

SIMMONS & WHITE
2581 Metrocentre Blvd West, Suite 3 West Palm Beach, Florida 33407
O 561.478.7848 | F 561.478.3738 www.simmonsandwhite.com
Certificate of Authorization Number 3452



TRAFFIC STUDY

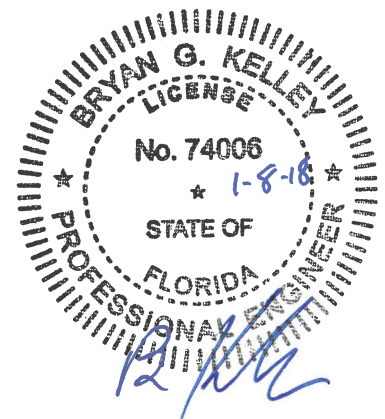
HALLANDALE BEACH TOWNHOMES HALLANDALE BEACH, FLORIDA

Prepared for:

99 Hallandale Manager, LLC
2875 NE 191st Street, Suite 801
Aventura, Florida 33180

Job No. 15-010

Date: June 12, 2015
Revised: October 13, 2016
Revised: January 8, 2018



Bryan G. Kelley, P.E.
FL Reg. No. 74006

1.0 SITE DATA

The subject parcels are located at 901-925 SW 9th Street and 920 SW 9th Street in the City of Hallandale Beach, Florida and contains approximately 1.61 acres. 901-925 SW 9th Street is currently vacant while 920 SW 9th Street currently contains a single family dwelling unit. The proposed plan of development consists of 20 townhouse dwelling units; 8 dwelling units are to be located at 920 SW 9th Street and 12 dwelling units are to be located at 901-925 SW 9th Street. Site access is proposed via full access driveway connections to SW 9th Street and SW 9th Avenue. For additional information on site layout, please refer to the site plan prepared by Joseph. B. Kaller and Associates PA.

2.0 TRAFFIC DATA

SW 9th Street is an east-west two-lane undivided local roadway that provides direct access to several residential properties west of SW 8th Avenue. SW 8th Avenue in the vicinity of the project is a north-south two-lane undivided collector roadway that provides connections to SW 11th Street to the south and Hallandale Beach Boulevard to the north. Speed humps and a school speed zone are present on SW 8th Avenue.

Turning movement counts were collected from 7:00 to 9:00 A.M. and from 4:00 to 6:00 P.M. on Tuesday, June 2, 2015 at the intersection of Hallandale Beach Boulevard and SW 8th Avenue. A peak season correction factor (PSCF) of 1.06 obtained from the FDOT was applied to the traffic counts to adjust for seasonal factors.

A review of the Broward County MPO 5-Year Transportation Improvement Program revealed that no capacity improvements are programmed in the study area.

3.0 TRAFFIC GENERATION

The traffic to be generated is calculated in accordance with the rates provided in the ITE Trip Generation Manual, 9th Edition as shown on Table 1, Table 2, and Table 3 attached with this report. Table 1 shows the daily traffic generation associated with the proposed use. Tables 2 and 3 show the A.M. and P.M. peak hour traffic generation, respectively. The traffic generation associated with the proposed 20 townhouse dwelling units may be summarized as follows:

Daily Traffic Generation	=	159 tpd
A.M. Peak Hour Traffic Generation	=	14 pht (2 In/12 Out)
P.M. Peak Hour Traffic Generation	=	16 pht (11 In/5 Out)

The traffic assigned with the proposed plan of development was distributed to the local roadway network based on existing land uses and travel patterns. The Trip Distribution figure is attached to this report.

4.0 FUTURE CONDITION ANALYSIS

FDOT historical AADT's were reviewed on the surrounding roadway network to determine the background growth rate. The results as shown in Table 4 showed an average area wide growth rate of 2.06%. Therefore, a growth rate of 2.06% was utilized for background growth to project traffic to 2021. The traffic volume development worksheet for the study intersection is included in Appendix C.

An intersection operational analysis was performed using Synchro 10 software with the corresponding Highway Capacity (HCM) results. The analysis was performed for both the buildout without project traffic and buildout with project traffic during both the A.M. and P.M. peak hours to determine the project impact on the intersection. A default heavy vehicle percentage (HV%) of 2.0% was used and the collected overall intersection peak hour factors (PHF) were used in the analysis.

The signal timing was optimized in all scenarios. However, the signal phasing, yellow and red timing, and overall cycle length were not modified. The results of the analysis are shown below.

Hallandale Beach Boulevard and SW 8th Avenue – 2021 Operational Analysis

APPROACH	AM PEAK HOUR				PM PEAK HOUR			
	WITHOUT PROJECT		WITH PROJECT		WITHOUT PROJECT		WITH PROJECT	
	AVG DELAY (S/VEH)	LOS	AVG DELAY (S/VEH)	LOS	AVG DELAY (S/VEH)	LOS	AVG DELAY (S/VEH)	LOS
EASTBOUND	50.4	D	50.8	D	66.6	E	67.0	E
WESTBOUND	32.5	C	32.5	C	108.9	F	108.9	F
NORTHBOUND	78.4	E	79.5	E	130.4	F	131.8	F
SOUTHBOUND	91.9	F	91.9	F	120.9	F	122.6	F
TOTAL	51.5	D	51.9	D	94.8	F	95.4	F

As shown above, the proposed project will have a negligible impact to the intersection of Hallandale Beach Boulevard and SW 8th Avenue.

Tables 4 and 5 attached to the report document the peak direction project assignment on the surrounding roadway network. As shown, the project will have an insignificant impact to the roadway links within the study area.

5.0 CONCLUSION

The propose plan of development of 20 townhouse dwelling units will generate 159 daily trips, 14 A.M. peak hour trips and 16 P.M. peak hour trips. Based on the findings of this report, the proposed development will have a negligible traffic impact on the surrounding roadway network.



Figure 1 – Site Location Map
Hallandale Beach Townhomes
Project # 15-010

PROPOSED DEVELOPMENT - 20 TOWNHOUSE UNITS**TABLE 1 - Daily Traffic Generation**

Landuse	ITE Code	Intensity	Rate/Equation	Dir Split		Gross Trips			Internalization			External Trips			Pass-by			Net Trips		
				In	Out	In	Out	Total	%	In	Out	In	Out	Total	%	In	Out	In	Out	Total
Condo/Townhouse	230	Dwelling Units	$\text{Ln(T)} = 0.87 \text{ Ln(X)} + 2.46$					159						159	0%					159
		Grand Totals:						159	0.0%					159	0%					159

TABLE 2 - AM Peak Hour Traffic Generation

Landuse	ITE Code	Intensity	Rate/Equation	Dir Split		Gross Trips			Internalization			External Trips			Pass-by			Net Trips		
				In	Out	In	Out	Total	%	In	Out	In	Out	Total	%	In	Out	In	Out	Total
Condo/Townhouse	230	Dwelling Units	$\text{Ln(T)} = 0.80 \text{ Ln(X)} + 0.26$	0.17	0.83	2	12	14	0.0%	0	0	2	12	14	0%	2	12	2	12	14
		Grand Totals:				2	12	14	0.0%	0	0	2	12	14	0%	2	12	2	12	14

