Final Traffic Impact Analysis

WINTERGREEN PD

CITY OF OCALA, FL

Prepared for:

WG One Corp

Prepared by:

Kimley-Horn and Associates, Inc.

142742000
September 2018

101 E Silver Springs Boulevard, Suite 400
Ocala, FL 34470
352 438 3000

Kimley»Horn

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THIS IS TO CERTIFY THAT THE ENCLOSED CALCULATIONS WERE PERFORMED BY ME OR UNDER MY DIRECT SUPERVISION.

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DATE: 9/17/2018

AMBER LEE GARTNER * LICENSE No. 72294 * STATE OF FLORIDA * PROFESSIONAL ENGINEER

EXECUTIVE SUMMARY

Kimley-Horn has performed a Traffic Impact Analysis (TIA) for the Wintergreen Planned Development (PD). The PD is generally located west of SW 44th Avenue, south of SW 20th Street in southwest Ocala, Florida. The PD area is +/- 40 acres on the east side of the Ocala West PUD.

The TIA has been prepared to support the PD rezoning application and Concurrency Development Agreement (CDA). The analysis has been performed in accordance with the City of Ocala Traffic Impact Analysis guidelines and the methodology which was approved by the City of Ocala, Marion County, and Ocala/Marion County TPO.

The project's development program includes the following uses and intensities:

- Apartments – 685 dwelling units
- Office space – 50,000 square feet
- Commercial retail – 87,000 square feet

Access to the property is proposed via a right-in/right-out connection on SW 20th Street, three right-in/right-out connections on SW 44th Avenue, two full median openings on SW 44th Avenue, and an access point along the proposed SW 31st Street which will intersect SW 44th Avenue near the southeast corner of the PD.

The traffic analysis was performed considering a buildout timeframe of 20 years (2037) for the proposed development program. The operating conditions within the study area were evaluated for future background (before addition of project traffic) conditions and buildout traffic conditions. This analysis assumes that SW 44th Avenue is constructed as a four-lane roadway from SR 40 to SR 200, consistent with the approved methodology. Transportation improvements were identified within the study area to be needed under future background traffic conditions. These improvements are needed prior to the addition to project traffic, and therefore no proportionate share contribution is required by the development per Florida State Statutes. No off-site transportation improvements were identified to be needed at project buildout beyond those identified under future background traffic conditions or assumed as committed transportation improvements.

The traffic analysis and results provided herein support the transportation concurrency reservation request for the Wintergreen PD project. The owners of the Wintergreen PD and Country Green PD, located on the western boundary of the Ocala West PUD, have prepared the TIAs for both developments and will be going through the transportation concurrency reservation process concurrently. However, for the purpose of the Wintergreen PD TIA, project trips from the Country Green PD will be considered "vested" background trips. The contribution of right-of-way for the future SW 44th Avenue is intended to satisfy transportation concurrency requirements for the proposed Wintergreen PD.

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INTRODUCTION

Kimley-Horn has performed a Traffic Impact Analysis (TIA) for the proposed Wintergreen Planned Development (PD). The project site is generally located west of SW 44th Avenue, south of SW 20th Street in southwest Ocala, Florida. The PD area is +/- 40 acres on the east side of the Ocala West Planned Unit Development (PUD). The site is proposed to contain commercial retail and residential uses.

The TIA identifies transportation needs within the study area under future background (before the addition of project traffic) and project buildout conditions. The TIA has been prepared to support the transportation concurrency reservation and a developer agreement for the subject property. The analysis has been performed in accordance with the City of Ocala Traffic Impact Analysis guidelines and the methodology which was approved by the City of Ocala, Marion County, and the Ocala/Marion County Transportation Planning Organization (TPO). The approved methodology is included in the **Appendix**.

The project's development program includes the following uses and intensities:

- Multifamily housing – 685 dwelling units
- Office space – 50,000 square feet
- Commercial retail – 87,000 square feet

Access to the property is proposed via a right-in/right-out connection on SW 20th Street, three right-in/right-out connections on SW 44th Avenue, two full median openings on SW 44th Avenue, and an access point along the proposed SW 31st Street which will intersect SW 44th Avenue near the southeast corner of the PD. The buildout timeframe evaluated for the project is 20 years (by end of 2037). A copy of the current PD Plan illustrating the site location and proposed project access is included in the **Appendix**.

This TIA is based on data collected by Kimley-Horn and supplemented by information obtained from City of Ocala, Marion County, and Florida Department of Transportation (FDOT) sources. The study observed the established procedures found in Institute of Transportation Engineers (ITE) sources, FDOT sources, and the *2010 Highway Capacity Manual* (HCM 2010).

PROJECT TRAFFIC

The trip generation potential of the proposed development program was calculated based upon rates and equations contained in the ITE *Trip Generation Manual,* Tenth Edition. Internal capture and pass-by calculations were prepared in accordance with the methods established in the ITE *Trip Generation Handbook, 3rd Edition*.

The ITE calculated pass-by capture was confirmed to be within 10% of the projected SW 20th Street traffic volumes. The pass-by capture calculations were approved during the methodology process. Pass-by trips have been included in the driveway volumes for evaluation of the site access locations.

Based on the development program provided, the project is anticipated to generate 6,257 net new daily trips, 409 net new AM peak hour trips, and 482 net new PM peak hour trips.

Table 1 illustrates the trip generation calculations for the site, which were approved during the methodology process.

Site Access

Access to the Wintergreen PD is proposed via a right-in/right-out connection on SW 20th Street, three right-in/right-out connections on SW 44th Avenue, two full median openings on SW 44th Avenue, and an access point along the proposed SW 31st Street which will intersect SW 44th Avenue near the southeast corner of the PD. The intersection of SW 31st Street with SW 44th Avenue is planned to have a roundabout configuration based on the latest plans from the City of Ocala. The driveway connection locations and geometry along SW 44th Avenue are being coordinated with the City's plans for the construction of SW 44th Avenue.

The access locations are illustrated on the PD in the **Appendix**. This report includes evaluation of the site access locations for turn lane needs and recommended length at project buildout.

Table 1: Trip Generation Calculations

Land Use	Intensity			Daily Trips	AM Peak Hour of Adjacent Street			PM Peak Hour of Adjacent Street		
					Total	In	Out	Total	In	Out
Proposed Development										
Multifamily Housing (Mid-Rise)	685 DU			3,732	226	59	167	281	171	110
General Office Building	50,000 SF			542	73	63	10	59	9	50
Shopping Center	87,000 SF			5,469	195	121	74	490	235	255
	Subtotal			*9,743*	*494*	*243*	*251*	*830*	*415*	*415*
Internal Capture	Daily	AM	PM							
Residential	23%	2%	34%	877	5	1	4	95	67	28
Office	32%	11%	31%	172	8	5	3	18	7	11
Commercial	17%	5%	21%	929	9	5	4	103	34	69
Subtotal	*20%*	*5%*	*26%*	1,978	22	11	11	216	108	108
Pass-By Traffic [1]	Daily	AM	PM							
Shopping Center	34%	34%	34%	1,544	63	39	24	132	68	64
10% of Adjacent Street Traffic	10%			1,508	136	68	68	136	68	68
	Subtotal			1,508	63	39	24	132	68	64
Driveway Volumes				**7,765**	**472**	**232**	**240**	**614**	**307**	**307**
TOTAL NET NEW TRIPS				**6,257**	**409**	**193**	**216**	**482**	**239**	**243**

Note: *Trip Generation was calculated using the data from ITE's Trip Generation Manual, 10th Edition*

Multifamily Housing (Mid-Rise) [ITE LUC 221]	
Daily	T = 5.45*(X) - 1.75 (X is DU)
AM Peak Hour of Adjacent Street	Ln(T) = 0.98*Ln(X) - 0.98 (X is DU; 26% in, 74% out)
PM Peak Hour of Adjacent Street	Ln(T) = 0.96*Ln(X) - 0.63 (X is DU; 61% in, 39% out)
General Office [ITE LUC 710]	
Daily	Ln(T) = 0.97*Ln(X) + 2.50 (X is SF/1,000)
AM Peak Hour of Adjacent Street	T = 0.94*(X) + 26.49 (X is SF/1,000; 86% in, 14% out)
PM Peak Hour of Adjacent Street	Ln(T) = 0.95*Ln(X) + 0.36 (X is SF/1,000; 16% in, 84% out)
Shopping Center [ITE LUC 820]	
Daily	Ln(T) = 0.68*Ln(X) + 5.57 (X is SF/1,000)
AM Peak Hour of Adjacent Street	T = 0.50*(X) + 151.78 (X is SF/1,000; 62% in, 38% out)
PM Peak Hour of Adjacent Street	Ln(T) = 0.74*Ln(X) + 2.89 (X is SF/1,000; 48% in, 52% out)
Pass-By Trip Reduction [2]	P = 0.34*(T)

Note 1: The ITE calculated pass-by capture was limited to 10% of the projected adjacent side-street traffic volumes. Adjacent side-street traffic volumes is that projected for SW 20th Street based on existing traffic volumes from the 2016 FDOT Florida Traffic Information CD, turning movement counts, and growth rates from the approved methodology. Background growth was applied to account for future adjacent traffic volumes at buildout of the development.

Note 2: The ITE recommended pass-by capture rate for the PM peak hour was applied for the daily and AM peak hour as well.

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TRIP DISTRIBUTION, ASSIGNMENT, AND STUDY AREA

A projected traffic distribution was developed using output from the Central Florida Regional Planning Model (CFRPM) Version 6.0, which is based on the Florida Standard Urban Transportation Model Structure (FSUTMS). Hand adjustments were made to the model output based on site layout characteristics and local knowledge to establish a reasonable estimation for the project's travel patterns within the study area. The distribution was approved during the methodology review process.

Functionally classified roadway segments in the project's vicinity were reviewed to determine the project's potential traffic impact. The project impact on the surrounding roadway network has been calculated as the average PM peak hour trip assignment on that roadway segment divided by the segment's peak hour peak direction service volume. A 3% threshold was used to define the project study area. Per the City of Ocala Traffic Impact Analysis Guidelines, the study area includes all significantly impacted roadways plus one segment beyond the last segment that meets the 3% impact threshold, unless the project has a de minimis impact on the roadway segment. The service volumes for evaluated roadways were obtained utilizing functional classification and level of service information published by the TPO and FDOT.

The project significance calculations are provided within the methodology document located in the **Appendix**.

The following roadway segments are included within the study area, as approved during the methodology process:

- SW 20th Street – SW 60th Avenue to SW 27th Avenue
- SW 44th Avenue – SR 200 to SR 40

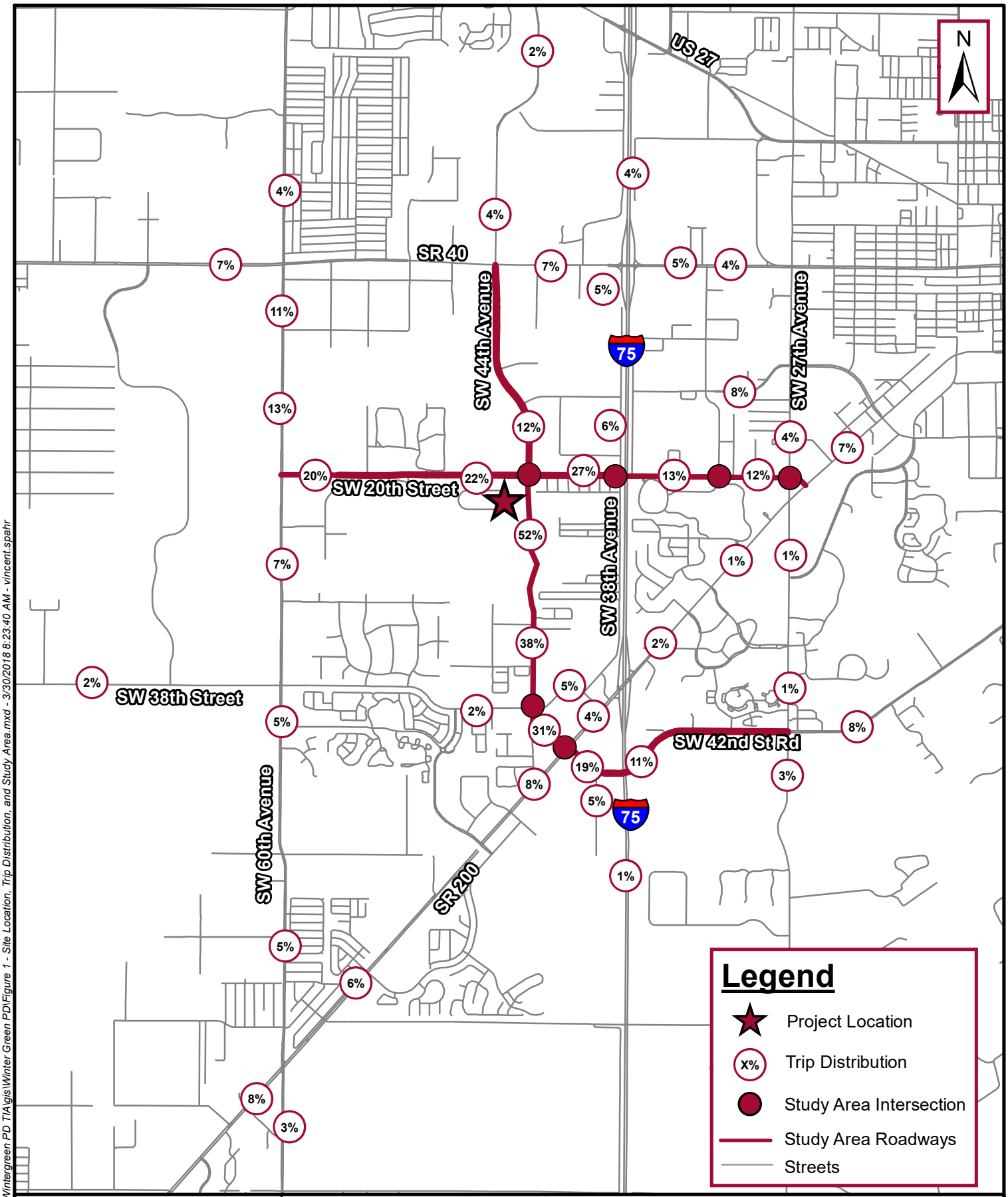
In addition to roadway segment analysis, the following intersections were evaluated for PM peak hour traffic conditions (4-6 PM), as approved during the methodology process:

- SW 20th Street & SW 44th Avenue (unsignalized)
- SW 20th Street & SW 38th Avenue
- SW 20th Street & SW 31st Avenue
- SW 20th Street & SW 27th Avenue
- SW 38th Street/40th Street & SW 44th Avenue (unsignalized)
- SW 42nd Street Road & SR 200

In addition, based on request by the review agencies during development of the methodology, the following intersections were also evaluated during the AM peak period (7AM – 9AM):

- SW 20th Street & SW 44th Avenue (unsignalized)
- SW 20th Street & SW 38th Avenue

The access locations on SW 20th Street and SW 44th Avenue were also reviewed for buildout traffic conditions. **Figure 1** illustrates the site location, trip distribution, and study area for the traffic analysis, as approved during the methodology process.



K:\OCA_Civil\142742000 - Wintergreen PD TIA\gis\Winter Green PD\Figure 1 - Site Location, Trip Distribution, and Study Area.mxd - 3/30/2018 8:23:40 AM - vincent.spahr

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FIGURE 1: SITE LOCATION, TRIP DISTRIBUTION, AND STUDY AREA

WINTERGREEN PD
OCALA, FLORIDA

Project No: 142742000	Not To Scale	April 2018	Figure 1

EXISTING CONDITIONS ANALYSIS

Data Collection

Turning movement counts were collected at the study area intersections during the AM (7:00 AM – 9:00 AM) and PM (4:00 PM – 6:00 PM) peak hours of adjacent street traffic in February 2018. The turning movement counts were used for the existing conditions analysis and as a basis for forecasting the future year turning movement volumes. The turning movement counts are provided in the **Appendix**.

The appropriate peak season factors from FDOT were utilized to adjust the observed traffic volumes to peak season. Existing peak hour factors, right turns on red, and heavy vehicles were recorded during the turning movement counts. The existing intersection lane geometries were observed in the field. Existing signal timings obtained from the City of Ocala and Marion County were utilized in the analysis.

Roadway Segment Analysis

Study roadway segments were evaluated to determine the existing PM peak hour levels of service and to provide a basis for the future conditions analysis. The maximum service volumes were obtained from the latest Marion County Roadway Segment Tables and the 2013 FDOT Quality/Level of Service Handbook.

The existing PM peak hour directional traffic volumes were calculated using the PM peak hour turning movement count (approach/departure) data collected at the study area intersections. The reported existing traffic volume is an average of the recorded approach and departure volumes, adjusted to peak season using the applicable FDOT peak season factor.

Table 2 illustrates the existing peak hour volume and level of service for roadway segments in the study area during the PM peak hour. All the study area roadway segments are shown to operate within the adopted level of service standard under existing PM peak hour traffic conditions.

Table 2: Existing Conditions PM Peak Hour Roadway Segment Analysis

Roadway		ROADWAY ATTRIBUTES [1]				Peak Hour Directional Service Capacity [2]	EXISTING PEAK SEASON PEAK HOUR TRAFFIC CONDITIONS					
							Volumes [3]		V/C Ratios		LOS [2]	
From	To	FDOT Classification	Area Type	Adopted LOS Standard	Number of Lanes		NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
SW 20th St												
SW 60th Ave	SW 44th Ave	NS-SA-C1	Urban	E	4	1,800	382	629	0.21	0.35	C	C
SW 44th Ave	I-75	NS-SA-C1	Urban	E	4	1,800	471	649	0.26	0.36	C	C
I-75	SW 27th Ave	NS-SA-C1	Urban	E	2	832	643	647	0.77	0.78	C	C
SW 27th Ave	SR 200	NS-SA-C1	Urban	E	2	792	334	285	0.42	0.36	C	C
SW 44th Ave												
SR 40	SW 20th St	NS-SA-C1	Urban	E	2	792	53	182	0.07	0.23	C	C

K:\OCA_Civil\142742000 - Wintergreen PD TIA\calcs\WINTERGREEN\[TIA-WG_Calcs_180321.xlsx]Roadway Existing *3/30/2018*

1. The roadway attributes were obtained from the latest Marion County and FDOT sources.
2. Roadway Service Capacities and LOS were determined using the 2013 FDOT Quality/LOS Handbook and Marion County roadway segment tables.
3. Existing peak season volumes are based on existing turning movement counts and supplemented by seasonal factors from FDOT's Florida Traffic Information 2016.

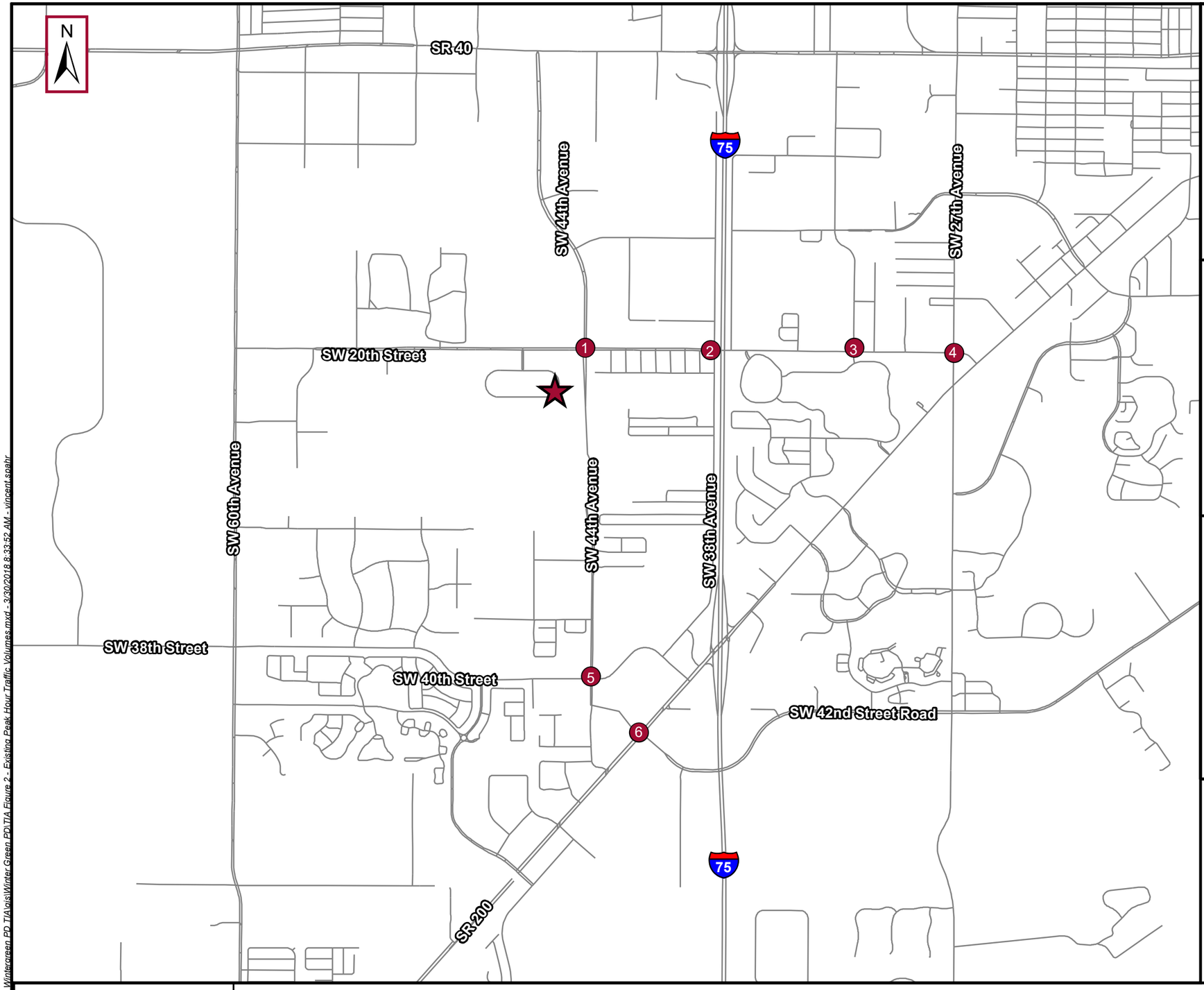
Intersection Analysis

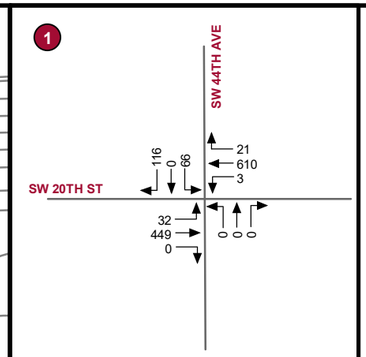
The existing intersection operating conditions were evaluated based on the data collection efforts summarized above. The operating conditions at the study intersections were analyzed using the Synchro 9 software package, which implements the procedures of the 2010 *Highway Capacity Manual* (HCM). The observed turning movement volumes were adjusted to peak season volumes for the existing conditions analysis. Existing lane geometry, peak hour factors, truck percentages, U-turn percentages, and right-turn-on-red percentages observed in the field were input into the capacity analyses. Existing turning movement volumes for the PM peak hour are depicted in **Figure 2**. Existing turning movement volumes for the AM peak hour are depicted in **Figure 3**.

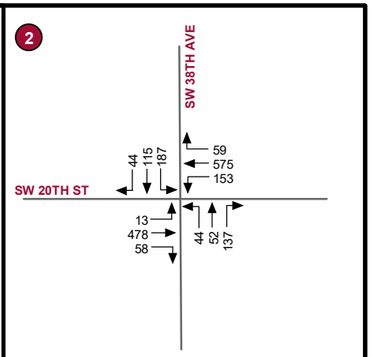
Table 3 provides a summary of the average delay and level of service during the PM peak hour under existing traffic conditions. All study area intersections operate with acceptable overall intersection level of service under existing PM peak hour conditions. However, the intersection SR 200 at SW 42nd Street Road is shown to operate with an individual traffic movement having a volume to capacity (V/C) ratio exceeding 1.0, as summarized in **Table 3**.

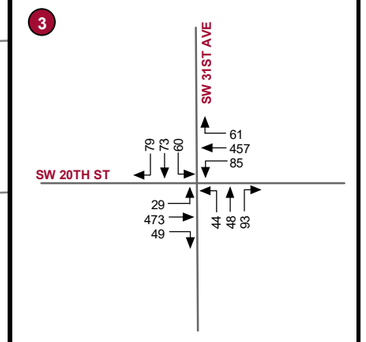
Table 4 provides a summary of the average delay and level of service during the existing AM peak hour. The two intersections evaluated during the AM peak hour are shown to operate with acceptable overall intersection LOS.

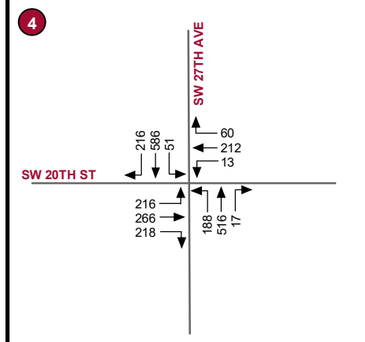
The Synchro 9 analysis output is provided in the **Appendix**.

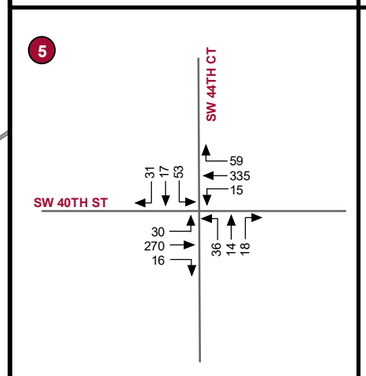


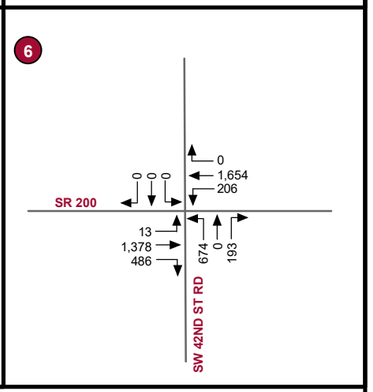












Legend

- Project Location
- Study Area Intersection
- Streets
- Existing Turning Movement Volume

K:\OCA_Civil\142742000_Wintergreen PD TIA\GIS\Winter Green PD\TIA Figure 2_ Existing Peak Hour Traffic Volumes.mxd 3/30/2018 8:33:52 AM vincent.spahr

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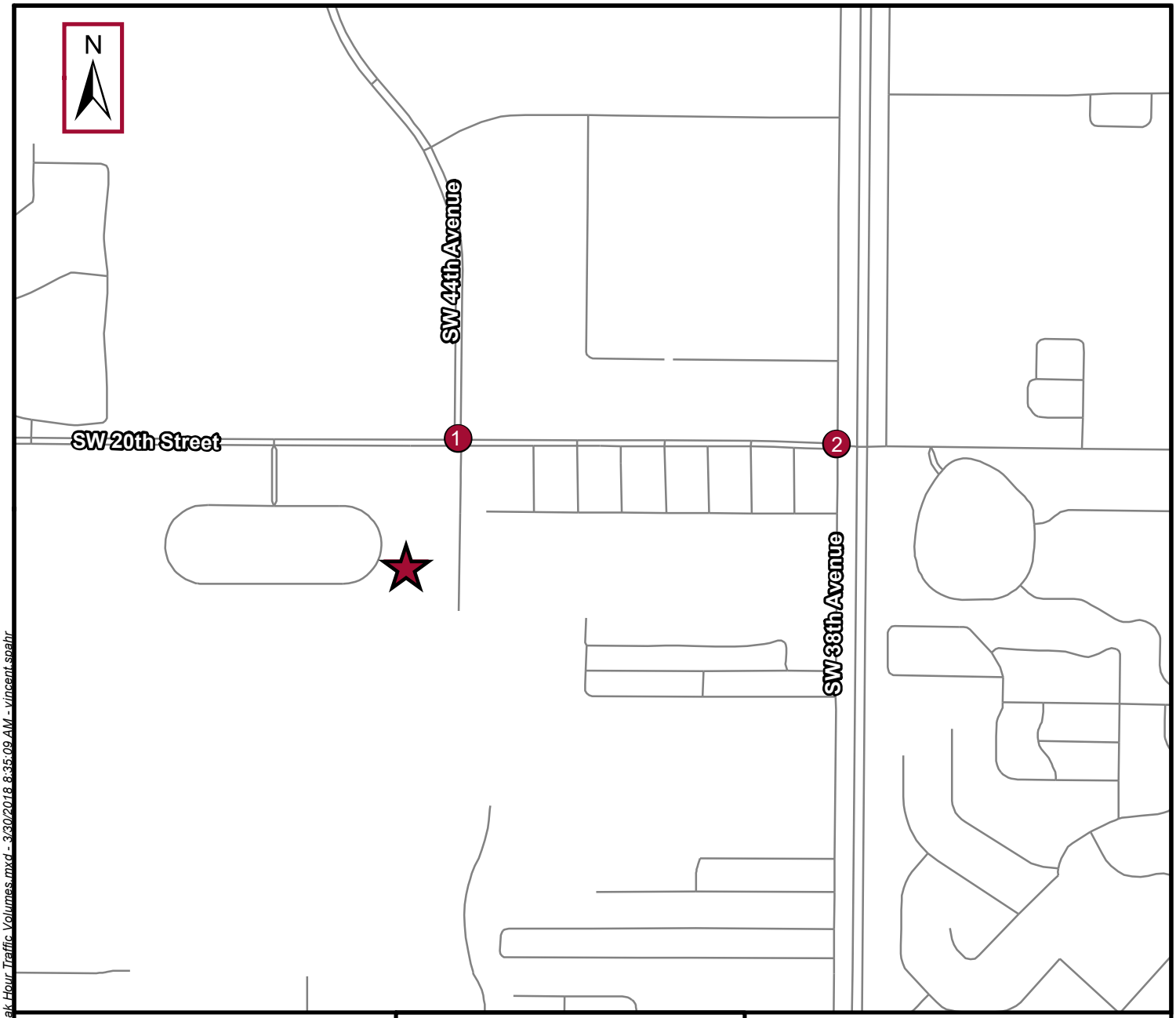
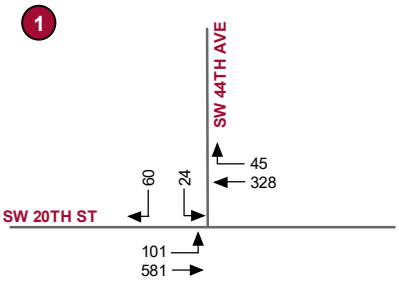
FIGURE 2: EXISTING PM PEAK HOUR TRAFFIC VOLUMES

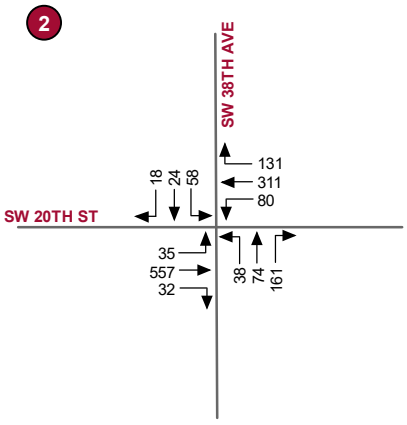
WINTERGREEN PD
OCALA, FLORIDA

Project No: 142742000

Not To Scale | April 2018







Legend

- Project Location
- Study Area Intersection
- Streets
- Existing Turning Movement Volume

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FIGURE 3: EXISTING AM PEAK HOUR TRAFFIC VOLUMES

WINTERGREEN PD
OCALA, FLORIDA

Project No: 142742000 | Not To Scale | April 2018

Table 3: Existing Conditions PM Peak Hour Intersection Analysis

Intersection	Existing Conditions		
	Intersection LOS	Intersection Delay (s/veh)	Max Movement V/C
Unsignalized			
SW 20th St & SW 44th Ave (TWSC) [1]	C	17.6	0.31
SW 43rd Ct & SW 40th St (AWSC)	B	12.5	0.56
Signalized			
SW 20th St & SW 38th Ave	C	29.4	0.87
SW 20th St & SW 31st Ave/CCF	B	13.3	0.72
SW 20th St & SW 27th Ave	D	38.7	0.86
SR 200 & SW 42nd Street Rd	C	33.0	1.05

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Note:
1. Intersection LOS and delay at two-way stop-controlled intersections are reported for the stop-controlled approaches only.

Table 4: Existing Conditions AM Peak Hour Intersection Analysis

Intersection	Existing Conditions		
	Intersection LOS	Intersection Delay (s/veh)	Max Movement V/C
Unsignalized			
SW 20th St & SW 44th Ave (TWSC) [1]	B	13.7	0.12
Signalized			
SW 20th St & SW 38th Ave	C	24.7	0.81

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Note:
1. Intersection LOS and delay at two-way stop-controlled intersections are reported for the stop-controlled approaches only.

FUTURE CONDITIONS ANALYSIS

Committed Transportation Improvements

SW 49th Avenue, from SW 42nd Street to CR 484 has been considered as a four-lane divided collector roadway for the future conditions analysis. The construction of this roadway is funded through transportation impact fees and recent sales tax referendum.

Consistent with the approved methodology, SW 44th Avenue has been assumed as a four-lane divided collector roadway from SR 40 to SR 200 for the future conditions analysis within in this TIA.

Traffic Volume Development

The future traffic volumes within the study area were calculated based on the approved methodology. Future background traffic volumes were calculated using collected peak season turning movement traffic volumes, an annual background growth rate applied over the 20-year buildout timeframe, and committed traffic volumes.

A 1.5% background annual growth rate was applied to the existing peak season volumes over the 20-year buildout timeframe. In addition, the following committed projects were included in the background traffic volume development, consistent with the approved methodology:

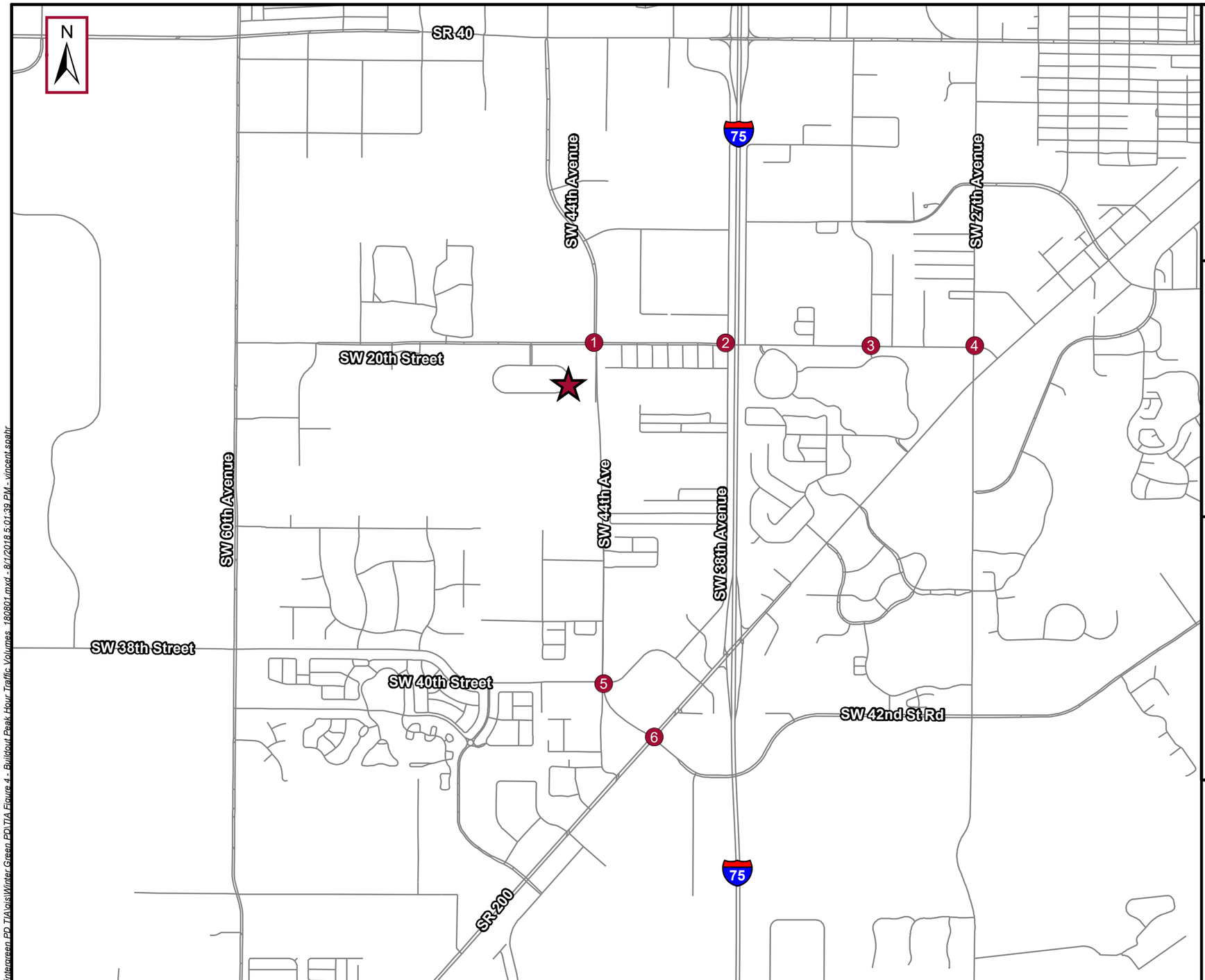
- Heathbrook remaining unbuilt
- Trinity Lane/Red Oak PUD
- Grand Oaks Town Center remaining
- Broadmoor Oaks
- Paddock Ridge East
- Paddock Ridge West
- On Top of the World
- Winding Oaks PD
- Country Green PD

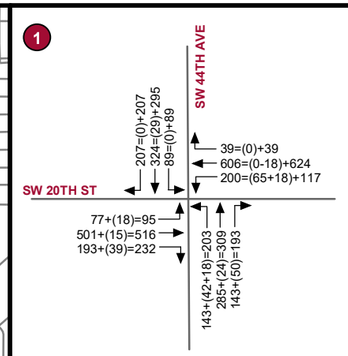
Projected traffic volumes were developed for future background traffic conditions considering the existing intersection and roadway geometry. The intersections along SW 44th Avenue will have different geometry and travel patterns with the extension and widening of SW 44th Avenue, from SR 40 to SR 200. Modeling techniques were utilized to determine the projected approach volumes at the intersections of SW 44th Avenue with SW 20th Street, SW 38th Street, and SR 200 under future (background) traffic conditions. The future background traffic volumes developed without the SW 44th Avenue extension were adjusted based on the projected re-distribution of traffic volumes within the surrounding transportation network due to the addition of the new SW 44th Avenue. The projected re-distribution of traffic was determined from a 2040 CFRPM model run with and without the proposed SW 44th Avenue. The individual turn percentages were developed to balance projected approach and departure volumes at each leg of the intersection. The future background traffic volumes consider ambient background growth of existing traffic volumes, traffic anticipated from vested development, and traffic re-distribution from the construction of SW 44th Avenue.

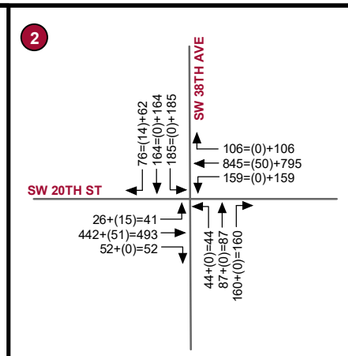
The total buildout traffic volumes were calculated as the sum of the background traffic volumes and project traffic. For the roadway segment analyses, the PM peak hour project traffic volumes were calculated as an average across the segment length.

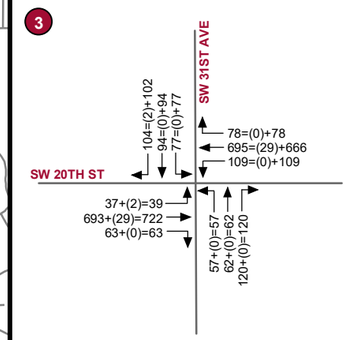
Two intersections were evaluated for AM peak hour traffic conditions. The same project trip distribution utilized for the PM analysis was utilized for the AM analysis.

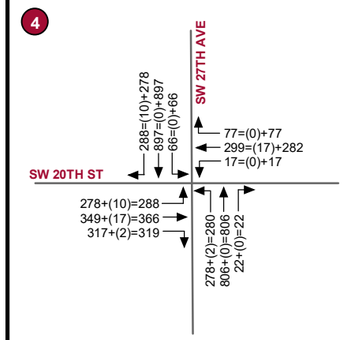
Worksheets detailing the future conditions intersection volume development and CFRPM model output are contained in the **Appendix**. The buildout total traffic volumes during the weekday PM peak hour are illustrated in **Figure 2**. The buildout total traffic volumes during the weekday AM peak hour are illustrated in **Figure 3**. The future background traffic volume represented in these figures are those projected after considering redistribution of traffic from the construction of SW 44th Avenue.

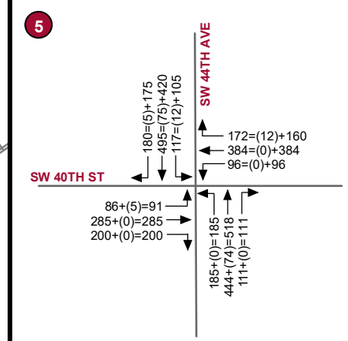


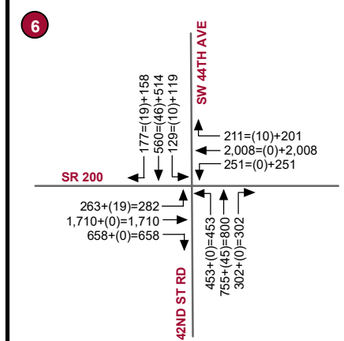












Legend

- Project Location
- Study Area Intersection
- Streets
- 2037 Projected Background + (Project+Pass-by) = Buildout Total Traffic

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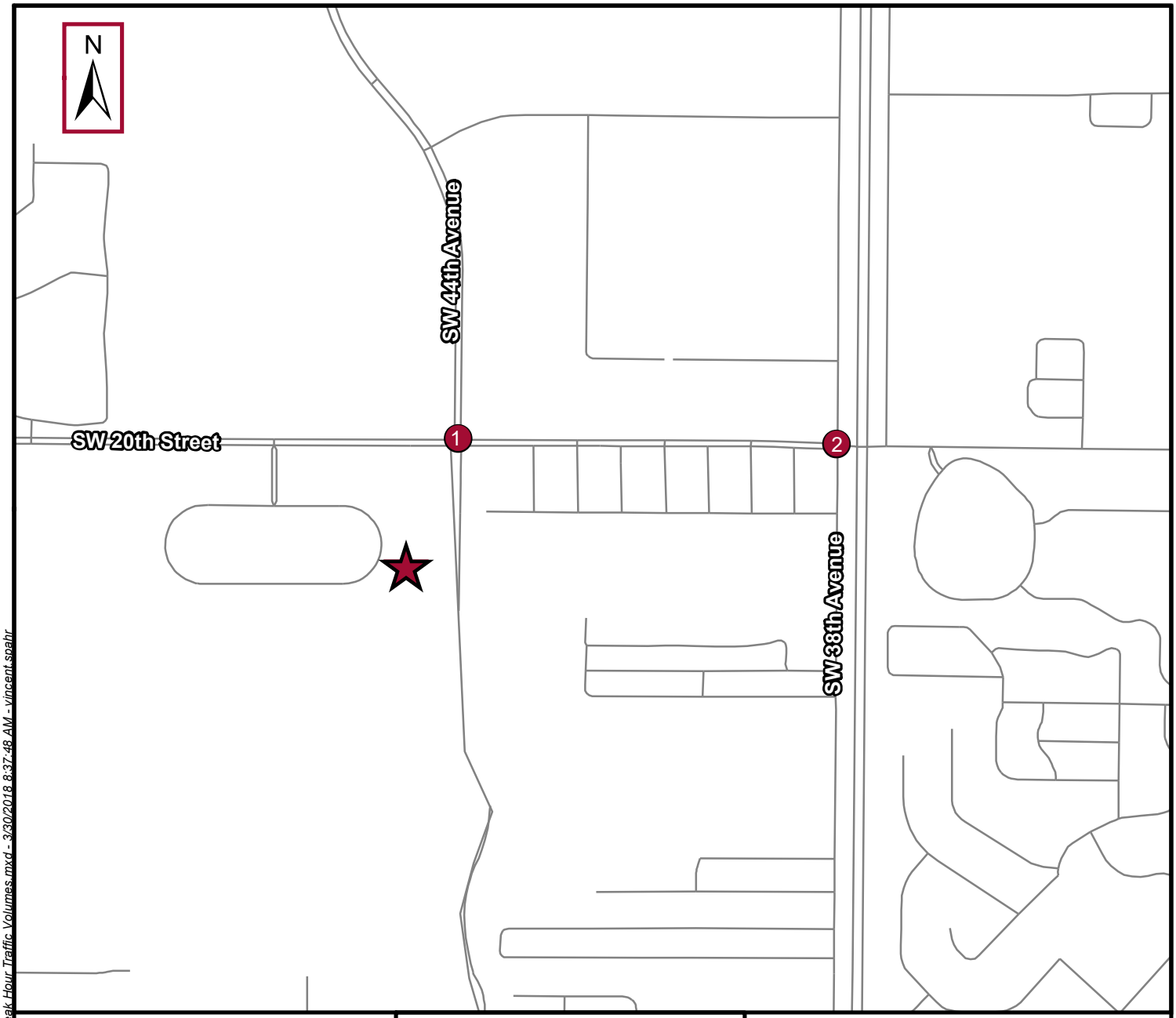
FIGURE 4: BUILDOUT (2037) PM PEAK HOUR TRAFFIC VOLUMES

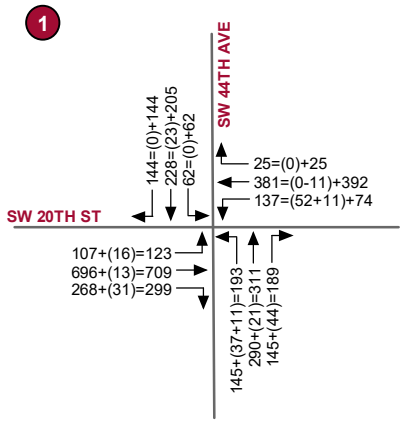
WINTERGREEN PD
OCALA, FLORIDA

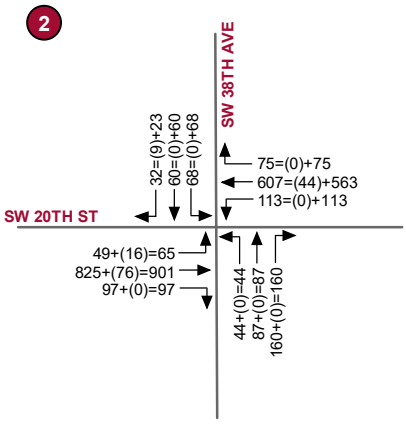
Project No: 142742000

Not To Scale

August 2018







Legend

- Project Location
- Study Area Intersection
- Streets
- 2037 Projected Background + (Project + Pass-by) = Buildout Total Traffic

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FIGURE 5: BUILDOUT (2037) AM PEAK HOUR TRAFFIC VOLUMES

WINTERGREEN PD
OCALA, FLORIDA

Project No: 142742000 | Not To Scale | April 2018

Future Background Roadway Segment Analysis

The roadway segments within the study area were evaluated for level of service under future background conditions (before the addition of project traffic) during the PM peak hour. The change in travel patterns due to the SW 44th Avenue extension was taken into account in determining the future background roadway volumes, as detailed in the previous section. The approach and departure volumes at the study area intersections were utilized to determine the average traffic volume along the segment length under future background traffic conditions.

The service volumes for roadways within the study area were obtained utilizing functional classification and level of service information published by the Ocala/Marion County TPO and FDOT, consistent with the approved methodology. The segments of SW 44th Street from SR 40 to SR 200 were assumed to have a four-lane divided geometry.

The segment of SW 20th Street from I-75 to SW 27th Avenue is shown to exceed the generalized service volume under future background (non-project) traffic conditions during the PM peak hour, as shown in **Table 5**. A more detailed Synchro arterial analysis of the segment indicates that SW 20th Street would operate at LOS D in the eastbound direction and LOS B in the westbound direction under future background traffic conditions. In addition, the future background conditions analysis identified the need for improvements at the intersection of SW 20th Street at SW 38th Avenue, which will improve level of service in the westbound direction.

All other roadway segments within the study area are shown to operate within the generalized service volume with 2037 background (non-project) traffic volumes. The future background conditions roadway segment analyses are detailed in **Table 5**. The Synchro Arterial analysis for SW 20th Street from I-75 to SW 27th Avenue is included in the **Appendix**.

Table 5: Future Background Conditions PM Peak Hour Roadway Segment Analysis

Roadway		Adopted LOS Standard	Peak Hour Directional Service Capacity [1]	Existing PM Peak Hour Traffic Conditions		Future (2037) Background Traffic Conditions					
				Volumes [2]		Future Non-Project Traffic Volumes [3]		V/C Ratios		LOS [1]	
From	To			NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
SW 20th St											
SW 60th Ave	SW 44th Ave	E	1,800	382	629	880	1,046	0.34	0.54	C	C
SW 44th Ave	I-75	E	1,800	471	649	698	917	0.42	0.58	C	C
I-75	SW 27th Ave	E	832	643	647	904	957	1.15	1.17	F (D) [4]	F (B) [4]
SW 27th Ave	SR 200	E	792	334	285	456	399	0.57	0.50	C	C
SW 44th Ave											
SR 40	SW 20th St	E	1,800	53	182	417	591	0.23	0.33	C	C
SW 20th St	SR 200	E	1,800	--	--	637	673	0.35	0.37	C	C

K:\OCA_Civil\142742000 - Wintergreen PD TIA\calcs\WINTERGREEN\[TIA-WG_Calcs_180321.xlsx]Roadway Background *3/30/2018*

1. Roadway Service Capacities and LOS were determined using the 2013 FDOT Quality/LOS Handbook and Marion County roadway segment tables.
2. Existing peak season volumes are based on existing turning movement counts and supplemented by seasonal factors from FDOT's Florida Traffic Information 2016.
3. Future non-project traffic volumes are calculated based on the approach and departure volumes of study area intersection located within the subject roadway segment. The background traffic volumes include ambient background growth of existing traffic volumes, traffic from vested developments, and re-distribution of traffic from the SW 44th Avenue extension.
4. SW 20th Street from I-75 to SW 27th Avenue is anticipated to exceed the generalized service volume under future background conditions. A detailed Synchro Arterial analysis shows LOS D in the eastbound direction and LOS B in the westbound direction for the segment.

Future Buildout Roadway Segment Analysis

The roadway segments within the study area were evaluated for level of service under future buildout traffic conditions during the PM peak hour. The service volumes utilized for the analysis are the same as those utilized for the future background conditions analysis.

The segment of SW 20th Street from I-75 to SW 27th Avenue is shown to exceed the generalized service capacity under future buildout traffic conditions during the PM peak hour, as shown in **Table 6**. The segment is also shown to exceed the generalized service volume with future background traffic volumes (prior to addition of project traffic). A more detailed Synchro arterial analysis of the segment indicated that SW 20th Street would operate at LOS D in the eastbound direction and LOS C in the westbound direction under future buildout traffic conditions. In addition, the future background conditions analysis identified the need for improvements at the intersection of SW 20th Street at SW 38th Avenue, which will improve level of service in the westbound direction.

All other roadway segments within the study area are shown to operate with acceptable level of service with 2037 buildout traffic volumes. The project does not have a significant and adverse impact on any of the roadway segments within the study area.

The buildout roadway segment analyses are detailed in **Table 6.** The Synchro Arterial analysis of SW 20th Street from I-75 to SW 27th Avenue is included in the **Appendix**.

