & Sheridan St



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Group Flow (vph)	144	1287	188	437	1369	241	252	732	385	224	904	194
v/c Ratio	0.69	1.00	0.27	1.00	0.62	0.31	0.98	0.84	0.73	0.84	1.02	0.37
Control Delay	90.2	76.2	6.0	110.1	37.0	8.7	123.5	67.0	36.8	97.9	94.0	9.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	90.2	76.2	6.0	110.1	37.0	8.7	123.5	67.0	36.8	97.9	94.0	9.7
Queue Length 50th (ft)	77	~713	5	239	408	35	138	387	200	121	~526	10
Queue Length 95th (ft)	117	#876	60	#357	462	97	#234	469	332	#187	#664	79
Internal Link Dist (ft)		248			269			208			350	
Turn Bay Length (ft)	200		200	315		220	320		320	350		350
Base Capacity (vph)	236	1282	689	439	2199	789	257	873	530	278	884	531
Starvation Cap Reductn	0	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	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.61	1.00	0.27	1.00	0.62	0.31	0.98	0.84	0.73	0.81	1.02	0.37

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 6th Signalized Intersection Summary

104: Palm Ave & Sheridan St

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 		 	  		 	 		 	 	
Traffic Volume (veh/h)	135	1210	177	411	1287	227	237	688	362	211	850	182
Future Volume (veh/h)	135	1210	177	411	1287	227	237	688	362	211	850	182
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	144	1287	188	437	1369	241	252	732	385	224	904	194
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	185	1288	575	443	2247	698	259	883	394	265	888	396
Arrive On Green	0.07	0.48	0.48	0.17	0.59	0.59	0.08	0.25	0.25	0.08	0.25	0.25
Sat Flow, veh/h	3456	3554	1585	3456	5106	1585	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	144	1287	188	437	1369	241	252	732	385	224	904	194
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1728	1702	1585	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	6.6	57.9	11.7	20.2	27.6	12.6	11.6	31.2	38.6	10.2	40.0	16.7
Cycle Q Clear(g_c), s	6.6	57.9	11.7	20.2	27.6	12.6	11.6	31.2	38.6	10.2	40.0	16.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	185	1288	575	443	2247	698	259	883	394	265	888	396
V/C Ratio(X)	0.78	1.00	0.33	0.99	0.61	0.35	0.97	0.83	0.98	0.85	1.02	0.49
Avail Cap(c_a), veh/h	238	1288	575	443	2247	698	259	883	394	281	888	396
HCM Platoon Ratio	1.33	1.33	1.33	1.33	1.33	1.33	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	73.4	41.4	29.4	66.2	24.3	21.2	73.8	56.9	59.7	72.9	60.0	51.3
Incr Delay (d2), s/veh	8.6	24.9	1.5	39.2	1.2	1.4	47.8	6.3	39.3	18.5	34.7	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	3.1	28.2	4.5	11.1	10.6	4.7	6.9	14.8	19.8	5.2	22.3	6.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.9	66.3	30.9	105.4	25.5	22.5	121.7	63.2	99.0	91.4	94.7	51.6
LnGrp LOS	F	E	C	F	C	C	F	E	F	F	F	D
Approach Vol, veh/h		1619			2047			1369			1322	
Approach Delay, s/veh		63.6			42.2			84.0			87.8	
Approach LOS		E			D			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.6	77.4	20.3	46.7	28.0	65.0	20.0	47.0				
Change Period (Y+Rc), s	7.0	7.0	8.0	7.0	7.5	7.0	8.0	7.0				
Max Green Setting (Gmax), s	11.0	68.0	13.0	39.0	20.5	58.0	12.0	40.0				
Max Q Clear Time (g_c+I1), s	8.6	29.6	12.2	40.6	22.2	59.9	13.6	42.0				
Green Ext Time (p_c), s	0.0	15.1	0.0	0.0	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			66.1									
HCM 6th LOS			E									
Notes												
User approved pedestrian interval to be less than phase max green.												

APPENDIX F

Vehicle Accumulation Count at Existing School at the Site

**FIRST BAPTIST CHURCH SCHOOL
PALM AVENUE AND SHERIDAN STREET
COOPER CITY , FL.**

(PALM AVE INTERSECTION) OCT 21st, 2021 (EAST INTERSECTION)