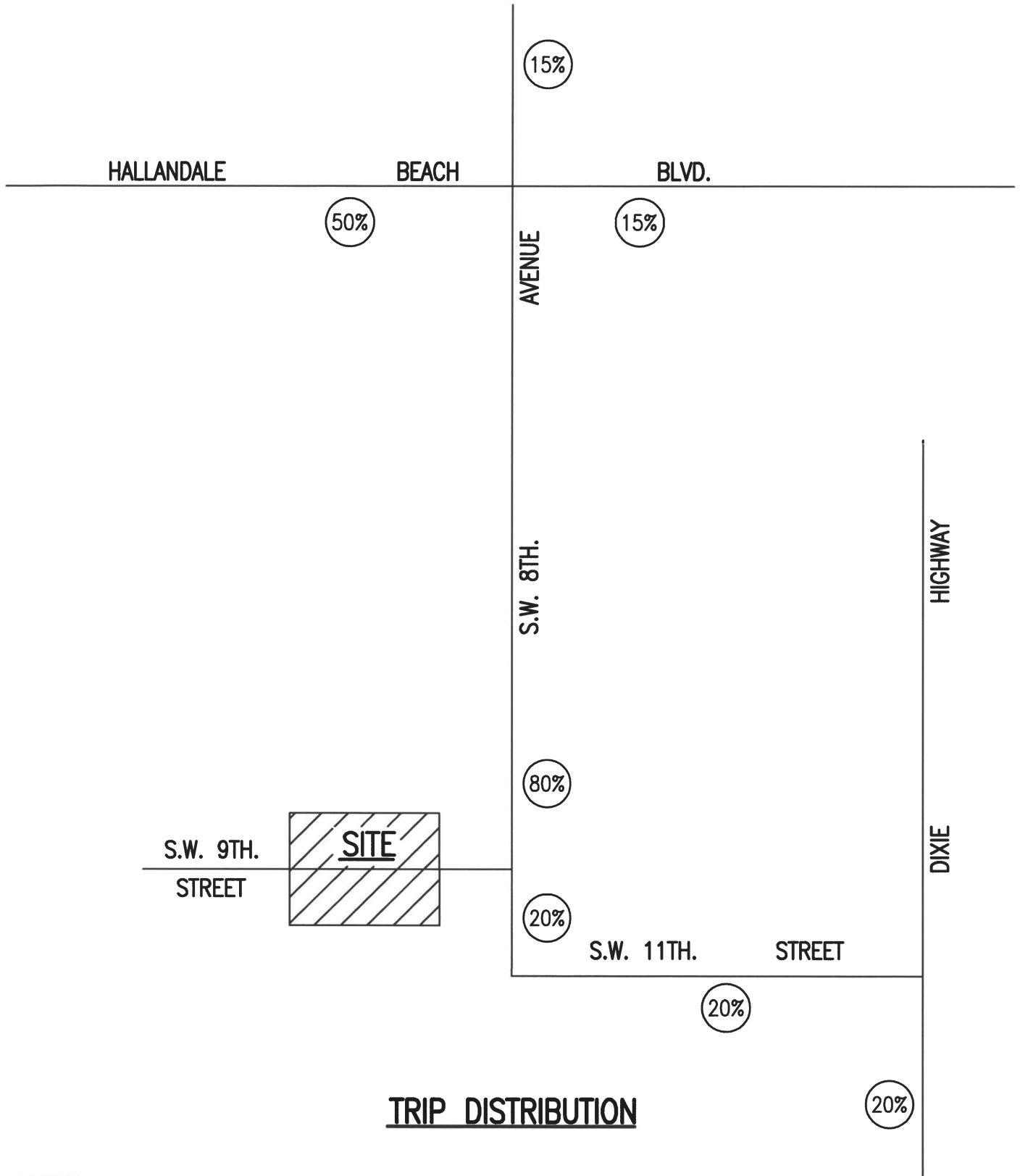
TABLE 3 - PM Peak Hour Traffic Generation

Landuse	ITE Code	Intensity	Rate/Equation	Dir Split		Gross Trips			Internalization			External Trips			Pass-by			Net Trips		
				In	Out	In	Out	Total	%	In	Out	In	Out	Total	%	In	Out	In	Out	Total
Condo/Townhouse	230	Dwelling Units	$\text{Ln(T)} = 0.82 \text{ Ln(X)} + 0.32$	0.67	0.33	11	5	16	0.0%	0	0	11	5	16	0%	11	5	11	5	16
		Grand Totals:				11	5	16	0.0%	0	0	11	5	16	0%	11	5	11	5	16



ENGINEERING | PLANNING | CONSULTING | SINCE 1982
Authorization No. 3452

2581 Metrocentre Blvd West • Suite 3 • West Palm Beach, Florida 33407 • (561) 478-7848



TRIP DISTRIBUTION

LEGEND

(20%) PROJECT DISTRIBUTION

HALLANDALE BEACH TOWNHOMES

15-010A B.K. 06-08-15

TABLE 4
TEST 1 - PROJECT SIGNIFICANCE CALCULATION
AM PEAK HOUR

2021 BUILD OUT		AM PEAK HOUR									
TOTAL AM PEAK HOUR PROJECT TRIPS (ENTER) 2											
TOTAL AM PEAK HOUR PROJECT TRIPS (EXIT) 12											
ROADWAY	FROM	TO	PROJECT DISTRIBUTION	AM PEAK HOUR DIRECTIONAL PROJECT TRIPS	EXISTING LANES	CLASS	LOS D STANDARD	TOTAL PROJECT IMPACT	PROJECT SIGNIFICANT		
SW 8TH AVENUE	SW 11TH STREET	SW 9TH STREET	20%	2	2L	II	750	0.32%	NO		
SW 8TH AVENUE	SW 9TH STREET	HALLANDALE BEACH BOULEVARD	80%	9	2L	II	750	1.26%	NO		
SW 8TH AVENUE	HALLANDALE BEACH BOULEVARD	PEMBROKE ROAD	15%	2	2L	II	750	0.24%	NO		
HALLANDALE BEACH BOULEVARD	I-95	SW 8TH AVENUE	50%	6	6D	I	3020	0.20%	NO		
HALLANDALE BEACH BOULEVARD	SW 8TH AVENUE	DIXIE HIGHWAY	15%	2	6D	I	3020	0.06%	NO		
SW 11TH STREET	SW 8TH AVENUE	DIXIE HIGHWAY	20%	2	2L	II	750	0.32%	NO		
DIXIE HIGHWAY	SW 11TH STREET	CITY LIMITS	20%	2	2L	II	750	0.32%	NO		

TABLE 5
TEST 1 - PROJECT SIGNIFICANCE CALCULATION
PM PEAK HOUR

2021 BUILD OUT
 TOTAL PM PEAK HOUR PROJECT TRIPS (ENTER) 11
 TOTAL PM PEAK HOUR PROJECT TRIPS (EXITING) 5

ROADWAY	FROM	TO	PM PEAK HOUR				CLASS	LOS D STANDARD	TOTAL PROJECT IMPACT	PROJECT SIGNIFICANT
			PROJECT DISTRIBUTION	DIRECTIONAL PROJECT TRIPS	EXISTING LANES					
SW 8TH AVENUE	SW 11TH STREET	SW 9TH STREET	20%	2	2L		II	750	0.29%	NO
SW 8TH AVENUE	SW 9TH STREET	HALLANDALE BEACH BOULEVARD	80%	9	2L		II	750	1.15%	NO
SW 8TH AVENUE	HALLANDALE BEACH BOULEVARD	PEMBROKE ROAD	15%	2	2L		II	750	0.22%	NO
HALLANDALE BEACH BOULEVARD	I-95	SW 8TH AVENUE	50%	5	6D		I	3020	0.18%	NO
HALLANDALE BEACH BOULEVARD	SW 8TH AVENUE	DIXIE HIGHWAY	15%	2	6D		I	3020	0.05%	NO
SW 11TH STREET	SW 8TH AVENUE	DIXIE HIGHWAY	20%	2	2L		II	750	0.29%	NO
DIXIE HIGHWAY	SW 11TH STREET	CITY LIMITS	20%	2	2L		II	750	0.29%	NO

APPENDIX “A”

TRAFFIC COUNTS

KMF Traffic Group, LLC
 1669 SW College St., Stuart, FL
 (772) 221-7971
www.kmftraffic.com

Manual Traffic Count - All Traffic
 W Hallandale Beach Blvd and NW 8th Ave
 Hallandale Beach, FL