Table 6: Buildout Conditions PM Peak Hour Roadway Segment Analysis

Roadway		Adopted LOS Standard	Peak Hour Directional Service Capacity [1]	Future Non-Project Traffic Volumes [2]		PM Peak Hour Project Traffic			Future Buildout PM Peak Hour Traffic Conditions					
									Volumes [4]		V/C Ratios		LOS [1]	
From	To			NB/EB	SB/WB	% Assign [3]	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB	NB/EB	SB/WB
SW 20th St														
SW 60th Ave	SW 44th Ave	E	1,800	880	1,046	21.0%	50	51	930	1,097	0.52	0.61	C	C
SW 44th Ave	I-75	E	1,800	698	917	24.0%	58	57	756	974	0.42	0.54	C	C
I-75	SW 27th Ave	E	832	904	957	14.2%	35	34	939	991	1.13	1.19	F (D) [5]	F (C) [5]
SW 27th Ave	SR 200	E	792	456	399	6.0%	15	14	471	413	0.59	0.52	C	C
SW 44th Ave														
SR 40	SW 20th St	E	1,800	417	591	12.0%	29	29	446	620	0.25	0.34	C	C
SW 20th St	SR 200	E	1,800	637	673	40.0%	96	97	733	770	0.41	0.43	C	C

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1. Roadway Service Capacities and LOS were determined using the 2013 FDOT Quality/LOS Handbook and Marion County roadway segment tables.
2. Future non-project traffic volumes are calculated based on the approach and departure volumes of study area intersection located within the subject roadway segment. The background traffic volumes include ambient background growth of existing traffic volumes, traffic from vested developments, and re-distribution of traffic from the SW 44th Avenue extension.
3. The percent project traffic is averaged across the roadway segment.
4. Future Buildout traffic volumes are the summation of future non-project traffic and project traffic.
5. SW 20th Street from I-75 to SW 27th Avenue is anticipated to exceed the generalized service capacity at project buildout. A detailed Synchro Arterial analysis shows LOS D in the eastbound direction and LOS C in the westbound direction. This segment also exceeds generalized service capacity under future background (before the addition of project traffic) conditions.

Future Background Conditions Intersections Analysis

The intersections within the study area were evaluated to determine improvement needs to provide an acceptable level of service and operations with future background traffic conditions prior to the addition of project traffic. The future background traffic volumes included existing peak season traffic, background traffic growth, and committed project traffic. Future background traffic volumes at the study intersections were adjusted to account for the change in travel patterns with the construction of the SW 44th Avenue extension.

Existing intersection geometry, signal timings (as obtained from the City of Ocala and Marion County), and peak hour factor and percent heavy vehicles (as obtained from the traffic counts) were input into Synchro 9 for the analysis. For intersections along SW 44th Avenue, the future geometry needed to accommodate the projected 2037 background traffic volumes is reflected in the future background conditions with improvement analysis. The required geometry is assumed to be constructed with the SW 44th Avenue extension and in place as a committed improvement.

Table 7 summarizes the resultant intersection LOS for the future background conditions with existing intersection geometry and signal timings during the PM peak hour. The identified intersection improvements that are shown to be needed under future background traffic conditions to provide acceptable intersection operations and level of service are summarized in **Table 7**. The intersection improvements along SW 44th Avenue are assumed to be constructed with the roadway widening and extension.

Signal warrant analyses were performed for the intersections of SW 44th Avenue with SW 20th Street and SW 38th Street. The future traffic volumes at the intersections will warrant signalization with the construction of SW 44th Avenue. The signal warrant analysis is detailed in a following section of this report.

One intersection improvement was identified to be needed outside of SW 44th Avenue. The analysis showed a need for an additional westbound through lane on SW 20th Street at SW 38th Avenue to provide for acceptable level of service and delay with 2037 future background traffic volumes.

Two intersections were also evaluated for the weekday AM peak hour. The AM peak hour analysis does not result in any additional intersection improvement needs over those identified for the PM peak hour analysis. The improvements identified during the PM peak hour analysis were applied for the AM peak hour analysis and the resulting LOS, delay, and V/C ratios are reported in **Table 8**.

The Synchro 9 output reports are provided in the **Appendix**.

Table 7: Future Background Conditions PM Peak Hour Intersection Analysis

Intersection	Future (2037) Background Conditions			Future (2037) Background Conditions with Improvements			
	Intersection LOS	Intersection Delay (s/veh)	Max Movement V/C	Identified Improvements	Intersection LOS	Intersection Delay (s/veh)	Max Movement V/C
Unsignalized							
SW 20th St & SW 44th Ave (TWSC) [1]	F	--/--	5.13	Signalize when warranted [2]	C	28.9	0.75
SW 43rd Ct & SW 40th St (AWSC)	F	219.9	2.23	Signalize when warranted [2]	D	40.0	0.90
Signalized							
SW 20th St & SW 38th Ave	F	96.3	1.29	Additional WB through lane	C	31.5	0.84
SW 20th St & SW 31st Ave/College of Central Florida	C	27.9	0.99	--	C	27.9	0.99
SW 20th St & SW 27th Ave	E	63.2	1.01	Signal timing adjusments	E	59.1	0.97
SR 200 & SW 42nd St Rd	F	96.1	1.75	Second EBL turn lane, second WBL turn lane, exclusive WBR turn lane, exclusive SBR turn lane	E	60.8	0.98

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Note:

1. Intersection LOS and delay at two-way stop-controlled intersections are reported for the stop-controlled approaches only.

2. Future (2037) background traffic volumes meet peak hour signal warrant requirements from the Manual on Uniform Traffic Control Devices (MUTCD). Signal warrant spreadsheets are included in the **Appendix**.

Table 8: Future Background Conditions AM Peak Hour Intersection Analysis

Intersection	Future (2037) Background Conditions			Future (2037) Background Conditions with Improvements			
	Intersection LOS	Intersection Delay (s/veh)	Max Movement V/C	Identified Improvements [2]	Intersection LOS	Intersection Delay (s/veh)	Max Movement V/C
Unsignalized							
SW 20th St & SW 44th Ave (TWSC) [1]	F	--/--	2.87	Signalize when warranted [3]	C	27.7	0.77
Signalized							
SW 20th St & SW 38th Ave	D	40.7	0.97	Additional WB through lane	C	32.8	0.90

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Note:

1. Intersection LOS and delay at two-way stop-controlled intersections are reported for the stop-controlled approaches only.
2. Improvements are consistent with those identified to be needed for PM Peak Hour traffic conditions.
3. Future (2037) background traffic volumes meet peak hour signal warrant requirements from the Manual on Uniform Traffic Control Devices (MUTCD). Signal warrant spreadsheets are included in the **Appendix**.

Future Buildout Conditions Intersection Analysis

The intersection operating conditions were evaluated under buildout traffic conditions for year 2037. The future buildout conditions analysis included future background non-project traffic and project traffic. The intersection geometry identified to be needed under future background traffic conditions was utilized in the buildout conditions analysis to identify any additional transportation improvements that are necessary to provide acceptable level of service and intersection operations due to the addition of project traffic.

Table 9 details the resultant intersection LOS and delay for PM peak hour future buildout traffic conditions with background improved geometry. The intersection capacity analysis indicates that no additional improvements are needed at the study intersections that were not already identified for the future background (non-project) traffic conditions.

Two intersections were also evaluated for the weekday AM peak hour per the approved methodology. The AM peak hour analysis does not result in any additional intersection improvement needs over those identified for the PM peak hour analysis. A summary of the buildout conditions intersection analysis during the AM peak hour is provided in **Table 10**.

The Synchro 9 output reports are provided in the **Appendix**.

Figure 4 illustrates the intersection geometry identified to be needed to provide acceptable traffic operations under future background traffic conditions and buildout traffic conditions.

Table 9: Buildout Conditions PM Peak Hour Intersection Analysis

Intersection	Future (2037) Buildout Conditions with Background Improvements [1]		
	Intersection LOS	Intersection Delay (s/veh)	Max Movement V/C
Signalized			
SW 20th St & SW 44th Ave	D	36.3	0.84
SW 20th St & SW 38th Ave	C	33.9	0.85
SW 20th St & SW 31st Ave/College of Central Florida	C	28.6	0.99
SW 20th St & SW 27th Ave	E	64.7	0.97
SW 43rd Ct & SW 40th St	D	43.4	0.94
SR 200 & SW 42nd St Rd	E	64.1	0.98

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Note:
1. Analysis assumed improvement identified to be needed under the future background traffic conditions are in place for the buildout conditions analysis.

Table 10: Buildout Conditions AM Peak Hour Intersection Analysis

Intersection	Future (2037) Buildout Conditions with Background Improvements [1]		
	Intersection LOS	Intersection Delay (s/veh)	Max Movement V/C
Signalized			
SW 20th St & SW 44th Ave	C	33.9	0.81
SW 20th St & SW 38th Ave	D	37.6	0.95

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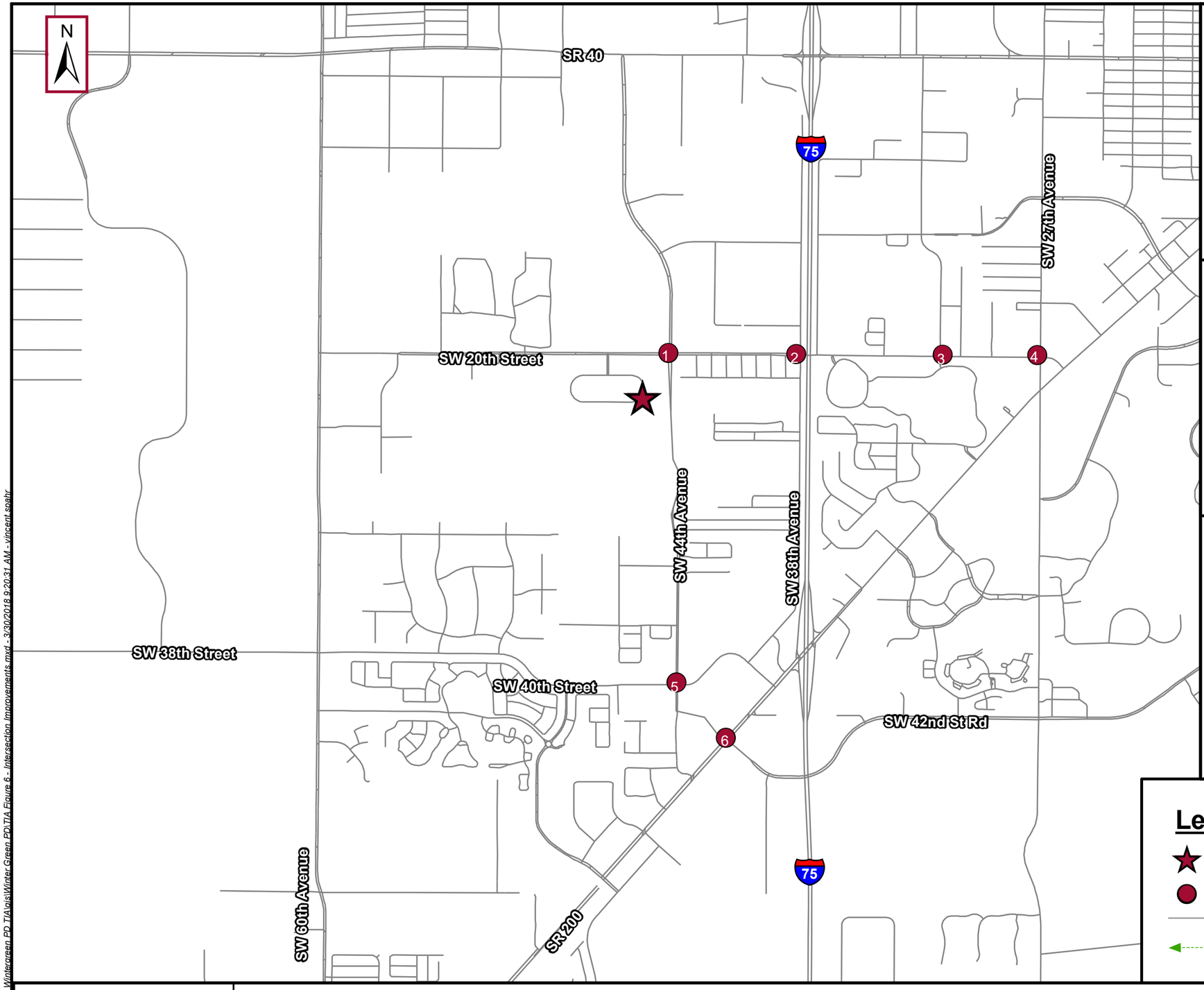
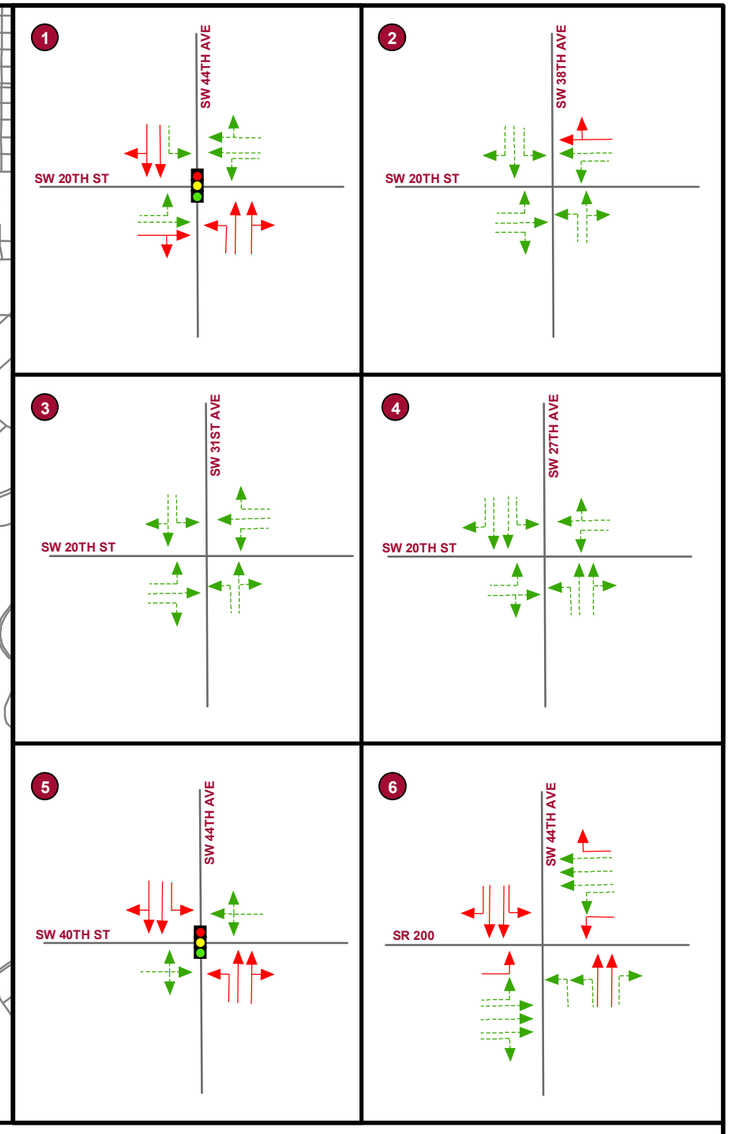
Note:
1. Analysis assumed improvement identified to be needed under the future background traffic conditions are in place for the buildout conditions analysis.





Legend

- Project Location
- Study Area Intersection
- Streets
- Existing Lane Geometry
- Lane Geometry Needed to Support Future Background Traffic
- Traffic Signal Needed to Support Future Background Traffic

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FIGURE 6: INTERSECTION IMPROVEMENT DETAILS

WINTERGREEN PD
OCALA, FLORIDA

Project No: 142742000

Not To Scale | April 2018

PRELIMINARY SIGNAL WARRANT ANALYSIS

A PM peak hour signal warrant analysis was conducted considering projected future background traffic volumes at the following intersections:

- SW 20th Street and SW 44th Avenue
- SW 44th Avenue and SW 40th Street

Guidelines established in the *Manual on Uniform Traffic Control Devices* (MUTCD) 2009 Edition for peak hour volume Warrant 3 were used for the analysis.

SW 20th Street & SW 44th Avenue

The major street (SW 20th Street) was evaluated as a two-or-more lane approach with a speed limit over 40 mph (meaning that the 70% columns were utilized). The minor street (SW 44th Avenue) was evaluated as a two-lane approach considering the northbound approach volumes. The northbound approach volume was calculated as the sum of the left-turn volume, through volume, and 50 percent of the northbound right-turn volume (reduction based on Pagones Theorem, see **Appendix**). The projected PM peak hour traffic volumes in the background (2037) conditions meet peak hour signal warrant criteria.

With the extension of SW 44th Avenue, it is anticipated that this intersection would be signalized to accommodate the projected traffic volumes through the intersection. It is recommended that the northbound and southbound approaches feature an exclusive left-turn lane, a through lane, and a shared through/right-turn lane. The intersection is shown to operate with acceptable level of service and delay considering signalized intersection control with PM (and AM) peak hour future background and buildout traffic conditions.

SW 43rd Court/SW 44th Avenue & SW 40th Street

The major street (SW 44th Avenue) was evaluated as a two-lane approach with a speed limit under 40 mph (meaning that the 100% columns were utilized). The minor street (SW 40th Street) was analyzed as a single-lane approach considering the westbound approach volume. The westbound approach volume was calculated as the sum of the left-turn volume, the through volume, and 80 percent of the right-turn volume (Pagones Theorem calls for reducing the right-turn volume by 20 percent when right-turns are less than or equal to 35 percent of the approach volume on a shared left/through/right approach). The projected PM peak hour traffic volumes in the background (2037) conditions meet peak hour signal warrant criteria.

Considering unsignalized operation, the intersection is shown to exhibit LOS F, with V/C ratios of several movements exceeding 1.0 under background traffic conditions. The intersection is shown to operate with acceptable level of service and delay considering signalized intersection control with PM peak hour future background and buildout traffic conditions.

The preliminary signal warrant worksheets are provided in the **Appendix**. A summary table of the Pagones Theorem reductions is also included in the **Appendix**.

SITE ACCESS ANALYSIS

The following access connections are proposed to serve the development:

- Right-in/right-out access connection on SW 20th Street
- Three right-in/right-out access connections on SW 44th Avenue
- Two full median openings on SW 44th Avenue
- A full access connection to the proposed SW 31st Street which is shown on the PD plan to have roundabout intersection control

The proposed site access locations were evaluated for required turn lane needs to accommodate the traffic at project buildout. Additionally, per City of Ocala's request on the approved methodology, the turn lanes on SW 20th Street at SW 44th Avenue were evaluated to identify any improvement needs to accommodate buildout traffic volumes.

Right-in/Right-out Driveway on SW 20th Street

The proposed right-in/right-out access connection on SW 20th Street is proposed approximately 120 feet west of the intersection with SW 44th Avenue. Based on the anticipated driveway assignment on the project site, the PM peak hour volumes would be approximately 21 trips in and 48 trips out at the driveway.

Based on the National Cooperative of Highway Research Programs (NCHRP) Report 457, the projected right-turn ingress volume at the right-in/right-out access on SW 20th Street does not warrant an exclusive right-turn lane.

Right-in/Right-out Driveways along SW 44th Avenue

As depicted on the Conceptual Site Plan (see **Appendix**), three right-in/right-out driveways are proposed to provide access along SW 44th Avenue to the Wintergreen PD. Given that the majority of the commercial development is planned toward the northern portion of the project site, the driveway expected to experience the highest ingress and egress volumes is the one nearest the intersection of SW 44th Avenue and SW 20th Street. The projected PM peak hour volumes at this driveway are approximately 35 trips in and 31 trips out at project buildout.

Based on the NCHRP Report 457, the projected right-turn volume into the development at the highest-volume right-in/right-out access on SW 44th Avenue does not warrant an exclusive right-turn lane.

Full-Access Connections along SW 44th Avenue

As depicted on the Conceptual Site Plan (see **Appendix**), two full-access driveways are proposed to provide access along SW 44th Avenue to the Wintergreen PD. Given that the majority of the commercial development is planned toward the northern portion of the project site, the more northern full-access driveway is expected to experience the highest ingress and egress volumes during the PM peak hour. The projected PM peak hour volumes at this driveway are approximately 107 trips in (36 southbound right, 71 northbound left) and 93 trips out (73 left, 20 right).

Based on the NCHRP Report 457, the projected right-turn volume into the development at the highest-volume full-access driveway on SW 44th Avenue does not warrant an exclusive right-turn lane. The projected traffic volumes meet NCHRP criteria for an exclusive northbound left-turn lane

According to 2017 FDOT Design Standards, using a design speed of 45 mph, the required deceleration length for the northbound left-turn lane is 185 feet. The anticipated 95th-percentile queue for the northbound left-turn movement is one vehicle length. The recommended length of the northbound left-turn lane is 235 feet to allow for the required deceleration length and recommended minimum queue length of two vehicles per the FDOT Greenbook.

Roundabout at SW 31st Street and SW 44th Avenue

As a part of the SW 44th Avenue extension, the City of Ocala has discussed implementing roundabout traffic control at the intersection of SW 44th Avenue and SW 31st Street at the southern limit of the Wintergreen PD.

It is projected approximately 69 project trips in (40 southbound right, 29 northbound left) and 60 project trips out (37 left, 23 out) would utilize the western leg of the intersection to access the site. The SIDRA software was used to evaluate the operating conditions of the proposed roundabout under future buildout traffic conditions. The analysis indicated that the roundabout would perform at LOS A under future (2037) buildout conditions with a V/C ratio of 0.34, including project trips. The SIDRA output is included in the **Appendix**.

Turn Lanes on SW 20th Street at SW 44th Avenue

Per City comment on the approved methodology, the turn lanes on SW 20th Street at the intersection with SW 44th Avenue evaluated to determine if exclusive turn lanes are warranted and if the existing turn lane lengths are sufficient. The Synchro analysis shows acceptable traffic operations and volume-to-capacity ratios without an exclusive eastbound right-turn lane. Therefore, an exclusive right-turn lane is not recommended. The intersection is shown to operate at an acceptable LOS without an eastbound right-turn lane.

The intersection has an existing westbound left-turn lane approximately 250 feet in length. Under the future (2037) buildout scenario, the westbound left-turn 50th-percentile queue is projected to be approximately 105 feet. To accommodate 185 feet for deceleration (2017 FDOT Design Standards for 45-mph design speed) and 105 feet of queue storage, the westbound left-turn lane should be lengthened to a minimum of 390 feet.

CRASH DATA SUMMARY

Five years of historic crash data (2013 – 2017) was obtained from the Signal Four Analytics program for SW 20th Street from ¼ mile west of SW 44th Avenue to ¼ mile east of SW 44th Avenue.

There were nineteen crashes reported along this segment of SW 20th Street between the years of 2013 and 2017; one of the seven crashes resulted in a fatality, nine resulted in one or more injuries, and nine resulted in property damage only. The most common crash type was angle crashes (six crashes), followed by rear-end crashes (three), sideswipe crashes (three), and left-turn crashes (three). Five of the seven crashes occurred under dark conditions, two occurred with wet surface conditions, and none involved alcohol. A summary of the crash type by year is provided in **Table 11**.

Table 11: Crash Summary, 2013 – 2017

	2013	2014	2015	2016	2017	5-Year Total
Crash Severity						
Fatal	1					**1**
Injury	2	2	2	3		**9**
Property Damage Only		3	2	2	2	**9**
Crash Type						
Angle	2		1	3		**6**
Rear-End		1		2		**3**
Sideswipe		1	2			**3**
Left-Turn		2			1	**3**
Other	1	1	1		1	**4**
Lighting Conditions						
Daylight	3	3	2	4	2	**14**
Dark		2	2	1		**5**
Surface Conditions						
Dry	2	4	4	5	2	**17**
Wet	1	1				**2**
TOTALS	**3**	**5**	**4**	**5**	**2**	**19**

CONCLUSION

This TIA has been performed to support the PD rezoning and traffic capacity reservation for the Wintergreen PD. The traffic analysis provided is consistent with the approved methodology document.

The traffic analysis was performed considering a buildout timeframe of 20 years (2037) for the proposed development program. The operating conditions within the study area were evaluated for future background conditions (before addition of project traffic) and buildout traffic conditions. Transportation improvements were identified within the study area to be needed under future background traffic conditions. SW 44th Avenue, from SR 40 to SR 200, was assumed to be a four-lane divided roadway along with appropriate geometry at major intersections, for the future conditions analysis.

No additional geometric improvements were identified to be needed at project buildout beyond those identified under future background traffic conditions. Therefore, no transportation proportionate share is required in conjunction with the Wintergreen PD.

The developer intends to satisfy transportation concurrency requirements for the Wintergreen PD by entering into an agreement with the City of Ocala to dedicate right-of-way along SW 44th Avenue fronting the Wintergreen PD. The proposed SW 44th Avenue from SW 20th Street to SR 200 will provide additional transportation capacity for this area of the City of Ocala and Marion County.

A site access analysis was performed for the proposed driveways along SW 44th Avenue. Exclusive southbound right-turn lanes are not warranted based on the projected ingress traffic volumes. Exclusive northbound left-turn lanes are warranted at the full median opening locations and should be a minimum of 235 feet long to accommodate the required deceleration length and anticipated queues. Additionally, the westbound left-turn lane at the intersection of SW 20th Street and SW 44th Avenue is recommended to be lengthened to 390 feet to accommodate future buildout traffic volumes.

The traffic analysis and results provided herein support the transportation concurrency reservation request for the Wintergreen PD project.

APPENDICES

Appendix A: Conceptual Site Development Plan

WINTERGREEN
PD PLAN

OCALA, FLORIDA

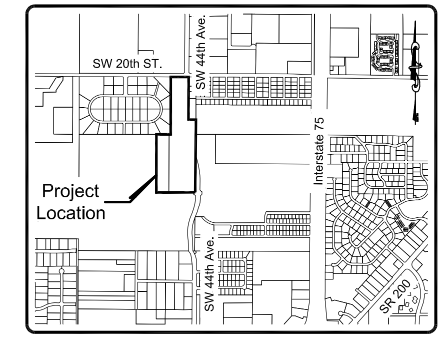
PARCELS 23812-000-00
23320-005-25

CITY OF OCALA PROJECT PERMIT # PUD17-0003

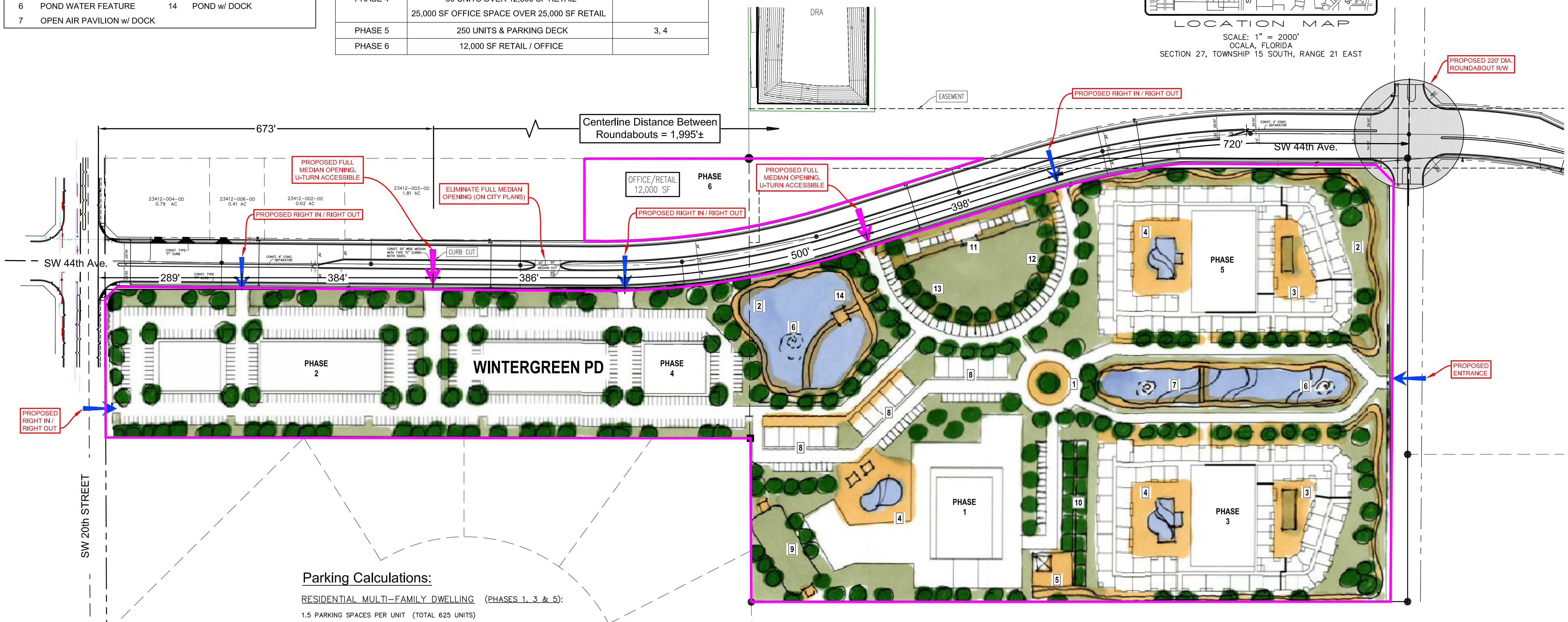
GRAPHIC SCALE
(IN FEET)
1 inch = 100 ft.

AMENITIES LEGEND			
1	ROUNDABOUT w/ TREE	8	RESIDENTIAL TOWNHOUSES
2	PEDESTRIAN / BIKE TRAILS	9	CHIPPING / PUTTING GREEN
3	COURTYARD	10	LEASABLE GARDEN SPACE
4	POOL w/ DECK	11	OPEN AIR PAVILION
5	GRILLING AREA	12	LEASABLE AMPHITHEATER
6	POND WATER FEATURE	13	LEASABLE EVENT LAWN
7	OPEN AIR PAVILION w/ DOCK	14	POND w/ DOCK

PHASING	DEVELOPMENT	AMENITIES
PHASE 1	110 UNITS, PARKING DECK & AMENITIES 15 RESIDENTIAL TOWNHOUSES & PARKING	1, 2, 4, 5, 6, 8, 9, 14
PHASE 2	30 UNITS OVER 12,500 SF RETAIL 25,000 SF OFFICE SPACE OVER 25,000 SF RETAIL	
PHASE 3	250 UNITS & PARKING DECK	3, 4, 6, 10, 11, 12, 13
PHASE 4	30 UNITS OVER 12,500 SF RETAIL 25,000 SF OFFICE SPACE OVER 25,000 SF RETAIL	
PHASE 5	250 UNITS & PARKING DECK	3, 4
PHASE 6	12,000 SF RETAIL / OFFICE	



LOCATION MAP
SCALE: 1" = 2000'
OCALA, FLORIDA
SECTION 27, TOWNSHIP 15 SOUTH, RANGE 21 EAST



Open Space - PD:

122-942 (a)(4) OPEN SPACE. OPEN SPACE REQUIREMENTS FOR A PD ARE AS FOLLOWS:

a. OPEN SPACE SHALL INCLUDE ACTIVE AND PASSIVE RECREATION AREAS SUCH AS COURTYARDS, STREETSCAPES/SIDEWALKS, PLAYGROUNDS, GOLF COURSES, WATERWAYS, LANDSCAPED YARDS AND PATIOS, LAGOONS, FLOODPLAINS, NATURE TRAILS, ROOF AREAS, AND OTHER SIMILAR OPEN SPACES. WATER RETENTION AREAS THAT ARE DESIGNED AS AESTHETIC LAKES OR PONDS FOR PASSIVE OR ACTIVE RECREATIONAL USE MAY ALSO BE COUNTED AS OPEN SPACE, AS LONG AS THESE AREAS ARE DESIGNED TO RETAIN A MINIMUM OF THREE FEET OF WATER AT ALL TIMES.

b. FENCED WATER RETENTION AREAS, OPEN WATER AREAS BEYOND THE PERIMETER OF THE SITE, PAVED PORTIONS OF STREET RIGHT-OF-WAY, DRIVEWAYS, OFF-STREET PARKING AREAS AND OFF-STREET LOADING AREAS SHALL NOT BE COUNTED IN DETERMINING OPEN SPACE. SIDE YARDS LESS THAN SIX FEET WIDE SHALL NOT BE COUNTED AS OPEN SPACE.

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d. THERE SHALL BE A MINIMUM OPEN SPACE REQUIREMENT OF 25 PERCENT OF THE TOTAL GROSS ACREAGE FOR ALL DEVELOPMENT IN ANY PD PROJECT. AT LEAST TEN PERCENT OF THE TOTAL REQUIRED OPEN SPACE SHALL BE IN USABLE AGGREGATE FORM. AGGREGATE OPEN SPACE IS DEFINED AS COMMON OPEN SPACE AREAS THAT IS DESIGNED AND INTENDED FOR USE BY THE OCCUPANTS/RESIDENTS OF A PD.

e. TREES SHOWN AS CONCEPTUAL ONLY. FINAL LANDSCAPE PLAN WILL DETERMINE ACTUAL TREE LOCATIONS.

Parking Calculations:

RESIDENTIAL MULTI-FAMILY DWELLING (PHASES 1, 3 & 5):

1.5 PARKING SPACES PER UNIT (TOTAL 625 UNITS)

PHASE 1:
(1) 4 STORY BUILDING (110 UNITS) = 110 UNITS = 1.5 X 110 = 165 SPACES
15 RESIDENTIAL TOWNHOUSES = 15 UNITS = 1.5 X 15 = 23 SPACES

PHASE 3:
(1) 4 STORY BUILDINGS (250 UNITS EA.) = 250 UNITS = 1.5 X 250 = 375 SPACES

PHASE 5:
(1) 4 STORY BUILDINGS (250 UNITS EA.) = 250 UNITS = 1.5 X 250 = 375 SPACES

SPACES REQUIRED: 938

SPACES PROVIDED: (2) 4 STORY PARKING DECKS @ 400 SPACES EA. = 800 SPACES
(1) 4 STORY PARKING DECK @ 200 SPACES EA. = 200 SPACES

TOTAL SPACES PROVIDED = 1,000

1,000/625 = 1.6 SPACES PER UNIT

REQUIRED HANDICAPPED PARKING – 2% OF TOTAL – .02 X 1,000 = 20

RESIDENTIAL / OFFICE OVER RETAIL (PHASE 2 & 4 ONLY):

RETAIL: 1 PARKING SPACE FOR EVERY 300 SQUARE FEET OF FLOOR AREA

RETAIL: 75,000 SF 75,000/300 = 250 SPACES
RETAIL PARKING PROVIDED – 250 SPACES
OFFICE PARKING PROVIDED = 50,000/300 = 167 SPACES

RESIDENTIAL OVER RETAIL – (2) 4 STORY BLDGS @ 30 UNITS PER BLDG. = 60 UNITS

RESIDENTIAL PARKING REQUIRED/PROVIDED 60 UNITS X 1.5 = 90 SPACES

TOTAL PARKING REQUIRED = 250 + 167 + 90 = 507

REQUIRED HANDICAPPED PARKING – 1 SPACE FOR EVERY 25 SPACES = 507/25 = 21 SPACES

NOTE: RESIDENTIAL OVER RETAIL MAY REQUIRE DECK PARKING TO MEET PARKING REQUIREMENTS.

Traffic Impact Statement:

TRAFFIC GENERATION RATES ARE BASED ON THE ITE TRIP GENERATION, 7th EDITION.

RESIDENTIAL:

ITE LAND USE CODE = 223, MID-RISE RESIDENTIAL CONDOMINIUM/TOWNHOUSE.

DWELLING UNITS = 685

A.M. PEAK HOUR OF GENERATOR
TRIP GENERATION A.M. = 0.30 (AVERAGE RATE) X 685 = 205.5 TRIPS
TRIP DISTRIBUTION = 31% ENTERING = 205.5 X 0.31 = 63.71 TRIPS
69% EXITING = 205.5 X 0.69 = 141.8 TRIPS

P.M. PEAK HOUR OF GENERATOR
TRIP GENERATION P.M. = 0.39 (AVERAGE RATE) X 685 = 267 TRIPS
TRIP DISTRIBUTION = 58% ENTERING = 267 X 0.58 = 155 TRIPS
42% EXITING = 267 X 0.42 = 112 TRIPS

COMMERCIAL:
PEAK HOUR CALCULATION (WEEKDAY PM PEAK):

SPECIALTY RETAIL (826): 2.71 PER 1,000 SF 2.71 X 75 = 203

TRIP DISTRIBUTION = 44% ENTERING = 0.44 X 203 = 89 TRIPS
56% EXITING = 0.56 X 203 = 114 TRIPS

OFFICE (710): 1.49 PER 1,000 SF 1.49 X 50 = 75

TRIP DISTRIBUTION = 50% ENTERING = 0.50 X 75 = 37.5 TRIPS
50% EXITING = 0.50 X 75 = 37.5 TRIPS

Notes:

1. LAND USE DESIGNATION = MEDIUM INTENSITY/SPECIAL DISTRICT
ALLOWABLE DENSITY = 30 UNITS/ACRE
PROPOSED DENSITY;
PHASES 1,3 & 5 = 625 UNITS/23.9 AC = 26.15 UNITS PER ACRE
PHASES 2 & 4 RES. = 60/8.9 AC = 6.7 UNITS PER ACRE
OFFICE = 50,000SF/8.9 = 5,618 SF/ACRE
COMM. = 75,000SF/8.9 = 8,427 SF/ACRE
PHASE 6 COMM. = 12,000/1.98 = 6,061 SF/ACRE

2. TOTAL SITE AREA = 40.07 ACRES
R/W (SW 44th AVE.) AREA = 4.63 ACRES
R/W (FUTURE ROAD) AREA = 0.66 ACRES
RETAIL/OFFICE = 1.98 ACRES
RESIDENTIAL/ OFFICE/ RETAIL = 8.94 ACRES
RESIDENTIAL = 23.86 ACRES

(2) – 4 STORY BUILDINGS @ 250 UNITS PER BLDG. = 500 UNITS
(1) – 4 STORY BUILDING @ 110 UNITS PER BLDG. = 110 UNITS
15 RESIDENTIAL TOWNHOUSES 15 UNITS
60 RESIDENTIAL UNITS OVER RETAIL 60 UNITS

685 UNITS

3. A PD DEVELOPER'S AGREEMENT PURSUANT TO SECTION 122.944(d) SHALL BE PROVIDED AT FINAL PLAN SUBMITTAL.

4. A TITLE OPINION SHALL BE REQUIRED BY THE TIME THE FINAL DEVELOPMENT PLAN AND THE FINAL DEVELOPER'S AGREEMENT ARE SUBMITTED.

5. LOADING AREAS AND DUMPSTER PADS TO BE SCREENED PER CITY CODE.

6. ALL UTILITIES SHALL BE UNDERGROUND (122-942).

7. ACCESS SHALL BE PROVIDED TO ALL USERS (122-942).

8. IF SEPARATE TRACTS ARE SOLD, TRACTS MUST MEET PLATTING REQUIREMENTS OF CHAPTER 114 (122-942).

9. A UNIFIED SIGNAGE PLAN MUST BE ADDRESSED WITH SUBMITTAL OF THE FIRST FINAL PD PLAN.

10. AN ARBORIST OR EQUIVALENT HORTICULTURAL PROFESSIONAL SHALL EVALUATE THE TREES ONSITE, PROVIDE NECESSARY TREE PRESERVATION REQUIREMENTS TO BE PROVIDED AND IS INVOLVED IN THE SITE CLEARING PROCESS TO ASSURE THE HEALTHY SURVIVAL OF ALL TREES SHOWN ON THE SITE TO BE SAVED.

11. A LANDSCAPE ARCHITECT OR EQUIVALENT HORTICULTURAL PROFESSIONAL SHALL DESIGN THE LANDSCAPE PLAN AND MANAGE THE ONSITE TREE PLANTING.

12. A LEGALLY CONSTITUTED MAINTENANCE AGREEMENT SHALL BE PROVIDED AT FINAL PLAN PURSUANT TO 122-944(C).

13. PROJECT SHALL BE UNDER UNIFIED CONTROL OF COUNTRY GREEN, LLP.

14. SEE LEGEND FOR AMENITIES.

Date:	By:	Revisions:
11-17-17	JWS	ADDED SOUTH ROUNDABOUT
11-30-17	JWS	REVISED MEDIAN NOTES
1-11-18	JWS	REVISED PHASING CHART

Designed: MWR | Scale: 1" = 100'
Drawn: JWS | Project: 2017-30
Checked: MWR | Date: 07-07-17
File: WG Concept w-Roundabout.dwg

MICHAEL W. RADCLIFFE ENGINEERING, INC.
2611 S.E. Lake Weir Avenue Ocala, FL 34471 (352) 629-5500 FAX (352) 629-1010
Certificate No. EB-0006198 • Michael W. Radcliffe P.E. #31170 • Christopher A. Gwin P.E. #66568
www.radcliffeengineering.com

Project Name: Wintergreen PD - Conceptual
Sheet Name: Conceptual Plan

Revisions to Plan Set
Date: 1-11-18

Sheet No. 1 of 1

Appendix B: Approved Traffic Analysis Methodology Correspondence

METHODOLOGY ACCEPTANCE

Project: Wintergreen PD

Project #: TIA18-0002

Applicant: Kimley-Horn and Associates Inc 438-3000
E-Mail: Amber.Gartner@kimley-horn.com

Meeting date:

Approved:

City Planning	x	County Traffic	
TPO	x	County Planning	x
City Traffic	x		
Other			

On February 9, 2018, the methodology for assessing the impact of subject project was approved by City staff subject to the following conditions:

1. Multimodal connectivity is encouraged.
2. Please coordinate with the Ocala/Marion TPO on transit concerns and consider providing sufficient area in the project for a bus stop and shelter.
3. Trip generation statement on PD Plan sheet 1 of 1 needs to be updated to match traffic study.
4. Perform left and right turn lane analyses on SW 20th Street at SW 44th Avenue.
5. Include Background Traffic volumes in the existing conditions inventory
6. If at any time development occurs prior to the development of SW 44th Avenue the traffic study will need to be updated to reflect the impacts on the surrounding roadways.

Approved: _____

Noel Cooper, PE, Transportation Engineer
City Engineer's Office Department

Kimley»Horn

January 16, 2018

Ms. Karen Cupp
Development Coordinator
City of Ocala Growth Management
201 SE 3rd Street, 2nd Floor
Ocala, FL 34471

RE: ***Traffic Study Methodology for Wintergreen PD;***
Kimley-Horn Project No. 142742000

Dear Ms. Cupp:

This methodology document has been prepared for the forthcoming traffic study associated with the proposed Wintergreen Planned Development (PD). The project parcel is generally located west of SW 44th Avenue, south of SW 20th Street in southwest Ocala, Florida. This parcel subject is connected to a right-of-way settlement agreement between the property owner and the City of Ocala. The proposed property will likely be developed concurrently with the construction of SW 44th Avenue. The traffic study is being prepared to support the PD rezoning application and Concurrency Development Agreement (CDA) with the City of Ocala and to determine if the right-of-way dedication for SW 44th Avenue satisfies transportation concurrency requirements for the proposed development program. Tables and figures are attached which detail the project's trip generation potential, trip distribution, and proposed study area. Following is a discussion related to the preliminary analyses and proposed methodology for the traffic study. This revised methodology document is based on comments previously received from the City of Ocala, Marion County, and the Ocala/Marion County TPO.

Project Background

The project site is adjacent to the Ocala West Planned Unit Development (PUD) in Ocala, Florida. The Wintergreen PD (parcels 23320-005-25 and 23812-000-00) is generally located on the east side of the Ocala West PUD and is ±40.07 acres, of which 4.63 are designated for SW 44th Avenue right-of-way and 0.66 acres are designated for a future road on the southern edge of the PD. The proposed Wintergreen PD will encompass 685 multifamily housing dwelling units (apartments), 50,000 square feet of general office space, and 87,000 square feet of shopping center land use. A copy of the conceptual site development plan is provided as an attachment.

The owner of the Wintergreen PD also owns the Country Green PD, which is located on the western boundary of the Ocala West PUD. Both projects will be going through the traffic study and concurrency reservation process concurrently. However, for the purpose of the traffic impact studies, Country Green will be considered as "vested" for the Wintergreen PD analysis.

Analysis Years / Phasing

The traffic analysis will identify transportation impacts and improvement needs that will be required within the timeframe expected for project buildout. A 20-year buildout timeframe for the proposed Wintergreen PD will be utilized for the traffic study (year 2037).

Project Trip Generation

The Institute of Transportation Engineers' (ITE) *Trip Generation Manual, 10th Edition* will be used to calculate trip generation potential for the proposed land uses within the project for the daily, AM peak hour, and PM peak hour conditions. Land use codes (LUCs) 221 (Multifamily Housing (Mid-Rise)), 710 (General Office), and 820 (Shopping Center) will be utilized. Internal capture and pass-by calculations will be calculated in accordance with the methods and rates established in the ITE *Trip Generation Handbook, 3rd Edition*. Pass-by trips will be included in the driveway volumes for evaluation of the site access locations.

Based on the development program provided, the project is anticipated to generate 6,257 net new daily trips, 409 net new AM peak hour trips, and 482 net new PM peak hour trips. Trip generation calculations are provided in the attached **Table 1**. The internal capture worksheets are also attached.

Project Trip Distribution

The project trip distribution will be developed based on Version 6.0 of the Central Florida Regional Planning Model (CFRPM), which is based on the Florida Standard Urban Transportation Model Structure (FSUTMS). The model output will be further refined based on engineering judgement and knowledge of local travel patterns and land uses. For the purpose of this study, it is assumed that SW 44th Avenue is constructed between SW 20th Street and SR 200 as a four-lane facility. This was discussed with and approved by City of Ocala Growth Management Staff. Due to the direct access of the development to SW 44th Avenue, it is expected that a majority of the development traffic will utilize this roadway to access the external transportation network. The distribution shown in the model output on SW 60th Avenue was reduced to reflect that some traffic traveling to and from SR 200 south of the site will utilize SW 44th Avenue. The distribution along SW 44th Avenue was increased accordingly. Adjustments were made to reflect local traffic assignment to the adjacent roadway network, as depicted in the attached CFRPM model plot with hand adjustments.

Study Area

Functionally classified roadway segments in the project's vicinity were reviewed to determine the project's potential traffic impact. The project impact on the surrounding roadway network has been calculated as the average PM peak hour trip assignment on that roadway segment divided by the segment's peak hour peak direction service volume. A 3% threshold was used to define a preliminary study area. Per the City of Ocala Traffic Impact Analysis Guidelines, the study area includes all significantly impacted roadways plus one segment beyond the last segment that meets the 3% impact threshold, unless the project has a de minimis impact on the roadway segment. **Table 2** details the project significant impact calculations and proposed study roadway segments.

The traffic study is proposed to include PM peak hour (4-6 PM) intersection level of service analyses at the following intersections of functionally classified roadways located within the project study area.

- SW 20th Street & SW 44th Avenue
- SW 20th Street & SW 38th Avenue
- SW 20th Street & SW 31st Avenue
- SW 20th Street & SW 27th Avenue
- SW 38th Street & SW 44th Avenue

- SW 42nd Street Road & SR 200

An AM peak hour (7AM-9AM) intersection level of service analysis will also be performed at the following intersections, based on input from City of Ocala Transportation staff:

- SW 20th Street & SW 44th Avenue
- SW 20th Street & SW 38th Avenue

Figure 1 illustrates the site location, trip distribution, and study area segments and intersections proposed to be included in the analysis.

Site Access

Access to the Wintergreen PD is proposed via a right-in/right-out connection to SW 20th Street on the north side of the parcel as well as three full median openings and two right-in/right-out connections to SW 44th Avenue. An additional access point is proposed on the south side of the parcel along the proposed SW 31st Street which will intersect SW 44th Avenue at the southeast corner of the PD.

The described access points are preliminary and may be refined during the PD review process. The access locations are illustrated on the attached conceptual site development plan. The traffic analysis will include evaluation of the site access locations for the appropriate control and geometry needed at project buildout.

Committed Transportation Improvements

SW 49th Avenue, from SW 42nd Street to CR 484 has been considered as a four-lane divided collector roadway for the project impact calculations. The construction of this roadway is funded through transportation impact fees and recent sales tax referendum.

The extension of SW 44th Avenue from SW 20th Street to SR 200 as a four-lane divided collector roadway will be included in the future conditions analysis. SW 44th Avenue from SR 40 to SW 20th Street will be assumed as a four-lane divided collector roadway in the future conditions analysis. This was discussed with and approved by City of Ocala Growth Management Staff.

Crash Data Review

Historic crash data as provided by Marion County will be reviewed and summarized for roadway segments that have direct driveway access.

Future Volume Development

Turning movement counts will be collected at the study area intersections during the PM peak period (4PM-6PM) and AM peak period (7AM-9AM), as specified previously. The observed turning movement volumes will be adjusted to peak season using peak season adjustment factors published by FDOT for the existing conditions analysis. Approach and departure volumes recorded at the intersections will be utilized to determine existing PM peak hour peak season traffic volumes on the study area roadway segments.

Future background traffic volumes will be calculated using existing peak season traffic volumes, an annual background growth rate applied over the 20-year buildout timeframe, and committed traffic volumes from the following developments:

- Heathbrook remaining unbuilt
- Trinity Lane/Red Oak PUD
- Grand Oaks Town Center remaining
- Broadmoor Oaks
- Paddock Ridge East
- Paddock Ridge West
- On Top of the World
- Winding Oaks PD
- Country Green PD

The number of vested trips and existing built percentages for each vested development are to be provided by the City of Ocala.

Historic AADT data and CFRPM model data within the study area were utilized to determine an appropriate areawide growth rate to utilize for the analysis. Within the next ten years, traffic growth within the study area will be primarily due to development within the committed projects listed above. Based on input from City of Ocala and Marion County Transportation staff, a historical growth rate of 1.50 percent will be used for the 20-year analysis project timeframe in addition to the committed traffic.

For the new planned section of SW 44th Avenue and respective intersections, future traffic will be projected using modeling techniques as outlined in the FDOT Project Traffic Forecasting Handbook. Projected AADT volumes from modeling procedures will be input to a turns balancing worksheet along with other traffic data such as turning movement percentages, K factors, and D factors to determine the future non-project turning movement volumes at intersections along SW 44th Avenue that do not currently exist as they will in the future once the SW 44th Avenue extension is complete from SW 20th Street to SR 200.

Future Conditions Analysis

The traffic analysis will identify transportation impacts and improvement needs for roadways and intersections within the study area upon project buildout, within a 20-year timeframe (2037).

The Synchro 9 software package will be utilized to evaluate the intersection operations during the AM peak hour and PM peak hour under existing, future background (non-project traffic), and buildout traffic conditions. PM peak hour roadway segment volumes under existing, future background, and buildout traffic conditions will be compared to the adopted and/or committed service volume.

The traffic study will provide a summary of the analysis results and necessary improvements to achieve an acceptable level of service within the study area. The traffic study will identify proportionate share calculations to mitigate transportation improvements shown to be needed due to the addition of project traffic. It is intended that right-of-way dedication along SW 44th Avenue will be utilized to offset transportation mitigation for the development, if any is identified.

Please feel free to contact me with any questions you may have during your review of the attached materials. We look forward to completing this project.

Sincerely,
KIMLEY-HORN

Amber L. Gartner, PE

Attachments: Wintergreen PD Conceptual Site Development Plan
Table 1 – Trip Generation
Internal Capture Worksheets
Figure 1 – Site Location, Trip Distribution, and Study Area
Table 2 – Project Significance Calculations
FSUTMS Select Zone Plot (hand adjusted)

Cc: Don Carll
Mike Radcliffe

K:\OCA_Civil\142742000 - Wintergreen PD TIA\doc\Methodology\Lkc180116alg_Winter Green PD Traffic Methodology.docx

WINTERGREEN
PD PLAN
OCALA, FLORIDA

PARCELS 23812-000-00
23320-005-25

CITY OF OCALA PROJECT PERMIT # PUD17-0003

GRAPHIC SCALE
(IN FEET)
1 inch = 100 ft.

