

Appendix A

Travel Demand Analysis



Memorandum

Date: August 12, 2022

To: Wiatt Bowers, Atkins

From: Ashutosh Kumar, Insight Transportation Consulting, Inc.

Subject: Travel Demand Modeling for US-1 Study Between SW 27 Avenue and SW 72 Street in Coral Gables, FL

This memorandum documents the travel demand modeling effort performed as part of the US-1 Study in the Coral Gables area. The work effort is conducted as part of the Miami-Dade TPO's GPC VIII-Work Order #02: US-1 Multimodal and/or Roadway Intersection Analysis Between SW 27 Avenue and SW 72 Street. The objective of the overall study is to conduct a traffic analysis to assess vehicular and pedestrian crossing access along and across US-1 from SW 27 Avenue to SW 72 Street and provide recommendations to maximize the capacity of this corridor via multimodal and/or roadway improvements. Travel demand modeling effort provided one of the several data and analyses required to conduct the overall study.

1. Introduction

The team utilized Southeast Florida Regional Planning Model (SERPM) 8.513 for traffic analysis for the study. SERPM's base year is 2015 and the horizon year is 2045. Results from both these model years were utilized for the study. In addition, the land use growth around the corridor and the historical traffic volumes were utilized in understanding the corridor travel patterns.

1.1 Model Review

As part of the study, the team performed a quick review of the SERPM network. The review revealed mostly minor corrections that may be needed to correct the SERPM networks. Specifically, the following attributes were reviewed.

1. Population and employment – No apparent error or discrepancy was identified in the 2015 and 2045 population and employment input data in SERPM. The population and employment plots by Traffic Analysis Zone (TAZ) are shown in Appendix A-1 and Appendix A-2 respectively.
2. Posted Speed – The review revealed the posted speed on the following roadways should be corrected along Ponce De Leon (for both the 2015 and 2045 networks) and Bird Road (for the 2045 network). Ponce De Leon currently coded at 45 mph should be reduced to 35 mph. The posted speed along Bird Road was recently reduced from 40 mph to 35 mph. Please refer to Appendix A-3 for details.
3. Number of Lanes – The number of lanes on small links along and intersecting Ponce De Leon should be corrected. Please refer to Appendix A-4 for details.

4. Turn Penalty/Prohibition – The turn penalty file should be modified to include a left turn prohibition from Ponce De Leon to SW 57th Ave.
5. Signal Locations – The coding of signal locations is appropriate in the SERPM model.

1.2 Key Findings

Data on traffic volumes along US-1 and Ponce De Leon corridors were gathered and analyzed. In addition, traffic volume data for all intersections along US-1, which includes US-1 links as well as the intersecting roadway links were gathered and analyzed. The data is presented in Table 1 for US-1 and Ponce De Leon segments. Data for intersections along US-1 is presented in Table 2. Please note that the data from SERPM in these two tables are from the released version of SERPM 8.513 and no adjustments based on the review presented in the previous section were made by the study team.

Based on the data in the two tables, the following key observations can be made.

- US-1
 - US-1 segments in this study are over capacity and are expected to have a small growth (5 percent overall at 0.16 percent compounded annual growth rate) in overall traffic volume by 2045.
 - The volume over capacity ratio is expected to increase from 1.43 in 2015 to 1.49 in 2045.
 - SERPM overestimates traffic volume on US-1 by approximately 13.5 percent in the study area based on links where traffic counts are available.
- Cross-streets
 - Overall, the cross streets are currently almost at capacity and will be over capacity by 2045. The cross streets are expected to see an 18 percent increase (or 0.56% compounded annual growth rate) in traffic volumes by 2045.
 - The volume over capacity will increase from 1.03 in 2015 to 1.23 in 2045 (per SERPM)
- Ponce De Leon
 - SERPM significantly overestimates traffic on Ponce De Leon. This is likely due to the high posted speed limit coded in SERPM as well as the turning movement coding error at 57th Ave.
 - Overall, there is a 30 percent growth (or 0.88% compounded annual growth rate) in traffic volume on Ponce De Leon between 2015 and 2045

Table 1: US-1 and Ponce De Leon Traffic Volumes and Projections

US-1 Study: US-1 and Ponce De Leon Roadways (Mainline Analysis)										DRAFT		5/15/2022			
US 1		Historical Counts & Growth Rates (2015 through 2020)								SERPM					
From	To	Traffic Station ID	2015	2017	2019	2020	CAGR Linear	CAGR Exponential	CAGR Decaying	SERPM 8 Count 2015	2015	2045	% Growth (30-year)	% Growth Rate (CAGR)	
SW 72nd St/Sunset Dr	SW 57th Ave/ Red Rd	870127 / 87980	70,000	77,500	73,500	56,000	-1.05%	-1.00%	-0.19%	72,760	93,144	97,913	5%	0.17%	
SW 57th Ave/ Red Rd	Alhambra Cir										85,135	85,051	0%	0.00%	
Alhambra Cir	Maynada St										83,982	85,594	2%	0.06%	
Maynada St	Granada Blvd										88,155	89,632	2%	0.06%	
Granada Blvd	Riviera Dr										87,267	92,586	6%	0.20%	
Riviera Dr	SW 42nd Ave	870521	74,000	81,500	82,000	51,500	-1.11%	-1.02%	-0.29%	74,050	87,392	92,706	6%	0.20%	
SW 42nd Ave	Grand Ave										73,229	74,901	2%	0.08%	
Grand Ave	SW 37th Ave										85,241	89,710	5%	0.17%	
SW 37th Ave	SW 40th St / Bird Ave										72,991	78,325	7%	0.24%	
SW 40th St / Bird Ave	SW 32nd Ave / McDonald St										96,522	103,158	7%	0.22%	
SW 32nd Ave / McDonald St	Virginia St	875200	73,000	89,000	83,500	16,000	-1.95%	-1.76%	-0.42%	78,660	98,368	104,137	6%	0.19%	
Virginia St	SW 27th Ave										100,040	106,055	6%	0.19%	
SW 27th Ave	SW 24th Ave										85,550	95,882	102,642	7%	0.23%
(Overall) US-1 Segments within the Study Area										1,147,348	1,202,410	5%	0.16%		
Ponce De Leon		Historical Counts & Growth Rates (2015 through 2020)								SERPM					
From	To	Traffic Station ID	2015	2017	2019	2020	Linear	Exponential	Decaying	SERPM 8 Count 2015	2015	2045	% Growth	% Growth Rate (CAGR)	
SW 57th Ave/ Red Rd	San Amaro Dr	878408	21,400	21,100	19,000	17,000	2.93%	3.79%	0.68%	22,100	35,009	46,586	33%	0.96%	
San Amaro Dr	George E Merrick St										36,534	47,701	31%	0.89%	
George E Merrick St	Augusto St										36,253	47,340	31%	0.89%	
Augusto St	Granada Blvd										35,548	47,548	34%	0.97%	
Granada Blvd	Riviera Dr										43,471	54,733	26%	0.77%	
Riviera Dr	SW 42nd Ave	878408	21,400	21,100	19,000	17,000	2.93%	3.79%	0.68%	22,100	42,252	53,115	26%	0.77%	
SW 42nd Ave	SW 38th Ave										14,811	19,925	35%	0.99%	
Ponce De Leon within Study Area										243,878	316,948	30%	0.88%		
CAGR: Compounded Annual Growth Rate															
Historical Growth Rates based on 10-year available counts data from FDOT Traffic Online															
SERPM 8.513 model is used for analysis															

Table 2: Intersection Level Analysis

US 1 Study - Summary of Traffic Data (Intersection Analysis)															DRAFT 5/7/2022						
US 1 Intersection	Location / Leg of the Intersection	Historical Counts								Land Use		SERPM					Volume Over Capacity				
		Traffic Station ID	2015	2017	2019	2020	CAGR Linear Option	CAGR Exponential Option	CAGR Decaying Exponential Option (Perferred)	CAGR Population	CAGR Employment	SERPM 8 Count 2015	2015	2045	% Growth	% Annual Growth Rate (CAGR)	# Lanes	Posted Speed	LOS D Capacity	2015 V/C (SERPM8)	2045 V/C (SERPM8)
SW 72nd St/Sunset Dr	US 1 West of SW 72nd St US 1 East of SW 72nd St SW 72nd St West of US 1 SW 72nd St East of US 1	870127 870034 878299	70,000 26,000 15,000	77,500 24,500 16,000	73,500 26,000 14,500	56,000 22,000 12,900	-1.05% 1.69% -0.59%	-1.00% 1.85% -0.61%	-0.19% 0.30% -0.08%	1.21%	1.02%	14,990	76,740	78,665	3%	0.08%	6	40	59,900	1.28	1.31
SW 57th Ave/ Red Rd	US 1 West of SW 57th Ave US 1 East of SW 57th Ave SW 57th Ave North of US 1 SW 57th Ave South of US 1												98,041	102,450	4%	0.15%	6	40	59,900	1.64	1.71
	93,144												97,913	5%	0.17%	4	35	32,400	1.13	1.42	
	85,135												85,051	0%	0.00%	2	35	14,800	0.98	1.20	
	47,187	57,303	21%	0.65%	6	40	59,900	1.55	1.63												
Alhambra Cir	US 1 West of Alhambra Cir US 1 East of Alhambra Cir Alhambra Cir North of US 1 Alhambra Cir South of US 1	26,040	47,187	57,303	21%	0.65%	4	35	32,400			1.46	1.77								
	19,150	31,906	36,346	14%	0.44%	4	35	32,400	0.98			1.12									
	72,760	85,135	85,051	0%	0.00%	6	45	59,900	1.42			1.42									
	83,982	85,594	2%	0.06%	6	45	59,900	1.40	1.43												
Granada Blvd	US 1 West of Granada Blvd US 1 East of Granada Blvd Granada Blvd North of US 1 Granada Blvd South of US 1	879800 877015	79,500 3,000	86,500 4,700	78,500 4,300	70,000 3,900	0.00% 0.00%	0.00% -0.20%	-0.05% -0.10%			78,800	88,155	89,632	2%	0.06%	6	45	59,900	1.47	1.50
	87,237												92,586	6%	0.20%	6	45	59,900	1.46	1.55	
	16,813												18,988	13%	0.41%	2	35	14,800	1.14	1.28	
	3,220												9,088	11,972	32%	0.92%	2	35	14,800	0.61	0.81
SW 42nd Ave	US 1 West of SW 42nd Ave US 1 East of SW 42nd Ave SW 42nd Ave North of US 1 SW 42nd Ave South of US 1	878358	12,200	13,000	11,400	9,500	-0.83% -0.85%	-0.13% -0.29%	74,050			87,392	92,706	6%	0.20%	6	45	59,900	1.46	1.55	
	73,229											74,901	2%	0.08%	6	45	59,900	1.22	1.25		
	26,880											33,124	23%	0.70%	2	40	17,700	1.52	1.87		
	12,200									13,186	15,654	19%	0.57%	2	40	17,700	0.74	0.88			
Grand Ave	US 1 West of Grand Ave US 1 East of Grand Ave Grand Ave West of US 1 Grand Ave East of US 1	870521	74,000	81,500	82,000	51,500	-1.11% -1.02%	-0.29% -0.65%	74,050	73,229	74,901	2%	0.08%	6	45	59,900	1.22	1.25			
	85,241									89,710	5%	0.17%	6	45	59,900	1.42	1.50				
	28,083									34,301	22%	0.67%	4	35	32,400	0.87	1.06				
	16,062									19,492	21%	0.65%	2	35	14,800	1.09	1.32				
SW 37th Ave	US 1 West of SW 37th Ave US 1 East of SW 37th Ave SW 37th Ave North of US 1 SW 37th Ave South of US 1	878264	15,200	13,000	11,400	10,200	-3.63% -3.30%	-0.53% -0.41%	11,040	85,241	89,710	5%	0.17%	6	45	59,900	1.42	1.50			
	72,991									78,325	7%	0.24%	6	45	59,900	1.22	1.31				
	15,500									20,809	23,060	11%	0.34%	4	35	32,400	0.64	0.71			
	9,062									12,196	35%	0.99%	2	35	14,800	0.61	0.82				
SW 40th St/Bird Ave	US 1 South of SW 40th St/Bird Ave US 1 North of SW 40th St/Bird Ave SW 40th St/Bird Ave West of US 1 SW 40th St/Bird Ave East of US 1	875200	73,000	89,000	83,500	16,000	-1.95% -1.43%	-1.76% -1.31%	-0.42% -0.33%	78,660	72,991	78,325	7%	0.24%	6	45	59,900	1.22	1.31		
	96,522										103,158	7%	0.22%	6	45	59,900	1.61	1.72			
	48,746										52,519	8%	0.25%	4	40	39,800	1.22	1.32			
	22,177										25,045	13%	0.41%	2	40	17,700	1.25	1.41			
SW 27th Ave	US 1 West of SW 27th Ave US 1 East of SW 27th Ave SW 27th Ave North of US 1 SW 27th Ave South of US 1	875201	85,500	88,500	83,500	22,000	-1.43% 2.49%	-1.31% 2.91%	-0.33% 0.51%	85,550	95,882	102,642	7%	0.23%	6	45	59,900	1.60	1.71		
	30,550										29,968	35,295	18%	0.55%	4	40	39,800	0.75	0.89		
	18,600										26,619	31,440	18%	0.56%	2	40	17,700	1.50	1.78		
	Averages																				
US 1 Segments			76,400	84,600	80,200	43,100	-1.11%	-1.02%	-0.26%			76,661	85,574	89,299	4%	0.14%	6.00	44.17	59,900	1.43	1.49
Cross Streets			17,214	17,143	16,471	13,086	-0.02%	0.08%	0.03%			16,810	24,854	29,410	18%	0.56%	2.78	35.56	23,111	1.03	1.23

Appendix

A-1: 2015 Population by TAZ and Population Growth between 2015 and 2045

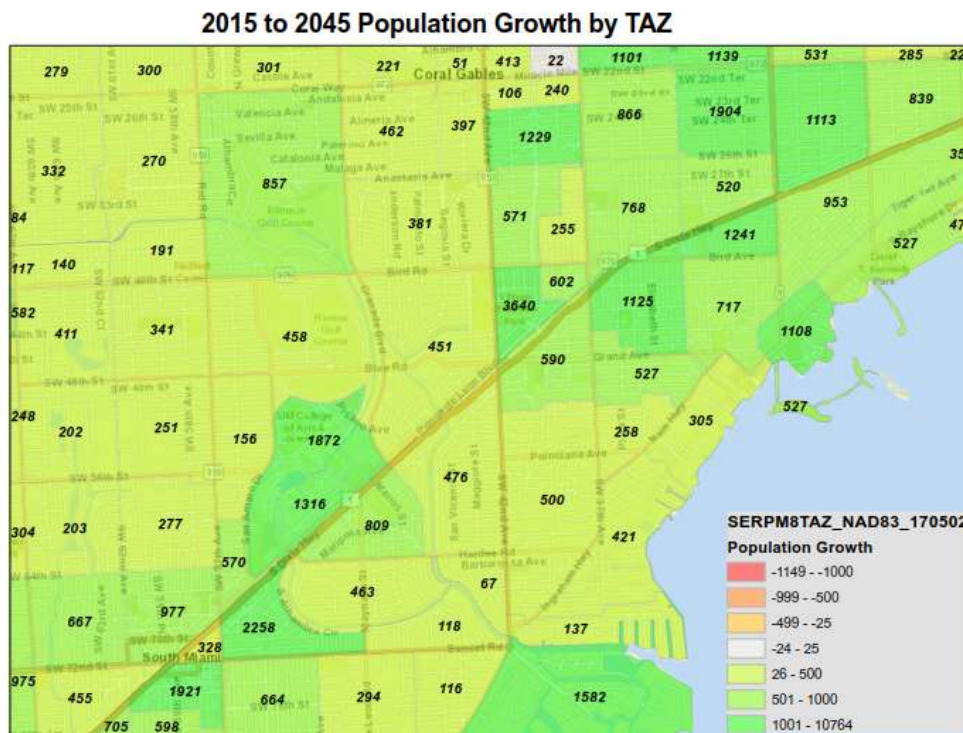
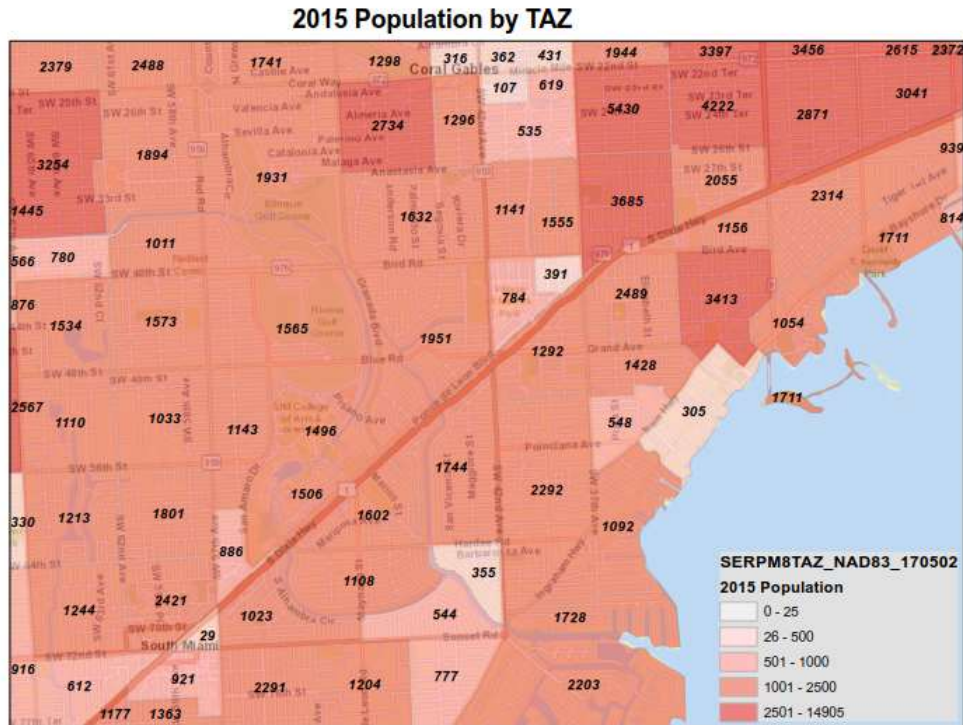


Table A-2: 2015 Employment by TAZ and Employment Growth between 2015 and 2045

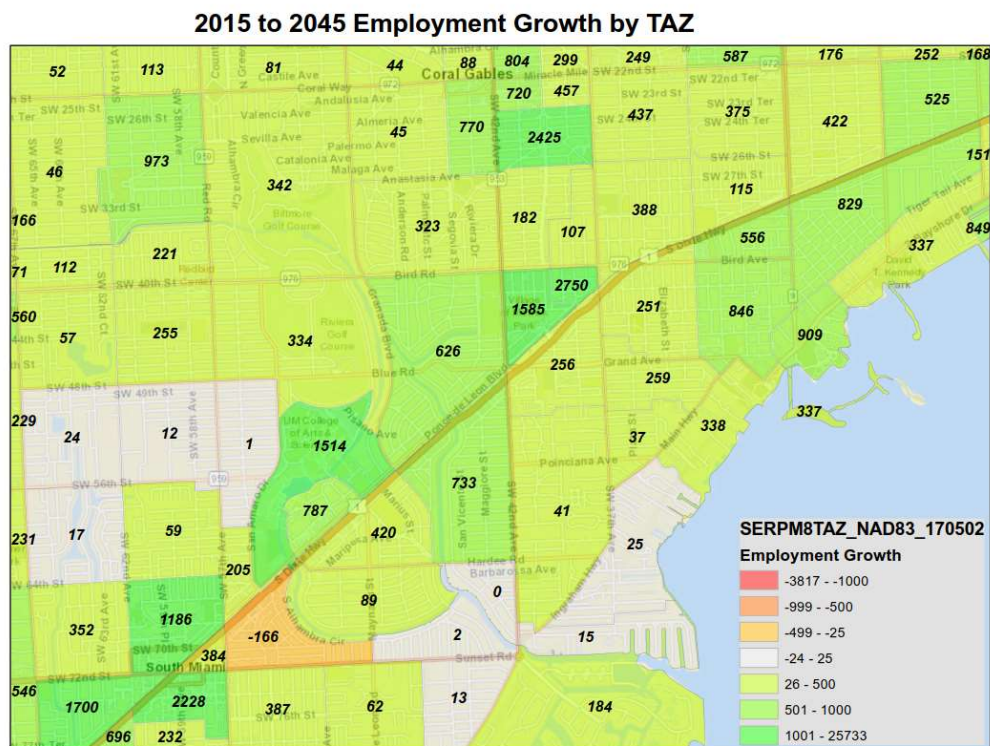
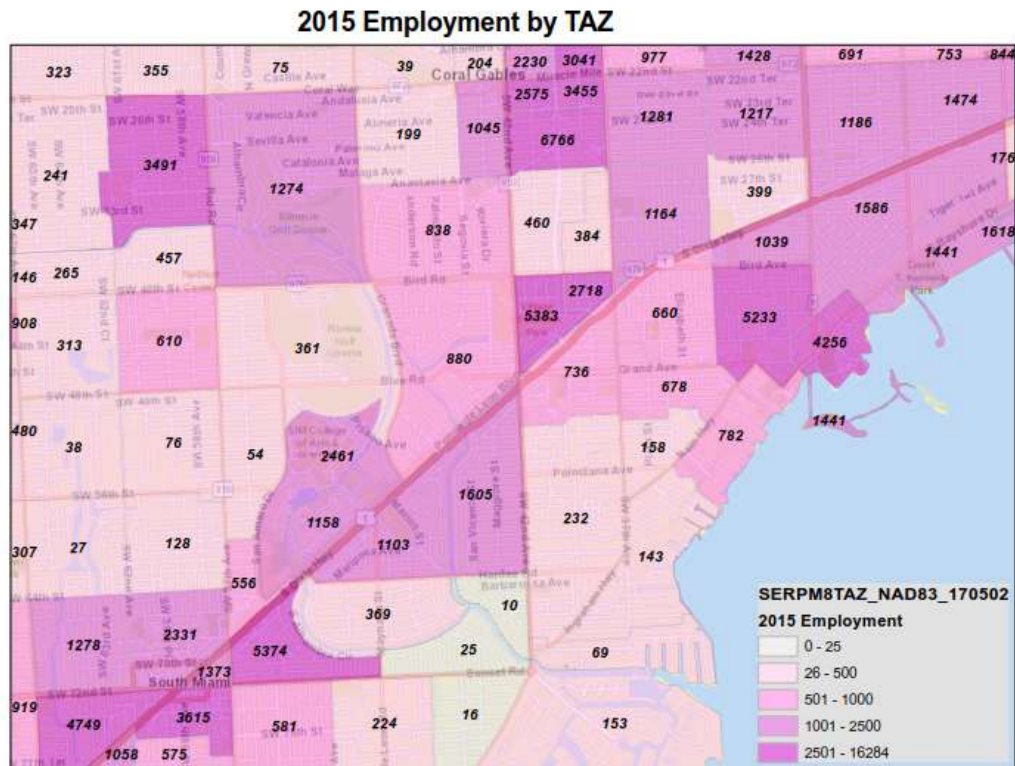
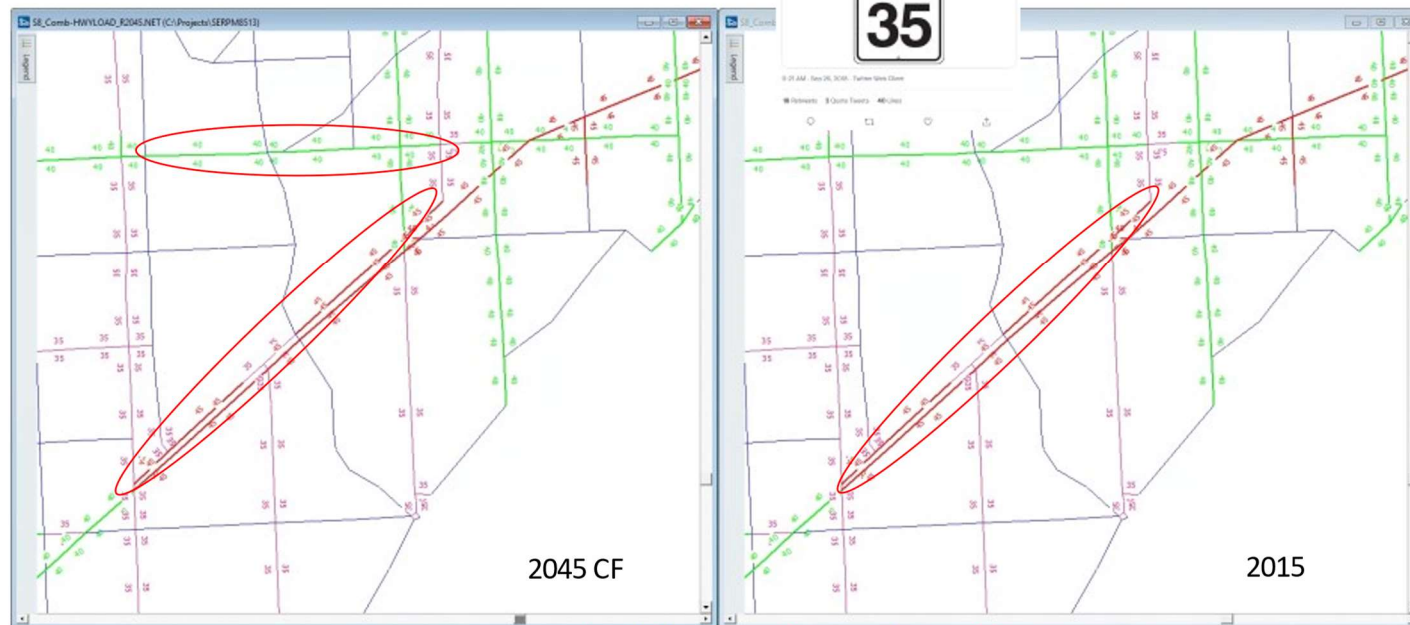


Table A-3: Posted Speed Limit Coding

Task 2.7

Posted Speed



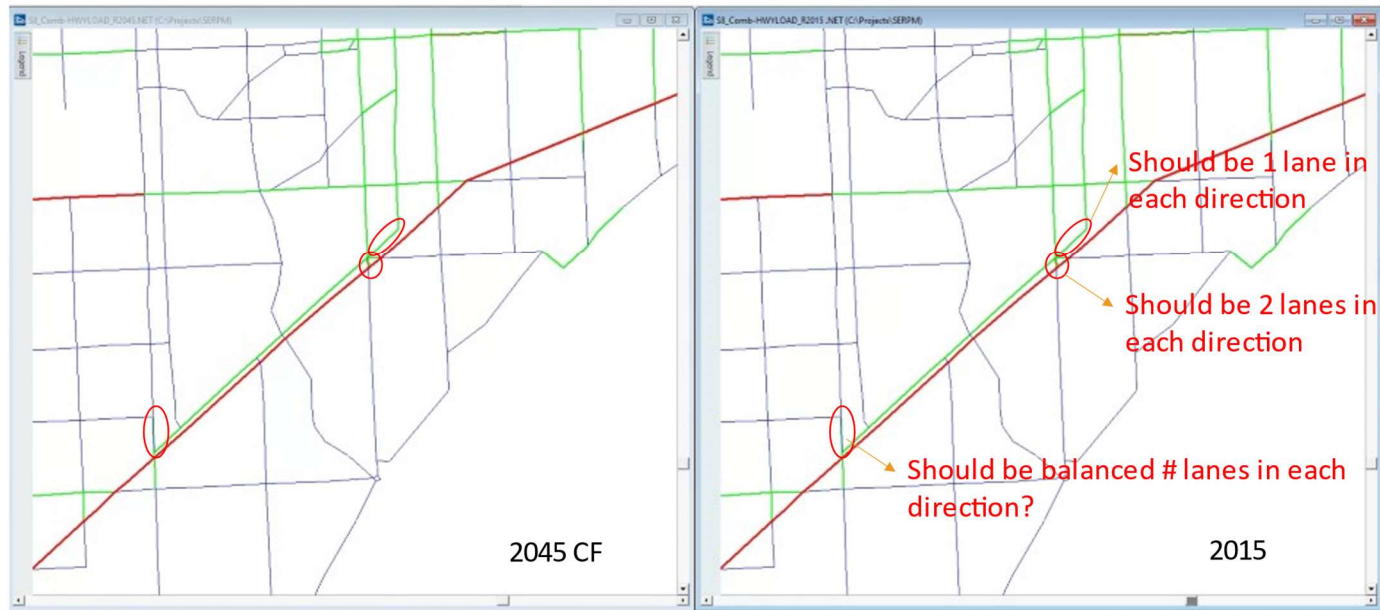
Ponce De Leon should be 35 mph posted speed limit.
Bird Rd between SW 57th Ave and Ponce De Leon in 2045
should be 35 mph.

Table A-4: Number of Lanes Coding

Task 2.7

Number of Lanes

— 6 lanes
— 4 lanes
— 2 lanes



DRAFT for Discussion

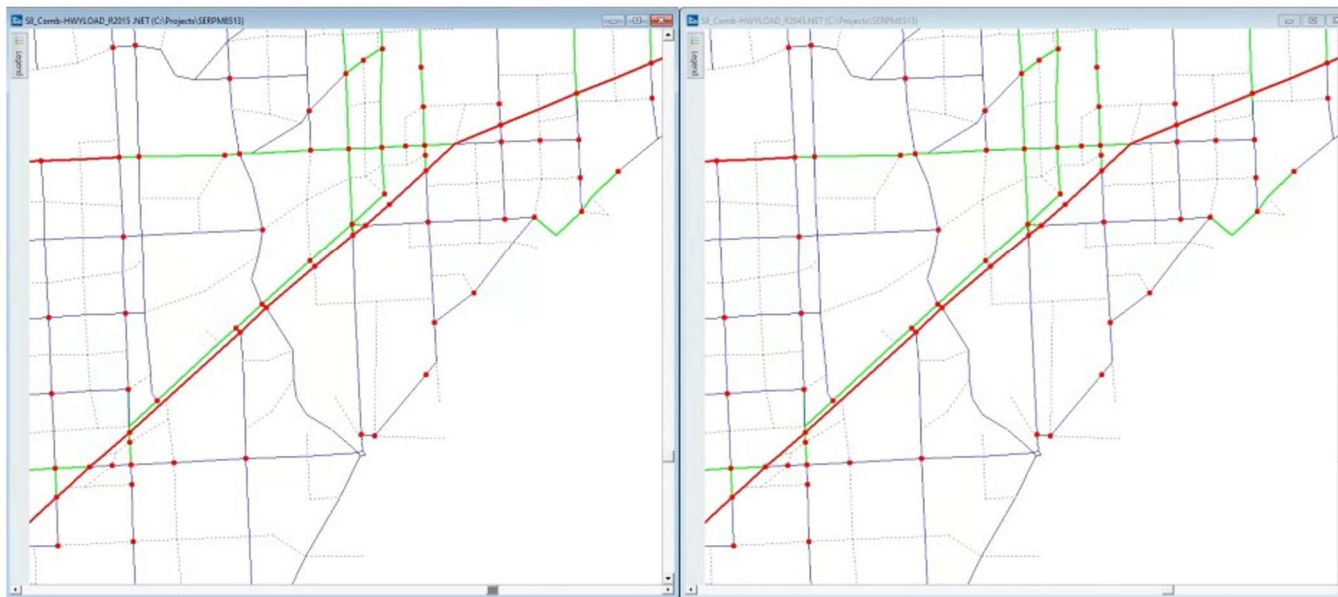
May need to change both 2015 & 2045 networks in the highlighted locations.

August 9, 2022

3

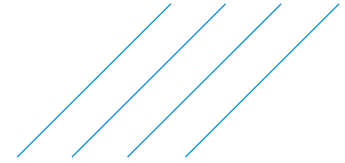
Table A-5: Signal Locations Coding

Signal Locations



Appendix B Traffic Operations Assessment





Memo

To: Wiatt Bowers, Atkins

From: Kent Blunt, Atkins

Email: Kent.Blunt@atkinsglobal.com

Date: 10 January 2023

Phone: 407-806-4122

Subject: Traffic Analysis Summary for US-1 Multimodal Study between SW 27 Avenue and SW 72 Street in Coral Gables, FL

1. Summary

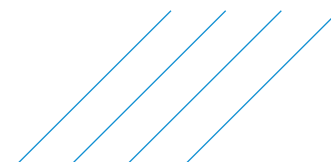
As a part of the overall US-1 Multimodal Study, this memo provides a traffic operations assessment for the US-1 and Ponce de Leon Boulevard intersections and evaluates the performance of alternatives aimed at either improving capacity deficiencies or improving pedestrian operations. Design hour traffic volumes were developed using growth rates based on the facility type and the travel demand model findings. Through the evaluation of operational traffic performances, corridor design alternatives were developed and compared to the existing condition operations.

2. Design Volume Development

The project design year (2045) traffic volumes were developed using the growth rates from the travel demand modeling results completed by Insight Transportation Consulting in August 2022. Since the study area contains a mix of roadway sections that are currently capacity-constrained and other facilities operating below capacity, the growth rates were applied by facility type to best replicate the growth patterns of each corridor within the study area.

The following traffic growth factors were derived from the traffic growth rates estimated from the SERPM Version 8.513 demand model to forecast volumes to the design year of 2045:

- US-1: 1.03
- Ponce de Leon Boulevard: 1.24
- Cross-streets: 1.14



3. 2021 Existing Performance

The existing intersection analysis was completed using the Synchro 11 software, which utilizes the Highway Capacity Manual methodology to calculate intersection delay and level of service (LOS). For this analysis, the HCM 2000 methodology was utilized versus the latest HCM 6th edition due to the pedestrian operations improvements not being compatible with HCM 6th edition analysis methodology.

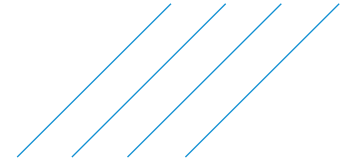
As a result of the analysis, the existing intersection control and layout summaries are illustrated in **Table 3-1**. Operations at the Ponce de Leon & SW 57th Avenue/Red Road intersection resulted in an expected LOS F during the PM Peak. The results of the model were also verified through the Google Maps congestion data, which confirmed longer delays and queueing during the PM period for the Southwest approach of Ponce de Leon & SW 57th Avenue/Red Road. The existing intersection performance summary is provided in **Table 3-1**. The synchro HCM reports are provided in the attachments.

Table 3-1 - 2022 Existing Intersection Performance Summary

Intersection		Intersection Delay* (Level of Service)	
		Weekday AM Peak	Weekday PM Peak
US-1	SW 72nd St/Sunset Dr	27.1 (C)	23.1 (C)
	SW 57th Ave/Red Rd	44.1 (D)	47.8 (D)
	Granada Blvd	13.0 (B)	29.2 (C)
	SW 42nd Ave/S Le Jeune Rd	35.8 (D)	46.9 (D)
	Grand Ave	51.9 (D)	25.2 (C)
	SW 37th Ave/Douglas Rd	27.8 (C)	45.6 (D)
	Bird Rd/SR-976	44.0 (D)	32.6 (C)
	SW 27th Ave	46.8 (D)	54.9 (D)
Ponce de Leon Blvd	SW 57th Ave/Red Rd **	13.6 (B)	140.3 (F)
	Stanford Dr	11.1 (B)	19.6 (B)
	Granada Blvd	24.9 (C)	29.9 (C)
	SW 42nd Ave	69.6 (E)	71.4 (E)

* Intersection delay reported as seconds per vehicle.

**Intersection operates as a two-way, stop-control. The highest delay movement was reported instead of the overall intersection delay.



4. Alternative Development

The study included two alternatives for analysis during the AM and PM peak periods. The objectives of the alternative development were to evaluate intersection capacity improvements and other operational changes aimed to improve pedestrian operations and safety. The analysis scenarios are listed below, and a summary of intersection improvement alternatives is listed in **Table 4-1**.

- **2045 Background:** This scenario includes all existing geometry and signal configurations to serve as a baseline for the alternative analysis. The existing signal timing splits were optimized to better service projected traffic demand during the design year to account for regularly planned signal retiming activity.
- **2045 Alternative 1 (Intersection Capacity Improvements):** This alternative involves capacity improvements aimed to allow for shorter cycle lengths to be used which are expected to shorten pedestrian delay and improve pedestrian signal compliance. The improvements include intersection control, lane elimination, lane reassignments, and shortening the network cycle length.
- **2045 Alternative 2 (Pedestrian Safety Improvements):** Although there were other pedestrian safety improvement applications discussed, the pedestrian improvements that affect intersection operations were evaluated for this alternative. The pedestrian facility improvements that affect the intersection operations pertain to restricting right-turn-on-red (RTOR) movements and implementing LPIs.

Both applications in Alternative 2 decrease the available green time for vehicles, reducing capacity while improving pedestrian safety by reducing vehicle-to-pedestrian conflicts while the pedestrian crosswalk is active. The no RTOR restrictions were applied to locations where there is a long distance between the right turn stop line and the downstream crosswalk or at locations with significant skew where right-turning drivers may not have the crosswalk in their peripheral vision while evaluating oncoming traffic gaps for making a right turn decision.

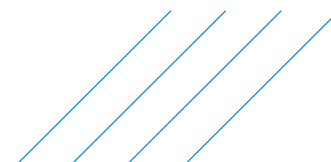
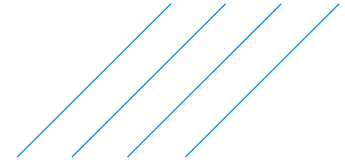


Table 4-1 - Summary of Alternative Improvements

Intersection		<u>Alternatives</u>	
		Alt 1 <i>(Capacity Improvements)</i>	Alt 2 <i>(Pedestrian Operations Improvements)</i>
US-1	SW 72nd St/Sunset Dr	- Remove SB Left Turn Lane	- No NB RTOR - No WB RTOR - Implement LPIs for US-1 crossing
	SW 57th Ave/Red Rd	--	- No NB RTOR - No SB RTOR - Implement LPIs for US-1 crossing
	Granada Blvd	- Reconfigured NWB Lane assignments	- Implement LPIs for crossing
	SW 42nd Ave/ S Le Jeune Rd	--	- No NB RTOR - No SB RTOR - Implement LPIs for US-1 crossing
	Grand Ave	--	- No NEB RTOR - No SWB RTOR
	SW 37th Ave/ Douglas Rd	- Remove SB Left Turn Lane	- No SB RTOR - No NEB RTOR - Implement LPIs for US-1 crossing
	Bird Rd/SR-976*	- Reconfigured WB Lane assignments	- No EB RTOR - Implement LPIs for US-1 crossing
	SW 27th Ave	--	- Implement LPIs for US-1 crossing
Ponce de Leon Blvd	SW 57th Ave/Red Rd	- Converted from a two-way stop to signalized intersection	--
	Stanford Dr	--	- LPIs for all crossings
	Granada Blvd	--	- LPIs for all crossings
	SW 42nd Ave	--	- No NB RTOR - No SB RTOR - Implement LPIs for Ponce de Leon Blvd crossings

RTOR - Right Turn on Red

LPI - Leading Pedestrian Interval



Preliminary Alternatives for the US-1 and Le Jeune Rd Focus Area

Several intersection reconfiguration concepts were for the US 1/Lejeune/42nd/Grand Avenue focus area to mitigate congestion among the closely spaced cluster of intersections. The traffic study included two additional modeling software to analyze the focus area concepts. The following concepts were considered but ultimately did not result in a favorable system improvement:

- **Ponce De Leon Blvd at Le Jeune Rd Roundabout:** this concept was evaluated including a traditional 5-legged roundabout at the Ponce de Leon Blvd at Lejeune Rd intersection. Sidra Intersection 10 was utilized to model a two-lane roundabout for Ponce de Leon Boulevard and SW 42nd Avenue. The analysis of the roundabout alternative resulted in the Ponce De Leon Boulevard northeast-bound approach operating over capacity and as LOS F, not bringing benefit to the study area. The results were supplemented with the Synchro HCM results. The Sidra reports for the AM and PM peak periods are provided in the attachments.
- **Ponce De Leon, US-1, and Le Jeune Rd Traffic Circle:** This concept would require the acquisition of the existing gas station in the middle of the triangle of the three intersections. VISSIM was used to evaluate a traffic circle at US-1 and SW 42nd Avenue and US-1 and Grande Avenue. The traffic demand on US-1 and Ponce de Leon Boulevard resulted in the traffic circle operationally failing in simulation. Ultimately, the simulation illustrated the traffic circle was not a feasible option, stopping the preliminary screening.
- **Grand Avenue One-way Conversion and Lane Assignments:** Signalization concept of converting Grand Avenue to an eastbound one-way street between the Le Jeune Rd and US-1 intersections. The objective of this concept was to simplify and combine certain intersection movements within the area to reduce the Ponce de Leon Blvd at Le Jeune road intersection from a 5-legged to a 4-legged intersection. The result of the lane reconfigurations and volume redirection was expected to increase delay at the US-1 and Le Jeune Road intersection and not bring any other benefit in terms of lower cycle lengths or improved overall system performance.

5. Alternatives Performance

The 2045 design intersection analysis was completed using the Synchro 11 software which utilizes the Highway Capacity Manual methodology to calculate intersection delay and LOS.

The alternatives performance analysis resulted in a mix of both improved and degraded intersection operations. Due to the study area proximity and close spacing among intersections, the operational performance relies heavily on the quality of signal progression between study intersections. The existing intersection performance summary is provided in **Table 5-1**. The synchro HCM reports are provided in the attachments.