File Name : PK
 Site Code : SW1511
 Start Date : 6/2/2015
 Page No : 1

Groups Printed- All Traffic

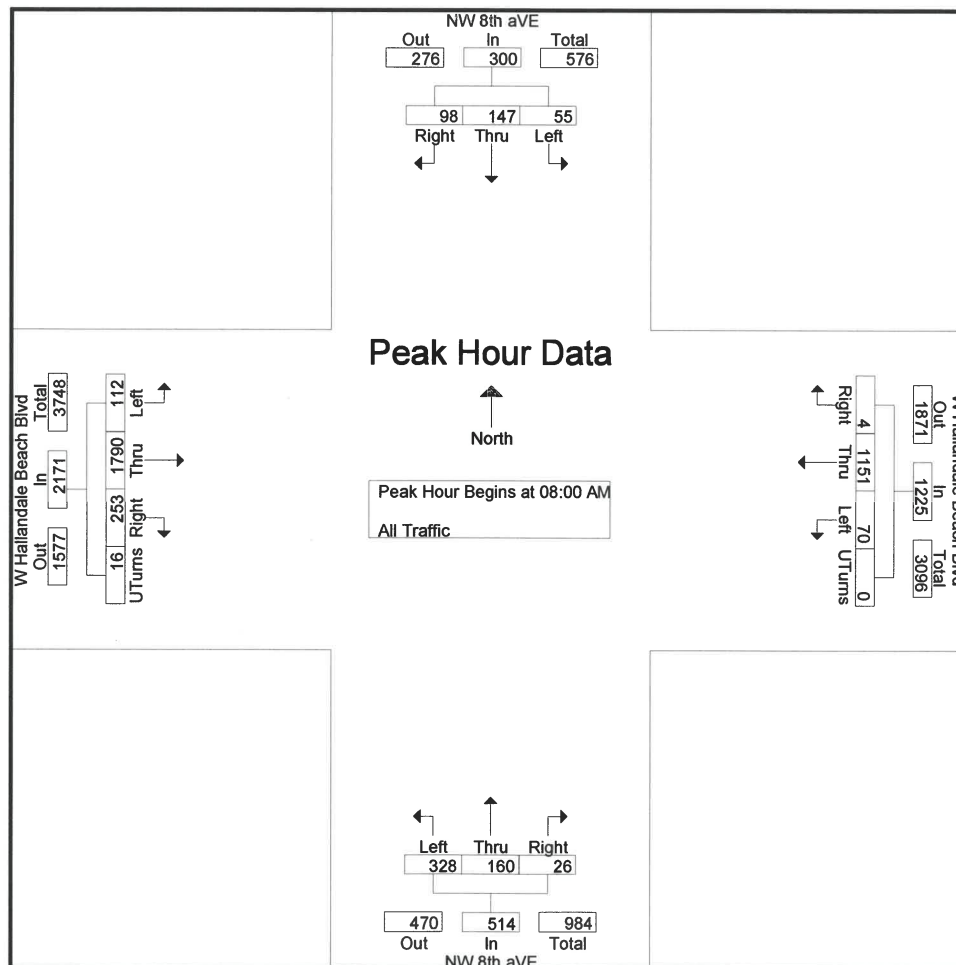
Start Time	NW 8th aVE Southbound				W Hallandale Beach Blvd Westbound					NW 8th aVE Northbound				W Hallandale Beach Blvd Eastbound					Int. Total
	Right	Thru	Left	App. Total	Right	Thru	Left	UTurns	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	UTurns	App. Total	
07:00 AM	36	24	7	67	4	231	6	0	241	2	9	90	101	30	258	25	7	320	729
07:15 AM	46	47	10	103	6	201	18	0	225	3	34	95	132	36	262	46	2	346	806
07:30 AM	21	30	8	59	0	215	25	0	240	2	41	80	123	54	325	93	7	479	901
07:45 AM	39	55	13	107	1	203	22	0	226	6	33	76	115	64	295	53	5	417	865
Total	142	156	38	336	11	850	71	0	932	13	117	341	471	184	1140	217	21	1562	3301
08:00 AM	41	47	12	100	1	260	18	0	279	6	58	85	149	56	410	32	4	502	1030
08:15 AM	26	38	10	74	2	270	20	0	292	7	36	71	114	62	465	27	2	556	1036
08:30 AM	15	38	18	71	1	317	21	0	339	7	38	86	131	77	443	21	6	547	1088
08:45 AM	16	24	15	55	0	304	11	0	315	6	28	86	120	58	472	32	4	566	1056
Total	98	147	55	300	4	1151	70	0	1225	26	160	328	514	253	1790	112	16	2171	4210
*** BREAK ***																			
04:00 PM	37	21	21	79	10	471	11	2	494	8	15	88	111	51	385	34	5	475	1159
04:15 PM	23	19	10	52	6	435	17	4	462	8	30	88	126	40	370	47	9	466	1106
04:30 PM	31	20	20	71	19	407	6	3	435	10	39	105	154	62	323	37	6	428	1088
04:45 PM	26	26	10	62	15	398	11	2	426	1	32	98	131	60	393	55	5	513	1132
Total	117	86	61	264	50	1711	45	11	1817	27	116	379	522	213	1471	173	25	1882	4485
05:00 PM	51	36	18	105	11	338	22	3	374	6	37	133	176	37	360	58	4	459	1114
05:15 PM	38	29	24	91	10	465	19	4	498	6	40	142	188	58	423	47	7	535	1312
05:30 PM	31	29	5	65	13	434	13	0	460	5	33	107	145	46	367	51	7	471	1141
05:45 PM	38	27	10	75	10	360	23	3	396	6	38	138	182	51	365	41	4	461	1114
Total	158	121	57	336	44	1597	77	10	1728	23	148	520	691	192	1515	197	22	1926	4681
Grand Total	515	510	211	1236	109	5309	263	21	5702	89	541	1568	2198	842	5916	699	84	7541	16677
Apprch %	41.7	41.3	17.1		1.9	93.1	4.6	0.4		4	24.6	71.3		11.2	78.5	9.3	1.1		
Total %	3.1	3.1	1.3	7.4	0.7	31.8	1.6	0.1	34.2	0.5	3.2	9.4	13.2	5	35.5	4.2	0.5	45.2	

KMF Traffic Group, LLC
 1669 SW College St., Stuart, FL
 (772) 221-7971
www.kmftraffic.com

Manual Traffic Count - All Traffic
 W Hallandale Beach Blvd and NW 8th Ave
 Hallandale Beach, FL

File Name : PK
 Site Code : SW1511
 Start Date : 6/2/2015
 Page No : 2

	NW 8th aVE Southbound				W Hallandale Beach Blvd Westbound					NW 8th aVE Northbound				W Hallandale Beach Blvd Eastbound					
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	UTurns	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	UTurns	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 08:00 AM																			
08:00 AM	41	47	12	100	1	260	18	0	279	6	58	85	149	56	410	32	4	502	1030
08:15 AM	26	38	10	74	2	270	20	0	292	7	36	71	114	62	465	27	2	556	1036
08:30 AM	15	38	18	71	1	317	21	0	339	7	38	86	131	77	443	21	6	547	1088
08:45 AM	16	24	15	55	0	304	11	0	315	6	28	86	120	58	472	32	4	566	1056
Total Volume	98	147	55	300	4	1151	70	0	1225	26	160	328	514	253	1790	112	16	2171	4210
% App. Total																			
PHF	.598	.782	.764	.750	.500	.908	.833	.000	.903	.929	.690	.953	.862	.821	.948	.875	.667	.959	.967