TIME	N/B RIGHT	S/B LEFT	W/B RIGHT	W/B LEFT	E/B RIGHT	W/B LEFT	N/B RIGHT	PARKED	QUEUE
8:00-:05	2	2	3	2	0	1	4		
8:05-:10	0	1	1	3	0	0	2	BEFORE=8	
8:10-:15	4	2	0	2	2	1	2	AFTER=10	AM
8:15-:20	3	2	6	5	0	0	4		QUEUE =0
8:20-:25	5	5	3	5	0	0	4		
8:25-:30	5	3	2	9	0	0	3		
8:30-:35	7	2	4	7	0	0	4		
8:35-:40	5	2	3	11	0	0	12		
8:40-:45	3	0	6	14	0	0	3		
8:45-:50	1	0	1	2	0	0	1		
8:50-:55	3	0	0	2	0	0	1		
8:55-9:00	1	0	3	3	0	0	0		
									PM QUEUE
2:30-:35	2	0	1	0	0	0	0		2
2:35-:40	0	0	0	0	0	0	0		
2:40-:45	0	2	1	0	1	0	1		4
2:45-:50	0	2	0	1	1	0	1	BEFORE=13	
2:50-:55	1	3	2	1	1	0	0	AFTER=20	5
2:55-3:00	2	0	1	1	0	0	3		7
3:00-:05	0	4	4	0	1	0	3		
3:05-:10	2	1	0	2	0	0	6		8
3:10-:15	4	2	0	0	1	0	3		12
3:15-:20	2	2	3	2	1	0	1		18
3:20-:25	1	7	3	8	3	0	1		
3:25-:30	2	3	5	9	2	1	5		
3:30-:35	4	0	2	10	0	0	7		
3:35-:40	2	3	9	4	3	1	4		
3:40-:45	2	1	2	4	1	3	7		

W/B :RIGHT TURN ONLY 7:00-8:00

2:45-3:35

CALCULATIONS

	in	in	out	parked/queue	
Start AM				8	at start of count
	4	4	5	11	
	1	2	4	10	
	6	2	2	16	
	5	4	11	14	
	10	4	8	20	
	8	3	11	20	
	9	4	11	22	
	7	12	14	27	
	3	3	20	13	
	1	1	3	12	
	3	1	2	14	
	1	0	6	9	

	in	in	out	parked/queue	
Start PM				13	at start of count
	2	0	1	14	
	0	0	0	14	
	2	1	1	16	
	2	1	1	18	
	4	0	3	19	
	2	3	2	22	
	4	3	4	25	
	3	6	2	32	
	6	3	0	41	
	4	1	5	41	
	8	1	11	39	
	5	5	14	35	
	4	7	12	34	
	5	4	13	30	
	3	7	6	34	

NOTES: Inbound vehicles include NB rights from Palm Avenue, SB lefts from Palm Avenue and NB rights from East/internal intersection (from the south)

Outbound vehicles include WB rights and WB lefts onto Palm Avenue

EB rights and WB lefts at East/internal intersection were vehicles cutting through (not school related)

APPENDIX G

Queue Counts at School Driveway

**TABLE G-1 (Queue Counts)
First Baptist Church of SW Broward**

Palm Avenue at Church / School Driveway					
SB Left-Turn			NB Right-Turn		
From	To	Volume	Queue	Volume	Queue
8:00 AM	8:05 AM		4		0
8:05 AM	8:10 AM		1		0
8:10 AM	8:15 AM		0		0
8:15 AM	8:20 AM		0		0
8:20 AM	8:25 AM		2		0
8:25 AM	8:30 AM		0		0
8:30 AM	8:35 AM		0		0
8:35 AM	8:40 AM		0		0
8:40 AM	8:45 AM		2		0
8:45 AM	8:50 AM		1		0
8:50 AM	8:55 AM		0		0
8:55 AM	9:00 AM		0		0
Hourly Total		66		9	
8:00 to 9:00					
AM Queue			1 veh / 16.5 left-turns	0 vehicles	

Palm Avenue at Church / School Driveway					
SB Left-Turn			NB Right-Turn		
From	To	Volume	Queue	Volume	Queue
2:30 PM	2:35 PM		0		0
2:35 PM	2:40 PM		1		0
2:40 PM	2:45 PM		2		0
2:45 PM	2:50 PM		0		0
2:50 PM	2:55 PM		2		0
2:55 PM	3:00 PM		1		0
3:00 PM	3:05 PM		1		0
3:05 PM	3:10 PM		1		0
3:10 PM	3:15 PM		2		0
3:15 PM	3:20 PM		3		0
3:20 PM	3:25 PM		2		0
3:25 PM	3:30 PM		2		0
3:30 PM	3:35 PM		2		0
3:35 PM	3:40 PM		4		0
3:40 PM	3:45 PM		1		0
Hourly Total		39		3	
2:45 to 3:45					
PM Queue			1 veh / 9.75 left-turns	0 veh	

Used 1 left-turn queue /16.5 left-turns for AM peak (critical peak)

Used 0 right-turn queue

Left-Turn Analysis: 113 peak hour vehicles = 6.85 veh x 22 feet/veh = **150 ft**

Right-Turn Analysis: 64 peak hour vehicles = **0 queue**

Source: Traf Tech Engineering, Inc. (Thursday, November 18, 2021)