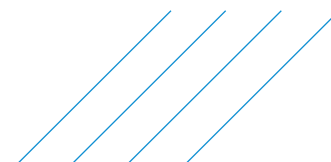


Table 5-1 - 2045 Intersection Performance Summary

Intersection		Intersection Delay (Level of Service)					
		AM Peak			PM Peak		
		Background	Alt 1	Alt 2	Background	Alt 1	Alt 2
US-1	SW 72nd St/Sunset Dr	34.9 (C)	21.8 (C)	42.8 (D)	24.5 (C)	29.0 (C)	31.5 (C)
	SW 57th Ave/Red Rd	43.3 (D)	51.2 (D)	53.5 (D)	39.6 (D)	45.5 (D)	65.2 (E)
	Granada Blvd	24.0 (C)	14.8 (B)	26.5 (C)	28.3 (C)	34.5 (C)	34.5 (C)
	SW 42nd Ave/S Le Jeune Rd	48.4 (D)	73.4 (E)	72.8 (E)	44.6 (D)	48.8 (D)	54.1 (D)
	Grand Ave	40.3 (D)	55.3 (D)	37.0 (D)	15.5 (B)	15.9 (B)	17.0 (B)
	SW 37th Ave/Douglas Rd	52.2 (D)	34.1 (C)	48.6 (D)	76.6 (E)	52.9 (D)	86.8 (F)
	Bird Rd/SR-976	50.1 (D)	55.2 (E)	54.4 (D)	28.1 (C)	40.6 (D)	30.1 (C)
	SW 27th Ave	81.2 (F)	131.9 (F)	114.5 (F)	97.2 (F)	125.1 (F)	214.7 (F)
Ponce de Leon Blvd	SW 57th Ave/Red Rd **	11.3 (B)	15.5 (B)	11.3 (B)	108.7 (F)	15.7 (B)	98.2 (F)
	Stanford Dr	10.1 (B)	11.9 (B)	14.4 (B)	24.6 (C)	21.2 (C)	24.2 (C)
	Granada Blvd	16.6 (B)	15.4 (B)	20.4 (C)	62.0 (E)	45.5 (D)	55.8 (E)
	SW 42nd Ave	32.9 (C)	59.9 (E)	49.9 (D)	68.1 (E)	69.6 (E)	82.0 (F)

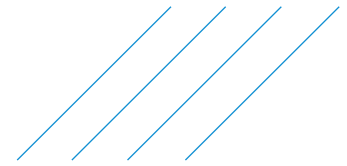
* Intersection delay reported as seconds per vehicle.

**Intersection operates as a two-way, stop-control intersection for the background condition. The highest delay movement was reported instead of the overall intersection delay.

The 2045 AM peak Background conditions resulted in all intersections as a LOS D or better except for the US-1 at SW 27th Avenue intersection which was found to operate as LOS F. The 2045 background PM peak hour scenario resulted in several more intersections along US-1 and Ponce de Leon Boulevard operating as LOS E and LOS F.

The intersection capacity improvements applied in the Alternative 1 scenario were evaluated using a shorter cycle length which creates varying results for intersection performance yet improves pedestrian wait times and compliance. The intersections where improvements were applied were found to either remain near background operations or decreased overall intersection delay due to the decreased cycle length.

The pedestrian safety improvements applied in Alternative 2 were evaluated to preserve background operations level for most intersections and performed similarly to the 2045 background conditions except for several locations which were operating at capacity. Performance degradations due to the pedestrian safety improvements were found for the US-1 at SW 37th Avenue / Douglas Road intersection and SW 27th Avenue intersections which were evaluated to operate as LOS F.



Attachment 1: Synchro HCM Reports

HCM Signalized Intersection Capacity Analysis

1: US-1 & SW 72nd St/Sunset Dr

01/09/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑	↑		↑↑		↑	↑↑↑		↑	↑↑↑	
Traffic Volume (vph)	0	530	20	0	260	10	55	2900	90	25	1600	180
Future Volume (vph)	0	530	20	0	260	10	55	2900	90	25	1600	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.9	8.9		8.9		6.4	8.0		6.4	8.0	
Lane Util. Factor		0.95	1.00		0.95		1.00	0.91		1.00	0.91	
Frt		1.00	0.85		0.99		1.00	1.00		1.00	0.98	
Flt Protected		1.00	1.00		1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3539	1583		3519		1770	5062		1770	5008	
Flt Permitted		1.00	1.00		1.00		0.08	1.00		0.03	1.00	
Satd. Flow (perm)		3539	1583		3519		148	5062		59	5008	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	558	21	0	274	11	58	3053	95	26	1684	189
RTOR Reduction (vph)	0	0	17	0	2	0	0	2	0	0	0	0
Lane Group Flow (vph)	0	558	4	0	283	0	58	3146	0	26	1873	0
Turn Type		NA	Perm		NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		1	6		5	2	
Permitted Phases			8				6			2		
Actuated Green, G (s)		33.5	33.5		33.5		136.2	129.0		130.2	126.0	
Effective Green, g (s)		33.5	33.5		33.5		136.2	129.0		130.2	126.0	
Actuated g/C Ratio		0.18	0.18		0.18		0.72	0.68		0.69	0.66	
Clearance Time (s)		8.9	8.9		8.9		6.4	8.0		6.4	8.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		623	279		620		167	3436		78	3321	
v/s Ratio Prot		c0.16			0.08		c0.01	c0.62		0.01	0.37	
v/s Ratio Perm			0.00				0.23			0.22		
v/c Ratio		0.90	0.01		0.46		0.35	0.92		0.33	0.56	
Uniform Delay, d1		76.5	64.6		70.1		12.2	25.9		37.4	17.2	
Progression Factor		1.00	1.00		1.00		0.29	0.68		2.13	0.57	
Incremental Delay, d2		15.4	0.0		0.5		0.9	3.7		2.2	0.6	
Delay (s)		91.9	64.6		70.6		4.4	21.4		81.9	10.4	
Level of Service		F	E		E		A	C		F	B	
Approach Delay (s)		90.9			70.6			21.1			11.4	
Approach LOS		F			E			C			B	
Intersection Summary												
HCM 2000 Control Delay			27.1				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.90									
Actuated Cycle Length (s)			190.0				Sum of lost time (s)			23.3		
Intersection Capacity Utilization			86.8%				ICU Level of Service			E		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2: US-1 & SW 57th Ave

01/09/2023

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑			↑↑	↑	↑	↑↑↑		↑	↑↑↑	
Traffic Volume (vph)	0	350	110	0	480	110	210	3000	80	90	1900	75
Future Volume (vph)	0	350	110	0	480	110	210	3000	80	90	1900	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0			7.0	7.0	6.8	6.8		6.8	6.8	
Lane Util. Factor		0.95			0.95	1.00	1.00	0.91		1.00	0.91	
Frt		0.96			1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected		1.00			1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3412			3539	1583	1770	5066		1770	5056	
Flt Permitted		1.00			1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		3412			3539	1583	1770	5066		1770	5056	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	368	116	0	505	116	221	3158	84	95	2000	79
RTOR Reduction (vph)	0	16	0	0	0	85	0	1	0	0	2	0
Lane Group Flow (vph)	0	468	0	0	505	31	221	3241	0	95	2077	0
Turn Type		NA			NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases						8						
Actuated Green, G (s)		28.7			28.7	28.7	28.8	126.5		14.2	111.9	
Effective Green, g (s)		28.7			28.7	28.7	28.8	126.5		14.2	111.9	
Actuated g/C Ratio		0.15			0.15	0.15	0.15	0.67		0.07	0.59	
Clearance Time (s)		7.0			7.0	7.0	6.8	6.8		6.8	6.8	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		515			534	239	268	3372		132	2977	
v/s Ratio Prot		0.14			c0.14		c0.12	c0.64		0.05	0.41	
v/s Ratio Perm						0.02						
v/c Ratio		0.91			0.95	0.13	0.82	0.96		0.72	0.70	
Uniform Delay, d1		79.4			79.9	69.8	78.2	29.5		86.0	27.2	
Progression Factor		1.00			1.00	1.00	1.25	0.71		0.71	1.20	
Incremental Delay, d2		19.7			25.8	0.2	11.5	5.8		12.8	1.0	
Delay (s)		99.1			105.7	70.1	108.8	26.7		73.5	33.8	
Level of Service		F			F	E	F	C		E	C	
Approach Delay (s)		99.1			99.0			31.9			35.5	
Approach LOS		F			F			C			D	
Intersection Summary												
HCM 2000 Control Delay		44.1			HCM 2000 Level of Service			D				
HCM 2000 Volume to Capacity ratio		0.97										
Actuated Cycle Length (s)		190.0			Sum of lost time (s)			20.6				
Intersection Capacity Utilization		95.2%			ICU Level of Service			F				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

3: US-1 & Granada Blvd

01/09/2023

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	100	220	90	10	180	30	80	3100	15	40	2400	125
Future Volume (vph)	100	220	90	10	180	30	80	3100	15	40	2400	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.7	6.7			6.7	6.7	6.8	6.8		6.8	6.8	6.8
Lane Util. Factor	1.00	0.95			0.95	1.00	1.00	0.91		1.00	0.91	1.00
Frt	1.00	0.96			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3385			3530	1583	1770	5082		1770	5085	1583
Flt Permitted	0.53	1.00			0.84	1.00	0.03	1.00		0.03	1.00	1.00
Satd. Flow (perm)	994	3385			2968	1583	59	5082		55	5085	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	105	232	95	11	189	32	84	3263	16	42	2526	132
RTOR Reduction (vph)	0	24	0	0	0	28	0	0	0	0	0	17
Lane Group Flow (vph)	105	303	0	0	200	4	84	3279	0	42	2526	115
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases		8			4		1	6			2	
Permitted Phases	8			4		4	6			2		2
Actuated Green, G (s)	24.3	24.3			24.3	24.3	152.2	152.2		135.4	135.4	135.4
Effective Green, g (s)	24.3	24.3			24.3	24.3	152.2	152.2		135.4	135.4	135.4
Actuated g/C Ratio	0.13	0.13			0.13	0.13	0.80	0.80		0.71	0.71	0.71
Clearance Time (s)	6.7	6.7			6.7	6.7	6.8	6.8		6.8	6.8	6.8
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	127	432			379	202	137	4070		39	3623	1128
v/s Ratio Prot		0.09					0.03	c0.65			0.50	
v/s Ratio Perm	c0.11				0.07	0.00	0.46			c0.76		0.07
v/c Ratio	0.83	0.70			0.53	0.02	0.61	0.81		1.08	0.70	0.10
Uniform Delay, d1	80.8	79.4			77.5	72.4	44.1	10.6		27.3	15.6	8.5
Progression Factor	0.81	0.78			1.00	1.00	1.30	0.26		0.65	0.32	0.09
Incremental Delay, d2	30.0	4.4			1.3	0.0	5.3	1.2		118.2	0.5	0.1
Delay (s)	95.6	66.4			78.8	72.5	62.5	3.9		135.8	5.6	0.8
Level of Service	F	E			E	E	E	A		F	A	A
Approach Delay (s)		73.5			77.9			5.4			7.4	
Approach LOS		E			E			A			A	
Intersection Summary												
HCM 2000 Control Delay		13.0			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		1.04										
Actuated Cycle Length (s)		190.0			Sum of lost time (s)			20.3				
Intersection Capacity Utilization		110.0%			ICU Level of Service			H				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

4: US-1 & SW 42nd Ave/Le Jeune Rd

01/09/2023

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑			↑↑	↑	↑	↑↑↑		↑	↑↑↑	
Traffic Volume (vph)	0	490	150	0	440	190	240	3100	20	60	2700	0
Future Volume (vph)	0	490	150	0	440	190	240	3100	20	60	2700	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.1			7.1	6.8	6.8	6.8		6.8	6.8	
Lane Util. Factor		0.95			0.91	0.91	1.00	0.91		1.00	0.91	
Frt		0.96			0.99	0.85	1.00	1.00		1.00	1.00	
Flt Protected		1.00			1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3415			3369	1441	1770	5080		1770	5085	
Flt Permitted		1.00			1.00	1.00	0.04	1.00		0.04	1.00	
Satd. Flow (perm)		3415			3369	1441	66	5080		70	5085	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	516	158	0	463	200	253	3263	21	63	2842	0
RTOR Reduction (vph)	0	2	0	0	2	15	0	0	0	0	0	0
Lane Group Flow (vph)	0	672	0	0	481	165	253	3284	0	63	2842	0
Turn Type		NA			NA	pm+ov	pm+pt	NA		Perm	NA	
Protected Phases		4			8	1	1	6			2	
Permitted Phases						8	6			2		
Actuated Green, G (s)		36.9			36.9	62.6	139.2	139.2		106.7	106.7	
Effective Green, g (s)		36.9			36.9	62.6	139.2	139.2		106.7	106.7	
Actuated g/C Ratio		0.19			0.19	0.33	0.73	0.73		0.56	0.56	
Clearance Time (s)		7.1			7.1	6.8	6.8	6.8		6.8	6.8	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		663			654	474	278	3721		39	2855	
v/s Ratio Prot		c0.20			0.14	0.05	0.12	c0.65			0.56	
v/s Ratio Perm						0.07	0.54			c0.90		
v/c Ratio		1.01			0.74	0.35	0.91	0.88		1.62	1.00	
Uniform Delay, d1		76.5			72.0	48.3	70.8	19.2		41.6	41.4	
Progression Factor		1.00			0.68	0.69	1.11	0.81		0.28	0.28	
Incremental Delay, d2		38.5			4.1	0.4	22.9	2.2		325.6	10.6	
Delay (s)		115.1			53.0	33.9	101.8	17.9		337.5	22.3	
Level of Service		F			D	C	F	B		F	C	
Approach Delay (s)		115.1			47.8			23.9			29.1	
Approach LOS		F			D			C			C	
Intersection Summary												
HCM 2000 Control Delay			35.8									HCM 2000 Level of Service D
HCM 2000 Volume to Capacity ratio			1.39									
Actuated Cycle Length (s)			190.0									Sum of lost time (s) 20.7
Intersection Capacity Utilization			108.4%									ICU Level of Service G
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: US-1 & Blue Rd/Grand Ave

01/09/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	70	310	10	90	190	0	0	3000	240	0	2700	55
Future Volume (vph)	70	310	10	90	190	0	0	3000	240	0	2700	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.9	7.9		7.9	7.9			6.8			6.8	
Lane Util. Factor	1.00	1.00		1.00	1.00			0.91			0.91	
Frt	1.00	1.00		1.00	1.00			0.99			1.00	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1770	1854		1770	1863			5029			5070	
Flt Permitted	0.63	1.00		0.09	1.00			1.00			1.00	
Satd. Flow (perm)	1178	1854		177	1863			5029			5070	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	74	326	11	95	200	0	0	3158	253	0	2842	58
RTOR Reduction (vph)	0	1	0	0	0	0	0	5	0	0	1	0
Lane Group Flow (vph)	74	336	0	95	200	0	0	3406	0	0	2899	0
Turn Type	Perm	NA		pm+pt	NA			NA			NA	
Protected Phases		8		7	4			2			6	
Permitted Phases	8			4								
Actuated Green, G (s)	35.1	35.1		50.1	50.1			125.2			125.2	
Effective Green, g (s)	35.1	35.1		50.1	50.1			125.2			125.2	
Actuated g/C Ratio	0.18	0.18		0.26	0.26			0.66			0.66	
Clearance Time (s)	7.9	7.9		7.9	7.9			6.8			6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	217	342		106	491			3313			3340	
v/s Ratio Prot		c0.18		c0.03	0.11			c0.68			0.57	
v/s Ratio Perm	0.06			0.20								
v/c Ratio	0.34	0.98		0.90	0.41			1.03			0.87	
Uniform Delay, d1	67.4	77.2		61.2	57.7			32.4			25.8	
Progression Factor	1.29	1.24		1.00	1.00			0.76			1.83	
Incremental Delay, d2	0.9	43.4		55.3	0.6			18.5			1.4	
Delay (s)	88.0	139.0		116.5	58.3			43.1			48.6	
Level of Service	F	F		F	E			D			D	
Approach Delay (s)		129.8			77.0			43.1			48.6	
Approach LOS		F			E			D			D	
Intersection Summary												
HCM 2000 Control Delay			51.9			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			1.02									
Actuated Cycle Length (s)			190.0			Sum of lost time (s)			22.6			
Intersection Capacity Utilization			104.0%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

6: US-1 & SW 37th Ave/Douglas Rd

01/09/2023

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	20	400	150	15	200	180	110	2600	15	50	2800	80
Future Volume (vph)	20	400	150	15	200	180	110	2600	15	50	2800	80
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.5		7.5	7.5	6.8	6.8	6.8		6.8	6.8	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3394		1770	1863	1583	1770	5081		1770	5064	
Flt Permitted	0.39	1.00		0.13	1.00	1.00	0.03	1.00		0.03	1.00	
Satd. Flow (perm)	727	3394		248	1863	1583	58	5081		62	5064	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	21	421	158	16	211	189	116	2737	16	53	2947	84
RTOR Reduction (vph)	0	5	0	0	0	16	0	0	0	0	1	0
Lane Group Flow (vph)	21	574	0	16	211	173	116	2753	0	53	3030	0
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		Perm	NA	
Protected Phases		4			8	1	1	6			2	
Permitted Phases	4			8		8	6			2		
Actuated Green, G (s)	34.8	34.8		34.8	34.8	48.0	140.9	140.9		120.9	120.9	
Effective Green, g (s)	34.8	34.8		34.8	34.8	48.0	140.9	140.9		120.9	120.9	
Actuated g/C Ratio	0.18	0.18		0.18	0.18	0.25	0.74	0.74		0.64	0.64	
Clearance Time (s)	7.5	7.5		7.5	7.5	6.8	6.8	6.8		6.8	6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	133	621		45	341	399	161	3767		39	3222	
v/s Ratio Prot		c0.17			0.11	0.03	0.05	c0.54			0.60	
v/s Ratio Perm	0.03			0.06		0.08	0.48			c0.86		
v/c Ratio	0.16	0.92		0.36	0.62	0.43	0.72	0.73		1.36	0.94	
Uniform Delay, d1	65.3	76.3		67.8	71.5	59.6	65.2	13.8		34.5	31.3	
Progression Factor	1.00	1.00		1.00	1.00	1.00	1.40	0.28		0.73	0.72	
Incremental Delay, d2	0.6	19.6		4.8	3.3	0.8	1.5	0.1		196.9	2.0	
Delay (s)	65.8	95.9		72.6	74.8	60.3	92.8	4.0		222.2	24.7	
Level of Service	E	F		E	E	E	F	A		F	C	
Approach Delay (s)		94.9			68.1			7.6			28.1	
Approach LOS		F			E			A			C	
Intersection Summary												
HCM 2000 Control Delay		27.8										
HCM 2000 Volume to Capacity ratio		1.23										
Actuated Cycle Length (s)		190.0								21.1		
Intersection Capacity Utilization		96.2%								F		
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

7: US-1 & Bird Rd/SW 40th St

01/09/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	540	200	0	220	290	10	0	2600	150	0	2800	550
Future Volume (vph)	540	200	0	220	290	10	0	2600	150	0	2800	550
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.1	8.1		8.1	8.1			7.5	8.1		7.5	8.1
Lane Util. Factor	0.91	0.91		1.00	0.95			0.91	1.00		0.91	1.00
Frt	1.00	1.00		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	0.99		0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (prot)	3221	1677		1770	3521			5085	1583		5085	1583
Flt Permitted	0.95	0.99		0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (perm)	3221	1677		1770	3521			5085	1583		5085	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	568	211	0	232	305	11	0	2737	158	0	2947	579
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	21	0	0	12
Lane Group Flow (vph)	511	268	0	232	314	0	0	2737	137	0	2947	567
Turn Type	Split	NA		Split	NA			NA	pm+ov		NA	pm+ov
Protected Phases	3	3		4	4			6	4		2	3
Permitted Phases								6				2
Actuated Green, G (s)	29.9	29.9		24.9	24.9			111.5	136.4		111.5	141.4
Effective Green, g (s)	29.9	29.9		24.9	24.9			111.5	136.4		111.5	141.4
Actuated g/C Ratio	0.16	0.16		0.13	0.13			0.59	0.72		0.59	0.74
Clearance Time (s)	8.1	8.1		8.1	8.1			7.5	8.1		7.5	8.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	506	263		231	461			2984	1203		2984	1178
v/s Ratio Prot	0.16	c0.16		c0.13	0.09			0.54	0.01		c0.58	0.08
v/s Ratio Perm									0.07			0.28
v/c Ratio	1.01	1.02		1.00	0.68			0.92	0.11		0.99	0.48
Uniform Delay, d1	80.0	80.0		82.5	78.8			35.1	8.2		38.6	9.7
Progression Factor	1.00	1.00		1.00	1.00			0.72	0.00		0.61	0.38
Incremental Delay, d2	42.5	60.5		60.3	4.1			4.0	0.0		10.1	0.2
Delay (s)	122.5	140.5		142.9	82.9			29.2	0.0		33.7	3.9
Level of Service	F	F		F	F			C	A		C	A
Approach Delay (s)		128.7			108.3			27.6			28.8	
Approach LOS		F			F			C			C	
Intersection Summary												
HCM 2000 Control Delay			44.0									
HCM 2000 Volume to Capacity ratio			0.99									
Actuated Cycle Length (s)			190.0									
Intersection Capacity Utilization			99.5%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

8: SW 27th Ave & US-1

01/09/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	190	3300	20	50	2700	60	35	370	230	110	380	340
Future Volume (vph)	190	3300	20	50	2700	60	35	370	230	110	380	340
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	6.9		6.9	6.9		6.6	6.6	6.6	6.6	6.6	6.8
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	5081		1770	5069		1770	3539	1583	1770	3539	1583
Flt Permitted	0.03	1.00		0.03	1.00		0.26	1.00	1.00	0.27	1.00	1.00
Satd. Flow (perm)	59	5081		62	5069		482	3539	1583	509	3539	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	200	3474	21	53	2842	63	37	389	242	116	400	358
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	52	0	0	16
Lane Group Flow (vph)	200	3495	0	53	2904	0	37	389	190	116	400	342
Turn Type	pm+pt	NA		Perm	NA		Perm	NA	Perm	Perm	NA	pm+ov
Protected Phases	1	6			2			4			8	1
Permitted Phases	6			2			4		4	8		8
Actuated Green, G (s)	147.1	147.1		119.5	119.5		29.4	29.4	29.4	29.4	29.4	50.2
Effective Green, g (s)	147.1	147.1		119.5	119.5		29.4	29.4	29.4	29.4	29.4	50.2
Actuated g/C Ratio	0.77	0.77		0.63	0.63		0.15	0.15	0.15	0.15	0.15	0.26
Clearance Time (s)	6.8	6.9		6.9	6.9		6.6	6.6	6.6	6.6	6.6	6.8
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	232	3933		38	3188		74	547	244	78	547	418
v/s Ratio Prot	0.09	c0.69			0.57			0.11			0.11	0.09
v/s Ratio Perm	0.57			c0.85			0.08		0.12	c0.23		0.13
v/c Ratio	0.86	0.89		1.39	0.91		0.50	0.71	0.78	1.49	0.73	0.82
Uniform Delay, d1	70.4	15.5		35.2	30.6		73.6	76.3	77.2	80.3	76.5	65.6
Progression Factor	1.08	1.46		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	16.9	2.0		282.8	5.1		5.2	4.3	14.9	275.3	5.0	11.8
Delay (s)	93.0	24.6		318.0	35.7		78.8	80.6	92.1	355.6	81.5	77.4
Level of Service	F	C		F	D		E	F	F	F	F	E
Approach Delay (s)		28.3			40.8			84.7			116.2	
Approach LOS		C			D			F			F	
Intersection Summary												
HCM 2000 Control Delay			46.8			HCM 2000 Level of Service			D			
HCM 2000 Volume to Capacity ratio			1.34									
Actuated Cycle Length (s)			190.0			Sum of lost time (s)			20.3			
Intersection Capacity Utilization			108.9%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

Intersection						
Int Delay, s/veh	3.6					
Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations	↑↑↱		↱	↑↑		↱
Traffic Vol, veh/h	300	400	300	500	0	200
Future Vol, veh/h	300	400	300	500	0	200
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	125	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	316	421	316	526	0	211
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	737	0	-	369
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.14	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.22	-	-	3.32
Pot Cap-1 Maneuver	-	-	865	-	0	628
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	865	-	-	628
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	NB		SB		SW	
HCM Control Delay, s	0		4.3		13.6	
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	SBL	SBT	SWLn1	
Capacity (veh/h)		-	-	865	-	628
HCM Lane V/C Ratio		-	-	0.365	-	0.335
HCM Control Delay (s)		-	-	11.5	-	13.6
HCM Lane LOS		-	-	B	-	B
HCM 95th %tile Q(veh)		-	-	1.7	-	1.5

HCM Signalized Intersection Capacity Analysis

10: Ponce de Leon Blvd & Stanford Dr

01/09/2023

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↔↔		↔	↔↔	↔	↔	↔↔		↔	↔↔	
Traffic Volume (vph)	20	23	21	88	67	96	69	677	95	91	339	86
Future Volume (vph)	20	23	21	88	67	96	69	677	95	91	339	86
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor		0.95		1.00	0.91	0.91	1.00	0.95		1.00	0.95	
Frt		0.95		1.00	0.94	0.85	1.00	0.98		1.00	0.97	
Flt Protected		0.98		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3313		1770	3188	1441	1770	3474		1770	3431	
Flt Permitted		0.83		0.39	1.00	1.00	0.49	1.00		0.27	1.00	
Satd. Flow (perm)		2797		718	3188	1441	918	3474		495	3431	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	21	24	22	93	71	101	73	713	100	96	357	91
RTOR Reduction (vph)	0	20	0	0	38	43	0	9	0	0	17	0
Lane Group Flow (vph)	0	47	0	93	80	11	73	804	0	96	431	0
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		7.1		18.7	18.7	18.7	52.1	52.1		64.3	64.3	
Effective Green, g (s)		7.1		18.7	18.7	18.7	52.1	52.1		64.3	64.3	
Actuated g/C Ratio		0.07		0.20	0.20	0.20	0.55	0.55		0.68	0.68	
Clearance Time (s)		6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		209		203	627	283	503	1905		418	2322	
v/s Ratio Prot				c0.03	0.03			c0.23		0.01	c0.13	
v/s Ratio Perm		0.02		c0.06		0.01	0.08			0.14		
v/c Ratio		0.22		0.46	0.13	0.04	0.15	0.42		0.23	0.19	
Uniform Delay, d1		41.4		32.5	31.4	30.9	10.5	12.6		6.4	5.7	
Progression Factor		1.00		0.75	0.64	1.00	0.63	0.71		0.66	0.55	
Incremental Delay, d2		0.5		1.5	0.1	0.1	0.6	0.6		0.3	0.2	
Delay (s)		41.9		25.8	20.1	30.9	7.2	9.6		4.4	3.3	
Level of Service		D		C	C	C	A	A		A	A	
Approach Delay (s)		41.9			24.3			9.4			3.5	
Approach LOS		D			C			A			A	
Intersection Summary												
HCM 2000 Control Delay			11.1									HCM 2000 Level of Service B
HCM 2000 Volume to Capacity ratio			0.44									
Actuated Cycle Length (s)			95.0									Sum of lost time (s) 24.0
Intersection Capacity Utilization			53.3%									ICU Level of Service A
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

11: Ponce de Leon Blvd & Granada Blvd

01/09/2023

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	34	323	94	37	289	27	134	597	27	29	374	65
Future Volume (vph)	34	323	94	37	289	27	134	597	27	29	374	65
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00			0.91	0.91	1.00	0.95		1.00	0.95	
Frt	1.00	0.97			1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1800			3367	1441	1770	3517		1770	3461	
Flt Permitted	0.50	1.00			0.71	1.00	0.40	1.00		0.40	1.00	
Satd. Flow (perm)	929	1800			2401	1441	737	3517		750	3461	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	36	340	99	39	304	28	141	628	28	31	394	68
RTOR Reduction (vph)	0	13	0	0	1	18	0	3	0	0	12	0
Lane Group Flow (vph)	36	426	0	0	345	7	141	653	0	31	450	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	
Protected Phases		4			8		1	6			2	
Permitted Phases	4			8		8	6			2		
Actuated Green, G (s)	27.8	27.8			27.8	27.8	55.2	55.2		40.0	40.0	
Effective Green, g (s)	27.8	27.8			27.8	27.8	55.2	55.2		40.0	40.0	
Actuated g/C Ratio	0.29	0.29			0.29	0.29	0.58	0.58		0.42	0.42	
Clearance Time (s)	6.0	6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	271	526			702	421	528	2043		315	1457	
v/s Ratio Prot		c0.24					0.03	c0.19			0.13	
v/s Ratio Perm	0.04				0.14	0.01	0.13			0.04		
v/c Ratio	0.13	0.81			0.49	0.02	0.27	0.32		0.10	0.31	
Uniform Delay, d1	24.7	31.2			27.8	23.9	9.5	10.2		16.6	18.3	
Progression Factor	1.00	1.00			1.02	1.00	2.14	2.13		0.66	0.69	
Incremental Delay, d2	0.2	9.2			0.5	0.0	0.3	0.4		0.6	0.5	
Delay (s)	25.0	40.3			28.9	23.9	20.6	22.2		11.5	13.2	
Level of Service	C	D			C	C	C	C		B	B	
Approach Delay (s)		39.2			28.6			21.9			13.1	
Approach LOS		D			C			C			B	
Intersection Summary												
HCM 2000 Control Delay		24.9			HCM 2000 Level of Service			C				
HCM 2000 Volume to Capacity ratio		0.52										
Actuated Cycle Length (s)		95.0			Sum of lost time (s)			18.0				
Intersection Capacity Utilization		73.6%			ICU Level of Service			D				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

12: Ponce de Leon Blvd & Le Jeune Rd & Blue Rd

01/09/2023

												
Movement	WBL2	WBL	WBR	WBR2	NBT	NBR	NBR2	SBL2	SBL	SBT	SBR	NEL
Lane Configurations												
Traffic Volume (vph)	65	135	57	2	398	103	3	6	60	457	151	144
Future Volume (vph)	65	135	57	2	398	103	3	6	60	457	151	144
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		6.0				6.0	6.0		6.0
Lane Util. Factor	1.00	1.00	1.00		0.95				1.00	0.95		0.97
Frt	1.00	1.00	0.85		0.97				1.00	0.96		1.00
Flt Protected	0.95	0.95	1.00		1.00				0.95	1.00		0.95
Satd. Flow (prot)	1770	1770	1583		3428				1770	3407		3433
Flt Permitted	0.60	0.95	1.00		1.00				0.39	1.00		0.95
Satd. Flow (perm)	1111	1770	1583		3428				725	3407		3433
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	68	142	60	2	419	108	3	6	63	481	159	152
RTOR Reduction (vph)	0	0	55	0	0	0	0	0	0	13	0	0
Lane Group Flow (vph)	68	142	7	0	530	0	0	0	69	627	0	152
Turn Type	Perm	Prot	Perm		NA			Perm	Perm	NA		Prot
Protected Phases		9			2					6		7
Permitted Phases	9		9					6	6			
Actuated Green, G (s)	20.5	20.5	20.5		87.9				87.9	87.9		13.4
Effective Green, g (s)	20.5	20.5	20.5		87.9				87.9	87.9		13.4
Actuated g/C Ratio	0.11	0.11	0.11		0.46				0.46	0.46		0.07
Clearance Time (s)	6.0	6.0	6.0		6.0				6.0	6.0		6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0				3.0	3.0		3.0
Lane Grp Cap (vph)	119	190	170		1585				335	1576		242
v/s Ratio Prot		c0.08			0.15					c0.18		0.04
v/s Ratio Perm	0.06		0.00						0.10			
v/c Ratio	0.57	0.75	0.04		0.33				0.21	0.40		0.63
Uniform Delay, d1	80.6	82.2	75.9		32.5				30.3	33.6		85.9
Progression Factor	1.13	1.11	7.98		0.76				1.00	1.00		1.06
Incremental Delay, d2	5.8	13.3	0.1		0.2				1.4	0.8		5.0
Delay (s)	97.1	104.7	606.2		25.0				31.7	34.4		95.8
Level of Service	F	F	F		C				C	C		F
Approach Delay (s)		217.1			25.0					34.1		
Approach LOS		F			C					C		
Intersection Summary												
HCM 2000 Control Delay			69.6		HCM 2000 Level of Service				E			
HCM 2000 Volume to Capacity ratio			0.63									
Actuated Cycle Length (s)			190.0		Sum of lost time (s)				24.0			
Intersection Capacity Utilization			81.8%		ICU Level of Service				D			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

12: Ponce de Leon Blvd & Le Jeune Rd & Blue Rd

01/09/2023



Movement	NET	NER	NER2	SWL	SWT	SWR
Lane Configurations						
Traffic Volume (vph)	505	232	19	24	204	6
Future Volume (vph)	505	232	19	24	204	6
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	0.95	
Frt	1.00	0.85		1.00	1.00	
Flt Protected	1.00	1.00		0.95	1.00	
Satd. Flow (prot)	1863	1583		1770	3525	
Flt Permitted	1.00	1.00		0.17	1.00	
Satd. Flow (perm)	1863	1583		326	3525	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	532	244	20	25	215	6
RTOR Reduction (vph)	0	35	0	0	2	0
Lane Group Flow (vph)	532	229	0	25	219	0
Turn Type	NA	Perm		Perm	NA	
Protected Phases	4				8	
Permitted Phases		4		8		
Actuated Green, G (s)	63.6	63.6		44.2	44.2	
Effective Green, g (s)	63.6	63.6		44.2	44.2	
Actuated g/C Ratio	0.33	0.33		0.23	0.23	
Clearance Time (s)	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	623	529		75	820	
v/s Ratio Prot	c0.29				0.06	
v/s Ratio Perm		0.14		0.08		
v/c Ratio	0.85	0.43		0.33	0.27	
Uniform Delay, d1	58.9	49.2		60.6	59.7	
Progression Factor	1.25	1.34		1.00	1.00	
Incremental Delay, d2	10.9	0.6		2.6	0.2	
Delay (s)	84.5	66.5		63.3	59.8	
Level of Service	F	E		E	E	
Approach Delay (s)	81.3				60.2	
Approach LOS	F				E	

Intersection Summary

HCM Signalized Intersection Capacity Analysis

1: US-1 & SW 72nd St/Sunset Dr

01/09/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑	↑		↑↑		↑	↑↑↑		↑	↑↑↑	
Traffic Volume (vph)	0	430	65	0	360	20	110	2000	115	55	2600	330
Future Volume (vph)	0	430	65	0	360	20	110	2000	115	55	2600	330
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.9	8.9		8.9		6.4	8.0		6.4	8.0	
Lane Util. Factor		0.95	1.00		0.95		1.00	0.91		1.00	0.91	
Frt		1.00	0.85		0.99		1.00	0.99		1.00	0.98	
Flt Protected		1.00	1.00		1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3539	1583		3511		1770	5044		1770	4999	
Flt Permitted		1.00	1.00		1.00		0.03	1.00		0.05	1.00	
Satd. Flow (perm)		3539	1583		3511		57	5044		97	4999	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	453	68	0	379	21	116	2105	121	58	2737	347
RTOR Reduction (vph)	0	0	55	0	3	0	0	3	0	0	8	0
Lane Group Flow (vph)	0	453	13	0	397	0	116	2223	0	58	3076	0
Turn Type		NA	Perm		NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		1	6		5	2	
Permitted Phases			8				6			2		
Actuated Green, G (s)		29.3	29.3		29.3		141.0	130.6		133.8	127.0	
Effective Green, g (s)		29.3	29.3		29.3		141.0	130.6		133.8	127.0	
Actuated g/C Ratio		0.15	0.15		0.15		0.74	0.69		0.70	0.67	
Clearance Time (s)		8.9	8.9		8.9		6.4	8.0		6.4	8.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		545	244		541		136	3467		128	3341	
v/s Ratio Prot		c0.13			0.11		c0.05	0.44		0.02	c0.62	
v/s Ratio Perm			0.01				c0.59			0.30		
v/c Ratio		0.83	0.05		0.73		0.85	0.64		0.45	0.92	
Uniform Delay, d1		78.0	68.5		76.6		65.9	16.6		15.0	27.2	
Progression Factor		1.00	1.00		1.00		1.35	0.63		2.08	0.27	
Incremental Delay, d2		10.4	0.1		5.1		19.4	0.4		1.4	3.2	
Delay (s)		88.4	68.6		81.8		108.5	10.8		32.7	10.4	
Level of Service		F	E		F		F	B		C	B	
Approach Delay (s)		85.8			81.8			15.6			10.8	
Approach LOS		F			F			B			B	
Intersection Summary												
HCM 2000 Control Delay			23.1				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.91									
Actuated Cycle Length (s)			190.0				Sum of lost time (s)			23.3		
Intersection Capacity Utilization			95.0%				ICU Level of Service			F		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2: US-1 & SW 57th Ave

01/09/2023

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑			↑↑	↑	↑	↑↑↑		↑	↑↑↑	
Traffic Volume (vph)	0	460	95	0	430	340	160	2100	135	105	2500	55
Future Volume (vph)	0	460	95	0	430	340	160	2100	135	105	2500	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0			7.0	7.0	6.8	6.8		6.8	6.8	
Lane Util. Factor		0.95			0.95	1.00	1.00	0.91		1.00	0.91	
Frt		0.97			1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected		1.00			1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3448			3539	1583	1770	5039		1770	5069	
Flt Permitted		1.00			1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		3448			3539	1583	1770	5039		1770	5069	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	484	100	0	453	358	168	2211	142	111	2632	58
RTOR Reduction (vph)	0	10	0	0	0	151	0	3	0	0	1	0
Lane Group Flow (vph)	0	574	0	0	453	207	168	2350	0	111	2689	0
Turn Type		NA			NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases						8						
Actuated Green, G (s)		37.2			37.2	37.2	22.5	115.0		17.2	109.7	
Effective Green, g (s)		37.2			37.2	37.2	22.5	115.0		17.2	109.7	
Actuated g/C Ratio		0.20			0.20	0.20	0.12	0.61		0.09	0.58	
Clearance Time (s)		7.0			7.0	7.0	6.8	6.8		6.8	6.8	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		675			692	309	209	3049		160	2926	
v/s Ratio Prot		c0.17			0.13		c0.09	c0.47		0.06	c0.53	
v/s Ratio Perm						0.13						
v/c Ratio		0.85			0.65	0.67	0.80	0.77		0.69	0.92	
Uniform Delay, d1		73.7			70.5	70.7	81.6	27.7		83.8	36.1	
Progression Factor		1.00			1.00	1.00	1.00	0.95		1.21	1.09	
Incremental Delay, d2		10.1			2.2	5.4	16.1	1.6		8.8	4.4	
Delay (s)		83.8			72.7	76.1	97.6	27.9		109.9	43.7	
Level of Service		F			E	E	F	C		F	D	
Approach Delay (s)		83.8			74.2			32.6			46.3	
Approach LOS		F			E			C			D	
Intersection Summary												
HCM 2000 Control Delay			47.8									HCM 2000 Level of Service D
HCM 2000 Volume to Capacity ratio			0.90									
Actuated Cycle Length (s)			190.0									Sum of lost time (s) 20.6
Intersection Capacity Utilization			91.3%									ICU Level of Service F
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

3: US-1 & Granada Blvd

01/09/2023

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	85	210	80	20	240	40	200	2400	20	50	2150	110
Future Volume (vph)	85	210	80	20	240	40	200	2400	20	50	2150	110
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.7	6.7			6.7	6.7	6.8	6.8		6.8	6.8	6.8
Lane Util. Factor	1.00	0.95			0.95	1.00	1.00	0.91		1.00	0.91	1.00
Frt	1.00	0.96			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3393			3526	1583	1770	5079		1770	5085	1583
Flt Permitted	0.40	1.00			0.78	1.00	0.04	1.00		0.05	1.00	1.00
Satd. Flow (perm)	751	3393			2743	1583	74	5079		92	5085	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	89	221	84	21	253	42	211	2526	21	53	2263	116
RTOR Reduction (vph)	0	21	0	0	0	36	0	0	0	0	0	21
Lane Group Flow (vph)	89	284	0	0	274	6	211	2547	0	53	2263	95
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases		8			4		1	6			2	
Permitted Phases	8			4		4	6			2		2
Actuated Green, G (s)	24.9	24.9			24.9	24.9	151.6	151.6		123.1	123.1	123.1
Effective Green, g (s)	24.9	24.9			24.9	24.9	151.6	151.6		123.1	123.1	123.1
Actuated g/C Ratio	0.13	0.13			0.13	0.13	0.80	0.80		0.65	0.65	0.65
Clearance Time (s)	6.7	6.7			6.7	6.7	6.8	6.8		6.8	6.8	6.8
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	98	444			359	207	252	4052		59	3294	1025
v/s Ratio Prot		0.08					c0.10	0.50			0.45	
v/s Ratio Perm	c0.12				0.10	0.00	0.57			c0.58		0.06
v/c Ratio	0.91	0.64			0.76	0.03	0.84	0.63		0.90	0.69	0.09
Uniform Delay, d1	81.4	78.3			79.7	72.0	61.9	7.8		28.2	21.2	12.5
Progression Factor	0.76	0.73			1.00	1.00	0.92	0.96		1.40	1.46	1.11
Incremental Delay, d2	54.7	2.5			9.3	0.1	17.8	0.6		73.4	0.8	0.1
Delay (s)	116.9	60.0			89.0	72.0	74.8	8.1		112.8	31.8	14.0
Level of Service	F	E			F	E	E	A		F	C	B
Approach Delay (s)		72.8			86.7			13.2			32.7	
Approach LOS		E			F			B			C	
Intersection Summary												
HCM 2000 Control Delay		29.2			HCM 2000 Level of Service			C				
HCM 2000 Volume to Capacity ratio		0.89										
Actuated Cycle Length (s)		190.0			Sum of lost time (s)			20.3				
Intersection Capacity Utilization		109.3%			ICU Level of Service			H				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

4: US-1 & SW 42nd Ave/Le Jeune Rd

01/09/2023

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑			↑↑	↑	↑	↑↑↑		↑	↑↑↑	
Traffic Volume (vph)	0	410	180	0	560	210	105	2600	30	200	2600	0
Future Volume (vph)	0	410	180	0	560	210	105	2600	30	200	2600	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.1			7.1	7.1	6.8	6.8		6.8	6.8	
Lane Util. Factor		0.95			0.91	0.91	1.00	0.91		1.00	0.91	
Frt		0.95			0.99	0.85	1.00	1.00		1.00	1.00	
Flt Protected		1.00			1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3378			3372	1441	1770	5076		1770	5085	
Flt Permitted		1.00			1.00	1.00	0.04	1.00		0.03	1.00	
Satd. Flow (perm)		3378			3372	1441	66	5076		62	5085	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	432	189	0	589	221	111	2737	32	211	2737	0
RTOR Reduction (vph)	0	26	0	0	2	89	0	0	0	0	0	0
Lane Group Flow (vph)	0	595	0	0	609	110	111	2769	0	211	2737	0
Turn Type		NA			NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases						8	6			2		
Actuated Green, G (s)		36.2			36.2	36.2	123.9	112.8		139.9	122.0	
Effective Green, g (s)		36.2			36.2	36.2	123.9	112.8		139.9	122.0	
Actuated g/C Ratio		0.19			0.19	0.19	0.65	0.59		0.74	0.64	
Clearance Time (s)		7.1			7.1	7.1	6.8	6.8		6.8	6.8	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		643			642	274	142	3013		228	3265	
v/s Ratio Prot		0.18			c0.18		0.05	0.55		c0.10	c0.54	
v/s Ratio Perm						0.08	0.46			c0.58		
v/c Ratio		0.93			0.95	0.40	0.78	0.92		0.93	0.84	
Uniform Delay, d1		75.6			76.0	67.4	55.4	34.5		71.1	26.4	
Progression Factor		1.00			0.78	0.57	1.09	0.97		1.19	1.15	
Incremental Delay, d2		19.3			19.7	0.8	20.7	5.0		26.2	1.5	
Delay (s)		94.8			78.8	39.3	81.4	38.3		110.7	31.8	
Level of Service		F			E	D	F	D		F	C	
Approach Delay (s)		94.8			69.1			40.0			37.5	
Approach LOS		F			E			D			D	
Intersection Summary												
HCM 2000 Control Delay			46.9		HCM 2000 Level of Service					D		
HCM 2000 Volume to Capacity ratio			0.95									
Actuated Cycle Length (s)			190.0		Sum of lost time (s)					20.7		
Intersection Capacity Utilization			96.9%		ICU Level of Service					F		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: US-1 & Blue Rd/Grand Ave

01/09/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations								  			  	
Traffic Volume (vph)	100	240	0	100	250	20	0	2600	160	0	2700	45
Future Volume (vph)	100	240	0	100	250	20	0	2600	160	0	2700	45
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.9	7.9		7.9	7.9			6.8			6.8	
Lane Util. Factor	1.00	1.00		1.00	1.00			0.91			0.91	
Frt	1.00	1.00		1.00	0.99			0.99			1.00	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1770	1863		1770	1842			5041			5073	
Flt Permitted	0.53	1.00		0.13	1.00			1.00			1.00	
Satd. Flow (perm)	980	1863		247	1842			5041			5073	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	105	253	0	105	263	21	0	2737	168	0	2842	47
RTOR Reduction (vph)	0	0	0	0	2	0	0	4	0	0	1	0
Lane Group Flow (vph)	105	253	0	105	282	0	0	2901	0	0	2888	0
Turn Type	Perm	NA		pm+pt	NA			NA			NA	
Protected Phases		8		7	4			2			6	
Permitted Phases	8			4								
Actuated Green, G (s)	26.4	26.4		43.3	43.3			132.0			132.0	
Effective Green, g (s)	26.4	26.4		43.3	43.3			132.0			132.0	
Actuated g/C Ratio	0.14	0.14		0.23	0.23			0.69			0.69	
Clearance Time (s)	7.9	7.9		7.9	7.9			6.8			6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	136	258		128	419			3502			3524	
v/s Ratio Prot		c0.14		0.04	c0.15			c0.58			0.57	
v/s Ratio Perm	0.11			0.15								
v/c Ratio	0.77	0.98		0.82	0.67			0.83			0.82	
Uniform Delay, d1	78.9	81.5		62.9	66.9			20.9			20.6	
Progression Factor	1.04	1.04		1.00	1.00			1.28			0.13	
Incremental Delay, d2	22.6	49.5		32.6	4.2			0.9			0.6	
Delay (s)	104.6	134.4		95.5	71.2			27.7			3.2	
Level of Service	F	F		F	E			C			A	
Approach Delay (s)		125.7			77.7			27.7			3.2	
Approach LOS		F			E			C			A	
Intersection Summary												
HCM 2000 Control Delay	25.2			HCM 2000 Level of Service			C					
HCM 2000 Volume to Capacity ratio	0.87											
Actuated Cycle Length (s)	190.0			Sum of lost time (s)			22.6					
Intersection Capacity Utilization	92.8%			ICU Level of Service			F					
Analysis Period (min)	15											
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

6: US-1 & SW 37th Ave/Douglas Rd

01/09/2023

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	40	440	80	110	410	110	210	2400	45	45	2700	75
Future Volume (vph)	40	440	80	110	410	110	210	2400	45	45	2700	75
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.5		7.5	7.5	6.8	6.8	6.8		6.8	6.8	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3458		1770	1863	1583	1770	5071		1770	5065	
Flt Permitted	0.09	1.00		0.25	1.00	1.00	0.04	1.00		0.04	1.00	
Satd. Flow (perm)	164	3458		467	1863	1583	65	5071		70	5065	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	42	463	84	116	432	116	221	2526	47	47	2842	79
RTOR Reduction (vph)	0	5	0	0	0	15	0	1	0	0	1	0
Lane Group Flow (vph)	42	542	0	116	432	101	221	2572	0	47	2920	0
Turn Type	Perm	NA		Perm	NA	pm+ov	pm+pt	NA		Perm	NA	
Protected Phases		4			8	1	1	6			2	
Permitted Phases	4			8		8	6			2		
Actuated Green, G (s)	45.5	45.5		45.5	45.5	61.7	130.2	130.2		107.2	107.2	
Effective Green, g (s)	45.5	45.5		45.5	45.5	61.7	130.2	130.2		107.2	107.2	
Actuated g/C Ratio	0.24	0.24		0.24	0.24	0.32	0.69	0.69		0.56	0.56	
Clearance Time (s)	7.5	7.5		7.5	7.5	6.8	6.8	6.8		6.8	6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	39	828		111	446	514	189	3474		39	2857	
v/s Ratio Prot		0.16			0.23	0.02	c0.10	0.51			0.58	
v/s Ratio Perm	c0.26			0.25		0.05	c0.69			0.68		
v/c Ratio	1.08	0.65		1.05	0.97	0.20	1.17	0.74		1.21	1.02	
Uniform Delay, d1	72.2	65.2		72.2	71.5	46.3	72.3	19.1		41.4	41.4	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.90	1.45		0.28	0.29	
Incremental Delay, d2	167.9	1.9		98.0	34.1	0.2	102.7	0.8		154.6	16.6	
Delay (s)	240.1	67.0		170.3	105.7	46.5	167.6	28.5		166.2	28.8	
Level of Service	F	E		F	F	D	F	C		F	C	
Approach Delay (s)		79.4			106.6			39.5			31.0	
Approach LOS		E			F			D			C	
Intersection Summary												
HCM 2000 Control Delay			45.6		HCM 2000 Level of Service					D		
HCM 2000 Volume to Capacity ratio			1.16									
Actuated Cycle Length (s)			190.0		Sum of lost time (s)					21.1		
Intersection Capacity Utilization			116.7%		ICU Level of Service					H		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

7: US-1 & Bird Rd/SW 40th St

01/09/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	350	220	10	190	320	10	0	2400	240	0	2600	770
Future Volume (vph)	350	220	10	190	320	10	0	2400	240	0	2600	770
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.1	8.1		8.1	8.1			7.5	8.1		7.5	8.1
Lane Util. Factor	0.91	0.91		1.00	0.95			0.91	1.00		0.91	1.00
Frt	1.00	0.99		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	0.99		0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (prot)	3221	1674		1770	3522			5085	1583		5085	1583
Flt Permitted	0.95	0.99		0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (perm)	3221	1674		1770	3522			5085	1583		5085	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	368	232	11	200	337	11	0	2526	253	0	2737	811
RTOR Reduction (vph)	0	1	0	0	1	0	0	0	36	0	0	7
Lane Group Flow (vph)	331	279	0	200	347	0	0	2526	217	0	2737	804
Turn Type	Split	NA		Split	NA			NA	pm+ov		NA	pm+ov
Protected Phases	3	3		4	4			6	4		2	3
Permitted Phases								6				2
Actuated Green, G (s)	32.9	32.9		23.3	23.3			110.1	133.4		110.1	143.0
Effective Green, g (s)	32.9	32.9		23.3	23.3			110.1	133.4		110.1	143.0
Actuated g/C Ratio	0.17	0.17		0.12	0.12			0.58	0.70		0.58	0.75
Clearance Time (s)	8.1	8.1		8.1	8.1			7.5	8.1		7.5	8.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	557	289		217	431			2946	1178		2946	1191
v/s Ratio Prot	0.10	c0.17		c0.11	0.10			0.50	0.02		c0.54	0.12
v/s Ratio Perm									0.11			0.39
v/c Ratio	0.59	0.97		0.92	0.81			0.86	0.18		0.93	0.67
Uniform Delay, d1	72.4	78.0		82.4	81.1			33.4	9.7		36.4	11.8
Progression Factor	1.00	1.00		1.00	1.00			0.72	1.07		0.50	0.10
Incremental Delay, d2	1.7	43.3		39.9	10.5			2.3	0.1		3.1	0.6
Delay (s)	74.1	121.3		122.4	91.6			26.5	10.4		21.2	1.8
Level of Service	E	F		F	F			C	B		C	A
Approach Delay (s)		95.7			102.8			25.0			16.8	
Approach LOS		F			F			C			B	
Intersection Summary												
HCM 2000 Control Delay			32.6									
HCM 2000 Volume to Capacity ratio			0.93									
Actuated Cycle Length (s)			190.0									
Intersection Capacity Utilization			92.2%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

8: SW 27th Ave & US-1

01/09/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (vph)	60	2700	40	100	3000	140	60	610	170	60	350	220
Future Volume (vph)	60	2700	40	100	3000	140	60	610	170	60	350	220
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	6.9		6.8	6.9		6.6	6.6	6.6	6.6	6.6	6.8
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	5074		1770	5051		1770	3539	1583	1770	3539	1583
Flt Permitted	0.03	1.00		0.03	1.00		0.38	1.00	1.00	0.13	1.00	1.00
Satd. Flow (perm)	63	5074		61	5051		713	3539	1583	237	3539	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	2842	42	105	3158	147	63	642	179	63	368	232
RTOR Reduction (vph)	0	1	0	0	3	0	0	0	50	0	0	16
Lane Group Flow (vph)	63	2883	0	105	3302	0	63	642	129	63	368	216
Turn Type	pm+pt	NA		pm+pt	NA		Perm	NA	Perm	Perm	NA	pm+ov
Protected Phases	1	6		5	2			4			8	1
Permitted Phases	6			2			4		4	8		8
Actuated Green, G (s)	125.8	118.0		132.4	121.3		40.6	40.6	40.6	40.6	40.6	48.4
Effective Green, g (s)	125.8	118.0		132.4	121.3		40.6	40.6	40.6	40.6	40.6	48.4
Actuated g/C Ratio	0.66	0.62		0.70	0.64		0.21	0.21	0.21	0.21	0.21	0.25
Clearance Time (s)	6.8	6.9		6.8	6.9		6.6	6.6	6.6	6.6	6.6	6.8
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	111	3151		142	3224		152	756	338	50	756	403
v/s Ratio Prot	0.02	0.57		c0.04	c0.65			0.18			0.10	0.02
v/s Ratio Perm	0.35			0.47			0.09		0.08	c0.27		0.11
v/c Ratio	0.57	0.92		0.74	1.02		0.41	0.85	0.38	1.26	0.49	0.53
Uniform Delay, d1	46.6	31.6		60.4	34.4		64.4	71.8	63.9	74.7	65.6	61.1
Progression Factor	1.40	1.09		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.1	3.5		18.1	22.4		1.8	8.8	0.7	212.9	0.5	1.4
Delay (s)	69.2	38.0		78.6	56.8		66.3	80.6	64.7	287.6	66.1	62.5
Level of Service	E	D		E	E		E	F	E	F	E	E
Approach Delay (s)		38.6			57.4			76.3			85.8	
Approach LOS		D			E			E			F	
Intersection Summary												
HCM 2000 Control Delay	54.9			HCM 2000 Level of Service			D					
HCM 2000 Volume to Capacity ratio	1.08											
Actuated Cycle Length (s)	190.0			Sum of lost time (s)			20.3					
Intersection Capacity Utilization	108.7%			ICU Level of Service			G					
Analysis Period (min)	15											
c Critical Lane Group												

Intersection						
Int Delay, s/veh	50.2					
Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations	↑↑↱		↱	↑↑		↱
Traffic Vol, veh/h	300	300	300	600	0	800
Future Vol, veh/h	300	300	300	600	0	800
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	Stop
Storage Length	-	-	125	-	-	0
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	95	95	95	95	95	95
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	316	316	316	632	0	842
Major/Minor	Major1	Major2	Minor1			
Conflicting Flow All	0	0	632	0	-	316
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Critical Hdwy	-	-	4.14	-	-	6.94
Critical Hdwy Stg 1	-	-	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-	-	-
Follow-up Hdwy	-	-	2.22	-	-	3.32
Pot Cap-1 Maneuver	-	-	947	-	0 ~ 680	
Stage 1	-	-	-	-	0	-
Stage 2	-	-	-	-	0	-
Platoon blocked, %	-	-	-			
Mov Cap-1 Maneuver	-	-	947	-	- ~ 680	
Mov Cap-2 Maneuver	-	-	-	-	-	-
Stage 1	-	-	-	-	-	-
Stage 2	-	-	-	-	-	-
Approach	NB		SB		SW	
HCM Control Delay, s	0		3.6		140.3	
HCM LOS					F	
Minor Lane/Major Mvmt	NBT	NBR	SBL	SBT	SWLn1	
Capacity (veh/h)		-	-	947	-	680
HCM Lane V/C Ratio		-	-	0.333	-	1.238
HCM Control Delay (s)		-	-	10.7	-	140.3
HCM Lane LOS		-	-	B	-	F
HCM 95th %tile Q(veh)		-	-	1.5	-	30.6
Notes						
~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon						

HCM Signalized Intersection Capacity Analysis

10: Ponce de Leon Blvd & Stanford Dr

01/09/2023

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	123	123	99	118	63	139	59	438	113	130	992	112
Future Volume (vph)	123	123	99	118	63	139	59	438	113	130	992	112
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor		0.95		1.00	0.91	0.91	1.00	0.95		1.00	0.95	
Frt		0.96		1.00	0.92	0.85	1.00	0.97		1.00	0.98	
Flt Protected		0.98		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3327		1770	3123	1441	1770	3430		1770	3485	
Flt Permitted		0.80		0.30	1.00	1.00	0.24	1.00		0.34	1.00	
Satd. Flow (perm)		2695		566	3123	1441	440	3430		627	3485	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	129	129	104	124	66	146	62	461	119	137	1044	118
RTOR Reduction (vph)	0	48	0	0	52	52	0	23	0	0	8	0
Lane Group Flow (vph)	0	314	0	124	87	21	62	557	0	137	1154	0
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		15.7		27.7	27.7	27.7	42.2	42.2		55.3	55.3	
Effective Green, g (s)		15.7		27.7	27.7	27.7	42.2	42.2		55.3	55.3	
Actuated g/C Ratio		0.17		0.29	0.29	0.29	0.44	0.44		0.58	0.58	
Clearance Time (s)		6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		445		241	910	420	195	1523		450	2028	
v/s Ratio Prot				c0.03	0.03			0.16		0.02	c0.33	
v/s Ratio Perm		c0.12		0.12		0.01	0.14			0.15		
v/c Ratio		0.71		0.51	0.10	0.05	0.32	0.37		0.30	0.57	
Uniform Delay, d1		37.5		26.2	24.5	24.2	17.1	17.5		9.7	12.4	
Progression Factor		1.00		0.98	1.22	5.83	1.03	0.94		0.47	0.39	
Incremental Delay, d2		5.1		1.0	0.0	0.0	4.1	0.7		0.3	0.9	
Delay (s)		42.5		26.6	30.0	141.0	21.8	17.1		4.9	5.7	
Level of Service		D		C	C	F	C	B		A	A	
Approach Delay (s)		42.5			52.9			17.6			5.6	
Approach LOS		D			D			B			A	
Intersection Summary												
HCM 2000 Control Delay			19.6									
HCM 2000 Volume to Capacity ratio			0.65									
Actuated Cycle Length (s)			95.0									
Intersection Capacity Utilization			71.8%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

11: Ponce de Leon Blvd & Granada Blvd

01/09/2023

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	72	283	95	74	392	57	260	557	34	45	900	126
Future Volume (vph)	72	283	95	74	392	57	260	557	34	45	900	126
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00			0.91	0.91	1.00	0.95		1.00	0.95	
Frt	1.00	0.96			1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1793			3358	1441	1770	3508		1770	3474	
Flt Permitted	0.35	1.00			0.60	1.00	0.11	1.00		0.42	1.00	
Satd. Flow (perm)	644	1793			2034	1441	197	3508		775	3474	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	76	298	100	78	413	60	274	586	36	47	947	133
RTOR Reduction (vph)	0	14	0	0	1	39	0	4	0	0	10	0
Lane Group Flow (vph)	76	384	0	0	496	15	274	618	0	47	1070	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	
Protected Phases		4			8		1	6			2	
Permitted Phases	4			8		8	6			2		
Actuated Green, G (s)	25.7	25.7			25.7	25.7	57.3	57.3		37.9	37.9	
Effective Green, g (s)	25.7	25.7			25.7	25.7	57.3	57.3		37.9	37.9	
Actuated g/C Ratio	0.27	0.27			0.27	0.27	0.60	0.60		0.40	0.40	
Clearance Time (s)	6.0	6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	174	485			550	389	340	2115		309	1385	
v/s Ratio Prot		0.21					c0.11	0.18			0.31	
v/s Ratio Perm	0.12				c0.24	0.01	c0.37			0.06		
v/c Ratio	0.44	0.79			0.90	0.04	0.81	0.29		0.15	0.77	
Uniform Delay, d1	28.7	32.2			33.4	25.5	22.0	9.1		18.3	24.8	
Progression Factor	1.00	1.00			0.87	1.00	1.15	1.05		0.85	1.07	
Incremental Delay, d2	1.8	8.6			15.5	0.0	12.6	0.3		0.6	2.7	
Delay (s)	30.4	40.8			44.6	25.6	38.0	9.8		16.2	29.3	
Level of Service	C	D			D	C	D	A		B	C	
Approach Delay (s)		39.1			42.7			18.5			28.8	
Approach LOS		D			D			B			C	
Intersection Summary												
HCM 2000 Control Delay		29.9			HCM 2000 Level of Service			C				
HCM 2000 Volume to Capacity ratio		0.87										
Actuated Cycle Length (s)		95.0			Sum of lost time (s)			18.0				
Intersection Capacity Utilization		97.6%			ICU Level of Service			F				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

12: Ponce de Leon Blvd & Le Jeune Rd & Blue Rd

01/09/2023

													
Movement	WBL2	WBL	WBR	WBR2	NBT	NBR	NBR2	SBL2	SBL	SBT	SBR	NEL	
Lane Configurations													
Traffic Volume (vph)	13	245	84	8	391	32	1	14	96	596	495	235	
Future Volume (vph)	13	245	84	8	391	32	1	14	96	596	495	235	
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	
Total Lost time (s)	6.0	6.0	6.0		6.0				6.0	6.0		6.0	
Lane Util. Factor	1.00	1.00	1.00		0.95				1.00	0.95		0.97	
Frt	1.00	1.00	0.85		0.99				1.00	0.93		1.00	
Flt Protected	0.95	0.95	1.00		1.00				0.95	1.00		0.95	
Satd. Flow (prot)	1770	1770	1583		3498				1770	3298		3433	
Flt Permitted	0.61	0.95	1.00		1.00				0.44	1.00		0.95	
Satd. Flow (perm)	1138	1770	1583		3498				815	3298		3433	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	
Adj. Flow (vph)	14	258	88	8	412	34	1	15	101	627	521	247	
RTOR Reduction (vph)	0	0	72	0	0	0	0	0	0	73	0	0	
Lane Group Flow (vph)	14	258	24	0	447	0	0	0	116	1075	0	247	
Turn Type	Perm	Prot	Perm		NA			Perm	Perm	NA		Prot	
Protected Phases		9			2					6		7	
Permitted Phases	9		9					6	6				
Actuated Green, G (s)	32.0	32.0	32.0		85.5				85.5	85.5		17.1	
Effective Green, g (s)	32.0	32.0	32.0		85.5				85.5	85.5		17.1	
Actuated g/C Ratio	0.17	0.17	0.17		0.45				0.45	0.45		0.09	
Clearance Time (s)	6.0	6.0	6.0		6.0				6.0	6.0		6.0	
Vehicle Extension (s)	3.0	3.0	3.0		3.0				3.0	3.0		3.0	
Lane Grp Cap (vph)	191	298	266		1574				366	1484		308	
v/s Ratio Prot		c0.15			0.13					c0.33		c0.07	
v/s Ratio Perm	0.01		0.02						0.14				
v/c Ratio	0.07	0.87	0.09		0.28				0.32	0.72		0.80	
Uniform Delay, d1	66.5	76.9	66.7		32.9				33.5	42.6		84.8	
Progression Factor	1.57	1.45	3.85		1.58				1.00	1.00		1.00	
Incremental Delay, d2	0.1	18.8	0.1		0.2				2.3	3.1		13.6	
Delay (s)	104.6	130.1	256.9		52.1				35.8	45.8		98.3	
Level of Service	F	F	F		D				D	D		F	
Approach Delay (s)		162.2			52.1					44.8			
Approach LOS		F			D					D			
Intersection Summary													
HCM 2000 Control Delay			71.4		HCM 2000 Level of Service				E				
HCM 2000 Volume to Capacity ratio			0.79										
Actuated Cycle Length (s)			190.0		Sum of lost time (s)				24.0				
Intersection Capacity Utilization			86.2%		ICU Level of Service				E				
Analysis Period (min)			15										
c Critical Lane Group													

HCM Signalized Intersection Capacity Analysis

12: Ponce de Leon Blvd & Le Jeune Rd & Blue Rd

01/09/2023



Movement	NET	NER	NER2	SWL2	SWL	SWT	SWR
Lane Configurations	↑	↑			↑	↑↑	
Traffic Volume (vph)	248	163	63	3	51	476	12
Future Volume (vph)	248	163	63	3	51	476	12
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0	6.0	
Lane Util. Factor	1.00	1.00			1.00	0.95	
Frt	1.00	0.85			1.00	1.00	
Flt Protected	1.00	1.00			0.95	1.00	
Satd. Flow (prot)	1863	1583			1770	3526	
Flt Permitted	1.00	1.00			0.60	1.00	
Satd. Flow (perm)	1863	1583			1114	3526	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	261	172	66	3	54	501	13
RTOR Reduction (vph)	0	37	0	0	0	1	0
Lane Group Flow (vph)	261	201	0	0	57	513	0
Turn Type	NA	Perm		Perm	Perm	NA	
Protected Phases	4					8	
Permitted Phases		4		8	8		
Actuated Green, G (s)	54.5	54.5			31.4	31.4	
Effective Green, g (s)	54.5	54.5			31.4	31.4	
Actuated g/C Ratio	0.29	0.29			0.17	0.17	
Clearance Time (s)	6.0	6.0			6.0	6.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	
Lane Grp Cap (vph)	534	454			184	582	
v/s Ratio Prot	0.14					c0.15	
v/s Ratio Perm		0.13			0.05		
v/c Ratio	0.49	0.44			0.31	0.88	
Uniform Delay, d1	56.2	55.3			69.8	77.5	
Progression Factor	0.97	0.96			1.00	1.00	
Incremental Delay, d2	0.7	0.7			1.0	14.6	
Delay (s)	55.4	54.0			70.7	92.1	
Level of Service	E	D			E	F	
Approach Delay (s)	69.2					90.0	
Approach LOS	E					F	

Intersection Summary

HCM Signalized Intersection Capacity Analysis

1: US-1 & SW 72nd St/Sunset Dr

01/09/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑	↑		↑↑		↑	↑↑↑		↑	↑↑↑	
Traffic Volume (vph)	0	604	23	0	296	11	57	2987	93	26	1648	185
Future Volume (vph)	0	604	23	0	296	11	57	2987	93	26	1648	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.9	8.9		8.9		6.4	8.0		6.4	8.0	
Lane Util. Factor		0.95	1.00		0.95		1.00	0.91		1.00	0.91	
Frt		1.00	0.85		0.99		1.00	1.00		1.00	0.98	
Flt Protected		1.00	1.00		1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3539	1583		3520		1770	5062		1770	5008	
Flt Permitted		1.00	1.00		1.00		0.07	1.00		0.03	1.00	
Satd. Flow (perm)		3539	1583		3520		132	5062		61	5008	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	636	24	0	312	12	60	3144	98	27	1735	195
RTOR Reduction (vph)	0	0	19	0	2	0	0	1	0	0	0	0
Lane Group Flow (vph)	0	636	5	0	322	0	60	3241	0	27	1930	0
Turn Type		NA	Perm		NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		1	6		5	2	
Permitted Phases			8				6			2		
Actuated Green, G (s)		37.3	37.3		37.3		131.6	124.2		127.2	122.0	
Effective Green, g (s)		37.3	37.3		37.3		131.6	124.2		127.2	122.0	
Actuated g/C Ratio		0.20	0.20		0.20		0.69	0.65		0.67	0.64	
Clearance Time (s)		8.9	8.9		8.9		6.4	8.0		6.4	8.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		694	310		691		155	3308		87	3215	
v/s Ratio Prot		c0.18			0.09		c0.02	c0.64		0.01	0.39	
v/s Ratio Perm			0.00				0.25			0.20		
v/c Ratio		0.92	0.02		0.47		0.39	0.98		0.31	0.60	
Uniform Delay, d1		74.8	61.5		67.5		14.9	31.7		47.4	19.8	
Progression Factor		1.00	1.00		1.00		1.25	0.68		2.75	0.82	
Incremental Delay, d2		16.8	0.0		0.5		1.1	9.0		1.6	0.7	
Delay (s)		91.6	61.6		68.0		19.7	30.4		132.1	16.9	
Level of Service		F	E		E		B	C		F	B	
Approach Delay (s)		90.6			68.0			30.2			18.5	
Approach LOS		F			E			C			B	
Intersection Summary												
HCM 2000 Control Delay			34.9				HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio			0.95									
Actuated Cycle Length (s)			190.0				Sum of lost time (s)			23.3		
Intersection Capacity Utilization			90.6%				ICU Level of Service			E		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2: US-1 & SW 57th Ave

01/09/2023

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑			↑↑	↑	↑	↑↑↑		↑	↑↑↑	
Traffic Volume (vph)	0	399	125	0	547	125	216	3090	82	93	1957	77
Future Volume (vph)	0	399	125	0	547	125	216	3090	82	93	1957	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0			7.0	7.0	6.8	6.8		6.8	6.8	
Lane Util. Factor		0.95			0.95	1.00	1.00	0.91		1.00	0.91	
Frt		0.96			1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected		1.00			1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3412			3539	1583	1770	5066		1770	5056	
Flt Permitted		1.00			1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		3412			3539	1583	1770	5066		1770	5056	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	420	132	0	576	132	227	3253	86	98	2060	81
RTOR Reduction (vph)	0	16	0	0	0	83	0	1	0	0	2	0
Lane Group Flow (vph)	0	536	0	0	576	49	227	3338	0	98	2139	0
Turn Type		NA			NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases						8						
Actuated Green, G (s)		32.6			32.6	32.6	29.1	125.2		11.6	107.7	
Effective Green, g (s)		32.6			32.6	32.6	29.1	125.2		11.6	107.7	
Actuated g/C Ratio		0.17			0.17	0.17	0.15	0.66		0.06	0.57	
Clearance Time (s)		7.0			7.0	7.0	6.8	6.8		6.8	6.8	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		585			607	271	271	3338		108	2865	
v/s Ratio Prot		0.16			c0.16		c0.13	c0.66		0.06	0.42	
v/s Ratio Perm						0.03						
v/c Ratio		0.92			0.95	0.18	0.84	1.00		0.91	0.75	
Uniform Delay, d1		77.4			77.9	67.3	78.2	32.4		88.7	30.9	
Progression Factor		1.00			1.00	1.00	1.18	0.58		0.88	0.67	
Incremental Delay, d2		19.2			24.2	0.3	12.5	11.9		42.4	1.1	
Delay (s)		96.5			102.1	67.6	104.9	30.7		120.2	21.8	
Level of Service		F			F	E	F	C		F	C	
Approach Delay (s)		96.5			95.7			35.5			26.1	
Approach LOS		F			F			D			C	
Intersection Summary												
HCM 2000 Control Delay			43.3									HCM 2000 Level of Service D
HCM 2000 Volume to Capacity ratio			1.00									
Actuated Cycle Length (s)			190.0									Sum of lost time (s) 20.6
Intersection Capacity Utilization			99.0%									ICU Level of Service F
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

3: US-1 & Granada Blvd

01/09/2023

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	114	251	103	11	205	34	82	3193	15	41	2472	129
Future Volume (vph)	114	251	103	11	205	34	82	3193	15	41	2472	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.7	6.7			6.7	6.7	6.8	6.8		6.8	6.8	6.8
Lane Util. Factor	1.00	0.95			0.95	1.00	1.00	0.91		1.00	0.91	1.00
Frt	1.00	0.96			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3385			3530	1583	1770	5082		1770	5085	1583
Flt Permitted	0.50	1.00			0.82	1.00	0.03	1.00		0.03	1.00	1.00
Satd. Flow (perm)	928	3385			2904	1583	53	5082		56	5085	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	120	264	108	12	216	36	86	3361	16	43	2602	136
RTOR Reduction (vph)	0	24	0	0	0	31	0	0	0	0	0	18
Lane Group Flow (vph)	120	348	0	0	228	5	86	3377	0	43	2602	118
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases		8			4		1	6			2	
Permitted Phases	8			4		4	6			2		2
Actuated Green, G (s)	27.0	27.0			27.0	27.0	149.5	149.5		133.4	133.4	133.4
Effective Green, g (s)	27.0	27.0			27.0	27.0	149.5	149.5		133.4	133.4	133.4
Actuated g/C Ratio	0.14	0.14			0.14	0.14	0.79	0.79		0.70	0.70	0.70
Clearance Time (s)	6.7	6.7			6.7	6.7	6.8	6.8		6.8	6.8	6.8
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	131	481			412	224	125	3998		39	3570	1111
v/s Ratio Prot		0.10					0.03	c0.66			0.51	
v/s Ratio Perm	c0.13				0.08	0.00	0.50			c0.77		0.07
v/c Ratio	0.92	0.72			0.55	0.02	0.69	0.84		1.10	0.73	0.11
Uniform Delay, d1	80.4	77.9			75.9	70.1	51.2	12.9		28.3	17.3	9.1
Progression Factor	1.00	1.00			1.00	1.00	1.11	0.67		1.30	1.16	0.62
Incremental Delay, d2	53.3	5.3			1.6	0.0	9.4	1.5		126.6	0.6	0.1
Delay (s)	133.6	83.3			77.5	70.2	66.0	10.1		163.5	20.6	5.8
Level of Service	F	F			E	E	E	B		F	C	A
Approach Delay (s)		95.5			76.5			11.5			22.1	
Approach LOS		F			E			B			C	
Intersection Summary												
HCM 2000 Control Delay		24.0			HCM 2000 Level of Service			C				
HCM 2000 Volume to Capacity ratio		1.07										
Actuated Cycle Length (s)		190.0			Sum of lost time (s)			20.3				
Intersection Capacity Utilization		111.6%			ICU Level of Service			H				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

4: US-1 & SW 42nd Ave/Le Jeune Rd

01/09/2023

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	0	559	171	0	502	217	247	3193	21	62	2781	0
Future Volume (vph)	0	559	171	0	502	217	247	3193	21	62	2781	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.1			7.1	6.8	6.8	6.8		6.8	6.8	
Lane Util. Factor		0.95			0.91	0.91	1.00	0.91		1.00	0.91	
Frt		0.96			0.99	0.85	1.00	1.00		1.00	1.00	
Flt Protected		1.00			1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3415			3369	1441	1770	5080		1770	5085	
Flt Permitted		1.00			1.00	1.00	0.03	1.00		0.04	1.00	
Satd. Flow (perm)		3415			3369	1441	64	5080		68	5085	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	588	180	0	528	228	260	3361	22	65	2927	0
RTOR Reduction (vph)	0	15	0	0	2	15	0	0	0	0	0	0
Lane Group Flow (vph)	0	753	0	0	549	190	260	3383	0	65	2927	0
Turn Type		NA			NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8	1	1	6		5	2	
Permitted Phases						8	6			2		
Actuated Green, G (s)		36.9			36.9	59.1	139.2	123.9		118.7	110.2	
Effective Green, g (s)		36.9			36.9	59.1	139.2	123.9		118.7	110.2	
Actuated g/C Ratio		0.19			0.19	0.31	0.73	0.65		0.62	0.58	
Clearance Time (s)		7.1			7.1	6.8	6.8	6.8		6.8	6.8	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		663			654	448	246	3312		118	2949	
v/s Ratio Prot		c0.22			0.16	0.05	c0.12	c0.67		0.02	0.58	
v/s Ratio Perm						0.08	c0.65			0.32		
v/c Ratio		1.14			0.84	0.42	1.06	1.02		0.55	0.99	
Uniform Delay, d1		76.5			73.7	51.9	73.7	33.0		44.6	39.5	
Progression Factor		1.00			1.00	1.00	1.18	0.59		1.49	0.21	
Incremental Delay, d2		78.5			9.5	0.6	59.7	17.8		2.1	8.7	
Delay (s)		155.1			83.2	52.6	146.8	37.4		68.5	17.2	
Level of Service		F			F	D	F	D		E	B	
Approach Delay (s)		155.1			74.9			45.2			18.3	
Approach LOS		F			E			D			B	
Intersection Summary												
HCM 2000 Control Delay		48.4			HCM 2000 Level of Service			D				
HCM 2000 Volume to Capacity ratio		1.10										
Actuated Cycle Length (s)		190.0			Sum of lost time (s)			20.7				
Intersection Capacity Utilization		105.6%			ICU Level of Service			G				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: US-1 & Blue Rd/Grand Ave

01/09/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations								  			  	
Traffic Volume (vph)	80	353	11	103	217	0	0	3090	247	0	2781	57
Future Volume (vph)	80	353	11	103	217	0	0	3090	247	0	2781	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.9	7.9		7.9	7.9			6.8			6.8	
Lane Util. Factor	1.00	1.00		1.00	1.00			0.91			0.91	
Frt	1.00	1.00		1.00	1.00			0.99			1.00	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1770	1854		1770	1863			5029			5070	
Flt Permitted	0.62	1.00		0.09	1.00			1.00			1.00	
Satd. Flow (perm)	1148	1854		169	1863			5029			5070	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	84	372	12	108	228	0	0	3253	260	0	2927	60
RTOR Reduction (vph)	0	1	0	0	0	0	0	5	0	0	1	0
Lane Group Flow (vph)	84	383	0	108	228	0	0	3508	0	0	2986	0
Turn Type	Perm	NA		pm+pt	NA			NA			NA	
Protected Phases		8		7	4			2			6	
Permitted Phases	8			4								
Actuated Green, G (s)	36.1	36.1		54.1	54.1			121.2			121.2	
Effective Green, g (s)	36.1	36.1		54.1	54.1			121.2			121.2	
Actuated g/C Ratio	0.19	0.19		0.28	0.28			0.64			0.64	
Clearance Time (s)	7.9	7.9		7.9	7.9			6.8			6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	218	352		133	530			3207			3234	
v/s Ratio Prot		c0.21		c0.04	0.12			c0.70			0.59	
v/s Ratio Perm	0.07			0.19								
v/c Ratio	0.39	1.09		0.81	0.43			1.09			0.92	
Uniform Delay, d1	67.3	77.0		56.2	55.4			34.4			30.3	
Progression Factor	1.00	1.00		1.00	1.00			0.34			0.17	
Incremental Delay, d2	1.1	73.8		30.0	0.6			42.9			0.6	
Delay (s)	68.4	150.8		86.3	55.9			54.4			5.9	
Level of Service	E	F		F	E			D			A	
Approach Delay (s)		136.0			65.7			54.4			5.9	
Approach LOS		F			E			D			A	
Intersection Summary												
HCM 2000 Control Delay			40.3			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			1.08									
Actuated Cycle Length (s)			190.0			Sum of lost time (s)			22.6			
Intersection Capacity Utilization			109.0%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

6: US-1 & SW 37th Ave/Douglas Rd

01/09/2023

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	23	456	171	17	228	205	113	2678	15	52	2884	82
Future Volume (vph)	23	456	171	17	228	205	113	2678	15	52	2884	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.5		6.8	7.5	6.8	6.8	6.8		6.8	6.8	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3394		1770	1863	1583	1770	5081		1770	5064	
Flt Permitted	0.57	1.00		0.09	1.00	1.00	0.03	1.00		0.04	1.00	
Satd. Flow (perm)	1056	3394		165	1863	1583	65	5081		69	5064	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	24	480	180	18	240	216	119	2819	16	55	3036	86
RTOR Reduction (vph)	0	20	0	0	0	15	0	0	0	0	1	0
Lane Group Flow (vph)	24	640	0	18	240	201	119	2835	0	55	3121	0
Turn Type	Perm	NA		pm+pt	NA	pm+ov	pm+pt	NA		Perm	NA	
Protected Phases		4		3	8	1	1	6			2	
Permitted Phases	4			8		8	6			2		
Actuated Green, G (s)	38.3	38.3		49.7	49.7	60.6	126.0	126.0		108.3	108.3	
Effective Green, g (s)	38.3	38.3		49.7	49.7	60.6	126.0	126.0		108.3	108.3	
Actuated g/C Ratio	0.20	0.20		0.26	0.26	0.32	0.66	0.66		0.57	0.57	
Clearance Time (s)	7.5	7.5		6.8	7.5	6.8	6.8	6.8		6.8	6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	212	684		82	487	504	140	3369		39	2886	
v/s Ratio Prot		c0.19		0.01	c0.13	0.02	0.05	c0.56			0.62	
v/s Ratio Perm	0.02			0.05		0.10	0.51			c0.80		
v/c Ratio	0.11	0.94		0.22	0.49	0.40	0.85	0.84		1.41	1.08	
Uniform Delay, d1	62.0	74.6		55.7	59.5	50.5	65.2	24.4		40.9	40.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.74	1.99		0.14	0.13	
Incremental Delay, d2	0.2	20.1		1.4	0.8	0.5	4.6	0.3		197.9	37.3	
Delay (s)	62.2	94.7		57.1	60.3	51.0	53.0	48.8		203.5	42.8	
Level of Service	E	F		E	E	D	D	D		F	D	
Approach Delay (s)		93.6			55.9			49.0			45.6	
Approach LOS		F			E			D			D	
Intersection Summary												
HCM 2000 Control Delay			52.2									HCM 2000 Level of Service D
HCM 2000 Volume to Capacity ratio			1.26									
Actuated Cycle Length (s)			190.0									Sum of lost time (s) 27.9
Intersection Capacity Utilization			100.5%									ICU Level of Service G
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

7: US-1 & Bird Rd/SW 40th St

01/09/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	616	228	0	251	331	11	0	2678	155	0	2884	567
Future Volume (vph)	616	228	0	251	331	11	0	2678	155	0	2884	567
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.1	8.1		8.1	8.1			7.5	8.1		7.5	8.1
Lane Util. Factor	0.91	0.91		1.00	0.95			0.91	1.00		0.91	1.00
Frt	1.00	1.00		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	0.99		0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (prot)	3221	1677		1770	3522			5085	1583		5085	1583
Flt Permitted	0.95	0.99		0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (perm)	3221	1677		1770	3522			5085	1583		5085	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	648	240	0	264	348	12	0	2819	163	0	3036	597
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	21	0	0	9
Lane Group Flow (vph)	583	305	0	264	359	0	0	2819	142	0	3036	588
Turn Type	Split	NA		Split	NA			NA	pm+ov		NA	pm+ov
Protected Phases	3	3		4	4			6	4		2	3
Permitted Phases								6				2
Actuated Green, G (s)	31.9	31.9		25.9	25.9			108.5	134.4		108.5	140.4
Effective Green, g (s)	31.9	31.9		25.9	25.9			108.5	134.4		108.5	140.4
Actuated g/C Ratio	0.17	0.17		0.14	0.14			0.57	0.71		0.57	0.74
Clearance Time (s)	8.1	8.1		8.1	8.1			7.5	8.1		7.5	8.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	540	281		241	480			2903	1187		2903	1169
v/s Ratio Prot	0.18	c0.18		c0.15	0.10			0.55	0.02		c0.60	0.08
v/s Ratio Perm									0.07			0.29
v/c Ratio	1.08	1.09		1.10	0.75			0.97	0.12		1.05	0.50
Uniform Delay, d1	79.0	79.0		82.0	78.9			39.2	8.9		40.8	10.3
Progression Factor	1.00	1.00		1.00	1.00			0.47	1.18		0.39	0.31
Incremental Delay, d2	62.0	78.4		85.8	6.3			7.2	0.0		25.6	0.1
Delay (s)	141.0	157.4		167.9	85.2			25.7	10.5		41.3	3.4
Level of Service	F	F		F	F			C	B		D	A
Approach Delay (s)		146.6			120.2			24.9			35.1	
Approach LOS		F			F			C			D	
Intersection Summary												
HCM 2000 Control Delay			50.1									D
HCM 2000 Volume to Capacity ratio			1.06									
Actuated Cycle Length (s)			190.0									23.7
Intersection Capacity Utilization			104.7%									G
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