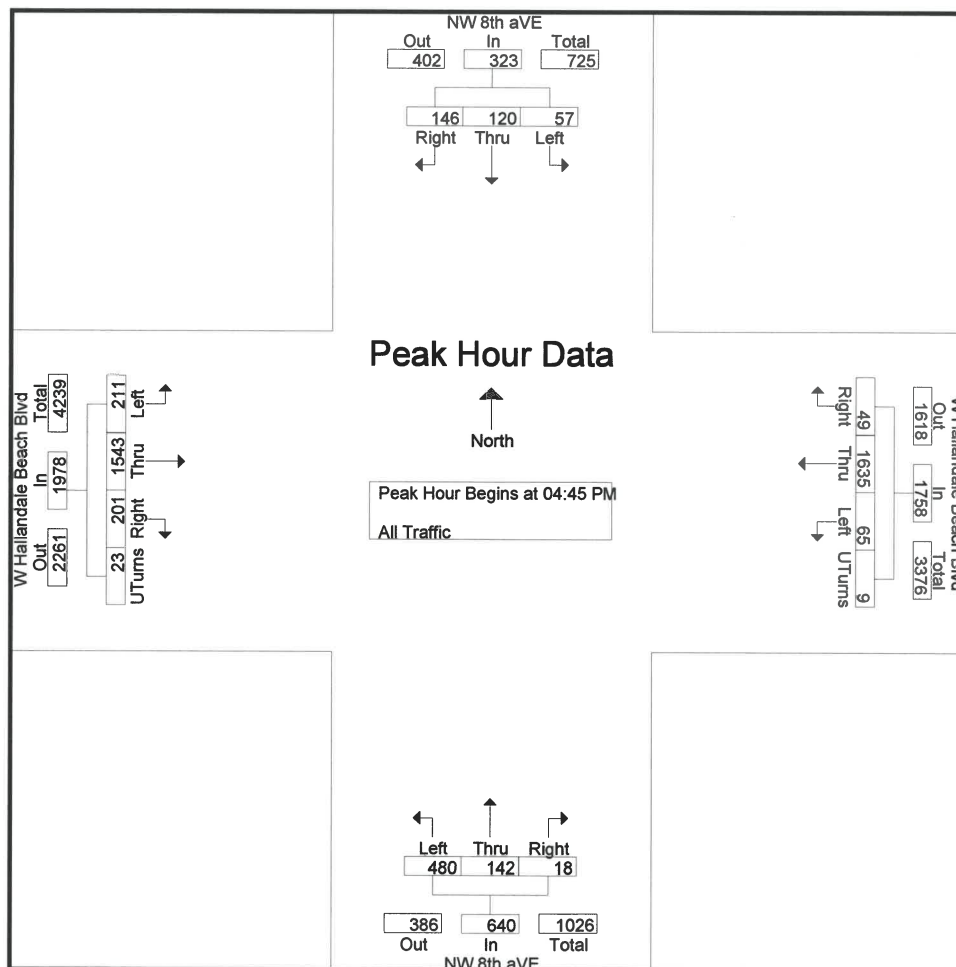


KMF Traffic Group, LLC
 1669 SW College St., Stuart, FL
 (772) 221-7971
www.kmftraffic.com

Manual Traffic Count - All Traffic
 W Hallandale Beach Blvd and NW 8th Ave
 Hallandale Beach, FL

File Name : PK
 Site Code : SW1511
 Start Date : 6/2/2015
 Page No : 3

	NW 8th aVE Southbound				W Hallandale Beach Blvd Westbound					NW 8th aVE Northbound				W Hallandale Beach Blvd Eastbound					
Start Time	Right	Thru	Left	App. Total	Right	Thru	Left	UTurns	App. Total	Right	Thru	Left	App. Total	Right	Thru	Left	UTurns	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																			
Peak Hour for Entire Intersection Begins at 04:45 PM																			
04:45 PM	26	26	10	62	15	398	11	2	426	1	32	98	131	60	393	55	5	513	1132
05:00 PM	51	36	18	105	11	338	22	3	374	6	37	133	176	37	360	58	4	459	1114
05:15 PM	38	29	24	91	10	465	19	4	498	6	40	142	188	58	423	47	7	535	1312
05:30 PM	31	29	5	65	13	434	13	0	460	5	33	107	145	46	367	51	7	471	1141
Total Volume	146	120	57	323	49	1635	65	9	1758	18	142	480	640	201	1543	211	23	1978	4699
% App. Total																			
PHF	.716	.833	.594	.769	.817	.879	.739	.563	.883	.750	.888	.845	.851	.838	.912	.909	.821	.924	.895



APPENDIX “B”

FDOT DATA

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2016 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 0297 - SR 858/HALLANDALE BCH BLVD - W OF SR 9/I-95

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
----	-----	-----	-----	-----	-----	-----
2016	49500 C	E 24000	W 25500	9.00	54.10	5.20
2015	44000 C	E 21500	W 22500	9.00	54.00	3.20
2014	43500 C	E 21500	W 22000	9.00	54.20	3.60
2013	51000 F	E 25000	W 26000	9.00	53.60	2.60
2012	51000 C	E 25000	W 26000	9.00	52.20	5.90
2011	44500 C	E 21500	W 23000	9.00	52.50	5.90
2010	43500 C	E 20500	W 23000	8.35	52.69	5.90
2009	42500 C	E 21000	W 21500	8.53	53.89	6.80
2008	42000 C	E 20000	W 22000	8.81	54.16	6.80
2007	42500 C	E 21000	W 21500	8.63	55.75	4.40
2006	38500 C	E 19000	W 19500	8.40	55.34	3.80
2005	42000 C	E 20500	W 21500	8.20	51.70	5.00
2004	40500 C	E 20000	W 20500	9.10	55.30	5.00
2003	41500 C	E 20500	W 21000	8.60	57.50	5.00
2002	47500 C	E 24000	W 23500	8.70	56.40	3.50
2001	46000 C	E 23000	W 23000	9.00	60.20	5.50

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

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2016 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 0590 - SR 858 / HALLANDALE BCH BLVD - W OF SR 5/US 1

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2016	45500 C	E 23000	W 22500	9.00	54.10	3.30
2015	43500 C	E 22000	W 21500	9.00	54.00	3.30
2014	42500 C	E 20000	W 22500	9.00	54.20	10.10
2013	42500 C	E 19500	W 23000	9.00	53.60	10.10
2012	38500 C	E 18500	W 20000	9.00	52.20	10.10
2011	41500 C	E 18500	W 23000	9.00	52.50	2.50
2010	43000 C	E 21500	W 21500	8.35	52.69	4.10
2009	41500 C	E 20500	W 21000	8.53	53.89	2.90
2008	38500 C	E 20000	W 18500	8.81	54.16	2.90
2007	40500 C	E 20000	W 20500	8.63	55.75	2.90
2006	44000 C	E 21500	W 22500	8.40	55.34	6.90
2005	38000 C	E 19000	W 19000	8.20	51.70	6.90
2004	40500 C	E 20000	W 20500	9.10	55.30	6.90
2003	40000 C	E 20500	W 19500	8.60	57.50	4.30
2002	43000 C	E 20500	W 22500	8.70	56.40	3.50
2001	40500 C	E 19500	W 21000	9.00	60.20	5.20

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

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2016 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 7312 - NW 8 AVE, N OF HALLANDALE BEACH BLVD

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2016	9600 F	N 4000	S 5600	9.00	54.10	2.90
2015	9500 C	N 4000	S 5500	9.00	54.00	3.40
2014	7000 X			9.00	54.20	7.40
2013	6900 X	0	0	9.00	53.60	7.60
2012	6900 T	0	0	9.00	52.20	5.90
2011	6900 S	0	0	9.00	52.50	6.30
2010	6900 F	0	0	8.35	52.69	9.30
2009	6900 C	N 0	S 0	8.53	53.89	5.30
2008	6800 C	N 0	S 0	8.81	54.16	6.50
2007	7900 C	N 0	S 0	8.63	55.75	4.80
2006	7600 C	N 0	S 0	8.40	55.34	2.90
2005	7400 C	N	S	8.20	51.70	0.00

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

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2016 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 9633 - SW 8 AVE, S OF HALLANDALE BEACH BLVD

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
----	-----	-----	-----	-----	-----	-----
2016	11000 C	N 5900	S 5100	9.00	54.10	2.90
2015	8700 V	0	0	9.00	54.00	3.40
2014	8500 R			9.00	54.20	7.40
2013	8400 T	0	0	9.00	53.60	7.60
2012	8400 S	0	0	9.00	52.20	5.90
2011	8400 F	0	0	9.00	52.50	6.30
2010	8400 C	N	S	8.35	52.69	9.30
2009	8400 F	0	0	8.53	53.89	5.30
2008	8600 C	N	S	8.81	54.16	6.50
2007	10000 C	N	S	8.63	55.75	4.80
2006	7400 C	N	S	8.40	55.34	2.90
2005	8800 C	N	S	8.20	51.70	0.00

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

FLORIDA DEPARTMENT OF TRANSPORTATION
TRANSPORTATION STATISTICS OFFICE
2016 HISTORICAL AADT REPORT

COUNTY: 86 - BROWARD

SITE: 9756 - SW 11TH STREET, W OF SW 8TH AVENUE

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2016	900 F	E	450 W	9.00	54.10	2.90
2015	900 C	E	450 W	9.00	54.00	3.40
2014	800 T	E	400 W	9.00	54.20	7.40
2013	800 S	E	400 W	9.00	53.60	7.60
2012	800 F	E	400 W	9.00	52.20	5.90
2011	800 C	E	400 W	9.00	52.50	6.30
2010	950 F	0	0	8.35	52.69	9.30
2009	950 C	E	0 W	8.53	53.89	5.30
2008	1200 C	E	0 W	8.81	54.16	6.50
2007	1400 C	E	0 W	8.63	55.75	4.80
2006	1300 C	E	0 W	8.40	55.34	2.90
2005	700 C	E	0 W	8.20	51.70	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