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5 GRILLING AREA	12 LEASABLE AMPHITHEATER
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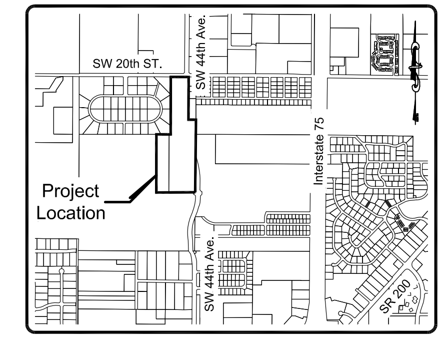

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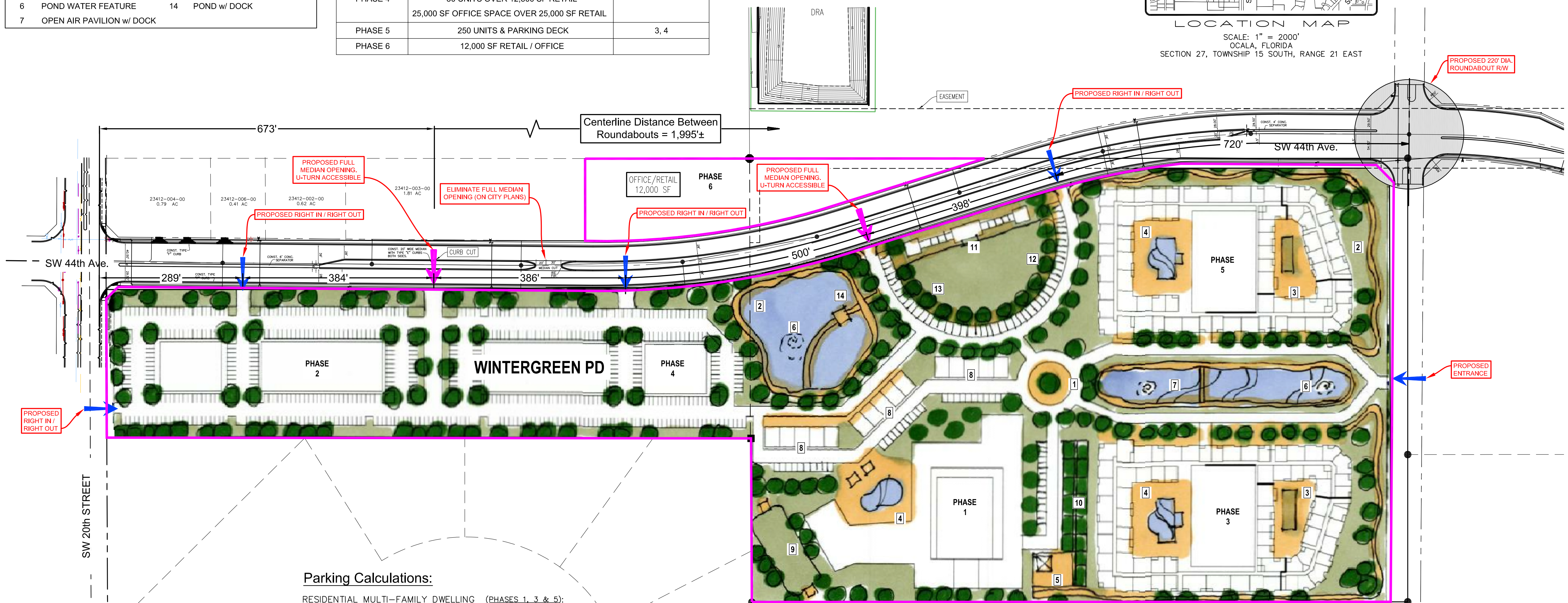

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b. FENCED WATER RETENTION AREAS, OPEN WATER AREAS BEYOND THE PERIMETER OF THE SITE, PAVED PORTIONS OF STREET RIGHT–OF–WAY, DRIVEWAYS, OFF–STREET PARKING AREAS AND OFF–STREET LOADING AREAS SHALL NOT BE COUNTED IN DETERMINING OPEN SPACE. SIDE YARDS LESS THAN SIX FEET WIDE SHALL NOT BE COUNTED AS OPEN SPACE.

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d. THERE SHALL BE A MINIMUM OPEN SPACE REQUIREMENT OF 25 PERCENT OF THE TOTAL GROSS ACREAGE FOR ALL DEVELOPMENT IN ANY PD PROJECT. AT LEAST TEN PERCENT OF THE TOTAL REQUIRED OPEN SPACE SHALL BE IN USABLE AGGREGATE FORM. AGGREGATE OPEN SPACE IS DEFINED AS COMMON OPEN SPACE AREAS THAT IS DESIGNED AND INTENDED FOR USE BY THE OCCUPANTS/RESIDENTS OF A PD.

e. TREES SHOWN AS CONCEPTUAL ONLY. FINAL LANDSCAPE PLAN WILL DETERMINE ACTUAL TREE LOCATIONS.

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(1) 4 STORY BUILDINGS (250 UNITS EA.) = 250 UNITS = 1.5 X 250 = 375 SPACES

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SPACES REQUIRED: 938

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TOTAL SPACES PROVIDED = 1,000

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REQUIRED HANDICAPPED PARKING – 2% OF TOTAL – .02 X 1,000 = 20

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RETAIL: 75,000 SF 75,000/300 = 250 SPACES
RETAIL PARKING PROVIDED – 250 SPACES
OFFICE PARKING PROVIDED = 50,000/300 = 167 SPACES

RESIDENTIAL OVER RETAIL – (2) 4 STORY BLDGS @ 30 UNITS PER BLDG. = 60 UNITS

RESIDENTIAL PARKING REQUIRED/PROVIDED 60 UNITS X 1.5 = 90 SPACES

TOTAL PARKING REQUIRED = 250 + 167 + 90 = 507

REQUIRED HANDICAPPED PARKING – 1 SPACE FOR EVERY 25 SPACES = 507/25 = 21 SPACES

NOTE: RESIDENTIAL OVER RETAIL MAY REQUIRE DECK PARKING TO MEET PARKING REQUIREMENTS.

Traffic Impact Statement:

TRAFFIC GENERATION RATES ARE BASED ON THE ITE TRIP GENERATION, 7th EDITION.

RESIDENTIAL:

ITE LAND USE CODE = 223, MID–RISE RESIDENTIAL CONDOMINIUM/TOWNHOUSE.

DWELLING UNITS = 685

A.M. PEAK HOUR OF GENERATOR
TRIP GENERATION A.M. = 0.30 (AVERAGE RATE) X 685 = 205.5 TRIPS
TRIP DISTRIBUTION = 31% ENTERING = 205.5 X 0.31 = 63.71 TRIPS
69% EXITING = 205.5 X 0.69 = 141.8 TRIPS

P.M. PEAK HOUR OF GENERATOR
TRIP GENERATION P.M. = 0.39 (AVERAGE RATE) X 685 = 267 TRIPS
TRIP DISTRIBUTION = 58% ENTERING = 267 X 0.58 = 155 TRIPS
42% EXITING = 267 X 0.42 = 112 TRIPS

COMMERCIAL:
PEAK HOUR CALCULATION (WEEKDAY PM PEAK):

SPECIALTY RETAIL (826): 2.71 PER 1,000 SF 2.71 X 75 = 203

TRIP DISTRIBUTION = 44% ENTERING = 0.44 X 203 = 89 TRIPS
56% EXITING = 0.56 X 203 = 114 TRIPS

OFFICE (710): 1.49 PER 1,000 SF 1.49 X 50 = 75

TRIP DISTRIBUTION = 50% ENTERING = 0.50 X 75 = 37.5 TRIPS
50% EXITING = 0.50 X 75 = 37.5 TRIPS

Notes:

1. LAND USE DESIGNATION = MEDIUM INTENSITY/SPECIAL DISTRICT
ALLOWABLE DENSITY = 30 UNITS/ACRE
PROPOSED DENSITY;
PHASES 1,3 & 5 = 625 UNITS/23.9 AC = 26.15 UNITS PER ACRE
PHASES 2 & 4 RES. = 60/8.9 AC = 6.7 UNITS PER ACRE
OFFICE = 50,000SF/8.9 = 5,618 SF/ACRE
COMM. = 75,000SF/8.9 = 8,427 SF/ACRE
PHASE 6 COMM. = 12,000/1.98 = 6,061 SF/ACRE

2. TOTAL SITE AREA = 40.07 ACRES
R/W (SW 44th AVE.) AREA = 4.63 ACRES
R/W (FUTURE ROAD) AREA = 0.66 ACRES
RETAIL/OFFICE = 1.98 ACRES
RESIDENTIAL/ OFFICE/ RETAIL = 8.94 ACRES
RESIDENTIAL = 23.86 ACRES

(2) – 4 STORY BUILDINGS @ 250 UNITS PER BLDG. = 500 UNITS
(1) – 4 STORY BUILDING @ 110 UNITS PER BLDG. = 110 UNITS
15 RESIDENTIAL TOWNHOUSES 15 UNITS
60 RESIDENTIAL UNITS OVER RETAIL 60 UNITS

685 UNITS

3. A PD DEVELOPER'S AGREEMENT PURSUANT TO SECTION 122.944(d) SHALL BE PROVIDED AT FINAL PLAN SUBMITTAL.

4. A TITLE OPINION SHALL BE REQUIRED BY THE TIME THE FINAL DEVELOPMENT PLAN AND THE FINAL DEVELOPER'S AGREEMENT ARE SUBMITTED.

5. LOADING AREAS AND DUMPSTER PADS TO BE SCREENED PER CITY CODE.

6. ALL UTILITIES SHALL BE UNDERGROUND (122–942).

7. ACCESS SHALL BE PROVIDED TO ALL USERS (122–942).

8. IF SEPARATE TRACTS ARE SOLD, TRACTS MUST MEET PLATTING REQUIREMENTS OF CHAPTER 114 (122–942).

9. A UNIFIED SIGNAGE PLAN MUST BE ADDRESSED WITH SUBMITTAL OF THE FIRST FINAL PD PLAN.

10. AN ARBORIST OR EQUIVALENT HORTICULTURAL PROFESSIONAL SHALL EVALUATE THE TREES ONSITE, PROVIDE NECESSARY TREE PRESERVATION REQUIREMENTS TO BE PROVIDED AND IS INVOLVED IN THE SITE CLEARING PROCESS TO ASSURE THE HEALTHY SURVIVAL OF ALL TREES SHOWN ON THE SITE TO BE SAVED.

11. A LANDSCAPE ARCHITECT OR EQUIVALENT HORTICULTURAL PROFESSIONAL SHALL DESIGN THE LANDSCAPE PLAN AND MANAGE THE ONSITE TREE PLANTING.

12. A LEGALLY CONSTITUTED MAINTENANCE AGREEMENT SHALL BE PROVIDED AT FINAL PLAN PURSUANT TO 122–944(C).

13. PROJECT SHALL BE UNDER UNIFIED CONTROL OF COUNTRY GREEN, LLP.

14. SEE LEGEND FOR AMENITIES.

Date:	By:	Revisions:
11-17-17	JWS	ADDED SOUTH ROUNDABOUT
11-30-17	JWS	REVISED MEDIAN NOTES
1-11-18	JWS	REVISED PHASING CHART

Designed: MWR Scale: 1" = 100'
Drawn: JWS Project: 2017-30
Checked: MWR Date: 07-07-17
File: WG Concept w-Roundabout.dwg

MICHAEL W. RADCLIFFE ENGINEERING, INC.
2611 S.E. Lake Weir Avenue Ocala, FL 34471 (352) 629-5500 FAX (352) 629-1010
Certificate No. EB-0006198 • Michael W. Radcliffe P.E. #31170 • Christopher A. Gwin P.E. #66568
www.radcliffeengineering.com

Project Name: Wintergreen PD - Conceptual
Sheet Name: Conceptual Plan

Revisions to Plan Set
THIS DATE INDICATES THE LATEST DATE AT WHICH ANY PART OF THIS PLAN SET WAS REVISED.
Date: 1-11-18

Sheet No. 1 of 1

Kimley»Horn

Table 1: Trip Generation

Land Use	Intensity			Daily Trips	AM Peak Hour of Adjacent Street			PM Peak Hour of Adjacent Street		
					Total	In	Out	Total	In	Out
Proposed Development										
Multifamily Housing (Mid-Rise)	685 DU			3,732	226	59	167	281	171	110
General Office Building	50,000 SF			542	73	63	10	59	9	50
Shopping Center	87,000 SF			5,469	195	121	74	490	235	255
	Subtotal			*9,743*	*494*	*243*	*251*	*830*	*415*	*415*
Internal Capture	Daily	AM	PM							
Residential	23%	2%	34%	877	5	1	4	95	67	28
Office	32%	11%	31%	172	8	5	3	18	7	11
Commercial	17%	5%	21%	929	9	5	4	103	34	69
Subtotal	*20%*	*5%*	*26%*	1,978	22	11	11	216	108	108
Pass-By Traffic [2]	Daily	AM	PM							
Shopping Center	34%	34%	34%	1,544	63	39	24	132	68	64
10% of Adjacent Street Traffic	10%			1,508	136	68	68	136	68	68
	Subtotal			1,508	63	39	24	132	68	64
Driveway Volumes				7,765	472	232	240	614	307	307
TOTAL NET NEW TRIPS				6,257	409	193	216	482	239	243

Note: *Trip Generation was calculated using the data from ITE's Trip Generation Manual, 10th Edition*

Multifamily Housing (Mid-Rise) [ITE LUC 221]	
Daily	T = 5.45*(X) - 1.75 (X is DU)
AM Peak Hour of Adjacent Street	Ln(T) = 0.98*Ln(X) - 0.98 (X is DU; 26% in, 74% out)
PM Peak Hour of Adjacent Street	Ln(T) = 0.96*Ln(X) - 0.63 (X is DU; 61% in, 39% out)
General Office [ITE LUC 710]	
Daily	Ln(T) = 0.97*Ln(X) + 2.50 (X is SF/1,000)
AM Peak Hour of Adjacent Street	T = 0.94*(X) + 26.49 (X is SF/1,000; 86% in, 14% out)
PM Peak Hour of Adjacent Street	Ln(T) = 0.95*Ln(X) + 0.36 (X is DU; 16% in, 84% out)
Shopping Center [ITE LUC 820]	
Daily	Ln(T) = 0.68*Ln(X) + 5.57 (X is SF/1,000)
AM Peak Hour of Adjacent Street	T = 0.50*(X) + 151.78 (X is SF/1,000; 62% in, 38% out)
PM Peak Hour of Adjacent Street	Ln(T) = 0.74*Ln(X) + 2.89 (X is DU; 48% in, 52% out)

Internal Capture Reduction Calculations

Methodology for A.M. Peak Hour and P.M. Peak Hour
based on the *Trip Generation Handbook* , 3rd Edition, published by the Institute of Transportation Engineers

Methodology for Daily
based on the average of the Unconstrained Rates for the A.M. Peak Hour and P.M. Peak Hour

Wintergreen PD

GROSS TRIP GENERATION

INPUT

Land Use	Daily		A.M. Peak Hour		P.M. Peak Hour	
	Enter	Exit	Enter	Exit	Enter	Exit
Office	271	271	63	10	9	50
Retail	2,735	2,735	121	74	235	255
Restaurant						
Cinema/Entertainment						
Residential	1,866	1,866	59	167	171	110
Hotel						
	4,872	4,872	243	251	415	415

INTERNAL TRIPS

OUTPUT

Land Use	Daily		A.M. Peak Hour		P.M. Peak Hour	
	Enter	Exit	Enter	Exit	Enter	Exit
Office	103	69	5	3	7	11
Retail	434	495	5	4	34	69
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	452	425	1	4	67	28
Hotel	0	0	0	0	0	0
	989	989	11	11	108	108

OUTPUT

Total % Reduction	*20.3%*	*4.5%*	*26.0%*
Office	31.7%	11.0%	30.5%
Retail	17.0%	4.6%	21.0%
Restaurant			
Cinema/Entertainment			
Residential	23.5%	2.2%	33.8%
Hotel			

EXTERNAL TRIPS

OUTPUT

Land Use	Daily		A.M. Peak Hour		P.M. Peak Hour	
	Enter	Exit	Enter	Exit	Enter	Exit
Office	168	202	58	7	2	39
Retail	2,301	2,240	116	70	201	186
Restaurant	0	0	0	0	0	0
Cinema/Entertainment	0	0	0	0	0	0
Residential	1,414	1,441	58	163	104	82
Hotel	0	0	0	0	0	0
	3,883	3,883	232	240	307	307

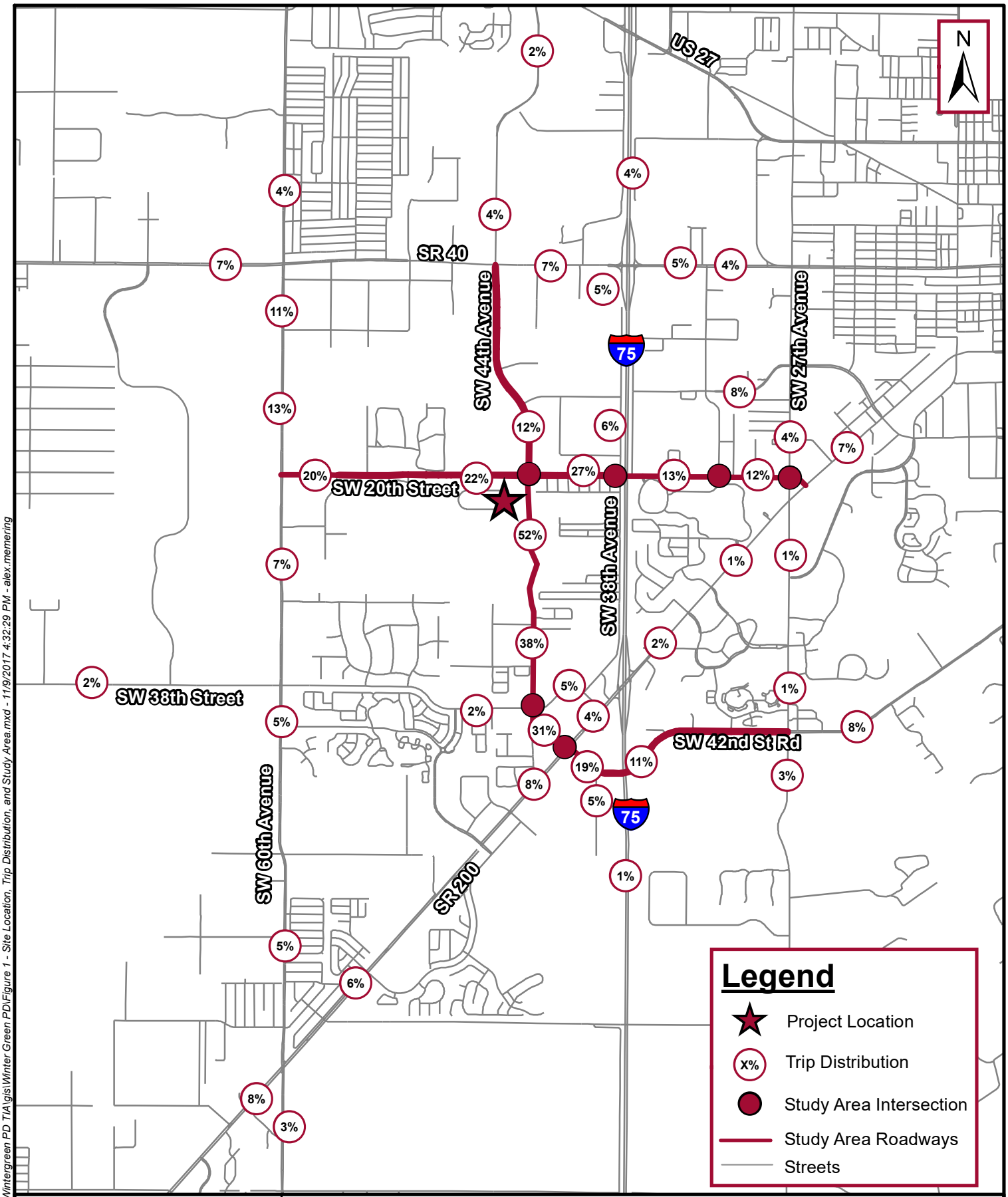


FIGURE 1: SITE LOCATION, TRIP DISTRIBUTION, AND STUDY AREA

WINTERGREEN PD
OCALA, FLORIDA

Project No: 142742000	Not To Scale	November 2017	Figure 1

Kimley»Horn

101 E Silver Springs Blvd, Suite 400, Ocala FL 34470
Phone: 352 438 3000
www.kimley-horn.com CA 00000696

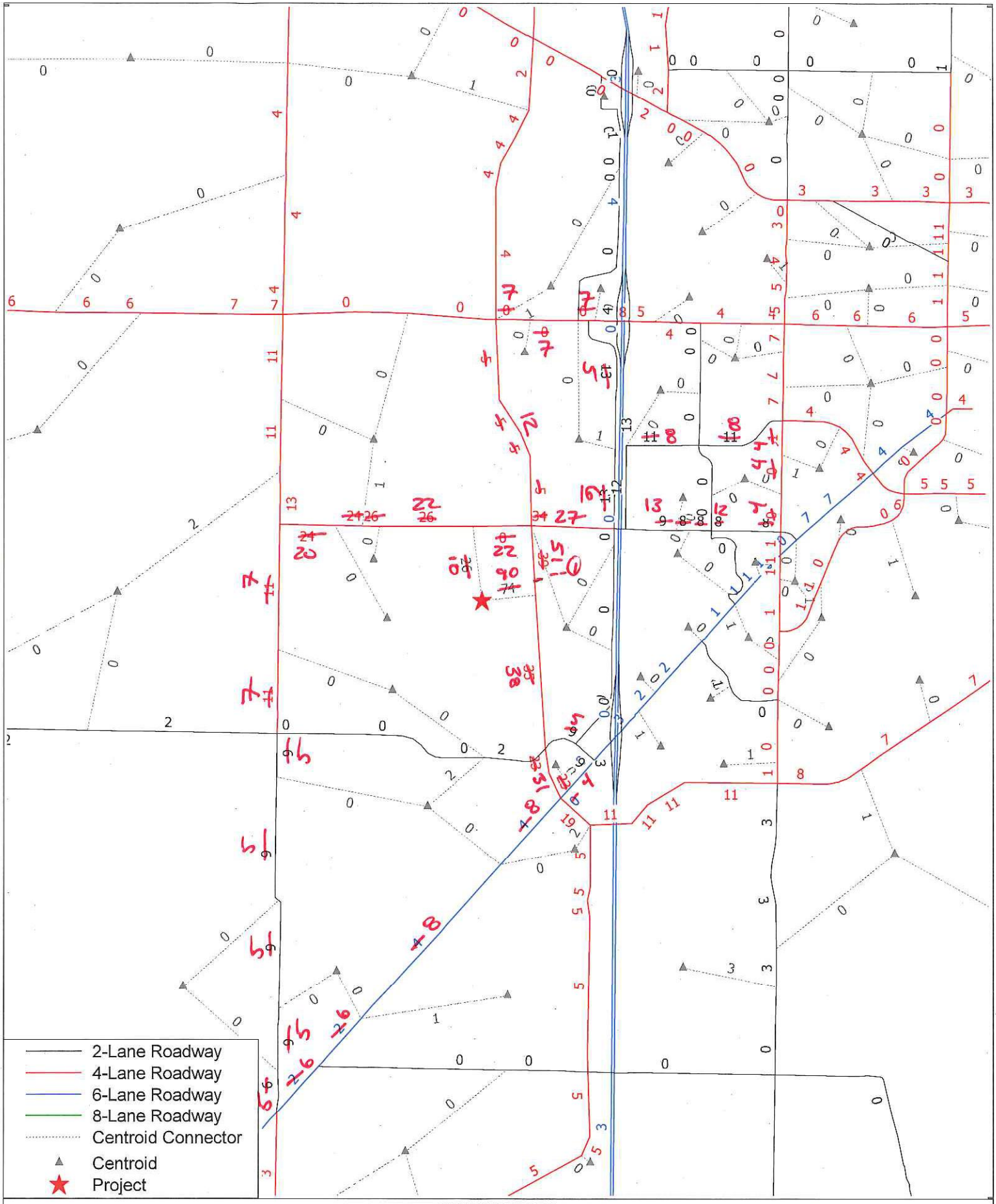
Kimley»Horn

Table 2: Project Significant Impact Calculations

Roadway		ROADWAY ATTRIBUTES [1]				EXISTING DAILY TRAFFIC CONDITIONS				Percent Project Traffic Assignment [2]	PM PEAK HOUR SIGNIFICANCE CALCULATIONS					Include In Study Area? [5]
											Pk. Hr. Dir. Service Capacity [3]	Project Traffic		Percent Impact	Significant Impact? [4]	
From	To	FDOT Classification	Area Type	Adopted LOS	Number of Lanes	Service Capacity [3]	2016 AADT	2016 V/C	2016 LOS			NB / EB	SB / WB			
SR 200																
SW 60th Ave	SW 48th Ave	ST-SA-C1	Urban	D	6	59,900	42,750	0.71	C	7.0%	3,020	17	17	0.56%	--	No
SW 48th Ave	I-75 East Ramps	ST-SA-C1	Urban	D	6	59,900	38,500 [6]	0.64	C	7.0%	3,020	17	17	0.56%	--	No
I-75 East Ramps	SW 27th Ave	ST-SA-C1	Urban	D	6	59,900	43,500	0.73	C	1.5%	3,020	4	4	0.13%	--	No
SW 27th Ave	SW 17th St	ST-SA-C1	Urban	D	6	59,900	38,300	0.64	C	7.0%	3,020	17	17	0.56%	--	No
NW / SW 60th Ave																
US 27	SR 40	NS-SA-C1	Urban	E	4	35,820	9,900	0.28	C	4.0%	1,800	10	10	0.56%	--	No
SR 40	SW 20th St	NS-SA-C1	Urban	E	4	35,820	13,800	0.39	C	12.0%	1,800	29	29	1.61%	--	No
SW 20th St	SW 38th St	NS-SA-C1	Urban	E	4	35,820	12,500 [6]	0.35	C	7.0%	1,800	17	17	0.94%	--	No
SW 38th St	SR 200	NS-SA-C1	Urban	E	4	35,820	14,950	0.42	C	5.0%	1,800	12	12	0.67%	--	No
SR 200	SW 80th St	NS-SA-C1	Urban	E	4	35,820	18,500	0.52	C	1.3%	1,800	3	3	0.17%	--	No
SW 49th Ave																
SW 42nd St	SW 66th St	NS-SA-C1	Urban	E	4	35,820	--	--	--	5.0%	1,800	12	12	0.67%	--	No
SW 44th Ave																
US 27	SR 40	NS-SA-C1	Urban	E	4	35,820	--	--	--	3.0%	1,800	7	7	0.39%	--	No
SR 40	SW 20th St	NS-SA-C1	Urban	E	4	35,820	--	--	--	12.0%	1,800	29	29	1.61%	--	Yes
SW 20th St	SR 200	NS-SA-C1	Urban	E	4	35,820	--	--	--	40.0%	1,800	96	97	5.39%	Yes	Yes
SW 42nd St																
SR 200	SW 27th Ave	NS-SA-C1	Urban	E	4	35,820	17,700	0.49	C	13.7%	1,800	33	33	1.83%	--	Yes
SW 27th Ave	SW 7th Ave	NS-SA-C1	Urban	E	4	35,820	19,200 [6]	0.54	C	7.5%	1,800	18	18	1.00%	--	No
SW 38th St																
SW 80th Ave	SW 60th Ave	NS-SA-C1	Urban	E	2	15,930	8,500	0.53	C	2.0%	792	5	5	0.63%	--	No
SW 60th Ave	SR 200	NS-SA-C1	Urban	E	2	15,930	6,200	0.39	C	2.3%	792	6	6	0.76%	--	No
SW 27th Ave																
SR 40	SR 200	NS-SA-C1	Urban	E	4	35,820	20,700	0.58	C	4.6%	1,800	11	11	0.61%	--	No
SR 200	SW 42nd St	NS-SA-C1	Urban	E	4	35,820	20,400	0.57	C	0.5%	1,800	1	1	0.06%	--	No
CR 475A																
SW 42nd St	SW 66th St	NS-SA-C1	Urban	E	2	15,930	12,300	0.77	C	1.5%	792	4	4	0.51%	--	No
SR 40																
SW 80th Ave	SW 60th Ave	ST-SA-C1	Urban	D	4	41,790	21,000	0.50	C	6.5%	2,100	16	16	0.76%	--	No
SW 60th Ave	SW 44th/46th Ave	ST-SA-C1	Urban	D	4	41,790	28,500 [6]	0.68	C	0.0%	2,100	0	0	0.00%	--	No
SW 44th/46th Ave	I-75	ST-SA-C1	Urban	D	4	41,790	30,500	0.73	C	7.5%	2,100	18	18	0.86%	--	No
I-75	SW 27th Ave	ST-SA-C1	Urban	D	4	39,800	33,000	0.83	C	4.5%	2,000	11	11	0.55%	--	No
SW 27th Ave	SW MLK Ave	ST-SA-C1	Urban	D	4	39,800	26,700	0.67	C	6.0%	2,000	15	14	0.75%	--	No
SW 20th St																
SW 60th Ave	SW 44th Ave	NS-SA-C1	Urban	E	4	35,820	11,600	0.32	C	21.0%	1,800	50	51	2.83%	--	Yes
SW 44th Ave	I-75	NS-SA-C1	Urban	E	4	35,820	12,800	0.36	C	24.0%	1,800	58	57	3.22%	Yes	Yes
I-75	SW 27th Ave	NS-SA-C1	Urban	E	2	16,727	11,600	0.69	C	14.2%	832	35	34	4.21%	Yes	Yes
SW 27th Ave	SR 200	NS-SA-C1	Urban	E	2	15,930	10,900 [6]	0.68	C	6.0%	792	15	14	1.89%	--	Yes
SW 38th Ave																
SR 40	SW 20th St	NS-SA-C2	Urban	E	2	14,040	3,500 [6]	0.25	C	5.5%	720	13	13	1.81%	--	No
SW 20th St	SW 38th St	NS-SA-C2	Urban	E	2	14,040	5,300 [6]	0.38	C	0.0%	720	0	0	0.00%	--	No

K:\OCA_Civil\142742000 - Wintergreen PD TIA\calcs\[MethodologyCalcs_171102.xlsx]T2-STUDYAREA_CGreen_avg_3%

1. The roadway attributes were obtained from the latest Marion County and FDOT sources.
2. Project traffic assignment was calculated as the average across the segment based on the trip distribution and assignment.
3. Roadway Service Capacities were determined using the 2013 FDOT Quality/LOS Handbook and Marion County roadway segment tables. A four-lane service capacity was assumed for SW 44th Ave and SW 49th Ave.
4. A segment is considered significantly impacted if the project impact is 3% or greater based on City of Ocala guidelines.
5. The study area includes all significantly impacted segments, plus one segment beyond, except when the next segment is expected to have *de minimis* impacts (<1%).
6. Roadway segments did not have traffic counts recorded for 2016. The most recent year of available data (2012 being the earliest) is reported.



WINTERGREEN PD
SELECT ZONE DISTRIBUTION (PERCENTAGES) (Hand Adjusted)
CFRPMv6.0 CF 2040 MODEL
10/31/2017

cube

Appendix C: Traffic Data

SeasonalFactorReport-Marion

2016 Peak Season Factor Category Report - Report Type: ALL

Category: 3600 MARION COUNTYWIDE

MOCF: 0.97

Week	Dates	SF	PSCF
1	01/01/2016 - 01/02/2016	0.99	1.02
2	01/03/2016 - 01/09/2016	1.02	1.05
3	01/10/2016 - 01/16/2016	1.06	1.09
4	01/17/2016 - 01/23/2016	1.05	1.08
5	01/24/2016 - 01/30/2016	1.03	1.06
6	01/31/2016 - 02/06/2016	1.02	1.05
7	02/07/2016 - 02/13/2016	1.00	1.03
* 8	02/14/2016 - 02/20/2016	0.99	1.02
* 9	02/21/2016 - 02/27/2016	0.98	1.01
*10	02/28/2016 - 03/05/2016	0.96	0.99
*11	03/06/2016 - 03/12/2016	0.95	0.98
*12	03/13/2016 - 03/19/2016	0.93	0.96
*13	03/20/2016 - 03/26/2016	0.94	0.97
*14	03/27/2016 - 04/02/2016	0.95	0.98
*15	04/03/2016 - 04/09/2016	0.96	0.99
*16	04/10/2016 - 04/16/2016	0.97	1.00
*17	04/17/2016 - 04/23/2016	0.98	1.01
*18	04/24/2016 - 04/30/2016	0.99	1.02
*19	05/01/2016 - 05/07/2016	0.99	1.02
*20	05/08/2016 - 05/14/2016	1.00	1.03
21	05/15/2016 - 05/21/2016	1.01	1.04
22	05/22/2016 - 05/28/2016	1.01	1.04
23	05/29/2016 - 06/04/2016	1.01	1.04
24	06/05/2016 - 06/11/2016	1.02	1.05
25	06/12/2016 - 06/18/2016	1.02	1.05
26	06/19/2016 - 06/25/2016	1.02	1.05
27	06/26/2016 - 07/02/2016	1.02	1.05
28	07/03/2016 - 07/09/2016	1.01	1.04
29	07/10/2016 - 07/16/2016	1.01	1.04
30	07/17/2016 - 07/23/2016	1.02	1.05
31	07/24/2016 - 07/30/2016	1.02	1.05
32	07/31/2016 - 08/06/2016	1.03	1.06
33	08/07/2016 - 08/13/2016	1.03	1.06
34	08/14/2016 - 08/20/2016	1.04	1.07
35	08/21/2016 - 08/27/2016	1.05	1.08
36	08/28/2016 - 09/03/2016	1.05	1.08
37	09/04/2016 - 09/10/2016	1.06	1.09
38	09/11/2016 - 09/17/2016	1.07	1.10
39	09/18/2016 - 09/24/2016	1.05	1.08
40	09/25/2016 - 10/01/2016	1.03	1.06
41	10/02/2016 - 10/08/2016	1.01	1.04
42	10/09/2016 - 10/15/2016	0.99	1.02
43	10/16/2016 - 10/22/2016	0.99	1.02
44	10/23/2016 - 10/29/2016	0.99	1.02

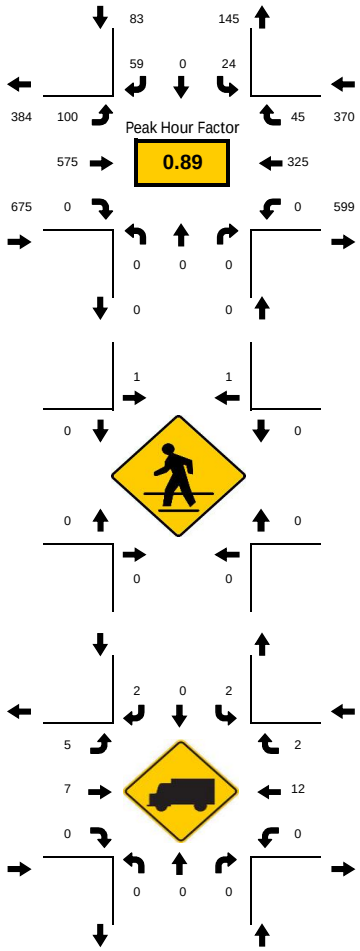
45	10/30/2016 - 11/05/2016	0.99	1.02
46	11/06/2016 - 11/12/2016	0.99	1.02
47	11/13/2016 - 11/19/2016	0.99	1.02
48	11/20/2016 - 11/26/2016	0.99	1.02
49	11/27/2016 - 12/03/2016	0.99	1.02
50	12/04/2016 - 12/10/2016	0.99	1.02
51	12/11/2016 - 12/17/2016	0.99	1.02
52	12/18/2016 - 12/24/2016	1.02	1.05
53	12/25/2016 - 12/31/2016	1.06	1.09

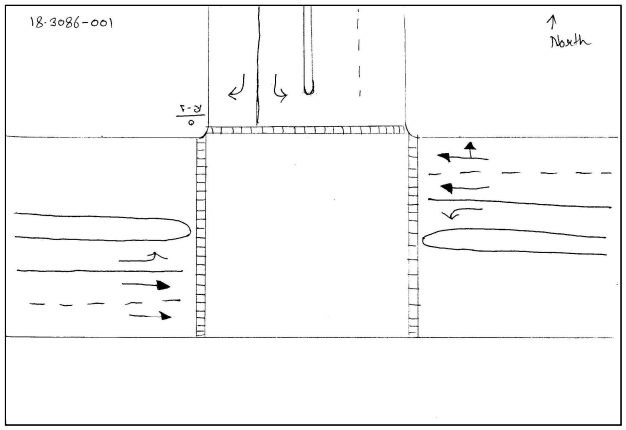
* Peak Season

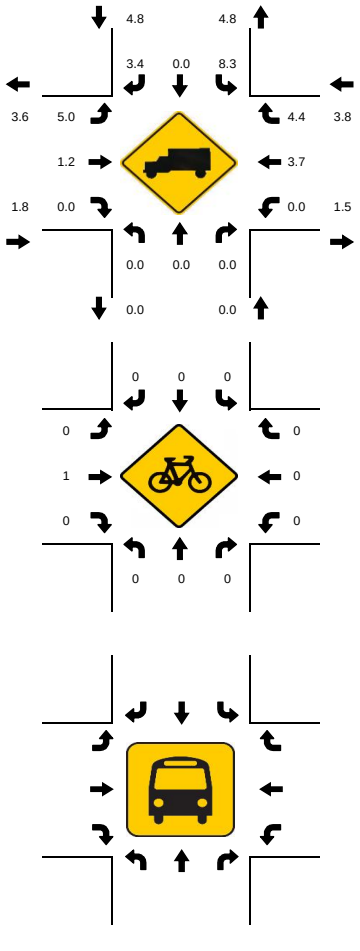
LOCATION: SW 44th Ave & SW 20th St
CITY/STATE: Ocala, FL

PROJECT ID: 18-03086-001
DATE: 02/20/2018

Peak-Hour: 07:30 AM - 08:30 AM
Peak 15-Minute: 07:45 AM - 08:00 AM





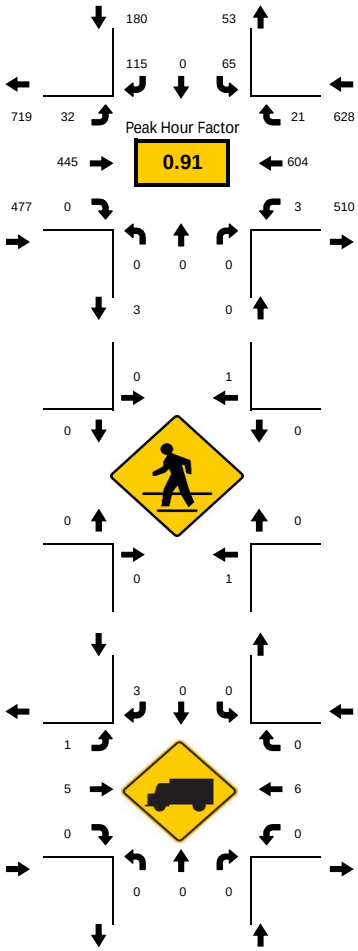


15-Min Count Period	SW 44th Ave Northbound					SW 44th Ave Southbound					SW 20th St Eastbound					SW 20th St Westbound						
Beginning At	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Total	Hourly Total
07:00 AM	0	0	0	0		10	0	4	0		20	100	0	0		0	39	10	0		183	992
07:15 AM	0	0	0	0		5	0	11	0		12	121	0	0		0	55	14	0		218	1090
07:30 AM	0	0	0	0		6	0	10	0		29	148	0	0		0	75	6	0		274	1128
07:45 AM	0	0	0	0		2	0	17	0		30	176	0	0		0	78	14	0		317	1100
08:00 AM	0	0	0	0		8	0	20	0		23	135	0	0		0	80	15	0		281	995
08:15 AM	0	0	0	0		8	0	12	0		18	116	0	0		0	92	10	0		256	714
08:30 AM	0	0	0	0		3	0	13	0		15	129	0	0		0	78	8	0		246	458
08:45 AM	0	0	0	0		11	0	14	0		13	113	0	0		0	55	6	0		212	212
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
All Vehicles	0	0	0	0		32	0	80	0		120	704	0	0		0	368	60	0		**1364**	
Heavy Trucks	0	0	0			4	0	4			8	16	0			0	20	4			**56**	
Pedestrians		0					4					0					0				**4**	
Bicycles	0	0	0			0	0	0			0	4	0			0	0	0			**4**	
Railroad																						
Stopped Buses																						

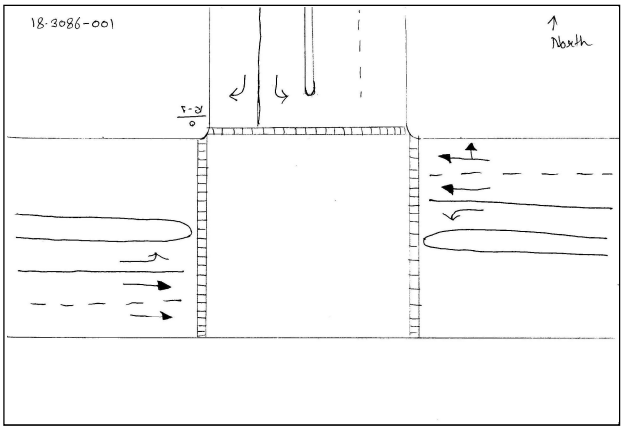
LOCATION: SW 44th Ave & SW 20th St
CITY/STATE: Ocala, FL

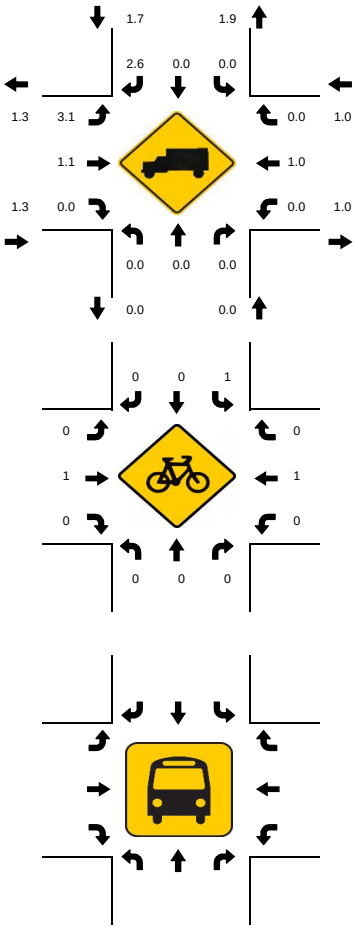
PROJECT ID: 18-03086-001
DATE: 02/20/2018

Peak-Hour: 04:30 PM - 05:30 PM
Peak 15-Minute: 05:00 PM - 05:15 PM



National Data & Surveying Services





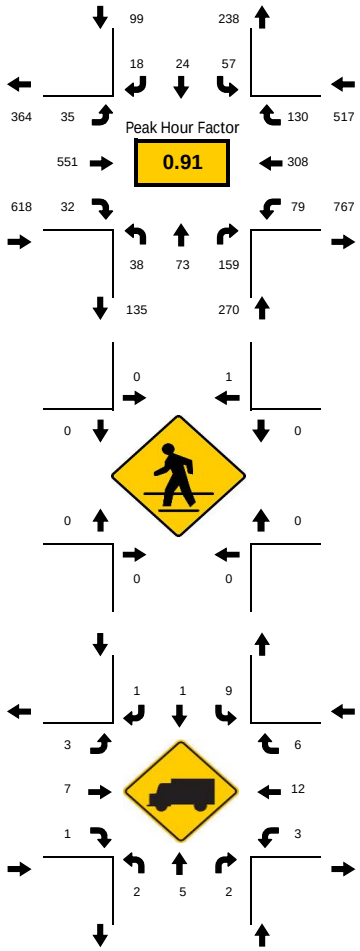
15-Min Count Period Beginning At	SW 44th Ave Northbound					SW 44th Ave Southbound					SW 20th St Eastbound					SW 20th St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
04:00 PM	0	0	2	0		13	0	18	0		19	136	0	0		0	151	16	0		355	1273
04:15 PM	0	0	0	0		10	0	17	0		6	132	0	0		0	157	8	1		331	1272
04:30 PM	0	0	0	0		15	0	19	0		9	118	0	0		0	136	3	0		300	1285
04:45 PM	0	0	0	0		11	0	19	0		10	99	0	0		0	141	7	0		287	1283
05:00 PM	0	0	0	0		24	0	48	0		7	101	0	0		2	164	7	1		354	1248
05:15 PM	0	0	0	0		15	0	29	0		6	127	0	0		0	163	4	0		344	894
05:30 PM	0	0	2	0		10	0	18	0		14	88	0	0		1	156	8	1		298	550
05:45 PM	0	0	0	0		10	0	18	0		6	81	0	0		0	132	5	0		252	252

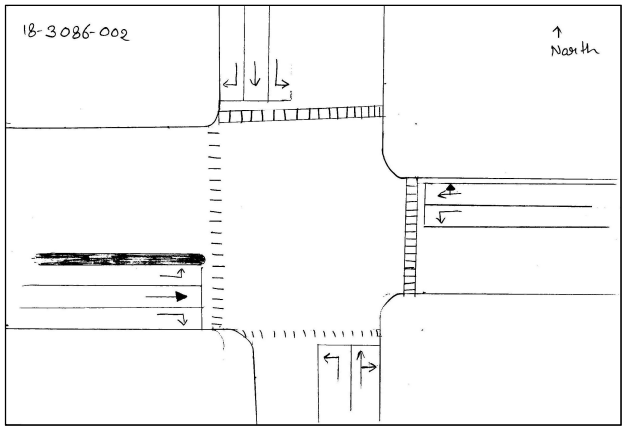
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	
All Vehicles	0	0	0	0		96	0	192	0		40	508	0	0		8	656	28	4		**1532**
Heavy Trucks	0	0	0			0	0	8			4	12	0			0	8	0			**32**
Pedestrians		4					4					0					0				**8**
Bicycles	0	0	0			4	0	0			0	4	0			0	4	0			**12**
Railroad																					
Stopped Buses																					

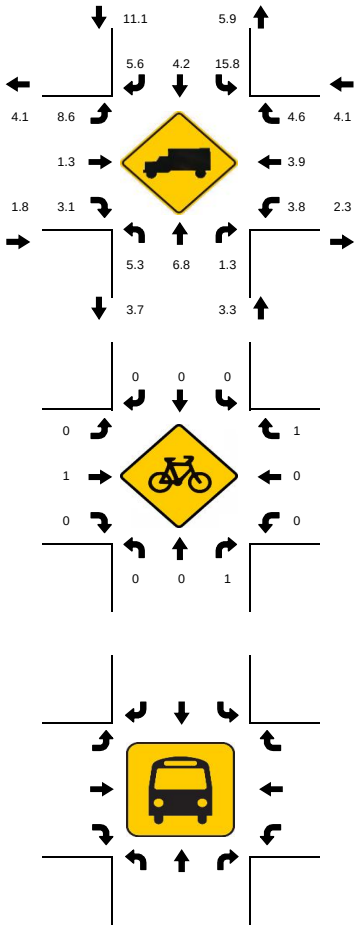
LOCATION: SW 38th Ave & SW 20th St
CITY/STATE: Ocala, FL

PROJECT ID: 18-03086-002
DATE: 02/20/2018

Peak-Hour: 07:30 AM - 08:30 AM
Peak 15-Minute: 07:45 AM - 08:00 AM





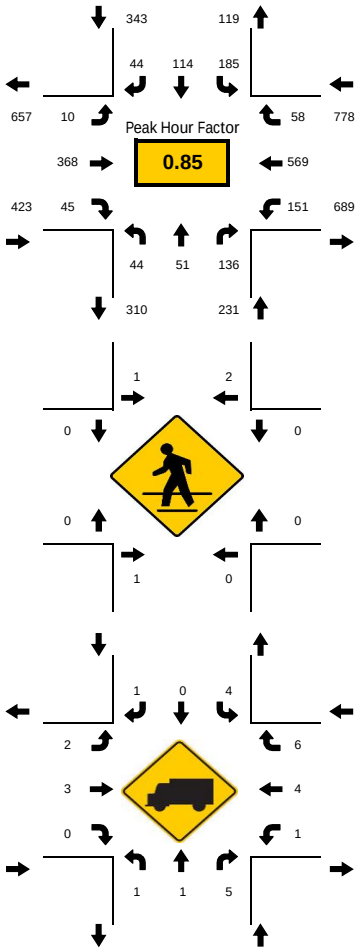


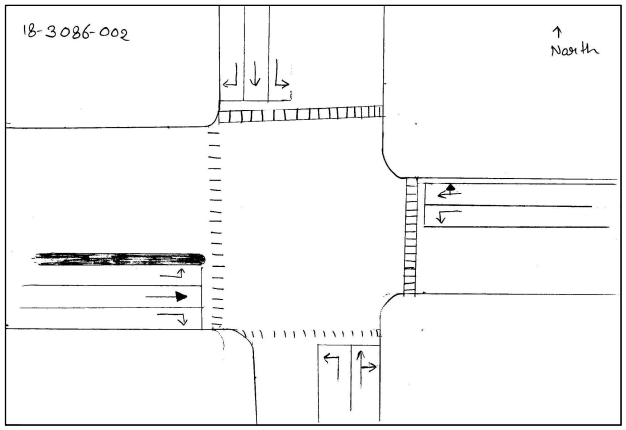
15-Min Count Period Beginning At	SW 38th Ave Northbound					SW 38th Ave Southbound					SW 20th St Eastbound					SW 20th St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
07:00 AM	6	11	27	0	13	8	8	2	0	2	7	80	14	0	7	18	48	24	0	3	253	1291
07:15 AM	6	14	28	0	13	9	8	2	0	2	2	104	12	0	6	20	56	17	0	0	278	1425
07:30 AM	3	16	35	0	17	6	7	4	0	3	8	145	8	0	1	20	71	22	0	4	345	1504
07:45 AM	11	21	45	0	13	21	4	2	0	2	10	141	4	0	1	25	85	46	0	0	415	1494
08:00 AM	11	18	35	0	9	18	7	5	0	5	10	149	9	0	4	15	69	41	0	4	387	1374
08:15 AM	13	18	44	0	14	12	6	7	0	4	7	116	11	0	7	19	83	21	0	2	357	987
08:30 AM	4	13	27	0	10	10	8	2	0	2	4	128	15	0	3	17	85	22	0	2	335	630
08:45 AM	10	10	26	0	9	18	11	4	0	0	3	121	7	0	2	19	50	16	0	3	295	295
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***	**Left**	**Thru**	**Rgt**	**U**	**R***		
All Vehicles	52	84	180	0	68	84	28	28	0	20	40	596	44	0	28	100	340	184	0	16	**1760**	
Heavy Trucks	8	12	4			12	4	4			4	16	4			8	20	12			**108**	
Pedestrians		0					4					0					0				**4**	
Bicycles	0	0	4			0	0	0			0	4	0			0	0	4			**12**	
Railroad																						
Stopped Buses																						

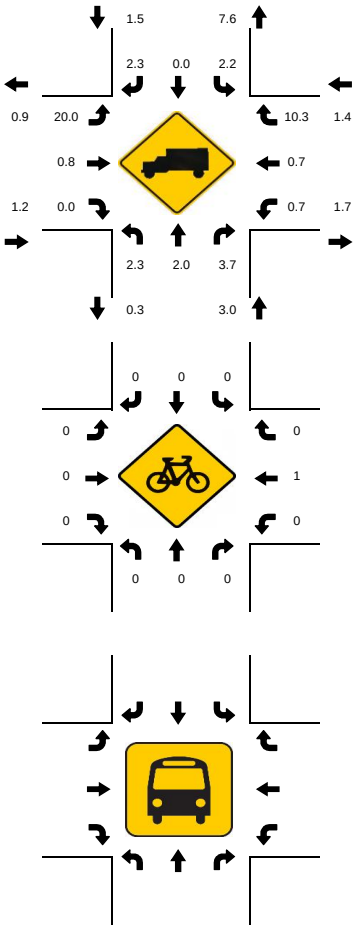
LOCATION: SW 38th Ave & SW 20th St
CITY/STATE: Ocala, FL