8: SW 27th Ave & US-1

01/09/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (vph)	196	3399	21	52	2781	62	40	422	262	125	433	388
Future Volume (vph)	196	3399	21	52	2781	62	40	422	262	125	433	388
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	6.9		6.8	6.9		6.4	6.6	6.6	6.4	6.6	6.8
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	5081		1770	5069		1770	3539	1583	1770	3539	1583
Flt Permitted	0.03	1.00		0.04	1.00		0.20	1.00	1.00	0.17	1.00	1.00
Satd. Flow (perm)	65	5081		69	5069		381	3539	1583	317	3539	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	206	3578	22	55	2927	65	42	444	276	132	456	408
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	117	0	0	44
Lane Group Flow (vph)	206	3600	0	55	2991	0	42	444	159	132	456	364
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	pm+ov
Protected Phases	1	6		5	2		7	4		3	8	1
Permitted Phases	6			2			4		4	8		8
Actuated Green, G (s)	133.7	118.9		115.9	107.9		34.5	27.8	27.8	38.3	29.7	48.7
Effective Green, g (s)	133.7	118.9		115.9	107.9		34.5	27.8	27.8	38.3	29.7	48.7
Actuated g/C Ratio	0.70	0.63		0.61	0.57		0.18	0.15	0.15	0.20	0.16	0.26
Clearance Time (s)	6.8	6.9		6.8	6.9		6.4	6.6	6.6	6.4	6.6	6.8
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	216	3179		113	2878		118	517	231	129	553	405
v/s Ratio Prot	c0.10	c0.71		0.02	0.59		0.01	0.13		c0.05	0.13	0.09
v/s Ratio Perm	0.58			0.27			0.05		0.10	c0.16		0.14
v/c Ratio	0.95	1.13		0.49	1.04		0.36	0.86	0.69	1.02	0.82	0.90
Uniform Delay, d1	72.2	35.5		44.2	41.0		65.9	79.2	77.0	71.9	77.6	68.3
Progression Factor	1.23	0.61		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	30.3	61.7		3.3	28.0		1.8	13.3	8.3	85.6	9.7	22.0
Delay (s)	118.9	83.4		47.5	69.1		67.7	92.5	85.3	157.5	87.3	90.3
Level of Service	F	F		D	E		E	F	F	F	F	F
Approach Delay (s)		85.3			68.7			88.5			97.8	
Approach LOS		F			E			F			F	
Intersection Summary												
HCM 2000 Control Delay	81.2			HCM 2000 Level of Service					F			
HCM 2000 Volume to Capacity ratio	1.13											
Actuated Cycle Length (s)	190.0			Sum of lost time (s)					26.7			
Intersection Capacity Utilization	111.1%			ICU Level of Service					H			
Analysis Period (min)	15											
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

9: SW 57th Ave/Red Rd & Ponce de Leon Blvd

01/09/2023

						
Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Volume (veh/h)	342	456	342	570	0	248
Future Volume (Veh/h)	342	456	342	570	0	248
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	360	480	360	600	0	261
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)	243					
pX, platoon unblocked			0.85		0.85	0.85
vC, conflicting volume			840		1620	420
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			463		1379	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			61		100	72
cM capacity (veh/h)			932		71	923
Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3	SW 1
Volume Total	240	600	360	300	300	261
Volume Left	0	0	360	0	0	0
Volume Right	0	480	0	0	0	261
cSH	1700	1700	932	1700	1700	923
Volume to Capacity	0.14	0.35	0.39	0.18	0.18	0.28
Queue Length 95th (ft)	0	0	46	0	0	29
Control Delay (s)	0.0	0.0	11.3	0.0	0.0	10.4
Lane LOS			B			B
Approach Delay (s)	0.0		4.2			10.4
Approach LOS						B
Intersection Summary						
Average Delay			3.3			
Intersection Capacity Utilization			49.7%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis

10: Ponce de Leon Blvd & Stanford Dr

01/09/2023

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	23	26	24	100	76	109	86	839	118	113	420	107
Future Volume (vph)	23	26	24	100	76	109	86	839	118	113	420	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor		0.95		1.00	0.91	0.91	1.00	0.95		1.00	0.95	
Frt		0.95		1.00	0.94	0.85	1.00	0.98		1.00	0.97	
Flt Protected		0.98		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3312		1770	3185	1441	1770	3474		1770	3431	
Flt Permitted		0.83		0.38	1.00	1.00	0.44	1.00		0.16	1.00	
Satd. Flow (perm)		2778		712	3185	1441	827	3474		303	3431	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	24	27	25	105	80	115	91	883	124	119	442	113
RTOR Reduction (vph)	0	23	0	0	41	46	0	9	0	0	18	0
Lane Group Flow (vph)	0	53	0	105	93	15	91	998	0	119	537	0
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		7.1		21.2	21.2	21.2	38.9	38.9		51.8	51.8	
Effective Green, g (s)		7.1		21.2	21.2	21.2	38.9	38.9		51.8	51.8	
Actuated g/C Ratio		0.08		0.25	0.25	0.25	0.46	0.46		0.61	0.61	
Clearance Time (s)		6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		232		278	794	359	378	1589		303	2090	
v/s Ratio Prot				c0.04	0.03			c0.29		c0.03	0.16	
v/s Ratio Perm		0.02		c0.06		0.01	0.11			0.21		
v/c Ratio		0.23		0.38	0.12	0.04	0.24	0.63		0.39	0.26	
Uniform Delay, d1		36.4		25.7	24.7	24.2	14.0	17.5		9.8	7.7	
Progression Factor		1.00		1.00	1.00	1.00	0.35	0.42		0.34	0.31	
Incremental Delay, d2		0.5		0.9	0.1	0.0	1.1	1.4		0.7	0.3	
Delay (s)		36.9		26.5	24.7	24.2	6.0	8.8		4.1	2.6	
Level of Service		D		C	C	C	A	A		A	A	
Approach Delay (s)		36.9			25.3			8.5			2.9	
Approach LOS		D			C			A			A	
Intersection Summary												
HCM 2000 Control Delay			10.1									
HCM 2000 Volume to Capacity ratio			0.57									
Actuated Cycle Length (s)			85.0									
Intersection Capacity Utilization			60.4%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

11: Ponce de Leon Blvd & Granada Blvd

01/09/2023

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	39	368	107	42	329	31	166	740	33	36	464	81
Future Volume (vph)	39	368	107	42	329	31	166	740	33	36	464	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00			0.91	0.91	1.00	0.95		1.00	0.95	
Frt	1.00	0.97			1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1800			3367	1441	1770	3516		1770	3460	
Flt Permitted	0.48	1.00			0.70	1.00	0.30	1.00		0.34	1.00	
Satd. Flow (perm)	891	1800			2365	1441	557	3516		642	3460	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	387	113	44	346	33	175	779	35	38	488	85
RTOR Reduction (vph)	0	14	0	0	1	20	0	3	0	0	14	0
Lane Group Flow (vph)	41	486	0	0	392	10	175	811	0	38	559	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	
Protected Phases		4			8		1	6			2	
Permitted Phases	4			8		8	6			2		
Actuated Green, G (s)	27.8	27.8			27.8	27.8	45.2	45.2		29.5	29.5	
Effective Green, g (s)	27.8	27.8			27.8	27.8	45.2	45.2		29.5	29.5	
Actuated g/C Ratio	0.33	0.33			0.33	0.33	0.53	0.53		0.35	0.35	
Clearance Time (s)	6.0	6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	291	588			773	471	434	1869		222	1200	
v/s Ratio Prot		c0.27					0.05	c0.23			0.16	
v/s Ratio Perm	0.05				0.17	0.01	0.17			0.06		
v/c Ratio	0.14	0.83			0.51	0.02	0.40	0.43		0.17	0.47	
Uniform Delay, d1	20.2	26.4			23.1	19.4	11.3	12.1		19.3	21.6	
Progression Factor	1.00	1.00			1.00	1.00	0.22	0.22		0.80	0.76	
Incremental Delay, d2	0.2	9.3			0.5	0.0	0.5	0.6		1.5	1.1	
Delay (s)	20.4	35.6			23.6	19.4	3.0	3.3		16.9	17.7	
Level of Service	C	D			C	B	A	A		B	B	
Approach Delay (s)		34.5			23.3			3.3			17.6	
Approach LOS		C			C			A			B	
Intersection Summary												
HCM 2000 Control Delay		16.6			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.63										
Actuated Cycle Length (s)		85.0			Sum of lost time (s)			18.0				
Intersection Capacity Utilization		82.2%			ICU Level of Service			E				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

12: Ponce de Leon Blvd & Le Jeune Rd & Blue Rd

01/09/2023

												
Movement	WBL2	WBL	WBR	WBR2	NBT	NBR	NBR2	SBL2	SBL	SBT	SBR	NEL
Lane Configurations												
Traffic Volume (vph)	74	154	65	2	454	117	3	7	68	521	172	179
Future Volume (vph)	74	154	65	2	454	117	3	7	68	521	172	179
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		6.0				6.0	6.0		6.0
Lane Util. Factor	1.00	1.00	1.00		0.95				1.00	0.95		0.97
Frt	1.00	1.00	0.85		0.97				1.00	0.96		1.00
Flt Protected	0.95	0.95	1.00		1.00				0.95	1.00		0.95
Satd. Flow (prot)	1770	1770	1583		3428				1770	3407		3433
Flt Permitted	0.56	0.95	1.00		1.00				0.29	1.00		0.95
Satd. Flow (perm)	1048	1770	1583		3428				542	3407		3433
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	78	162	68	2	478	123	3	7	72	548	181	188
RTOR Reduction (vph)	0	0	59	0	1	0	0	0	0	36	0	0
Lane Group Flow (vph)	78	162	11	0	603	0	0	0	79	693	0	188
Turn Type	Perm	Prot	Perm		NA			Perm	Perm	NA		Prot
Protected Phases		9			2					6		7
Permitted Phases	9		9					6	6			
Actuated Green, G (s)	12.8	12.8	12.8		23.2				23.2	23.2		6.0
Effective Green, g (s)	12.8	12.8	12.8		23.2				23.2	23.2		6.0
Actuated g/C Ratio	0.15	0.15	0.15		0.27				0.27	0.27		0.07
Clearance Time (s)	6.0	6.0	6.0		6.0				6.0	6.0		6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0				3.0	3.0		3.0
Lane Grp Cap (vph)	157	266	238		935				147	929		242
v/s Ratio Prot		c0.09			0.18					c0.20		0.05
v/s Ratio Perm	0.07		0.01						0.15			
v/c Ratio	0.50	0.61	0.04		0.65				0.54	0.75		0.78
Uniform Delay, d1	33.1	33.8	30.9		27.3				26.3	28.2		38.8
Progression Factor	1.00	1.00	1.00		1.00				1.00	1.00		1.07
Incremental Delay, d2	2.5	3.9	0.1		3.4				13.4	5.4		14.1
Delay (s)	35.6	37.7	30.9		30.7				39.7	33.7		55.8
Level of Service	D	D	C		C				D	C		E
Approach Delay (s)		35.6			30.7					34.2		
Approach LOS		D			C					C		
Intersection Summary												
HCM 2000 Control Delay			32.9		HCM 2000 Level of Service				C			
HCM 2000 Volume to Capacity ratio			0.90									
Actuated Cycle Length (s)			85.0		Sum of lost time (s)				24.0			
Intersection Capacity Utilization			91.2%		ICU Level of Service				F			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

12: Ponce de Leon Blvd & Le Jeune Rd & Blue Rd

01/09/2023



Movement	NET	NER	NER2	SWL	SWT	SWR
Lane Configurations	↑	↘		↙	↑↑	
Traffic Volume (vph)	626	288	24	30	253	7
Future Volume (vph)	626	288	24	30	253	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	0.95	
Frt	1.00	0.85		1.00	1.00	
Flt Protected	1.00	1.00		0.95	1.00	
Satd. Flow (prot)	1863	1583		1770	3526	
Flt Permitted	1.00	1.00		0.21	1.00	
Satd. Flow (perm)	1863	1583		392	3526	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	659	303	25	32	266	7
RTOR Reduction (vph)	0	74	0	0	2	0
Lane Group Flow (vph)	659	254	0	32	271	0
Turn Type	NA	Perm		Perm	NA	
Protected Phases	4				8	
Permitted Phases		4		8		
Actuated Green, G (s)	31.0	31.0		19.0	19.0	
Effective Green, g (s)	31.0	31.0		19.0	19.0	
Actuated g/C Ratio	0.36	0.36		0.22	0.22	
Clearance Time (s)	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	679	577		87	788	
v/s Ratio Prot	c0.35				0.08	
v/s Ratio Perm		0.16		0.08		
v/c Ratio	0.97	0.44		0.37	0.34	
Uniform Delay, d1	26.6	20.4		27.9	27.8	
Progression Factor	0.56	0.22		1.00	1.00	
Incremental Delay, d2	26.8	0.5		2.6	0.3	
Delay (s)	41.7	5.0		30.5	28.0	
Level of Service	D	A		C	C	
Approach Delay (s)	33.7				28.3	
Approach LOS	C				C	

Intersection Summary

HCM Signalized Intersection Capacity Analysis

1: US-1 & SW 72nd St/Sunset Dr

01/09/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑	↑		↑↑		↑	↑↑↑		↑	↑↑↑	
Traffic Volume (vph)	0	490	74	0	410	23	113	2060	118	57	2678	340
Future Volume (vph)	0	490	74	0	410	23	113	2060	118	57	2678	340
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.9	8.9		8.9		6.4	8.0		6.4	8.0	
Lane Util. Factor		0.95	1.00		0.95		1.00	0.91		1.00	0.91	
Frt		1.00	0.85		0.99		1.00	0.99		1.00	0.98	
Flt Protected		1.00	1.00		1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3539	1583		3511		1770	5044		1770	4999	
Flt Permitted		1.00	1.00		1.00		0.03	1.00		0.04	1.00	
Satd. Flow (perm)		3539	1583		3511		62	5044		82	4999	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	516	78	0	432	24	119	2168	124	60	2819	358
RTOR Reduction (vph)	0	0	58	0	3	0	0	3	0	0	9	0
Lane Group Flow (vph)	0	516	20	0	453	0	119	2289	0	60	3168	0
Turn Type		NA	Perm		NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		1	6		5	2	
Permitted Phases			8				6			2		
Actuated Green, G (s)		29.0	29.0		29.0		129.6	120.0		125.8	118.1	
Effective Green, g (s)		29.0	29.0		29.0		129.6	120.0		125.8	118.1	
Actuated g/C Ratio		0.16	0.16		0.16		0.72	0.67		0.70	0.66	
Clearance Time (s)		8.9	8.9		8.9		6.4	8.0		6.4	8.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		570	255		565		135	3362		129	3279	
v/s Ratio Prot		c0.15			0.13		c0.05	0.45		0.02	c0.63	
v/s Ratio Perm			0.01				0.58			0.30		
v/c Ratio		0.91	0.08		0.80		0.88	0.68		0.47	0.97	
Uniform Delay, d1		74.2	64.2		72.7		63.2	18.3		17.9	29.1	
Progression Factor		1.00	1.00		1.00		1.33	0.50		2.09	0.25	
Incremental Delay, d2		17.9	0.1		8.1		18.9	0.4		1.0	4.7	
Delay (s)		92.0	64.3		80.8		103.1	9.6		38.4	12.0	
Level of Service		F	E		F		F	A		D	B	
Approach Delay (s)		88.4			80.8			14.2			12.5	
Approach LOS		F			F			B			B	
Intersection Summary												
HCM 2000 Control Delay		24.5			HCM 2000 Level of Service			C				
HCM 2000 Volume to Capacity ratio		0.95										
Actuated Cycle Length (s)		180.0			Sum of lost time (s)			23.3				
Intersection Capacity Utilization		98.5%			ICU Level of Service			F				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2: US-1 & SW 57th Ave

01/09/2023

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑			↑↑	↑	↑	↑↑↑		↑	↑↑↑	
Traffic Volume (vph)	0	524	108	0	490	388	165	2163	139	108	2575	57
Future Volume (vph)	0	524	108	0	490	388	165	2163	139	108	2575	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0			7.0	7.0	6.8	6.8		6.8	6.8	
Lane Util. Factor		0.95			0.95	1.00	1.00	0.91		1.00	0.91	
Frt		0.97			1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected		1.00			1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3448			3539	1583	1770	5039		1770	5069	
Flt Permitted		1.00			1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		3448			3539	1583	1770	5039		1770	5069	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	552	114	0	516	408	174	2277	146	114	2711	60
RTOR Reduction (vph)	0	10	0	0	0	146	0	4	0	0	1	0
Lane Group Flow (vph)	0	656	0	0	516	262	174	2419	0	114	2770	0
Turn Type		NA			NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases						8						
Actuated Green, G (s)		36.3			36.3	36.3	20.3	106.8		16.3	102.8	
Effective Green, g (s)		36.3			36.3	36.3	20.3	106.8		16.3	102.8	
Actuated g/C Ratio		0.20			0.20	0.20	0.11	0.59		0.09	0.57	
Clearance Time (s)		7.0			7.0	7.0	6.8	6.8		6.8	6.8	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		695			713	319	199	2989		160	2894	
v/s Ratio Prot		c0.19			0.15		c0.10	c0.48		0.06	c0.55	
v/s Ratio Perm						0.17						
v/c Ratio		0.94			0.72	0.82	0.87	0.81		0.71	0.96	
Uniform Delay, d1		70.9			67.2	68.7	78.6	28.6		79.6	36.5	
Progression Factor		1.00			1.00	1.00	1.09	0.80		1.06	0.40	
Incremental Delay, d2		21.4			3.6	15.5	26.2	1.9		8.3	6.0	
Delay (s)		92.3			70.8	84.2	111.5	24.9		92.6	20.8	
Level of Service		F			E	F	F	C		F	C	
Approach Delay (s)		92.3			76.7			30.7			23.6	
Approach LOS		F			E			C			C	
Intersection Summary												
HCM 2000 Control Delay			39.6									
HCM 2000 Level of Service										D		
HCM 2000 Volume to Capacity ratio			0.95									
Actuated Cycle Length (s)			180.0							20.6		
Intersection Capacity Utilization			95.3%							F		
ICU Level of Service												
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

3: US-1 & Granada Blvd

01/09/2023

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	97	239	91	23	274	46	206	2472	21	52	2215	113
Future Volume (vph)	97	239	91	23	274	46	206	2472	21	52	2215	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.7	6.7			6.7	6.7	6.8	6.8		6.8	6.8	6.8
Lane Util. Factor	1.00	0.95			0.95	1.00	1.00	0.91		1.00	0.91	1.00
Frt	1.00	0.96			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3393			3526	1583	1770	5079		1770	5085	1583
Flt Permitted	0.38	1.00			0.77	1.00	0.03	1.00		0.04	1.00	1.00
Satd. Flow (perm)	715	3393			2712	1583	62	5079		77	5085	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	102	252	96	24	288	48	217	2602	22	55	2332	119
RTOR Reduction (vph)	0	23	0	0	0	41	0	0	0	0	0	23
Lane Group Flow (vph)	102	325	0	0	312	7	217	2624	0	55	2332	96
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases		8			4		1	6			2	
Permitted Phases	8			4		4	6			2		2
Actuated Green, G (s)	27.2	27.2			27.2	27.2	139.3	139.3		114.2	114.2	114.2
Effective Green, g (s)	27.2	27.2			27.2	27.2	139.3	139.3		114.2	114.2	114.2
Actuated g/C Ratio	0.15	0.15			0.15	0.15	0.77	0.77		0.63	0.63	0.63
Clearance Time (s)	6.7	6.7			6.7	6.7	6.8	6.8		6.8	6.8	6.8
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	108	512			409	239	221	3930		48	3226	1004
v/s Ratio Prot		0.10					c0.10	0.52			0.46	
v/s Ratio Perm	c0.14				0.12	0.00	0.65			c0.71		0.06
v/c Ratio	0.94	0.63			0.76	0.03	0.98	0.67		1.15	0.72	0.10
Uniform Delay, d1	75.7	71.7			73.3	65.2	65.0	9.5		32.9	22.2	12.8
Progression Factor	0.61	0.55			1.00	1.00	1.05	1.16		1.10	0.98	0.66
Incremental Delay, d2	62.0	2.2			8.2	0.1	48.6	0.7		148.7	0.9	0.1
Delay (s)	108.1	41.5			81.5	65.2	117.2	11.7		184.8	22.6	8.5
Level of Service	F	D			F	E	F	B		F	C	A
Approach Delay (s)		56.6			79.3			19.8			25.5	
Approach LOS		E			E			B			C	
Intersection Summary												
HCM 2000 Control Delay		28.3			HCM 2000 Level of Service			C				
HCM 2000 Volume to Capacity ratio		1.08										
Actuated Cycle Length (s)		180.0			Sum of lost time (s)			20.3				
Intersection Capacity Utilization		110.7%			ICU Level of Service			H				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

4: US-1 & SW 42nd Ave/Le Jeune Rd

01/09/2023

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑			↑↑	↑	↑	↑↑↑		↑	↑↑↑	
Traffic Volume (vph)	0	467	205	0	638	239	108	2678	31	206	2678	0
Future Volume (vph)	0	467	205	0	638	239	108	2678	31	206	2678	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.1			7.1	7.1	6.8	6.8		6.8	6.8	
Lane Util. Factor		0.95			0.91	0.91	1.00	0.91		1.00	0.91	
Frt		0.95			0.99	0.85	1.00	1.00		1.00	1.00	
Flt Protected		1.00			1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3377			3372	1441	1770	5076		1770	5085	
Flt Permitted		1.00			1.00	1.00	0.04	1.00		0.04	1.00	
Satd. Flow (perm)		3377			3372	1441	73	5076		68	5085	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	492	216	0	672	252	114	2819	33	217	2819	0
RTOR Reduction (vph)	0	27	0	0	2	86	0	1	0	0	0	0
Lane Group Flow (vph)	0	681	0	0	695	141	114	2851	0	217	2819	0
Turn Type		NA			NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases						8	6			2		
Actuated Green, G (s)		38.7			38.7	38.7	112.6	102.2		127.4	110.2	
Effective Green, g (s)		38.7			38.7	38.7	112.6	102.2		127.4	110.2	
Actuated g/C Ratio		0.22			0.22	0.22	0.63	0.57		0.71	0.61	
Clearance Time (s)		7.1			7.1	7.1	6.8	6.8		6.8	6.8	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		726			724	309	143	2882		222	3113	
v/s Ratio Prot		0.20			c0.21		0.05	0.56		c0.10	c0.55	
v/s Ratio Perm						0.10	0.45			c0.59		
v/c Ratio		0.94			0.96	0.46	0.80	0.99		0.98	0.91	
Uniform Delay, d1		69.5			69.9	61.5	53.3	38.4		68.4	30.4	
Progression Factor		1.00			0.94	0.99	1.28	0.95		1.48	0.24	
Incremental Delay, d2		19.5			17.0	0.6	21.8	12.9		32.5	2.2	
Delay (s)		88.9			82.4	61.3	90.1	49.3		133.6	9.4	
Level of Service		F			F	E	F	D		F	A	
Approach Delay (s)		88.9			77.2			50.9			18.3	
Approach LOS		F			E			D			B	
Intersection Summary												
HCM 2000 Control Delay		44.6										
HCM 2000 Level of Service												
HCM 2000 Volume to Capacity ratio		1.00										
Actuated Cycle Length (s)		180.0										
Sum of lost time (s)												
Intersection Capacity Utilization		101.3%										
ICU Level of Service												
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: US-1 & Blue Rd/Grand Ave

01/09/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations								  			  	
Traffic Volume (vph)	114	274	0	114	285	23	0	2678	165	0	2781	46
Future Volume (vph)	114	274	0	114	285	23	0	2678	165	0	2781	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.9	7.9		7.9	7.9			6.8			6.8	
Lane Util. Factor	1.00	1.00		1.00	1.00			0.91			0.91	
Frt	1.00	1.00		1.00	0.99			0.99			1.00	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1770	1863		1770	1842			5041			5073	
Flt Permitted	0.52	1.00		0.16	1.00			1.00			1.00	
Satd. Flow (perm)	960	1863		307	1842			5041			5073	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	120	288	0	120	300	24	0	2819	174	0	2927	48
RTOR Reduction (vph)	0	0	0	0	1	0	0	4	0	0	1	0
Lane Group Flow (vph)	120	288	0	120	323	0	0	2989	0	0	2974	0
Turn Type	Perm	NA		pm+pt	NA			NA			NA	
Protected Phases		8		7	4			2			6	
Permitted Phases	8			4								
Actuated Green, G (s)	31.5	31.5		49.5	49.5			115.8			115.8	
Effective Green, g (s)	31.5	31.5		49.5	49.5			115.8			115.8	
Actuated g/C Ratio	0.18	0.18		0.28	0.28			0.64			0.64	
Clearance Time (s)	7.9	7.9		7.9	7.9			6.8			6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	168	326		166	506			3243			3263	
v/s Ratio Prot		c0.15		0.04	c0.18			c0.59			0.59	
v/s Ratio Perm	0.13			0.16								
v/c Ratio	0.71	0.88		0.72	0.64			0.92			0.91	
Uniform Delay, d1	70.0	72.5		53.2	57.4			28.1			27.7	
Progression Factor	1.14	1.14		1.00	1.00			0.17			0.20	
Incremental Delay, d2	12.5	22.1		14.4	2.6			1.6			0.5	
Delay (s)	92.5	104.4		67.6	60.0			6.3			6.0	
Level of Service	F	F		E	E			A			A	
Approach Delay (s)		100.9			62.1			6.3			6.0	
Approach LOS		F			E			A			A	
Intersection Summary												
HCM 2000 Control Delay		15.5			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.92										
Actuated Cycle Length (s)		180.0			Sum of lost time (s)			22.6				
Intersection Capacity Utilization		97.0%			ICU Level of Service			F				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

6: US-1 & SW 37th Ave/Douglas Rd

01/09/2023

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	46	502	91	125	467	125	216	2472	46	46	2781	77
Future Volume (vph)	46	502	91	125	467	125	216	2472	46	46	2781	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.5		6.8	7.5	6.8	6.8	6.8		6.8	6.8	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3458		1770	1863	1583	1770	5071		1770	5065	
Flt Permitted	0.13	1.00		0.10	1.00	1.00	0.04	1.00		0.04	1.00	
Satd. Flow (perm)	237	3458		195	1863	1583	74	5071		79	5065	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	48	528	96	132	492	132	227	2602	48	48	2927	81
RTOR Reduction (vph)	0	8	0	0	0	15	0	1	0	0	1	0
Lane Group Flow (vph)	48	616	0	132	492	117	227	2649	0	48	3007	0
Turn Type	Perm	NA		pm+pt	NA	pm+ov	pm+pt	NA		Perm	NA	
Protected Phases		4		3	8	1	1	6			2	
Permitted Phases	4			8		8	6			2		
Actuated Green, G (s)	31.5	31.5		49.5	49.5	64.7	116.2	116.2		94.2	94.2	
Effective Green, g (s)	31.5	31.5		49.5	49.5	64.7	116.2	116.2		94.2	94.2	
Actuated g/C Ratio	0.18	0.18		0.28	0.28	0.36	0.65	0.65		0.52	0.52	
Clearance Time (s)	7.5	7.5		6.8	7.5	6.8	6.8	6.8		6.8	6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	41	605		151	512	569	190	3273		41	2650	
v/s Ratio Prot		0.18		0.05	c0.26	0.02	c0.10	0.52			0.59	
v/s Ratio Perm	c0.20			0.19		0.06	c0.67			0.61		
v/c Ratio	1.17	1.02		0.87	0.96	0.21	1.19	0.81		1.17	1.13	
Uniform Delay, d1	74.2	74.2		54.4	64.3	39.9	66.4	23.7		42.9	42.9	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.80	1.88		0.53	0.50	
Incremental Delay, d2	195.3	41.1		38.9	29.9	0.2	107.1	0.9		120.0	61.8	
Delay (s)	269.5	115.4		93.3	94.2	40.1	160.0	45.4		142.9	83.5	
Level of Service	F	F		F	F	D	F	D		F	F	
Approach Delay (s)		126.4			84.6			54.5			84.4	
Approach LOS		F			F			D			F	
Intersection Summary												
HCM 2000 Control Delay			76.6		HCM 2000 Level of Service					E		
HCM 2000 Volume to Capacity ratio			1.21									
Actuated Cycle Length (s)			180.0		Sum of lost time (s)					27.9		
Intersection Capacity Utilization			121.7%		ICU Level of Service					H		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

7: US-1 & Bird Rd/SW 40th St

01/09/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	399	251	11	217	365	11	0	2472	247	0	2678	793
Future Volume (vph)	399	251	11	217	365	11	0	2472	247	0	2678	793
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.1	8.1		8.1	8.1			7.5	8.1		7.5	8.1
Lane Util. Factor	0.91	0.91		1.00	0.95			0.91	1.00		0.91	1.00
Frt	1.00	0.99		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	0.99		0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (prot)	3221	1674		1770	3523			5085	1583		5085	1583
Flt Permitted	0.95	0.99		0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (perm)	3221	1674		1770	3523			5085	1583		5085	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	420	264	12	228	384	12	0	2602	260	0	2819	835
RTOR Reduction (vph)	0	1	0	0	1	0	0	0	38	0	0	8
Lane Group Flow (vph)	378	317	0	228	395	0	0	2602	222	0	2819	827
Turn Type	Split	NA		Split	NA			NA	pm+ov		NA	pm+ov
Protected Phases	3	3		4	4			6	4		2	3
Permitted Phases									6			2
Actuated Green, G (s)	33.9	33.9		22.9	22.9			99.5	122.4		99.5	133.4
Effective Green, g (s)	33.9	33.9		22.9	22.9			99.5	122.4		99.5	133.4
Actuated g/C Ratio	0.19	0.19		0.13	0.13			0.55	0.68		0.55	0.74
Clearance Time (s)	8.1	8.1		8.1	8.1			7.5	8.1		7.5	8.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	606	315		225	448			2810	1147		2810	1173
v/s Ratio Prot	0.12	c0.19		c0.13	0.11			0.51	0.02		c0.55	0.13
v/s Ratio Perm									0.12			0.39
v/c Ratio	0.62	1.01		1.01	0.88			0.93	0.19		1.00	0.71
Uniform Delay, d1	67.2	73.0		78.5	77.2			36.9	10.6		40.2	12.6
Progression Factor	1.00	1.00		1.00	1.00			0.24	0.25		0.26	0.26
Incremental Delay, d2	2.0	52.5		63.5	18.1			4.0	0.0		5.9	0.2
Delay (s)	69.2	125.5		142.0	95.3			12.9	2.7		16.5	3.4
Level of Service	E	F		F	F			B	A		B	A
Approach Delay (s)		94.9			112.4			12.0			13.5	
Approach LOS		F			F			B			B	
Intersection Summary												
HCM 2000 Control Delay	28.1			HCM 2000 Level of Service			C					
HCM 2000 Volume to Capacity ratio	1.00											
Actuated Cycle Length (s)	180.0			Sum of lost time (s)			23.7					
Intersection Capacity Utilization	96.8%			ICU Level of Service			F					
Analysis Period (min)	15											
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

8: SW 27th Ave & US-1

01/09/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (vph)	62	2781	41	103	3090	144	68	695	194	68	399	251
Future Volume (vph)	62	2781	41	103	3090	144	68	695	194	68	399	251
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	6.9		6.8	6.9		6.4	6.6	6.6	6.4	6.6	6.8
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	5074		1770	5051		1770	3539	1583	1770	3539	1583
Flt Permitted	0.04	1.00		0.04	1.00		0.30	1.00	1.00	0.12	1.00	1.00
Satd. Flow (perm)	75	5074		74	5051		558	3539	1583	220	3539	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	65	2927	43	108	3253	152	72	732	204	72	420	264
RTOR Reduction (vph)	0	1	0	0	3	0	0	0	84	0	0	47
Lane Group Flow (vph)	65	2969	0	108	3402	0	72	732	120	72	420	217
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	pm+ov
Protected Phases	1	6		5	2		7	4		3	8	1
Permitted Phases	6			2			4		4	8		8
Actuated Green, G (s)	107.5	99.1		111.1	100.9		44.0	33.9	33.9	44.0	33.9	42.3
Effective Green, g (s)	107.5	99.1		111.1	100.9		44.0	33.9	33.9	44.0	33.9	42.3
Actuated g/C Ratio	0.60	0.55		0.62	0.56		0.24	0.19	0.19	0.24	0.19	0.23
Clearance Time (s)	6.8	6.9		6.8	6.9		6.4	6.6	6.6	6.4	6.6	6.8
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	123	2793		141	2831		204	666	298	140	666	372
v/s Ratio Prot	0.02	0.59		c0.04	c0.67		0.02	c0.21		c0.03	0.12	0.03
v/s Ratio Perm	0.29			0.43			0.07		0.08	0.10		0.11
v/c Ratio	0.53	1.06		0.77	1.20		0.35	1.10	0.40	0.51	0.63	0.58
Uniform Delay, d1	41.2	40.5		54.7	39.5		54.1	73.0	64.1	56.1	67.3	61.0
Progression Factor	1.56	0.59		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.2	33.3		21.6	94.5		1.1	65.1	0.9	3.2	2.0	2.3
Delay (s)	66.5	57.4		76.4	134.0		55.2	138.2	65.0	59.3	69.2	63.3
Level of Service	E	E		E	F		E	F	E	E	E	E
Approach Delay (s)		57.6			132.2			117.4			66.2	
Approach LOS		E			F			F			E	
Intersection Summary												
HCM 2000 Control Delay	97.2			HCM 2000 Level of Service			F					
HCM 2000 Volume to Capacity ratio	1.12											
Actuated Cycle Length (s)	180.0			Sum of lost time (s)			26.7					
Intersection Capacity Utilization	112.7%			ICU Level of Service			H					
Analysis Period (min)	15											
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

9: SW 57th Ave/Red Rd & Ponce de Leon Blvd

01/09/2023

	↑	↗	↖	↓	↙	↘
Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations	↑↑		↖	↑↑		↗
Traffic Volume (veh/h)	342	342	342	684	0	992
Future Volume (Veh/h)	342	342	342	684	0	992
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	360	360	360	720	0	1044
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)	243					
pX, platoon unblocked			0.82		0.82	0.82
vC, conflicting volume			720		1620	360
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			221		1318	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			67		100	0
cM capacity (veh/h)			1104		82	889
Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3	SW 1
Volume Total	240	480	360	360	360	1044
Volume Left	0	0	360	0	0	0
Volume Right	0	360	0	0	0	1044
cSH	1700	1700	1104	1700	1700	889
Volume to Capacity	0.14	0.28	0.33	0.21	0.21	1.17
Queue Length 95th (ft)	0	0	36	0	0	792
Control Delay (s)	0.0	0.0	9.8	0.0	0.0	108.7
Lane LOS			A			F
Approach Delay (s)	0.0		3.3			108.7
Approach LOS						F
Intersection Summary						
Average Delay			41.1			
Intersection Capacity Utilization			88.5%		ICU Level of Service	E
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis

10: Ponce de Leon Blvd & Stanford Dr

01/09/2023

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	140	140	113	135	72	158	73	543	140	161	1230	139
Future Volume (vph)	140	140	113	135	72	158	73	543	140	161	1230	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor		0.95		1.00	0.91	0.91	1.00	0.95		1.00	0.95	
Frt		0.96		1.00	0.92	0.85	1.00	0.97		1.00	0.98	
Flt Protected		0.98		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3327		1770	3125	1441	1770	3431		1770	3485	
Flt Permitted		0.79		0.28	1.00	1.00	0.13	1.00		0.21	1.00	
Satd. Flow (perm)		2669		514	3125	1441	250	3431		389	3485	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	147	147	119	142	76	166	77	572	147	169	1295	146
RTOR Reduction (vph)	0	50	0	0	53	53	0	23	0	0	9	0
Lane Group Flow (vph)	0	363	0	142	106	30	77	696	0	169	1432	0
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		16.1		32.2	32.2	32.2	29.8	29.8		45.8	45.8	
Effective Green, g (s)		16.1		32.2	32.2	32.2	29.8	29.8		45.8	45.8	
Actuated g/C Ratio		0.18		0.36	0.36	0.36	0.33	0.33		0.51	0.51	
Clearance Time (s)		6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		477		324	1118	515	82	1136		351	1773	
v/s Ratio Prot				c0.05	0.03			0.20		0.05	c0.41	
v/s Ratio Perm		c0.14		0.11		0.02	c0.31			0.19		
v/c Ratio		0.76		0.44	0.09	0.06	0.94	0.61		0.48	0.81	
Uniform Delay, d1		35.1		20.9	19.2	19.0	29.2	25.3		13.9	18.4	
Progression Factor		1.00		0.76	0.84	5.06	0.72	0.58		1.18	0.86	
Incremental Delay, d2		7.0		0.7	0.0	0.0	77.8	2.2		0.5	2.1	
Delay (s)		42.2		16.6	16.2	95.9	98.8	16.7		16.9	18.0	
Level of Service		D		B	B	F	F	B		B	B	
Approach Delay (s)		42.2			33.6			24.7			17.9	
Approach LOS		D			C			C			B	
Intersection Summary												
HCM 2000 Control Delay			24.6									
HCM 2000 Volume to Capacity ratio			0.84									
Actuated Cycle Length (s)			90.0									
Intersection Capacity Utilization			81.6%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

11: Ponce de Leon Blvd & Granada Blvd

01/09/2023

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	82	323	108	84	447	65	322	691	42	56	1116	156
Future Volume (vph)	82	323	108	84	447	65	322	691	42	56	1116	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00			0.91	0.91	1.00	0.95		1.00	0.95	
Frt	1.00	0.96			1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1793			3358	1441	1770	3509		1770	3474	
Flt Permitted	0.28	1.00			0.55	1.00	0.05	1.00		0.36	1.00	
Satd. Flow (perm)	515	1793			1850	1441	102	3509		670	3474	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	86	340	114	88	471	68	339	727	44	59	1175	164
RTOR Reduction (vph)	0	8	0	0	1	42	0	2	0	0	6	0
Lane Group Flow (vph)	86	446	0	0	565	19	339	769	0	59	1333	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	
Protected Phases		4			8		1	6			2	
Permitted Phases	4			8		8	6			2		
Actuated Green, G (s)	56.0	56.0			56.0	56.0	112.0	112.0		67.2	67.2	
Effective Green, g (s)	56.0	56.0			56.0	56.0	112.0	112.0		67.2	67.2	
Actuated g/C Ratio	0.31	0.31			0.31	0.31	0.62	0.62		0.37	0.37	
Clearance Time (s)	6.0	6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	160	557			575	448	423	2183		250	1296	
v/s Ratio Prot		0.25					c0.17	0.22			c0.38	
v/s Ratio Perm	0.17				c0.31	0.01	0.33			0.09		
v/c Ratio	0.54	0.80			0.98	0.04	0.80	0.35		0.24	1.03	
Uniform Delay, d1	51.3	56.9			61.5	43.3	56.2	16.5		38.8	56.4	
Progression Factor	1.00	1.00			1.34	2.28	0.85	0.95		0.76	0.80	
Incremental Delay, d2	3.4	8.1			27.7	0.0	9.7	0.4		0.8	23.1	
Delay (s)	54.7	65.0			110.1	98.6	57.7	16.0		30.4	68.3	
Level of Service	D	E			F	F	E	B		C	E	
Approach Delay (s)		63.4			109.0			28.7			66.7	
Approach LOS		E			F			C			E	
Intersection Summary												
HCM 2000 Control Delay		62.0			HCM 2000 Level of Service			E				
HCM 2000 Volume to Capacity ratio		0.96										
Actuated Cycle Length (s)		180.0			Sum of lost time (s)			18.0				
Intersection Capacity Utilization		112.7%			ICU Level of Service			H				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

12: Ponce de Leon Blvd & Le Jeune Rd & Blue Rd

01/09/2023

												
Movement	WBL2	WBL	WBR	WBR2	NBT	NBR	NBR2	SBL2	SBL	SBT	SBR	NEL
Lane Configurations												
Traffic Volume (vph)	15	279	96	9	446	36	1	16	109	679	564	291
Future Volume (vph)	15	279	96	9	446	36	1	16	109	679	564	291
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		6.0				6.0	6.0		6.0
Lane Util. Factor	1.00	1.00	1.00		0.95				1.00	0.95		0.97
Frt	1.00	1.00	0.85		0.99				1.00	0.93		1.00
Flt Protected	0.95	0.95	1.00		1.00				0.95	1.00		0.95
Satd. Flow (prot)	1770	1770	1583		3498				1770	3298		3433
Flt Permitted	0.58	0.95	1.00		1.00				0.38	1.00		0.95
Satd. Flow (perm)	1080	1770	1583		3498				715	3298		3433
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	16	294	101	9	469	38	1	17	115	715	594	306
RTOR Reduction (vph)	0	0	75	0	0	0	0	0	0	82	0	0
Lane Group Flow (vph)	16	294	35	0	508	0	0	0	132	1227	0	306
Turn Type	Perm	Prot	Perm		NA			Perm	Perm	NA		Prot
Protected Phases		9			2					6		7
Permitted Phases	9		9					6	6			
Actuated Green, G (s)	32.4	32.4	32.4		72.8				72.8	72.8		17.0
Effective Green, g (s)	32.4	32.4	32.4		72.8				72.8	72.8		17.0
Actuated g/C Ratio	0.18	0.18	0.18		0.40				0.40	0.40		0.09
Clearance Time (s)	6.0	6.0	6.0		6.0				6.0	6.0		6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0				3.0	3.0		3.0
Lane Grp Cap (vph)	194	318	284		1414				289	1333		324
v/s Ratio Prot		c0.17			0.15					c0.37		c0.09
v/s Ratio Perm	0.01		0.02						0.18			
v/c Ratio	0.08	0.92	0.12		0.36				0.46	0.92		0.94
Uniform Delay, d1	61.4	72.6	61.9		37.3				39.2	50.9		81.0
Progression Factor	1.47	1.40	3.15		0.12				1.00	1.00		0.77
Incremental Delay, d2	0.2	28.3	0.2		0.3				5.1	11.8		34.5
Delay (s)	90.6	129.8	195.4		4.9				44.3	62.7		97.1
Level of Service	F	F	F		A				D	E		F
Approach Delay (s)		145.5			4.9					61.0		
Approach LOS		F			A					E		
Intersection Summary												
HCM 2000 Control Delay			68.1		HCM 2000 Level of Service				E			
HCM 2000 Volume to Capacity ratio			0.93									
Actuated Cycle Length (s)			180.0		Sum of lost time (s)				24.0			
Intersection Capacity Utilization			97.4%		ICU Level of Service				F			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

12: Ponce de Leon Blvd & Le Jeune Rd & Blue Rd

01/09/2023



Movement	NET	NER	NER2	SWL2	SWL	SWT	SWR
Lane Configurations							
Traffic Volume (vph)	308	202	78	4	63	590	15
Future Volume (vph)	308	202	78	4	63	590	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0	6.0	
Lane Util. Factor	1.00	1.00			1.00	0.95	
Frt	1.00	0.85			1.00	1.00	
Flt Protected	1.00	1.00			0.95	1.00	
Satd. Flow (prot)	1863	1583			1770	3526	
Flt Permitted	1.00	1.00			0.56	1.00	
Satd. Flow (perm)	1863	1583			1052	3526	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	324	213	82	4	66	621	16
RTOR Reduction (vph)	0	38	0	0	0	1	0
Lane Group Flow (vph)	324	257	0	0	70	636	0
Turn Type	NA	Perm		Perm	Perm	NA	
Protected Phases	4					8	
Permitted Phases		4		8	8		
Actuated Green, G (s)	56.8	56.8			33.8	33.8	
Effective Green, g (s)	56.8	56.8			33.8	33.8	
Actuated g/C Ratio	0.32	0.32			0.19	0.19	
Clearance Time (s)	6.0	6.0			6.0	6.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	
Lane Grp Cap (vph)	587	499			197	662	
v/s Ratio Prot	0.17					c0.18	
v/s Ratio Perm		0.16			0.07		
v/c Ratio	0.55	0.52			0.36	0.96	
Uniform Delay, d1	51.1	50.4			63.6	72.4	
Progression Factor	0.78	0.72			1.00	1.00	
Incremental Delay, d2	1.1	0.9			1.1	25.5	
Delay (s)	40.8	37.1			64.7	98.0	
Level of Service	D	D			E	F	
Approach Delay (s)	58.3					94.7	
Approach LOS	E					F	

Intersection Summary

HCM Signalized Intersection Capacity Analysis

1: US-1 & SW 72nd St/Sunset Dr

01/09/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑	↑		↑↑		↑	↑↑↑			↑↑↑	
Traffic Volume (vph)	0	604	23	0	296	11	57	2987	93	0	1648	185
Future Volume (vph)	0	604	23	0	296	11	57	2987	93	0	1648	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.9	8.9		8.9		6.4	8.0			8.0	
Lane Util. Factor		0.95	1.00		0.95		1.00	0.91			0.91	
Frt		1.00	0.85		0.99		1.00	1.00			0.98	
Flt Protected		1.00	1.00		1.00		0.95	1.00			1.00	
Satd. Flow (prot)		3539	1583		3520		1770	5062			5008	
Flt Permitted		1.00	1.00		1.00		0.06	1.00			1.00	
Satd. Flow (perm)		3539	1583		3520		119	5062			5008	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	636	24	0	312	12	60	3144	98	0	1735	195
RTOR Reduction (vph)	0	0	19	0	2	0	0	2	0	0	0	0
Lane Group Flow (vph)	0	636	5	0	322	0	60	3240	0	0	1930	0
Turn Type		NA	Perm		NA		pm+pt	NA			NA	
Protected Phases		8			4		1	6			2	
Permitted Phases			8				6					
Actuated Green, G (s)		29.9	29.9		29.9		103.2	103.2			90.8	
Effective Green, g (s)		29.9	29.9		29.9		103.2	103.2			90.8	
Actuated g/C Ratio		0.20	0.20		0.20		0.69	0.69			0.61	
Clearance Time (s)		8.9	8.9		8.9		6.4	8.0			8.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		705	315		701		147	3482			3031	
v/s Ratio Prot		c0.18			0.09		0.02	c0.64			0.39	
v/s Ratio Perm			0.00				0.26					
v/c Ratio		0.90	0.02		0.46		0.41	0.93			0.64	
Uniform Delay, d1		58.6	48.2		52.9		14.1	20.3			19.0	
Progression Factor		1.00	1.00		1.00		1.56	0.50			0.61	
Incremental Delay, d2		14.8	0.0		0.5		1.2	3.9			0.7	
Delay (s)		73.4	48.2		53.4		23.2	14.0			12.3	
Level of Service		E	D		D		C	B			B	
Approach Delay (s)		72.5			53.4			14.2			12.3	
Approach LOS		E			D			B			B	
Intersection Summary												
HCM 2000 Control Delay			21.8				HCM 2000 Level of Service				C	
HCM 2000 Volume to Capacity ratio			0.97									
Actuated Cycle Length (s)			150.0				Sum of lost time (s)			23.3		
Intersection Capacity Utilization			90.6%				ICU Level of Service			E		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2: US-1 & SW 57th Ave

01/09/2023

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑			↑↑	↑	↑	↑↑↑		↑	↑↑↑	
Traffic Volume (vph)	0	399	125	0	547	125	216	3090	82	119	1957	77
Future Volume (vph)	0	399	125	0	547	125	216	3090	82	119	1957	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0			7.0	7.0	6.8	6.8		6.8	6.8	
Lane Util. Factor		0.95			0.95	1.00	1.00	0.91		1.00	0.91	
Frt		0.96			1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected		1.00			1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3412			3539	1583	1770	5066		1770	5056	
Flt Permitted		1.00			1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		3412			3539	1583	1770	5066		1770	5056	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	420	132	0	576	132	227	3253	86	125	2060	81
RTOR Reduction (vph)	0	20	0	0	0	106	0	2	0	0	3	0
Lane Group Flow (vph)	0	532	0	0	576	26	227	3337	0	125	2138	0
Turn Type		NA			NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases						8						
Actuated Green, G (s)		25.0			25.0	25.0	23.8	93.2		11.2	80.6	
Effective Green, g (s)		25.0			25.0	25.0	23.8	93.2		11.2	80.6	
Actuated g/C Ratio		0.17			0.17	0.17	0.16	0.62		0.07	0.54	
Clearance Time (s)		7.0			7.0	7.0	6.8	6.8		6.8	6.8	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		568			589	263	280	3147		132	2716	
v/s Ratio Prot		0.16			c0.16		c0.13	c0.66		0.07	0.42	
v/s Ratio Perm						0.02						
v/c Ratio		0.94			0.98	0.10	0.81	1.06		0.95	0.79	
Uniform Delay, d1		61.7			62.2	53.0	60.9	28.4		69.1	27.8	
Progression Factor		1.00			0.93	1.53	1.17	0.60		0.74	0.98	
Incremental Delay, d2		23.0			30.9	0.2	9.5	31.9		44.1	1.4	
Delay (s)		84.7			88.6	81.1	80.8	48.9		95.1	28.7	
Level of Service		F			F	F	F	D		F	C	
Approach Delay (s)		84.7			87.2			50.9			32.4	
Approach LOS		F			F			D			C	
Intersection Summary												
HCM 2000 Control Delay			51.2									HCM 2000 Level of Service D
HCM 2000 Volume to Capacity ratio			1.05									
Actuated Cycle Length (s)			150.0								20.6	
Intersection Capacity Utilization			100.4%									ICU Level of Service G
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

3: US-1 & Granada Blvd

01/09/2023

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	114	251	103	11	205	34	82	3193	15	41	2472	129
Future Volume (vph)	114	251	103	11	205	34	82	3193	15	41	2472	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.7	6.7		6.7	6.7		6.8	6.8		6.8	6.8	6.8
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	1.00
Frt	1.00	0.96		1.00	0.98		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3385		1770	3463		1770	5082		1770	5085	1583
Flt Permitted	0.51	1.00		0.33	1.00		0.04	1.00		0.04	1.00	1.00
Satd. Flow (perm)	943	3385		606	3463		71	5082		76	5085	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	120	264	108	12	216	36	86	3361	16	43	2602	136
RTOR Reduction (vph)	0	31	0	0	2	0	0	0	0	0	0	26
Lane Group Flow (vph)	120	341	0	12	250	0	86	3377	0	43	2602	110
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases		8			4		1	6			2	
Permitted Phases	8			4			6			2		2
Actuated Green, G (s)	22.8	22.8		22.8	22.8		113.7	113.7		98.5	98.5	98.5
Effective Green, g (s)	22.8	22.8		22.8	22.8		113.7	113.7		98.5	98.5	98.5
Actuated g/C Ratio	0.15	0.15		0.15	0.15		0.76	0.76		0.66	0.66	0.66
Clearance Time (s)	6.7	6.7		6.7	6.7		6.8	6.8		6.8	6.8	6.8
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	143	514		92	526		148	3852		49	3339	1039
v/s Ratio Prot		0.10			0.07		0.03	c0.66			0.51	
v/s Ratio Perm	c0.13			0.02			0.41			0.57		0.07
v/c Ratio	0.84	0.66		0.13	0.48		0.58	0.88		0.88	0.78	0.11
Uniform Delay, d1	61.8	60.0		55.0	58.1		32.7	13.1		20.9	18.1	9.5
Progression Factor	1.25	1.28		1.00	1.00		1.20	0.53		0.28	0.19	0.00
Incremental Delay, d2	26.1	2.4		0.6	0.7		3.4	1.9		41.0	0.5	0.1
Delay (s)	103.1	79.3		55.7	58.8		42.8	8.9		47.0	4.0	0.1
Level of Service	F	E		E	E		D	A		D	A	A
Approach Delay (s)		85.1			58.7			9.7			4.5	
Approach LOS		F			E			A			A	
Intersection Summary												
HCM 2000 Control Delay		14.8			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.92										
Actuated Cycle Length (s)		150.0			Sum of lost time (s)			20.3				
Intersection Capacity Utilization		111.6%			ICU Level of Service			H				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

4: US-1 & SW 42nd Ave/Le Jeune Rd

01/09/2023

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑			↑↑	↑	↑	↑↑↑		↑	↑↑↑	
Traffic Volume (vph)	0	559	171	0	502	217	247	3193	21	62	2781	0
Future Volume (vph)	0	559	171	0	502	217	247	3193	21	62	2781	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.1			7.1	6.8	6.8	6.8		6.8	6.8	
Lane Util. Factor		0.95			0.91	0.91	1.00	0.91		1.00	0.91	
Frt		0.96			0.99	0.85	1.00	1.00		1.00	1.00	
Flt Protected		1.00			1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3415			3369	1441	1770	5080		1770	5085	
Flt Permitted		1.00			1.00	1.00	0.05	1.00		0.05	1.00	
Satd. Flow (perm)		3415			3369	1441	88	5080		95	5085	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	588	180	0	528	228	260	3361	22	65	2927	0
RTOR Reduction (vph)	0	20	0	0	2	18	0	0	0	0	0	0
Lane Group Flow (vph)	0	748	0	0	549	187	260	3383	0	65	2927	0
Turn Type		NA			NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8	1	1	6		5	2	
Permitted Phases						8	6			2		
Actuated Green, G (s)		35.7			35.7	51.1	100.4	86.9		84.9	78.2	
Effective Green, g (s)		35.7			35.7	51.1	100.4	86.9		84.9	78.2	
Actuated g/C Ratio		0.24			0.24	0.34	0.67	0.58		0.57	0.52	
Clearance Time (s)		7.1			7.1	6.8	6.8	6.8		6.8	6.8	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		812			801	490	231	2943		128	2650	
v/s Ratio Prot		c0.22			0.16	0.04	c0.12	c0.67		0.02	0.58	
v/s Ratio Perm						0.09	0.64			0.26		
v/c Ratio		0.92			0.69	0.38	1.13	1.15		0.51	1.10	
Uniform Delay, d1		55.8			52.0	37.5	54.5	31.5		33.7	35.9	
Progression Factor		1.00			0.53	0.28	1.18	0.53		1.54	0.46	
Incremental Delay, d2		15.7			2.1	0.4	82.6	69.7		1.0	49.2	
Delay (s)		71.5			29.9	10.7	147.0	86.4		52.8	65.6	
Level of Service		E			C	B	F	F		D	E	
Approach Delay (s)		71.5			24.7			90.7			65.3	
Approach LOS		E			C			F			E	
Intersection Summary												
HCM 2000 Control Delay			73.4									HCM 2000 Level of Service E
HCM 2000 Volume to Capacity ratio			1.12									
Actuated Cycle Length (s)			150.0									Sum of lost time (s) 20.7
Intersection Capacity Utilization			105.6%									ICU Level of Service G
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: US-1 & Blue Rd/Grand Ave

01/09/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations								  			  	
Traffic Volume (vph)	80	353	11	103	217	0	0	3090	247	0	2781	57
Future Volume (vph)	80	353	11	103	217	0	0	3090	247	0	2781	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.9	7.9		7.9	7.9			6.8			6.8	
Lane Util. Factor	1.00	1.00		1.00	1.00			0.91			0.91	
Frt	1.00	1.00		1.00	1.00			0.99			1.00	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1770	1854		1770	1863			5029			5070	
Flt Permitted	0.62	1.00		0.12	1.00			1.00			1.00	
Satd. Flow (perm)	1148	1854		218	1863			5029			5070	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	84	372	12	108	228	0	0	3253	260	0	2927	60
RTOR Reduction (vph)	0	1	0	0	0	0	0	6	0	0	2	0
Lane Group Flow (vph)	84	383	0	108	228	0	0	3507	0	0	2985	0
Turn Type	Perm	NA		pm+pt	NA			NA			NA	
Protected Phases		8		7	4			2			6	
Permitted Phases	8			4								
Actuated Green, G (s)	26.3	26.3		44.1	44.1			91.2			91.2	
Effective Green, g (s)	26.3	26.3		44.1	44.1			91.2			91.2	
Actuated g/C Ratio	0.18	0.18		0.29	0.29			0.61			0.61	
Clearance Time (s)	7.9	7.9		7.9	7.9			6.8			6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	201	325		166	547			3057			3082	
v/s Ratio Prot		c0.21		c0.04	0.12			c0.70			0.59	
v/s Ratio Perm	0.07			0.15								
v/c Ratio	0.42	1.18		0.65	0.42			1.15			0.97	
Uniform Delay, d1	55.0	61.9		43.0	42.6			29.4			28.0	
Progression Factor	1.37	1.35		1.00	1.00			0.25			0.53	
Incremental Delay, d2	1.3	106.8		8.8	0.5			66.7			1.5	
Delay (s)	76.6	190.1		51.8	43.1			73.9			16.4	
Level of Service	E	F		D	D			E			B	
Approach Delay (s)		169.8			45.9			73.9			16.4	
Approach LOS		F			D			E			B	
Intersection Summary												
HCM 2000 Control Delay			55.3			HCM 2000 Level of Service			E			
HCM 2000 Volume to Capacity ratio			1.12									
Actuated Cycle Length (s)			150.0			Sum of lost time (s)			22.6			
Intersection Capacity Utilization			109.0%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

6: US-1 & SW 37th Ave/Douglas Rd

01/09/2023

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	23	456	171	0	228	205	113	2678	15	52	2884	82
Future Volume (vph)	23	456	171	0	228	205	113	2678	15	52	2884	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.5			7.5	6.8	6.8	6.8		6.8	6.8	
Lane Util. Factor	1.00	0.95			1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.96			1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3394			1863	1583	1770	5081		1770	5064	
Flt Permitted	0.42	1.00			1.00	1.00	0.04	1.00		0.05	1.00	
Satd. Flow (perm)	779	3394			1863	1583	80	5081		87	5064	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	24	480	180	0	240	216	119	2819	16	55	3036	86
RTOR Reduction (vph)	0	2	0	0	0	20	0	0	0	0	2	0
Lane Group Flow (vph)	24	658	0	0	240	196	119	2835	0	55	3120	0
Turn Type	Perm	NA			NA	pm+ov	pm+pt	NA		Perm	NA	
Protected Phases		4			8	1	1	6			2	
Permitted Phases	4					8	6			2		
Actuated Green, G (s)	33.3	33.3			33.3	43.1	102.4	102.4		85.8	85.8	
Effective Green, g (s)	33.3	33.3			33.3	43.1	102.4	102.4		85.8	85.8	
Actuated g/C Ratio	0.22	0.22			0.22	0.29	0.68	0.68		0.57	0.57	
Clearance Time (s)	7.5	7.5			7.5	6.8	6.8	6.8		6.8	6.8	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	172	753			413	454	165	3468		49	2896	
v/s Ratio Prot		c0.19			0.13	0.03	0.05	c0.56			0.62	
v/s Ratio Perm	0.03					0.10	0.44			c0.63		
v/c Ratio	0.14	0.87			0.58	0.43	0.72	0.82		1.12	1.08	
Uniform Delay, d1	46.8	56.3			52.1	43.5	46.3	17.1		32.1	32.1	
Progression Factor	1.00	1.00			1.00	1.00	1.24	0.90		0.15	0.13	
Incremental Delay, d2	0.4	11.0			2.1	0.7	1.4	0.2		76.8	35.6	
Delay (s)	47.2	67.3			54.2	44.1	58.7	15.6		81.6	39.7	
Level of Service	D	E			D	D	E	B		F	D	
Approach Delay (s)		66.6			49.4			17.4			40.5	
Approach LOS		E			D			B			D	
Intersection Summary												
HCM 2000 Control Delay			34.1									HCM 2000 Level of Service C
HCM 2000 Volume to Capacity ratio			1.05									
Actuated Cycle Length (s)			150.0									Sum of lost time (s) 21.1
Intersection Capacity Utilization			100.5%									ICU Level of Service G
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

7: US-1 & Bird Rd/SW 40th St

01/09/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	633	228	0	251	331	11	0	2678	155	0	2884	567
Future Volume (vph)	633	228	0	251	331	11	0	2678	155	0	2884	567
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.1	8.1		8.1	8.1			7.5	8.1		7.5	8.1
Lane Util. Factor	0.91	0.91		0.91	0.91			0.91	1.00		0.91	1.00
Frt	1.00	1.00		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	0.99		0.95	0.99			1.00	1.00		1.00	1.00
Satd. Flow (prot)	3221	1677		1610	3351			5085	1583		5085	1583
Flt Permitted	0.95	0.99		0.95	0.99			1.00	1.00		1.00	1.00
Satd. Flow (perm)	3221	1677		1610	3351			5085	1583		5085	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	666	240	0	264	348	12	0	2819	163	0	3036	597
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	27	0	0	10
Lane Group Flow (vph)	599	307	0	203	420	0	0	2819	136	0	3036	587
Turn Type	Split	NA		Split	NA			NA	pm+ov		NA	pm+ov
Protected Phases	3	3		4	4			6	4		2	3
Permitted Phases									6			2
Actuated Green, G (s)	25.9	25.9		17.9	17.9			82.5	100.4		82.5	108.4
Effective Green, g (s)	25.9	25.9		17.9	17.9			82.5	100.4		82.5	108.4
Actuated g/C Ratio	0.17	0.17		0.12	0.12			0.55	0.67		0.55	0.72
Clearance Time (s)	8.1	8.1		8.1	8.1			7.5	8.1		7.5	8.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	556	289		192	399			2796	1145		2796	1143
v/s Ratio Prot	c0.19	0.18		c0.13	0.13			0.55	0.01		c0.60	0.09
v/s Ratio Perm									0.07			0.28
v/c Ratio	1.08	1.06		1.06	1.05			1.01	0.12		1.09	0.51
Uniform Delay, d1	62.1	62.1		66.0	66.0			33.8	8.9		33.8	9.2
Progression Factor	1.00	1.00		1.00	1.00			0.68	1.86		0.23	0.25
Incremental Delay, d2	60.7	70.3		80.9	59.7			14.7	0.0		39.3	0.0
Delay (s)	122.7	132.4		147.0	125.7			37.5	16.6		47.2	2.3
Level of Service	F	F		F	F			D	B		D	A
Approach Delay (s)		126.0			132.6			36.3			39.8	
Approach LOS		F			F			D			D	
Intersection Summary												
HCM 2000 Control Delay			55.2									
HCM 2000 Volume to Capacity ratio			1.08									
Actuated Cycle Length (s)			150.0									
Intersection Capacity Utilization			102.4%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

8: SW 27th Ave & US-1

01/09/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (vph)	196	3399	21	52	2781	62	40	422	262	125	433	388
Future Volume (vph)	196	3399	21	52	2781	62	40	422	262	125	433	388
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	6.9		6.8	6.9		6.4	6.6	6.6	6.4	6.6	6.8
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	5081		1770	5069		1770	3539	1583	1770	3539	1583
Flt Permitted	0.05	1.00		0.06	1.00		0.34	1.00	1.00	0.22	1.00	1.00
Satd. Flow (perm)	94	5081		102	5069		626	3539	1583	407	3539	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	206	3578	22	55	2927	65	42	444	276	132	456	408
RTOR Reduction (vph)	0	0	0	0	2	0	0	0	130	0	0	72
Lane Group Flow (vph)	206	3600	0	55	2990	0	42	444	146	132	456	336
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	pm+ov
Protected Phases	1	6		5	2		7	4		3	8	1
Permitted Phases	6			2			4		4	8		8
Actuated Green, G (s)	94.0	80.9		79.0	72.7		31.9	24.9	24.9	40.3	29.1	43.6
Effective Green, g (s)	94.0	80.9		79.0	72.7		31.9	24.9	24.9	40.3	29.1	43.6
Actuated g/C Ratio	0.63	0.54		0.53	0.48		0.21	0.17	0.17	0.27	0.19	0.29
Clearance Time (s)	6.8	6.9		6.8	6.9		6.4	6.6	6.6	6.4	6.6	6.8
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	220	2740		123	2456		186	587	262	211	686	460
v/s Ratio Prot	c0.09	c0.71		0.02	0.59		0.01	0.13		c0.05	0.13	c0.07
v/s Ratio Perm	0.50			0.21			0.04		0.09	0.12		0.14
v/c Ratio	0.94	1.31		0.45	1.22		0.23	0.76	0.56	0.63	0.66	0.73
Uniform Delay, d1	51.5	34.5		33.6	38.6		47.8	59.7	57.5	44.4	55.9	47.9
Progression Factor	1.44	0.63		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	24.2	142.3		2.6	101.9		0.6	5.5	2.6	5.7	2.4	5.9
Delay (s)	98.4	164.1		36.1	140.5		48.5	65.2	60.0	50.1	58.4	53.8
Level of Service	F	F		D	F		D	E	E	D	E	D
Approach Delay (s)		160.5			138.6			62.4			55.4	
Approach LOS		F			F			E			E	
Intersection Summary												
HCM 2000 Control Delay	131.9			HCM 2000 Level of Service					F			
HCM 2000 Volume to Capacity ratio	1.17											
Actuated Cycle Length (s)	150.0			Sum of lost time (s)					26.7			
Intersection Capacity Utilization	111.1%			ICU Level of Service					H			
Analysis Period (min)	15											
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

9: SW 57th Ave/Red Rd & Ponce de Leon Blvd

01/09/2023

						
Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations	↑↑		↵	↑↑		↵
Traffic Volume (vph)	342	456	342	570	0	248
Future Volume (vph)	342	456	342	570	0	248
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0	6.0		6.0
Lane Util. Factor	0.95		1.00	0.95		1.00
Frt	0.91		1.00	1.00		0.86
Flt Protected	1.00		0.95	1.00		1.00
Satd. Flow (prot)	3236		1770	3539		1611
Flt Permitted	1.00		0.95	1.00		1.00
Satd. Flow (perm)	3236		1770	3539		1611
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	360	480	360	600	0	261
RTOR Reduction (vph)	223	0	0	0	0	162
Lane Group Flow (vph)	617	0	360	600	0	99
Turn Type	NA		Prot	NA		pt+ov
Protected Phases	2		1 3	6		1 3
Permitted Phases						
Actuated Green, G (s)	34.6		28.4	49.4		28.4
Effective Green, g (s)	34.6		28.4	49.4		28.4
Actuated g/C Ratio	0.46		0.38	0.66		0.38
Clearance Time (s)	6.0			6.0		
Vehicle Extension (s)	3.0			3.0		
Lane Grp Cap (vph)	1492		670	2331		610
v/s Ratio Prot	c0.19		c0.20	0.17		0.06
v/s Ratio Perm						
v/c Ratio	0.41		0.54	0.26		0.16
Uniform Delay, d1	13.4		18.2	5.3		15.4
Progression Factor	0.90		1.00	1.00		2.76
Incremental Delay, d2	0.6		0.8	0.3		0.1
Delay (s)	12.7		19.0	5.5		42.7
Level of Service	B		B	A		D
Approach Delay (s)	12.7			10.6	42.7	
Approach LOS	B			B	D	
Intersection Summary						
HCM 2000 Control Delay		15.5		HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio		0.52				
Actuated Cycle Length (s)		75.0		Sum of lost time (s)		18.0
Intersection Capacity Utilization		53.1%		ICU Level of Service		A
Analysis Period (min)		15				
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis

10: Ponce de Leon Blvd & Stanford Dr

01/09/2023

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	23	26	24	100	76	109	86	839	118	113	420	107
Future Volume (vph)	23	26	24	100	76	109	86	839	118	113	420	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor		0.95		1.00	0.91	0.91	1.00	0.95		1.00	0.95	
Frt		0.95		1.00	0.94	0.85	1.00	0.98		1.00	0.97	
Flt Protected		0.98		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3312		1770	3185	1441	1770	3474		1770	3431	
Flt Permitted		0.83		0.35	1.00	1.00	0.44	1.00		0.14	1.00	
Satd. Flow (perm)		2792		645	3185	1441	827	3474		267	3431	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	24	27	25	105	80	115	91	883	124	119	442	113
RTOR Reduction (vph)	0	23	0	0	40	45	0	11	0	0	22	0
Lane Group Flow (vph)	0	53	0	105	94	16	91	996	0	119	533	0
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		5.8		19.1	19.1	19.1	31.0	31.0		43.9	43.9	
Effective Green, g (s)		5.8		19.1	19.1	19.1	31.0	31.0		43.9	43.9	
Actuated g/C Ratio		0.08		0.25	0.25	0.25	0.41	0.41		0.59	0.59	
Clearance Time (s)		6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		215		273	811	366	341	1435		294	2008	
v/s Ratio Prot				c0.04	0.03			c0.29		c0.04	0.16	
v/s Ratio Perm		0.02		c0.06		0.01	0.11			0.20		
v/c Ratio		0.25		0.38	0.12	0.04	0.27	0.69		0.40	0.27	
Uniform Delay, d1		32.5		22.4	21.5	21.1	14.5	18.1		9.8	7.6	
Progression Factor		1.00		1.16	1.39	1.00	0.53	0.55		0.40	0.29	
Incremental Delay, d2		0.6		0.8	0.1	0.0	1.4	2.1		0.8	0.3	
Delay (s)		33.1		26.8	29.9	21.1	9.1	12.1		4.7	2.5	
Level of Service		C		C	C	C	A	B		A	A	
Approach Delay (s)		33.1			27.0			11.9			2.9	
Approach LOS		C			C			B			A	
Intersection Summary												
HCM 2000 Control Delay			11.9									HCM 2000 Level of Service B
HCM 2000 Volume to Capacity ratio			0.61									
Actuated Cycle Length (s)			75.0									Sum of lost time (s) 24.0
Intersection Capacity Utilization			60.4%									ICU Level of Service B
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

11: Ponce de Leon Blvd & Granada Blvd

01/09/2023

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	39	368	107	42	329	31	166	740	33	36	464	81
Future Volume (vph)	39	368	107	42	329	31	166	740	33	36	464	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00			0.91	0.91	1.00	0.95		1.00	0.95	
Frt	1.00	0.97			1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1800			3367	1441	1770	3516		1770	3460	
Flt Permitted	0.49	1.00			0.69	1.00	0.29	1.00		0.34	1.00	
Satd. Flow (perm)	912	1800			2349	1441	535	3516		642	3460	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	387	113	44	346	33	175	779	35	38	488	85
RTOR Reduction (vph)	0	14	0	0	1	21	0	4	0	0	17	0
Lane Group Flow (vph)	41	486	0	0	392	9	175	810	0	38	556	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	
Protected Phases		4			8		1	6			2	
Permitted Phases	4			8		8	6			2		
Actuated Green, G (s)	23.6	23.6			23.6	23.6	39.4	39.4		24.0	24.0	
Effective Green, g (s)	23.6	23.6			23.6	23.6	39.4	39.4		24.0	24.0	
Actuated g/C Ratio	0.31	0.31			0.31	0.31	0.53	0.53		0.32	0.32	
Clearance Time (s)	6.0	6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	286	566			739	453	435	1847		205	1107	
v/s Ratio Prot		c0.27					0.05	c0.23			c0.16	
v/s Ratio Perm	0.04				0.17	0.01	0.16			0.06		
v/c Ratio	0.14	0.86			0.53	0.02	0.40	0.44		0.19	0.50	
Uniform Delay, d1	18.4	24.1			21.1	17.7	10.3	11.0		18.4	20.7	
Progression Factor	1.00	1.00			0.85	1.00	0.39	0.23		0.68	0.67	
Incremental Delay, d2	0.2	12.3			0.7	0.0	0.5	0.6		1.8	1.5	
Delay (s)	18.7	36.4			18.7	17.7	4.6	3.2		14.4	15.4	
Level of Service	B	D			B	B	A	A		B	B	
Approach Delay (s)		35.0			18.6			3.4			15.3	
Approach LOS		D			B			A			B	
Intersection Summary												
HCM 2000 Control Delay		15.4			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.67										
Actuated Cycle Length (s)		75.0			Sum of lost time (s)			18.0				
Intersection Capacity Utilization		82.2%			ICU Level of Service			E				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

12: Ponce de Leon Blvd & Le Jeune Rd & Blue Rd

01/09/2023

												
Movement	WBL2	WBL	WBR	WBR2	NBT	NBR	NBR2	SBL2	SBL	SBT	SBR	NEL
Lane Configurations												
Traffic Volume (vph)	74	154	65	2	454	117	3	7	68	521	172	179
Future Volume (vph)	74	154	65	2	454	117	3	7	68	521	172	179
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		6.0				6.0	6.0		6.0
Lane Util. Factor	1.00	1.00	1.00		0.95				1.00	0.95		0.97
Frt	1.00	1.00	0.85		0.97				1.00	0.96		1.00
Flt Protected	0.95	0.95	1.00		1.00				0.95	1.00		0.95
Satd. Flow (prot)	1770	1770	1583		3428				1770	3407		3433
Flt Permitted	0.56	0.95	1.00		1.00				0.31	1.00		0.95
Satd. Flow (perm)	1048	1770	1583		3428				578	3407		3433
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	78	162	68	2	478	123	3	7	72	548	181	188
RTOR Reduction (vph)	0	0	62	0	0	0	0	0	0	19	0	0
Lane Group Flow (vph)	78	162	8	0	604	0	0	0	79	710	0	188
Turn Type	Perm	Prot	Perm		NA			Perm	Perm	NA		Prot
Protected Phases		9			2					6		7
Permitted Phases	9		9					6	6			
Actuated Green, G (s)	18.0	18.0	18.0		54.4				54.4	54.4		12.2
Effective Green, g (s)	18.0	18.0	18.0		54.4				54.4	54.4		12.2
Actuated g/C Ratio	0.12	0.12	0.12		0.36				0.36	0.36		0.08
Clearance Time (s)	6.0	6.0	6.0		6.0				6.0	6.0		6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0				3.0	3.0		3.0
Lane Grp Cap (vph)	125	212	189		1243				209	1235		279
v/s Ratio Prot		c0.09			0.18					c0.21		0.05
v/s Ratio Perm	0.07		0.01						0.14			
v/c Ratio	0.62	0.76	0.04		0.49				0.38	0.57		0.67
Uniform Delay, d1	62.8	63.9	58.4		37.0				35.3	38.5		67.0
Progression Factor	1.33	1.31	12.34		0.62				1.00	1.00		1.18
Incremental Delay, d2	8.3	13.5	0.1		0.4				5.1	2.0		6.1
Delay (s)	92.1	97.5	720.4		23.5				40.4	40.4		85.0
Level of Service	F	F	F		C				D	D		F
Approach Delay (s)		236.8			23.5					40.4		
Approach LOS		F			C					D		
Intersection Summary												
HCM 2000 Control Delay			59.9		HCM 2000 Level of Service				E			
HCM 2000 Volume to Capacity ratio			0.78									
Actuated Cycle Length (s)			150.0		Sum of lost time (s)				24.0			
Intersection Capacity Utilization			91.2%		ICU Level of Service				F			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

12: Ponce de Leon Blvd & Le Jeune Rd & Blue Rd

01/09/2023



Movement	NET	NER	NER2	SWL	SWT	SWR
Lane Configurations	↑	↗		↘	↖	↗
Traffic Volume (vph)	626	288	24	30	253	7
Future Volume (vph)	626	288	24	30	253	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	0.95	
Frt	1.00	0.85		1.00	1.00	
Flt Protected	1.00	1.00		0.95	1.00	
Satd. Flow (prot)	1863	1583		1770	3526	
Flt Permitted	1.00	1.00		0.13	1.00	
Satd. Flow (perm)	1863	1583		250	3526	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	659	303	25	32	266	7
RTOR Reduction (vph)	0	39	0	0	1	0
Lane Group Flow (vph)	659	289	0	32	272	0
Turn Type	NA	Perm		Perm	NA	
Protected Phases	4				8	
Permitted Phases		4		8		
Actuated Green, G (s)	59.6	59.6		41.4	41.4	
Effective Green, g (s)	59.6	59.6		41.4	41.4	
Actuated g/C Ratio	0.40	0.40		0.28	0.28	
Clearance Time (s)	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	740	628		69	973	
v/s Ratio Prot	c0.35				0.08	
v/s Ratio Perm		0.18		0.13		
v/c Ratio	0.89	0.46		0.46	0.28	
Uniform Delay, d1	42.2	33.3		45.1	42.6	
Progression Factor	0.89	0.83		1.00	1.00	
Incremental Delay, d2	12.6	0.5		4.9	0.2	
Delay (s)	50.0	28.3		49.9	42.8	
Level of Service	D	C		D	D	
Approach Delay (s)	49.5				43.5	
Approach LOS	D				D	

Intersection Summary

HCM Signalized Intersection Capacity Analysis

1: US-1 & SW 72nd St/Sunset Dr

01/09/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑	↑		↑↑		↑	↑↑↑			↑↑↑	
Traffic Volume (vph)	0	490	74	0	410	23	113	2060	118	0	2678	340
Future Volume (vph)	0	490	74	0	410	23	113	2060	118	0	2678	340
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.9	8.9		8.9		6.4	8.0			8.0	
Lane Util. Factor		0.95	1.00		0.95		1.00	0.91			0.91	
Frt		1.00	0.85		0.99		1.00	0.99			0.98	
Flt Protected		1.00	1.00		1.00		0.95	1.00			1.00	
Satd. Flow (prot)		3539	1583		3511		1770	5044			4999	
Flt Permitted		1.00	1.00		1.00		0.04	1.00			1.00	
Satd. Flow (perm)		3539	1583		3511		76	5044			4999	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	516	78	0	432	24	119	2168	124	0	2819	358
RTOR Reduction (vph)	0	0	65	0	3	0	0	4	0	0	10	0
Lane Group Flow (vph)	0	516	13	0	454	0	119	2288	0	0	3167	0
Turn Type		NA	Perm		NA		pm+pt	NA			NA	
Protected Phases		8			4		1	6			2	
Permitted Phases			8				6					
Actuated Green, G (s)		25.0	25.0		25.0		108.1	108.1			91.9	
Effective Green, g (s)		25.0	25.0		25.0		108.1	108.1			91.9	
Actuated g/C Ratio		0.17	0.17		0.17		0.72	0.72			0.61	
Clearance Time (s)		8.9	8.9		8.9		6.4	8.0			8.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0			3.0	
Lane Grp Cap (vph)		589	263		585		165	3635			3062	
v/s Ratio Prot		c0.15			0.13		0.05	c0.45			c0.63	
v/s Ratio Perm			0.01				0.47					
v/c Ratio		0.88	0.05		0.78		0.72	0.63			1.03	
Uniform Delay, d1		61.0	52.5		59.8		48.6	10.7			29.0	
Progression Factor		1.00	1.00		1.00		1.44	0.72			0.36	
Incremental Delay, d2		13.7	0.1		6.4		4.5	0.2			18.7	
Delay (s)		74.7	52.6		66.2		74.5	8.0			29.1	
Level of Service		E	D		E		E	A			C	
Approach Delay (s)		71.8			66.2			11.2			29.1	
Approach LOS		E			E			B			C	
Intersection Summary												
HCM 2000 Control Delay			29.0				HCM 2000 Level of Service				C	
HCM 2000 Volume to Capacity ratio			0.99									
Actuated Cycle Length (s)			150.0				Sum of lost time (s)			23.3		
Intersection Capacity Utilization			98.5%				ICU Level of Service			F		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2: US-1 & SW 57th Ave

01/09/2023

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑			↑↑	↑	↑	↑↑↑		↑	↑↑↑	
Traffic Volume (vph)	0	524	108	0	490	388	165	2163	139	165	2575	57
Future Volume (vph)	0	524	108	0	490	388	165	2163	139	165	2575	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0			7.0	7.0	6.8	6.8		6.8	6.8	
Lane Util. Factor		0.95			0.95	1.00	1.00	0.91		1.00	0.91	
Frt		0.97			1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected		1.00			1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3448			3539	1583	1770	5039		1770	5069	
Flt Permitted		1.00			1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		3448			3539	1583	1770	5039		1770	5069	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	552	114	0	516	408	174	2277	146	174	2711	60
RTOR Reduction (vph)	0	11	0	0	0	138	0	4	0	0	1	0
Lane Group Flow (vph)	0	655	0	0	516	270	174	2419	0	174	2770	0
Turn Type		NA			NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases						8						
Actuated Green, G (s)		29.0			29.0	29.0	15.2	83.0		17.4	85.2	
Effective Green, g (s)		29.0			29.0	29.0	15.2	83.0		17.4	85.2	
Actuated g/C Ratio		0.19			0.19	0.19	0.10	0.55		0.12	0.57	
Clearance Time (s)		7.0			7.0	7.0	6.8	6.8		6.8	6.8	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		666			684	306	179	2788		205	2879	
v/s Ratio Prot		c0.19			0.15		c0.10	0.48		0.10	c0.55	
v/s Ratio Perm						0.17						
v/c Ratio		0.98			0.75	0.88	0.97	0.87		0.85	0.96	
Uniform Delay, d1		60.3			57.1	58.8	67.2	28.8		65.0	30.9	
Progression Factor		1.00			0.96	0.96	1.10	0.78		1.14	0.98	
Incremental Delay, d2		30.4			4.7	24.3	50.0	3.0		16.3	6.4	
Delay (s)		90.7			59.7	80.5	124.1	25.6		90.2	36.5	
Level of Service		F			E	F	F	C		F	D	
Approach Delay (s)		90.7			68.9			32.2			39.7	
Approach LOS		F			E			C			D	
Intersection Summary												
HCM 2000 Control Delay		45.5			HCM 2000 Level of Service			D				
HCM 2000 Volume to Capacity ratio		0.97										
Actuated Cycle Length (s)		150.0			Sum of lost time (s)			20.6				
Intersection Capacity Utilization		95.3%			ICU Level of Service			F				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

3: US-1 & Granada Blvd

01/09/2023

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	97	239	91	23	274	46	206	2472	21	52	2215	113
Future Volume (vph)	97	239	91	23	274	46	206	2472	21	52	2215	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.7	6.7		6.7	6.7		6.8	6.8		6.8	6.8	6.8
Lane Util. Factor	1.00	0.95		1.00	0.95		1.00	0.91		1.00	0.91	1.00
Frt	1.00	0.96		1.00	0.98		1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3393		1770	3463		1770	5079		1770	5085	1583
Flt Permitted	0.38	1.00		0.37	1.00		0.04	1.00		0.04	1.00	1.00
Satd. Flow (perm)	717	3393		685	3463		77	5079		83	5085	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	102	252	96	24	288	48	217	2602	22	55	2332	119
RTOR Reduction (vph)	0	27	0	0	7	0	0	0	0	0	0	31
Lane Group Flow (vph)	102	321	0	24	329	0	217	2624	0	55	2332	88
Turn Type	Perm	NA		Perm	NA		pm+pt	NA		Perm	NA	Perm
Protected Phases		8			4		1	6			2	
Permitted Phases	8			4			6			2		2
Actuated Green, G (s)	23.6	23.6		23.6	23.6		112.9	112.9		89.4	89.4	89.4
Effective Green, g (s)	23.6	23.6		23.6	23.6		112.9	112.9		89.4	89.4	89.4
Actuated g/C Ratio	0.16	0.16		0.16	0.16		0.75	0.75		0.60	0.60	0.60
Clearance Time (s)	6.7	6.7		6.7	6.7		6.8	6.8		6.8	6.8	6.8
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	112	533		107	544		246	3822		49	3030	943
v/s Ratio Prot		0.09			0.10		c0.10	0.52			0.46	
v/s Ratio Perm	c0.14			0.04			0.56			c0.66		0.06
v/c Ratio	0.91	0.60		0.22	0.61		0.88	0.69		1.12	0.77	0.09
Uniform Delay, d1	62.2	58.8		55.2	58.9		50.6	9.5		30.3	22.6	13.0
Progression Factor	1.07	1.10		1.00	1.00		1.42	0.77		1.75	1.84	2.59
Incremental Delay, d2	47.0	1.4		1.1	1.9		24.0	0.8		133.4	1.1	0.1
Delay (s)	113.5	66.3		56.3	60.8		95.7	8.1		186.3	42.6	33.7
Level of Service	F	E		E	E		F	A		F	D	C
Approach Delay (s)		77.0			60.5			14.8			45.4	
Approach LOS		E			E			B			D	
Intersection Summary												
HCM 2000 Control Delay		34.5					HCM 2000 Level of Service			C		
HCM 2000 Volume to Capacity ratio		1.05										
Actuated Cycle Length (s)		150.0					Sum of lost time (s)			20.3		
Intersection Capacity Utilization		110.7%					ICU Level of Service			H		
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

4: US-1 & SW 42nd Ave/Le Jeune Rd

01/09/2023

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑			↑↑	↑	↑	↑↑↑		↑	↑↑↑	
Traffic Volume (vph)	0	467	205	0	638	239	108	2678	31	206	2678	0
Future Volume (vph)	0	467	205	0	638	239	108	2678	31	206	2678	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.1			7.1	7.1	6.8	6.8		6.8	6.8	
Lane Util. Factor		0.95			0.91	0.91	1.00	0.91		1.00	0.91	
Frt		0.95			0.99	0.85	1.00	1.00		1.00	1.00	
Flt Protected		1.00			1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3377			3372	1441	1770	5076		1770	5085	
Flt Permitted		1.00			1.00	1.00	0.05	1.00		0.05	1.00	
Satd. Flow (perm)		3377			3372	1441	94	5076		88	5085	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	492	216	0	672	252	114	2819	33	217	2819	0
RTOR Reduction (vph)	0	34	0	0	2	104	0	1	0	0	0	0
Lane Group Flow (vph)	0	674	0	0	695	123	114	2851	0	217	2819	0
Turn Type		NA			NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases						8	6			2		
Actuated Green, G (s)		35.0			35.0	35.0	88.8	79.2		99.8	84.7	
Effective Green, g (s)		35.0			35.0	35.0	88.8	79.2		99.8	84.7	
Actuated g/C Ratio		0.23			0.23	0.23	0.59	0.53		0.67	0.56	
Clearance Time (s)		7.1			7.1	7.1	6.8	6.8		6.8	6.8	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		787			786	336	162	2680		227	2871	
v/s Ratio Prot		0.20			c0.21		0.04	c0.56		c0.10	c0.55	
v/s Ratio Perm						0.09	0.37			0.54		
v/c Ratio		0.86			0.88	0.37	0.70	1.06		0.96	0.98	
Uniform Delay, d1		55.1			55.6	48.2	39.5	35.4		53.4	31.9	
Progression Factor		1.00			1.20	1.65	1.03	0.75		1.55	0.37	
Incremental Delay, d2		9.1			7.1	0.4	10.6	35.9		23.9	6.3	
Delay (s)		64.2			73.9	80.0	51.4	62.3		106.8	18.0	
Level of Service		E			E	E	D	E		F	B	
Approach Delay (s)		64.2			75.4			61.9			24.4	
Approach LOS		E			E			E			C	
Intersection Summary												
HCM 2000 Control Delay		48.8			HCM 2000 Level of Service			D				
HCM 2000 Volume to Capacity ratio		1.02										
Actuated Cycle Length (s)		150.0			Sum of lost time (s)			20.7				
Intersection Capacity Utilization		101.3%			ICU Level of Service			G				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: US-1 & Blue Rd/Grand Ave

01/09/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations								  			  	
Traffic Volume (vph)	114	274	0	114	285	23	0	2678	165	0	2781	46
Future Volume (vph)	114	274	0	114	285	23	0	2678	165	0	2781	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.9	7.9		7.9	7.9			6.8			6.8	
Lane Util. Factor	1.00	1.00		1.00	1.00			0.91			0.91	
Frt	1.00	1.00		1.00	0.99			0.99			1.00	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1770	1863		1770	1842			5041			5073	
Flt Permitted	0.56	1.00		0.17	1.00			1.00			1.00	
Satd. Flow (perm)	1052	1863		324	1842			5041			5073	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	120	288	0	120	300	24	0	2819	174	0	2927	48
RTOR Reduction (vph)	0	0	0	0	1	0	0	4	0	0	1	0
Lane Group Flow (vph)	120	288	0	120	323	0	0	2989	0	0	2974	0
Turn Type	Perm	NA		pm+pt	NA			NA			NA	
Protected Phases		8		7	4			2			6	
Permitted Phases	8			4								
Actuated Green, G (s)	25.8	25.8		43.6	43.6			91.7			91.7	
Effective Green, g (s)	25.8	25.8		43.6	43.6			91.7			91.7	
Actuated g/C Ratio	0.17	0.17		0.29	0.29			0.61			0.61	
Clearance Time (s)	7.9	7.9		7.9	7.9			6.8			6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	180	320		189	535			3081			3101	
v/s Ratio Prot		c0.15		0.04	c0.18			c0.59			0.59	
v/s Ratio Perm	0.11			0.14								
v/c Ratio	0.67	0.90		0.63	0.60			0.97			0.96	
Uniform Delay, d1	58.1	60.8		42.6	45.8			27.8			27.4	
Progression Factor	1.05	1.04		1.00	1.00			0.30			0.25	
Incremental Delay, d2	8.4	25.2		6.8	1.9			1.5			1.2	
Delay (s)	69.2	88.8		49.4	47.7			9.9			7.9	
Level of Service	E	F		D	D			A			A	
Approach Delay (s)		83.0			48.2			9.9			7.9	
Approach LOS		F			D			A			A	
Intersection Summary												
HCM 2000 Control Delay		15.9			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.95										
Actuated Cycle Length (s)		150.0			Sum of lost time (s)			22.6				
Intersection Capacity Utilization		97.0%			ICU Level of Service			F				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

6: US-1 & SW 37th Ave/Douglas Rd

01/09/2023

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	46	502	91	0	467	125	216	2472	46	46	2781	77
Future Volume (vph)	46	502	91	0	467	125	216	2472	46	46	2781	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.5			7.5	6.8	6.8	6.8		6.8	6.8	
Lane Util. Factor	1.00	0.95			1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.98			1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3458			1863	1583	1770	5071		1770	5065	
Flt Permitted	0.11	1.00			1.00	1.00	0.05	1.00		0.05	1.00	
Satd. Flow (perm)	204	3458			1863	1583	87	5071		94	5065	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	48	528	96	0	492	132	227	2602	48	48	2927	81
RTOR Reduction (vph)	0	4	0	0	0	19	0	1	0	0	2	0
Lane Group Flow (vph)	48	620	0	0	492	113	227	2649	0	48	3006	0
Turn Type	Perm	NA			NA	pm+ov	pm+pt	NA		Perm	NA	
Protected Phases		4			8	1	1	6			2	
Permitted Phases	4					8	6			2		
Actuated Green, G (s)	36.5	36.5			36.5	49.7	99.2	99.2		79.2	79.2	
Effective Green, g (s)	36.5	36.5			36.5	49.7	99.2	99.2		79.2	79.2	
Actuated g/C Ratio	0.24	0.24			0.24	0.33	0.66	0.66		0.53	0.53	
Clearance Time (s)	7.5	7.5			7.5	6.8	6.8	6.8		6.8	6.8	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	49	841			453	524	205	3353		49	2674	
v/s Ratio Prot		0.18			c0.26	0.02	c0.10	0.52			0.59	
v/s Ratio Perm	0.24					0.05	c0.64			0.51		
v/c Ratio	0.98	0.74			1.09	0.22	1.11	0.79		0.98	1.12	
Uniform Delay, d1	56.4	52.3			56.8	36.1	54.0	18.0		34.6	35.4	
Progression Factor	1.00	1.00			1.00	1.00	1.08	1.15		0.14	0.15	
Incremental Delay, d2	119.7	3.4			67.5	0.2	69.0	0.7		33.9	56.4	
Delay (s)	176.0	55.7			124.3	36.3	127.5	21.3		38.7	61.8	
Level of Service	F	E			F	D	F	C		D	E	
Approach Delay (s)		64.3			105.7			29.7			61.4	
Approach LOS		E			F			C			E	
Intersection Summary												
HCM 2000 Control Delay			52.9		HCM 2000 Level of Service					D		
HCM 2000 Volume to Capacity ratio			1.12									
Actuated Cycle Length (s)			150.0		Sum of lost time (s)					21.1		
Intersection Capacity Utilization			121.7%		ICU Level of Service					H		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

7: US-1 & Bird Rd/SW 40th St

01/09/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	524	251	11	217	365	11	0	2472	247	0	2678	793
Future Volume (vph)	524	251	11	217	365	11	0	2472	247	0	2678	793
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.1	8.1		8.1	8.1			7.5	8.1		7.5	8.1
Lane Util. Factor	0.91	0.91		0.91	0.91			0.91	1.00		0.91	1.00
Frt	1.00	0.99		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	0.99		0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (prot)	3221	1672		1610	3366			5085	1583		5085	1583
Flt Permitted	0.95	0.99		0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (perm)	3221	1672		1610	3366			5085	1583		5085	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	552	264	12	228	384	12	0	2602	260	0	2819	835
RTOR Reduction (vph)	0	1	0	0	1	0	0	0	46	0	0	10
Lane Group Flow (vph)	497	330	0	203	420	0	0	2602	214	0	2819	825
Turn Type	Split	NA		Split	NA			NA	pm+ov		NA	pm+ov
Protected Phases	3	3		4	4			6	4		2	3
Permitted Phases								6				2
Actuated Green, G (s)	28.9	28.9		17.9	17.9			79.5	97.4		79.5	108.4
Effective Green, g (s)	28.9	28.9		17.9	17.9			79.5	97.4		79.5	108.4
Actuated g/C Ratio	0.19	0.19		0.12	0.12			0.53	0.65		0.53	0.72
Clearance Time (s)	8.1	8.1		8.1	8.1			7.5	8.1		7.5	8.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	620	322		192	401			2695	1113		2695	1143
v/s Ratio Prot	0.15	c0.20		c0.13	0.12			0.51	0.02		c0.55	0.14
v/s Ratio Perm									0.11			0.38
v/c Ratio	0.80	1.03		1.06	1.05			0.97	0.19		1.05	0.72
Uniform Delay, d1	57.8	60.5		66.0	66.0			33.9	10.5		35.2	12.1
Progression Factor	1.00	1.00		1.00	1.00			0.66	1.68		0.22	0.25
Incremental Delay, d2	7.4	56.8		80.9	58.0			8.0	0.1		22.0	0.2
Delay (s)	65.2	117.4		147.0	124.0			30.5	17.8		29.6	3.2
Level of Service	E	F		F	F			C	B		C	A
Approach Delay (s)		86.1			131.5			29.3			23.6	
Approach LOS		F			F			C			C	
Intersection Summary												
HCM 2000 Control Delay			40.6									
HCM 2000 Level of Service												D
HCM 2000 Volume to Capacity ratio			1.04									
Actuated Cycle Length (s)			150.0									
Sum of lost time (s)											23.7	
Intersection Capacity Utilization			97.0%									
ICU Level of Service											F	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

8: SW 27th Ave & US-1

01/09/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (vph)	62	2781	41	103	3090	144	68	695	194	68	399	251
Future Volume (vph)	62	2781	41	103	3090	144	68	695	194	68	399	251
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	6.9		6.8	6.9		6.4	6.6	6.6	6.4	6.6	6.8
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	5074		1770	5051		1770	3539	1583	1770	3539	1583
Flt Permitted	0.05	1.00		0.05	1.00		0.32	1.00	1.00	0.14	1.00	1.00
Satd. Flow (perm)	98	5074		96	5051		597	3539	1583	262	3539	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	65	2927	43	108	3253	152	72	732	204	72	420	264
RTOR Reduction (vph)	0	1	0	0	3	0	0	0	101	0	0	57
Lane Group Flow (vph)	65	2969	0	108	3402	0	72	732	103	72	420	207
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	pm+ov
Protected Phases	1	6		5	2		7	4		3	8	1
Permitted Phases	6			2			4		4	8		8
Actuated Green, G (s)	83.8	75.8		86.8	77.3		38.0	28.4	28.4	38.0	28.4	36.4
Effective Green, g (s)	83.8	75.8		86.8	77.3		38.0	28.4	28.4	38.0	28.4	36.4
Actuated g/C Ratio	0.56	0.51		0.58	0.52		0.25	0.19	0.19	0.25	0.19	0.24
Clearance Time (s)	6.8	6.9		6.8	6.9		6.4	6.6	6.6	6.4	6.6	6.8
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	143	2564		161	2602		226	670	299	162	670	384
v/s Ratio Prot	0.02	0.59		c0.04	c0.67		0.02	c0.21		c0.03	0.12	0.03
v/s Ratio Perm	0.23			0.34			0.06		0.07	0.08		0.10
v/c Ratio	0.45	1.16		0.67	1.31		0.32	1.09	0.35	0.44	0.63	0.54
Uniform Delay, d1	33.0	37.1		36.9	36.4		44.0	60.8	52.7	45.7	55.9	49.5
Progression Factor	1.52	0.58		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	0.9	73.0		10.5	141.2		0.8	62.7	0.7	1.9	1.8	1.5
Delay (s)	50.9	94.7		47.4	177.5		44.8	123.5	53.4	47.6	57.8	51.0
Level of Service	D	F		D	F		D	F	D	D	E	D
Approach Delay (s)		93.8			173.5			103.7			54.4	
Approach LOS		F			F			F			D	
Intersection Summary												
HCM 2000 Control Delay	125.1			HCM 2000 Level of Service			F					
HCM 2000 Volume to Capacity ratio	1.16											
Actuated Cycle Length (s)	150.0			Sum of lost time (s)			26.7					
Intersection Capacity Utilization	112.7%			ICU Level of Service			H					
Analysis Period (min)	15											
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

9: SW 57th Ave/Red Rd & Ponce de Leon Blvd

01/09/2023

	↑	↗	↖	↓	↙	↘
Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations	↑↑		↖	↑↑		↗
Traffic Volume (vph)	342	342	342	684	0	992
Future Volume (vph)	342	342	342	684	0	992
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.0	6.0		6.0
Lane Util. Factor	0.95		1.00	0.95		1.00
Frt	0.93		1.00	1.00		0.86
Flt Protected	1.00		0.95	1.00		1.00
Satd. Flow (prot)	3274		1770	3539		1611
Flt Permitted	1.00		0.95	1.00		1.00
Satd. Flow (perm)	3274		1770	3539		1611
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	360	360	360	720	0	1044
RTOR Reduction (vph)	120	0	0	0	0	38
Lane Group Flow (vph)	600	0	360	720	0	1006
Turn Type	NA		Prot	NA		pt+ov
Protected Phases	2		1 3	6		1 3
Permitted Phases						
Actuated Green, G (s)	33.5		104.5	124.0		104.5
Effective Green, g (s)	33.5		104.5	124.0		104.5
Actuated g/C Ratio	0.22		0.70	0.83		0.70
Clearance Time (s)	6.0			6.0		
Vehicle Extension (s)	3.0			3.0		
Lane Grp Cap (vph)	731		1233	2925		1122
v/s Ratio Prot	c0.18		0.20	0.20		c0.62
v/s Ratio Perm						
v/c Ratio	0.82		0.29	0.25		0.90
Uniform Delay, d1	55.4		8.7	2.8		18.4
Progression Factor	0.44		1.00	1.00		0.60
Incremental Delay, d2	2.9		0.1	0.2		7.9
Delay (s)	27.1		8.8	3.0		18.9
Level of Service	C		A	A		B
Approach Delay (s)	27.1			5.0	18.9	
Approach LOS	C			A	B	
Intersection Summary						
HCM 2000 Control Delay		15.7		HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio		0.92				
Actuated Cycle Length (s)		150.0		Sum of lost time (s)		18.0
Intersection Capacity Utilization		91.9%		ICU Level of Service		F
Analysis Period (min)		15				
c Critical Lane Group						

HCM Signalized Intersection Capacity Analysis

10: Ponce de Leon Blvd & Stanford Dr

01/09/2023

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	140	140	113	135	72	158	73	543	140	161	1230	139
Future Volume (vph)	140	140	113	135	72	158	73	543	140	161	1230	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor		0.95		1.00	0.91	0.91	1.00	0.95		1.00	0.95	
Frt		0.96		1.00	0.92	0.85	1.00	0.97		1.00	0.98	
Flt Protected		0.98		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3327		1770	3125	1441	1770	3431		1770	3485	
Flt Permitted		0.78		0.23	1.00	1.00	0.14	1.00		0.29	1.00	
Satd. Flow (perm)		2644		426	3125	1441	268	3431		546	3485	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	147	147	119	142	76	166	77	572	147	169	1295	146
RTOR Reduction (vph)	0	30	0	0	59	59	0	15	0	0	5	0
Lane Group Flow (vph)	0	383	0	142	100	24	77	704	0	169	1436	0
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		25.1		42.7	42.7	42.7	78.6	78.6		95.3	95.3	
Effective Green, g (s)		25.1		42.7	42.7	42.7	78.6	78.6		95.3	95.3	
Actuated g/C Ratio		0.17		0.28	0.28	0.28	0.52	0.52		0.64	0.64	
Clearance Time (s)		6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		442		225	889	410	140	1797		434	2214	
v/s Ratio Prot				c0.05	0.03			0.21		0.03	c0.41	
v/s Ratio Perm		c0.14		0.13		0.02	0.29			0.22		
v/c Ratio		0.87		0.63	0.11	0.06	0.55	0.39		0.39	0.65	
Uniform Delay, d1		60.8		42.9	39.6	39.0	23.9	21.4		12.6	17.0	
Progression Factor		1.00		0.52	0.29	0.65	0.90	0.85		0.55	0.40	
Incremental Delay, d2		16.2		4.5	0.0	0.0	13.7	0.6		0.3	0.9	
Delay (s)		77.0		27.0	11.7	25.4	35.0	18.7		7.2	7.7	
Level of Service		E		C	B	C	D	B		A	A	
Approach Delay (s)		77.0			20.3			20.3			7.7	
Approach LOS		E			C			C			A	
Intersection Summary												
HCM 2000 Control Delay			21.2									
HCM 2000 Volume to Capacity ratio			0.73									
Actuated Cycle Length (s)			150.0									
Intersection Capacity Utilization			81.6%									
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

11: Ponce de Leon Blvd & Granada Blvd

01/09/2023

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	82	323	108	84	447	65	322	691	42	56	1116	156
Future Volume (vph)	82	323	108	84	447	65	322	691	42	56	1116	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00			0.91	0.91	1.00	0.95		1.00	0.95	
Frt	1.00	0.96			1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1793			3358	1441	1770	3509		1770	3474	
Flt Permitted	0.28	1.00			0.55	1.00	0.06	1.00		0.36	1.00	
Satd. Flow (perm)	526	1793			1867	1441	111	3509		670	3474	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	86	340	114	88	471	68	339	727	44	59	1175	164
RTOR Reduction (vph)	0	8	0	0	1	42	0	3	0	0	7	0
Lane Group Flow (vph)	86	446	0	0	565	19	339	768	0	59	1332	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	
Protected Phases		4			8		1	6			2	
Permitted Phases	4			8		8	6			2		
Actuated Green, G (s)	46.0	46.0			46.0	46.0	92.0	92.0		61.0	61.0	
Effective Green, g (s)	46.0	46.0			46.0	46.0	92.0	92.0		61.0	61.0	
Actuated g/C Ratio	0.31	0.31			0.31	0.31	0.61	0.61		0.41	0.41	
Clearance Time (s)	6.0	6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	161	549			572	441	344	2152		272	1412	
v/s Ratio Prot		0.25					c0.16	0.22			0.38	
v/s Ratio Perm	0.16				c0.30	0.01	c0.44			0.09		
v/c Ratio	0.53	0.81			0.99	0.04	0.99	0.36		0.22	0.94	
Uniform Delay, d1	43.1	48.0			51.7	36.5	51.3	14.4		29.0	42.8	
Progression Factor	1.00	1.00			0.55	0.24	1.06	0.61		0.93	0.95	
Incremental Delay, d2	3.4	8.9			31.0	0.0	43.2	0.4		0.5	5.1	
Delay (s)	46.5	56.9			59.2	8.9	97.7	9.2		27.4	45.9	
Level of Service	D	E			E	A	F	A		C	D	
Approach Delay (s)		55.3			54.3			36.2			45.2	
Approach LOS		E			D			D			D	
Intersection Summary												
HCM 2000 Control Delay		45.5			HCM 2000 Level of Service			D				
HCM 2000 Volume to Capacity ratio		1.01										
Actuated Cycle Length (s)		150.0			Sum of lost time (s)			18.0				
Intersection Capacity Utilization		112.7%			ICU Level of Service			H				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

12: Ponce de Leon Blvd & Le Jeune Rd & Blue Rd

01/09/2023

												
Movement	WBL2	WBL	WBR	WBR2	NBT	NBR	NBR2	SBL2	SBL	SBT	SBR	NEL
Lane Configurations												
Traffic Volume (vph)	15	279	96	9	446	36	1	16	109	679	564	291
Future Volume (vph)	15	279	96	9	446	36	1	16	109	679	564	291
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		6.0				6.0	6.0		6.0
Lane Util. Factor	1.00	1.00	1.00		0.95				1.00	0.95		0.97
Frt	1.00	1.00	0.85		0.99				1.00	0.93		1.00
Flt Protected	0.95	0.95	1.00		1.00				0.95	1.00		0.95
Satd. Flow (prot)	1770	1770	1583		3498				1770	3298		3433
Flt Permitted	0.58	0.95	1.00		1.00				0.39	1.00		0.95
Satd. Flow (perm)	1080	1770	1583		3498				721	3298		3433
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	16	294	101	9	469	38	1	17	115	715	594	306
RTOR Reduction (vph)	0	0	90	0	0	0	0	0	0	99	0	0
Lane Group Flow (vph)	16	294	20	0	508	0	0	0	132	1210	0	306
Turn Type	Perm	Prot	Perm		NA			Perm	Perm	NA		Prot
Protected Phases		9			2					6		7
Permitted Phases	9		9					6	6			
Actuated Green, G (s)	26.0	26.0	26.0		59.0				59.0	59.0		14.0
Effective Green, g (s)	26.0	26.0	26.0		59.0				59.0	59.0		14.0
Actuated g/C Ratio	0.17	0.17	0.17		0.39				0.39	0.39		0.09
Clearance Time (s)	6.0	6.0	6.0		6.0				6.0	6.0		6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0				3.0	3.0		3.0
Lane Grp Cap (vph)	187	306	274		1375				283	1297		320
v/s Ratio Prot		c0.17			0.15					c0.37		c0.09
v/s Ratio Perm	0.01		0.01						0.18			
v/c Ratio	0.09	0.96	0.07		0.37				0.47	0.93		0.96
Uniform Delay, d1	52.0	61.5	51.9		32.3				33.8	43.6		67.7
Progression Factor	1.60	1.53	4.38		0.18				1.00	1.00		0.91
Incremental Delay, d2	0.2	37.3	0.1		0.5				5.4	13.3		37.4
Delay (s)	83.3	131.3	227.4		6.3				39.2	56.9		99.2
Level of Service	F	F	F		A				D	E		F
Approach Delay (s)		154.6			6.3					55.3		
Approach LOS		F			A					E		
Intersection Summary												
HCM 2000 Control Delay			69.6		HCM 2000 Level of Service				E			
HCM 2000 Volume to Capacity ratio			0.96									
Actuated Cycle Length (s)			150.0		Sum of lost time (s)				24.0			
Intersection Capacity Utilization			97.4%		ICU Level of Service				F			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

12: Ponce de Leon Blvd & Le Jeune Rd & Blue Rd

01/09/2023



Movement	NET	NER	NER2	SWL2	SWL	SWT	SWR
Lane Configurations	↑	↑			↑	↑↑	
Traffic Volume (vph)	308	202	78	4	63	590	15
Future Volume (vph)	308	202	78	4	63	590	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0	6.0	
Lane Util. Factor	1.00	1.00			1.00	0.95	
Frt	1.00	0.85			1.00	1.00	
Flt Protected	1.00	1.00			0.95	1.00	
Satd. Flow (prot)	1863	1583			1770	3526	
Flt Permitted	1.00	1.00			0.56	1.00	
Satd. Flow (perm)	1863	1583			1052	3526	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	324	213	82	4	66	621	16
RTOR Reduction (vph)	0	45	0	0	0	1	0
Lane Group Flow (vph)	324	250	0	0	70	636	0
Turn Type	NA	Perm		Perm	Perm	NA	
Protected Phases	4					8	
Permitted Phases		4		8	8		
Actuated Green, G (s)	47.0	47.0			27.0	27.0	
Effective Green, g (s)	47.0	47.0			27.0	27.0	
Actuated g/C Ratio	0.31	0.31			0.18	0.18	
Clearance Time (s)	6.0	6.0			6.0	6.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	
Lane Grp Cap (vph)	583	496			189	634	
v/s Ratio Prot	0.17					c0.18	
v/s Ratio Perm		0.16			0.07		
v/c Ratio	0.56	0.50			0.37	1.00	
Uniform Delay, d1	42.8	42.0			54.0	61.5	
Progression Factor	1.24	1.32			1.00	1.00	
Incremental Delay, d2	1.1	0.8			1.2	36.6	
Delay (s)	54.2	56.1			55.3	98.1	
Level of Service	D	E			E	F	
Approach Delay (s)	69.7					93.8	
Approach LOS	E					F	

Intersection Summary

HCM Signalized Intersection Capacity Analysis

1: US-1 & SW 72nd St/Sunset Dr

01/09/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑	↑		↑↑		↑	↑↑↑		↑	↑↑↑	
Traffic Volume (vph)	0	604	23	0	296	11	57	2987	93	26	1648	185
Future Volume (vph)	0	604	23	0	296	11	57	2987	93	26	1648	185
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.9	8.9		8.9		6.4	8.0		6.4	8.0	
Lane Util. Factor		0.95	1.00		0.95		1.00	0.91		1.00	0.91	
Frt		1.00	0.85		0.99		1.00	1.00		1.00	0.98	
Flt Protected		1.00	1.00		1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3539	1583		3520		1770	5062		1770	5008	
Flt Permitted		1.00	1.00		1.00		0.07	1.00		0.03	1.00	
Satd. Flow (perm)		3539	1583		3520		124	5062		64	5008	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	636	24	0	312	12	60	3144	98	27	1735	195
RTOR Reduction (vph)	0	0	19	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	636	5	0	324	0	60	3242	0	27	1930	0
Turn Type		NA	Perm		NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		1	6		5	2	
Permitted Phases			8				6			2		
Actuated Green, G (s)		38.5	38.5		38.5		126.4	119.0		122.0	116.8	
Effective Green, g (s)		38.5	38.5		38.5		126.4	119.0		122.0	116.8	
Actuated g/C Ratio		0.20	0.20		0.20		0.67	0.63		0.64	0.61	
Clearance Time (s)		8.9	8.9		8.9		6.4	8.0		6.4	8.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		717	320		713		146	3170		87	3078	
v/s Ratio Prot		c0.18			0.09		c0.02	c0.64		0.01	0.39	
v/s Ratio Perm			0.00				0.26			0.19		
v/c Ratio		0.89	0.02		0.45		0.41	1.02		0.31	0.63	
Uniform Delay, d1		73.6	60.6		66.5		17.7	35.5		46.3	22.9	
Progression Factor		1.00	1.00		1.00		1.38	0.70		2.46	0.90	
Incremental Delay, d2		12.7	0.0		0.5		1.3	19.4		1.6	0.8	
Delay (s)		86.4	60.6		67.0		25.7	44.1		115.4	21.4	
Level of Service		F	E		E		C	D		F	C	
Approach Delay (s)		85.4			67.0			43.8			22.7	
Approach LOS		F			E			D			C	
Intersection Summary												
HCM 2000 Control Delay			42.8				HCM 2000 Level of Service			D		
HCM 2000 Volume to Capacity ratio			0.97									
Actuated Cycle Length (s)			190.0				Sum of lost time (s)			26.3		
Intersection Capacity Utilization			90.6%				ICU Level of Service			E		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2: US-1 & SW 57th Ave

01/09/2023

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑			↑↑	↑	↑	↑↑↑		↑	↑↑↑	
Traffic Volume (vph)	0	399	125	0	547	125	216	3090	82	93	1957	77
Future Volume (vph)	0	399	125	0	547	125	216	3090	82	93	1957	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0			7.0	7.0	6.8	6.8		6.8	6.8	
Lane Util. Factor		0.95			0.95	1.00	1.00	0.91		1.00	0.91	
Frt		0.96			1.00	0.85	1.00	1.00		1.00	0.99	
Flt Protected		1.00			1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3412			3539	1583	1770	5066		1770	5056	
Flt Permitted		1.00			1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		3412			3539	1583	1770	5066		1770	5056	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	420	132	0	576	132	227	3253	86	98	2060	81
RTOR Reduction (vph)	0	0	0	0	0	0	0	2	0	0	2	0
Lane Group Flow (vph)	0	552	0	0	576	132	227	3337	0	98	2139	0
Turn Type		NA			NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases						8						
Actuated Green, G (s)		36.5			36.5	36.5	29.1	117.0		11.9	99.8	
Effective Green, g (s)		36.5			36.5	36.5	29.1	117.0		11.9	99.8	
Actuated g/C Ratio		0.19			0.19	0.19	0.15	0.62		0.06	0.53	
Clearance Time (s)		7.0			7.0	7.0	6.8	6.8		6.8	6.8	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		655			679	304	271	3119		110	2655	
v/s Ratio Prot		0.16			c0.16		c0.13	c0.66		0.06	0.42	
v/s Ratio Perm						0.08						
v/c Ratio		0.84			0.85	0.43	0.84	1.07		0.89	0.81	
Uniform Delay, d1		74.0			74.1	67.6	78.2	36.5		88.4	37.1	
Progression Factor		1.00			1.00	1.00	1.21	0.52		0.95	0.63	
Incremental Delay, d2		9.6			9.7	1.0	12.5	36.0		38.5	1.7	
Delay (s)		83.6			83.7	68.6	107.4	55.2		122.4	25.1	
Level of Service		F			F	E	F	E		F	C	
Approach Delay (s)		83.6			80.9			58.5			29.3	
Approach LOS		F			F			E			C	
Intersection Summary												
HCM 2000 Control Delay			53.5									HCM 2000 Level of Service D
HCM 2000 Volume to Capacity ratio			1.02									
Actuated Cycle Length (s)			190.0									Sum of lost time (s) 23.6
Intersection Capacity Utilization			99.0%									ICU Level of Service F
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

3: US-1 & Granada Blvd

01/09/2023

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	114	251	103	11	205	34	82	3193	15	41	2472	129
Future Volume (vph)	114	251	103	11	205	34	82	3193	15	41	2472	129
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.7	6.7			6.7	6.7	6.8	6.8		6.8	6.8	6.8
Lane Util. Factor	1.00	0.95			0.95	1.00	1.00	0.91		1.00	0.91	1.00
Frt	1.00	0.96			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3385			3530	1583	1770	5082		1770	5085	1583
Flt Permitted	0.51	1.00			0.85	1.00	0.03	1.00		0.03	1.00	1.00
Satd. Flow (perm)	952	3385			3024	1583	56	5082		59	5085	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	120	264	108	12	216	36	86	3361	16	43	2602	136
RTOR Reduction (vph)	0	23	0	0	0	30	0	0	0	0	0	26
Lane Group Flow (vph)	120	349	0	0	228	6	86	3377	0	43	2602	110
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases		8			4		1	6			2	
Permitted Phases	8			4		4	6			2		2
Actuated Green, G (s)	29.5	29.5			29.5	29.5	143.0	143.0		126.9	126.9	126.9
Effective Green, g (s)	29.5	29.5			29.5	29.5	143.0	143.0		126.9	126.9	126.9
Actuated g/C Ratio	0.16	0.16			0.16	0.16	0.75	0.75		0.67	0.67	0.67
Clearance Time (s)	6.7	6.7			6.7	6.7	6.8	6.8		6.8	6.8	6.8
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	147	525			469	245	126	3824		39	3396	1057
v/s Ratio Prot		0.10					0.03	c0.66			0.51	
v/s Ratio Perm	c0.13				0.08	0.00	0.48			c0.73		0.07
v/c Ratio	0.82	0.67			0.49	0.02	0.68	0.88		1.10	0.77	0.10
Uniform Delay, d1	77.6	75.6			73.3	68.0	51.4	17.3		31.5	21.5	11.3
Progression Factor	1.00	1.00			1.00	1.00	1.15	0.77		1.16	1.03	0.59
Incremental Delay, d2	28.2	3.2			0.8	0.0	9.1	2.1		116.7	0.6	0.1
Delay (s)	105.9	78.8			74.1	68.1	68.3	15.4		153.4	22.6	6.7
Level of Service	F	E			E	E	E	B		F	C	A
Approach Delay (s)		85.4			73.3			16.7			23.9	
Approach LOS		F			E			B			C	
Intersection Summary												
HCM 2000 Control Delay		26.5			HCM 2000 Level of Service			C				
HCM 2000 Volume to Capacity ratio		1.05										
Actuated Cycle Length (s)		190.0			Sum of lost time (s)			23.3				
Intersection Capacity Utilization		111.6%			ICU Level of Service			H				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

4: US-1 & SW 42nd Ave/Le Jeune Rd

01/09/2023

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑			↑↑	↑	↑	↑↑↑		↑	↑↑↑	
Traffic Volume (vph)	0	559	171	0	502	217	247	3193	21	62	2781	0
Future Volume (vph)	0	559	171	0	502	217	247	3193	21	62	2781	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.1			7.1	6.8	6.8	6.8		6.8	6.8	
Lane Util. Factor		0.95			0.91	0.91	1.00	0.91		1.00	0.91	
Frt		0.96			0.99	0.85	1.00	1.00		1.00	1.00	
Flt Protected		1.00			1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3415			3369	1441	1770	5080		1770	5085	
Flt Permitted		1.00			1.00	1.00	0.04	1.00		0.04	1.00	
Satd. Flow (perm)		3415			3369	1441	69	5080		73	5085	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	588	180	0	528	228	260	3361	22	65	2927	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	768	0	0	551	205	260	3383	0	65	2927	0
Turn Type		NA			NA	pm+ov	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8	1	1	6		5	2	
Permitted Phases						8	6			2		
Actuated Green, G (s)		43.3			43.3	63.5	128.8	113.5		110.3	101.8	
Effective Green, g (s)		43.3			43.3	63.5	128.8	113.5		110.3	101.8	
Actuated g/C Ratio		0.23			0.23	0.33	0.68	0.60		0.58	0.54	
Clearance Time (s)		7.1			7.1	6.8	6.8	6.8		6.8	6.8	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		778			767	481	227	3034		118	2724	
v/s Ratio Prot		c0.22			0.16	0.05	c0.12	c0.67		0.02	0.58	
v/s Ratio Perm						0.10	c0.66			0.29		
v/c Ratio		0.99			0.72	0.43	1.15	1.11		0.55	1.07	
Uniform Delay, d1		73.1			67.7	49.1	72.2	38.2		43.4	44.1	
Progression Factor		1.00			1.00	1.00	1.19	0.60		1.46	0.36	
Incremental Delay, d2		28.8			3.2	0.6	90.5	54.7		2.2	37.0	
Delay (s)		101.9			71.0	49.7	176.3	77.6		65.6	52.7	
Level of Service		F			E	D	F	E		E	D	
Approach Delay (s)		101.9			65.2			84.6			53.0	
Approach LOS		F			E			F			D	
Intersection Summary												
HCM 2000 Control Delay			72.8									HCM 2000 Level of Service E
HCM 2000 Volume to Capacity ratio			1.12									
Actuated Cycle Length (s)			190.0									Sum of lost time (s) 23.7
Intersection Capacity Utilization			105.6%									ICU Level of Service G
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: US-1 & Blue Rd/Grand Ave

01/09/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations								  			  	
Traffic Volume (vph)	80	353	11	103	217	0	0	3090	247	0	2781	57
Future Volume (vph)	80	353	11	103	217	0	0	3090	247	0	2781	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.9	7.9		7.9	7.9			6.8			6.8	
Lane Util. Factor	1.00	1.00		1.00	1.00			0.91			0.91	
Frt	1.00	1.00		1.00	1.00			0.99			1.00	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1770	1854		1770	1863			5029			5070	
Flt Permitted	0.62	1.00		0.09	1.00			1.00			1.00	
Satd. Flow (perm)	1148	1854		173	1863			5029			5070	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	84	372	12	108	228	0	0	3253	260	0	2927	60
RTOR Reduction (vph)	0	1	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	84	383	0	108	228	0	0	3513	0	0	2987	0
Turn Type	Perm	NA		pm+pt	NA			NA			NA	
Protected Phases		8		7	4			2			6	
Permitted Phases	8			4								
Actuated Green, G (s)	35.1	35.1		53.1	53.1			122.2			122.2	
Effective Green, g (s)	35.1	35.1		53.1	53.1			122.2			122.2	
Actuated g/C Ratio	0.18	0.18		0.28	0.28			0.64			0.64	
Clearance Time (s)	7.9	7.9		7.9	7.9			6.8			6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	212	342		133	520			3234			3260	
v/s Ratio Prot		c0.21		c0.04	0.12			c0.70			0.59	
v/s Ratio Perm	0.07			0.18								
v/c Ratio	0.40	1.12		0.81	0.44			1.09			0.92	
Uniform Delay, d1	68.1	77.5		56.8	56.2			33.9			29.5	
Progression Factor	1.00	1.00		1.00	1.00			0.12			0.26	
Incremental Delay, d2	1.2	85.3		30.0	0.6			39.4			1.5	
Delay (s)	69.3	162.7		86.8	56.8			43.4			9.1	
Level of Service	E	F		F	E			D			A	
Approach Delay (s)		146.0			66.4			43.4			9.1	
Approach LOS		F			E			D			A	
Intersection Summary												
HCM 2000 Control Delay			37.0			HCM 2000 Level of Service				D		
HCM 2000 Volume to Capacity ratio			1.08									
Actuated Cycle Length (s)			190.0			Sum of lost time (s)			22.6			
Intersection Capacity Utilization			109.0%			ICU Level of Service			G			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

6: US-1 & SW 37th Ave/Douglas Rd

01/09/2023

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	23	456	171	17	228	205	113	2678	15	52	2884	82
Future Volume (vph)	23	456	171	17	228	205	113	2678	15	52	2884	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.5		6.8	7.5	6.8	6.8	6.8		6.8	6.8	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3394		1770	1863	1583	1770	5081		1770	5064	
Flt Permitted	0.48	1.00		0.09	1.00	1.00	0.03	1.00		0.04	1.00	
Satd. Flow (perm)	894	3394		175	1863	1583	63	5081		67	5064	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	24	480	180	18	240	216	119	2819	16	55	3036	86
RTOR Reduction (vph)	0	19	0	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	24	641	0	18	240	216	119	2835	0	55	3120	0
Turn Type	Perm	NA		pm+pt	NA	pm+ov	pm+pt	NA		Perm	NA	
Protected Phases		4		3	8	1		6			2	
Permitted Phases	4			8		8	6			2		
Actuated Green, G (s)	35.7	35.7		47.2	43.2	53.9	128.5	128.5		111.0	111.0	
Effective Green, g (s)	35.7	35.7		47.2	43.2	53.9	128.5	128.5		111.0	111.0	
Actuated g/C Ratio	0.19	0.19		0.25	0.23	0.28	0.68	0.68		0.58	0.58	
Clearance Time (s)	7.5	7.5		6.8	7.5	6.8	6.8	6.8		6.8	6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	167	637		82	423	449	138	3436		39	2958	
v/s Ratio Prot		c0.19		c0.01	c0.13	0.03	0.05	c0.56			0.62	
v/s Ratio Perm	0.03			0.05		0.11	0.53			c0.82		
v/c Ratio	0.14	1.01		0.22	0.57	0.48	0.86	0.83		1.41	1.05	
Uniform Delay, d1	64.4	77.2		57.7	65.1	56.4	66.3	22.5		39.5	39.5	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.81	2.12		0.09	0.11	
Incremental Delay, d2	0.4	37.0		1.4	1.7	0.8	5.3	0.2		197.9	25.7	
Delay (s)	64.8	114.2		59.1	66.9	57.3	58.9	48.0		201.5	30.0	
Level of Service	E	F		E	E	E	E	D		F	C	
Approach Delay (s)		112.4			62.2			48.4			33.0	
Approach LOS		F			E			D			C	
Intersection Summary												
HCM 2000 Control Delay			48.6									HCM 2000 Level of Service D
HCM 2000 Volume to Capacity ratio			1.28									
Actuated Cycle Length (s)			190.0									Sum of lost time (s) 27.9
Intersection Capacity Utilization			100.5%									ICU Level of Service G
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

7: US-1 & Bird Rd/SW 40th St

01/09/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	616	228	0	251	331	11	0	2678	155	0	2884	567
Future Volume (vph)	616	228	0	251	331	11	0	2678	155	0	2884	567
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.1	8.1		8.1	8.1			7.5	8.1		7.5	8.1
Lane Util. Factor	0.91	0.91		1.00	0.95			0.91	1.00		0.91	1.00
Frt	1.00	1.00		1.00	0.99			1.00	0.85		1.00	0.85
Flt Protected	0.95	0.99		0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (prot)	3221	1677		1770	3522			5085	1583		5085	1583
Flt Permitted	0.95	0.99		0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (perm)	3221	1677		1770	3522			5085	1583		5085	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	648	240	0	264	348	12	0	2819	163	0	3036	597
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	17	0	0	57
Lane Group Flow (vph)	583	305	0	264	359	0	0	2819	146	0	3036	540
Turn Type	Split	NA		Split	NA			NA	pm+ov		NA	pm+ov
Protected Phases	3	3		4	4			6	4		2	3
Permitted Phases									6			2
Actuated Green, G (s)	31.9	31.9		24.9	24.9			105.5	130.4		105.5	137.4
Effective Green, g (s)	31.9	31.9		24.9	24.9			105.5	130.4		105.5	137.4
Actuated g/C Ratio	0.17	0.17		0.13	0.13			0.56	0.69		0.56	0.72
Clearance Time (s)	8.1	8.1		8.1	8.1			7.5	8.1		7.5	8.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	540	281		231	461			2823	1086		2823	1144
v/s Ratio Prot	0.18	c0.18		c0.15	0.10			0.55	0.02		c0.60	0.08
v/s Ratio Perm									0.07			0.26
v/c Ratio	1.08	1.09		1.14	0.78			1.00	0.13		1.08	0.47
Uniform Delay, d1	79.0	79.0		82.5	79.9			42.2	10.3		42.2	11.1
Progression Factor	1.00	1.00		1.00	1.00			0.41	0.77		0.27	0.10
Incremental Delay, d2	62.0	78.4		103.1	8.1			12.2	0.0		36.8	0.1
Delay (s)	141.0	157.4		185.7	88.0			29.5	8.0		48.2	1.2
Level of Service	F	F		F	F			C	A		D	A
Approach Delay (s)		146.6			129.3			28.3			40.5	
Approach LOS		F			F			C			D	
Intersection Summary												
HCM 2000 Control Delay	54.4			HCM 2000 Level of Service					D			
HCM 2000 Volume to Capacity ratio	1.08											
Actuated Cycle Length (s)	190.0			Sum of lost time (s)					26.7			
Intersection Capacity Utilization	104.7%			ICU Level of Service					G			
Analysis Period (min)	15											
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

8: SW 27th Ave & US-1

01/09/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (vph)	196	3399	21	52	2781	62	40	422	262	125	433	388
Future Volume (vph)	196	3399	21	52	2781	62	40	422	262	125	433	388
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	6.9		6.8	6.9		6.4	6.6	6.6	6.4	6.6	6.8
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00		1.00	1.00		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	5081		1770	5069		1770	3539	1583	1770	3539	1583
Flt Permitted	0.04	1.00		0.04	1.00		0.27	1.00	1.00	0.18	1.00	1.00
Satd. Flow (perm)	72	5081		77	5069		497	3539	1583	342	3539	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	206	3578	22	55	2927	65	42	444	276	132	456	408
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	130	0	0	79
Lane Group Flow (vph)	206	3600	0	55	2991	0	42	444	146	132	456	329
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	pm+ov
Protected Phases	1	6		5	2		7	4		3	8	1
Permitted Phases	6			2			4		4	8		8
Actuated Green, G (s)	124.7	109.9		104.7	96.7		37.5	29.8	29.8	45.3	33.7	54.9
Effective Green, g (s)	124.7	109.9		104.7	96.7		37.5	29.8	29.8	45.3	33.7	54.9
Actuated g/C Ratio	0.66	0.58		0.55	0.51		0.20	0.16	0.16	0.24	0.18	0.29
Clearance Time (s)	6.8	6.9		6.8	6.9		6.4	6.6	6.6	6.4	6.6	6.8
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	236	2938		113	2579		149	555	248	168	627	457
v/s Ratio Prot	c0.10	c0.71		0.02	0.59		0.01	0.13		c0.05	0.13	0.08
v/s Ratio Perm	0.47			0.25			0.04		0.09	c0.14		0.13
v/c Ratio	0.87	1.23		0.49	1.16		0.28	0.80	0.59	0.79	0.73	0.72
Uniform Delay, d1	68.3	40.0		43.1	46.6		63.2	77.2	74.4	61.0	73.8	60.7
Progression Factor	1.20	0.61		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	15.2	102.9		3.3	76.6		1.0	8.1	3.6	21.0	4.2	5.5
Delay (s)	97.2	127.4		46.3	123.3		64.2	85.3	78.0	82.1	78.0	66.2
Level of Service	F	F		D	F		E	F	E	F	E	E
Approach Delay (s)		125.8			121.9			81.5			73.7	
Approach LOS		F			F			F			E	
Intersection Summary												
HCM 2000 Control Delay	114.5			HCM 2000 Level of Service					F			
HCM 2000 Volume to Capacity ratio	1.13											
Actuated Cycle Length (s)	190.0			Sum of lost time (s)					29.7			
Intersection Capacity Utilization	111.1%			ICU Level of Service					H			
Analysis Period (min)	15											
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

9: SW 57th Ave/Red Rd & Ponce de Leon Blvd

01/09/2023

						
Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Volume (veh/h)	342	456	342	570	0	248
Future Volume (Veh/h)	342	456	342	570	0	248
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	360	480	360	600	0	261
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)	243					
pX, platoon unblocked			0.86		0.86	0.86
vC, conflicting volume			840		1620	420
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			475		1387	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			61		100	72
cM capacity (veh/h)			927		70	928
Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3	SW 1
Volume Total	240	600	360	300	300	261
Volume Left	0	0	360	0	0	0
Volume Right	0	480	0	0	0	261
cSH	1700	1700	927	1700	1700	928
Volume to Capacity	0.14	0.35	0.39	0.18	0.18	0.28
Queue Length 95th (ft)	0	0	46	0	0	29
Control Delay (s)	0.0	0.0	11.3	0.0	0.0	10.4
Lane LOS			B			B
Approach Delay (s)	0.0		4.2			10.4
Approach LOS						B
Intersection Summary						
Average Delay			3.3			
Intersection Capacity Utilization			49.7%	ICU Level of Service		A
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis

10: Ponce de Leon Blvd & Stanford Dr

01/09/2023

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	23	26	24	100	76	109	86	839	118	113	420	107
Future Volume (vph)	23	26	24	100	76	109	86	839	118	113	420	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor		0.95		1.00	0.91	0.91	1.00	0.95		1.00	0.95	
Frt		0.95		1.00	0.94	0.85	1.00	0.98		1.00	0.97	
Flt Protected		0.98		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3312		1770	3185	1441	1770	3474		1770	3431	
Flt Permitted		0.83		0.30	1.00	1.00	0.44	1.00		0.11	1.00	
Satd. Flow (perm)		2778		558	3185	1441	827	3474		196	3431	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	24	27	25	105	80	115	91	883	124	119	442	113
RTOR Reduction (vph)	0	23	0	0	41	46	0	9	0	0	19	0
Lane Group Flow (vph)	0	53	0	105	93	15	91	998	0	119	536	0
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		7.1		24.2	20.6	20.6	31.7	31.7		48.8	44.7	
Effective Green, g (s)		7.1		24.2	20.6	20.6	31.7	31.7		48.8	44.7	
Actuated g/C Ratio		0.08		0.28	0.24	0.24	0.37	0.37		0.57	0.53	
Clearance Time (s)		6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		232		265	771	349	308	1295		242	1804	
v/s Ratio Prot				c0.03	0.03			c0.29		c0.04	0.16	
v/s Ratio Perm		0.02		c0.08		0.01	0.11			c0.24		
v/c Ratio		0.23		0.40	0.12	0.04	0.30	0.77		0.49	0.30	
Uniform Delay, d1		36.4		23.7	25.1	24.6	18.8	23.4		13.5	11.3	
Progression Factor		1.00		1.00	1.00	1.00	0.52	0.50		0.39	0.54	
Incremental Delay, d2		0.5		1.0	0.1	0.1	1.9	3.4		1.3	0.4	
Delay (s)		36.9		24.7	25.2	24.7	11.7	15.2		6.6	6.5	
Level of Service		D		C	C	C	B	B		A	A	
Approach Delay (s)		36.9			24.9			14.9			6.5	
Approach LOS		D			C			B			A	
Intersection Summary												
HCM 2000 Control Delay			14.4									HCM 2000 Level of Service B
HCM 2000 Volume to Capacity ratio			0.70									
Actuated Cycle Length (s)			85.0									Sum of lost time (s) 30.0
Intersection Capacity Utilization			60.4%									ICU Level of Service B
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

11: Ponce de Leon Blvd & Granada Blvd

01/09/2023

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	39	368	107	42	329	31	166	740	33	36	464	81
Future Volume (vph)	39	368	107	42	329	31	166	740	33	36	464	81
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00			0.91	0.91	1.00	0.95		1.00	0.95	
Frt	1.00	0.97			1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1800			3367	1441	1770	3516		1770	3460	
Flt Permitted	0.48	1.00			0.69	1.00	0.21	1.00		0.34	1.00	
Satd. Flow (perm)	888	1800			2341	1441	386	3516		642	3460	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	41	387	113	44	346	33	175	779	35	38	488	85
RTOR Reduction (vph)	0	11	0	0	1	20	0	4	0	0	16	0
Lane Group Flow (vph)	41	489	0	0	392	10	175	810	0	38	557	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	
Protected Phases		4			8		1	6			2	
Permitted Phases	4			8		8	6			2		
Actuated Green, G (s)	27.4	27.4			27.4	27.4	41.6	37.6		21.8	21.8	
Effective Green, g (s)	27.4	27.4			27.4	27.4	41.6	37.6		21.8	21.8	
Actuated g/C Ratio	0.32	0.32			0.32	0.32	0.49	0.44		0.26	0.26	
Clearance Time (s)	6.0	6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	286	580			754	464	348	1555		164	887	
v/s Ratio Prot		c0.27					c0.06	c0.23			c0.16	
v/s Ratio Perm	0.05				0.17	0.01	0.19			0.06		
v/c Ratio	0.14	0.84			0.52	0.02	0.50	0.52		0.23	0.63	
Uniform Delay, d1	20.5	26.8			23.4	19.6	14.4	17.2		25.0	28.0	
Progression Factor	1.00	1.00			1.00	1.00	1.20	0.30		0.78	0.74	
Incremental Delay, d2	0.2	10.8			0.7	0.0	1.0	1.0		2.9	3.0	
Delay (s)	20.7	37.6			24.1	19.7	18.2	6.2		22.4	23.7	
Level of Service	C	D			C	B	B	A		C	C	
Approach Delay (s)		36.3			23.8			8.3			23.6	
Approach LOS		D			C			A			C	
Intersection Summary												
HCM 2000 Control Delay		20.4			HCM 2000 Level of Service			C				
HCM 2000 Volume to Capacity ratio		0.73										
Actuated Cycle Length (s)		85.0			Sum of lost time (s)			24.0				
Intersection Capacity Utilization		82.2%			ICU Level of Service			E				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

12: Ponce de Leon Blvd & Le Jeune Rd & Blue Rd

01/09/2023

												
Movement	WBL2	WBL	WBR	WBR2	NBT	NBR	NBR2	SBL2	SBL	SBT	SBR	NEL
Lane Configurations												
Traffic Volume (vph)	74	154	65	2	454	117	3	7	68	521	172	179
Future Volume (vph)	74	154	65	2	454	117	3	7	68	521	172	179
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		6.0				6.0	6.0		6.0
Lane Util. Factor	1.00	1.00	1.00		0.95				1.00	0.95		0.97
Frt	1.00	1.00	0.85		0.97				1.00	0.96		1.00
Flt Protected	0.95	0.95	1.00		1.00				0.95	1.00		0.95
Satd. Flow (prot)	1770	1770	1583		3428				1770	3407		3433
Flt Permitted	0.56	0.95	1.00		1.00				0.29	1.00		0.95
Satd. Flow (perm)	1048	1770	1583		3428				549	3407		3433
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	78	162	68	2	478	123	3	7	72	548	181	188
RTOR Reduction (vph)	0	0	60	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	78	162	10	0	604	0	0	0	79	729	0	188
Turn Type	Perm	Prot	Perm		NA			Perm	Perm	NA		Prot
Protected Phases		9			2					6		7
Permitted Phases	9		9					6	6			
Actuated Green, G (s)	12.6	12.6	12.6		23.6				23.6	23.6		4.0
Effective Green, g (s)	12.6	12.6	12.6		23.6				23.6	23.6		4.0
Actuated g/C Ratio	0.15	0.15	0.15		0.28				0.28	0.28		0.05
Clearance Time (s)	6.0	6.0	6.0		6.0				6.0	6.0		6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0				3.0	3.0		3.0
Lane Grp Cap (vph)	155	262	234		951				152	945		161
v/s Ratio Prot		c0.09			0.18					c0.21		0.05
v/s Ratio Perm	0.07		0.01						0.14			
v/c Ratio	0.50	0.62	0.04		0.64				0.52	0.77		1.17
Uniform Delay, d1	33.3	33.9	31.0		26.9				25.9	28.2		40.5
Progression Factor	1.00	1.00	1.00		1.00				1.00	1.00		0.97
Incremental Delay, d2	2.6	4.3	0.1		3.2				12.1	6.1		122.0
Delay (s)	35.9	38.2	31.1		30.2				38.1	34.3		161.3
Level of Service	D	D	C		C				D	C		F
Approach Delay (s)		36.0			30.2					34.7		
Approach LOS		D			C					C		
Intersection Summary												
HCM 2000 Control Delay			49.9		HCM 2000 Level of Service				D			
HCM 2000 Volume to Capacity ratio			0.97									
Actuated Cycle Length (s)			85.0		Sum of lost time (s)				27.0			
Intersection Capacity Utilization			91.2%		ICU Level of Service				F			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

12: Ponce de Leon Blvd & Le Jeune Rd & Blue Rd

01/09/2023



Movement	NET	NER	NER2	SWL	SWT	SWR
Lane Configurations	↑	↗		↘	↖	↗
Traffic Volume (vph)	626	288	24	30	253	7
Future Volume (vph)	626	288	24	30	253	7
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00		1.00	0.95	
Frt	1.00	0.85		1.00	1.00	
Flt Protected	1.00	1.00		0.95	1.00	
Satd. Flow (prot)	1863	1583		1770	3526	
Flt Permitted	1.00	1.00		0.24	1.00	
Satd. Flow (perm)	1863	1583		438	3526	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	659	303	25	32	266	7
RTOR Reduction (vph)	0	105	0	0	2	0
Lane Group Flow (vph)	659	223	0	32	271	0
Turn Type	NA	Perm		Perm	NA	
Protected Phases	4				8	
Permitted Phases		4		8		
Actuated Green, G (s)	27.0	27.0		17.0	17.0	
Effective Green, g (s)	27.0	27.0		17.0	17.0	
Actuated g/C Ratio	0.32	0.32		0.20	0.20	
Clearance Time (s)	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	591	502		87	705	
v/s Ratio Prot	c0.35				0.08	
v/s Ratio Perm		0.14		0.07		
v/c Ratio	1.12	0.44		0.37	0.38	
Uniform Delay, d1	29.0	23.0		29.4	29.5	
Progression Factor	0.64	0.39		1.00	1.00	
Incremental Delay, d2	72.2	0.6		2.6	0.3	
Delay (s)	90.7	9.7		32.0	29.8	
Level of Service	F	A		C	C	
Approach Delay (s)	79.4				30.0	
Approach LOS	E				C	

Intersection Summary

HCM Signalized Intersection Capacity Analysis

1: US-1 & SW 72nd St/Sunset Dr

01/09/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑	↑		↑↑		↑	↑↑↑		↑	↑↑↑	
Traffic Volume (vph)	0	490	74	0	410	23	113	2060	118	57	2678	340
Future Volume (vph)	0	490	74	0	410	23	113	2060	118	57	2678	340
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		8.9	8.9		8.9		6.4	8.0		6.4	8.0	
Lane Util. Factor		0.95	1.00		0.95		1.00	0.91		1.00	0.91	
Frt		1.00	0.85		0.99		1.00	0.99		1.00	0.98	
Flt Protected		1.00	1.00		1.00		0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3539	1583		3511		1770	5044		1770	4999	
Flt Permitted		1.00	1.00		1.00		0.04	1.00		0.04	1.00	
Satd. Flow (perm)		3539	1583		3511		66	5044		72	4999	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	516	78	0	432	24	119	2168	124	60	2819	358
RTOR Reduction (vph)	0	0	64	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	516	14	0	456	0	119	2292	0	60	3177	0
Turn Type		NA	Perm		NA		pm+pt	NA		pm+pt	NA	
Protected Phases		8			4		1	6		5	2	
Permitted Phases			8				6			2		
Actuated Green, G (s)		31.9	31.9		31.9		123.4	112.7		118.2	110.1	
Effective Green, g (s)		31.9	31.9		31.9		123.4	112.7		118.2	110.1	
Actuated g/C Ratio		0.18	0.18		0.18		0.69	0.63		0.66	0.61	
Clearance Time (s)		8.9	8.9		8.9		6.4	8.0		6.4	8.0	
Vehicle Extension (s)		3.0	3.0		3.0		3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		627	280		622		146	3158		123	3057	
v/s Ratio Prot		c0.15			0.13		c0.05	0.45		0.02	c0.64	
v/s Ratio Perm			0.01				c0.51			0.30		
v/c Ratio		0.82	0.05		0.73		0.82	0.73		0.49	1.04	
Uniform Delay, d1		71.3	61.5		70.0		61.5	23.1		23.1	35.0	
Progression Factor		1.00	1.00		1.00		1.41	0.46		1.80	0.18	
Incremental Delay, d2		8.6	0.1		4.5		11.7	0.5		1.2	22.4	
Delay (s)		79.9	61.5		74.5		98.2	11.1		42.8	28.6	
Level of Service		E	E		E		F	B		D	C	
Approach Delay (s)		77.5			74.5			15.4			28.9	
Approach LOS		E			E			B			C	
Intersection Summary												
HCM 2000 Control Delay		31.5			HCM 2000 Level of Service			C				
HCM 2000 Volume to Capacity ratio		0.97										
Actuated Cycle Length (s)		180.0			Sum of lost time (s)			26.3				
Intersection Capacity Utilization		98.5%			ICU Level of Service			F				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

2: US-1 & SW 57th Ave

01/09/2023

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑			↑↑	↑	↑	↑↑↑		↑	↑↑↑	
Traffic Volume (vph)	0	524	108	0	490	388	165	2163	139	108	2575	57
Future Volume (vph)	0	524	108	0	490	388	165	2163	139	108	2575	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.0			7.0	7.0	6.8	6.8		6.8	6.8	
Lane Util. Factor		0.95			0.95	1.00	1.00	0.91		1.00	0.91	
Frt		0.97			1.00	0.85	1.00	0.99		1.00	1.00	
Flt Protected		1.00			1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3448			3539	1583	1770	5039		1770	5069	
Flt Permitted		1.00			1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (perm)		3448			3539	1583	1770	5039		1770	5069	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	552	114	0	516	408	174	2277	146	114	2711	60
RTOR Reduction (vph)	0	0	0	0	0	0	0	4	0	0	2	0
Lane Group Flow (vph)	0	666	0	0	516	408	174	2419	0	114	2769	0
Turn Type		NA			NA	Perm	Prot	NA		Prot	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases						8						
Actuated Green, G (s)		50.4			50.4	50.4	16.2	90.6		14.4	88.8	
Effective Green, g (s)		50.4			50.4	50.4	16.2	90.6		14.4	88.8	
Actuated g/C Ratio		0.28			0.28	0.28	0.09	0.50		0.08	0.49	
Clearance Time (s)		7.0			7.0	7.0	6.8	6.8		6.8	6.8	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		965			990	443	159	2536		141	2500	
v/s Ratio Prot		0.19			0.15		c0.10	0.48		0.06	c0.55	
v/s Ratio Perm						c0.26						
v/c Ratio		0.69			0.52	0.92	1.09	0.95		0.81	1.11	
Uniform Delay, d1		57.8			54.6	62.9	81.9	42.7		81.4	45.6	
Progression Factor		1.00			1.00	1.00	1.12	0.81		1.23	0.50	
Incremental Delay, d2		2.1			0.5	24.5	90.1	8.1		17.4	52.4	
Delay (s)		60.0			55.1	87.3	181.7	42.6		117.9	75.3	
Level of Service		E			E	F	F	D		F	E	
Approach Delay (s)		60.0			69.3			51.9			77.0	
Approach LOS		E			E			D			E	
Intersection Summary												
HCM 2000 Control Delay			65.2				HCM 2000 Level of Service			E		
HCM 2000 Volume to Capacity ratio			1.04									
Actuated Cycle Length (s)			180.0				Sum of lost time (s)			23.6		
Intersection Capacity Utilization			95.3%				ICU Level of Service			F		
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

3: US-1 & Granada Blvd

01/09/2023

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	97	239	91	23	274	46	206	2472	21	52	2215	113
Future Volume (vph)	97	239	91	23	274	46	206	2472	21	52	2215	113
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.7	6.7			6.7	6.7	6.8	6.8		6.8	6.8	6.8
Lane Util. Factor	1.00	0.95			0.95	1.00	1.00	0.91		1.00	0.91	1.00
Frt	1.00	0.96			1.00	0.85	1.00	1.00		1.00	1.00	0.85
Flt Protected	0.95	1.00			1.00	1.00	0.95	1.00		0.95	1.00	1.00
Satd. Flow (prot)	1770	3393			3526	1583	1770	5079		1770	5085	1583
Flt Permitted	0.41	1.00			0.81	1.00	0.03	1.00		0.04	1.00	1.00
Satd. Flow (perm)	770	3393			2867	1583	65	5079		69	5085	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	102	252	96	24	288	48	217	2602	22	55	2332	119
RTOR Reduction (vph)	0	22	0	0	0	40	0	1	0	0	0	33
Lane Group Flow (vph)	102	326	0	0	312	8	217	2623	0	55	2332	86
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	Perm
Protected Phases		8			4		1	6			2	
Permitted Phases	8			4		4	6			2		2
Actuated Green, G (s)	31.1	31.1			31.1	31.1	131.4	131.4		107.8	107.8	107.8
Effective Green, g (s)	31.1	31.1			31.1	31.1	131.4	131.4		107.8	107.8	107.8
Actuated g/C Ratio	0.17	0.17			0.17	0.17	0.73	0.73		0.60	0.60	0.60
Clearance Time (s)	6.7	6.7			6.7	6.7	6.8	6.8		6.8	6.8	6.8
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	3.0
Lane Grp Cap (vph)	133	586			495	273	206	3707		41	3045	948
v/s Ratio Prot		0.10					c0.10	0.52			0.46	
v/s Ratio Perm	c0.13				0.11	0.01	0.67			c0.80		0.05
v/c Ratio	0.77	0.56			0.63	0.03	1.05	0.71		1.34	0.77	0.09
Uniform Delay, d1	71.0	68.1			69.1	61.9	65.2	13.6		36.1	26.7	15.3
Progression Factor	0.94	0.95			1.00	1.00	1.07	1.32		1.02	0.93	0.66
Incremental Delay, d2	17.9	0.9			2.6	0.0	70.5	0.9		222.0	1.1	0.1
Delay (s)	84.9	65.5			71.7	62.0	140.3	18.9		259.0	25.9	10.2
Level of Service	F	E			E	E	F	B		F	C	B
Approach Delay (s)		69.9			70.4			28.2			30.3	
Approach LOS		E			E			C			C	
Intersection Summary												
HCM 2000 Control Delay		34.5			HCM 2000 Level of Service			C				
HCM 2000 Volume to Capacity ratio		1.18										
Actuated Cycle Length (s)		180.0			Sum of lost time (s)			23.3				
Intersection Capacity Utilization		110.7%			ICU Level of Service			H				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

4: US-1 & SW 42nd Ave/Le Jeune Rd

01/09/2023

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations		↑↑			↑↑	↑	↑	↑↑↑		↑	↑↑↑	
Traffic Volume (vph)	0	467	205	0	638	239	108	2678	31	206	2678	0
Future Volume (vph)	0	467	205	0	638	239	108	2678	31	206	2678	0
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.1			7.1	7.1	6.8	6.8		6.8	6.8	
Lane Util. Factor		0.95			0.91	0.91	1.00	0.91		1.00	0.91	
Frt		0.95			0.99	0.85	1.00	1.00		1.00	1.00	
Flt Protected		1.00			1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3377			3372	1441	1770	5076		1770	5085	
Flt Permitted		1.00			1.00	1.00	0.04	1.00		0.04	1.00	
Satd. Flow (perm)		3377			3372	1441	79	5076		73	5085	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	0	492	216	0	672	252	114	2819	33	217	2819	0
RTOR Reduction (vph)	0	0	0	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	0	708	0	0	697	227	114	2852	0	217	2819	0
Turn Type		NA			NA	Perm	pm+pt	NA		pm+pt	NA	
Protected Phases		4			8		1	6		5	2	
Permitted Phases						8	6			2		
Actuated Green, G (s)		43.3			43.3	43.3	105.3	94.8		118.7	101.5	
Effective Green, g (s)		43.3			43.3	43.3	105.3	94.8		118.7	101.5	
Actuated g/C Ratio		0.24			0.24	0.24	0.58	0.53		0.66	0.56	
Clearance Time (s)		7.1			7.1	7.1	6.8	6.8		6.8	6.8	
Vehicle Extension (s)		3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		812			811	346	144	2673		210	2867	
v/s Ratio Prot		c0.21			0.21		0.05	c0.56		c0.10	c0.55	
v/s Ratio Perm						0.16	0.42			0.58		
v/c Ratio		0.87			0.86	0.66	0.79	1.07		1.03	0.98	
Uniform Delay, d1		65.7			65.4	61.6	54.0	42.6		67.2	38.4	
Progression Factor		1.00			0.98	1.01	1.24	0.77		1.54	0.29	
Incremental Delay, d2		10.2			5.7	2.7	20.8	37.1		48.9	7.6	
Delay (s)		75.8			70.0	65.1	87.9	70.0		152.5	18.7	
Level of Service		E			E	E	F	E		F	B	
Approach Delay (s)		75.8			68.8			70.7			28.2	
Approach LOS		E			E			E			C	
Intersection Summary												
HCM 2000 Control Delay		54.1			HCM 2000 Level of Service			D				
HCM 2000 Volume to Capacity ratio		1.01										
Actuated Cycle Length (s)		180.0			Sum of lost time (s)			23.7				
Intersection Capacity Utilization		101.3%			ICU Level of Service			G				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

5: US-1 & Blue Rd/Grand Ave

01/09/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations								  			  	
Traffic Volume (vph)	114	274	0	114	285	23	0	2678	165	0	2781	46
Future Volume (vph)	114	274	0	114	285	23	0	2678	165	0	2781	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.9	7.9		7.9	7.9			6.8			6.8	
Lane Util. Factor	1.00	1.00		1.00	1.00			0.91			0.91	
Frt	1.00	1.00		1.00	0.99			0.99			1.00	
Flt Protected	0.95	1.00		0.95	1.00			1.00			1.00	
Satd. Flow (prot)	1770	1863		1770	1842			5041			5073	
Flt Permitted	0.51	1.00		0.15	1.00			1.00			1.00	
Satd. Flow (perm)	953	1863		289	1842			5041			5073	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	120	288	0	120	300	24	0	2819	174	0	2927	48
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	0	0	0	0
Lane Group Flow (vph)	120	288	0	120	323	0	0	2993	0	0	2975	0
Turn Type	Perm	NA		pm+pt	NA			NA			NA	
Protected Phases		8		7	4			2			6	
Permitted Phases	8			4								
Actuated Green, G (s)	30.8	30.8		48.8	48.8			116.5			116.5	
Effective Green, g (s)	30.8	30.8		48.8	48.8			116.5			116.5	
Actuated g/C Ratio	0.17	0.17		0.27	0.27			0.65			0.65	
Clearance Time (s)	7.9	7.9		7.9	7.9			6.8			6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0			3.0	
Lane Grp Cap (vph)	163	318		161	499			3262			3283	
v/s Ratio Prot		c0.15		0.04	c0.18			c0.59			0.59	
v/s Ratio Perm	0.13			0.16								
v/c Ratio	0.74	0.91		0.75	0.65			0.92			0.91	
Uniform Delay, d1	70.7	73.2		53.8	58.0			27.6			27.1	
Progression Factor	1.08	1.07		1.00	1.00			0.26			0.27	
Incremental Delay, d2	14.8	26.1		17.0	2.9			0.5			0.5	
Delay (s)	90.8	104.6		70.8	60.9			7.8			7.8	
Level of Service	F	F		E	E			A			A	
Approach Delay (s)		100.6			63.5			7.8			7.8	
Approach LOS		F			E			A			A	
Intersection Summary												
HCM 2000 Control Delay		17.0			HCM 2000 Level of Service			B				
HCM 2000 Volume to Capacity ratio		0.92										
Actuated Cycle Length (s)		180.0			Sum of lost time (s)			22.6				
Intersection Capacity Utilization		97.0%			ICU Level of Service			F				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

6: US-1 & SW 37th Ave/Douglas Rd

01/09/2023

												
Movement	NBL	NBT	NBR	SBL	SBT	SBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	46	502	91	125	467	125	216	2472	46	46	2781	77
Future Volume (vph)	46	502	91	125	467	125	216	2472	46	46	2781	77
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	7.5	7.5		6.8	7.5	6.8	6.8	6.8		6.8	6.8	
Lane Util. Factor	1.00	0.95		1.00	1.00	1.00	1.00	0.91		1.00	0.91	
Frt	1.00	0.98		1.00	1.00	0.85	1.00	1.00		1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	3458		1770	1863	1583	1770	5071		1770	5065	
Flt Permitted	0.13	1.00		0.12	1.00	1.00	0.04	1.00		0.05	1.00	
Satd. Flow (perm)	240	3458		221	1863	1583	78	5071		84	5065	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	48	528	96	132	492	132	227	2602	48	48	2927	81
RTOR Reduction (vph)	0	8	0	0	0	0	0	0	0	0	2	0
Lane Group Flow (vph)	48	616	0	132	492	132	227	2650	0	48	3006	0
Turn Type	Perm	NA		pm+pt	NA	pm+ov	pm+pt	NA		Perm	NA	
Protected Phases		4		3	8	1	1	6			2	
Permitted Phases	4			8		8	6			2		
Actuated Green, G (s)	36.9	36.9		54.9	50.9	66.1	110.8	110.8		88.8	88.8	
Effective Green, g (s)	36.9	36.9		54.9	50.9	66.1	110.8	110.8		88.8	88.8	
Actuated g/C Ratio	0.20	0.20		0.30	0.28	0.37	0.62	0.62		0.49	0.49	
Clearance Time (s)	7.5	7.5		6.8	7.5	6.8	6.8	6.8		6.8	6.8	
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	49	708		163	526	581	190	3121		41	2498	
v/s Ratio Prot		0.18		c0.05	c0.26	0.02	c0.10	0.52			0.59	
v/s Ratio Perm	0.20			0.20		0.06	c0.63			0.57		
v/c Ratio	0.98	0.87		0.81	0.94	0.23	1.19	0.85		1.17	1.20	
Uniform Delay, d1	71.2	69.2		50.2	62.9	39.3	65.2	27.9		45.6	45.6	
Progression Factor	1.00	1.00		1.00	1.00	1.00	0.84	1.67		0.58	0.53	
Incremental Delay, d2	119.7	11.3		24.8	24.1	0.2	107.2	1.3		124.2	92.7	
Delay (s)	190.8	80.5		75.0	87.0	39.5	162.1	47.7		150.7	116.7	
Level of Service	F	F		E	F	D	F	D		F	F	
Approach Delay (s)		88.4			76.6			56.8			117.2	
Approach LOS		F			E			E			F	
Intersection Summary												
HCM 2000 Control Delay	86.8			HCM 2000 Level of Service					F			
HCM 2000 Volume to Capacity ratio	1.15											
Actuated Cycle Length (s)	180.0			Sum of lost time (s)					27.9			
Intersection Capacity Utilization	121.7%			ICU Level of Service					H			
Analysis Period (min)	15											
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

7: US-1 & Bird Rd/SW 40th St

01/09/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	399	251	11	217	365	11	0	2472	247	0	2678	793
Future Volume (vph)	399	251	11	217	365	11	0	2472	247	0	2678	793
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	8.1	8.1		8.1	8.1			7.5	8.1		7.5	8.1
Lane Util. Factor	0.91	0.91		1.00	0.95			0.91	1.00		0.91	1.00
Frt	1.00	0.99		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	0.99		0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (prot)	3221	1674		1770	3523			5085	1583		5085	1583
Flt Permitted	0.95	0.99		0.95	1.00			1.00	1.00		1.00	1.00
Satd. Flow (perm)	3221	1674		1770	3523			5085	1583		5085	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	420	264	12	228	384	12	0	2602	260	0	2819	835
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	30	0	0	59
Lane Group Flow (vph)	378	318	0	228	395	0	0	2602	230	0	2819	776
Turn Type	Split	NA		Split	NA			NA	pm+ov		NA	pm+ov
Protected Phases	3	3		4	4			6	4		2	3
Permitted Phases									6			2
Actuated Green, G (s)	31.9	31.9		20.9	20.9			99.5	120.4		99.5	131.4
Effective Green, g (s)	31.9	31.9		20.9	20.9			99.5	120.4		99.5	131.4
Actuated g/C Ratio	0.18	0.18		0.12	0.12			0.55	0.67		0.55	0.73
Clearance Time (s)	8.1	8.1		8.1	8.1			7.5	8.1		7.5	8.1
Vehicle Extension (s)	3.0	3.0		3.0	3.0			3.0	3.0		3.0	3.0
Lane Grp Cap (vph)	570	296		205	409			2810	1058		2810	1155
v/s Ratio Prot	0.12	c0.19		c0.13	0.11			0.51	0.03		c0.55	0.12
v/s Ratio Perm									0.12			0.37
v/c Ratio	0.66	1.07		1.11	0.97			0.93	0.22		1.00	0.67
Uniform Delay, d1	69.0	74.0		79.5	79.2			36.9	11.5		40.2	12.9
Progression Factor	1.00	1.00		1.00	1.00			0.23	0.27		0.18	0.61
Incremental Delay, d2	2.9	73.5		96.2	35.4			3.9	0.1		5.9	0.1
Delay (s)	71.9	147.5		175.7	114.6			12.2	3.2		13.2	8.0
Level of Service	E	F		F	F			B	A		B	A
Approach Delay (s)		106.5			136.9			11.4			12.0	
Approach LOS		F			F			B			B	
Intersection Summary												
HCM 2000 Control Delay			30.1					HCM 2000 Level of Service			C	
HCM 2000 Volume to Capacity ratio			1.03									
Actuated Cycle Length (s)			180.0					Sum of lost time (s)			26.7	
Intersection Capacity Utilization			96.8%					ICU Level of Service			F	
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

8: SW 27th Ave & US-1

01/09/2023

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (vph)	62	2781	41	103	3090	144	68	695	194	68	399	251
Future Volume (vph)	62	2781	41	103	3090	144	68	695	194	68	399	251
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.8	6.9		6.8	6.9		6.4	6.6	6.6	6.4	6.6	6.8
Lane Util. Factor	1.00	0.91		1.00	0.91		1.00	0.95	1.00	1.00	0.95	1.00
Frt	1.00	1.00		1.00	0.99		1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	1770	5074		1770	5051		1770	3539	1583	1770	3539	1583
Flt Permitted	0.05	1.00		0.05	1.00		0.39	1.00	1.00	0.17	1.00	1.00
Satd. Flow (perm)	99	5074		96	5051		732	3539	1583	312	3539	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	65	2927	43	108	3253	152	72	732	204	72	420	264
RTOR Reduction (vph)	0	1	0	0	3	0	0	0	94	0	0	162
Lane Group Flow (vph)	65	2969	0	108	3402	0	72	732	110	72	420	102
Turn Type	pm+pt	NA		pm+pt	NA		pm+pt	NA	Perm	pm+pt	NA	pm+ov
Protected Phases	1	6		5	2		7	4		3	8	1
Permitted Phases	6			2			4		4	8		8
Actuated Green, G (s)	84.1	75.4		89.1	77.9		61.2	51.4	51.4	61.0	51.3	60.0
Effective Green, g (s)	84.1	75.4		89.1	77.9		61.2	51.4	51.4	61.0	51.3	60.0
Actuated g/C Ratio	0.47	0.42		0.49	0.43		0.34	0.29	0.29	0.34	0.28	0.33
Clearance Time (s)	6.8	6.9		6.8	6.9		6.4	6.6	6.6	6.4	6.6	6.8
Vehicle Extension (s)	3.0	3.0		3.0	3.0		3.0	3.0	3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	127	2125		151	2185		305	1010	452	184	1008	527
v/s Ratio Prot	0.02	0.59		c0.04	c0.67		0.01	c0.21		c0.02	0.12	0.01
v/s Ratio Perm	0.21			0.31			0.07		0.07	0.11		0.06
v/c Ratio	0.51	1.40		0.72	1.56		0.24	0.72	0.24	0.39	0.42	0.19
Uniform Delay, d1	41.2	52.3		45.3	51.0		41.3	57.9	49.4	43.5	52.2	42.8
Progression Factor	1.26	0.70		1.00	1.00		1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.9	180.4		14.9	253.0		0.4	2.6	0.3	1.4	0.3	0.2
Delay (s)	53.8	217.3		60.2	304.0		41.7	60.5	49.7	44.9	52.5	42.9
Level of Service	D	F		E	F		D	E	D	D	D	D
Approach Delay (s)		213.8			296.5			57.0			48.4	
Approach LOS		F			F			E			D	
Intersection Summary												
HCM 2000 Control Delay	214.7			HCM 2000 Level of Service			F					
HCM 2000 Volume to Capacity ratio	1.14											
Actuated Cycle Length (s)	180.0			Sum of lost time (s)			31.2					
Intersection Capacity Utilization	112.7%			ICU Level of Service			H					
Analysis Period (min)	15											
c Critical Lane Group												

HCM Unsignalized Intersection Capacity Analysis

9: SW 57th Ave/Red Rd & Ponce de Leon Blvd

01/09/2023

						
Movement	NBT	NBR	SBL	SBT	SWL	SWR
Lane Configurations						
Traffic Volume (veh/h)	342	342	342	684	0	992
Future Volume (Veh/h)	342	342	342	684	0	992
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Hourly flow rate (vph)	360	360	360	720	0	1044
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh						
Upstream signal (ft)	243					
pX, platoon unblocked			0.84		0.84	0.84
vC, conflicting volume			720		1620	360
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			283		1355	0
tC, single (s)			4.1		6.8	6.9
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			66		100	0
cM capacity (veh/h)			1071		78	910
Direction, Lane #	NB 1	NB 2	SB 1	SB 2	SB 3	SW 1
Volume Total	240	480	360	360	360	1044
Volume Left	0	0	360	0	0	0
Volume Right	0	360	0	0	0	1044
cSH	1700	1700	1071	1700	1700	910
Volume to Capacity	0.14	0.28	0.34	0.21	0.21	1.15
Queue Length 95th (ft)	0	0	37	0	0	747
Control Delay (s)	0.0	0.0	10.1	0.0	0.0	98.2
Lane LOS			B			F
Approach Delay (s)	0.0		3.4			98.2
Approach LOS						F
Intersection Summary						
Average Delay			37.3			
Intersection Capacity Utilization			88.5%	ICU Level of Service		E
Analysis Period (min)			15			

HCM Signalized Intersection Capacity Analysis

10: Ponce de Leon Blvd & Stanford Dr

01/09/2023

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	140	140	113	135	72	158	73	543	140	161	1230	139
Future Volume (vph)	140	140	113	135	72	158	73	543	140	161	1230	139
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor		0.95		1.00	0.91	0.91	1.00	0.95		1.00	0.95	
Frt		0.96		1.00	0.92	0.85	1.00	0.97		1.00	0.98	
Flt Protected		0.98		0.95	1.00	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)		3327		1770	3125	1441	1770	3431		1770	3485	
Flt Permitted		0.78		0.20	1.00	1.00	0.13	1.00		0.28	1.00	
Satd. Flow (perm)		2636		378	3125	1441	246	3431		522	3485	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	147	147	119	142	76	166	77	572	147	169	1295	146
RTOR Reduction (vph)	0	24	0	0	61	61	0	11	0	0	4	0
Lane Group Flow (vph)	0	389	0	142	98	22	77	708	0	169	1437	0
Turn Type	Perm	NA		pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4			8		8	2			6		
Actuated Green, G (s)		30.7		52.7	48.7	48.7	93.9	93.9		115.3	111.3	
Effective Green, g (s)		30.7		52.7	48.7	48.7	93.9	93.9		115.3	111.3	
Actuated g/C Ratio		0.17		0.29	0.27	0.27	0.52	0.52		0.64	0.62	
Clearance Time (s)		6.0		6.0	6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)		3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)		449		203	845	389	128	1789		413	2154	
v/s Ratio Prot				c0.05	0.03			0.21		c0.03	c0.41	
v/s Ratio Perm		c0.15		c0.16		0.02	0.31			0.24		
v/c Ratio		0.87		0.70	0.12	0.06	0.60	0.40		0.41	0.67	
Uniform Delay, d1		72.7		50.9	49.4	48.6	30.0	25.9		15.5	22.3	
Progression Factor		1.00		0.51	0.16	1.04	0.85	0.68		0.49	0.36	
Incremental Delay, d2		15.9		7.7	0.0	0.0	17.1	0.6		0.4	1.0	
Delay (s)		88.6		33.5	7.7	50.5	42.7	18.1		7.9	9.0	
Level of Service		F		C	A	D	D	B		A	A	
Approach Delay (s)		88.6			26.5			20.5			8.9	
Approach LOS		F			C			C			A	
Intersection Summary												
HCM 2000 Control Delay		24.2										
HCM 2000 Volume to Capacity ratio		0.75										
Actuated Cycle Length (s)		180.0								30.0		
Intersection Capacity Utilization		81.6%										
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

11: Ponce de Leon Blvd & Granada Blvd

01/09/2023

												
Movement	SEL	SET	SER	NWL	NWT	NWR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (vph)	82	323	108	84	447	65	322	691	42	56	1116	156
Future Volume (vph)	82	323	108	84	447	65	322	691	42	56	1116	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Lane Util. Factor	1.00	1.00			0.91	0.91	1.00	0.95		1.00	0.95	
Frt	1.00	0.96			1.00	0.85	1.00	0.99		1.00	0.98	
Flt Protected	0.95	1.00			0.99	1.00	0.95	1.00		0.95	1.00	
Satd. Flow (prot)	1770	1793			3358	1441	1770	3509		1770	3474	
Flt Permitted	0.29	1.00			0.56	1.00	0.05	1.00		0.36	1.00	
Satd. Flow (perm)	534	1793			1893	1441	96	3509		670	3474	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	86	340	114	88	471	68	339	727	44	59	1175	164
RTOR Reduction (vph)	0	6	0	0	1	41	0	2	0	0	6	0
Lane Group Flow (vph)	86	448	0	0	565	20	339	769	0	59	1333	0
Turn Type	Perm	NA		Perm	NA	Perm	pm+pt	NA		Perm	NA	
Protected Phases		4			8		1	6			2	
Permitted Phases	4			8		8	6			2		
Actuated Green, G (s)	58.4	58.4			58.4	58.4	105.6	101.6		67.6	67.6	
Effective Green, g (s)	58.4	58.4			58.4	58.4	105.6	101.6		67.6	67.6	
Actuated g/C Ratio	0.32	0.32			0.32	0.32	0.59	0.56		0.38	0.38	
Clearance Time (s)	6.0	6.0			6.0	6.0	6.0	6.0		6.0	6.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	3.0	3.0		3.0	3.0	
Lane Grp Cap (vph)	173	581			614	467	316	1980		251	1304	
v/s Ratio Prot		0.25					c0.17	0.22			0.38	
v/s Ratio Perm	0.16				c0.30	0.01	c0.46			0.09		
v/c Ratio	0.50	0.77			0.92	0.04	1.07	0.39		0.24	1.02	
Uniform Delay, d1	49.0	54.8			58.6	41.6	64.1	21.9		38.5	56.2	
Progression Factor	1.00	1.00			0.46	1.00	0.94	0.80		0.86	0.90	
Incremental Delay, d2	2.2	6.3			15.3	0.0	70.3	0.6		0.2	14.0	
Delay (s)	51.2	61.0			42.2	41.7	130.6	18.1		33.3	64.5	
Level of Service	D	E			D	D	F	B		C	E	
Approach Delay (s)		59.5			42.2			52.4			63.1	
Approach LOS		E			D			D			E	
Intersection Summary												
HCM 2000 Control Delay		55.8			HCM 2000 Level of Service			E				
HCM 2000 Volume to Capacity ratio		1.05										
Actuated Cycle Length (s)		180.0			Sum of lost time (s)			24.0				
Intersection Capacity Utilization		112.7%			ICU Level of Service			H				
Analysis Period (min)		15										
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

12: Ponce de Leon Blvd & Le Jeune Rd & Blue Rd

01/09/2023

												
Movement	WBL2	WBL	WBR	WBR2	NBT	NBR	NBR2	SBL2	SBL	SBT	SBR	NEL
Lane Configurations												
Traffic Volume (vph)	15	279	96	9	446	36	1	16	109	679	564	291
Future Volume (vph)	15	279	96	9	446	36	1	16	109	679	564	291
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0		6.0				6.0	6.0		6.0
Lane Util. Factor	1.00	1.00	1.00		0.95				1.00	0.95		0.97
Frt	1.00	1.00	0.85		0.99				1.00	0.93		1.00
Flt Protected	0.95	0.95	1.00		1.00				0.95	1.00		0.95
Satd. Flow (prot)	1770	1770	1583		3498				1770	3298		3433
Flt Permitted	0.58	0.95	1.00		1.00				0.39	1.00		0.95
Satd. Flow (perm)	1080	1770	1583		3498				732	3298		3433
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	16	294	101	9	469	38	1	17	115	715	594	306
RTOR Reduction (vph)	0	0	91	0	0	0	0	0	0	0	0	0
Lane Group Flow (vph)	16	294	19	0	508	0	0	0	132	1309	0	306
Turn Type	Perm	Prot	Perm		NA			Perm	Perm	NA		Prot
Protected Phases		9			2					6		7
Permitted Phases	9		9					6	6			
Actuated Green, G (s)	29.0	29.0	29.0		77.0				77.0	77.0		16.0
Effective Green, g (s)	29.0	29.0	29.0		77.0				77.0	77.0		16.0
Actuated g/C Ratio	0.16	0.16	0.16		0.43				0.43	0.43		0.09
Clearance Time (s)	6.0	6.0	6.0		6.0				6.0	6.0		6.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0				3.0	3.0		3.0
Lane Grp Cap (vph)	174	285	255		1496				313	1410		305
v/s Ratio Prot		c0.17			0.15					c0.40		c0.09
v/s Ratio Perm	0.01		0.01						0.18			
v/c Ratio	0.09	1.03	0.07		0.34				0.42	0.93		1.00
Uniform Delay, d1	64.3	75.5	64.1		34.5				36.0	48.9		82.0
Progression Factor	1.47	1.42	4.41		0.11				1.00	1.00		0.86
Incremental Delay, d2	0.2	57.4	0.1		0.3				4.1	12.0		51.2
Delay (s)	94.9	164.4	282.6		4.1				40.1	60.9		121.8
Level of Service	F	F	F		A				D	E		F
Approach Delay (s)		192.7			4.1					59.0		
Approach LOS		F			A					E		
Intersection Summary												
HCM 2000 Control Delay			82.0		HCM 2000 Level of Service				F			
HCM 2000 Volume to Capacity ratio			0.98									
Actuated Cycle Length (s)			180.0		Sum of lost time (s)				27.0			
Intersection Capacity Utilization			97.4%		ICU Level of Service				F			
Analysis Period (min)			15									
c Critical Lane Group												

HCM Signalized Intersection Capacity Analysis

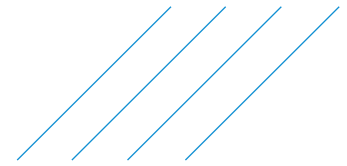
12: Ponce de Leon Blvd & Le Jeune Rd & Blue Rd

01/09/2023



Movement	NET	NER	NER2	SWL2	SWL	SWT	SWR
Lane Configurations	↑	↑			↑	↑↑	
Traffic Volume (vph)	308	202	78	4	63	590	15
Future Volume (vph)	308	202	78	4	63	590	15
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0			6.0	6.0	
Lane Util. Factor	1.00	1.00			1.00	0.95	
Frt	1.00	0.85			1.00	1.00	
Flt Protected	1.00	1.00			0.95	1.00	
Satd. Flow (prot)	1863	1583			1770	3526	
Flt Permitted	1.00	1.00			0.56	1.00	
Satd. Flow (perm)	1863	1583			1048	3526	
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	324	213	82	4	66	621	16
RTOR Reduction (vph)	0	52	0	0	0	1	0
Lane Group Flow (vph)	324	243	0	0	70	636	0
Turn Type	NA	Perm		Perm	Perm	NA	
Protected Phases	4					8	
Permitted Phases		4		8	8		
Actuated Green, G (s)	52.0	52.0			30.0	30.0	
Effective Green, g (s)	52.0	52.0			30.0	30.0	
Actuated g/C Ratio	0.29	0.29			0.17	0.17	
Clearance Time (s)	6.0	6.0			6.0	6.0	
Vehicle Extension (s)	3.0	3.0			3.0	3.0	
Lane Grp Cap (vph)	538	457			174	587	
v/s Ratio Prot	0.17					c0.18	
v/s Ratio Perm		0.15			0.07		
v/c Ratio	0.60	0.53			0.40	1.08	
Uniform Delay, d1	55.1	53.8			67.0	75.0	
Progression Factor	0.91	0.87			1.00	1.00	
Incremental Delay, d2	1.8	1.1			1.5	61.9	
Delay (s)	51.8	47.7			68.5	136.9	
Level of Service	D	D			E	F	
Approach Delay (s)	73.6					130.1	
Approach LOS	E					F	

Intersection Summary



Attachment 2: SIDRA Roundabout Analysis Results

MOVEMENT SUMMARY

 **Site: 101 [AM Peak - 2 lane]**

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Le Jeune Road												
8	T1	493	3.0	0.638	22.9	LOS C	3.9	98.7	0.82	1.03	1.55	27.6
18a	R1	127	3.0	0.638	21.5	LOS C	3.9	98.7	0.81	1.02	1.53	27.9
18	R2	3	3.0	0.638	21.5	LOS C	3.9	98.7	0.81	1.02	1.53	27.4
Approach		624	3.0	0.638	22.6	LOS C	3.9	98.7	0.82	1.02	1.55	27.7
East: Grand Ave												
1	L2	80	3.0	0.584	22.6	LOS C	2.9	74.0	0.84	1.00	1.46	26.4
1a	L1	167	3.0	0.584	22.6	LOS C	2.9	74.0	0.84	1.00	1.46	26.1
16	R2	71	3.0	0.199	13.2	LOS B	0.6	16.4	0.76	0.76	0.76	30.3
16b	R3	2	3.0	0.199	13.2	LOS B	0.6	16.4	0.76	0.76	0.76	29.9
Approach		321	3.0	0.584	20.4	LOS C	2.9	74.0	0.82	0.95	1.30	27.0
NorthEast: Ponce de Leon Blvd												
1ax	L1	33	3.0	0.284	11.0	LOS B	1.1	27.0	0.67	0.69	0.73	31.6
6x	T1	275	3.0	0.284	10.4	LOS B	1.1	27.0	0.66	0.68	0.71	32.4
16bx	R3	8	3.0	0.284	9.9	LOS A	1.0	26.8	0.66	0.67	0.70	31.4
Approach		315	3.0	0.284	10.4	LOS B	1.1	27.0	0.67	0.68	0.71	32.3
North: Le Jeune Road												
7b	L3	8	3.0	0.515	12.0	LOS B	3.4	87.9	0.69	0.81	1.03	31.8
7	L2	74	3.0	0.515	12.0	LOS B	3.4	87.9	0.69	0.81	1.03	31.4
4	T1	566	3.0	0.515	11.7	LOS B	3.5	88.4	0.68	0.80	1.01	31.7
14a	R1	187	3.0	0.515	11.2	LOS B	3.5	88.4	0.67	0.79	0.99	31.9
Approach		835	3.0	0.515	11.6	LOS B	3.5	88.4	0.68	0.80	1.01	31.7
SouthWest: Ponce de Leon Blvd												
5ax	L1	195	3.0	1.236	138.1	LOS F	69.1	1768.4	1.00	3.86	9.80	11.5
2x	T1	680	3.0	1.236	138.1	LOS F	69.1	1768.4	1.00	3.86	9.80	11.5
12ax	R1	313	3.0	0.532	14.5	LOS B	3.2	83.0	0.74	0.88	1.18	30.5
12bx	R3	26	3.0	0.532	14.5	LOS B	3.2	83.0	0.74	0.88	1.18	29.6
Approach		1214	3.0	1.236	103.6	LOS F	69.1	1768.4	0.93	3.02	7.40	13.9
All Vehicles		3309	3.0	1.236	48.2	LOS E	69.1	1768.4	0.81	1.66	3.45	21.0

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.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if $v/c > 1$ irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (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.

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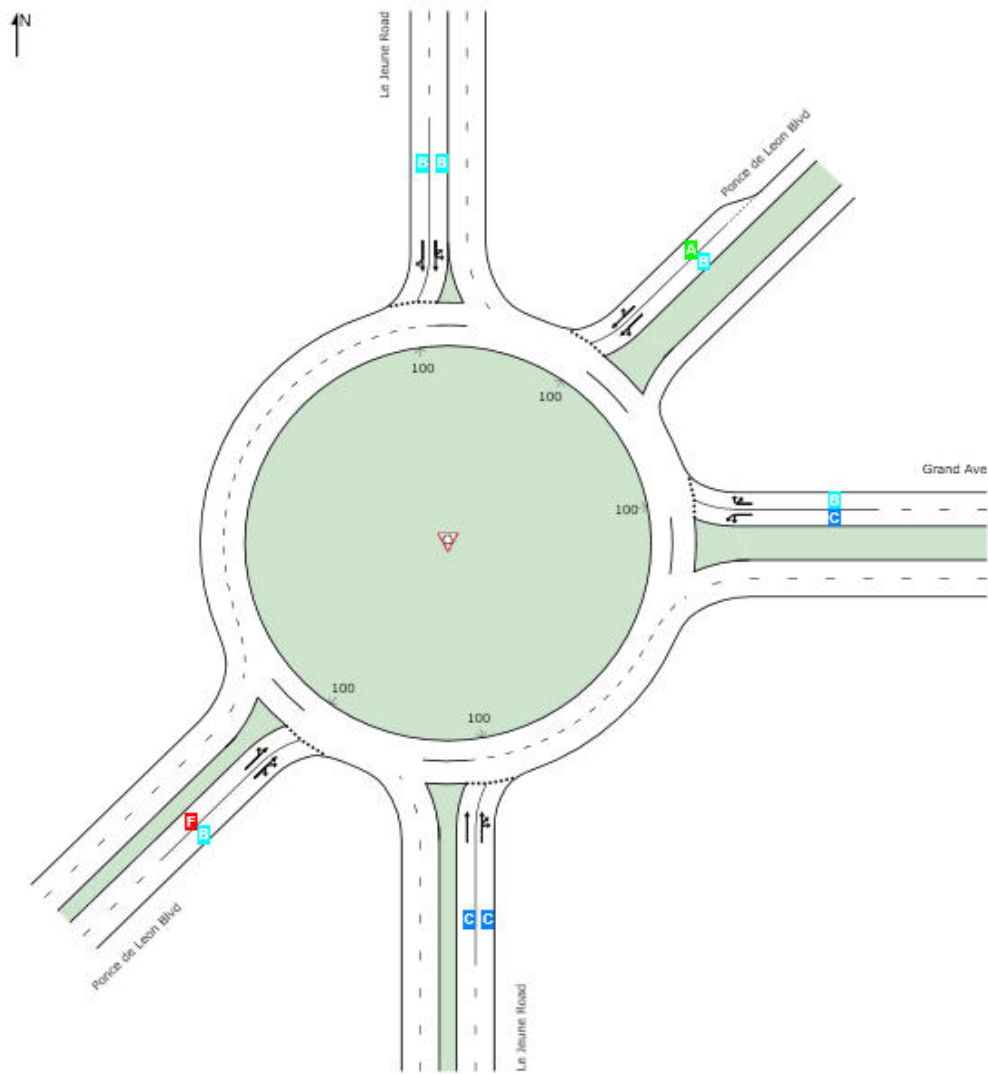
LANE LEVEL OF SERVICE

Lane Level of Service

 **Site: 101 [AM Peak - 2 lane]**

New Site
Site Category: (None)
Roundabout

	Approaches					Intersection
	South	East	Northeast	North	Southwest	
LOS	C	C	B	B	F	E



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).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

MOVEMENT SUMMARY

 Site: 101 [PM Peak - 2 lane]

New Site
Site Category: (None)
Roundabout

Movement Performance - Vehicles												
Mov ID	Turn	Demand Total veh/h	Flows HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back Vehicles veh	of Queue Distance ft	Prop. Queued	Effective Stop Rate	Aver. No. Cycles	Average Speed mph
South: Le Jeune Road												
8	T1	485	3.0	0.472	14.5	LOS B	2.4	60.7	0.73	0.84	1.10	30.8
18a	R1	39	3.0	0.472	13.8	LOS B	2.4	60.7	0.72	0.83	1.09	30.8
18	R2	1	3.0	0.472	13.8	LOS B	2.4	60.7	0.72	0.83	1.09	30.2
Approach		525	3.0	0.472	14.5	LOS B	2.4	60.7	0.73	0.84	1.10	30.8
East: Grand Ave												
1	L2	16	3.0	0.654	23.6	LOS C	3.9	100.4	0.83	1.05	1.61	26.2
1a	L1	303	3.0	0.654	23.6	LOS C	3.9	100.4	0.83	1.05	1.61	25.9
16	R2	104	3.0	0.268	12.9	LOS B	0.9	24.3	0.74	0.76	0.80	30.4
16b	R3	10	3.0	0.268	12.9	LOS B	0.9	24.3	0.74	0.76	0.80	30.0
Approach		434	3.0	0.654	20.7	LOS C	3.9	100.4	0.81	0.97	1.40	26.9
NorthEast: Ponce de Leon Blvd												
1bx	L3	4	3.0	0.827	43.1	LOS E	6.7	170.8	0.92	1.33	2.42	22.2
1ax	L1	68	3.0	0.827	43.1	LOS E	6.7	170.8	0.92	1.33	2.42	21.9
6x	T1	641	3.0	0.827	40.6	LOS E	7.0	180.0	0.91	1.33	2.43	22.7
16bx	R3	16	3.0	0.827	38.9	LOS E	7.0	180.0	0.91	1.33	2.43	22.5
Approach		730	3.0	0.827	40.8	LOS E	7.0	180.0	0.91	1.33	2.43	22.6
North: Le Jeune Road												
7b	L3	17	3.0	1.416	221.9	LOS F	75.3	1928.5	1.00	4.28	12.36	8.1
7	L2	118	3.0	1.416	221.9	LOS F	75.3	1928.5	1.00	4.28	12.36	8.1
4	T1	738	3.0	1.416	221.1	LOS F	84.4	2161.8	1.00	4.36	12.59	8.1
14a	R1	613	3.0	1.416	218.7	LOS F	84.4	2161.8	1.00	4.62	13.34	8.1
Approach		1487	3.0	1.416	220.2	LOS F	84.4	2161.8	1.00	4.46	12.88	8.1
SouthWest: Ponce de Leon Blvd												
5ax	L1	316	3.0	0.882	34.1	LOS D	14.5	371.3	0.95	1.58	2.85	23.7
2x	T1	335	3.0	0.882	34.1	LOS D	14.5	371.3	0.95	1.58	2.85	23.9
12ax	R1	220	3.0	0.456	12.1	LOS B	2.5	63.0	0.69	0.79	0.98	31.5
12bx	R3	85	3.0	0.456	12.1	LOS B	2.5	63.0	0.69	0.79	0.98	30.5
Approach		955	3.0	0.882	27.1	LOS D	14.5	371.3	0.87	1.33	2.26	25.7
All Vehicles		4132	3.0	1.416	96.7	LOS F	84.4	2161.8	0.90	2.36	5.87	14.5

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.

Vehicle movement LOS values are based on average delay and v/c ratio (degree of saturation) per movement.

LOS F will result if v/c > 1 irrespective of movement delay value (does not apply for approaches and intersection).

Intersection and Approach LOS values are based on average delay for all movements (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.

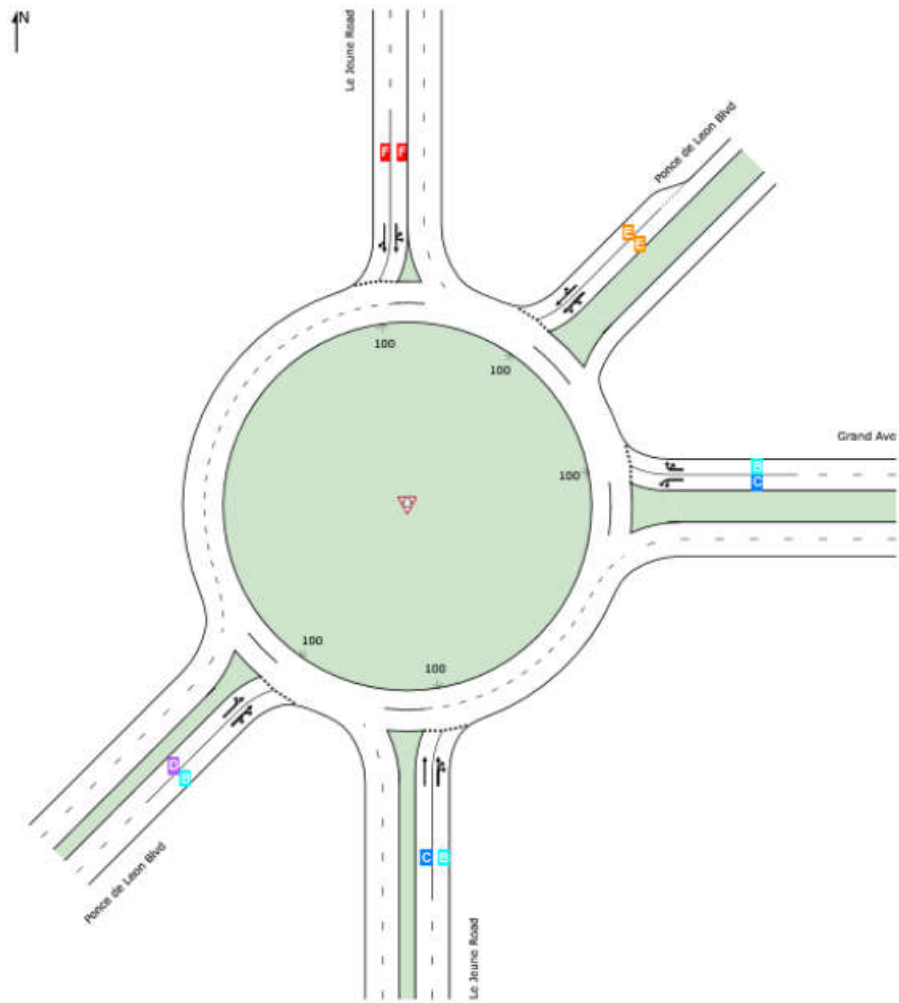
LANE LEVEL OF SERVICE

Lane Level of Service

 **Site: 101 [PM Peak - 2 lane]**

New Site
Site Category: (None)
Roundabout

	Approaches					Intersection
	South	East	Northeast	North	Southwest	
LOS	B	C	E	F	D	F



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).
HCM Delay Formula option is used. Control Delay does not include Geometric Delay since Exclude Geometric Delay option applies.

Appendix C

Preliminary Structures Analysis



CONTENTS

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TASK DESCRIPTION

This task involves estimating the cost for elevated bike path bridge structures at two intersections (US 1/Granada Blvd and US 1/57th Ave) along US 1 near the University of Miami campus.

CONCEPT

The concept drawings for Granada Blvd comprise four steel truss bridges connected by four support towers and at 57th Ave there are two steel truss bridges connected by one tower.

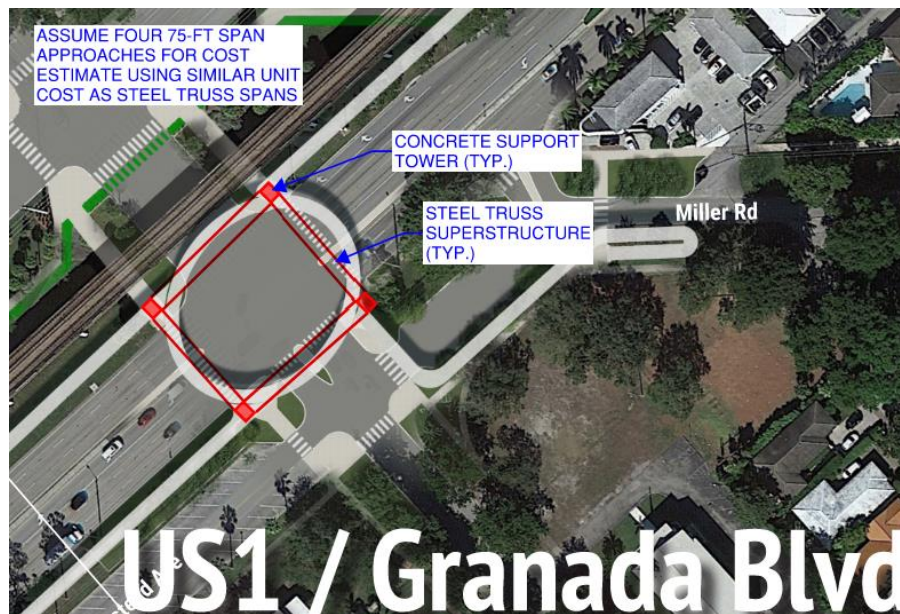


Figure 1: Granada Blvd Bridge Aerial

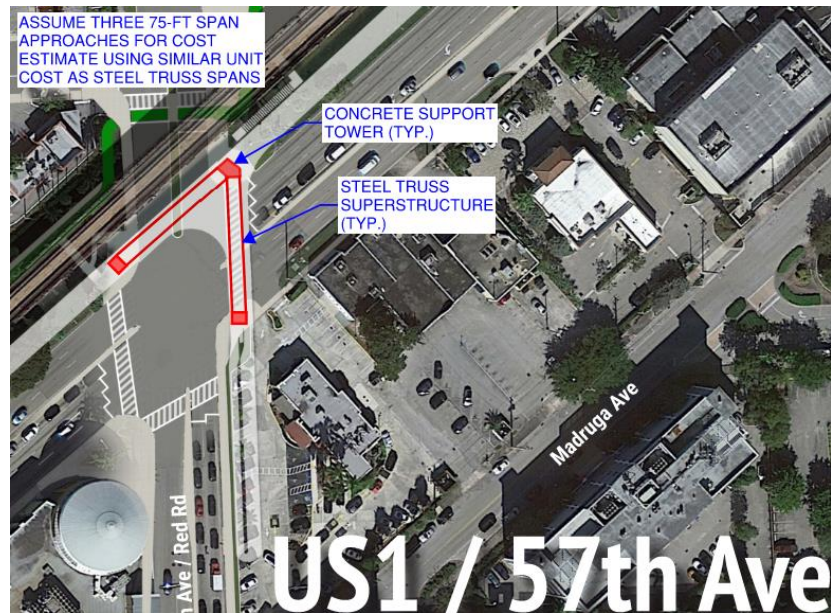


Figure 2: 57th Ave Bridge Aerial

ASSUMPTIONS FOR CSIBRIDGE MODEL

- 150-ft span lengths (measured 125-ft to 140-ft spans roughly in Google Earth)
- 18-ft width, center-to-center of chords (per FDM 266.2, 16-ft clear width is desired for shared-use path structures)
- 12-ft height assumed, center-to-center of chords
- Assumed the approaches (spans leading up to the support towers) as 75-ft truss spans for cost estimate
- Box truss configuration similar to truss Type 4 shown in FDM Fig. 266.3.1 composed of HSS tubes

Figure 266.3.1 Prefabricated Pedestrian Bridge Standard Truss Configurations

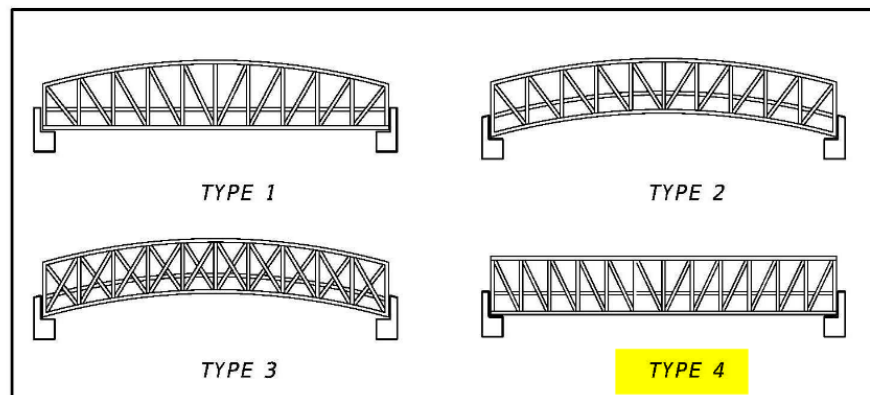


Figure 3: Truss Configuration

- Bottom left corner supports modeled as pins, bottom right as rollers restrained in the vertical and transverse direction, and both top corners as rollers restrained in the transverse direction
- 8-in deck (shell stiffness properties zeroed to ignore composite action)

- Pedestrian load of 0.075-ksf applied to deck
- Shell modeled on vertical face of the truss with stiffness and weight zeroed for wind load application
 - Wind load applied to shell faces; 170-mph winds, 33-ft structure height, and assumed exposure category D (conservative)
- Service I, Strength I, and Strength III considered for design
 - AISC 360-16 used for the steel design (since latest available AASHTO code in CSiBridge v22 is LRFD 2007)
 - Performance ratios kept to near 0.5 for all members

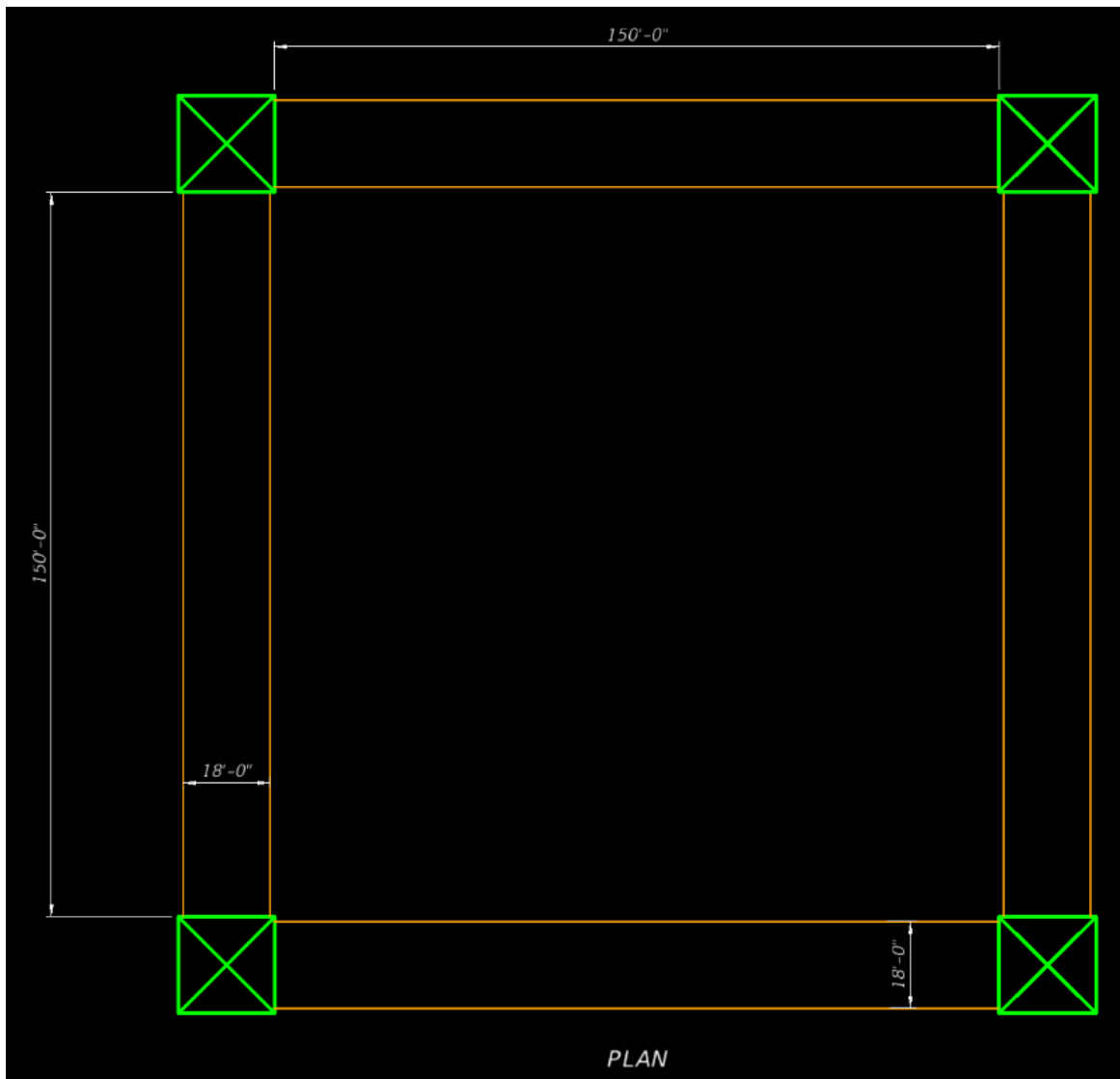


Figure 4: Granada Blvd Concept Drawing, Plan View

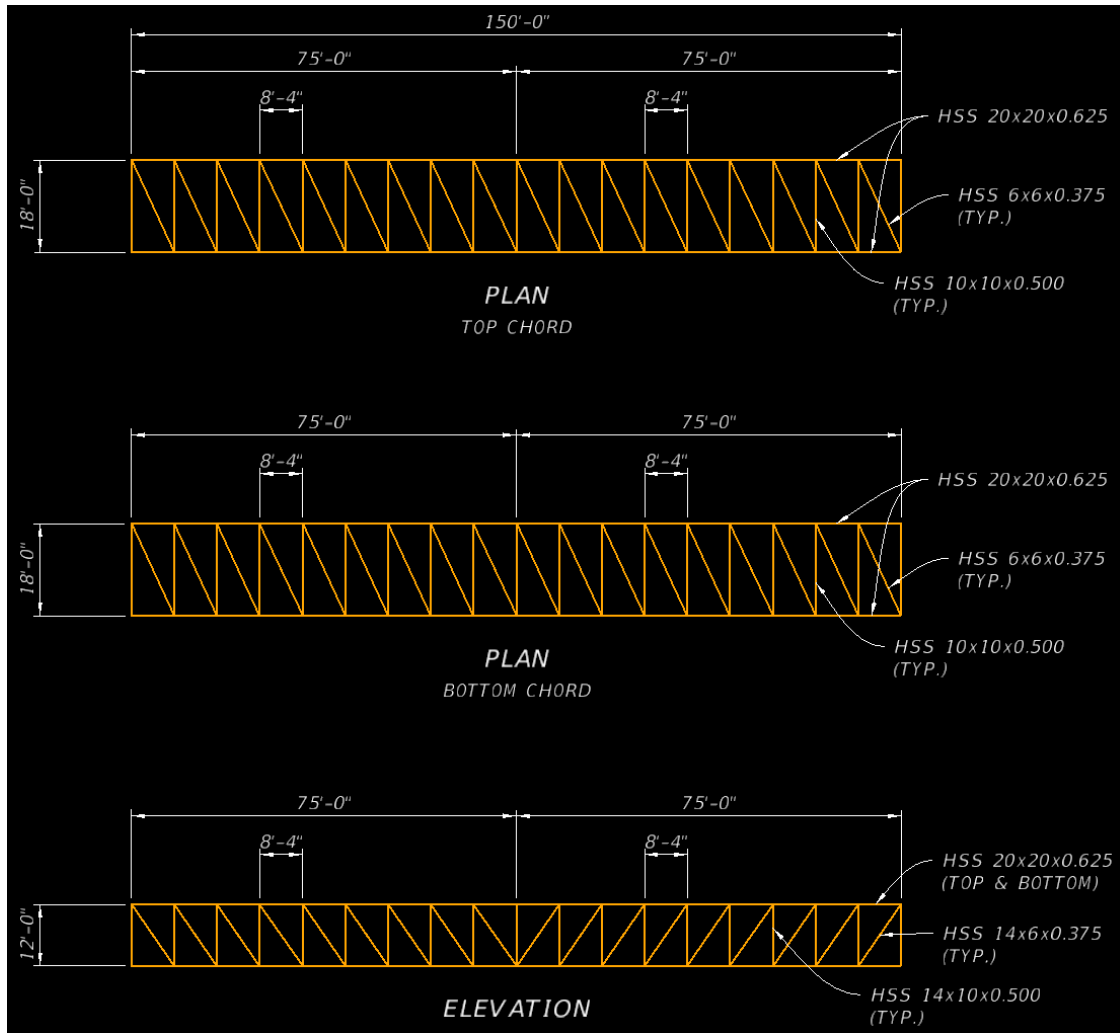


Figure 5: Granada Blvd Concept Drawing, Truss Plan and Elevation

CSIBRIDGE MODEL

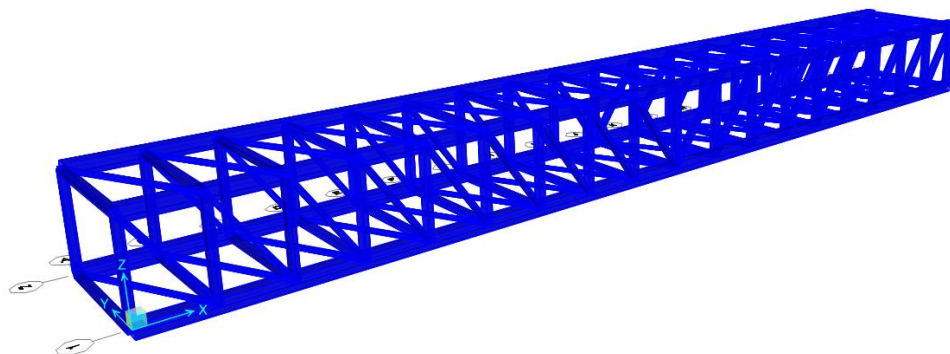


Figure 6: Model Isometric View

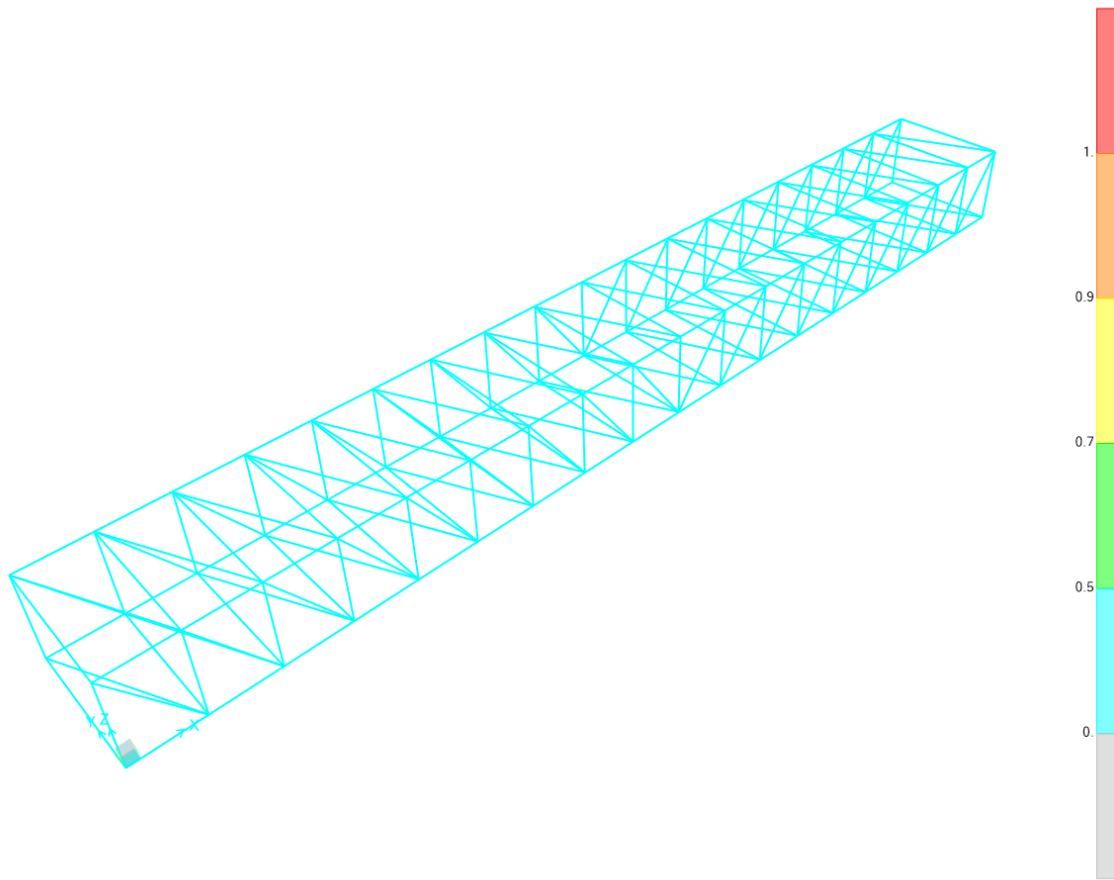


Figure 7: Model Performance Ratios (kept near or below 0.5)

ASSUMPTIONS FOR COST ESTIMATE

- Use historical item averages for prefabricated steel truss pedestrian bridge
 - Use 6-month Statewide averages and adjust for market volatility/inflation (15% increase assumed)
- Aesthetics calculated as 10% of the structures cost
- Cost of walls, drainage items, and approach slabs not included
- MOT, Mobilization, and Project Contingencies are not included
- Owner's Soft Costs (such as ROW, financing, administrative, legal) are not included
- Costs for temporary fencing or other security measures during construction are not included
- Unforeseen conditions (muck, unstable soil conditions, etc.) are not included
- Costs related to construction delays or claims are not included
- The cost of the approach spans leading up to the towers was estimated using the same unit cost as the bridge structures

TOTAL COSTS

- Granada Blvd Bridge Structures - **\$12,000,000**
- 57th Ave Bridge Structures - **\$7,000,000**
- Aesthetics - **\$1,900,000**

APPENDIX A - COST ESTIMATE CALCULATIONS

Unit Cost

Prefabricated Steel Truss Pedestrian Bridge

Pay Item 460-7

From 2022:

6 month Statewide average	\$624.53 /SF
12 month Statewide average	\$601.89 /SF

Unit cost	\$624.53 /SF
-----------	--------------

Bridge Data

Bridge width 18 ft

Granada Blvd:

Bridge Spans	4
Span length	150 ft
Approach Spans	4
Approach length	75 ft
Total Length	900 ft
Square footage	16200 SF

57th Ave:

Bridge Spans	2
Span length	150 ft
Approach Spans	3
Approach length	75 ft
Total Length	525 ft
Square footage	9450 SF

Total Structures Cost

Granada Blvd:

Structures cost	\$10,117,386	
Additional % for volatility/inflation	15 %	
Additional cost	\$1,517,608	
Total cost	\$12,000,000	rounded to nearest \$1M

57th Ave:

Structures cost	\$5,901,809	
Additional % for volatility/inflation	15 %	
Additional cost	\$885,271	
Total cost	\$7,000,000	rounded to nearest \$1M

Total Aesthetics Cost

Total cost of structures	\$19,000,000	
Additional % for aesthetics	10 %	
Total cost	\$1,900,000	rounded to nearest \$100K