2014 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
 CATEGORY: 8601 CEN.-W OF US1 TO SR7

WEEK	DATES	SF	MOCF: 0.97 PSCF
1	01/01/2014 - 01/04/2014	0.97	1.00
2	01/05/2014 - 01/11/2014	0.99	1.02
3	01/12/2014 - 01/18/2014	1.01	1.04
4	01/19/2014 - 01/25/2014	1.00	1.03
* 5	01/26/2014 - 02/01/2014	0.99	1.02
* 6	02/02/2014 - 02/08/2014	0.98	1.01
* 7	02/09/2014 - 02/15/2014	0.97	1.00
* 8	02/16/2014 - 02/22/2014	0.96	0.99
* 9	02/23/2014 - 03/01/2014	0.96	0.99
*10	03/02/2014 - 03/08/2014	0.96	0.99
*11	03/09/2014 - 03/15/2014	0.96	0.99
*12	03/16/2014 - 03/22/2014	0.96	0.99
*13	03/23/2014 - 03/29/2014	0.96	0.99
*14	03/30/2014 - 04/05/2014	0.97	1.00
*15	04/06/2014 - 04/12/2014	0.98	1.01
*16	04/13/2014 - 04/19/2014	0.98	1.01
*17	04/20/2014 - 04/26/2014	0.99	1.02
18	04/27/2014 - 05/03/2014	1.00	1.03
19	05/04/2014 - 05/10/2014	1.01	1.04
20	05/11/2014 - 05/17/2014	1.01	1.04
21	05/18/2014 - 05/24/2014	1.02	1.05
22	05/25/2014 - 05/31/2014	1.03	1.06
23	06/01/2014 - 06/07/2014	1.03	1.06
24	06/08/2014 - 06/14/2014	1.04	1.07
25	06/15/2014 - 06/21/2014	1.05	1.08
26	06/22/2014 - 06/28/2014	1.05	1.08
27	06/29/2014 - 07/05/2014	1.05	1.08
28	07/06/2014 - 07/12/2014	1.05	1.08
29	07/13/2014 - 07/19/2014	1.05	1.08
30	07/20/2014 - 07/26/2014	1.05	1.08
31	07/27/2014 - 08/02/2014	1.04	1.07
32	08/03/2014 - 08/09/2014	1.04	1.07
33	08/10/2014 - 08/16/2014	1.03	1.06
34	08/17/2014 - 08/23/2014	1.03	1.06
35	08/24/2014 - 08/30/2014	1.03	1.06
36	08/31/2014 - 09/06/2014	1.03	1.06
37	09/07/2014 - 09/13/2014	1.03	1.06
38	09/14/2014 - 09/20/2014	1.04	1.07
39	09/21/2014 - 09/27/2014	1.03	1.06
40	09/28/2014 - 10/04/2014	1.02	1.05
41	10/05/2014 - 10/11/2014	1.01	1.04
42	10/12/2014 - 10/18/2014	1.00	1.03
43	10/19/2014 - 10/25/2014	1.00	1.03
44	10/26/2014 - 11/01/2014	1.00	1.03
45	11/02/2014 - 11/08/2014	1.00	1.03
46	11/09/2014 - 11/15/2014	1.00	1.03
47	11/16/2014 - 11/22/2014	1.00	1.03
48	11/23/2014 - 11/29/2014	0.99	1.02
49	11/30/2014 - 12/06/2014	0.98	1.01
50	12/07/2014 - 12/13/2014	0.98	1.01
51	12/14/2014 - 12/20/2014	0.97	1.00
52	12/21/2014 - 12/27/2014	0.99	1.02
53	12/28/2014 - 12/31/2014	1.01	1.04

* PEAK SEASON

09-MAR-2015 16:07:53

830UPD

4_8601_PKSEASON.TXT

APPENDIX “C”

TRAFFIC DEVELOPMENT SHEETS

HALLANDALE BEACH TOWNHOMES

01/08/2018

AREA WIDE GROWTH RATE CALCULATION

FDOT STATION	ROADWAY	LOCATION	2013 PEAK		2016 PEAK	
			SEASON DAILY TRAFFIC	SEASON DAILY TRAFFIC	SEASON DAILY TRAFFIC	GROWTH (%)
86-9633	SW 8th Avenue	S. of Hallandale Beach Blvd	8,400		11,000	9.41%
86-7312	NW 8th Avenue	N. of Hallandale Beach Blvd	6,900		9,600	11.64%
86-0590	Hallandale Beach Blvd	W. of US-1	42,500		45,500	2.30%
86-0297	Hallandale Beach Blvd	W. of I-95	51,000		49,500	-0.99%
86-9756	SW 11th Street	W. of SW 8th Ave	800		900	4.00%
$\Sigma =$			109,600		116,500	2.06%

AREA WIDE GROWTH RATE = 2.06%

INTERSECTION VOLUME DEVELOPMENT WORKSHEET

HALLANDALE BEACH TOWNHOMES
HALLANDALE BEACH BOULEVARD AND SW 8TH AVENUE

TRIPS			
	IN	OUT	
AM	2	12	
PM	11	5	

INPUT DATA

Comments:

Growth Rate = 2.06% Peak Season = 1.06 Current Year = 2015 Buildout Year = 2021

AM Peak Hour

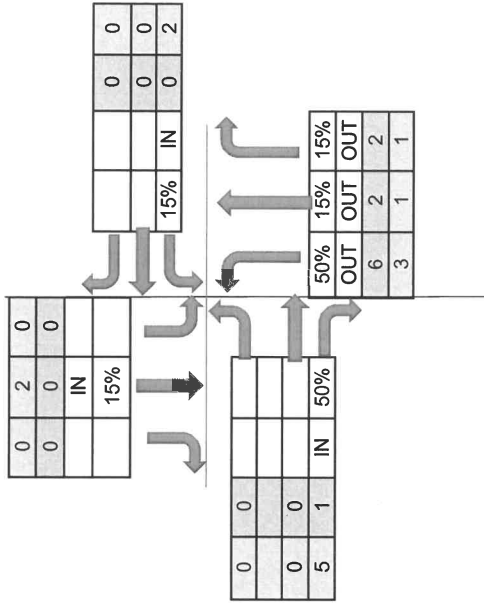
INTERSECTION VOLUME DEVELOPMENT

	Northbound			Southbound			Eastbound			Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volume (2015)	328	160	26	55	147	98	128	1790	253	70	1151	4
Peak Season Adjusted	348	170	28	58	156	104	136	1897	268	74	1220	4
Background Traffic Growth	45	22	4	8	20	13	18	246	35	10	158	1
Future Traffic W/O Project (2021)	393	192	31	66	176	117	153	2144	303	84	1379	5
Project Traffic	6	2	2	0	0	0	0	0	1	0	0	0
Future Traffic W/ Project (2021)	399	194	33	66	176	117	153	2144	304	84	1379	5
Approach Total	626			359			2,601			1,467		

PM Peak Hour

INTERSECTION VOLUME DEVELOPMENT

	Northbound			Southbound			Eastbound			Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
Existing Volume (2015)	480	142	18	57	120	146	234	1543	201	74	1635	49
Peak Season Adjusted	509	151	19	60	127	155	248	1636	213	78	1733	52
Background Traffic Growth	66	20	2	8	17	20	32	212	28	10	225	7
Future Traffic W/O Project (2021)	575	170	22	68	144	175	280	1848	241	89	1958	59
Project Traffic	3	1	1	0	2	0	0	0	5	2	0	0
Future Traffic W/ Project (2021)	578	171	23	68	146	175	280	1848	246	91	1958	59
Approach Total	772			389			2,374			2,108		























APPENDIX “D”