PROJECT ID: 18-03086-002
DATE: 02/20/2018

Peak-Hour: 04:45 PM - 05:45 PM
Peak 15-Minute: 05:15 PM - 05:30 PM







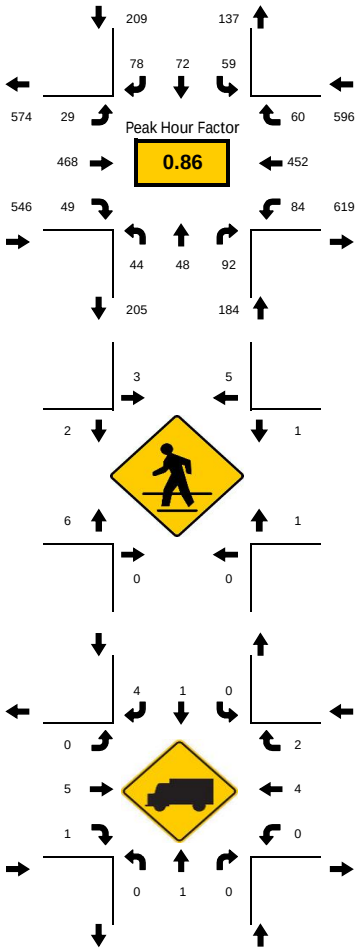
15-Min Count Period	SW 38th Ave Northbound					SW 38th Ave Southbound					SW 20th St Eastbound					SW 20th St Westbound						
Beginning At	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Total	Hourly Total
04:00 PM	10	8	37	0	24	26	13	6	0	2	5	108	11	0	5	45	131	12	0	5	412	1724
04:15 PM	12	13	27	0	11	26	15	13	0	9	4	161	16	0	6	36	159	18	0	3	500	1740
04:30 PM	12	10	21	0	10	20	15	7	0	5	4	102	19	1	7	49	113	19	0	2	392	1763
04:45 PM	12	11	32	0	18	35	24	7	0	4	2	92	11	0	7	44	132	18	0	0	420	1775
05:00 PM	13	12	29	0	12	53	27	8	0	5	4	81	15	0	5	34	137	15	0	0	428	1763
05:15 PM	7	9	41	0	15	65	41	14	0	8	3	115	13	0	9	33	167	15	0	0	523	1335
05:30 PM	12	19	34	0	3	32	22	15	0	10	1	80	6	0	6	40	133	10	0	3	404	812
05:45 PM	9	18	32	0	11	16	23	10	0	5	0	91	9	0	6	44	143	13	0	0	408	408

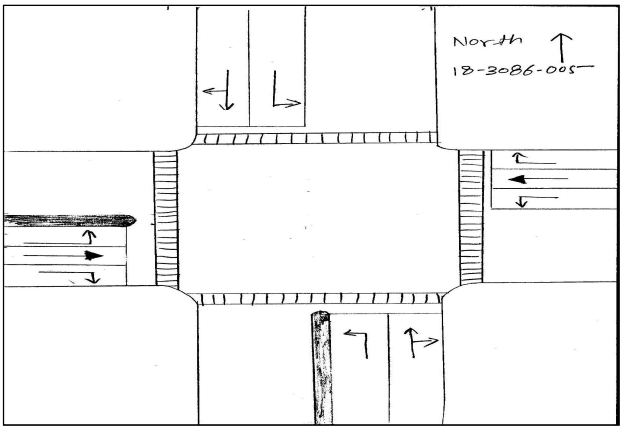
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	
All Vehicles	52	76	164	0	72	260	164	60	0	40	16	460	60	0	36	176	668	72	0	12	**2228**
Heavy Trucks	4	4	20			8	0	4			4	8	0			4	12	8			**76**
Pedestrians		4					8					0					0				**12**
Bicycles	0	0	0			0	0	0			0	0	0			0	4	0			**4**
Railroad Stopped Buses																					

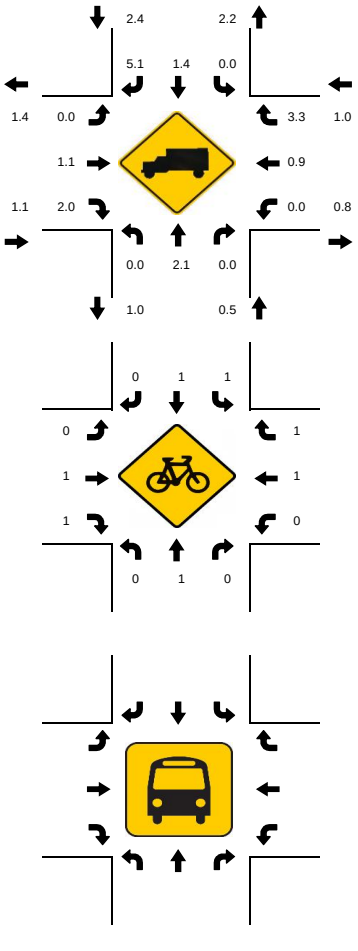
LOCATION: SW 31st Ave & SW 20th St
CITY/STATE: Ocala, FL

PROJECT ID: 18-03086-005
DATE: 02/20/2018

Peak-Hour: 04:45 PM - 05:45 PM
Peak 15-Minute: 05:15 PM - 05:30 PM







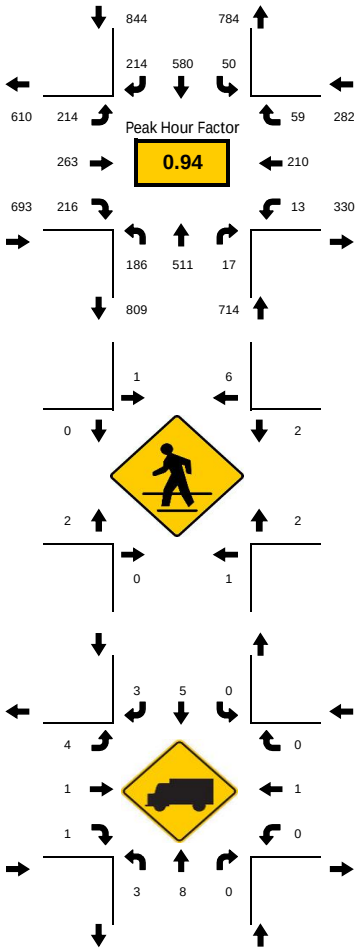
15-Min Count Period Beginning At	SW 31st Ave Northbound					SW 31st Ave Southbound					SW 20th St Eastbound					SW 20th St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
04:00 PM	5	9	36	0	7	17	11	13	0	5	17	131	8	0	1	12	86	9	0	1	354	1445
04:15 PM	6	5	26	0	4	16	15	13	0	7	18	155	6	0	2	18	104	13	0	3	395	1473
04:30 PM	8	17	27	0	7	10	7	10	0	3	6	111	9	0	3	15	100	17	0	4	337	1523
04:45 PM	15	6	28	0	10	13	18	16	0	3	6	109	10	0	5	16	109	13	0	3	359	1535
05:00 PM	13	15	27	0	2	14	14	16	0	7	6	120	13	0	6	24	110	10	0	2	382	1472
05:15 PM	6	17	16	0	6	21	14	33	0	6	12	137	20	0	4	27	121	21	0	3	445	1090
05:30 PM	10	10	21	0	5	11	26	13	0	4	5	102	6	0	1	17	112	16	0	4	349	645
05:45 PM	4	11	22	0	7	13	7	10	0	3	5	96	9	0	3	12	90	17	0	2	296	296

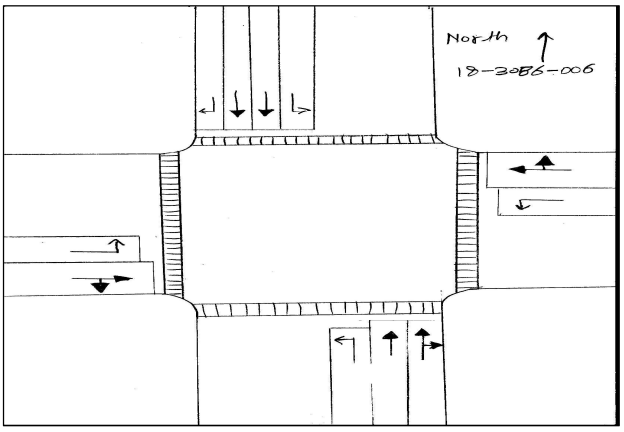
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	
All Vehicles	60	68	112	0	40	84	104	132	0	28	48	548	80	0	24	108	484	84	0	16	**1912**
Heavy Trucks	0	4	0			0	4	16			0	12	4			0	8	4			**52**
Pedestrians		0					24					28					4				**56**
Bicycles	0	4	0			4	4	0			0	4	4			0	4	4			**28**
Railroad																					
Stopped Buses																					

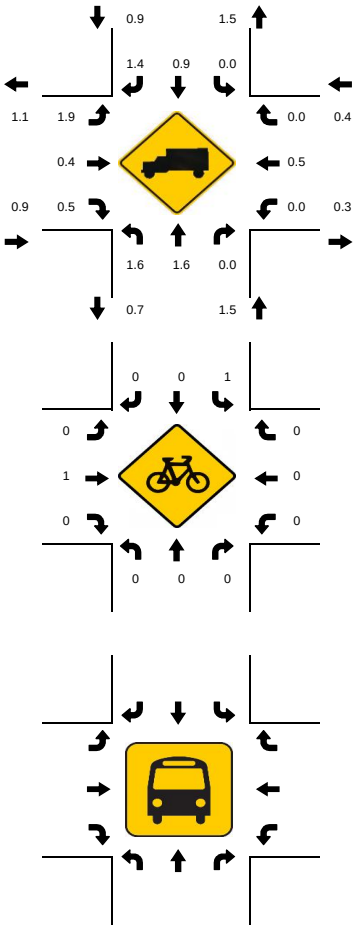
LOCATION: SW 27th Ave & SW 20th St
CITY/STATE: Ocala, FL

PROJECT ID: 18-03086-006
DATE: 02/20/2018

Peak-Hour: 04:45 PM - 05:45 PM
Peak 15-Minute: 05:15 PM - 05:30 PM







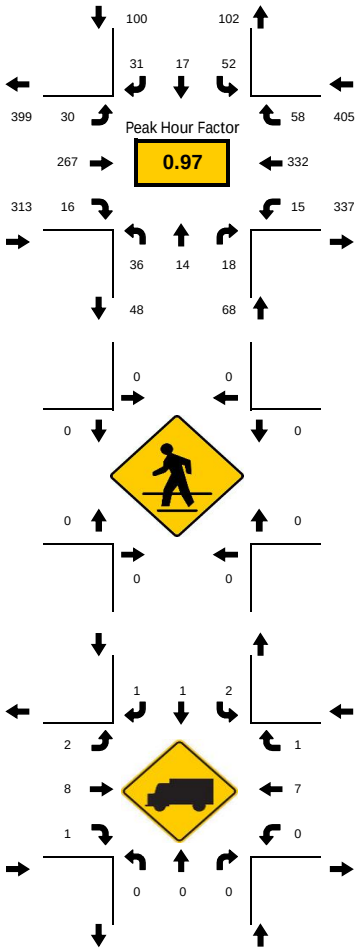
15-Min Count Period Beginning At	SW 27th Ave Northbound					SW 27th Ave Southbound					SW 20th St Eastbound					SW 20th St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
04:00 PM	41	122	2	0	0	13	158	48	0	27	48	69	66	0	10	4	41	17	0	1	629	2461
04:15 PM	44	119	1	0	0	15	144	43	0	22	71	67	56	0	7	6	52	15	0	0	633	2485
04:30 PM	51	131	5	0	1	12	132	46	0	19	60	45	54	0	10	4	46	12	0	0	598	2527
04:45 PM	39	122	5	0	0	13	153	51	0	25	54	64	39	0	5	2	48	11	0	6	601	2533
05:00 PM	39	124	2	0	0	9	150	58	0	28	65	81	53	0	8	5	48	19	0	1	653	2431
05:15 PM	57	155	6	0	0	12	151	57	0	21	47	64	60	0	3	3	48	15	0	1	675	1778
05:30 PM	51	110	4	0	1	16	126	48	0	25	48	54	64	0	4	3	66	14	0	1	604	1103
05:45 PM	39	110	5	0	1	16	135	33	0	17	56	37	28	0	3	2	24	14	0	8	499	499

Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	
All Vehicles	228	620	24	0	4	64	612	232	0	112	260	324	256	0	32	20	264	76	0	24	**2980**
Heavy Trucks	8	12	0			0	8	8			8	4	4			0		4	0		**56**
Pedestrians		4					24					8					8				**44**
Bicycles	0	0	0			4	0	0			0	4	0			0		0	0		**8**
Railroad																					
Stopped Buses																					

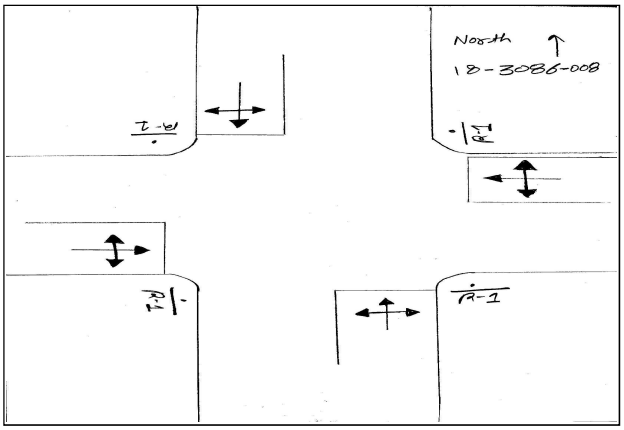
LOCATION: SW 43rd Ct & SW 38th St/40th St
CITY/STATE: Ocala, FL

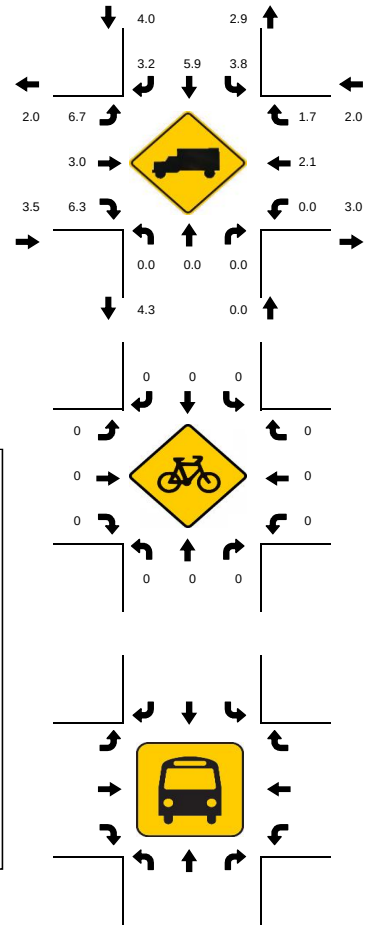
PROJECT ID: 18-03086-008
DATE: 02/20/2018

Peak-Hour: 04:15 PM - 05:15 PM
Peak 15-Minute: 04:30 PM - 04:45 PM



National Data & Surveying Services





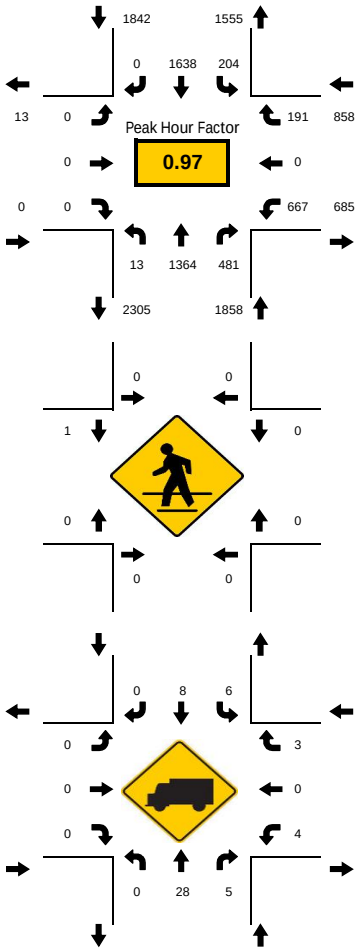
15-Min Count Period Beginning At	SW 43rd Ct Northbound					SW 43rd Ct Southbound					SW 38th St/40th St Eastbound					SW 38th St/40th St Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
04:00 PM	8	4	4	0		9	3	7	0		7	82	10	0		2	65	16	1		218	881
04:15 PM	14	5	4	0		20	4	6	0		7	58	5	0		6	83	7	0		219	886
04:30 PM	5	3	6	0		10	5	3	0		6	76	5	0		3	92	13	1		228	886
04:45 PM	5	4	4	0		10	3	9	0		8	71	5	0		3	76	18	0		216	871
05:00 PM	12	2	4	0		12	5	13	0		9	62	1	0		2	81	20	0		223	857
05:15 PM	9	7	7	0		11	3	7	0		5	63	4	0		6	80	16	1		219	634
05:30 PM	8	10	4	0		19	4	5	0		8	66	5	0		5	64	15	0		213	415
05:45 PM	10	4	6	0		17	4	9	0		3	44	4	0		1	83	17	0		202	202

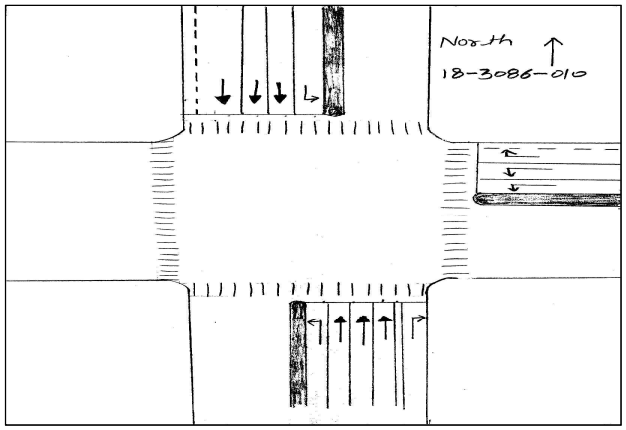
Peak 15-Min Flowrates	Northbound					Southbound					Eastbound					Westbound					Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	
All Vehicles	56	20	24	0		80	20	52	0		36	304	20	0		24	368	80	4		**1088**
Heavy Trucks	0	0	0			4	4	4			8	12	4			0	12	4			**52**
Pedestrians		0					0					0					0				**0**
Bicycles	0	0	0			0	0	0			0	0	0			0	0	0			**0**
Railroad Stopped Buses																					

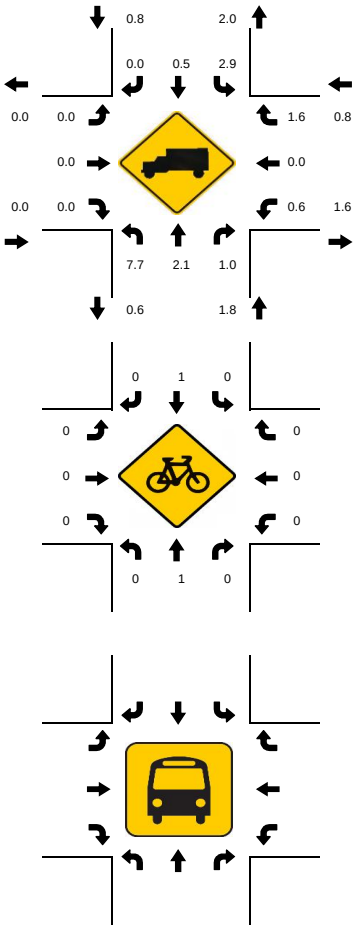
LOCATION: SR 200 & SW 42nd St/43rd St Rd
CITY/STATE: Ocala, FL

PROJECT ID: 18-03086-010
DATE: 02/20/2018

Peak-Hour: 04:45 PM - 05:45 PM
Peak 15-Minute: 05:15 PM - 05:30 PM







15-Min Count Period Beginning At	SR 200 Northbound					SR 200 Southbound					SW 42nd St/43rd St Rd Eastbound					SW 42nd St/43rd St Rd Westbound					Total	Hourly Total
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
04:00 PM	0	266	91	3	37	39	384	0	3	0	0	0	0	0	0	159	0	50	0	23	995	4267
04:15 PM	0	336	128	4	38	49	425	0	3	0	0	0	0	0	0	126	0	35	0	28	1106	4387
04:30 PM	0	256	98	1	41	52	410	0	1	0	0	0	0	0	0	165	0	61	0	38	1044	4455
04:45 PM	0	373	115	1	33	34	409	0	1	0	0	0	0	0	0	146	0	43	0	17	1122	4558
05:00 PM	0	361	114	5	35	50	403	0	3	0	0	0	0	0	0	134	0	45	0	32	1115	4468
05:15 PM	0	314	127	5	48	62	401	0	4	0	0	0	0	0	0	209	0	52	0	22	1174	3353
05:30 PM	0	316	125	2	36	48	425	0	2	0	0	0	0	0	0	178	0	51	0	33	1147	2179
05:45 PM	0	296	98	3	25	52	401	0	3	0	0	0	0	0	0	140	0	39	0	29	1032	1032
Peak 15-Min Flowrates	**Northbound**					**Southbound**					**Eastbound**					**Westbound**					**Total**	
	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*	Left	Thru	Rgt	U	R*		
All Vehicles	0	1492	508	20	192	248	1700	0	16	0	0	0	0	0	0	836	0	208	0	132	**5028**	
Heavy Trucks	0	36	12			20	12	0			0	0	0			8	0	4			**92**	
Pedestrians		0					0					4					0				**4**	
Bicycles	0	4	0			0	4	0			0	0	0			0	0	0			**8**	
Railroad Stopped Buses																						

Appendix D: Signal Timing Worksheets

ID: 107
Name: SW 20th St & 38th Ave
Configuration: Standard

Param	Phs 1	Phs 2	Phs 3	Phs 4	Phs 5	Phs 6	Phs 7	Phs 8	Phs 9	Phs 10	Phs 11	Phs 12	Phs 13	Phs 14	Phs 15	Phs 16
Walk	0	7	0	7	0	7	0	7	0	0	0	0	0	0	0	0
Ped Clearance	0	16	0	22	0	16	0	22	0	0	0	0	0	0	0	0
Min Green	10	20	5	10	10	20	5	10	0	0	0	0	0	0	0	0
Passage	3	4	3	3	3	4	3	3	0	0	0	0	0	0	0	0
Max1	20	45	20	25	20	45	20	25	0	0	0	0	0	0	0	0
Max2	20	65	20	25	20	65	20	25	0	0	0	0	0	0	0	0
Yellow	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3	0	0	0	0	0	0	0	0
Red	0	1	0	1	0	1	0	1	0	0	0	0	0	0	0	0
Red Revert	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Added Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduce By	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Step	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Startup	RED	GREEN	RED	RED	RED	GREEN	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED
Enable	On	On	On	On	On	On	On	On	Off	Off	Off	Off	Off	Off	Off	Off
Auto Entry	Off	Off	Off	On	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off
Auto Exit	Off	On	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Non Act1	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Non Act2	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Lock Call	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Min Recall	Off	On	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Max Recall	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Ped Recall	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Soft Recall	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Dual Entry	Off	On	Off	On	Off	On	Off	On	Off	Off	Off	Off	Off	Off	Off	Off
Sim Gap Enable	On	On	On	On	On	On	On	On	Off	Off	Off	Off	Off	Off	Off	Off
Guar Passage	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Rest In Walk	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Cond Service	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Add Init Calc	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Ring	1	1	1	1	2	2	2	2	0	0	0	0	0	0	0	0
Concur 1	5	5	7	7	1	1	3	3	0	0	0	0	0	0	0	0
Concur 2	6	6	8	8	2	2	4	4	0	0	0	0	0	0	0	0
Concur 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

ID: 222
Name: SW 20th St & 31st Ave-
Configuration: Upload

Param	Phs 1	Phs 2	Phs 3	Phs 4	Phs 5	Phs 6	Phs 7	Phs 8	Phs 9	Phs 10	Phs 11	Phs 12	Phs 13	Phs 14	Phs 15	Phs 16
Walk	0	7	0	7	0	7	0	0	0	0	0	0	0	0	0	0
Ped Clearance	0	15	0	14	0	15	0	0	0	0	0	0	0	0	0	0
Min Green	0	15	0	8	5	15	2	2	0	0	0	0	0	0	0	0
Passage	0	4	0	3.5	3.5	4	0	0	0	0	0	0	0	0	0	0
Max1	0	30	0	26	20	30	0	0	0	0	0	0	0	0	0	0
Max2	0	40	0	30	25	40	0	0	0	0	0	0	0	0	0	0
Yellow	0	4.7	0	3.6	3.6	4.7	0	4	0	0	0	0	0	0	0	0
Red	0	2	0	2.4	2	2	0	0	0	0	0	0	0	0	0	0
Red Revert	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Added Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduce By	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Step	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Startup	RED	GREEN	RED	RED	RED	GREEN	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED
Enable	Off	On	Off	On	On	On	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Auto Entry	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Auto Exit	Off	On	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Non Act1	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Non Act2	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Lock Call	Off	On	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Min Recall	Off	On	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Max Recall	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Ped Recall	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Soft Recall	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Dual Entry	Off	On	Off	On	Off	On	Off	On	Off	Off	Off	Off	Off	Off	Off	Off
Sim Gap Enable	On	On	On	On	On	On	On	On	Off	Off	Off	Off	Off	Off	Off	Off
Guar Passage	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Rest In Walk	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Cond Service	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Add Init Calc	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Ring	1	1	1	1	2	2	2	2	0	0	0	0	0	0	0	0
Concur 1	5	5	7	7	1	1	3	3	0	0	0	0	0	0	0	0
Concur 2	6	6	8	8	2	2	4	4	0	0	0	0	0	0	0	0
Concur 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

ID: 170
Name: SW 27th Ave & SW 20th St (Temp)
Configuration: Standard

Param	Phs 1	Phs 2	Phs 3	Phs 4	Phs 5	Phs 6	Phs 7	Phs 8	Phs 9	Phs 10	Phs 11	Phs 12	Phs 13	Phs 14	Phs 15	Phs 16
Walk	0	7	0	7	0	7	0	7	0	0	0	0	0	0	0	0
Ped Clearance	0	28	0	25	0	18	0	26	0	0	0	0	0	0	0	0
Min Green	7	20	7	7	0	20	0	7	0	0	0	0	0	0	0	0
Passage	3	3	3	3	0	3	0	3	0	0	0	0	0	0	0	0
Max1	30	40	30	40	0	40	0	40	0	0	0	0	0	0	0	0
Max2	25	67	24	34	0	93	0	50	0	0	0	0	0	0	0	0
Yellow	4.7	4.7	4.7	3.6	0	4.7	0	4.7	0	0	0	0	0	0	0	0
Red	0	2	0	3.1	0	2	0	2	0	0	0	0	0	0	0	0
Red Revert	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Added Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Max Initial	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Cars Before Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Time To Reduce	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Reduce By	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Gap	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Limit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Dynamic Max Step	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Startup	RED	GREEN	RED	RED	RED	GREEN	RED	RED	RED	RED	RED	RED	RED	RED	RED	RED
Enable	On	On	On	On	Off	On	Off	On	Off	Off	Off	Off	Off	Off	Off	Off
Auto Entry	Off	Off	Off	On	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off
Auto Exit	Off	On	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Non Act1	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Non Act2	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Lock Call	Off	On	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Min Recall	Off	On	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Max Recall	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Ped Recall	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Soft Recall	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Dual Entry	Off	On	Off	On	Off	On	Off	On	Off	Off	Off	Off	Off	Off	Off	Off
Sim Gap Enable	Off	On	Off	On	Off	On	Off	On	Off	Off	Off	Off	Off	Off	Off	Off
Guar Passage	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Rest In Walk	Off	On	Off	Off	Off	On	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Cond Service	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Add Init Calc	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off	Off
Ring	1	1	1	1	2	2	2	2	0	0	0	0	0	0	0	0
Concur 1	5	5	7	7	1	1	3	3	0	0	0	0	0	0	0	0
Concur 2	6	6	8	8	2	2	4	4	0	0	0	0	0	0	0	0
Concur 3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 7	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 8	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 9	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Concur 10	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

ID: 170
Name: SW 27th Ave & SW 20th St (Temp)
Configuration: Standard

Pattern	Cycle Time	Offset Time	Split Number	Seq Number
Pattern 1	140	118	1	1
Pattern 2	150	16	2	1
Pattern 3	160	30	3	1
Pattern 4	110	93	4	1
Pattern 5	160	146	5	1
Pattern 6	0	0	0	1
Pattern 7	0	0	0	1
Pattern 8	0	0	0	1
Pattern 9	0	0	0	1
Pattern 10	0	0	0	1
Pattern 11	0	0	0	1
Pattern 12	0	0	0	1
Pattern 13	0	0	0	1
Pattern 14	0	0	0	1
Pattern 15	0	0	0	1
Pattern 16	0	0	0	1
Pattern 17	0	0	0	1
Pattern 18	0	0	0	1
Pattern 19	0	0	0	1
Pattern 20	0	0	0	1
Pattern 21	0	0	0	1
Pattern 22	0	0	0	1
Pattern 23	0	0	0	1
Pattern 24	0	0	0	1
Pattern 25	0	0	0	1
Pattern 26	0	0	0	1
Pattern 27	0	0	0	1
Pattern 28	0	0	0	1
Pattern 29	0	0	0	1
Pattern 30	0	0	0	1
Pattern 31	0	0	0	1
Pattern 32	0	0	0	1
Pattern 33	0	0	0	1
Pattern 34	0	0	0	1
Pattern 35	0	0	0	1
Pattern 36	0	0	0	1
Pattern 37	0	0	0	1
Pattern 38	0	0	0	1
Pattern 39	0	0	0	1
Pattern 40	0	0	0	1
Pattern 41	0	0	0	1
Pattern 42	0	0	0	1
Pattern 43	0	0	0	1
Pattern 44	0	0	0	1
Pattern 45	0	0	0	1
Pattern 46	0	0	0	1
Pattern 47	0	0	0	1
Pattern 48	0	0	0	1

Station : 122 - SR 200 & SW 43rd St Rd (Standard File)

Phase [1.1.1]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Walk		7		7		7		7								
Ped Clearance		27		36		27		40								
Min Green	7	20	7	7	7	20	7	7	5	5	5	5	5	5	5	5
Passage	3	3	3	4	3	3	3	4	1	1	1	1	1	1	1	1
Max1	20	55	30	30	20	55	14	30	25	25	25	25	25	25	25	25
Max2	15	103		18	22	103	24	10	50	50	50	50	50	50	50	50
Yellow	5.2	5.2		4	5.2	5.2	4	4	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
Red	2.7	2		3.3	2.8	2	3	3.3	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																
Auto Exit		ON				ON										
Rest In Walk		ON				ON										

Phase Option [1.1.2]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Enable	ON	ON		ON	ON	ON	ON	ON								
Auto Entry				ON			ON	ON								
Non Act1																
Non Act2																
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	ON	ON	ON	ON
Guar Passage																
Cond Service																
Add Init Calc																

Alternate Phase Program 1, Calls and Redirection [1.1.6.3]

	Entry	Call Phases	From	To	From	To	From	To	From	To	Assigned Ph
1											
2											
3											
4											
5											
6											
7											
8											

Alternate Phase Program 2, Calls and Redirection [1.1.6.3]

	Entry	Call Phases	From	To	From	To	From	To	From	To	Assigned Ph
1											
2											
3											
4											
5											
6											
7											
8											

Alternate Phase Program 1, Interval Times [1.1.6.1]

	Phase	Walk	Ped Clear	Min Green	Passage	Max1	Max2	Yellow	Red Clear	Assign Ph	Bike Clear
1											
2											
3											
4											
5											
6											
7											
8											

Alternate Phase Program 2, Interval Times [1.1.6.1]

	Phase	Walk	Ped Clear	Min Green	Passage	Max1	Max2	Yellow	Red Clear	Assign Ph	Bike Clear
1											
2											
3											
4											
5											
6											
7											
8											

Prepared By	Date Implemented	Reviewed By	Traffic Engineer

City of Ocala Timing Sheet 12/29/2016 8:53:37 AM

Station : 122 - SR 200 & SW 43rd St Rd (Standard File)

Unit Parameters [1.2.1]

Start	Auto	Back	Red	Cons	Tone	Feat	Phas	Dian	SDL	TS2	Cycl	Max	Max	Max	Enal	Loca	Start	Disa	Yell	Omit	Free

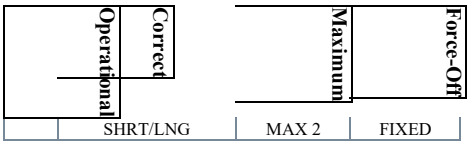
Station : 122 - SR 200 & SW 43rd St Rd (Standard File)

Preemption Times+[3.4]/Overlaps+[3.5]/Options+[3.6]

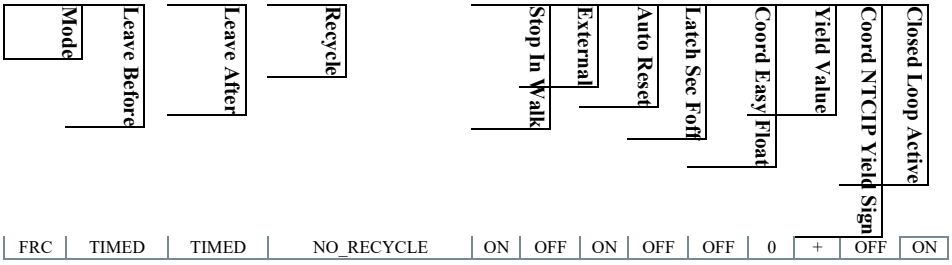
Preempt	1	2	3	4	5	6
Enable						
Type	EMERG	EMERG	EMERG	EMERG	EMERG	EMERG
Skip Track						
Volt Mon Flash						
Coord in Preempt						
Max2						
Return Max/Min	MAX	MAX	MAX	MAX	MAX	MAX
Extend Dwell						
Pattern						
Output Mode	TS2	TS2	TS2	TS2	TS2	TS2
Track Over 1						
Track Over 2						
Track Over 3						
Track Over 4						
Track Over 5						
Track Over 6						
Track Over 7						
Track Over 8						
Track Over 9						
Track Over 10						
Track Over 11						
Track Over 12						
Dwell Over 1						
Dwell Over 2						
Dwell Over 3						
Dwell Over 4						
Dwell Over 5						
Dwell Over 6						
Dwell Over 7						
Dwell Over 8						
Dwell Over 9						
Dwell Over 10						
Dwell Over 11						
Dwell Over 12						
Ped Clear						
Yellow						
Red						
Return Min/Max						
Delay Inh						
Exit Time						
All Red B4						

Coordination, Modes,+ [2.1]

Modes



Modes+



Coordination, Pattern 1-16 [2.1]

Pattern	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Cycle Time	140	150	160	110	160											
Offset Time	66	97	111	91	62											
Split Number	1	2	3	4	5	6	7	8								
Seq Number	1	2	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Offset	endgrn	endgrn	endgrn	endgrn	endgrn	beggrn	beggrn	beggrn	beggrn	beggrn	beggrn	beggrn	beggrn	beggrn	beggrn	beggrn

Coordination, Pattern 17-32 [2.1]

Pattern	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Cycle Time																
Offset Time																
Split Number																
Seq Number	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Offset	beggrn	beggrn	beggrn	beggrn	beggrn	beggrn	beggrn	beggrn	beggrn	beggrn	beggrn	beggrn	beggrn	beggrn	beggrn	beggrn

Station : 122 - SR 200 & SW 43rd St Rd (Standard File)

Coordination, Splits [2.7.1]

Split Table 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	17	83		40	20	80	23	17								
Mode	NON	MXP	NON	NON	NON	MXP	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	18	67		65	22	63	50	15								
Mode	NON	MXP	NON	NON	MAX	MXP	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph						ON										

Split Table 3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	17	76		67	26	67	52	15								
Mode	NON	MXP	NON	NON	NON	MXP	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	18	55		37	20	53	22	15								
Mode	NON	MXP	NON	NON	NON	MXP	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	18	77		65	22	73	50	15								
Mode	NON	MXP	NON	NON	NON	MXP	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph		ON														

Split Table 6	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph																

Split Table 7	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph																

Split Table 8	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph																

Split Table 9	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph																

Split Table 10	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph																

Split Table 11	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph																

Split Table 12	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph																

Station : 122 - SR 200 & SW 43rd St Rd (Standard File)

Split Table 13	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph																

Split Table 14	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph																

Split Table 15	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph																

Split Table 16	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph																

Split Table 17	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph																

Split Table 18	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph																

Split Table 19	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph																

Split Table 20	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph																

Split Table 21	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph																

Split Table 22	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph																

Split Table 23	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph																

Split Table 24	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph																

Split Table 25	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph																

Split Table 26	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph																

Split Table 27	**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON	NON
Coord-Ph																

Station : 122 - SR 200 & SW 43rd St Rd (Standard File)

TB Coor, Advanced Scheduler [4.3]

	Month												Day of Week							Day of Month									1									2									3		
Plan	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	Day Plan
1	1	1	1	1	1	1	1	1	1	1	1	1		1	1	1	1	1		1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	2
3	1	1	1	1	1	1	1	1	1	1	1	1							1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	3
4																																																	1
5																																																	1
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31																																																	1
32																																																	1

TB Coor, Day Plan [4.4]

Day Plan Table 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour		6	10	15	18	20	23									
Minute			30		30											
Action	100	1	5	3	1	4	100									

Day Plan Table 2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour		8	10	18	22											
Minute			30													
Action	100	4	1	4	100											

Day Plan Table 3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour		7	9	19	23											
Minute		30	30	30												
Action	100	4	5	4	100											

Day Plan Table 4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Day Plan Table 5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Day Plan Table 6	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action																

Appendix E: Intersection Volume Development Worksheets

INTERSECTION VOLUME DEVELOPMENT
SW 43rd Ct @ SW 20th St
AM Peak Hour

Case	SW 43rd Ct Northbound			SW 44th Ave Southbound			SW 20th St Eastbound			SW 20th St Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2/20/18 Observed Volumes	0	0	0	24	0	59	100	575	0	0	325	45
Peak Season Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2018 Peak Season Volumes	0	0	0	24	0	60	101	581	0	0	328	45
Growth Factor	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29
2037 Peak Season Volumes	0	0	0	31	0	77	130	747	0	0	421	58
Reserved Trips												
Heathbrook (remaining unbuilt)	0	0	0	0	0	0	0	3	0	0	4	0
Trinity Lane/Red Oak PUD	0	0	0	0	0	0	0	10	0	0	11	0
Grand Oaks Town Center remaining	0	0	0	0	0	0	0	1	0	0	1	0
Broadmoor Oaks	0	0	0	0	0	0	0	2	0	0	2	0
Paddock Ridge East	0	0	0	0	0	0	0	2	0	0	1	0
Paddock Ridge West	0	0	0	0	0	0	0	5	0	0	1	0
On Top of the World	0	0	0	0	0	0	0	55	0	0	28	0
Winding Oaks PD	0	0	0	0	0	3	2	0	0	0	0	0
Country Green PD	0	0	0	0	0	12	21	94	0	0	54	0
Reserved Trips	0	0	0	0	0	15	23	172	0	0	102	0
2037 Non-Project Traffic (Prior to adjustment for SW 44th Ave Construction)	0	0	0	31	0	92	153	919	0	0	523	58
SW 44th Avenue Adjustment												
Adjusted Approach Volume		580			410			1070			490	
Approach Percent Turns	25%	50%	25%	15%	50%	35%	10%	65%	25%	15%	80%	5%
2037 Projected Background (Non-Project) Traffic Volumes	145	290	145	62	205	144	107	696	268	74	392	25
Project Traffic												
Project Assignment	17.3%	9.9%	20.6%	0.0%	12.1%	0.0%	7.4%	6.2%	16.3%	27.2%	0.0%	0.0%
	OUT	OUT	OUT	--	IN	--	OUT	OUT	IN	IN	--	--
Project Traffic (Net New Trips)	37	21	44	0	23	0	16	13	31	52	0	0
Pass-By Traffic	11	0	0	0	0	0	0	0	0	11	-11	0
Total Build-Out Volumes	193	311	189	62	228	144	123	709	299	137	381	25

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Raw-To-Peak Season Factor: 1.01
Applied Growth Rate: 1.50%
Existing Year 2018
Build-Out Year: 2037
Growth Factor: 1.29

INTERSECTION VOLUME DEVELOPMENT
SW 44th Ave @ SW 20th St
PM Peak Hour

Case	SW 44th Ave Northbound			SW 44th Ave Southbound			SW 20th St Eastbound			SW 20th St Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2/20/18 Observed Volumes	0	0	0	65	0	115	32	445	0	3	604	21
Peak Season Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2018 Peak Season Volumes	0	0	0	66	0	116	32	449	0	3	610	21
Growth Factor	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29
2037 Peak Season Volumes	0	0	0	85	0	149	41	577	0	4	784	27
Reserved Trips												
Heathbrook (remaining unbuilt)	0	0	0	0	0	0	0	9	0	0	9	0
Trinity Lane/Red Oak PUD	0	0	0	0	0	0	0	13	0	0	14	0
Grand Oaks Town Center remaining	0	0	0	0	0	0	0	0	0	0	0	0
Broadmoor Oaks	0	0	0	0	0	0	0	0	0	0	0	0
Paddock Ridge East	0	0	0	0	0	0	0	1	0	0	3	0
Paddock Ridge West	0	0	0	0	0	0	0	3	0	0	7	0
On Top of the World	0	0	0	0	0	0	0	56	0	0	82	0
Winding Oaks PD	0	0	0	0	0	8	9	0	0	0	0	0
Reserved Trips	0	0	0	0	0	8	9	82	0	0	115	0
2037 Non-Project Traffic (Prior to adjustment for SW 44th Ave Construction)	0	0	0	85	0	157	50	659	0	4	899	27
SW 44th Avenue Adjustment												
Adjusted Approach Volume		570			590			770			780	
Approach Percent Turns	25%	50%	25%	15%	50%	35%	10%	65%	25%	15%	80%	5%
2037 Projected Background (Non-Project) Traffic Volumes	143	285	143	89	295	207	77	501	193	117	624	39
Project Traffic												
Project Assignment	17.3%	9.9%	20.6%	0.0%	12.1%	0.0%	7.4%	6.2%	16.3%	27.2%	0.0%	0.0%
	OUT	OUT	OUT	--	IN	--	OUT	OUT	IN	IN	--	--
Project Traffic (Net New Trips)	42	24	50	0	29	0	18	15	39	65	0	0
Pass-By Traffic	18	0	0	0	0	0	0	0	0	18	-18	0
Total Build-Out Volumes	203	309	193	89	324	207	95	516	232	200	606	39

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Raw-To-Peak Season Factor: 1.01
Applied Growth Rate: 1.50%
Existing Year 2018
Build-Out Year: 2037
Growth Factor: 1.29

INTERSECTION VOLUME DEVELOPMENT
SW 38th Ave @ SW 20th St
AM Peak Hour

Case	SW 38th Ave Northbound			SW 38th Ave Southbound			SW 20th St Eastbound			SW 20th St Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2/20/18 Observed Volumes	38	73	159	57	24	18	35	551	32	79	308	130
Peak Season Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2018 Peak Season Volumes	38	74	161	58	24	18	35	557	32	80	311	131
Growth Factor	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29
2037 Peak Season Volumes	49	95	207	75	31	23	45	716	41	103	400	168
Reserved Trips												
Heathbrook (remaining unbuilt)	4	2	6	0	1	0	0	0	3	4	0	0
Trinity Lane/Red Oak PUD	5	21	5	0	21	0	0	0	5	5	0	0
Grand Oaks Town Center remaining	1	1	1	0	1	0	0	0	1	1	0	0
Broadmoor Oaks	2	9	35	0	11	0	0	0	2	42	0	0
Paddock Ridge East	1	0	0	0	0	0	0	0	2	0	0	0
Paddock Ridge West	1	0	0	0	0	0	0	0	5	0	0	0
On Top of the World	0	0	0	0	0	9	18	36	0	0	19	0
Winding Oaks PD	0	2	0	0	3	0	0	0	0	0	0	0
Country Green PD	0	0	0	0	0	9	16	76	0	0	44	0
Reserved Trips	14	35	47	0	37	18	34	112	18	52	63	0
2037 Non-Project Traffic (Prior to adjustment for SW 44th Ave Construction)	63	130	254	75	68	41	79	828	59	155	463	168
SW 44th Avenue Adjustment												
Adjusted Approach Volume		290			150			970			750	
Approach Percent Turns	15%	30%	55%	45%	40%	15%	5%	85%	10%	15%	75%	10%
2037 Projected Background (Non-Project) Traffic Volumes	44	87	160	68	60	23	49	825	97	113	563	75
Project Traffic												
Project Assignment	0.0%	0.0%	0.0%	0.0%	0.0%	6.0%	6.0%	29.0%	0.0%	0.0%	29.0%	0.0%
	--	--	--	--	--	IN	OUT	OUT	--	--	IN	--
Project Traffic (Net New Trips)	0	0	0	0	0	9	16	76	0	0	44	0
Total Build-Out Volumes	44	87	160	68	60	32	65	901	97	113	607	75

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Raw-To-Peak Season Factor: 1.01
Applied Growth Rate: 1.50%
Existing Year 2018
Build-Out Year: 2037
Growth Factor: 1.29

INTERSECTION VOLUME DEVELOPMENT
SW 38th Ave @ SW 20th St
PM Peak Hour

Case	SW 38th Ave Northbound			SW 38th Ave Southbound			SW 20th St Eastbound			SW 20th St Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2/20/18 Observed Volumes	44	51	136	185	114	44	10	368	45	151	569	58
Peak Season Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2018 Peak Season Volumes	44	52	137	187	115	44	10	372	45	153	575	59
Growth Factor	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29
2037 Peak Season Volumes	57	67	176	240	148	57	13	478	58	197	739	76
Reserved Trips												
Heathbrook (remaining unbuilt)	1	1	14	0	2	0	0	0	2	13	0	0
Trinity Lane/Red Oak PUD	7	28	7	0	26	0	0	0	7	7	0	0
Grand Oaks Town Center remaining	1	1	1	0	1	0	0	0	1	1	0	0
Broadmoor Oaks	5	13	46	0	10	0	0	0	4	37	0	0
Paddock Ridge East	3	0	0	0	0	0	0	0	1	0	0	0
Paddock Ridge West	7	0	0	0	0	0	0	0	3	0	0	0
On Top of the World	0	0	0	0	0	20	14	28	0	0	41	0
Winding Oaks PD	0	9	0	0	8	0	0	0	0	0	0	0
Reserved Trips	24	52	68	0	47	20	14	28	18	58	41	0
2037 Non-Project Traffic (Prior to adjustment for SW 44th Ave Construction)	81	119	244	240	195	77	27	506	76	255	780	76
SW 44th Avenue Adjustment												
Adjusted Approach Volume		290			410			520			1,060	
Approach Percent Turns	15%	30%	55%	45%	40%	15%	5%	85%	10%	15%	75%	10%
2037 Projected Background (Non-Project) Traffic Volumes	44	87	160	185	164	62	26	442	52	159	795	106
Project Traffic												
Project Assignment	0.0%	0.0%	0.0%	0.0%	0.0%	6.0%	6.0%	21.0%	0.0%	0.0%	21.0%	0.0%
	--	--	--	--	--	IN	OUT	OUT	--	--	IN	--
Project Traffic (Net New Trips)	0	0	0	0	0	14	15	51	0	0	50	0
Total Build-Out Volumes	44	87	160	185	164	76	41	493	52	159	845	106

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Raw-To-Peak Season Factor: 1.01
Applied Growth Rate: 1.50%
Existing Year 2018
Build-Out Year: 2037
Growth Factor: 1.29

INTERSECTION VOLUME DEVELOPMENT
College of Central FL @ SW 20th St
PM Peak Hour

Case	College of Central FL Northbound			SW 31st Ave Southbound			SW 20th St Eastbound			SW 20th St Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2/20/18 Observed Volumes	44	48	92	59	72	78	29	468	49	84	452	60
Peak Season Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2018 Peak Season Volumes	44	48	93	60	73	79	29	473	49	85	457	61
Growth Factor	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29
2037 Peak Season Volumes	57	62	120	77	94	102	37	608	63	109	587	78
Reserved Trips												
Heathbrook (remaining unbuilt)	0	0	0	0	0	0	0	17	0	0	14	0
Trinity Lane/Red Oak PUD	0	0	0	0	0	0	0	7	0	0	7	0
Grand Oaks Town Center remaining	0	0	0	0	0	0	0	1	0	0	1	0
Broadmoor Oaks	0	0	0	0	0	0	0	46	0	0	37	0
Paddock Ridge East	0	0	0	0	0	0	0	0	0	0	0	0
Paddock Ridge West	0	0	0	0	0	0	0	0	0	0	0	0
On Top of the World	0	0	0	0	0	0	0	14	0	0	20	0
Winding Oaks PD	0	0	0	0	0	0	0	0	0	0	0	0
Reserved Trips	0	0	0	0	0	0	0	85	0	0	79	0
2037 Non-Project Traffic	57	62	120	77	94	102	37	693	63	109	666	78
Project Traffic												
Project Assignment	0.0%	0.0%	0.0%	0.0%	0.0%	1.0%	1.0%	12.0%	0.0%	0.0%	12.0%	0.0%
	--	--	--	--	--	IN	OUT	OUT	--	--	IN	--
Project Traffic (Net New Trips)	0	0	0	0	0	2	2	29	0	0	29	0
Total Build-Out Volumes	57	62	120	77	94	104	39	722	63	109	695	78

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0.123583 0.088435

Raw-To-Peak Season Factor: 1.01
Applied Growth Rate: 1.50%
Existing Year 2018
Build-Out Year: 2037
Growth Factor: 1.29

INTERSECTION VOLUME DEVELOPMENT
SW 27th Ave @ SW 20th St
PM Peak Hour

Case	SW 27th Ave Northbound			SW 27th Ave Southbound			SW 20th St Eastbound			SW 20th St Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2/20/18 Observed Volumes	186	511	17	50	580	214	214	263	216	13	210	59
Peak Season Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2018 Peak Season Volumes	188	516	17	51	586	216	216	266	218	13	212	60
Growth Factor	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29
2037 Peak Season Volumes	242	663	22	66	753	278	278	342	280	17	272	77
Reserved Trips												
Heathbrook (remaining unbuilt)	14	43	0	0	61	0	0	0	20	0	0	0
Trinity Lane/Red Oak PUD	14	56	0	0	53	0	0	0	13	0	0	0
Grand Oaks Town Center remaining	2	8	0	0	9	0	0	0	2	0	0	0
Broadmoor Oaks	5	17	0	0	9	0	0	0	2	0	0	0
Paddock Ridge East	0	3	0	0	1	0	0	0	0	0	0	0
Paddock Ridge West	1	7	0	0	3	0	0	0	0	0	0	0
On Top of the World	0	0	0	0	0	0	0	7	0	0	10	0
Winding Oaks PD	0	9	0	0	8	0	0	0	0	0	0	0
Reserved Trips	36	143	0	0	144	0	0	7	37	0	10	0
2037 Non-Project Traffic	278	806	22	66	897	278	278	349	317	17	282	77
Project Traffic												
Project Assignment	1.0%	0.0%	0.0%	0.0%	0.0%	4.0%	4.0%	7.0%	1.0%	0.0%	7.0%	0.0%
	IN	--	--	--	--	IN	OUT	OUT	OUT	--	IN	--
Project Traffic (Net New Trips)	2	0	0	0	0	10	10	17	2	0	17	0
Total Build-Out Volumes	280	806	22	66	897	288	288	366	319	17	299	77

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Raw-To-Peak Season Factor: 1.01
Applied Growth Rate: 1.50%
Existing Year 2018
Build-Out Year: 2037
Growth Factor: 1.29

INTERSECTION VOLUME DEVELOPMENT
SW 44th Ave @ SW 40th St
PM Peak Hour

Case	SW 44th Ave Northbound			SW 44th Ave Southbound			SW 40th St Eastbound			SW 40th St Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2/20/18 Observed Volumes	36	14	18	52	17	31	30	267	16	15	332	58
Peak Season Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2018 Peak Season Volumes	36	14	18	53	17	31	30	270	16	15	335	59
Growth Factor	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29
2037 Peak Season Volumes	46	18	23	68	22	40	39	347	21	19	430	76
Reserved Trips												
Heathbrook (remaining unbuilt)	0	0	0	0	0	0	0	19	0	0	13	0
Trinity Lane/Red Oak PUD	0	0	0	0	0	0	0	13	0	0	14	0
Grand Oaks Town Center remaining	0	0	0	7	0	0	0	8	0	0	6	6
Broadmoor Oaks	0	0	0	0	0	0	0	19	0	0	23	0
Paddock Ridge East	0	0	0	0	0	0	0	0	0	0	1	0
Paddock Ridge West	0	0	0	0	0	0	0	1	0	0	2	1
On Top of the World	0	0	0	0	0	0	0	28	0	0	41	0
Winding Oaks PD	0	0	0	8	0	0	0	0	0	0	0	9
Reserved Trips	0	0	0	15	0	0	0	88	0	0	100	16
2037 Non-Project Traffic (Prior to adjustment for SW 44th Ave Construction)	46	18	23	83	22	40	39	435	21	19	530	92
SW 44th Avenue Adjustment												
Adjusted Approach Volume	740	740	740	700	700	700	570	570	570	640	640	640
Approach Percent Turns	25%	60%	15%	15%	60%	25%	15%	50%	35%	15%	60%	25%
2037 Projected Background (Non-Project) Traffic Volumes	185	444	111	105	420	175	86	285	200	96	384	160
Project Traffic												
Project Assignment	0.0%	31.0%	0.0%	5.0%	31.0%	2.0%	2.0%	0.0%	0.0%	0.0%	0.0%	5.0%
	--	IN	--	OUT	OUT	OUT	IN	--	--	--	--	IN
Project Traffic (Net New Trips)	0	74	0	12	75	5	5	0	0	0	0	12
Total Build-Out Volumes	185	518	111	117	495	180	91	285	200	96	384	172

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Raw-To-Peak Season Factor: 1.01
Applied Growth Rate: 1.50%
Existing Year 2018
Build-Out Year: 2037
Growth Factor: 1.29

INTERSECTION VOLUME DEVELOPMENT
SW 43rd St Rd @ SR 200
PM Peak Hour

Case	SW 43rd St Rd Northbound			SW 44th Avenue Southbound			SR 200 Eastbound			SR 200 Westbound		
	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right
2/20/18 Observed Volumes	667	0	191	0	0	0	13	1,364	481	204	1,638	0
Peak Season Factor	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01	1.01
2018 Peak Season Volumes	674	0	193	0	0	0	13	1,378	486	206	1,654	0
Growth Factor	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29	1.29
2037 Peak Season Volumes	866	0	248	0	0	0	17	1,771	625	265	2,125	0
Reserved Trips												
Heathbrook (remaining unbuilt)	38	0	0	0	0	0	0	214	27	0	198	0
Trinity Lane/Red Oak PUD	108	0	54	0	0	0	0	0	102	51	0	0
Grand Oaks Town Center remaining	24	0	14	0	0	0	0	0	25	15	0	0
Broadmoor Oaks	0	0	16	0	0	0	0	24	0	19	29	0
Paddock Ridge East	18	0	8	0	0	0	0	0	8	4	0	0
Paddock Ridge West	49	0	22	0	0	0	0	0	18	8	0	0
On Top of the World	16	0	0	0	0	0	0	75	11	0	110	0
Winding Oaks PD	25	0	0	0	0	0	0	152	28	0	131	0
Reserved Trips	278	0	114	0	0	0	0	465	219	97	468	0
2037 Non-Project Traffic (Prior to adjustment for SW 44th Ave Construction)	1,144	0	362	0	0	0	17	2,236	844	362	2,593	0
SW 44th Avenue Volume Adjustment												
Adjusted Approach Volume		1,510		790	790	790	2,630	2,630	2,630	2,510	2,510	2,510
Approach Percent Turns	30%	50%	20%	15%	65%	20%	10%	65%	25%	10%	80%	8%
2037 Projected Background (Non-Project) Traffic Volumes	453	755	302	119	514	158	263	1,710	658	251	2,008	201
Project Traffic												
Project Assignment	0.0%	19.0%	0.0%	4.0%	19.0%	8.0%	8.0%	0.0%	0.0%	0.0%	0.0%	4.0%
	--	IN	--	OUT	OUT	OUT	IN	--	--	--	--	IN
Project Traffic (Net New Trips)	0	45	0	10	46	19	19	0	0	0	0	10
Total Build-Out Volumes	453	800	302	129	560	177	282	1,710	658	251	2,008	211

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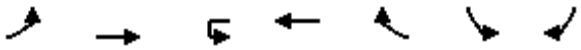
Raw-To-Peak Season Factor: 1.01
Applied Growth Rate: 1.50%
Existing Year 2018
Build-Out Year: 2037
Growth Factor: 1.29

Appendix F: Synchro Output

PM Peak Hour Existing Traffic Conditions



Lane Group	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	32	449	0	610	21	66	116
Future Volume (vph)	32	449	0	610	21	66	116
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	1%	1%	1%	1%	2%	2%
Adj. Flow (vph)	35	493	0	670	23	73	127
Shared Lane Traffic (%)							
Lane Group Flow (vph)	35	493	0	693	0	73	127
Sign Control		Free		Free		Stop	

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Vol, veh/h	32	449	0	610	21	66	116
Future Vol, veh/h	32	449	0	610	21	66	116
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	None
Storage Length	250	-	250	-	-	0	0
Veh in Median Storage, #	-	0	-	0	-	0	-
Grade, %	-	0	-	0	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91
Heavy Vehicles, %	1	1	1	1	1	2	2
Mvmt Flow	35	493	0	670	23	73	127

Major/Minor	Major1		Major2			Minor2	
Conflicting Flow All	693	0	360	-	0	999	347
Stage 1	-	-	-	-	-	682	-
Stage 2	-	-	-	-	-	317	-
Critical Hdwy	4.12	-	6.42	-	-	6.84	6.94
Critical Hdwy Stg 1	-	-	-	-	-	5.84	-
Critical Hdwy Stg 2	-	-	-	-	-	5.84	-
Follow-up Hdwy	2.21	-	2.51	-	-	3.52	3.32
Pot Cap-1 Maneuver	905	-	853	-	-	240	649
Stage 1	-	-	-	-	-	464	-
Stage 2	-	-	-	-	-	711	-
Platoon blocked, %		-		-	-		
Mov Cap-1 Maneuver	905	-	853	-	-	231	649
Mov Cap-2 Maneuver	-	-	-	-	-	231	-
Stage 1	-	-	-	-	-	464	-
Stage 2	-	-	-	-	-	684	-

Approach	EB	WB	SB
HCM Control Delay, s	0.6	0	17.6
HCM LOS			C

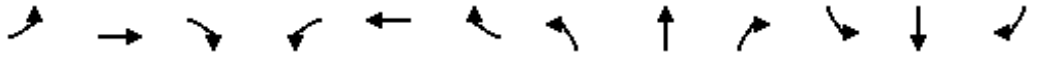
Minor Lane/Major Mvmt	EBL	EBT	WBU	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	905	-	853	-	-	231	649
HCM Lane V/C Ratio	0.039	-	-	-	-	0.314	0.196
HCM Control Delay (s)	9.1	-	0	-	-	27.6	11.9
HCM Lane LOS	A	-	A	-	-	D	B
HCM 95th %tile Q(veh)	0.1	-	0	-	-	1.3	0.7

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	10	372	45	153	575	59	44	52	137	187	115	44
Future Volume (vph)	10	372	45	153	575	59	44	52	137	187	115	44
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	12	438	53	180	676	69	52	61	161	220	135	52
Shared Lane Traffic (%)												
Lane Group Flow (vph)	12	438	53	180	745	0	52	222	0	220	135	52
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		8
Detector Phase	1	6	6	5	2		7	4		3	8	8
Switch Phase												
Minimum Initial (s)	10.0	20.0	20.0	10.0	20.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	16.3	26.3	26.3	16.3	26.3		11.3	20.0		11.3	20.0	20.0
Total Split (s)	20.0	65.0	65.0	20.0	65.0		20.0	25.0		20.0	25.0	25.0
Total Split (%)	15.4%	50.0%	50.0%	15.4%	50.0%		15.4%	19.2%		15.4%	19.2%	19.2%
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	4.3		4.3	4.3	4.3
All-Red Time (s)	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
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3		6.3	6.3		6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min		None	None		None	None	None
v/c Ratio	0.04	0.69	0.08	0.43	0.84		0.16	0.71		0.66	0.32	0.11
Control Delay	11.6	33.7	0.3	15.6	34.9		29.2	41.0		39.7	41.4	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	11.6	33.7	0.3	15.6	34.9		29.2	41.0		39.7	41.4	0.5
Queue Length 50th (ft)	3	239	0	58	356		19	75		91	67	0
Queue Length 95th (ft)	12	334	0	93	649		59	181		#221	154	0
Internal Link Dist (ft)		2796			3003			398			352	
Turn Bay Length (ft)	250			125			185			165		200
Base Capacity (vph)	338	1151	1030	443	1137		430	389		350	431	469
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.04	0.38	0.05	0.41	0.66		0.12	0.57		0.63	0.31	0.11

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 100.4
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: SW 38th Ave & SW 20th St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	10	372	45	153	575	59	44	52	137	187	115	44
Future Volume (veh/h)	10	372	45	153	575	59	44	52	137	187	115	44
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		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
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1881	1900	1845	1845	1900	1863	1863	1863
Adj Flow Rate, veh/h	12	438	21	180	676	65	52	61	105	220	135	20
Adj No. of Lanes	1	1	1	1	1	0	1	1	0	1	1	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	1	1	1	1	1	1	3	3	3	2	2	2
Cap, veh/h	199	727	618	447	779	75	294	75	130	328	391	332
Arrive On Green	0.03	0.39	0.39	0.10	0.46	0.46	0.04	0.12	0.12	0.12	0.21	0.21
Sat Flow, veh/h	1792	1881	1599	1792	1690	163	1757	610	1050	1774	1863	1583
Grp Volume(v), veh/h	12	438	21	180	0	741	52	0	166	220	135	20
Grp Sat Flow(s),veh/h/ln	1792	1881	1599	1792	0	1853	1757	0	1659	1774	1863	1583
Q Serve(g_s), s	0.4	17.9	0.8	5.3	0.0	34.6	2.5	0.0	9.4	10.0	5.9	1.0
Cycle Q Clear(g_c), s	0.4	17.9	0.8	5.3	0.0	34.6	2.5	0.0	9.4	10.0	5.9	1.0
Prop In Lane	1.00		1.00	1.00		0.09	1.00		0.63	1.00		1.00
Lane Grp Cap(c), veh/h	199	727	618	447	0	854	294	0	205	328	391	332
V/C Ratio(X)	0.06	0.60	0.03	0.40	0.00	0.87	0.18	0.00	0.81	0.67	0.35	0.06
Avail Cap(c_a), veh/h	403	1147	975	518	0	1129	475	0	322	359	391	332
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.6	23.6	18.4	15.4	0.0	23.3	34.8	0.0	41.1	30.2	32.4	30.5
Incr Delay (d2), s/veh	0.1	0.8	0.0	0.6	0.0	5.8	0.3	0.0	8.1	4.2	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	9.4	0.3	2.6	0.0	18.9	1.2	0.0	4.8	5.2	3.1	0.4
LnGrp Delay(d),s/veh	20.7	24.4	18.4	16.0	0.0	29.1	35.1	0.0	49.2	34.4	32.9	30.5
LnGrp LOS	C	C	B	B		C	D		D	C	C	C
Approach Vol, veh/h		471			921			218			375	
Approach Delay, s/veh		24.1			26.5			45.8			33.7	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.0	50.7	18.3	18.2	16.2	43.5	10.1	26.5
Change Period (Y+Rc), s	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Max Green Setting (Gmax), s	13.7	58.7	13.7	18.7	13.7	58.7	13.7	18.7
Max Q Clear Time (g_c+I1), s	2.4	36.6	12.0	11.4	7.3	19.9	4.5	7.9
Green Ext Time (p_c), s	0.0	7.8	0.1	0.5	0.2	9.1	0.1	1.3

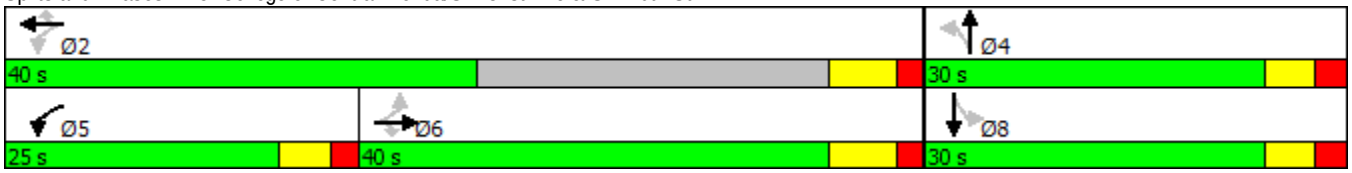
Intersection Summary	
HCM 2010 Ctrl Delay	29.4
HCM 2010 LOS	C

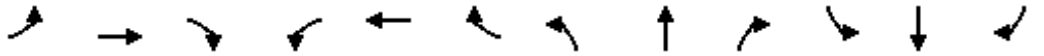
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	473	49	85	457	61	44	48	93	60	73	79
Future Volume (vph)	29	473	49	85	457	61	44	48	93	60	73	79
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	34	550	57	99	531	71	51	56	108	70	85	92
Shared Lane Traffic (%)												
Lane Group Flow (vph)	34	550	57	99	531	71	51	164	0	70	177	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		6		5	2			4			8	
Permitted Phases	6		6	2		2	4			8		
Detector Phase	6	6	6	5	2	2	4	4		8	8	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	15.0	8.0	8.0		8.0	8.0	
Minimum Split (s)	28.7	28.7	28.7	10.6	28.7	28.7	27.0	27.0		27.0	27.0	
Total Split (s)	40.0	40.0	40.0	25.0	40.0	40.0	30.0	30.0		30.0	30.0	
Total Split (%)	42.1%	42.1%	42.1%	26.3%	42.1%	42.1%	31.6%	31.6%		31.6%	31.6%	
Yellow Time (s)	4.7	4.7	4.7	3.6	4.7	4.7	3.6	3.6		3.6	3.6	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.4	2.4		2.4	2.4	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.7	6.7	6.7	5.6	6.7	6.7	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Recall Mode	Min	Min	Min	None	Min	Min	None	None		None	None	
v/c Ratio	0.10	0.72	0.08	0.22	0.48	0.07	0.23	0.42		0.31	0.49	
Control Delay	13.5	22.4	1.3	5.7	8.3	1.7	27.7	15.8		29.3	23.5	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	13.5	22.4	1.3	5.7	8.3	1.7	27.7	15.8		29.3	23.5	
Queue Length 50th (ft)	8	168	0	12	88	0	17	21		23	41	
Queue Length 95th (ft)	25	299	6	29	164	12	49	72		62	103	
Internal Link Dist (ft)		3003			1127			192			432	
Turn Bay Length (ft)	150		150	350		200	200			150		
Base Capacity (vph)	528	1130	1000	745	1702	1454	526	789		526	774	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.06	0.49	0.06	0.13	0.31	0.05	0.10	0.21		0.13	0.23	

Intersection Summary

Cycle Length: 95
Actuated Cycle Length: 59.7
Natural Cycle: 70
Control Type: Actuated-Uncoordinated

Splits and Phases: 5: College of Central Florida/SW 31st Ave & SW 20th St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	473	49	85	457	61	44	48	93	60	73	79
Future Volume (veh/h)	29	473	49	85	457	61	44	48	93	60	73	79
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		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
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1881	1881	1881	1881	1900	1863	1863	1900
Adj Flow Rate, veh/h	34	550	38	99	531	57	51	56	81	70	85	69
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	467	759	645	389	1084	921	272	134	194	284	184	149
Arrive On Green	0.40	0.40	0.40	0.07	0.58	0.58	0.19	0.19	0.19	0.19	0.19	0.19
Sat Flow, veh/h	833	1881	1599	1792	1881	1599	1240	696	1007	1247	953	773
Grp Volume(v), veh/h	34	550	38	99	531	57	51	0	137	70	0	154
Grp Sat Flow(s),veh/h/ln	833	1881	1599	1792	1881	1599	1240	0	1703	1247	0	1726
Q Serve(g_s), s	1.4	13.6	0.8	1.6	9.2	0.9	2.1	0.0	3.9	2.9	0.0	4.3
Cycle Q Clear(g_c), s	1.4	13.6	0.8	1.6	9.2	0.9	6.4	0.0	3.9	6.8	0.0	4.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.59	1.00		0.45
Lane Grp Cap(c), veh/h	467	759	645	389	1084	921	272	0	329	284	0	333
V/C Ratio(X)	0.07	0.72	0.06	0.25	0.49	0.06	0.19	0.00	0.42	0.25	0.00	0.46
Avail Cap(c_a), veh/h	635	1138	968	893	1138	968	574	0	743	587	0	753
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.2	13.8	10.0	9.5	6.9	5.1	22.5	0.0	19.5	22.4	0.0	19.7
Incr Delay (d2), s/veh	0.1	1.3	0.0	0.3	0.3	0.0	0.3	0.0	0.8	0.4	0.0	1.0
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	0.3	7.3	0.4	0.8	4.8	0.4	0.7	0.0	1.9	1.0	0.0	2.1
LnGrp Delay(d),s/veh	10.3	15.2	10.1	9.8	7.2	5.2	22.8	0.0	20.3	22.9	0.0	20.7
LnGrp LOS	B	B	B	A	A	A	C		C	C		C
Approach Vol, veh/h		622			687			188			224	
Approach Delay, s/veh		14.6			7.4			21.0			21.4	
Approach LOS		B			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		38.4		16.6	9.5	28.9		16.6
Change Period (Y+Rc), s		6.7		6.0	5.6	6.7		6.0
Max Green Setting (Gmax), s		33.3		24.0	19.4	33.3		24.0
Max Q Clear Time (g_c+I1), s		11.2		8.4	3.6	15.6		8.8
Green Ext Time (p_c), s		7.3		1.9	0.2	6.6		1.9

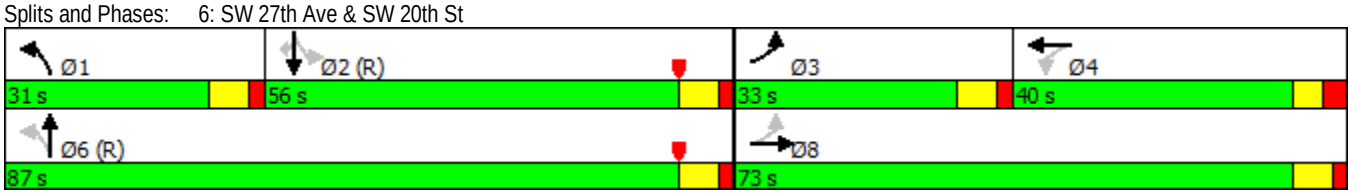
Intersection Summary	
HCM 2010 Ctrl Delay	13.3
HCM 2010 LOS	B

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	216	266	218	13	212	60	188	516	17	51	586	216
Future Volume (vph)	216	266	218	13	212	60	188	516	17	51	586	216
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	2%	2%	2%	1%	1%	1%
Adj. Flow (vph)	230	283	232	14	226	64	200	549	18	54	623	230
Shared Lane Traffic (%)												
Lane Group Flow (vph)	230	515	0	14	290	0	200	567	0	54	623	230
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases	3	8			4		1	6			2	
Permitted Phases	8			4			6			2		2
Detector Phase	3	8		4	4		1	6		2	2	2
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	20.0		20.0	20.0	20.0
Minimum Split (s)	13.7	20.0		20.0	20.0		13.7	26.7		26.7	26.7	26.7
Total Split (s)	33.0	73.0		40.0	40.0		31.0	87.0		56.0	56.0	56.0
Total Split (%)	20.6%	45.6%		25.0%	25.0%		19.4%	54.4%		35.0%	35.0%	35.0%
Yellow Time (s)	4.7	4.7		3.6	3.6		4.7	4.7		4.7	4.7	4.7
All-Red Time (s)	2.0	2.0		3.1	3.1		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
Total Lost Time (s)	6.7	6.7		6.7	6.7		6.7	6.7		6.7	6.7	6.7
Lead/Lag	Lead			Lag	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes		Yes			Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	C-Max
v/c Ratio	0.76	0.81		0.12	0.86		0.47	0.29		0.15	0.41	0.28
Control Delay	53.7	53.8		54.9	85.1		22.5	19.6		34.3	34.7	5.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	53.7	53.8		54.9	85.1		22.5	19.6		34.3	34.7	5.0
Queue Length 50th (ft)	177	457		12	288		102	159		35	237	0
Queue Length 95th (ft)	231	557		35	393		170	225		80	343	62
Internal Link Dist (ft)		941			462			544			1105	
Turn Bay Length (ft)	350			200			300			350		400
Base Capacity (vph)	353	744		140	389		502	1987		354	1535	818
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.65	0.69		0.10	0.75		0.40	0.29		0.15	0.41	0.28

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 30 (19%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 75
Control Type: Actuated-Coordinated

Splits and Phases: 6: SW 27th Ave & SW 20th St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	216	266	218	13	212	60	188	516	17	51	586	216
Future Volume (veh/h)	216	266	218	13	212	60	188	516	17	51	586	216
Number	3	8	18	7	4	14	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1881	1881	1900	1900	1900	1900	1863	1863	1900	1881	1881	1881
Adj Flow Rate, veh/h	230	283	211	14	226	54	200	549	17	54	623	124
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	1
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, %	1	1	1	0	0	0	2	2	2	1	1	1
Cap, veh/h	288	337	251	114	264	63	424	2032	63	441	1664	745
Arrive On Green	0.12	0.34	0.34	0.18	0.18	0.18	0.07	0.58	0.58	0.47	0.47	0.47
Sat Flow, veh/h	1792	1002	747	917	1483	354	1774	3505	108	850	3574	1599
Grp Volume(v), veh/h	230	0	494	14	0	280	200	277	289	54	623	124
Grp Sat Flow(s),veh/h/ln	1792	0	1749	917	0	1837	1774	1770	1844	850	1787	1599
Q Serve(g_s), s	16.3	0.0	41.8	2.3	0.0	23.7	9.1	12.5	12.5	5.8	18.0	7.2
Cycle Q Clear(g_c), s	16.3	0.0	41.8	18.7	0.0	23.7	9.1	12.5	12.5	5.8	18.0	7.2
Prop In Lane	1.00		0.43	1.00		0.19	1.00		0.06	1.00		1.00
Lane Grp Cap(c), veh/h	288	0	589	114	0	327	424	1026	1069	441	1664	745
V/C Ratio(X)	0.80	0.00	0.84	0.12	0.00	0.86	0.47	0.27	0.27	0.12	0.37	0.17
Avail Cap(c_a), veh/h	373	0	725	142	0	382	565	1026	1069	441	1664	745
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	46.6	0.0	49.1	69.4	0.0	63.8	20.0	16.8	16.8	24.4	27.7	24.8
Incr Delay (d2), s/veh	9.1	0.0	7.3	0.5	0.0	15.5	0.8	0.6	0.6	0.6	0.6	0.5
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	8.8	0.0	21.4	0.6	0.0	13.5	4.5	6.3	6.5	1.4	9.1	3.3
LnGrp Delay(d),s/veh	55.7	0.0	56.3	69.9	0.0	79.3	20.8	17.4	17.4	25.0	28.3	25.2
LnGrp LOS	E		E	E		E	C	B	B	C	C	C
Approach Vol, veh/h		724			294			766			801	
Approach Delay, s/veh		56.1			78.9			18.3			27.6	
Approach LOS		E			E			B			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6		8
Phs Duration (G+Y+Rc), s	18.3	81.2	25.4	35.1		99.5		60.5
Change Period (Y+Rc), s	6.7	6.7	6.7	6.7		6.7		6.7
Max Green Setting (Gmax), s	24.3	49.3	26.3	33.3		80.3		66.3
Max Q Clear Time (g_c+I1), s	11.1	20.0	18.3	25.7		14.5		43.8
Green Ext Time (p_c), s	0.4	9.0	0.4	2.8		10.1		4.7

Intersection Summary	
HCM 2010 Ctrl Delay	38.7
HCM 2010 LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	270	16	15	335	59	36	14	18	53	17	31
Future Volume (vph)	30	270	16	15	335	59	36	14	18	53	17	31
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
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	0%	0%	0%	4%	4%	4%
Adj. Flow (vph)	31	278	16	15	345	61	37	14	19	55	18	32
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	325	0	0	421	0	0	70	0	0	105	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	12.5
Intersection LOS	B

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	270	16	15	335	59	36	14	18	53	17	31
Future Vol, veh/h	30	270	16	15	335	59	36	14	18	53	17	31
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
Heavy Vehicles, %	4	4	4	2	2	2	0	0	0	4	4	4
Mvmt Flow	31	278	16	15	345	61	37	14	19	55	18	32
Number of Lanes	0	1	0	0	1	0	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	1	1
HCM Control Delay	12.2	13.7	9.7	10.1
HCM LOS	B	B	A	B

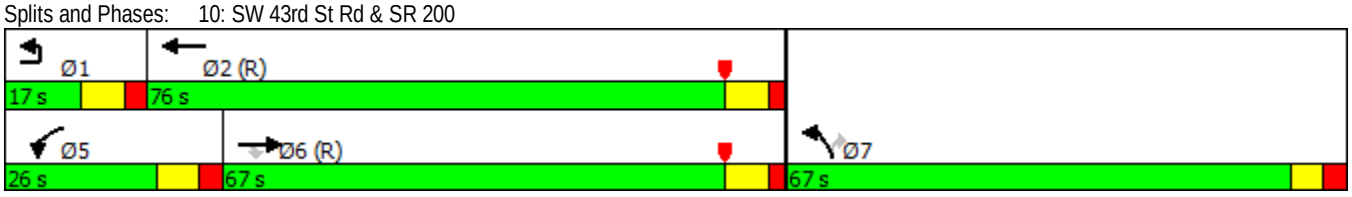
Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	53%	9%	4%	52%
Vol Thru, %	21%	85%	82%	17%
Vol Right, %	26%	5%	14%	31%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	68	316	409	101
LT Vol	36	30	15	53
Through Vol	14	270	335	17
RT Vol	18	16	59	31
Lane Flow Rate	70	326	422	104
Geometry Grp	1	1	1	1
Degree of Util (X)	0.115	0.456	0.554	0.169
Departure Headway (Hd)	5.884	5.041	4.842	5.847
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	611	720	751	615
Service Time	3.907	3.041	2.842	3.868
HCM Lane V/C Ratio	0.115	0.453	0.562	0.169
HCM Control Delay	9.7	12.2	13.7	10.1
HCM Lane LOS	A	B	B	B
HCM 95th-tile Q	0.4	2.4	3.4	0.6

Lane Group	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (vph)	13	1378	486	206	1654	674	193
Future Volume (vph)	13	1378	486	206	1654	674	193
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	1%
Adj. Flow (vph)	13	1421	501	212	1705	695	199
Shared Lane Traffic (%)							
Lane Group Flow (vph)	13	1421	501	212	1705	695	199
Turn Type	Prot	NA	Perm	Prot	NA	Prot	Perm
Protected Phases	1	6		5	2	7	
Permitted Phases			6				7
Detector Phase	1	6	6	5	2	7	7
Switch Phase							
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0	7.0	7.0
Minimum Split (s)	14.9	27.2	27.2	15.0	27.2	14.0	14.0
Total Split (s)	17.0	67.0	67.0	26.0	76.0	67.0	67.0
Total Split (%)	10.6%	41.9%	41.9%	16.3%	47.5%	41.9%	41.9%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	4.0	4.0
All-Red Time (s)	2.7	2.0	2.0	2.8	2.0	3.0	3.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	7.9	7.2	7.2	8.0	7.2	7.0	7.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		
Recall Mode	None	C-Min	C-Min	None	C-Min	None	None
v/c Ratio	0.16	0.64	0.51	0.66	0.53	0.82	0.39
Control Delay	77.5	37.8	4.5	98.4	6.2	65.5	12.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	77.5	37.8	4.5	98.4	6.2	65.5	12.7
Queue Length 50th (ft)	13	419	0	234	110	357	30
Queue Length 95th (ft)	38	531	80	m281	107	404	96
Internal Link Dist (ft)		1071			738	670	
Turn Bay Length (ft)	390		670	375			
Base Capacity (vph)	100	2221	973	322	3222	1300	700
Starvation Cap Reductn	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0
Reduced v/c Ratio	0.13	0.64	0.51	0.66	0.53	0.53	0.28

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 111 (69%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
Natural Cycle: 70
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 10: SW 43rd St Rd & SR 200



Movement	EBU	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations							
Traffic Volume (veh/h)	13	1378	486	206	1654	674	193
Future Volume (veh/h)	13	1378	486	206	1654	674	193
Number		6	16	5	2	7	14
Initial Q (Qb), veh		0	0	0	0	0	0
Ped-Bike Adj(A_pbT)			1.00	1.00		1.00	1.00
Parking Bus, Adj		1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln		1863	1863	1881	1881	1881	1881
Adj Flow Rate, veh/h		1421	344	212	1705	695	92
Adj No. of Lanes		3	1	1	3	2	1
Peak Hour Factor		0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %		2	2	1	1	1	1
Cap, veh/h		2665	830	202	3526	781	359
Arrive On Green		0.52	0.52	0.11	0.69	0.22	0.22
Sat Flow, veh/h		5253	1583	1792	5305	3476	1599
Grp Volume(v), veh/h		1421	344	212	1705	695	92
Grp Sat Flow(s),veh/h/ln		1695	1583	1792	1712	1738	1599
Q Serve(g_s), s		29.5	21.1	18.0	24.9	31.0	7.6
Cycle Q Clear(g_c), s		29.5	21.1	18.0	24.9	31.0	7.6
Prop In Lane			1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h		2665	830	202	3526	781	359
V/C Ratio(X)		0.53	0.41	1.05	0.48	0.89	0.26
Avail Cap(c_a), veh/h		2665	830	202	3526	1303	600
HCM Platoon Ratio		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
Uniform Delay (d), s/veh		25.1	23.2	71.0	11.8	60.1	51.0
Incr Delay (d2), s/veh		0.8	1.5	77.7	0.5	4.6	0.4
Initial Q Delay(d3),s/veh		0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln		14.0	9.6	13.3	11.8	15.4	3.4
LnGrp Delay(d),s/veh		25.9	24.7	148.7	12.2	64.7	51.4
LnGrp LOS		C	C	F	B	E	D
Approach Vol, veh/h		1765			1917	787	
Approach Delay, s/veh		25.7			27.3	63.1	
Approach LOS		C			C	E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		
Phs Duration (G+Y+Rc), s		117.1		42.9	26.0	91.1		
Change Period (Y+Rc), s		7.2		7.0	* 8	7.2		
Max Green Setting (Gmax), s		68.8		60.0	* 18	59.8		
Max Q Clear Time (g_c+I1), s		26.9		33.0	20.0	31.5		
Green Ext Time (p_c), s		35.1		2.9	0.0	25.0		

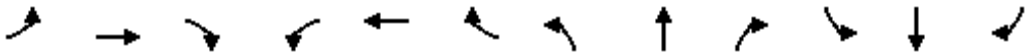
Intersection Summary	
HCM 2010 Ctrl Delay	33.0
HCM 2010 LOS	C

Notes

User approved ignoring U-Turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

PM Peak Hour Future Year Background Traffic Conditions



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	88	572	220	131	696	44	143	285	143	89	295	207
Future Volume (vph)	88	572	220	131	696	44	143	285	143	89	295	207
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	0%	0%	2%	2%	2%
Adj. Flow (vph)	97	629	242	144	765	48	157	313	157	98	324	227
Shared Lane Traffic (%)												
Lane Group Flow (vph)	97	871	0	144	813	0	157	470	0	98	551	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	88	572	220	131	696	44	143	285	143	89	295	207
Future Vol, veh/h	88	572	220	131	696	44	143	285	143	89	295	207
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	-	250	-	-	0	-	-	0	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	91	91	91	91	91	91	91	91	91	91	91	91
Heavy Vehicles, %	1	1	1	1	1	1	0	0	0	2	2	2
Mvmt Flow	97	629	242	144	765	48	157	313	157	98	324	227

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	813	0	0	870	0	0	1775	2044	435	1741	2141	407
Stage 1	-	-	-	-	-	-	943	943	-	1077	1077	-
Stage 2	-	-	-	-	-	-	832	1101	-	664	1064	-
Critical Hdwy	4.12	-	-	4.12	-	-	7.5	6.5	6.9	7.54	6.54	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.54	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.54	5.54	-
Follow-up Hdwy	2.21	-	-	2.21	-	-	3.5	4	3.3	3.52	4.02	3.32
Pot Cap-1 Maneuver	816	-	-	777	-	-	~ 54	~ 57	575	~ 56	~ 48	593
Stage 1	-	-	-	-	-	-	286	344	-	234	~ 293	-
Stage 2	-	-	-	-	-	-	334	~ 290	-	416	~ 298	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	816	-	-	777	-	-	-	~ 41	575	-	~ 34	593
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 41	-	-	~ 34	-
Stage 1	-	-	-	-	-	-	252	~ 303	-	206	~ 239	-
Stage 2	-	-	-	-	-	-	-	~ 236	-	-	~ 263	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	1	1.6		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	-	41	77	816	-	-	777	-	-	-	34	76
HCM Lane V/C Ratio	-	3.819	4.074	0.119	-	-	0.185	-	-	-	4.767	5.126
HCM Control Delay (s)	-	$ 1471	$ 1494.7	10	-	-	10.7	-	-	-	$ 1931	$ 1966.1
HCM Lane LOS	-	F	F	B	-	-	B	-	-	-	F	F
HCM 95th %tile Q(veh)	-	17.8	33.1	0.4	-	-	0.7	-	-	-	19.2	42.6

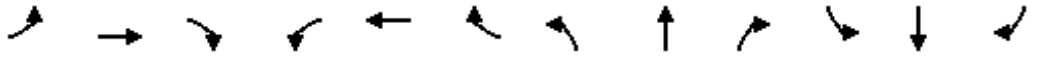
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	502	59	171	855	114	44	87	160	189	168	63
Future Volume (vph)	30	502	59	171	855	114	44	87	160	189	168	63
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	35	591	69	201	1006	134	52	102	188	222	198	74
Shared Lane Traffic (%)												
Lane Group Flow (vph)	35	591	69	201	1140	0	52	290	0	222	198	74
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		8
Detector Phase	1	6	6	5	2		7	4		3	8	8
Switch Phase												
Minimum Initial (s)	10.0	20.0	20.0	10.0	20.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	16.3	26.3	26.3	16.3	26.3		11.3	20.0		11.3	20.0	20.0
Total Split (s)	20.0	65.0	65.0	20.0	65.0		20.0	25.0		20.0	25.0	25.0
Total Split (%)	15.4%	50.0%	50.0%	15.4%	50.0%		15.4%	19.2%		15.4%	19.2%	19.2%
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	4.3		4.3	4.3	4.3
All-Red Time (s)	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
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3		6.3	6.3		6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min		None	None		None	None	None
v/c Ratio	0.17	0.75	0.09	0.60	1.25		0.17	0.93		0.86	0.47	0.16
Control Delay	13.2	36.4	0.2	20.2	148.6		33.0	77.5		64.3	48.5	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	13.2	36.4	0.2	20.2	148.6		33.0	77.5		64.3	48.5	0.7
Queue Length 50th (ft)	11	381	0	71	~1209		30	193		144	148	0
Queue Length 95th (ft)	24	486	0	103	#1353		60	#345		#271	224	0
Internal Link Dist (ft)		2796			3003			398			352	
Turn Bay Length (ft)	250			125			185			165		200
Base Capacity (vph)	263	923	852	358	915		383	311		259	420	460
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.13	0.64	0.08	0.56	1.25		0.14	0.93		0.86	0.47	0.16

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 120.2
Natural Cycle: 150
Control Type: Actuated-Uncoordinated
~ 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: 4: SW 38th Ave & SW 20th St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	502	59	171	855	114	44	87	160	189	168	63
Future Volume (veh/h)	30	502	59	171	855	114	44	87	160	189	168	63
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		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
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1881	1900	1845	1845	1900	1863	1863	1863
Adj Flow Rate, veh/h	35	591	37	201	1006	130	52	102	132	222	198	42
Adj No. of Lanes	1	1	1	1	1	0	1	1	0	1	1	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	1	1	1	1	1	1	3	3	3	2	2	2
Cap, veh/h	160	850	722	365	778	100	273	111	144	272	425	362
Arrive On Green	0.06	0.45	0.45	0.08	0.48	0.48	0.03	0.15	0.15	0.11	0.23	0.23
Sat Flow, veh/h	1792	1881	1599	1792	1633	211	1757	731	946	1774	1863	1583
Grp Volume(v), veh/h	35	591	37	201	0	1136	52	0	234	222	198	42
Grp Sat Flow(s),veh/h/ln	1792	1881	1599	1792	0	1844	1757	0	1678	1774	1863	1583
Q Serve(g_s), s	1.2	31.0	1.6	7.3	0.0	58.7	3.1	0.0	17.0	12.7	11.3	2.6
Cycle Q Clear(g_c), s	1.2	31.0	1.6	7.3	0.0	58.7	3.1	0.0	17.0	12.7	11.3	2.6
Prop In Lane	1.00		1.00	1.00		0.11	1.00		0.56	1.00		1.00
Lane Grp Cap(c), veh/h	160	850	722	365	0	878	273	0	254	272	425	362
V/C Ratio(X)	0.22	0.70	0.05	0.55	0.00	1.29	0.19	0.00	0.92	0.82	0.47	0.12
Avail Cap(c_a), veh/h	257	896	761	418	0	878	407	0	254	272	425	362
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.8	27.0	19.0	20.3	0.0	32.3	42.1	0.0	51.6	38.3	41.1	37.7
Incr Delay (d2), s/veh	0.7	2.2	0.0	1.3	0.0	140.7	0.3	0.0	35.6	17.4	0.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.6	16.6	0.7	3.7	0.0	64.1	1.5	0.0	10.4	7.5	5.9	1.1
LnGrp Delay(d),s/veh	28.5	29.2	19.0	21.6	0.0	173.0	42.4	0.0	87.2	55.7	41.9	37.8
LnGrp LOS	C	C	B	C		F	D		F	E	D	D
Approach Vol, veh/h		663			1337			286			462	
Approach Delay, s/veh		28.6			150.3			79.0			48.1	
Approach LOS		C			F			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.3	65.0	20.0	25.0	16.3	62.0	10.5	34.5
Change Period (Y+Rc), s	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Max Green Setting (Gmax), s	13.7	58.7	13.7	18.7	13.7	58.7	13.7	18.7
Max Q Clear Time (g_c+I1), s	3.2	60.7	14.7	19.0	9.3	33.0	5.1	13.3
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.2	15.1	0.0	1.3

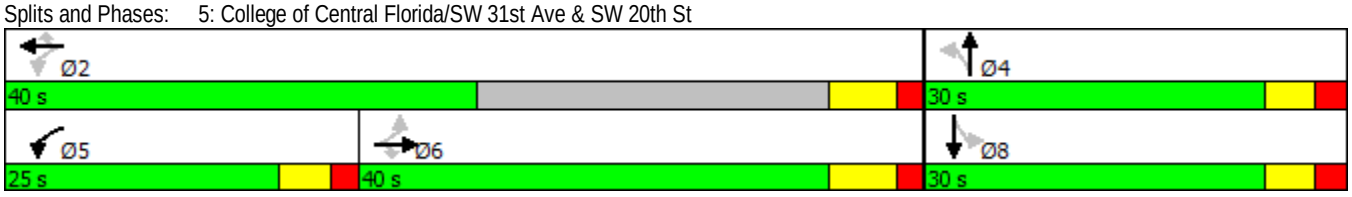
Intersection Summary	
HCM 2010 Ctrl Delay	96.3
HCM 2010 LOS	F

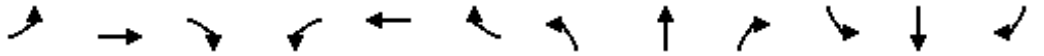
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	737	65	109	721	78	60	62	120	77	94	105
Future Volume (vph)	39	737	65	109	721	78	60	62	120	77	94	105
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	45	857	76	127	838	91	70	72	140	90	109	122
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	857	76	127	838	91	70	212	0	90	231	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		6		5	2			4			8	
Permitted Phases	6		6	2		2	4			8		
Detector Phase	6	6	6	5	2	2	4	4		8	8	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	15.0	8.0	8.0		8.0	8.0	
Minimum Split (s)	28.7	28.7	28.7	10.6	28.7	28.7	27.0	27.0		27.0	27.0	
Total Split (s)	40.0	40.0	40.0	25.0	40.0	40.0	30.0	30.0		30.0	30.0	
Total Split (%)	42.1%	42.1%	42.1%	26.3%	42.1%	42.1%	31.6%	31.6%		31.6%	31.6%	
Yellow Time (s)	4.7	4.7	4.7	3.6	4.7	4.7	3.6	3.6		3.6	3.6	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.4	2.4		2.4	2.4	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.7	6.7	6.7	5.6	6.7	6.7	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Recall Mode	Min	Min	Min	None	Min	Min	None	None		None	None	
v/c Ratio	0.16	0.96	0.09	0.39	0.70	0.09	0.42	0.54		0.50	0.64	
Control Delay	16.3	45.1	2.6	10.3	13.2	1.8	35.5	20.7		37.8	29.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	16.3	45.1	2.6	10.3	13.2	1.8	35.5	20.7		37.8	29.8	
Queue Length 50th (ft)	11	368	0	17	204	0	29	46		37	73	
Queue Length 95th (ft)	38	#716	15	51	393	15	66	103		80	139	
Internal Link Dist (ft)		3003			1127			192			432	
Turn Bay Length (ft)	150		150	350		200	200			150		
Base Capacity (vph)	287	894	812	566	1535	1322	311	645		338	625	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.16	0.96	0.09	0.22	0.55	0.07	0.23	0.33		0.27	0.37	

Intersection Summary

Cycle Length: 95
Actuated Cycle Length: 71.6
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: College of Central Florida/SW 31st Ave & SW 20th St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	737	65	109	721	78	60	62	120	77	94	105
Future Volume (veh/h)	39	737	65	109	721	78	60	62	120	77	94	105
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		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
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1881	1881	1881	1881	1900	1863	1863	1900
Adj Flow Rate, veh/h	45	857	57	127	838	77	70	72	113	90	109	99
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	271	865	735	218	1130	961	237	148	232	253	202	183
Arrive On Green	0.46	0.46	0.46	0.06	0.60	0.60	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	614	1881	1599	1792	1881	1599	1181	661	1037	1194	901	818
Grp Volume(v), veh/h	45	857	57	127	838	77	70	0	185	90	0	208
Grp Sat Flow(s),veh/h/ln	614	1881	1599	1792	1881	1599	1181	0	1698	1194	0	1718
Q Serve(g_s), s	4.1	32.7	1.4	2.5	23.2	1.5	4.0	0.0	6.9	5.1	0.0	7.7
Cycle Q Clear(g_c), s	17.1	32.7	1.4	2.5	23.2	1.5	11.8	0.0	6.9	12.0	0.0	7.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.61	1.00		0.48
Lane Grp Cap(c), veh/h	271	865	735	218	1130	961	237	0	380	253	0	385
V/C Ratio(X)	0.17	0.99	0.08	0.58	0.74	0.08	0.29	0.00	0.49	0.36	0.00	0.54
Avail Cap(c_a), veh/h	271	865	735	584	1130	961	365	0	563	382	0	570
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.2	19.4	11.0	16.4	10.4	6.1	30.0	0.0	24.5	29.7	0.0	24.8
Incr Delay (d2), s/veh	0.3	28.2	0.0	2.4	2.7	0.0	0.7	0.0	1.0	0.8	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	23.7	0.6	1.4	12.7	0.7	1.3	0.0	3.3	1.8	0.0	3.8
LnGrp Delay(d),s/veh	20.5	47.6	11.0	18.9	13.1	6.1	30.7	0.0	25.5	30.6	0.0	26.0
LnGrp LOS	C	D	B	B	B	A	C		C	C		C
Approach Vol, veh/h		959			1042			255			298	
Approach Delay, s/veh		44.2			13.3			26.9			27.4	
Approach LOS		D			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		50.2		22.2	10.2	40.0		22.2
Change Period (Y+Rc), s		6.7		6.0	5.6	6.7		6.0
Max Green Setting (Gmax), s		33.3		24.0	19.4	33.3		24.0
Max Q Clear Time (g_c+I1), s		25.2		13.8	4.5	34.7		14.0
Green Ext Time (p_c), s		6.2		2.2	0.2	0.0		2.2

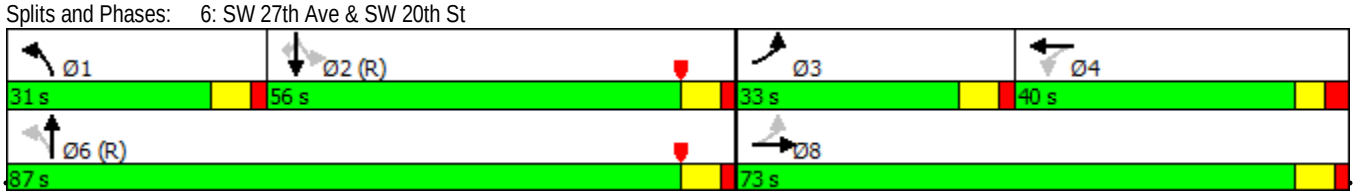
Intersection Summary	
HCM 2010 Ctrl Delay	27.9
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	294	368	326	17	305	77	290	806	22	66	897	298
Future Volume (vph)	294	368	326	17	305	77	290	806	22	66	897	298
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	2%	2%	2%	1%	1%	1%
Adj. Flow (vph)	313	391	347	18	324	82	309	857	23	70	954	317
Shared Lane Traffic (%)												
Lane Group Flow (vph)	313	738	0	18	406	0	309	880	0	70	954	317
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases	3	8			4		1	6			2	
Permitted Phases	8			4			6			2		2
Detector Phase	3	8		4	4		1	6		2	2	2
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	20.0		20.0	20.0	20.0
Minimum Split (s)	13.7	20.0		20.0	20.0		13.7	26.7		26.7	26.7	26.7
Total Split (s)	33.0	73.0		40.0	40.0		31.0	87.0		56.0	56.0	56.0
Total Split (%)	20.6%	45.6%		25.0%	25.0%		19.4%	54.4%		35.0%	35.0%	35.0%
Yellow Time (s)	4.7	4.7		3.6	3.6		4.7	4.7		4.7	4.7	4.7
All-Red Time (s)	2.0	2.0		3.1	3.1		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
Total Lost Time (s)	6.7	6.7		6.7	6.7		6.7	6.7		6.7	6.7	6.7
Lead/Lag	Lead			Lag	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes		Yes			Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	C-Max
v/c Ratio	0.95	0.99		0.38	1.02		0.98	0.50		0.37	0.87	0.45
Control Delay	84.8	74.9		80.7	108.8		94.5	27.6		50.5	61.7	6.0
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	84.8	74.9		80.7	108.8		94.5	27.6		50.5	61.7	6.0
Queue Length 50th (ft)	274	740		16	~453		275	315		58	497	0
Queue Length 95th (ft)	#462	#1028		49	#674		#479	375		111	589	73
Internal Link Dist (ft)		941			462			544			1105	
Turn Bay Length (ft)	350			200			300			350		400
Base Capacity (vph)	339	744		47	399		315	1770		187	1101	712
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.92	0.99		0.38	1.02		0.98	0.50		0.37	0.87	0.45

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 30 (19%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 110
Control Type: Actuated-Coordinated
~ 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.

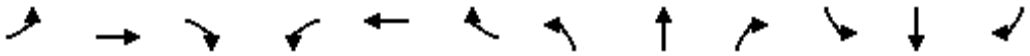
Splits and Phases: 6: SW 27th Ave & SW 20th St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	294	368	326	17	305	77	290	806	22	66	897	298
Future Volume (veh/h)	294	368	326	17	305	77	290	806	22	66	897	298
Number	3	8	18	7	4	14	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1881	1881	1900	1900	1900	1900	1863	1863	1900	1881	1881	1881
Adj Flow Rate, veh/h	313	391	326	18	324	72	309	857	22	70	954	211
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	1
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, %	1	1	1	0	0	0	2	2	2	1	1	1
Cap, veh/h	332	394	328	48	320	71	329	1770	45	248	1141	510
Arrive On Green	0.16	0.41	0.41	0.21	0.21	0.21	0.14	0.50	0.50	0.32	0.32	0.32
Sat Flow, veh/h	1792	950	792	746	1506	335	1774	3526	91	635	3574	1599
Grp Volume(v), veh/h	313	0	717	18	0	396	309	430	449	70	954	211
Grp Sat Flow(s),veh/h/ln	1792	0	1741	746	0	1841	1774	1770	1847	635	1787	1599
Q Serve(g_s), s	23.6	0.0	65.6	0.7	0.0	34.0	20.3	25.6	25.6	13.5	39.7	16.6
Cycle Q Clear(g_c), s	23.6	0.0	65.6	34.0	0.0	34.0	20.3	25.6	25.6	13.5	39.7	16.6
Prop In Lane	1.00		0.45	1.00		0.18	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	332	0	722	48	0	391	329	888	927	248	1141	510
V/C Ratio(X)	0.94	0.00	0.99	0.37	0.00	1.01	0.94	0.48	0.48	0.28	0.84	0.41
Avail Cap(c_a), veh/h	339	0	722	48	0	391	349	888	927	248	1141	510
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.5	0.0	46.6	79.9	0.0	63.0	42.9	26.2	26.2	41.7	50.6	42.7
Incr Delay (d2), s/veh	33.7	0.0	31.8	4.7	0.0	49.0	32.0	1.9	1.8	2.8	7.3	2.5
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	16.8	0.0	37.8	0.9	0.0	22.6	16.4	12.9	13.4	2.6	20.8	7.7
LnGrp Delay(d),s/veh	84.2	0.0	78.5	84.6	0.0	112.1	74.9	28.1	28.0	44.5	57.9	45.2
LnGrp LOS	F		E	F		F	E	C	C	D	E	D
Approach Vol, veh/h		1030			414			1188			1235	
Approach Delay, s/veh		80.2			110.9			40.2			55.0	
Approach LOS		F			F			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6		8
Phs Duration (G+Y+Rc), s	29.2	57.8	32.3	40.7		87.0		73.0
Change Period (Y+Rc), s	6.7	6.7	6.7	6.7		6.7		6.7
Max Green Setting (Gmax), s	24.3	49.3	26.3	33.3		80.3		66.3
Max Q Clear Time (g_c+I1), s	22.3	41.7	25.6	36.0		27.6		67.6
Green Ext Time (p_c), s	0.2	6.0	0.1	0.0		20.8		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	63.2
HCM 2010 LOS	E



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	300	210	101	402	168	185	444	111	105	420	175
Future Volume (vph)	90	300	210	101	402	168	185	444	111	105	420	175
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
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	0%	0%	0%	4%	4%	4%
Adj. Flow (vph)	93	309	216	104	414	173	191	458	114	108	433	180
Shared Lane Traffic (%)												
Lane Group Flow (vph)	0	618	0	0	691	0	191	572	0	108	613	0
Sign Control		Stop			Stop			Stop			Stop	

Intersection Summary

Control Type: Unsignalized

Intersection	
Intersection Delay, s/veh	219.9
Intersection LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	90	300	210	101	402	168	185	444	111	105	420	175
Future Vol, veh/h	90	300	210	101	402	168	185	444	111	105	420	175
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
Heavy Vehicles, %	4	4	4	2	2	2	0	0	0	4	4	4
Mvmt Flow	93	309	216	104	414	173	191	458	114	108	433	180
Number of Lanes	0	1	0	0	1	0	1	2	0	1	2	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	1	1	3	3
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	3	3	1	1
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	3	3	1	1
HCM Control Delay	368.6	459.5	43.8	48.9
HCM LOS	F	F	E	E

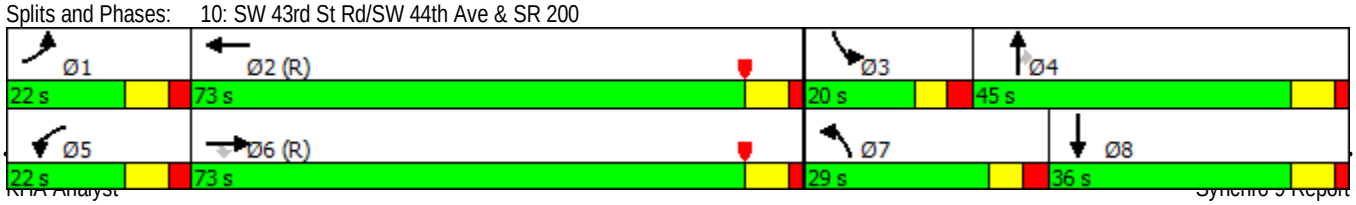
Lane	NBLn1	NBLn2	NBLn3	EBLn1	WBLn1	SBLn1	SBLn2	SBLn3
Vol Left, %	100%	0%	0%	15%	15%	100%	0%	0%
Vol Thru, %	0%	100%	57%	50%	60%	0%	100%	44%
Vol Right, %	0%	0%	43%	35%	25%	0%	0%	56%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Vol by Lane	185	296	259	600	671	105	280	315
LT Vol	185	0	0	90	101	105	0	0
Through Vol	0	296	148	300	402	0	280	140
RT Vol	0	0	111	210	168	0	0	175
Lane Flow Rate	191	305	267	619	692	108	289	325
Geometry Grp	7	7	7	7	7	7	7	7
Degree of Util (X)	0.539	0.821	0.696	1.726	1.937	0.309	0.784	0.847
Departure Headway (Hd)	13.486	12.935	12.604	12.262	11.89	13.286	12.735	12.306
Convergence, Y/N	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Cap	269	284	288	303	311	273	286	299
Service Time	11.186	10.635	10.304	9.962	9.59	10.986	10.435	10.006
HCM Lane V/C Ratio	0.71	1.074	0.927	2.043	2.225	0.396	1.01	1.087
HCM Control Delay	30.9	55.4	39.8	368.6	459.5	21.8	49.6	57.2
HCM Lane LOS	D	F	E	F	F	C	E	F
HCM 95th-tile Q	2.9	6.7	4.8	32.5	40.8	1.3	6.1	7.2

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	264	1716	660	252	2016	202	462	770	308	119	514	158
Future Volume (vph)	264	1716	660	252	2016	202	462	770	308	119	514	158
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
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	272	1769	680	260	2078	208	476	794	318	123	530	163
Shared Lane Traffic (%)												
Lane Group Flow (vph)	272	1769	680	260	2286	0	476	794	318	123	693	0
Turn Type	Prot	NA	Perm	Prot	NA		Prot	NA	Perm	Prot	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases			6						4			
Detector Phase	1	6	6	5	2		7	4	4	3	8	
Switch Phase												
Minimum Initial (s)	7.0	20.0	20.0	7.0	20.0		7.0	20.0	20.0	7.0	20.0	
Minimum Split (s)	15.0	27.2	27.2	15.0	27.2		14.0	27.2	27.2	15.0	28.2	
Total Split (s)	22.0	73.0	73.0	22.0	73.0		29.0	45.0	45.0	20.0	36.0	
Total Split (%)	13.8%	45.6%	45.6%	13.8%	45.6%		18.1%	28.1%	28.1%	12.5%	22.5%	
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2		4.0	5.2	5.2	4.0	5.2	
All-Red Time (s)	2.8	2.0	2.0	2.8	2.0		3.0	2.0	2.0	3.0	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	
Total Lost Time (s)	8.0	7.2	7.2	8.0	7.2		7.0	7.2	7.2	7.0	7.2	
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag	Lag	Lead	Lag	
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	
Recall Mode	None	C-Min	C-Min	None	C-Min		None	None	None	None	None	
v/c Ratio	1.77	0.85	0.82	1.67	1.09		1.00	0.94	0.61	0.87	1.10	
Control Delay	408.0	47.3	32.3	368.7	79.1		108.9	78.3	27.2	119.2	122.0	
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Total Delay	408.0	47.3	32.3	368.7	79.1		108.9	78.3	27.2	119.2	122.0	
Queue Length 50th (ft)	~422	608	389	~402	~986		260	433	122	129	~420	
Queue Length 95th (ft)	#615	673	587	m#554	#1056		#382	#560	233	#254	#552	
Internal Link Dist (ft)		1071			738			670			1631	
Turn Bay Length (ft)	390		670	375								
Base Capacity (vph)	154	2091	826	156	2090		476	848	522	143	632	
Starvation Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Spillback Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Storage Cap Reductn	0	0	0	0	0		0	0	0	0	0	
Reduced v/c Ratio	1.77	0.85	0.82	1.67	1.09		1.00	0.94	0.61	0.86	1.10	

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 111 (69%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
Natural Cycle: 145
Control Type: Actuated-Coordinated
~ 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.

Splits and Phases: 10: SW 43rd St Rd/SW 44th Ave & SR 200



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	264	1716	660	252	2016	202	462	770	308	119	514	158
Future Volume (veh/h)	264	1716	660	252	2016	202	462	770	308	119	514	158
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1881	1881	1900	1881	1881	1881	1863	1863	1900
Adj Flow Rate, veh/h	272	1769	464	260	2078	136	476	794	148	123	530	101
Adj No. of Lanes	1	3	1	1	3	0	2	2	1	1	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	2	2	2
Cap, veh/h	155	2091	651	157	2026	132	478	847	379	143	534	101
Arrive On Green	0.09	0.41	0.41	0.12	0.55	0.55	0.14	0.24	0.24	0.08	0.18	0.18
Sat Flow, veh/h	1774	5085	1583	1792	4928	321	3476	3574	1599	1774	2969	564
Grp Volume(v), veh/h	272	1769	464	260	1440	774	476	794	148	123	315	316
Grp Sat Flow(s),veh/h/ln	1774	1695	1583	1792	1712	1825	1738	1787	1599	1774	1770	1763
Q Serve(g_s), s	14.0	50.2	39.0	14.0	65.8	65.8	21.9	34.9	12.5	11.0	28.4	28.6
Cycle Q Clear(g_c), s	14.0	50.2	39.0	14.0	65.8	65.8	21.9	34.9	12.5	11.0	28.4	28.6
Prop In Lane	1.00		1.00	1.00		0.18	1.00		1.00	1.00		0.32
Lane Grp Cap(c), veh/h	155	2091	651	157	1408	750	478	847	379	143	319	317
V/C Ratio(X)	1.75	0.85	0.71	1.66	1.02	1.03	1.00	0.94	0.39	0.86	0.99	1.00
Avail Cap(c_a), veh/h	155	2091	651	157	1408	750	478	847	379	144	319	317
HCM Platoon Ratio	1.00	1.00	1.00	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	73.0	42.5	39.2	70.7	36.2	36.2	69.0	59.9	51.3	72.7	65.4	65.5
Incr Delay (d2), s/veh	363.7	4.4	6.5	322.9	29.9	41.1	40.1	17.7	0.7	37.3	47.3	49.2
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	22.5	24.3	18.2	21.0	36.6	41.4	13.2	19.3	5.6	6.8	18.1	18.3
LnGrp Delay(d),s/veh	436.7	47.0	45.7	393.6	66.2	77.4	109.0	77.6	52.0	110.0	112.7	114.8
LnGrp LOS	F	D	D	F	F	F	F	E	D	F	F	F
Approach Vol, veh/h		2505			2474			1418			754	
Approach Delay, s/veh		89.1			104.1			85.5			113.1	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	73.0	19.9	45.1	22.0	73.0	29.0	36.0
Change Period (Y+Rc), s	* 8	7.2	7.0	7.2	* 8	7.2	7.0	7.2
Max Green Setting (Gmax), s	* 14	65.8	13.0	37.8	* 14	65.8	22.0	28.8
Max Q Clear Time (g_c+I1), s	16.0	67.8	13.0	36.9	16.0	52.2	23.9	30.6
Green Ext Time (p_c), s	0.0	0.0	0.0	0.7	0.0	13.3	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	96.1
HCM 2010 LOS	F

Notes

User approved ignoring U-Turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

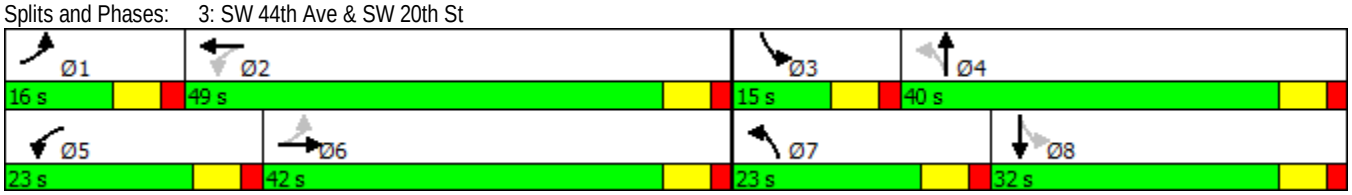
PM Peak Hour Future Year Background Traffic Conditions with Improvement

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	88	572	220	131	696	44	143	285	143	89	295	207
Future Volume (vph)	88	572	220	131	696	44	143	285	143	89	295	207
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	0%	0%	2%	2%	2%
Adj. Flow (vph)	97	629	242	144	765	48	157	313	157	98	324	227
Shared Lane Traffic (%)												
Lane Group Flow (vph)	97	871	0	144	813	0	157	470	0	98	551	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	11.3	24.3		11.3	24.3		11.3	24.3		11.3	24.3	
Total Split (s)	16.0	42.0		23.0	49.0		23.0	40.0		15.0	32.0	
Total Split (%)	13.3%	35.0%		19.2%	40.8%		19.2%	33.3%		12.5%	26.7%	
Yellow Time (s)	4.3	4.3		4.3	4.3		4.3	4.3		4.3	4.3	
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)	6.3	6.3		6.3	6.3		6.3	6.3		6.3	6.3	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	Min		None	Min		None	None		None	None	
v/c Ratio	0.34	0.82		0.51	0.63		0.50	0.48		0.31	0.74	
Control Delay	19.0	38.1		21.8	29.9		27.1	28.8		24.4	35.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	19.0	38.1		21.8	29.9		27.1	28.8		24.4	35.3	
Queue Length 50th (ft)	32	248		49	227		65	115		39	130	
Queue Length 95th (ft)	71	393		100	343		126	183		83	219	
Internal Link Dist (ft)		4996			2796			7224			1805	
Turn Bay Length (ft)	250			250			250			250		
Base Capacity (vph)	320	1326		388	1608		396	1273		336	1003	
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	0.30	0.66		0.37	0.51		0.40	0.37		0.29	0.55	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 97.4
Natural Cycle: 75
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: SW 44th Ave & SW 20th St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	88	572	220	131	696	44	143	285	143	89	295	207
Future Volume (veh/h)	88	572	220	131	696	44	143	285	143	89	295	207
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		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
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1900	1900	1900	1863	1863	1900
Adj Flow Rate, veh/h	97	629	242	144	765	48	157	313	157	98	324	227
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	2	2	2
Cap, veh/h	289	841	323	285	1211	76	302	595	292	309	450	308
Arrive On Green	0.05	0.33	0.33	0.07	0.35	0.35	0.09	0.25	0.25	0.06	0.22	0.22
Sat Flow, veh/h	1792	2526	971	1792	3416	214	1810	2349	1152	1774	2011	1378
Grp Volume(v), veh/h	97	445	426	144	400	413	157	239	231	98	284	267
Grp Sat Flow(s),veh/h/ln	1792	1787	1710	1792	1787	1843	1810	1805	1697	1774	1770	1620
Q Serve(g_s), s	3.2	19.9	19.9	4.7	16.7	16.8	5.9	10.2	10.6	3.8	13.4	13.8
Cycle Q Clear(g_c), s	3.2	19.9	19.9	4.7	16.7	16.8	5.9	10.2	10.6	3.8	13.4	13.8
Prop In Lane	1.00		0.57	1.00		0.12	1.00		0.68	1.00		0.85
Lane Grp Cap(c), veh/h	289	595	569	285	634	654	302	457	429	309	396	362
V/C Ratio(X)	0.34	0.75	0.75	0.51	0.63	0.63	0.52	0.52	0.54	0.32	0.72	0.74
Avail Cap(c_a), veh/h	387	709	679	484	849	875	478	676	636	376	506	463
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	19.3	26.6	26.6	20.0	24.1	24.1	24.6	28.9	29.0	24.9	32.3	32.4
Incr Delay (d2), s/veh	0.7	3.6	3.8	1.4	1.0	1.0	1.4	0.9	1.1	0.6	3.5	4.5
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	1.6	10.4	9.9	2.3	8.4	8.7	3.0	5.2	5.1	1.9	6.9	6.6
LnGrp Delay(d),s/veh	20.0	30.2	30.4	21.4	25.2	25.2	26.0	29.8	30.1	25.5	35.8	36.9
LnGrp LOS	C	C	C	C	C	C	C	C	C	C	D	D
Approach Vol, veh/h		968			957			627			649	
Approach Delay, s/veh		29.3			24.6			29.0			34.7	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.1	38.2	11.6	29.1	13.0	36.3	14.3	26.4
Change Period (Y+Rc), s	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Max Green Setting (Gmax), s	9.7	42.7	8.7	33.7	16.7	35.7	16.7	25.7
Max Q Clear Time (g_c+I1), s	5.2	18.8	5.8	12.6	6.7	21.9	7.9	15.8
Green Ext Time (p_c), s	0.1	11.0	0.1	6.4	0.2	8.0	0.2	4.4

Intersection Summary	
HCM 2010 Ctrl Delay	28.9
HCM 2010 LOS	C

Notes

User approved pedestrian interval to be less than phase max green.

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	502	59	171	855	114	44	87	160	189	168	63
Future Volume (vph)	30	502	59	171	855	114	44	87	160	189	168	63
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	35	591	69	201	1006	134	52	102	188	222	198	74
Shared Lane Traffic (%)												
Lane Group Flow (vph)	35	591	69	201	1140	0	52	290	0	222	198	74
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		8
Detector Phase	1	6	6	5	2		7	4		3	8	8
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	10.0	20.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	12.0	26.3	26.3	16.3	26.3		15.0	20.0		15.0	20.0	20.0
Total Split (s)	12.0	67.0	67.0	19.0	74.0		15.0	31.0		23.0	39.0	39.0
Total Split (%)	8.6%	47.9%	47.9%	13.6%	52.9%		10.7%	22.1%		16.4%	27.9%	27.9%
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	4.3		4.3	4.3	4.3
All-Red Time (s)	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
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3		6.3	6.3		6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min		None	None		None	None	None
v/c Ratio	0.18	0.87	0.10	0.70	0.69		0.16	0.83		0.70	0.39	0.13
Control Delay	16.9	48.9	0.3	31.0	28.0		29.7	59.1		42.1	41.6	0.5
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	16.9	48.9	0.3	31.0	28.0		29.7	59.1		42.1	41.6	0.5
Queue Length 50th (ft)	13	436	0	85	401		26	178		123	129	0
Queue Length 95th (ft)	28	536	0	138	441		60	#325		211	220	0
Internal Link Dist (ft)		2796			3003			398			352	
Turn Bay Length (ft)	250			125			185			165		200
Base Capacity (vph)	194	1009	961	299	2107		346	409		344	540	581
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.18	0.59	0.07	0.67	0.54		0.15	0.71		0.65	0.37	0.13

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 116.8
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: SW 38th Ave & SW 20th St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	30	502	59	171	855	114	44	87	160	189	168	63
Future Volume (veh/h)	30	502	59	171	855	114	44	87	160	189	168	63
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		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
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1881	1900	1845	1845	1900	1863	1863	1863
Adj Flow Rate, veh/h	35	591	37	201	1006	125	52	102	132	222	198	42
Adj No. of Lanes	1	1	1	1	2	0	1	1	0	1	1	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	1	1	1	1	1	1	3	3	3	2	2	2
Cap, veh/h	224	760	646	326	1480	184	307	122	158	311	466	396
Arrive On Green	0.03	0.40	0.40	0.09	0.46	0.46	0.04	0.17	0.17	0.12	0.25	0.25
Sat Flow, veh/h	1792	1881	1599	1792	3201	397	1757	731	946	1774	1863	1583
Grp Volume(v), veh/h	35	591	37	201	561	570	52	0	234	222	198	42
Grp Sat Flow(s),veh/h/ln	1792	1881	1599	1792	1787	1811	1757	0	1678	1774	1863	1583
Q Serve(g_s), s	1.3	31.0	1.6	7.0	27.9	28.0	2.8	0.0	15.3	11.3	10.1	2.3
Cycle Q Clear(g_c), s	1.3	31.0	1.6	7.0	27.9	28.0	2.8	0.0	15.3	11.3	10.1	2.3
Prop In Lane	1.00		1.00	1.00		0.22	1.00		0.56	1.00		1.00
Lane Grp Cap(c), veh/h	224	760	646	326	827	838	307	0	280	311	466	396
V/C Ratio(X)	0.16	0.78	0.06	0.62	0.68	0.68	0.17	0.00	0.84	0.71	0.42	0.11
Avail Cap(c_a), veh/h	262	1007	856	369	1067	1081	379	0	365	361	537	456
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	20.7	29.4	20.6	21.8	23.9	23.9	37.2	0.0	45.7	33.1	35.7	32.7
Incr Delay (d2), s/veh	0.3	2.8	0.0	2.5	1.2	1.2	0.3	0.0	12.2	5.5	0.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	16.7	0.7	3.7	14.0	14.2	1.4	0.0	8.0	6.0	5.3	1.0
LnGrp Delay(d),s/veh	21.0	32.2	20.7	24.3	25.1	25.1	37.4	0.0	58.0	38.6	36.3	32.9
LnGrp LOS	C	C	C	C	C	C	D		E	D	D	C
Approach Vol, veh/h		663			1332			286			462	
Approach Delay, s/veh		31.0			24.9			54.2			37.1	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	9.6	58.8	19.8	25.2	16.3	52.1	10.3	34.7
Change Period (Y+Rc), s	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Max Green Setting (Gmax), s	5.7	67.7	16.7	24.7	12.7	60.7	8.7	32.7
Max Q Clear Time (g_c+I1), s	3.3	30.0	13.3	17.3	9.0	33.0	4.8	12.1
Green Ext Time (p_c), s	0.0	14.5	0.2	1.6	0.2	12.9	0.0	2.7

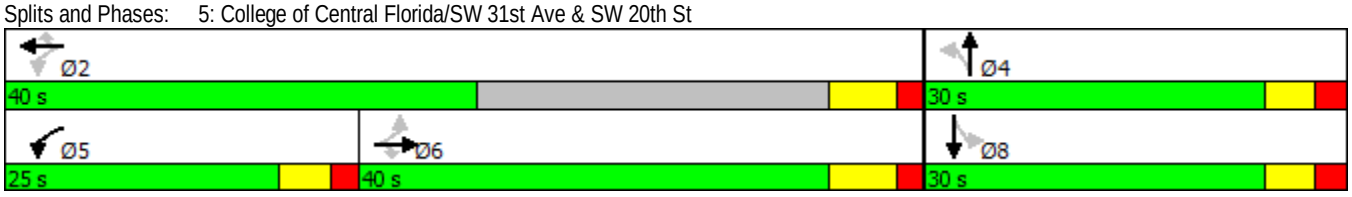
Intersection Summary	
HCM 2010 Ctrl Delay	31.5
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	39	737	65	109	721	78	60	62	120	77	94	105
Future Volume (vph)	39	737	65	109	721	78	60	62	120	77	94	105
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	45	857	76	127	838	91	70	72	140	90	109	122
Shared Lane Traffic (%)												
Lane Group Flow (vph)	45	857	76	127	838	91	70	212	0	90	231	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		6		5	2			4			8	
Permitted Phases	6		6	2		2	4			8		
Detector Phase	6	6	6	5	2	2	4	4		8	8	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	15.0	8.0	8.0		8.0	8.0	
Minimum Split (s)	28.7	28.7	28.7	10.6	28.7	28.7	27.0	27.0		27.0	27.0	
Total Split (s)	40.0	40.0	40.0	25.0	40.0	40.0	30.0	30.0		30.0	30.0	
Total Split (%)	42.1%	42.1%	42.1%	26.3%	42.1%	42.1%	31.6%	31.6%		31.6%	31.6%	
Yellow Time (s)	4.7	4.7	4.7	3.6	4.7	4.7	3.6	3.6		3.6	3.6	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.4	2.4		2.4	2.4	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.7	6.7	6.7	5.6	6.7	6.7	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Recall Mode	Min	Min	Min	None	Min	Min	None	None		None	None	
v/c Ratio	0.16	0.96	0.09	0.39	0.70	0.09	0.42	0.54		0.50	0.64	
Control Delay	16.3	45.1	2.6	10.3	13.2	1.8	35.5	20.7		37.8	29.8	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	16.3	45.1	2.6	10.3	13.2	1.8	35.5	20.7		37.8	29.8	
Queue Length 50th (ft)	11	368	0	17	204	0	29	46		37	73	
Queue Length 95th (ft)	38	#716	15	51	393	15	66	103		80	139	
Internal Link Dist (ft)		3003			1127			192			432	
Turn Bay Length (ft)	150		150	350		200	200			150		
Base Capacity (vph)	287	894	812	566	1535	1322	311	645		338	625	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.16	0.96	0.09	0.22	0.55	0.07	0.23	0.33		0.27	0.37	

Intersection Summary

Cycle Length: 95
Actuated Cycle Length: 71.6
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: College of Central Florida/SW 31st Ave & SW 20th St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	737	65	109	721	78	60	62	120	77	94	105
Future Volume (veh/h)	39	737	65	109	721	78	60	62	120	77	94	105
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		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
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1881	1881	1881	1881	1900	1863	1863	1900
Adj Flow Rate, veh/h	45	857	57	127	838	77	70	72	113	90	109	99
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	271	865	735	218	1130	961	237	148	232	253	202	183
Arrive On Green	0.46	0.46	0.46	0.06	0.60	0.60	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	614	1881	1599	1792	1881	1599	1181	661	1037	1194	901	818
Grp Volume(v), veh/h	45	857	57	127	838	77	70	0	185	90	0	208
Grp Sat Flow(s),veh/h/ln	614	1881	1599	1792	1881	1599	1181	0	1698	1194	0	1718
Q Serve(g_s), s	4.1	32.7	1.4	2.5	23.2	1.5	4.0	0.0	6.9	5.1	0.0	7.7
Cycle Q Clear(g_c), s	17.1	32.7	1.4	2.5	23.2	1.5	11.8	0.0	6.9	12.0	0.0	7.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.61	1.00		0.48
Lane Grp Cap(c), veh/h	271	865	735	218	1130	961	237	0	380	253	0	385
V/C Ratio(X)	0.17	0.99	0.08	0.58	0.74	0.08	0.29	0.00	0.49	0.36	0.00	0.54
Avail Cap(c_a), veh/h	271	865	735	584	1130	961	365	0	563	382	0	570
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.2	19.4	11.0	16.4	10.4	6.1	30.0	0.0	24.5	29.7	0.0	24.8
Incr Delay (d2), s/veh	0.3	28.2	0.0	2.4	2.7	0.0	0.7	0.0	1.0	0.8	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	23.7	0.6	1.4	12.7	0.7	1.3	0.0	3.3	1.8	0.0	3.8
LnGrp Delay(d),s/veh	20.5	47.6	11.0	18.9	13.1	6.1	30.7	0.0	25.5	30.6	0.0	26.0
LnGrp LOS	C	D	B	B	B	A	C		C	C		C
Approach Vol, veh/h		959			1042			255			298	
Approach Delay, s/veh		44.2			13.3			26.9			27.4	
Approach LOS		D			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		50.2		22.2	10.2	40.0		22.2
Change Period (Y+Rc), s		6.7		6.0	5.6	6.7		6.0
Max Green Setting (Gmax), s		33.3		24.0	19.4	33.3		24.0
Max Q Clear Time (g_c+I1), s		25.2		13.8	4.5	34.7		14.0
Green Ext Time (p_c), s		6.2		2.2	0.2	0.0		2.2

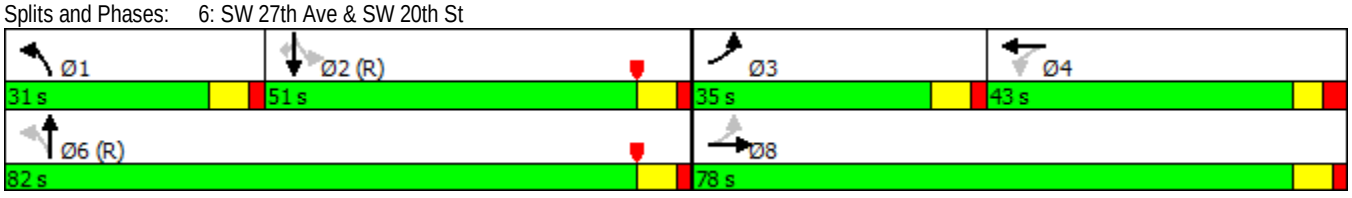
Intersection Summary	
HCM 2010 Ctrl Delay	27.9
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	294	368	326	17	305	77	290	806	22	66	897	298
Future Volume (vph)	294	368	326	17	305	77	290	806	22	66	897	298
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	2%	2%	2%	1%	1%	1%
Adj. Flow (vph)	313	391	347	18	324	82	309	857	23	70	954	317
Shared Lane Traffic (%)												
Lane Group Flow (vph)	313	738	0	18	406	0	309	880	0	70	954	317
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases	3	8			4		1	6			2	
Permitted Phases	8			4			6			2		2
Detector Phase	3	8		4	4		1	6		2	2	2
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	20.0		20.0	20.0	20.0
Minimum Split (s)	13.7	20.0		20.0	20.0		13.7	26.7		26.7	26.7	26.7
Total Split (s)	35.0	78.0		43.0	43.0		31.0	82.0		51.0	51.0	51.0
Total Split (%)	21.9%	48.8%		26.9%	26.9%		19.4%	51.3%		31.9%	31.9%	31.9%
Yellow Time (s)	4.7	4.7		3.6	3.6		4.7	4.7		4.7	4.7	4.7
All-Red Time (s)	2.0	2.0		3.1	3.1		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
Total Lost Time (s)	6.7	6.7		6.7	6.7		6.7	6.7		6.7	6.7	6.7
Lead/Lag	Lead			Lag	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes		Yes			Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	C-Max
v/c Ratio	0.92	0.95		0.30	0.96		0.97	0.52		0.40	0.93	0.46
Control Delay	77.9	63.0		66.6	93.5		91.0	30.3		55.5	71.4	6.6
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	77.9	63.0		66.6	93.5		91.0	30.3		55.5	71.4	6.6
Queue Length 50th (ft)	268	696		16	418		276	336		60	521	0
Queue Length 95th (ft)	#435	#967		45	#636		#481	400		116	#663	77
Internal Link Dist (ft)		941			462			544			1105	
Turn Bay Length (ft)	350			200			300			350		400
Base Capacity (vph)	361	798		61	428		319	1701		174	1023	683
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.87	0.92		0.30	0.95		0.97	0.52		0.40	0.93	0.46

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 30 (19%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 110
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: SW 27th Ave & SW 20th St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	294	368	326	17	305	77	290	806	22	66	897	298
Future Volume (veh/h)	294	368	326	17	305	77	290	806	22	66	897	298
Number	3	8	18	7	4	14	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1881	1881	1900	1900	1900	1900	1863	1863	1900	1881	1881	1881
Adj Flow Rate, veh/h	313	391	326	18	324	72	309	857	22	70	954	211
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	1
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, %	1	1	1	0	0	0	2	2	2	1	1	1
Cap, veh/h	336	405	337	63	360	80	328	1728	44	236	1077	482
Arrive On Green	0.15	0.43	0.43	0.24	0.24	0.24	0.15	0.49	0.49	0.30	0.30	0.30
Sat Flow, veh/h	1792	950	792	746	1506	335	1774	3526	91	635	3574	1599
Grp Volume(v), veh/h	313	0	717	18	0	396	309	430	449	70	954	211
Grp Sat Flow(s),veh/h/ln	1792	0	1741	746	0	1841	1774	1770	1847	635	1787	1599
Q Serve(g_s), s	20.8	0.0	64.3	3.9	0.0	33.4	21.4	26.2	26.2	13.9	40.7	17.0
Cycle Q Clear(g_c), s	20.8	0.0	64.3	38.2	0.0	33.4	21.4	26.2	26.2	13.9	40.7	17.0
Prop In Lane	1.00		0.45	1.00		0.18	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	336	0	742	63	0	440	328	867	905	236	1077	482
V/C Ratio(X)	0.93	0.00	0.97	0.28	0.00	0.90	0.94	0.50	0.50	0.30	0.89	0.44
Avail Cap(c_a), veh/h	392	0	776	63	0	440	337	867	905	236	1077	482
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	41.4	0.0	44.8	78.0	0.0	59.0	45.9	27.5	27.5	43.9	53.3	45.0
Incr Delay (d2), s/veh	26.9	0.0	23.8	2.4	0.0	21.1	33.7	2.0	1.9	3.2	10.7	2.9
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	16.2	0.0	35.8	0.8	0.0	19.5	16.5	13.3	13.8	2.6	21.7	7.9
LnGrp Delay(d),s/veh	68.3	0.0	68.6	80.4	0.0	80.1	79.6	29.5	29.4	47.1	64.0	47.9
LnGrp LOS	E		E	F		F	E	C	C	D	E	D
Approach Vol, veh/h		1030			414			1188			1235	
Approach Delay, s/veh		68.5			80.2			42.5			60.3	
Approach LOS		E			F			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6		8
Phs Duration (G+Y+Rc), s	30.2	54.9	29.9	44.9		85.1		74.9
Change Period (Y+Rc), s	6.7	6.7	6.7	6.7		6.7		6.7
Max Green Setting (Gmax), s	24.3	44.3	28.3	36.3		75.3		71.3
Max Q Clear Time (g_c+I1), s	23.4	42.7	22.8	40.2		28.2		66.3
Green Ext Time (p_c), s	0.1	1.4	0.4	0.0		20.0		1.9

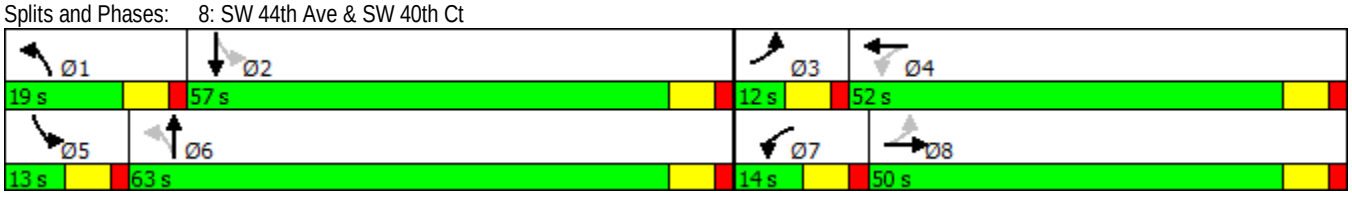
Intersection Summary	
HCM 2010 Ctrl Delay	59.1
HCM 2010 LOS	E

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	90	300	210	101	402	168	185	444	111	105	420	175
Future Volume (vph)	90	300	210	101	402	168	185	444	111	105	420	175
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
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	0%	0%	0%	4%	4%	4%
Adj. Flow (vph)	93	309	216	104	414	173	191	458	114	108	433	180
Shared Lane Traffic (%)												
Lane Group Flow (vph)	93	525	0	104	587	0	191	572	0	108	613	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	3	8		7	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	15.0	20.0		15.0	20.0		15.0	25.0		15.0	25.0	
Total Split (s)	12.0	50.0		14.0	52.0		19.0	63.0		13.0	57.0	
Total Split (%)	8.6%	35.7%		10.0%	37.1%		13.6%	45.0%		9.3%	40.7%	
Yellow Time (s)	4.8	4.8		4.8	4.8		4.8	4.8		4.8	4.8	
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)	6.8	6.8		6.8	6.8		6.8	6.8		6.8	6.8	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	
v/c Ratio	0.45	0.80		0.40	0.83		0.70	0.59		0.45	0.79	
Control Delay	25.5	42.1		21.6	43.5		38.3	36.9		30.6	46.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	25.5	42.1		21.6	43.5		38.3	36.9		30.6	46.2	
Queue Length 50th (ft)	36	330		40	380		96	184		52	210	
Queue Length 95th (ft)	74	#562		82	#642		151	241		90	275	
Internal Link Dist (ft)		1473			795			1631			7224	
Turn Bay Length (ft)	255			255			255			255		
Base Capacity (vph)	205	666		264	716		283	1741		241	1490	
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	0.45	0.79		0.39	0.82		0.67	0.33		0.45	0.41	

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 114.4
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: SW 44th Ave & SW 40th Ct



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	90	300	210	101	402	168	185	444	111	105	420	175
Future Volume (veh/h)	90	300	210	101	402	168	185	444	111	105	420	175
Number	3	8	18	7	4	14	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1827	1827	1900	1863	1863	1900	1900	1900	1900	1827	1827	1900
Adj Flow Rate, veh/h	93	309	216	104	414	173	191	458	114	108	433	180
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	2	2	2	0	0	0	4	4	4
Cap, veh/h	186	361	253	222	459	192	307	844	209	288	609	251
Arrive On Green	0.05	0.36	0.36	0.05	0.37	0.37	0.09	0.29	0.29	0.05	0.25	0.25
Sat Flow, veh/h	1740	1002	701	1774	1249	522	1810	2870	709	1740	2400	988
Grp Volume(v), veh/h	93	0	525	104	0	587	191	287	285	108	312	301
Grp Sat Flow(s),veh/h/ln	1740	0	1703	1774	0	1771	1810	1805	1775	1740	1736	1653
Q Serve(g_s), s	3.8	0.0	32.5	4.2	0.0	35.8	8.8	15.2	15.4	5.2	18.6	18.9
Cycle Q Clear(g_c), s	3.8	0.0	32.5	4.2	0.0	35.8	8.8	15.2	15.4	5.2	18.6	18.9
Prop In Lane	1.00		0.41	1.00		0.29	1.00		0.40	1.00		0.60
Lane Grp Cap(c), veh/h	186	0	614	222	0	650	307	531	522	288	440	419
V/C Ratio(X)	0.50	0.00	0.85	0.47	0.00	0.90	0.62	0.54	0.55	0.37	0.71	0.72
Avail Cap(c_a), veh/h	186	0	646	241	0	702	329	890	875	288	764	728
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.3	0.0	33.7	26.1	0.0	34.1	29.1	33.8	33.8	29.7	38.7	38.8
Incr Delay (d2), s/veh	2.1	0.0	10.5	1.5	0.0	14.4	3.3	0.9	0.9	0.8	2.1	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.9	0.0	17.0	2.1	0.0	20.0	4.6	7.7	7.7	2.5	9.2	8.9
LnGrp Delay(d),s/veh	29.4	0.0	44.2	27.6	0.0	48.5	32.4	34.6	34.7	30.5	40.8	41.1
LnGrp LOS	C		D	C		D	C	C	C	C	D	D
Approach Vol, veh/h		618			691			763			721	
Approach Delay, s/veh		42.0			45.4			34.1			39.4	
Approach LOS		D			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.6	35.7	12.0	48.7	13.0	40.3	12.8	47.9
Change Period (Y+Rc), s	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
Max Green Setting (Gmax), s	12.2	50.2	5.2	45.2	6.2	56.2	7.2	43.2
Max Q Clear Time (g_c+I1), s	10.8	20.9	5.8	37.8	7.2	17.4	6.2	34.5
Green Ext Time (p_c), s	0.1	8.0	0.0	4.1	0.0	8.4	0.0	4.6

Intersection Summary	
HCM 2010 Ctrl Delay	40.0
HCM 2010 LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	264	1716	660	252	2016	202	462	770	308	119	514	158
Future Volume (vph)	264	1716	660	252	2016	202	462	770	308	119	514	158
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
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	272	1769	680	260	2078	208	476	794	318	123	530	163
Shared Lane Traffic (%)												
Lane Group Flow (vph)	272	1769	680	260	2078	208	476	794	318	123	530	163
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)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	15.0	27.2	27.2	15.0	27.2	27.2	14.0	27.2	27.2	15.0	28.2	28.2
Total Split (s)	22.0	73.0	73.0	22.0	73.0	73.0	30.0	45.5	45.5	19.5	35.0	35.0
Total Split (%)	13.8%	45.6%	45.6%	13.8%	45.6%	45.6%	18.8%	28.4%	28.4%	12.2%	21.9%	21.9%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	5.2	4.0	5.2	5.2	4.0	5.2	5.2
All-Red Time (s)	2.8	2.0	2.0	2.8	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)	8.0	7.2	7.2	8.0	7.2	7.2	7.0	7.2	7.2	7.0	7.2	7.2
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-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	0.90	0.84	0.81	0.86	0.98	0.27	0.96	0.94	0.61	0.89	0.88	0.39
Control Delay	102.6	46.7	30.2	94.6	60.2	14.5	97.8	78.7	27.2	123.4	80.7	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	0.0
Total Delay	102.6	46.7	30.2	94.6	60.2	14.5	97.8	78.7	27.2	123.4	80.7	8.1
Queue Length 50th (ft)	147	608	369	143	589	48	258	431	123	130	287	0
Queue Length 95th (ft)	#235	673	564	m#199	#887	m88	#370	#553	233	#260	#378	53
Internal Link Dist (ft)		1071			738			670			1631	
Turn Bay Length (ft)	390		670	375		200	450		200	400		250
Base Capacity (vph)	303	2106	840	303	2121	765	498	855	524	138	614	422
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	0.90	0.84	0.81	0.86	0.98	0.27	0.96	0.93	0.61	0.89	0.86	0.39

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 65 (41%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
Natural Cycle: 135
Control Type: Actuated-Coordinated
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.

Splits and Phases: 10: SW 43rd St Rd/SW 44th Ave & SR 200

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	264	1716	660	252	2016	202	462	770	308	119	514	158
Future Volume (veh/h)	264	1716	660	252	2016	202	462	770	308	119	514	158
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1881	1881	1881	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	272	1769	464	260	2078	136	476	794	148	123	530	101
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	1	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	2	2	2
Cap, veh/h	301	2108	656	300	2122	661	500	849	380	139	608	272
Arrive On Green	0.09	0.41	0.41	0.11	0.55	0.55	0.14	0.24	0.24	0.08	0.17	0.17
Sat Flow, veh/h	3442	5085	1583	3476	5136	1599	3476	3574	1599	1774	3539	1583
Grp Volume(v), veh/h	272	1769	464	260	2078	136	476	794	148	123	530	101
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1738	1712	1599	1738	1787	1599	1774	1770	1583
Q Serve(g_s), s	12.5	50.0	38.8	11.8	63.2	6.9	21.7	34.8	12.4	11.0	23.3	9.0
Cycle Q Clear(g_c), s	12.5	50.0	38.8	11.8	63.2	6.9	21.7	34.8	12.4	11.0	23.3	9.0
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	301	2108	656	300	2122	661	500	849	380	139	608	272
V/C Ratio(X)	0.90	0.84	0.71	0.87	0.98	0.21	0.95	0.94	0.39	0.89	0.87	0.37
Avail Cap(c_a), veh/h	301	2108	656	304	2122	661	500	856	383	139	615	275
HCM Platoon Ratio	1.00	1.00	1.00	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	0.61	0.61	0.61
Uniform Delay (d), s/veh	72.3	42.1	38.8	69.9	35.4	22.7	68.0	59.8	51.3	73.1	64.5	58.6
Incr Delay (d2), s/veh	28.6	4.2	6.3	22.2	15.2	0.7	28.6	17.1	0.7	31.6	8.3	0.5
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	7.2	24.2	18.2	6.6	32.5	3.2	12.4	19.2	5.6	6.6	12.1	4.0
LnGrp Delay(d),s/veh	100.9	46.3	45.1	92.1	50.6	23.4	96.6	76.9	51.9	104.6	72.9	59.1
LnGrp LOS	F	D	D	F	D	C	F	E	D	F	E	E
Approach Vol, veh/h		2505			2474			1418			754	
Approach Delay, s/veh		52.0			53.5			80.9			76.2	
Approach LOS		D			D			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	73.3	19.5	45.2	21.8	73.5	30.0	34.7
Change Period (Y+Rc), s	* 8	7.2	7.0	7.2	* 8	7.2	7.0	7.2
Max Green Setting (Gmax), s	* 14	65.8	12.5	38.3	* 14	65.8	23.0	27.8
Max Q Clear Time (g_c+I1), s	14.5	65.2	13.0	36.8	13.8	52.0	23.7	25.3
Green Ext Time (p_c), s	0.0	0.6	0.0	1.2	0.0	13.5	0.0	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	60.8
HCM 2010 LOS	E

Notes

User approved ignoring U-Turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

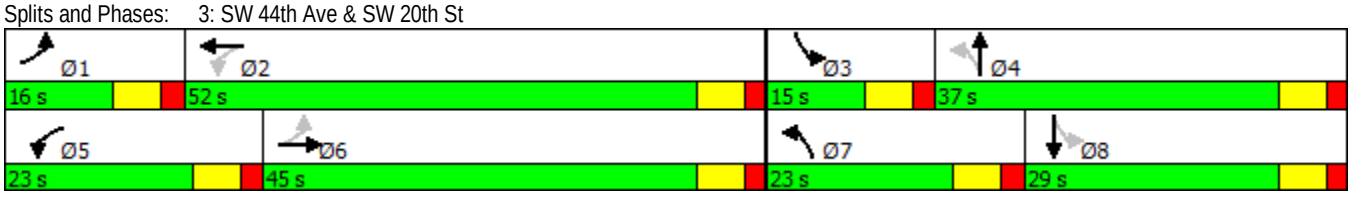
PM Peak Hour Buildout Traffic Conditions (with Background Improvement)

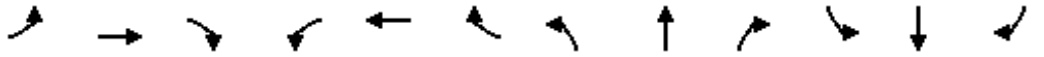
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	106	587	259	214	678	44	203	309	193	89	324	207
Future Volume (vph)	106	587	259	214	678	44	203	309	193	89	324	207
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	0%	0%	0%	2%	2%	2%
Adj. Flow (vph)	116	645	285	235	745	48	223	340	212	98	356	227
Shared Lane Traffic (%)												
Lane Group Flow (vph)	116	930	0	235	793	0	223	552	0	98	583	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	11.3	24.3		11.3	24.3		11.3	24.3		11.3	24.3	
Total Split (s)	16.0	45.0		23.0	52.0		23.0	37.0		15.0	29.0	
Total Split (%)	13.3%	37.5%		19.2%	43.3%		19.2%	30.8%		12.5%	24.2%	
Yellow Time (s)	4.3	4.3		4.3	4.3		4.3	4.3		4.3	4.3	
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)	6.3	6.3		6.3	6.3		6.3	6.3		6.3	6.3	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	Min		None	Min		None	None		None	None	
v/c Ratio	0.40	0.86		0.75	0.62		0.70	0.54		0.35	0.83	
Control Delay	20.3	42.9		40.3	30.9		38.2	30.8		28.3	47.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	20.3	42.9		40.3	30.9		38.2	30.8		28.3	47.2	
Queue Length 50th (ft)	45	326		113	252		119	156		48	187	
Queue Length 95th (ft)	78	411		#224	318		#194	218		88	#262	
Internal Link Dist (ft)		4996			2796			7224			1805	
Turn Bay Length (ft)	250			500			250			250		
Base Capacity (vph)	310	1278		345	1523		348	1059		294	792	
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	0.37	0.73		0.68	0.52		0.64	0.52		0.33	0.74	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 108.8
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: SW 44th Ave & SW 20th St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	106	587	259	214	678	44	203	309	193	89	324	207
Future Volume (veh/h)	106	587	259	214	678	44	203	309	193	89	324	207
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		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
Adj Sat Flow, veh/h/ln	1881	1881	1900	1881	1881	1900	1900	1900	1900	1863	1863	1900
Adj Flow Rate, veh/h	116	645	285	235	745	48	223	340	212	98	356	227
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	1	1	1	1	1	1	0	0	0	2	2	2
Cap, veh/h	317	801	354	313	1289	83	310	563	344	276	429	269
Arrive On Green	0.06	0.33	0.33	0.11	0.38	0.38	0.11	0.26	0.26	0.06	0.21	0.21
Sat Flow, veh/h	1792	2414	1066	1792	3410	220	1810	2155	1318	1774	2091	1311
Grp Volume(v), veh/h	116	478	452	235	390	403	223	284	268	98	300	283
Grp Sat Flow(s),veh/h/ln	1792	1787	1693	1792	1787	1842	1810	1805	1667	1774	1770	1631
Q Serve(g_s), s	4.4	25.4	25.4	8.8	18.1	18.1	9.7	14.4	14.8	4.5	16.9	17.4
Cycle Q Clear(g_c), s	4.4	25.4	25.4	8.8	18.1	18.1	9.7	14.4	14.8	4.5	16.9	17.4
Prop In Lane	1.00		0.63	1.00		0.12	1.00		0.79	1.00		0.80
Lane Grp Cap(c), veh/h	317	593	562	313	676	697	310	472	436	276	363	335
V/C Ratio(X)	0.37	0.81	0.81	0.75	0.58	0.58	0.72	0.60	0.62	0.36	0.83	0.84
Avail Cap(c_a), veh/h	376	664	629	409	784	808	392	532	491	319	385	355
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.6	31.8	31.8	23.5	25.8	25.8	28.5	33.7	33.9	30.3	39.6	39.8
Incr Delay (d2), s/veh	0.7	6.6	6.9	5.5	0.8	0.8	4.7	1.5	1.9	0.8	13.2	16.0
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	2.2	13.5	12.9	4.7	9.0	9.3	5.2	7.4	7.0	2.2	9.6	9.3
LnGrp Delay(d),s/veh	22.4	38.3	38.7	29.0	26.6	26.6	33.2	35.3	35.8	31.1	52.9	55.8
LnGrp LOS	C	D	D	C	C	C	C	D	D	C	D	E
Approach Vol, veh/h		1046			1028			775			681	
Approach Delay, s/veh		36.7			27.1			34.8			51.0	
Approach LOS		D			C			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.5	45.7	12.4	33.5	17.4	40.9	18.3	27.7
Change Period (Y+Rc), s	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Max Green Setting (Gmax), s	9.7	45.7	8.7	30.7	16.7	38.7	16.7	22.7
Max Q Clear Time (g_c+I1), s	6.4	20.1	6.5	16.8	10.8	27.4	11.7	19.4
Green Ext Time (p_c), s	0.1	11.8	0.0	5.9	0.3	7.2	0.3	2.0

Intersection Summary	
HCM 2010 Ctrl Delay	36.3
HCM 2010 LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	45	553	59	171	905	114	44	87	160	189	168	77
Future Volume (vph)	45	553	59	171	905	114	44	87	160	189	168	77
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	3%	3%	3%	2%	2%	2%
Adj. Flow (vph)	53	651	69	201	1065	134	52	102	188	222	198	91
Shared Lane Traffic (%)												
Lane Group Flow (vph)	53	651	69	201	1199	0	52	290	0	222	198	91
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		8
Detector Phase	1	6	6	5	2		7	4		3	8	8
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	10.0	20.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	12.0	26.3	26.3	16.3	26.3		15.0	20.0		15.0	20.0	20.0
Total Split (s)	12.0	67.0	67.0	19.0	74.0		15.0	31.0		23.0	39.0	39.0
Total Split (%)	8.6%	47.9%	47.9%	13.6%	52.9%		10.7%	22.1%		16.4%	27.9%	27.9%
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	4.3		4.3	4.3	4.3
All-Red Time (s)	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
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3		6.3	6.3		6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min		None	None		None	None	None
v/c Ratio	0.30	0.90	0.09	0.79	0.73		0.17	0.85		0.73	0.40	0.17
Control Delay	19.0	51.8	0.2	46.6	30.2		31.4	63.1		46.2	43.7	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	19.0	51.8	0.2	46.6	30.2		31.4	63.1		46.2	43.7	0.7
Queue Length 50th (ft)	21	507	0	98	435		28	189		133	138	0
Queue Length 95th (ft)	39	613	0	#201	473		60	#325		#213	220	0
Internal Link Dist (ft)		2796			3003			398			352	
Turn Bay Length (ft)	250			125			185			165		200
Base Capacity (vph)	178	967	930	266	2020		335	394		328	518	565
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.30	0.67	0.07	0.76	0.59		0.16	0.74		0.68	0.38	0.16

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 121.5
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: SW 38th Ave & SW 20th St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	45	553	59	171	905	114	44	87	160	189	168	77
Future Volume (veh/h)	45	553	59	171	905	114	44	87	160	189	168	77
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		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
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1881	1900	1845	1845	1900	1863	1863	1863
Adj Flow Rate, veh/h	53	651	37	201	1065	127	52	102	132	222	198	59
Adj No. of Lanes	1	1	1	1	2	0	1	1	0	1	1	1
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	1	1	1	1	1	1	3	3	3	2	2	2
Cap, veh/h	222	799	679	300	1522	181	296	120	156	303	463	393
Arrive On Green	0.03	0.42	0.42	0.08	0.47	0.47	0.03	0.16	0.16	0.12	0.25	0.25
Sat Flow, veh/h	1792	1881	1599	1792	3217	383	1757	731	946	1774	1863	1583
Grp Volume(v), veh/h	53	651	37	201	591	601	52	0	234	222	198	59
Grp Sat Flow(s),veh/h/ln	1792	1881	1599	1792	1787	1814	1757	0	1678	1774	1863	1583
Q Serve(g_s), s	2.0	36.6	1.6	7.3	31.3	31.4	2.9	0.0	16.3	12.1	10.7	3.5
Cycle Q Clear(g_c), s	2.0	36.6	1.6	7.3	31.3	31.4	2.9	0.0	16.3	12.1	10.7	3.5
Prop In Lane	1.00		1.00	1.00		0.21	1.00		0.56	1.00		1.00
Lane Grp Cap(c), veh/h	222	799	679	300	846	858	296	0	276	303	463	393
V/C Ratio(X)	0.24	0.81	0.05	0.67	0.70	0.70	0.18	0.00	0.85	0.73	0.43	0.15
Avail Cap(c_a), veh/h	245	950	807	340	1006	1021	363	0	345	340	507	431
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	21.2	30.4	20.4	23.8	24.9	25.0	39.8	0.0	48.8	35.4	38.0	35.3
Incr Delay (d2), s/veh	0.5	4.8	0.0	4.3	1.7	1.7	0.3	0.0	14.8	7.1	0.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	20.0	0.7	3.9	15.8	16.1	1.5	0.0	8.7	6.5	5.6	1.5
LnGrp Delay(d),s/veh	21.7	35.2	20.4	28.1	26.7	26.7	40.0	0.0	63.5	42.5	38.6	35.4
LnGrp LOS	C	D	C	C	C	C	D		E	D	D	D
Approach Vol, veh/h		741			1393			286			479	
Approach Delay, s/veh		33.5			26.9			59.3			40.0	
Approach LOS		C			C			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.4	63.2	20.5	26.1	16.3	57.4	10.4	36.2
Change Period (Y+Rc), s	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Max Green Setting (Gmax), s	5.7	67.7	16.7	24.7	12.7	60.7	8.7	32.7
Max Q Clear Time (g_c+I1), s	4.0	33.4	14.1	18.3	9.3	38.6	4.9	12.7
Green Ext Time (p_c), s	0.0	15.6	0.2	1.5	0.2	12.4	0.0	2.7

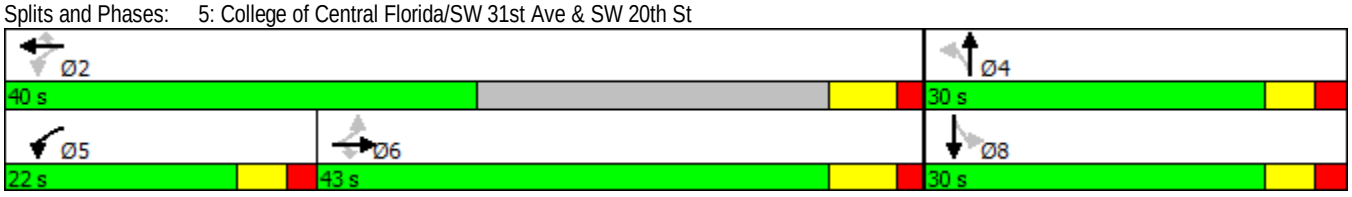
Intersection Summary	
HCM 2010 Ctrl Delay	33.9
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	41	766	65	109	750	78	60	62	120	77	94	107
Future Volume (vph)	41	766	65	109	750	78	60	62	120	77	94	107
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Heavy Vehicles (%)	1%	1%	1%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	48	891	76	127	872	91	70	72	140	90	109	124
Shared Lane Traffic (%)												
Lane Group Flow (vph)	48	891	76	127	872	91	70	212	0	90	233	0
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA		Perm	NA	
Protected Phases		6		5	2			4			8	
Permitted Phases	6		6	2		2	4			8		
Detector Phase	6	6	6	5	2	2	4	4		8	8	
Switch Phase												
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	15.0	8.0	8.0		8.0	8.0	
Minimum Split (s)	28.7	28.7	28.7	10.6	28.7	28.7	27.0	27.0		27.0	27.0	
Total Split (s)	43.0	43.0	43.0	22.0	40.0	40.0	30.0	30.0		30.0	30.0	
Total Split (%)	45.3%	45.3%	45.3%	23.2%	42.1%	42.1%	31.6%	31.6%		31.6%	31.6%	
Yellow Time (s)	4.7	4.7	4.7	3.6	4.7	4.7	3.6	3.6		3.6	3.6	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.4	2.4		2.4	2.4	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.7	6.7	6.7	5.6	6.7	6.7	6.0	6.0		6.0	6.0	
Lead/Lag	Lag	Lag	Lag	Lead								
Lead-Lag Optimize?	Yes	Yes	Yes	Yes								
Recall Mode	Min	Min	Min	None	Min	Min	None	None		None	None	
v/c Ratio	0.18	0.96	0.09	0.40	0.71	0.09	0.45	0.55		0.53	0.66	
Control Delay	16.8	45.3	2.6	11.2	13.6	1.7	38.9	21.7		41.1	31.6	
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	16.8	45.3	2.6	11.2	13.6	1.7	38.9	21.7		41.1	31.6	
Queue Length 50th (ft)	13	403	0	18	225	0	30	48		40	78	
Queue Length 95th (ft)	41	#775	15	56	430	15	69	108		85	147	
Internal Link Dist (ft)		3003			1127			192			432	
Turn Bay Length (ft)	150		150	350		200	200			150		
Base Capacity (vph)	274	926	838	475	1480	1277	282	618		311	597	
Starvation Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Storage Cap Reductn	0	0	0	0	0	0	0	0		0	0	
Reduced v/c Ratio	0.18	0.96	0.09	0.27	0.59	0.07	0.25	0.34		0.29	0.39	

Intersection Summary

Cycle Length: 95
Actuated Cycle Length: 75.3
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 5: College of Central Florida/SW 31st Ave & SW 20th St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	41	766	65	109	750	78	60	62	120	77	94	107
Future Volume (veh/h)	41	766	65	109	750	78	60	62	120	77	94	107
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		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
Adj Sat Flow, veh/h/ln	1881	1881	1881	1881	1881	1881	1881	1881	1900	1863	1863	1900
Adj Flow Rate, veh/h	48	891	57	127	872	77	70	72	113	90	109	101
Adj No. of Lanes	1	1	1	1	1	1	1	1	0	1	1	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	1	1	1	1	1	1	1	1	1	2	2	2
Cap, veh/h	260	898	763	209	1152	979	227	146	229	244	197	182
Arrive On Green	0.48	0.48	0.48	0.06	0.61	0.61	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	594	1881	1599	1792	1881	1599	1178	661	1037	1194	891	826
Grp Volume(v), veh/h	48	891	57	127	872	77	70	0	185	90	0	210
Grp Sat Flow(s),veh/h/ln	594	1881	1599	1792	1881	1599	1178	0	1698	1194	0	1717
Q Serve(g_s), s	4.8	35.8	1.5	2.5	25.5	1.5	4.3	0.0	7.2	5.4	0.0	8.3
Cycle Q Clear(g_c), s	20.0	35.8	1.5	2.5	25.5	1.5	12.5	0.0	7.2	12.7	0.0	8.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.61	1.00		0.48
Lane Grp Cap(c), veh/h	260	898	763	209	1152	979	227	0	375	244	0	379
V/C Ratio(X)	0.18	0.99	0.07	0.61	0.76	0.08	0.31	0.00	0.49	0.37	0.00	0.55
Avail Cap(c_a), veh/h	260	898	763	485	1152	979	339	0	536	358	0	542
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.6	19.7	10.8	17.4	10.7	6.0	31.9	0.0	25.9	31.5	0.0	26.3
Incr Delay (d2), s/veh	0.3	28.0	0.0	2.9	2.9	0.0	0.8	0.0	1.0	0.9	0.0	1.3
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	0.8	25.3	0.7	1.5	14.0	0.7	1.4	0.0	3.5	1.8	0.0	4.0
LnGrp Delay(d),s/veh	21.9	47.7	10.8	20.2	13.6	6.0	32.6	0.0	26.9	32.4	0.0	27.6
LnGrp LOS	C	D	B	C	B	A	C		C	C		C
Approach Vol, veh/h		996			1076			255			300	
Approach Delay, s/veh		44.4			13.8			28.5			29.0	
Approach LOS		D			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4	5	6		8
Phs Duration (G+Y+Rc), s		53.3		22.8	10.3	43.0		22.8
Change Period (Y+Rc), s		6.7		6.0	5.6	6.7		6.0
Max Green Setting (Gmax), s		33.3		24.0	16.4	36.3		24.0
Max Q Clear Time (g_c+I1), s		27.5		14.5	4.5	37.8		14.7
Green Ext Time (p_c), s		4.8		2.1	0.2	0.0		2.1

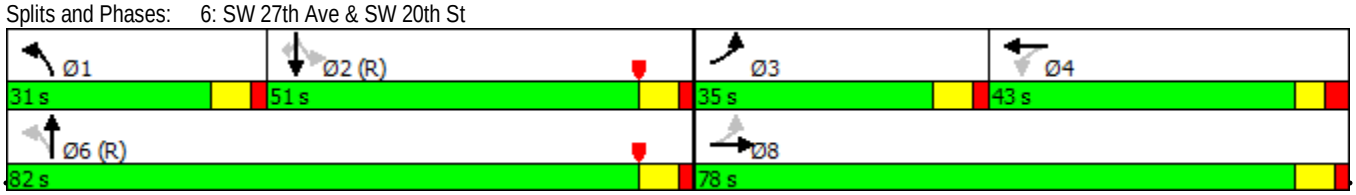
Intersection Summary	
HCM 2010 Ctrl Delay	28.6
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	304	385	328	17	322	77	292	806	22	66	897	308
Future Volume (vph)	304	385	328	17	322	77	292	806	22	66	897	308
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Heavy Vehicles (%)	1%	1%	1%	0%	0%	0%	2%	2%	2%	1%	1%	1%
Adj. Flow (vph)	323	410	349	18	343	82	311	857	23	70	954	328
Shared Lane Traffic (%)												
Lane Group Flow (vph)	323	759	0	18	425	0	311	880	0	70	954	328
Turn Type	pm+pt	NA		Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases	3	8			4		1	6			2	
Permitted Phases	8			4			6			2		2
Detector Phase	3	8		4	4		1	6		2	2	2
Switch Phase												
Minimum Initial (s)	7.0	7.0		7.0	7.0		7.0	20.0		20.0	20.0	20.0
Minimum Split (s)	13.7	20.0		20.0	20.0		13.7	26.7		26.7	26.7	26.7
Total Split (s)	35.0	78.0		43.0	43.0		31.0	82.0		51.0	51.0	51.0
Total Split (%)	21.9%	48.8%		26.9%	26.9%		19.4%	51.3%		31.9%	31.9%	31.9%
Yellow Time (s)	4.7	4.7		3.6	3.6		4.7	4.7		4.7	4.7	4.7
All-Red Time (s)	2.0	2.0		3.1	3.1		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
Total Lost Time (s)	6.7	6.7		6.7	6.7		6.7	6.7		6.7	6.7	6.7
Lead/Lag	Lead			Lag	Lag		Lead			Lag	Lag	Lag
Lead-Lag Optimize?	Yes			Yes	Yes		Yes			Yes	Yes	Yes
Recall Mode	None	None		None	None		None	C-Max		C-Max	C-Max	C-Max
v/c Ratio	0.94	0.95		0.32	0.97		0.98	0.53		0.42	0.96	0.48
Control Delay	81.4	63.2		69.1	95.2		93.2	31.1		56.4	77.8	6.7
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	81.4	63.2		69.1	95.2		93.2	31.1		56.4	77.8	6.7
Queue Length 50th (ft)	283	731		16	~445		277	336		60	521	0
Queue Length 95th (ft)	#463	#1015		46	#680		#485	400		116	#663	79
Internal Link Dist (ft)		941			462			544			1105	
Turn Bay Length (ft)	350			200			300			350		400
Base Capacity (vph)	361	799		57	438		318	1666		168	989	679
Starvation Cap Reductn	0	0		0	0		0	0		0	0	0
Spillback Cap Reductn	0	0		0	0		0	0		0	0	0
Storage Cap Reductn	0	0		0	0		0	0		0	0	0
Reduced v/c Ratio	0.89	0.95		0.32	0.97		0.98	0.53		0.42	0.96	0.48

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 30 (19%), Referenced to phase 2:SBTL and 6:NBTL, Start of Yellow
Natural Cycle: 120
Control Type: Actuated-Coordinated
~ 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: 6: SW 27th Ave & SW 20th St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	304	385	328	17	322	77	292	806	22	66	897	308
Future Volume (veh/h)	304	385	328	17	322	77	292	806	22	66	897	308
Number	3	8	18	7	4	14	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1881	1881	1900	1900	1900	1900	1863	1863	1900	1881	1881	1881
Adj Flow Rate, veh/h	323	410	328	18	343	72	311	857	22	70	954	222
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	1
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, %	1	1	1	0	0	0	2	2	2	1	1	1
Cap, veh/h	344	422	338	61	354	74	327	1694	43	227	1025	458
Arrive On Green	0.16	0.44	0.44	0.23	0.23	0.23	0.15	0.48	0.48	0.29	0.29	0.29
Sat Flow, veh/h	1792	969	775	732	1524	320	1774	3526	91	635	3574	1599
Grp Volume(v), veh/h	323	0	738	18	0	415	311	430	449	70	954	222
Grp Sat Flow(s),veh/h/ln	1792	0	1744	732	0	1844	1774	1770	1847	635	1787	1599
Q Serve(g_s), s	23.6	0.0	66.2	3.5	0.0	35.7	22.5	26.7	26.7	14.1	41.6	18.4
Cycle Q Clear(g_c), s	23.6	0.0	66.2	37.2	0.0	35.7	22.5	26.7	26.7	14.1	41.6	18.4
Prop In Lane	1.00		0.44	1.00		0.17	1.00		0.05	1.00		1.00
Lane Grp Cap(c), veh/h	344	0	760	61	0	428	327	850	887	227	1025	458
V/C Ratio(X)	0.94	0.00	0.97	0.29	0.00	0.97	0.95	0.51	0.51	0.31	0.93	0.48
Avail Cap(c_a), veh/h	371	0	777	61	0	428	327	850	887	227	1025	458
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	48.2	0.0	44.1	78.4	0.0	60.9	48.6	28.5	28.5	45.8	55.5	47.3
Incr Delay (d2), s/veh	30.6	0.0	25.0	2.6	0.0	35.5	36.7	2.1	2.1	3.5	15.8	3.6
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	17.0	0.0	37.0	0.8	0.0	22.4	17.0	13.5	14.1	2.7	22.8	8.6
LnGrp Delay(d),s/veh	78.8	0.0	69.1	81.0	0.0	96.3	85.3	30.7	30.6	49.3	71.3	50.9
LnGrp LOS	E		E	F		F	F	C	C	D	E	D
Approach Vol, veh/h		1061			433			1190			1246	
Approach Delay, s/veh		72.0			95.7			44.9			66.4	
Approach LOS		E			F			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4		6		8
Phs Duration (G+Y+Rc), s	31.0	52.6	32.6	43.9		83.6		76.4
Change Period (Y+Rc), s	6.7	6.7	6.7	6.7		6.7		6.7
Max Green Setting (Gmax), s	24.3	44.3	28.3	36.3		75.3		71.3
Max Q Clear Time (g_c+I1), s	24.5	43.6	25.6	39.2		28.7		68.2
Green Ext Time (p_c), s	0.0	0.7	0.3	0.0		20.1		1.5

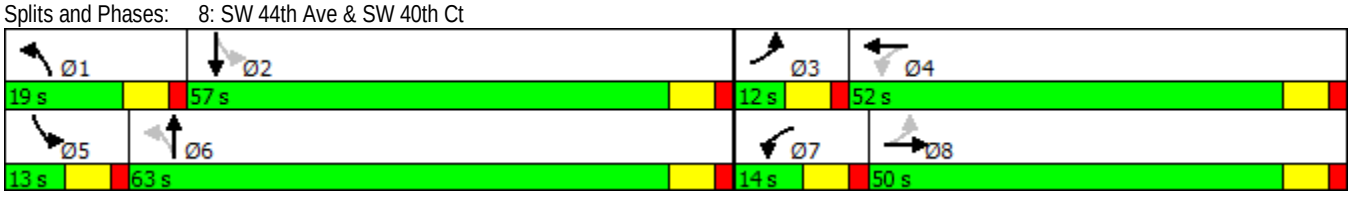
Intersection Summary	
HCM 2010 Ctrl Delay	64.7
HCM 2010 LOS	E

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	95	300	210	101	402	180	185	518	111	117	495	180
Future Volume (vph)	95	300	210	101	402	180	185	518	111	117	495	180
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
Heavy Vehicles (%)	4%	4%	4%	2%	2%	2%	0%	0%	0%	4%	4%	4%
Adj. Flow (vph)	98	309	216	104	414	186	191	534	114	121	510	186
Shared Lane Traffic (%)												
Lane Group Flow (vph)	98	525	0	104	600	0	191	648	0	121	696	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	3	8		7	4		1	6		5	2	
Permitted Phases	8			4			6			2		
Detector Phase	3	8		7	4		1	6		5	2	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	15.0	20.0		15.0	20.0		15.0	25.0		15.0	25.0	
Total Split (s)	12.0	50.0		14.0	52.0		19.0	63.0		13.0	57.0	
Total Split (%)	8.6%	35.7%		10.0%	37.1%		13.6%	45.0%		9.3%	40.7%	
Yellow Time (s)	4.8	4.8		4.8	4.8		4.8	4.8		4.8	4.8	
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)	6.8	6.8		6.8	6.8		6.8	6.8		6.8	6.8	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	None		None	None		None	Min		None	Min	
v/c Ratio	0.54	0.82		0.42	0.87		0.74	0.62		0.53	0.81	
Control Delay	32.6	45.5		24.2	49.4		41.2	37.4		33.6	47.8	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	32.6	45.5		24.2	49.4		41.2	37.4		33.6	47.8	
Queue Length 50th (ft)	40	348		43	415		96	217		59	252	
Queue Length 95th (ft)	83	#600		87	#708		#163	277		99	322	
Internal Link Dist (ft)		1473			795			1631			7224	
Turn Bay Length (ft)	255			255								
Base Capacity (vph)	180	641		248	687		268	1677		227	1433	
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	0.54	0.82		0.42	0.87		0.71	0.39		0.53	0.49	

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 119
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: SW 44th Ave & SW 40th Ct



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	300	210	101	402	180	185	518	111	117	495	180
Future Volume (veh/h)	95	300	210	101	402	180	185	518	111	117	495	180
Number	3	8	18	7	4	14	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1827	1827	1900	1863	1863	1900	1900	1900	1900	1827	1827	1900
Adj Flow Rate, veh/h	98	309	216	104	414	186	191	534	114	121	510	186
Adj No. of Lanes	1	1	0	1	1	0	1	2	0	1	2	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	4	4	4	2	2	2	0	0	0	4	4	4
Cap, veh/h	163	355	248	210	442	199	294	941	200	276	693	251
Arrive On Green	0.04	0.35	0.35	0.05	0.36	0.36	0.09	0.32	0.32	0.05	0.28	0.28
Sat Flow, veh/h	1740	1002	701	1774	1219	547	1810	2964	630	1740	2497	906
Grp Volume(v), veh/h	98	0	525	104	0	600	191	324	324	121	354	342
Grp Sat Flow(s),veh/h/ln	1740	0	1703	1774	0	1766	1810	1805	1789	1740	1736	1667
Q Serve(g_s), s	4.3	0.0	34.8	4.5	0.0	39.6	9.0	18.1	18.2	6.1	22.4	22.6
Cycle Q Clear(g_c), s	4.3	0.0	34.8	4.5	0.0	39.6	9.0	18.1	18.2	6.1	22.4	22.6
Prop In Lane	1.00		0.41	1.00		0.31	1.00		0.35	1.00		0.54
Lane Grp Cap(c), veh/h	163	0	603	210	0	641	294	573	568	276	481	462
V/C Ratio(X)	0.60	0.00	0.87	0.50	0.00	0.94	0.65	0.57	0.57	0.44	0.73	0.74
Avail Cap(c_a), veh/h	163	0	609	223	0	661	311	840	832	276	721	693
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.2	0.0	36.4	28.3	0.0	37.1	29.7	34.3	34.4	30.1	39.6	39.7
Incr Delay (d2), s/veh	6.1	0.0	12.9	1.8	0.0	20.5	4.4	0.9	0.9	1.1	2.2	2.3
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	2.3	0.0	18.5	2.3	0.0	23.0	4.8	9.2	9.1	2.9	11.0	10.7
LnGrp Delay(d),s/veh	36.3	0.0	49.3	30.1	0.0	57.6	34.1	35.2	35.3	31.2	41.8	42.0
LnGrp LOS	D		D	C		E	C	D	D	C	D	D
Approach Vol, veh/h		623			704			839			817	
Approach Delay, s/veh		47.3			53.5			35.0			40.3	
Approach LOS		D			D			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.8	40.3	12.0	50.7	13.0	45.2	13.1	49.6
Change Period (Y+Rc), s	6.8	6.8	6.8	6.8	6.8	6.8	6.8	6.8
Max Green Setting (Gmax), s	12.2	50.2	5.2	45.2	6.2	56.2	7.2	43.2
Max Q Clear Time (g_c+I1), s	11.0	24.6	6.3	41.6	8.1	20.2	6.5	36.8
Green Ext Time (p_c), s	0.1	9.0	0.0	2.3	0.0	9.9	0.0	3.7

Intersection Summary	
HCM 2010 Ctrl Delay	43.4
HCM 2010 LOS	D

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	283	1716	660	252	2016	212	462	815	308	129	560	177
Future Volume (vph)	283	1716	660	252	2016	212	462	815	308	129	560	177
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
Heavy Vehicles (%)	2%	2%	2%	1%	1%	1%	1%	1%	1%	2%	2%	2%
Adj. Flow (vph)	292	1769	680	260	2078	219	476	840	318	133	577	182
Shared Lane Traffic (%)												
Lane Group Flow (vph)	292	1769	680	260	2078	219	476	840	318	133	577	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)	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0	7.0	20.0	20.0
Minimum Split (s)	15.0	27.2	27.2	15.0	27.2	27.2	14.0	27.2	27.2	15.0	28.2	28.2
Total Split (s)	22.0	73.0	73.0	22.0	73.0	73.0	30.0	45.5	45.5	19.5	35.0	35.0
Total Split (%)	13.8%	45.6%	45.6%	13.8%	45.6%	45.6%	18.8%	28.4%	28.4%	12.2%	21.9%	21.9%
Yellow Time (s)	5.2	5.2	5.2	5.2	5.2	5.2	4.0	5.2	5.2	4.0	5.2	5.2
All-Red Time (s)	2.8	2.0	2.0	2.8	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)	8.0	7.2	7.2	8.0	7.2	7.2	7.0	7.2	7.2	7.0	7.2	7.2
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-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None	None
v/c Ratio	0.97	0.85	0.81	0.86	0.98	0.29	0.96	0.98	0.61	0.96	0.94	0.43
Control Delay	116.9	47.2	30.7	94.9	61.2	15.4	97.8	86.5	27.7	138.8	88.8	11.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	116.9	47.2	30.7	94.9	61.2	15.4	97.8	86.5	27.7	138.8	88.8	11.1
Queue Length 50th (ft)	159	608	373	143	590	53	258	464	126	141	317	3
Queue Length 95th (ft)	#260	673	569	m#199	#887	m96	#370	#605	236	#286	#434	74
Internal Link Dist (ft)		1071			738			670			1631	
Turn Bay Length (ft)	390		670	375		200	450		200	400		250
Base Capacity (vph)	300	2093	835	303	2112	762	498	855	521	138	614	422
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	0.97	0.85	0.81	0.86	0.98	0.29	0.96	0.98	0.61	0.96	0.94	0.43

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 65 (41%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow
Natural Cycle: 145
Control Type: Actuated-Coordinated
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.

Splits and Phases: 10: SW 43rd St Rd/SW 44th Ave & SR 200

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	283	1716	660	252	2016	212	462	815	308	129	560	177
Future Volume (veh/h)	283	1716	660	252	2016	212	462	815	308	129	560	177
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1881	1881	1881	1881	1881	1881	1863	1863	1863
Adj Flow Rate, veh/h	292	1769	464	260	2078	147	476	840	148	133	577	120
Adj No. of Lanes	2	3	1	2	3	1	2	2	1	1	2	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	1	1	1	1	1	1	2	2	2
Cap, veh/h	301	2098	653	300	2112	658	500	856	383	139	615	275
Arrive On Green	0.09	0.41	0.41	0.11	0.55	0.55	0.14	0.24	0.24	0.08	0.17	0.17
Sat Flow, veh/h	3442	5085	1583	3476	5136	1599	3476	3574	1599	1774	3539	1583
Grp Volume(v), veh/h	292	1769	464	260	2078	147	476	840	148	133	577	120
Grp Sat Flow(s),veh/h/ln	1721	1695	1583	1738	1712	1599	1738	1787	1599	1774	1770	1583
Q Serve(g_s), s	13.5	50.1	39.0	11.8	63.5	7.6	21.7	37.4	12.4	12.0	25.8	10.8
Cycle Q Clear(g_c), s	13.5	50.1	39.0	11.8	63.5	7.6	21.7	37.4	12.4	12.0	25.8	10.8
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	301	2098	653	300	2112	658	500	856	383	139	615	275
V/C Ratio(X)	0.97	0.84	0.71	0.87	0.98	0.22	0.95	0.98	0.39	0.96	0.94	0.44
Avail Cap(c_a), veh/h	301	2098	653	304	2112	658	500	856	383	139	615	275
HCM Platoon Ratio	1.00	1.00	1.00	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	0.56	0.56	0.56
Uniform Delay (d), s/veh	72.8	42.3	39.1	69.9	35.7	23.1	68.0	60.5	51.0	73.5	65.3	59.1
Incr Delay (d2), s/veh	43.5	4.3	6.4	22.2	16.1	0.8	28.6	26.2	0.6	45.9	14.7	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	8.3	24.3	18.2	6.6	32.9	3.5	12.4	21.5	5.6	7.6	13.8	4.8
LnGrp Delay(d),s/veh	116.3	46.7	45.5	92.1	51.9	23.8	96.6	86.7	51.6	119.4	80.0	59.7
LnGrp LOS	F	D	D	F	D	C	F	F	D	F	E	E
Approach Vol, veh/h		2525			2485			1464			830	
Approach Delay, s/veh		54.5			54.4			86.4			83.4	
Approach LOS		D			D			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.0	73.0	19.5	45.5	21.8	73.2	30.0	35.0
Change Period (Y+Rc), s	* 8	7.2	7.0	7.2	* 8	7.2	7.0	7.2
Max Green Setting (Gmax), s	* 14	65.8	12.5	38.3	* 14	65.8	23.0	27.8
Max Q Clear Time (g_c+I1), s	15.5	65.5	14.0	39.4	13.8	52.1	23.7	27.8
Green Ext Time (p_c), s	0.0	0.3	0.0	0.0	0.0	13.4	0.0	0.0

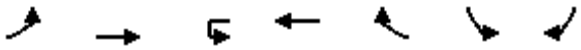
Intersection Summary	
HCM 2010 Ctrl Delay	64.1
HCM 2010 LOS	E

Notes

User approved ignoring U-Turning movement.

* HCM 2010 computational engine requires equal clearance times for the phases crossing the barrier.

AM Peak Hour Existing Traffic Conditions



Lane Group	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Volume (vph)	101	581	0	328	45	24	60
Future Volume (vph)	101	581	0	328	45	24	60
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	2%	4%	4%	4%	5%	5%
Adj. Flow (vph)	113	653	0	369	51	27	67
Shared Lane Traffic (%)							
Lane Group Flow (vph)	113	653	0	420	0	27	67
Sign Control		Free		Free		Stop	

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	1.8

Movement	EBL	EBT	WBU	WBT	WBR	SBL	SBR
Lane Configurations							
Traffic Vol, veh/h	101	581	0	328	45	24	60
Future Vol, veh/h	101	581	0	328	45	24	60
Conflicting Peds, #/hr	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	-	None	-	None
Storage Length	250	-	250	-	-	0	0
Veh in Median Storage, #	-	0	-	0	-	0	-
Grade, %	-	0	-	0	-	0	-
Peak Hour Factor	89	89	89	89	89	89	89
Heavy Vehicles, %	2	2	4	4	4	5	5
Mvmt Flow	113	653	0	369	51	27	67

Major/Minor	Major1		Major2			Minor2	
Conflicting Flow All	419	0	476	-	0	947	210
Stage 1	-	-	-	-	-	394	-
Stage 2	-	-	-	-	-	553	-
Critical Hdwy	4.14	-	6.48	-	-	6.9	7
Critical Hdwy Stg 1	-	-	-	-	-	5.9	-
Critical Hdwy Stg 2	-	-	-	-	-	5.9	-
Follow-up Hdwy	2.22	-	2.54	-	-	3.55	3.35
Pot Cap-1 Maneuver	1137	-	708	-	-	254	786
Stage 1	-	-	-	-	-	642	-
Stage 2	-	-	-	-	-	532	-
Platoon blocked, %		-		-	-		
Mov Cap-1 Maneuver	1137	-	708	-	-	229	786
Mov Cap-2 Maneuver	-	-	-	-	-	229	-
Stage 1	-	-	-	-	-	642	-
Stage 2	-	-	-	-	-	479	-

Approach	EB	WB	SB
HCM Control Delay, s	1.3	0	13.7
HCM LOS			B

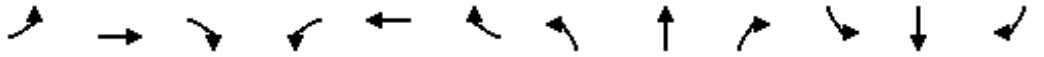
Minor Lane/Major Mvmt	EBL	EBT	WBU	WBT	WBR	SBLn1	SBLn2
Capacity (veh/h)	1137	-	708	-	-	229	786
HCM Lane V/C Ratio	0.1	-	-	-	-	0.118	0.086
HCM Control Delay (s)	8.5	-	0	-	-	22.8	10
HCM Lane LOS	A	-	A	-	-	C	B
HCM 95th %tile Q(veh)	0.3	-	0	-	-	0.4	0.3

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	35	557	32	80	311	131	38	74	161	58	24	18
Future Volume (vph)	35	557	32	80	311	131	38	74	161	58	24	18
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	3%	3%	3%	11%	11%	11%
Adj. Flow (vph)	38	612	35	88	342	144	42	81	177	64	26	20
Shared Lane Traffic (%)												
Lane Group Flow (vph)	38	612	35	88	486	0	42	258	0	64	26	20
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		8
Detector Phase	1	6	6	5	2		7	4		3	8	8
Switch Phase												
Minimum Initial (s)	10.0	20.0	20.0	10.0	20.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	16.3	26.3	26.3	16.3	26.3		11.3	20.0		11.3	20.0	20.0
Total Split (s)	20.0	65.0	65.0	20.0	65.0		20.0	25.0		20.0	25.0	25.0
Total Split (%)	15.4%	50.0%	50.0%	15.4%	50.0%		15.4%	19.2%		15.4%	19.2%	19.2%
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	4.3		4.3	4.3	4.3
All-Red Time (s)	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
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3		6.3	6.3		6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min		None	None		None	None	None
v/c Ratio	0.08	0.79	0.05	0.26	0.61		0.11	0.71		0.24	0.07	0.05
Control Delay	11.1	35.2	0.1	13.0	24.9		28.3	42.5		30.0	38.8	0.2
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	11.1	35.2	0.1	13.0	24.9		28.3	42.5		30.0	38.8	0.2
Queue Length 50th (ft)	11	355	0	26	250		18	113		28	14	0
Queue Length 95th (ft)	27	536	0	52	380		53	#295		75	45	0
Internal Link Dist (ft)		2796			1461			398			352	
Turn Bay Length (ft)	250			125			185			165		200
Base Capacity (vph)	519	1207	1073	402	1139		480	434		355	448	478
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.07	0.51	0.03	0.22	0.43		0.09	0.59		0.18	0.06	0.04

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 93.6
Natural Cycle: 80
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: SW 38th Ave & SW 20th St

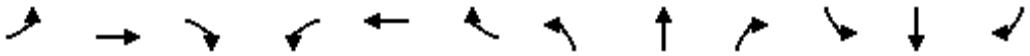


Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	557	32	80	311	131	38	74	161	58	24	18
Future Volume (veh/h)	35	557	32	80	311	131	38	74	161	58	24	18
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1827	1827	1900	1845	1845	1900	1712	1712	1712
Adj Flow Rate, veh/h	38	612	21	88	342	133	42	81	118	64	26	5
Adj No. of Lanes	1	1	1	1	1	0	1	1	0	1	1	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	4	4	4	3	3	3	11	11	11
Cap, veh/h	419	756	643	354	551	214	344	100	146	194	267	227
Arrive On Green	0.07	0.41	0.41	0.10	0.44	0.44	0.04	0.15	0.15	0.05	0.16	0.16
Sat Flow, veh/h	1774	1863	1583	1740	1253	487	1757	680	990	1630	1712	1455
Grp Volume(v), veh/h	38	612	21	88	0	475	42	0	199	64	26	5
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1740	0	1741	1757	0	1670	1630	1712	1455
Q Serve(g_s), s	1.0	24.6	0.7	2.2	0.0	17.8	1.7	0.0	9.8	2.8	1.1	0.2
Cycle Q Clear(g_c), s	1.0	24.6	0.7	2.2	0.0	17.8	1.7	0.0	9.8	2.8	1.1	0.2
Prop In Lane	1.00		1.00	1.00		0.28	1.00		0.59	1.00		1.00
Lane Grp Cap(c), veh/h	419	756	643	354	0	765	344	0	245	194	267	227
V/C Ratio(X)	0.09	0.81	0.03	0.25	0.00	0.62	0.12	0.00	0.81	0.33	0.10	0.02
Avail Cap(c_a), veh/h	582	1293	1099	456	0	1208	564	0	369	383	378	322
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	13.3	22.2	15.1	14.8	0.0	18.3	28.8	0.0	34.9	29.3	30.6	30.2
Incr Delay (d2), s/veh	0.1	2.1	0.0	0.4	0.0	0.8	0.2	0.0	8.0	1.0	0.2	0.0
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	0.5	13.0	0.3	1.1	0.0	8.6	0.8	0.0	5.0	1.3	0.5	0.1
LnGrp Delay(d),s/veh	13.4	24.4	15.1	15.1	0.0	19.1	29.0	0.0	42.9	30.3	30.8	30.3
LnGrp LOS	B	C	B	B		B	C		D	C	C	C
Approach Vol, veh/h		671			563			241			95	
Approach Delay, s/veh		23.5			18.5			40.5			30.4	
Approach LOS		C			B			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.2	43.5	10.2	18.7	15.0	40.6	9.4	19.5
Change Period (Y+Rc), s	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Max Green Setting (Gmax), s	13.7	58.7	13.7	18.7	13.7	58.7	13.7	18.7
Max Q Clear Time (g_c+I1), s	3.0	19.8	4.8	11.8	4.2	26.6	3.7	3.1
Green Ext Time (p_c), s	0.0	8.0	0.1	0.7	0.1	7.7	0.0	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	24.7
HCM 2010 LOS	C

AM Peak Hour Future Year Background Traffic Conditions



Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	107	696	268	74	392	25	145	290	145	62	205	144
Future Volume (vph)	107	696	268	74	392	25	145	290	145	62	205	144
Peak Hour Factor	0.89	0.89	0.92	0.92	0.89	0.89	0.92	0.92	0.92	0.89	0.92	0.89
Heavy Vehicles (%)	2%	2%	2%	2%	4%	4%	2%	2%	2%	5%	2%	5%
Adj. Flow (vph)	120	782	291	80	440	28	158	315	158	70	223	162
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	1073	0	80	468	0	158	473	0	70	385	0
Sign Control		Free			Free			Stop			Stop	

Intersection Summary

Control Type: Unsignalized

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	107	696	268	74	392	25	145	290	145	62	205	144
Future Vol, veh/h	107	696	268	74	392	25	145	290	145	62	205	144
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	250	-	-	250	-	-	250	-	-	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	89	89	92	92	89	89	92	92	92	89	92	89
Heavy Vehicles, %	2	2	2	2	4	4	2	2	2	5	2	5
Mvmt Flow	120	782	291	80	440	28	158	315	158	70	223	162

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	469	0	0	1073	0	0	1661	1797	537	1404	1929	234
Stage 1	-	-	-	-	-	-	1168	1168	-	615	615	-
Stage 2	-	-	-	-	-	-	493	629	-	789	1314	-
Critical Hdwy	4.14	-	-	4.14	-	-	7.54	6.54	6.94	7.6	6.54	7
Critical Hdwy Stg 1	-	-	-	-	-	-	6.54	5.54	-	6.6	5.54	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.54	5.54	-	6.6	5.54	-
Follow-up Hdwy	2.22	-	-	2.22	-	-	3.52	4.02	3.32	3.55	4.02	3.35
Pot Cap-1 Maneuver	1089	-	-	645	-	-	~ 64	~ 79	488	97	~ 66	759
Stage 1	-	-	-	-	-	-	206	~ 266	-	438	480	-
Stage 2	-	-	-	-	-	-	526	474	-	343	226	-
Platoon blocked, %		-	-		-	-						
Mov Cap-1 Maneuver	1089	-	-	645	-	-	-	~ 62	488	-	~ 51	759
Mov Cap-2 Maneuver	-	-	-	-	-	-	-	~ 62	-	-	~ 51	-
Stage 1	-	-	-	-	-	-	183	~ 237	-	390	420	-
Stage 2	-	-	-	-	-	-	170	415	-	-	~ 201	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.9	1.7		
HCM LOS			-	-

Minor Lane/Major Mvmt	NBLn1	NBLn2	NBLn3	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1	SBLn2	SBLn3
Capacity (veh/h)	-	62	110	1089	-	-	645	-	-	-	51	114
HCM Lane V/C Ratio	-	2.542	2.866	0.11	-	-	0.125	-	-	-	2.185	2.397
HCM Control Delay (s)	-	$ 842.2	$ 924.8	8.7	-	-	11.4	-	-	-	$ 716.9	$ 715.2
HCM Lane LOS	-	F	F	A	-	-	B	-	-	-	F	F
HCM 95th %tile Q(veh)	-	15.7	29.6	0.4	-	-	0.4	-	-	-	11.3	24.1

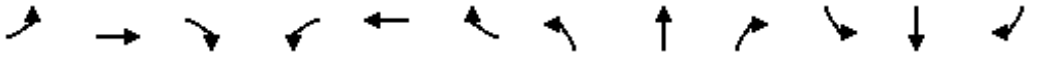
Notes			
~: Volume exceeds capacity	$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	825	97	113	563	75	44	87	160	68	60	23
Future Volume (vph)	49	825	97	113	563	75	44	87	160	68	60	23
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	3%	3%	3%	11%	11%	11%
Adj. Flow (vph)	54	907	107	124	619	82	48	96	176	75	66	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	907	107	124	701	0	48	272	0	75	66	25
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		8
Detector Phase	1	6	6	5	2		7	4		3	8	8
Switch Phase												
Minimum Initial (s)	10.0	20.0	20.0	10.0	20.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	16.3	26.3	26.3	16.3	26.3		11.3	20.0		11.3	20.0	20.0
Total Split (s)	20.0	65.0	65.0	20.0	65.0		20.0	25.0		20.0	25.0	25.0
Total Split (%)	15.4%	50.0%	50.0%	15.4%	50.0%		15.4%	19.2%		15.4%	19.2%	19.2%
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	4.3		4.3	4.3	4.3
All-Red Time (s)	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
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3		6.3	6.3		6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min		None	None		None	None	None
v/c Ratio	0.16	1.00	0.13	0.57	0.73		0.16	0.90		0.41	0.24	0.07
Control Delay	11.3	61.1	2.1	32.8	30.5		34.7	73.0		40.8	48.1	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	11.3	61.1	2.1	32.8	30.5		34.7	73.0		40.8	48.1	0.4
Queue Length 50th (ft)	16	~761	0	49	455		28	170		45	46	0
Queue Length 95th (ft)	35	#1102	20	116	664		61	#357		87	93	0
Internal Link Dist (ft)		2796			1461			398			352	
Turn Bay Length (ft)	250			125			185			165		200
Base Capacity (vph)	397	911	842	255	955		363	309		232	289	356
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.14	1.00	0.13	0.49	0.73		0.13	0.88		0.32	0.23	0.07

Intersection Summary

Cycle Length: 130
Actuated Cycle Length: 120.7
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
~ 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: 4: SW 38th Ave & SW 20th St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	825	97	113	563	75	44	87	160	68	60	23
Future Volume (veh/h)	49	825	97	113	563	75	44	87	160	68	60	23
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1827	1827	1900	1845	1845	1900	1712	1712	1712
Adj Flow Rate, veh/h	54	907	93	124	619	71	48	96	117	75	66	10
Adj No. of Lanes	1	1	1	1	1	0	1	1	0	1	1	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	4	4	4	3	3	3	11	11	11
Cap, veh/h	347	933	793	225	828	95	290	110	133	168	278	236
Arrive On Green	0.07	0.50	0.50	0.08	0.51	0.51	0.03	0.14	0.14	0.05	0.16	0.16
Sat Flow, veh/h	1774	1863	1583	1740	1610	185	1757	758	924	1630	1712	1455
Grp Volume(v), veh/h	54	907	93	124	0	690	48	0	213	75	66	10
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1740	0	1794	1757	0	1682	1630	1712	1455
Q Serve(g_s), s	1.6	54.7	3.6	3.7	0.0	35.0	2.7	0.0	14.3	4.5	3.9	0.7
Cycle Q Clear(g_c), s	1.6	54.7	3.6	3.7	0.0	35.0	2.7	0.0	14.3	4.5	3.9	0.7
Prop In Lane	1.00		1.00	1.00		0.10	1.00		0.55	1.00		1.00
Lane Grp Cap(c), veh/h	347	933	793	225	0	923	290	0	243	168	278	236
V/C Ratio(X)	0.16	0.97	0.12	0.55	0.00	0.75	0.17	0.00	0.88	0.45	0.24	0.04
Avail Cap(c_a), veh/h	431	946	804	284	0	923	438	0	272	277	278	236
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.1	28.1	15.3	25.0	0.0	22.1	40.1	0.0	48.4	40.1	42.2	40.8
Incr Delay (d2), s/veh	0.2	22.5	0.1	2.1	0.0	3.4	0.3	0.0	24.2	1.8	0.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	33.8	1.6	2.1	0.0	18.1	1.3	0.0	8.3	2.1	1.9	0.3
LnGrp Delay(d),s/veh	16.3	50.6	15.4	27.1	0.0	25.5	40.4	0.0	72.6	41.9	42.6	40.9
LnGrp LOS	B	D	B	C		C	D		E	D	D	D
Approach Vol, veh/h		1054			814			261			151	
Approach Delay, s/veh		45.7			25.7			66.6			42.2	
Approach LOS		D			C			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.5	65.7	12.3	23.0	16.1	64.2	10.2	25.0
Change Period (Y+Rc), s	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Max Green Setting (Gmax), s	13.7	58.7	13.7	18.7	13.7	58.7	13.7	18.7
Max Q Clear Time (g_c+I1), s	3.6	37.0	6.5	16.3	5.7	56.7	4.7	5.9
Green Ext Time (p_c), s	0.1	11.8	0.1	0.4	0.2	1.1	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	40.7
HCM 2010 LOS	D

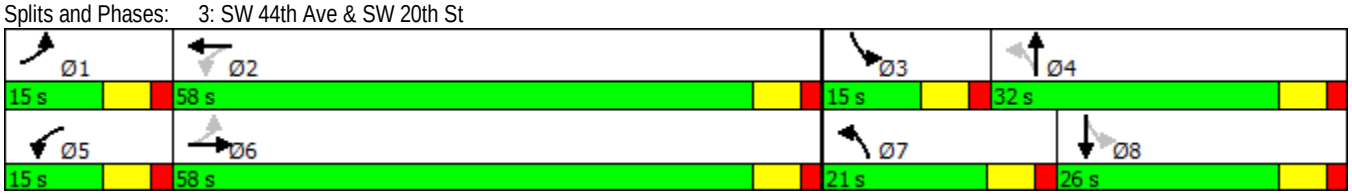
AM Peak Hour Future Year Background Traffic Conditions with Improvement

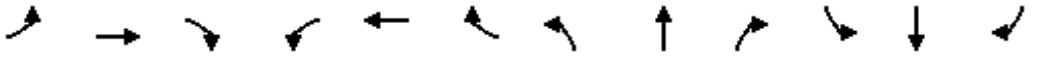
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	107	696	268	74	392	25	145	290	145	62	205	144
Future Volume (vph)	107	696	268	74	392	25	145	290	145	62	205	144
Peak Hour Factor	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	2%	2%	2%	5%	5%	5%
Adj. Flow (vph)	120	782	301	83	440	28	163	326	163	70	230	162
Shared Lane Traffic (%)												
Lane Group Flow (vph)	120	1083	0	83	468	0	163	489	0	70	392	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	11.3	24.3		11.3	24.3		11.3	24.3		11.3	24.3	
Total Split (s)	15.0	58.0		15.0	58.0		21.0	32.0		15.0	26.0	
Total Split (%)	12.5%	48.3%		12.5%	48.3%		17.5%	26.7%		12.5%	21.7%	
Yellow Time (s)	4.3	4.3		4.3	4.3		4.3	4.3		4.3	4.3	
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)	6.3	6.3		6.3	6.3		6.3	6.3		6.3	6.3	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	Min		None	Min		None	None		None	None	
v/c Ratio	0.27	0.78		0.36	0.38		0.49	0.59		0.26	0.68	
Control Delay	13.9	29.1		16.8	22.6		30.9	34.9		28.2	34.2	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	13.9	29.1		16.8	22.6		30.9	34.9		28.2	34.2	
Queue Length 50th (ft)	35	296		24	105		74	132		30	83	
Queue Length 95th (ft)	72	415		53	160		146	213		71	152	
Internal Link Dist (ft)		2458			2796			1229			1805	
Turn Bay Length (ft)	250			250			250			250		
Base Capacity (vph)	455	2006		249	2013		385	1023		293	816	
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	0.26	0.54		0.33	0.23		0.42	0.48		0.24	0.48	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 94.3
Natural Cycle: 80
Control Type: Actuated-Uncoordinated

Splits and Phases: 3: SW 44th Ave & SW 20th St





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	107	696	268	74	392	25	145	290	145	62	205	144
Future Volume (veh/h)	107	696	268	74	392	25	145	290	145	62	205	144
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1827	1827	1900	1863	1863	1900	1810	1810	1900
Adj Flow Rate, veh/h	120	782	301	83	440	28	163	326	163	70	230	162
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
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	4	4	4	2	2	2	5	5	5
Cap, veh/h	464	1019	392	233	1315	83	305	509	249	237	335	227
Arrive On Green	0.06	0.41	0.41	0.05	0.40	0.40	0.10	0.22	0.22	0.05	0.17	0.17
Sat Flow, veh/h	1774	2501	962	1740	3315	210	1774	2304	1129	1723	1966	1329
Grp Volume(v), veh/h	120	553	530	83	230	238	163	249	240	70	200	192
Grp Sat Flow(s),veh/h/ln	1774	1770	1693	1740	1736	1790	1774	1770	1664	1723	1719	1575
Q Serve(g_s), s	3.6	24.5	24.5	2.5	8.4	8.4	6.7	11.6	12.0	3.0	9.9	10.5
Cycle Q Clear(g_c), s	3.6	24.5	24.5	2.5	8.4	8.4	6.7	11.6	12.0	3.0	9.9	10.5
Prop In Lane	1.00		0.57	1.00		0.12	1.00		0.68	1.00		0.84
Lane Grp Cap(c), veh/h	464	721	690	233	688	710	305	391	367	237	293	269
V/C Ratio(X)	0.26	0.77	0.77	0.36	0.33	0.34	0.53	0.64	0.65	0.30	0.68	0.72
Avail Cap(c_a), veh/h	529	1006	963	316	987	1018	421	500	470	323	373	341
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	14.9	23.2	23.2	18.3	19.1	19.1	27.4	32.1	32.3	29.4	35.4	35.6
Incr Delay (d2), s/veh	0.3	2.4	2.5	0.9	0.3	0.3	1.5	1.7	2.1	0.7	3.5	5.1
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	1.8	12.3	11.8	1.3	4.1	4.2	3.4	5.9	5.7	1.5	5.0	4.9
LnGrp Delay(d),s/veh	15.2	25.6	25.7	19.3	19.4	19.4	28.9	33.8	34.4	30.1	38.9	40.7
LnGrp LOS	B	C	C	B	B	B	C	C	C	C	D	D
Approach Vol, veh/h		1203			551			652			462	
Approach Delay, s/veh		24.6			19.3			32.8			38.3	
Approach LOS		C			B			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.7	42.4	10.5	26.4	10.7	43.4	15.1	21.8
Change Period (Y+Rc), s	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Max Green Setting (Gmax), s	8.7	51.7	8.7	25.7	8.7	51.7	14.7	19.7
Max Q Clear Time (g_c+I1), s	5.6	10.4	5.0	14.0	4.5	26.5	8.7	12.5
Green Ext Time (p_c), s	0.1	12.4	0.0	4.1	0.1	10.5	0.2	3.0

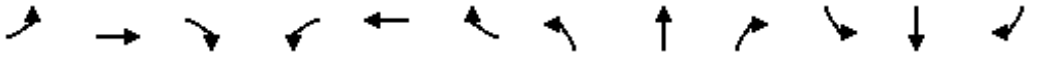
Intersection Summary	
HCM 2010 Ctrl Delay	27.7
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	825	97	113	563	75	44	87	160	68	60	23
Future Volume (vph)	49	825	97	113	563	75	44	87	160	68	60	23
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	3%	3%	3%	11%	11%	11%
Adj. Flow (vph)	54	907	107	124	619	82	48	96	176	75	66	25
Shared Lane Traffic (%)												
Lane Group Flow (vph)	54	907	107	124	701	0	48	272	0	75	66	25
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		8
Detector Phase	1	6	6	5	2		7	4		3	8	8
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	10.0	20.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	12.0	26.3	26.3	16.3	26.3		15.0	20.0		15.0	20.0	20.0
Total Split (s)	17.0	86.0	86.0	17.0	86.0		12.0	25.0		12.0	25.0	25.0
Total Split (%)	12.1%	61.4%	61.4%	12.1%	61.4%		8.6%	17.9%		8.6%	17.9%	17.9%
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	4.3		4.3	4.3	4.3
All-Red Time (s)	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
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3		6.3	6.3		6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min		None	None		None	None	None
v/c Ratio	0.12	0.92	0.12	0.58	0.35		0.18	0.90		0.59	0.25	0.08
Control Delay	8.2	41.5	1.8	33.0	14.3		43.8	75.5		63.7	55.0	0.4
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	8.2	41.5	1.8	33.0	14.3		43.8	75.5		63.7	55.0	0.4
Queue Length 50th (ft)	14	667	0	43	158		32	187		51	50	0
Queue Length 95th (ft)	29	893	20	115	202		72	#400		#121	104	0
Internal Link Dist (ft)		2796			1461			398			352	
Turn Bay Length (ft)	250			125			185			165		200
Base Capacity (vph)	524	1221	1080	216	2270		268	302		127	263	328
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.10	0.74	0.10	0.57	0.31		0.18	0.90		0.59	0.25	0.08

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 124.3
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 4: SW 38th Ave & SW 20th St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	49	825	97	113	563	75	44	87	160	68	60	23
Future Volume (veh/h)	49	825	97	113	563	75	44	87	160	68	60	23
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1827	1827	1900	1845	1845	1900	1712	1712	1712
Adj Flow Rate, veh/h	54	907	93	124	619	71	48	96	117	75	66	10
Adj No. of Lanes	1	1	1	1	2	0	1	1	0	1	1	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	4	4	4	3	3	3	11	11	11
Cap, veh/h	477	1007	856	248	1834	210	269	107	130	146	263	223
Arrive On Green	0.03	0.54	0.54	0.08	0.58	0.58	0.03	0.14	0.14	0.04	0.15	0.15
Sat Flow, veh/h	1774	1863	1583	1740	3140	360	1757	758	924	1630	1712	1455
Grp Volume(v), veh/h	54	907	93	124	342	348	48	0	213	75	66	10
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1740	1736	1763	1757	0	1682	1630	1712	1455
Q Serve(g_s), s	1.7	55.8	3.7	3.7	13.0	13.1	3.0	0.0	15.9	5.0	4.3	0.7
Cycle Q Clear(g_c), s	1.7	55.8	3.7	3.7	13.0	13.1	3.0	0.0	15.9	5.0	4.3	0.7
Prop In Lane	1.00		1.00	1.00		0.20	1.00		0.55	1.00		1.00
Lane Grp Cap(c), veh/h	477	1007	856	248	1014	1030	269	0	237	146	263	223
V/C Ratio(X)	0.11	0.90	0.11	0.50	0.34	0.34	0.18	0.00	0.90	0.51	0.25	0.04
Avail Cap(c_a), veh/h	566	1160	986	259	1081	1098	291	0	246	146	263	223
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	12.2	26.3	14.4	25.9	13.8	13.8	45.0	0.0	54.1	45.6	47.7	46.2
Incr Delay (d2), s/veh	0.1	8.9	0.1	1.6	0.2	0.2	0.3	0.0	31.5	3.0	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	31.0	1.6	2.5	6.3	6.4	1.5	0.0	9.5	2.4	2.1	0.3
LnGrp Delay(d),s/veh	12.3	35.3	14.4	27.4	14.0	14.0	45.3	0.0	85.6	48.6	48.2	46.2
LnGrp LOS	B	D	B	C	B	B	D		F	D	D	D
Approach Vol, veh/h		1054			814			261			151	
Approach Delay, s/veh		32.3			16.0			78.2			48.2	
Approach LOS		C			B			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.6	81.1	12.0	24.3	16.2	75.4	10.4	25.9
Change Period (Y+Rc), s	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Max Green Setting (Gmax), s	10.7	79.7	5.7	18.7	10.7	79.7	5.7	18.7
Max Q Clear Time (g_c+I1), s	3.7	15.1	7.0	17.9	5.7	57.8	5.0	6.3
Green Ext Time (p_c), s	0.0	16.4	0.0	0.1	0.1	11.3	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	32.8
HCM 2010 LOS	C

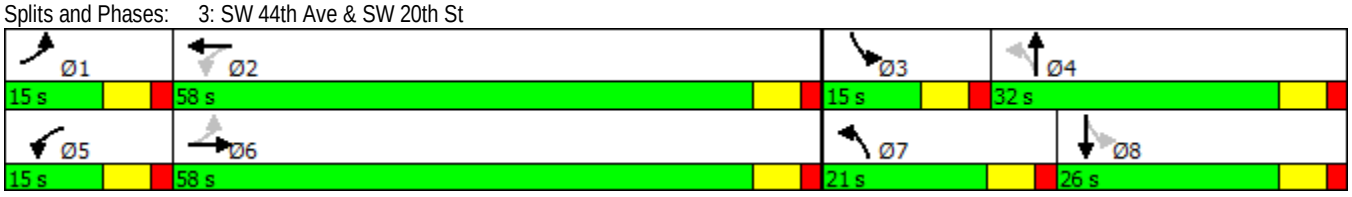
AM Peak Hour Buildout Traffic Conditions (with Background Improvement)

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	123	709	299	137	381	25	193	311	189	62	228	144
Future Volume (vph)	123	709	299	137	381	25	193	311	189	62	228	144
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
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	2%	2%	2%	5%	5%	5%
Adj. Flow (vph)	138	797	336	154	428	28	217	349	212	70	256	162
Shared Lane Traffic (%)												
Lane Group Flow (vph)	138	1133	0	154	456	0	217	561	0	70	418	0
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA		pm+pt	NA	
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6			2			4			8		
Detector Phase	1	6		5	2		7	4		3	8	
Switch Phase												
Minimum Initial (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0	
Minimum Split (s)	11.3	24.3		11.3	24.3		11.3	24.3		11.3	24.3	
Total Split (s)	15.0	58.0		15.0	58.0		21.0	32.0		15.0	26.0	
Total Split (%)	12.5%	48.3%		12.5%	48.3%		17.5%	26.7%		12.5%	21.7%	
Yellow Time (s)	4.3	4.3		4.3	4.3		4.3	4.3		4.3	4.3	
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)	6.3	6.3		6.3	6.3		6.3	6.3		6.3	6.3	
Lead/Lag	Lead	Lag		Lead	Lag		Lead	Lag		Lead	Lag	
Lead-Lag Optimize?	Yes	Yes		Yes	Yes		Yes	Yes		Yes	Yes	
Recall Mode	None	Min		None	Min		None	None		None	None	
v/c Ratio	0.30	0.84		0.71	0.34		0.66	0.65		0.30	0.74	
Control Delay	14.7	33.6		38.1	22.7		38.0	35.6		29.9	41.3	
Queue Delay	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Total Delay	14.7	33.6		38.1	22.7		38.0	35.6		29.9	41.3	
Queue Length 50th (ft)	46	341		51	111		109	156		32	110	
Queue Length 95th (ft)	81	440		#154	155		193	237		71	177	
Internal Link Dist (ft)		2458			2796			1229			1805	
Turn Bay Length (ft)	250			250			250			250		
Base Capacity (vph)	476	1754		219	1753		345	926		252	708	
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	0.29	0.65		0.70	0.26		0.63	0.61		0.28	0.59	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 103.8
Natural Cycle: 90
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: SW 44th Ave & SW 20th St



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	123	709	299	137	381	25	193	311	189	62	228	144
Future Volume (veh/h)	123	709	299	137	381	25	193	311	189	62	228	144
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1827	1827	1900	1863	1863	1900	1810	1810	1900
Adj Flow Rate, veh/h	138	797	336	154	428	28	217	349	212	70	256	162
Adj No. of Lanes	1	2	0	1	2	0	1	2	0	1	2	0
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	4	4	4	2	2	2	5	5	5
Cap, veh/h	482	980	413	245	1356	88	319	508	303	219	342	209
Arrive On Green	0.06	0.40	0.40	0.07	0.41	0.41	0.12	0.24	0.24	0.05	0.17	0.17
Sat Flow, veh/h	1774	2430	1022	1740	3309	216	1774	2134	1273	1723	2052	1255
Grp Volume(v), veh/h	138	580	553	154	224	232	217	288	273	70	213	205
Grp Sat Flow(s),veh/h/ln	1774	1770	1682	1740	1736	1789	1774	1770	1638	1723	1719	1588
Q Serve(g_s), s	4.7	30.2	30.4	5.3	9.1	9.1	10.1	15.4	15.8	3.5	12.3	12.8
Cycle Q Clear(g_c), s	4.7	30.2	30.4	5.3	9.1	9.1	10.1	15.4	15.8	3.5	12.3	12.8
Prop In Lane	1.00		0.61	1.00		0.12	1.00		0.78	1.00		0.79
Lane Grp Cap(c), veh/h	482	714	679	245	712	733	319	421	390	219	286	264
V/C Ratio(X)	0.29	0.81	0.81	0.63	0.31	0.32	0.68	0.68	0.70	0.32	0.74	0.78
Avail Cap(c_a), veh/h	518	880	837	269	863	890	362	437	405	284	326	301
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	16.4	27.5	27.5	22.2	20.8	20.8	30.1	36.0	36.2	34.0	41.2	41.5
Incr Delay (d2), s/veh	0.3	4.8	5.1	4.0	0.3	0.2	4.3	4.2	5.0	0.8	7.8	10.6
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	2.3	15.6	15.1	2.8	4.4	4.6	5.3	8.0	7.7	1.7	6.4	6.4
LnGrp Delay(d),s/veh	16.7	32.3	32.7	26.2	21.0	21.0	34.4	40.2	41.2	34.8	49.1	52.1
LnGrp LOS	B	C	C	C	C	C	C	D	D	C	D	D
Approach Vol, veh/h		1271			610			778			488	
Approach Delay, s/veh		30.8			22.3			39.0			48.3	
Approach LOS		C			C			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.9	48.9	11.1	31.1	13.6	48.3	18.5	23.6
Change Period (Y+Rc), s	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Max Green Setting (Gmax), s	8.7	51.7	8.7	25.7	8.7	51.7	14.7	19.7
Max Q Clear Time (g_c+I1), s	6.7	11.1	5.5	17.8	7.3	32.4	12.1	14.8
Green Ext Time (p_c), s	0.1	12.9	0.0	3.6	0.0	9.6	0.1	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	33.9
HCM 2010 LOS	C

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	65	901	97	113	607	75	44	87	160	68	60	32
Future Volume (vph)	65	901	97	113	607	75	44	87	160	68	60	32
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Heavy Vehicles (%)	2%	2%	2%	4%	4%	4%	3%	3%	3%	11%	11%	11%
Adj. Flow (vph)	71	990	107	124	667	82	48	96	176	75	66	35
Shared Lane Traffic (%)												
Lane Group Flow (vph)	71	990	107	124	749	0	48	272	0	75	66	35
Turn Type	pm+pt	NA	Perm	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm
Protected Phases	1	6		5	2		7	4		3	8	
Permitted Phases	6		6	2			4			8		8
Detector Phase	1	6	6	5	2		7	4		3	8	8
Switch Phase												
Minimum Initial (s)	5.0	20.0	20.0	10.0	20.0		5.0	10.0		5.0	10.0	10.0
Minimum Split (s)	12.0	26.3	26.3	16.3	26.3		15.0	20.0		15.0	20.0	20.0
Total Split (s)	17.0	86.0	86.0	17.0	86.0		12.0	25.0		12.0	25.0	25.0
Total Split (%)	12.1%	61.4%	61.4%	12.1%	61.4%		8.6%	17.9%		8.6%	17.9%	17.9%
Yellow Time (s)	4.3	4.3	4.3	4.3	4.3		4.3	4.3		4.3	4.3	4.3
All-Red Time (s)	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
Total Lost Time (s)	6.3	6.3	6.3	6.3	6.3		6.3	6.3		6.3	6.3	6.3
Lead/Lag	Lead	Lag	Lag	Lead	Lag		Lead	Lag		Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		Yes	Yes		Yes	Yes	Yes
Recall Mode	None	Min	Min	None	Min		None	None		None	None	None
v/c Ratio	0.16	0.96	0.12	0.66	0.37		0.19	0.98		0.65	0.24	0.10
Control Delay	8.2	49.7	1.8	44.7	14.7		46.0	95.2		71.3	56.5	0.6
Queue Delay	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0	0.0	0.0
Total Delay	8.2	49.7	1.8	44.7	14.7		46.0	95.2		71.3	56.5	0.6
Queue Length 50th (ft)	19	796	0	58	174		35	~209		56	55	0
Queue Length 95th (ft)	35	#1128	20	#142	222		72	#400		#106	104	0
Internal Link Dist (ft)		2796			1461			398			352	
Turn Bay Length (ft)	250			125			185			165		200
Base Capacity (vph)	493	1106	990	191	2075		258	278		116	273	336
Starvation Cap Reductn	0	0	0	0	0		0	0		0	0	0
Spillback Cap Reductn	0	0	0	0	0		0	0		0	0	0
Storage Cap Reductn	0	0	0	0	0		0	0		0	0	0
Reduced v/c Ratio	0.14	0.90	0.11	0.65	0.36		0.19	0.98		0.65	0.24	0.10

Intersection Summary

Cycle Length: 140
Actuated Cycle Length: 134.7
Natural Cycle: 130
Control Type: Actuated-Uncoordinated
~ 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: 4: SW 38th Ave & SW 20th St

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	65	901	97	113	607	75	44	87	160	68	60	32
Future Volume (veh/h)	65	901	97	113	607	75	44	87	160	68	60	32
Number	1	6	16	5	2	12	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1827	1827	1900	1845	1845	1900	1712	1712	1712
Adj Flow Rate, veh/h	71	990	64	124	667	75	48	96	118	75	66	8
Adj No. of Lanes	1	1	1	1	2	0	1	1	0	1	1	1
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	2	2	4	4	4	3	3	3	11	11	11
Cap, veh/h	465	1044	888	213	1886	212	258	104	128	135	254	216
Arrive On Green	0.03	0.56	0.56	0.07	0.60	0.60	0.03	0.14	0.14	0.04	0.15	0.15
Sat Flow, veh/h	1774	1863	1583	1740	3147	353	1757	754	927	1630	1712	1455
Grp Volume(v), veh/h	71	990	64	124	368	374	48	0	214	75	66	8
Grp Sat Flow(s),veh/h/ln	1774	1863	1583	1740	1736	1765	1757	0	1681	1630	1712	1455
Q Serve(g_s), s	2.3	67.5	2.5	3.7	14.6	14.6	3.2	0.0	17.0	5.4	4.6	0.6
Cycle Q Clear(g_c), s	2.3	67.5	2.5	3.7	14.6	14.6	3.2	0.0	17.0	5.4	4.6	0.6
Prop In Lane	1.00		1.00	1.00		0.20	1.00		0.55	1.00		1.00
Lane Grp Cap(c), veh/h	465	1044	888	213	1040	1058	258	0	232	135	254	216
V/C Ratio(X)	0.15	0.95	0.07	0.58	0.35	0.35	0.19	0.00	0.92	0.56	0.26	0.04
Avail Cap(c_a), veh/h	545	1096	932	223	1040	1058	276	0	232	135	254	216
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	11.9	27.9	13.6	30.1	13.8	13.8	48.0	0.0	57.6	48.9	51.1	49.4
Incr Delay (d2), s/veh	0.2	15.9	0.0	3.5	0.2	0.2	0.3	0.0	38.4	4.9	0.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	39.3	1.1	2.8	7.0	7.1	1.6	0.0	10.4	2.6	2.2	0.3
LnGrp Delay(d),s/veh	12.1	43.8	13.7	33.6	14.0	14.0	48.3	0.0	96.0	53.8	51.6	49.5
LnGrp LOS	B	D	B	C	B	B	D		F	D	D	D
Approach Vol, veh/h		1125			866			262			149	
Approach Delay, s/veh		40.1			16.8			87.3			52.6	
Approach LOS		D			B			F			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.0	87.5	12.0	25.0	16.2	82.2	10.6	26.4
Change Period (Y+Rc), s	6.3	6.3	6.3	6.3	6.3	6.3	6.3	6.3
Max Green Setting (Gmax), s	10.7	79.7	5.7	18.7	10.7	79.7	5.7	18.7
Max Q Clear Time (g_c+I1), s	4.3	16.6	7.4	19.0	5.7	69.5	5.2	6.6
Green Ext Time (p_c), s	0.1	19.2	0.0	0.0	0.1	6.4	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	37.6
HCM 2010 LOS	D

PM Peak Hour Arterial Analysis (Background and Buildout with Background Improvement)

Arterial Level of Service: EB SW 20th St

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
College of Central F	II	45	46.7	45.1	91.8	0.58	22.9	C
SW 27th Ave	II	45	39.7	63.0	102.7	0.42	14.8	E
Total	II		86.4	108.1	194.5	1.01	18.6	D

Arterial Level of Service: WB SW 20th St

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
SW 31st Ave	II	45	39.7	13.2	52.9	0.42	28.7	B
SW 38th Ave	II	45	46.7	28.0	74.7	0.58	28.1	B
Total	II		86.4	41.2	127.6	1.01	28.4	B

Arterial Level of Service: EB SW 20th St

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
College of Central F	II	45	46.7	45.3	92.0	0.58	22.8	C
SW 27th Ave	II	45	39.7	63.2	102.9	0.42	14.8	E
Total	II		86.4	108.5	194.9	1.01	18.6	D

Arterial Level of Service: WB SW 20th St

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
SW 31st Ave	II	45	39.7	13.6	53.3	0.42	28.5	B
SW 38th Ave	II	45	46.7	30.2	76.9	0.58	27.3	C
Total	II		86.4	43.8	130.2	1.01	27.8	C

Appendix G: Signal Warrant Analysis Worksheets

Pagones Theorem			
Situation	**Approach configuration**	**Condition**	**Reduction of right turns**
1	Shared Left/ Through/Right	$R > 0.7A$ $0.7A \geq R > 0.35A$ $R \leq 0.35A$	Reduce R by 60 percent Reduce R by 40 percent Reduce R by 20 percent
2	Exclusive Left, Shared Through/ Right	$R > 3T$ $3T \geq R > T/3$ $R \leq T/3$	Reduce R by 60 percent Reduce R by 40 percent Reduce R by 20 percent
3	Any configuration with an exclusive right turn lane (usually ≥ 600 feet long)		Reduce R by 75 percent in all cases
4	Shared Left/Through and Shared Through/Right	$R > (T + L)$ $L > (T + R)$ $L = T = R$ (±10 vehicles) $L = T > 3R$ $R = T > 3L$ All other cases	Reduce R by 65 percent Use Situation 2 Reduce R by 40 percent Reduce R by 20 percent Reduce R by 50 percent Reduce R by 30 percent
5	Exclusive Left, Exclusive Through and Shared Through/Right	$R > T$ $T \geq R > T/2$ $T/2 \geq R > T/4$ $R \leq T/4$	Reduce R by 75 percent Reduce R by 50 percent Reduce R by 30 percent Reduce R by 15 percent

Where: L = number of left turning vehicles in approach;
T = number of through vehicles in approach;
R = number of right turning vehicles in approach; and
$A = (L + T + R)$.

TABLE 3
TRAFFIC SIGNAL WARRANT SUMMARY

City: Ocala | Engineer: Kimley-Horn
County: Marion | Date: March 28, 2018

Major Street: SW 44th Avenue | Lanes: 2 | Critical Approach Speed: 45
Minor Street: SW 40th Street | Lanes: 1

Volume Level Criteria

1. Is the critical speed of major street traffic > 70 km/h (40 mph) ? ☐ Yes ■ No
2. Is the intersection in a built-up area of isolated community of <10,000 population? ☐ Yes ■ No

If Question 1 or 2 above is answered "Yes", then use "70%" volume level ☐ 70% ■ 100%

WARRANT 3 - PEAK HOUR

Applicable: ■ Yes ☐ No
Satisfied: ■ Yes ☐ No

If all three criteria are fullfilled or the plotted point lies above the appropriate line, then the warrant is satisfed.

Unusual condition justifying use of warrant:

N/A

Record hour when criteria are fulfilled and the corresponding delay or volume in boxes provided.

Peak Hour Volumes	
4:15 PM - 5:15 PM	
Major Street	1,440
Minor Street	637

Criteria

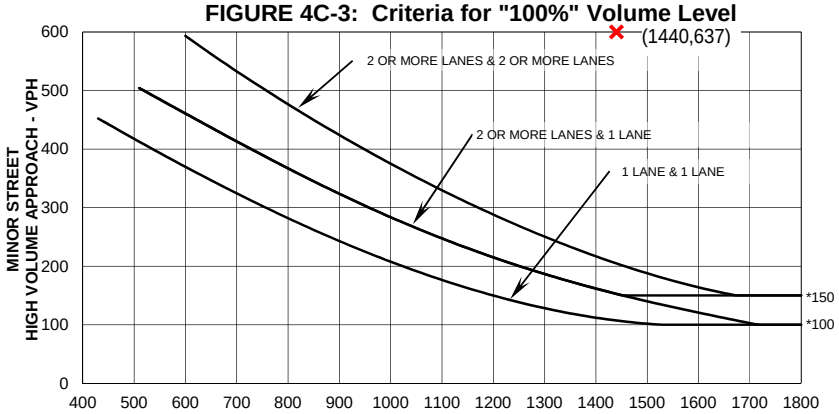
1. Delay on Minor Approach *(vehicle-hours)		
Approach Lanes	**1**	2
Delay Criteria*	**4.0**	5.0
Delay*	**138.4**	
Fulfilled?: ■ Yes ☐ No		

2. Volume on Minor Approach *(vehicles per hour)		
Approach Lanes	**1**	2
Volume Criteria*	**100**	150
Volume*	**637**	
Fulfilled?: ■ Yes ☐ No		

3. Total Entering Volume *(vehicles per hour)		
No. of Approaches	3	**4**
Volume Criteria*	650	**800**
Volume*		**2,077**
Fulfilled?: ■ Yes ☐ No		

Plot volume combination on the applicable figure below.

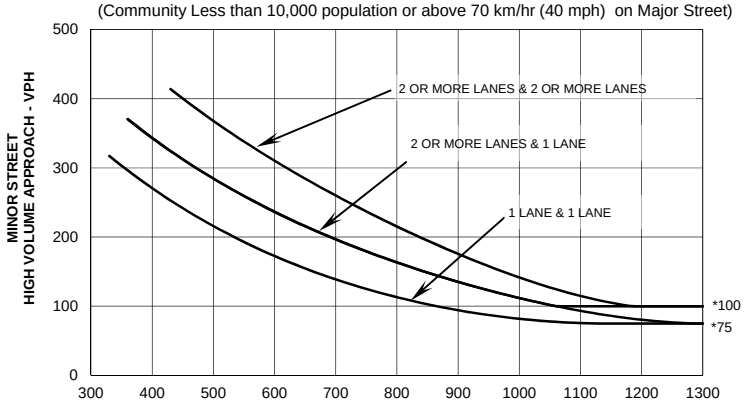
FIGURE 4C-3: Criteria for "100%" Volume Level



** Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume threshold for a minor street approach with one lane.*

FIGURE 4C-4: Criteria for "70%" Volume Level

(Community Less than 10,000 population or above 70 km/hr (40 mph) on Major Street)



** Note: 100 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 75 vph applies as the lower threshold volume threshold for a minor street approach with one lane.*

Source: Revised from NCHRP Report 457

K:\OCA_Civil\142742000 - Wintergreen PD TIA\calcs\Signal Warrant\WINTERGREEN\[WarrantSpreadsheet -- 44th & 40th (Background).xlsm]Warrant 3

TABLE 3
TRAFFIC SIGNAL WARRANT SUMMARY

City: Ocala | Engineer: Kimley-Horn
County: Marion | Date: March 28, 2018

Major Street: SW 20th Street | Lanes: 2 | Critical Approach Speed: 45
Minor Street: SW 44th Avenue | Lanes: 2
includes RT volume reduction for Pagones Theorem

Volume Level Criteria

1. Is the critical speed of major street traffic > 70 km/h (40 mph) ? ■ Yes ☐ No
2. Is the intersection in a built-up area of isolated community of <10,000 population? ☐ Yes ■ No

If Question 1 or 2 above is answered "Yes", then use "70%" volume level ■ 70% ☐ 100%

WARRANT 3 - PEAK HOUR

Applicable: ■ Yes ☐ No
Satisfied: ■ Yes ☐ No

If all three criteria are fullfilled or the plotted point lies above the appropriate line, then the warrant is satisfed.

Unusual condition justifying use of warrant:

N/A

Record hour when criteria are fulfilled and the corresponding delay or volume in boxes provided.

Peak Hour Volumes	
4:15 PM - 5:15 PM	
Major Street	1,731
Minor Street	500

Criteria

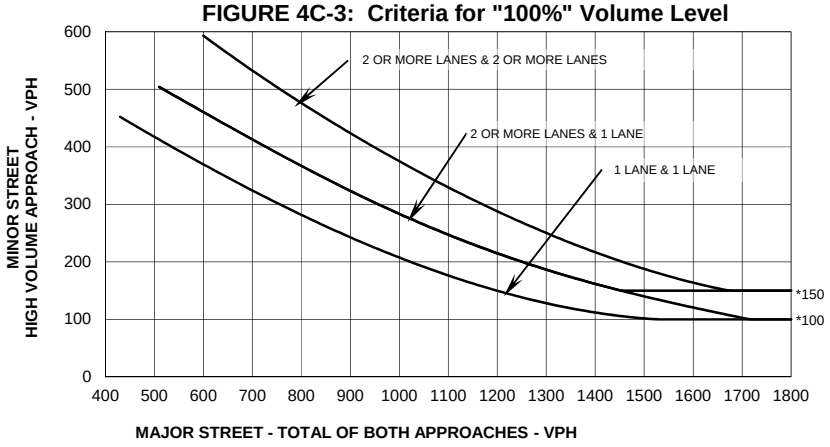
1. Delay on Minor Approach *(vehicle-hours)		
Approach Lanes	1	**2**
Delay Criteria*	4.0	**5.0**
Delay*		**41.7**
Fulfilled?: ■ Yes ☐ No		

2. Volume on Minor Approach *(vehicles per hour)		
Approach Lanes	1	**2**
Volume Criteria*	100	**150**
Volume*		**500**
Fulfilled?: ■ Yes ☐ No		

3. Total Entering Volume *(vehicles per hour)		
No. of Approaches	3	**4**
Volume Criteria*	650	**800**
Volume*		**2,231**
Fulfilled?: ■ Yes ☐ No		

Plot volume combination on the applicable figure below.

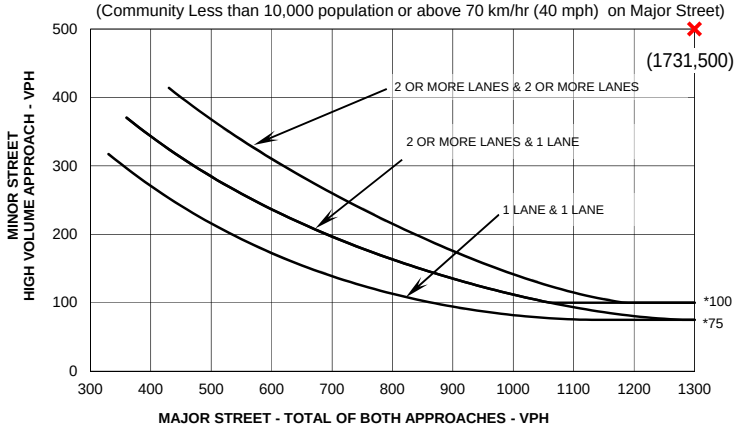
FIGURE 4C-3: Criteria for "100%" Volume Level



** Note: 150 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 100 vph applies as the lower threshold volume threshold for a minor street approach with one lane.*

FIGURE 4C-4: Criteria for "70%" Volume Level

(Community Less than 10,000 population or above 70 km/hr (40 mph) on Major Street)



** Note: 100 vph applies as the lower threshold volume for a minor street approach with two or more lanes and 75 vph applies as the lower threshold volume threshold for a minor street approach with one lane.*

Source: Revised from NCHRP Report 457

K:\OCA_Civil\142742000 - Wintergreen PD TIA\calcs\Signal Warrant\WINTERGREEN\[WarrantSpreadsheet -- 44th & 20th (Background).xlsm]Warrant 3

Appendix H: Turn Lane Warrant Worksheets

SW 20th Street Right-in/Right-out Access

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

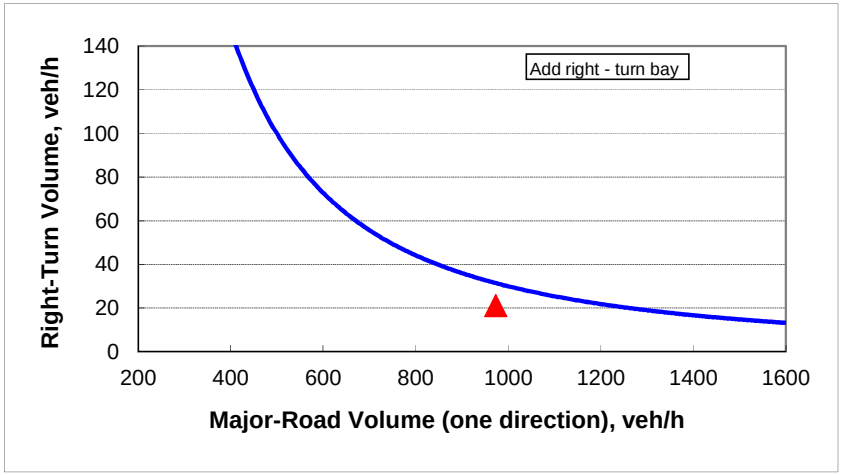
INPUT

Roadway geometry:	4-lane roadway

Variable	Value
Major-road speed, mph:	45
Major-road volume (one direction), veh/h:	973
Right-turn volume, veh/h:	21

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	31
Guidance for determining the need for a major-road right-turn bay for a 4-lane roadway:	
Do NOT add right-turn bay.	



SW 44th Avenue Right-in/Right-out Access

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

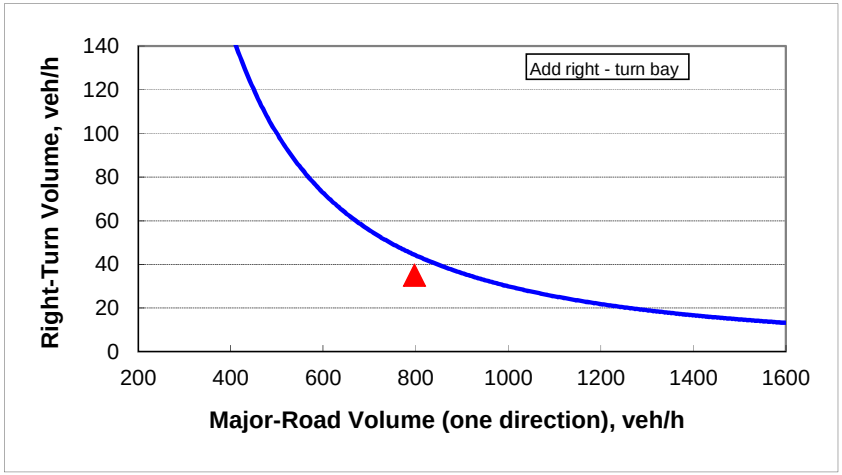
INPUT

Roadway geometry:	4-lane roadway

Variable	Value
Major-road speed, mph:	45
Major-road volume (one direction), veh/h:	797
Right-turn volume, veh/h:	35

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	44
Guidance for determining the need for a major-road right-turn bay for a 4-lane roadway:	
Do NOT add right-turn bay.	



SW 44th Avenue Full Access

Figure 2 - 6. Guideline for determining the need for a major-road right-turn bay at a two-way stop-controlled intersection.

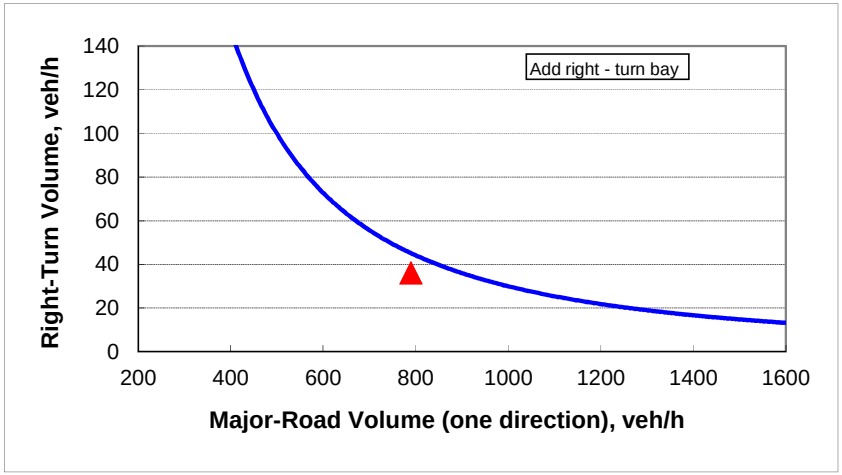
INPUT

Roadway geometry:	4-lane roadway

Variable	Value
Major-road speed, mph:	45
Major-road volume (one direction), veh/h:	790
Right-turn volume, veh/h:	36

OUTPUT

Variable	Value
Limiting right-turn volume, veh/h:	45
Guidance for determining the need for a major-road right-turn bay for a 4-lane roadway:	
Do NOT add right-turn bay.	



SW 44th Avenue Full Access (North)

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

4-lane roadway

INPUT

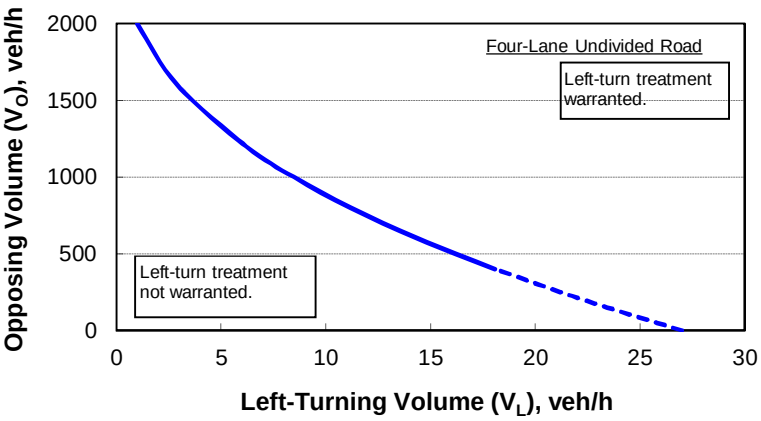
Variable	Value
Left-turning volume (V_L), veh/h:	71
Advancing volume (V_A), veh/h:	629
Opposing volume (V_O), veh/h:	790

OUTPUT

Variable	Message
Opposing volume (Vo) check:	O.K.
Combined volume (V_A and V_O) check:	O.K.
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment warranted.	

CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	4.0
Critical headway, s:	6.0



Note: When V_O < 400 veh/h (dashed line), a left-turn lane is not normally warranted unless the advancing volume (V_A) in the same direction as the left-turning traffic exceeds 400 veh/h (V_A > 400 veh/h).

SW 44th Avenue Full Access (South)

Figure 2 - 5. Guideline for determining the need for a major-road left-turn bay at a two-way stop-controlled intersection.

4-lane roadway

INPUT

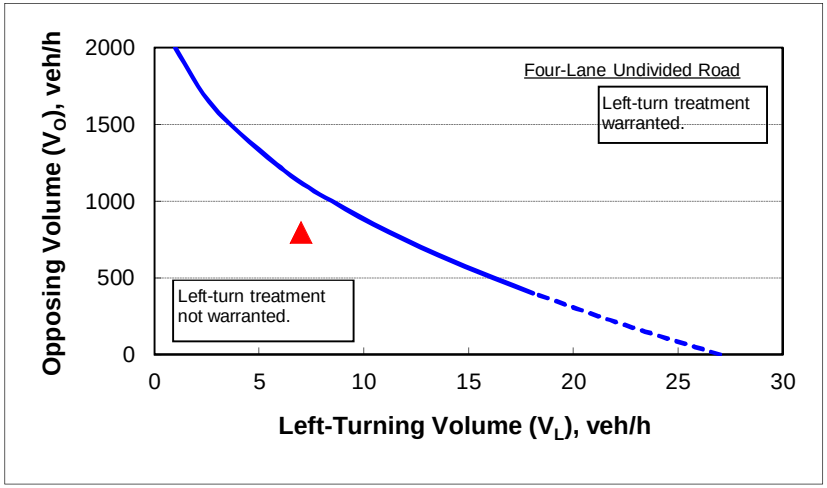
Variable	Value
Left-turning volume (V_L), veh/h:	7
Advancing volume (V_A), veh/h:	615
Opposing volume (V_O), veh/h:	795

OUTPUT

Variable	Message
Opposing volume (Vo) check:	O.K.
Combined volume (V_A and V_O) check:	O.K.
Guidance for determining the need for a major-road left-turn bay:	
Left-turn treatment NOT warranted.	

CALIBRATION CONSTANTS

Variable	Value
Average time for making left-turn, s:	4.0
Critical headway, s:	6.0



Note: When V_O < 400 veh/h (dashed line), a left-turn lane is not normally warranted unless the advancing volume (V_A) in the same direction as the left-turning traffic exceeds 400 veh/h (V_A > 400 veh/h).

Appendix I: SIDRA Output

LANE SUMMARY

Site: 1 [SW 44th Ave & SW 31st St]

Proposed Roundabout Access to Wintergreen PD via SW 31st Street

Roundabout

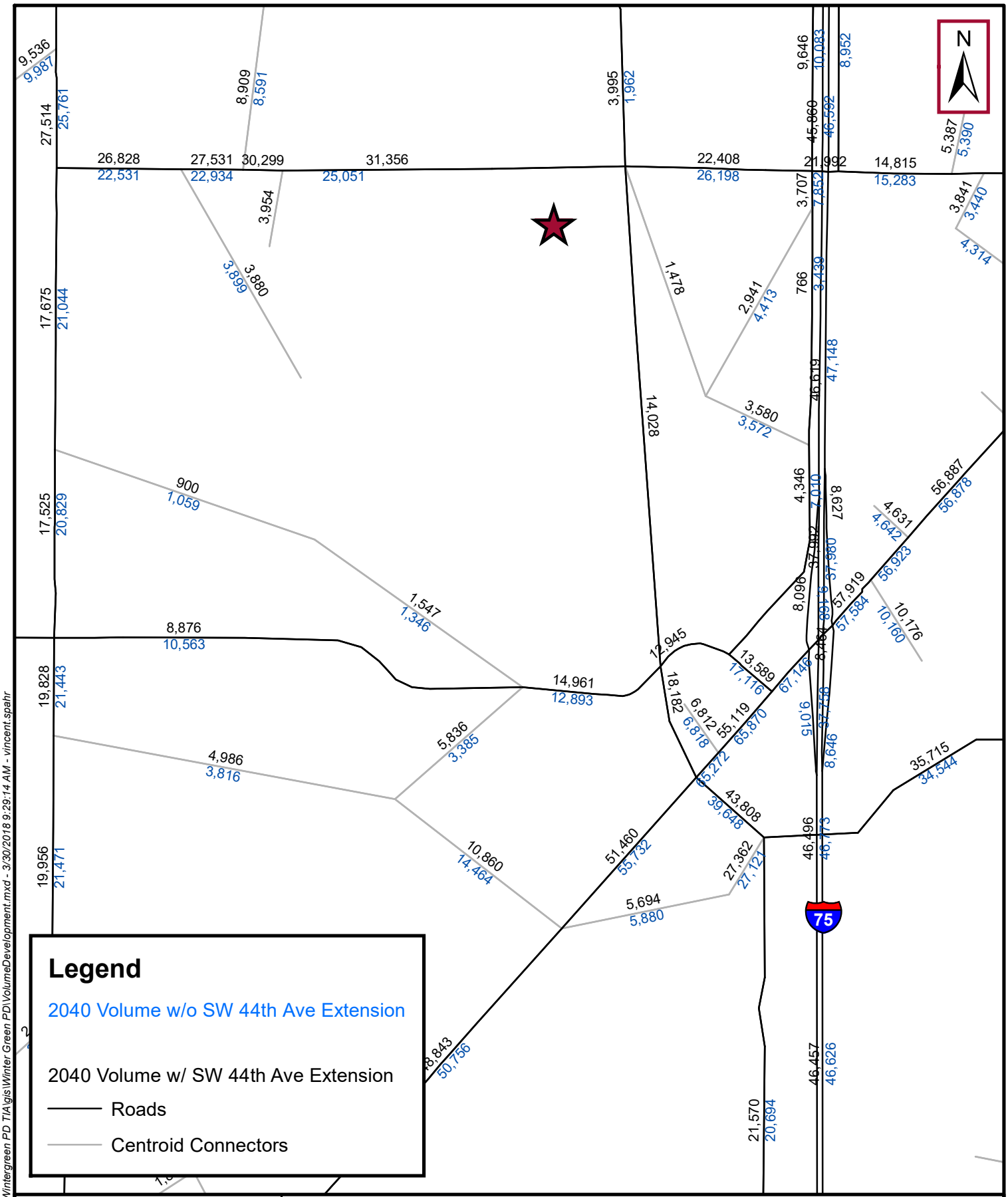
Lane Use and Performance

	Demand Flows Total veh/h	HV %	Cap. veh/h	Deg. Satn v/c	Lane Util. %	Average Delay sec	Level of Service	95% Back of Queue Veh	Dist ft	Lane Config	Lane Length ft	Cap. Adj. %	Prob. Block. %
South: SW 44th Avenue													
Lane 1	385	2.0	1338	0.288	100	5.2	LOS A	1.5	37.7	Full	1600	0.0	0.0
Lane 2[d]	385	2.0	1338	0.288	100	5.2	LOS A	1.5	37.7	Full	1600	0.0	0.0
Approach	770	2.0		0.288		5.2	LOS A	1.5	37.7				
East: SW 31st Street													
Lane 1[d]	3	2.0	690	0.005	100	5.3	LOS A	0.0	0.4	Full	1600	0.0	0.0
Approach	3	2.0		0.005		5.3	LOS A	0.0	0.4				
North: SW 44th Avenue													
Lane 1	453	2.0	1349	0.336	100	5.7	LOS A	1.9	47.1	Full	1600	0.0	0.0
Lane 2[d]	453	2.0	1349	0.336	100	5.7	LOS A	1.9	47.1	Full	1600	0.0	0.0
Approach	905	2.0		0.336		5.7	LOS A	1.9	47.1				
West: SW 31st Street													
Lane 1[d]	67	2.0	659	0.102	100	6.6	LOS A	0.3	8.8	Full	1600	0.0	0.0
Approach	67	2.0		0.102		6.6	LOS A	0.3	8.8				
Intersection	1746	2.0		0.336		5.5	LOS A	1.9	47.1				

Site Level of Service (LOS) Method: Delay & v/c (HCM 6). Site LOS Method is specified in the Parameter Settings dialog (Site tab).
Roundabout LOS Method: Same as Sign Control.
Lane LOS values are based on average delay and v/c ratio (degree of saturation) per lane.
LOS F will result if v/c > 1 irrespective of lane delay value (does not apply for approaches and intersection).
Intersection and Approach LOS values are based on average delay for all lanes (v/c not used as specified in HCM 6).
Roundabout Capacity Model: US HCM 6.
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.
Gap-Acceptance Capacity: Traditional M1.
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

d Dominant lane on roundabout approach

Appendix J: CFRPM Model Outputs, SW 44th Avenue Extension



Kimley»Horn
© 2018 Kimley-Horn and Associates, Inc.
101 E Silver Springs Blvd, Suite 400, Ocala FL 34470
Phone: 352 438 3000
www.kimley-horn.com CA 00000696

CFRPM Model Outputs -- SW 44th Avenue Extension

WINTERGREEN PD
OCALA, FLORIDA

Project No: 142742000	Not To Scale	April 2018	Figure 1

Appendix K: Post-submittal Documentation and Study Approval

TRANSPORTATION IMPACT ANALYSIS
TRAFFIC STUDY
SUBMITTAL ACCEPTANCE

Date: September 4, 2018

Project: Winter Green PD (TIA18-0002)

Applicant: Kimley-Horn and Associates

The submittal concerning the subject project has been approved by the review committee subject to submittal and finalization of the proportionate share agreement.

Oscar E. Tovar, PE, Deputy City Engineer
City Engineer's Office Department

\\sharedept\Clust4\Growth_sd-GM-Planning_sd-GM-DS-DP-Universal-Share\Transportation Review Process\Wintergreen PD\Acceptance Study Submittal 09-04-18.docx

Kimley»Horn

August 13, 2018

Ms. Karen Cupp
City of Ocala Growth Management Department
201 SE 3rd Street, 2nd Floor
Ocala, FL 34471

RE: ***Wintergreen PD (TIA18-0002)***
Kimley-Horn Number 142742f000

Dear Ms. Cupp:

Kimley-Horn and Associates, Inc. received comments dated August 2, 2018, for the above referenced project. Below are the comments and associated responses:

Transportation Division

1. Include discussion on transit per item 2 of the conditional Methodology Acceptance.

   Response: The site civil design engineer will coordinate with the TPO regarding the need for a bus stop and shelter within the site. This will be addressed during the site plan submittal process and/or conceptual PD plan review process.

2. Concur with planning comment on proportionate share determination.

   Response: Acknowledged.

Planning

3. Any proportionate share is to be determined through a settlement agreement per Tye Chighizola, Growth Management Director.

   Response: Acknowledged.

Marion County Growth Services

4. Page 11 - Figure 1 – Trip Distribution
   Extending out from the site (intersection of SW 20th Street and SW 44th Avenue), the distribution percentages are 12%, 27%, 52%, and 22% that adds up to 113%? The 52% distribution to the south seems somewhat high given the extent of development in that direction and that it drops off to 38% (a 14% reduction) when there does not seem to be that much that would "pull off" that much traffic as most of what is immediately south, before SW 38th Street/Ave, is almost all residential.

   Response: The trip distribution shown in Figure 1 was approved during the methodology process and is based on the FSUTMS model distribution. The 52% shown on SW 44th Avenue is directly fronting the site and represents overlap in traffic volumes entering and exiting multiple driveway locations along SW 44th Avenue and SW 20th Street. A portion of the 52% of project traffic shown on this segment is entering/exiting traffic from/to the south and entering/exiting traffic from/to the north on the segment adjacent to the project driveways. The 38% trip distribution shown south of the project

site is the anticipated distribution from/to the south. The trip distribution percentages south of the site (38%), west of the site (22%), north of SW 20th Street (12%), and east of SW 44th Avenue (27%) represent 99% of the project traffic distribution.

5. Page 20 – Buildout (2037) PM Peak Hour Traffic Volumes
Intersection 1 – SW 20th St/SW 44th Ave – the southbound direction identifies multiple "0" trip movements for southbound on to SW 44th Ave and "0" trip movements for all northbound movements from SW 44th Ave – these "0"s seem inappropriate, especially for the PM hour given the variety of residential and non-residential uses existing in the area, the proposed uses, and the "connectivity" of the area given that SW 44th Ave will be part of the routing to the areas to the south and southeast given SW 44th Ave's connection to the SW 42nd Street Road and the SW 49th Avenue extension south to Marion Oaks. These "0"s are especially a concern as this project's analysis presumes the Country Green PD with more housing and commercial will be considered "in place" prior to this Wintergreen PD (according to the Executive Summary)

Response: A revised Figure 4 is provided as an attachment to this letter. The turning movement volumes shown on the original figure were not consistent with those utilized in the operational analysis. The Buildout total volumes used in the analysis included existing peak season traffic volumes, background growth (including a shift to account for the new SW 44th Avenue), committed traffic, and project traffic. The turning movement volumes are further detailed in Appendix E (Intersection Volume Development) of the submitted traffic study.

Marion County Transportation

6. No comments received.

Response: Acknowledged.

Transportation Planning Organization (TPO)

7. TPO staff have reviewed and have no comments at this time.

Response: Acknowledged.

We trust these responses, along with the attachment, will provide the additional information as requested. Please feel free to contact our office if you have any questions.

Sincerely,
KIMLEY-HORN

Amber L. Gartner, PE

ALG/sab

Attachments: Revised Figure 4

Cc: Don Carll
File

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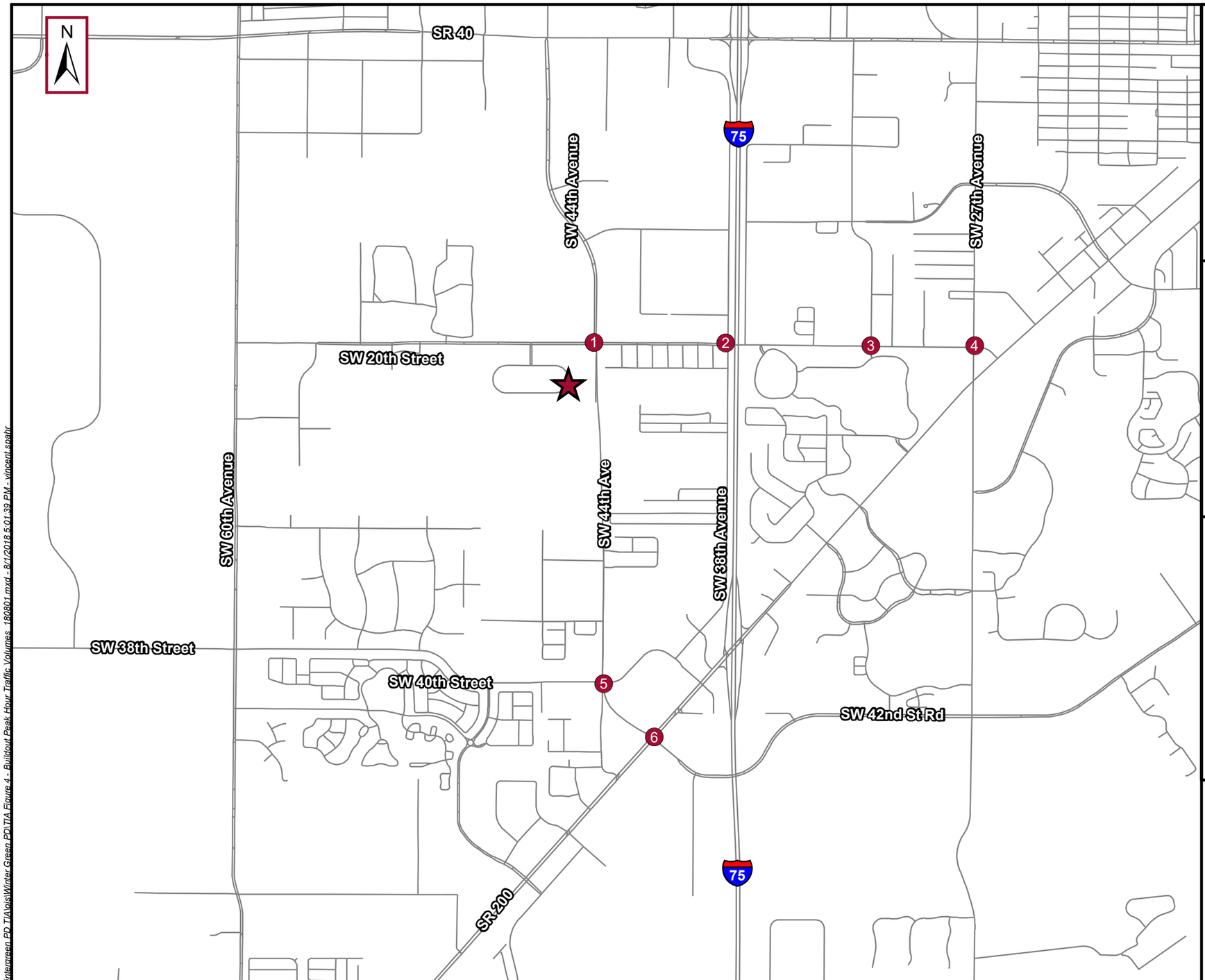

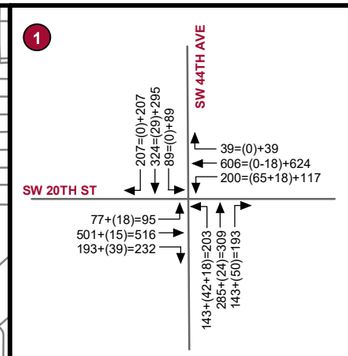

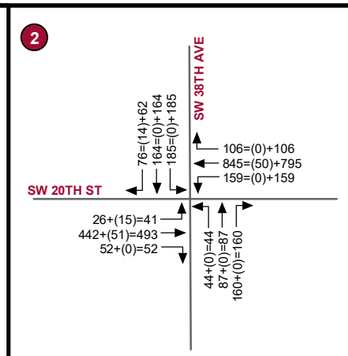

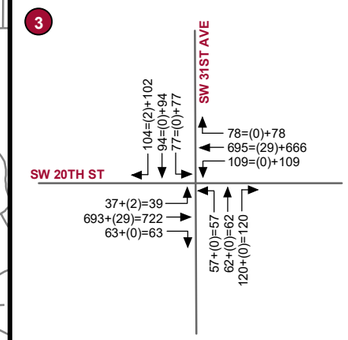

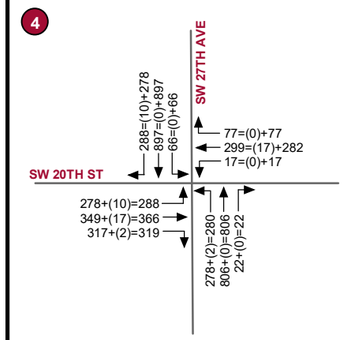

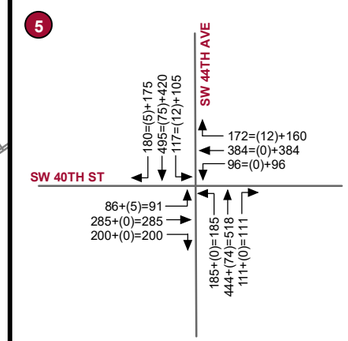

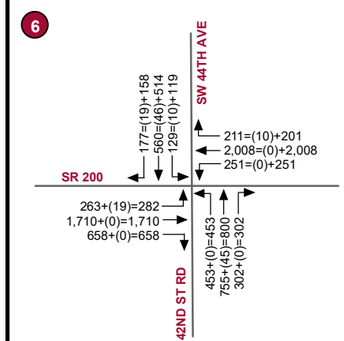

Legend

- Project Location
- Study Area Intersection
- Streets
- 2037 Projected Background + (Project+Pass-by) = Buildout Total Traffic

Kimley»Horn

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FIGURE 4: BUILDOUT (2037) PM PEAK HOUR TRAFFIC VOLUMES

WINTERGREEN PD
OCALA, FLORIDA

Project No: 142742000

Not To Scale

August 2018