SYNCHRO ANALYSIS

Lanes, Volumes, Timings













3: SW 8th Avenue & Hallandale Beach Boulevard

01/08/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	153	2144	303	84	1379	5	393	192	31	66	176	117
Future Volume (vph)	153	2144	303	84	1379	5	393	192	31	66	176	117
Ideal Flow (vphpl)	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950
Storage Length (ft)	215		0	180		0	150		0	300		0
Storage Lanes	1		0	1		0	2		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	0.97	1.00	1.00	1.00	1.00	1.00
Frnt		0.981			0.999			0.979			0.940	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1816	5120	0	1816	5214	0	3523	1872	0	1816	1797	0
Flt Permitted	0.104			0.053			0.950			0.615		
Satd. Flow (perm)	199	5120	0	101	5214	0	3523	1872	0	1176	1797	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23						5			18	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		628			672			660			560	
Travel Time (s)		9.5			10.2			15.0			12.7	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	158	2210	312	87	1422	5	405	198	32	68	181	121
Shared Lane Traffic (%)					-							
Lane Group Flow (vph)	158	2522	0	87	1427	0	405	230	0	68	302	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2						8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	10.5	28.5		10.5	28.5		10.0	34.0		10.0	34.0	
Total Split (s)	22.0	86.0		14.0	78.0		26.0	49.0		11.0	34.0	
Total Split (%)	13.8%	53.8%		8.8%	48.8%		16.3%	30.6%		6.9%	21.3%	
Maximum Green (s)	15.5	79.5		7.5	71.5		20.0	43.0		5.0	28.0	
Yellow Time (s)	4.5	4.5		4.5	4.5		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effect Green (s)	92.2	80.5		83.2	75.8		19.9	42.2		32.3	27.3	

Lanes, Volumes, Timings
3: SW 8th Avenue & Hallandale Beach Boulevard

01/08/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.58	0.50		0.52	0.47		0.12	0.26		0.20	0.17	
v/c Ratio	0.67	0.98		0.66	0.58		0.92	0.46		0.26	0.94	
Control Delay	31.9	51.2		51.6	32.1		96.2	51.6		43.1	98.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	31.9	51.2		51.6	32.1		96.2	51.6		43.1	98.0	
LOS	C	D		D	C		F	D		D	F	
Approach Delay		50.0			33.3			80.1			87.9	
Approach LOS		D			C			F			F	
Queue Length 50th (ft)	73	933		38	394		219	198		49	298	
Queue Length 95th (ft)	130	#1064		#121	463		#319	285		88	#482	
Internal Link Dist (ft)		548			592			580			480	
Turn Bay Length (ft)	215			180			150			300		
Base Capacity (vph)	273	2586		133	2470		440	506		257	329	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.58	0.98		0.65	0.58		0.92	0.45		0.26	0.92	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.98

Intersection Signal Delay: 51.5

Intersection LOS: D

Intersection Capacity Utilization 99.2%









ICU Level of Service F

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.





















Splits and Phases: 3: SW 8th Avenue & Hallandale Beach Boulevard

 Ø1	 Ø2 (R)	 Ø3	 Ø4
22 s	73 s	11 s	49 s
 Ø5	 Ø5 (R)	 Ø7	 Ø8
14 s	36 s	26 s	34 s

HCM Signalized Intersection Capacity Analysis

3: SW 8th Avenue & Hallandale Beach Boulevard

01/08/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	153	2144	303	84	1379	5	393	192	31	66	176	117
Future Volume (vph)	153	2144	303	84	1379	5	393	192	31	66	176	117
Ideal Flow (vphpl)	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950
Total Lost time (s)	6.5	6.5		6.5	6.5		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	1.00		1.00	1.00	
Fr't	1.00	0.98		1.00	1.00		1.00	0.98		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1816	5122		1816	5216		3523	1872		1816	1797	
Flt Permitted	0.10	1.00		0.05	1.00		0.95	1.00		0.62	1.00	
Satd. Flow (perm)	199	5122		101	5216		3523	1872		1176	1797	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	158	2210	312	87	1422	5	405	198	32	68	181	121
RTOR Reduction (vph)	0	11	0	0	0	0	0	4	0	0	15	0
Lane Group Flow (vph)	158	2511	0	87	1427	0	405	226	0	68	287	0
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2						8		
Actuated Green, G (s)	92.4	80.4		83.2	75.8		19.9	42.2		32.3	27.3	
Effective Green, g (s)	92.4	80.4		83.2	75.8		19.9	42.2		32.3	27.3	
Actuated g/C Ratio	0.58	0.50		0.52	0.47		0.12	0.26		0.20	0.17	
Clearance Time (s)	6.5	6.5		6.5	6.5		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	236	2573		131	2471		438	493		257	306	
v/s Ratio Prot	c0.05	c0.49		0.03	0.27		c0.11	0.12		0.01	c0.16	
v/s Ratio Perm	0.34			0.31						0.05		
v/c Ratio	0.67	0.98		0.66	0.58		0.92	0.46		0.26	0.94	
Uniform Delay, d1	21.9	38.8		36.2	30.5		69.3	49.3		52.9	65.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	7.0	12.9		12.0	1.0		25.2	0.7		0.6	35.1	
Delay (s)	28.9	51.7		48.2	31.5		94.5	50.0		53.5	100.6	
Level of Service	C	D		D	C		F	D		D	F	
Approach Delay (s)		50.4			32.5			78.4			91.9	
Approach LOS		D			C			E			F	





















Intersection Summary

HCM 2000 Control Delay	51.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.96		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	99.2%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			

Lanes, Volumes, Timings

3: SW 8th Avenue & Hallandale Beach Boulevard













01/08/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	153	2144	304	84	1379	5	399	194	33	66	176	117
Future Volume (vph)	153	2144	304	84	1379	5	399	194	33	66	176	117
Ideal Flow (vphpl)	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950
Storage Length (ft)	215		0	180		0	150		0	300		0
Storage Lanes	1		0	1		0	2		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	0.97	1.00	1.00	1.00	1.00	1.00
Frnt		0.981			0.999			0.978			0.940	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1816	5120	0	1816	5214	0	3523	1870	0	1816	1797	0
Flt Permitted	0.104			0.053			0.950			0.613		
Satd. Flow (perm)	199	5120	0	101	5214	0	3523	1870	0	1172	1797	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		23						5			18	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		628			672			660			560	
Travel Time (s)		9.5			10.2			15.0			12.7	
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	158	2210	313	87	1422	5	411	200	34	68	181	121
Shared Lane Traffic (%)												
Lane Group Flow (vph)	158	2523	0	87	1427	0	411	234	0	68	302	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2						8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	10.5	28.5		10.5	28.5		10.0	34.0		10.0	34.0	
Total Split (s)	22.0	86.0		14.0	78.0		26.0	49.0		11.0	34.0	
Total Split (%)	13.8%	53.8%		8.8%	48.8%		16.3%	30.6%		6.9%	21.3%	
Maximum Green (s)	15.5	79.5		7.5	71.5		20.0	43.0		5.0	28.0	
Yellow Time (s)	4.5	4.5		4.5	4.5		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effect Green (s)	92.1	80.4		83.1	75.7		20.0	42.3		32.3	27.3	

Lanes, Volumes, Timings

3: SW 8th Avenue & Hallandale Beach Boulevard

01/08/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.58	0.50		0.52	0.47		0.12	0.26		0.20	0.17	
v/c Ratio	0.67	0.98		0.66	0.58		0.93	0.47		0.27	0.94	
Control Delay	31.9	51.5		51.6	32.2		97.7	51.8		43.1	98.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	31.9	51.5		51.6	32.2		97.7	51.8		43.1	98.0	
LOS	C	D		D	C		F	D		D	F	
Approach Delay		50.3			33.3			81.1			87.9	
Approach LOS		D			C			F			F	
Queue Length 50th (ft)	73	934		38	394		223	201		49	298	
Queue Length 95th (ft)	130	#1064		#121	463		#325	290		88	#482	
Internal Link Dist (ft)		548			592			580			480	
Turn Bay Length (ft)	215			180			150			300		
Base Capacity (vph)	273	2583		133	2467		440	506		256	329	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	0.58	0.98		0.65	0.58		0.93	0.46		0.27	0.92	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.98

Intersection Signal Delay: 51.8

Intersection LOS: D

Intersection Capacity Utilization 99.4%









ICU Level of Service F

Analysis Period (min) 15

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.





















Splits and Phases: 3: SW 8th Avenue & Hallandale Beach Boulevard

 Ø1	 Ø2 (R)	 Ø3	 Ø4
22 s	78 s	11 s	49 s
 Ø5	 Ø6 (R)	 Ø7	 Ø8
14 s	86 s	26 s	34 s

HCM Signalized Intersection Capacity Analysis





















3: SW 8th Avenue & Hallandale Beach Boulevard

01/08/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	153	2144	304	84	1379	5	399	194	33	66	176	117
Future Volume (vph)	153	2144	304	84	1379	5	399	194	33	66	176	117
Ideal Flow (vphpl)	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950
Total Lost time (s)	6.5	6.5		6.5	6.5		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00		1.00	0.98		1.00	0.94	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1816	5122		1816	5216		3523	1870		1816	1797	
Flt Permitted	0.10	1.00		0.05	1.00		0.95	1.00		0.61	1.00	
Satd. Flow (perm)	199	5122		101	5216		3523	1870		1172	1797	
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	158	2210	313	87	1422	5	411	200	34	68	181	121
RTOR Reduction (vph)	0	11	0	0	0	0	0	4	0	0	15	0
Lane Group Flow (vph)	158	2512	0	87	1427	0	411	230	0	68	287	0
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2						8		
Actuated Green, G (s)	92.3	80.3		83.1	75.7		20.0	42.3		32.3	27.3	
Effective Green, g (s)	92.3	80.3		83.1	75.7		20.0	42.3		32.3	27.3	
Actuated g/C Ratio	0.58	0.50		0.52	0.47		0.12	0.26		0.20	0.17	
Clearance Time (s)	6.5	6.5		6.5	6.5		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	236	2570		131	2467		440	494		256	306	
v/s Ratio Prot	c0.05	c0.49		0.03	0.27		c0.12	0.12		0.01	c0.16	
v/s Ratio Perm	0.34			0.31						0.05		
v/c Ratio	0.67	0.98		0.66	0.58		0.93	0.47		0.27	0.94	
Uniform Delay, d1	22.0	39.0		36.2	30.6		69.3	49.4		52.9	65.5	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	7.0	13.2		12.0	1.0		27.0	0.7		0.6	35.1	
Delay (s)	29.0	52.1		48.2	31.6		96.3	50.1		53.5	100.6	
Level of Service	C	D		D	C		F	D		D	F	
Approach Delay (s)		50.8			32.5			79.5			91.9	
Approach LOS		D			C			E			F	
Intersection Summary												
HCM 2000 Control Delay	51.9			HCM 2000 Level of Service			D					
HCM 2000 Volume to Capacity ratio	0.97											
Actuated Cycle Length (s)	160.0			Sum of lost time (s)			25.0					
Intersection Capacity Utilization	99.4%			ICU Level of Service			F					
Analysis Period (min)	15											
c Critical Lane Group												













Lanes, Volumes, Timings
3: SW 8th Avenue & Hallandale Beach Boulevard

01/08/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	280	1848	241	89	1958	59	575	170	22	68	144	175
Future Volume (vph)	280	1848	241	89	1958	59	575	170	22	68	144	175
Ideal Flow (vphpl)	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950
Storage Length (ft)	215		0	180		0	150		0	300		0
Storage Lanes	1		0	1		0	2		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	0.97	1.00	1.00	1.00	1.00	1.00
Frnt		0.983			0.996			0.983			0.918	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1816	5130	0	1816	5198	0	3523	1879	0	1816	1755	0
Flt Permitted	0.059			0.065			0.950			0.625		
Satd. Flow (perm)	113	5130	0	124	5198	0	3523	1879	0	1195	1755	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		19			3			4			33	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		628			672			660			560	
Travel Time (s)		9.5			10.2			15.0			12.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	311	2053	268	99	2176	66	639	189	24	76	160	194
Shared Lane Traffic (%)												
Lane Group Flow (vph)	311	2321	0	99	2242	0	639	213	0	76	354	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2						8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	10.5	28.5		10.5	28.5		10.0	34.0		10.0	34.0	
Total Split (s)	27.0	80.0		15.0	68.0		31.0	54.0		11.0	34.0	
Total Split (%)	16.9%	50.0%		9.4%	42.5%		19.4%	33.8%		6.9%	21.3%	
Maximum Green (s)	20.5	73.5		8.5	61.5		25.0	48.0		5.0	28.0	
Yellow Time (s)	4.5	4.5		4.5	4.5		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effect Green (s)	88.5	73.7		69.8	61.5		25.0	48.0		33.0	28.0	

Lanes, Volumes, Timings
3: SW 8th Avenue & Hallandale Beach Boulevard

01/08/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.55	0.46		0.44	0.38		0.16	0.30		0.21	0.18	
v/c Ratio	1.11	0.98		0.70	1.12		1.16	0.38		0.29	1.06	
Control Delay	131.8	55.7		56.4	106.8		148.4	45.7		41.5	121.0	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	131.8	55.7		56.4	106.8		148.4	45.7		41.5	121.0	
LOS	F	E		E	F		F	D		D	F	
Approach Delay		64.7			104.7			122.7			107.0	
Approach LOS		E			F			F			F	
Queue Length 50th (ft)	~317	860		50	~987		~406	173		52	~375	
Queue Length 95th (ft)	#521	#983		#136	#1074		#532	253		92	#588	
Internal Link Dist (ft)		548			592			580			480	
Turn Bay Length (ft)	215			180			150			300		
Base Capacity (vph)	280	2374		144	1999		550	566		265	334	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	1.11	0.98		0.69	1.12		1.16	0.38		0.29	1.06	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.16

Intersection Signal Delay: 90.5

Intersection LOS: F

Intersection Capacity Utilization 107.9%

ICU Level of Service G

Analysis Period (min) 15









~ 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.





















Splits and Phases: 3: SW 8th Avenue & Hallandale Beach Boulevard

			
Ø1	Ø2 (R)	Ø3	Ø4
27 s	68 s	11 s	54 s
			
Ø5	Ø6 (R)	Ø7	Ø8
15 s	80 s	31 s	34 s

HCM Signalized Intersection Capacity Analysis

3: SW 8th Avenue & Hallandale Beach Boulevard

01/08/2018





















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	280	1848	241	89	1958	59	575	170	22	68	144	175
Future Volume (vph)	280	1848	241	89	1958	59	575	170	22	68	144	175
Ideal Flow (vphpl)	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950
Total Lost time (s)	6.5	6.5		6.5	6.5		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00		1.00	0.98		1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1816	5129		1816	5196		3523	1879		1816	1755	
Flt Permitted	0.06	1.00		0.07	1.00		0.95	1.00		0.62	1.00	
Satd. Flow (perm)	112	5129		124	5196		3523	1879		1194	1755	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	311	2053	268	99	2176	66	639	189	24	76	160	194
RTOR Reduction (vph)	0	10	0	0	2	0	0	3	0	0	27	0
Lane Group Flow (vph)	311	2311	0	99	2240	0	639	210	0	76	327	0
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2						8		
Actuated Green, G (s)	88.5	73.7		69.8	61.5		25.0	48.0		33.0	28.0	
Effective Green, g (s)	88.5	73.7		69.8	61.5		25.0	48.0		33.0	28.0	
Actuated g/C Ratio	0.55	0.46		0.44	0.38		0.16	0.30		0.21	0.18	
Clearance Time (s)	6.5	6.5		6.5	6.5		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	280	2362		141	1997		550	563		265	307	
v/s Ratio Prot	c0.14	c0.45		0.04	0.43		c0.18	0.11		0.01	c0.19	
v/s Ratio Perm	c0.47			0.27						0.05		
v/c Ratio	1.11	0.98		0.70	1.12		1.16	0.37		0.29	1.06	
Uniform Delay, d1	55.4	42.4		37.8	49.2		67.5	44.1		52.6	66.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	86.8	14.1		14.6	62.1		91.5	0.4		0.6	69.4	
Delay (s)	142.3	56.4		52.4	111.4		159.0	44.6		53.2	135.4	
Level of Service	F	E		D	F		F	D		D	F	
Approach Delay (s)		66.6			108.9			130.4			120.9	
Approach LOS		E			F			F			F	

Intersection Summary

HCM 2000 Control Delay	94.8	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.13		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	107.9%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			













Lanes, Volumes, Timings
3: SW 8th Avenue & Hallandale Beach Boulevard

01/08/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	280	1848	246	91	1958	59	578	171	23	68	146	175
Future Volume (vph)	280	1848	246	91	1958	59	578	171	23	68	146	175
Ideal Flow (vphpl)	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950
Storage Length (ft)	215		0	180		0	150		0	300		0
Storage Lanes	1		0	1		0	2		0	1		0
Taper Length (ft)	100			100			100			100		
Lane Util. Factor	1.00	0.91	0.91	1.00	0.91	0.91	0.97	1.00	1.00	1.00	1.00	1.00
Frt		0.982			0.996			0.982			0.918	
Flt Protected	0.950			0.950			0.950			0.950		
Satd. Flow (prot)	1816	5125	0	1816	5198	0	3523	1877	0	1816	1755	0
Flt Permitted	0.059			0.065			0.950			0.623		
Satd. Flow (perm)	113	5125	0	124	5198	0	3523	1877	0	1191	1755	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)		20			3			4			33	
Link Speed (mph)		45			45			30			30	
Link Distance (ft)		628			672			660			560	
Travel Time (s)		9.5			10.2			15.0			12.7	
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	311	2053	273	101	2176	66	642	190	26	76	162	194
Shared Lane Traffic (%)												
Lane Group Flow (vph)	311	2326	0	101	2242	0	642	216	0	76	356	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		12			12			24			24	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Turning Speed (mph)	15		9	15		9	15		9	15		9
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2						8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	4.0	4.0		4.0	4.0		4.0	4.0		4.0	4.0	
Minimum Split (s)	10.5	28.5		10.5	28.5		10.0	34.0		10.0	34.0	
Total Split (s)	27.0	80.0		15.0	68.0		31.0	54.0		11.0	34.0	
Total Split (%)	16.9%	50.0%		9.4%	42.5%		19.4%	33.8%		6.9%	21.3%	
Maximum Green (s)	20.5	73.5		8.5	61.5		25.0	48.0		5.0	28.0	
Yellow Time (s)	4.5	4.5		4.5	4.5		4.0	4.0		4.0	4.0	
All-Red Time (s)	2.0	2.0		2.0	2.0		2.0	2.0		2.0	2.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.5	6.5		6.5	6.5		6.0	6.0		6.0	6.0	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Recall Mode	None	C-Min		None	C-Min		None	None		None	None	
Act Effct Green (s)	88.5	73.7		69.8	61.5		25.0	48.0		33.0	28.0	

Lanes, Volumes, Timings
3: SW 8th Avenue & Hallandale Beach Boulevard

01/08/2018

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Actuated g/C Ratio	0.55	0.46		0.44	0.38		0.16	0.30		0.21	0.18	
v/c Ratio	1.11	0.98		0.71	1.12		1.17	0.38		0.29	1.07	
Control Delay	131.8	56.3		57.9	106.8		150.2	45.8		41.5	122.6	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	131.8	56.3		57.9	106.8		150.2	45.8		41.5	122.6	
LOS	F	E		E	F		F	D		D	F	
Approach Delay		65.2			104.7			123.9			108.3	
Approach LOS		E			F			F			F	
Queue Length 50th (ft)	~317	863		52	~987		~409	176		52	~380	
Queue Length 95th (ft)	#521	#988		#140	#1074		#537	257		92	#593	
Internal Link Dist (ft)		548			592			580			480	
Turn Bay Length (ft)	215			180			150			300		
Base Capacity (vph)	280	2371		144	1999		550	565		265	334	
Starvation Cap Reductn	0	0		0	0		0	0		0	0	
Spillback Cap Reductn	0	0		0	0		0	0		0	0	
Storage Cap Reductn	0	0		0	0		0	0		0	0	
Reduced v/c Ratio	1.11	0.98		0.70	1.12		1.17	0.38		0.29	1.07	

Intersection Summary

Area Type: Other

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 0 (0%), Referenced to phase 2:WBTL and 6:EBTL, Start of Green

Natural Cycle: 145

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.17

Intersection Signal Delay: 91.0

Intersection LOS: F

Intersection Capacity Utilization 108.1%

ICU Level of Service G

Analysis Period (min) 15









~ 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.





















Splits and Phases: 3: SW 8th Avenue & Hallandale Beach Boulevard

			
Ø1	Ø2 (R)	Ø3	Ø4
27 s	68 s	11 s	54 s
			
Ø5	Ø6 (R)	Ø7	Ø8
15 s	80 s	31 s	34 s

HCM Signalized Intersection Capacity Analysis

3: SW 8th Avenue & Hallandale Beach Boulevard

01/08/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	280	1848	246	91	1958	59	578	171	23	68	146	175
Future Volume (vph)	280	1848	246	91	1958	59	578	171	23	68	146	175
Ideal Flow (vphpl)	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950	1950
Total Lost time (s)	6.5	6.5		6.5	6.5		6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	0.91		1.00	0.91		0.97	1.00		1.00	1.00	
Frt	1.00	0.98		1.00	1.00		1.00	0.98		1.00	0.92	
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1816	5127		1816	5196		3523	1877		1816	1755	
Flt Permitted	0.06	1.00		0.07	1.00		0.95	1.00		0.62	1.00	
Satd. Flow (perm)	112	5127		124	5196		3523	1877		1191	1755	
Peak-hour factor, PHF	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Adj. Flow (vph)	311	2053	273	101	2176	66	642	190	26	76	162	194
RTOR Reduction (vph)	0	11	0	0	2	0	0	3	0	0	27	0
Lane Group Flow (vph)	311	2315	0	101	2240	0	642	213	0	76	329	0
Turn Type	pm+pt	NA		pm+pt	NA		Prot	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2						8		
Actuated Green, G (s)	88.5	73.7		69.8	61.5		25.0	48.0		33.0	28.0	
Effective Green, g (s)	88.5	73.7		69.8	61.5		25.0	48.0		33.0	28.0	
Actuated g/C Ratio	0.55	0.46		0.44	0.38		0.16	0.30		0.21	0.18	
Clearance Time (s)	6.5	6.5		6.5	6.5		6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	280	2361		141	1997		550	563		265	307	
v/s Ratio Prot	c0.14	c0.45		0.04	0.43		c0.18	0.11		0.01	c0.19	
v/s Ratio Perm	c0.47			0.27						0.05		
v/c Ratio	1.11	0.98		0.72	1.12		1.17	0.38		0.29	1.07	
Uniform Delay, d1	55.4	42.4		37.8	49.2		67.5	44.2		52.6	66.0	
Progression Factor	1.00	1.00		1.00	1.00		1.00	1.00		1.00	1.00	
Incremental Delay, d2	86.8	14.5		15.9	62.1		93.6	0.4		0.6	71.5	
Delay (s)	142.3	56.9		53.7	111.4		161.1	44.7		53.2	137.5	
Level of Service	F	E		D	F		F	D		D	F	
Approach Delay (s)		67.0			108.9			131.8			122.6	
Approach LOS		E			F			F			F	

Intersection Summary

HCM 2000 Control Delay	95.4	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.14		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	25.0
Intersection Capacity Utilization	108.1%	ICU Level of Service	G
Analysis Period (min)	15		
c Critical Lane Group			

APPENDIX “E”

SIGNAL TIMING

Station : 3089 - Hallandale Beach Blvd & W 8 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		15		21		15		21								
Min Green	4	12	4	6	4	12	5	6								
Gap Ext	1.5	3	1.5	2	1.5	3	1.5	2								
Max1	12	50	12	25	12	50	12	25								
Max2																
Yellow Clr	4.5	4.5	4	4	4.5	4.5	4	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red Clr	2	2	2	2	2	2	2	2	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
Red Revert																
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Enable	ON	ON	ON	ON	ON	ON	ON	ON								
Auto Flash Entry				ON				ON								
Auto Flash Exit		ON				ON										
Non-Actuated 1																
Non-Actuated 2																
Lock Call									ON	ON	ON	ON	ON	ON	ON	ON
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry				ON				ON								
Sim Gap Enable									ON	ON	ON	ON	ON	ON	ON	ON
Guar Passage																
Rest In Walk		ON				ON										
Cond Service																
Add Init Calc																
Concurrent Ps	1	1	1	1	2	2	2	2								

Preemption

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Auto Flash						
Override Higher Preempt						
Flash in Dwell						
Link to Preempt						
Delay						
Min Duration						
Min Green	6	6	6	6	6	6
Min Walk						
Ped Clear						
Track Green						1
Min Dwell	8	8	8	8	8	8
Max Presence	180	180	180	180	180	180
Track Veh 1				9		
Track Veh 2						
Track Veh 3						
Track Veh 4						
Dwell Cyc Veh 1	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						
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						

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				

Coordination

[illegible]

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

[illegible]

User Comments: