

WEST BUSCH BOULEVARD

Corridor Alternatives & Strategies Report



DRAFT FINAL August 31, 2018

SR 580/Busch Blvd. from N. Dale Mabry Hwy. to N. Nebraska Ave.

Financial Project ID Number: 435908-1-22-01



Appendix G

Design Traffic Report





SR 580/ WEST BUSCH BOULEVARD CORRIDOR STUDY

FINAL DESIGN TRAFFIC TECHNICAL MEMORANDUM

Financial Project Number: 435908-1-22-01

Prepared for FDOT District 7

July 2018

JULY 2018

**SR 580/ West Busch Boulevard
Corridor Study
FPID 435908-1-22-01
Final Design Traffic Technical Memorandum**

PREPARED FOR
FDOT DISTRICT 7

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1 Introduction

The Florida Department of Transportation (FDOT), District 7, is conducting a corridor planning study along SR 580/West Busch Blvd from Dale Mabry Hwy to Nebraska Ave in Hillsborough County – approximately 3.3 miles. The SR 580 corridor is an east-west urban principal arterial that connects local commuters to regionally significant corridors, including the Veterans Expressway to the west and I-275, and I-75 to the east. The corridor study area includes portions of unincorporated Hillsborough County and the City of Tampa and is one of the primary links to Busch Gardens Amusement Park (located approximately 2 miles east of the project limit).

The study corridor supports a variety of land uses and demographics, including schools, churches, and businesses with direct access to and from SR 580, transit services, pedestrians, bicyclists and many small communities.

VHB's role is to prepare the Design Traffic Technical Memorandum in support of the SR 580/West Busch Blvd corridor planning study. This document summarizes the existing traffic conditions and provides the recommended design traffic characteristics, and provides evaluation of the future traffic conditions based on recommended future traffic forecasts. Please note that the existing traffic volumes and recommended design traffic characteristics were approved as part of the Existing Annual Average Daily Traffic (AADT) & Design Traffic Characteristics Report completed in July 2017.

The study area map is shown in **Figure 1**.

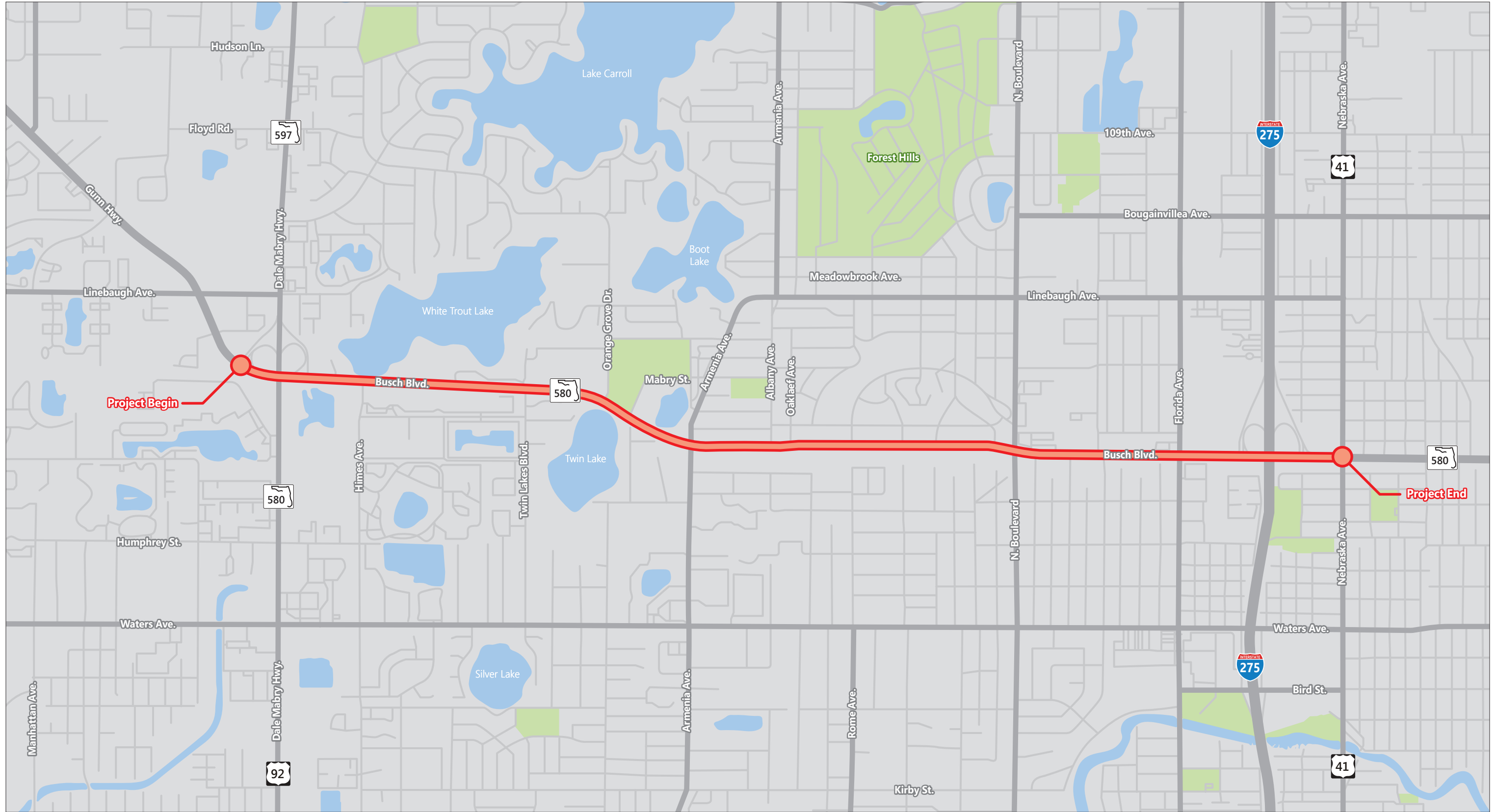


Figure 1

Project Location Map

SR 580/West Busch Blvd.

Design Traffic Technical Memorandum

2 Existing Conditions

This section provides the existing conditions traffic data and the design traffic characteristics information for the study corridor.

2.1 Traffic Count Information

Figure 2 provides the location of traffic counts and types of traffic count data collected for the study. The data collected included:

- 72-hour bi-directional volume counts (28 locations)
- 72-hour classification count (1 location)
- 4-hour intersection turning movement counts for AM and PM peak hours (11 intersections)

The weekday turning movement counts were collected for the intersections between the peak hours of 7:00-9:00 AM and 4:00-6:00 PM. The traffic count data (72-Hour volume and 72-Hour classification) collected were adjusted utilizing the FDOT axle and seasonal adjustment factors for Hillsborough County to provide 2017 annual average conditions. Vehicle composition for the classification count was broken into three primary vehicle types:

- Passenger Vehicles – Motorcycles, Cars, Vans, and Pickups;
- Medium Truck – Buses and 2 axle Single Unit Trucks;
- Heavy Trucks – (3 or 4 axles) Single Unit Trucks, 2 axle Tractors (with 1 or 2 axle Trailer), 3 axle Tractors (with 2 or 3 axle Trailers), and (5, 6 and 7 axle) Multi-trailers.

Based on these categories, percentages for overall trucks (medium and heavy) were determined for peak and daily traffic conditions. Copies of all traffic count data are provided in **Appendix A**. Year 2016 FDOT axle and seasonal adjustment factors for Hillsborough County are provided in **Appendix B**.

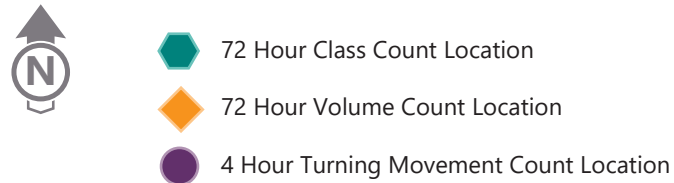
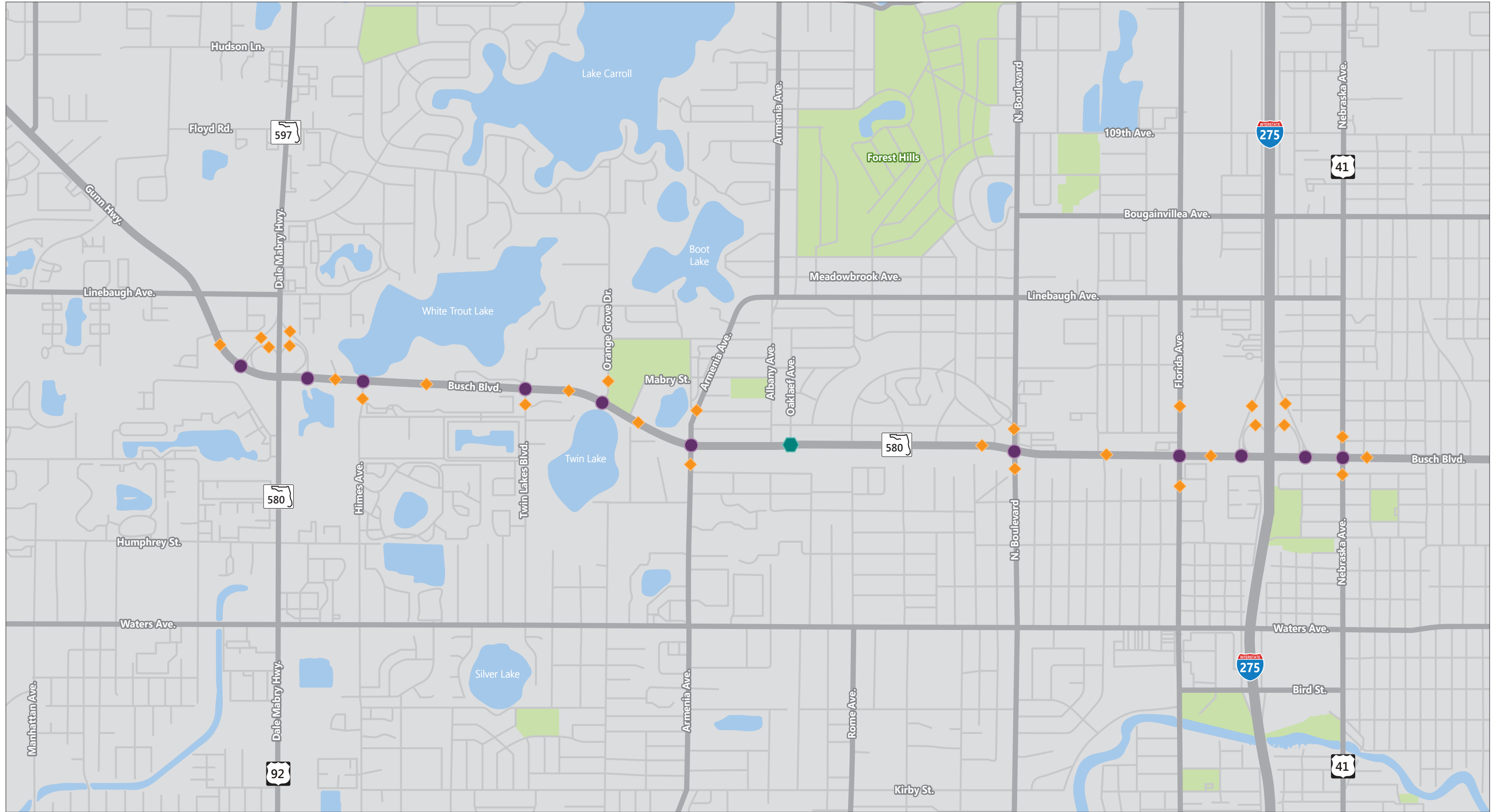


Figure 2
Traffic Count Locations By Type
SR 580/West Busch Blvd.
Design Traffic Technical Memorandum

2.2 Existing Geometry

Figure 3 provides the year 2017 intersection geometry for all the following 11 study signalized intersections. The year 2017 intersection geometry information was obtained and verified based on field visits and aerial photographs.

Roadway ID: 10000645 – CR 587/Gunn Hwy

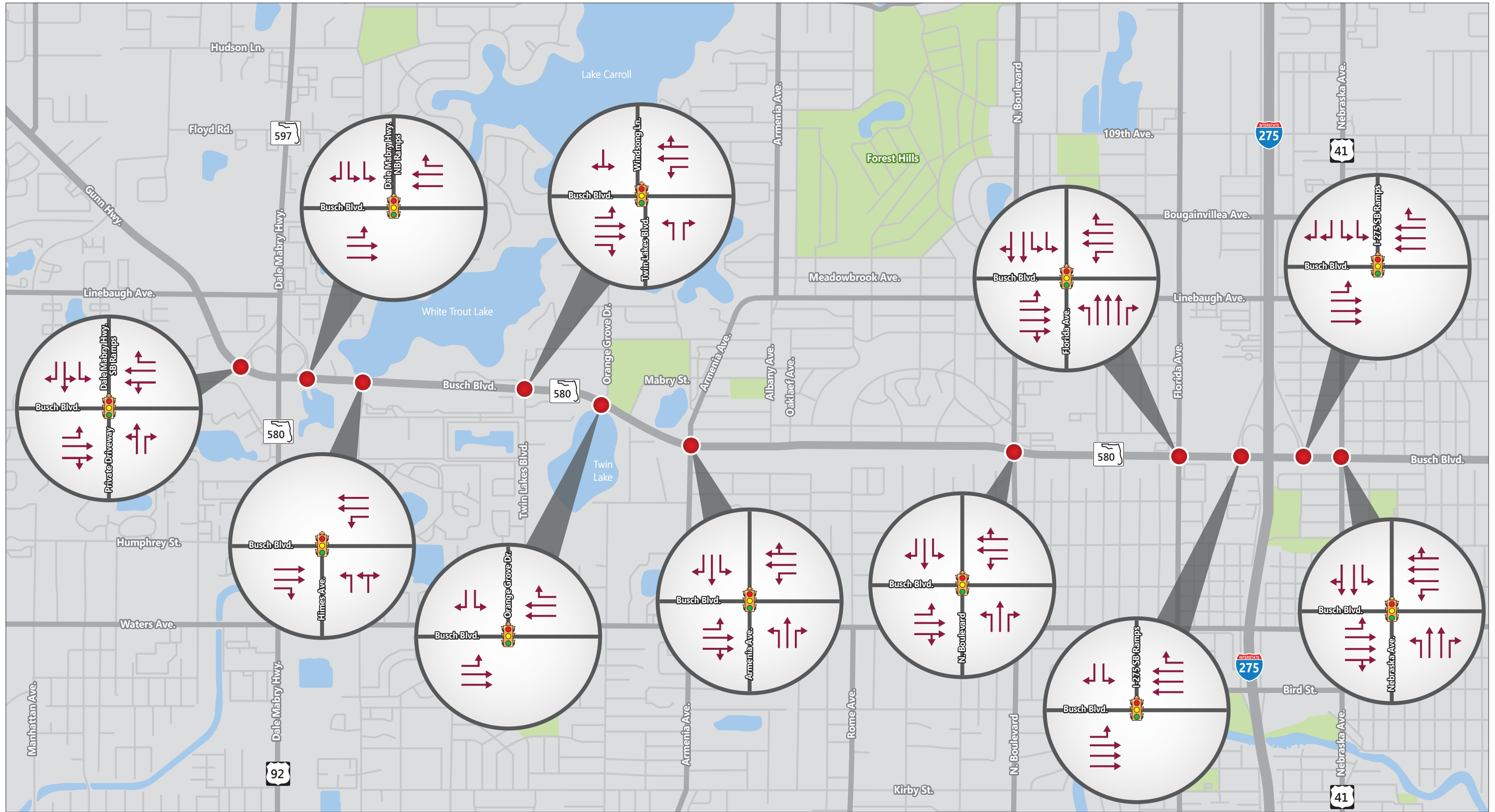
- Dale Mabry Hwy SB Ramps (MP 0.108)

Roadway ID: 10310000 – SR 580/ West Busch Blvd

- Dale Mabry Hwy NB Ramps (MP 0.088)
- Himes Ave (MP 0.267)
- Twin Lakes Blvd (MP 0.757)
- Orange Grove Dr (MP 1.012)
- Armenia Ave (MP 1.315)
- North Blvd (MP 2.315)
- Florida Ave (MP 2.817)
- I-275 SB Ramps (MP 3.009)
- I-275 NB Ramps (MP 3.198)
- Nebraska Ave (MP 3.320)

2.3 Existing Traffic Volumes

Traffic count information as collected was used to develop existing traffic characteristics for the project corridor and the intersecting side streets. The truck factor for each movement for the peak condition will be used in the existing intersection analysis. Based on the 72-Hour volume counts and 72-Hour classification counts, peak hour traffic flow (K measured) and, directional split (D measured) for the roadways in the study area were derived. The adjusted Annual Average Daily Traffic (AADT) volumes for the individual roadway segments are provided in **Table 1**. **Figure 4** provides the existing AADT's for the project corridor and the side streets. Turning movement counts were obtained for the AM and PM peak hour conditions for the eleven (11) study intersections. The turning movement counts were checked for reasonableness. Raw data for the year 2017 AM and PM peak hour turning movement volumes collected at the study intersections are available in **Appendix C**. The year 2017 AM and PM peak hour turning movement volumes (raw) for the study corridor are shown in **Figure 5**.



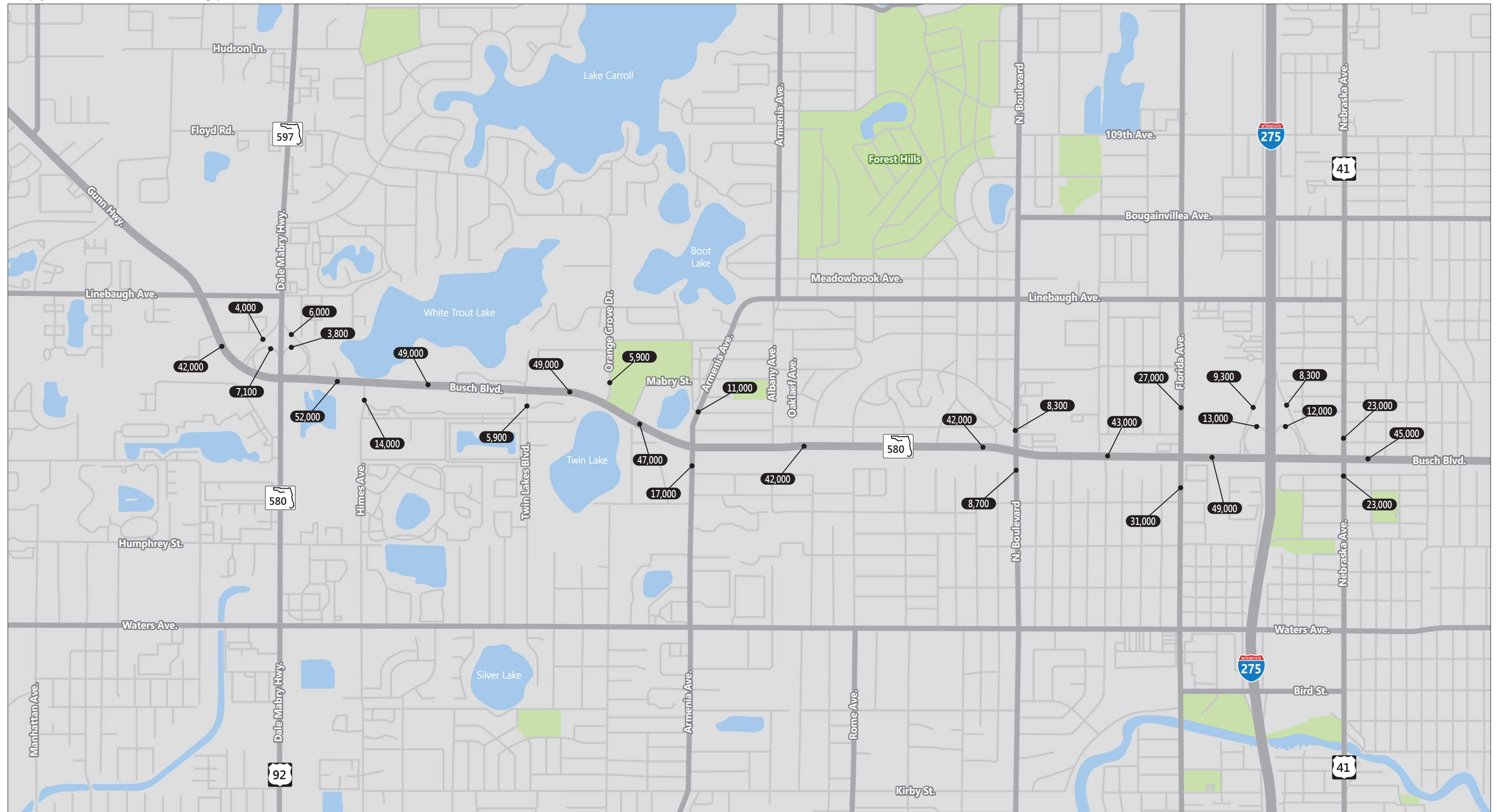
FDOT **Figure 3**
Existing Geometry
SR 580/West Busch Blvd.
Design Traffic Technical Memorandum

Table 1: Existing Year 2017 Traffic Volumes

Roadway / Segment	Date of Count	Source and Type	Measured Characteristics							Axle Adj. ²	Seasonal Adj. ¹	Adjusted AADT ³	
			ADT	Peak Hr.	NB/EB	SB/WB	Peak Time	"K"	"D"				"T _{Daily} "
Mainline Characteristics (SR 580)													
SR 580/Busch Boulevard													
West of N Dale Mabry Hwy	5/16/2017	72-hr Volume	42,141	3,522	1,606	1,916	4:45 - 5:45 PM	8.4%	54.4%	-	0.99	1.00	42,000
West of N Himes Ave	5/16/2017	72-hr Volume	52,239	4,179	1,798	2,381	4:30 - 5:30 PM	8.0%	57.0%	-	0.99	1.00	52,000
East of N Himes Ave	5/16/2017	72-hr Volume	49,131	3,755	1,704	2,051	4:15 - 5:15 PM	7.6%	54.6%	-	0.99	1.00	49,000
B/W Twin Lakes Blvd & Orange Grove Dr	5/2/2017	72-hr Volume	50,373	4,014	2,029	1,985	4:15 - 5:15 PM	8.0%	50.5%	-	0.99	0.99	49,000
B/W Orange Grove Dr & Armenia Ave	5/16/2017	72-hr Volume	47,810	3,576	1,721	1,855	5:15 - 6:15 PM	7.5%	51.9%	-	0.99	1.00	47,000
East of Armenia Ave	5/2/2017	72-hr Classification	42,549	3,326	1,641	1,685	7:30 - 8:30 AM	7.8%	50.7%	3.1%	1.00	0.99	42,000
West of N Boulevard	5/2/2017	72-hr Volume	42,489	3,255	1,692	1,563	4:15 - 5:15 PM	7.7%	52.0%	-	0.99	0.99	42,000
West of N Florida Ave	5/16/2017	72-hr Volume	43,373	3,160	1,524	1,636	5:15 - 6:15 PM	7.3%	51.8%	-	0.99	1.00	43,000
East of N Florida Ave	5/2/2017	72-hr Volume	49,937	3,848	1,952	1,896	4:15 - 5:15 PM	7.7%	50.7%	-	0.99	0.99	49,000
East of N Nebraska Ave	5/2/2017	72-hr Volume	46,037	3,491	1,918	1,573	4:30 - 5:30 PM	7.6%	54.9%	-	0.99	0.99	45,000
Sidestreet Characteristics													
N Dale Mabry Hwy													
Northbound Off Ramp	5/2/2017	72-hr Volume	3,915	319	319	0	4:15 - 5:15 PM	8.1%	100.0%	-	0.99	0.99	3,800
Northbound On Ramp	5/2/2017	72-hr Volume	6,141	574	574	0	5:00 - 6:00 PM	9.3%	100.0%	-	0.99	0.99	6,000
Southbound Off Ramp	5/2/2017	72-hr Volume	4,037	334	0	334	8:15 - 9:15 AM	8.3%	100.0%	-	0.99	0.99	4,000
Southbound On Ramp	5/2/2017	72-hr Volume	7,214	572	0	572	6:15 - 7:15 AM	7.9%	100.0%	-	0.99	0.99	7,100
N Himes Ave													
South of Busch Blvd	5/2/2017	72-hr Volume	14,292	1,188	679	509	5:00 - 6:00 PM	8.3%	57.2%	-	0.99	0.99	14,000
Twin Lakes Blvd													
South of Busch Blvd	5/2/2017	72-hr Volume	6,070	739	542	197	7:15 - 8:15 AM	12.2%	73.3%	-	0.99	0.99	5,900
Orange Grove Dr													
North of Busch Blvd	5/2/2017	72-hr Volume	5,972	595	326	269	5:15 - 6:15 PM	10.0%	54.8%	-	0.99	0.99	5,900
N Armenia Ave													
North of Busch Blvd	5/16/2017	72-hr Volume	10,869	976	504	472	5:00 - 6:00 PM	9.0%	51.6%	-	0.99	1.00	11,000
South of Busch Blvd	5/2/2017	72-hr Volume	17,122	1,349	833	516	7:00 - 8:00 AM	7.9%	61.7%	-	0.99	0.99	17,000
N Boulevard													
North of Busch Blvd	5/2/2017	72-hr Volume	8,482	1,061	563	498	6:45 - 7:45 AM	12.5%	53.1%	-	0.99	0.99	8,300
South of Busch Blvd	5/16/2017	72-hr Volume	8,743	956	661	295	7:00 - 8:00 AM	10.9%	69.1%	-	0.99	1.00	8,700
N Florida Ave													
North of Busch Blvd	5/2/2017	72-hr Volume	27,171	2,211	1,205	1,006	4:30 - 5:30 PM	8.1%	54.5%	-	0.99	0.99	27,000
South of Busch Blvd	5/2/2017	72-hr Volume	31,319	2,408	1,412	996	5:00 - 6:00 PM	7.7%	58.6%	-	0.99	0.99	31,000
N Nebraska Ave													
North of Busch Blvd	5/16/2017	72-hr Volume	23,543	1,683	899	784	5:00 - 6:00 PM	7.1%	53.4%	-	0.99	1.00	23,000
South of Busch Blvd	5/2/2017	72-hr Volume	23,769	1,699	899	800	5:00 - 6:00 PM	7.1%	52.9%	-	0.99	0.99	23,000
I-275													
Northbound Off Ramp	5/16/2017	72-hr Volume	11,761	773	773	0	8:00 - 9:00 AM	6.6%	100.0%	-	0.99	1.00	12,000
Northbound On Ramp	5/2/2017	72-hr Volume	8,444	816	816	0	4:45 - 5:45 PM	9.7%	100.0%	-	0.99	0.99	8,300
Southbound Off Ramp	5/2/2017	72-hr Volume	9,462	837	0	837	3:30 - 4:30 PM	8.8%	100.0%	-	0.99	0.99	9,300
Southbound On Ramp	5/2/2017	72-hr Volume	13,100	920	0	920	4:30 - 5:30 PM	7.0%	100.0%	-	0.99	0.99	13,000

Notes:

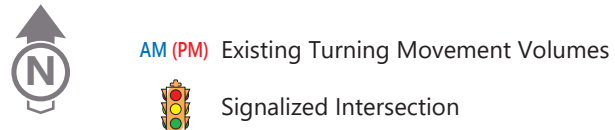
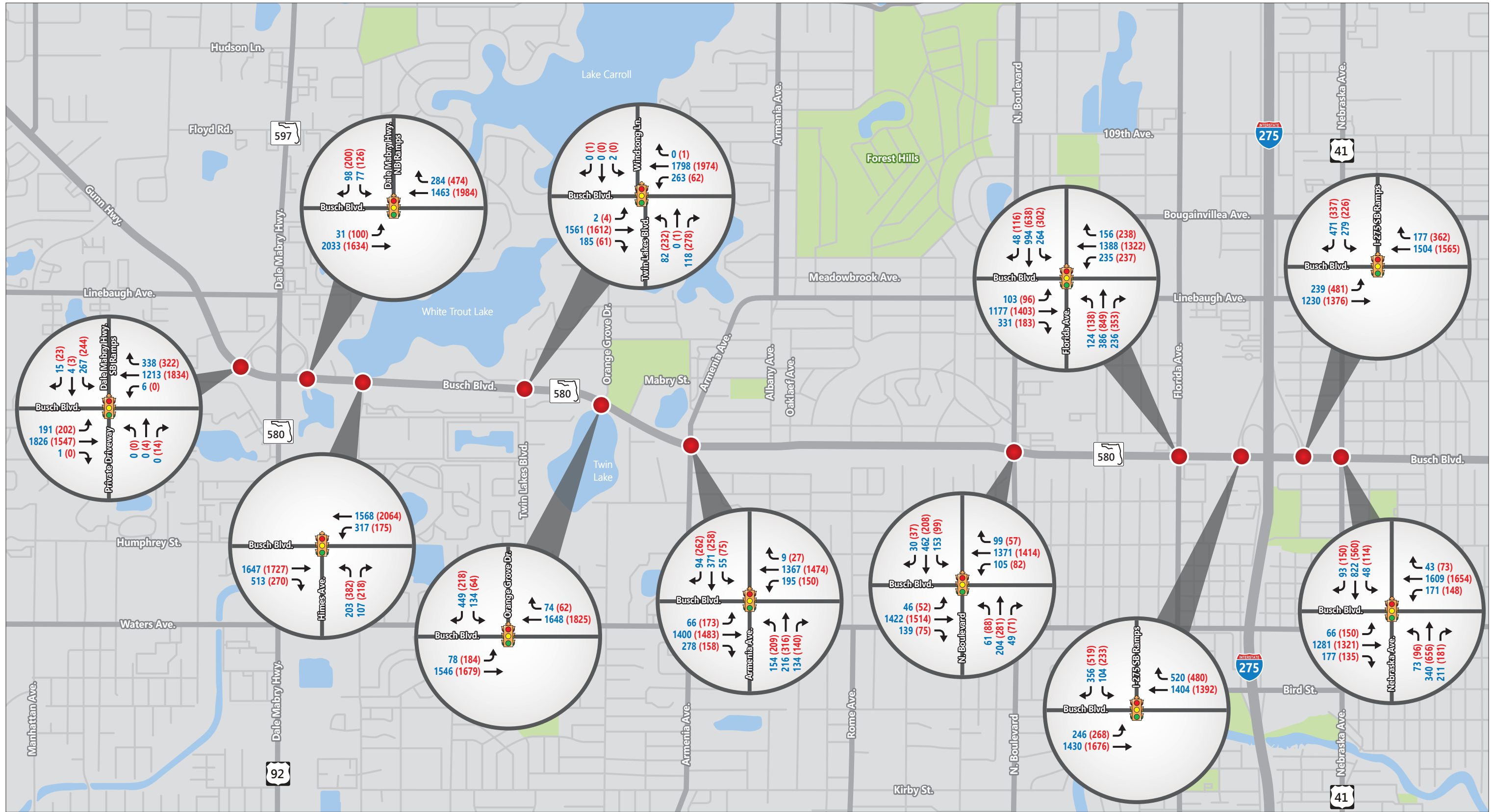
1. Most Recent Seasonal Adjustment factors were obtained from FDOT 2016 Traffic Count Information
2. Most Recent Axle Adjustment factors were obtained from FDOT 2016 Traffic Count Information
3. Adjusted AADT = Measured ADT * Axle Adjustment * Seasonal Adjustment



0000 Average Annual Daily Traffic (AADT)



Figure 4
2017 AADT
 SR 580/West Busch Blvd.
 Design Traffic Technical Memorandum



FDOT **Figure 5**
Existing AM & PM Raw Turning
Movement Volumes SR 580/West
Busch Blvd.
 Design Traffic Technical Memorandum

3 Development of Design Characteristics

The design traffic characteristics established in this section will be used in developing design hour volumes (DHV's) for the intersections and directional design hour volumes (DDHV's) for the roadway segments for the existing and future conditions. These characteristics are determined based on the procedures outlined in the FDOT's Project Traffic Forecasting Handbook, dated January 2014.

3.1 Standard K Factor

Based on direction from FDOT, a Standard K Factor of 9.0% (urban area) was used for all the major study corridors including SR 580/West Busch Blvd and the intersecting study roadways.

3.2 D Factor

The directional distribution factor, D, is based on the median value of the directional factors for the highest 200 hours of volumes for each continuous count station. In determining this factor for SR 580/Busch Blvd and side streets, statewide guidelines (Figure 2.9 from the 2014 PTF Handbook) for D factor were compared to D factors obtained from the field collected traffic counts and historical information contained in the Florida Transportation Information (FTI) DVD.

The measured D for the study area roadways are shown in **Table 1**. The average of the measured D factors for SR 580/West Busch Blvd corridor within the study limits is 52.9%. The measured D factors for the side streets are well within the FDOT recommended range of D values except for the Twin Lakes Blvd, south of SR 580/West Busch Blvd with 73.3% and North Blvd, south of SR 580/West Busch Blvd with 69.1%. Therefore, for these two streets, a D value of 67.1% is recommended.

Table 2 illustrates the historical D factors from the five sites on SR 580/West Busch Blvd: 105252, 105184, 105183, 105190 and 105191. The factors were obtained for seven years between 2010 and 2016. The average, minimum and maximum D factors over the seven years for SR 580/West Busch Blvd corridor are 57.59%, 56.16% and 59.00% respectively.

Table 3 provides the current recommended range of D values from the FDOT Project Traffic Forecasting Handbook (2014) for an urban arterial.

Table 2: Historical FTI Data - D Values

Year	SR 580/West Busch Blvd					
	105252	105184	105183	105190	105191	
	E. of N Dale Mabry Hwy	E. of N Armenia Ave	E. of N Florida Ave	W. of N Nebraska Ave	E. of N Nebraska Ave	
2016	57.00%	57.00%	57.00%	57.00%	57.00%	
2015	56.80%	56.80%	56.80%	56.80%	56.80%	
2014	58.60%	58.60%	58.60%	58.60%	58.60%	
2013	58.20%	58.20%	58.20%	58.20%	58.20%	
2012	59.00%	59.00%	59.00%	59.00%	59.00%	
2011	57.20%	57.20%	57.20%	57.20%	57.20%	
2010	56.00%	56.00%		56.00%	56.00%	
Average	57.54%	57.54%	57.80%	57.54%	57.54%	57.59%
Minimum	56.00%	56.00%	56.80%	56.00%	56.00%	56.16%
Maximum	59.00%	59.00%	59.00%	59.00%	59.00%	59.00%

Table 3: Recommended Range of D Values

Area & Highway Type	Value	Source
		FDOT ¹
Urban Arterial	Low	50.8%
	Average	57.9%
	High	67.1%

Note:

1) Source: FDOT Project Traffic Forecasting Handbook, January 2014, Figure 2.9

3.2.1 SR 580/West Busch Blvd Corridor

The average measured D from the 2017 traffic counts is 52.9%, while the average of the historical D factors is 57.59%. Therefore, being conservative without overestimating future design traffic volumes, a D factor of 55.2% (average of measured D and historical average D) is recommended for the SR 580/West Busch Blvd corridor.

3.2.2 Side Streets

For the purposes of this study, the measured D values from the 2017 traffic counts will be used for all the side streets as the recommended D factors except for the Twin Lakes Blvd with 73.3% and North Blvd, south of SR 580/West Busch Blvd with 69.1%. Therefore, for these two streets, a D value of 67.1% is recommended.

3.3 T & DHT Factors

The daily truck factor, T represents the percentage composition of medium sized and heavy trucks occurring in the traffic stream for a 24-hour period. The design hour truck, DHT is the percentage of truck traffic during the peak hour and is recommended as one-half of the T factor in the Project Traffic Forecasting Handbook.

The year 2017 measured T factor for the study corridor is shown in **Table 1**. A T factor of 3.1% and DHT of 1.5% were measured for the SR 580/West Busch Blvd corridor.

Table 4 contains the historical T factors from the FTI DVD for the seven years between 2010 and 2016. The average, minimum and maximum T factors over the seven years for SR 580/West Busch Blvd corridor are shown in the table.

Table 4: Historical FTI Data - T_{daily} Values

Year	SR 580/West Busch Blvd					
	105252	105184	105183	105190	105191	
	E. of Dale Mabry Hwy	E. of Armenia Ave	E. of Florida Ave	W. of Nebraska Ave	E. of Nebraska Ave	
2016	2.90%	3.00%	4.60%	2.70%	2.60%	
2015	4.00%	3.40%	4.60%	3.40%	3.40%	
2014	3.40%	5.70%	4.00%	5.70%	5.70%	
2013	3.40%	3.10%	4.00%	2.30%	2.50%	
2012	3.30%	3.20%	3.90%	2.30%	2.50%	
2011	3.80%	3.00%	4.00%	2.30%	2.50%	
2010	5.20%	4.40%		4.40%	4.40%	
Average	3.71%	3.69%	4.18%	3.30%	3.37%	3.65%
Minimum	2.90%	3.00%	3.90%	2.30%	2.50%	2.92%
Maximum	5.20%	5.70%	4.60%	5.70%	5.70%	5.38%

3.3.1 SR 580/West Busch Blvd Corridor

A T (DHT) factor of **4.0% (2.0%)** is recommended for the SR 580/West Busch Blvd corridor, based on the comparison of existing count information, historical information and previous studies (ESAL memo dated December 14, 2015 for FPN # 437530-1-52-01, provided in **Appendix D**).

3.3.2 Side Streets

Daily truck factors were not counted for the side streets. **Table 5** contains the historical T factors from the FTI DVD for the seven years between 2010 and 2016 for side streets, Armenia Ave, Florida Ave, Nebraska Ave and I-275 ramps. The average, minimum and maximum T factors over the seven years for side streets,

Armenia Ave, Florida Ave, Nebraska Ave and I-275 ramps are shown in the table. For the remaining side streets, for future intersection analyses, the existing peak hour truck percentages from the turning movement counts will be used.

Table 5: Historical FTI Data - T_{daily} Values

Year	Armenia Ave	Florida Ave		Nebraska Ave		I-275 Ramps
	109062 & 109166	105279	105063	105086	106013	102612 - 102615
	N. & S. of West Busch Blvd	N. of West Busch Blvd	S. of West Busch Blvd	N. of West Busch Blvd	S. of West Busch Blvd	
2016	6.80%	3.10%	3.40%	4.40%	3.40%	4.30%
2015	6.90%	4.30%	3.50%	4.30%	4.60%	4.10%
2014	9.10%	4.30%	3.50%	5.70%	4.50%	5.00%
2013	7.20%	4.30%	3.50%	4.40%	4.50%	5.00%
2012	6.60%	2.70%	2.90%	3.90%	4.40%	5.00%
2011	5.60%	2.60%	2.90%	3.90%	3.40%	4.60%
2010	-	2.70%	3.00%	3.50%	3.60%	4.60%
Average	7.03%	3.43%	3.24%	4.30%	4.06%	4.66%
Minimum	5.60%	2.60%	2.90%	3.50%	3.40%	4.10%
Maximum	9.10%	4.30%	3.50%	5.70%	4.60%	5.00%

3.4 Recommended Design Traffic Characteristics

Based on the afore-mentioned discussion, the following **Table 6** provides a summary of the recommended design traffic characteristics for this study.

Table 6: Recommended Design Traffic Characteristics

Roadway / Segment	Recommended Design Characteristics			
	K	D	T	DHT
	Factor	Factor	Factor	Factor
Mainline Characteristics				
SR 580/West Busch Blvd	9.00%	55.20%	4.00%	2.00%
Side Street Characteristics				
Dale Mabry Hwy Ramps	9.00%	-	-	Existing
Armenia Ave	9.00%	Existing	7.00%	3.50%
Florida Ave	9.00%	Existing	3.30%	1.65%
Nebraska Ave	9.00%	Existing	4.18%	2.10%
I-275 Ramps	9.00%	-	4.60%	2.30%
Remaining side streets*	9.00%	Existing	-	Existing

Note: Truck factors obtained from Year 2017 TMCs will be used for future conditions for the side streets. A D value of 67.1% is recommended for Twin Lakes Blvd, south of SR 580/West Busch Blvd and North Blvd, south of SR 580/West Busch Blvd.

4 Development of Existing & Future Traffic Volumes

The design hour volumes for all the alternatives were provided by FDOT and were developed using the existing turning movement counts and AADT volumes, and design traffic characteristics approved as part of the Existing Annual Average Daily Traffic (AADT) & Design Traffic Characteristics Report completed in July 2017. The Department provided design hour volumes for the existing (2017) conditions, and future AADTs and design hour volumes for the No Build (2040) alternative (with existing configuration along SR 580/West Busch Blvd) and the Build (2040) alternative (with 6-lane section of SR 580/West Busch Blvd within the study limits). VHB reviewed these design hour volumes, in coordination with the Department, before using them in the alternatives analysis.

Based on 2040 travel demand projections for the study corridor, an annual growth rate of approximately 0.9% was observed for the No Build and Build Alternative 1 (existing lane configuration). For Build Alternative 2, an annual growth rate of 1.9% was observed along the study corridor.

The following sections provide a brief description of the methodology and the travel demand model used to develop the design hour volumes for existing (2017), No Build (2040) alternative and Build (2040) alternative. For detailed information, please refer to **Appendix E** of this report.

4.1 Methodology

The Design Traffic Application was utilized for the SR 580/West Busch Blvd Corridor Study project traffic development for the subarea modeling and corridor modeling process and generation of initial base year (2010) and future year (2040) traffic results. The Design Traffic Application is a post-process application for conducting subarea modeling, corridor modeling, and design traffic process. This application utilizes the procedures set forth in the National Cooperative Highway Research Program (NCHRP) Report 765 to generate the design traffic volumes automatically. The base year (2010) and future year (2040) traffic results from the Design Traffic Application were used as a starting point to estimate the project traffic for existing year (2017) and future year (2040). The existing year (2017) and future year (2040) final Turning Movement Volumes (TMVs) were adjusted and balanced to ensure the reasonableness of the volume patterns and gaps between adjacent intersections.

4.2 Travel Demand Model

The Tampa Bay Regional Planning Model version 8.1.1 (TBRPM v8.1.1) was utilized for this study. TBRPM v8.1.1 is the sketch planning level travel demand forecasting tool that was adopted by the Tampa Bay Regional Transportation Analysis (RTA) process to evaluate the travel demand and the proposed transportation improvements in FDOT District 7.

In support of the future design hour volume development, the TBRPM was reviewed to ascertain that it includes all the programmed and planned improvements identified in the latest adopted Long-Range Transportation Plan (LRTP).

5 Existing Operational Analysis

The existing conditions were evaluated using the existing design hour traffic volumes, existing signal timings and other pertinent field collected data using Synchro. The existing design hour volumes are shown in **Figure 6**.

Levels of service (LOS) for the study corridor (intersections and roadway segments) were determined utilizing the Highway Capacity Manual, 6th Edition (HCM 6) methodologies incorporated in Synchro software. In addition, arterial LOS (using Synchro) and multimodal LOS (using ARTPLAN) are reported for the study corridor.

5.1 Year 2017 Intersection Auto LOS Analysis

A summary of the LOS analysis for the study intersections is included in **Table 7**. As shown in **Table 7**, based on the critical condition between 2017 AM and PM peak hour conditions, the signalized intersections along SR 580/West Busch Blvd at 1) Himes Ave, 2) Armenia Ave 3) North Blvd, 4) Florida Ave and 5) Nebraska Ave were found to operate above the target LOS D. The year 2017 AM and PM peak hour Synchro intersection analysis outputs along with the signal timing data are included in **Appendix F**.

Table 7: Existing Year 2017 Intersection LOS Analysis Summary

Intersection @ SR 580/West Busch Blvd	Control Type	FDOT Target LOS	County/ City Adopted LOS	AM Peak Hour		PM Peak Hour	
				Delay (sec/vehicle)	LOS	Delay (sec/vehicle)	LOS
Dale Mabry Hwy SB Ramps	Signal	D	D	24.5	C	54.2	D
Dale Mabry Hwy NB Ramps	Signal	D	D	6.0	A	5.8	A
Himes Ave	Signal	D	D	60.7	E	35.5	D
Twin Lakes Blvd	Signal	D	D	43.2	D	10.9	B
Orange Grove Dr	Signal	D	D	51.8	D	20.6	C
Armenia Ave	Signal	D	D	53.6	D	138.6	F
North Blvd	Signal	D	D	80.7	F	65.1	E
Florida Ave	Signal	D	D	145.1	F	140.3	F
I-275 SB Ramps	Signal	D	D	21.2	C	21.6	C
I- 275 NB Ramps	Signal	D	D	22.4	C	42.7	D
Nebraska Ave	Signal	D	D	99.1	F	77.9	E

Notes:

1. HCM 6 based outputs are presented in this table for the signalized study intersections
2. Overall intersection delay and LOS results are reported for the signalized intersections
3. FDOT's target LOS and Hillsborough County's/City of Tampa's LOS standard for SR 580/West Busch Blvd study corridor is D

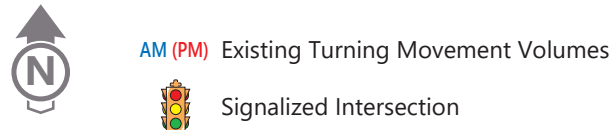
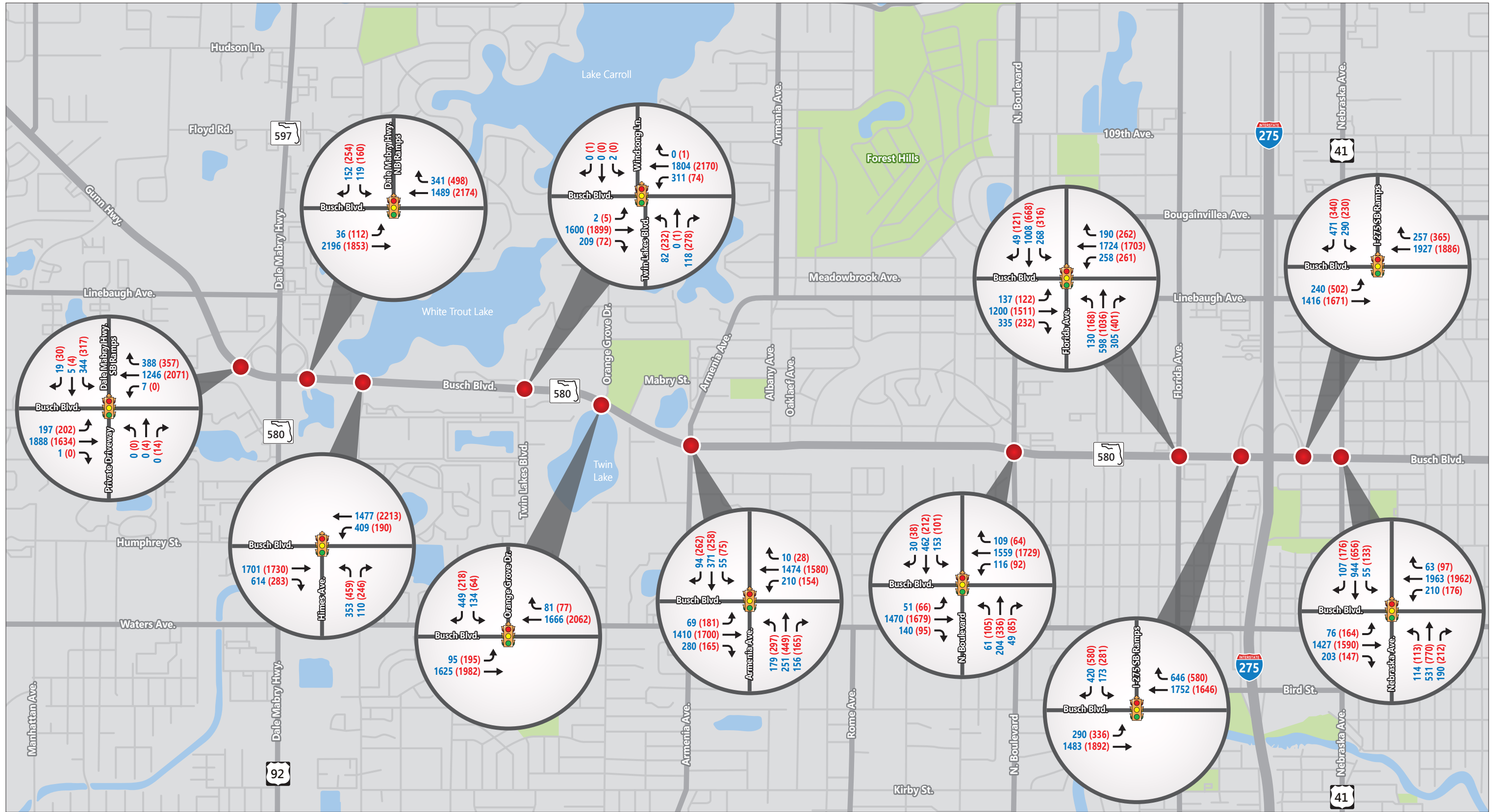


Figure 6
Existing AM & PM Design Hour
Turning Movement Volumes SR 580/
West Busch Blvd.
 Design Traffic Technical Memorandum

5.2 Year 2017 Arterial LOS Analysis

The arterial segments operating conditions were evaluated using Synchro software. The LOS results shown in **Table 8** are reported based on the level of service thresholds stated in FDOT’s 2013 Quality/Level of Service (Q/LOS) Handbook for Class I arterials (with posted speed greater than 40 MPH). For the existing conditions, the overall SR 580/West Busch Blvd study corridor between Dale Mabry Hwy and Nebraska Ave in both eastbound and westbound directions is shown to operate at or below the target LOS D.

Year 2017 AM and PM peak hour Synchro arterial analysis outputs and are LOS thresholds from Q/LOS Handbook included in **Appendix F**.

Table 8: Existing Year 2017 Arterial LOS Analysis Summary

Roadway Segment - SR 580/West Busch Blvd	AM Peak Hour		PM Peak Hour	
	EB	WB	EB	WB
Dale Mabry Hwy SB Ramps - Dale Mabry Hwy NB Ramps	C	D	C	D
Dale Mabry Hwy NB Ramps - Himes Ave	F	C	F	D
Himes Ave - Twin Lakes Blvd	B	B	C	C
Twin Lakes Blvd - Orange Grove Dr	B	C	C	C
Orange Grove Dr - Armenia Ave	F	D	F	D
Armenia Ave - North Blvd	C	B	C	E
North Blvd - Florida Ave	F	F	E	F
Florida Ave - I-275 SB Ramps	E	F	F	F
I-275 SB Ramps - I- 275 NB Ramps	D	F	C	F
I- 275 NB Ramps - Nebraska Ave	F	D	F	D
Total Segment	D	E	F	F

Note:

1. Segment LOS is based on average speed reported by Synchro and LOS thresholds from FDOT’s 2013 Q/LOS Handbook

5.3 Year 2017 Multimodal LOS Analysis

The 2017 multimodal LOS was evaluated using ARTPLAN software. The multimodal LOS results shown in **Table 9** are reported based on the 2013 Q/LOS Handbook multimodal LOS criteria and takes into consideration several existing roadway characteristics including outside lane traffic volumes, outside lane width, pavement condition, sidewalk presence, sidewalk/roadway separation, barrier presence, bus frequency, and bus stop amenities. The ARTPLAN outputs are provided in **Appendix G**. For the existing multimodal operating conditions, the overall SR 580/West Busch Blvd study corridor between Dale Mabry Hwy and Nebraska Ave is shown to operate at or below LOS E.

Table 9: Existing Year 2017 Multimodal LOS Analysis Summary

Roadway Segment - SR 580/West Busch Blvd	Pedestrian				Bicycle				Transit				
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour		
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	
Dale Mabry Hwy SB Ramps - Dale Mabry Hwy NB Ramps	E	F	E	F	E	E	E	E	E	E	E	E	E
Dale Mabry Hwy NB Ramps - Himes Ave	E	E	E	F	E	E	E	E	E	D	E	E	E
Himes Ave - Twin Lakes Blvd	E	E	E	E	E	C	E	C	D	E	D	D	D
Twin Lakes Blvd - Orange Grove Dr	E	E	E	E	E	E	E	E	E	D	D	D	D
Orange Grove Dr - Armenia Ave	E	E	E	E	E	C	E	C	E	D	E	D	D
Armenia Ave - North Blvd	F	E	F	E	E	E	E	E	E	D	E	D	D
North Blvd - Florida Ave	D	E	E	E	E	E	E	E	D	D	D	D	D
Florida Ave - I-275 SB Ramps	D	F	D	F	E	E	E	E	E	E	E	E	E
I-275 SB Ramps - I- 275 NB Ramps	C	D	D	D	E	E	E	E	E	D	E	E	E
I- 275 NB Ramps - Nebraska Ave	C	D	D	D	E	E	E	E	E	E	E	E	E
Total Segment	E	E	F	E	E	E	E	E	E	E	E	E	E

6 Future Operational Analysis

This section presents the results of the future traffic operational analysis conducted for a total of three alternatives. The future alternatives considered for operational analysis are described below:

- **4/6 Lanes SR 580/West Busch Blvd with No Improvements (No Build Alternative):** This alternative is the do-nothing or the No Build alternative. However, the programmed improvements proposed at SR 580/West Busch Blvd and Armenia Ave intersection were included as part of the No Build alternative.
- **4/6 Lanes SR 580/West Busch Blvd with Intersection Improvements (Build Alternative 1):** This alternative maintained the existing number of through lanes along the study corridor (4-lane section between Dale Mabry Hwy and Florida Ave and 6-lane section east of Florida Ave), but considered required intersection turn lane improvements.
- **6 Lanes SR 580/West Busch Blvd with Intersection Improvements (Build Alternative 2):** This alternative considered six lanes for the entire the study corridor and required intersection turn lane improvements.

6.1 Design Period

The following design periods were used for the future traffic operational analysis of the study corridor.

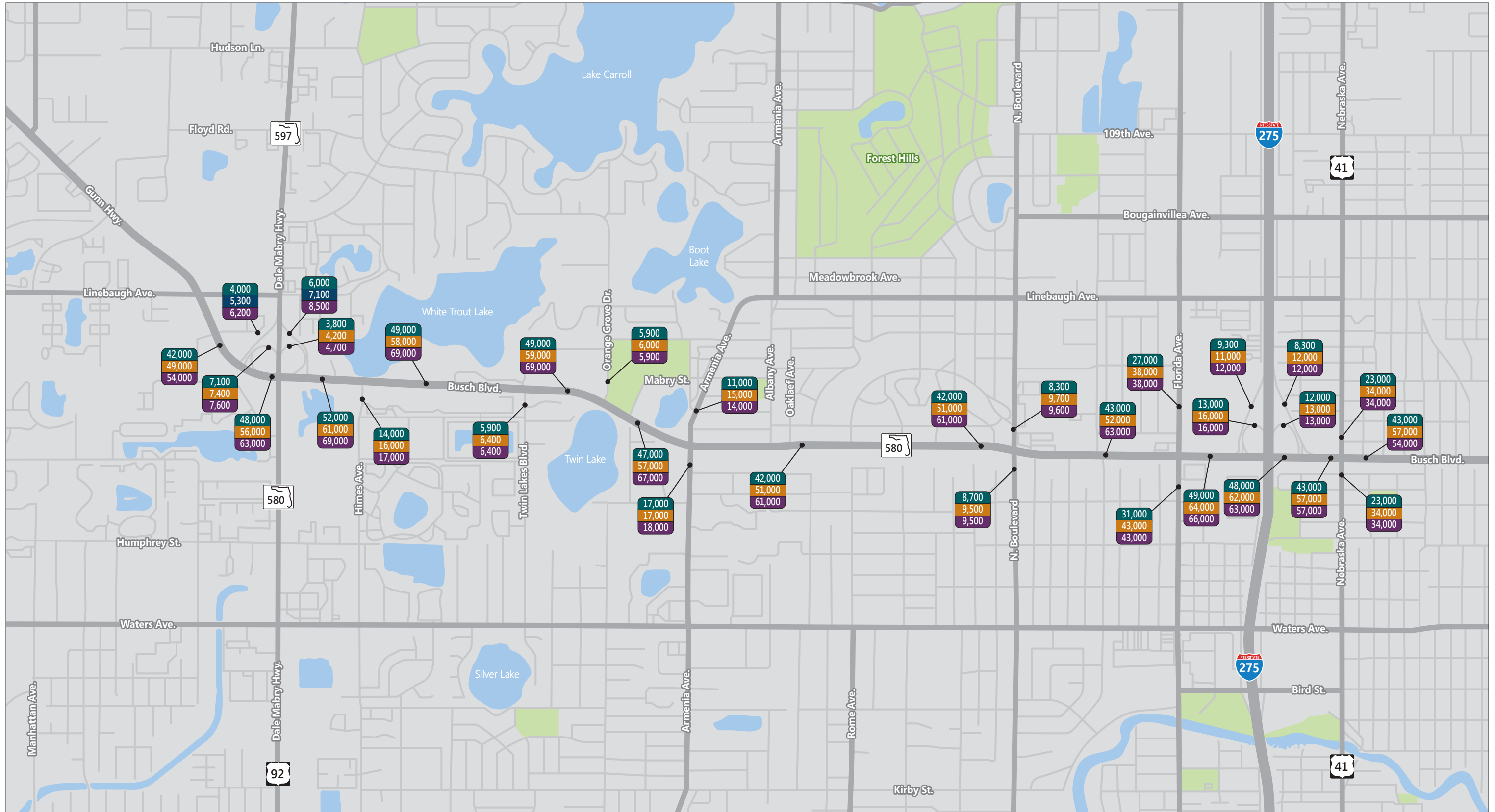
- Opening Year - 2020
- Mid-design Year – 2030
- Design Year – 2040

6.2 Future AADT & Intersection Design Hour Volumes

As mentioned in Section 4 of this report, FDOT provided the future volumes for 2 configurations of SR 580/West Busch Blvd study corridor. The first scenario is with the existing number of lanes along the study corridor and the second scenario is with 6 lanes for the entire study corridor.

Please note that the design hour volumes provided for the scenario with the existing number of lanes along the study corridor were used for future operational analysis under No Build Alternative and Build Alternative 1. The design hour volumes provided for the scenario with 6 lanes for the entire study corridor were used for future operational analysis under Build Alternative 2.

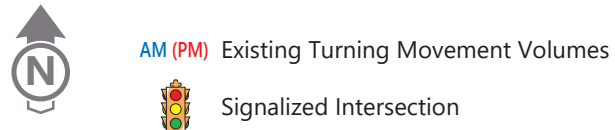
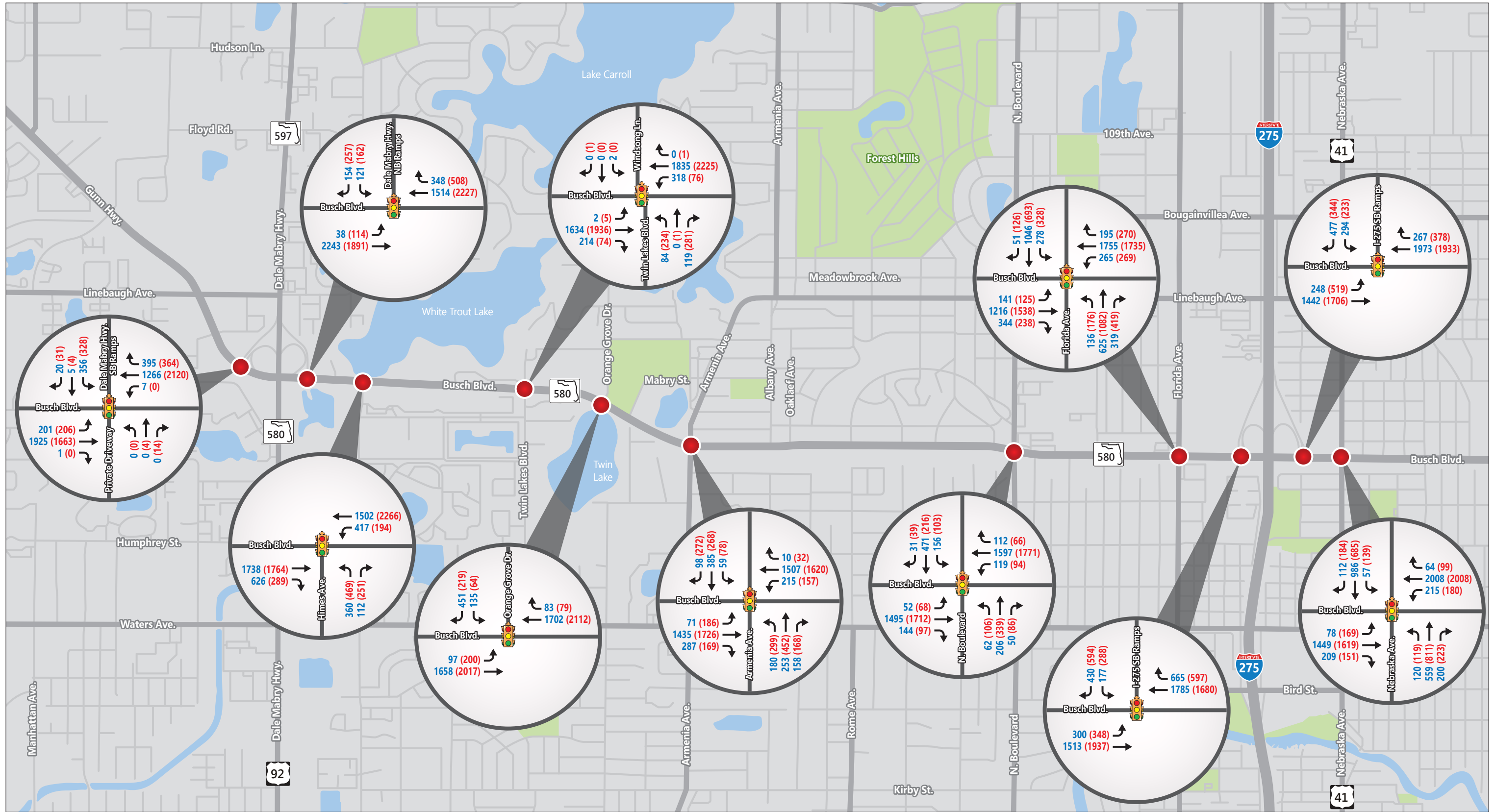
Figure 7 provides the existing year 2017 and 2040 AADT volumes for the future alternatives. The AM and PM design hour volumes for opening year 2020 and mid-design year 2030 were interpolated using the existing and 2040 AM and PM design hour volumes. The estimated design hour volumes for the AM and PM design hours were assessed and balanced for reasonableness. The future year AM and PM design hour volumes for No Build Alternative and Build Alternative 1 are shown in **Figures 8 through 10** for the years 2020, 2030 and 2040, respectively. The future year AM and PM design hour volumes for Build Alternative 2 are shown in **Figures 11 through 13** for years 2020, 2030 and 2040 respectively.



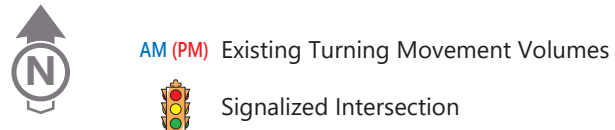
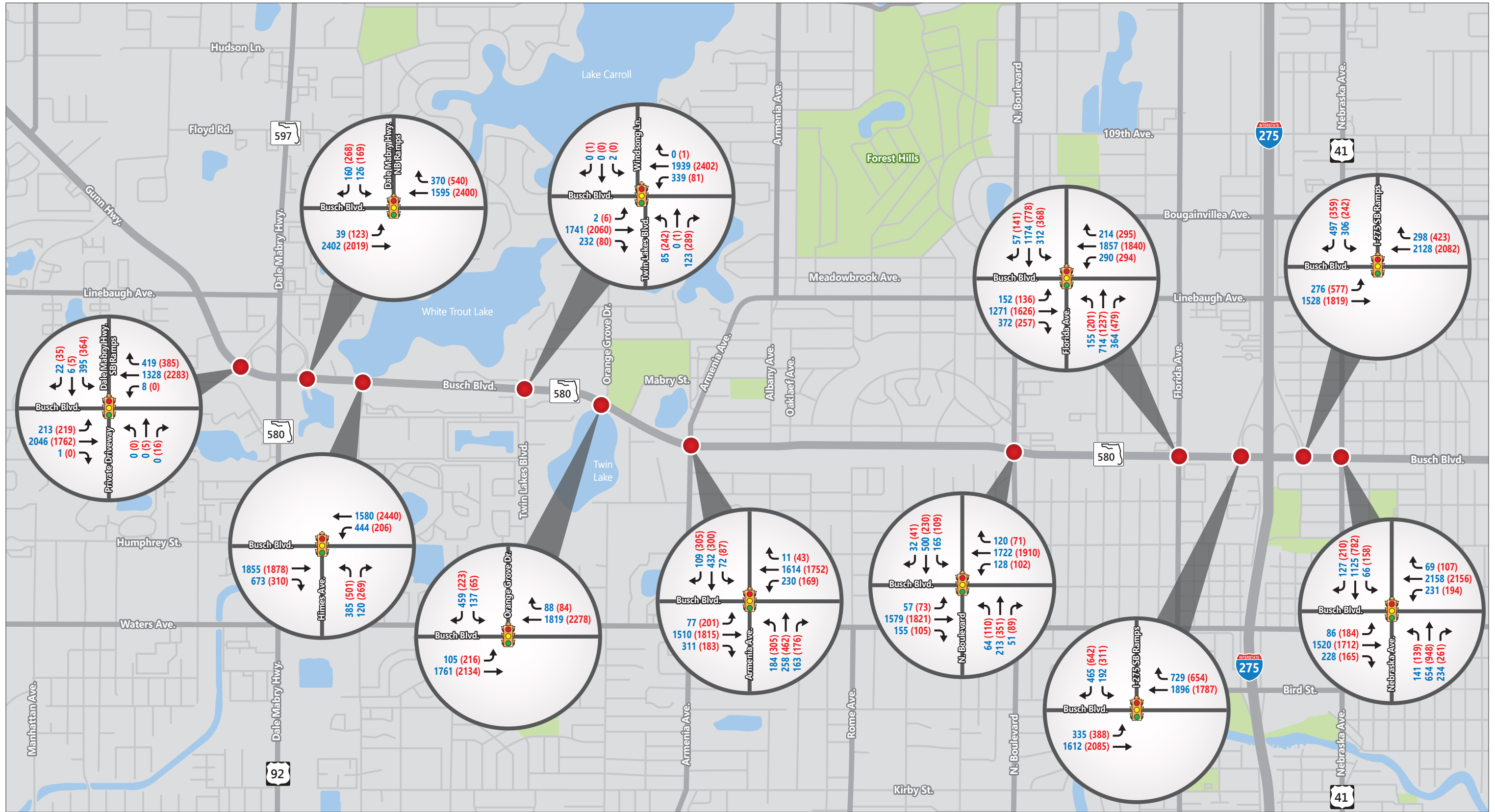
0000 2017 Existing Average Annual Daily Traffic (AADT)
0000 2040 No Build and Build Alternative 1 Average Annual Daily Traffic (AADT)
0000 2040 Build Alternative 2 Average Annual Daily Traffic (AADT)



Figure 7
Existing and Future AADTs
 SR 580/West Busch Blvd.
 Design Traffic Technical
 Memorandum



FDOT **Figure 8**
Year 2020 Design Hour Turning
Movement Volumes - No Build
and Build Alternative 1
 SR 580/West Busch Blvd.
 Design Traffic Technical
 Memorandum



FDOT **Figure 9**
Year 2030 Design Hour Turning
Movement Volumes - No Build
and Build Alternative 1
 SR 580/West Busch Blvd.
 Design Traffic Technical
 Memorandum

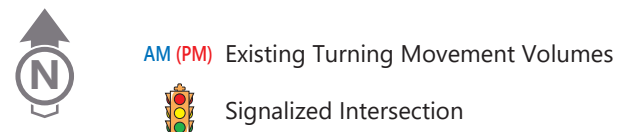
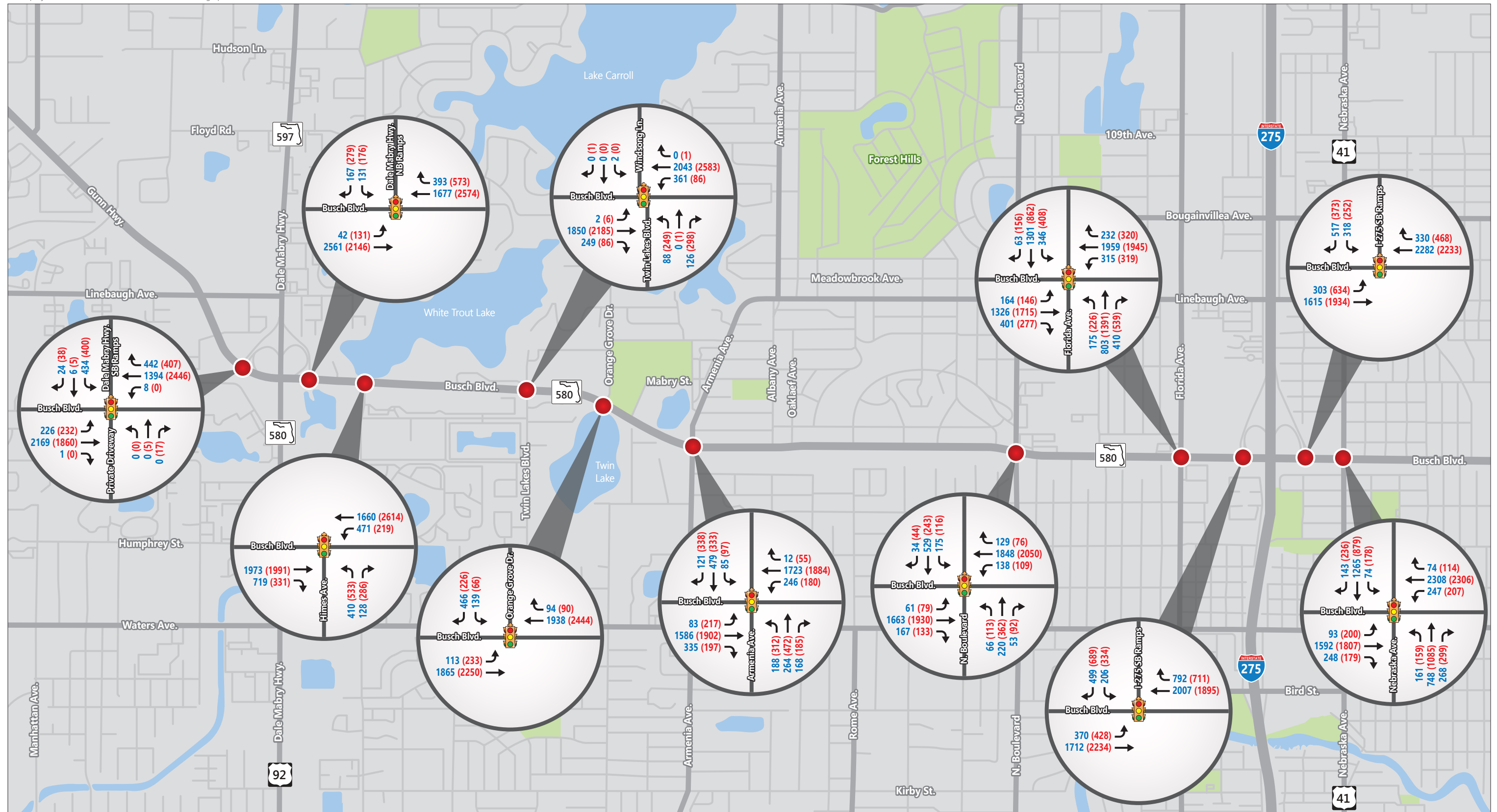
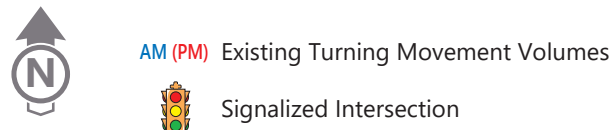
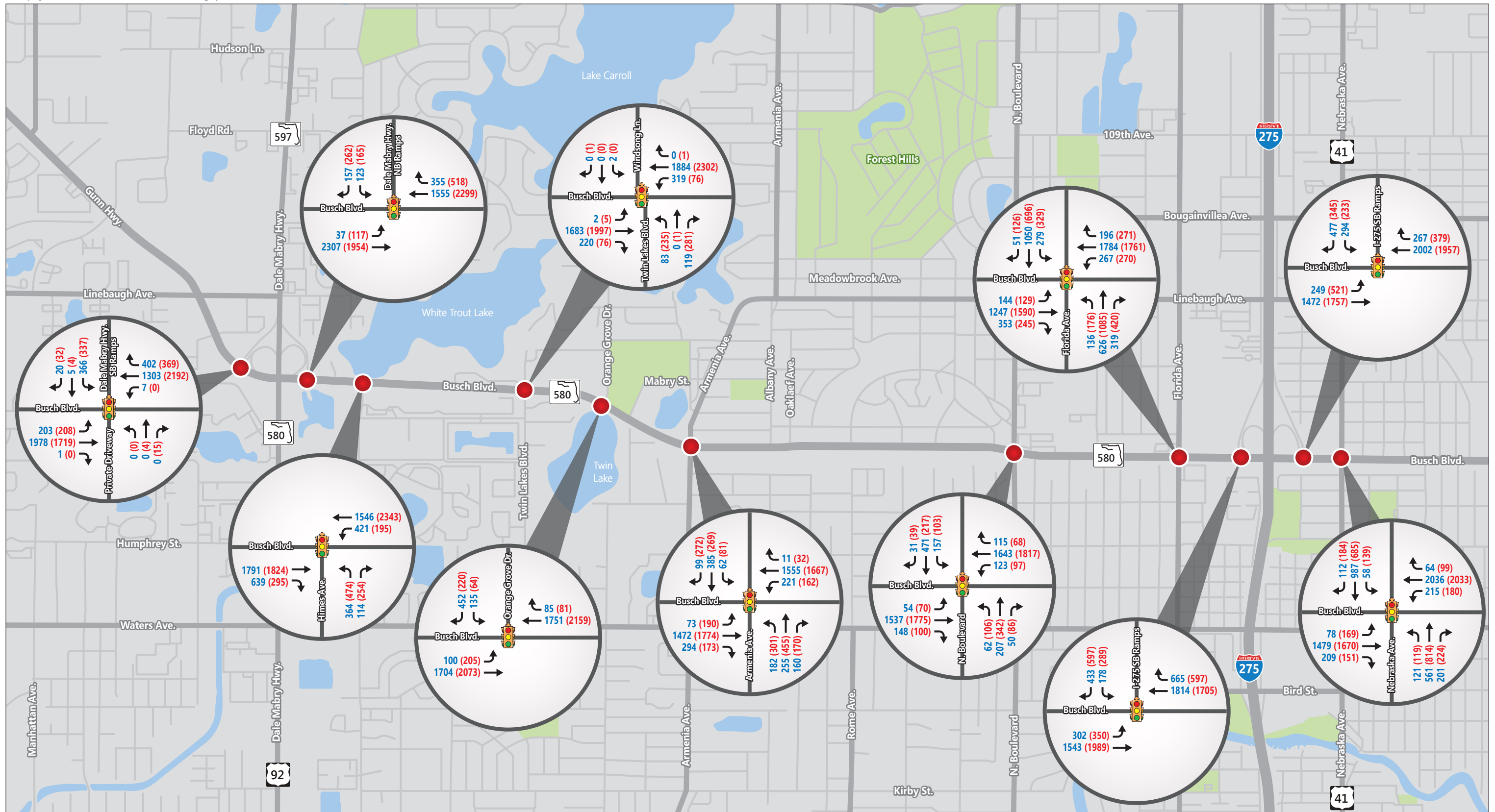


Figure 10
 Year 2040 Design Hour Turning Movement Volumes - No Build and Build Alternative 1
 SR 580/West Busch Blvd.
 Design Traffic Technical Memorandum



FDOT Figure 11
 Year 2020 Design Hour Turning
 Movement Volumes - Build Alternative 2
 SR 580/West Busch Blvd.
 Design Traffic Technical Memorandum

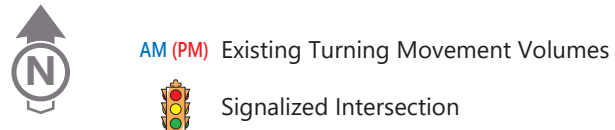
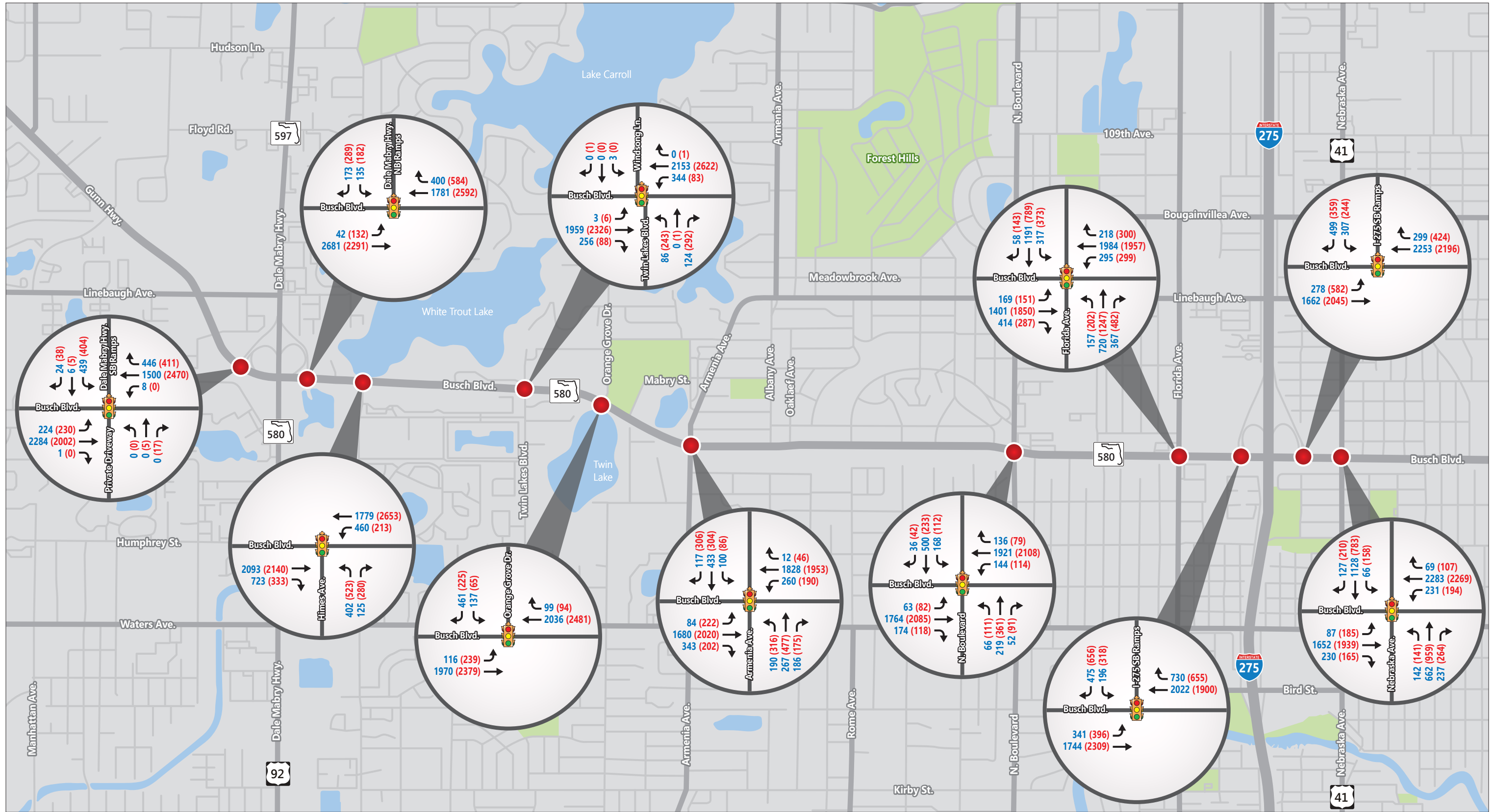
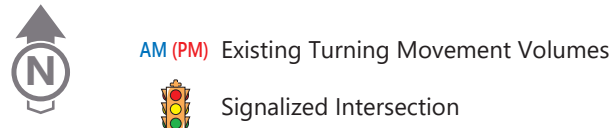
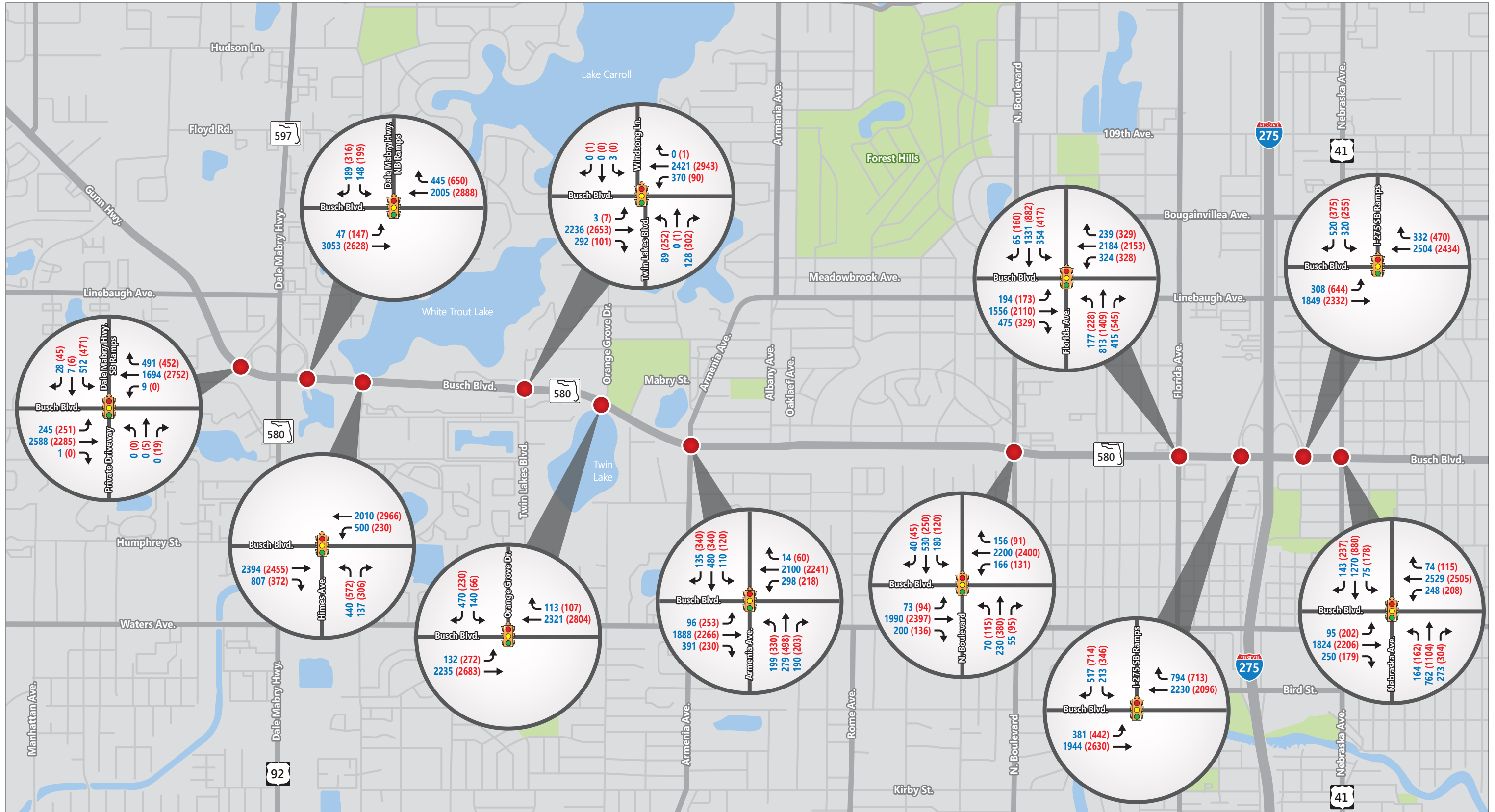


Figure 12
Year 2030 Design Hour Turning Movement Volumes - Build Alternative 2
 SR 580/West Busch Blvd.
 Design Traffic Technical Memorandum



FDOT **Figure 13**
Year 2040 Design Hour Turning
Movement Volumes - Build Alternative 2
 SR 580/West Busch Blvd.
 Design Traffic Technical Memorandum

6.3 Required Intersection Geometry

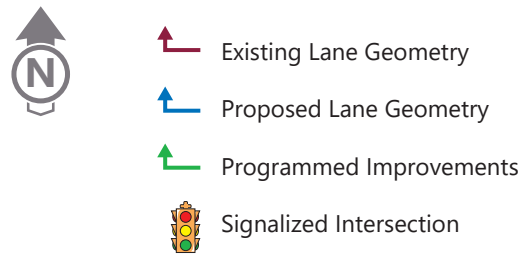
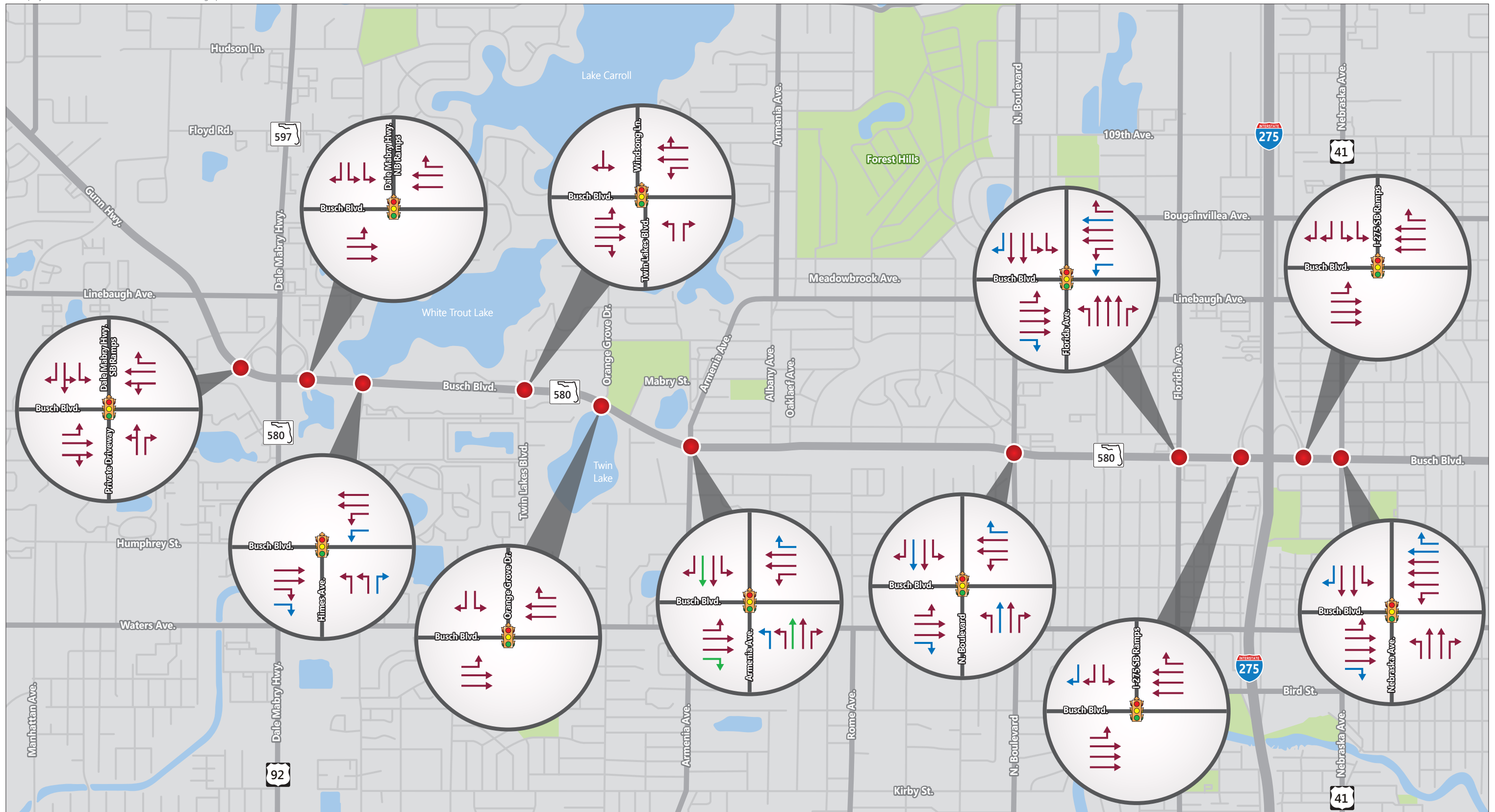
Intersection operational analyses were performed for the opening, mid-design and design years for the above mentioned future alternatives. As the first step, a No Build analysis was conducted to establish a base scenario for comparison purposes. As the second step, the required intersection improvements were determined using the 2040 traffic conditions (both Build Alternatives). Then, this maximum recommended geometry was applied for the opening year 2020 and mid-design year 2030 traffic conditions to obtain the LOS information at the study intersections.

Table 10 shows the list of intersections improvements needed for both Build Alternatives 1 and 2 based on anticipated 2040 traffic conditions. **Figures 14 and 15** provide the required design year geometry for Build Alternatives 1 and 2, respectively.

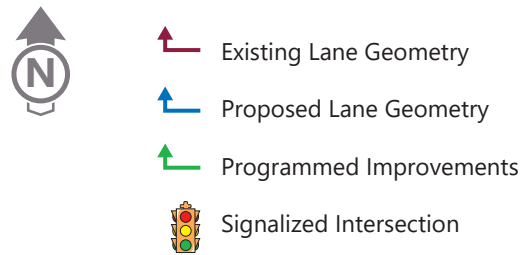
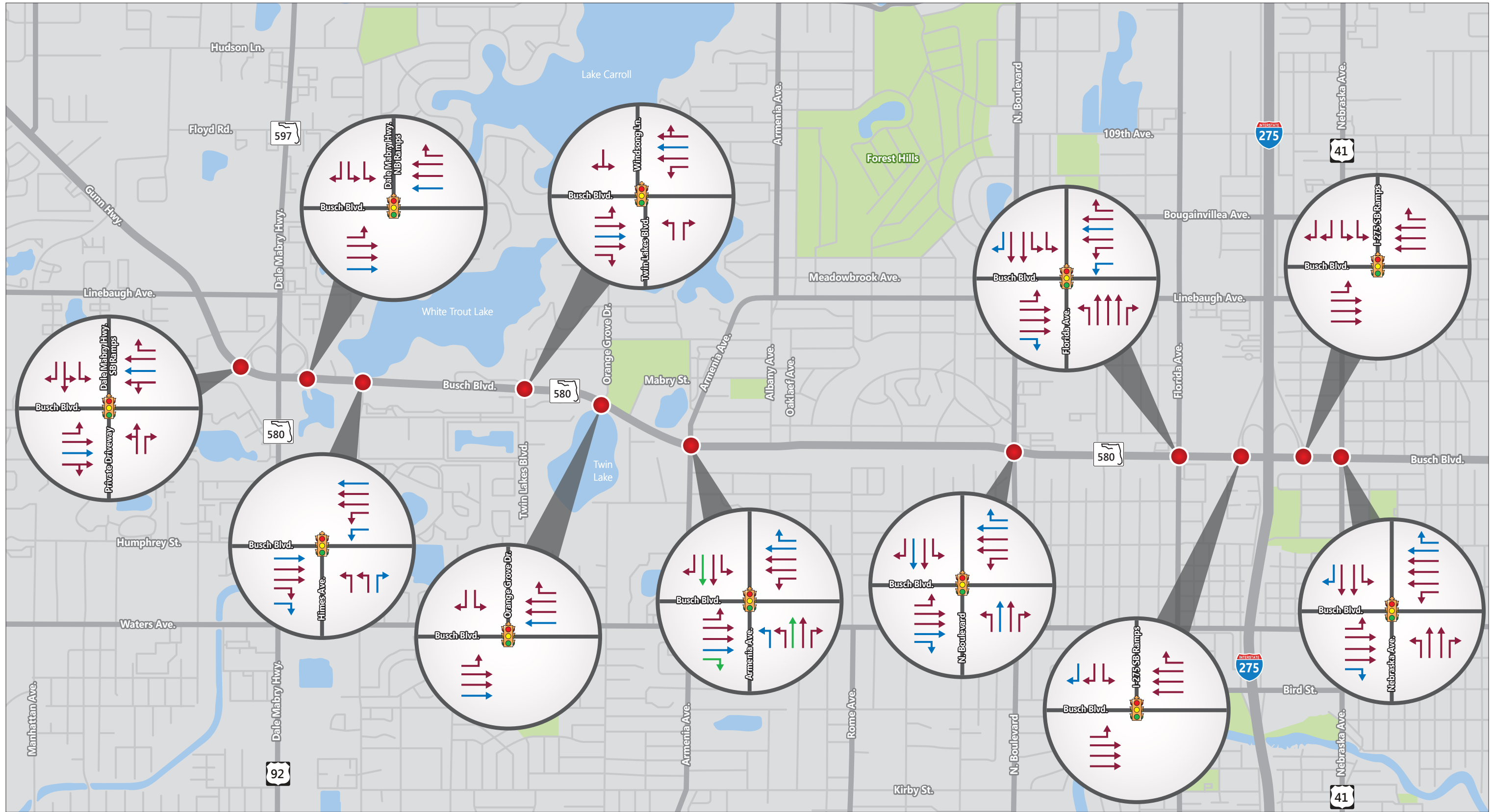
Please note that turn lane improvements for the movements along SR 580/West Busch Blvd leading to the on-ramps at Dale Mabry Hwy and I-275 were not considered that would require the widening of ramps. Also, please note that even with maximum geometry (based on volumes), certain study intersections are anticipated to operate at LOS E (below target LOS D).

Table 10: Recommended Intersection Improvements for Build Alternatives 1 & 2

SR 580/West Busch Blvd @	Intersection Improvements
Dale Mabry Hwy SB Ramps	None
Dale Mabry Hwy NB Ramps	None
Himes Ave	Additional eastbound right turn lane Additional westbound left turn lane Convert the shared northbound left/right lane to a left turn lane and add an exclusive right turn lane
Twin Lakes Blvd	None
Orange Grove Dr	None
Armenia Ave	<i>An exclusive eastbound right turn lane (Programmed)</i> <i>Additional northbound & southbound through lanes (Programmed)</i> Additional northbound left turn lane An exclusive westbound right turn lane
North Blvd	An exclusive eastbound right turn lane Additional northbound & southbound through lanes just at the intersection An exclusive westbound right turn lane
Florida Ave	An exclusive eastbound right turn lane Additional westbound left turn and through lanes. The additional westbound through lane is assumed to merge (to become 2 lanes) west of the intersection. An exclusive southbound right turn lane
I-275 SB Ramps	Additional southbound right turn lane
I- 275 NB Ramps	None
Nebraska Ave	An exclusive eastbound right turn lane Additional westbound through lane (4 th lane) that will continue through intersection and merge as westbound right turn lane at I-275 NB ramps An exclusive westbound right turn lane An exclusive southbound right turn lane



FDOT **Figure 14**
Build Alternative 1 Geometry
 SR 580/West Busch Blvd.
 Design Traffic Technical
 Memorandum



FDOT **Figure 15**
Build Alternative 2 Geometry
SR 580/West Busch Blvd.
Design Traffic Technical
Memorandum

6.4 Future Intersection Auto LOS Analysis

Future LOS analyses results for the study intersections are provided in **Tables 11 through 13**. The Synchro intersection analysis outputs are included in **Appendix H**. Based on these results, the following important conclusions are interpreted:

6.4.1 No Build Alternative

- The study intersections that operate below LOS D under the existing conditions are also projected to operate below the target LOS D for 2020 conditions. The exception is the intersection of SR 580/West Busch Blvd and Armenia Ave which is anticipated to operate at LOS D in 2020 because of the proposed programmed improvements.
- The study intersections at 1) SR 580/Dale Mabry Hwy SB Ramps, and 2) SR 580/Armenia Ave are projected to operate at LOS E starting from 2030 design hour conditions.
- Starting from year 2040, the study intersection at SR 580/Armenia Ave is projected to operate at LOS F.

6.4.2 Build Alternatives 1 & 2

- With the proposed improvements, all the study intersections are anticipated to operate at or above LOS E through the design year 2040 under both Build Alternatives 1 and 2. The only exception is the intersection at SR 580/West Busch Blvd and Florida Ave, which is projected to operate at LOS F under 2040 Build Alternative 2 AM design hour condition.
- The study intersections that were projected to operate with significant intersection delays (> 100 seconds per vehicle) including SR 580/North Blvd, SR 580/Florida Ave and SR 580/Nebraska Ave under the No Build alternative are projected to operate with comparatively lower intersection delays under both Build Alternatives 1 and 2.

Table 11: Intersection Auto LOS Analysis Summary – No Build Alternative

Intersection SR 580/West Busch Blvd	2020				2030				2040			
	AM Design Hour		PM Design Hour		AM Design Hour		PM Design Hour		AM Design Hour		PM Design Hour	
	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
Dale Mabry Hwy SB Ramps	25.1	C	53.4	D	29.1	C	63.2	E	34.3	C	76.7	E
Dale Mabry Hwy NB Ramps	6.1	A	5.6	A	6.8	A	5.8	A	7.7	A	7.7	A
Himes Ave	62.9	E	38.9	D	65.1	E	72.4	E	68.9	E	74.5	E
Twin Lakes Blvd	44.5	D	11.0	B	47.7	D	11.1	B	48.6	D	11.3	B
Orange Grove Dr	51.8	D	23.3	C	51.5	D	23.7	C	53.4	D	26.3	C
Armenia Ave	35.3	D	51.0	D	37.6	D	61.6	E	40.7	D	98.3	F
North Blvd	88.7	F	66.4	E	107.7	F	77.1	E	108.9	F	86.4	F
Florida Ave	144.7	F	139.6	F	160.8	F	147.8	F	172.0	F	155.3	F
I-275 SB Ramps	21.4	C	31.4	C	22.4	C	35.0	C	34.0	C	36.1	D
I- 275 NB Ramps	22.6	C	44.6	D	24.2	C	51.8	D	26.5	C	53.7	D
Nebraska Ave	106.2	F	95.8	F	112.8	F	122.6	F	137.8	F	135.4	F

Notes:

1. HCM 6 based outputs are presented in this table for the signalized study intersections

Table 12: Intersection Auto LOS Analysis Summary – Build Alternative 1

Intersection @ SR 580/West Busch Blvd	2020				2030				2040			
	AM Design Hour		PM Design Hour		AM Design Hour		PM Design Hour		AM Design Hour		PM Design Hour	
	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
Dale Mabry Hwy SB Ramps	24.6	C	50.0	D	28.7	C	55.8	E	32.3	C	69.6	E
Dale Mabry Hwy NB Ramps	6.1	A	5.9	A	6.8	A	6.1	A	7.7	A	7.9	A
Himes Ave	19.9	B	16.0	B	20.7	C	17.2	B	22.2	C	32.3	C
Twin Lakes Blvd	7.3	A	10.0	A	7.3	A	10.5	B	7.5	A	12.1	B
Orange Grove Dr	23.5	C	22.9	C	24.4	C	22.6	C	26.9	C	25.9	C
Armenia Ave	33.9	C	42.6	D	35.8	D	47.7	D	37.9	D	70.4	E
North Blvd	51.1	D	41.2	D	59.0	E	46.9	D	70.6	E	54.0	D
Florida Ave	58.0	E	49.9	D	63.7	E	60.0	E	79.6	E	66.7	E
I-275 SB Ramps	16.6	B	13.9	B	19.5	B	15.5	B	21.3	C	16.1	B
I- 275 NB Ramps	12.3	B	14.7	B	23.9	C	19.1	B	25.4	C	25.4	C
Nebraska Ave	57.8	E	57.3	E	64.4	E	59.2	E	75.1	E	77.2	E

Notes:

1. HCM 6 based outputs are presented in this table for the signalized study intersections

Table 13: Intersection Auto LOS Analysis Summary – Build Alternative 2

Intersection @ SR 580/West Busch Blvd	2020				2030				2040			
	AM Design Hour		PM Design Hour		AM Design Hour		AM Design Hour		PM Design Hour		AM Design Hour	
	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS	Delay (s)	LOS
Dale Mabry Hwy SB Ramps	15.9	B	23.7	C	17.7	B	30.6	C	20.0	B	34.5	C
Dale Mabry Hwy NB Ramps	4.4	A	7.6	A	4.8	A	8.0	A	5.4	A	8.8	A
Himes Ave	14.6	B	14.4	B	16.6	B	14.6	B	17.1	B	25.2	C
Twin Lakes Blvd	7.1	A	7.1	A	7.0	A	7.2	A	7.0	A	7.0	A
Orange Grove Dr	17.2	B	17.5	B	23.7	C	18.5	B	24.6	C	22.9	C
Armenia Ave	29.5	C	38.3	D	31.8	C	41.0	D	34.4	C	52.6	D
North Blvd	41.0	D	33.5	C	44.3	D	36.4	D	52.1	D	40.4	D
Florida Ave	53.9	D	52.2	D	74.2	E	56.7	E	87.3	F	79.0	E
I-275 SB Ramps	18.2	B	13.9	B	20.0	B	15.0	B	24.4	C	18.6	B
I- 275 NB Ramps	15.7	B	16.4	B	15.7	B	21.4	C	15.9	B	28.9	C
Nebraska Ave	63.2	E	59.0	E	65.1	E	60.3	E	74.9	E	78.2	E

Notes:

1. HCM 6 based outputs are presented in this table for the signalized study intersections

6.5 Future Arterial LOS Analysis

The arterial segments operating conditions were evaluated using Synchro software. Future Arterial LOS analyses results that are provided in **Tables 14 through 16** are reported based on the level of service thresholds stated in FDOT's 2013 Quality/Level of Service (Q/LOS) Handbook. The Synchro arterial analysis outputs are included in **Appendix H**. Based on these results, the following important conclusions are interpreted:

6.5.1 No Build Alternative

- The overall study corridor is anticipated to operate below LOS D through the design year 2040. An improvement in overall roadway LOS in eastbound direction was noted in 2020 design hour condition because of the programmed improvements at SR 580/West Busch Blvd and Armenia Ave intersection.

6.5.2 Build Alternative 1

- With the proposed turn lane improvements, the overall study corridor is projected to operate at LOS D through the mid-design 2030, except for 2030 PM design hour condition in the westbound direction. The overall study corridor is anticipated to operate at or below LOS E during 2040 PM design hour traffic condition.

6.5.3 Build Alternative 2

- With the proposed improvements, the overall study corridor is projected to operate at LOS D through the mid-design 2030, and for 2040 AM design hour traffic condition. The overall study corridor is anticipated to operate at LOS E during 2040 PM design hour traffic condition.

Table 14: Arterial LOS Analysis Summary – No Build Alternative

Roadway Segment - SR 580	2020				2030				2040			
	AM Design Hour		PM Design Hour		AM Design Hour		PM Design Hour		AM Design Hour		PM Design Hour	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
Dale Mabry Hwy SB Ramps - Dale Mabry Hwy NB Ramps	C	E	C	F	C	F	C	F	C	F	C	F
Dale Mabry Hwy NB Ramps - Himes Ave	F	C	E	E	F	C	F	F	F	C	F	F
Himes Ave - Twin Lakes Blvd	B	B	C	B	C	B	C	B	B	B	C	D
Twin Lakes Blvd - Orange Grove Dr	B	C	D	C	B	C	D	D	C	C	D	D
Orange Grove Dr - Armenia Ave	D	D	E	E	E	D	F	F	E	D	F	F
Armenia Ave - North Blvd	D	B	C	C	D	B	C	D	D	B	C	E
North Blvd - Florida Ave	F	F	F	E	F	F	F	E	E	F	F	F
Florida Ave - I-275 SB Ramps	E	F	F	F	E	F	F	F	D	F	F	F
I-275 SB Ramps - I- 275 NB Ramps	D	F	C	F	D	F	C	F	D	F	C	F
I- 275 NB Ramps - Nebraska Ave	F	D	F	F	F	E	F	F	F	E	F	F
Total Segment	D	F	D	F	E	F	E	F	E	F	F	F

Table 15: Arterial LOS Analysis Summary – Build Alternative 1

Roadway Segment - SR 580	2020				2030				2040			
	AM Design Hour		PM Design Hour		AM Design Hour		PM Design Hour		AM Design Hour		PM Design Hour	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
Dale Mabry Hwy SB Ramps - Dale Mabry Hwy NB Ramps	C	F	D	F	C	E	D	F	D	F	E	F
Dale Mabry Hwy NB Ramps - Himes Ave	F	D	F	F	F	D	F	F	F	D	F	F
Himes Ave - Twin Lakes Blvd	B	B	C	C	B	B	C	C	B	B	C	D
Twin Lakes Blvd - Orange Grove Dr	C	C	C	E	C	C	E	E	C	C	E	E
Orange Grove Dr - Armenia Ave	E	D	D	E	E	E	F	F	E	F	F	E
Armenia Ave - North Blvd	B	B	C	C	C	B	C	C	C	B	C	D
North Blvd - Florida Ave	D	C	C	E	D	C	C	F	D	C	D	F
Florida Ave - I-275 SB Ramps	C	F	C	F	C	F	C	F	C	F	C	F
I-275 SB Ramps - I- 275 NB Ramps	D	D	C	E	E	E	C	F	E	E	C	F
I- 275 NB Ramps - Nebraska Ave	F	D	F	F	F	F	F	F	F	E	F	F
Total Segment	D	C	D	D	D	D	D	E	D	D	E	F

Table 16: Arterial LOS Analysis Summary – Build Alternative 2

Roadway Segment - SR 580	2020				2030				2040			
	AM Design Hour		PM Design Hour		AM Design Hour		PM Design Hour		AM Design Hour		PM Design Hour	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
Dale Mabry Hwy SB Ramps - Dale Mabry Hwy NB Ramps	C	D	C	E	C	E	C	F	C	F	C	F
Dale Mabry Hwy NB Ramps - Himes Ave	E	D	E	E	E	C	E	E	F	D	F	F
Himes Ave - Twin Lakes Blvd	B	B	C	B	B	B	C	B	B	B	B	C
Twin Lakes Blvd - Orange Grove Dr	C	C	C	E	C	C	C	E	C	C	B	D
Orange Grove Dr - Armenia Ave	D	F	E	C	E	D	E	C	E	D	F	C
Armenia Ave - North Blvd	B	B	B	C	B	B	B	C	C	B	C	D
North Blvd - Florida Ave	D	B	D	D	D	B	E	D	D	B	F	E
Florida Ave - I-275 SB Ramps	C	F	C	F	C	F	C	F	C	F	C	F
I-275 SB Ramps - I- 275 NB Ramps	C	F	C	E	C	F	C	F	C	F	C	F
I- 275 NB Ramps - Nebraska Ave	F	E	F	D	F	F	F	E	F	F	F	F
Total Segment	C	C	D	C	C	C	D	D	D	D	E	E

6.6 Multimodal LOS Analysis

Multimodal LOS analysis was completed for the future alternatives for 2040 conditions based on the proposed pedestrian and bicycle improvements. The multimodal LOS results shown in **Tables 17 through 19** for the future alternatives are reported based on the 2013 Quality LOS Handbook multimodal level of service criteria. The ARTPLAN outputs along with the assumptions considered for the multimodal analysis are provided in **Appendix I**. The following assumptions are considered to evaluate future multimodal operations:

6.6.1 No Build Alternative

- Other than the change in volumes, the assumptions considered in existing multimodal analysis were also used in the No Build alternative.
- Transit amenities and service frequency used in the existing multimodal analysis were also used in the No Build alternative.

6.6.2 Build Alternatives 1 and 2

- For these two alternatives, a continuous sidewalk and a 5-foot bicycle lane (or 7-foot buffered bicycle lane) are assumed for the study corridor.
- Under Build Alternative 2, the number of through lanes increase to 3 between Dale Mabry Hwy and Florida Ave along with a slight increase in traffic volumes. Please note that the outside through volume will decrease under Build Alternative 2 (compared to Build Alternative 1).
- Transit amenities and service frequency used in the existing multimodal analysis were also used in Build Alternatives 1 and 2.

Under Build Alternative 1, the overall Busch Blvd study corridor between Dale Mabry Hwy and Nebraska Ave is anticipated to have improved multimodal operations (pedestrian, bicycle and transit) compared to the No Build alternative. Similarly, under Build Alternative 2, the overall Busch Blvd study corridor between Dale Mabry Hwy and Nebraska Ave is anticipated to have improved multimodal operations (pedestrian, bicycle and transit) compared to the No Build alternative and Build Alternative 1. The reason for improvement under Build Alternative 2 could be because of the reduction in the outside lane traffic volume.

Table 17: Multimodal LOS Analysis Summary – 2040 No Build Alternative

Roadway Segment - SR 580/West Busch Blvd	Pedestrian				Bicycle				Transit				
	AM Design Hour		PM Design Hour		AM Design Hour		PM Design Hour		AM Design Hour		PM Design Hour		
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	
Dale Mabry Hwy SB Ramps - Dale Mabry Hwy NB Ramps	F	F	E	F	E	E	E	E	E	E	E	E	E
Dale Mabry Hwy NB Ramps - Himes Ave	F	D	E	F	E	E	E	E	E	D	E	E	E
Himes Ave - Twin Lakes Blvd	E	E	F	F	E	C	E	C	D	E	E	E	E
Twin Lakes Blvd - Orange Grove Dr	E	F	F	F	E	E	E	E	D	E	E	E	E
Orange Grove Dr - Armenia Ave	E	E	F	F	E	C	E	C	E	D	E	E	E
Armenia Ave - North Blvd	F	E	F	E	E	E	E	E	E	D	E	D	D
North Blvd - Florida Ave	E	E	E	E	E	E	E	E	D	D	D	D	D
Florida Ave - I-275 SB Ramps	D	F	E	F	E	E	E	E	E	E	E	E	E
I-275 SB Ramps - I- 275 NB Ramps	D	E	D	D	E	E	E	E	E	E	E	E	D
I- 275 NB Ramps - Nebraska Ave	D	D	D	D	E	E	E	E	D	D	E	D	D
Total Segment	F	E	F	F	E	E	E	E	E	E	E	E	E

Table 18: Multimodal LOS Analysis Summary – 2040 Build Alternative 1

Roadway Segment - SR 580/West Busch Blvd	Pedestrian				Bicycle				Transit			
	AM Design Hour		PM Design Hour		AM Design Hour		PM Design Hour		AM Design Hour		PM Design Hour	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
Dale Mabry Hwy SB Ramps - Dale Mabry Hwy NB Ramps	F	E	E	F	C	C	C	C	E	E	E	E
Dale Mabry Hwy NB Ramps - Himes Ave	F	D	E	F	C	C	C	C	E	D	E	E
Himes Ave - Twin Lakes Blvd	E	E	E	F	C	C	C	C	D	E	D	E
Twin Lakes Blvd - Orange Grove Dr	E	E	F	F	C	C	C	C	D	D	E	E
Orange Grove Dr - Armenia Ave	E	E	E	F	C	C	C	C	E	D	E	E
Armenia Ave - North Blvd	F	E	E	E	C	C	C	C	D	D	D	D
North Blvd - Florida Ave	E	E	E	E	C	C	C	C	D	D	D	D
Florida Ave - I-275 SB Ramps	D	E	D	E	C	C	C	C	E	E	E	E
I-275 SB Ramps - I- 275 NB Ramps	C	D	D	D	B	C	C	C	E	D	E	D
I- 275 NB Ramps - Nebraska Ave	C	D	D	D	B	C	B	C	E	D	E	D
Total Segment	E	E	E	E	C	C	C	C	E	D	E	E

Table 19: Multimodal LOS Analysis Summary – 2040 Build Alternative 2

Roadway Segment - SR 580/West Busch Blvd	Pedestrian				Bicycle				Transit			
	AM Design Hour		PM Design Hour		AM Design Hour		PM Design Hour		AM Design Hour		PM Design Hour	
	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB	EB	WB
Dale Mabry Hwy SB Ramps - Dale Mabry Hwy NB Ramps	E	D	D	E	C	C	C	C	E	E	D	E
Dale Mabry Hwy NB Ramps - Himes Ave	E	D	E	E	C	C	C	C	E	D	E	E
Himes Ave - Twin Lakes Blvd	D	D	E	E	C	C	C	C	E	D	D	D
Twin Lakes Blvd - Orange Grove Dr	D	E	E	E	C	C	C	C	E	E	E	D
Orange Grove Dr - Armenia Ave	D	D	E	E	C	C	C	C	D	E	E	D
Armenia Ave - North Blvd	D	D	E	D	C	C	C	C	D	D	D	D
North Blvd - Florida Ave	D	D	D	D	C	C	C	C	D	D	D	D
Florida Ave - I-275 SB Ramps	D	D	E	D	C	C	C	C	E	E	E	E
I-275 SB Ramps - I- 275 NB Ramps	D	E	E	D	C	C	C	C	E	E	E	D
I- 275 NB Ramps - Nebraska Ave	D	D	D	D	B	C	C	C	E	D	E	D
Total Segment	D	D	E	E	C	C	C	C	D	D	D	D

7 Conclusions

The Design Traffic Technical Memorandum was prepared to support the ongoing corridor planning study for SR 580/West Busch Blvd from Dale Mabry Hwy to Nebraska Ave, in Hillsborough County, Florida. This document summarizes the existing traffic operational conditions, and provides evaluation of the future traffic conditions based on recommended future traffic forecasts.

The key findings based on the existing and future operational analysis are:

- Under the existing conditions, study intersections and roadway segments along SR 580/West Busch Blvd between Armenia Ave and Nebraska Ave were found to operate at failing conditions (LOS E or F). The intersections along SR 580/West Busch at Armenia Ave, North Blvd, Florida Ave and Nebraska Ave currently operate with significant intersection delays indicating oversaturated traffic conditions.
- Travel demand projections for year 2040 indicate that the study corridor will experience annual growth rates of approximately 0.9% and 1.8% for No Build and Build Alternative 1 (existing lane configuration) and Build Alternative 2 (6-lane configuration), respectively. With existing oversaturated conditions along the study corridor, the travel demand projections illustrate that the study corridor (as a major east-west regional corridor) will attract suppressed demand in the future.
- Compared to the No Build alternative, the overall intersection and roadway LOS results for both Build Alternatives 1 and 2 show significant improvement. However, the suppressed demand projected for Build Alternatives 1 and 2 is anticipated to consume the additional capacity, which is evident by LOS E or worse condition at several study intersections and along study segments.
- Compared to Build Alternative 1, the study intersections and segments along SR 580 between Florida Ave and Nebraska Ave are not anticipated to have improved LOS because of the increased travel demand in the already 6 lanes section.
- Intersection turn lane improvements to the left turn movements (on-ramps) at SR 580/Dale Mabry Hwy and SR 580/I-275 are anticipated to improve the LOS for these movements and reduce the required storage lengths, but implementing dual lefts would likely require interstate widening and an Interchange Modification Report (IMR) request.
- Under Build Alternatives 1 and 2, the bicycle mode is anticipated to have significant improvement in LOS because of the introduction of bicycle lanes. Under Build Alternative 2, a significant improvement in both pedestrian and bus LOS were also seen because of the reduction in outside lane traffic volumes.

7.1 Storage Length Results

In addition to the above improvements, this study used the 95th percentile queues from the HCM intersection analysis, to develop the queue length requirements at the signalized intersections along the study corridor. Queue length calculations are shown in **Appendix J**.

It should be noted that the specific lengths do not include the taper or deceleration distance (refer to FDOT index 301 to determine the appropriate specific taper and deceleration length). These queue lengths are recommended at locations where these lengths can be achieved. Actual design and implementation of these queue length requirements will be a function of design and the physical practicality of their construction.

8 Appendices

Appendix A – 2017 Traffic Counts

Appendix B – FTI Factors

Appendix C – 2017 Raw TMC

Appendix D – Previous Study ESAL

Appendix E – Existing & Future Traffic Development Memorandum

Appendix F – Existing Synchro Outputs

Appendix G – Existing ARTPLAN Outputs

Appendix H – Future Synchro Outputs

Appendix I - Future ARTPLAN Outputs

Appendix J – Recommended Storage Lengths

Appendix A

2017 Traffic Counts

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 16, 2017 Start Time 00:00
 Stop Date : May 19, 2017 Stop Time 24:00
 County : Hillsborough
 Location : SR 580 Busch Blvd at 300 ft South of Premier Dr

VHB Project #: 62966

AVERAGE	Eastbound Volume for Lane 1											
End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	45	19	20	24	30	67	221	525	481	365	269	270
30	39	27	17	17	36	96	279	547	506	385	276	261
45	32	16	46	19	57	133	403	535	448	331	274	271
00	26	17	20	29	62	161	485	499	455	297	250	291
Hr Total	142	79	103	89	185	457	1,388	2,106	1,890	1,378	1,069	1,093

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	272	267	270	301	422	437	357	253	194	168	134	74
30	272	258	282	318	404	385	331	233	185	160	140	72
45	275	294	305	374	423	377	309	214	194	176	83	62
00	269	266	316	382	407	374	274	188	152	136	96	65
Hr Total	1,088	1,085	1,173	1,375	1,656	1,573	1,271	888	725	640	453	273

24 Hour Total : 22,179
 AM Peak Hour begins : 7:00 AM Peak Volume : 2,106 AM Peak Hour Factor : 0.96
 PM Peak Hour begins : 16:15 PM Peak Volume : 1,671 PM Peak Hour Factor : 0.96

AVERAGE	Westbound Volume for Lane 2											
End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	41	27	20	14	23	34	118	249	278	258	206	219
30	44	28	17	19	22	54	164	294	302	251	209	229
45	30	21	18	13	38	80	210	326	319	241	214	222
00	35	15	15	19	38	97	266	330	261	225	221	267
Hr Total	150	91	70	65	121	265	758	1,199	1,160	975	850	937

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	238	259	286	323	404	454	439	274	228	171	138	70
30	260	264	291	363	424	508	429	258	205	176	135	77
45	243	294	276	411	443	491	376	258	221	178	107	67
00	259	266	330	414	463	465	337	235	218	140	98	57
Hr Total	1,000	1,083	1,183	1,511	1,734	1,918	1,581	1,025	872	665	478	271

24 Hour Total : 19,962
 AM Peak Hour begins : 7:30 AM Peak Volume : 1,236 AM Peak Hour Factor : 0.94
 PM Peak Hour begins : 17:00 PM Peak Volume : 1,918 PM Peak Hour Factor : 0.94

AVERAGE	Total Volume for All Lanes											
End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	86	46	40	38	53	101	339	774	759	623	475	489
30	83	55	34	36	58	150	443	841	808	636	485	490
45	62	37	64	32	95	213	613	861	767	572	488	493
00	61	32	35	48	100	258	751	829	716	522	471	558
Hr Total	292	170	173	154	306	722	2,146	3,305	3,050	2,353	1,919	2,030

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	510	526	556	624	826	891	796	527	422	339	272	144
30	532	522	573	681	828	893	760	491	390	336	275	149
45	518	588	581	785	866	868	685	472	415	354	190	129
00	528	532	646	796	870	839	611	423	370	276	194	122
Hr Total	2,088	2,168	2,356	2,886	3,390	3,491	2,852	1,913	1,597	1,305	931	544

24 Hour Total : 42,141
 AM Peak Hour begins : 7:00 AM Peak Volume : 3,305 AM Peak Hour Factor : 0.96
 PM Peak Hour begins : 16:45 PM Peak Volume : 3,522 PM Peak Hour Factor : 0.99

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 16, 2017
 Stop Date : May 19, 2017
 County : Hillsborough
 Location : SR 580 Busch Blvd at Marelyn Ln

Start Time : 00:00
 Stop Time : 24:00

VHB Project #: 62966

16-May-17

Eastbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	54	25	32	24	27	63	221	546	517	432	316	307
30	42	32	18	24	35	94	252	580	524	429	286	281
45	37	12	41	17	50	130	414	561	535	318	310	274
00	37	31	19	29	52	157	511	536	499	304	271	325
Hr Total	170	100	110	94	164	444	1,398	2,223	2,075	1,483	1,183	1,187

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	294	319	326	329	468	477	359	299	241	216	162	88
30	305	342	351	339	419	423	370	263	235	215	147	81
45	334	312	336	416	470	393	343	318	220	198	116	66
00	317	312	361	449	420	389	302	248	183	168	95	78
Hr Total	1,250	1,285	1,374	1,533	1,777	1,682	1,374	1,128	879	797	520	313

24 Hour Total : 24,543
 AM Peak Hour begins : 7:00 AM Peak Volume : 2,223 AM Peak Hour Factor : 0.96
 PM Peak Hour begins : 15:45 PM Peak Volume : 1,806 PM Peak Hour Factor : 0.96

16-May-17

Westbound Volume for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	46	33	28	21	35	43	190	357	392	351	315	342
30	60	43	16	33	42	86	265	382	418	354	319	339
45	38	37	26	30	57	133	348	474	455	328	345	307
00	50	21	15	30	62	165	387	447	416	337	363	417
Hr Total	194	134	85	114	196	427	1,190	1,660	1,681	1,370	1,342	1,405

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	351	347	391	470	532	624	580	351	302	207	167	85
30	369	412	404	482	558	641	576	354	288	256	136	81
45	321	401	400	495	568	642	483	331	274	199	117	74
00	361	353	433	551	595	623	452	308	283	183	125	58
Hr Total	1,402	1,513	1,628	1,998	2,253	2,530	2,091	1,344	1,147	845	545	298

24 Hour Total : 27,392
 AM Peak Hour begins : 7:30 AM Peak Volume : 1,731 AM Peak Hour Factor : 0.91
 PM Peak Hour begins : 17:00 PM Peak Volume : 2,530 PM Peak Hour Factor : 0.99

16-May-17

Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	100	58	60	45	62	106	411	903	909	783	631	649
30	102	75	34	57	77	180	517	962	942	783	605	620
45	75	49	67	47	107	263	762	1,035	990	646	655	581
00	87	52	34	59	114	322	898	983	915	641	634	742
Hr Total	364	234	195	208	360	871	2,588	3,883	3,756	2,853	2,525	2,592

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	645	666	717	799	1,000	1,101	939	650	543	423	329	173
30	674	754	755	821	977	1,064	946	617	523	471	283	162
45	655	713	736	911	1,038	1,035	826	649	494	397	233	140
00	678	665	794	1,000	1,015	1,012	754	556	466	351	220	136
Hr Total	2,652	2,798	3,002	3,531	4,030	4,212	3,465	2,472	2,026	1,642	1,065	611

24 Hour Total : 51,935
 AM Peak Hour begins : 7:15 AM Peak Volume : 3,889 AM Peak Hour Factor : 0.94
 PM Peak Hour begins : 16:30 PM Peak Volume : 4,218 PM Peak Hour Factor : 0.96

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 16, 2017
 Stop Date : May 19, 2017
 County : Hillsborough
 Location : SR 580 Busch Blvd at Marelyn Ln

Start Time : 00:00
 Stop Time : 24:00

VHB Project #: 62966

17-May-17 Eastbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	41	28	18	27	38	67	190	581	505	455	306	293
30	50	33	20	21	42	81	276	563	551	365	318	299
45	33	23	40	24	48	141	352	559	499	372	324	326
00	37	13	24	32	64	175	475	493	497	338	271	280
Hr Total	161	97	102	104	192	464	1,293	2,196	2,052	1,530	1,219	1,198

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	337	312	296	377	436	465	413	309	212	195	172	86
30	310	320	346	359	494	408	366	317	233	221	178	93
45	300	340	359	368	458	409	398	240	221	216	99	89
00	319	336	371	423	461	394	293	217	205	168	108	72
Hr Total	1,266	1,308	1,372	1,527	1,849	1,676	1,470	1,083	871	800	557	340

24 Hour Total : 24,727
 AM Peak Hour begins : 7:00 AM Peak Volume : 2,196 AM Peak Hour Factor : 0.95
 PM Peak Hour begins : 16:15 PM Peak Volume : 1,878 PM Peak Hour Factor : 0.95

17-May-17 Westbound Volume for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	56	39	14	22	38	63	187	368	424	385	274	326
30	56	17	25	26	42	78	239	378	452	370	310	326
45	46	25	28	34	43	115	349	469	424	341	321	333
00	31	19	21	35	62	148	357	435	353	343	358	357
Hr Total	189	100	88	117	185	404	1,132	1,650	1,653	1,439	1,263	1,342

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	368	359	403	431	514	632	601	376	302	224	146	82
30	390	375	388	467	583	653	527	386	263	231	185	94
45	353	410	455	528	579	618	468	350	272	196	142	86
00	394	378	403	534	595	600	481	324	280	195	129	82
Hr Total	1,505	1,522	1,649	1,960	2,271	2,503	2,077	1,436	1,117	846	602	344

24 Hour Total : 27,394
 AM Peak Hour begins : 7:30 AM Peak Volume : 1,780 AM Peak Hour Factor : 0.95
 PM Peak Hour begins : 17:00 PM Peak Volume : 2,503 PM Peak Hour Factor : 0.96

17-May-17 Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	97	67	32	49	76	130	377	949	929	840	580	619
30	106	50	45	47	84	159	515	941	1,003	735	628	625
45	79	48	68	58	91	256	701	1,028	923	713	645	659
00	68	32	45	67	126	323	832	928	850	681	629	637
Hr Total	350	197	190	221	377	868	2,425	3,846	3,705	2,969	2,482	2,540

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	705	671	699	808	950	1,097	1,014	685	514	419	318	168
30	700	695	734	826	1,077	1,061	893	703	496	452	363	187
45	653	750	814	896	1,037	1,027	866	590	493	412	241	175
00	713	714	774	957	1,056	994	774	541	485	363	237	154
Hr Total	2,771	2,830	3,021	3,487	4,120	4,179	3,547	2,519	1,988	1,646	1,159	684

24 Hour Total : 52,121
 AM Peak Hour begins : 7:30 AM Peak Volume : 3,888 AM Peak Hour Factor : 0.95
 PM Peak Hour begins : 16:15 PM Peak Volume : 4,267 PM Peak Hour Factor : 0.97

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 16, 2017
 Stop Date : May 19, 2017
 County : Hillsborough
 Location : SR 580 Busch Blvd at Marelyn Ln

Start Time : 00:00
 Stop Time : 24:00

VHB Project #: 62966

18-May-17

Eastbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	54	26	23	24	34	65	230	566	530	407	281	293
30	55	37	22	25	38	106	263	545	520	367	311	326
45	43	22	34	24	52	118	379	571	531	391	277	306
00	37	28	25	31	69	160	516	499	499	337	288	331
Hr Total	189	113	104	104	193	449	1,388	2,181	2,080	1,502	1,157	1,256

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	305	311	299	362	489	425	415	287	248	211	195	107
30	317	320	318	397	427	432	362	289	241	188	185	90
45	318	327	386	375	507	384	355	247	265	248	134	68
00	339	303	356	437	448	416	308	244	203	192	114	79
Hr Total	1,279	1,261	1,359	1,571	1,871	1,657	1,440	1,067	957	839	628	344

24 Hour Total : 24,989
 AM Peak Hour begins : 6:45
 PM Peak Hour begins : 16:00

AM Peak Volume : 2,198
 PM Peak Volume : 1,871
 AM Peak Hour Factor : 0.96
 PM Peak Hour Factor : 0.92

18-May-17

Westbound Volume for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	63	21	25	21	34	61	181	357	432	373	283	321
30	62	43	36	29	38	84	247	391	431	359	308	321
45	42	38	24	35	60	132	347	451	441	363	315	332
00	52	27	30	39	66	158	373	455	348	349	332	390
Hr Total	219	129	115	124	198	435	1,148	1,654	1,652	1,444	1,238	1,364

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	348	343	403	456	532	520	588	395	333	235	179	105
30	371	383	375	496	559	618	575	406	323	217	153	105
45	348	370	460	549	531	654	544	329	297	231	163	83
00	401	373	416	560	588	562	465	325	301	184	122	78
Hr Total	1,468	1,469	1,654	2,061	2,210	2,354	2,172	1,455	1,254	867	617	371

24 Hour Total : 27,672
 AM Peak Hour begins : 7:30
 PM Peak Hour begins : 17:15

AM Peak Volume : 1,769
 PM Peak Volume : 2,422
 AM Peak Hour Factor : 0.97
 PM Peak Hour Factor : 0.93

18-May-17

Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	117	47	48	45	68	126	411	923	962	780	564	614
30	117	80	58	54	76	190	510	936	951	726	619	647
45	85	60	58	59	112	250	726	1,022	972	754	592	638
00	89	55	55	70	135	318	889	954	847	686	620	721
Hr Total	408	242	219	228	391	884	2,536	3,835	3,732	2,946	2,395	2,620

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	653	654	702	818	1,021	945	1,003	682	581	446	374	212
30	688	703	693	893	986	1,050	937	695	564	405	338	195
45	666	697	846	924	1,038	1,038	899	576	562	479	297	151
00	740	676	772	997	1,036	978	773	569	504	376	236	157
Hr Total	2,747	2,730	3,013	3,632	4,081	4,011	3,612	2,522	2,211	1,706	1,245	715

24 Hour Total : 52,661
 AM Peak Hour begins : 7:30
 PM Peak Hour begins : 16:00

AM Peak Volume : 3,889
 PM Peak Volume : 4,081
 AM Peak Hour Factor : 0.95
 PM Peak Hour Factor : 0.98

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 16, 2017
 Stop Date : May 19, 2017
 County : Hillsborough
 Location : SR 580 Busch Blvd at Marelyn Ln

Start Time : 00:00
 Stop Time : 24:00

VHB Project #: 62966

AVERAGE		Eastbound Volume for Lane 1										
End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	50	26	24	25	33	65	214	564	517	431	301	298
30	49	34	20	23	38	94	264	563	532	387	305	302
45	38	19	38	22	50	130	382	564	522	360	304	302
00	37	24	23	31	62	164	501	509	498	326	277	312
Hr Total	174	103	105	101	183	453	1,361	2,200	2,069	1,504	1,187	1,214

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	312	314	307	356	464	456	396	298	234	207	176	94
30	311	327	338	365	447	421	366	290	236	208	170	88
45	317	326	360	386	478	395	365	268	235	221	116	74
00	325	317	363	436	443	400	301	236	197	176	106	76
Hr Total	1,265	1,284	1,368	1,543	1,832	1,672	1,428	1,092	902	812	568	332

24 Hour Total : 24,752
 AM Peak Hour begins : 7:00 AM Peak Volume : 2,200 AM Peak Hour Factor : 0.98
 PM Peak Hour begins : 16:00 PM Peak Volume : 1,832 PM Peak Hour Factor : 0.96

AVERAGE		Westbound Volume for Lane 2										
End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	55	31	22	21	36	56	186	361	416	370	291	330
30	59	34	26	29	41	83	250	384	434	361	312	329
45	42	33	26	33	53	127	348	465	440	344	327	324
00	44	22	22	35	63	157	372	446	372	343	351	388
Hr Total	200	120	96	118	193	423	1,156	1,656	1,662	1,418	1,281	1,371

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	356	350	399	452	526	592	590	374	312	222	164	91
30	377	390	389	482	567	637	559	382	291	235	158	93
45	341	394	438	524	559	638	498	337	281	209	141	81
00	385	368	417	548	593	595	466	319	288	187	125	73
Hr Total	1,459	1,502	1,643	2,006	2,245	2,462	2,113	1,412	1,172	853	588	338

24 Hour Total : 27,487
 AM Peak Hour begins : 7:30 AM Peak Volume : 1,761 AM Peak Hour Factor : 0.95
 PM Peak Hour begins : 17:00 PM Peak Volume : 2,462 PM Peak Hour Factor : 0.97

AVERAGE		Total Volume for All Lanes										
End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	105	57	46	46	69	121	400	925	933	801	592	628
30	108	68	46	52	79	177	514	947	966	748	617	631
45	80	52	64	55	103	257	730	1,029	962	704	631	626
00	81	46	45	66	125	321	873	955	870	669	628	700
Hr Total	374	223	201	219	376	876	2,517	3,856	3,731	2,922	2,468	2,585

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	668	664	706	808	990	1,048	986	672	546	429	340	185
30	688	717	727	847	1,014	1,058	925	672	527	443	328	181
45	658	720	798	910	1,037	1,033	863	605	516	430	257	155
00	710	685	780	984	1,036	995	767	555	485	363	231	149
Hr Total	2,724	2,786	3,011	3,549	4,077	4,134	3,541	2,504	2,074	1,665	1,156	670

24 Hour Total : 52,239
 AM Peak Hour begins : 7:30 AM Peak Volume : 3,883 AM Peak Hour Factor : 0.94
 PM Peak Hour begins : 16:30 PM Peak Volume : 4,179 PM Peak Hour Factor : 0.99

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 16, 2017
 Stop Date : May 19, 2017
 County : Hillsborough
 Location : SR 580 Busch Blvd at High St

Start Time : 00:00
 Stop Time : 24:00

VHB Project #: 62966

16-May-17

Eastbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	60	28	34	19	25	66	223	472	423	378	300	312
30	42	27	18	25	32	92	224	493	452	386	286	276
45	34	13	33	19	58	130	411	449	429	304	310	261
00	35	27	20	30	52	153	445	421	418	289	275	306
Hr Total	171	95	105	93	167	441	1,303	1,835	1,722	1,357	1,171	1,155

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	269	301	302	299	442	388	339	272	228	194	145	97
30	275	317	348	325	415	381	354	249	216	191	141	89
45	292	287	289	389	449	376	325	283	225	195	121	70
00	259	311	343	435	420	374	293	251	187	144	92	86
Hr Total	1,095	1,216	1,282	1,448	1,726	1,519	1,311	1,055	856	724	499	342

24 Hour Total : 22,688
 AM Peak Hour begins : 6:45 AM Peak Volume : 1,859 AM Peak Hour Factor : 0.94
 PM Peak Hour begins : 15:45 PM Peak Volume : 1,741 PM Peak Hour Factor : 0.97

16-May-17

Westbound Volume for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	51	37	28	23	32	48	194	378	445	389	306	325
30	69	46	23	32	46	94	282	405	440	341	316	338
45	46	38	24	35	57	128	365	474	482	319	339	316
00	51	22	20	34	65	172	415	489	440	331	352	342
Hr Total	217	143	95	124	200	442	1,256	1,746	1,807	1,380	1,313	1,321

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	353	328	341	458	465	534	507	337	262	206	139	90
30	321	405	387	433	508	554	519	314	269	245	135	77
45	323	348	380	449	518	532	447	324	274	188	125	79
00	313	356	400	476	523	549	394	304	271	164	121	46
Hr Total	1,310	1,437	1,508	1,816	2,014	2,169	1,867	1,279	1,076	803	520	292

24 Hour Total : 26,135
 AM Peak Hour begins : 7:45 AM Peak Volume : 1,856 AM Peak Hour Factor : 0.95
 PM Peak Hour begins : 17:00 PM Peak Volume : 2,169 PM Peak Hour Factor : 0.98

16-May-17

Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	111	65	62	42	57	114	417	850	868	767	606	637
30	111	73	41	57	78	186	506	898	892	727	602	614
45	80	51	57	54	115	258	776	923	911	623	649	577
00	86	49	40	64	117	325	860	910	858	620	627	648
Hr Total	388	238	200	217	367	883	2,559	3,581	3,529	2,737	2,484	2,476

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	622	629	643	757	907	922	846	609	490	400	284	187
30	596	722	735	758	923	935	873	563	485	436	276	166
45	615	635	669	838	967	908	772	607	499	383	246	149
00	572	667	743	911	943	923	687	555	458	308	213	132
Hr Total	2,405	2,653	2,790	3,264	3,740	3,688	3,178	2,334	1,932	1,527	1,019	634

24 Hour Total : 48,823
 AM Peak Hour begins : 7:15 AM Peak Volume : 3,599 AM Peak Hour Factor : 0.98
 PM Peak Hour begins : 16:30 PM Peak Volume : 3,767 PM Peak Hour Factor : 0.97

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 16, 2017
 Stop Date : May 19, 2017
 County : Hillsborough
 Location : SR 580 Busch Blvd at High St

Start Time : 00:00
 Stop Time : 24:00

VHB Project #: 62966

17-May-17 Eastbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	41	33	18	24	35	71	190	516	406	389	292	304
30	47	30	19	24	45	80	263	480	449	332	291	242
45	31	22	36	30	47	145	338	436	397	334	309	323
00	35	15	26	32	67	174	424	396	387	319	259	262
Hr Total	154	100	99	110	194	470	1,215	1,828	1,639	1,374	1,151	1,131

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	306	322	269	357	419	397	383	275	197	198	178	91
30	295	274	331	348	471	337	361	278	233	212	175	86
45	291	331	326	343	449	398	360	231	207	201	103	84
00	273	304	363	421	414	367	277	216	210	165	100	72
Hr Total	1,165	1,231	1,289	1,469	1,753	1,499	1,381	1,000	847	776	556	333

24 Hour Total : 22,764
 AM Peak Hour begins : 6:45 AM Peak Volume : 1,856 AM Peak Hour Factor : 0.90
 PM Peak Hour begins : 15:45 PM Peak Volume : 1,760 PM Peak Hour Factor : 0.93

17-May-17 Westbound Volume for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	59	41	14	23	36	68	182	393	487	397	268	314
30	59	11	23	30	48	76	273	399	480	354	321	296
45	50	23	28	34	45	115	387	497	460	350	299	329
00	35	22	25	41	58	171	382	448	371	311	358	321
Hr Total	203	97	90	128	187	430	1,224	1,737	1,798	1,412	1,246	1,260

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	384	336	346	416	494	576	519	353	285	214	144	86
30	322	351	396	423	507	572	471	340	252	235	185	102
45	358	372	437	461	515	570	449	315	248	181	135	85
00	348	365	376	458	519	513	431	292	257	187	140	86
Hr Total	1,412	1,424	1,555	1,758	2,035	2,231	1,870	1,300	1,042	817	604	359

24 Hour Total : 26,219
 AM Peak Hour begins : 7:30 AM Peak Volume : 1,912 AM Peak Hour Factor : 0.96
 PM Peak Hour begins : 16:45 PM Peak Volume : 2,237 PM Peak Hour Factor : 0.97

17-May-17 Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	100	74	32	47	71	139	372	909	893	786	560	618
30	106	41	42	54	93	156	536	879	929	686	612	538
45	81	45	64	64	92	260	725	933	857	684	608	652
00	70	37	51	73	125	345	806	844	758	630	617	583
Hr Total	357	197	189	238	381	900	2,439	3,565	3,437	2,786	2,397	2,391

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	690	658	615	773	913	973	902	628	482	412	322	177
30	617	625	727	771	978	909	832	618	485	447	360	188
45	649	703	763	804	964	968	809	546	455	382	238	169
00	621	669	739	879	933	880	708	508	467	352	240	158
Hr Total	2,577	2,655	2,844	3,227	3,788	3,730	3,251	2,300	1,889	1,593	1,160	692

24 Hour Total : 48,983
 AM Peak Hour begins : 7:30 AM Peak Volume : 3,599 AM Peak Hour Factor : 0.96
 PM Peak Hour begins : 16:15 PM Peak Volume : 3,848 PM Peak Hour Factor : 0.98

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 16, 2017
 Stop Date : May 19, 2017
 County : Hillsborough
 Location : SR 580 Busch Blvd at High St

Start Time : 00:00
 Stop Time : 24:00

VHB Project #: 62966

18-May-17 Eastbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	60	27	25	18	36	69	213	471	453	333	254	274
30	55	38	23	29	36	110	248	481	447	350	305	298
45	43	26	29	25	61	118	369	441	431	340	256	326
00	42	27	22	33	68	159	468	399	399	309	277	303
Hr Total	200	118	99	105	201	456	1,298	1,792	1,730	1,332	1,092	1,201

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	282	315	271	327	455	390	389	273	237	213	184	105
30	276	290	327	367	415	386	351	272	222	196	174	92
45	283	301	352	358	463	362	350	253	241	233	133	74
00	280	295	341	415	439	400	291	234	202	195	116	83
Hr Total	1,121	1,201	1,291	1,467	1,772	1,538	1,381	1,032	902	837	607	354

24 Hour Total : 23,127
 AM Peak Hour begins : 6:45 AM Peak Volume : 1,861 AM Peak Hour Factor : 0.97
 PM Peak Hour begins : 16:00 PM Peak Volume : 1,772 PM Peak Hour Factor : 0.96

18-May-17 Westbound Volume for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	62	24	25	23	39	64	193	366	486	396	280	307
30	69	38	37	29	42	88	274	427	458	336	309	309
45	48	35	32	35	61	141	369	481	476	325	301	324
00	53	33	30	40	71	171	398	478	344	362	329	338
Hr Total	232	130	124	127	213	464	1,234	1,752	1,764	1,419	1,219	1,278

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	360	308	334	483	434	435	524	389	328	226	159	110
30	325	365	369	439	508	532	508	352	284	224	146	112
45	358	328	429	487	508	566	500	311	292	193	154	87
00	371	370	389	516	499	514	408	315	269	187	114	74
Hr Total	1,414	1,371	1,521	1,925	1,949	2,047	1,940	1,367	1,173	830	573	383

24 Hour Total : 26,449
 AM Peak Hour begins : 7:30 AM Peak Volume : 1,903 AM Peak Hour Factor : 0.98
 PM Peak Hour begins : 17:15 PM Peak Volume : 2,136 PM Peak Hour Factor : 0.94

18-May-17 Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	122	51	50	41	75	133	406	837	939	729	534	581
30	124	76	60	58	78	198	522	908	905	686	614	607
45	91	61	61	60	122	259	738	922	907	665	557	650
00	95	60	52	73	139	330	866	877	743	671	606	641
Hr Total	432	248	223	232	414	920	2,532	3,544	3,494	2,751	2,311	2,479

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	642	623	605	810	889	825	913	662	565	439	343	215
30	601	655	696	806	923	918	859	624	506	420	320	204
45	641	629	781	845	971	928	850	564	533	426	287	161
00	651	665	730	931	938	914	699	549	471	382	230	157
Hr Total	2,535	2,572	2,812	3,392	3,721	3,585	3,321	2,399	2,075	1,667	1,180	737

24 Hour Total : 49,576
 AM Peak Hour begins : 7:15 AM Peak Volume : 3,646 AM Peak Hour Factor : 0.97
 PM Peak Hour begins : 16:00 PM Peak Volume : 3,721 PM Peak Hour Factor : 0.96

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 16, 2017
 Stop Date : May 19, 2017
 County : Hillsborough
 Location : SR 580 Busch Blvd at High St

Start Time : 00:00
 Stop Time : 24:00

VHB Project #: 62966

AVERAGE		Eastbound Volume for Lane 1										
End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	54	29	26	20	32	69	209	486	427	367	282	297
30	48	32	20	26	38	94	245	485	449	356	294	272
45	36	20	33	25	55	131	373	442	419	326	292	303
00	37	23	23	32	62	162	446	405	401	306	270	290
Hr Total	175	104	102	103	187	456	1,273	1,818	1,696	1,355	1,138	1,162

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	286	313	281	328	439	392	370	273	221	202	169	98
30	282	294	335	347	434	368	355	266	224	200	163	89
45	289	306	322	363	454	379	345	256	224	210	119	76
00	271	303	349	424	424	380	287	234	200	168	103	80
Hr Total	1,128	1,216	1,287	1,462	1,751	1,519	1,357	1,029	869	780	554	343

24 Hour Total : 22,864
 AM Peak Hour begins : 6:45 AM Peak Volume : 1,859 AM Peak Hour Factor : 0.96
 PM Peak Hour begins : 15:45 PM Peak Volume : 1,751 PM Peak Hour Factor : 0.96

AVERAGE		Westbound Volume for Lane 2										
End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	57	34	22	23	36	60	190	379	473	394	285	315
30	66	32	28	30	45	86	276	410	459	344	315	314
45	48	32	28	35	54	128	374	484	473	331	313	323
00	46	26	25	38	65	171	398	472	385	335	346	334
Hr Total	217	124	103	126	200	445	1,238	1,745	1,790	1,404	1,259	1,286

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	366	324	340	452	464	515	517	360	292	215	147	95
30	323	374	384	432	508	553	499	335	268	235	155	97
45	346	349	415	466	514	556	465	317	271	187	138	84
00	344	364	388	483	514	525	411	304	266	179	125	69
Hr Total	1,379	1,411	1,527	1,833	2,000	2,149	1,892	1,316	1,097	816	565	345

24 Hour Total : 26,267
 AM Peak Hour begins : 7:30 AM Peak Volume : 1,888 AM Peak Hour Factor : 0.98
 PM Peak Hour begins : 17:15 PM Peak Volume : 2,151 PM Peak Hour Factor : 0.97

AVERAGE		Total Volume for All Lanes										
End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	111	63	48	43	68	129	399	865	900	761	567	612
30	114	64	48	56	83	180	521	895	908	700	609	586
45	84	52	61	60	109	259	747	926	892	657	605	626
00	83	49	48	70	127	333	844	877	786	641	616	624
Hr Total	392	228	205	229	387	901	2,511	3,563	3,486	2,759	2,397	2,448

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	652	637	621	780	903	907	887	633	513	417	316	193
30	605	668	719	779	942	921	854	601	492	435	318	186
45	635	655	737	829	968	935	810	573	495	397	257	160
00	615	667	737	907	938	905	698	538	466	347	228	149
Hr Total	2,507	2,627	2,814	3,295	3,751	3,668	3,249	2,345	1,966	1,596	1,119	688

24 Hour Total : 49,131
 AM Peak Hour begins : 7:30 AM Peak Volume : 3,611 AM Peak Hour Factor : 0.98
 PM Peak Hour begins : 16:15 PM Peak Volume : 3,755 PM Peak Hour Factor : 0.97

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 2, 2017 Start Time 00:00
 Stop Date : May 5, 2017 Stop Time 24:00
 County : Hillsborough
 Location : SR 580 at 700 ft East of Twin Lakes Blvd

VHB Project #: 62966

AVERAGE	Eastbound Volume for Lane 1											
End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	47	35	19	20	36	66	208	454	420	357	287	266
30	50	24	24	24	43	108	279	427	412	344	305	257
45	41	25	36	29	52	139	380	387	419	313	289	293
00	46	19	26	31	64	158	458	369	391	300	288	272
Hr Total	184	103	105	104	195	471	1,325	1,637	1,642	1,314	1,169	1,088

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	324	288	288	346	445	494	444	307	213	220	156	99
30	299	310	343	343	488	452	440	279	222	219	149	101
45	320	304	339	429	495	484	401	267	220	190	133	93
00	288	317	356	491	508	486	342	244	210	173	107	67
Hr Total	1,231	1,219	1,326	1,609	1,936	1,916	1,627	1,097	865	802	545	360

24 Hour Total : 23,870
 AM Peak Hour begins : 6:45 AM Peak Volume : 1,726 AM Peak Hour Factor : 0.94
 PM Peak Hour begins : 16:15 PM Peak Volume : 1,985 PM Peak Hour Factor : 0.98

AVERAGE	Westbound Volume for Lane 2											
End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	67	35	24	29	37	68	186	436	515	409	311	325
30	55	38	28	37	49	85	295	467	486	357	298	334
45	49	39	28	40	59	134	371	524	497	357	335	337
00	45	27	33	38	62	167	413	529	467	332	321	361
Hr Total	216	139	113	144	207	454	1,265	1,956	1,965	1,455	1,265	1,357

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	314	356	367	425	455	509	478	351	297	217	164	106
30	324	355	371	441	508	487	478	355	255	208	150	94
45	340	380	412	434	518	502	447	305	280	204	131	72
00	331	358	416	478	494	479	406	299	240	173	125	78
Hr Total	1,309	1,449	1,566	1,778	1,975	1,977	1,809	1,310	1,072	802	570	350

24 Hour Total : 26,503
 AM Peak Hour begins : 7:30 AM Peak Volume : 2,054 AM Peak Hour Factor : 0.97
 PM Peak Hour begins : 16:15 PM Peak Volume : 2,029 PM Peak Hour Factor : 0.98

AVERAGE	Total Volume for All Lanes											
End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	114	70	43	49	73	134	394	890	935	766	598	591
30	105	62	52	61	92	193	574	894	898	701	603	591
45	90	64	64	69	111	273	751	911	916	670	624	630
00	91	46	59	69	126	325	871	898	858	632	609	633
Hr Total	400	242	218	248	402	925	2,590	3,593	3,607	2,769	2,434	2,445

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	638	644	655	771	900	1,003	922	658	510	437	320	205
30	623	665	714	784	996	939	918	634	477	427	299	195
45	660	684	751	863	1,013	986	848	572	500	394	264	165
00	619	675	772	969	1,002	965	748	543	450	346	232	145
Hr Total	2,540	2,668	2,892	3,387	3,911	3,893	3,436	2,407	1,937	1,604	1,115	710

24 Hour Total : 50,373
 AM Peak Hour begins : 7:45 AM Peak Volume : 3,647 AM Peak Hour Factor : 0.98
 PM Peak Hour begins : 16:15 PM Peak Volume : 4,014 PM Peak Hour Factor : 0.99

TRAFFIC COUNT DATA

VHB PROJECT NO: 62966
 LOCATION CODE: 1 - SR 580 Busch Blvd just east of N Oakleaf Ave
 COUNT LOCATION: 1
 EQUIPMENT ID: p211

TYPE OF COUNT: 72 Hour Classification Count

TIME OF COUNT:
 Start Date: 5/16/2017 Start Time: Midnight
 End Date: 5/18/2017 End Time: Midnight

VOLUMES:

		Peak Hour Time:	7:30 AM
Average Daily:	42,549	Average Peak Hour:	3,326
Daily Truck Avg:	1,337	Max Hour Truck Avg:	148
		Peak Hour Truck Avg:	77

TRAVEL CHARACTERISTICS:

K MEASURED		D MEASURED	
K=	7.8%	D=	50.6%
T Max Hour	4.5%	T daily	3.1%
T med (max)	1.7%	T med Daily	1.5%
T heavy (max)	2.8%	T heavy Daily	1.7%
T Peak Hour	2.3%		
T med Peak Hour	1.1%	Axle Factor	0.99
T heavy Peak Hour	1.2%		

ANNUAL VEHICLE CLASSIFICATION REPORT

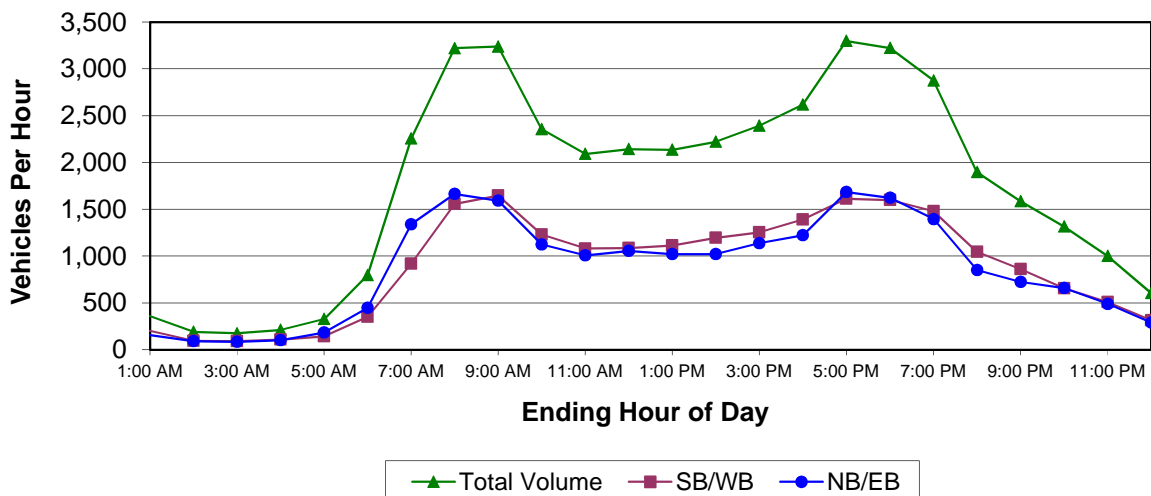
VHB PROJECT NO: 62966
 LOCATION CODE: 1 - SR 580 Busch Blvd just east of N Oakleaf Ave
 COUNT LOCATION: 1
 EQUIPMENT ID: p211

Vehicle Classification	Vehicle Type	Average Daily Statistics	
		Volume	Percentage
Class 1	Motorcycles	90	0.21%
Class 2	Cars	36,219	85.12%
Class 3	Pick-Ups & Vans	4,903	11.52%
Class 4	Buses	315	0.74%
Class 5	2 Axle, Single Unit Trucks	312	0.73%
Class 6	3 Axle, Single Unit Trucks	240	0.56%
Class 7	4 Axle, Single Unit Trucks	35	0.08%
Class 8	2 Axle Trctr with 1 or 2 Axle Trlr, 3 Axle Trctr with 1 Axle	241	0.57%
Class 9	3 Axle Tractor with 2 Axle Trailer	39	0.09%
Class 10	3 Axle Tractor with 3 Axle Trailer	6	0.01%
Class 11	5 Axle Multi Trailer	87	0.20%
Class 12	6 Axle Multi Trailer	26	0.06%
Class 13	7 or more Axles	37	0.09%
Class 14	Not Used	0	0.00%
Class 15	Other	0	0.00%
TOTALS		42,550	100.00%

HOURLY DISTRIBUTIONS OF TRAFFIC VOLUMES

VHB PROJECT NO: 62966
 LOCATION CODE: 1 - SR 580 Busch Blvd just east of N Oakleaf Ave
 COUNT LOCATION: 1
 EQUIPMENT ID: p211

HOUR ENDING AT	HOURLY VOLUME DIRECTION (NB OR EB)	HOURLY VOLUME DIRECTION (SB OR WB)	TOTAL VOLUME BOTH DIRECTIONS	DISTRIBUTION PERCENT DIRECTION (NB OR EB)	DISTRIBUTION PERCENT DIRECTION (SB OR WB)	TOTAL PERCENT BOTH DIRECTIONS
1:00 AM	158	200	358	0.75%	0.93%	0.84%
2:00 AM	93	97	191	0.44%	0.45%	0.45%
3:00 AM	85	91	176	0.40%	0.42%	0.41%
4:00 AM	102	110	212	0.48%	0.51%	0.50%
5:00 AM	186	142	328	0.89%	0.66%	0.77%
6:00 AM	447	351	798	2.13%	1.63%	1.88%
7:00 AM	1,339	918	2,258	6.38%	4.26%	5.31%
8:00 AM	1,664	1,558	3,222	7.93%	7.23%	7.57%
9:00 AM	1,592	1,647	3,239	7.59%	7.64%	7.61%
10:00 AM	1,124	1,230	2,355	5.36%	5.71%	5.53%
11:00 AM	1,010	1,082	2,092	4.81%	5.02%	4.92%
12:00 PM	1,055	1,087	2,142	5.03%	5.04%	5.03%
1:00 PM	1,021	1,116	2,137	4.86%	5.17%	5.02%
2:00 PM	1,023	1,198	2,221	4.88%	5.55%	5.22%
3:00 PM	1,138	1,256	2,394	5.42%	5.83%	5.63%
4:00 PM	1,225	1,393	2,618	5.84%	6.46%	6.15%
5:00 PM	1,685	1,613	3,298	8.03%	7.48%	7.75%
6:00 PM	1,625	1,599	3,224	7.74%	7.42%	7.58%
7:00 PM	1,397	1,480	2,877	6.65%	6.86%	6.76%
8:00 PM	850	1,047	1,898	4.05%	4.86%	4.46%
9:00 PM	725	862	1,587	3.45%	4.00%	3.73%
10:00 PM	661	656	1,317	3.15%	3.04%	3.10%
11:00 PM	491	510	1,001	2.34%	2.37%	2.35%
12:00 AM	291	316	607	1.38%	1.47%	1.43%
TOTALS	20,988	21,561	42,549	100.0%	100.0%	100.0%



Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 16, 2017 Start Time 00:00
 Stop Date : May 19, 2017 Stop Time 24:00
 County : Hillsborough
 Location : SR 580 Busch Blvd at just south of N Arrawana Ave

VHB Project #: 62966

AVERAGE **Eastbound Volume for Lane 1**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	52	30	27	22	34	71	205	477	442	367	284	305
30	50	31	18	26	38	88	269	415	431	354	304	277
45	37	21	32	25	56	134	354	448	402	351	310	311
00	37	23	22	34	65	161	439	465	408	301	260	304
Hr Total	176	105	99	107	193	454	1,267	1,805	1,683	1,373	1,158	1,197

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	296	271	316	343	441	419	436	269	221	199	163	92
30	293	314	314	354	448	431	411	267	225	195	165	90
45	285	299	348	400	442	426	343	242	221	211	122	72
00	292	281	355	418	432	428	303	247	192	171	105	75
Hr Total	1,166	1,165	1,333	1,515	1,763	1,704	1,493	1,025	859	776	555	329

24 Hour Total : 23,300
 AM Peak Hour begins : 7:00 AM Peak Volume : 1,805 AM Peak Hour Factor : 0.95
 PM Peak Hour begins : 16:00 PM Peak Volume : 1,763 PM Peak Hour Factor : 0.98

AVERAGE **Westbound Volume for Lane 2**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	59	32	20	25	34	55	193	319	436	358	299	316
30	63	34	30	31	45	85	280	359	423	350	294	305
45	48	34	29	37	55	128	338	381	405	358	338	317
00	38	23	23	41	62	158	356	409	400	305	318	333
Hr Total	208	123	102	134	196	426	1,167	1,468	1,664	1,371	1,249	1,271

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	327	327	356	392	410	440	460	319	269	215	150	98
30	337	332	354	421	455	475	446	334	264	207	151	98
45	316	372	389	424	451	470	431	282	254	199	139	86
00	341	334	374	452	436	450	402	301	236	163	124	68
Hr Total	1,321	1,365	1,473	1,689	1,752	1,835	1,739	1,236	1,023	784	564	350

24 Hour Total : 24,510
 AM Peak Hour begins : 7:45 AM Peak Volume : 1,673 AM Peak Hour Factor : 0.96
 PM Peak Hour begins : 17:15 PM Peak Volume : 1,855 PM Peak Hour Factor : 0.98

AVERAGE **Total Volume for All Lanes**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	111	62	47	47	68	126	398	796	878	725	583	621
30	113	65	48	57	83	173	549	774	854	704	598	582
45	85	55	61	62	111	262	692	829	807	709	648	628
00	75	46	45	75	127	319	795	874	808	606	578	637
Hr Total	384	228	201	241	389	880	2,434	3,273	3,347	2,744	2,407	2,468

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	623	598	672	735	851	859	896	588	490	414	313	190
30	630	646	668	775	903	906	857	601	489	402	316	188
45	601	671	737	824	893	896	774	524	475	410	261	158
00	633	615	729	870	868	878	705	548	428	334	229	143
Hr Total	2,487	2,530	2,806	3,204	3,515	3,539	3,232	2,261	1,882	1,560	1,119	679

24 Hour Total : 47,810
 AM Peak Hour begins : 7:30 AM Peak Volume : 3,435 AM Peak Hour Factor : 0.98
 PM Peak Hour begins : 17:15 PM Peak Volume : 3,576 PM Peak Hour Factor : 0.99

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 16, 2017 Start Time 00:00
 Stop Date : May 19, 2017 Stop Time 24:00
 County : Hillsborough
 Location : SR 580 Busch Blvd at just east of N Ola Ave

VHB Project #: 62966

AVERAGE	Eastbound Volume for Lane 1											
End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	47	27	27	19	33	68	212	385	389	304	223	257
30	45	30	20	27	39	94	259	393	420	306	310	291
45	36	21	18	23	54	132	359	404	414	324	261	279
00	37	24	26	36	72	171	377	404	367	305	269	311
Hr Total	165	102	91	105	198	465	1,207	1,586	1,590	1,239	1,063	1,138

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	272	235	266	310	367	337	373	236	218	169	147	87
30	283	281	297	319	387	407	350	223	190	176	152	81
45	260	260	296	317	387	379	333	230	201	181	110	70
00	278	292	346	349	372	365	292	212	192	155	97	63
Hr Total	1,093	1,068	1,205	1,295	1,513	1,488	1,348	901	801	681	506	301

24 Hour Total : 21,149
 AM Peak Hour begins : 7:45 AM Peak Volume : 1,627 AM Peak Hour Factor : 0.97
 PM Peak Hour begins : 17:15 PM Peak Volume : 1,524 PM Peak Hour Factor : 0.94

AVERAGE	Westbound Volume for Lane 2											
End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	63	36	25	24	30	50	167	336	372	339	309	304
30	62	48	29	28	36	75	238	351	375	320	268	276
45	57	35	30	31	49	115	286	349	345	347	318	298
00	42	27	24	38	48	149	304	332	326	277	281	296
Hr Total	224	146	108	121	163	389	995	1,368	1,418	1,283	1,176	1,174

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	325	329	356	401	403	418	415	271	231	188	146	90
30	280	292	323	356	369	417	372	292	236	192	145	92
45	311	369	365	397	398	406	371	262	221	171	126	76
00	279	309	326	388	395	398	331	248	228	152	120	73
Hr Total	1,195	1,299	1,370	1,542	1,565	1,639	1,489	1,073	916	703	537	331

24 Hour Total : 22,224
 AM Peak Hour begins : 7:30 AM Peak Volume : 1,428 AM Peak Hour Factor : 0.95
 PM Peak Hour begins : 17:00 PM Peak Volume : 1,639 PM Peak Hour Factor : 0.98

AVERAGE	Total Volume for All Lanes											
End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	110	63	52	43	63	118	379	721	761	643	532	561
30	107	78	49	55	75	169	497	744	795	626	578	567
45	93	56	48	54	103	247	645	753	759	671	579	577
00	79	51	50	74	120	320	681	736	693	582	550	607
Hr Total	389	248	199	226	361	854	2,202	2,954	3,008	2,522	2,239	2,312

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	597	564	622	711	770	755	788	507	449	357	293	177
30	563	573	620	675	756	824	722	515	426	368	297	173
45	571	629	661	714	785	785	704	492	422	352	236	146
00	557	601	672	737	767	763	623	460	420	307	217	136
Hr Total	2,288	2,367	2,575	2,837	3,078	3,127	2,837	1,974	1,717	1,384	1,043	632

24 Hour Total : 43,373
 AM Peak Hour begins : 7:45 AM Peak Volume : 3,051 AM Peak Hour Factor : 0.96
 PM Peak Hour begins : 17:15 PM Peak Volume : 3,160 PM Peak Hour Factor : 0.96

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 2, 2017 Start Time 00:00
 Stop Date : May 5, 2017 Stop Time 24:00
 County : Hillsborough
 Location : SR 580 at 500 ft East of N Florida Ave

VHB Project #: 62966

AVERAGE		Eastbound Volume for Lane 1											
End Time	00	01	02	03	04	05	06	07	08	09	10	11	
15	56	44	22	24	36	76	228	393	392	352	308	276	
30	49	31	31	29	45	107	279	377	400	312	296	302	
45	44	32	33	41	62	139	309	407	367	332	302	315	
00	51	25	29	38	69	158	368	411	340	291	298	309	
Hr Total	200	132	115	132	212	480	1,184	1,588	1,499	1,287	1,204	1,202	

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	348	323	340	371	469	510	446	343	273	218	171	104
30	330	321	318	334	476	482	434	298	241	239	160	107
45	333	345	368	395	492	461	433	287	258	190	133	79
00	316	322	343	429	474	462	371	262	234	202	115	80
Hr Total	1,327	1,311	1,369	1,529	1,911	1,915	1,684	1,190	1,006	849	579	370

24 Hour Total : 24,275
 AM Peak Hour begins : 7:30 AM Peak Volume : 1,610 AM Peak Hour Factor : 0.98
 PM Peak Hour begins : 16:30 PM Peak Volume : 1,958 PM Peak Hour Factor : 0.96

AVERAGE		Westbound Volume for Lane 2											
End Time	00	01	02	03	04	05	06	07	08	09	10	11	
15	76	42	30	35	30	67	183	391	444	441	366	369	
30	60	44	32	36	47	72	261	439	457	379	334	302	
45	69	47	35	32	50	127	283	417	462	401	386	370	
00	48	33	30	41	50	151	340	472	480	354	336	329	
Hr Total	253	166	127	144	177	417	1,067	1,719	1,843	1,575	1,422	1,370	

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	366	385	397	434	461	446	411	300	243	198	155	114
30	301	361	371	413	506	433	423	323	251	210	152	115
45	376	424	414	471	480	454	390	275	232	194	137	86
00	352	364	377	468	464	414	344	274	218	183	133	89
Hr Total	1,395	1,534	1,559	1,786	1,911	1,747	1,568	1,172	944	785	577	404

24 Hour Total : 25,662
 AM Peak Hour begins : 8:00 AM Peak Volume : 1,843 AM Peak Hour Factor : 0.96
 PM Peak Hour begins : 15:45 PM Peak Volume : 1,915 PM Peak Hour Factor : 0.95

AVERAGE		Total Volume for All Lanes											
End Time	00	01	02	03	04	05	06	07	08	09	10	11	
15	132	86	52	59	66	143	411	784	836	793	674	645	
30	109	75	63	65	92	179	540	816	857	691	630	604	
45	113	79	68	73	112	266	592	824	829	733	688	685	
00	99	58	59	79	119	309	708	883	820	645	634	638	
Hr Total	453	298	242	276	389	897	2,251	3,307	3,342	2,862	2,626	2,572	

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	714	708	737	805	930	956	857	643	516	416	326	218
30	631	682	689	747	982	915	857	621	492	449	312	222
45	709	769	782	866	972	915	823	562	490	384	270	165
00	668	686	720	897	938	876	715	536	452	385	248	169
Hr Total	2,722	2,845	2,928	3,315	3,822	3,662	3,252	2,362	1,950	1,634	1,156	774

24 Hour Total : 49,937
 AM Peak Hour begins : 7:45 AM Peak Volume : 3,405 AM Peak Hour Factor : 0.96
 PM Peak Hour begins : 16:15 PM Peak Volume : 3,848 PM Peak Hour Factor : 0.98

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 2, 2017
 Stop Date : May 5, 2017
 County : Hillsborough
 Location : SR 580 Busch Blvd at N 9th St

Start Time : 00:00
 Stop Time : 24:00

VHB Project #: 62966

2-May-17

Eastbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	91	57	34	30	26	67	150	327	331	301	268	296
30	60	41	30	37	38	75	215	350	349	316	281	257
45	68	43	47	34	40	94	267	355	344	298	267	285
00	61	27	32	33	62	139	334	369	293	294	268	291
Hr Total	280	168	143	134	166	375	966	1,401	1,317	1,209	1,084	1,129

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	285	284	285	330	341	407	364	315	239	240	177	131
30	289	298	307	335	391	400	344	262	234	232	157	137
45	282	336	323	334	400	383	343	251	250	191	136	106
00	272	311	346	393	394	371	308	229	198	181	118	89
Hr Total	1,128	1,229	1,261	1,392	1,526	1,561	1,359	1,057	921	844	588	463

24 Hour Total : 21,701
 AM Peak Hour begins : 7:15 AM Peak Volume : 1,405 AM Peak Hour Factor : 0.95
 PM Peak Hour begins : 16:30 PM Peak Volume : 1,601 PM Peak Hour Factor : 0.98

2-May-17

Westbound Volume for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	64	38	23	41	43	69	195	419	450	324	275	287
30	54	42	28	34	52	85	256	463	361	308	268	271
45	70	37	30	37	58	122	327	452	410	325	302	324
00	58	31	29	34	57	136	342	480	393	309	290	270
Hr Total	246	148	110	146	210	412	1,120	1,814	1,614	1,266	1,135	1,152

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	274	333	352	396	466	464	419	275	234	163	150	90
30	274	312	313	364	440	539	375	264	202	202	117	84
45	311	308	410	391	454	460	391	208	214	148	133	84
00	300	324	353	452	487	420	296	202	211	162	130	76
Hr Total	1,159	1,277	1,428	1,603	1,847	1,883	1,481	949	861	675	530	334

24 Hour Total : 23,400
 AM Peak Hour begins : 7:15 AM Peak Volume : 1,845 AM Peak Hour Factor : 0.96
 PM Peak Hour begins : 16:45 PM Peak Volume : 1,950 PM Peak Hour Factor : 0.90

2-May-17

Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	155	95	57	71	69	136	345	746	781	625	543	583
30	114	83	58	71	90	160	471	813	710	624	549	528
45	138	80	77	71	98	216	594	807	754	623	569	609
00	119	58	61	67	119	275	676	849	686	603	558	561
Hr Total	526	316	253	280	376	787	2,086	3,215	2,931	2,475	2,219	2,281

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	559	617	637	726	807	871	783	590	473	403	327	221
30	563	610	620	699	831	939	719	526	436	434	274	221
45	593	644	733	725	854	843	734	459	464	339	269	190
00	572	635	699	845	881	791	604	431	409	343	248	165
Hr Total	2,287	2,506	2,689	2,995	3,373	3,444	2,840	2,006	1,782	1,519	1,118	797

24 Hour Total : 45,101
 AM Peak Hour begins : 7:15 AM Peak Volume : 3,250 AM Peak Hour Factor : 0.96
 PM Peak Hour begins : 16:30 PM Peak Volume : 3,545 PM Peak Hour Factor : 0.94

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 2, 2017
 Stop Date : May 5, 2017
 County : Hillsborough
 Location : SR 580 Busch Blvd at N 9th St

Start Time : 00:00
 Stop Time : 24:00

VHB Project #: 62966

3-May-17

Eastbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	74	39	37	38	35	68	180	327	363	352	309	311
30	77	41	37	39	38	66	198	359	345	248	287	315
45	50	38	33	31	46	123	278	345	335	297	287	319
00	53	37	39	41	63	110	327	373	334	322	265	283
Hr Total	254	155	146	149	182	367	983	1,404	1,377	1,219	1,148	1,228

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	346	265	359	359	377	409	380	316	247	220	165	140
30	291	303	273	298	416	382	356	284	247	257	201	114
45	323	320	389	327	425	376	329	288	232	217	176	106
00	331	301	373	395	336	371	335	249	233	181	135	97
Hr Total	1,291	1,189	1,394	1,379	1,554	1,538	1,400	1,137	959	875	677	457

24 Hour Total : 22,462
 AM Peak Hour begins : 7:15
 PM Peak Hour begins : 15:45

AM Peak Volume : 1,440
 PM Peak Volume : 1,613
 AM Peak Hour Factor : 0.97
 PM Peak Hour Factor : 0.95

3-May-17

Westbound Volume for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	75	45	25	31	32	66	211	420	470	316	321	299
30	70	34	26	55	40	86	296	496	409	297	288	276
45	66	40	32	33	41	119	343	527	422	356	334	307
00	55	25	23	48	61	142	374	471	382	304	302	317
Hr Total	266	144	106	167	174	413	1,224	1,914	1,683	1,273	1,245	1,199

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	349	318	338	368	445	492	406	264	226	181	159	109
30	310	332	368	363	462	461	389	294	232	180	130	105
45	364	354	390	417	489	461	374	275	222	188	137	96
00	288	300	353	433	460	447	324	243	179	152	125	89
Hr Total	1,311	1,304	1,449	1,581	1,856	1,861	1,493	1,076	859	701	551	399

24 Hour Total : 24,249
 AM Peak Hour begins : 7:15
 PM Peak Hour begins : 16:15

AM Peak Volume : 1,964
 PM Peak Volume : 1,903
 AM Peak Hour Factor : 0.93
 PM Peak Hour Factor : 0.97

3-May-17

Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	149	84	62	69	67	134	391	747	833	668	630	610
30	147	75	63	94	78	152	494	855	754	545	575	591
45	116	78	65	64	87	242	621	872	757	653	621	626
00	108	62	62	89	124	252	701	844	716	626	567	600
Hr Total	520	299	252	316	356	780	2,207	3,318	3,060	2,492	2,393	2,427

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	695	583	697	727	822	901	786	580	473	401	324	249
30	601	635	641	661	878	843	745	578	479	437	331	219
45	687	674	779	744	914	837	703	563	454	405	313	202
00	619	601	726	828	796	818	659	492	412	333	260	186
Hr Total	2,602	2,493	2,843	2,960	3,410	3,399	2,893	2,213	1,818	1,576	1,228	856

24 Hour Total : 46,711
 AM Peak Hour begins : 7:15
 PM Peak Hour begins : 16:15

AM Peak Volume : 3,404
 PM Peak Volume : 3,489
 AM Peak Hour Factor : 0.98
 PM Peak Hour Factor : 0.95

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 2, 2017
 Stop Date : May 5, 2017
 County : Hillsborough
 Location : SR 580 Busch Blvd at N 9th St

Start Time : 00:00
 Stop Time : 24:00

VHB Project #: 62966

4-May-17

Eastbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	78	48	40	25	43	71	155	321	351	317	316	297
30	75	47	33	38	27	73	217	349	378	312	314	278
45	61	46	35	40	37	107	284	347	346	299	315	276
00	59	27	37	45	52	119	342	405	334	295	265	291
Hr Total	273	168	145	148	159	370	998	1,422	1,409	1,223	1,210	1,142

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	346	331	324	357	395	377	359	289	235	225	193	117
30	288	342	299	322	424	403	337	295	248	248	180	124
45	280	329	367	370	391	384	338	242	247	214	166	114
00	329	315	321	366	396	388	308	232	235	211	133	95
Hr Total	1,243	1,317	1,311	1,415	1,606	1,552	1,342	1,058	965	898	672	450

24 Hour Total : 22,496
 AM Peak Hour begins : 7:30
 PM Peak Hour begins : 16:00

AM Peak Volume : 1,481
 PM Peak Volume : 1,606
 AM Peak Hour Factor : 0.91
 PM Peak Hour Factor : 0.95

4-May-17

Westbound Volume for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	64	42	27	36	49	72	198	445	434	321	296	326
30	71	39	29	35	52	84	311	406	405	296	290	280
45	66	51	28	36	52	153	322	427	400	340	300	321
00	60	48	40	36	65	149	318	526	355	274	293	302
Hr Total	261	180	124	143	218	458	1,149	1,804	1,594	1,231	1,179	1,229

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	311	298	318	389	425	449	449	279	245	167	155	111
30	305	343	353	391	434	514	399	271	185	180	137	104
45	324	406	329	380	462	447	371	263	208	171	143	75
00	365	354	363	399	485	379	342	206	178	164	129	86
Hr Total	1,305	1,401	1,363	1,559	1,806	1,789	1,561	1,019	816	682	564	376

24 Hour Total : 23,811
 AM Peak Hour begins : 7:00
 PM Peak Hour begins : 16:30

AM Peak Volume : 1,804
 PM Peak Volume : 1,910
 AM Peak Hour Factor : 0.86
 PM Peak Hour Factor : 0.93

4-May-17

Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	142	90	67	61	92	143	353	766	785	638	612	623
30	146	86	62	73	79	157	528	755	783	608	604	558
45	127	97	63	76	89	260	606	774	746	639	615	597
00	119	75	77	81	117	268	660	931	689	569	558	593
Hr Total	534	348	269	291	377	828	2,147	3,226	3,003	2,454	2,389	2,371

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	657	629	642	746	820	826	808	568	480	392	348	228
30	593	685	652	713	858	917	736	566	433	428	317	228
45	604	735	696	750	853	831	709	505	455	385	309	189
00	694	669	684	765	881	767	650	438	413	375	262	181
Hr Total	2,548	2,718	2,674	2,974	3,412	3,341	2,903	2,077	1,781	1,580	1,236	826

24 Hour Total : 46,307
 AM Peak Hour begins : 7:30
 PM Peak Hour begins : 16:30

AM Peak Volume : 3,273
 PM Peak Volume : 3,477
 AM Peak Hour Factor : 0.88
 PM Peak Hour Factor : 0.95

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 2, 2017
 Stop Date : May 5, 2017
 County : Hillsborough
 Location : SR 580 Busch Blvd at N 9th St

Start Time : 00:00
 Stop Time : 24:00

VHB Project #: 62966

AVERAGE		Eastbound Volume for Lane 1											
End Time	00	01	02	03	04	05	06	07	08	09	10	11	
15	81	48	37	31	35	69	162	325	348	323	298	301	
30	71	43	33	38	34	71	210	353	357	292	294	283	
45	60	42	38	35	41	108	276	349	342	298	290	293	
00	58	30	36	40	59	123	334	382	320	304	266	288	
Hr Total	270	163	144	144	169	371	982	1,409	1,367	1,217	1,148	1,165	

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	326	293	323	349	371	398	368	307	240	228	178	129
30	289	314	293	318	410	395	346	280	243	246	179	125
45	295	328	360	344	405	381	337	260	243	207	159	109
00	311	309	347	385	375	377	317	237	222	191	129	94
Hr Total	1,221	1,244	1,323	1,396	1,561	1,551	1,368	1,084	948	872	645	457

24 Hour Total : 22,219
 AM Peak Hour begins : 7:30 AM Peak Volume : 1,436 AM Peak Hour Factor : 0.94
 PM Peak Hour begins : 16:15 PM Peak Volume : 1,588 PM Peak Hour Factor : 0.97

AVERAGE		Westbound Volume for Lane 2											
End Time	00	01	02	03	04	05	06	07	08	09	10	11	
15	68	42	25	36	41	69	201	428	451	320	297	304	
30	65	38	28	41	48	85	288	455	392	300	282	276	
45	67	43	30	35	50	131	331	469	411	340	312	317	
00	58	35	31	39	61	142	345	492	377	296	295	296	
Hr Total	258	158	114	151	200	427	1,165	1,844	1,631	1,256	1,186	1,193	

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	311	316	336	384	445	468	425	273	235	170	155	103
30	296	329	345	373	445	505	388	276	206	187	128	98
45	333	356	376	396	468	456	379	249	215	169	138	85
00	318	326	356	428	477	415	321	217	189	159	128	84
Hr Total	1,258	1,327	1,413	1,581	1,835	1,844	1,513	1,015	845	685	549	370

24 Hour Total : 23,818
 AM Peak Hour begins : 7:15 AM Peak Volume : 1,867 AM Peak Hour Factor : 0.95
 PM Peak Hour begins : 16:30 PM Peak Volume : 1,918 PM Peak Hour Factor : 0.95

AVERAGE		Total Volume for All Lanes											
End Time	00	01	02	03	04	05	06	07	08	09	10	11	
15	149	90	62	67	76	138	363	753	799	643	595	605	
30	136	81	61	79	82	156	498	808	749	592	576	559	
45	127	85	68	70	91	239	607	818	753	638	602	610	
00	116	65	67	79	120	265	679	874	697	600	561	584	
Hr Total	528	321	258	295	369	798	2,147	3,253	2,998	2,473	2,334	2,358	

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	637	609	659	733	816	866	793	580	475	398	333	232
30	585	643	638	691	855	900	734	556	449	433	307	223
45	628	684	736	740	873	837	716	509	458	376	297	194
00	629	635	703	813	852	792	638	454	411	350	257	178
Hr Total	2,479	2,571	2,736	2,977	3,396	3,395	2,881	2,099	1,793	1,557	1,194	827

24 Hour Total : 46,037
 AM Peak Hour begins : 7:15 AM Peak Volume : 3,299 AM Peak Hour Factor : 0.94
 PM Peak Hour begins : 16:30 PM Peak Volume : 3,491 PM Peak Hour Factor : 0.97

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 2, 2017 Start Time 00:00
 Stop Date : May 5, 2017 Stop Time 24:00
 County : Hillsborough
 Location : N Dale Mabry Hwy SB Off Ramp to SR 580 Busch Blvd

VHB Project #: 62966

2-May-17 Northbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total : 0
 AM Peak Hour begins : 0:00 AM Peak Volume : 0 AM Peak Hour Factor : #DIV/0!
 PM Peak Hour begins : 12:00 PM Peak Volume : 0 PM Peak Hour Factor : #DIV/0!

2-May-17 Southbound Volume for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	2	4	5	0	1	7	14	48	59	75	40	42
30	8	3	3	2	2	5	24	68	92	39	48	55
45	5	1	2	3	3	9	48	64	88	59	52	55
00	3	3	1	0	4	16	46	67	96	46	54	47
Hr Total	18	11	11	5	10	37	132	247	335	219	194	199

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	65	89	62	84	61	69	60	49	49	45	27	14
30	79	76	81	53	65	56	49	52	48	33	19	9
45	76	81	64	63	51	56	47	66	61	31	21	10
00	65	57	56	62	79	50	53	51	54	34	18	6
Hr Total	285	303	263	262	256	231	209	218	212	143	85	39

24 Hour Total : 3,924
 AM Peak Hour begins : 8:15 AM Peak Volume : 351 AM Peak Hour Factor : 0.91
 PM Peak Hour begins : 12:45 PM Peak Volume : 311 PM Peak Hour Factor : 0.87

2-May-17 Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	2	4	5	0	1	7	14	48	59	75	40	42
30	8	3	3	2	2	5	24	68	92	39	48	55
45	5	1	2	3	3	9	48	64	88	59	52	55
00	3	3	1	0	4	16	46	67	96	46	54	47
Hr Total	18	11	11	5	10	37	132	247	335	219	194	199

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	65	89	62	84	61	69	60	49	49	45	27	14
30	79	76	81	53	65	56	49	52	48	33	19	9
45	76	81	64	63	51	56	47	66	61	31	21	10
00	65	57	56	62	79	50	53	51	54	34	18	6
Hr Total	285	303	263	262	256	231	209	218	212	143	85	39

24 Hour Total : 3,924
 AM Peak Hour begins : 8:15 AM Peak Volume : 351 AM Peak Hour Factor : 0.91
 PM Peak Hour begins : 12:45 PM Peak Volume : 311 PM Peak Hour Factor : 0.87

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 2, 2017 Start Time 00:00
 Stop Date : May 5, 2017 Stop Time 24:00
 County : Hillsborough
 Location : N Dale Mabry Hwy SB Off Ramp to SR 580 Busch Blvd

VHB Project #: 62966

4-May-17 Northbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total : 0
 AM Peak Hour begins : 0:00 AM Peak Volume : 0 AM Peak Hour Factor : #DIV/0!
 PM Peak Hour begins : 12:00 PM Peak Volume : 0 PM Peak Hour Factor : #DIV/0!

4-May-17 Southbound Volume for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	7	4	4	4	6	6	18	61	60	50	52	50
30	10	4	1	4	4	9	28	77	90	55	55	54
45	9	7	2	2	5	11	45	68	85	64	58	52
00	6	1	1	1	5	9	59	75	73	39	61	82
Hr Total	32	16	8	11	20	35	150	281	308	208	226	238

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	75	70	60	70	74	64	58	49	48	36	28	13
30	66	68	70	69	59	79	48	56	37	54	30	20
45	99	63	69	65	76	64	52	48	42	53	31	10
00	72	61	52	55	49	52	47	68	44	35	15	8
Hr Total	312	262	251	259	258	259	205	221	171	178	104	51

24 Hour Total : 4,064
 AM Peak Hour begins : 7:45 AM Peak Volume : 310 AM Peak Hour Factor : 0.86
 PM Peak Hour begins : 12:00 PM Peak Volume : 312 PM Peak Hour Factor : 0.79

4-May-17 Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	7	4	4	4	6	6	18	61	60	50	52	50
30	10	4	1	4	4	9	28	77	90	55	55	54
45	9	7	2	2	5	11	45	68	85	64	58	52
00	6	1	1	1	5	9	59	75	73	39	61	82
Hr Total	32	16	8	11	20	35	150	281	308	208	226	238

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	75	70	60	70	74	64	58	49	48	36	28	13
30	66	68	70	69	59	79	48	56	37	54	30	20
45	99	63	69	65	76	64	52	48	42	53	31	10
00	72	61	52	55	49	52	47	68	44	35	15	8
Hr Total	312	262	251	259	258	259	205	221	171	178	104	51

24 Hour Total : 4,064
 AM Peak Hour begins : 7:45 AM Peak Volume : 310 AM Peak Hour Factor : 0.86
 PM Peak Hour begins : 12:00 PM Peak Volume : 312 PM Peak Hour Factor : 0.79

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 2, 2017 Start Time 00:00
 Stop Date : May 5, 2017 Stop Time 24:00
 County : Hillsborough
 Location : N Dale Mabry Hwy SB On Ramp from SR 580 Busch Blvd

VHB Project #: 62966

AVERAGE **Northbound Volume for Lane 1**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total : 0
 AM Peak Hour begins : 0:00 AM Peak Volume : 0 AM Peak Hour Factor : #DIV/0!
 PM Peak Hour begins : 12:00 PM Peak Volume : 0 PM Peak Hour Factor : #DIV/0!

AVERAGE **Southbound Volume for Lane 2**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	15	8	4	9	12	30	78	128	127	126	102	83
30	17	11	11	15	18	45	130	118	140	117	98	105
45	13	11	19	17	31	53	176	131	134	125	108	90
00	11	10	9	18	34	74	138	127	125	113	101	97
Hr Total	56	40	43	59	95	202	522	504	526	481	409	375

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	82	87	94	96	122	118	118	82	61	47	34	22
30	96	92	93	110	113	108	121	91	56	49	40	19
45	104	88	103	135	144	121	103	68	59	49	29	18
00	88	93	90	116	111	124	105	60	51	44	29	19
Hr Total	370	360	380	457	490	471	447	301	227	189	132	78

24 Hour Total : 7,214
 AM Peak Hour begins : 6:15 AM Peak Volume : 572 AM Peak Hour Factor : 0.81
 PM Peak Hour begins : 15:45 PM Peak Volume : 495 PM Peak Hour Factor : 0.86

AVERAGE **Total Volume for All Lanes**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	15	8	4	9	12	30	78	128	127	126	102	83
30	17	11	11	15	18	45	130	118	140	117	98	105
45	13	11	19	17	31	53	176	131	134	125	108	90
00	11	10	9	18	34	74	138	127	125	113	101	97
Hr Total	56	40	43	59	95	202	522	504	526	481	409	375

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	82	87	94	96	122	118	118	82	61	47	34	22
30	96	92	93	110	113	108	121	91	56	49	40	19
45	104	88	103	135	144	121	103	68	59	49	29	18
00	88	93	90	116	111	124	105	60	51	44	29	19
Hr Total	370	360	380	457	490	471	447	301	227	189	132	78

24 Hour Total : 7,214
 AM Peak Hour begins : 6:15 AM Peak Volume : 572 AM Peak Hour Factor : 0.81
 PM Peak Hour begins : 15:45 PM Peak Volume : 495 PM Peak Hour Factor : 0.86

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 2, 2017 Start Time 00:00
 Stop Date : May 5, 2017 Stop Time 24:00
 County : Hillsborough
 Location : N Dale Mabry Hwy NB Off Ramp to SR 580 Busch Blvd

VHB Project #: 62966

2-May-17 Northbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	11	12	5	5	2	3	15	43	40	48	49	41
30	12	4	4	5	8	11	25	47	39	49	55	51
45	14	6	4	2	7	10	18	41	35	44	60	46
00	16	10	5	4	6	22	40	38	61	52	52	49
Hr Total	53	32	18	16	23	46	98	169	175	193	216	187

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	69	63	57	71	75	81	77	75	47	53	37	23
30	60	52	48	57	80	75	84	57	42	55	28	26
45	30	47	57	75	91	98	88	50	38	40	27	25
00	61	62	61	69	89	82	75	43	46	39	17	26
Hr Total	220	224	223	272	335	336	324	225	173	187	109	100

24 Hour Total : 3,954
 AM Peak Hour begins : 9:45 AM Peak Volume : 216 AM Peak Hour Factor : 0.90
 PM Peak Hour begins : 16:45 PM Peak Volume : 343 PM Peak Hour Factor : 0.88

2-May-17 Southbound Volume for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total : 0
 AM Peak Hour begins : AM Peak Volume : 0 AM Peak Hour Factor :
 PM Peak Hour begins : PM Peak Volume : 0 PM Peak Hour Factor :

2-May-17 Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	11	12	5	5	2	3	15	43	40	48	49	41
30	12	4	4	5	8	11	25	47	39	49	55	51
45	14	6	4	2	7	10	18	41	35	44	60	46
00	16	10	5	4	6	22	40	38	61	52	52	49
Hr Total	53	32	18	16	23	46	98	169	175	193	216	187

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	69	63	57	71	75	81	77	75	47	53	37	23
30	60	52	48	57	80	75	84	57	42	55	28	26
45	30	47	57	75	91	98	88	50	38	40	27	25
00	61	62	61	69	89	82	75	43	46	39	17	26
Hr Total	220	224	223	272	335	336	324	225	173	187	109	100

24 Hour Total : 3,954
 AM Peak Hour begins : 9:45 AM Peak Volume : 216 AM Peak Hour Factor : 0.90
 PM Peak Hour begins : 16:45 PM Peak Volume : 343 PM Peak Hour Factor : 0.88

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 2, 2017 Start Time 00:00
 Stop Date : May 5, 2017 Stop Time 24:00
 County : Hillsborough
 Location : N Dale Mabry Hwy NB On Ramp from SR 580 Busch Blvd

VHB Project #: 62966

AVERAGE **Northbound Volume for Lane 1**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	9	3	2	4	3	8	24	43	76	72	72	92
30	6	4	2	4	7	5	29	50	75	76	68	96
45	9	1	3	3	6	15	37	81	81	85	91	114
00	6	3	3	4	6	15	51	76	81	77	84	120
Hr Total	30	11	10	15	22	43	141	250	313	310	315	422

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	121	117	104	125	129	133	133	96	64	43	35	19
30	113	110	89	112	122	142	132	81	64	39	30	15
45	111	101	101	131	128	157	129	81	65	40	25	9
00	112	89	107	138	139	142	108	65	50	31	23	9
Hr Total	457	417	401	506	518	574	502	323	243	153	113	52

24 Hour Total : 6,141
 AM Peak Hour begins : 11:00 AM Peak Volume : 422 AM Peak Hour Factor : 0.88
 PM Peak Hour begins : 17:00 PM Peak Volume : 574 PM Peak Hour Factor : 0.91

AVERAGE **Southbound Volume for Lane 2**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total : 0
 AM Peak Hour begins : 0:00 AM Peak Volume : 0 AM Peak Hour Factor : #DIV/0!
 PM Peak Hour begins : 12:00 PM Peak Volume : 0 PM Peak Hour Factor : #DIV/0!

AVERAGE **Total Volume for All Lanes**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	9	3	2	4	3	8	24	43	76	72	72	92
30	6	4	2	4	7	5	29	50	75	76	68	96
45	9	1	3	3	6	15	37	81	81	85	91	114
00	6	3	3	4	6	15	51	76	81	77	84	120
Hr Total	30	11	10	15	22	43	141	250	313	310	315	422

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	121	117	104	125	129	133	133	96	64	43	35	19
30	113	110	89	112	122	142	132	81	64	39	30	15
45	111	101	101	131	128	157	129	81	65	40	25	9
00	112	89	107	138	139	142	108	65	50	31	23	9
Hr Total	457	417	401	506	518	574	502	323	243	153	113	52

24 Hour Total : 6,141
 AM Peak Hour begins : 11:00 AM Peak Volume : 422 AM Peak Hour Factor : 0.88
 PM Peak Hour begins : 17:00 PM Peak Volume : 574 PM Peak Hour Factor : 0.91

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 2, 2017 Start Time 00:00
 Stop Date : May 5, 2017 Stop Time 24:00
 County : Hillsborough
 Location : Twin Lakes Blvd at 300 ft South of SR 580

VHB Project #: 62966

4-May-17 Northbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	3	4	1	0	1	3	12	38	61	17	21	17
30	4	1	1	1	0	1	11	42	54	31	27	30
45	4	1	2	0	1	4	24	55	45	28	41	30
00	0	4	2	1	2	8	22	45	42	28	27	41
Hr Total	11	10	6	2	4	16	69	180	202	104	116	118

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	36	40	41	61	95	129	103	39	20	11	18	8
30	40	45	39	78	110	154	94	28	17	19	5	3
45	31	41	39	80	135	115	65	28	21	12	10	8
00	28	28	58	106	87	139	56	20	23	7	7	6
Hr Total	135	154	177	325	427	537	318	115	81	49	40	25

24 Hour Total : 3,221
 AM Peak Hour begins : 7:30 AM Peak Volume : 215 AM Peak Hour Factor : 0.88
 PM Peak Hour begins : 17:00 PM Peak Volume : 537 PM Peak Hour Factor : 0.87

4-May-17 Southbound Volume for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	4	4	0	1	1	2	8	126	121	73	38	25
30	4	0	0	2	1	0	14	144	116	49	34	19
45	3	2	1	0	1	5	29	125	85	29	31	31
00	0	0	3	0	0	5	55	141	92	55	30	34
Hr Total	11	6	4	3	3	12	106	536	414	206	133	109

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	26	43	36	38	37	31	51	23	24	10	7	5
30	26	23	33	32	34	33	34	26	9	15	8	8
45	41	28	47	33	28	43	24	17	17	11	9	9
00	46	27	44	41	41	43	23	22	12	10	5	6
Hr Total	139	121	160	144	140	150	132	88	62	46	29	28

24 Hour Total : 2,782
 AM Peak Hour begins : 7:00 AM Peak Volume : 536 AM Peak Hour Factor : 0.93
 PM Peak Hour begins : 17:30 PM Peak Volume : 171 PM Peak Hour Factor : 0.84

4-May-17 Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	7	8	1	1	2	5	20	164	182	90	59	42
30	8	1	1	3	1	1	25	186	170	80	61	49
45	7	3	3	0	2	9	53	180	130	57	72	61
00	0	4	5	1	2	13	77	186	134	83	57	75
Hr Total	22	16	10	5	7	28	175	716	616	310	249	227

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	62	83	77	99	132	160	154	62	44	21	25	13
30	66	68	72	110	144	187	128	54	26	34	13	11
45	72	69	86	113	163	158	89	45	38	23	19	17
00	74	55	102	147	128	182	79	42	35	17	12	12
Hr Total	274	275	337	469	567	687	450	203	143	95	69	53

24 Hour Total : 6,003
 AM Peak Hour begins : 7:15 AM Peak Volume : 734 AM Peak Hour Factor : 0.99
 PM Peak Hour begins : 17:00 PM Peak Volume : 687 PM Peak Hour Factor : 0.92

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 2, 2017 Start Time 00:00
 Stop Date : May 5, 2017 Stop Time 24:00
 County : Hillsborough
 Location : Twin Lakes Blvd at 300 ft South of SR 580

VHB Project #: 62966

AVERAGE		Northbound Volume for Lane 1											
End Time	00	01	02	03	04	05	06	07	08	09	10	11	
15	2	3	1	0	1	3	11	38	53	25	27	23	
30	3	2	1	0	1	2	11	38	52	29	24	29	
45	3	1	2	1	2	4	24	58	59	25	30	36	
00	3	3	1	1	2	7	22	48	39	22	31	34	
Hr Total	11	9	5	2	6	16	68	182	203	101	112	122	

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	39	41	41	58	95	141	105	43	25	14	11	6
30	39	42	37	65	96	143	101	35	19	16	10	5
45	36	37	47	76	130	132	80	32	18	14	9	6
00	36	30	61	91	115	130	56	27	17	10	7	4
Hr Total	150	150	186	290	436	546	342	137	79	54	37	21

24 Hour Total : 3,265
 AM Peak Hour begins : 7:45 AM Peak Volume : 212 AM Peak Hour Factor : 0.90
 PM Peak Hour begins : 17:00 PM Peak Volume : 546 PM Peak Hour Factor : 0.96

AVERAGE		Southbound Volume for Lane 2											
End Time	00	01	02	03	04	05	06	07	08	09	10	11	
15	4	2	2	2	1	1	11	122	118	80	41	33	
30	3	1	0	2	2	2	16	148	115	47	32	26	
45	2	1	1	0	1	4	28	129	97	43	32	32	
00	2	2	1	0	0	6	55	147	92	43	32	31	
Hr Total	11	6	4	4	4	13	110	546	422	213	137	122	

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	29	33	30	39	29	33	37	29	23	14	10	6
30	24	28	32	35	29	34	34	25	14	16	10	6
45	28	31	42	40	35	38	24	19	18	9	7	10
00	37	36	43	37	35	37	27	22	17	13	5	4
Hr Total	118	128	147	151	128	142	122	95	72	52	32	26

24 Hour Total : 2,805
 AM Peak Hour begins : 7:00 AM Peak Volume : 546 AM Peak Hour Factor : 0.92
 PM Peak Hour begins : 14:30 PM Peak Volume : 159 PM Peak Hour Factor : 0.92

AVERAGE		Total Volume for All Lanes											
End Time	00	01	02	03	04	05	06	07	08	09	10	11	
15	6	5	3	2	2	4	22	160	171	105	68	56	
30	6	3	1	2	3	4	27	186	167	76	56	55	
45	5	2	3	1	3	8	52	187	156	68	62	68	
00	5	5	2	1	2	13	77	195	131	65	63	65	
Hr Total	22	15	9	6	10	29	178	728	625	314	249	244	

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	68	74	71	97	124	174	142	72	48	28	21	12
30	63	70	69	100	125	177	135	60	33	32	20	11
45	64	68	89	116	165	170	104	51	36	23	16	16
00	73	66	104	128	150	167	83	49	34	23	12	8
Hr Total	268	278	333	441	564	688	464	232	151	106	69	47

24 Hour Total : 6,070
 AM Peak Hour begins : 7:15 AM Peak Volume : 739 AM Peak Hour Factor : 0.95
 PM Peak Hour begins : 17:00 PM Peak Volume : 688 PM Peak Hour Factor : 0.97

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 2, 2017 Start Time 00:00
 Stop Date : May 5, 2017 Stop Time 24:00
 County : Hillsborough
 Location : Orange Grove Rd at 300 ft North of SR 580

VHB Project #: 62966

2-May-17 Southbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	2	0	0	2	3	17	152	144	74	33	29
30	2	1	0	0	5	7	27	153	132	35	32	31
45	2	0	3	0	4	8	37	195	97	44	39	34
00	0	0	0	0	4	11	66	160	106	39	26	33
Hr Total	4	3	3	0	15	29	147	660	479	192	130	127

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	33	35	33	50	39	56	67	47	43	25	9	7
30	25	47	42	50	60	61	49	28	30	10	8	3
45	39	31	44	54	56	62	49	44	22	10	6	6
00	33	35	40	33	58	60	34	32	26	4	2	5
Hr Total	130	148	159	187	213	239	199	151	121	49	25	21

24 Hour Total : 3,431
 AM Peak Hour begins : 7:00 AM Peak Volume : 660 AM Peak Hour Factor : 0.85
 PM Peak Hour begins : 17:15 PM Peak Volume : 250 PM Peak Hour Factor : 0.93

2-May-17 Northbound Volume for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	2	5	1	0	1	2	6	22	28	33	24	22
30	4	1	0	0	1	4	7	21	35	32	26	34
45	2	0	3	1	1	6	20	30	49	24	27	29
00	2	0	2	0	3	2	25	31	45	24	27	23
Hr Total	10	6	6	1	6	14	58	104	157	113	104	108

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	39	22	26	37	54	88	75	46	25	13	15	10
30	36	33	42	47	61	85	80	30	17	15	13	10
45	29	29	29	38	70	90	91	36	23	15	13	7
00	37	25	35	61	73	97	54	28	20	11	13	5
Hr Total	141	109	132	183	258	360	300	140	85	54	54	32

24 Hour Total : 2,535
 AM Peak Hour begins : 8:15 AM Peak Volume : 162 AM Peak Hour Factor : 0.83
 PM Peak Hour begins : 17:00 PM Peak Volume : 360 PM Peak Hour Factor : 0.93

2-May-17 Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	2	7	1	0	3	5	23	174	172	107	57	51
30	6	2	0	0	6	11	34	174	167	67	58	65
45	4	0	6	1	5	14	57	225	146	68	66	63
00	2	0	2	0	7	13	91	191	151	63	53	56
Hr Total	14	9	9	1	21	43	205	764	636	305	234	235

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	72	57	59	87	93	144	142	93	68	38	24	17
30	61	80	84	97	121	146	129	58	47	25	21	13
45	68	60	73	92	126	152	140	80	45	25	19	13
00	70	60	75	94	131	157	88	60	46	15	15	10
Hr Total	271	257	291	370	471	599	499	291	206	103	79	53

24 Hour Total : 5,966
 AM Peak Hour begins : 7:00 AM Peak Volume : 764 AM Peak Hour Factor : 0.85
 PM Peak Hour begins : 17:00 PM Peak Volume : 599 PM Peak Hour Factor : 0.95

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 2, 2017 Start Time 00:00
 Stop Date : May 5, 2017 Stop Time 24:00
 County : Hillsborough
 Location : Orange Grove Rd at 300 ft North of SR 580

VHB Project #: 62966

3-May-17 Southbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	1	1	2	0	2	5	12	142	135	66	34	36
30	1	2	0	0	1	7	31	167	142	45	40	32
45	2	1	1	2	4	6	47	169	99	43	22	28
00	2	0	1	2	3	12	86	145	77	40	38	38
Hr Total	6	4	4	4	10	30	176	623	453	194	134	134

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	41	40	27	48	37	80	72	28	24	15	12	4
30	46	43	35	68	53	65	47	34	26	15	9	6
45	49	29	47	52	63	76	47	34	32	8	4	2
00	53	29	54	53	50	66	42	43	23	9	7	1
Hr Total	189	141	163	221	203	287	208	139	105	47	32	13

24 Hour Total : 3,520
 AM Peak Hour begins : 7:00 AM Peak Volume : 623 AM Peak Hour Factor : 0.92
 PM Peak Hour begins : 17:00 PM Peak Volume : 287 PM Peak Hour Factor : 0.90

3-May-17 Northbound Volume for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	2	4	2	2	0	2	4	30	22	33	26	21
30	6	0	0	2	1	2	9	23	32	24	24	24
45	2	0	4	2	0	2	20	28	56	29	21	38
00	3	1	2	1	3	8	20	35	52	30	32	30
Hr Total	13	5	8	7	4	14	53	116	162	116	103	113

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	38	29	25	46	56	74	100	44	22	22	10	9
30	36	29	41	33	54	66	78	30	29	21	8	7
45	27	41	25	50	55	73	70	26	24	17	9	12
00	33	36	40	38	64	84	45	21	34	16	7	4
Hr Total	134	135	131	167	229	297	293	121	109	76	34	32

24 Hour Total : 2,472
 AM Peak Hour begins : 8:15 AM Peak Volume : 173 AM Peak Hour Factor : 0.77
 PM Peak Hour begins : 17:30 PM Peak Volume : 335 PM Peak Hour Factor : 0.84

3-May-17 Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	3	5	4	2	2	7	16	172	157	99	60	57
30	7	2	0	2	2	9	40	190	174	69	64	56
45	4	1	5	4	4	8	67	197	155	72	43	66
00	5	1	3	3	6	20	106	180	129	70	70	68
Hr Total	19	9	12	11	14	44	229	739	615	310	237	247

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	79	69	52	94	93	154	172	72	46	37	22	13
30	82	72	76	101	107	131	125	64	55	36	17	13
45	76	70	72	102	118	149	117	60	56	25	13	14
00	86	65	94	91	114	150	87	64	57	25	14	5
Hr Total	323	276	294	388	432	584	501	260	214	123	66	45

24 Hour Total : 5,992
 AM Peak Hour begins : 7:00 AM Peak Volume : 739 AM Peak Hour Factor : 0.94
 PM Peak Hour begins : 17:15 PM Peak Volume : 602 PM Peak Hour Factor : 0.88

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 2, 2017 Start Time 00:00
 Stop Date : May 5, 2017 Stop Time 24:00
 County : Hillsborough
 Location : Orange Grove Rd at 300 ft North of SR 580

VHB Project #: 62966

4-May-17 Southbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	2	0	0	1	2	8	18	147	140	65	39	30
30	3	0	0	1	1	7	32	157	114	42	41	32
45	4	0	1	3	8	9	46	173	93	40	25	35
00	1	2	0	1	2	10	78	144	74	45	24	35
Hr Total	10	2	1	6	13	34	174	621	421	192	129	132

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	33	48	38	61	54	75	78	38	29	5	9	5
30	43	33	52	51	56	73	49	27	26	12	14	5
45	29	36	50	41	60	68	51	22	30	12	8	3
00	34	48	57	37	60	61	27	24	20	9	12	2
Hr Total	139	165	197	190	230	277	205	111	105	38	43	15

24 Hour Total : 3,450
 AM Peak Hour begins : 7:00 AM Peak Volume : 621 AM Peak Hour Factor : 0.90
 PM Peak Hour begins : 17:15 PM Peak Volume : 280 PM Peak Hour Factor : 0.90

4-May-17 Northbound Volume for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	2	0	0	0	1	3	35	33	34	26	31
30	4	0	1	1	1	5	8	25	34	26	31	28
45	5	1	1	0	0	3	13	42	40	44	29	28
00	4	3	0	0	2	6	18	25	36	24	32	39
Hr Total	13	6	2	1	3	15	42	127	143	128	118	126

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	37	33	36	37	70	67	74	38	18	17	13	8
30	44	37	43	48	61	78	64	32	19	15	12	11
45	34	31	35	56	44	87	61	30	24	19	15	11
00	35	35	33	64	63	71	60	23	17	12	14	6
Hr Total	150	136	147	205	238	303	259	123	78	63	54	36

24 Hour Total : 2,516
 AM Peak Hour begins : 8:15 AM Peak Volume : 144 AM Peak Hour Factor : 0.90
 PM Peak Hour begins : 17:15 PM Peak Volume : 310 PM Peak Hour Factor : 0.89

4-May-17 Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	2	2	0	1	2	9	21	182	173	99	65	61
30	7	0	1	2	2	12	40	182	148	68	72	60
45	9	1	2	3	8	12	59	215	133	84	54	63
00	5	5	0	1	4	16	96	169	110	69	56	74
Hr Total	23	8	3	7	16	49	216	748	564	320	247	258

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	70	81	74	98	124	142	152	76	47	22	22	13
30	87	70	95	99	117	151	113	59	45	27	26	16
45	63	67	85	97	104	155	112	52	54	31	23	14
00	69	83	90	101	123	132	87	47	37	21	26	8
Hr Total	289	301	344	395	468	580	464	234	183	101	97	51

24 Hour Total : 5,966
 AM Peak Hour begins : 7:00 AM Peak Volume : 748 AM Peak Hour Factor : 0.87
 PM Peak Hour begins : 17:15 PM Peak Volume : 590 PM Peak Hour Factor : 0.95

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 2, 2017 Start Time 00:00
 Stop Date : May 5, 2017 Stop Time 24:00
 County : Hillsborough
 Location : Orange Grove Rd at 300 ft North of SR 580

VHB Project #: 62966

AVERAGE **Southbound Volume for Lane 1**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	1	1	1	0	2	5	16	147	140	68	35	32
30	2	1	0	0	2	7	30	159	129	41	38	32
45	3	0	2	2	5	8	43	179	96	42	29	32
00	1	1	0	1	3	11	77	150	86	41	29	35
Hr Total	7	3	3	3	12	31	166	635	451	192	131	131

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	36	41	33	53	43	70	72	38	32	15	10	5
30	38	41	43	56	56	66	48	30	27	12	10	5
45	39	32	47	49	60	69	49	33	28	10	6	4
00	40	37	50	41	56	62	34	33	23	7	7	3
Hr Total	153	151	173	199	215	267	203	134	110	44	33	17

24 Hour Total : 3,464
 AM Peak Hour begins : 7:00 AM Peak Volume : 635 AM Peak Hour Factor : 0.89
 PM Peak Hour begins : 17:15 PM Peak Volume : 269 PM Peak Hour Factor : 0.93

AVERAGE **Northbound Volume for Lane 2**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	1	4	1	1	0	2	4	29	28	33	25	25
30	5	0	0	1	1	4	8	23	34	27	27	29
45	3	0	3	1	0	4	18	33	48	32	26	32
00	3	1	1	0	3	5	21	30	44	26	30	31
Hr Total	12	5	5	3	4	15	51	115	154	118	108	117

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	38	28	29	40	60	76	83	43	22	17	13	9
30	39	33	42	43	59	76	74	31	22	17	11	9
45	30	34	30	48	56	83	74	31	24	17	12	10
00	35	32	36	54	67	84	53	24	24	13	11	5
Hr Total	142	127	137	185	242	319	284	129	92	64	47	33

24 Hour Total : 2,508
 AM Peak Hour begins : 8:15 AM Peak Volume : 159 AM Peak Hour Factor : 0.83
 PM Peak Hour begins : 17:15 PM Peak Volume : 326 PM Peak Hour Factor : 0.97

AVERAGE **Total Volume for All Lanes**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	2	5	2	1	2	7	20	176	168	101	60	57
30	7	1	0	1	3	11	38	182	163	68	65	61
45	6	0	5	3	5	12	61	212	144	74	55	64
00	4	2	1	1	6	16	98	180	130	67	59	66
Hr Total	19	8	8	6	16	46	217	750	605	310	239	248

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	74	69	62	93	103	146	155	81	54	32	23	14
30	77	74	85	99	115	142	122	61	49	29	21	14
45	69	66	77	97	116	152	123	64	52	27	18	14
00	75	69	86	95	123	146	87	57	47	20	18	8
Hr Total	295	278	310	384	457	586	487	263	202	108	80	50

24 Hour Total : 5,972
 AM Peak Hour begins : 7:00 AM Peak Volume : 750 AM Peak Hour Factor : 0.88
 PM Peak Hour begins : 17:15 PM Peak Volume : 595 PM Peak Hour Factor : 0.96

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 2, 2017 Start Time 00:00
 Stop Date : May 5, 2017 Stop Time 24:00
 County : Hillsborough
 Location : N Armenia Ave at 300 ft South of SR 580

VHB Project #: 62966

4-May-17 Northbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	16	10	6	4	6	11	31	122	122	126	107	107
30	17	6	7	6	6	15	62	142	104	109	84	126
45	7	10	3	4	9	21	74	122	124	105	101	120
00	12	10	3	5	11	32	92	117	131	104	124	111
Hr Total	52	36	19	19	32	79	259	503	481	444	416	464

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	120	136	153	175	174	192	172	120	112	86	51	33
30	118	143	136	163	166	174	171	101	100	62	43	23
45	126	122	171	175	186	169	173	108	100	67	48	22
00	123	130	156	193	155	175	142	95	76	66	40	23
Hr Total	487	531	616	706	681	710	658	424	388	281	182	101

24 Hour Total : 8,569
 AM Peak Hour begins : 7:00 AM Peak Volume : 503 AM Peak Hour Factor : 0.89
 PM Peak Hour begins : 15:45 PM Peak Volume : 719 PM Peak Hour Factor : 0.93

4-May-17 Southbound Volume for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	17	4	3	4	6	13	49	194	187	162	122	122
30	12	8	6	6	4	10	67	216	177	137	124	95
45	13	8	10	3	8	19	85	215	152	120	93	131
00	10	10	8	4	7	40	160	199	150	116	120	99
Hr Total	52	30	27	17	25	82	361	824	666	535	459	447

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	122	128	102	177	145	131	139	111	89	80	37	32
30	117	125	148	160	141	128	131	97	99	69	52	23
45	105	125	147	163	133	146	122	89	97	50	43	35
00	131	131	157	149	128	144	117	89	67	57	39	21
Hr Total	475	509	554	649	547	549	509	386	352	256	171	111

24 Hour Total : 8,593
 AM Peak Hour begins : 7:00 AM Peak Volume : 824 AM Peak Hour Factor : 0.95
 PM Peak Hour begins : 14:45 PM Peak Volume : 657 PM Peak Hour Factor : 0.93

4-May-17 Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	33	14	9	8	12	24	80	316	309	288	229	229
30	29	14	13	12	10	25	129	358	281	246	208	221
45	20	18	13	7	17	40	159	337	276	225	194	251
00	22	20	11	9	18	72	252	316	281	220	244	210
Hr Total	104	66	46	36	57	161	620	1,327	1,147	979	875	911

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	242	264	255	352	319	323	311	231	201	166	88	65
30	235	268	284	323	307	302	302	198	199	131	95	46
45	231	247	318	338	319	315	295	197	197	117	91	57
00	254	261	313	342	283	319	259	184	143	123	79	44
Hr Total	962	1,040	1,170	1,355	1,228	1,259	1,167	810	740	537	353	212

24 Hour Total : 17,162
 AM Peak Hour begins : 7:00 AM Peak Volume : 1,327 AM Peak Hour Factor : 0.93
 PM Peak Hour begins : 15:00 PM Peak Volume : 1,355 PM Peak Hour Factor : 0.96

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 2, 2017 Start Time 00:00
 Stop Date : May 5, 2017 Stop Time 24:00
 County : Hillsborough
 Location : N Armenia Ave at 300 ft South of SR 580

VHB Project #: 62966

AVERAGE	Northbound Volume for Lane 1											
End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	14	10	5	3	4	11	34	121	112	118	114	111
30	13	6	4	7	6	16	60	129	110	107	88	121
45	8	10	4	5	9	21	75	147	126	107	100	124
00	10	8	3	4	14	26	92	119	117	105	110	110
Hr Total	45	34	16	19	33	74	261	516	465	437	412	466

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	128	144	148	180	176	173	173	140	108	73	50	38
30	119	139	142	167	172	152	175	124	100	70	47	26
45	109	120	161	172	167	175	169	116	95	59	39	23
00	119	133	181	175	168	169	151	95	78	61	39	22
Hr Total	475	536	632	694	683	669	668	475	381	263	175	109

24 Hour Total : 8,538
 AM Peak Hour begins : 7:00 AM Peak Volume : 516 AM Peak Hour Factor : 0.88
 PM Peak Hour begins : 14:45 PM Peak Volume : 700 PM Peak Hour Factor : 0.97

AVERAGE	Southbound Volume for Lane 2											
End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	13	6	5	5	5	12	39	198	187	166	112	113
30	11	10	6	5	4	11	64	220	190	140	132	100
45	16	7	10	2	8	17	96	216	157	129	110	124
00	11	7	9	3	12	35	136	199	154	133	114	110
Hr Total	51	30	30	15	29	75	335	833	688	568	468	447

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	124	123	126	150	133	134	139	111	88	82	52	25
30	117	128	135	141	129	137	133	110	104	65	45	30
45	117	125	160	147	137	143	130	91	86	53	39	27
00	122	127	148	138	138	137	121	89	72	58	31	18
Hr Total	480	503	569	576	537	551	523	401	350	258	167	100

24 Hour Total : 8,584
 AM Peak Hour begins : 7:00 AM Peak Volume : 833 AM Peak Hour Factor : 0.95
 PM Peak Hour begins : 14:30 PM Peak Volume : 599 PM Peak Hour Factor : 0.94

AVERAGE	Total Volume for All Lanes											
End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	27	16	10	8	9	23	73	319	299	284	226	224
30	24	16	10	12	10	27	124	349	300	247	220	221
45	24	17	14	7	17	38	171	363	283	236	210	248
00	21	15	12	7	26	61	228	318	271	238	224	220
Hr Total	96	64	46	34	62	149	596	1,349	1,153	1,005	880	913

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	252	267	274	330	309	307	312	251	196	155	102	63
30	236	267	277	308	301	289	308	234	204	135	92	56
45	226	245	321	319	304	318	299	207	181	112	78	50
00	241	260	329	313	306	306	272	184	150	119	70	40
Hr Total	955	1,039	1,201	1,270	1,220	1,220	1,191	876	731	521	342	209

24 Hour Total : 17,122
 AM Peak Hour begins : 7:00 AM Peak Volume : 1,349 AM Peak Hour Factor : 0.93
 PM Peak Hour begins : 14:30 PM Peak Volume : 1,288 PM Peak Hour Factor : 0.98

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 16, 2017 Start Time 00:00
 Stop Date : May 19, 2017 Stop Time 24:00
 County : Hillsborough
 Location : N Armenia Ave at 500 ft North of SR 580 Busch Blvd

VHB Project #: 62966

16-May-17 Northbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	6	4	6	5	8	9	48	119	126	109	92	56
30	8	6	1	7	7	14	62	90	111	105	88	75
45	8	3	3	12	9	19	108	104	130	90	74	81
00	8	4	1	5	9	34	108	100	114	96	68	80
Hr Total	30	17	11	29	33	76	326	413	481	400	322	292

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	83	95	92	110	97	137	93	76	53	46	24	19
30	87	95	92	101	106	109	100	69	51	43	29	9
45	77	96	124	96	111	120	102	66	51	57	18	10
00	84	83	85	106	125	126	73	65	57	26	19	7
Hr Total	331	369	393	413	439	492	368	276	212	172	90	45

24 Hour Total : 6,030
 AM Peak Hour begins : 8:00 AM Peak Volume : 481 AM Peak Hour Factor : 0.93
 PM Peak Hour begins : 17:00 PM Peak Volume : 492 PM Peak Hour Factor : 0.90

16-May-17 Southbound Volume for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	7	9	2	5	1	5	14	50	66	53	44	66
30	9	3	2	3	3	6	18	45	58	59	64	61
45	9	3	1	1	2	7	29	67	64	57	59	62
00	3	7	1	2	4	5	35	71	50	61	55	54
Hr Total	28	22	6	11	10	23	96	233	238	230	222	243

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	71	71	75	69	106	113	129	86	50	41	18	22
30	63	70	76	83	110	113	113	71	65	51	27	10
45	59	76	72	90	115	103	103	66	56	32	22	15
00	63	105	89	102	114	125	106	72	40	32	19	9
Hr Total	256	322	312	344	445	454	451	295	211	156	86	56

24 Hour Total : 4,750
 AM Peak Hour begins : 7:30 AM Peak Volume : 262 AM Peak Hour Factor : 0.92
 PM Peak Hour begins : 17:15 PM Peak Volume : 470 PM Peak Hour Factor : 0.91

16-May-17 Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	13	13	8	10	9	14	62	169	192	162	136	122
30	17	9	3	10	10	20	80	135	169	164	152	136
45	17	6	4	13	11	26	137	171	194	147	133	143
00	11	11	2	7	13	39	143	171	164	157	123	134
Hr Total	58	39	17	40	43	99	422	646	719	630	544	535

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	154	166	167	179	203	250	222	162	103	87	42	41
30	150	165	168	184	216	222	213	140	116	94	56	19
45	136	172	196	186	226	223	205	132	107	89	40	25
00	147	188	174	208	239	251	179	137	97	58	38	16
Hr Total	587	691	705	757	884	946	819	571	423	328	176	101

24 Hour Total : 10,780
 AM Peak Hour begins : 7:45 AM Peak Volume : 726 AM Peak Hour Factor : 0.94
 PM Peak Hour begins : 17:00 PM Peak Volume : 946 PM Peak Hour Factor : 0.94

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 16, 2017 Start Time 00:00
 Stop Date : May 19, 2017 Stop Time 24:00
 County : Hillsborough
 Location : N Armenia Ave at 500 ft North of SR 580 Busch Blvd

VHB Project #: 62966

AVERAGE **Northbound Volume for Lane 1**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	10	4	4	5	8	11	51	117	131	108	87	76
30	10	8	5	5	5	14	70	99	119	96	87	70
45	8	9	3	8	10	24	107	102	126	85	72	85
00	4	6	1	5	12	33	111	97	116	89	73	86
Hr Total	32	27	13	23	35	82	339	415	492	378	319	317

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	92	80	88	112	97	132	109	70	66	41	29	21
30	88	83	91	105	125	127	107	68	58	41	31	17
45	88	84	110	94	117	123	89	65	52	46	21	15
00	82	83	101	99	115	122	76	61	55	27	20	10
Hr Total	350	330	390	410	454	504	381	264	231	155	101	63

24 Hour Total : 6,105
 AM Peak Hour begins : 8:00 AM Peak Volume : 492 AM Peak Hour Factor : 0.94
 PM Peak Hour begins : 17:00 PM Peak Volume : 504 PM Peak Hour Factor : 0.96

AVERAGE **Southbound Volume for Lane 2**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	12	6	3	4	1	4	13	49	55	52	55	64
30	10	4	4	3	1	8	21	59	54	54	63	56
45	6	4	4	1	2	8	26	65	55	59	54	68
00	6	4	2	2	3	8	39	61	49	55	61	59
Hr Total	34	18	13	10	7	28	99	234	213	220	233	247

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	68	72	76	81	118	114	117	84	53	47	27	21
30	60	71	74	89	104	118	118	75	59	49	30	13
45	63	70	78	96	107	116	106	63	55	37	23	15
00	65	89	88	99	106	124	93	60	46	36	23	12
Hr Total	256	302	316	365	435	472	434	282	213	169	103	61

24 Hour Total : 4,764
 AM Peak Hour begins : 10:45 AM Peak Volume : 249 AM Peak Hour Factor : 0.92
 PM Peak Hour begins : 17:15 PM Peak Volume : 475 PM Peak Hour Factor : 0.96

AVERAGE **Total Volume for All Lanes**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	22	10	7	9	9	15	64	166	186	160	142	140
30	20	12	9	8	6	22	91	158	173	150	150	126
45	14	13	7	9	12	32	133	167	181	144	126	153
00	10	10	3	7	15	41	150	158	165	144	134	145
Hr Total	66	45	26	33	42	110	438	649	705	598	552	564

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	160	152	164	193	215	246	226	154	119	88	56	42
30	148	154	165	194	229	245	225	143	117	90	61	30
45	151	154	188	190	224	239	195	128	107	83	44	30
00	147	172	189	198	221	246	169	121	101	63	43	22
Hr Total	606	632	706	775	889	976	815	546	444	324	204	124

24 Hour Total : 10,869
 AM Peak Hour begins : 8:00 AM Peak Volume : 705 AM Peak Hour Factor : 0.95
 PM Peak Hour begins : 17:00 PM Peak Volume : 976 PM Peak Hour Factor : 0.99

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 16, 2017 Start Time 00:00
 Stop Date : May 19, 2017 Stop Time 24:00
 County : Hillsborough
 Location : N Boulevard at 300 ft South of SR 580 Busch Blvd

VHB Project #: 62966

17-May-17 Northbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	7	7	10	1	4	4	24	152	171	82	49	39
30	5	22	15	0	0	7	31	173	148	72	41	46
45	7	24	3	2	3	8	66	171	135	54	56	61
00	5	26	2	2	3	13	103	186	123	42	38	45
Hr Total	24	79	30	5	10	32	224	682	577	250	184	191

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	59	58	66	115	71	96	78	49	34	31	33	14
30	45	50	59	54	80	82	63	48	39	21	13	21
45	53	61	81	67	87	92	72	57	38	24	17	13
00	61	45	73	66	85	69	52	41	44	23	7	7
Hr Total	218	214	279	302	323	339	265	195	155	99	70	55

24 Hour Total : 4,802
 AM Peak Hour begins : 7:15 AM Peak Volume : 701 AM Peak Hour Factor : 0.94
 PM Peak Hour begins : 16:45 PM Peak Volume : 355 PM Peak Hour Factor : 0.92

17-May-17 Southbound Volume for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	7	6	3	2	2	6	18	84	57	41	43	46
30	8	2	2	1	4	12	17	99	60	47	45	36
45	2	0	1	1	6	10	32	64	73	48	51	49
00	1	4	2	3	3	12	68	50	69	42	41	52
Hr Total	18	12	8	7	15	40	135	297	259	178	180	183

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	58	45	55	77	75	90	106	56	39	29	27	7
30	54	44	73	73	85	99	96	70	51	32	20	9
45	56	61	83	74	100	104	60	36	37	30	22	8
00	55	57	75	97	86	85	52	38	35	29	13	7
Hr Total	223	207	286	321	346	378	314	200	162	120	82	31

24 Hour Total : 4,002
 AM Peak Hour begins : 6:45 AM Peak Volume : 315 AM Peak Hour Factor : 0.80
 PM Peak Hour begins : 17:15 PM Peak Volume : 394 PM Peak Hour Factor : 0.93

17-May-17 Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	14	13	13	3	6	10	42	236	228	123	92	85
30	13	24	17	1	4	19	48	272	208	119	86	82
45	9	24	4	3	9	18	98	235	208	102	107	110
00	6	30	4	5	6	25	171	236	192	84	79	97
Hr Total	42	91	38	12	25	72	359	979	836	428	364	374

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	117	103	121	192	146	186	184	105	73	60	60	21
30	99	94	132	127	165	181	159	118	90	53	33	30
45	109	122	164	141	187	196	132	93	75	54	39	21
00	116	102	148	163	171	154	104	79	79	52	20	14
Hr Total	441	421	565	623	669	717	579	395	317	219	152	86

24 Hour Total : 8,804
 AM Peak Hour begins : 7:00 AM Peak Volume : 979 AM Peak Hour Factor : 0.90
 PM Peak Hour begins : 16:45 PM Peak Volume : 734 PM Peak Hour Factor : 0.94

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 16, 2017 Start Time 00:00
 Stop Date : May 19, 2017 Stop Time 24:00
 County : Hillsborough
 Location : N Boulevard at 300 ft South of SR 580 Busch Blvd

VHB Project #: 62966

18-May-17 Northbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	10	4	5	2	3	1	19	128	148	93	50	53
30	3	3	4	2	1	6	32	157	147	65	38	54
45	9	3	2	0	6	10	88	174	125	63	50	43
00	7	4	3	0	3	11	112	195	129	56	41	48
Hr Total	29	14	14	4	13	28	251	654	549	277	179	198

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	49	58	58	100	78	90	82	60	49	39	24	18
30	50	56	63	73	84	92	59	52	43	38	29	15
45	46	60	97	83	89	82	68	57	49	30	18	15
00	51	38	72	70	84	84	52	58	48	29	19	14
Hr Total	196	212	290	326	335	348	261	227	189	136	90	62

24 Hour Total : 4,882
 AM Peak Hour begins : 7:15 AM Peak Volume : 674 AM Peak Hour Factor : 0.86
 PM Peak Hour begins : 16:30 PM Peak Volume : 355 PM Peak Hour Factor : 0.97

18-May-17 Southbound Volume for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	7	6	3	1	1	5	13	75	50	42	44	39
30	3	3	1	1	3	9	23	79	51	34	47	43
45	5	3	2	2	5	17	45	74	83	49	41	38
00	2	3	1	0	4	9	53	55	57	56	49	50
Hr Total	17	15	7	4	13	40	134	283	241	181	181	170

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	44	49	66	81	114	99	123	65	36	33	22	8
30	44	47	75	68	83	110	92	49	29	27	19	15
45	53	46	85	70	99	104	75	45	21	21	19	11
00	52	52	88	80	95	92	60	39	20	27	17	9
Hr Total	193	194	314	299	391	405	350	198	106	108	77	43

24 Hour Total : 3,964
 AM Peak Hour begins : 7:00 AM Peak Volume : 283 AM Peak Hour Factor : 0.90
 PM Peak Hour begins : 17:15 PM Peak Volume : 429 PM Peak Hour Factor : 0.87

18-May-17 Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	17	10	8	3	4	6	32	203	198	135	94	92
30	6	6	5	3	4	15	55	236	198	99	85	97
45	14	6	4	2	11	27	133	248	208	112	91	81
00	9	7	4	0	7	20	165	250	186	112	90	98
Hr Total	46	29	21	8	26	68	385	937	790	458	360	368

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	93	107	124	181	192	189	205	125	85	72	46	26
30	94	103	138	141	167	202	151	101	72	65	48	30
45	99	106	182	153	188	186	143	102	70	51	37	26
00	103	90	160	150	179	176	112	97	68	56	36	23
Hr Total	389	406	604	625	726	753	611	425	295	244	167	105

24 Hour Total : 8,846
 AM Peak Hour begins : 7:00 AM Peak Volume : 937 AM Peak Hour Factor : 0.94
 PM Peak Hour begins : 17:15 PM Peak Volume : 769 PM Peak Hour Factor : 0.94

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 16, 2017 Start Time 00:00
 Stop Date : May 19, 2017 Stop Time 24:00
 County : Hillsborough
 Location : N Boulevard at 300 ft South of SR 580 Busch Blvd

VHB Project #: 62966

AVERAGE **Northbound Volume for Lane 1**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	7	5	6	1	2	2	21	137	159	91	54	46
30	6	9	7	1	1	6	32	166	148	66	46	45
45	6	10	3	1	3	9	74	172	130	59	55	52
00	5	11	3	1	3	10	106	186	126	53	35	48
Hr Total	24	35	19	4	9	27	233	661	563	269	190	191

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	55	58	61	104	74	88	75	53	39	32	26	15
30	47	48	59	67	83	89	61	50	45	30	19	15
45	49	61	89	75	86	80	65	53	46	26	18	11
00	53	48	78	65	79	81	55	52	45	25	15	9
Hr Total	204	215	287	311	322	338	256	208	175	113	78	50

24 Hour Total : 4,782
 AM Peak Hour begins : 7:15 AM Peak Volume : 683 AM Peak Hour Factor : 0.92
 PM Peak Hour begins : 16:30 PM Peak Volume : 342 PM Peak Hour Factor : 0.96

AVERAGE **Southbound Volume for Lane 2**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	7	4	2	1	2	4	18	80	54	43	44	44
30	4	3	2	2	3	9	19	90	60	42	45	38
45	5	3	1	1	5	11	41	70	79	43	45	45
00	2	3	1	1	4	13	59	55	61	47	43	50
Hr Total	18	13	6	5	14	37	137	295	254	175	177	177

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	52	50	57	77	94	97	111	61	39	28	24	9
30	49	49	69	73	86	100	89	60	39	26	18	11
45	55	58	81	76	100	99	72	39	30	25	16	8
00	53	54	79	89	90	92	56	38	29	24	15	7
Hr Total	209	211	286	315	370	388	328	198	137	103	73	35

24 Hour Total : 3,961
 AM Peak Hour begins : 6:45 AM Peak Volume : 299 AM Peak Hour Factor : 0.83
 PM Peak Hour begins : 17:15 PM Peak Volume : 402 PM Peak Hour Factor : 0.91

AVERAGE **Total Volume for All Lanes**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	14	9	8	2	4	6	39	217	213	134	98	90
30	10	12	9	3	4	15	51	256	208	108	91	83
45	11	13	4	2	8	20	115	242	209	102	100	97
00	7	14	4	2	7	23	165	241	187	100	78	98
Hr Total	42	48	25	9	23	64	370	956	817	444	367	368

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	107	108	118	181	168	185	186	114	78	60	50	24
30	96	97	128	140	169	189	150	110	84	56	37	26
45	104	119	170	151	186	179	137	92	76	51	34	19
00	106	102	157	154	169	173	111	90	74	49	30	16
Hr Total	413	426	573	626	692	726	584	406	312	216	151	85

24 Hour Total : 8,743
 AM Peak Hour begins : 7:00 AM Peak Volume : 956 AM Peak Hour Factor : 0.93
 PM Peak Hour begins : 16:30 PM Peak Volume : 729 PM Peak Hour Factor : 0.96

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 2, 2017 Start Time 00:00
 Stop Date : May 5, 2017 Stop Time 24:00
 County : Hillsborough
 Location : N Boulevard at 300 ft North of SR 580

VHB Project #: 62966

4-May-17 Northbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	5	4	0	0	1	2	14	123	45	29	31	32
30	6	3	1	5	5	4	20	202	61	45	33	47
45	3	4	2	3	4	10	41	73	65	34	39	30
00	4	2	3	0	2	6	92	47	70	33	51	41
Hr Total	18	13	6	8	12	22	167	445	241	141	154	150

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	39	45	64	158	77	93	104	46	31	21	13	6
30	44	59	53	86	97	99	103	29	57	21	16	7
45	40	43	67	83	67	103	104	29	42	18	10	5
00	50	53	84	86	63	116	55	35	25	24	12	5
Hr Total	173	200	268	413	304	411	366	139	155	84	51	23

24 Hour Total : 3,964
 AM Peak Hour begins : 6:45 AM Peak Volume : 490 AM Peak Hour Factor : 0.61
 PM Peak Hour begins : 17:45 PM Peak Volume : 427 PM Peak Hour Factor : 0.92

4-May-17 Southbound Volume for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	4	1	1	4	2	1	39	164	147	84	42	44
30	2	0	2	2	2	10	50	153	134	73	47	44
45	3	2	2	0	4	16	89	135	118	61	52	51
00	2	1	2	3	5	23	110	167	113	47	40	50
Hr Total	11	4	7	9	13	50	288	619	512	265	181	189

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	48	57	49	106	71	76	68	49	47	18	15	16
30	38	49	56	65	86	62	77	41	39	21	15	7
45	42	39	80	83	75	75	54	35	52	24	15	9
00	51	46	89	41	71	93	45	35	42	23	9	10
Hr Total	179	191	274	295	303	306	244	160	180	86	54	42

24 Hour Total : 4,462
 AM Peak Hour begins : 7:00 AM Peak Volume : 619 AM Peak Hour Factor : 0.93
 PM Peak Hour begins : 14:45 PM Peak Volume : 343 PM Peak Hour Factor : 0.81

4-May-17 Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	9	5	1	4	3	3	53	287	192	113	73	76
30	8	3	3	7	7	14	70	355	195	118	80	91
45	6	6	4	3	8	26	130	208	183	95	91	81
00	6	3	5	3	7	29	202	214	183	80	91	91
Hr Total	29	17	13	17	25	72	455	1,064	753	406	335	339

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	87	102	113	264	148	169	172	95	78	39	28	22
30	82	108	109	151	183	161	180	70	96	42	31	14
45	82	82	147	166	142	178	158	64	94	42	25	14
00	101	99	173	127	134	209	100	70	67	47	21	15
Hr Total	352	391	542	708	607	717	610	299	335	170	105	65

24 Hour Total : 8,426
 AM Peak Hour begins : 7:00 AM Peak Volume : 1,064 AM Peak Hour Factor : 0.75
 PM Peak Hour begins : 14:45 PM Peak Volume : 754 PM Peak Hour Factor : 0.71

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 2, 2017 Start Time 00:00
 Stop Date : May 5, 2017 Stop Time 24:00
 County : Hillsborough
 Location : N Boulevard at 300 ft North of SR 580

VHB Project #: 62966

AVERAGE		Northbound Volume for Lane 1											
End Time	00	01	02	03	04	05	06	07	08	09	10	11	
15	5	3	1	1	1	3	18	129	49	45	41	37	
30	4	2	2	2	2	4	18	198	57	40	41	50	
45	6	3	2	3	3	8	40	77	61	39	36	52	
00	4	1	2	0	3	9	94	46	67	37	39	38	
Hr Total	19	9	7	6	9	24	170	450	234	161	157	177	

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	40	46	57	156	77	93	111	56	35	21	12	7
30	52	54	57	95	88	98	98	51	48	21	13	12
45	47	49	77	77	74	106	89	35	40	20	8	5
00	48	55	71	81	73	116	64	36	26	20	10	3
Hr Total	187	204	262	409	312	413	362	178	149	82	43	27

24 Hour Total : 4,051
 AM Peak Hour begins : 6:45 AM Peak Volume : 498 AM Peak Hour Factor : 0.63
 PM Peak Hour begins : 17:15 PM Peak Volume : 431 PM Peak Hour Factor : 0.93

AVERAGE		Southbound Volume for Lane 2											
End Time	00	01	02	03	04	05	06	07	08	09	10	11	
15	2	1	1	2	2	3	37	154	155	81	41	45	
30	5	1	2	1	2	9	49	152	152	67	45	39	
45	4	2	2	1	5	14	86	133	121	61	47	50	
00	3	1	2	2	5	21	124	166	123	47	40	48	
Hr Total	14	5	7	6	14	47	296	605	551	256	173	182	

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	49	55	54	88	70	78	68	43	41	25	16	11
30	47	51	48	67	91	66	67	38	36	26	13	13
45	46	45	78	72	79	72	47	39	56	20	15	8
00	47	47	85	50	64	79	48	36	41	23	10	7
Hr Total	189	198	265	277	304	295	230	156	174	94	54	39

24 Hour Total : 4,431
 AM Peak Hour begins : 7:15 AM Peak Volume : 606 AM Peak Hour Factor : 0.91
 PM Peak Hour begins : 14:30 PM Peak Volume : 318 PM Peak Hour Factor : 0.90

AVERAGE		Total Volume for All Lanes											
End Time	00	01	02	03	04	05	06	07	08	09	10	11	
15	7	4	2	3	3	6	55	283	204	126	82	82	
30	9	3	4	3	4	13	67	350	209	107	86	89	
45	10	5	4	4	8	22	126	210	182	100	83	102	
00	7	2	4	2	8	30	218	212	190	84	79	86	
Hr Total	33	14	14	12	23	71	466	1,055	785	417	330	359	

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	89	101	111	244	147	171	179	99	76	46	28	18
30	99	105	105	162	179	164	165	89	84	47	26	25
45	93	94	155	149	153	178	136	74	96	40	23	13
00	95	102	156	131	137	195	112	72	67	43	20	10
Hr Total	376	402	527	686	616	708	592	334	323	176	97	66

24 Hour Total : 8,482
 AM Peak Hour begins : 6:45 AM Peak Volume : 1,061 AM Peak Hour Factor : 0.76
 PM Peak Hour begins : 14:30 PM Peak Volume : 717 PM Peak Hour Factor : 0.74

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 2, 2017 Start Time 00:00
 Stop Date : May 5, 2017 Stop Time 24:00
 County : Hillsborough
 Location : N Florida Ave at 500 ft South of SR 580

VHB Project #: 62966

3-May-17 **Northbound Volume for Lane 1**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	38	15	7	16	17	22	72	147	184	194	217	234
30	27	21	15	10	17	29	75	195	186	187	206	234
45	21	14	14	15	17	51	122	172	224	196	216	225
00	25	15	10	16	20	58	113	220	217	211	237	209
Hr Total	111	65	46	57	71	160	382	734	811	788	876	902

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	229	240	247	270	324	359	351	255	174	124	92	57
30	232	247	266	237	324	336	344	239	159	119	83	52
45	235	223	283	266	346	351	344	174	135	118	70	41
00	221	265	258	304	329	334	326	169	138	112	59	51
Hr Total	917	975	1,054	1,077	1,323	1,380	1,365	837	606	473	304	201

24 Hour Total : 15,515
 AM Peak Hour begins : 10:45 AM Peak Volume : 930 AM Peak Hour Factor : 0.98
 PM Peak Hour begins : 17:00 PM Peak Volume : 1,380 PM Peak Hour Factor : 0.96

3-May-17 **Southbound Volume for Lane 2**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	32	19	11	14	8	21	113	394	376	282	227	275
30	20	16	12	9	19	36	193	422	406	214	230	236
45	19	8	10	17	13	56	252	426	388	238	213	233
00	24	18	8	6	25	75	369	403	319	244	253	206
Hr Total	95	61	41	46	65	188	927	1,645	1,489	978	923	950

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	186	213	205	217	226	241	243	162	158	112	76	43
30	240	252	247	230	270	214	255	152	145	101	65	38
45	248	213	234	217	261	253	205	157	126	89	47	36
00	227	222	255	237	252	274	194	146	127	81	56	28
Hr Total	901	900	941	901	1,009	982	897	617	556	383	244	145

24 Hour Total : 15,884
 AM Peak Hour begins : 7:00 AM Peak Volume : 1,645 AM Peak Hour Factor : 0.97
 PM Peak Hour begins : 17:30 PM Peak Volume : 1,025 PM Peak Hour Factor : 0.94

3-May-17 **Total Volume for All Lanes**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	70	34	18	30	25	43	185	541	560	476	444	509
30	47	37	27	19	36	65	268	617	592	401	436	470
45	40	22	24	32	30	107	374	598	612	434	429	458
00	49	33	18	22	45	133	482	623	536	455	490	415
Hr Total	206	126	87	103	136	348	1,309	2,379	2,300	1,766	1,799	1,852

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	415	453	452	487	550	600	594	417	332	236	168	100
30	472	499	513	467	594	550	599	391	304	220	148	90
45	483	436	517	483	607	604	549	331	261	207	117	77
00	448	487	513	541	581	608	520	315	265	193	115	79
Hr Total	1,818	1,875	1,995	1,978	2,332	2,362	2,262	1,454	1,162	856	548	346

24 Hour Total : 31,399
 AM Peak Hour begins : 7:15 AM Peak Volume : 2,398 AM Peak Hour Factor : 0.96
 PM Peak Hour begins : 17:30 PM Peak Volume : 2,405 PM Peak Hour Factor : 0.99

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 2, 2017 Start Time 00:00
 Stop Date : May 5, 2017 Stop Time 24:00
 County : Hillsborough
 Location : N Florida Ave at 500 ft South of SR 580

VHB Project #: 62966

4-May-17 Northbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	36	23	12	15	8	19	74	166	204	205	197	189
30	24	22	16	21	16	29	84	175	185	202	205	231
45	24	29	20	15	9	44	114	179	202	195	205	253
00	25	12	12	10	23	57	132	224	218	210	228	233
Hr Total	109	86	60	61	56	149	404	744	809	812	835	906

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	242	246	255	275	352	349	347	242	175	128	115	79
30	260	201	251	284	335	358	361	222	173	124	84	59
45	248	259	247	322	307	347	333	186	128	81	75	50
00	262	248	260	331	323	384	306	170	134	107	70	38
Hr Total	1,012	954	1,013	1,212	1,317	1,438	1,347	820	610	440	344	226

24 Hour Total : 15,764
 AM Peak Hour begins : 11:00 AM Peak Volume : 906 AM Peak Hour Factor : 0.90
 PM Peak Hour begins : 17:30 PM Peak Volume : 1,439 PM Peak Hour Factor : 0.94

4-May-17 Southbound Volume for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	29	16	14	10	12	22	121	376	399	253	228	218
30	29	16	13	11	12	39	180	411	367	237	211	228
45	31	20	14	13	23	50	229	428	350	265	186	209
00	15	10	9	11	28	88	375	407	333	236	238	245
Hr Total	104	62	50	45	75	199	905	1,622	1,449	991	863	900

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	240	257	239	231	272	257	237	189	134	110	64	48
30	249	256	210	297	274	244	235	178	146	115	79	52
45	233	214	249	255	283	258	201	150	145	88	55	38
00	266	238	251	246	255	260	205	153	111	98	63	29
Hr Total	988	965	949	1,029	1,084	1,019	878	670	536	411	261	167

24 Hour Total : 16,222
 AM Peak Hour begins : 7:15 AM Peak Volume : 1,645 AM Peak Hour Factor : 0.96
 PM Peak Hour begins : 16:00 PM Peak Volume : 1,084 PM Peak Hour Factor : 0.96

4-May-17 Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	65	39	26	25	20	41	195	542	603	458	425	407
30	53	38	29	32	28	68	264	586	552	439	416	459
45	55	49	34	28	32	94	343	607	552	460	391	462
00	40	22	21	21	51	145	507	631	551	446	466	478
Hr Total	213	148	110	106	131	348	1,309	2,366	2,258	1,803	1,698	1,806

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	482	503	494	506	624	606	584	431	309	238	179	127
30	509	457	461	581	609	602	596	400	319	239	163	111
45	481	473	496	577	590	605	534	336	273	169	130	88
00	528	486	511	577	578	644	511	323	245	205	133	67
Hr Total	2,000	1,919	1,962	2,241	2,401	2,457	2,225	1,490	1,146	851	605	393

24 Hour Total : 31,986
 AM Peak Hour begins : 7:15 AM Peak Volume : 2,427 AM Peak Hour Factor : 0.96
 PM Peak Hour begins : 17:00 PM Peak Volume : 2,457 PM Peak Hour Factor : 0.95

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 2, 2017 Start Time 00:00
 Stop Date : May 5, 2017 Stop Time 24:00
 County : Hillsborough
 Location : N Florida Ave at 500 ft South of SR 580

VHB Project #: 62966

AVERAGE	Northbound Volume for Lane 1											
End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	36	17	10	15	11	20	73	156	192	204	202	206
30	29	21	13	14	16	27	80	193	185	190	199	223
45	22	18	16	14	15	43	117	185	212	203	198	227
00	26	13	12	10	22	56	123	215	204	210	227	215
Hr Total	113	69	51	53	64	146	393	749	793	807	826	871

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	229	235	252	257	340	362	342	237	173	130	97	59
30	238	237	249	260	316	348	360	218	167	120	82	55
45	240	243	246	292	331	344	331	184	136	102	68	48
00	235	249	254	305	319	358	292	166	140	108	70	42
Hr Total	942	964	1,001	1,114	1,306	1,412	1,325	805	616	460	317	204

24 Hour Total : 15,401
 AM Peak Hour begins : 10:45 AM Peak Volume : 883 AM Peak Hour Factor : 0.97
 PM Peak Hour begins : 17:00 PM Peak Volume : 1,412 PM Peak Hour Factor : 0.98

AVERAGE	Southbound Volume for Lane 2											
End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	32	17	13	11	10	24	120	384	386	278	216	226
30	27	17	14	12	13	36	177	408	385	232	227	226
45	27	13	10	14	19	56	250	423	369	239	200	214
00	18	12	11	8	25	77	357	414	331	228	233	219
Hr Total	104	59	48	45	67	193	904	1,629	1,471	977	876	885

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	212	242	222	225	261	251	238	180	149	111	77	43
30	244	245	233	265	258	236	238	165	141	105	67	43
45	230	216	234	234	265	257	200	155	136	85	56	36
00	239	236	248	233	250	252	196	149	125	87	59	31
Hr Total	925	939	937	957	1,034	996	872	649	551	388	259	153

24 Hour Total : 15,918
 AM Peak Hour begins : 7:15 AM Peak Volume : 1,631 AM Peak Hour Factor : 0.96
 PM Peak Hour begins : 16:00 PM Peak Volume : 1,034 PM Peak Hour Factor : 0.98

AVERAGE	Total Volume for All Lanes											
End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	68	34	23	26	21	44	193	540	578	482	418	432
30	56	38	27	26	29	63	257	601	570	422	426	449
45	49	31	26	28	34	99	367	608	581	442	398	441
00	44	25	23	18	47	133	480	629	535	438	460	434
Hr Total	217	128	99	98	131	339	1,297	2,378	2,264	1,784	1,702	1,756

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	441	477	474	482	601	613	580	417	322	241	174	102
30	482	482	482	525	574	584	598	383	308	225	149	98
45	470	459	480	526	596	601	531	339	272	187	124	84
00	474	485	502	538	569	610	488	315	265	195	129	73
Hr Total	1,867	1,903	1,938	2,071	2,340	2,408	2,197	1,454	1,167	848	576	357

24 Hour Total : 31,319
 AM Peak Hour begins : 7:15 AM Peak Volume : 2,416 AM Peak Hour Factor : 0.96
 PM Peak Hour begins : 17:00 PM Peak Volume : 2,408 PM Peak Hour Factor : 0.98

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 2, 2017 Start Time 00:00
 Stop Date : May 5, 2017 Stop Time 24:00
 County : Hillsborough
 Location : N Florida Ave at 500 ft North of SR 580

VHB Project #: 62966

AVERAGE Northbound Volume for Lane 1												
End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	26	15	9	11	5	15	46	137	154	188	172	190
30	23	15	7	7	10	17	61	155	172	175	197	209
45	16	15	10	4	5	18	83	153	176	194	174	194
00	17	12	8	7	14	30	98	178	188	200	201	206
Hr Total	82	57	34	29	34	80	288	623	690	757	744	799

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	198	203	209	229	295	320	303	206	128	93	68	54
30	222	239	245	256	292	300	299	192	116	85	59	47
45	221	197	216	259	294	286	272	161	117	74	56	38
00	223	243	240	268	291	304	243	131	100	79	58	32
Hr Total	864	882	910	1,012	1,172	1,210	1,117	690	461	331	241	171

24 Hour Total : 13,278
 AM Peak Hour begins : 11:00 AM Peak Volume : 799 AM Peak Hour Factor : 0.96
 PM Peak Hour begins : 17:00 PM Peak Volume : 1,210 PM Peak Hour Factor : 0.95

AVERAGE Southbound Volume for Lane 2												
End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	27	14	8	8	6	16	94	333	317	249	178	204
30	17	12	10	7	9	29	150	351	312	201	200	207
45	17	10	9	11	17	38	267	352	290	187	184	200
00	14	7	7	5	15	57	318	326	274	197	215	193
Hr Total	75	43	34	31	47	140	829	1,362	1,193	834	777	804

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	199	222	206	231	226	273	235	147	139	99	61	34
30	219	238	210	218	243	241	197	136	109	83	47	24
45	238	194	209	211	256	218	167	127	101	67	44	23
00	210	191	227	215	236	220	161	126	113	68	42	23
Hr Total	866	845	852	875	961	952	760	536	462	317	194	104

24 Hour Total : 13,893
 AM Peak Hour begins : 7:00 AM Peak Volume : 1,362 AM Peak Hour Factor : 0.97
 PM Peak Hour begins : 16:15 PM Peak Volume : 1,008 PM Peak Hour Factor : 0.92

AVERAGE Total Volume for All Lanes												
End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	53	29	17	19	11	31	140	470	471	437	350	394
30	40	27	17	14	19	46	211	506	484	376	397	416
45	33	25	19	15	22	56	350	505	466	381	358	394
00	31	19	15	12	29	87	416	504	462	397	416	399
Hr Total	157	100	68	60	81	220	1,117	1,985	1,883	1,591	1,521	1,603

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	397	425	415	460	521	593	538	353	267	192	129	88
30	441	477	455	474	535	541	496	328	225	168	106	71
45	459	391	425	470	550	504	439	288	218	141	100	61
00	433	434	467	483	527	524	404	257	213	147	100	55
Hr Total	1,730	1,727	1,762	1,887	2,133	2,162	1,877	1,226	923	648	435	275

24 Hour Total : 27,171
 AM Peak Hour begins : 7:15 AM Peak Volume : 1,986 AM Peak Hour Factor : 0.98
 PM Peak Hour begins : 16:30 PM Peak Volume : 2,211 PM Peak Hour Factor : 0.93

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 2, 2017 Start Time 00:00
 Stop Date : May 5, 2017 Stop Time 24:00
 County : Hillsborough
 Location : I-275 SB On Ramp from SR 580 Busch Blvd

VHB Project #: 62966

4-May-17 Northbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total : 0
 AM Peak Hour begins : 0:00 AM Peak Volume : 0 AM Peak Hour Factor : #DIV/0!
 PM Peak Hour begins : 12:00 PM Peak Volume : 0 PM Peak Hour Factor : #DIV/0!

4-May-17 Southbound Volume for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	31	24	20	22	29	55	168	224	165	184	172	194
30	40	36	19	28	50	71	227	224	190	162	179	163
45	35	29	16	23	49	132	199	228	181	207	199	187
00	38	30	27	31	48	114	182	199	150	156	172	169
Hr Total	144	119	82	104	176	372	776	875	686	709	722	713

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	196	178	220	186	177	233	236	183	156	105	95	58
30	164	165	216	169	150	262	204	153	112	88	89	55
45	213	225	219	163	181	213	211	164	118	98	104	47
00	169	184	198	145	244	196	150	117	123	106	87	42
Hr Total	742	752	853	663	752	904	801	617	509	397	375	202

24 Hour Total : 13,045
 AM Peak Hour begins : 7:00 AM Peak Volume : 875 AM Peak Hour Factor : 0.96
 PM Peak Hour begins : 16:45 PM Peak Volume : 952 PM Peak Hour Factor : 0.91

4-May-17 Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	31	24	20	22	29	55	168	224	165	184	172	194
30	40	36	19	28	50	71	227	224	190	162	179	163
45	35	29	16	23	49	132	199	228	181	207	199	187
00	38	30	27	31	48	114	182	199	150	156	172	169
Hr Total	144	119	82	104	176	372	776	875	686	709	722	713

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	196	178	220	186	177	233	236	183	156	105	95	58
30	164	165	216	169	150	262	204	153	112	88	89	55
45	213	225	219	163	181	213	211	164	118	98	104	47
00	169	184	198	145	244	196	150	117	123	106	87	42
Hr Total	742	752	853	663	752	904	801	617	509	397	375	202

24 Hour Total : 13,045
 AM Peak Hour begins : 7:00 AM Peak Volume : 875 AM Peak Hour Factor : 0.96
 PM Peak Hour begins : 16:45 PM Peak Volume : 952 PM Peak Hour Factor : 0.91

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 2, 2017 Start Time 00:00
 Stop Date : May 5, 2017 Stop Time 24:00
 County : Hillsborough
 Location : I-275 SB On Ramp from SR 580 Busch Blvd

VHB Project #: 62966

AVERAGE **Northbound Volume for Lane 1**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total : 0
 AM Peak Hour begins : 0:00 AM Peak Volume : 0 AM Peak Hour Factor : #DIV/0!
 PM Peak Hour begins : 12:00 PM Peak Volume : 0 PM Peak Hour Factor : #DIV/0!

AVERAGE **Southbound Volume for Lane 2**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	35	30	15	20	28	52	169	230	190	178	176	187
30	37	27	20	32	42	84	208	229	188	169	168	165
45	33	23	17	29	51	120	201	232	185	198	200	198
00	31	22	18	27	48	119	185	205	154	175	165	167
Hr Total	136	102	70	108	169	375	763	896	717	720	709	717

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	190	181	194	213	203	231	214	181	150	113	92	54
30	164	172	199	197	202	244	194	160	123	109	67	56
45	207	216	218	192	217	196	201	154	120	93	90	50
00	170	173	190	183	228	204	158	120	112	101	79	43
Hr Total	731	742	801	785	850	875	767	615	505	416	328	203

24 Hour Total : 13,100
 AM Peak Hour begins : 7:00 AM Peak Volume : 896 AM Peak Hour Factor : 0.97
 PM Peak Hour begins : 16:30 PM Peak Volume : 920 PM Peak Hour Factor : 0.94

AVERAGE **Total Volume for All Lanes**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	35	30	15	20	28	52	169	230	190	178	176	187
30	37	27	20	32	42	84	208	229	188	169	168	165
45	33	23	17	29	51	120	201	232	185	198	200	198
00	31	22	18	27	48	119	185	205	154	175	165	167
Hr Total	136	102	70	108	169	375	763	896	717	720	709	717

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	190	181	194	213	203	231	214	181	150	113	92	54
30	164	172	199	197	202	244	194	160	123	109	67	56
45	207	216	218	192	217	196	201	154	120	93	90	50
00	170	173	190	183	228	204	158	120	112	101	79	43
Hr Total	731	742	801	785	850	875	767	615	505	416	328	203

24 Hour Total : 13,100
 AM Peak Hour begins : 7:00 AM Peak Volume : 896 AM Peak Hour Factor : 0.97
 PM Peak Hour begins : 16:30 PM Peak Volume : 920 PM Peak Hour Factor : 0.94

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 2, 2017 Start Time 00:00
 Stop Date : May 5, 2017 Stop Time 24:00
 County : Hillsborough
 Location : I-275 SB Off Ramp to SR 580 Busch Blvd

VHB Project #: 62966

2-May-17 Northbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total : 0
 AM Peak Hour begins : 0:00 AM Peak Volume : 0 AM Peak Hour Factor : #DIV/0!
 PM Peak Hour begins : 12:00 PM Peak Volume : 0 PM Peak Hour Factor : #DIV/0!

2-May-17 Southbound Volume for Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	37	21	8	18	14	31	78	72	73	224	139	137
30	26	12	10	12	10	34	87	56	96	150	128	139
45	24	17	14	16	26	61	69	50	108	120	130	126
00	18	16	12	13	19	72	72	70	155	135	145	147
Hr Total	105	66	44	59	69	198	306	248	432	629	542	549

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	129	122	150	139	143	125	115	124	99	95	56	49
30	134	131	147	134	136	143	112	102	78	100	53	43
45	124	182	143	167	133	158	126	98	91	76	40	22
00	117	152	150	149	129	123	122	104	78	64	54	37
Hr Total	504	587	590	589	541	549	475	428	346	335	203	151

24 Hour Total : 8,545
 AM Peak Hour begins : 8:45 AM Peak Volume : 649 AM Peak Hour Factor : 0.72
 PM Peak Hour begins : 13:30 PM Peak Volume : 631 PM Peak Hour Factor : 0.87

2-May-17 Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	37	21	8	18	14	31	78	72	73	224	139	137
30	26	12	10	12	10	34	87	56	96	150	128	139
45	24	17	14	16	26	61	69	50	108	120	130	126
00	18	16	12	13	19	72	72	70	155	135	145	147
Hr Total	105	66	44	59	69	198	306	248	432	629	542	549

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	129	122	150	139	143	125	115	124	99	95	56	49
30	134	131	147	134	136	143	112	102	78	100	53	43
45	124	182	143	167	133	158	126	98	91	76	40	22
00	117	152	150	149	129	123	122	104	78	64	54	37
Hr Total	504	587	590	589	541	549	475	428	346	335	203	151

24 Hour Total : 8,545
 AM Peak Hour begins : 8:45 AM Peak Volume : 649 AM Peak Hour Factor : 0.72
 PM Peak Hour begins : 13:30 PM Peak Volume : 631 PM Peak Hour Factor : 0.87

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 2, 2017 Start Time 00:00
 Stop Date : May 5, 2017 Stop Time 24:00
 County : Hillsborough
 Location : I-275 SB Off Ramp to SR 580 Busch Blvd

VHB Project #: 62966

3-May-17 **Northbound Volume for Lane 1**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total : 0
 AM Peak Hour begins : 0:00 AM Peak Volume : 0 AM Peak Hour Factor : #DIV/0!
 PM Peak Hour begins : 12:00 PM Peak Volume : 0 PM Peak Hour Factor : #DIV/0!

3-May-17 **Southbound Volume for Lane 2**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	29	19	12	9	11	24	78	66	89	178	151	163
30	24	9	11	17	17	37	105	57	95	145	133	124
45	25	19	14	15	28	58	68	51	92	178	146	156
00	15	11	9	17	21	63	73	71	209	175	137	133
Hr Total	93	58	46	58	77	182	324	245	485	676	567	576

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	137	119	152	132	190	153	235	113	91	90	64	36
30	145	123	149	140	195	184	164	110	97	80	58	33
45	129	143	171	173	158	215	113	89	81	89	56	28
00	183	167	165	174	110	261	144	109	108	72	42	29
Hr Total	594	552	637	619	653	813	656	421	377	331	220	126

24 Hour Total : 9,386
 AM Peak Hour begins : 8:45 AM Peak Volume : 710 AM Peak Hour Factor : 0.85
 PM Peak Hour begins : 17:15 PM Peak Volume : 895 PM Peak Hour Factor : 0.86

3-May-17 **Total Volume for All Lanes**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	29	19	12	9	11	24	78	66	89	178	151	163
30	24	9	11	17	17	37	105	57	95	145	133	124
45	25	19	14	15	28	58	68	51	92	178	146	156
00	15	11	9	17	21	63	73	71	209	175	137	133
Hr Total	93	58	46	58	77	182	324	245	485	676	567	576

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	137	119	152	132	190	153	235	113	91	90	64	36
30	145	123	149	140	195	184	164	110	97	80	58	33
45	129	143	171	173	158	215	113	89	81	89	56	28
00	183	167	165	174	110	261	144	109	108	72	42	29
Hr Total	594	552	637	619	653	813	656	421	377	331	220	126

24 Hour Total : 9,386
 AM Peak Hour begins : 8:45 AM Peak Volume : 710 AM Peak Hour Factor : 0.85
 PM Peak Hour begins : 17:15 PM Peak Volume : 895 PM Peak Hour Factor : 0.86

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 2, 2017 Start Time 00:00
 Stop Date : May 5, 2017 Stop Time 24:00
 County : Hillsborough
 Location : I-275 SB Off Ramp to SR 580 Busch Blvd

VHB Project #: 62966

AVERAGE **Northbound Volume for Lane 1**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total : 0
 AM Peak Hour begins : 0:00 AM Peak Volume : 0 AM Peak Hour Factor : #DIV/0!
 PM Peak Hour begins : 12:00 PM Peak Volume : 0 PM Peak Hour Factor : #DIV/0!

AVERAGE **Southbound Volume for Lane 2**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	35	19	14	11	14	26	82	70	99	218	156	153
30	25	12	9	15	14	35	95	69	111	167	143	131
45	25	18	13	15	22	55	73	64	111	148	137	148
00	19	15	10	17	23	70	72	92	175	157	134	148
Hr Total	104	64	46	58	73	186	322	295	496	690	570	580

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	130	117	150	157	214	140	162	112	91	86	61	44
30	135	137	151	194	198	153	145	109	95	90	61	42
45	134	160	158	211	193	196	125	97	91	76	53	29
00	158	159	160	214	126	174	137	110	88	72	50	33
Hr Total	557	573	619	776	731	663	569	428	365	324	225	148

24 Hour Total : 9,462
 AM Peak Hour begins : 8:45 AM Peak Volume : 708 AM Peak Hour Factor : 0.81
 PM Peak Hour begins : 15:30 PM Peak Volume : 837 PM Peak Hour Factor : 0.98

AVERAGE **Total Volume for All Lanes**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	35	19	14	11	14	26	82	70	99	218	156	153
30	25	12	9	15	14	35	95	69	111	167	143	131
45	25	18	13	15	22	55	73	64	111	148	137	148
00	19	15	10	17	23	70	72	92	175	157	134	148
Hr Total	104	64	46	58	73	186	322	295	496	690	570	580

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	130	117	150	157	214	140	162	112	91	86	61	44
30	135	137	151	194	198	153	145	109	95	90	61	42
45	134	160	158	211	193	196	125	97	91	76	53	29
00	158	159	160	214	126	174	137	110	88	72	50	33
Hr Total	557	573	619	776	731	663	569	428	365	324	225	148

24 Hour Total : 9,462
 AM Peak Hour begins : 8:45 AM Peak Volume : 708 AM Peak Hour Factor : 0.81
 PM Peak Hour begins : 15:30 PM Peak Volume : 837 PM Peak Hour Factor : 0.98

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 16, 2017 Start Time 00:00
 Stop Date : May 19, 2017 Stop Time 24:00
 County : Hillsborough
 Location : I-275 NB Off Ramp to SR 580 Busch Blvd

VHB Project #: 62966

16-May-17 Northbound Volume for Lane 1

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	50	33	27	13	13	16	55	155	189	159	185	182
30	56	37	18	25	28	34	93	192	171	161	180	148
45	53	27	23	12	25	47	88	201	183	205	173	181
00	27	16	21	14	18	64	131	185	250	177	184	173
Hr Total	186	113	89	64	84	161	367	733	793	702	722	684

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	191	186	191	206	101	125	148	149	139	119	97	76
30	167	173	183	208	108	138	141	162	143	129	105	85
45	181	178	213	109	124	123	168	171	130	105	83	72
00	177	206	196	104	105	135	184	161	120	127	99	51
Hr Total	716	743	783	627	438	521	641	643	532	480	384	284

24 Hour Total : 11,490
 AM Peak Hour begins : 8:00 AM Peak Volume : 793 AM Peak Hour Factor : 0.79
 PM Peak Hour begins : 14:30 PM Peak Volume : 823 PM Peak Hour Factor : 0.97

16-May-17 Lane 2

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total : 0
 AM Peak Hour begins : AM Peak Volume : 0 AM Peak Hour Factor :
 PM Peak Hour begins : PM Peak Volume : 0 PM Peak Hour Factor :

16-May-17 Total Volume for All Lanes

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	50	33	27	13	13	16	55	155	189	159	185	182
30	56	37	18	25	28	34	93	192	171	161	180	148
45	53	27	23	12	25	47	88	201	183	205	173	181
00	27	16	21	14	18	64	131	185	250	177	184	173
Hr Total	186	113	89	64	84	161	367	733	793	702	722	684

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	191	186	191	206	101	125	148	149	139	119	97	76
30	167	173	183	208	108	138	141	162	143	129	105	85
45	181	178	213	109	124	123	168	171	130	105	83	72
00	177	206	196	104	105	135	184	161	120	127	99	51
Hr Total	716	743	783	627	438	521	641	643	532	480	384	284

24 Hour Total : 11,490
 AM Peak Hour begins : 8:00 AM Peak Volume : 793 AM Peak Hour Factor : 0.79
 PM Peak Hour begins : 14:30 PM Peak Volume : 823 PM Peak Hour Factor : 0.97

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 16, 2017 Start Time 00:00
 Stop Date : May 19, 2017 Stop Time 24:00
 County : Hillsborough
 Location : I-275 NB Off Ramp to SR 580 Busch Blvd

VHB Project #: 62966

17-May-17 **Northbound Volume for Lane 1**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	55	32	17	13	20	20	74	157	181	160	178	206
30	35	36	18	17	13	23	70	174	185	177	168	177
45	35	24	20	17	12	38	95	159	190	179	168	200
00	36	25	15	14	20	59	130	212	207	192	166	180
Hr Total	161	117	70	61	65	140	369	702	763	708	680	763

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	197	222	187	193	149	134	135	157	123	126	116	75
30	197	162	209	225	149	136	156	186	138	159	101	95
45	171	201	203	195	137	145	146	129	127	124	75	79
00	177	182	211	174	141	138	165	149	155	128	95	64
Hr Total	742	767	810	787	576	553	602	621	543	537	387	313

24 Hour Total : 11,837
 AM Peak Hour begins : 7:45 AM Peak Volume : 768 AM Peak Hour Factor : 0.91
 PM Peak Hour begins : 14:30 PM Peak Volume : 832 PM Peak Hour Factor : 0.92

17-May-17 **Lane 2**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total : 0
 AM Peak Hour begins : AM Peak Volume : 0 AM Peak Hour Factor :
 PM Peak Hour begins : PM Peak Volume : 0 PM Peak Hour Factor :

17-May-17 **Total Volume for All Lanes**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	55	32	17	13	20	20	74	157	181	160	178	206
30	35	36	18	17	13	23	70	174	185	177	168	177
45	35	24	20	17	12	38	95	159	190	179	168	200
00	36	25	15	14	20	59	130	212	207	192	166	180
Hr Total	161	117	70	61	65	140	369	702	763	708	680	763

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	197	222	187	193	149	134	135	157	123	126	116	75
30	197	162	209	225	149	136	156	186	138	159	101	95
45	171	201	203	195	137	145	146	129	127	124	75	79
00	177	182	211	174	141	138	165	149	155	128	95	64
Hr Total	742	767	810	787	576	553	602	621	543	537	387	313

24 Hour Total : 11,837
 AM Peak Hour begins : 7:45 AM Peak Volume : 768 AM Peak Hour Factor : 0.91
 PM Peak Hour begins : 14:30 PM Peak Volume : 832 PM Peak Hour Factor : 0.92

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 16, 2017 Start Time 00:00
 Stop Date : May 19, 2017 Stop Time 24:00
 County : Hillsborough
 Location : I-275 NB Off Ramp to SR 580 Busch Blvd

VHB Project #: 62966

AVERAGE		Northbound Volume for Lane 1											
End Time	00	01	02	03	04	05	06	07	08	09	10	11	
15	53	31	25	15	17	17	60	161	181	155	179	193	
30	50	35	20	19	21	33	88	172	176	162	174	179	
45	46	22	22	14	20	40	95	183	189	183	169	190	
00	35	23	18	14	21	59	131	201	227	181	170	166	
Hr Total	184	111	85	62	79	149	374	717	773	681	692	728	

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	192	198	191	204	143	137	141	158	126	123	109	78
30	189	178	183	211	138	136	148	170	141	145	107	81
45	172	187	204	168	136	135	163	147	129	131	89	76
00	182	192	213	147	125	141	171	156	144	132	99	60
Hr Total	735	755	791	730	542	549	623	631	540	531	404	295

24 Hour Total : 11,761
 AM Peak Hour begins : 8:00 AM Peak Volume : 773 AM Peak Hour Factor : 0.85
 PM Peak Hour begins : 14:30 PM Peak Volume : 832 PM Peak Hour Factor : 0.98

AVERAGE		Lane 2											
End Time	00	01	02	03	04	05	06	07	08	09	10	11	
15	0	0	0	0	0	0	0	0	0	0	0	0	
30	0	0	0	0	0	0	0	0	0	0	0	0	
45	0	0	0	0	0	0	0	0	0	0	0	0	
00	0	0	0	0	0	0	0	0	0	0	0	0	
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0	

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total : 0
 AM Peak Hour begins : 0:00 AM Peak Volume : 0 AM Peak Hour Factor : #DIV/0!
 PM Peak Hour begins : 12:00 PM Peak Volume : 0 PM Peak Hour Factor : #DIV/0!

AVERAGE		Total Volume for All Lanes											
End Time	00	01	02	03	04	05	06	07	08	09	10	11	
15	53	31	25	15	17	17	60	161	181	155	179	193	
30	50	35	20	19	21	33	88	172	176	162	174	179	
45	46	22	22	14	20	40	95	183	189	183	169	190	
00	35	23	18	14	21	59	131	201	227	181	170	166	
Hr Total	184	111	85	62	79	149	374	717	773	681	692	728	

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	192	198	191	204	143	137	141	158	126	123	109	78
30	189	178	183	211	138	136	148	170	141	145	107	81
45	172	187	204	168	136	135	163	147	129	131	89	76
00	182	192	213	147	125	141	171	156	144	132	99	60
Hr Total	735	755	791	730	542	549	623	631	540	531	404	295

24 Hour Total : 11,761
 AM Peak Hour begins : 8:00 AM Peak Volume : 773 AM Peak Hour Factor : 0.85
 PM Peak Hour begins : 14:30 PM Peak Volume : 832 PM Peak Hour Factor : 0.98

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 2, 2017 Start Time 00:00
 Stop Date : May 5, 2017 Stop Time 24:00
 County : Hillsborough
 Location : I-275 NB On Ramp from SR 580 Busch Blvd

VHB Project #: 62966

2-May-17		Northbound Volume for Lane 1										
End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	25	18	7	7	13	17	58	67	102	91	77	82
30	27	11	11	11	9	34	76	85	114	117	103	93
45	12	16	7	16	18	35	94	102	118	92	85	98
00	27	15	7	5	24	47	92	94	105	121	99	97
Hr Total	91	60	32	39	64	133	320	348	439	421	364	370

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	93	106	102	135	184	208	192	122	98	85	68	42
30	110	116	123	125	186	222	179	125	87	90	72	51
45	102	112	102	152	188	218	147	100	92	94	50	25
00	103	118	135	163	178	177	145	98	88	73	46	37
Hr Total	408	452	462	575	736	825	663	445	365	342	236	155

24 Hour Total : 8,345
 AM Peak Hour begins : 8:00 AM Peak Volume : 439 AM Peak Hour Factor : 0.93
 PM Peak Hour begins : 16:45 PM Peak Volume : 826 PM Peak Hour Factor : 0.93

2-May-17		Southbound Volume for Lane 2										
End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total : 0
 AM Peak Hour begins : AM Peak Volume : 0 AM Peak Hour Factor :
 PM Peak Hour begins : PM Peak Volume : 0 PM Peak Hour Factor :

2-May-17		Total Volume for All Lanes										
End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	25	18	7	7	13	17	58	67	102	91	77	82
30	27	11	11	11	9	34	76	85	114	117	103	93
45	12	16	7	16	18	35	94	102	118	92	85	98
00	27	15	7	5	24	47	92	94	105	121	99	97
Hr Total	91	60	32	39	64	133	320	348	439	421	364	370

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	93	106	102	135	184	208	192	122	98	85	68	42
30	110	116	123	125	186	222	179	125	87	90	72	51
45	102	112	102	152	188	218	147	100	92	94	50	25
00	103	118	135	163	178	177	145	98	88	73	46	37
Hr Total	408	452	462	575	736	825	663	445	365	342	236	155

24 Hour Total : 8,345
 AM Peak Hour begins : 8:00 AM Peak Volume : 439 AM Peak Hour Factor : 0.93
 PM Peak Hour begins : 16:45 PM Peak Volume : 826 PM Peak Hour Factor : 0.93

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 2, 2017 Start Time 00:00
 Stop Date : May 5, 2017 Stop Time 24:00
 County : Hillsborough
 Location : I-275 NB On Ramp from SR 580 Busch Blvd

VHB Project #: 62966

AVERAGE **Northbound Volume for Lane 1**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	28	23	9	10	13	21	62	76	110	100	89	88
30	22	13	10	11	11	30	79	86	100	107	103	97
45	21	15	12	13	19	36	90	101	104	89	89	105
00	18	14	9	10	20	47	83	102	102	103	104	115
Hr Total	89	65	40	44	63	134	314	365	416	399	385	405

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	100	103	113	128	174	214	179	129	103	82	73	49
30	114	127	128	140	184	214	165	125	102	97	62	46
45	109	118	116	156	186	200	124	100	105	83	52	31
00	107	130	128	167	188	177	138	105	85	79	53	37
Hr Total	430	478	485	591	732	805	606	459	395	341	240	163

24 Hour Total : 8,444
 AM Peak Hour begins : 7:45 AM Peak Volume : 416 AM Peak Hour Factor : 0.95
 PM Peak Hour begins : 16:45 PM Peak Volume : 816 PM Peak Hour Factor : 0.95

AVERAGE **Southbound Volume for Lane 2**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	0	0	0	0	0	0	0	0	0	0	0	0
30	0	0	0	0	0	0	0	0	0	0	0	0
45	0	0	0	0	0	0	0	0	0	0	0	0
00	0	0	0	0	0	0	0	0	0	0	0	0
Hr Total	0	0	0	0	0	0	0	0	0	0	0	0

24 Hour Total : 0
 AM Peak Hour begins : 0:00 AM Peak Volume : 0 AM Peak Hour Factor : #DIV/0!
 PM Peak Hour begins : 12:00 PM Peak Volume : 0 PM Peak Hour Factor : #DIV/0!

AVERAGE **Total Volume for All Lanes**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	28	23	9	10	13	21	62	76	110	100	89	88
30	22	13	10	11	11	30	79	86	100	107	103	97
45	21	15	12	13	19	36	90	101	104	89	89	105
00	18	14	9	10	20	47	83	102	102	103	104	115
Hr Total	89	65	40	44	63	134	314	365	416	399	385	405

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	100	103	113	128	174	214	179	129	103	82	73	49
30	114	127	128	140	184	214	165	125	102	97	62	46
45	109	118	116	156	186	200	124	100	105	83	52	31
00	107	130	128	167	188	177	138	105	85	79	53	37
Hr Total	430	478	485	591	732	805	606	459	395	341	240	163

24 Hour Total : 8,444
 AM Peak Hour begins : 7:45 AM Peak Volume : 416 AM Peak Hour Factor : 0.95
 PM Peak Hour begins : 16:45 PM Peak Volume : 816 PM Peak Hour Factor : 0.95

Roadway Count Summary

Vanasse Hangen Brustlin, Inc.

Start Date : May 16, 2017 Start Time 00:00
 Stop Date : May 19, 2017 Stop Time 24:00
 County : Hillsborough
 Location : N Nebraska Ave at 300 ft North of SR 580 Busch Blvd

VHB Project #: 62966

AVERAGE **Northbound Volume for Lane 1**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	41	35	27	20	18	29	51	109	126	112	129	138
30	45	35	24	22	14	29	67	113	116	144	150	173
45	42	31	24	15	20	35	85	137	137	125	137	138
00	33	28	19	17	33	40	83	134	139	147	165	177
Hr Total	161	129	94	74	85	133	286	493	518	528	581	626

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	150	140	161	163	210	220	222	155	117	108	86	66
30	189	178	175	194	218	215	210	143	129	99	85	59
45	143	143	168	187	209	221	210	126	136	94	78	60
00	188	170	180	206	208	243	161	120	109	92	78	54
Hr Total	670	631	684	750	845	899	803	544	491	393	327	239

24 Hour Total : 10,984
 AM Peak Hour begins : 11:00 AM Peak Volume : 626 AM Peak Hour Factor : 0.88
 PM Peak Hour begins : 17:15 PM Peak Volume : 901 PM Peak Hour Factor : 0.93

AVERAGE **Southbound Volume for Lane 2**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	48	32	18	29	18	37	102	254	244	233	153	163
30	35	27	27	25	25	45	150	246	239	197	163	173
45	37	28	27	19	33	72	206	256	248	163	158	158
00	28	25	33	22	32	80	225	245	238	169	191	169
Hr Total	148	112	105	95	108	234	683	1,001	969	762	665	663

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	175	181	174	199	194	214	186	141	125	103	89	54
30	181	192	192	188	190	203	175	123	113	91	84	52
45	165	174	176	176	195	199	149	130	122	96	77	55
00	195	188	197	195	199	168	151	111	95	70	67	45
Hr Total	716	735	739	758	778	784	661	505	455	360	317	206

24 Hour Total : 12,559
 AM Peak Hour begins : 7:00 AM Peak Volume : 1,001 AM Peak Hour Factor : 0.98
 PM Peak Hour begins : 16:45 PM Peak Volume : 815 PM Peak Hour Factor : 0.95

AVERAGE **Total Volume for All Lanes**

End Time	00	01	02	03	04	05	06	07	08	09	10	11
15	89	67	45	49	36	66	153	363	370	345	282	301
30	80	62	51	47	39	74	217	359	355	341	313	346
45	79	59	51	34	53	107	291	393	385	288	295	296
00	61	53	52	39	65	120	308	379	377	316	356	346
Hr Total	309	241	199	169	193	367	969	1,494	1,487	1,290	1,246	1,289

End Time	12	13	14	15	16	17	18	19	20	21	22	23
15	325	321	335	362	404	434	408	296	242	211	175	120
30	370	370	367	382	408	418	385	266	242	190	169	111
45	308	317	344	363	404	420	359	256	258	190	155	115
00	383	358	377	401	407	411	312	231	204	162	145	99
Hr Total	1,386	1,366	1,423	1,508	1,623	1,683	1,464	1,049	946	753	644	445

24 Hour Total : 23,543
 AM Peak Hour begins : 7:15 AM Peak Volume : 1,501 AM Peak Hour Factor : 0.96
 PM Peak Hour begins : 17:00 PM Peak Volume : 1,683 PM Peak Hour Factor : 0.97

Appendix B

2017 FTI Factors

2016 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
 CATEGORY: 1000 HILLSBOROUGH COUNTYWIDE

WEEK	DATES	SF	MOCF: 0.97 PSCF
1	01/01/2016 - 01/02/2016	1.01	1.04
2	01/03/2016 - 01/09/2016	1.03	1.06
3	01/10/2016 - 01/16/2016	1.06	1.09
4	01/17/2016 - 01/23/2016	1.04	1.07
5	01/24/2016 - 01/30/2016	1.02	1.05
6	01/31/2016 - 02/06/2016	1.00	1.03
* 7	02/07/2016 - 02/13/2016	0.99	1.02
* 8	02/14/2016 - 02/20/2016	0.97	1.00
* 9	02/21/2016 - 02/27/2016	0.97	1.00
*10	02/28/2016 - 03/05/2016	0.96	0.99
*11	03/06/2016 - 03/12/2016	0.96	0.99
*12	03/13/2016 - 03/19/2016	0.96	0.99
*13	03/20/2016 - 03/26/2016	0.96	0.99
*14	03/27/2016 - 04/02/2016	0.97	1.00
*15	04/03/2016 - 04/09/2016	0.98	1.01
*16	04/10/2016 - 04/16/2016	0.98	1.01
*17	04/17/2016 - 04/23/2016	0.99	1.02
*18	04/24/2016 - 04/30/2016	0.99	1.02
*19	05/01/2016 - 05/07/2016	0.99	1.02
20	05/08/2016 - 05/14/2016	1.00	1.03
21	05/15/2016 - 05/21/2016	1.00	1.03
22	05/22/2016 - 05/28/2016	1.01	1.04
23	05/29/2016 - 06/04/2016	1.02	1.05
24	06/05/2016 - 06/11/2016	1.03	1.06
25	06/12/2016 - 06/18/2016	1.03	1.06
26	06/19/2016 - 06/25/2016	1.04	1.07
27	06/26/2016 - 07/02/2016	1.05	1.08
28	07/03/2016 - 07/09/2016	1.05	1.08
29	07/10/2016 - 07/16/2016	1.06	1.09
30	07/17/2016 - 07/23/2016	1.05	1.08
31	07/24/2016 - 07/30/2016	1.04	1.07
32	07/31/2016 - 08/06/2016	1.04	1.07
33	08/07/2016 - 08/13/2016	1.03	1.06
34	08/14/2016 - 08/20/2016	1.02	1.05
35	08/21/2016 - 08/27/2016	1.02	1.05
36	08/28/2016 - 09/03/2016	1.02	1.05
37	09/04/2016 - 09/10/2016	1.02	1.05
38	09/11/2016 - 09/17/2016	1.02	1.05
39	09/18/2016 - 09/24/2016	1.01	1.04
40	09/25/2016 - 10/01/2016	1.00	1.03
41	10/02/2016 - 10/08/2016	0.99	1.02
42	10/09/2016 - 10/15/2016	0.97	1.00
43	10/16/2016 - 10/22/2016	0.98	1.01
44	10/23/2016 - 10/29/2016	0.98	1.01
45	10/30/2016 - 11/05/2016	0.99	1.02
46	11/06/2016 - 11/12/2016	0.99	1.02
47	11/13/2016 - 11/19/2016	0.99	1.02
48	11/20/2016 - 11/26/2016	1.00	1.03
49	11/27/2016 - 12/03/2016	1.00	1.03
50	12/04/2016 - 12/10/2016	1.00	1.03
51	12/11/2016 - 12/17/2016	1.01	1.04
52	12/18/2016 - 12/24/2016	1.03	1.06
53	12/25/2016 - 12/31/2016	1.06	1.09

* PEAK SEASON

21-FEB-2017 10:54:35

830UPD

7_1000_PKSEASON.TXT

2016 WEEKLY AXLE FACTOR CATEGORY REPORT - REPORT TYPE: ALL

COUNTY: 10 - HILLSBOROUGH

WEEK	DATES	1046 SR589, SR60 - SR600	1047 SR580, PINELLAS-T'N'C	1048 SR580, T'N'C - SR600	1049 SR600, D MABRY - US41
1	01/01/2016 - 01/02/2016	1.00	0.99	0.98	0.98
2	01/03/2016 - 01/09/2016	1.00	0.99	0.98	0.98
3	01/10/2016 - 01/16/2016	1.00	0.99	0.98	0.98
4	01/17/2016 - 01/23/2016	1.00	0.99	0.98	0.98
5	01/24/2016 - 01/30/2016	1.00	0.99	0.98	0.98
6	01/31/2016 - 02/06/2016	1.00	0.99	0.98	0.98
7	02/07/2016 - 02/13/2016	1.00	0.99	0.98	0.98
8	02/14/2016 - 02/20/2016	1.00	0.99	0.98	0.98
9	02/21/2016 - 02/27/2016	1.00	0.99	0.98	0.98
10	02/28/2016 - 03/05/2016	1.00	0.99	0.98	0.98
11	03/06/2016 - 03/12/2016	1.00	0.99	0.98	0.98
12	03/13/2016 - 03/19/2016	1.00	0.99	0.98	0.98
13	03/20/2016 - 03/26/2016	1.00	0.99	0.98	0.98
14	03/27/2016 - 04/02/2016	1.00	0.99	0.98	0.98
15	04/03/2016 - 04/09/2016	1.00	0.99	0.98	0.98
16	04/10/2016 - 04/16/2016	1.00	0.99	0.98	0.98
17	04/17/2016 - 04/23/2016	1.00	0.99	0.98	0.98
18	04/24/2016 - 04/30/2016	1.00	0.99	0.98	0.98
19	05/01/2016 - 05/07/2016	1.00	0.99	0.98	0.98
20	05/08/2016 - 05/14/2016	1.00	0.99	0.98	0.98
21	05/15/2016 - 05/21/2016	1.00	0.99	0.98	0.98
22	05/22/2016 - 05/28/2016	1.00	0.99	0.98	0.98
23	05/29/2016 - 06/04/2016	1.00	0.99	0.98	0.98
24	06/05/2016 - 06/11/2016	1.00	0.99	0.98	0.98
25	06/12/2016 - 06/18/2016	1.00	0.99	0.98	0.98
26	06/19/2016 - 06/25/2016	1.00	0.99	0.98	0.98
27	06/26/2016 - 07/02/2016	1.00	0.99	0.98	0.98
28	07/03/2016 - 07/09/2016	1.00	0.99	0.98	0.98
29	07/10/2016 - 07/16/2016	1.00	0.99	0.98	0.98
30	07/17/2016 - 07/23/2016	1.00	0.99	0.98	0.98
31	07/24/2016 - 07/30/2016	1.00	0.99	0.98	0.98
32	07/31/2016 - 08/06/2016	1.00	0.99	0.98	0.98
33	08/07/2016 - 08/13/2016	1.00	0.99	0.98	0.98
34	08/14/2016 - 08/20/2016	1.00	0.99	0.98	0.98
35	08/21/2016 - 08/27/2016	1.00	0.99	0.98	0.98
36	08/28/2016 - 09/03/2016	1.00	0.99	0.98	0.98
37	09/04/2016 - 09/10/2016	1.00	0.99	0.98	0.98
38	09/11/2016 - 09/17/2016	1.00	0.99	0.98	0.98
39	09/18/2016 - 09/24/2016	1.00	0.99	0.98	0.98
40	09/25/2016 - 10/01/2016	1.00	0.99	0.98	0.98
41	10/02/2016 - 10/08/2016	1.00	0.99	0.98	0.98
42	10/09/2016 - 10/15/2016	1.00	0.99	0.98	0.98
43	10/16/2016 - 10/22/2016	1.00	0.99	0.98	0.98
44	10/23/2016 - 10/29/2016	1.00	0.99	0.98	0.98
45	10/30/2016 - 11/05/2016	1.00	0.99	0.98	0.98
46	11/06/2016 - 11/12/2016	1.00	0.99	0.98	0.98
47	11/13/2016 - 11/19/2016	1.00	0.99	0.98	0.98
48	11/20/2016 - 11/26/2016	1.00	0.99	0.98	0.98
49	11/27/2016 - 12/03/2016	1.00	0.99	0.98	0.98
50	12/04/2016 - 12/10/2016	1.00	0.99	0.98	0.98
51	12/11/2016 - 12/17/2016	1.00	0.99	0.98	0.98
52	12/18/2016 - 12/24/2016	1.00	0.99	0.98	0.98
53	12/25/2016 - 12/31/2016	1.00	0.99	0.98	0.98

2016 WEEKLY AXLE FACTOR CATEGORY REPORT - REPORT TYPE: ALL

COUNTY: 10 - HILLSBOROUGH

WEEK	DATES	1075 SR580, SR600-SR583	1076 US301, HARNEY-PASCO	1077 SR585, I-4 - SR 600	1078 I-275, I-4 - SR 580
1	01/01/2016 - 01/02/2016	0.99	0.93	1.00	0.98
2	01/03/2016 - 01/09/2016	0.99	0.93	1.00	0.98
3	01/10/2016 - 01/16/2016	0.99	0.93	1.00	0.98
4	01/17/2016 - 01/23/2016	0.99	0.93	1.00	0.98
5	01/24/2016 - 01/30/2016	0.99	0.93	1.00	0.98
6	01/31/2016 - 02/06/2016	0.99	0.93	1.00	0.98
7	02/07/2016 - 02/13/2016	0.99	0.93	1.00	0.98
8	02/14/2016 - 02/20/2016	0.99	0.93	1.00	0.98
9	02/21/2016 - 02/27/2016	0.99	0.93	1.00	0.98
10	02/28/2016 - 03/05/2016	0.99	0.93	1.00	0.98
11	03/06/2016 - 03/12/2016	0.99	0.93	1.00	0.98
12	03/13/2016 - 03/19/2016	0.99	0.93	1.00	0.98
13	03/20/2016 - 03/26/2016	0.99	0.93	1.00	0.98
14	03/27/2016 - 04/02/2016	0.99	0.93	1.00	0.98
15	04/03/2016 - 04/09/2016	0.99	0.93	1.00	0.98
16	04/10/2016 - 04/16/2016	0.99	0.93	1.00	0.98
17	04/17/2016 - 04/23/2016	0.99	0.93	1.00	0.98
18	04/24/2016 - 04/30/2016	0.99	0.93	1.00	0.98
19	05/01/2016 - 05/07/2016	0.99	0.93	1.00	0.98
20	05/08/2016 - 05/14/2016	0.99	0.93	1.00	0.98
21	05/15/2016 - 05/21/2016	0.99	0.93	1.00	0.98
22	05/22/2016 - 05/28/2016	0.99	0.93	1.00	0.98
23	05/29/2016 - 06/04/2016	0.99	0.93	1.00	0.98
24	06/05/2016 - 06/11/2016	0.99	0.93	1.00	0.98
25	06/12/2016 - 06/18/2016	0.99	0.93	1.00	0.98
26	06/19/2016 - 06/25/2016	0.99	0.93	1.00	0.98
27	06/26/2016 - 07/02/2016	0.99	0.93	1.00	0.98
28	07/03/2016 - 07/09/2016	0.99	0.93	1.00	0.98
29	07/10/2016 - 07/16/2016	0.99	0.93	1.00	0.98
30	07/17/2016 - 07/23/2016	0.99	0.93	1.00	0.98
31	07/24/2016 - 07/30/2016	0.99	0.93	1.00	0.98
32	07/31/2016 - 08/06/2016	0.99	0.93	1.00	0.98
33	08/07/2016 - 08/13/2016	0.99	0.93	1.00	0.98
34	08/14/2016 - 08/20/2016	0.99	0.93	1.00	0.98
35	08/21/2016 - 08/27/2016	0.99	0.93	1.00	0.98
36	08/28/2016 - 09/03/2016	0.99	0.93	1.00	0.98
37	09/04/2016 - 09/10/2016	0.99	0.93	1.00	0.98
38	09/11/2016 - 09/17/2016	0.99	0.93	1.00	0.98
39	09/18/2016 - 09/24/2016	0.99	0.93	1.00	0.98
40	09/25/2016 - 10/01/2016	0.99	0.93	1.00	0.98
41	10/02/2016 - 10/08/2016	0.99	0.93	1.00	0.98
42	10/09/2016 - 10/15/2016	0.99	0.93	1.00	0.98
43	10/16/2016 - 10/22/2016	0.99	0.93	1.00	0.98
44	10/23/2016 - 10/29/2016	0.99	0.93	1.00	0.98
45	10/30/2016 - 11/05/2016	0.99	0.93	1.00	0.98
46	11/06/2016 - 11/12/2016	0.99	0.93	1.00	0.98
47	11/13/2016 - 11/19/2016	0.99	0.93	1.00	0.98
48	11/20/2016 - 11/26/2016	0.99	0.93	1.00	0.98
49	11/27/2016 - 12/03/2016	0.99	0.93	1.00	0.98
50	12/04/2016 - 12/10/2016	0.99	0.93	1.00	0.98
51	12/11/2016 - 12/17/2016	0.99	0.93	1.00	0.98
52	12/18/2016 - 12/24/2016	0.99	0.93	1.00	0.98
53	12/25/2016 - 12/31/2016	0.99	0.93	1.00	0.98

2016 WEEKLY AXLE FACTOR CATEGORY REPORT - REPORT TYPE: ALL

COUNTY: 10 - HILLSBOROUGH

WEEK	DATES	1050 SR580, HILLS AV-BUSCH	1052 SR573, MCDILLAFB-US92	1053 CR39, SR600- SAM ALLE	1054 SR39, SAM ALLEN-PASCO
1	01/01/2016 - 01/02/2016	0.99	0.99	0.91	0.91
2	01/03/2016 - 01/09/2016	0.99	0.99	0.91	0.91
3	01/10/2016 - 01/16/2016	0.99	0.99	0.91	0.91
4	01/17/2016 - 01/23/2016	0.99	0.99	0.91	0.91
5	01/24/2016 - 01/30/2016	0.99	0.99	0.91	0.91
6	01/31/2016 - 02/06/2016	0.99	0.99	0.91	0.91
7	02/07/2016 - 02/13/2016	0.99	0.99	0.91	0.91
8	02/14/2016 - 02/20/2016	0.99	0.99	0.91	0.91
9	02/21/2016 - 02/27/2016	0.99	0.99	0.91	0.91
10	02/28/2016 - 03/05/2016	0.99	0.99	0.91	0.91
11	03/06/2016 - 03/12/2016	0.99	0.99	0.91	0.91
12	03/13/2016 - 03/19/2016	0.99	0.99	0.91	0.91
13	03/20/2016 - 03/26/2016	0.99	0.99	0.91	0.91
14	03/27/2016 - 04/02/2016	0.99	0.99	0.91	0.91
15	04/03/2016 - 04/09/2016	0.99	0.99	0.91	0.91
16	04/10/2016 - 04/16/2016	0.99	0.99	0.91	0.91
17	04/17/2016 - 04/23/2016	0.99	0.99	0.91	0.91
18	04/24/2016 - 04/30/2016	0.99	0.99	0.91	0.91
19	05/01/2016 - 05/07/2016	0.99	0.99	0.91	0.91
20	05/08/2016 - 05/14/2016	0.99	0.99	0.91	0.91
21	05/15/2016 - 05/21/2016	0.99	0.99	0.91	0.91
22	05/22/2016 - 05/28/2016	0.99	0.99	0.91	0.91
23	05/29/2016 - 06/04/2016	0.99	0.99	0.91	0.91
24	06/05/2016 - 06/11/2016	0.99	0.99	0.91	0.91
25	06/12/2016 - 06/18/2016	0.99	0.99	0.91	0.91
26	06/19/2016 - 06/25/2016	0.99	0.99	0.91	0.91
27	06/26/2016 - 07/02/2016	0.99	0.99	0.91	0.91
28	07/03/2016 - 07/09/2016	0.99	0.99	0.91	0.91
29	07/10/2016 - 07/16/2016	0.99	0.99	0.91	0.91
30	07/17/2016 - 07/23/2016	0.99	0.99	0.91	0.91
31	07/24/2016 - 07/30/2016	0.99	0.99	0.91	0.91
32	07/31/2016 - 08/06/2016	0.99	0.99	0.91	0.91
33	08/07/2016 - 08/13/2016	0.99	0.99	0.91	0.91
34	08/14/2016 - 08/20/2016	0.99	0.99	0.91	0.91
35	08/21/2016 - 08/27/2016	0.99	0.99	0.91	0.91
36	08/28/2016 - 09/03/2016	0.99	0.99	0.91	0.91
37	09/04/2016 - 09/10/2016	0.99	0.99	0.91	0.91
38	09/11/2016 - 09/17/2016	0.99	0.99	0.91	0.91
39	09/18/2016 - 09/24/2016	0.99	0.99	0.91	0.91
40	09/25/2016 - 10/01/2016	0.99	0.99	0.91	0.91
41	10/02/2016 - 10/08/2016	0.99	0.99	0.91	0.91
42	10/09/2016 - 10/15/2016	0.99	0.99	0.91	0.91
43	10/16/2016 - 10/22/2016	0.99	0.99	0.91	0.91
44	10/23/2016 - 10/29/2016	0.99	0.99	0.91	0.91
45	10/30/2016 - 11/05/2016	0.99	0.99	0.91	0.91
46	11/06/2016 - 11/12/2016	0.99	0.99	0.91	0.91
47	11/13/2016 - 11/19/2016	0.99	0.99	0.91	0.91
48	11/20/2016 - 11/26/2016	0.99	0.99	0.91	0.91
49	11/27/2016 - 12/03/2016	0.99	0.99	0.91	0.91
50	12/04/2016 - 12/10/2016	0.99	0.99	0.91	0.91
51	12/11/2016 - 12/17/2016	0.99	0.99	0.91	0.91
52	12/18/2016 - 12/24/2016	0.99	0.99	0.91	0.91
53	12/25/2016 - 12/31/2016	0.99	0.99	0.91	0.91

Appendix C

2017 Raw TMC

Roadway Count Summary

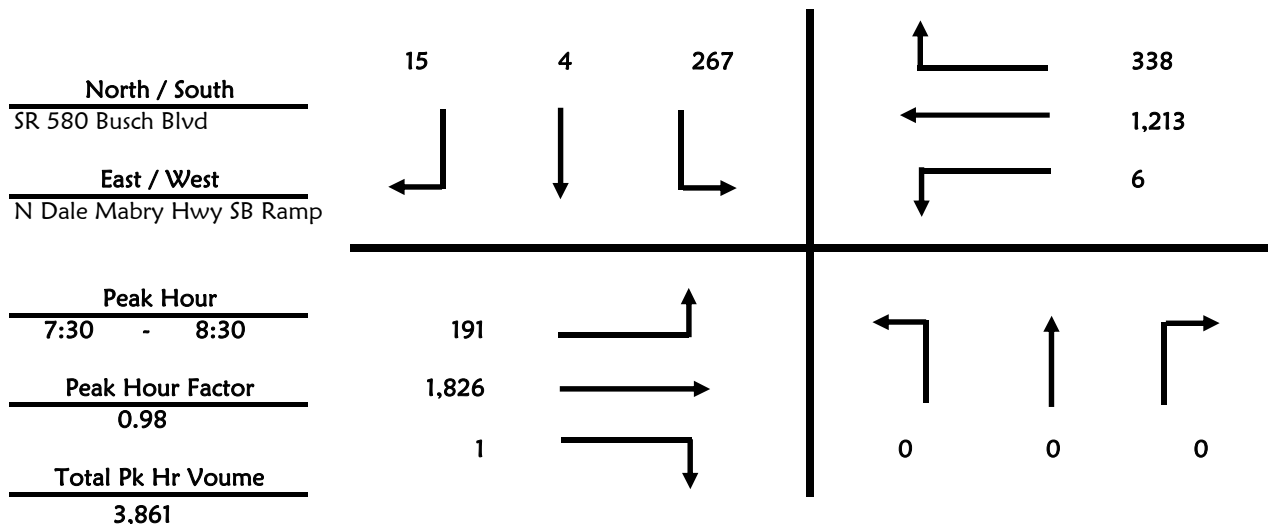
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Dale Mabry Hwy SB Ramp
Date Thursday, May 04, 2017 7:00 AM **All Vehicles**
Time Period 7:00 to 9:00

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	0	61	1	5
7:15 - 7:30	0	0	0	63	0	4
7:30 - 7:45	0	0	0	67	1	5
7:45 - 8:00	0	0	0	69	0	3
8:00 - 8:15	0	0	0	53	2	2
8:15 - 8:30	0	0	0	78	1	5
8:30 - 8:45	0	0	0	83	2	7
8:45 - 9:00	0	1	0	65	2	7
	0	1	0	539	9	38

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	51	516	0	0	270	72
7:15 - 7:30	41	467	0	1	302	66
7:30 - 7:45	49	465	1	4	306	89
7:45 - 8:00	49	428	0	0	317	81
8:00 - 8:15	42	497	0	1	286	82
8:15 - 8:30	51	436	0	1	304	86
8:30 - 8:45	56	418	0	0	318	81
8:45 - 9:00	55	391	2	2	242	73
	394	3,618	3	9	2,345	630



Roadway Count Summary

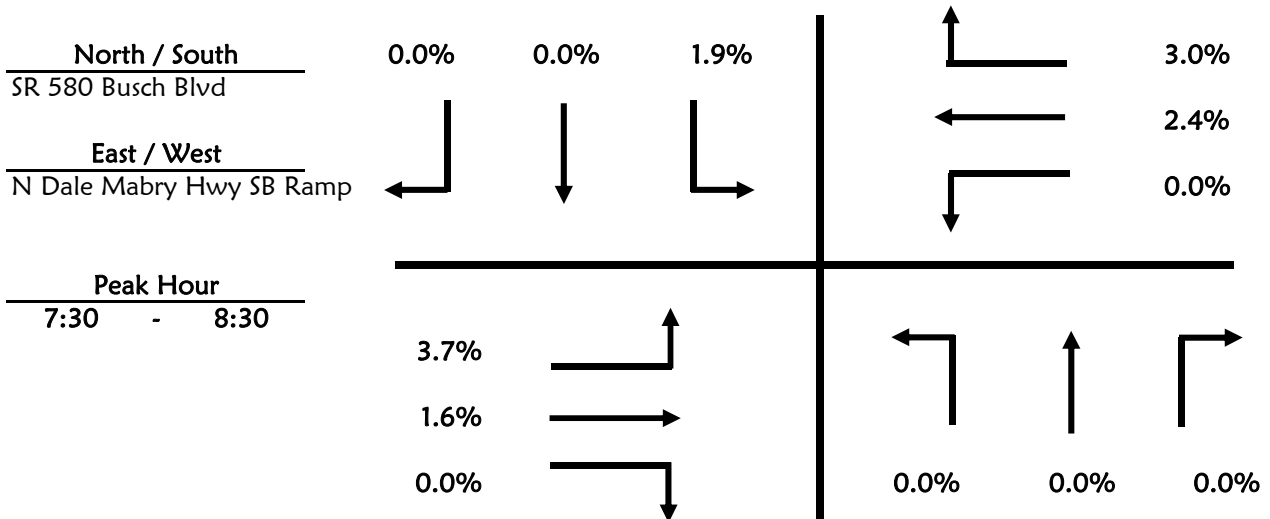
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Dale Mabry Hwy SB Ramp
Date Thursday, May 04, 2017 7:00 .
Time Period 7:00 to 9:00

Trucks
VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	0	3	0	1
7:15 - 7:30	0	0	0	2	0	1
7:30 - 7:45	0	0	0	2	0	0
7:45 - 8:00	0	0	0	0	0	0
8:00 - 8:15	0	0	0	1	0	0
8:15 - 8:30	0	0	0	2	0	0
8:30 - 8:45	0	0	0	3	0	0
8:45 - 9:00	0	0	0	1	0	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	9	0	0	4	2
7:15 - 7:30	1	3	0	0	11	0
7:30 - 7:45	1	7	0	0	5	2
7:45 - 8:00	1	7	0	0	9	1
8:00 - 8:15	2	4	0	0	6	3
8:15 - 8:30	3	12	0	0	9	4
8:30 - 8:45	0	9	0	0	13	4
8:45 - 9:00	0	19	0	0	5	1



Roadway Count Summary

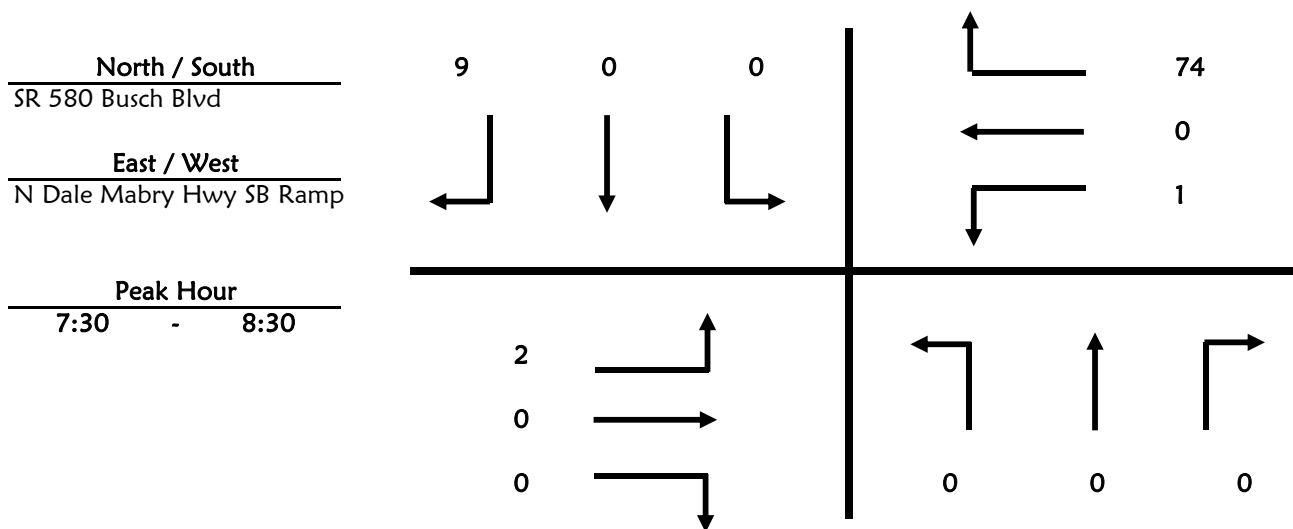
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Dale Mabry Hwy SB Ramp
Date Thursday, May 04, 2017 7:00 A
Time Period 7:00 to 9:00 **U-Turn & RTOR**

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	0	0	0	4
7:15 - 7:30	0	0	0	0	0	2
7:30 - 7:45	0	0	0	0	0	4
7:45 - 8:00	0	0	0	0	0	1
8:00 - 8:15	0	0	0	0	0	2
8:15 - 8:30	0	0	0	0	0	2
8:30 - 8:45	0	0	0	0	0	7
8:45 - 9:00	0	0	0	0	0	5

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	0	0	0	15
7:15 - 7:30	0	0	0	0	0	22
7:30 - 7:45	0	0	0	1	0	12
7:45 - 8:00	0	0	0	0	0	15
8:00 - 8:15	1	0	0	0	0	28
8:15 - 8:30	1	0	0	0	0	19
8:30 - 8:45	0	0	0	0	0	18
8:45 - 9:00	0	0	0	0	0	9



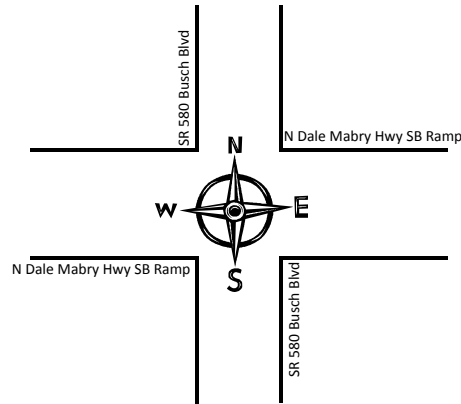
Pedestrian & Bicycle Summary

Project #: 62966
 Date: Thursday, May 04,

NB/SB: SR 580 Busch Blvd
 EB/WB: N Dale Mabry Hwy SB Ramp

		Hour								
		7:00	8:00	1	2	3	6	7	8	
Eastbound	Bike	0	0							0
	Ped	0	0							0
Westbound	Bike	0	0							0
	Ped	0	0							0

Hour	Southbound		Northbound	
	Ped ▼	Bike	Ped ▲	Bike
1 7:00	0	0	0	0
2 8:00	0	0	0	0
3				
4				
5				
6				
7				
8				
	0	0	0	0



Hour	Southbound		Northbound	
	Ped ▼	Bike	Ped ▲	Bike
1 7:00	0	0	0	0
2 8:00	0	0	0	0
3				
4				
5				
6				
7				
8				
	0	0	0	0

Eastbound	Bike	0	0							0
	Ped	0	0							0
Westbound	Bike	0	0							0
	Ped	0	0							0

		7:00	8:00	1	2	3	4	5	6	7	8

Hour

Roadway Count Summary

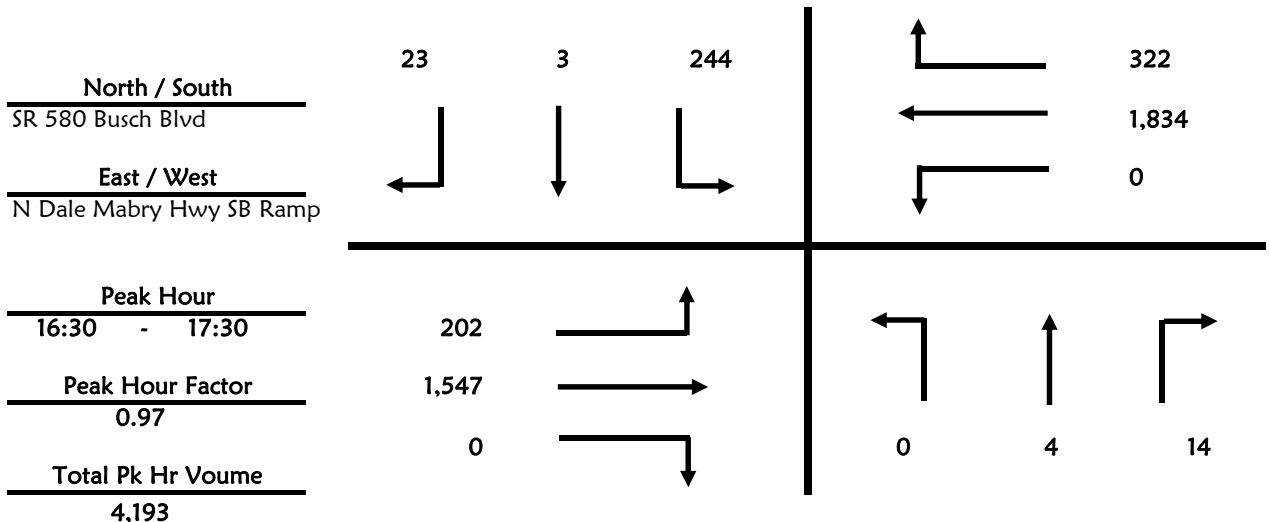
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Dale Mabry Hwy SB Ramp
Date Thursday, May 04, 2017 7:00 AM **All Vehicles**
Time Period 16:00 to 18:00

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	0	2	69	0	3
16:15 - 16:30	0	2	3	52	0	4
16:30 - 16:45	0	0	0	75	2	2
16:45 - 17:00	0	3	3	43	0	5
17:00 - 17:15	0	1	8	56	0	6
17:15 - 17:30	0	0	3	70	1	10
17:30 - 17:45	0	0	3	56	0	7
17:45 - 18:00	0	0	2	49	0	3
Total	0	6	24	470	3	40

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	49	387	0	0	421	81
16:15 - 16:30	36	374	0	0	446	75
16:30 - 16:45	61	396	0	0	441	103
16:45 - 17:00	48	375	0	0	430	74
17:00 - 17:15	51	419	0	0	466	79
17:15 - 17:30	42	357	0	0	497	66
17:30 - 17:45	55	362	0	2	482	72
17:45 - 18:00	42	339	0	0	441	64
Total	384	3,009	0	2	3,624	614



Roadway Count Summary

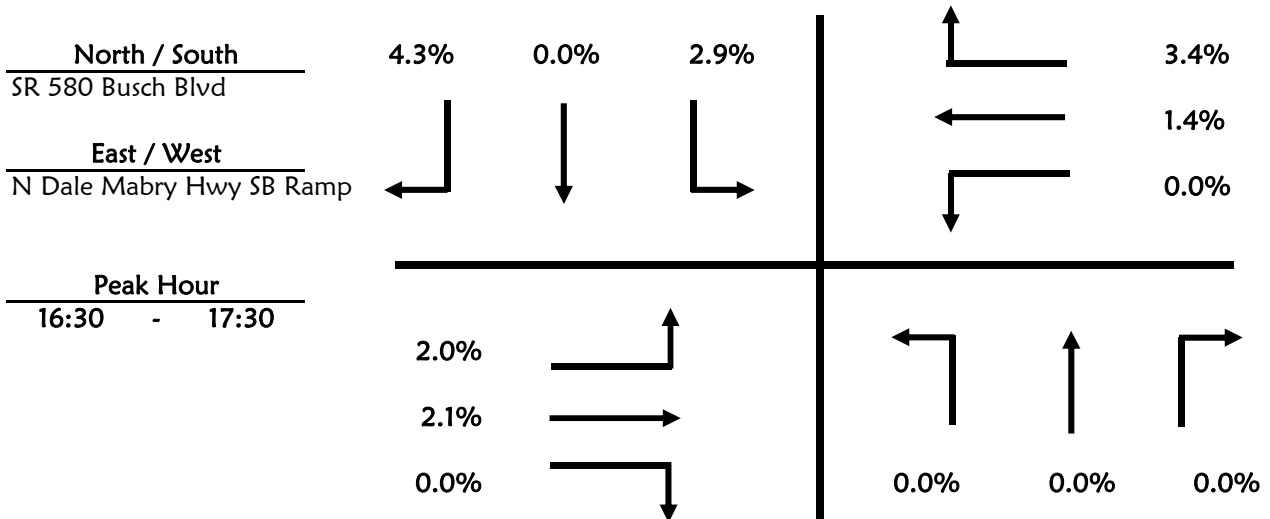
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Dale Mabry Hwy SB Ramp
Date Thursday, May 04, 2017 7:00 .
Time Period 16:00 to 18:00 **Trucks**

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	0	0	1	0	0
16:15 - 16:30	0	0	0	2	0	0
16:30 - 16:45	0	0	0	3	0	1
16:45 - 17:00	0	0	0	1	0	0
17:00 - 17:15	0	0	0	1	0	0
17:15 - 17:30	0	0	0	2	0	0
17:30 - 17:45	0	0	0	1	0	0
17:45 - 18:00	0	0	0	1	0	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	10	0	0	9	4
16:15 - 16:30	3	9	0	0	4	4
16:30 - 16:45	2	10	0	0	4	3
16:45 - 17:00	0	11	0	0	3	3
17:00 - 17:15	2	7	0	0	8	3
17:15 - 17:30	0	4	0	0	10	2
17:30 - 17:45	0	7	0	0	3	1
17:45 - 18:00	0	5	0	0	6	2



Roadway Count Summary

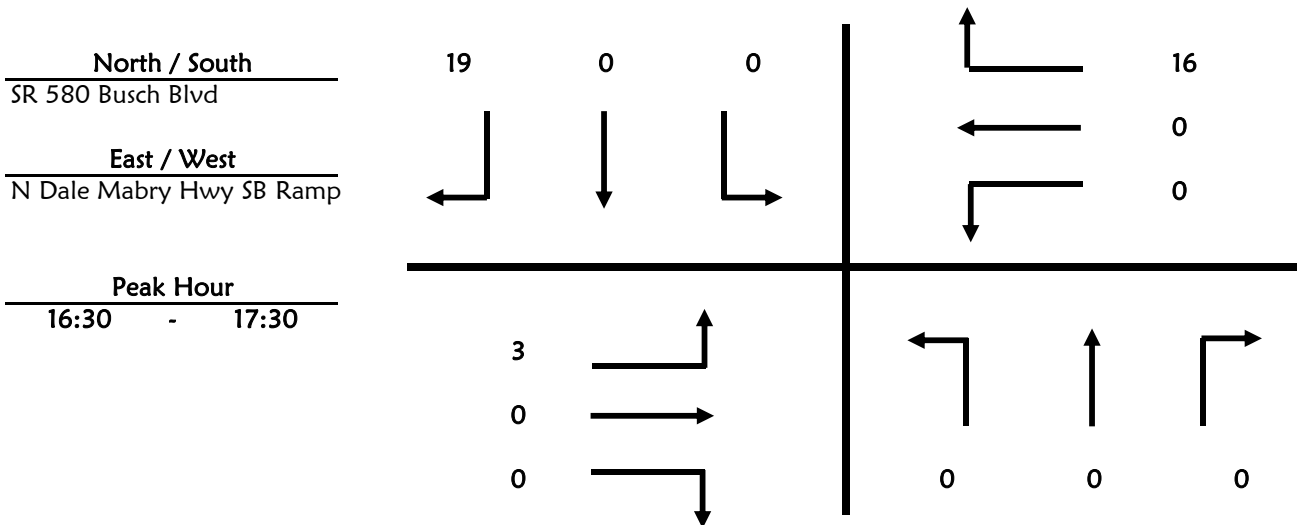
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Dale Mabry Hwy SB Ramp
Date Thursday, May 04, 2017 7:00 A
Time Period 16:00 to 18:00 **U-Turn & RTOR**

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	0	0	0	0	3
16:15 - 16:30	0	0	0	0	0	4
16:30 - 16:45	0	0	0	0	0	1
16:45 - 17:00	0	0	0	0	0	5
17:00 - 17:15	0	0	0	0	0	5
17:15 - 17:30	0	0	0	0	0	8
17:30 - 17:45	0	0	0	0	0	5
17:45 - 18:00	0	0	0	0	0	1

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	3	0	0	0	0	7
16:15 - 16:30	4	0	0	0	0	5
16:30 - 16:45	1	0	0	0	0	4
16:45 - 17:00	0	0	0	0	0	3
17:00 - 17:15	0	0	0	0	0	5
17:15 - 17:30	2	0	0	0	0	4
17:30 - 17:45	3	0	0	0	0	2
17:45 - 18:00	1	0	0	0	0	3



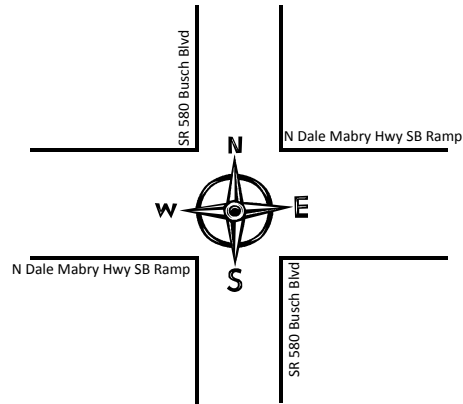
Pedestrian & Bicycle Summary

Project #: 62966
 Date: Thursday, May 04,

NB/SB: SR 580 Busch Blvd
 EB/WB: N Dale Mabry Hwy SB Ramp

		Hour								
		16:00	17:00	1	2	3	6	7	8	
Eastbound	Bike	0	0							0
	Ped	0	0							0
Westbound	Bike	0	0							0
	Ped	0	0							0

Hour	Southbound		Northbound	
	Ped ▼	Bike	Ped ▲	Bike
1 16:00	0	0	0	0
2 17:00	0	0	1	0
3				
4				
5				
6				
7				
8				
	0	0	1	0



Hour	Southbound		Northbound	
	Ped ▼	Bike	Ped ▲	Bike
1 16:00	0	0	0	0
2 17:00	0	0	0	0
3				
4				
5				
6				
7				
8				
	0	0	0	0

Eastbound	Bike	0	0							0
	Ped	0	0							0
Westbound	Bike	0	0							0
	Ped	0	0							0

		16:00	17:00	1	2	3	4	5	6	7	8
--	--	-------	-------	---	---	---	---	---	---	---	---

Hour

Roadway Count Summary

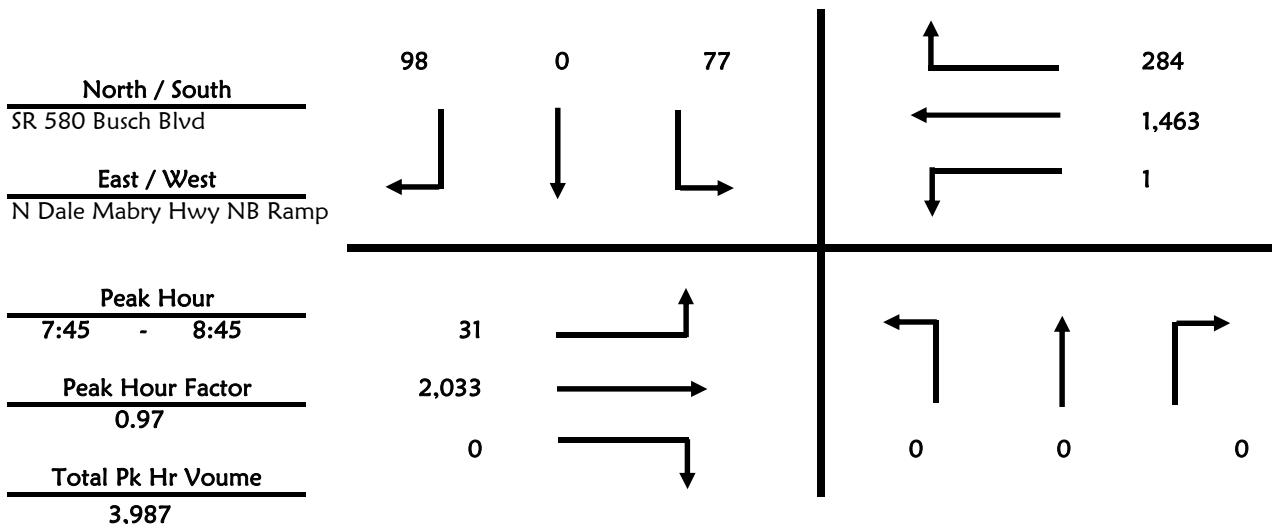
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Dale Mabry Hwy NB Ramp
Date Thursday, May 04, 2017 7:00 AM **All Vehicles**
Time Period 7:00 to 9:00

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	0	24	0	13
7:15 - 7:30	0	0	0	20	0	18
7:30 - 7:45	0	0	0	17	0	18
7:45 - 8:00	0	0	0	15	0	31
8:00 - 8:15	0	0	0	24	0	16
8:15 - 8:30	0	0	0	16	0	21
8:30 - 8:45	0	0	0	22	0	30
8:45 - 9:00	0	0	0	28	0	19
Total	0	0	0	166	0	166

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	4	552	0	0	314	35
7:15 - 7:30	7	556	0	0	335	54
7:30 - 7:45	12	493	0	0	377	69
7:45 - 8:00	14	492	0	1	394	64
8:00 - 8:15	3	522	0	0	349	73
8:15 - 8:30	6	501	0	0	338	83
8:30 - 8:45	8	518	0	0	382	64
8:45 - 9:00	8	471	0	0	323	78
Total	62	4,105	0	1	2,812	520



Roadway Count Summary

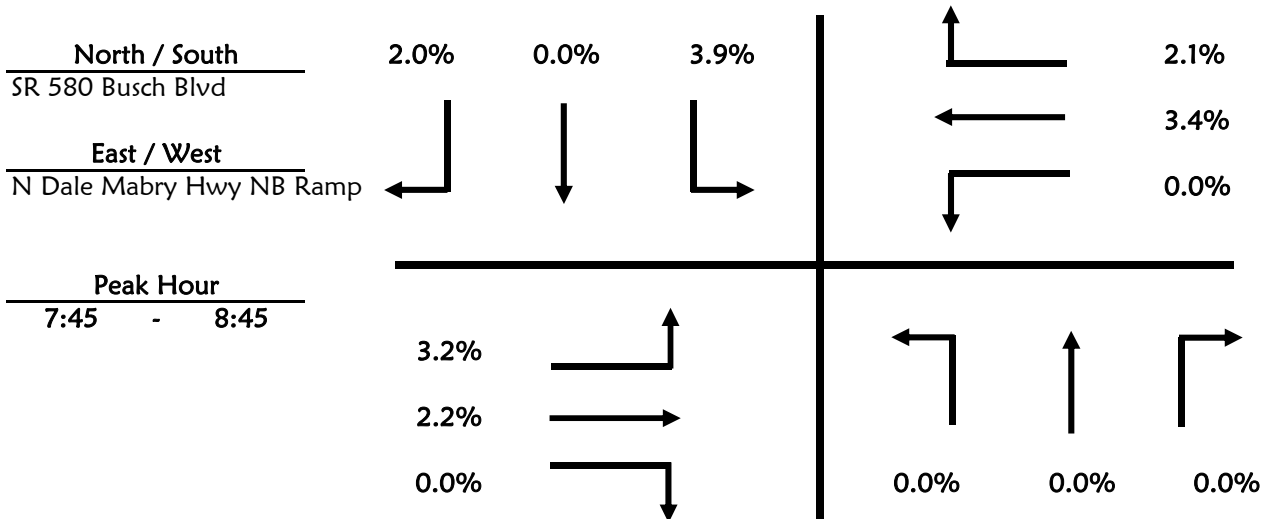
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Dale Mabry Hwy NB Ramp
Date Thursday, May 04, 2017 7:00 .
Time Period 7:00 to 9:00

Trucks
VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	0	0	0	0
7:15 - 7:30	0	0	0	1	0	0
7:30 - 7:45	0	0	0	1	0	0
7:45 - 8:00	0	0	0	2	0	1
8:00 - 8:15	0	0	0	0	0	0
8:15 - 8:30	0	0	0	0	0	0
8:30 - 8:45	0	0	0	1	0	1
8:45 - 9:00	0	0	0	1	0	1

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	13	0	0	8	0
7:15 - 7:30	1	6	0	0	8	1
7:30 - 7:45	1	4	0	0	10	4
7:45 - 8:00	0	10	0	0	10	1
8:00 - 8:15	1	6	0	0	10	1
8:15 - 8:30	0	11	0	0	12	1
8:30 - 8:45	0	17	0	0	18	3
8:45 - 9:00	0	25	0	0	6	5



Roadway Count Summary

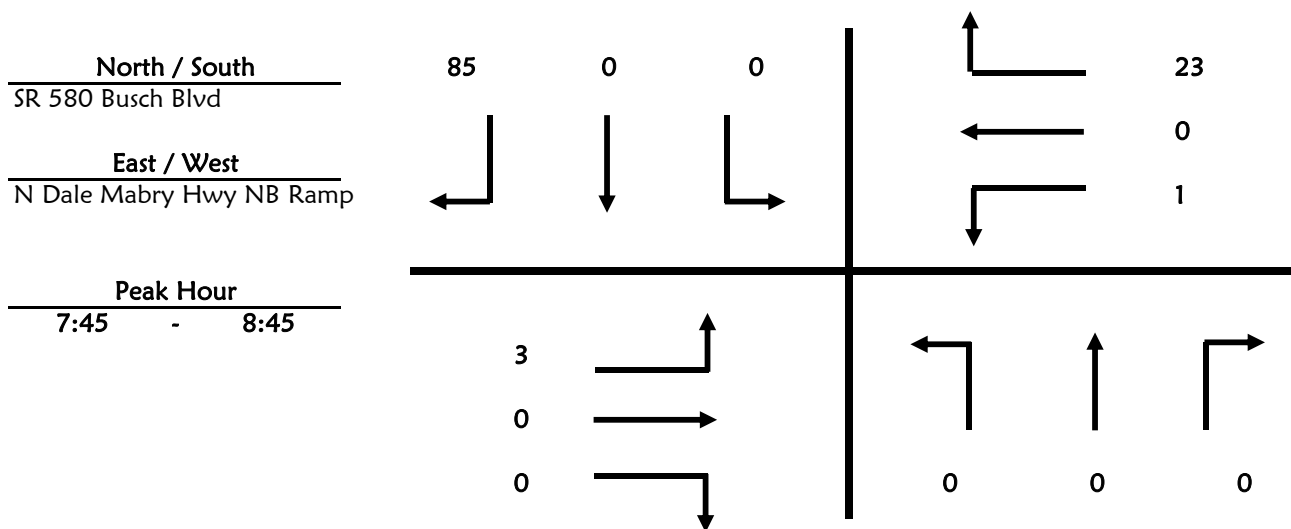
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Dale Mabry Hwy NB Ramp
Date Thursday, May 04, 2017 7:00 A
Time Period 7:00 to 9:00 **U-Turn & RTOR**

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	0	0	0	10
7:15 - 7:30	0	0	0	0	0	18
7:30 - 7:45	0	0	0	0	0	16
7:45 - 8:00	0	0	0	0	0	29
8:00 - 8:15	0	0	0	0	0	13
8:15 - 8:30	0	0	0	0	0	15
8:30 - 8:45	0	0	0	0	0	28
8:45 - 9:00	0	0	0	0	0	16

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	0	0	0	4
7:15 - 7:30	0	0	0	0	0	0
7:30 - 7:45	0	0	0	0	0	1
7:45 - 8:00	0	0	0	1	0	0
8:00 - 8:15	1	0	0	0	0	6
8:15 - 8:30	2	0	0	0	0	12
8:30 - 8:45	0	0	0	0	0	5
8:45 - 9:00	0	0	0	0	0	7



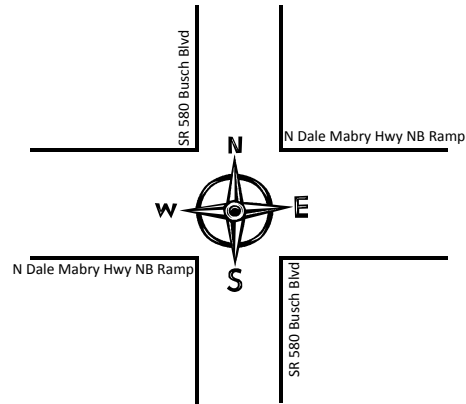
Pedestrian & Bicycle Summary

Project #: 62966
 Date: Thursday, May 04,

NB/SB: SR 580 Busch Blvd
 EB/WB: N Dale Mabry Hwy NB Ramp

		Hour								
		7:00	8:00	1	2	3	6	7	8	
Eastbound	Bike	0	0							0
	Ped	0	0							0
Westbound	Bike	0	1							1
	Ped	0	0							0

Hour	Southbound		Northbound	
	Ped ▼	Bike	Ped ▲	Bike
1 7:00	0	0	0	0
2 8:00	0	0	0	0
3				
4				
5				
6				
7				
8				
	0	0	0	0



Hour	Southbound		Northbound	
	Ped ▼	Bike	Ped ▲	Bike
1 7:00	0	0	0	0
2 8:00	0	0	0	0
3				
4				
5				
6				
7				
8				
	0	0	0	0

Eastbound	Bike	0	0							0
	Ped	0	0							0
Westbound	Bike	0	0							0
	Ped	0	0							0

		7:00	8:00	1	2	3	4	5	6	7	8

Hour

Roadway Count Summary

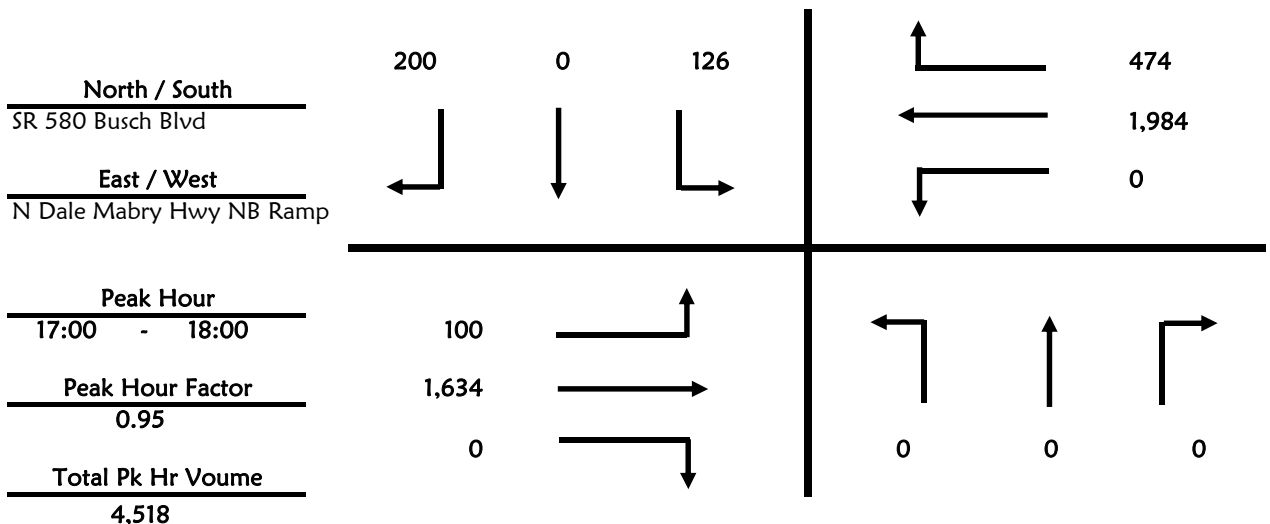
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Dale Mabry Hwy NB Ramp
Date Thursday, May 04, 2017 7:00 AM **All Vehicles**
Time Period 16:00 to 18:00

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	0	0	27	0	36
16:15 - 16:30	0	0	0	36	0	46
16:30 - 16:45	0	0	0	32	0	41
16:45 - 17:00	0	0	0	35	0	28
17:00 - 17:15	0	0	0	38	0	59
17:15 - 17:30	0	0	0	33	0	46
17:30 - 17:45	0	0	0	29	0	51
17:45 - 18:00	0	0	0	26	0	44
Total	0	0	0	256	0	351

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	22	409	0	0	463	109
16:15 - 16:30	17	413	0	0	484	110
16:30 - 16:45	34	442	0	0	490	104
16:45 - 17:00	20	384	0	0	464	103
17:00 - 17:15	26	458	0	0	494	120
17:15 - 17:30	22	410	0	0	520	102
17:30 - 17:45	25	411	0	0	512	126
17:45 - 18:00	27	355	0	0	458	126
Total	193	3,282	0	0	3,885	900



Roadway Count Summary

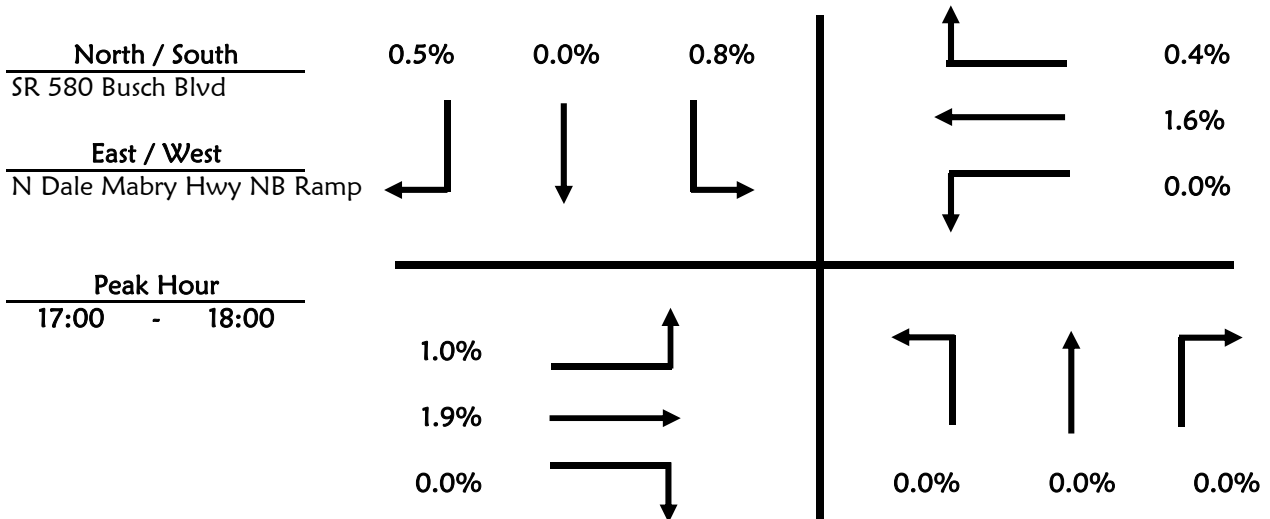
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Dale Mabry Hwy NB Ramp
Date Thursday, May 04, 2017 7:00 .
Time Period 16:00 to 18:00 **Trucks**

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	0	0	1	0	0
16:15 - 16:30	0	0	0	0	0	1
16:30 - 16:45	0	0	0	1	0	2
16:45 - 17:00	0	0	0	0	0	0
17:00 - 17:15	0	0	0	1	0	0
17:15 - 17:30	0	0	0	0	0	0
17:30 - 17:45	0	0	0	0	0	1
17:45 - 18:00	0	0	0	0	0	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	6	0	0	11	2
16:15 - 16:30	0	8	0	0	9	1
16:30 - 16:45	0	10	0	0	6	2
16:45 - 17:00	0	12	0	0	6	1
17:00 - 17:15	0	9	0	0	10	0
17:15 - 17:30	0	6	0	0	9	1
17:30 - 17:45	0	9	0	0	4	1
17:45 - 18:00	1	7	0	0	8	0



Roadway Count Summary

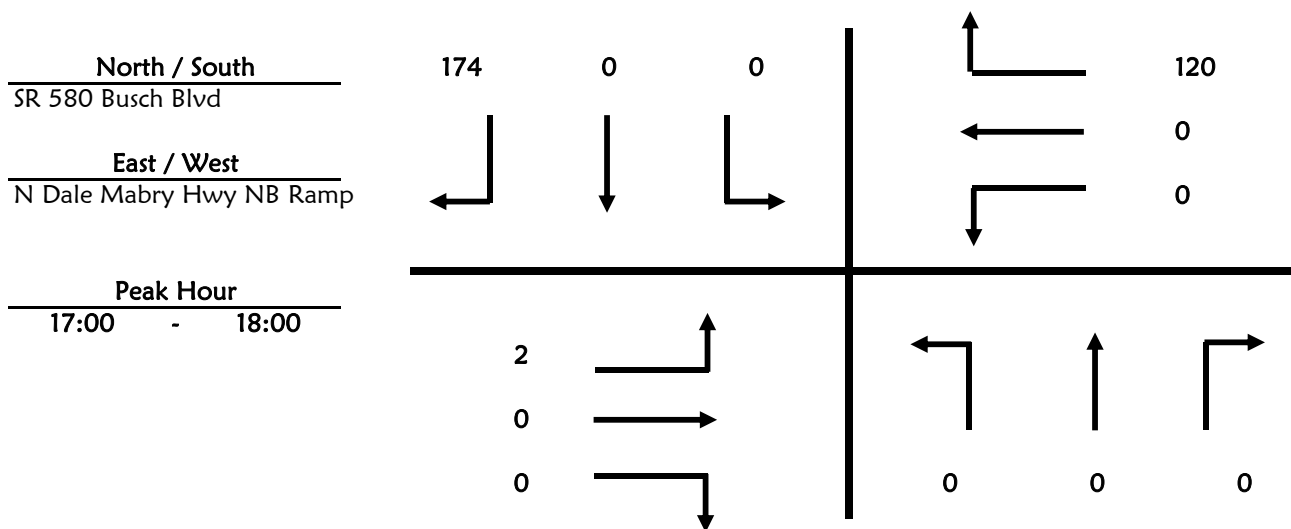
Vanasse Hangen Brustlin, Inc.

County Hillsborough City Tampa
 Intersection SR 580 Busch Blvd & N Dale Mabry Hwy NB Ramp
 Date Thursday, May 04, 2017 7:00 A
 Time Period 16:00 to 18:00 U-Turn & RTOR

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	0	0	0	0	28
16:15 - 16:30	0	0	0	0	0	39
16:30 - 16:45	0	0	0	0	0	37
16:45 - 17:00	0	0	0	0	0	20
17:00 - 17:15	0	0	0	0	0	54
17:15 - 17:30	0	0	0	0	0	35
17:30 - 17:45	0	0	0	0	0	47
17:45 - 18:00	0	0	0	0	0	38

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	1	0	0	0	0	29
16:15 - 16:30	1	0	0	0	0	24
16:30 - 16:45	3	0	0	0	0	27
16:45 - 17:00	0	0	0	0	0	29
17:00 - 17:15	1	0	0	0	0	27
17:15 - 17:30	1	0	0	0	0	31
17:30 - 17:45	0	0	0	0	0	32
17:45 - 18:00	0	0	0	0	0	30



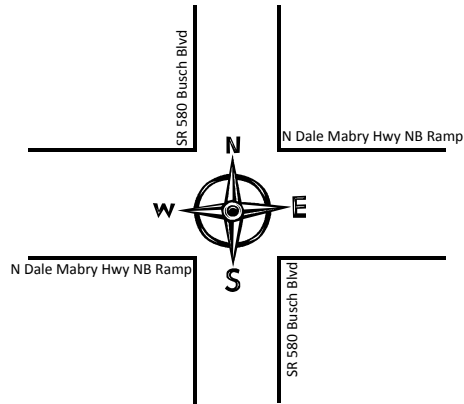
Pedestrian & Bicycle Summary

Project #: 62966
 Date: Thursday, May 04,

NB/SB: SR 580 Busch Blvd
 EB/WB: N Dale Mabry Hwy NB Ramp

		Hour								
		16:00	17:00							
		1	2	3	4	5	6	7	8	
Eastbound	Bike	0	0							0
	Ped	0	0							0
Westbound	Bike	0	0							0
	Ped	0	1							1

Hour	Southbound		Northbound	
	Ped ▼	Bike	Ped ▲	Bike
1 16:00	0	0	0	0
2 17:00	0	0	0	0
3				
4				
5				
6				
7				
8				
	0	0	0	0



Hour	Southbound		Northbound	
	Ped ▼	Bike	Ped ▲	Bike
1 16:00	0	0	0	0
2 17:00	0	0	0	0
3				
4				
5				
6				
7				
8				
	0	0	0	0

Eastbound	Bike	0	0							0
	Ped	0	0							0
Westbound	Bike	0	0							0
	Ped	0	0							0

		16:00	17:00							
		1	2	3	4	5	6	7	8	
Hour										

Roadway Count Summary

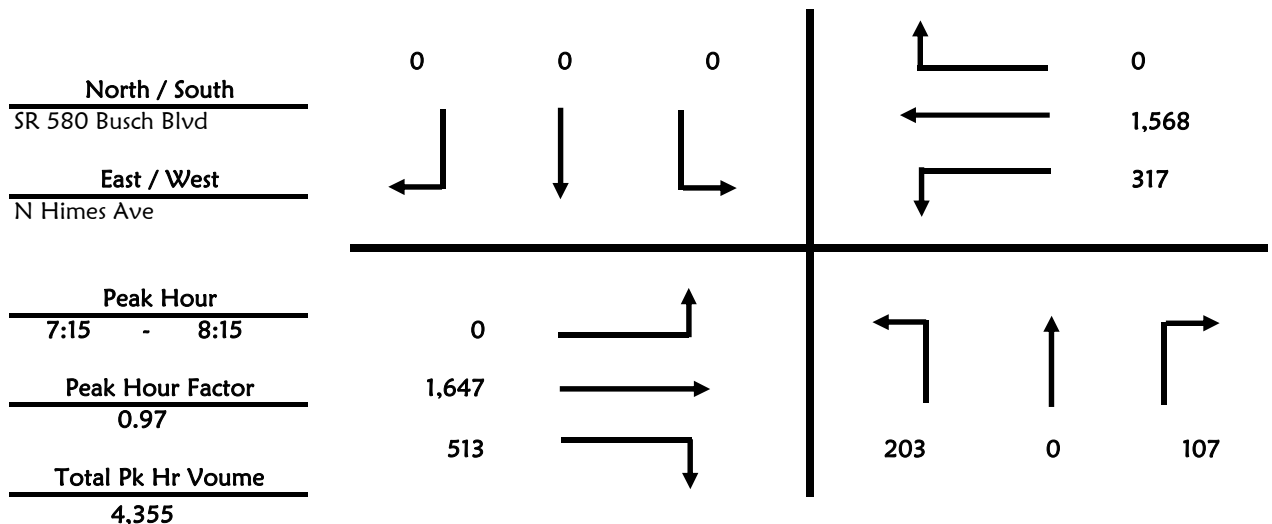
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Himes Ave
Date Tuesday, May 09, 2017 7:00 AM **All Vehicles**
Time Period 7:00 to 9:00

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	41	0	24	0	0	0
7:15 - 7:30	44	0	38	0	0	0
7:30 - 7:45	49	0	17	0	0	0
7:45 - 8:00	47	0	21	0	0	0
8:00 - 8:15	63	0	31	0	0	0
8:15 - 8:30	48	0	26	0	0	0
8:30 - 8:45	43	0	27	0	0	0
8:45 - 9:00	37	0	32	0	0	0
Total	372	0	216	0	0	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	501	102	66	322	0
7:15 - 7:30	0	404	136	74	374	0
7:30 - 7:45	0	450	109	70	391	0
7:45 - 8:00	0	402	141	94	414	0
8:00 - 8:15	0	391	127	79	389	0
8:15 - 8:30	0	409	148	80	333	0
8:30 - 8:45	0	405	126	71	372	0
8:45 - 9:00	0	315	91	68	372	0
Total	0	3,277	980	602	2,967	0



Roadway Count Summary

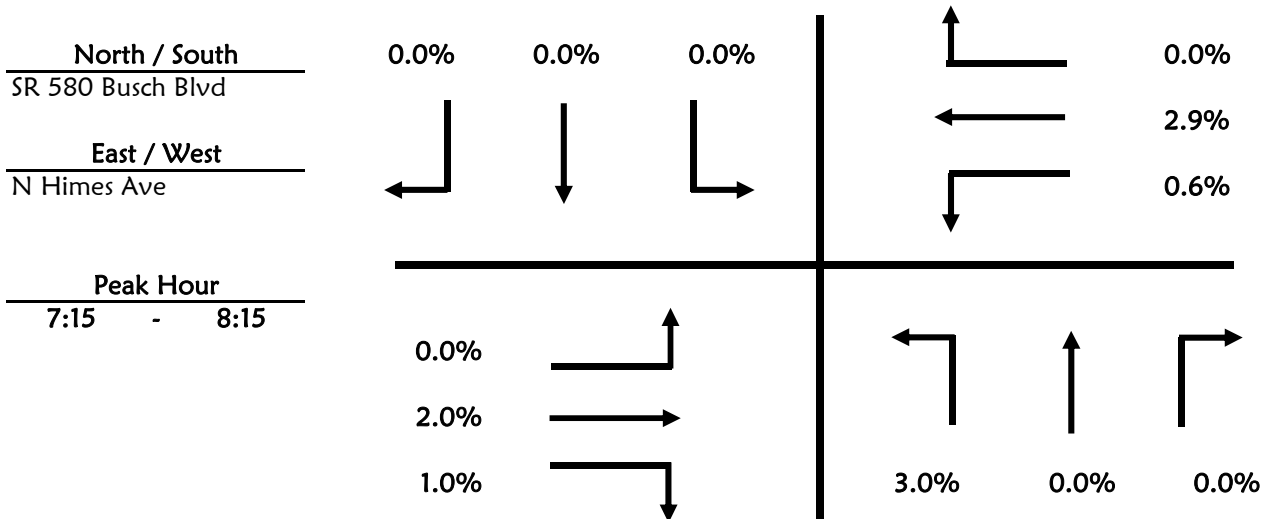
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Himes Ave
Date Tuesday, May 09, 2017 7:00 A
Time Period 7:00 to 9:00

Trucks
VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	1	0	0	0	0	0
7:15 - 7:30	1	0	0	0	0	0
7:30 - 7:45	1	0	0	0	0	0
7:45 - 8:00	1	0	0	0	0	0
8:00 - 8:15	3	0	0	0	0	0
8:15 - 8:30	0	0	0	0	0	0
8:30 - 8:45	2	0	1	0	0	0
8:45 - 9:00	0	0	1	0	0	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	13	2	0	16	0
7:15 - 7:30	0	6	0	0	16	0
7:30 - 7:45	0	6	2	1	11	0
7:45 - 8:00	0	10	1	0	11	0
8:00 - 8:15	0	11	2	1	8	0
8:15 - 8:30	0	8	1	0	9	0
8:30 - 8:45	0	13	4	0	15	0
8:45 - 9:00	0	17	0	0	15	0



Roadway Count Summary

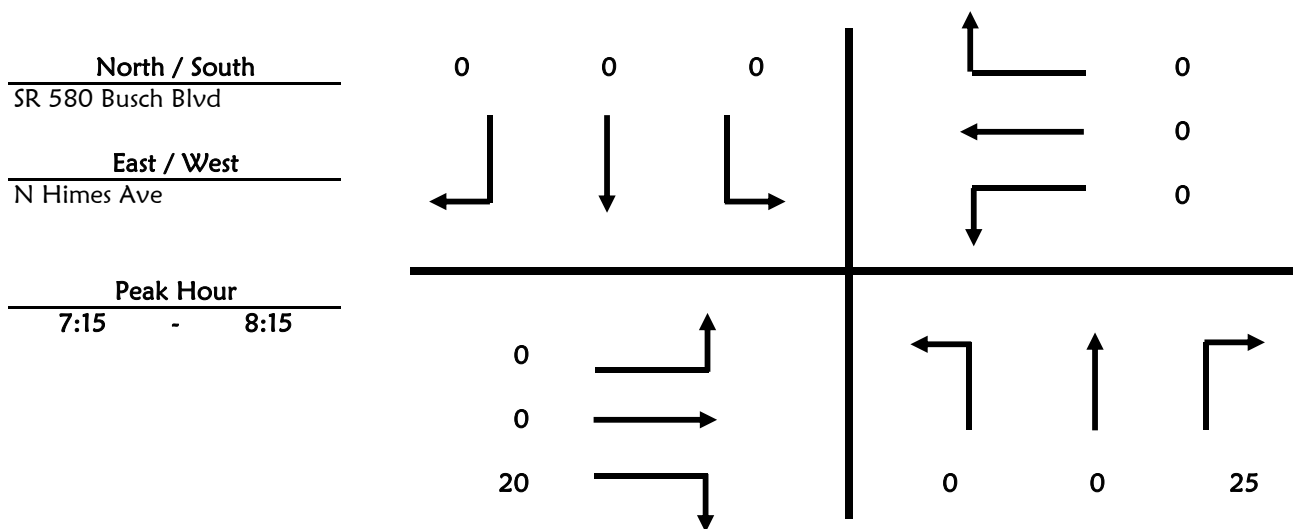
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Himes Ave
Date Tuesday, May 09, 2017 7:00 AM
Time Period 7:00 to 9:00 **U-Turn & RTOR**

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	8	0	0	0
7:15 - 7:30	0	0	6	0	0	0
7:30 - 7:45	0	0	9	0	0	0
7:45 - 8:00	0	0	2	0	0	0
8:00 - 8:15	0	0	8	0	0	0
8:15 - 8:30	0	0	9	0	0	0
8:30 - 8:45	0	0	3	0	0	0
8:45 - 9:00	0	0	10	0	0	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	1	0	0	0
7:15 - 7:30	0	0	2	0	0	0
7:30 - 7:45	0	0	1	0	0	0
7:45 - 8:00	0	0	7	0	0	0
8:00 - 8:15	0	0	10	0	0	0
8:15 - 8:30	0	0	8	0	0	0
8:30 - 8:45	0	0	7	0	0	0
8:45 - 9:00	0	0	6	0	0	0



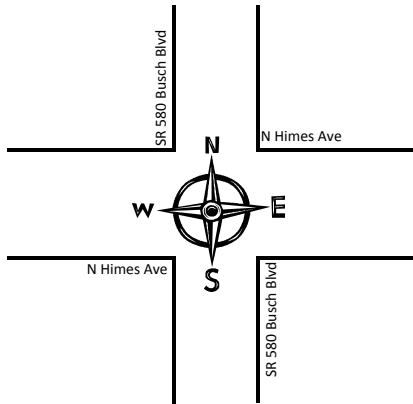
Pedestrian & Bicycle Summary

Project #: 62966
 Date: Tuesday, May 09, 2017

NB/SB: SR 580 Busch Blvd
 EB/WB: N Himes Ave

		Hour								
		7:00	8:00	1	2	3	6	7	8	
Eastbound	Bike	0	0							0
	Ped	0	0							0
Westbound	Bike	0	0							0
	Ped	0	0							0

Hour	Southbound		Northbound	
	Ped ▼	Bike	Ped ▲	Bike
1 7:00	0	0	0	0
2 8:00	0	0	0	0
3				
4				
5				
6				
7				
8				
	0	0	0	0



Hour	Southbound		Northbound	
	Ped ▼	Bike	Ped ▲	Bike
1 7:00	2	1	2	0
2 8:00	3	0	1	0
3				
4				
5				
6				
7				
8				
	5	1	3	0

Eastbound	Bike	0	0							0
	Ped	0	0							0
Westbound	Bike	0	0							0
	Ped	3	1							4

		7:00	8:00	1	2	3	4	5	6	7	8
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Roadway Count Summary

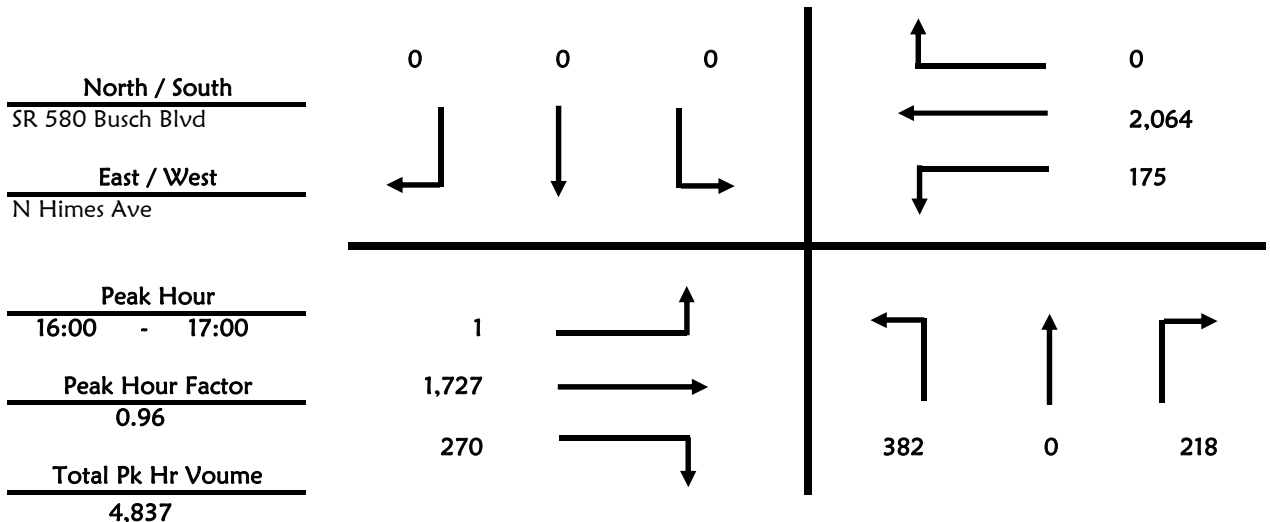
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Himes Ave
Date Tuesday, May 09, 2017 7:00 AM **All Vehicles**
Time Period 16:00 to 18:00

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	79	0	47	0	0	0
16:15 - 16:30	93	0	62	0	0	0
16:30 - 16:45	108	0	51	0	0	0
16:45 - 17:00	102	0	58	0	0	0
17:00 - 17:15	121	0	44	0	0	0
17:15 - 17:30	122	0	44	0	0	0
17:30 - 17:45	129	0	38	0	0	0
17:45 - 18:00	105	0	50	0	0	0
Total	859	0	394	0	0	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	418	66	47	548	0
16:15 - 16:30	0	453	72	46	499	0
16:30 - 16:45	0	471	58	37	530	0
16:45 - 17:00	1	385	74	45	487	0
17:00 - 17:15	0	288	71	40	445	0
17:15 - 17:30	0	310	97	29	474	0
17:30 - 17:45	0	301	62	30	455	0
17:45 - 18:00	0	308	86	32	466	0
Total	1	2,934	586	306	3,904	0



Roadway Count Summary

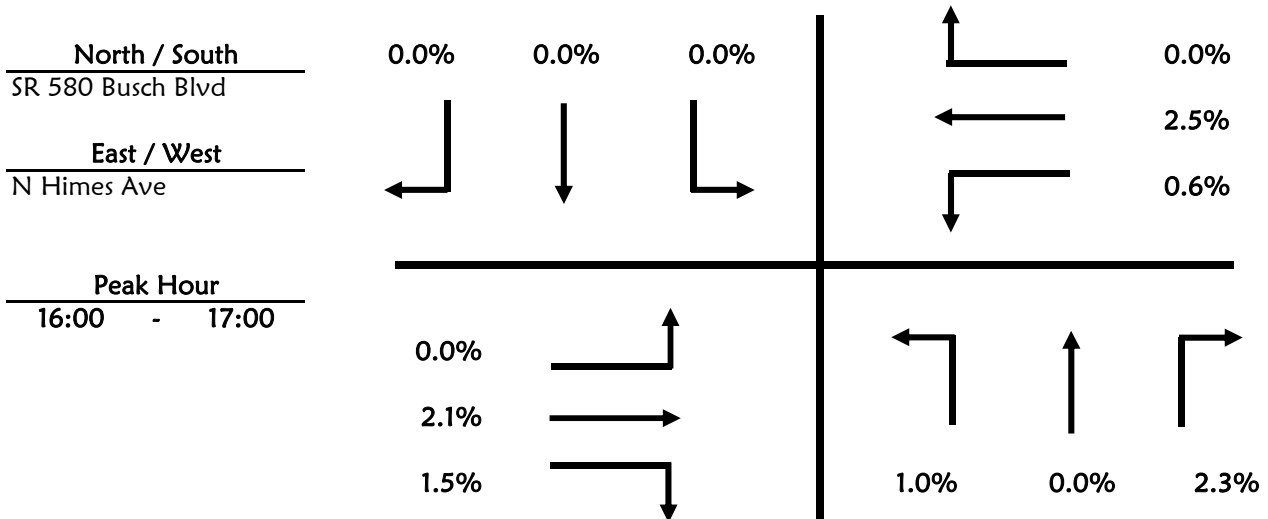
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Himes Ave
Date Tuesday, May 09, 2017 7:00 A
Time Period 16:00 to 18:00

Trucks
VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	1	0	2	0	0	0
16:15 - 16:30	1	0	2	0	0	0
16:30 - 16:45	2	0	0	0	0	0
16:45 - 17:00	0	0	1	0	0	0
17:00 - 17:15	0	0	0	0	0	0
17:15 - 17:30	1	0	0	0	0	0
17:30 - 17:45	0	0	0	0	0	0
17:45 - 18:00	1	0	0	0	0	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	5	1	1	22	0
16:15 - 16:30	0	14	0	0	10	0
16:30 - 16:45	0	8	1	0	11	0
16:45 - 17:00	0	9	2	0	8	0
17:00 - 17:15	0	9	0	0	6	0
17:15 - 17:30	0	5	1	0	4	0
17:30 - 17:45	0	10	0	0	9	0
17:45 - 18:00	0	9	1	0	8	0



Roadway Count Summary

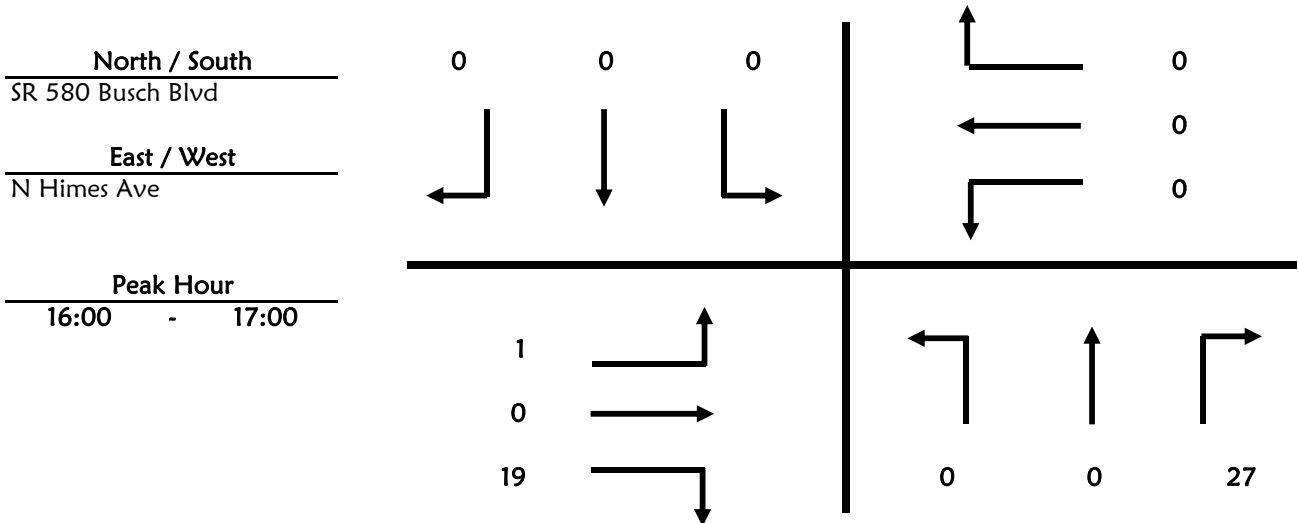
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Himes Ave
Date Tuesday, May 09, 2017 7:00 AM
Time Period 16:00 to 18:00 **U-Turn & RTOR**

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	0	7	0	0	0
16:15 - 16:30	0	0	8	0	0	0
16:30 - 16:45	0	0	5	0	0	0
16:45 - 17:00	0	0	7	0	0	0
17:00 - 17:15	0	0	5	0	0	0
17:15 - 17:30	0	0	2	0	0	0
17:30 - 17:45	0	0	4	0	0	0
17:45 - 18:00	0	0	8	0	0	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	0	4	0	0	0
16:15 - 16:30	0	0	8	0	0	0
16:30 - 16:45	0	0	4	0	0	0
16:45 - 17:00	1	0	3	0	0	0
17:00 - 17:15	0	0	30	0	0	0
17:15 - 17:30	0	0	31	0	0	0
17:30 - 17:45	0	0	25	0	0	0
17:45 - 18:00	0	0	38	0	0	0



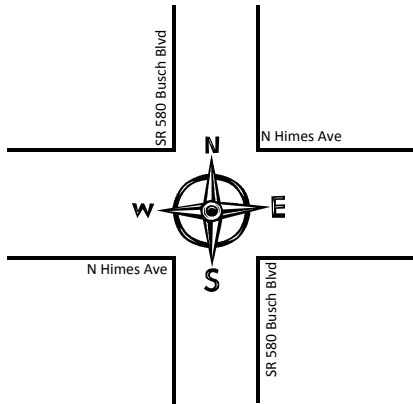
Pedestrian & Bicycle Summary

Project #: 62966
 Date: Tuesday, May 09, 2017

NB/SB: SR 580 Busch Blvd
 EB/WB: N Himes Ave

		Hour									
		16:00		17:00							
		1	2	3	4	5	6	7	8		
Eastbound	Bike	0	0							0	
	Ped	0	0							0	
Westbound	Bike	0	0							0	
	Ped	0	0							0	

		Southbound		Northbound	
Hour		Ped ▼	Bike	Ped ▲	Bike
1	16:00	0	0	0	0
2	17:00	0	0	0	0
3					
4					
5					
6					
7					
8					
		0	0	0	0



		Southbound		Northbound			
Hour		Ped ▼	Bike	Ped ▲	Bike		
1	16:00	0	2	1	4		
2	17:00	1	3	1	1		
3							
4							
5							
6							
7							
8							
		1	5	2	5		

Eastbound	Bike	0	0							0	
	Ped	0	1							1	
Westbound	Bike	4	4							8	
	Ped	0	0							0	

		Hour							
		16:00		17:00					
		1	2	3	4	5	6	7	8

Roadway Count Summary

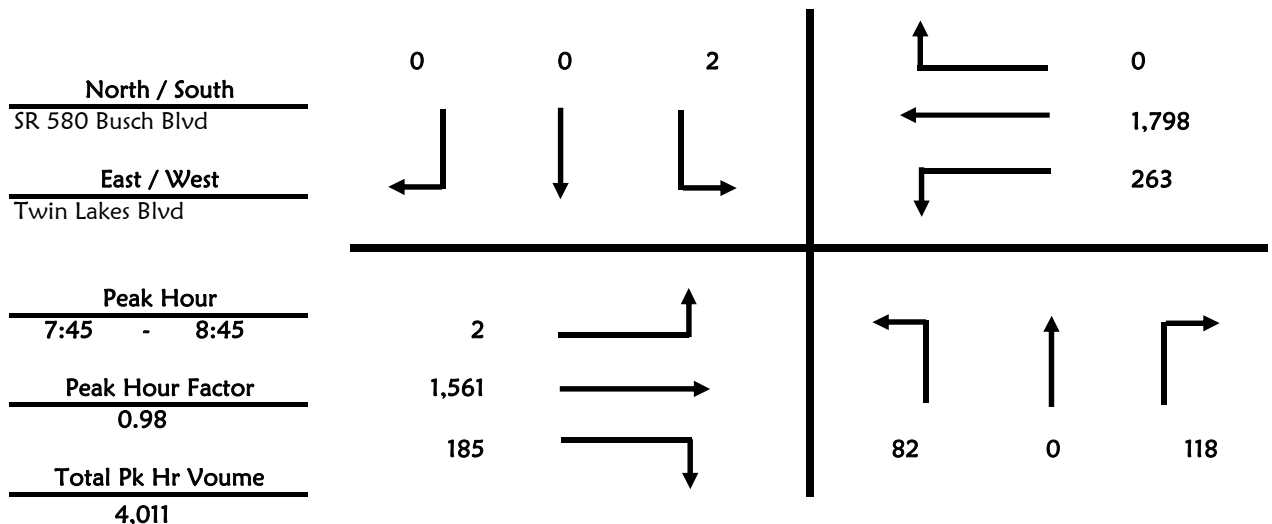
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & Twin Lakes Blvd
Date Thursday, May 04, 2017 7:00 AM **All Vehicles**
Time Period 7:00 to 9:00

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	6	0	32	0	1	0
7:15 - 7:30	19	0	23	0	2	0
7:30 - 7:45	17	0	34	0	1	0
7:45 - 8:00	17	0	27	1	0	0
8:00 - 8:15	26	0	34	1	0	0
8:15 - 8:30	20	0	30	0	0	0
8:30 - 8:45	19	0	27	0	0	0
8:45 - 9:00	16	0	26	0	0	1
	140	0	233	2	4	1

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	2	413	78	50	406	0
7:15 - 7:30	1	392	84	56	398	0
7:30 - 7:45	0	388	55	63	465	0
7:45 - 8:00	0	366	51	86	474	0
8:00 - 8:15	1	360	50	73	432	0
8:15 - 8:30	1	395	48	61	431	0
8:30 - 8:45	0	440	36	43	461	0
8:45 - 9:00	1	361	34	55	409	0
	6	3,115	436	487	3,476	0



Roadway Count Summary

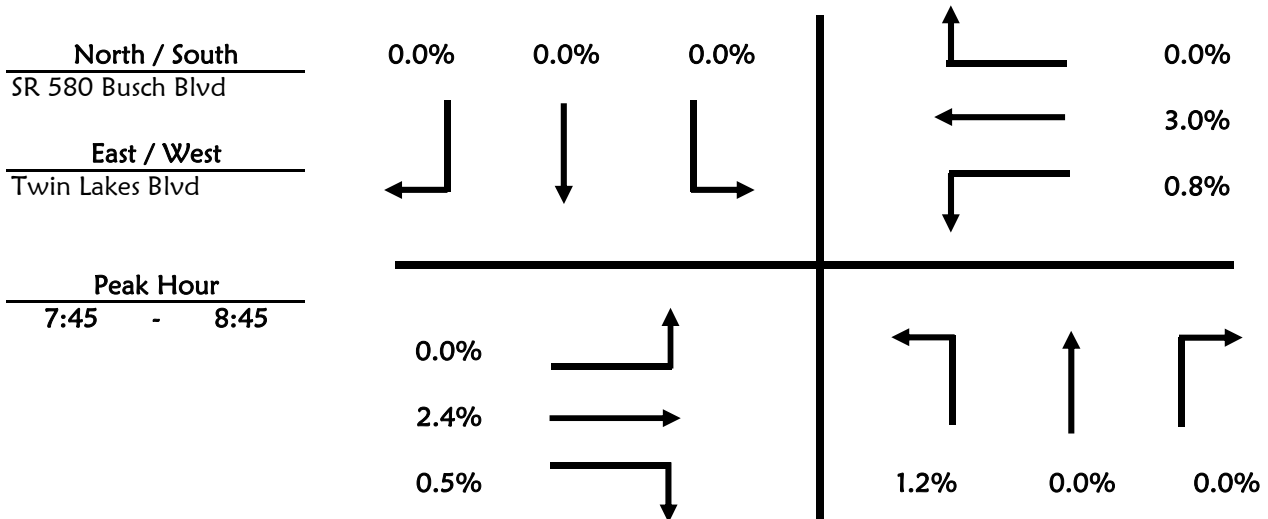
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & Twin Lakes Blvd
Date Thursday, May 04, 2017 7:00 .
Time Period 7:00 to 9:00

Trucks
VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	0	0	0	0
7:15 - 7:30	1	0	0	0	0	0
7:30 - 7:45	0	0	0	0	0	0
7:45 - 8:00	0	0	0	0	0	0
8:00 - 8:15	0	0	0	0	0	0
8:15 - 8:30	1	0	0	0	0	0
8:30 - 8:45	0	0	0	0	0	0
8:45 - 9:00	0	0	0	0	0	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	11	0	0	3	0
7:15 - 7:30	0	6	0	0	11	0
7:30 - 7:45	0	5	0	0	8	0
7:45 - 8:00	0	14	0	0	10	0
8:00 - 8:15	0	4	0	1	12	0
8:15 - 8:30	0	7	0	1	13	0
8:30 - 8:45	0	12	1	0	19	0
8:45 - 9:00	0	24	0	1	9	0



Roadway Count Summary

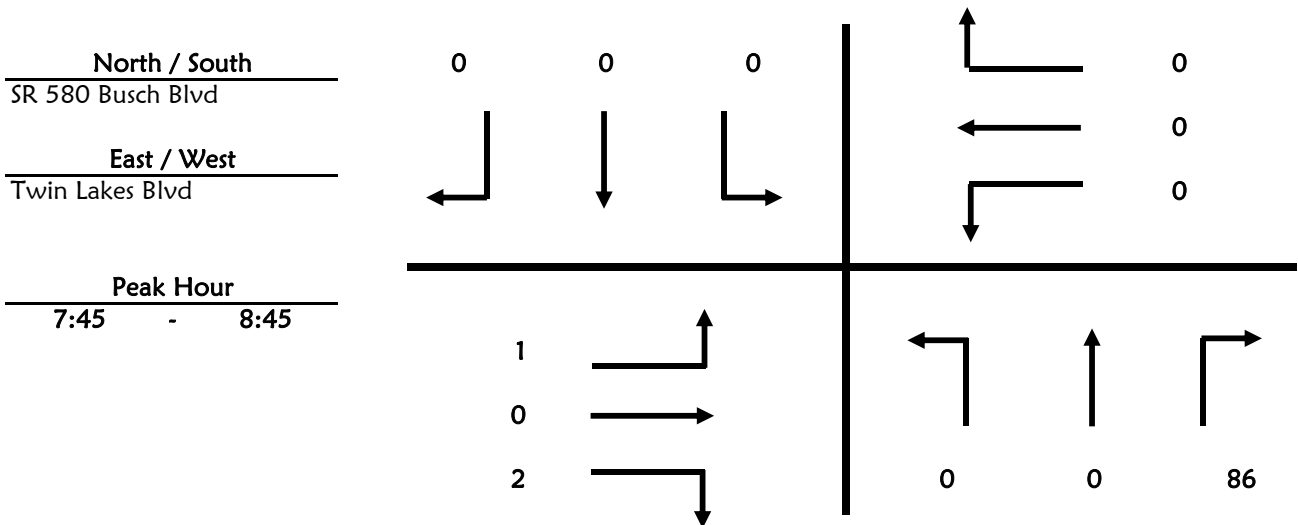
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & Twin Lakes Blvd
Date Thursday, May 04, 2017 7:00 A
Time Period 7:00 to 9:00 **U-Turn & RTOR**

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	27	0	0	0
7:15 - 7:30	0	0	20	0	0	0
7:30 - 7:45	0	0	30	0	0	0
7:45 - 8:00	0	0	19	0	0	0
8:00 - 8:15	0	0	22	0	0	0
8:15 - 8:30	0	0	27	0	0	0
8:30 - 8:45	0	0	18	0	0	0
8:45 - 9:00	0	0	20	0	0	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	3	0	0	0
7:15 - 7:30	1	0	0	0	0	0
7:30 - 7:45	0	0	0	0	0	0
7:45 - 8:00	0	0	0	0	0	0
8:00 - 8:15	1	0	0	0	0	0
8:15 - 8:30	0	0	1	0	0	0
8:30 - 8:45	0	0	1	0	0	0
8:45 - 9:00	0	0	0	0	0	0



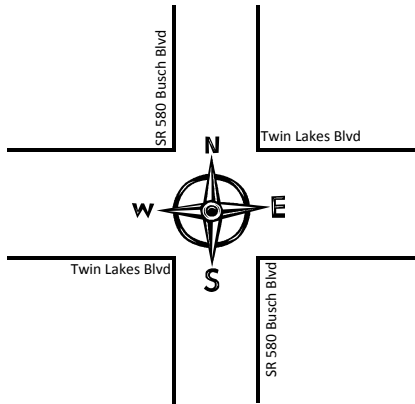
Pedestrian & Bicycle Summary

Project #: 62966
 Date: Thursday, May 04,

NB/SB: SR 580 Busch Blvd
 EB/WB: Twin Lakes Blvd

		Hour								
		7:00	8:00							
		1	2	3	6	7	8			
Eastbound	Bike	0	0							0
	Ped	0	1							1
Westbound	Bike	1	1							2
	Ped	0	0							0

		Southbound		Northbound	
Hour		Ped	Bike	Ped	Bike
1	7:00	0	0	0	0
2	8:00	0	0	1	0
3					
4					
5					
6					
7					
8					
		0	0	1	0



		Southbound		Northbound			
Hour		Ped	Bike	Ped	Bike	Hour	
1	7:00	0	0	0	0	1	7:00
2	8:00	1	0	1	0	2	8:00
3						3	
4						4	
5						5	
6						6	
7						7	
8						8	
		1	0	1	0		

Eastbound	Bike	0	0							0
	Ped	0	0							0
Westbound	Bike	0	0							0
	Ped	1	0							1

		7:00	8:00						
		1	2	3	4	5	6	7	8

Hour

Roadway Count Summary

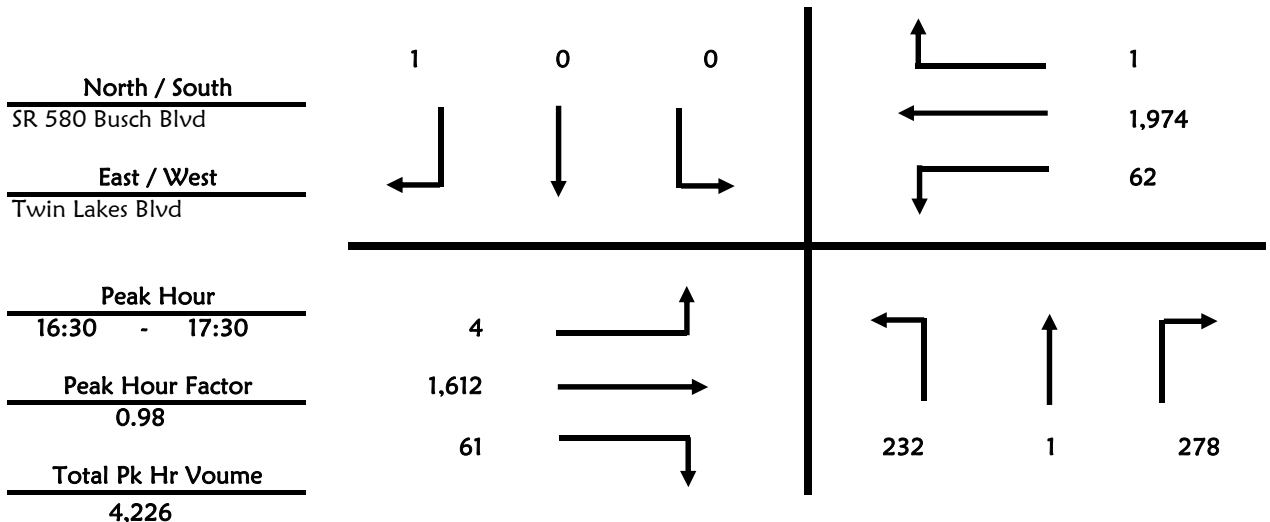
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & Twin Lakes Blvd
Date Thursday, May 04, 2017 7:00 AM **All Vehicles**
Time Period 16:00 to 18:00

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	45	0	49	0	0	0
16:15 - 16:30	58	0	53	0	0	0
16:30 - 16:45	70	0	66	0	0	0
16:45 - 17:00	40	0	45	0	0	0
17:00 - 17:15	56	0	86	0	0	0
17:15 - 17:30	66	1	81	0	0	1
17:30 - 17:45	55	0	69	0	1	0
17:45 - 18:00	55	0	71	0	0	1
Total	445	1	520	0	1	2

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	1	405	18	16	451	0
16:15 - 16:30	1	410	13	15	466	1
16:30 - 16:45	0	419	13	12	496	0
16:45 - 17:00	2	432	19	18	467	1
17:00 - 17:15	1	383	15	15	504	0
17:15 - 17:30	1	378	14	17	507	0
17:30 - 17:45	3	388	22	21	460	0
17:45 - 18:00	1	383	19	20	455	1
Total	10	3,198	133	134	3,806	3



Roadway Count Summary

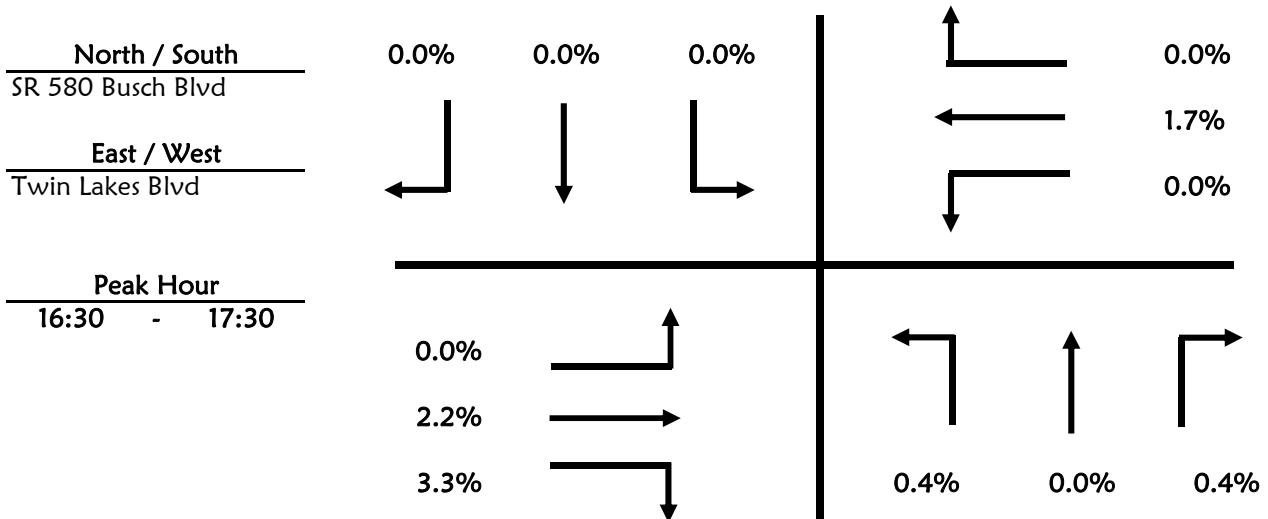
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & Twin Lakes Blvd
Date Thursday, May 04, 2017 7:00 .
Time Period 16:00 to 18:00

Trucks
VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	2	0	0	0	0	0
16:15 - 16:30	0	0	1	0	0	0
16:30 - 16:45	0	0	0	0	0	0
16:45 - 17:00	0	0	1	0	0	0
17:00 - 17:15	1	0	0	0	0	0
17:15 - 17:30	0	0	0	0	0	0
17:30 - 17:45	1	0	0	0	0	0
17:45 - 18:00	0	0	0	0	0	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	5	0	0	14	0
16:15 - 16:30	0	6	0	0	9	0
16:30 - 16:45	0	10	0	0	8	0
16:45 - 17:00	0	12	2	0	7	0
17:00 - 17:15	0	7	0	0	12	0
17:15 - 17:30	0	7	0	0	7	0
17:30 - 17:45	0	7	1	0	2	0
17:45 - 18:00	0	4	0	0	8	0



Roadway Count Summary

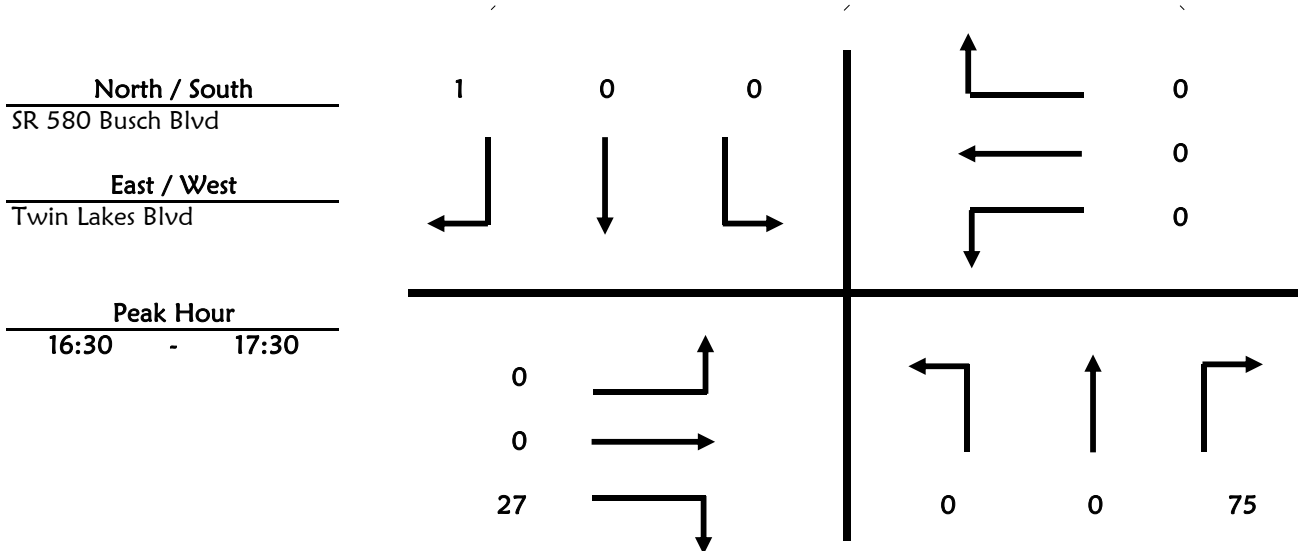
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & Twin Lakes Blvd
Date Thursday, May 04, 2017 7:00 A
Time Period 16:00 to 18:00 **U-Turn & RTOR**

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	0	24	0	0	0
16:15 - 16:30	0	0	15	0	0	0
16:30 - 16:45	0	0	29	0	0	0
16:45 - 17:00	0	0	5	0	0	0
17:00 - 17:15	0	0	22	0	0	0
17:15 - 17:30	0	0	19	0	0	1
17:30 - 17:45	0	0	14	0	0	0
17:45 - 18:00	0	0	11	0	0	1

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	1	0	5	0	0	0
16:15 - 16:30	0	0	5	0	0	0
16:30 - 16:45	0	0	5	0	0	0
16:45 - 17:00	0	0	9	0	0	0
17:00 - 17:15	0	0	7	0	0	0
17:15 - 17:30	0	0	6	0	0	0
17:30 - 17:45	2	0	7	0	0	0
17:45 - 18:00	0	0	8	0	0	0



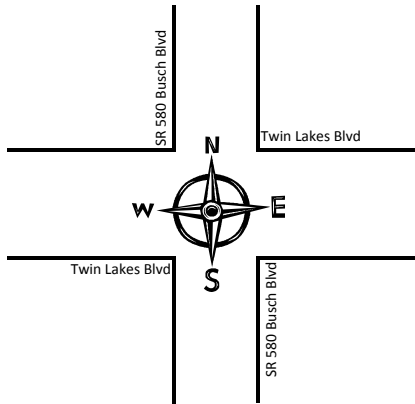
Pedestrian & Bicycle Summary

Project #: 62966
 Date: Thursday, May 04,

NB/SB: SR 580 Busch Blvd
 EB/WB: Twin Lakes Blvd

		Hour							
		16:00		17:00					
		1	2	3	6	7	8		
Eastbound	Bike	1	0						1
	Ped	2	1						3
Westbound	Bike	0	1						1
	Ped	1	0						1

		Southbound		Northbound	
Hour		Ped ▼	Bike	Ped ▲	Bike
1	16:00	0	0	0	0
2	17:00	0	0	0	0
3					
4					
5					
6					
7					
8					
		0	0	0	0



		Southbound		Northbound			
Hour		Ped ▼	Bike	Ped ▲	Bike		
1	16:00	0	0	0	0		
2	17:00	0	0	0	0		
3							
4							
5							
6							
7							
8							
		0	0	0	0		

Eastbound	Bike	3	0						3
	Ped	0	0						0
Westbound	Bike	1	0						1
	Ped	0	0						0

		Hour							
		16:00		17:00					
		1	2	3	4	5	6	7	8

Roadway Count Summary

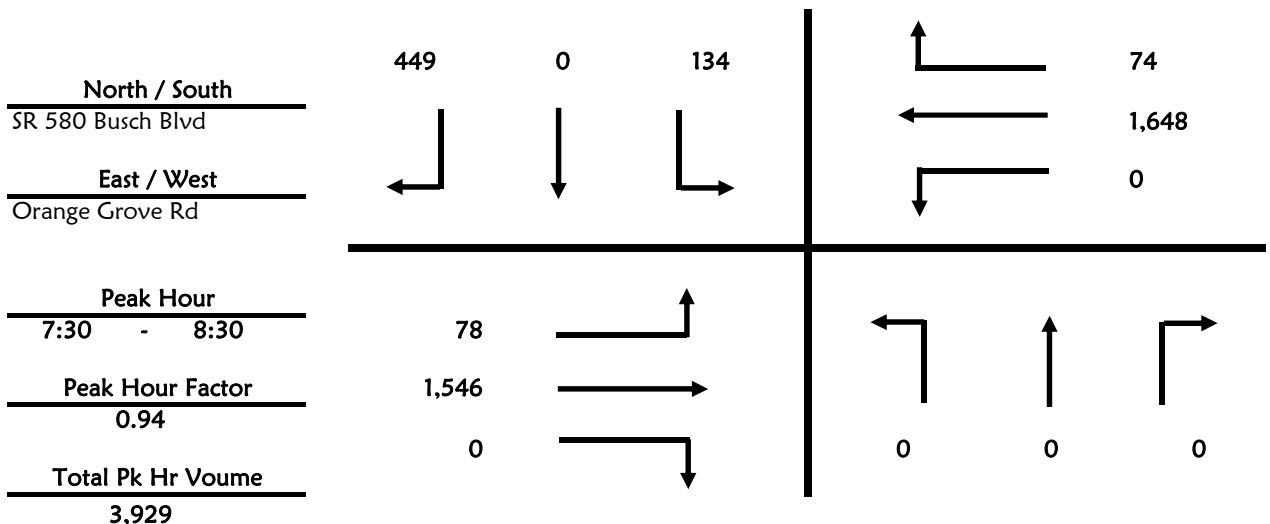
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & Orange Grove Rd
Date Thursday, May 04, 2017 7:00 AM **All Vehicles**
Time Period 7:00 to 9:00

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	0	33	0	125
7:15 - 7:30	0	0	0	46	0	122
7:30 - 7:45	0	0	0	39	0	130
7:45 - 8:00	0	0	0	34	0	121
8:00 - 8:15	0	0	0	37	0	116
8:15 - 8:30	0	0	0	24	0	82
8:30 - 8:45	0	0	0	18	0	71
8:45 - 9:00	0	0	0	18	0	59
Total	0	0	0	249	0	826

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	34	415	0	0	310	4
7:15 - 7:30	14	375	0	0	336	12
7:30 - 7:45	24	407	0	0	420	25
7:45 - 8:00	16	390	0	0	416	17
8:00 - 8:15	21	355	0	0	413	14
8:15 - 8:30	17	394	0	0	399	18
8:30 - 8:45	26	432	0	0	451	18
8:45 - 9:00	30	348	0	0	373	18
Total	182	3,116	0	0	3,118	126



Roadway Count Summary

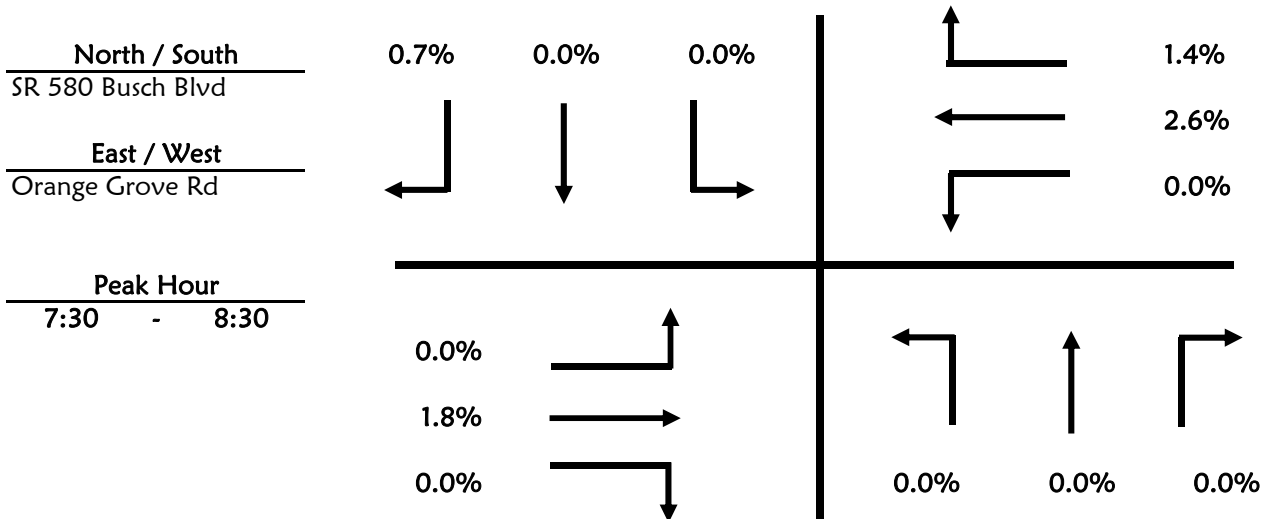
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & Orange Grove Rd
Date Thursday, May 04, 2017 7:00 .
Time Period 7:00 to 9:00

Trucks
VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	0	0	0	0
7:15 - 7:30	0	0	0	0	0	0
7:30 - 7:45	0	0	0	0	0	0
7:45 - 8:00	0	0	0	0	0	2
8:00 - 8:15	0	0	0	0	0	1
8:15 - 8:30	0	0	0	0	0	0
8:30 - 8:45	0	0	0	0	0	0
8:45 - 9:00	0	0	0	0	0	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	10	0	0	5	0
7:15 - 7:30	0	6	0	0	11	0
7:30 - 7:45	0	5	0	0	8	0
7:45 - 8:00	0	13	0	0	9	0
8:00 - 8:15	0	4	0	0	11	0
8:15 - 8:30	0	6	0	0	15	1
8:30 - 8:45	2	11	0	0	12	1
8:45 - 9:00	1	20	0	0	12	0



Roadway Count Summary

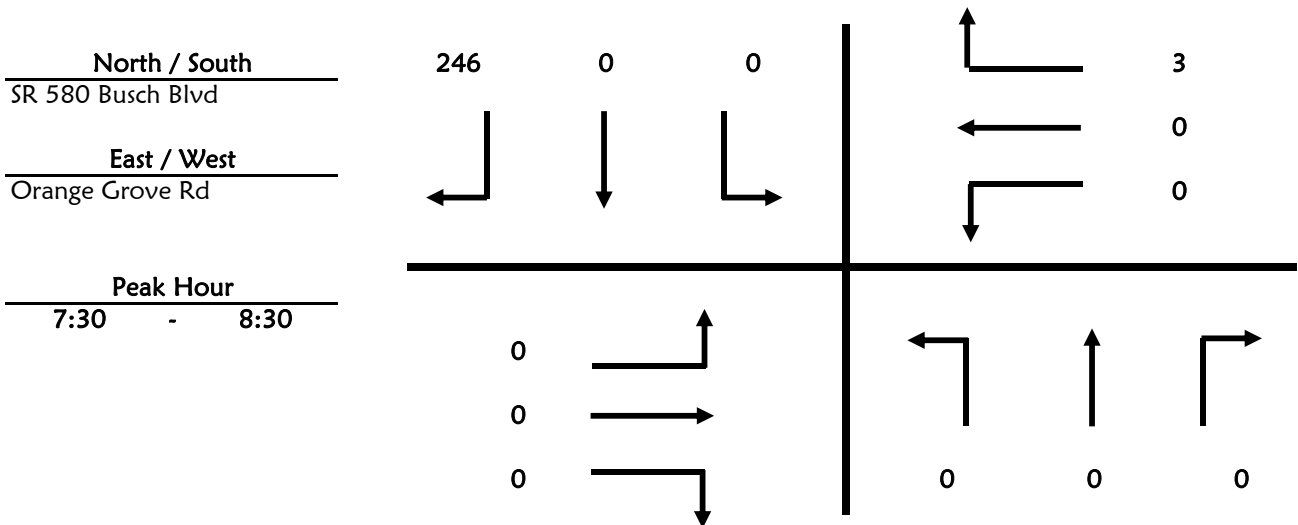
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & Orange Grove Rd
Date Thursday, May 04, 2017 7:00 A
Time Period 7:00 to 9:00 **U-Turn & RTOR**

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	0	0	0	75
7:15 - 7:30	0	0	0	0	0	61
7:30 - 7:45	0	0	0	0	0	61
7:45 - 8:00	0	0	0	0	0	72
8:00 - 8:15	0	0	0	0	0	55
8:15 - 8:30	0	0	0	0	0	58
8:30 - 8:45	0	0	0	0	0	40
8:45 - 9:00	0	0	0	0	0	29

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	0	0	0	0
7:15 - 7:30	0	0	0	0	0	1
7:30 - 7:45	0	0	0	0	0	2
7:45 - 8:00	0	0	0	0	0	0
8:00 - 8:15	0	0	0	0	0	0
8:15 - 8:30	0	0	0	0	0	1
8:30 - 8:45	0	0	0	0	0	3
8:45 - 9:00	0	0	0	0	0	5



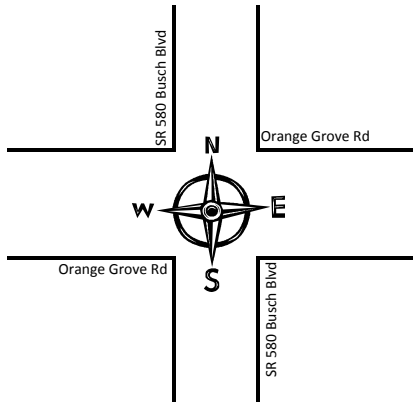
Pedestrian & Bicycle Summary

Project #: 62966
 Date: Thursday, May 04,

NB/SB: SR 580 Busch Blvd
 EB/WB: Orange Grove Rd

		Hour								
		7:00	8:00	1	2	3	6	7	8	
Eastbound	Bike	0	0							0
	Ped	0	0							0
Westbound	Bike	0	0							0
	Ped	0	0							0

		Southbound		Northbound	
Hour		Ped ▼	Bike	Ped ▲	Bike
1	7:00	0	0	0	0
2	8:00	0	0	0	0
3					
4					
5					
6					
7					
8					
		0	0	0	0



		Southbound		Northbound			
Hour		Ped ▼	Bike	Ped ▲	Bike	Hour	
1	7:00	0	0	0	0	1	7:00
2	8:00	0	0	0	0	2	8:00
3						3	
4						4	
5						5	
6						6	
7						7	
8						8	
		0	0	0	0		

Eastbound	Bike	0	0							0
	Ped	0	0							0
Westbound	Bike	0	0							0
	Ped	0	0							0

		7:00	8:00	1	2	3	4	5	6	7	8
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Roadway Count Summary

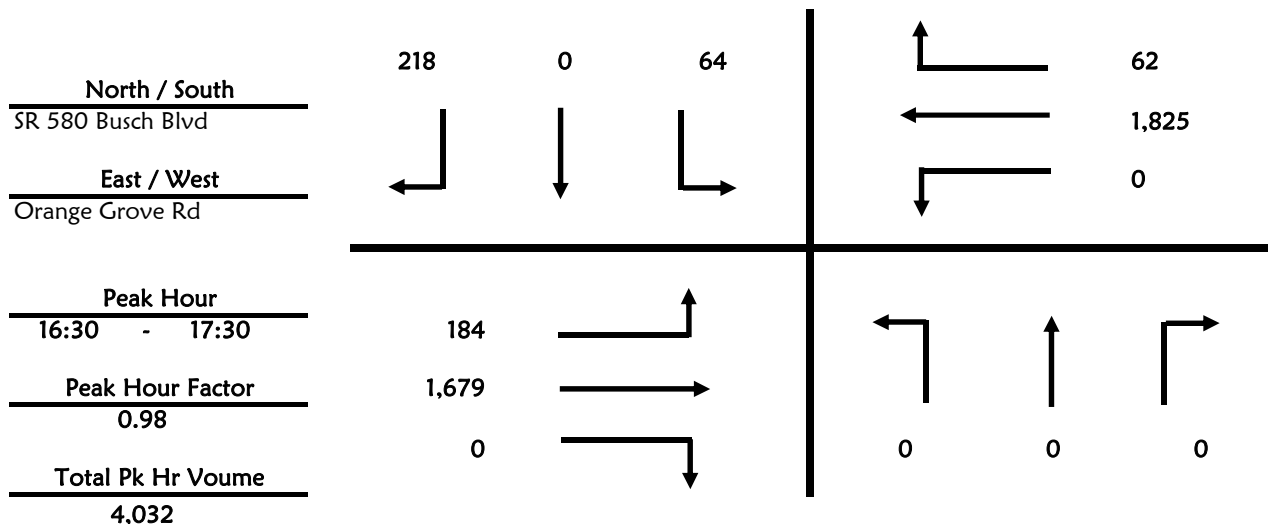
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & Orange Grove Rd
Date Thursday, May 04, 2017 7:00 AM **All Vehicles**
Time Period 16:00 to 18:00

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	0	0	16	0	48
16:15 - 16:30	0	0	0	12	0	40
16:30 - 16:45	0	0	0	10	0	56
16:45 - 17:00	0	0	0	12	0	42
17:00 - 17:15	0	0	0	21	0	64
17:15 - 17:30	0	0	0	21	0	56
17:30 - 17:45	0	0	0	17	0	51
17:45 - 18:00	0	0	0	19	0	50
Total	0	0	0	128	0	407

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	46	410	0	0	422	17
16:15 - 16:30	52	425	0	0	452	9
16:30 - 16:45	41	423	0	0	466	10
16:45 - 17:00	42	439	0	0	444	16
17:00 - 17:15	47	415	0	0	447	12
17:15 - 17:30	54	402	0	0	468	24
17:30 - 17:45	62	410	0	0	441	18
17:45 - 18:00	55	388	0	0	424	20
Total	399	3,312	0	0	3,564	126



Roadway Count Summary

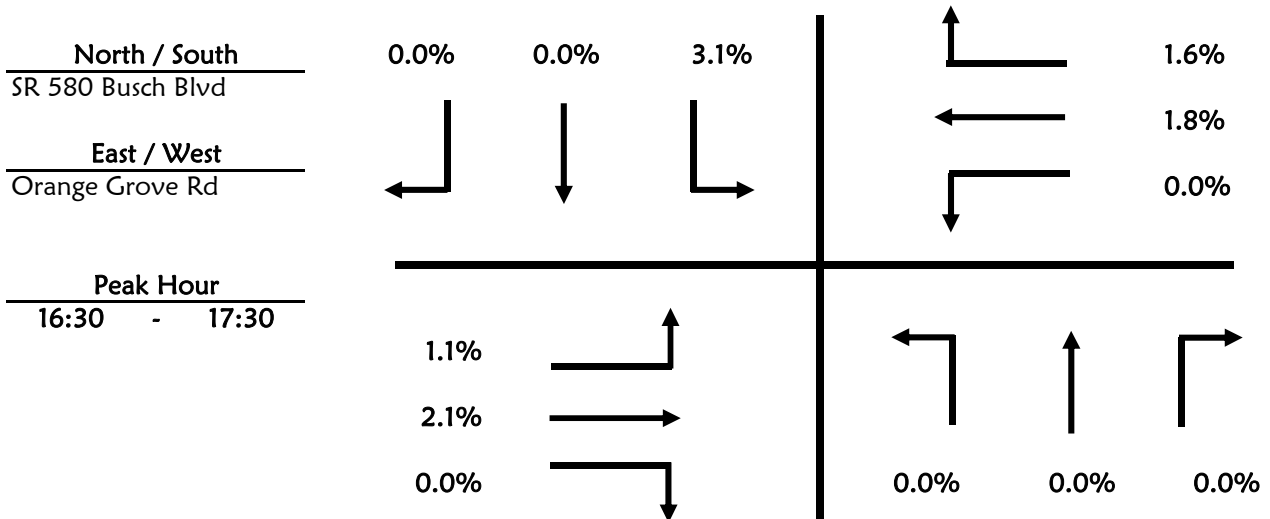
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & Orange Grove Rd
Date Thursday, May 04, 2017 7:00 .
Time Period 16:00 to 18:00

Trucks
VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	0	0	1	0	0
16:15 - 16:30	0	0	0	3	0	1
16:30 - 16:45	0	0	0	1	0	0
16:45 - 17:00	0	0	0	1	0	0
17:00 - 17:15	0	0	0	0	0	0
17:15 - 17:30	0	0	0	0	0	0
17:30 - 17:45	0	0	0	0	0	0
17:45 - 18:00	0	0	0	1	0	1

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	5	0	0	14	0
16:15 - 16:30	0	8	0	0	10	0
16:30 - 16:45	0	10	0	0	6	0
16:45 - 17:00	0	14	0	0	7	0
17:00 - 17:15	2	5	0	0	13	0
17:15 - 17:30	0	7	0	0	6	1
17:30 - 17:45	1	7	0	0	5	0
17:45 - 18:00	0	4	0	0	6	0



Roadway Count Summary

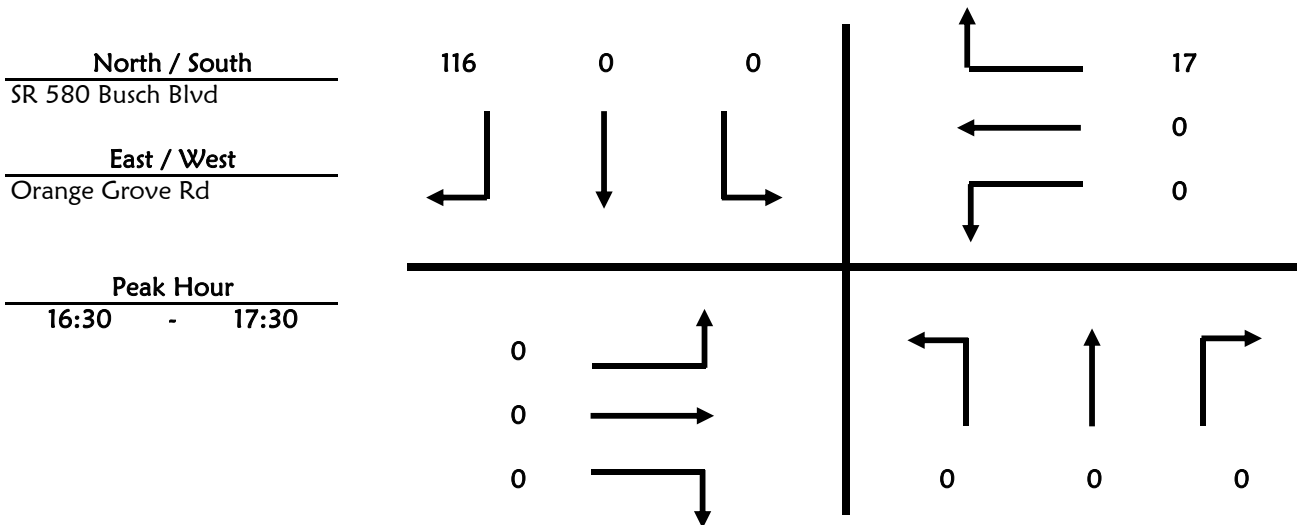
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & Orange Grove Rd
Date Thursday, May 04, 2017 7:00 A
Time Period 16:00 to 18:00 **U-Turn & RTOR**

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	0	0	0	0	25
16:15 - 16:30	0	0	0	0	0	24
16:30 - 16:45	0	0	0	0	0	32
16:45 - 17:00	0	0	0	0	0	29
17:00 - 17:15	0	0	0	0	0	28
17:15 - 17:30	0	0	0	0	0	27
17:30 - 17:45	0	0	0	0	0	26
17:45 - 18:00	0	0	0	0	0	34

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	0	0	0	0	7
16:15 - 16:30	0	0	0	0	0	5
16:30 - 16:45	0	0	0	0	0	3
16:45 - 17:00	0	0	0	0	0	4
17:00 - 17:15	0	0	0	0	0	2
17:15 - 17:30	0	0	0	0	0	8
17:30 - 17:45	0	0	0	0	0	7
17:45 - 18:00	0	0	0	0	0	6



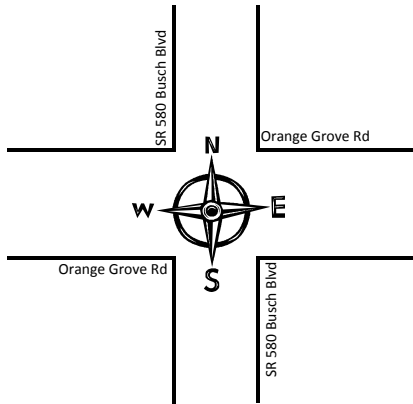
Pedestrian & Bicycle Summary

Project #: 62966
 Date: Thursday, May 04,

NB/SB: SR 580 Busch Blvd
 EB/WB: Orange Grove Rd

		Hour								
		16:00		17:00						
		1	2	3	6	7	8			
Eastbound	Bike	0	1							1
	Ped	1	0							1
Westbound	Bike	0	1							1
	Ped	2	1							3

		Southbound		Northbound	
Hour		Ped	Bike	Ped	Bike
1	16:00	1	0	0	0
2	17:00	0	0	0	0
3					
4					
5					
6					
7					
8					
		1	0	0	0



		Southbound		Northbound			
Hour		Ped	Bike	Ped	Bike		
1	16:00	0	0	0	0		
2	17:00	0	0	0	0		
3							
4							
5							
6							
7							
8							
		0	0	0	0		

Eastbound	Bike	0	0							0
	Ped	0	0							0
Westbound	Bike	0	0							0
	Ped	0	0							0

		Hour							
		16:00		17:00					
		1	2	3	4	5	6	7	8

Roadway Count Summary

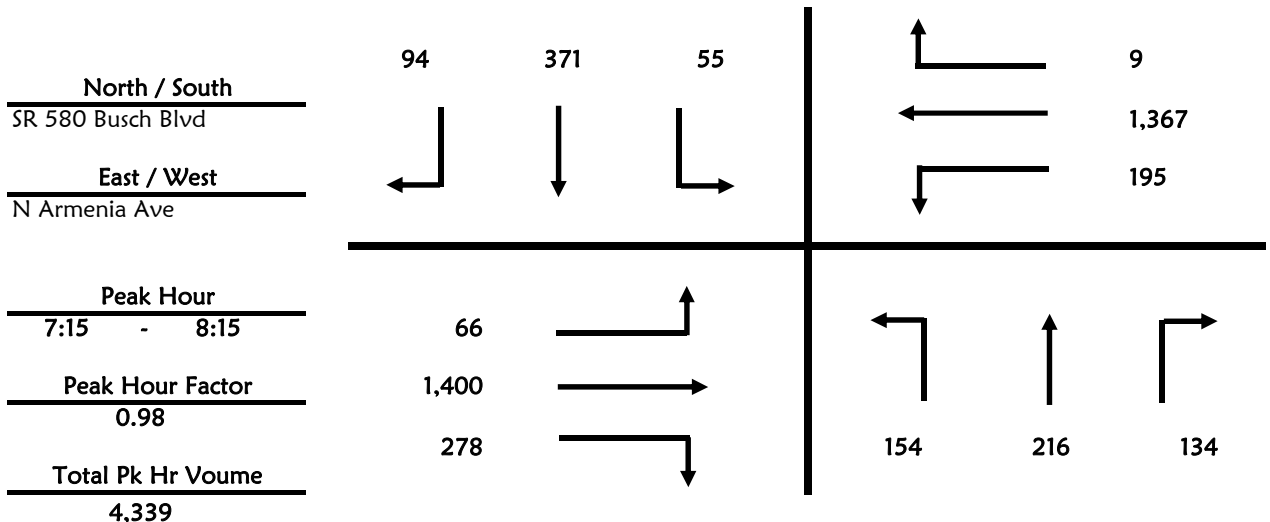
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Armenia Ave
Date Tuesday, May 09, 2017 7:00 AM **All Vehicles**
Time Period 7:00 to 9:00

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	25	35	47	13	78	11
7:15 - 7:30	31	40	45	13	97	20
7:30 - 7:45	46	59	40	5	99	16
7:45 - 8:00	42	67	24	15	93	18
8:00 - 8:15	35	50	25	22	82	40
8:15 - 8:30	38	39	27	12	82	37
8:30 - 8:45	32	47	27	15	88	54
8:45 - 9:00	28	48	43	17	62	35
	277	385	278	112	681	231

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	20	352	68	45	308	0
7:15 - 7:30	10	356	75	47	334	1
7:30 - 7:45	15	370	67	48	344	1
7:45 - 8:00	19	312	76	60	344	5
8:00 - 8:15	22	362	60	40	345	2
8:15 - 8:30	15	387	53	32	332	5
8:30 - 8:45	23	348	39	40	340	3
8:45 - 9:00	13	245	36	46	323	4
	137	2,732	474	358	2,670	21



Roadway Count Summary

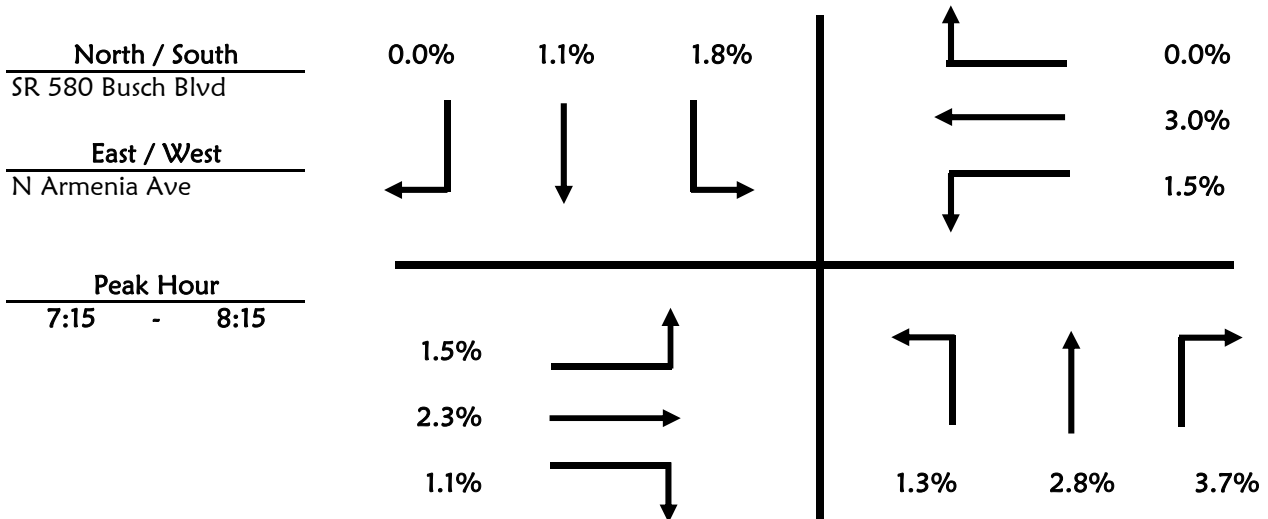
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Armenia Ave
Date Tuesday, May 09, 2017 7:00 A
Time Period 7:00 to 9:00

Trucks
VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	1	3	0	1	1	0
7:15 - 7:30	0	2	3	0	0	0
7:30 - 7:45	0	1	1	0	2	0
7:45 - 8:00	1	0	1	0	1	0
8:00 - 8:15	1	3	0	1	1	0
8:15 - 8:30	0	1	0	1	1	1
8:30 - 8:45	1	1	3	0	4	3
8:45 - 9:00	0	2	3	0	5	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	13	0	1	19	0
7:15 - 7:30	0	7	0	1	18	0
7:30 - 7:45	0	7	0	1	9	0
7:45 - 8:00	1	7	2	0	5	0
8:00 - 8:15	0	11	1	1	9	0
8:15 - 8:30	0	11	0	0	8	0
8:30 - 8:45	0	9	3	0	9	0
8:45 - 9:00	0	11	1	2	16	0



Roadway Count Summary

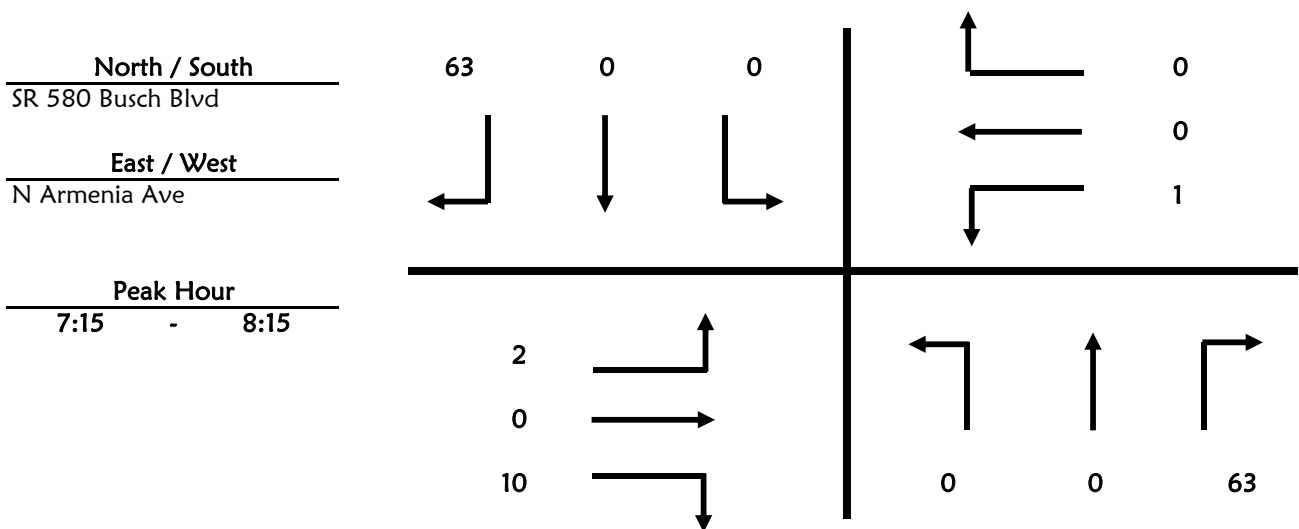
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Armenia Ave
Date Tuesday, May 09, 2017 7:00 AM
Time Period 7:00 to 9:00 **U-Turn & RTOR**

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	25	0	0	9
7:15 - 7:30	0	0	25	0	0	14
7:30 - 7:45	0	0	15	0	0	11
7:45 - 8:00	0	0	12	0	0	8
8:00 - 8:15	0	0	11	0	0	30
8:15 - 8:30	0	0	14	0	0	28
8:30 - 8:45	0	0	12	0	0	37
8:45 - 9:00	0	0	27	0	0	25

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	5	0	0	0
7:15 - 7:30	0	0	3	0	0	0
7:30 - 7:45	0	0	0	0	0	0
7:45 - 8:00	0	0	4	0	0	0
8:00 - 8:15	2	0	3	1	0	0
8:15 - 8:30	0	0	3	0	0	0
8:30 - 8:45	3	0	0	1	0	0
8:45 - 9:00	0	0	2	0	0	0



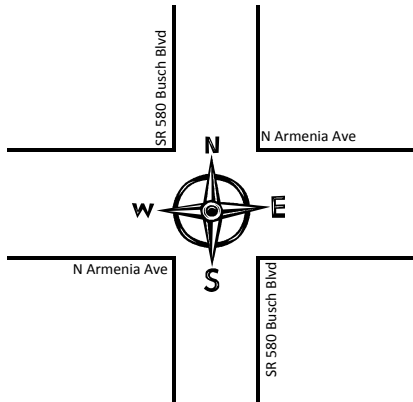
Pedestrian & Bicycle Summary

Project #: 62966
 Date: Tuesday, May 09, 2017

NB/SB: SR 580 Busch Blvd
 EB/WB: N Armenia Ave

		Hour								
		7:00	8:00	1	2	3	6	7	8	
Eastbound	Bike	0	0							0
	Ped	0	0							0
Westbound	Bike	0	0							0
	Ped	0	0							0

Hour	Southbound		Northbound	
	Ped	Bike	Ped	Bike
1 7:00	0	0	1	0
2 8:00	0	0	1	0
3				
4				
5				
6				
7				
8				
	0	0	2	0



Hour	Southbound		Northbound	
	Ped	Bike	Ped	Bike
1 7:00	1	2	0	3
2 8:00	1	4	4	3
3				
4				
5				
6				
7				
8				
	2	6	4	6

Eastbound	Bike	1	0							1
	Ped	0	0							0
Westbound	Bike	0	0							0
	Ped	0	3							3

		7:00	8:00	1	2	3	4	5	6	7	8
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Roadway Count Summary

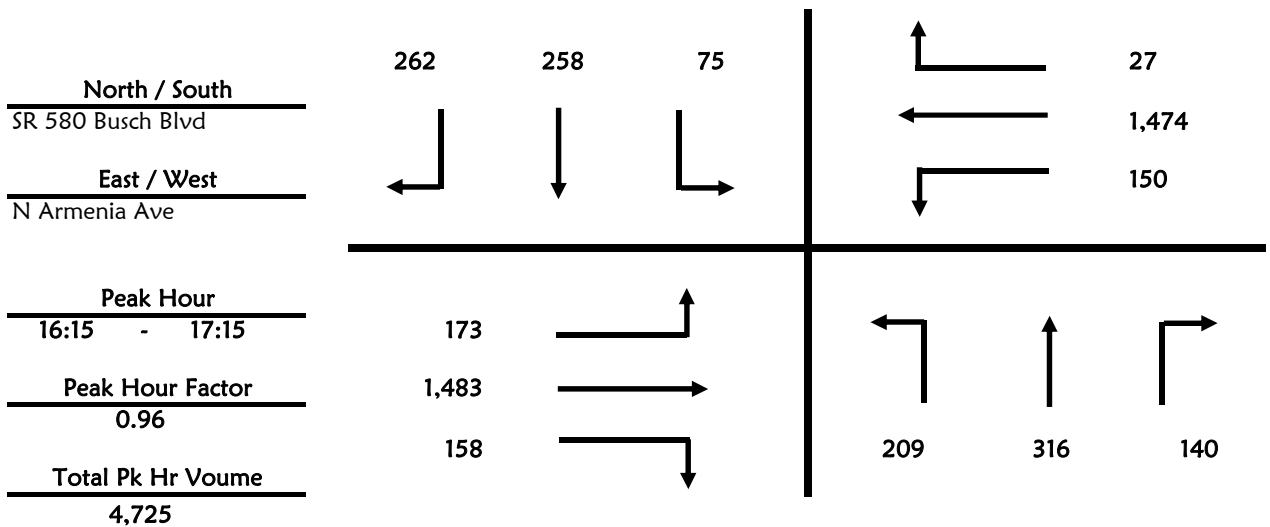
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Armenia Ave
Date Tuesday, May 09, 2017 7:00 AM **All Vehicles**
Time Period 16:00 to 18:00

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	50	86	42	11	46	52
16:15 - 16:30	45	76	33	14	60	58
16:30 - 16:45	57	67	28	21	64	78
16:45 - 17:00	53	88	41	16	62	50
17:00 - 17:15	54	85	38	24	72	76
17:15 - 17:30	65	83	39	12	59	74
17:30 - 17:45	51	85	36	18	63	60
17:45 - 18:00	36	83	49	13	57	74
	411	653	306	129	483	522

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	52	359	28	32	370	9
16:15 - 16:30	48	372	40	35	386	7
16:30 - 16:45	33	363	48	42	350	9
16:45 - 17:00	52	369	34	35	364	2
17:00 - 17:15	40	379	36	38	374	9
17:15 - 17:30	39	348	23	37	246	4
17:30 - 17:45	41	326	23	33	255	8
17:45 - 18:00	37	308	39	35	330	7
	342	2,824	271	287	2,675	55



Roadway Count Summary

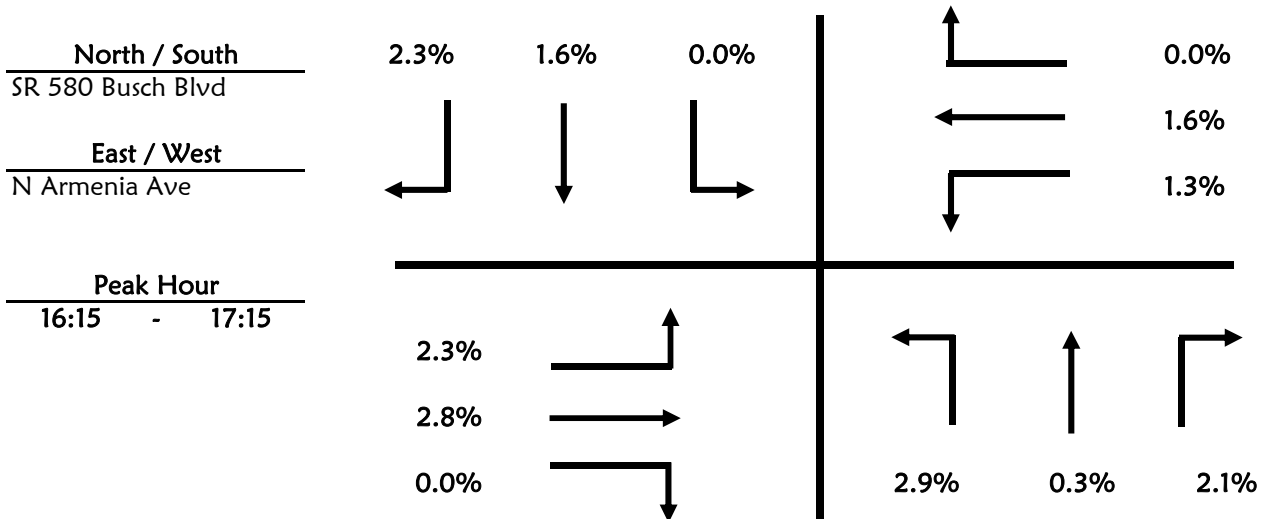
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Armenia Ave
Date Tuesday, May 09, 2017 7:00 A
Time Period 16:00 to 18:00

Trucks
VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	2	2	7	1	2	1
16:15 - 16:30	1	0	1	0	2	1
16:30 - 16:45	3	1	1	0	1	1
16:45 - 17:00	1	0	0	0	0	2
17:00 - 17:15	1	0	1	0	1	2
17:15 - 17:30	0	0	0	0	1	0
17:30 - 17:45	0	0	0	0	0	2
17:45 - 18:00	1	2	1	0	0	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	6	0	0	18	0
16:15 - 16:30	1	16	0	0	6	0
16:30 - 16:45	0	9	0	0	7	0
16:45 - 17:00	1	11	0	0	5	0
17:00 - 17:15	2	6	0	2	5	0
17:15 - 17:30	0	6	0	0	4	0
17:30 - 17:45	0	7	0	0	9	0
17:45 - 18:00	0	12	0	0	3	0



Roadway Count Summary

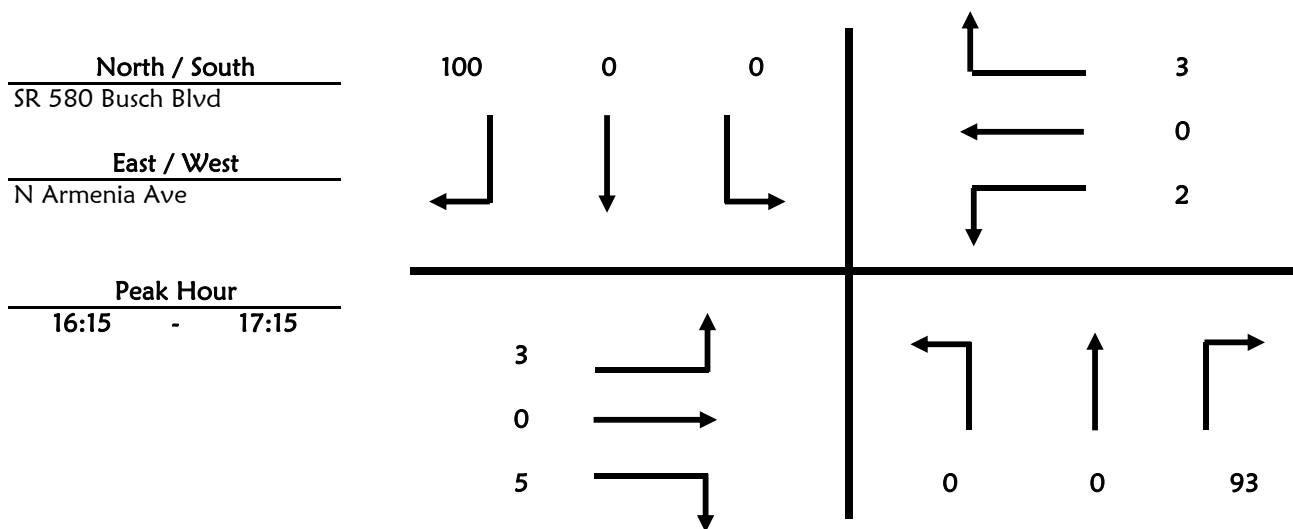
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Armenia Ave
Date Tuesday, May 09, 2017 7:00 AM
Time Period 16:00 to 18:00 **U-Turn & RTOR**

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	0	24	0	0	24
16:15 - 16:30	0	0	23	0	0	19
16:30 - 16:45	0	0	15	0	0	40
16:45 - 17:00	0	0	28	0	0	32
17:00 - 17:15	0	0	27	0	0	9
17:15 - 17:30	0	0	29	0	0	22
17:30 - 17:45	0	0	27	0	0	17
17:45 - 18:00	0	0	36	0	0	16

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	2	0	0	0	0	0
16:15 - 16:30	0	0	1	0	0	0
16:30 - 16:45	0	0	1	0	0	2
16:45 - 17:00	1	0	1	0	0	1
17:00 - 17:15	2	0	2	2	0	0
17:15 - 17:30	0	0	0	0	0	0
17:30 - 17:45	0	0	2	0	0	0
17:45 - 18:00	0	0	0	0	0	0



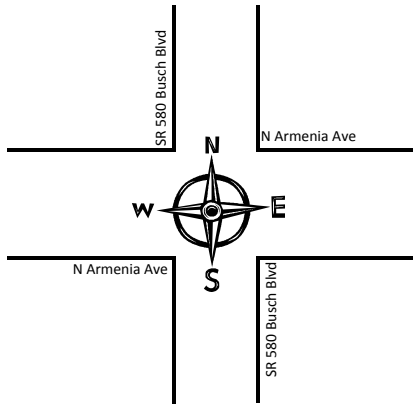
Pedestrian & Bicycle Summary

Project #: 62966
 Date: Tuesday, May 09, 2017

NB/SB: SR 580 Busch Blvd
 EB/WB: N Armenia Ave

		Hour								
		16:00		17:00						
		1	2	3	4	5	6	7	8	
Eastbound	Bike	0	0							0
	Ped	0	0							0
Westbound	Bike	0	0							0
	Ped	0	0							0

Hour	Southbound		Northbound	
	Ped ▼	Bike	Ped ▲	Bike
1 16:00	0	0	0	0
2 17:00	0	1	0	2
3				
4				
5				
6				
7				
8				
	0	1	0	2



Hour	Southbound		Northbound	
	Ped ▼	Bike	Ped ▲	Bike
1 16:00	2	3	2	1
2 17:00	1	4	0	4
3				
4				
5				
6				
7				
8				
	3	7	2	5

Eastbound	Bike	0	0							0
	Ped	1	1							2
Westbound	Bike	0	0							0
	Ped	0	0							0

		Hour							
		16:00		17:00					
		1	2	3	4	5	6	7	8

Roadway Count Summary

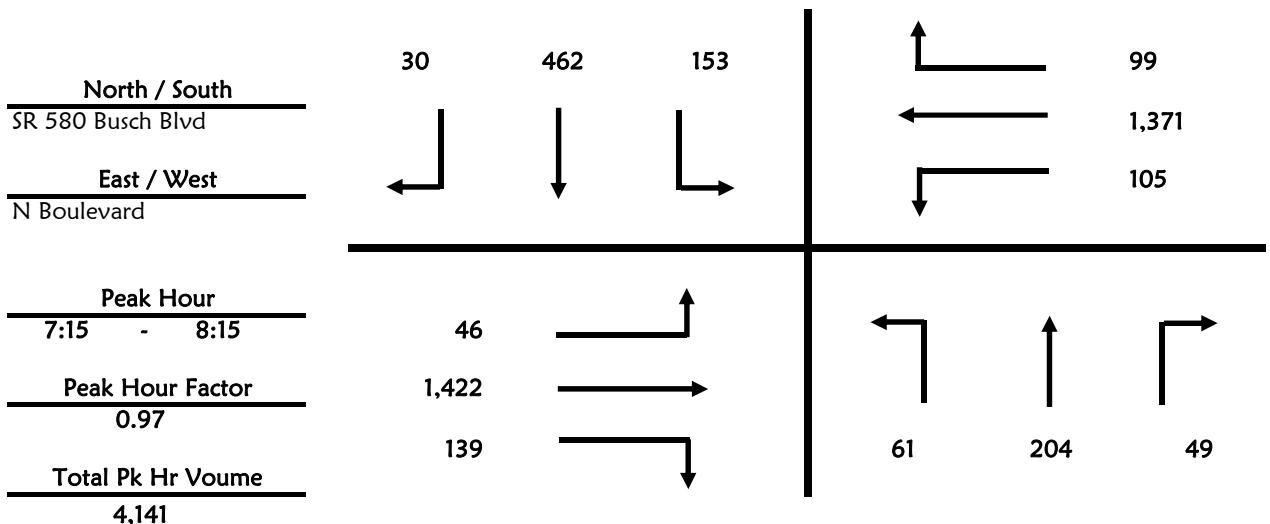
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Boulevard
Date Thursday, May 04, 2017 7:00 AM **All Vehicles**
Time Period 7:00 to 9:00

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	14	78	13	34	92	10
7:15 - 7:30	11	99	8	26	117	7
7:30 - 7:45	18	42	9	38	135	7
7:45 - 8:00	19	42	19	48	131	8
8:00 - 8:15	13	21	13	41	79	8
8:15 - 8:30	12	37	13	32	91	13
8:30 - 8:45	20	59	11	42	75	17
8:45 - 9:00	25	33	11	24	79	10
	132	411	97	285	799	80

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	22	407	27	14	288	38
7:15 - 7:30	32	347	29	29	304	64
7:30 - 7:45	6	333	39	27	353	17
7:45 - 8:00	6	327	39	28	325	9
8:00 - 8:15	2	415	32	21	389	9
8:15 - 8:30	6	395	26	12	385	18
8:30 - 8:45	8	348	18	16	313	7
8:45 - 9:00	10	299	17	25	369	8
	92	2,871	227	172	2,726	170



Roadway Count Summary

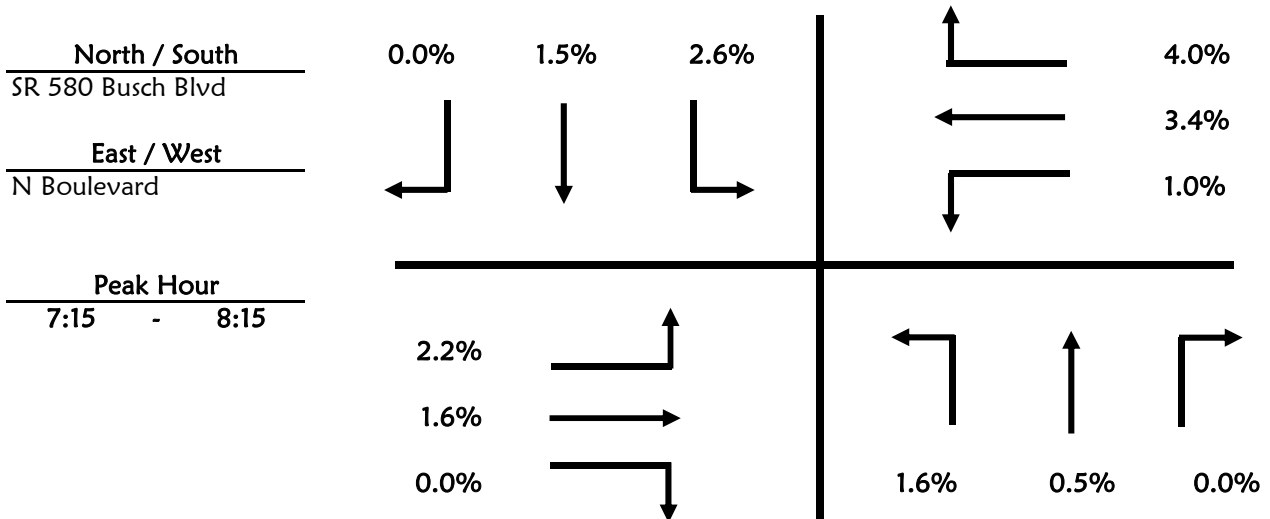
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Boulevard
Date Thursday, May 04, 2017 7:00 .
Time Period 7:00 to 9:00

Trucks
VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	3	1	0	1	1	0
7:15 - 7:30	0	0	0	0	2	0
7:30 - 7:45	1	1	0	0	1	0
7:45 - 8:00	0	0	0	3	2	0
8:00 - 8:15	0	0	0	1	2	0
8:15 - 8:30	0	1	0	1	1	0
8:30 - 8:45	2	2	0	2	1	0
8:45 - 9:00	0	4	0	4	2	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	1	7	0	1	6	2
7:15 - 7:30	0	3	0	0	14	1
7:30 - 7:45	0	3	0	0	8	0
7:45 - 8:00	1	11	0	0	6	1
8:00 - 8:15	0	6	0	1	18	2
8:15 - 8:30	0	9	0	0	8	1
8:30 - 8:45	0	11	0	0	16	0
8:45 - 9:00	3	9	1	0	14	0



Roadway Count Summary

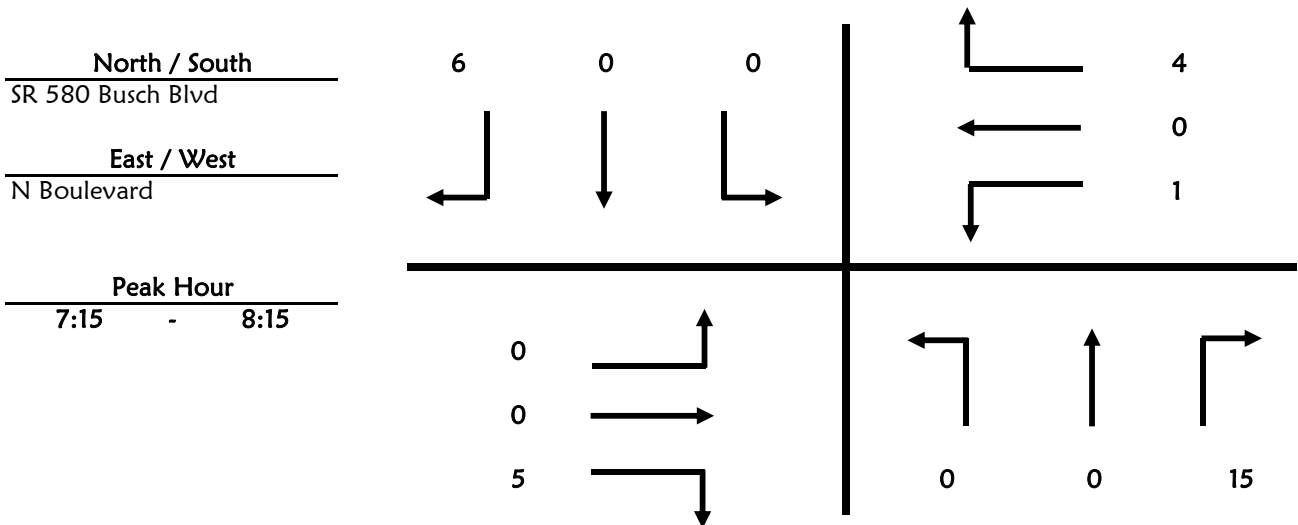
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Boulevard
Date Thursday, May 04, 2017 7:00 A
Time Period 7:00 to 9:00 **U-Turn & RTOR**

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	0	0	0	4
7:15 - 7:30	0	0	6	0	0	2
7:30 - 7:45	0	0	0	0	0	1
7:45 - 8:00	0	0	8	0	0	1
8:00 - 8:15	0	0	1	0	0	2
8:15 - 8:30	0	0	3	0	0	2
8:30 - 8:45	0	0	2	0	0	6
8:45 - 9:00	0	0	3	0	0	1

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	1	0	0	2
7:15 - 7:30	0	0	0	0	0	0
7:30 - 7:45	0	0	1	0	0	1
7:45 - 8:00	0	0	4	0	0	0
8:00 - 8:15	0	0	0	1	0	3
8:15 - 8:30	0	0	0	0	0	0
8:30 - 8:45	1	0	2	0	0	1
8:45 - 9:00	0	0	1	1	0	0



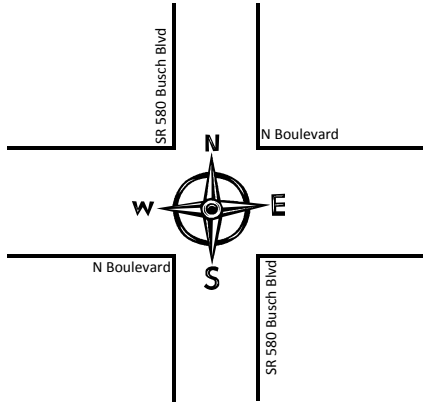
Pedestrian & Bicycle Summary

Project #: 62966
 Date: Thursday, May 04,

NB/SB: SR 580 Busch Blvd
 EB/WB: N Boulevard

		Hour								
		7:00	8:00							
		1	2	3	6	7	8			
Eastbound	Bike	1	0							1
	Ped	1	2							3
Westbound	Bike	1	0							1
	Ped	2	0							2

Hour	Southbound		Northbound	
	Ped ▼	Bike	Ped ▲	Bike
1 7:00	6	0	10	0
2 8:00	0	1	0	0
3				
4				
5				
6				
7				
8				
	6	1	10	0



Hour	Southbound		Northbound	
	Ped ▼	Bike	Ped ▲	Bike
1 7:00	3	0	23	5
2 8:00	3	1	4	5
3				
4				
5				
6				
7				
8				
	6	1	27	10

Eastbound	Bike	0	0							0
	Ped	2	0							2
Westbound	Bike	0	0							0
	Ped	2	0							2

		7:00	8:00	Hour					
		1	2	3	4	5	6	7	8

Roadway Count Summary

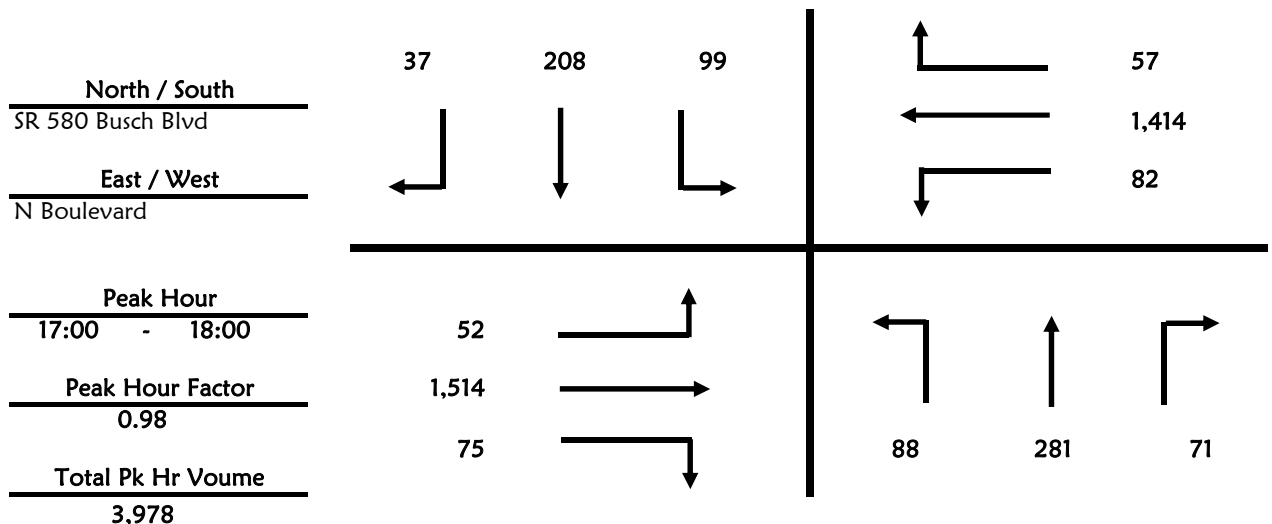
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Boulevard
Date Thursday, May 04, 2017 7:00 AM **All Vehicles**
Time Period 16:00 to 18:00

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	25	56	15	24	39	19
16:15 - 16:30	27	79	13	25	54	10
16:30 - 16:45	19	55	24	23	63	9
16:45 - 17:00	16	53	11	17	51	9
17:00 - 17:15	30	72	22	25	50	12
17:15 - 17:30	16	66	15	29	38	7
17:30 - 17:45	22	70	19	15	61	8
17:45 - 18:00	20	73	15	30	59	10
	175	524	134	188	415	84

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	10	331	21	30	365	10
16:15 - 16:30	11	338	24	28	373	6
16:30 - 16:45	10	341	20	30	401	5
16:45 - 17:00	5	371	19	23	365	10
17:00 - 17:15	11	385	13	18	358	11
17:15 - 17:30	13	402	18	18	367	13
17:30 - 17:45	12	367	25	24	371	19
17:45 - 18:00	16	360	19	22	318	14
	88	2,895	159	193	2,918	88



Roadway Count Summary

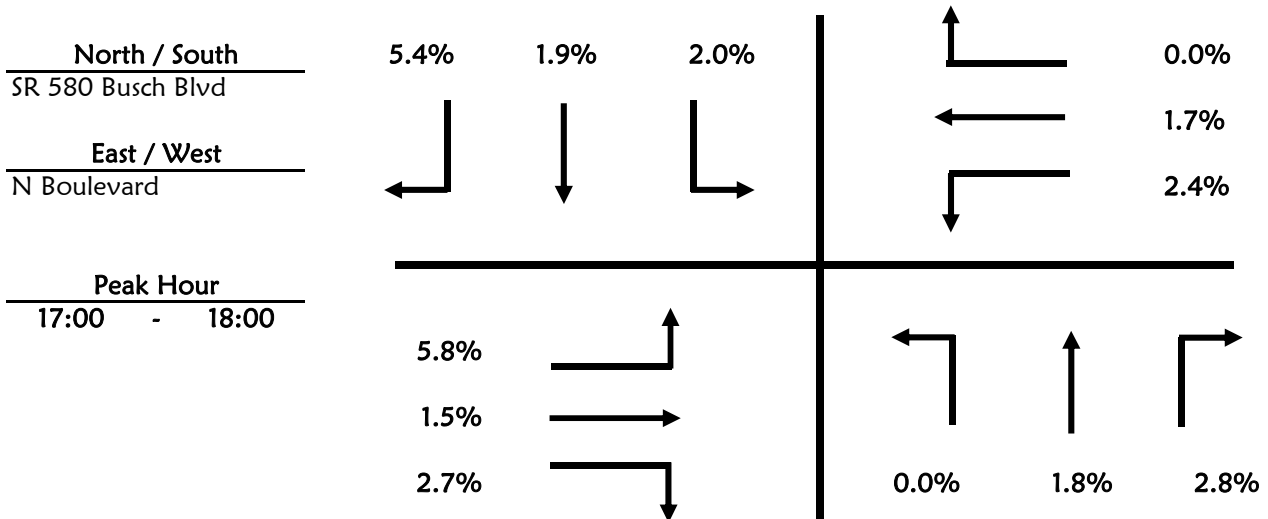
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Boulevard
Date Thursday, May 04, 2017 7:00 .
Time Period 16:00 to 18:00

Trucks
VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	2	1	0	2	1	0
16:15 - 16:30	0	1	0	3	2	0
16:30 - 16:45	0	0	1	0	1	0
16:45 - 17:00	0	3	0	0	3	1
17:00 - 17:15	0	2	1	1	2	1
17:15 - 17:30	0	1	0	0	1	0
17:30 - 17:45	0	0	1	0	1	0
17:45 - 18:00	0	2	0	1	0	1

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	6	0	0	9	0
16:15 - 16:30	0	8	1	0	8	0
16:30 - 16:45	1	10	0	1	7	0
16:45 - 17:00	0	14	1	0	11	1
17:00 - 17:15	1	5	0	1	8	0
17:15 - 17:30	0	7	1	0	6	0
17:30 - 17:45	1	2	1	1	5	0
17:45 - 18:00	1	9	0	0	5	0



Roadway Count Summary

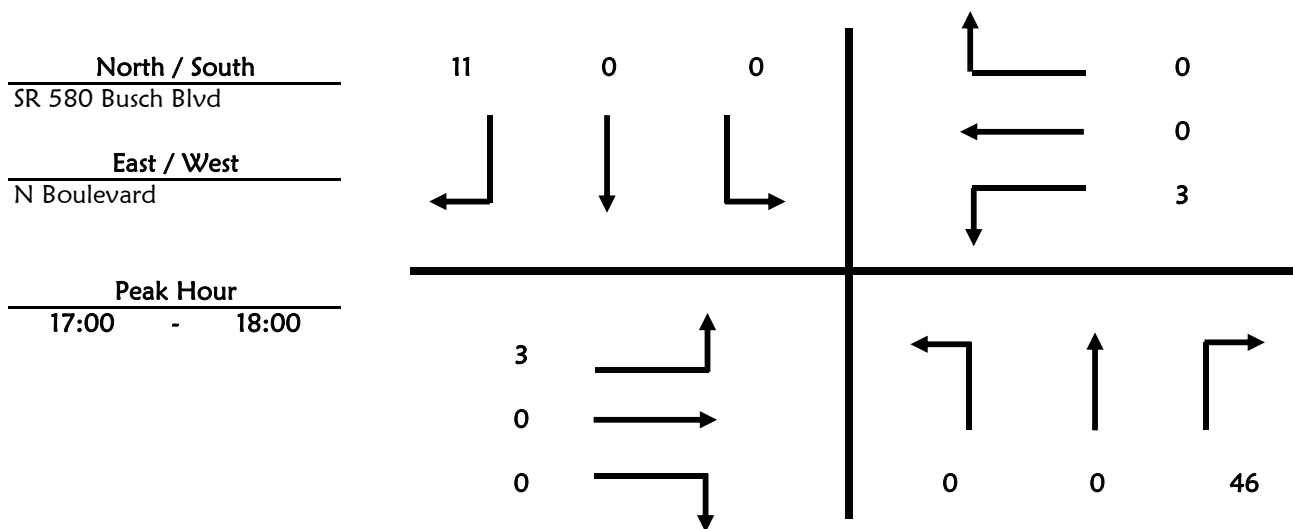
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Boulevard
Date Thursday, May 04, 2017 7:00 A
Time Period 16:00 to 18:00 **U-Turn & RTOR**

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	1	0	10	0	0	6
16:15 - 16:30	3	0	9	1	0	2
16:30 - 16:45	0	0	19	0	0	1
16:45 - 17:00	0	0	8	0	0	5
17:00 - 17:15	0	0	12	0	0	2
17:15 - 17:30	0	0	11	0	0	4
17:30 - 17:45	0	0	15	0	0	3
17:45 - 18:00	0	0	8	0	0	2

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	1	0	1	3	0	0
16:15 - 16:30	0	0	0	1	0	0
16:30 - 16:45	0	0	0	0	0	0
16:45 - 17:00	0	0	0	0	0	0
17:00 - 17:15	0	0	0	1	0	0
17:15 - 17:30	1	0	0	1	0	0
17:30 - 17:45	1	0	0	1	0	0
17:45 - 18:00	1	0	0	0	0	0



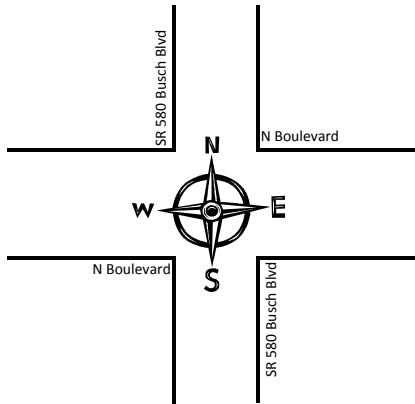
Pedestrian & Bicycle Summary

Project #: 62966
 Date: Thursday, May 04,

NB/SB: SR 580 Busch Blvd
 EB/WB: N Boulevard

		Hour									
		16:00		17:00							
		1	2	3	4	5	6	7	8		
Eastbound	Bike	0	0							0	
	Ped	1	1							2	
Westbound	Bike	1	1							2	
	Ped	0	2							2	

Hour	Southbound		Northbound	
	Ped ▼	Bike	Ped ▲	Bike
1 16:00	0	6	0	6
2 17:00	2	5	1	4
3				
4				
5				
6				
7				
8				
	2	11	1	10



Hour	Southbound		Northbound	
	Ped ▼	Bike	Ped ▲	Bike
1 16:00	3	7	2	0
2 17:00	2	2	2	0
3				
4				
5				
6				
7				
8				
	5	9	4	0

Eastbound	Bike	0	2							2	
	Ped	0	2							2	
Westbound	Bike	4	0							4	
	Ped	0	0							0	

		Hour							
		16:00		17:00					
		1	2	3	4	5	6	7	8

Roadway Count Summary

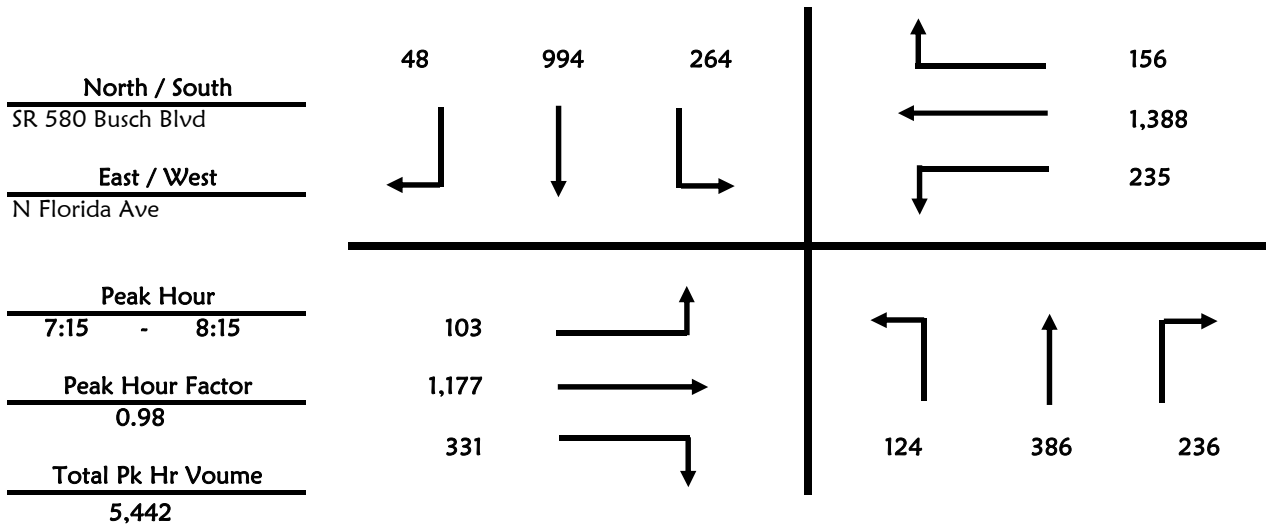
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Florida Ave
Date Thursday, May 04, 2017 7:00 AM **All Vehicles**
Time Period 7:00 to 9:00

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	28	83	41	66	242	15
7:15 - 7:30	35	81	43	74	257	8
7:30 - 7:45	23	98	61	75	272	9
7:45 - 8:00	30	106	70	65	242	15
8:00 - 8:15	36	101	62	50	223	16
8:15 - 8:30	23	111	48	58	219	15
8:30 - 8:45	26	127	45	46	212	30
8:45 - 9:00	28	136	60	47	197	37
	229	843	430	481	1,864	145

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	27	344	67	59	306	42
7:15 - 7:30	14	299	70	61	368	45
7:30 - 7:45	22	307	83	53	322	32
7:45 - 8:00	34	276	76	62	372	42
8:00 - 8:15	33	295	102	59	326	37
8:15 - 8:30	40	297	84	49	344	46
8:30 - 8:45	35	292	86	59	324	37
8:45 - 9:00	43	234	71	59	306	50
	248	2,344	639	461	2,668	331



Roadway Count Summary

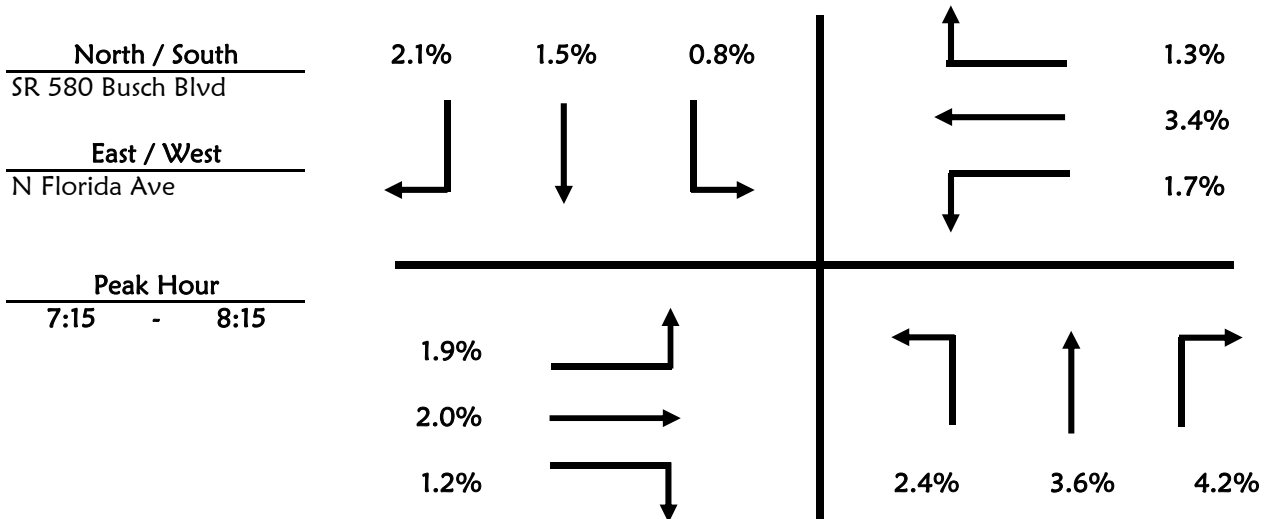
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Florida Ave
Date Thursday, May 04, 2017 7:00
Time Period 7:00 to 9:00

Trucks
VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	2	3	3	0	2	0
7:15 - 7:30	0	3	1	0	2	1
7:30 - 7:45	0	4	5	0	3	0
7:45 - 8:00	1	2	2	1	6	0
8:00 - 8:15	2	5	2	1	4	0
8:15 - 8:30	2	8	1	4	5	0
8:30 - 8:45	1	4	1	1	1	3
8:45 - 9:00	4	2	6	2	7	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	6	2	5	5	2
7:15 - 7:30	0	6	1	1	13	1
7:30 - 7:45	0	4	1	2	6	1
7:45 - 8:00	0	9	1	0	10	0
8:00 - 8:15	2	5	1	1	18	0
8:15 - 8:30	0	8	1	3	5	0
8:30 - 8:45	0	8	1	3	14	0
8:45 - 9:00	0	12	2	3	9	0



Roadway Count Summary

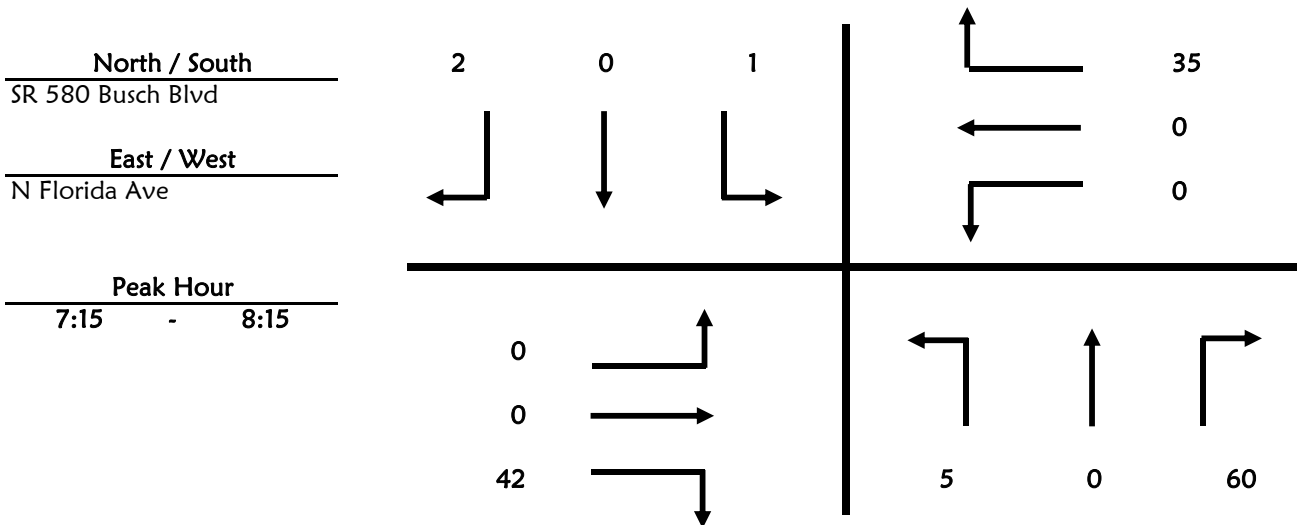
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Florida Ave
Date Thursday, May 04, 2017 7:00 A
Time Period 7:00 to 9:00 **U-Turn & RTOR**

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	1	0	0	0
7:15 - 7:30	0	0	11	0	0	0
7:30 - 7:45	0	0	11	0	0	0
7:45 - 8:00	1	0	16	0	0	1
8:00 - 8:15	4	0	22	1	0	1
8:15 - 8:30	2	0	25	0	0	3
8:30 - 8:45	1	0	20	0	0	1
8:45 - 9:00	0	0	15	1	0	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	1	0	5	1	0	4
7:15 - 7:30	0	0	10	0	0	6
7:30 - 7:45	0	0	5	0	0	8
7:45 - 8:00	0	0	7	0	0	14
8:00 - 8:15	0	0	20	0	0	7
8:15 - 8:30	1	0	5	0	0	10
8:30 - 8:45	0	0	7	2	0	9
8:45 - 9:00	0	0	11	0	0	11



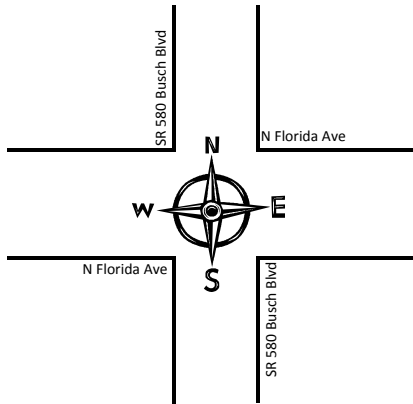
Pedestrian & Bicycle Summary

Project #: 62966
 Date: Thursday, May 04,

NB/SB: SR 580 Busch Blvd
 EB/WB: N Florida Ave

		Hour								
		7:00	8:00	1	2	3	6	7	8	
Eastbound	Bike	0	0							0
	Ped	0	2							2
Westbound	Bike	0	0							0
	Ped	0	2							2

Hour	Southbound		Northbound	
	Ped ▼	Bike	Ped ▲	Bike
1 7:00	0	0	0	0
2 8:00	0	0	4	0
3				
4				
5				
6				
7				
8				
	0	0	4	0



Hour	Southbound		Northbound	
	Ped ▼	Bike	Ped ▲	Bike
1 7:00	1	1	2	0
2 8:00	2	2	8	0
3				
4				
5				
6				
7				
8				
	3	3	10	0

Eastbound	Bike	0	0							0
	Ped	0	0							0
Westbound	Bike	0	0							0
	Ped	1	0							1

		Hour									
		7:00	8:00	1	2	3	4	5	6	7	8

Roadway Count Summary

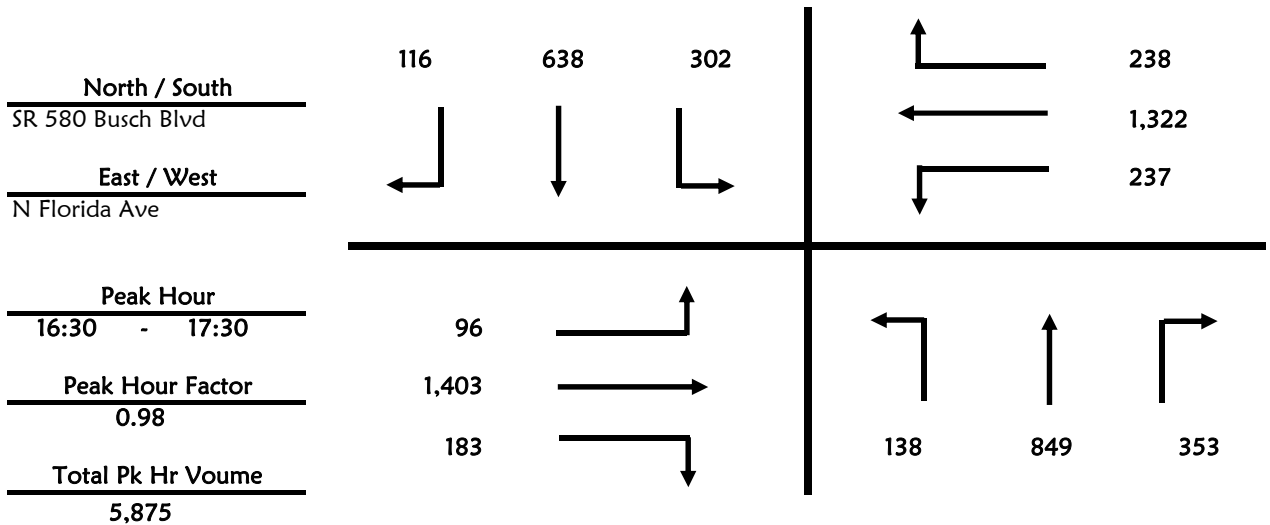
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Florida Ave
Date Thursday, May 04, 2017 7:00 AM **All Vehicles**
Time Period 16:00 to 18:00

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	34	195	91	58	138	27
16:15 - 16:30	32	214	106	59	139	33
16:30 - 16:45	35	185	66	90	152	41
16:45 - 17:00	31	210	92	55	169	27
17:00 - 17:15	36	226	91	79	171	24
17:15 - 17:30	36	228	104	78	146	24
17:30 - 17:45	39	199	105	49	131	23
17:45 - 18:00	31	203	110	47	137	23
	274	1,660	765	515	1,183	222

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	20	334	43	76	346	62
16:15 - 16:30	25	337	48	74	351	42
16:30 - 16:45	23	344	55	71	363	69
16:45 - 17:00	23	350	28	66	334	53
17:00 - 17:15	24	356	44	58	302	61
17:15 - 17:30	26	353	56	42	323	55
17:30 - 17:45	19	318	49	77	349	52
17:45 - 18:00	16	314	37	77	295	54
	176	2,706	360	541	2,663	448



Roadway Count Summary

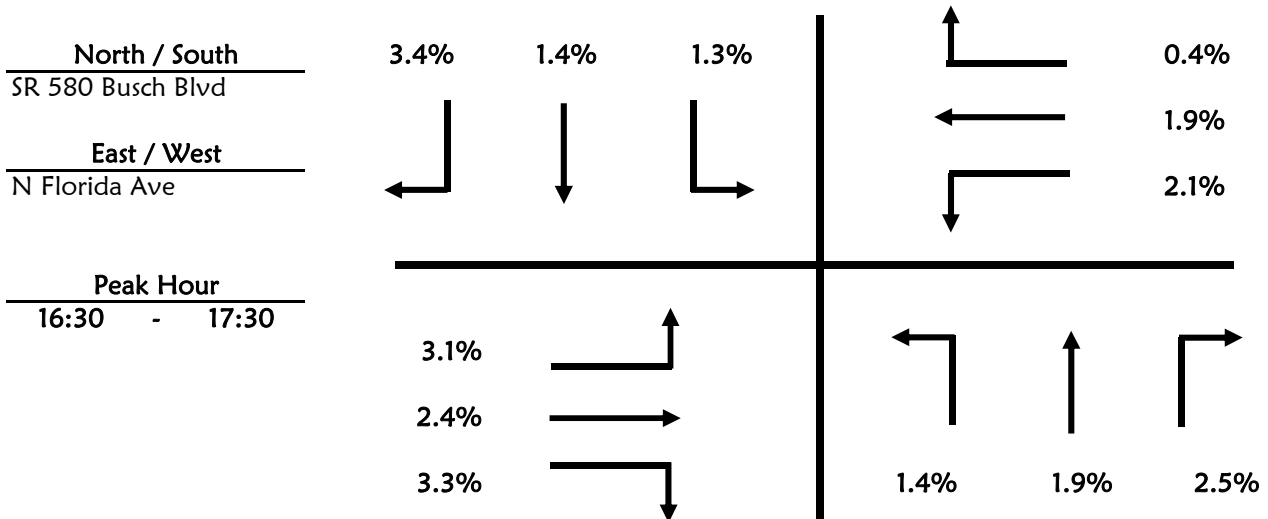
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Florida Ave
Date Thursday, May 04, 2017 7:00 .
Time Period 16:00 to 18:00

Trucks
VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	1	9	5	0	3	2
16:15 - 16:30	1	3	0	1	4	0
16:30 - 16:45	0	5	2	2	2	0
16:45 - 17:00	1	2	2	0	4	2
17:00 - 17:15	0	5	2	1	0	1
17:15 - 17:30	1	4	3	1	3	1
17:30 - 17:45	1	1	1	0	2	0
17:45 - 18:00	0	1	4	0	6	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	8	0	0	4	2
16:15 - 16:30	1	5	3	3	9	1
16:30 - 16:45	1	8	2	2	7	0
16:45 - 17:00	1	12	1	1	8	1
17:00 - 17:15	0	8	1	2	6	0
17:15 - 17:30	1	6	2	0	4	0
17:30 - 17:45	0	1	1	1	5	0
17:45 - 18:00	0	6	0	0	5	1



Roadway Count Summary

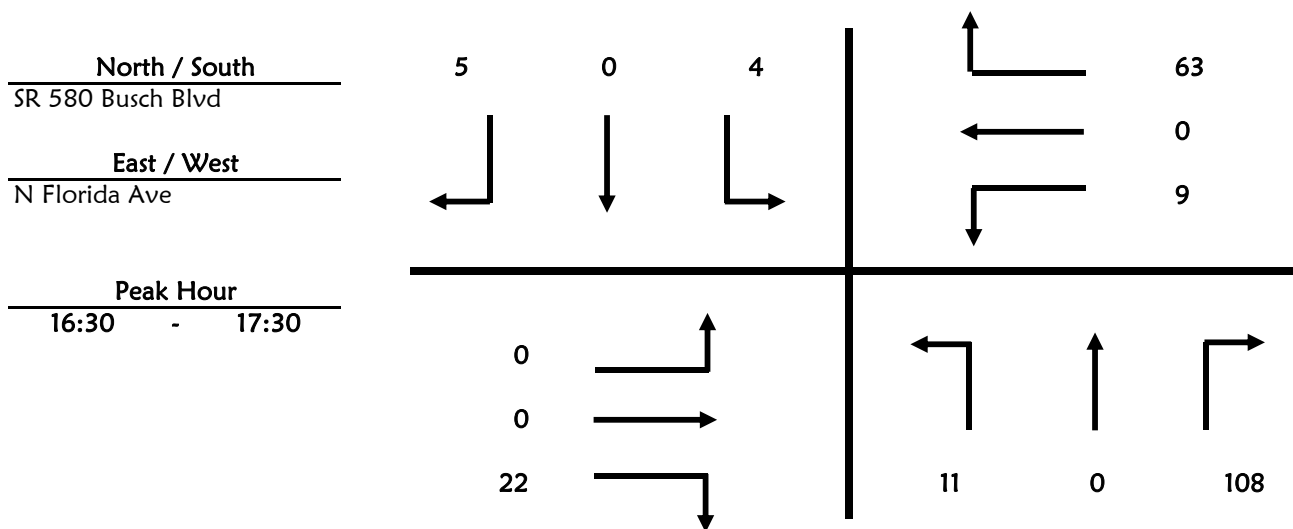
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Florida Ave
Date Thursday, May 04, 2017 7:00 A
Time Period 16:00 to 18:00 **U-Turn & RTOR**

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	1	0	13	4	0	3
16:15 - 16:30	0	0	27	1	0	0
16:30 - 16:45	2	0	21	0	0	0
16:45 - 17:00	4	0	22	2	0	1
17:00 - 17:15	1	0	26	0	0	1
17:15 - 17:30	4	0	39	2	0	3
17:30 - 17:45	0	0	62	0	0	4
17:45 - 18:00	4	0	56	1	0	2

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	0	10	1	0	7
16:15 - 16:30	0	0	3	0	0	12
16:30 - 16:45	0	0	12	1	0	24
16:45 - 17:00	0	0	2	3	0	14
17:00 - 17:15	0	0	5	3	0	14
17:15 - 17:30	0	0	3	2	0	11
17:30 - 17:45	0	0	17	3	0	14
17:45 - 18:00	0	0	7	1	0	10



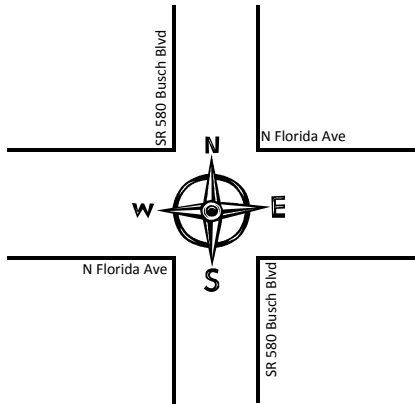
Pedestrian & Bicycle Summary

Project #: 62966
 Date: Thursday, May 04,

NB/SB: SR 580 Busch Blvd
 EB/WB: N Florida Ave

		Hour									
		16:00		17:00							
		1	2	3	4	5	6	7	8		
Eastbound	Bike	0	0							0	
	Ped	0	1							1	
Westbound	Bike	4	2							6	
	Ped	0	0							0	

Hour	Southbound		Northbound	
	Ped ▼	Bike	Ped ▲	Bike
1 16:00	0	2	0	5
2 17:00	1	1	0	3
3				
4				
5				
6				
7				
8				
	1	3	0	8



Hour	Southbound		Northbound	
	Ped ▼	Bike	Ped ▲	Bike
1 16:00	3	16	1	7
2 17:00	1	2	1	4
3				
4				
5				
6				
7				
8				
	4	18	2	11

Eastbound	Bike	0	1							1
	Ped	4	1							5
Westbound	Bike	0	0							0
	Ped	0	0							0

		Hour							
		16:00		17:00					
		1	2	3	4	5	6	7	8

Roadway Count Summary

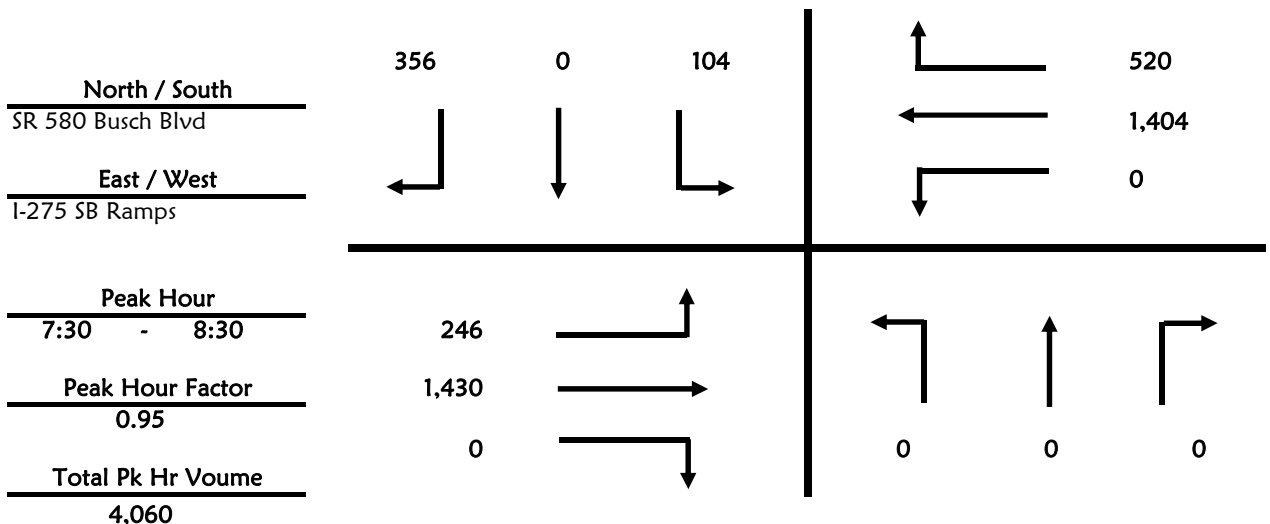
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & I-275 SB Ramps
Date Thursday, May 04, 2017 7:00 AM **All Vehicles**
Time Period 7:00 to 9:00

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	0	10	0	58
7:15 - 7:30	0	0	0	23	0	58
7:30 - 7:45	0	0	0	15	0	67
7:45 - 8:00	0	0	0	28	0	106
8:00 - 8:15	0	0	0	27	0	91
8:15 - 8:30	0	0	0	34	0	92
8:30 - 8:45	0	0	0	16	0	100
8:45 - 9:00	0	0	0	29	0	105
Total	0	0	0	182	0	677

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	74	366	0	0	312	144
7:15 - 7:30	66	324	0	0	346	157
7:30 - 7:45	75	357	0	0	344	158
7:45 - 8:00	57	367	0	0	379	134
8:00 - 8:15	53	356	0	0	337	108
8:15 - 8:30	61	350	0	0	344	120
8:30 - 8:45	59	335	0	0	338	113
8:45 - 9:00	51	282	0	0	350	88
Total	496	2,737	0	0	2,750	1,022



Roadway Count Summary

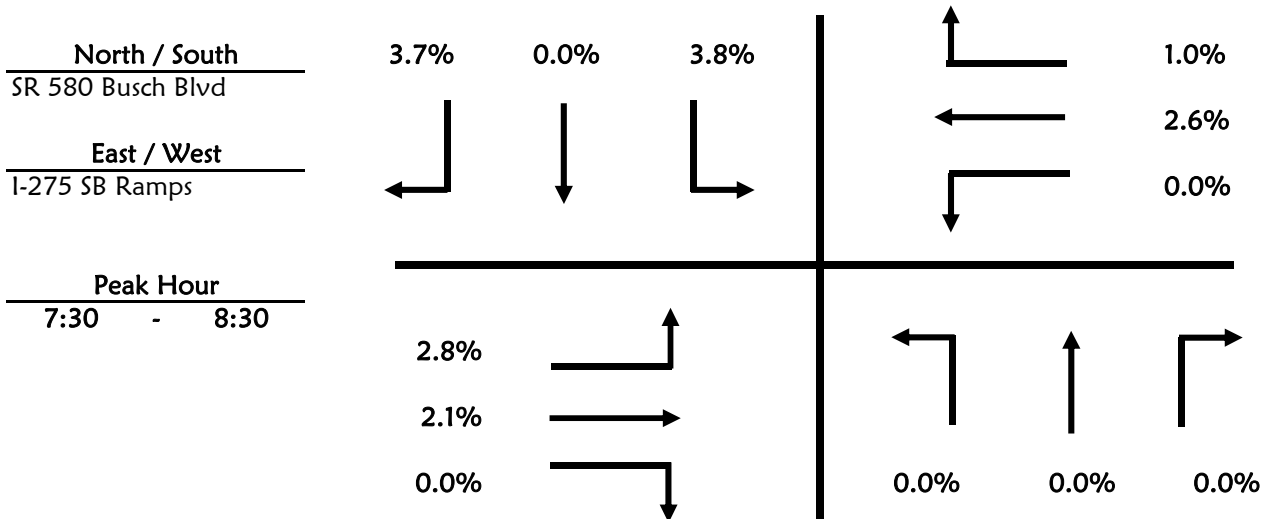
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & I-275 SB Ramps
Date Thursday, May 04, 2017 7:00 .
Time Period 7:00 to 9:00

Trucks
VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	0	0	0	1
7:15 - 7:30	0	0	0	3	0	4
7:30 - 7:45	0	0	0	1	0	4
7:45 - 8:00	0	0	0	1	0	2
8:00 - 8:15	0	0	0	0	0	2
8:15 - 8:30	0	0	0	2	0	5
8:30 - 8:45	0	0	0	0	0	5
8:45 - 9:00	0	0	0	2	0	4

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	3	6	0	0	11	0
7:15 - 7:30	2	7	0	0	10	2
7:30 - 7:45	2	6	0	0	6	3
7:45 - 8:00	3	8	0	0	6	0
8:00 - 8:15	0	8	0	0	20	1
8:15 - 8:30	2	8	0	0	4	1
8:30 - 8:45	3	9	0	0	17	2
8:45 - 9:00	3	13	0	0	7	0



Roadway Count Summary

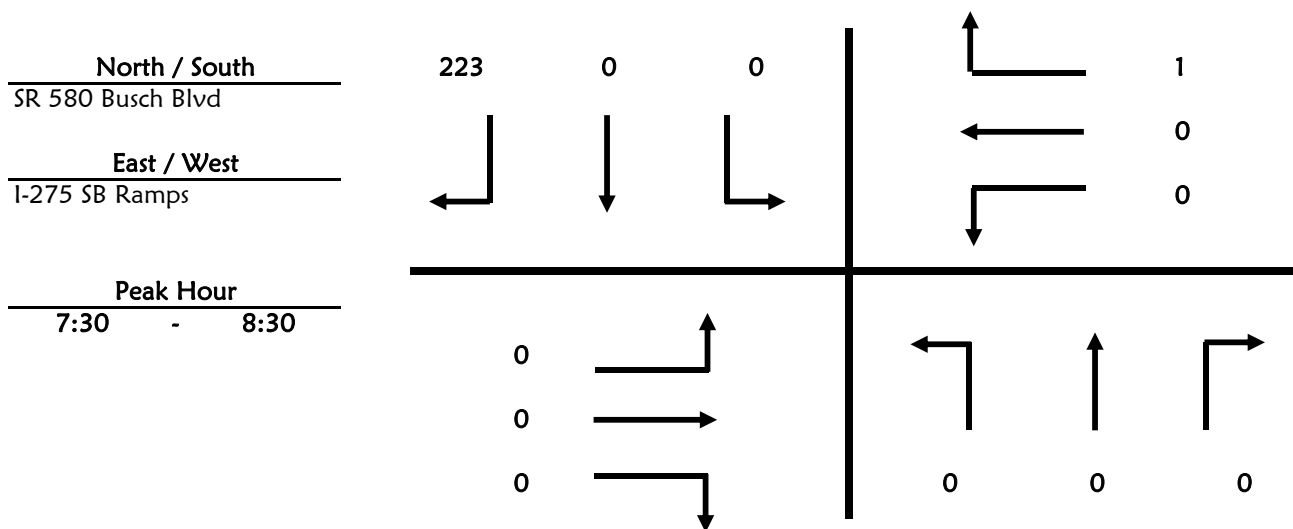
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & I-275 SB Ramps
Date Thursday, May 04, 2017 7:00 A
Time Period 7:00 to 9:00 **U-Turn & RTOR**

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	0	0	0	37
7:15 - 7:30	0	0	0	0	0	36
7:30 - 7:45	0	0	0	0	0	34
7:45 - 8:00	0	0	0	0	0	70
8:00 - 8:15	0	0	0	0	0	52
8:15 - 8:30	0	0	0	0	0	67
8:30 - 8:45	0	0	0	0	0	80
8:45 - 9:00	0	0	0	0	0	54

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	0	0	0	1
7:15 - 7:30	1	0	0	0	0	0
7:30 - 7:45	0	0	0	0	0	1
7:45 - 8:00	0	0	0	0	0	0
8:00 - 8:15	0	0	0	0	0	0
8:15 - 8:30	0	0	0	0	0	0
8:30 - 8:45	0	0	0	0	0	0
8:45 - 9:00	0	0	0	0	0	0



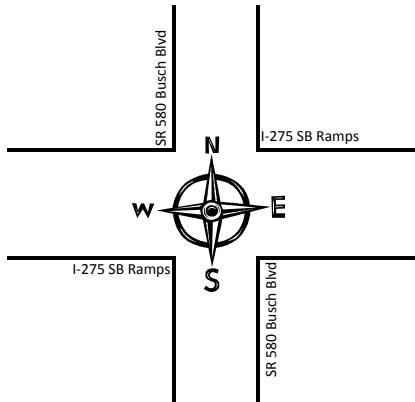
Pedestrian & Bicycle Summary

Project #: 62966
 Date: Thursday, May 04,

NB/SB: SR 580 Busch Blvd
 EB/WB: I-275 SB Ramps

		Hour								
		7:00	8:00	1	2	3	6	7	8	
Eastbound	Bike	0	0							0
	Ped	1	0							1
Westbound	Bike	0	0							0
	Ped	4	6							10

Hour	Southbound		Northbound	
	Ped	Bike	Ped	Bike
1 7:00	0	0	0	0
2 8:00	1	0	0	0
3				
4				
5				
6				
7				
8				
	1	0	0	0



Hour	Southbound		Northbound	
	Ped	Bike	Ped	Bike
1 7:00	0	0	1	0
2 8:00	0	0	0	0
3				
4				
5				
6				
7				
8				
	0	0	1	0

Eastbound	Bike	0	0							0
	Ped	0	0							0
Westbound	Bike	0	0							0
	Ped	0	0							0

		7:00	8:00	1	2	3	4	5	6	7	8
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Roadway Count Summary

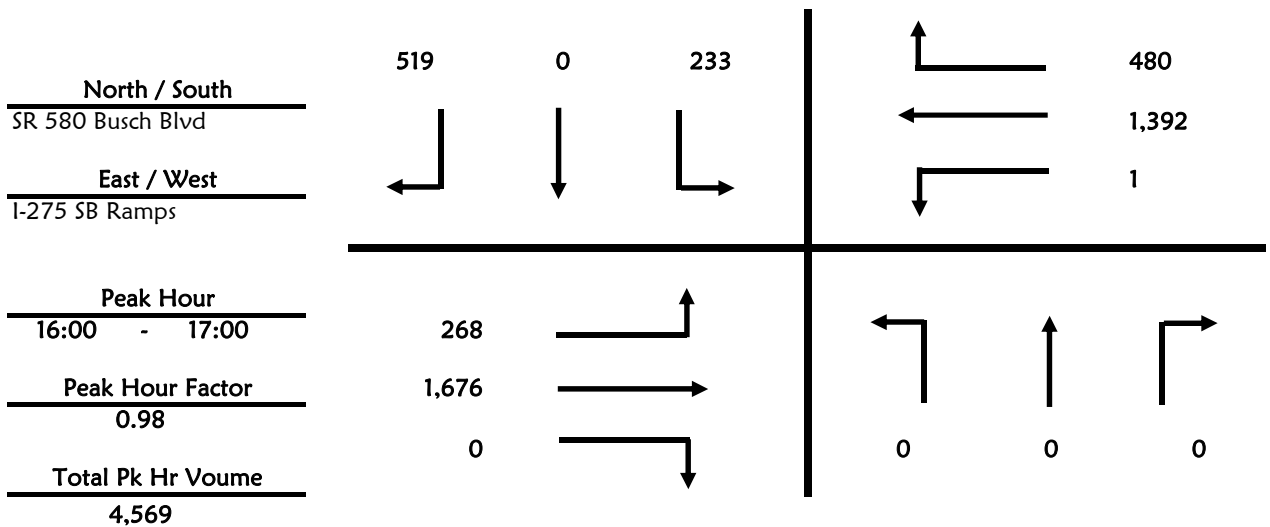
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & I-275 SB Ramps
Date Thursday, May 04, 2017 7:00 AM **All Vehicles**
Time Period 16:00 to 18:00

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	0	0	70	0	155
16:15 - 16:30	0	0	0	57	0	122
16:30 - 16:45	0	0	0	70	0	150
16:45 - 17:00	0	0	0	36	0	92
17:00 - 17:15	0	0	0	41	0	95
17:15 - 17:30	0	0	0	41	0	88
17:30 - 17:45	0	0	0	57	0	130
17:45 - 18:00	0	0	0	37	0	93
Total	0	0	0	409	0	925

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	70	412	0	1	314	115
16:15 - 16:30	51	442	0	0	351	102
16:30 - 16:45	61	413	0	0	365	109
16:45 - 17:00	86	409	0	0	362	154
17:00 - 17:15	101	409	0	0	324	117
17:15 - 17:30	104	425	0	0	355	150
17:30 - 17:45	81	411	0	1	325	143
17:45 - 18:00	83	410	0	0	297	124
Total	637	3,331	0	2	2,693	1,014



Roadway Count Summary

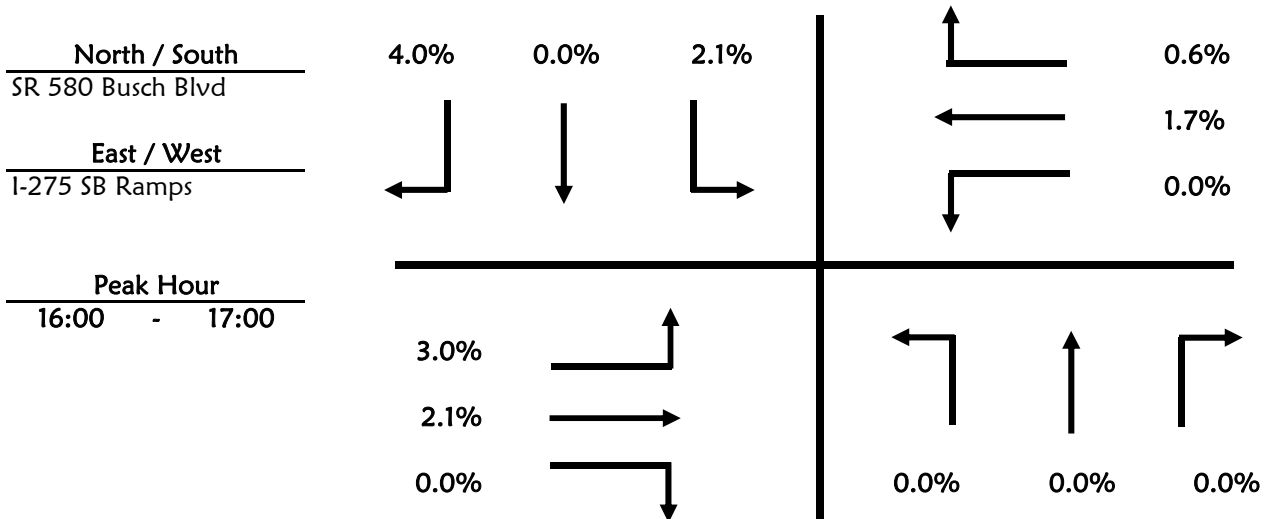
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & I-275 SB Ramps
Date Thursday, May 04, 2017 7:00 .
Time Period 16:00 to 18:00

Trucks
VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	0	0	1	0	4
16:15 - 16:30	0	0	0	2	0	7
16:30 - 16:45	0	0	0	0	0	6
16:45 - 17:00	0	0	0	2	0	4
17:00 - 17:15	0	0	0	2	0	5
17:15 - 17:30	0	0	0	2	0	1
17:30 - 17:45	0	0	0	1	0	3
17:45 - 18:00	0	0	0	2	0	2

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	2	11	0	0	4	1
16:15 - 16:30	0	6	0	0	7	0
16:30 - 16:45	1	12	0	0	3	1
16:45 - 17:00	5	7	0	0	9	1
17:00 - 17:15	4	11	0	0	2	1
17:15 - 17:30	1	9	0	0	7	1
17:30 - 17:45	1	2	0	0	2	1
17:45 - 18:00	0	7	0	0	3	2



Roadway Count Summary

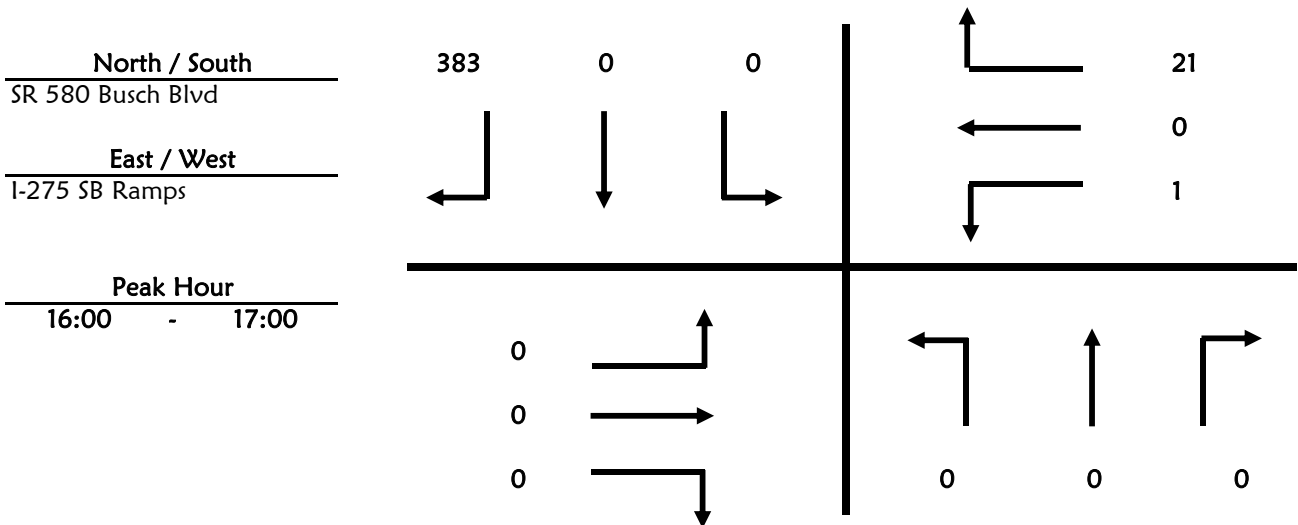
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & I-275 SB Ramps
Date Thursday, May 04, 2017 7:00 A
Time Period 16:00 to 18:00 **U-Turn & RTOR**

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	0	0	0	0	104
16:15 - 16:30	0	0	0	0	0	110
16:30 - 16:45	0	0	0	0	0	96
16:45 - 17:00	0	0	0	0	0	73
17:00 - 17:15	0	0	0	0	0	33
17:15 - 17:30	0	0	0	0	0	37
17:30 - 17:45	0	0	0	0	0	54
17:45 - 18:00	0	0	0	0	0	52

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	0	0	1	0	0
16:15 - 16:30	0	0	0	0	0	1
16:30 - 16:45	0	0	0	0	0	10
16:45 - 17:00	0	0	0	0	0	10
17:00 - 17:15	0	0	0	0	0	9
17:15 - 17:30	0	0	0	0	0	12
17:30 - 17:45	0	0	0	1	0	18
17:45 - 18:00	0	0	0	0	0	1



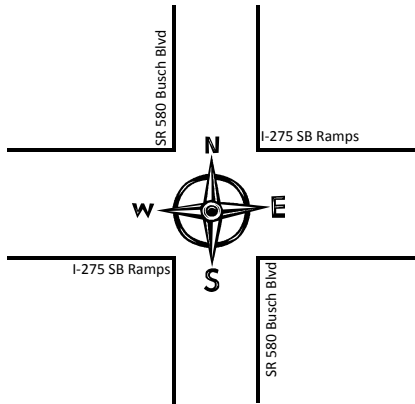
Pedestrian & Bicycle Summary

Project #: 62966
 Date: Thursday, May 04,

NB/SB: SR 580 Busch Blvd
 EB/WB: I-275 SB Ramps

		Hour									
		16:00		17:00							
		1	2	3	4	5	6	7	8		
Eastbound	Bike	5	0							5	
	Ped	1	2							3	
Westbound	Bike	1	0							1	
	Ped	0	1							1	

		Southbound		Northbound	
Hour		Ped	Bike	Ped	Bike
1	16:00	0	0	0	0
2	17:00	0	0	0	0
3					
4					
5					
6					
7					
8					
		0	0	0	0



		Southbound		Northbound			
Hour		Ped	Bike	Ped	Bike		
1	16:00	0	0	0	0		
2	17:00	0	0	0	0		
3							
4							
5							
6							
7							
8							
		0	0	0	0		

Eastbound	Bike	0	0							0	
	Ped	0	0							0	
Westbound	Bike	0	0							0	
	Ped	0	0							0	

		Hour							
		16:00		17:00					
		1	2	3	4	5	6	7	8

Roadway Count Summary

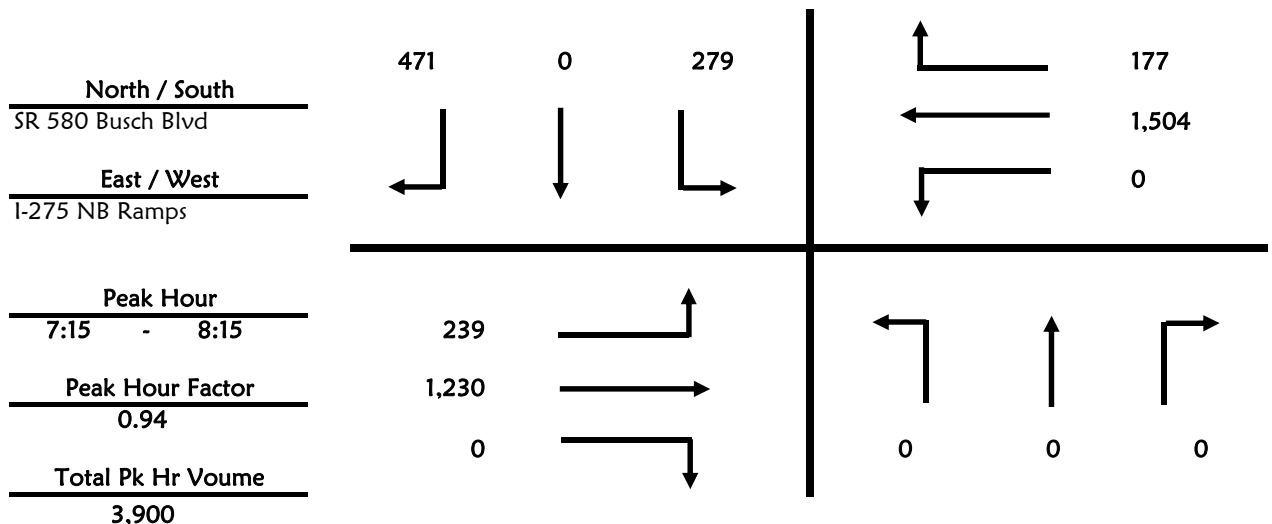
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & I-275 NB Ramps
Date Thursday, May 04, 2017 7:00 AM **All Vehicles**
Time Period 7:00 to 9:00

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	0	53	0	90
7:15 - 7:30	0	0	0	61	0	123
7:30 - 7:45	0	0	0	67	0	116
7:45 - 8:00	0	0	0	82	0	118
8:00 - 8:15	0	0	0	69	0	114
8:15 - 8:30	0	0	0	60	0	111
8:30 - 8:45	0	0	0	69	0	144
8:45 - 9:00	0	0	0	78	0	162
Total	0	0	0	539	0	978

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	63	322	0	0	367	34
7:15 - 7:30	51	306	0	0	406	37
7:30 - 7:45	51	303	0	0	362	45
7:45 - 8:00	65	305	0	0	420	50
8:00 - 8:15	72	316	0	0	316	45
8:15 - 8:30	54	323	0	1	360	31
8:30 - 8:45	57	312	0	0	291	42
8:45 - 9:00	55	268	0	0	287	36
Total	468	2,455	0	1	2,809	320



Roadway Count Summary

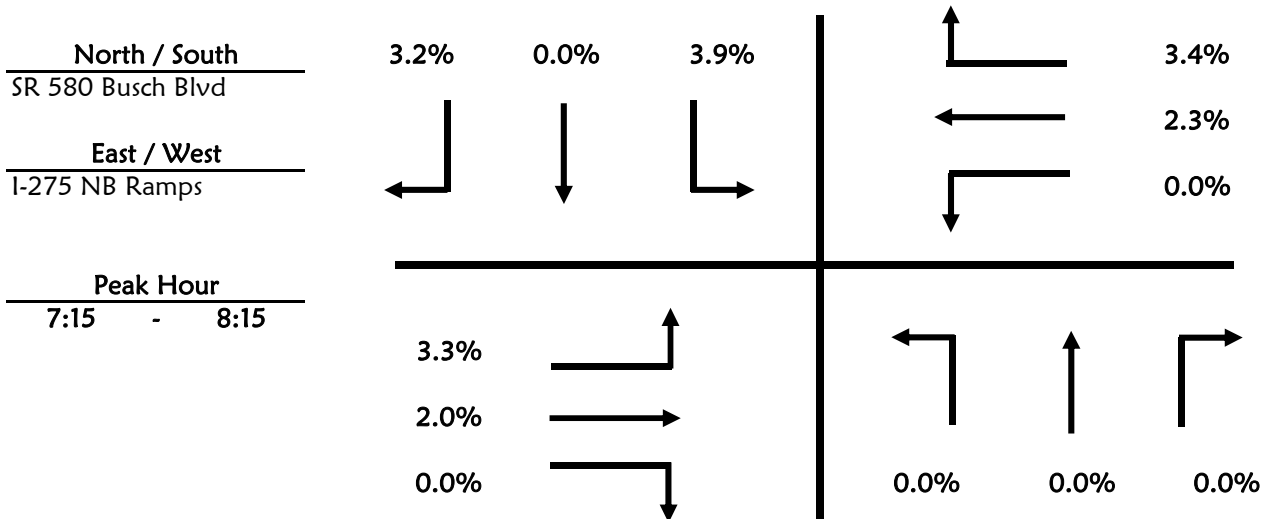
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & I-275 NB Ramps
Date Thursday, May 04, 2017 7:00
Time Period 7:00 to 9:00

Trucks
 VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	0	1	0	3
7:15 - 7:30	0	0	0	0	0	5
7:30 - 7:45	0	0	0	5	0	2
7:45 - 8:00	0	0	0	3	0	1
8:00 - 8:15	0	0	0	3	0	7
8:15 - 8:30	0	0	0	5	0	3
8:30 - 8:45	0	0	0	1	0	8
8:45 - 9:00	0	0	0	0	0	2

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	5	2	0	0	11	0
7:15 - 7:30	2	7	0	0	10	1
7:30 - 7:45	4	3	0	0	6	2
7:45 - 8:00	1	7	0	0	9	0
8:00 - 8:15	1	8	0	0	10	3
8:15 - 8:30	1	8	0	0	5	2
8:30 - 8:45	5	8	0	0	12	1
8:45 - 9:00	1	12	0	0	6	1



Roadway Count Summary

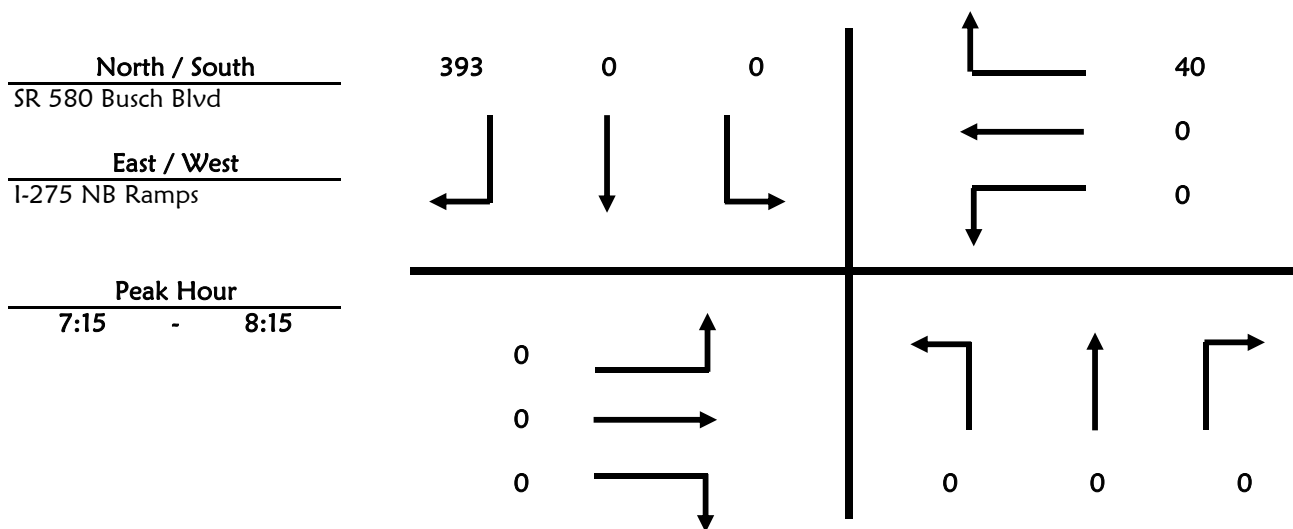
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & I-275 NB Ramps
Date Thursday, May 04, 2017 7:00 A
Time Period 7:00 to 9:00 **U-Turn & RTOR**

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	0	0	0	68
7:15 - 7:30	0	0	0	0	0	107
7:30 - 7:45	0	0	0	0	0	85
7:45 - 8:00	0	0	0	0	0	99
8:00 - 8:15	0	0	0	0	0	102
8:15 - 8:30	0	0	0	0	0	88
8:30 - 8:45	0	0	0	0	0	110
8:45 - 9:00	0	0	0	0	0	134

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	0	0	0	5
7:15 - 7:30	0	0	0	0	0	7
7:30 - 7:45	0	0	0	0	0	14
7:45 - 8:00	0	0	0	0	0	5
8:00 - 8:15	0	0	0	0	0	14
8:15 - 8:30	0	0	0	1	0	8
8:30 - 8:45	0	0	0	0	0	6
8:45 - 9:00	0	0	0	0	0	11



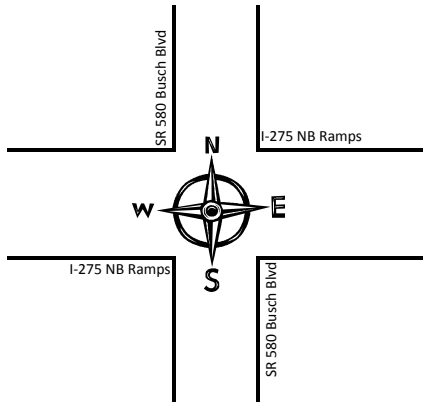
Pedestrian & Bicycle Summary

Project #: 62966
 Date: Thursday, May 04,

NB/SB: SR 580 Busch Blvd
 EB/WB: I-275 NB Ramps

		Hour								
		7:00	8:00	1	2	3	6	7	8	
Eastbound	Bike	0	0							0
	Ped	0	0							0
Westbound	Bike	0	0							0
	Ped	0	0							0

Hour	Southbound		Northbound	
	Ped	Bike	Ped	Bike
1 7:00	0	0	0	0
2 8:00	0	0	0	0
3				
4				
5				
6				
7				
8				
	0	0	0	0



Hour	Southbound		Northbound	
	Ped	Bike	Ped	Bike
1 7:00	0	0	0	0
2 8:00	0	0	0	0
3				
4				
5				
6				
7				
8				
	0	0	0	0

Eastbound	Bike	0	0							0
	Ped	0	0							0
Westbound	Bike	0	0							0
	Ped	0	0							0

		7:00	8:00	1	2	3	4	5	6	7	8
--	--	------	------	---	---	---	---	---	---	---	---

Roadway Count Summary

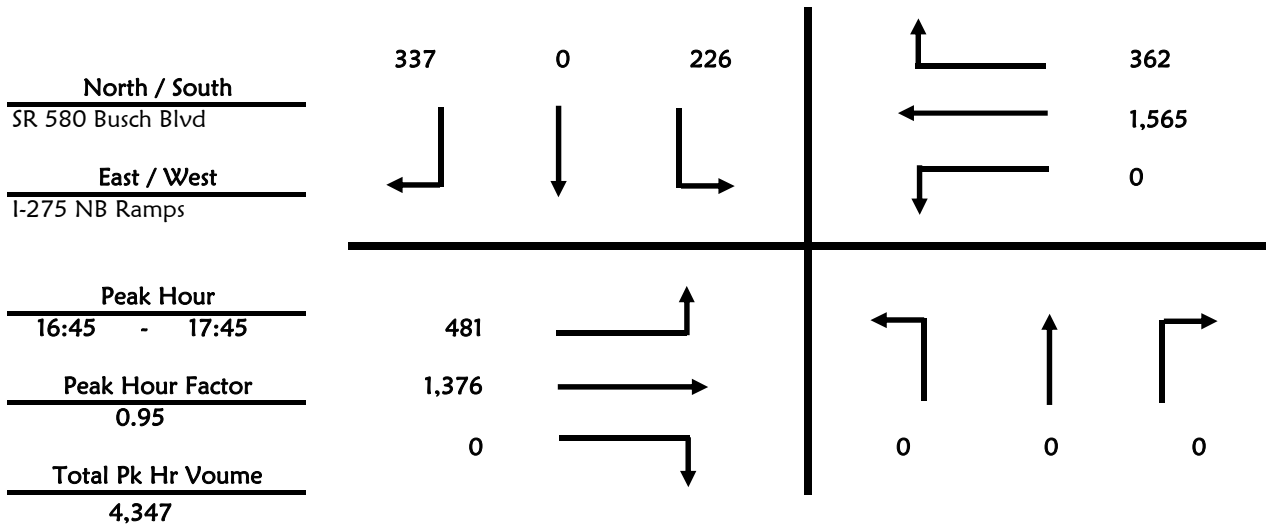
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & I-275 NB Ramps
Date Thursday, May 04, 2017 7:00 AM **All Vehicles**
Time Period 16:00 to 18:00

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	0	0	54	0	90
16:15 - 16:30	0	0	0	53	0	95
16:30 - 16:45	0	0	0	46	0	91
16:45 - 17:00	0	0	0	51	0	90
17:00 - 17:15	0	0	0	53	0	83
17:15 - 17:30	0	0	0	55	0	84
17:30 - 17:45	0	0	0	67	0	80
17:45 - 18:00	0	0	0	53	0	101
	0	0	0	432	0	714

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	108	368	0	0	361	65
16:15 - 16:30	109	388	0	0	347	69
16:30 - 16:45	94	376	0	0	373	70
16:45 - 17:00	121	342	0	0	417	83
17:00 - 17:15	125	334	0	0	350	98
17:15 - 17:30	119	356	0	0	425	105
17:30 - 17:45	116	344	0	0	373	76
17:45 - 18:00	107	340	0	0	325	79
	899	2,848	0	0	2,971	645



Roadway Count Summary

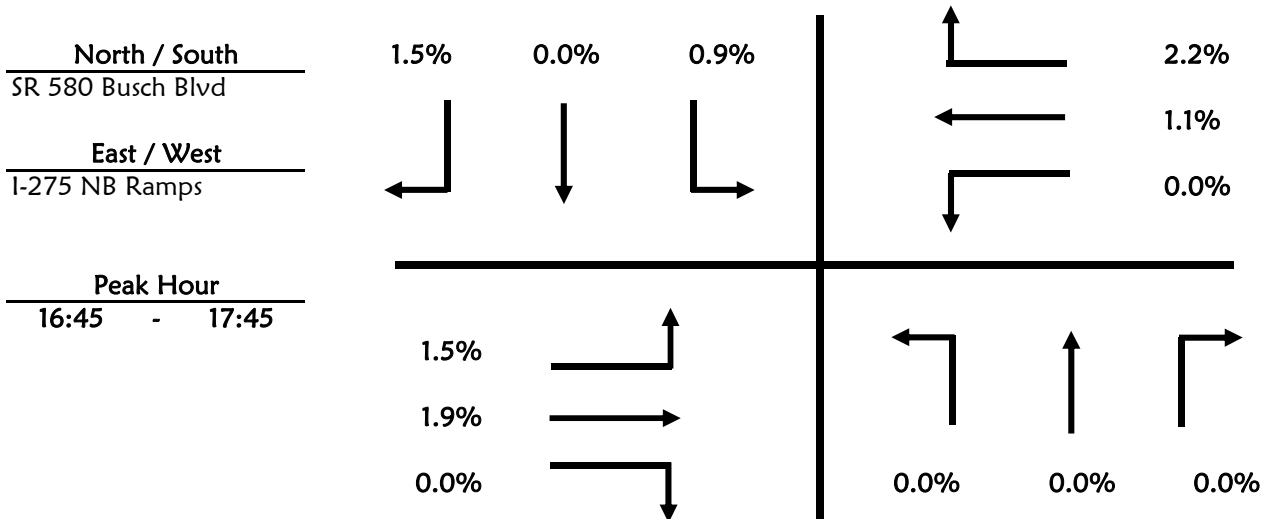
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & I-275 NB Ramps
Date Thursday, May 04, 2017 7:00 .
Time Period 16:00 to 18:00

Trucks
VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	0	0	2	0	0
16:15 - 16:30	0	0	0	1	0	2
16:30 - 16:45	0	0	0	1	0	0
16:45 - 17:00	0	0	0	0	0	2
17:00 - 17:15	0	0	0	0	0	0
17:15 - 17:30	0	0	0	2	0	2
17:30 - 17:45	0	0	0	0	0	1
17:45 - 18:00	0	0	0	2	0	2

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	4	5	0	0	6	2
16:15 - 16:30	1	10	0	0	4	3
16:30 - 16:45	0	9	0	0	3	2
16:45 - 17:00	2	7	0	0	7	0
17:00 - 17:15	2	9	0	0	3	0
17:15 - 17:30	3	7	0	0	5	8
17:30 - 17:45	0	3	0	0	2	0
17:45 - 18:00	3	8	0	0	3	0



Roadway Count Summary

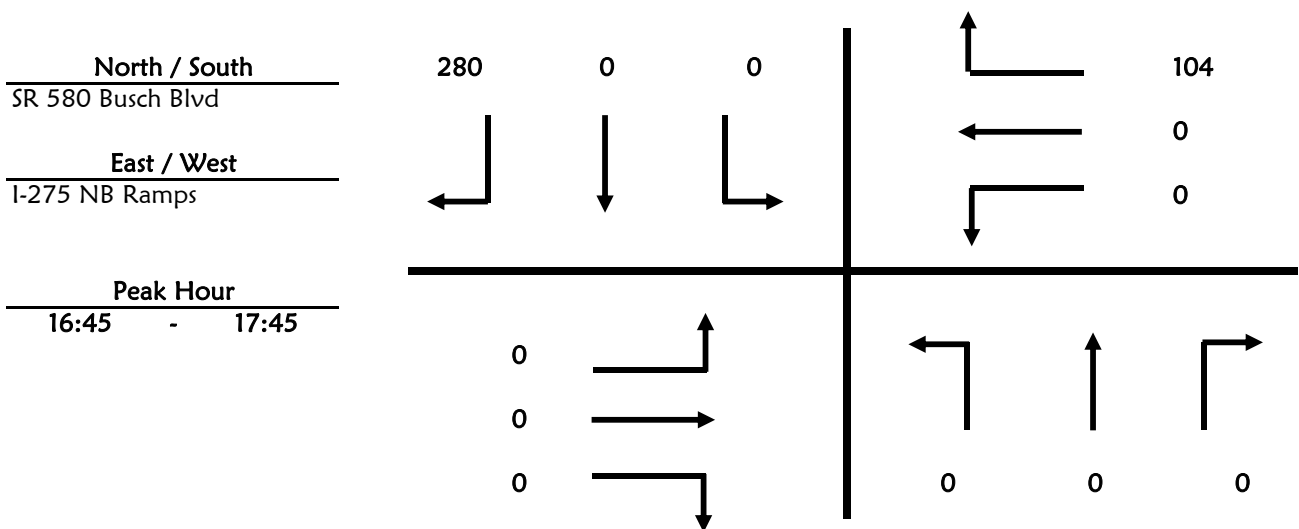
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & I-275 NB Ramps
Date Thursday, May 04, 2017 7:00 A
Time Period 16:00 to 18:00 **U-Turn & RTOR**

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	0	0	0	0	72
16:15 - 16:30	0	0	0	0	0	80
16:30 - 16:45	0	0	0	0	0	80
16:45 - 17:00	0	0	0	0	0	75
17:00 - 17:15	0	0	0	0	0	72
17:15 - 17:30	0	0	0	0	0	70
17:30 - 17:45	0	0	0	0	0	63
17:45 - 18:00	0	0	0	0	0	85

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	0	0	0	0	23
16:15 - 16:30	0	0	0	0	0	16
16:30 - 16:45	0	0	0	0	0	12
16:45 - 17:00	0	0	0	0	0	27
17:00 - 17:15	0	0	0	0	0	28
17:15 - 17:30	0	0	0	0	0	30
17:30 - 17:45	0	0	0	0	0	19
17:45 - 18:00	1	0	0	0	0	15



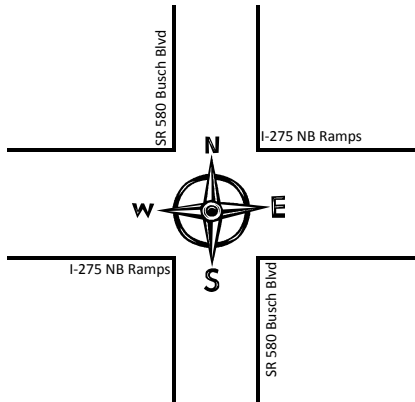
Pedestrian & Bicycle Summary

Project #: 62966
 Date: Thursday, May 04,

NB/SB: SR 580 Busch Blvd
 EB/WB: I-275 NB Ramps

		Hour									
		16:00		17:00							
		1	2	3	6	7	8				
Eastbound	Bike	0	1							1	
	Ped	0	1							1	
Westbound	Bike	0	1							1	
	Ped	0	0							0	

Hour	Southbound		Northbound	
	Ped ▼	Bike	Ped ▲	Bike
1 16:00	0	0	0	0
2 17:00	0	0	0	0
3				
4				
5				
6				
7				
8				
	0	0	0	0



Hour	Southbound		Northbound	
	Ped ▼	Bike	Ped ▲	Bike
1 16:00	0	0	0	0
2 17:00	0	0	0	0
3				
4				
5				
6				
7				
8				
	0	0	0	0

Eastbound	Bike	0	0							0	
	Ped	0	0							0	
Westbound	Bike	0	0							0	
	Ped	0	0							0	

		Hour								
		16:00		17:00						
		1	2	3	4	5	6	7	8	
Hour										

Roadway Count Summary

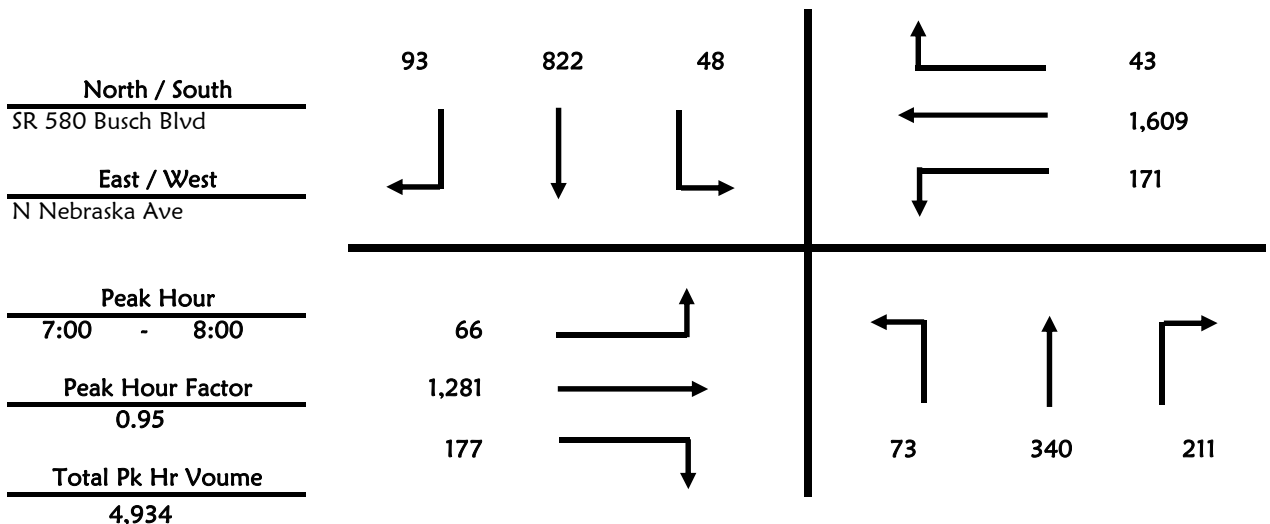
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Nebraska Ave
Date Thursday, May 04, 2017 7:00 AM **All Vehicles**
Time Period 7:00 to 9:00

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	15	65	40	13	200	27
7:15 - 7:30	20	76	52	8	209	21
7:30 - 7:45	23	110	60	13	213	22
7:45 - 8:00	15	89	59	14	200	23
8:00 - 8:15	24	77	35	17	193	15
8:15 - 8:30	23	78	54	21	177	22
8:30 - 8:45	12	78	32	27	160	34
8:45 - 9:00	16	92	39	18	136	39
	148	665	371	131	1,488	203

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	13	298	39	44	373	12
7:15 - 7:30	11	317	46	45	385	13
7:30 - 7:45	19	325	52	45	401	7
7:45 - 8:00	23	341	40	37	450	11
8:00 - 8:15	25	311	49	46	313	17
8:15 - 8:30	21	315	44	44	328	11
8:30 - 8:45	27	309	28	56	304	16
8:45 - 9:00	31	273	36	38	268	22
	170	2,489	334	355	2,822	109



Roadway Count Summary

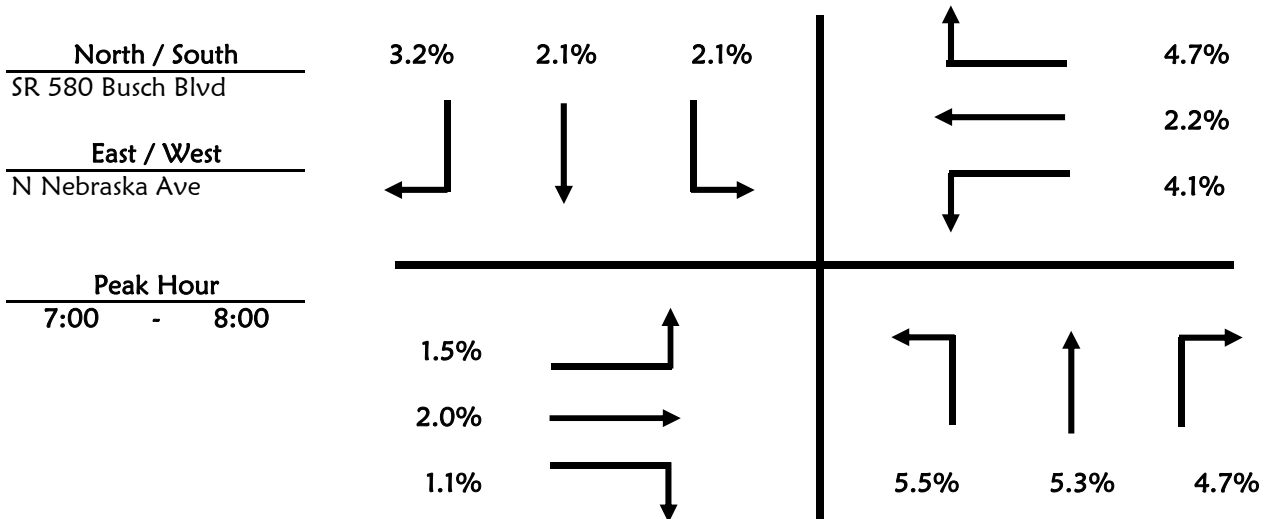
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Nebraska Ave
Date Thursday, May 04, 2017 7:00
Time Period 7:00 to 9:00

Trucks
VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	4	2	0	4	1
7:15 - 7:30	3	5	2	0	3	0
7:30 - 7:45	1	3	3	0	3	2
7:45 - 8:00	0	6	3	1	7	0
8:00 - 8:15	2	3	0	1	4	0
8:15 - 8:30	2	5	3	0	4	0
8:30 - 8:45	0	4	2	4	2	2
8:45 - 9:00	0	7	4	1	3	1

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	1	1	0	8	0
7:15 - 7:30	0	6	0	4	8	1
7:30 - 7:45	1	8	1	2	5	1
7:45 - 8:00	0	10	0	1	14	0
8:00 - 8:15	3	5	2	1	10	0
8:15 - 8:30	3	9	3	0	3	3
8:30 - 8:45	1	5	1	2	11	1
8:45 - 9:00	3	8	1	0	3	2



Roadway Count Summary

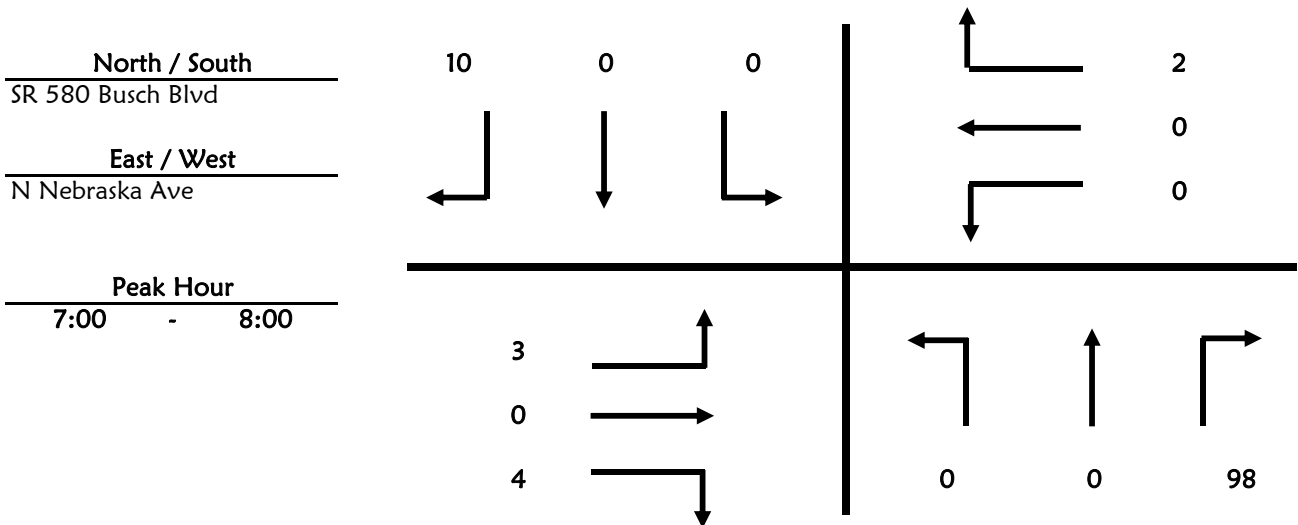
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Nebraska Ave
Date Thursday, May 04, 2017 7:00 A
Time Period 7:00 to 9:00 **U-Turn & RTOR**

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	0	0	14	0	0	4
7:15 - 7:30	0	0	24	0	0	0
7:30 - 7:45	0	0	30	0	0	0
7:45 - 8:00	0	0	30	0	0	6
8:00 - 8:15	0	0	19	0	0	0
8:15 - 8:30	0	0	20	0	0	0
8:30 - 8:45	0	0	18	0	0	5
8:45 - 9:00	0	0	18	0	0	9

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
7:00 - 7:15	1	0	1	0	0	1
7:15 - 7:30	1	0	0	0	0	1
7:30 - 7:45	0	0	2	0	0	0
7:45 - 8:00	1	0	1	0	0	0
8:00 - 8:15	0	0	1	0	0	0
8:15 - 8:30	0	0	0	0	0	0
8:30 - 8:45	1	0	0	0	0	0
8:45 - 9:00	1	0	0	0	0	0



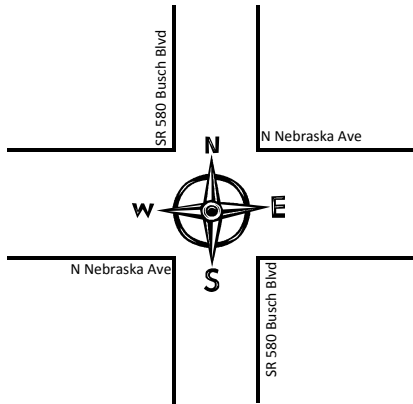
Pedestrian & Bicycle Summary

Project #: 62966
 Date: Thursday, May 04,

NB/SB: SR 580 Busch Blvd
 EB/WB: N Nebraska Ave

		Hour								
		7:00	8:00	1	2	3	6	7	8	
Eastbound	Bike	0	0							0
	Ped	0	0							0
Westbound	Bike	1	2							3
	Ped	0	0							0

Hour	Southbound		Northbound	
	Ped	Bike	Ped	Bike
1 7:00	0	6	0	0
2 8:00	0	1	1	2
3				
4				
5				
6				
7				
8				
	0	7	1	2



Hour	Southbound		Northbound	
	Ped	Bike	Ped	Bike
1 7:00	4	0	6	1
2 8:00	0	1	0	0
3				
4				
5				
6				
7				
8				
	4	1	6	1

Eastbound	Bike	1	0							1
	Ped	1	1							2
Westbound	Bike	0	1							1
	Ped	0	1							1

		7:00	8:00	1	2	3	4	5	6	7	8
--	--	------	------	---	---	---	---	---	---	---	---

Hour

Roadway Count Summary

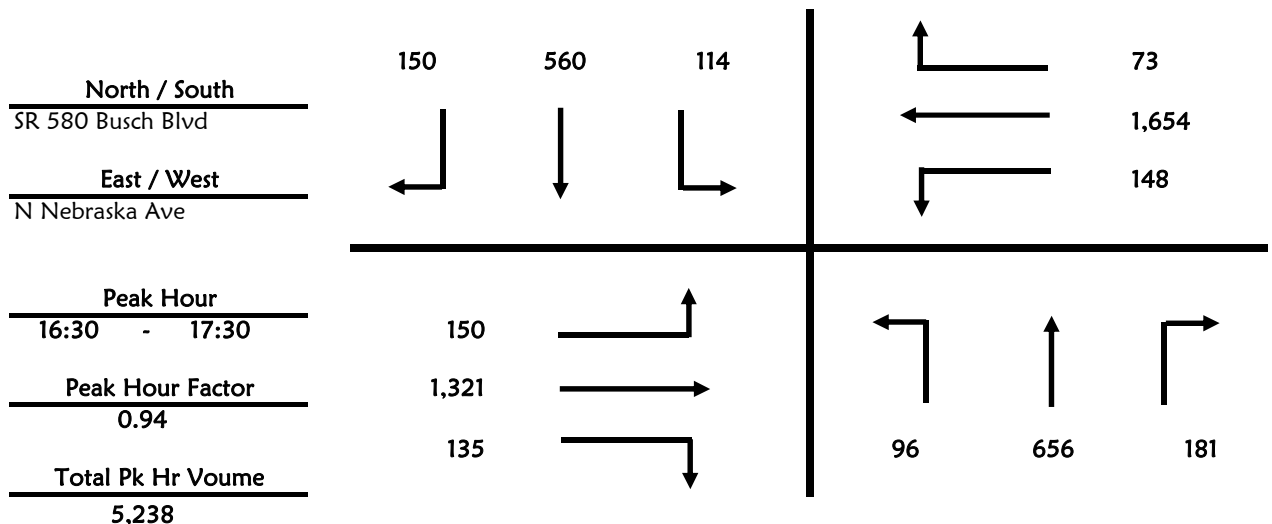
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Nebraska Ave
Date Thursday, May 04, 2017 7:00 AM **All Vehicles**
Time Period 16:00 to 18:00

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	30	145	38	26	124	45
16:15 - 16:30	22	145	41	23	138	39
16:30 - 16:45	17	141	44	29	140	27
16:45 - 17:00	24	164	38	35	124	44
17:00 - 17:15	34	176	46	26	143	38
17:15 - 17:30	21	175	53	24	153	41
17:30 - 17:45	17	162	51	29	128	39
17:45 - 18:00	28	170	41	28	132	42
	193	1,278	352	220	1,082	315

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	32	359	41	38	363	16
16:15 - 16:30	35	371	43	36	375	27
16:30 - 16:45	37	345	44	34	394	17
16:45 - 17:00	43	326	28	32	426	17
17:00 - 17:15	30	309	30	43	371	24
17:15 - 17:30	40	341	33	39	463	15
17:30 - 17:45	39	333	33	30	391	17
17:45 - 18:00	29	327	32	42	328	29
	285	2,711	284	294	3,111	162



Roadway Count Summary

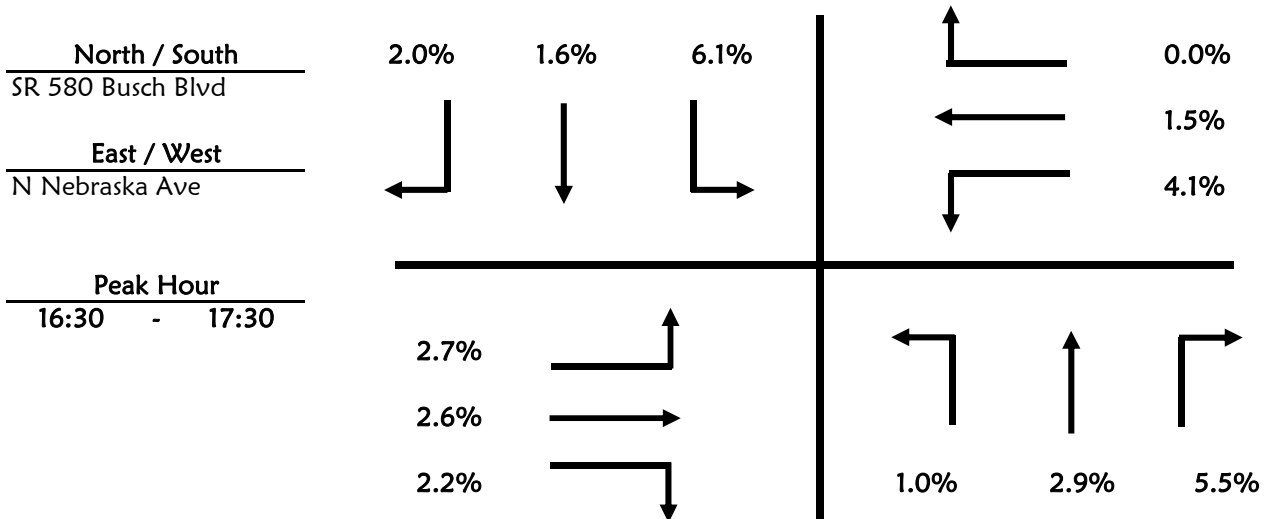
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Nebraska Ave
Date Thursday, May 04, 2017 7:00 .
Time Period 16:00 to 18:00

Trucks
VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	1	3	2	0	3	0
16:15 - 16:30	0	2	1	4	8	0
16:30 - 16:45	0	5	6	0	1	0
16:45 - 17:00	0	5	1	3	5	0
17:00 - 17:15	0	4	1	4	3	1
17:15 - 17:30	1	5	2	0	0	2
17:30 - 17:45	0	5	0	0	5	1
17:45 - 18:00	0	3	2	2	3	0

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	1	6	1	1	4	1
16:15 - 16:30	0	7	3	0	7	3
16:30 - 16:45	1	11	0	2	7	0
16:45 - 17:00	1	5	3	0	6	0
17:00 - 17:15	0	10	0	3	2	0
17:15 - 17:30	2	8	0	1	9	0
17:30 - 17:45	1	2	0	0	2	0
17:45 - 18:00	1	4	3	1	2	0



Roadway Count Summary

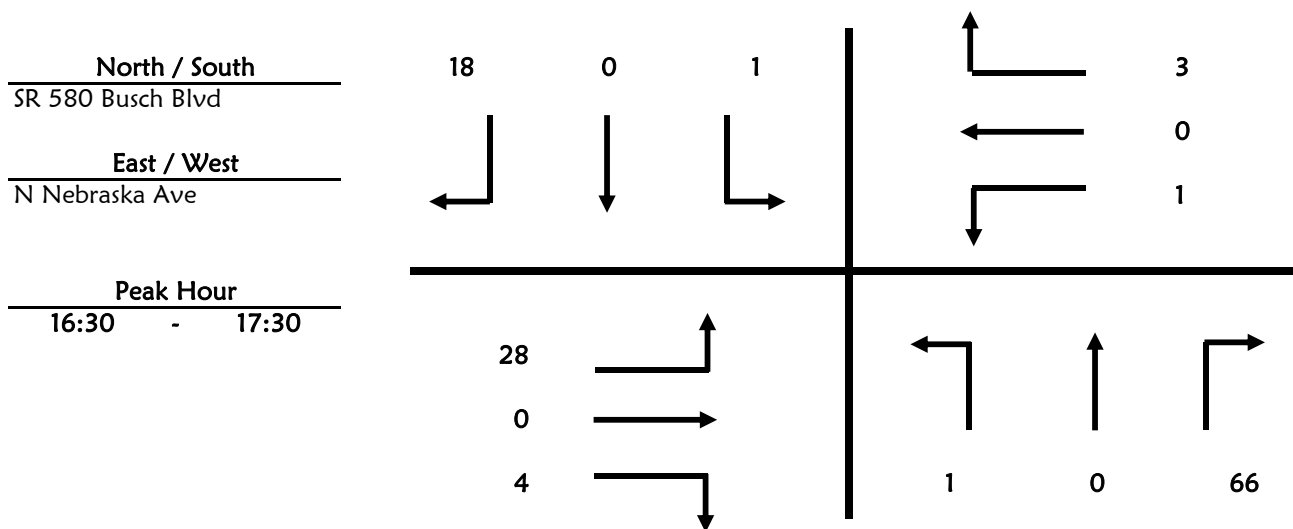
Vanasse Hangen Brustlin, Inc.

County Hillsborough **City** Tampa
Intersection SR 580 Busch Blvd & N Nebraska Ave
Date Thursday, May 04, 2017 7:00 A
Time Period 16:00 to 18:00 **U-Turn & RTOR**

VHB Project #: 62966

Time Period	Northbound			Southbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	0	0	10	2	0	3
16:15 - 16:30	0	0	8	0	0	1
16:30 - 16:45	0	0	18	0	0	3
16:45 - 17:00	0	0	13	0	0	5
17:00 - 17:15	1	0	16	1	0	5
17:15 - 17:30	0	0	19	0	0	5
17:30 - 17:45	0	0	19	0	0	8
17:45 - 18:00	0	0	16	0	0	1

Time Period	Eastbound			Westbound		
	Left	Through	Right	Left	Through	Right
16:00 - 16:15	2	0	0	1	0	0
16:15 - 16:30	2	0	0	0	0	0
16:30 - 16:45	5	0	1	0	0	1
16:45 - 17:00	8	0	2	1	0	1
17:00 - 17:15	5	0	0	0	0	0
17:15 - 17:30	10	0	1	0	0	1
17:30 - 17:45	5	0	0	0	0	3
17:45 - 18:00	0	0	2	0	0	0



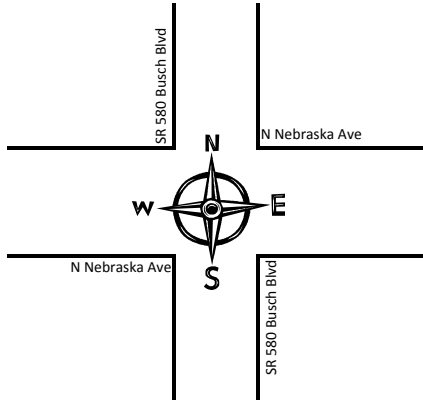
Pedestrian & Bicycle Summary

Project #: 62966
 Date: Thursday, May 04,

NB/SB: SR 580 Busch Blvd
 EB/WB: N Nebraska Ave

		Hour									
		16:00		17:00							
		1	2	3	4	5	6	7	8		
Eastbound	Bike	0	0							0	
	Ped	0	1							1	
Westbound	Bike	0	0							0	
	Ped	0	0							0	

Hour	Southbound		Northbound	
	Ped ▼	Bike	Ped ▲	Bike
1 16:00	1	3	4	6
2 17:00	5	1	5	2
3				
4				
5				
6				
7				
8				
	6	4	9	8



Hour	Southbound		Northbound	
	Ped ▼	Bike	Ped ▲	Bike
1 16:00	1	4	3	3
2 17:00	1	6	0	12
3				
4				
5				
6				
7				
8				
	2	10	3	15

Eastbound	Bike	1	1							2	
	Ped	1	1							2	
Westbound	Bike	1	0							1	
	Ped	0	0							0	

		Hour							
		16:00		17:00					
		1	2	3	4	5	6	7	8

Appendix D

Previous Study - ESAL

MEMORANDUM
FLORIDA DEPARTMENT OF TRANSPORTATION
INTERMODAL SYSTEMS DEVELOPMENT * MS 7-500

DATE: December 14, 2015

TO: Liyanage Indike Ratnayake, FDOT Project Manager

FROM: Andrew J. Tyrell, Systems Planning Coordinator 

COPIES: File

SUBJECT: F.P.N. : 437530-1-52-01
Roadway ID: 10 310 000
State Road : SR 580/W. Busch Blvd. (E. of N. Armenia Ave. to W. of Florida Ave.)
County : HILLSBOROUGH

Per your request, enclosed are the projected 2020, 2030 and the 2040 AADT traffic, the (K30, D30 & T24) factors, and the 18 KIP Equivalent Single Axle Load Accumulation (ESAL), for the above sections.

K30	9.00%
D30	58.60%
24Hr T	4.00%
Design Hr T	2.00%

Year	AADT
2014	42,000
2020	43,900
2030	47,100
2040	50,300

The projected 2020 and 2030 AADT's are interpolated between the 2014 and 2040 AADT.

I have followed The FDOT Project Traffic Forecasting Procedure.

/AJT
Enclosure

18 kip EQUIVALENT SINGLE AXLE LOAD ANALYSIS

PROJECT TRAFFIC FOR PD&E and DESIGN ANALYSIS INFO / FACTORS

PIN #: 437530-1-52-01
COUNTY: HILLSBOROUGH
ROADWAYID: 10 310 000
PROJECT DESCRIPTION: SR 580/W. Busch Blvd. (E. of N. Armenia Ave. to W. of Florida Ave.)

LOCATION DESCRIPTION: _____ **LOCATION #:** 1
 _____ 0

GROWTH RATE FORMULA

A: Interpolation
B: Enter Growth Rate
C: Enter All AADTs
D: New Facility

Choose A, B, C, or D here: C

Linear Growth Rate 0.76 %
 Compounded Growth Rate _____ %
 Decaying Growth Rate _____ %
 (select one)

If "A" select an interpolation function
 If "B" enter rate as decimals (1%=1.01)
 If "C", or "D" continue to next section

DESIGN INFORMATION

	AADT	
Existing Year <u>2014</u>	<u>42000</u>	Daily Direction Split (50% or 100%) <u>50%</u>
Opening Year <u>2020</u>	<u>43900</u>	Lanes in One Direction <u>2</u>
Mid-Design Year <u>2030</u>	<u>47100</u>	T24 values
Design Year <u>2040</u>	<u>50300</u>	Existing to Opening Year <u>4.00%</u>
		Opening to Mid-Year <u>4.00%</u>
		Mid-Year to Design-Year <u>4.00%</u>

Note: AADT values have been rounded to the nearest 100

1995 EQUIVALENCY FACTORS |u(1)|

	FLEXIBLE PAVEMENT	RIGID PAVEMENT
(selected with an X)	SN = 5/THICK	SN = 12/THICK
RURAL FREEWAY:	1.050 _____	1.600 _____
URBAN FREEWAY:	0.900 _____	1.270 _____
RURAL HIGHWAY:	0.960 _____	1.350 _____
URBAN HIGHWAY:	0.890 <u>X</u>	1.220 <u>X</u>
OTHER (Enter Factor and X):	_____	_____

(1) Equivalency Factors are based on Updated Pavement Damage Factors Memorandum, dated July 2, 1998.

Lane Factors developed by Copes equation

I have reviewed the 18 kip Equivalent Single Axle Loads (ESAL's) to be used for pavement design on this project. I hereby attest that these have been developed in accordance with the FDOT Project Traffic Forecasting Procedure using historical traffic data and other available information.

Prepared by:	Andrew J. Tyrell	Systems Planning Coordinator	FDOT D7	12/14/2015
	Name	Title	Org. Unit or Firm	Date
	Signature			
Reviewed by:	Daniel R. Lamb	Systems Planning Administrator	FDOT D7	12/14/2015
	Name	Title	Org. Unit or Firm	Date
	Signature			

18 kip EQUIVALENT SINGLE AXLE LOAD ANALYSIS - LOCATION 1

PROJECT TRAFFIC FOR PD&E and DESIGN ANALYSIS INFO / FACTORS

YEARS: 2014 to 2040

SECTION #: 10 310 000

COUNTY: HILLSBOROUGH

PIN #: 437530-1-52-01

FLEXIBLE PAVEMENT URBAN HIGHWAY 0.890

SN=5/THICK

SR 580/W. Busch Blvd. (E. of N. Armenia Ave. to W. of Florida Ave.)

C

YEAR	AADT	ESAL (1000S)	ACCUM (1000s)	D	T	LF	EF
2014	42000	204	0	0.5	4.00%	0.745	0.890
2015	42300	205	0	0.5	4.00%	0.744	0.890
2016	42600	206	0	0.5	4.00%	0.744	0.890
2017	42900	208	0	0.5	4.00%	0.743	0.890
2018	43200	209	0	0.5	4.00%	0.743	0.890
2019	43500	210	0	0.5	4.00%	0.742	0.890
2020	43900	212	212	0.5	4.00%	0.741	0.890
2021	44200	213	425	0.5	4.00%	0.741	0.890
2022	44500	214	639	0.5	4.00%	0.740	0.890
2023	44800	216	855	0.5	4.00%	0.740	0.890
2024	45100	217	1072	0.5	4.00%	0.739	0.890
2025	45500	219	1291	0.5	4.00%	0.738	0.890
2026	45800	220	1511	0.5	4.00%	0.738	0.890
2027	46100	221	1732	0.5	4.00%	0.737	0.890
2028	46400	223	1955	0.5	4.00%	0.737	0.890
2029	46700	224	2179	0.5	4.00%	0.736	0.890
2030	47100	226	2405	0.5	4.00%	0.735	0.890
2031	47400	227	2632	0.5	4.00%	0.735	0.890
2032	47700	228	2860	0.5	4.00%	0.734	0.890
2033	48000	229	3089	0.5	4.00%	0.734	0.890
2034	48300	231	3320	0.5	4.00%	0.733	0.890
2035	48700	232	3552	0.5	4.00%	0.733	0.890
2036	49000	234	3786	0.5	4.00%	0.732	0.890
2037	49300	235	4021	0.5	4.00%	0.732	0.890
2038	49600	236	4257	0.5	4.00%	0.731	0.890
2039	49900	237	4494	0.5	4.00%	0.731	0.890
2040	50300	239	4733	0.5	4.00%	0.730	0.890

Opening to Mid-Design Year ESAL Accumulation (1000s): 2193

Opening to Design Year ESAL Accumulation (1000s): 4521

I have reviewed the 18 kip Equivalent Single Axle Loads (ESAL's) to be used for pavement design on this project. I hereby attest that these have been developed in accordance with the FDOT Project Traffic Forecasting Procedure using historical traffic data and other available information.

Prepared by: Andrew J. Tyrell Systems Planning Coordinator FDOT D7 12/14/2015
 Name Title Org.Unit or F Date

Signature

Reviewed By: Daniel R. Lamb Systems Planning Administrator FDOT D7 12/14/2015
 Name Title Org.Unit or F Date

Signature

18 kip EQUIVALENT SINGLE AXLE LOAD ANALYSIS - LOCATION HILLSBORO


PROJECT TRAFFIC FOR PD&E and DESIGN ANALYSIS INFO / FACTORS
 YEARS: 2014 to 2040


SECTION #: 10 310 000 Location #: 1 FIN #: 437530-1-52-01
 RIGID PAVEMENT URBAN HIGHWAY 1.220
 SN=12/THICK SR 580/W. Busch Blvd. (E. of N. Armenia Ave. to W. of Florida Ave.) C

YEAR	AADT	ESAL (1000S)	ACCUM (1000s)	D	T	LF	EF
2014	42000	279	0	0.5	4.00%	0.745	1.220
2015	42300	281	0	0.5	4.00%	0.744	1.220
2016	42600	283	0	0.5	4.00%	0.744	1.220
2017	42900	284	0	0.5	4.00%	0.743	1.220
2018	43200	286	0	0.5	4.00%	0.743	1.220
2019	43500	288	0	0.5	4.00%	0.742	1.220
2020	43900	290	290	0.5	4.00%	0.741	1.220
2021	44200	292	582	0.5	4.00%	0.741	1.220
2022	44500	294	876	0.5	4.00%	0.740	1.220
2023	44800	296	1172	0.5	4.00%	0.740	1.220
2024	45100	297	1469	0.5	4.00%	0.739	1.220
2025	45500	300	1769	0.5	4.00%	0.738	1.220
2026	45800	301	2070	0.5	4.00%	0.738	1.220
2027	46100	303	2373	0.5	4.00%	0.737	1.220
2028	46400	305	2678	0.5	4.00%	0.737	1.220
2029	46700	307	2985	0.5	4.00%	0.736	1.220
2030	47100	309	3294	0.5	4.00%	0.735	1.220
2031	47400	311	3605	0.5	4.00%	0.735	1.220
2032	47700	312	3917	0.5	4.00%	0.734	1.220
2033	48000	314	4231	0.5	4.00%	0.734	1.220
2034	48300	316	4547	0.5	4.00%	0.733	1.220
2035	48700	318	4865	0.5	4.00%	0.733	1.220
2036	49000	320	5185	0.5	4.00%	0.732	1.220
2037	49300	322	5507	0.5	4.00%	0.732	1.220
2038	49600	324	5831	0.5	4.00%	0.731	1.220
2039	49900	325	6156	0.5	4.00%	0.731	1.220
2040	50300	328	6484	0.5	4.00%	0.730	1.220

Opening to Mid-Design Year ESAL Accumulation (1000s): 3004
 Opening to Design Year ESAL Accumulation (1000s): 6194

I have reviewed the 18 kip Equivalent Single Axle Loads (ESAL's) to be used for pavement design on this project. I hereby attest that these have been developed in accordance with the FDOT Project Traffic Forecasting Procedure using historical traffic data and other available information.

Prepared by: Andrew J. Tyrell Systems Planning Coordinator FDOT D7 12/14/2015
 Name Title Firm Date
 Signature 

Reviewed By: Daniel R. Lamb Systems Planning Administrator FDOT D7 12/14/2015
 Name Title Org. Unit or Firm Date
 Signature 

Appendix E

Development of Existing & Future Traffic Volumes

Section 1.0 INTRODUCTION

The Design Traffic Application is a post-process application which would conduct subarea modeling, corridor modeling, and design traffic process following the NCHRP 765 procedure to generate the design traffic volumes automatically. The Design Traffic Application was utilized for the Busch Blvd Corridor Study project traffic development for the subarea modeling and corridor modeling process and generation of initial base year (2010) and future year (2040) traffic results. The base year (2010) and future year (2040) traffic results from the Design Traffic Application were used as a starting point to estimate the project traffic for existing year (2017) and future year (2040). The existing year (2017) and future year (2040) final Turning Movement Volumes (TMVs) were adjusted and balanced to ensure the reasonableness of the volume pattern and volume gaps between adjacent intersections.

Section 2.0 METHODOLOGY

2.1 DATA SOURCES

The following data were received from VHB for the project traffic volume development:

- Existing Year (2017) AADT
- Existing Year (2017) K & D factors and Observed Turning Movement Counts
- Existing Year Traffic Report
- Existing Year Peak Direction Figure

2.2 DESIGN TRAFFIC APPLICATION APPROACH

The Design Traffic Application is a post-process application which would conduct subarea modeling, corridor modeling, and design traffic process following the NCHRP 765 procedure to generate the design traffic volumes automatically. The Design Traffic Application was utilized for the Busch Blvd Corridor Study project traffic development for the subarea modeling and corridor modeling process and generation of initial base year (2010) and future year (2040) traffic results by applying the model annual growth rates between base year (2010) and future year (2040) to the existing year (2017) AADTs.

The existing year count calibration process was conducted for the study area, which is an iterative process to adjust the model base year (2010) input counts using the existing year (2017) counts and appropriate annual growth rate adjustment factor for the model input counts until the calculated model existing year (2017) AADTs are close to the observed AADTs.

For this study, it was agreed that the base year (2010) and future year (2040) traffic AADTs from the Design Traffic Application were used as a starting point to project the design traffic for 2040. The existing year (2017) TMVs were adjusted by VHB. The existing year (2017) and future year (2040) final Turning Movement Volumes (TMVs) were adjusted and balanced to ensure the reasonableness of the volume pattern and volume gaps between adjacent intersections.

2.3 TRAVEL DEMAND MODEL AND SUBAREA MODEL INPUT DEVELOPMENT

The Tampa Bay Regional Planning Model version 8.1.1 (TBRPM v8.1.1) was utilized for this study. TBRPM v8.1.1 is the sketch planning level travel demand forecasting tool that was adopted by the Tampa Bay Regional Transportation Analysis (RTA) process to evaluate the travel demand and the proposed transportation improvements in FDOT District 7.

The study area roadway geometry and number of lanes were reviewed by comparing with Google Earth aerial image.

LRTP coding check was conducted in TBRPM 2040 network. The facility type of Armenia Ave between West Sligh Ave and West Busch Blvd was updated from 32 and 24 to 23 and 25.

2.4 MODEL SENARIOS

Three scenarios were set up in TBRPM:

- 2010 Base
- 2040 No Build (Existing Lane Configuration)
- 2040 Build (6 lanes on Busch Blvd)

2.5 PROJECT TRAFFIC DEVELOPMENT

Existing Year (2017) Project Traffic Development

AADT

The exiting year (2017) AADTs were provided by VHB.

DDHV

The exiting year (2017) initial DDHVs were developed by applying K and D factors to the existing year (2017) AADTs according to the directionality figure. The Future Year (2017) final design DDHVs were developed by summing up the existing year (2017) design TMVs for each intersection approach movement.

TMV

The initial existing year (2017) design TMVs were developed by applying the split percentage of the existing year (2017) observed turning movement counts by direction (left turn, through movement, and right turn) to the initial DDHVs. The initial existing year (2017) design TMVs were reviewed and adjusted by VHB and the Department to ensure the reasonableness.

Future Year 2040 No-Build Project Traffic Development

AADT

The Future Year 2040 No-Build AADTs were developed by the design traffic application following the NCHRP 765 procedure. Certain reasonableness check and adjustment were conducted to ensure the reasonableness of the AADTs.

SR 580/West Busch Blvd Corridor Study Existing & Future Year Traffic Volume Development

TMV

The Future Year 2040 No-Build TMVs were developed by applying the NCHRP model link based annual growth rates between 2017 and 2040 No-Build approach directional AADTs to the existing year (2017) adjusted design traffic TMVs. The link based annual growth rates were calculated using the Design Traffic Application base year (2010) AADT and future year (2040) No-Build AADT. It was assumed that there is linear growth between 2010 and 2040.

The Future Year 2040 No-Build TMVs were adjusted and smoothed following the same logic as the existing year (2017) TMV adjustment to ensure the reasonableness of the volume pattern and volume gaps between adjacent intersections.

DDHV

The Future Year 2040 No-Build DDHVs were developed by summing up the 2040 No-Build TMVs for each intersection approach movement.

Future Year 2040 Build Design Traffic Development

AADT

The Future Year 2040 Build AADTs were developed by the design traffic application following the NCHRP 765 procedure. Certain reasonableness check and adjustment were conducted to ensure the reasonableness of the AADTs.

TMV

The Future Year 2040 Build TMVs were developed by applying the NCHRP model link based annual growth rates between 2017 and 2040 Build approach directional AADTs to the existing year (2017) adjusted design traffic TMVs. The link based annual growth rates were calculated using the Design Traffic Application base year (2010) AADT and future year (2040) Build AADT. It was assumed that there is linear growth between 2010 and 2040.

The Future Year 2040 Build TMVs were adjusted and smoothed following the same logic as the existing year (2017) TMV adjustment to ensure the reasonableness of the volume pattern and volume gaps between adjacent intersections.

DDHV

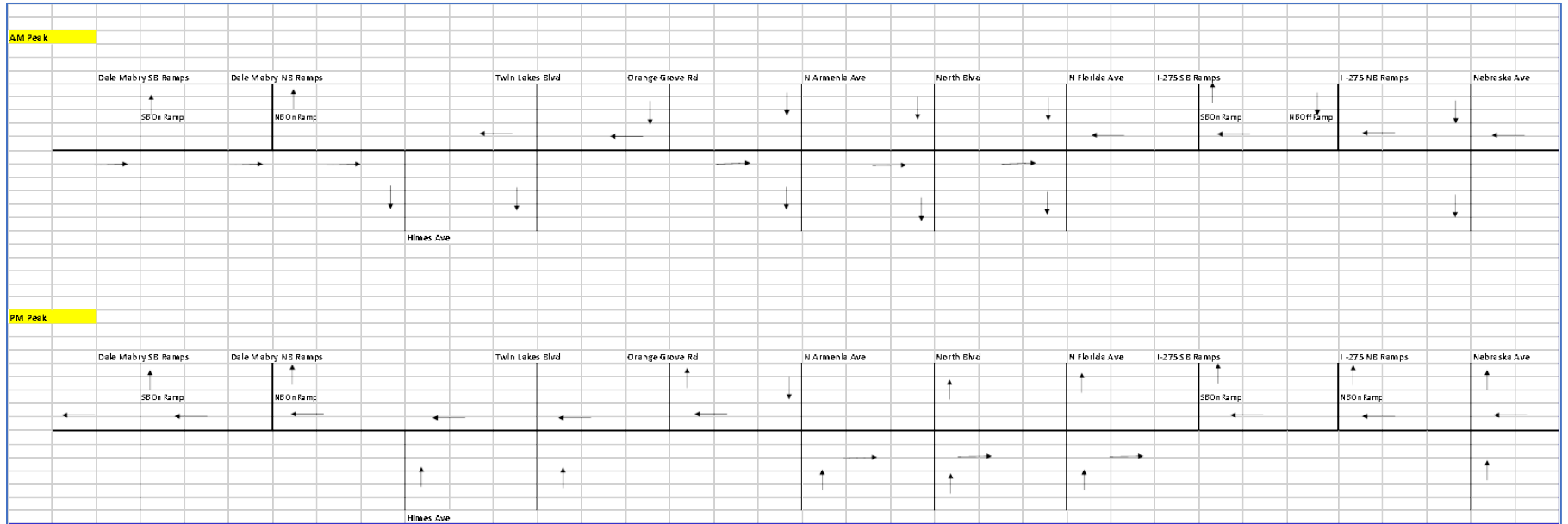
The Future Year 2040 Build DDHVs were developed by summing up the 2040 Build TMVs for each intersection approach movement.

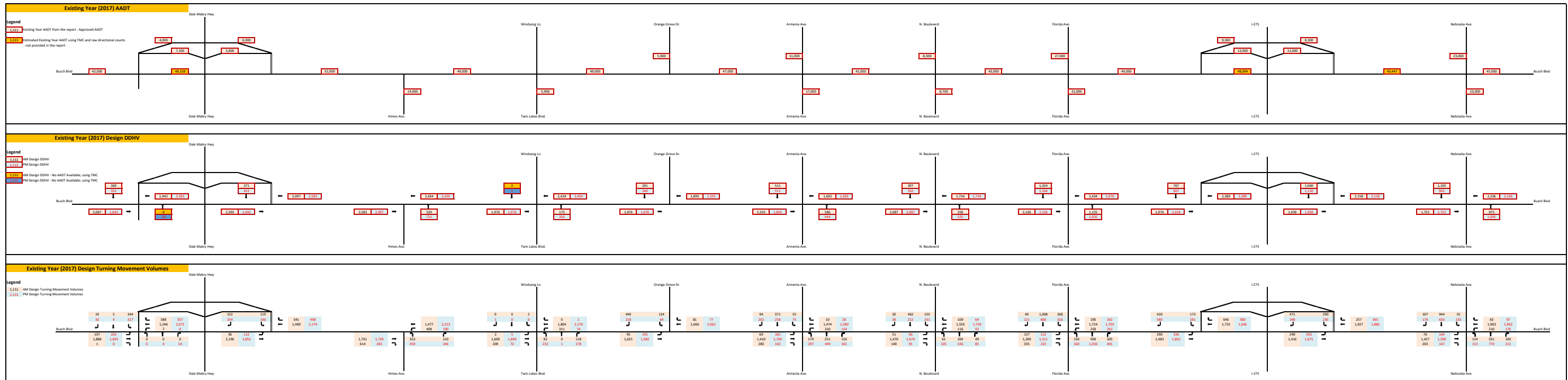
**SR 580/West Busch Blvd Corridor Study
Existing & Future Year Traffic Volume Development**

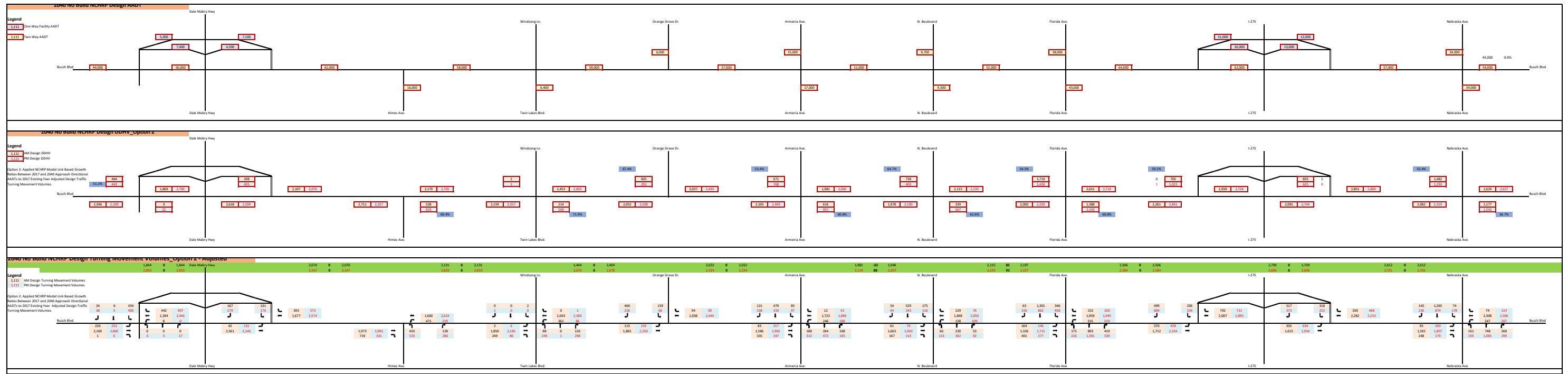
Section 3.0

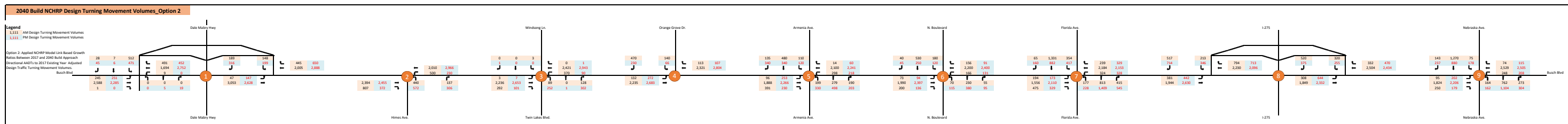
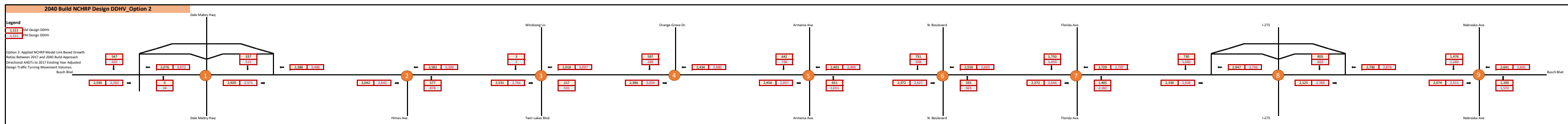
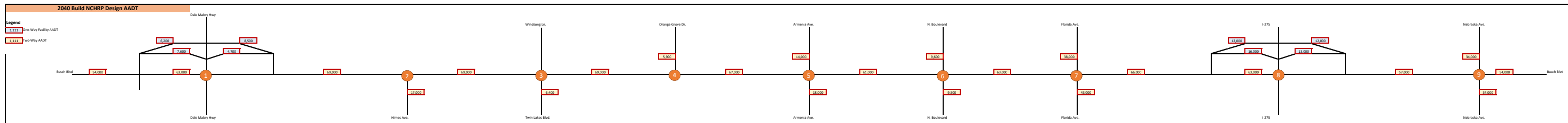
APPENDIX

Peak Directionality Figure































Appendix F

Existing Synchro Outputs

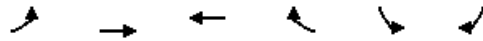
SR 580/Busch Blvd
1: Busch Blvd & Dale Mabry Hwy SB Ramps

Existing AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 							
Traffic Volume (veh/h)	197	1888	1	7	1246	0	0	0	0	344	5	19
Future Volume (veh/h)	197	1888	1	7	1246	0	0	0	0	344	5	19
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1885	1885	1856	1856	0	1900	1900	1900	1870	1900	1796
Adj Flow Rate, veh/h	203	1946	1	7	1285	0	0	0	0	359	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	1	1	3	3	0	0	0	0	2	0	7
Cap, veh/h	318	3012	2	24	2534	0	0	1	1	394	0	
Arrive On Green	0.04	0.82	0.82	0.50	0.50	0.00	0.00	0.00	0.00	0.11	0.00	0.00
Sat Flow, veh/h	1767	3674	2	6	3491	0	0	1900	1610	3563	0	1522
Grp Volume(v), veh/h	203	949	998	686	606	0	0	0	0	359	0	0
Grp Sat Flow(s),veh/h/ln	1767	1791	1885	1809	1604	0	0	1900	1610	1781	0	1522
Q Serve(g_s), s	5.1	38.6	38.6	0.0	48.2	0.0	0.0	0.0	0.0	18.9	0.0	0.0
Cycle Q Clear(g_c), s	5.1	38.6	38.6	46.8	48.2	0.0	0.0	0.0	0.0	18.9	0.0	0.0
Prop In Lane	1.00		0.00	0.01		0.00	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	318	1468	1545	1365	1193	0	0	1	1	394	0	
V/C Ratio(X)	0.64	0.65	0.65	0.50	0.51	0.00	0.00	0.00	0.00	0.91	0.00	
Avail Cap(c_a), veh/h	658	1468	1545	1365	1193	0	0	76	64	405	0	
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	17.2	6.6	6.6	23.9	24.3	0.0	0.0	0.0	0.0	83.5	0.0	0.0
Incr Delay (d2), s/veh	2.1	2.2	2.1	1.3	1.5	0.0	0.0	0.0	0.0	23.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	12.9	13.6	22.5	20.1	0.0	0.0	0.0	0.0	10.1	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	19.3	8.8	8.7	25.3	25.9	0.0	0.0	0.0	0.0	107.4	0.0	0.0
LnGrp LOS	B	A	A	C	C	A	A	A	A	F	A	
Approach Vol, veh/h		2150			1292			0			359	A
Approach Delay, s/veh		9.7			25.5			0.0			107.4	
Approach LOS		A			C						F	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	14.4	148.1		0.0		162.6		27.4				
Change Period (Y+Rc), s	6.8	6.8		* 8.4		6.8		6.4				
Max Green Setting (Gmax), s	44.2	88.2		* 7.6		139.2		21.6				
Max Q Clear Time (g_c+I1), s	7.1	50.2		0.0		40.6		20.9				
Green Ext Time (p_c), s	0.6	15.8		0.0		50.2		0.1				
Intersection Summary												
HCM 6th Ctrl Delay				24.3								
HCM 6th LOS				C								
Notes												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.												

SR 580/Busch Blvd
2: Busch Blvd & Dale Mabry Hwy NB Ramps

Existing AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↶	↷	↷	↷	↶	↷
Traffic Volume (veh/h)	36	2196	1489	341	119	152
Future Volume (veh/h)	36	2196	1489	341	119	152
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1781	1885	1900	1856	1826	1885
Adj Flow Rate, veh/h	37	2241	1519	0	121	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	8	1	0	3	5	1
Cap, veh/h	345	3157	2971		159	
Arrive On Green	0.03	1.00	1.00	0.00	0.05	0.00
Sat Flow, veh/h	1697	3676	3705	1572	3374	1598
Grp Volume(v), veh/h	37	2241	1519	0	121	0
Grp Sat Flow(s),veh/h/ln	1697	1791	1805	1572	1687	1598
Q Serve(g_s), s	0.6	0.0	0.0	0.0	6.7	0.0
Cycle Q Clear(g_c), s	0.6	0.0	0.0	0.0	6.7	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	345	3157	2971		159	
V/C Ratio(X)	0.11	0.71	0.51		0.76	
Avail Cap(c_a), veh/h	479	3157	2971		341	
HCM Platoon Ratio	1.33	1.33	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.47	0.00	1.00	0.00
Uniform Delay (d), s/veh	2.0	0.0	0.0	0.0	89.5	0.0
Incr Delay (d2), s/veh	0.1	1.4	0.3	0.0	7.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	0.6	0.1	0.0	3.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	2.1	1.4	0.3	0.0	96.7	0.0
LnGrp LOS	A	A	A		F	
Approach Vol, veh/h		2278	1519	A	121	A
Approach Delay, s/veh		1.4	0.3		96.7	
Approach LOS		A	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	11.1	163.2			174.2	15.8
Change Period (Y+Rc), s	6.8	6.8			6.8	6.8
Max Green Setting (Gmax), s	19.2	131.2			157.2	19.2
Max Q Clear Time (g_c+I1), s	2.6	2.0			2.0	8.7
Green Ext Time (p_c), s	0.0	30.1			85.9	0.2
Intersection Summary						
HCM 6th Ctrl Delay			3.9			
HCM 6th LOS			A			






















Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑↑	↑↑
Traffic Volume (veh/h)	1701	614	409	1477	353	110
Future Volume (veh/h)	1701	614	409	1477	353	110
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1885	1885	1856	1856	1900
Adj Flow Rate, veh/h	1754	633	422	1523	238	247
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	1	1	3	3	0
Cap, veh/h	2306	1037	437	3010	132	120
Arrive On Green	1.00	1.00	0.22	1.00	0.07	0.07
Sat Flow, veh/h	3647	1598	1795	3618	1767	1610
Grp Volume(v), veh/h	1754	633	422	1523	238	247
Grp Sat Flow(s),veh/h/ln	1777	1598	1795	1763	1767	1610
Q Serve(g_s), s	0.0	0.0	29.7	0.0	14.2	14.2
Cycle Q Clear(g_c), s	0.0	0.0	29.7	0.0	14.2	14.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2306	1037	437	3010	132	120
V/C Ratio(X)	0.76	0.61	0.96	0.51	1.80	2.05
Avail Cap(c_a), veh/h	2306	1037	467	3010	132	120
HCM Platoon Ratio	2.00	2.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.63	0.63	0.75	0.75	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	43.6	0.0	87.9	87.9
Incr Delay (d2), s/veh	1.5	1.7	26.6	0.5	389.3	501.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	33.9	21.5	0.2	20.8	29.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.5	1.7	70.2	0.5	477.2	589.1
LnGrp LOS	A	A	E	A	F	F
Approach Vol, veh/h	2387			1945	485	
Approach Delay, s/veh	1.6			15.6	534.2	
Approach LOS	A			B	F	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		169.0		21.0	38.9	130.1
Change Period (Y+Rc), s		6.8		* 6.8	6.8	6.8
Max Green Setting (Gmax), s		162.2		* 14	35.2	120.2
Max Q Clear Time (g_c+I1), s		2.0		16.2	31.7	2.0
Green Ext Time (p_c), s		30.8		0.0	0.4	63.0
Intersection Summary						
HCM 6th Ctrl Delay			60.9			
HCM 6th LOS			E			
Notes						
User approved volume balancing among the lanes for turning movement.						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

SR 580/Busch Blvd
4: Twin Lakes Blvd/Mossvale Ln & Busch Blvd

Existing AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	1600	209	311	1804	0	82	0	118	2	0	0
Future Volume (veh/h)	2	1600	209	311	1804	0	82	0	118	2	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1900	1885	1870	1870	1885	0	1900	1900	1900	1900
Adj Flow Rate, veh/h	2	1633	213	317	1841	0	84	0	120	2	0	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	2	0	1	2	2	1	0	0	0	0	0
Cap, veh/h	234	2721	1233	217	3282	0	0	0	0	6	0	0
Arrive On Green	0.25	0.25	0.25	0.24	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	255	3554	1610	1795	3647	0		0		1809	0	0
Grp Volume(v), veh/h	2	1633	213	317	1841	0		0.0		2	0	0
Grp Sat Flow(s),veh/h/ln	255	1777	1610	1795	1777	0				1810	0	0
Q Serve(g_s), s	1.1	76.9	19.6	23.0	0.0	0.0				0.2	0.0	0.0
Cycle Q Clear(g_c), s	1.1	76.9	19.6	23.0	0.0	0.0				0.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	234	2721	1233	217	3282	0				6	0	0
V/C Ratio(X)	0.01	0.60	0.17	1.46	0.56	0.00				0.35	0.00	0.00
Avail Cap(c_a), veh/h	234	2721	1233	217	3282	0				87	0	0
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.53	0.53	0.53	0.43	0.43	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	17.0	45.4	24.0	72.0	0.0	0.0				94.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.2	217.1	0.3	0.0				32.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	37.1	8.6	22.5	0.1	0.0				0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.1	45.9	24.1	289.1	0.3	0.0				127.3	0.0	0.0
LnGrp LOS	B	D	C	F	A	A				F	A	A
Approach Vol, veh/h		1848			2158							2
Approach Delay, s/veh		43.3			42.7							127.3
Approach LOS		D			D							F
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	30.0	152.5		7.5		182.5						
Change Period (Y+Rc), s	* 7	* 7		6.9		* 7						
Max Green Setting (Gmax), s	* 23	* 1.2E2		9.1		* 1.5E2						
Max Q Clear Time (g_c+I1), s	25.0	78.9		2.2		2.0						
Green Ext Time (p_c), s	0.0	25.5		0.0		50.2						
Intersection Summary												
HCM 6th Ctrl Delay				43.1								
HCM 6th LOS				D								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

SR 580/Busch Blvd
5: Busch Blvd & Orange Grove Dr


























Existing AM



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations	↖	↗	↗	↖	↖	↖
Traffic Volume (veh/h)	95	1625	1666	81	134	449
Future Volume (veh/h)	95	1625	1666	81	134	449
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1870	1856	1900	1900	1900
Adj Flow Rate, veh/h	102	1747	1791	87	144	483
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	3	0	0	0
Cap, veh/h	259	2690	2443	1116	307	273
Arrive On Green	0.06	1.00	1.00	1.00	0.17	0.17
Sat Flow, veh/h	1810	3647	3618	1610	1810	1610
Grp Volume(v), veh/h	102	1747	1791	87	144	483
Grp Sat Flow(s),veh/h/ln	1810	1777	1763	1610	1810	1610
Q Serve(g_s), s	3.1	0.0	0.0	0.0	13.6	32.2
Cycle Q Clear(g_c), s	3.1	0.0	0.0	0.0	13.6	32.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	259	2690	2443	1116	307	273
V/C Ratio(X)	0.39	0.65	0.73	0.08	0.47	1.77
Avail Cap(c_a), veh/h	439	2690	2443	1116	307	273
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.61	0.61	0.45	0.45	1.00	1.00
Uniform Delay (d), s/veh	7.1	0.0	0.0	0.0	71.2	78.9
Incr Delay (d2), s/veh	0.6	0.8	0.9	0.1	1.1	361.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.3	0.3	0.0	6.5	40.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.7	0.8	0.9	0.1	72.3	440.0
LnGrp LOS	A	A	A	A	E	F
Approach Vol, veh/h		1849	1878		627	
Approach Delay, s/veh		1.1	0.9		355.5	
Approach LOS		A	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	12.1	138.9			151.0	39.0
Change Period (Y+Rc), s	6.8	* 7.2			* 7.2	6.8
Max Green Setting (Gmax), s	24.2	* 1.1E2			* 1.4E2	32.2
Max Q Clear Time (g_c+I1), s	5.1	2.0			2.0	34.2
Green Ext Time (p_c), s	0.2	45.8			43.4	0.0
Intersection Summary						
HCM 6th Ctrl Delay			52.1			
HCM 6th LOS			D			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

SR 580/Busch Blvd
6: N Armenia Ave & Busch Blvd

Existing AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Traffic Volume (veh/h)	69	1410	280	210	1474	10	179	251	156	55	371	94
Future Volume (veh/h)	69	1410	280	210	1474	10	179	251	156	55	371	94
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1856	1856	1885	1856	1841	1870	1885	1900
Adj Flow Rate, veh/h	70	1439	286	214	1504	10	183	256	159	56	379	96
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	3	3	1	3	4	2	1	0
Cap, veh/h	86	1403	273	211	1951	13	173	458	385	220	399	341
Arrive On Green	0.10	0.95	0.95	0.12	0.54	0.54	0.07	0.25	0.25	0.03	0.21	0.21
Sat Flow, veh/h	1781	2966	578	1781	3590	24	1795	1856	1560	1781	1885	1610
Grp Volume(v), veh/h	70	850	875	214	738	776	183	256	159	56	379	96
Grp Sat Flow(s),veh/h/ln	1781	1777	1766	1781	1763	1851	1795	1856	1560	1781	1885	1610
Q Serve(g_s), s	7.3	89.9	89.9	22.5	62.5	62.6	13.0	22.9	12.3	4.7	37.7	9.5
Cycle Q Clear(g_c), s	7.3	89.9	89.9	22.5	62.5	62.6	13.0	22.9	12.3	4.7	37.7	9.5
Prop In Lane	1.00		0.33	1.00		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	86	841	836	211	958	1006	173	458	385	220	399	341
V/C Ratio(X)	0.81	1.01	1.05	1.01	0.77	0.77	1.06	0.56	0.41	0.25	0.95	0.28
Avail Cap(c_a), veh/h	196	841	836	211	958	1006	173	458	385	283	416	355
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.73	0.73	0.73	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	85.0	5.1	5.1	83.7	34.1	34.1	60.3	62.5	34.4	56.6	73.9	62.7
Incr Delay (d2), s/veh	12.5	29.4	39.6	21.8	0.6	0.5	83.9	1.5	0.7	0.6	30.8	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.5	9.1	11.4	11.6	26.3	27.6	6.2	11.1	4.9	2.2	21.7	4.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	97.5	34.5	44.7	105.5	34.6	34.6	144.3	64.0	35.1	57.2	104.6	63.2
LnGrp LOS	F	F	F	F	C	C	F	E	D	E	F	E
Approach Vol, veh/h		1795			1728			598			531	
Approach Delay, s/veh		41.9			43.4			80.9			92.1	
Approach LOS		D			D			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.3	109.4	12.3	53.0	28.6	96.0	19.0	46.4				
Change Period (Y+Rc), s	* 6.1	* 6.1	6.0	6.1	* 6.1	* 6.1	6.0	6.1				
Max Green Setting (Gmax), s	* 21	* 90	13.0	41.9	* 21	* 90	13.0	41.9				
Max Q Clear Time (g_c+I1), s	9.3	64.6	6.7	24.9	24.5	91.9	15.0	39.7				
Green Ext Time (p_c), s	0.1	11.3	0.0	1.8	0.0	0.0	0.0	0.6				
Intersection Summary												
HCM 6th Ctrl Delay			53.2									
HCM 6th LOS			D									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

SR 580/Busch Blvd
7: N Boulevard & Busch Blvd

Existing AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	51	1470	140	116	1559	109	61	204	49	153	462	30
Future Volume (veh/h)	51	1470	140	116	1559	109	61	204	49	153	462	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1856	1856	1870	1900	1900	1856	1870	1900
Adj Flow Rate, veh/h	53	1515	144	120	1607	112	63	210	51	158	476	31
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	1	3	3	2	0	0	3	2	0
Cap, veh/h	153	1610	152	138	1611	111	78	470	522	113	501	569
Arrive On Green	0.09	0.49	0.49	0.08	0.48	0.48	0.04	0.25	0.25	0.06	0.27	0.27
Sat Flow, veh/h	1781	3282	309	1795	3345	232	1781	1900	1610	1767	1870	1610
Grp Volume(v), veh/h	53	815	844	120	842	877	63	210	51	158	476	31
Grp Sat Flow(s),veh/h/ln	1781	1777	1815	1795	1763	1814	1781	1900	1610	1767	1870	1610
Q Serve(g_s), s	5.3	81.9	84.2	12.6	90.0	91.5	6.7	17.8	4.2	12.2	47.5	2.4
Cycle Q Clear(g_c), s	5.3	81.9	84.2	12.6	90.0	91.5	6.7	17.8	4.2	12.2	47.5	2.4
Prop In Lane	1.00		0.17	1.00		0.13	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	153	872	890	138	849	873	78	470	522	113	501	569
V/C Ratio(X)	0.35	0.93	0.95	0.87	0.99	1.00	0.80	0.45	0.10	1.39	0.95	0.05
Avail Cap(c_a), veh/h	153	872	890	154	849	873	114	544	584	113	536	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.20	0.20	0.20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	81.8	45.5	46.1	86.8	48.9	49.3	90.0	60.5	44.8	88.9	68.3	40.5
Incr Delay (d2), s/veh	1.2	5.0	5.9	33.5	28.9	31.6	14.1	0.7	0.1	221.5	26.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	36.3	38.3	7.1	45.5	48.2	3.4	8.8	1.7	12.6	26.5	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	83.1	50.5	52.0	120.3	77.8	80.9	104.1	61.1	44.9	310.4	94.6	40.5
LnGrp LOS	F	D	D	F	E	F	F	E	D	F	F	D
Approach Vol, veh/h		1712			1839			324			665	
Approach Delay, s/veh		52.3			82.0			66.9			143.3	
Approach LOS		D			F			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.0	97.4	18.0	52.6	20.3	99.1	14.2	56.5				
Change Period (Y+Rc), s	* 5.7	5.9	* 5.8	* 5.6	* 5.7	5.9	* 5.8	* 5.6				
Max Green Setting (Gmax), s	* 16	84.1	* 12	* 54	* 16	84.1	* 12	* 54				
Max Q Clear Time (g_c+I1), s	7.3	93.5	14.2	19.8	14.6	86.2	8.7	49.5				
Green Ext Time (p_c), s	0.0	0.0	0.0	1.4	0.0	0.0	0.0	1.4				
Intersection Summary												
HCM 6th Ctrl Delay			78.7									
HCM 6th LOS			E									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

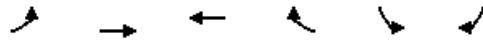
SR 580/Busch Blvd
8: Florida Ave & Busch Blvd

Existing AM

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	137	1200	335	258	1724	190	130	598	305	268	1008	49
Future Volume (veh/h)	137	1200	335	258	1724	190	130	598	305	268	1008	49
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1856	1885	1870	1841	1841	1885	1870	1870
Adj Flow Rate, veh/h	140	1224	0	263	1759	194	133	610	311	273	1029	50
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	3	1	2	4	4	1	2	2
Cap, veh/h	238	1882		238	1299	589	149	1405	436	309	982	48
Arrive On Green	0.13	0.37	0.00	0.04	0.12	0.12	0.08	0.28	0.28	0.09	0.28	0.28
Sat Flow, veh/h	1781	5274	0	1781	3526	1598	1781	5025	1560	3483	3449	168
Grp Volume(v), veh/h	140	1224	0	263	1759	194	133	610	311	273	530	549
Grp Sat Flow(s),veh/h/ln	1781	1702	0	1781	1763	1598	1781	1675	1560	1742	1777	1840
Q Serve(g_s), s	16.3	43.8	0.0	29.4	81.1	24.4	16.3	21.9	39.5	17.0	62.6	62.6
Cycle Q Clear(g_c), s	16.3	43.8	0.0	29.4	81.1	24.4	16.3	21.9	39.5	17.0	62.6	62.6
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	238	1882		238	1299	589	149	1405	436	309	506	524
V/C Ratio(X)	0.59	0.65		1.10	1.35	0.33	0.89	0.43	0.71	0.88	1.05	1.05
Avail Cap(c_a), veh/h	238	1882		238	1299	589	207	1430	444	405	506	524
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.66	0.66	0.66	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	89.6	57.7	0.0	105.1	96.6	71.8	99.8	65.0	71.3	99.1	78.7	78.7
Incr Delay (d2), s/veh	10.2	1.8	0.0	78.7	162.7	1.0	27.7	0.2	5.2	16.3	53.3	52.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	19.2	0.0	19.5	68.3	10.8	8.7	9.4	16.3	8.4	35.8	37.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	99.8	59.5	0.0	183.8	259.3	72.7	127.5	65.2	76.6	115.4	132.0	131.3
LnGrp LOS	F	E		F	F	E	F	E	E	F	F	F
Approach Vol, veh/h		1364	A		2216			1054			1352	
Approach Delay, s/veh		63.6			234.0			76.4			128.4	
Approach LOS		E			F			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	36.0	88.2	26.9	68.9	36.0	88.2	25.8	70.0				
Change Period (Y+Rc), s	* 6.6	* 7.1	7.4	7.4	* 6.6	* 7.1	7.4	7.4				
Max Green Setting (Gmax), s	* 29	* 74	25.6	62.6	* 29	* 74	25.6	62.6				
Max Q Clear Time (g_c+I1), s	18.3	83.1	19.0	41.5	31.4	45.8	18.3	64.6				
Green Ext Time (p_c), s	0.2	0.0	0.5	4.9	0.0	9.6	0.2	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			143.6									
HCM 6th LOS			F									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

SR 580/Busch Blvd
9: Busch Blvd & I-275 SB Ramps

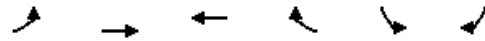
Existing AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↑↑↑	↑↑↑	↵	↵	↵
Traffic Volume (veh/h)	290	1483	1752	646	173	420
Future Volume (veh/h)	290	1483	1752	646	173	420
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1856	1885	1826	1841
Adj Flow Rate, veh/h	309	1578	1864	0	184	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	3	1	5	4
Cap, veh/h	339	4213	3058		202	
Arrive On Green	0.13	0.55	1.00	0.00	0.12	0.00
Sat Flow, veh/h	1767	5274	5233	1598	1739	1560
Grp Volume(v), veh/h	309	1578	1864	0	184	0
Grp Sat Flow(s),veh/h/ln	1767	1702	1689	1598	1739	1560
Q Serve(g_s), s	38.0	38.3	0.0	0.0	23.0	0.0
Cycle Q Clear(g_c), s	38.0	38.3	0.0	0.0	23.0	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	339	4213	3058		202	
V/C Ratio(X)	0.91	0.37	0.61		0.91	
Avail Cap(c_a), veh/h	518	4213	3058		281	
HCM Platoon Ratio	0.67	0.67	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.41	0.41	0.53	0.00	1.00	0.00
Uniform Delay (d), s/veh	94.0	17.2	0.0	0.0	96.1	0.0
Incr Delay (d2), s/veh	10.1	0.1	0.5	0.0	27.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.8	16.7	0.1	0.0	12.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	104.1	17.3	0.5	0.0	123.9	0.0
LnGrp LOS	F	B	A		F	
Approach Vol, veh/h		1887	1864	A	184	A
Approach Delay, s/veh		31.5	0.5		123.9	
Approach LOS		C	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	48.7	139.3			188.0	32.0
Change Period (Y+Rc), s	6.5	6.5			6.5	6.4
Max Green Setting (Gmax), s	64.5	100.5			171.5	35.6
Max Q Clear Time (g_c+I1), s	40.0	2.0			40.3	25.0
Green Ext Time (p_c), s	2.2	26.0			18.3	0.6
Intersection Summary						
HCM 6th Ctrl Delay			21.1			
HCM 6th LOS			C			
Notes						
Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.						

SR 580/Busch Blvd
10: Busch Blvd & I-275 NB Ramps























Existing AM



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↶	↷↷↷	↷↷↷	↷	↶↶	↶↶
Traffic Volume (veh/h)	240	1416	1927	257	290	471
Future Volume (veh/h)	240	1416	1927	257	290	471
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1870	1856	1841	1856
Adj Flow Rate, veh/h	255	1506	2050	0	309	501
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	2	3	4	3
Cap, veh/h	317	3817	2750		653	531
Arrive On Green	0.36	1.00	1.00	0.00	0.19	0.19
Sat Flow, veh/h	1767	5274	5274	1572	3401	2768
Grp Volume(v), veh/h	255	1506	2050	0	309	501
Grp Sat Flow(s),veh/h/ln	1767	1702	1702	1572	1700	1384
Q Serve(g_s), s	28.6	0.0	0.0	0.0	17.8	39.3
Cycle Q Clear(g_c), s	28.6	0.0	0.0	0.0	17.8	39.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	317	3817	2750		653	531
V/C Ratio(X)	0.80	0.39	0.75		0.47	0.94
Avail Cap(c_a), veh/h	317	3817	2750		668	543
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.25	0.00	1.00	1.00
Uniform Delay (d), s/veh	67.1	0.0	0.0	0.0	79.0	87.7
Incr Delay (d2), s/veh	14.4	0.3	0.5	0.0	0.8	25.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.9	0.1	0.1	0.0	8.0	16.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	81.5	0.3	0.5	0.0	79.7	112.9
LnGrp LOS	F	A	A		E	F
Approach Vol, veh/h		1761	2050	A	810	
Approach Delay, s/veh		12.0	0.5		100.2	
Approach LOS		B	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	46.0	125.0			171.0	49.0
Change Period (Y+Rc), s	6.5	6.5			6.5	6.8
Max Green Setting (Gmax), s	38.5	118.5			163.5	43.2
Max Q Clear Time (g_c+I1), s	30.6	2.0			2.0	41.3
Green Ext Time (p_c), s	1.0	33.3			16.7	1.0
Intersection Summary						
HCM 6th Ctrl Delay			22.4			
HCM 6th LOS			C			
Notes						
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.						

SR 580/Busch Blvd
11: Nebraska Ave & Busch Blvd

Existing AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	76	1427	203	210	1963	63	114	531	190	55	944	107
Future Volume (veh/h)	76	1427	203	210	1963	63	114	531	190	55	944	107
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1870	1870	1826	1870	1870	1796	1826	1841	1841	1870	1870
Adj Flow Rate, veh/h	81	1518	216	223	2088	67	121	565	0	59	1004	114
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	2	2	5	2	2	7	5	4	4	2	2
Cap, veh/h	175	1930	274	256	2411	77	136	879		73	693	79
Arrive On Green	0.20	0.85	0.85	0.15	0.47	0.47	0.08	0.25	0.00	0.04	0.22	0.22
Sat Flow, veh/h	1739	4517	642	1739	5082	163	1711	3469	1560	1753	3216	365
Grp Volume(v), veh/h	81	1143	591	223	1397	758	121	565	0	59	554	564
Grp Sat Flow(s),veh/h/ln	1739	1702	1755	1739	1702	1841	1711	1735	1560	1753	1777	1805
Q Serve(g_s), s	9.0	32.7	33.0	27.6	80.5	81.0	15.4	32.0	0.0	7.3	47.4	47.4
Cycle Q Clear(g_c), s	9.0	32.7	33.0	27.6	80.5	81.0	15.4	32.0	0.0	7.3	47.4	47.4
Prop In Lane	1.00		0.37	1.00		0.09	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	175	1454	750	256	1614	873	136	879		73	383	389
V/C Ratio(X)	0.46	0.79	0.79	0.87	0.87	0.87	0.89	0.64		0.81	1.45	1.45
Avail Cap(c_a), veh/h	175	1454	750	256	1614	873	170	879		174	383	389
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.92	0.92	0.92	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	82.7	11.5	11.6	91.8	51.6	51.7	100.3	73.3	0.0	104.6	86.3	86.3
Incr Delay (d2), s/veh	7.9	4.0	7.6	25.5	6.5	11.4	31.4	1.6	0.0	7.8	215.9	216.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.3	5.8	6.8	14.3	35.6	39.9	8.1	14.5	0.0	3.5	44.6	45.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	90.6	15.6	19.2	117.3	58.0	63.1	131.7	74.9	0.0	112.4	302.2	302.5
LnGrp LOS	F	B	B	F	E	E	F	E		F	F	F
Approach Vol, veh/h		1815			2378			686	A		1177	
Approach Delay, s/veh		20.1			65.2			84.9			292.8	
Approach LOS		C			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	29.0	111.3	16.3	63.3	39.3	101.0	24.7	55.0				
Change Period (Y+Rc), s	6.9	7.0	* 7.2	* 7.6	7.0	* 7	* 7.2	* 7.6				
Max Green Setting (Gmax), s	22.1	100.0	* 22	* 47	28.1	* 94	* 22	* 47				
Max Q Clear Time (g_c+I1), s	11.0	83.0	9.3	34.0	29.6	35.0	17.4	49.4				
Green Ext Time (p_c), s	0.1	12.9	0.0	2.9	0.0	19.1	0.1	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			98.1									
HCM 6th LOS			F									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.												

Arterial Level of Service: EB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
	II	45	22.0	13.9	35.9	0.20	20.2	D
Dale Mabry Hwy NB Ra	II	45	23.3	4.2	27.5	0.21	28.0	B
N Himes Ave	II	45	19.0	29.6	48.6	0.17	12.9	F
Twin Lakes Blvd	II	45	43.9	13.6	57.5	0.50	31.2	B
Orange Grove Dr	II	45	25.9	3.1	29.0	0.25	30.9	B
N Armenia Ave	II	45	29.7	61.5	91.2	0.30	11.8	F
N Boulevard	II	45	79.8	63.0	142.8	1.00	25.1	C
Florida Ave	II	40	47.3	79.7	127.0	0.51	14.4	E
I-275 SB Ramps	II	40	21.9	17.2	39.1	0.19	17.5	D
I-275 NB Ramps	II	40	21.3	13.5	34.8	0.19	19.2	D
Nebraska Ave	II	40	14.6	63.2	77.8	0.13	5.9	F
Total	II		348.7	362.5	711.2	3.65	18.5	D

Arterial Level of Service: WB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Nebraska Ave	II	40	27.0	65.7	92.7	0.25	9.5	F
I-275 NB Ramps	II	40	14.6	8.1	22.7	0.13	20.1	D
I-275 SB Ramps	II	40	21.3	42.8	64.1	0.19	10.4	F
Florida Ave	II	40	21.9	275.2	297.1	0.19	2.3	F
N Boulevard	II	40	47.3	110.4	157.7	0.51	11.6	F
N Armenia Ave	II	45	79.8	5.6	85.4	1.00	42.0	A
Orange Grove Dr	II	45	29.7	20.6	50.3	0.30	21.4	D
Mossvale Ln	II	45	25.9	7.2	33.1	0.25	27.1	C
N Himes Ave	II	45	43.9	6.2	50.1	0.50	35.8	A
Dale Mabry Hwy NB Ra	II	45	19.0	3.8	22.8	0.17	27.5	C
Dale Mabry Hwy SB Ra	II	45	23.3	17.7	41.0	0.21	18.8	D
Total	II		353.7	563.3	917.0	3.69	14.5	E

HCM 6th Signalized Intersection Summary
 1: Busch Blvd & Dale Mabry Hwy SB Ramps

Existing - PM
 04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	202	1634	0	0	2071	0	0	4	14	317	4	30
Future Volume (veh/h)	202	1634	0	0	2071	0	0	4	14	317	4	30
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	0	1900	1900	1900	1856	1900	1841
Adj Flow Rate, veh/h	208	1685	0	0	2135	0	0	4	14	330	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	1	1	0	0	0	0	3	0	4
Cap, veh/h	227	2867	0	0	2464	0	0	38	32	188	0	
Arrive On Green	0.08	0.81	0.00	0.00	0.69	0.00	0.00	0.02	0.02	0.05	0.00	0.00
Sat Flow, veh/h	1781	3647	0	0	3770	0	0	1900	1610	3534	0	1560
Grp Volume(v), veh/h	208	1685	0	0	2135	0	0	4	14	330	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1791	0	0	1900	1610	1767	0	1560
Q Serve(g_s), s	12.4	31.3	0.0	0.0	82.9	0.0	0.0	0.4	1.5	9.6	0.0	0.0
Cycle Q Clear(g_c), s	12.4	31.3	0.0	0.0	82.9	0.0	0.0	0.4	1.5	9.6	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.00	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	227	2867	0	0	2464	0	0	38	32	188	0	
V/C Ratio(X)	0.91	0.59	0.00	0.00	0.87	0.00	0.00	0.11	0.44	1.75	0.00	
Avail Cap(c_a), veh/h	273	2867	0	0	2464	0	0	80	68	188	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	59.2	6.4	0.0	0.0	21.7	0.0	0.0	86.7	87.2	85.2	0.0	0.0
Incr Delay (d2), s/veh	29.9	0.9	0.0	0.0	4.4	0.0	0.0	1.2	9.2	358.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.3	10.1	0.0	0.0	33.3	0.0	0.0	0.2	0.7	13.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.1	7.3	0.0	0.0	26.1	0.0	0.0	87.9	96.5	444.0	0.0	0.0
LnGrp LOS	F	A	A	A	C	A	A	F	F	F	A	
Approach Vol, veh/h		1893			2135			18			330	A
Approach Delay, s/veh		16.3			26.1			94.6			444.0	
Approach LOS		B			C			F			F	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	21.4	130.6		12.0		152.0		16.0				
Change Period (Y+Rc), s	6.8	6.8		* 8.4		6.8		6.4				
Max Green Setting (Gmax), s	19.2	115.2		* 7.6		141.2		9.6				
Max Q Clear Time (g_c+I1), s	14.4	84.9		3.5		33.3		11.6				
Green Ext Time (p_c), s	0.2	25.4		0.0		37.5		0.0				

Intersection Summary

HCM 6th Ctrl Delay 53.6
 HCM 6th LOS D

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [SWR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 2: Busch Blvd & Dale Mabry Hwy NB Ramps

Existing - PM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↕↕	↕↕	↕	↵↵	↕
Traffic Volume (veh/h)	112	1853	2174	498	160	254
Future Volume (veh/h)	112	1853	2174	498	160	254
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	119	1971	2313	0	170	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	2	2	1	1	1
Cap, veh/h	218	3067	2834		214	
Arrive On Green	0.03	0.86	1.00	0.00	0.06	0.00
Sat Flow, veh/h	1810	3647	3647	1598	3483	1598
Grp Volume(v), veh/h	119	1971	2313	0	170	0
Grp Sat Flow(s),veh/h/ln	1810	1777	1777	1598	1742	1598
Q Serve(g_s), s	2.1	30.7	0.0	0.0	8.7	0.0
Cycle Q Clear(g_c), s	2.1	30.7	0.0	0.0	8.7	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	218	3067	2834		214	
V/C Ratio(X)	0.55	0.64	0.82		0.80	
Avail Cap(c_a), veh/h	291	3067	2834		410	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.15	0.00	1.00	0.00
Uniform Delay (d), s/veh	2.6	3.8	0.0	0.0	83.4	0.0
Incr Delay (d2), s/veh	2.1	1.0	0.4	0.0	6.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	7.7	0.2	0.0	4.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	4.7	4.8	0.4	0.0	90.0	0.0
LnGrp LOS	A	A	A		F	
Approach Vol, veh/h		2090	2313	A	170	A
Approach Delay, s/veh		4.8	0.4		90.0	
Approach LOS		A	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	11.8	150.4			162.2	17.8
Change Period (Y+Rc), s	6.8	6.8			6.8	6.8
Max Green Setting (Gmax), s	12.2	126.2			145.2	21.2
Max Q Clear Time (g_c+I1), s	4.1	2.0			32.7	10.7
Green Ext Time (p_c), s	0.2	81.3			54.8	0.4

Intersection Summary

HCM 6th Ctrl Delay	5.8
HCM 6th LOS	A

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 3: N Himes Ave & Busch Blvd

Existing - PM
 04/04/2018






















	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑↑	↑
Traffic Volume (veh/h)	1730	283	190	2213	459	246
Future Volume (veh/h)	1730	283	190	2213	459	246
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1885	1870	1900	1885	1900
Adj Flow Rate, veh/h	1922	314	211	2459	392	400
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	1	2	0	1	0
Cap, veh/h	2201	990	244	2571	381	342
Arrive On Green	1.00	1.00	0.05	0.71	0.21	0.21
Sat Flow, veh/h	3647	1598	1781	3705	1795	1610
Grp Volume(v), veh/h	1922	314	211	2459	392	400
Grp Sat Flow(s),veh/h/ln	1777	1598	1781	1805	1795	1610
Q Serve(g_s), s	0.0	0.0	7.6	110.7	38.2	38.2
Cycle Q Clear(g_c), s	0.0	0.0	7.6	110.7	38.2	38.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2201	990	244	2571	381	342
V/C Ratio(X)	0.87	0.32	0.87	0.96	1.03	1.17
Avail Cap(c_a), veh/h	2201	990	346	2571	381	342
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.69	0.69	0.46	0.46	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	18.0	23.4	70.9	70.9
Incr Delay (d2), s/veh	3.6	0.6	6.8	5.5	53.7	103.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	15.9	3.7	43.8	23.2	40.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	3.6	0.6	24.8	28.9	124.6	174.5
LnGrp LOS	A	A	C	C	F	F
Approach Vol, veh/h	2236			2670	792	
Approach Delay, s/veh	3.2			28.6	149.8	
Approach LOS	A			C	F	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		135.0		45.0	16.7	118.3
Change Period (Y+Rc), s		6.8		* 6.8	6.8	6.8
Max Green Setting (Gmax), s		128.2		* 38	20.2	101.2
Max Q Clear Time (g_c+I1), s		112.7		40.2	9.6	2.0
Green Ext Time (p_c), s		14.8		0.0	0.3	56.9
Intersection Summary						
HCM 6th Ctrl Delay			35.5			
HCM 6th LOS			D			

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
 4: Twin Lakes Blvd/Mossvale Ln & Busch Blvd

Existing - PM
 04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1899	72	74	2170	1	232	0	278	0	0	1
Future Volume (veh/h)	5	1899	72	74	2170	1	232	0	278	0	0	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1856	1900	1870	1870	1885	0	1885	1900	1900	1900
Adj Flow Rate, veh/h	5	1938	73	76	2214	1	237	0	284	0	0	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	2	3	0	2	2	1	0	1	0	0	0
Cap, veh/h	158	2360	1044	93	2750	1	229	0	0	0	0	3
Arrive On Green	1.00	1.00	1.00	0.07	1.00	1.00	0.13	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	177	3554	1572	1810	3645	2	1795	237		0	0	1610
Grp Volume(v), veh/h	5	1938	73	76	1079	1136	237	146.8		0	0	1
Grp Sat Flow(s),veh/h/ln	177	1777	1572	1810	1777	1870	1795	F		0	0	1610
Q Serve(g_s), s	0.0	0.0	0.0	7.5	0.0	0.0	23.0			0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.0	0.0	0.0	7.5	0.0	0.0	23.0			0.0	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00			0.00		1.00
Lane Grp Cap(c), veh/h	158	2360	1044	93	1341	1411	229			0	0	3
V/C Ratio(X)	0.03	0.82	0.07	0.82	0.80	0.81	1.03			0.00	0.00	0.38
Avail Cap(c_a), veh/h	158	2360	1044	111	1341	1411	229			0	0	81
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33	1.00			1.00	1.00	1.00
Upstream Filter(I)	0.19	0.19	0.19	0.45	0.45	0.45	1.00			0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	83.0	0.0	0.0	78.5			0.0	0.0	89.8
Incr Delay (d2), s/veh	0.1	0.7	0.0	17.9	2.4	2.3	68.3			0.0	0.0	72.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.2	0.0	3.9	0.9	0.9	15.1			0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.1	0.7	0.0	100.9	2.4	2.3	146.8			0.0	0.0	162.5
LnGrp LOS	A	A	A	F	A	A	F			A	A	F
Approach Vol, veh/h		2016			2291							1
Approach Delay, s/veh		0.6			5.6							162.5
Approach LOS		A			A							F
Timer - Assigned Phs	1	2	3	4		6						
Phs Duration (G+Y+Rc), s	16.3	126.5	30.0	7.2		142.8						
Change Period (Y+Rc), s	* 7	* 7	7.0	6.9		* 7						
Max Green Setting (Gmax), s	* 11	* 1.1E2	23.0	9.1		* 1.3E2						
Max Q Clear Time (g_c+I1), s	9.5	2.0	25.0	2.1		2.0						
Green Ext Time (p_c), s	0.0	54.4	0.0	0.0		78.2						
Intersection Summary												
HCM 6th Ctrl Delay				10.8								
HCM 6th LOS				B								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
5: Busch Blvd & Orange Grove Rd

Existing - PM
04/04/2018



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations	↔	↔↔	↔↔	↔	↔	↔
Traffic Volume (veh/h)	195	1982	2062	77	64	218
Future Volume (veh/h)	195	1982	2062	77	64	218
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1885	1870	1870	1870	1856	1900
Adj Flow Rate, veh/h	199	2022	2104	79	65	222
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	2	2	2	3	0
Cap, veh/h	249	2977	2702	1205	149	136
Arrive On Green	0.08	1.00	1.00	1.00	0.08	0.08
Sat Flow, veh/h	1795	3647	3647	1585	1767	1610
Grp Volume(v), veh/h	199	2022	2104	79	65	222
Grp Sat Flow(s),veh/h/ln	1795	1777	1777	1585	1767	1610
Q Serve(g_s), s	4.6	0.0	0.0	0.0	6.3	15.2
Cycle Q Clear(g_c), s	4.6	0.0	0.0	0.0	6.3	15.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	249	2977	2702	1205	149	136
V/C Ratio(X)	0.80	0.68	0.78	0.07	0.44	1.63
Avail Cap(c_a), veh/h	429	2977	2702	1205	149	136
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.47	0.47	0.09	0.09	1.00	1.00
Uniform Delay (d), s/veh	7.5	0.0	0.0	0.0	78.3	82.4
Incr Delay (d2), s/veh	2.8	0.6	0.2	0.0	2.0	315.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.2	0.1	0.0	3.0	18.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	10.3	0.6	0.2	0.0	80.3	397.9
LnGrp LOS	B	A	A	A	F	F
Approach Vol, veh/h		2221	2183		287	
Approach Delay, s/veh		1.5	0.2		326.0	
Approach LOS		A	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	13.9	144.1			158.0	22.0
Change Period (Y+Rc), s	6.8	* 7.2			* 7.2	6.8
Max Green Setting (Gmax), s	25.2	* 1.2E2			* 1.5E2	15.2
Max Q Clear Time (g_c+I1), s	6.6	2.0			2.0	17.2
Green Ext Time (p_c), s	0.5	66.7			64.9	0.0

Intersection Summary

HCM 6th Ctrl Delay	20.7
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
6: N Armenia Ave & Busch Blvd

Existing - PM
04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	181	1700	165	154	1580	28	297	449	165	75	258	262
Future Volume (veh/h)	181	1700	165	154	1580	28	297	449	165	75	258	262
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1870	1870	1870	1885	1885	1900	1885	1870
Adj Flow Rate, veh/h	193	1809	176	164	1681	30	316	478	176	80	274	279
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	2	1	2	2	2	1	1	0	1	2
Cap, veh/h	212	1345	129	283	1604	29	274	473	400	123	361	303
Arrive On Green	0.08	0.28	0.28	0.16	0.45	0.45	0.11	0.25	0.25	0.05	0.19	0.19
Sat Flow, veh/h	1781	3277	314	1795	3572	64	1781	1885	1598	1810	1885	1585
Grp Volume(v), veh/h	193	967	1018	164	835	876	316	478	176	80	274	279
Grp Sat Flow(s),veh/h/ln	1781	1777	1814	1795	1777	1859	1781	1885	1598	1810	1885	1585
Q Serve(g_s), s	19.3	73.9	73.9	15.2	80.8	80.8	19.0	45.1	11.7	6.3	24.8	31.1
Cycle Q Clear(g_c), s	19.3	73.9	73.9	15.2	80.8	80.8	19.0	45.1	11.7	6.3	24.8	31.1
Prop In Lane	1.00		0.17	1.00		0.03	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	212	729	745	283	798	835	274	473	400	123	361	303
V/C Ratio(X)	0.91	1.33	1.37	0.58	1.05	1.05	1.15	1.01	0.44	0.65	0.76	0.92
Avail Cap(c_a), veh/h	237	729	745	283	798	835	274	473	400	231	407	343
HCM Platoon Ratio	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.70	0.70	0.70	0.12	0.12	0.12	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	81.8	65.2	65.2	70.3	49.6	49.6	57.7	67.4	27.8	58.1	68.9	71.4
Incr Delay (d2), s/veh	25.8	153.3	171.2	0.4	25.8	27.1	102.4	44.3	0.8	5.6	7.2	27.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	10.6	65.1	70.2	7.0	40.4	42.6	11.2	27.5	4.6	3.1	12.7	15.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	107.6	218.5	236.4	70.6	75.4	76.7	160.1	111.7	28.5	63.7	76.1	99.0
LnGrp LOS	F	F	F	E	F	F	F	F	C	E	E	F
Approach Vol, veh/h		2178			1875			970			633	
Approach Delay, s/veh		217.1			75.6			112.4			84.6	
Approach LOS		F			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	27.6	86.9	14.3	51.2	34.5	80.0	25.0	40.5				
Change Period (Y+Rc), s	* 6.1	* 6.1	6.0	6.1	* 6.1	* 6.1	6.0	6.1				
Max Green Setting (Gmax), s	* 24	* 74	19.0	38.9	* 24	* 74	19.0	38.9				
Max Q Clear Time (g_c+I1), s	21.3	82.8	8.3	47.1	17.2	75.9	21.0	33.1				
Green Ext Time (p_c), s	0.1	0.0	0.1	0.0	0.2	0.0	0.0	1.3				

Intersection Summary


























HCM 6th Ctrl Delay	137.4
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
7: N Boulevard & Busch Blvd

Existing - PM
04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Traffic Volume (veh/h)	66	1679	95	92	1729	64	105	336	85	101	212	38
Future Volume (veh/h)	66	1679	95	92	1729	64	105	336	85	101	212	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1870	1870	1870	1870	1870	1900	1870	1856	1885	1841	1826
Adj Flow Rate, veh/h	67	1713	97	94	1764	65	107	343	87	103	216	39
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	5	2	2	2	2	2	0	2	3	1	4	5
Cap, veh/h	153	1957	110	109	1908	70	122	367	405	118	358	436
Arrive On Green	0.09	0.57	0.57	0.06	0.55	0.55	0.07	0.20	0.20	0.07	0.19	0.19
Sat Flow, veh/h	1739	3420	192	1781	3496	128	1810	1870	1572	1795	1841	1547
Grp Volume(v), veh/h	67	884	926	94	892	937	107	343	87	103	216	39
Grp Sat Flow(s),veh/h/ln	1739	1777	1836	1781	1777	1847	1810	1870	1572	1795	1841	1547
Q Serve(g_s), s	8.0	93.2	95.8	11.5	100.8	102.8	12.9	39.7	9.6	12.5	23.6	4.1
Cycle Q Clear(g_c), s	8.0	93.2	95.8	11.5	100.8	102.8	12.9	39.7	9.6	12.5	23.6	4.1
Prop In Lane	1.00		0.10	1.00		0.07	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	153	1017	1050	109	970	1008	122	367	405	118	358	436
V/C Ratio(X)	0.44	0.87	0.88	0.86	0.92	0.93	0.87	0.94	0.21	0.87	0.60	0.09
Avail Cap(c_a), veh/h	153	1017	1050	156	970	1008	125	420	450	124	413	483
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	95.2	40.1	40.6	102.3	45.6	46.0	101.6	87.1	64.2	101.8	80.9	58.2
Incr Delay (d2), s/veh	0.8	1.0	1.1	20.4	15.1	15.7	42.9	26.5	0.3	41.3	1.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.7	40.0	42.6	6.0	47.9	50.8	7.6	22.1	3.9	7.3	11.5	1.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	96.0	41.1	41.8	122.7	60.7	61.7	144.5	113.5	64.5	143.2	82.8	58.2
LnGrp LOS	F	D	D	F	E	E	F	F	E	F	F	E
Approach Vol, veh/h		1877			1923			537			358	
Approach Delay, s/veh		43.4			64.2			111.7			97.5	
Approach LOS		D			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	25.0	126.0	20.3	48.7	19.2	131.8	20.7	48.4				
Change Period (Y+Rc), s	* 5.7	5.9	* 5.8	* 5.6	* 5.7	5.9	* 5.8	* 5.6				
Max Green Setting (Gmax), s	* 19	113.1	* 15	* 49	* 19	113.1	* 15	* 49				
Max Q Clear Time (g_c+I1), s	10.0	104.8	14.5	41.7	13.5	97.8	14.9	25.6				
Green Ext Time (p_c), s	0.0	6.6	0.0	1.4	0.0	10.5	0.0	1.3				
Intersection Summary												
HCM 6th Ctrl Delay			63.9									
HCM 6th LOS			E									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
8: Florida Ave & Busch Blvd

Existing - PM
04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	122	1511	232	261	1703	262	168	1036	401	316	668	121
Future Volume (veh/h)	122	1511	232	261	1703	262	168	1036	401	316	668	121
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1870	1870	1870	1870	1885	1885	1870	1856	1885	1885	1885
Adj Flow Rate, veh/h	124	1542	0	266	1738	267	171	1057	409	322	682	123
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	2	2	2	2	1	1	2	3	1	1	1
Cap, veh/h	308	1996		283	1334	600	187	1112	343	357	656	118
Arrive On Green	0.17	0.39	0.00	0.05	0.12	0.12	0.10	0.22	0.22	0.10	0.22	0.22
Sat Flow, veh/h	1767	5274	0	1781	3554	1598	1795	5106	1572	3483	3032	546
Grp Volume(v), veh/h	124	1542	0	266	1738	267	171	1057	409	322	403	402
Grp Sat Flow(s),veh/h/ln	1767	1702	0	1781	1777	1598	1795	1702	1572	1742	1791	1787
Q Serve(g_s), s	13.7	58.0	0.0	32.7	82.6	34.1	20.7	44.9	47.9	20.1	47.6	47.6
Cycle Q Clear(g_c), s	13.7	58.0	0.0	32.7	82.6	34.1	20.7	44.9	47.9	20.1	47.6	47.6
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		0.31
Lane Grp Cap(c), veh/h	308	1996		283	1334	600	187	1112	343	357	387	387
V/C Ratio(X)	0.40	0.77		0.94	1.30	0.45	0.92	0.95	1.19	0.90	1.04	1.04
Avail Cap(c_a), veh/h	308	1996		311	1334	600	217	1112	343	421	387	387
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.55	0.55	0.55	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	80.6	58.5	0.0	103.1	96.4	75.1	97.6	84.9	86.0	97.6	86.2	86.2
Incr Delay (d2), s/veh	3.9	3.0	0.0	22.7	139.2	1.3	35.8	16.4	112.4	20.0	56.2	56.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.6	25.5	0.0	17.7	65.7	15.0	11.5	21.3	30.1	10.1	28.0	27.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	84.5	61.4	0.0	125.8	235.6	76.4	133.4	101.3	198.4	117.6	142.4	142.9
LnGrp LOS	F	E		F	F	E	F	F	F	F	F	F
Approach Vol, veh/h		1666	A		2271			1637			1127	
Approach Delay, s/veh		63.2			204.0			128.9			135.5	
Approach LOS		E			F			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	45.0	89.7	30.0	55.3	41.6	93.1	30.3	55.0				
Change Period (Y+Rc), s	* 6.6	* 7.1	7.4	7.4	* 6.6	* 7.1	7.4	7.4				
Max Green Setting (Gmax), s	* 38	* 79	26.6	47.6	* 38	* 79	26.6	47.6				
Max Q Clear Time (g_c+I1), s	15.7	84.6	22.1	49.9	34.7	60.0	22.7	49.6				
Green Ext Time (p_c), s	0.3	0.0	0.5	0.0	0.3	10.5	0.1	0.0				

Intersection Summary

HCM 6th Ctrl Delay	139.1
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 9: Busch Blvd & I-75 SB Ramps

Existing - PM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑↑	↑↑↑	↗	↖	↗
Traffic Volume (veh/h)	336	1892	1646	580	281	580
Future Volume (veh/h)	336	1892	1646	580	281	580
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1870	1885	1856	1841
Adj Flow Rate, veh/h	343	1931	1680	0	287	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	2	2	1	3	4
Cap, veh/h	367	3957	2746		294	
Arrive On Green	0.21	0.77	1.00	0.00	0.17	0.00
Sat Flow, veh/h	1767	5274	5274	1598	1767	1560
Grp Volume(v), veh/h	343	1931	1680	0	287	0
Grp Sat Flow(s),veh/h/ln	1767	1702	1702	1598	1767	1560
Q Serve(g_s), s	42.0	30.1	0.0	0.0	35.6	0.0
Cycle Q Clear(g_c), s	42.0	30.1	0.0	0.0	35.6	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	367	3957	2746		294	
V/C Ratio(X)	0.93	0.49	0.61		0.98	
Avail Cap(c_a), veh/h	438	3957	2746		294	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.31	0.31	0.42	0.00	1.00	0.00
Uniform Delay (d), s/veh	85.7	9.0	0.0	0.0	91.3	0.0
Incr Delay (d2), s/veh	11.9	0.1	0.4	0.0	45.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.4	10.8	0.1	0.0	20.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	97.5	9.1	0.4	0.0	137.2	0.0
LnGrp LOS	F	A	A		F	
Approach Vol, veh/h		2274	1680	A	287	A
Approach Delay, s/veh		22.4	0.4		137.2	
Approach LOS		C	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	52.2	124.8			177.0	43.0
Change Period (Y+Rc), s	6.5	6.5			6.5	6.4
Max Green Setting (Gmax), s	54.5	109.5			170.5	36.6
Max Q Clear Time (g_c+I1), s	44.0	2.0			32.1	37.6
Green Ext Time (p_c), s	1.7	20.8			29.1	0.0

Intersection Summary

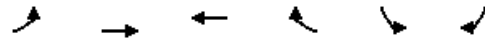
HCM 6th Ctrl Delay	21.5
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 10: Busch Blvd & I-275 NB Ramps

Existing - PM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↑↑↑	↑↑↑	↵	↵↵	↵↵
Traffic Volume (veh/h)	502	1671	1886	365	230	340
Future Volume (veh/h)	502	1671	1886	365	230	340
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1856	1870	1885
Adj Flow Rate, veh/h	528	1759	1985	0	242	358
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	1	3	2	1
Cap, veh/h	514	4375	2772		286	233
Arrive On Green	0.58	1.00	1.00	0.00	0.08	0.08
Sat Flow, veh/h	1781	5274	5316	1572	3456	2812
Grp Volume(v), veh/h	528	1759	1985	0	242	358
Grp Sat Flow(s),veh/h/ln	1781	1702	1716	1572	1728	1406
Q Serve(g_s), s	63.5	0.0	0.0	0.0	15.2	18.2
Cycle Q Clear(g_c), s	63.5	0.0	0.0	0.0	15.2	18.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	514	4375	2772		286	233
V/C Ratio(X)	1.03	0.40	0.72		0.85	1.54
Avail Cap(c_a), veh/h	514	4375	2772		286	233
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.81	0.81	0.20	0.00	1.00	1.00
Uniform Delay (d), s/veh	46.5	0.0	0.0	0.0	99.5	100.9
Incr Delay (d2), s/veh	42.8	0.2	0.3	0.0	21.0	263.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	29.4	0.1	0.1	0.0	7.8	15.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	89.3	0.2	0.3	0.0	120.5	363.9
LnGrp LOS	F	A	A		F	F
Approach Vol, veh/h		2287	1985	A	600	
Approach Delay, s/veh		20.8	0.3		265.7	
Approach LOS		C	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	70.0	125.0			195.0	25.0
Change Period (Y+Rc), s	6.5	6.5			6.5	6.8
Max Green Setting (Gmax), s	63.5	118.5			188.5	18.2
Max Q Clear Time (g_c+I1), s	65.5	2.0			2.0	20.2
Green Ext Time (p_c), s	0.0	30.7			23.3	0.0

Intersection Summary

HCM 6th Ctrl Delay	42.6
HCM 6th LOS	D

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 11: Nebraska Ave & Busch Blvd

Existing - PM
 04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	1590	147	176	1962	97	113	770	212	133	656	176
Future Volume (veh/h)	164	1590	147	176	1962	97	113	770	212	133	656	176
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1841	1870	1870	1885	1856	1811	1811	1870	1870
Adj Flow Rate, veh/h	174	1691	156	187	2087	108	120	819	0	141	698	187
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.90	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	4	2	2	1	3	6	6	2	2
Cap, veh/h	178	2017	186	223	2260	116	129	856		124	673	180
Arrive On Green	0.20	0.85	0.85	0.13	0.45	0.45	0.07	0.24	0.00	0.07	0.24	0.24
Sat Flow, veh/h	1767	4720	435	1753	4972	256	1795	3526	1535	1725	2771	742
Grp Volume(v), veh/h	174	1209	638	187	1426	769	120	819	0	141	447	438
Grp Sat Flow(s),veh/h/ln	1767	1689	1777	1753	1702	1824	1795	1763	1535	1725	1777	1737
Q Serve(g_s), s	21.6	40.3	40.8	22.9	86.5	87.5	14.6	50.4	0.0	15.8	53.4	53.4
Cycle Q Clear(g_c), s	21.6	40.3	40.8	22.9	86.5	87.5	14.6	50.4	0.0	15.8	53.4	53.4
Prop In Lane	1.00		0.24	1.00		0.14	1.00		1.00	1.00		0.43
Lane Grp Cap(c), veh/h	178	1443	759	223	1547	829	129	856		124	431	422
V/C Ratio(X)	0.98	0.84	0.84	0.84	0.92	0.93	0.93	0.96		1.14	1.04	1.04
Avail Cap(c_a), veh/h	178	1443	759	224	1547	829	129	856		124	431	422
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	87.7	12.1	12.1	93.8	56.3	56.6	101.6	82.2	0.0	102.1	83.3	83.3
Incr Delay (d2), s/veh	58.8	5.3	9.8	22.3	10.5	17.9	57.5	21.0	0.0	122.8	53.4	54.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.0	6.4	7.7	11.8	39.1	44.0	8.9	25.4	0.0	11.3	30.7	30.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	146.5	17.4	21.9	116.1	66.9	74.5	159.1	103.1	0.0	224.9	136.6	137.3
LnGrp LOS	F	B	C	F	E	E	F	F		F	F	F
Approach Vol, veh/h		2021			2382			939	A		1026	
Approach Delay, s/veh		30.0			73.2			110.3			149.1	
Approach LOS		C			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	29.0	107.0	23.0	61.0	35.0	101.0	23.0	61.0				
Change Period (Y+Rc), s	6.9	7.0	* 7.2	* 7.6	7.0	* 7	* 7.2	* 7.6				
Max Green Setting (Gmax), s	22.1	100.0	* 16	* 53	28.1	* 94	* 16	* 53				
Max Q Clear Time (g_c+I1), s	23.6	89.5	17.8	52.4	24.9	42.8	16.6	55.4				
Green Ext Time (p_c), s	0.0	8.7	0.0	0.5	0.1	20.4	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			77.2									
HCM 6th LOS			E									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.												

Arterial Level of Service: EB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
	II	45	22.0	9.1	31.1	0.20	23.4	C
Dale Mabry Hwy NB Ra	II	45	23.3	6.0	29.3	0.21	26.3	C
N Himes Ave	II	45	19.0	41.6	60.6	0.17	10.4	F
Twin Lakes Blvd	II	45	43.9	22.7	66.6	0.50	27.0	C
Orange Grove Rd	II	45	25.9	10.7	36.6	0.25	24.5	C
N Armenia Ave	II	45	29.7	209.0	238.7	0.30	4.5	F
N Boulevard	II	45	79.8	53.8	133.6	1.00	26.9	C
Florida Ave	II	40	47.2	69.1	116.3	0.51	15.7	E
I-75 SB Ramps	II	40	21.9	28.8	50.7	0.19	13.5	E
I-275 NB Ramps	II	40	21.3	7.1	28.4	0.19	23.5	C
Nebraska Ave	II	40	14.6	58.5	73.1	0.13	6.2	F
Total	II		348.6	516.4	865.0	3.65	15.2	E

Arterial Level of Service: WB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Nebraska Ave	II	40	27.0	68.1	95.1	0.25	9.3	F
I-275 NB Ramps	II	40	14.6	9.3	23.9	0.13	19.1	D
I-75 SB Ramps	II	40	21.3	37.8	59.1	0.19	11.3	F
Florida Ave	II	40	21.9	211.3	233.2	0.19	2.9	F
N Boulevard	II	40	47.2	75.4	122.6	0.51	14.9	E
N Armenia Ave	II	45	79.8	124.6	204.4	1.00	17.6	D
Orange Grove Rd	II	45	29.7	8.9	38.6	0.30	27.9	C
Mossvale Ln	II	45	25.9	13.3	39.2	0.25	22.9	C
N Himes Ave	II	45	43.9	16.3	60.2	0.50	29.8	B
Dale Mabry Hwy NB Ra	II	45	19.0	14.6	33.6	0.17	18.7	D
Dale Mabry Hwy SB Ra	II	45	23.3	17.1	40.4	0.21	19.1	D
Total	II		353.6	596.7	950.3	3.69	14.0	E

Appendix E

Signal Timings

Station : 1172 - Busch Blvd & Dale Mabry SB Ramp (West)(F080) (Standard File)

Phase [1.1.1]

	1 (EL)	2 (WT)	3 (ST)	4 (NT)	5	6 (ET)	7	8	9	10	11	12	13	14	15	16
Walk																
Ped Clearance																
Min Green	5	15	6	6		15										
Passage	3	4	3	3		4										
Max1	15	40	20	15		55										
Max2																
Yellow	4.8	4.8	4	3.4	9	4.8	9	9	9	9	9	9	9	9	9	9
Red	2	2	2.4	5		2										
Red Revert	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Auto Exit		ON				ON										
Rest In Walk																

Phase Option [1.1.2]

	1 (EL)	2 (WT)	3 (ST)	4 (NT)	5	6 (ET)	7	8	9	10	11	12	13	14	15	16
Enable	ON	ON	ON	ON		ON										
Auto Entry				ON												
Non Act1																
Non Act2																
Lock Call																
Min Recall																
Max Recall		ON				ON										
Ped Recall																
Soft Recall																
Dual Entry		ON				ON										
Sim Gap Enable	ON	ON				ON										
Guar Passage																
Cond Service																
Add Init Calc																

Alternate Phase Program 1, Calls and Redirection [1.1.6.3]

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

Alternate Phase Program 2, Calls and Redirection [1.1.6.3]

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

Alternate Phase Program 1, Interval Times [1.1.6.1]

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

Alternate Phase Program 2, Interval Times [1.1.6.1]

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

Station : 1172 - Busch Blvd & Dale Mabry SB Ramp (West)(F080) (Standard File)

Unit Parameters [1.2.1]

Free Ring Sequence	Omit Yellow Enable	Yellow 3 Second Disable	Disable Init Ped	Start Red Time	Local Flash Start	Enable Run	Max Seek Dwell Time	Max Seek Track Time	Max Cycle Time	Cycle Fault Action	TS2 Det Faults	SDLC Retry Time	Diamond Mode	Phase Mode	Feature Profile	Tone Disable	Console Timeout	Red Revert	Backup Time	Auto Ped Clear	StartUp Flash
1	OFF	OFF	OFF	OFF	OFF	ON				ALARM	ON		4PH	QSEQ		OFF	30	3		ON	

Comm, General Comm Parameters [6.1]

Station ID	Master Station ID	Fallback time	Allow Pencil	Port	System-Up	Sys-Down	PC/Print	Aux 232
1172		900	OFF					

Port Parameters [6.2]

Comm	Mode	Baud	MsgTime	Duplex	Enable	DialTime	Modem	ModemTime	Tel#1	Tel#2
System Up(P-A)										
System Down(P-B)										
PC/Print(P-2)										

Overlap General Parameters [1.5.1]

Conflict Lock	Lock Inhibit	Program Card	Use Parent	Canadian Fast Flash
OFF	OFF	OFF	ON	OFF

Overlap Program Parameters [1.5.2.1]

Overlap	Included Phases	Modifier Phases	Type	Green	Yellow	Red
Overlap 1			NORMAL		3.5	1.5
Overlap 2			NORMAL		3.5	1.5
Overlap 3			NORMAL		3.5	1.5
Overlap 4			NORMAL		3.5	1.5
Overlap 5			NORMAL		3.5	1.5
Overlap 6			NORMAL		3.5	1.5
Overlap 7			NORMAL		3.5	1.5
Overlap 8			NORMAL		3.5	1.5

Overlap Conflict Parameters+ [1.5.2.2]

Overlap	Conflicting Phases	Conflicting Overlaps	Conflicting Peds
Overlap 1			OFF OFF
Overlap 2			OFF OFF
Overlap 3			OFF OFF
Overlap 4			OFF OFF
Overlap 5			OFF OFF
Overlap 6			OFF OFF
Overlap 7			OFF OFF
Overlap 8			OFF OFF

Detector, Vehicle Parameters 1-16 [5.1]

	1 (NBT1)	2 (NBL1)	3	4	5 (EBL1)	6	7 (SBT1)	8 (SBL2)	9	10	11	12	13 (EBT5)	14 (EBT6)	15 (SBT6)	16
Call Phase	4	4			1		3	3								
Switch Phase					6											
Delay Time	5															

Detector, Vehicle Parameters 17-32 [5.1]

	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Call Phase																
Switch Phase																
Delay Time																

Station : 1172 - Busch Blvd & Dale Mabry SB Ramp (West)(F080) (Standard File)

Detector Alternate Program 1, Vehicle Parameters [5.5.1]

	1 (NBT1)	2 (NBL1)	3	4	5 (EBL1)	6	7 (SBT1)	8 (SBL2)	9	10	11	12	13 (EBT5)	14 (EBT6)	15 (SBT6)	16
Call Phase																
Switch Phase																
Delay Time																

Channels/SDLC, Assign to Phases [1.3.1]

PH/OLP #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Type	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OLP	OLP	OLP	OLP	PED	PED	PED	PED	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
Flash	RED	YEL	RED	RED	RED	YEL	RED	RED	RED	RED	RED	RED	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK
Flash 1-2 Hertz																								
Dimming Green																								
Dimming Yellow																								
Dimming Red																								
Alt Cyc	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Channel/SDLC, Parameters [1.3.3]

TOD Dim Enable	Extra Maps Enable	D Connector Enable	Single BIU Map	IO Mode	Preempt or Ext Output
OFF	DEFAULT	NONE	ON	AUTO	EXT

Channel/SDLC, MMU Map [1.3.5]

MMU-to-Controller Channel Map

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Channel/SDLC, Permissive [1.3.4]

Channel	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2
1											1				
2											1				
3															
4															
5															
6															
7															
8															
9															
10															
11															
12															
13															
14															
15															

Channel/SDLC, Permissive [1.3.7]

SDLC Device	Term/Fac	Detector								MMU		Diag						
BIU#	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8		
Present	ON	ON							ON								ON	
Peer to Peer																		

Ring Sequence [1.2.4]

Ring	P1	P2	P3	P4	P5	P6	P7	P8
Ring 1	1	2		3	4	7	8	
Ring 2	5	6						
Ring 3								
Ring 4								

Station : 1172 - Busch Blvd & Dale Mabry SB Ramp (West)(F080) (Standard File)

Alarms, Enable Events [1.6.1]

Event#	Event Enable
1	ON
2	ON
3	ON
4	ON
5	ON
6	ON
7	
8	
9	
10	
11	
12	ON
13	ON
14	ON
15	ON
16	ON
17	
18	
19	
20	
21	
22	ON
23	ON
24	
25	
26	ON
27	
28	
29	ON
30	
31	
32	
33	
34	
35	
36	
37	ON
38	
39	
40	
41	
42	
43	
44	
45	
46	
47	
48	
49	
50	
51	
52	
53	
54	
55	
56	
57	
58	
59	
60	
61	
62	
63	
64	

Alarms, Enable Alarms [1.6.4]

Alarm#	Alarm Enable
1	ON
2	ON
3	ON
4	ON
5	ON
6	ON
7	
8	
9	
10	
11	
12	ON
13	ON
14	ON
15	ON
16	ON
17	
18	
19	
20	
21	
22	ON
23	ON
24	
25	
26	ON
27	
28	
29	ON
30	
31	
32	
33	
34	
35	
36	
37	ON
38	
39	
40	
41	
42	
43	
44	
45	
46	
47	
48	
49	
50	
51	
52	
53	
54	
55	
56	
57	
58	
59	
60	
61	
62	
63	
64	

Preemption Times[3.1]/Phases[3.2]/Options[3.3]

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Flash	ON	ON				
Override Higher	ON	ON				
Flash Dwell						
Link						
Delay						
Min Duration						
Min Green	5	5	5	5	5	5
Min Walk						
Ped Clear						
Track Green						
Min Dwell	5	5	10	10	10	10
Max Presence						
Track R1						
Track R2						
Track R3						
Track R4						
Dwell P1						
Dwell P2						
Dwell P3						
Dwell P4						
Dwell P5						
Dwell P6						
Dwell P7						
Dwell P8						
Dwell P9						
Dwell P10						
Dwell P11						
Dwell P12						
Dwell Ped1						
Dwell Ped2						
Dwell Ped3						
Dwell Ped4						
Dwell Ped5						
Dwell Ped6						
Dwell Ped7						
Dwell Ped8						
Exit R1						
Exit R2						
Exit R3						
Exit R4						

Alarms, Parameters [1.4.1]

Auto Flash Parameter

Yellow	Red	Mode	Source
		VOT_MON	TEST A

Alarms, Parameters [1.6.7]

Preempt Event Enabled	Pattern Event Enabled
ON	ON

Alarms, Phases/Overlaps [1.4.2]

Auto Flash	1	2	3	4	5	6	7	8	9	10	11	12
Phases												
Overlaps												

Station : 1172 - Busch Blvd & Dale Mabry SB Ramp (West)(F080) (Standard File)

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

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

Coordination, Modes,+ [2.1]

Modes

Operational	Correct	Maximum	Force-Off
	SHRT/LNG	MAX INH	FIXED

Modes+

Mode	Leave Before	Leave After	Recycle	Stop In Walk	External	Auto Reset	Latch Sec Foff	Coord Easy Float	Yield Value	Coord NTCIP Yield Sign	Closed Loop Active
FRC	TIMED	TIMED	NO RECYCLE	ON	OFF	ON	OFF	OFF	0	+	ON

Coordination, Pattern 1-16 [2.1]

Pattern	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Cycle Time	190	140	180	110	90	140	100									
Offset Time	137	102	159	48	13	2	2									
Split Number	1	2	3	4	5	6	7									
Seq Number	1	1	9	9	1	1	1	1	1	1	1	1	1	1	1	1
Offset	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn

Coordination, Pattern 17-32 [2.1]

Pattern	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Cycle Time					130											
Offset Time					10											
Split Number					21											
Seq Number	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Offset	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn

Station : 1172 - Busch Blvd & Dale Mabry SB Ramp (West)(F080) (Standard File)

Coordination, Splits [2.7.1]

Split Table 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	51	95	28	16		146										
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table 2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	16	84	24	16		100										
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table 3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	26	122	16	16		148										
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table 4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	16	59	19	16		75										
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table 5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	20	35	19	16		55										
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table 6	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	16	82	26	16		98										
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table 7	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	15	51	18	16		66										
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

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

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

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

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

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

Station : 1172 - Busch Blvd & Dale Mabry SB Ramp (West)(F080) (Standard File)

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

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

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

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

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

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

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

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

Split Table 21	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	16	77	21	16		93										
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

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

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

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

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

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

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

Split Table 28	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table 29	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table 30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table 31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table 32	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Station : 1172 - Busch Blvd & Dale Mabry SB Ramp (West)(F080) (Standard File)

Day Plan Table 7	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	99															

Day Plan Table 8	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	99															

Day Plan Table 9	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	99															

Day Plan Table 10	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	99															

Day Plan Table 11	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	99															

Day Plan Table 12	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	99															

Station : 1172 - Busch Blvd & Dale Mabry SB Ramp (West)(F080) (Standard File)

TB Coor, Action Table [4.5]

Action	Pattern	Aux 1	Aux 2	Aux 3	Special 1	Special 2	Special 3	Special 4	Special 5	Special 6	Special 7	Special 8
1	1											
2	2											
3	3											
4	4											
5	5											
6	6											
7	7											
8	8											
9	9											
10	10											
11	11											
12	12											
13	13											
14	14											
15	15											
16	16											
17	17											
18	18											
19	19											
20	20											
21	21											
22	22											
23	23											
24	24											
25	25											
26	26											
27	27											
28	28											
29	29											
30	30											
31	31											
32	32											
33	33											
34	34											
35	35											
36	36											
37	37											
38	38											
39	39											
40	40											
41	41											
42	42											
43	43											
44	44											
45	45											
46	46											
47	47											
48	48											
49												
50												
51												
52												
53												
54												
55												
56												
57												
58												
59												
60												
61												
62												
63												
64												
99	254											
100	255											

Station : 1171 - Busch Blvd & Dale Mabry NB Ramp (East)(F082) (Standard File)

Phase [1.1.1]

	1 (EL)	2 (WT)	3	4	5	6 (ET)	7	8 (ST)	9	10	11	12	13	14	15	16
Walk		7						7								
Ped Clearance		16						23								
Min Green	5	15				15		7								
Passage	3	4				4		3								
Max1	15	40				40		25								
Max2																
Yellow	4.8	4.8	9	9	9	4.8	9	4	9	9	9	9	9	9	9	9
Red	2	2				2		2.4								
Red Revert	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Auto Exit		ON				ON										
Rest In Walk																

Phase Option [1.1.2]

	1 (EL)	2 (WT)	3	4	5	6 (ET)	7	8 (ST)	9	10	11	12	13	14	15	16
Enable	ON	ON				ON		ON								
Auto Entry								ON								
Non Act1																
Non Act2																
Lock Call																
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry		ON				ON										
Sim Gap Enable	ON	ON				ON										
Guar Passage																
Cond Service																
Add Init Calc																

Alternate Phase Program 1, Calls and Redirection [1.1.6.3]

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

Alternate Phase Program 2, Calls and Redirection [1.1.6.3]

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

Alternate Phase Program 1, Interval Times [1.1.6.1]

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

Alternate Phase Program 2, Interval Times [1.1.6.1]

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

Station : 1171 - Busch Blvd & Dale Mabry NB Ramp (East)(F082) (Standard File)

Unit Parameters [1.2.1]

Free Ring Sequence	Omit Yellow Enable	Yellow 3 Second Disable	Disable Init Ped	Start Red Time	Local Flash Start	Enable Run	Max Seek Dwell Time	Max Seek Track Time	Max Cycle Time	Cycle Fault Action	Ts2 Det Faults	SDLC Retry Time	Diamond Mode	Phase Mode	Feature Profile	Tone Disable	Console Timeout	Red Revert	Backup Time	Auto Ped Clear	StartUp Flash
1	OFF	OFF	OFF	OFF	OFF	ON				ALARM	ON	1	4PH	QSEQ		OFF	30	3		ON	3

Comm, General Comm Parameters [6.1]

Station ID	Master Station ID	Fallback time	Allow Pencil	Port	System-Up	Sys-Down	PC/Print	Aux 232
1171		900	OFF					

Port Parameters [6.2]

Comm	Mode	Baud	MsgTime	Duplex	Enable	DialTime	Modem	ModemTime	Tel#1	Tel#2
System Up(P-A)										
System Down(P-B)										
PC/Print(P-2)										

Overlap General Parameters [1.5.1]

Conflict Lock	Lock Inhibit	Program Card	Use Parent	Canadian Fast Flash
OFF	OFF	OFF	ON	OFF

Overlap Program Parameters [1.5.2.1]

Overlap	Included Phases	Modifier Phases	Type	Green	Yellow	Red
Overlap 1			NORMAL		3.5	1.5
Overlap 2			NORMAL		3.5	1.5
Overlap 3			NORMAL		3.5	1.5
Overlap 4			NORMAL		3.5	1.5
Overlap 5			NORMAL		3.5	1.5
Overlap 6			NORMAL		3.5	1.5
Overlap 7			NORMAL		3.5	1.5
Overlap 8			NORMAL		3.5	1.5

Overlap Conflict Parameters+ [1.5.2.2]

Overlap	Conflicting Phases	Conflicting Overlaps	Conflicting Peds
Overlap 1			OFF OFF
Overlap 2			OFF OFF
Overlap 3			OFF OFF
Overlap 4			OFF OFF
Overlap 5			OFF OFF
Overlap 6			OFF OFF
Overlap 7			OFF OFF
Overlap 8			OFF OFF

Detector, Vehicle Parameters 1-16 [5.1]

	1 (EBT1)	2 (EBT2)	3 (EBL1)	4 (SBT1)	5 (SBT2)	6	7 (WBT1)	8 (WBT2)	9	10	11	12	13	14	15	16
Call Phase	6	6	1	8	8		2	2								
Switch Phase			6													
Delay Time																

Detector, Vehicle Parameters 17-32 [5.1]

	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Call Phase																
Switch Phase																
Delay Time																

Station : 1171 - Busch Blvd & Dale Mabry NB Ramp (East)(F082) (Standard File)

Detector Alternate Program 1, Vehicle Parameters [5.5.1]

	1 (EBT1)	2 (EBT2)	3 (EBL1)	4 (SBT1)	5 (SBT2)	6	7 (WBT1)	8 (WBT2)	9	10	11	12	13	14	15	16
Call Phase																
Switch Phase																
Delay Time																

Channels/SDLC, Assign to Phases [1.3.1]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
PH/OLP #	1	2				6	8						2			8								
Type	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OLP	OLP	OLP	OLP	PED	PED	PED	PED	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
Flash	RED	YEL	RED	RED	RED	YEL	RED	RED	RED	RED	RED	RED	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK
Flash 1-2 Hertz																								
Dimming Green																								
Dimming Yellow																								
Dimming Red																								
Alt Cyc	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Channel/SDLC, Parameters [1.3.3]

TOD Dim Enable	Extra Maps Enable	D Connector Enable	Single BIU Map	IO Mode	Preempt or Ext Output
OFF	DEFAULT	NONE	ON	AUTO	EXT

Channel/SDLC, MMU Map [1.3.5]

MMU-to-Controller Channel Map

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Channel/SDLC, Permissive [1.3.4]

Channel	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2
1											1				
2				1							1				
3															
4															
5															
6				1											
7															
8	1														
9															
10															
11															
12															
13															
14															
15															

Channel/SDLC, Permissive [1.3.7]

SDLC Device	Term/Fac	Detector								MMU		Diag						
BIU#	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8		
Present	ON	ON							ON								ON	
Peer to Peer																		

Ring Sequence [1.2.4]

Ring	P1	P2	P3	P4	P5	P6	P7	P8
Ring 1	1	2		3	4	7	8	
Ring 2	5	6						
Ring 3								
Ring 4								

Station : 1171 - Busch Blvd & Dale Mabry NB Ramp (East)(F082) (Standard File)

Alarms, Enable Events [1.6.1]

Event#	Event Enable
1	ON
2	ON
3	ON
4	ON
5	ON
6	ON
7	
8	
9	
10	
11	
12	ON
13	ON
14	ON
15	ON
16	ON
17	
18	
19	
20	
21	
22	ON
23	ON
24	
25	
26	ON
27	
28	
29	ON
30	
31	
32	
33	
34	
35	
36	
37	ON
38	
39	
40	
41	
42	
43	
44	
45	
46	
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56	
57	
58	
59	
60	
61	
62	
63	
64	

Alarms, Enable Alarms [1.6.4]

Alarm#	Alarm Enable
1	ON
2	ON
3	ON
4	ON
5	ON
6	ON
7	
8	
9	
10	
11	
12	ON
13	ON
14	ON
15	ON
16	ON
17	
18	
19	
20	
21	
22	ON
23	ON
24	
25	
26	ON
27	
28	
29	ON
30	
31	
32	
33	
34	
35	
36	
37	ON
38	
39	
40	
41	
42	
43	
44	
45	
46	
47	
48	
49	
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51	
52	
53	
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59	
60	
61	
62	
63	
64	

Preemption Times[3.1]/Phases[3.2]/Options[3.3]

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Flash	ON	ON				
Override Higher						
Flash Dwell						
Link						
Delay						
Min Duration						
Min Green	5	5	5	5	5	5
Min Walk						
Ped Clear						
Track Green						
Min Dwell	5	5	10	10	10	10
Max Presence						
Track R1						
Track R2						
Track R3						
Track R4						
Dwell P1						
Dwell P2						
Dwell P3						
Dwell P4						
Dwell P5						
Dwell P6						
Dwell P7						
Dwell P8						
Dwell P9						
Dwell P10						
Dwell P11						
Dwell P12						
Dwell Ped1						
Dwell Ped2						
Dwell Ped3						
Dwell Ped4						
Dwell Ped5						
Dwell Ped6						
Dwell Ped7						
Dwell Ped8						
Exit R1						
Exit R2						
Exit R3						
Exit R4						

Alarms, Parameters [1.4.1]

Auto Flash Parameter

Yellow	Red	Mode	Source
		VOT_MON	TEST A

Alarms, Parameters [1.6.7]

Preempt Event Enabled	Pattern Event Enabled
ON	ON

Alarms, Phases/Overlaps [1.4.2]

Auto Flash	1	2	3	4	5	6	7	8	9	10	11	12
Phases	2	6										
Overlaps												

Station : 1171 - Busch Blvd & Dale Mabry NB Ramp (East)(F082) (Standard File)

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

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

Coordination, Modes,+ [2.1]

Modes

Operational	Correct	Maximum	Force-Off
	SHRT/LNG	MAX INH	FIXED

Modes+

Mode	Leave Before	Leave After	Recycle	Stop In Walk	External	Auto Reset	Latch Sec Foff	Coord Easy Float	Yield Value	NTCIP Yield Sign	Coord Active	Closed Loop
FRC	TIMED	TIMED	NO RECYCLE	ON	OFF	ON	OFF	OFF	0	+	ON	OFF

Coordination, Pattern 1-16 [2.1]

Pattern	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Cycle Time	190	140	180	110	90	140	100									
Offset Time	155	89	142	32	19	15	9									
Split Number	1	2	3	4	5	6	7									
Seq Number	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Offset	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn

Coordination, Pattern 17-32 [2.1]

Pattern	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Cycle Time					130											
Offset Time					85											
Split Number					21											
Seq Number	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Offset	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn

Station : 1171 - Busch Blvd & Dale Mabry NB Ramp (East)(F082) (Standard File)

Coordination, Splits [2.7.1]

Split Table 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	26	138				164		26								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table 2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	25	83				108		32								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table 3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	19	133				152		28								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table 4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	19	66				85		25								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table 5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	15	58				73		17								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table 6	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	18	100				118		22								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table 7	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	15	67				82		18								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

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

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

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

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

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

Station : 1171 - Busch Blvd & Dale Mabry NB Ramp (East)(F082) (Standard File)

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

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

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

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

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

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

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

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

Split Table 21	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	24	76				100		30								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

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

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

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

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

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

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

Split Table 28	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table 29	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table 30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table 31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table 32	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Station : 1171 - Busch Blvd & Dale Mabry NB Ramp (East)(F082) (Standard File)

Day Plan Table 7	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	99															

Day Plan Table 8	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	99															

Day Plan Table 9	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	99															

Day Plan Table 10	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	99															

Day Plan Table 11	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	99															

Day Plan Table 12	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	99															

Station : 1171 - Busch Blvd & Dale Mabry NB Ramp (East)(F082) (Standard File)

TB Coor, Action Table [4.5]

Action	Pattern	Aux 1	Aux 2	Aux 3	Special 1	Special 2	Special 3	Special 4	Special 5	Special 6	Special 7	Special 8
1	1											
2	2											
3	3											
4	4											
5	5											
6	6											
7	7											
8	8											
9	9											
10	10											
11	11											
12	12											
13	13											
14	14											
15	15											
16	16											
17	17											
18	18											
19	19											
20	20											
21	21											
22	22											
23	23											
24	24											
25	25											
26	26											
27	27											
28	28											
29	29											
30	30											
31	31											
32	32											
33	33											
34	34											
35	35											
36	36											
37	37											
38	38											
39	39											
40	40											
41	41											
42	42											
43	43											
44	44											
45	45											
46	46											
47	47											
48	48											
49												
50												
51												
52												
53												
54												
55												
56												
57												
58												
59												
60												
61												
62												
63												
64												
99	254											
100	255											

Station : 1170 - Busch Blvd & Himes Ave (F060) (Standard File)

Phase [1.1.1]

	1	2 (WT)	3	4 (NT)	5 (WL)	6 (ET)	7	8	9	10	11	12	13	14	15	16
Walk				7		7										
Ped Clearance				21		27										
Min Green		15		7	5	15			2							
Passage		4		2.5	2.5	4										
Max1		65		25	15	50			2							
Max2																
Yellow	9	4.8	9	4	4.8	4.8	9	9	3	9	9	9	9	9	9	9
Red		2		2.8	2	2										
Red Revert	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Auto Exit		ON				ON										
Rest In Walk																

Phase Option [1.1.2]

	1	2 (WT)	3	4 (NT)	5 (WL)	6 (ET)	7	8	9	10	11	12	13	14	15	16
Enable		ON		ON	ON	ON										
Auto Entry				ON												
Non Act1																
Non Act2																
Lock Call																
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry		ON				ON										
Sim Gap Enable		ON			ON	ON										
Guar Passage																
Cond Service																
Add Init Calc																

Alternate Phase Program 1, Calls and Redirection [1.1.6.3]

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

Alternate Phase Program 2, Calls and Redirection [1.1.6.3]

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

Alternate Phase Program 1, Interval Times [1.1.6.1]

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

Alternate Phase Program 2, Interval Times [1.1.6.1]

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

Hillsborough County

Timing Sheet

12/9/2013 9:35:34 AM

Station : 1170 - Busch Blvd & Himes Ave (F060) (Standard File)

Unit Parameters [1.2.1]

StartUp Flash	Auto Ped Clear	Backup Time	Red Revert	Console Timeout	Tone Disable	Feature Profile	Phase Mode	Diamond Mode	SDLC Retry Time	TSS Det Faults	Cycle Fault Action	Max Cycle Time	Max Seek Track Time	Max Seek Dwell Time	Enable Run	Local Flash Start	Start Red Time	Disable Init Ped	Yellow 3 Second Disable	Omit Yellow Enable	Free Ring Sequence
	ON		3	30	OFF		USER	4PH		ON	ALARM				ON	OFF		OFF	OFF	OFF	1

Comm, General Comm Parameters [6.1]

Station ID	Master Station ID	Fallback time	Allow Pencil	Port	System-Up	Sys-Down	PC/Print	Aux 232
1170		900	OFF					

Port Parameters [6.2]

Comm	Mode	Baud	MsgTime	Duplex	Enable	DialTime	Modem	ModemTime	Tel#1	Tel#2
System Up(P-A)										
System Down(P-B)										
PC/Print(P-2)										

Overlap General Parameters [1.5.1]

Conflict Lock	Lock Inhibit	Program Card	Use Parent	Canadian Fast Flash
OFF	OFF	OFF	ON	OFF

Overlap Program Parameters [1.5.2.1]

Overlap	Included Phases	Modifier Phases	Type	Green	Yellow	Red
Overlap 1	9		NORMAL		3	
Overlap 2			NORMAL		3.5	1.5
Overlap 3			NORMAL		3.5	1.5
Overlap 4			NORMAL		3.5	1.5
Overlap 5			NORMAL		3.5	1.5
Overlap 6			NORMAL		3.5	1.5
Overlap 7			NORMAL		3.5	1.5
Overlap 8			NORMAL		3.5	1.5

Overlap Conflict Parameters+ [1.5.2.2]

Overlap	Conflicting Phases	Conflicting Overlaps	Conflicting Peds
Overlap 1			OFF OFF
Overlap 2			OFF OFF
Overlap 3			OFF OFF
Overlap 4			OFF OFF
Overlap 5			OFF OFF
Overlap 6			OFF OFF
Overlap 7			OFF OFF
Overlap 8			OFF OFF

Detector, Vehicle Parameters 1-16 [5.1]

	1 (NBR1)	2 (NBL2)	3	4 (EBT1)	5 (EBT2)	6 (WBT1)	7 (WBT2)	8 (WBL1)	9	10	11	12	13	14	15	16
Call Phase	4	4		6	6	2	2	5								
Switch Phase								2								
Delay Time	5															

Detector, Vehicle Parameters 17-32 [5.1]

	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Call Phase																
Switch Phase																
Delay Time																

Station : 1170 - Busch Blvd & Himes Ave (F060) (Standard File)

Detector Alternate Program 1, Vehicle Parameters [5.5.1]

	1 (NBR1)	2 (NBL2)	3	4 (EBT1)	5 (EBT2)	6 (WBT1)	7 (WBT2)	8 (WBL1)	9	10	11	12	13	14	15	16
Call Phase																
Switch Phase																
Delay Time																

Channels/SDLC, Assign to Phases [1.3.1]

PH/OLP #	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
Type	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OLP	OLP	OLP	OLP	PED	PED	PED	PED	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
Flash	RED	YEL	RED	RED	RED	YEL	RED	RED	RED	RED	RED	RED	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK
Flash 1-2 Hertz																								
Dimming Green																								
Dimming Yellow																								
Dimming Red																								
Alt Cyc	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Channel/SDLC, Parameters [1.3.3]

TOD Dim Enable	Extra Maps Enable	D Connector Enable	Single BIU Map	IO Mode	Preempt or Ext Output
OFF	DEFAULT	NONE	ON	AUTO	EXT

Channel/SDLC, MMU Map [1.3.5]

MMU-to-Controller Channel Map

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Channel/SDLC, Permissive [1.3.4]

Channel	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2
1															
2		1						1			1	1			
3															
4			1					1							
5								1							
6		1						1							
7															
8															
9		1	1												
10															
11															
12															
13															
14															
15															

Channel/SDLC, Permissive [1.3.7]

SDLC Device	Term/Fac	Detector								MMU	Diag								
BIU#	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8			
Present	ON	ON							ON									ON	
Peer to Peer																			

Ring Sequence [1.2.4]

Ring	P1	P2	P3	P4	P5	P6	P7	P8
Ring 1	1	2		3	4	7	8	
Ring 2	5	6						
Ring 3	9							
Ring 4								

Station : 1170 - Busch Blvd & Himes Ave (F060) (Standard File)

Alarms, Enable Events [1.6.1]

Event#	Event Enable
1	ON
2	ON
3	ON
4	ON
5	ON
6	ON
7	
8	
9	
10	
11	
12	ON
13	ON
14	ON
15	ON
16	ON
17	
18	
19	
20	
21	
22	ON
23	ON
24	
25	
26	ON
27	
28	
29	ON
30	
31	
32	
33	
34	
35	
36	
37	ON
38	
39	
40	
41	
42	
43	
44	
45	
46	
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56	
57	
58	
59	
60	
61	
62	
63	
64	

Alarms, Enable Alarms [1.6.4]

Alarm#	Alarm Enable
1	ON
2	ON
3	ON
4	ON
5	ON
6	ON
7	
8	
9	
10	
11	
12	ON
13	ON
14	ON
15	ON
16	ON
17	
18	
19	
20	
21	
22	ON
23	ON
24	
25	
26	ON
27	
28	
29	ON
30	
31	
32	
33	
34	
35	
36	
37	ON
38	
39	
40	
41	
42	
43	
44	
45	
46	
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62	
63	
64	

Preemption Times[3.1]/Phases[3.2]/Options[3.3]

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Flash	ON	ON				
Override Higher	ON					
Flash Dwell						
Link						
Delay						
Min Duration						
Min Green	2	5	5	5	5	5
Min Walk	1					
Ped Clear	1					
Track Green	7					
Min Dwell	10	5	10	10	10	10
Max Presence						
Track R1	4					
Track R2	9					
Track R3						
Track R4						
Dwell P1	2					
Dwell P2	6					
Dwell P3	9					
Dwell P4						
Dwell P5						
Dwell P6						
Dwell P7						
Dwell P8						
Dwell P9						
Dwell P10						
Dwell P11						
Dwell P12						
Dwell Ped1						
Dwell Ped2						
Dwell Ped3						
Dwell Ped4						
Dwell Ped5						
Dwell Ped6						
Dwell Ped7						
Dwell Ped8						
Exit R1	4					
Exit R2						
Exit R3						
Exit R4						

Alarms, Parameters [1.4.1]

Auto Flash Parameter

Yellow	Red	Mode	Source
		VOT_MON	TEST A

Alarms, Parameters [1.6.7]

Preempt Event Enabled	Pattern Event Enabled
ON	ON

Alarms, Phases/Overlaps [1.4.2]

Auto Flash	1	2	3	4	5	6	7	8	9	10	11	12
Phases												
Overlaps												

Station : 1170 - Busch Blvd & Himes Ave (F060) (Standard File)

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

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

Coordination, Modes, + [2.1]

Modes

Operational	Correct	Maximum	Force-Off
	SHRT/LNG	MAX INH	FIXED

Modes+

Mode	Leave Before	Leave After	Recycle	Stop In Walk	External	Auto Reset	Latch Sec Foff	Coord Easy Float	Yield Value	NTCIP Yield Sign	Coord Active	Closed Loop
FRC	TIMED	TIMED	NO_RECYCLE	ON	OFF	ON	OFF	OFF	0	+	ON	OFF

Coordination, Pattern 1-16 [2.1]

Pattern	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Cycle Time	190	140	180	110	90	140	100									
Offset Time	168	100	128	46	18	18	9									
Split Number	1	2	3	4	5	6	7	8								
Seq Number	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Offset	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn

Coordination, Pattern 17-32 [2.1]

Pattern	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Cycle Time					130											
Offset Time					76											
Split Number					21											
Seq Number	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Offset	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn

Station : 1170 - Busch Blvd & Himes Ave (F060) (Standard File)

Coordination, Splits [2.7.1]

Split Table 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time		169		21	42	127										
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table 2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time		104		36	25	79										
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table 3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time		135		45	27	108										
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table 4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time		82		28	20	62										
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table 5	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time		71		19	15	56										
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table 6	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time		111		29	20	91										
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table 7	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time		79		21	15	64										
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

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

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

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

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

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

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

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

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

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

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

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

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

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

Split Table 21	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time		97		33	23	74										
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

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

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

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

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

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

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

Split Table 28	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table 29	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table 30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table 31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table 32	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

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Day Plan Table 7	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	99															

Day Plan Table 8	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	99															

Day Plan Table 9	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	99															

Day Plan Table 10	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	99															

Day Plan Table 11	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	99															

Day Plan Table 12	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	99															

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Station : 1170 - Busch Blvd & Himes Ave (F060) (Standard File)

TB Coor, Action Table [4.5]

Action	Pattern	Aux 1	Aux 2	Aux 3	Special 1	Special 2	Special 3	Special 4	Special 5	Special 6	Special 7	Special 8
1	1											
2	2											
3	3											
4	4											
5	5											
6	6											
7	7											
8	8											
9	9											
10	10											
11	11											
12	12											
13	13											
14	14											
15	15											
16	16											
17	17											
18	18											
19	19											
20	20											
21	21											
22	22											
23	23											
24	24											
25	25											
26	26											
27	27											
28	28											
29	29											
30	30											
31	31											
32	32											
33	33											
34	34											
35	35											
36	36											
37	37											
38	38											
39	39											
40	40											
41	41											
42	42											
43	43											
44	44											
45	45											
46	46											
47	47											
48	48											
49												
50												
51												
52												
53												
54												
55												
56												
57												
58												
59												
60												
61												
62												
63												
64												
99	254											
100	255											

Station : 1169 - Busch Blvd & Twin Lakes Blvd (F062) (Standard File)

Phase [1.1.1]

	1 (WL)	2 (ET)	3 (NT)	4 (ST)	5	6 (WT)	7	8	9	10	11	12	13	14	15	16
Walk		7	7			7										
Ped Clearance		21	20			11										
Min Green	5	15	6	6		15										
Passage	4	4	3	3		4										
Max1	15	40	20	10		55										
Max2																
Yellow	4.8	4.8	3.7	3.4	9	4.8	9	9	9	9	9	9	9	9	9	9
Red	2.2	2.2	3.3	3.5		2.2										
Red Revert	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Auto Exit		ON				ON										
Rest In Walk																

Phase Option [1.1.2]

	1 (WL)	2 (ET)	3 (NT)	4 (ST)	5	6 (WT)	7	8	9	10	11	12	13	14	15	16
Enable	ON	ON	ON	ON		ON										
Auto Entry				ON												
Non Act1																
Non Act2																
Lock Call																
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry		ON				ON										
Sim Gap Enable	ON	ON				ON										
Guar Passage																
Cond Service																
Add Init Calc																

Alternate Phase Program 1, Calls and Redirection [1.1.6.3]

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

Alternate Phase Program 2, Calls and Redirection [1.1.6.3]

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

Alternate Phase Program 1, Interval Times [1.1.6.1]

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

Alternate Phase Program 2, Interval Times [1.1.6.1]

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

Station : 1169 - Busch Blvd & Twin Lakes Blvd (F062) (Standard File)

Unit Parameters [1.2.1]

Free Ring Sequence	Omit Yellow Enable	Yellow 3 Second Disable	Disable Init Ped	Start Red Time	Local Flash Start	Enable Run	Max Seek Dwell Time	Max Seek Track Time	Max Cycle Time	Cycle Fault Action	Ts2 Det Faults	SDLC Retry Time	Diamond Mode	Phase Mode	Feature Profile	Tone Disable	Console Timeout	Red Revert	Backup Time	Auto Ped Clear	StartUp Flash
1	OFF	OFF	OFF	OFF	OFF	ON				ALARM	ON		4PH	QSEQ		OFF	30	3		ON	

Comm, General Comm Parameters [6.1]

Station ID	Master Station ID	Fallback time	Allow Pencil	Port	System-Up	Sys-Down	PC/Print	Aux 232
1169		900	OFF					

Port Parameters [6.2]

Comm	Mode	Baud	MsgTime	Duplex	Enable	DialTime	Modem	ModemTime	Tel#1	Tel#2
System Up(P-A)										
System Down(P-B)										
PC/Print(P-2)										

Overlap General Parameters [1.5.1]

Conflict Lock	Lock Inhibit	Program Card	Use Parent	Canadian Fast Flash
OFF	OFF	OFF	ON	OFF

Overlap Program Parameters [1.5.2.1]

Overlap	Included Phases	Modifier Phases	Type	Green	Yellow	Red
Overlap 1			NORMAL		3	1.5
Overlap 2	1	2	R-T/OTH		4.8	2.2
Overlap 3			NORMAL		3.5	1.5
Overlap 4			NORMAL		3.5	1.5
Overlap 5			NORMAL		3.5	1.5
Overlap 6			NORMAL		3.5	1.5
Overlap 7			NORMAL		3.5	1.5
Overlap 8			NORMAL		3.5	1.5

Overlap Conflict Parameters+ [1.5.2.2]

Overlap	Conflicting Phases	Conflicting Overlaps	Conflicting Peds
Overlap 1			OFF OFF
Overlap 2			OFF FL OFF YEL4
Overlap 3			OFF OFF
Overlap 4			OFF OFF
Overlap 5			OFF OFF
Overlap 6			OFF OFF
Overlap 7			OFF OFF
Overlap 8			OFF OFF

Detector, Vehicle Parameters 1-16 [5.1]

	1 (WBT1)	2 (WBT2)	3 (WBL1)	4 (NBR1)	5 (NBL1)	6	7 (EBT1)	8 (EBT2)	9 (EBL1)	10	11	12	13	14	15	16
Call Phase	6	6	1	3	3		2	2	2							
Switch Phase			6													
Delay Time				8												

Detector, Vehicle Parameters 17-32 [5.1]

	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Call Phase				4												
Switch Phase																
Delay Time				8												

Station : 1169 - Busch Blvd & Twin Lakes Blvd (F062) (Standard File)

Detector Alternate Program 1, Vehicle Parameters [5.5.1]

	1 (WBT1)	2 (WBT2)	3 (WBL1)	4 (NBR1)	5 (NBL1)	6	7 (EBT1)	8 (EBT2)	9 (EBL1)	10	11	12	13	14	15	16
Call Phase																
Switch Phase																
Delay Time																

Channels/SDLC, Assign to Phases [1.3.1]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
PH/OLP #	2	2	3	4	6								2		6	3								
Type	OLP	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OLP	OLP	OLP	OLP	PED	PED	PED	PED	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
Flash	RED	YEL	RED	RED	RED	YEL	RED	RED	RED	RED	RED	RED	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK
Flash 1-2 Hertz																								
Dimming Green																								
Dimming Yellow																								
Dimming Red																								
Alt Cyc	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Channel/SDLC, Parameters [1.3.3]

TOD Dim Enable	Extra Maps Enable	D Connector Enable	Single BIU Map	IO Mode	Preempt or Ext Output
OFF	DEFAULT	NONE	ON	AUTO	EXT

Channel/SDLC, MMU Map [1.3.5]

MMU-to-Controller Channel Map

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Channel/SDLC, Permissive [1.3.4]

Channel	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2
1		1									1				
2		1		1							1				
3	1														
4															
5															
6		1		1											
7															
8															
9															
10															
11															
12															
13		1													
14															
15															

Channel/SDLC, Permissive [1.3.7]

SDLC Device	Term/Fac	Detector								MMU	Diag							
BIU#	1	2	3	4	5	6	7	8	1	2	3	4	5	6	7	8		
Present	ON	ON							ON	ON							ON	
Peer to Peer																		

Ring Sequence [1.2.4]

Ring	P1	P2	P3	P4	P5	P6	P7	P8
Ring 1	1	2		3	4	7	8	
Ring 2	5	6						
Ring 3								
Ring 4								

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Alarms, Enable Events [1.6.1]

Event#	Event Enable
1	ON
2	ON
3	ON
4	ON
5	ON
6	ON
7	
8	
9	
10	
11	
12	ON
13	ON
14	ON
15	ON
16	ON
17	
18	
19	
20	
21	
22	ON
23	ON
24	
25	
26	ON
27	
28	
29	ON
30	
31	
32	
33	
34	
35	
36	
37	ON
38	
39	
40	
41	
42	
43	
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45	
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60	
61	
62	
63	
64	

Alarms, Enable Alarms [1.6.4]

Alarm#	Alarm Enable
1	ON
2	ON
3	ON
4	ON
5	ON
6	ON
7	
8	
9	
10	
11	
12	ON
13	ON
14	ON
15	ON
16	ON
17	
18	
19	
20	
21	
22	ON
23	ON
24	
25	
26	ON
27	
28	
29	ON
30	
31	
32	
33	
34	
35	
36	
37	ON
38	
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40	
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64	

Preemption Times[3.1]/Phases[3.2]/Options[3.3]

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Flash	ON	ON				
Override Higher	ON					
Flash Dwell						
Link						
Delay						
Min Duration						
Min Green	2	5	5	5	5	5
Min Walk	1					
Ped Clear	1					
Track Green	7					
Min Dwell	10	5	10	10	10	10
Max Presence						
Track R1	3					
Track R2						
Track R3						
Track R4						
Dwell P1	2					
Dwell P2	6					
Dwell P3						
Dwell P4						
Dwell P5						
Dwell P6						
Dwell P7						
Dwell P8						
Dwell P9						
Dwell P10						
Dwell P11						
Dwell P12						
Dwell Ped1						
Dwell Ped2						
Dwell Ped3						
Dwell Ped4						
Dwell Ped5						
Dwell Ped6						
Dwell Ped7						
Dwell Ped8						
Exit R1	3					
Exit R2						
Exit R3						
Exit R4						

Alarms, Parameters [1.4.1]

Auto Flash Parameter

Yellow	Red	Mode	Source
		VOT_MON	TEST A

Alarms, Parameters [1.6.7]

Preempt Event Enabled	Pattern Event Enabled
ON	ON

Alarms, Phases/Overlaps [1.4.2]

Auto Flash	1	2	3	4	5	6	7	8	9	10	11	12
Phases												
Overlaps												

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

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

Coordination, Modes,+ [2.1]

Modes

Operational	Correct	Maximum	Force-Off
	SHRT/LNG	MAX INH	FIXED

Modes+

Mode	Leave Before	Leave After	Recycle	Stop In Walk	External	Auto Reset	Latch Sec Foff	Coord Easy Float	Yield Value	Coord NTCIP Yield Sign	Closed Loop Active
FRC	TIMED	TIMED	NO RECYCLE	ON	OFF	ON	OFF	OFF	0	+	ON

Coordination, Pattern 1-16 [2.1]

Pattern	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Cycle Time	190	140	180	110		140										
Offset Time	33	17	129	85		72										
Split Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Seq Number	1	9	9	9	9	9	9	1	1	1	1	1	1	1	1	1
Offset	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn

Coordination, Pattern 17-32 [2.1]

Pattern	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Cycle Time					130											
Offset Time					83											
Split Number	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Seq Number	1	1	1	1	9	1	1	1	1	1	1	1	1	1	1	1
Offset	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn

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Coordination, Splits [2.7.1]

Split Table 1	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	30	126	18	16		156										
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table 2	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	29	70	25	16		99										
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table 3	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	18	116	30	16		134										
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table 4	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	20	52	22	16		72										
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

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

Split Table 6	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	16	88	20	16		104										
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Split Table 21	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	27	64	23	16	91											
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

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

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

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

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

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

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

Split Table 28	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table 29	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table 30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table 31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table 32	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

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Day Plan Table 7	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	99															

Day Plan Table 8	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	99															

Day Plan Table 9	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	99															

Day Plan Table 10	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	99															

Day Plan Table 11	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	99															

Day Plan Table 12	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	99															

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TB Coor, Action Table [4.5]

Action	Pattern	Aux 1	Aux 2	Aux 3	Special 1	Special 2	Special 3	Special 4	Special 5	Special 6	Special 7	Special 8
1	1											
2	2											
3	3											
4	4											
5	5											
6	6											
7	7											
8	8											
9	9											
10	10											
11	11											
12	12											
13	13											
14	14											
15	15											
16	16											
17	17											
18	18											
19	19											
20	20											
21	21											
22	22											
23	23											
24	24											
25	25											
26	26											
27	27											
28	28											
29	29											
30	30											
31	31											
32	32											
33	33											
34	34											
35	35											
36	36											
37	37											
38	38											
39	39											
40	40											
41	41											
42	42											
43	43											
44	44											
45	45											
46	46											
47	47											
48	48											
49												
50												
51												
52												
53												
54												
55												
56												
57												
58												
59												
60												
61												
62												
63												
64												
99	254											
100	255											

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Phase [1.1.1]

	1 (EL)	2 (WT)	3	4	5	6 (ET)	7	8 (ST)	9	10	11	12	13	14	15	16
Walk		7						7								
Ped Clearance		22						24								
Min Green	5	15				15		7								
Passage	3	4				4		3								
Max1	15	45				45		15								
Max2																
Yellow	4.8	4.8	9	9	9	4.8	9	3.7	9	9	9	9	9	9	9	9
Red	2	2.4				2.4		3.4								
Red Revert	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Added Initial																
Max Initial																
Time Before Reduce																
Cars Before Reduce																
Time To Reduce																
Reduce By																
Min Gap																
Dynamic Max Limit																
Dynamic Max Step																
Auto Exit		ON				ON										
Rest In Walk																

Phase Option [1.1.2]

	1 (EL)	2 (WT)	3	4	5	6 (ET)	7	8 (ST)	9	10	11	12	13	14	15	16
Enable	ON	ON				ON		ON								
Auto Entry								ON								
Non Act1																
Non Act2																
Lock Call																
Min Recall		ON				ON										
Max Recall																
Ped Recall																
Soft Recall																
Dual Entry																
Sim Gap Enable	ON	ON				ON										
Guar Passage																
Cond Service																
Add Init Calc																

Alternate Phase Program 1, Calls and Redirection [1.1.6.3]

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

Alternate Phase Program 2, Calls and Redirection [1.1.6.3]

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

Alternate Phase Program 1, Interval Times [1.1.6.1]

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

Alternate Phase Program 2, Interval Times [1.1.6.1]

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

Prepared By

Date Implemented

Reviewed By

Traffic Engineer

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Unit Parameters [1.2.1]

StartUp Flash	Auto Ped Clear	Backup Time	Red Revert	Console Timeout	Tone Disable	Feature Profile	Phase Mode	Diamond Mode	SDLC Retry Time	TS2 Det Faults	Cycle Fault Action	Max Cycle Time	Max Seek Track Time	Max Seek Dwell Time	Enable Run	Local Flash Start	Start Red Time	Disable Init Ped	Yellow 3 Second Disable	Omit Yellow Enable	Free Ring Sequence	
	ON		3	30	OFF		QSEQ	4PH		ON	ALARM				ON	OFF		OFF	OFF	OFF	OFF	1

Comm, General Comm Parameters [6.1]

Station ID	Master Station ID	Fallback time	Allow Pencil	Port	System-Up	Sys-Down	PC/Print	Aux 232
1168		900	OFF					

Port Parameters [6.2]

Comm	Mode	Baud	MsgTime	Duplex	Enable	DialTime	Modem	ModemTime	Tel#1	Tel#2
System Up(P-A)										
System Down(P-B)										
PC/Print(P-2)										

Overlap General Parameters [1.5.1]

Conflict Lock	Lock Inhibit	Program Card	Use Parent	Canadian Fast Flash
OFF	OFF	OFF	ON	OFF

Overlap Program Parameters [1.5.2.1]

Overlap	Included Phases	Modifier Phases	Type	Green	Yellow	Red
Overlap 1			NORMAL		3.5	1.5
Overlap 2			NORMAL		3.5	1.5
Overlap 3			NORMAL		3.5	1.5
Overlap 4			NORMAL		3.5	1.5
Overlap 5			NORMAL		3.5	1.5
Overlap 6			NORMAL		3.5	1.5
Overlap 7			NORMAL		3.5	1.5
Overlap 8			NORMAL		3.5	1.5

Overlap Conflict Parameters+ [1.5.2.2]

Overlap	Conflicting Phases	Conflicting Overlaps	Conflicting Peds
Overlap 1			OFF OFF
Overlap 2			OFF OFF
Overlap 3			OFF OFF
Overlap 4			OFF OFF
Overlap 5			OFF OFF
Overlap 6			OFF OFF
Overlap 7			OFF OFF
Overlap 8			OFF OFF

Detector, Vehicle Parameters 1-16 [5.1]

	1 (SBR1)	2 (SBL1)	3	4 (WBT1)	5 (WBT2)	6 (EBT1)	7 (EBT2)	8 (EBL1)	9	10	11	12	13	14	15	16
Call Phase	8	8		2	2	6	6	1								
Switch Phase								6								
Delay Time	5	2														

Detector, Vehicle Parameters 17-32 [5.1]

	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Call Phase																
Switch Phase																
Delay Time																

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Detector Alternate Program 1, Vehicle Parameters [5.5.1]

	1 (SBR1)	2 (SBL1)	3	4 (WBT1)	5 (WBT2)	6 (EBT1)	7 (EBT2)	8 (EBL1)	9	10	11	12	13	14	15	16
Call Phase																
Switch Phase																
Delay Time																

Channels/SDLC, Assign to Phases [1.3.1]

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
PH/OLP #	1	2				6		8					2			8								
Type	VEH	VEH	VEH	VEH	VEH	VEH	VEH	VEH	OLP	OLP	OLP	OLP	PED	PED	PED	PED	OTH	OTH	OTH	OTH	OTH	OTH	OTH	OTH
Flash	RED	YEL	RED	RED	RED	YEL	RED	RED	RED	RED	RED	RED	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK	DRK
Flash 1-2 Hertz																								
Dimming Green																								
Dimming Yellow																								
Dimming Red																								
Alt Cyc	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+	+

Channel/SDLC, Parameters [1.3.3]

TOD Dim Enable	Extra Maps Enable	D Connector Enable	Single BIU Map	IO Mode	Preempt or Ext Output
OFF	DEFAULT	NONE	ON	AUTO	EXT

Channel/SDLC, MMU Map [1.3.5]

MMU-to-Controller Channel Map

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

Channel/SDLC, Permissive [1.3.4]

Channel	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2
1											1				
2				1							1				
3															
4															
5															
6				1											
7															
8	1														
9															
10															
11															
12															
13															
14															
15															

Channel/SDLC, Permissive [1.3.7]

SDLC Device	Term/Fac		Detector								MMU	Diag							
	1	2	3	4	5	6	7	8	1	2			3	4	5	6	7	8	
Present	ON	ON								ON								ON	
Peer to Peer																			

Ring Sequence [1.2.4]

Ring	P1	P2	P3	P4	P5	P6	P7	P8
Ring 1	1	2		3	4	7	8	
Ring 2	5	6						
Ring 3								
Ring 4								

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Alarms, Enable Events [1.6.1]

Event#	Event Enable
1	ON
2	ON
3	ON
4	ON
5	ON
6	ON
7	
8	
9	
10	
11	
12	ON
13	ON
14	ON
15	ON
16	ON
17	
18	
19	
20	
21	
22	ON
23	ON
24	
25	
26	ON
27	
28	
29	ON
30	
31	
32	
33	
34	
35	
36	
37	ON
38	
39	
40	
41	
42	
43	
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60	
61	
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63	
64	

Alarms, Enable Alarms [1.6.4]

Alarm#	Alarm Enable
1	ON
2	ON
3	ON
4	ON
5	ON
6	ON
7	
8	
9	
10	
11	
12	ON
13	ON
14	ON
15	ON
16	ON
17	
18	
19	
20	
21	
22	ON
23	ON
24	
25	
26	ON
27	
28	
29	ON
30	
31	
32	
33	
34	
35	
36	
37	ON
38	
39	
40	
41	
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63	
64	

Preemption Times[3.1]/Phases[3.2]/Options[3.3]

Channel	1	2	3	4	5	6
Lock Input	ON	ON	ON	ON	ON	ON
Override Flash	ON	ON				
Override Higher						
Flash Dwell						
Link						
Delay						
Min Duration						
Min Green	5	5	5	5	5	5
Min Walk						
Ped Clear						
Track Green						
Min Dwell	5	5	10	10	10	10
Max Presence						
Track R1						
Track R2						
Track R3						
Track R4						
Dwell P1						
Dwell P2						
Dwell P3						
Dwell P4						
Dwell P5						
Dwell P6						
Dwell P7						
Dwell P8						
Dwell P9						
Dwell P10						
Dwell P11						
Dwell P12						
Dwell Ped1						
Dwell Ped2						
Dwell Ped3						
Dwell Ped4						
Dwell Ped5						
Dwell Ped6						
Dwell Ped7						
Dwell Ped8						
Exit R1						
Exit R2						
Exit R3						
Exit R4						

Alarms, Parameters [1.4.1]

Auto Flash Parameter

Yellow	Red	Mode	Source
		VOT_MON	TEST A

Alarms, Parameters [1.6.7]

Preempt Event Enabled	Pattern Event Enabled
ON	ON

Alarms, Phases/Overlaps [1.4.2]

Auto Flash	1	2	3	4	5	6	7	8	9	10	11	12
Phases												
Overlaps												

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

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

Coordination, Modes, + [2.1]

Modes

Operational	Correct	Maximum	Force-Off
	SHRT/LNG	MAX INH	FIXED

Modes+

Mode	Leave Before	Leave After	Recycle	Stop In Walk	External	Auto Reset	Latch Sec Foff	Coord Easy Float	Yield Value	NTCIP Yield Sign	Coord Active	Closed Loop
FRC	TIMED	TIMED	NO_RECYCLE	ON	OFF	ON	OFF	OFF	0	+	ON	OFF

Coordination, Pattern 1-16 [2.1]

Pattern	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Cycle Time	190	140	180	110		140										
Offset Time	42	90	79	105		84										
Split Number	1	2	3	4	5	6	7									
Seq Number	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Offset	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn

Coordination, Pattern 17-32 [2.1]

Pattern	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
Cycle Time					130											
Offset Time					25											
Split Number					21											
Seq Number	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
Offset	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn	endgrn

Hillsborough County

Timing Sheet

11/12/2013 2:17:02 PM

Station : 1168 - Busch Blvd & Orange Grove Dr (F038) (Standard File)

Coordination, Splits [2.7.1]

Split Table 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	31	120				151		39								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table 2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	20	99				119		21								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table 3

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	32	126				158		22								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table 4

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	16	74				90		20								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table 5

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

Split Table 6

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	16	95				111		29								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

Split Table 7

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

Split Table 8

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

Split Table 9

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

Split Table 10

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

Split Table 11

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

Split Table 12

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

Hillsborough County

Timing Sheet

11/12/2013 2:17:02 PM

Station : 1168 - Busch Blvd & Orange Grove Dr (F038) (Standard File)

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

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

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

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

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

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

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

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

Split Table 21	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time	19	87				106		24								
Mode	NON	MAX	NON	NON	NON	MAX	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph		ON														

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

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

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

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

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

Time																
Mode	NON	NON	NON	NON	NON	NON	NON	NON	NON	OMT	OMT	OMT	OMT	OMT	OMT	OMT
Coord-Ph																

Split Table 27

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

Split Table 28

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

Split Table 29

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

Split Table 30

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

Split Table 31

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

Split Table 32

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

Hillsborough County

Timing Sheet

11/12/2013 2:17:02 PM

Station : 1168 - Busch Blvd & Orange Grove Dr (F038) (Standard File)

Day Plan Table 7	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	99															

Day Plan Table 8	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	99															

Day Plan Table 9	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	99															

Day Plan Table 10	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	99															

Day Plan Table 11	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	99															

Day Plan Table 12	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour																
Minute																
Action	99															

Hillsborough County

Timing Sheet

11/12/2013 2:17:02 PM

Station : 1168 - Busch Blvd & Orange Grove Dr (F038) (Standard File)

TB Coor, Action Table [4.5]

Action	Pattern	Aux 1	Aux 2	Aux 3	Special 1	Special 2	Special 3	Special 4	Special 5	Special 6	Special 7	Special 8
1	1											
2	2											
3	3											
4	4											
5	5											
6	6											
7	7											
8	8											
9	9											
10	10											
11	11											
12	12											
13	13											
14	14											
15	15											
16	16											
17	17											
18	18											
19	19											
20	20											
21	21											
22	22											
23	23											
24	24											
25	25											
26	26											
27	27											
28	28											
29	29											
30	30											
31	31											
32	32											
33	33											
34	34											
35	35											
36	36											
37	37											
38	38											
39	39											
40	40											
41	41											
42	42											
43	43											
44	44											
45	45											
46	46											
47	47											
48	48											
49												
50												
51												
52												
53												
54												
55												
56												
57												
58												
59												
60												
61												
62												
63												
64												
99	254											
100	255											

City of Tampa Signal Timing Sheet

258394

Section ID: 901 Computer: M CCU: 58 DROP 8 MYLAR: 203 SHOP ID 1598

Timing Date: 6/12/2007 Phase Date: 9/11/2000 Controller: ECONOLITE

Intersection: BUSCH and ARMENIA

Phase Numbers	1	2	3	4	5	6	7	8
Direction	EBLT	WB	SB LT	NB	WB LT	EB	NB LT	SB
Minimum Green	5	15	5	10	5	15	5	10
Walk	---	4	---	4	---	4	---	4
Flash Don't Walk	---	20	---	24	---	20	---	24
Vehicle Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Max. Green I	30	90	20	45	30	90	20	45
Max. Green II	30	90	20	45	30	90	20	45
Yellow Clearance	3.0	4.3	3.0	3.6	3.0	4.3	3.0	3.6
All Red Clearance	2.4	1.0	3.3	1.2	2.4	1.0	3.3	1.2
Phase Recall	---	MAX	---	---	---	MAX	---	---
Detector Memory	ON	---	---	---	ON	---	---	---
Ped. Recall	---	ON	---	---	---	ON	---	---
Flash Operation	RED	YEL	---	RED	RED	YEL	---	RED

Special Modes and Times of Operations:

Surveillance Times:

Flash Source: Times:

C = Computer Flash T = Time Clock/Controller

Special Functions:

Please Implement Within: 1 Week [] 1 Month

Comments:

UPDATED TIMING SHEET & ECONOLITE PROGRAMMING SHEETS
RXR PREEMPT LOCATION
UPDATED PED TIMINGS AND RXR PREEMPT SETTINGS

Submitted By: SK Reviewed By: JS Approved By: MR
 Date: 6-12-07 Date: 6-12-07 Date: 6/12/07

Timing Implemented: As Sent, [] With Following Revisions, [] By Contractor

By: [Signature]
 [] Signal Timing Not Implemented Reason:



Date: _____ By: _____

COMPUTER PATTERN SHEET

901
901
STRUCTURE 1

CITY OF TAMPA

901 - BUSCH & ARMENIA

ECONOLITE

Timing Date: 06/21/2016	MIN	10	5	10	5	
MSX: M CCU: 58 Drop: 8	YEL	4.3	3.6	3.6	4.3	
Structures: 123	RED	1.8	2.4	2.5	1.8	
Lead / Lag: 23	WLK	7		7		
	FDW	23		22		
	Min - 78	37	12	17	12	
Pat	CYC	OS	2+6	3+7	4+8	1+5
1 Am 0630 - 0930						
2 Am Off 0930 - 1130	140	13	55	22	35	28
3 Noon 1130 - 1530	140	13	55	22	35	28
4 Pm Off 1330 - 1515	140	13	55	22	35	28
5 Pm 1530 - 1900						
6 Evening 1900 - 2100	140	13	55	22	35	28
7 Late 2100 - 0630	100	87	35	15	30	20
8						
9 WE 1000 - 1900						
10						
11						
12						
13						
14						
15						
16 Hurricane	200	37	95	20	60	25

S.F. #1 - 2+5 Lead
S.F. #2 - 1+6 Lead

T.B.C. DAY PLAN 1: M-Th patt 1-7 Day Plan 2: Sat patt 9
DAY PLAN 3: Sun patt 9 DAY PLAN 4: Fri patt 5 @ 1500

COMPUTER PATTERN SHEET

901
901
STRUCTURE 2

CITY OF TAMPA

901 - BUSCH & ARMENIA

ECONOLITE

Timing Date: 06/21/2016	MIN	10	5	5	10	5
MSX: M CCU: 58 Drop: 8	YEL	4.3	4.3	3.6	3.6	4.3
Structures: 123	RED	1.8	1.8	2.4	2.5	1.8
Lead / Lag: 23	WLK	7			7	
	FDW	23			22	
	Min - 90	37	12	12	17	12
Pat	CYC FOS OS	2+6	1+6	3+7	4+8	2+5
1 Am 0630 - 0930	190 138 165	69	27	19	48	27
2 Am off 0930 - 1130						
3 Noon 1130 - 1530						
4 Pm off 1330 - 1515						
5 Pm 1530 - 1900						
6 Evening 1900 - 2100						
7 Late 2100 - 0630						
8						
9 WE 1000 - 1900						
10						
11						
12						
13						
14						
15						
16 Hurricane						

S.F. #1 - 2+5 Lead
S.F. #2 - 1+6 Lead

T.B.C. DAY PLAN 1: M-Th patt 1-7 Day Plan 2: Sat patt 9
DAY PLAN 3: Sun patt 9 DAY PLAN 4: Fri patt 5 @ 1500

COMPUTER PATTERN SHEET

901
901
STRUCTURE 3

CITY OF TAMPA

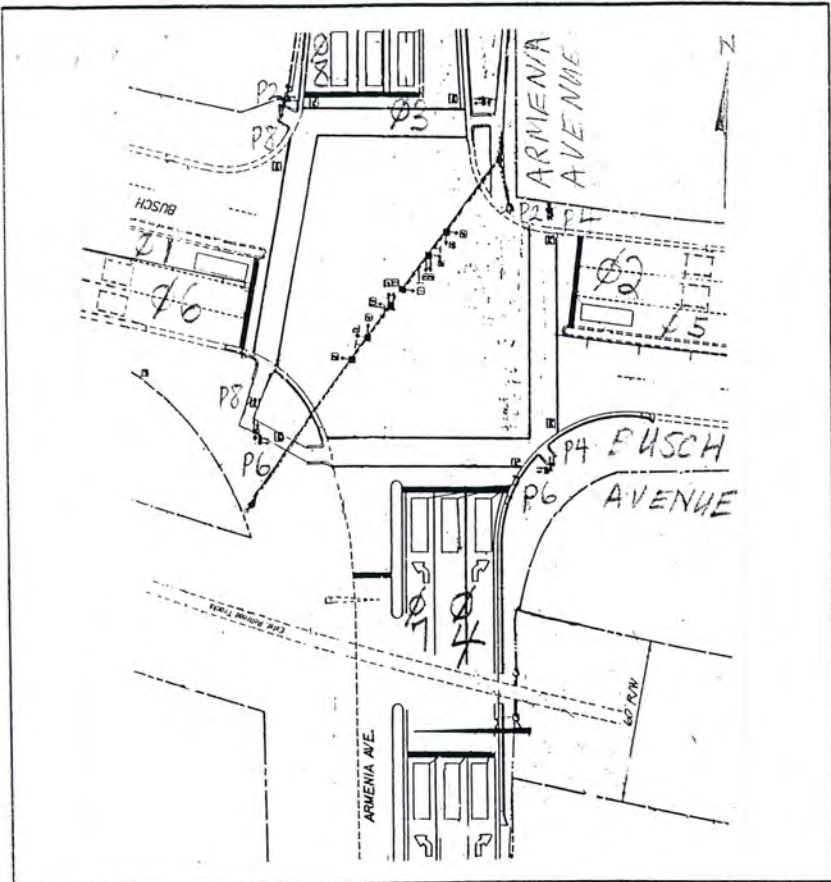
901 - BUSCH & ARMENIA

ECONOLITE

Timing Date: 06/21/2016	MIN	10	5	5	10	5
MSX: M CCU: 58 Drop: 8	YEL	4.3	4.3	4.3	4.3	4.3
Structures: 123	RED	1.8	1.8	1.8	1.8	1.8
Lead / Lag: 23	WLK	7			7	
	FDW	23			22	
	Min - 90	37	12	12	17	12
Pat	CYC FOS OS	2+6	2+5	3+7	4+8	1+6
1 Am 0630 - 0930						
2 Am Off 0930 - 1130						
3 Noon 1130 - 1530						
4 Pm Off 1330 - 1515						
5 Pm 1530 - 1900	180 118 148	50	30	25	45	30
6 Evening 1900 - 2100						
7 Late 2100 - 0630						
8						
9 WE 1000 - 1900						
10						
11						
12						
13						
14						
15						
16 Hurricane						

S.F. #1 - 2+5 Lead
S.F. #2 - 1+6 Lead

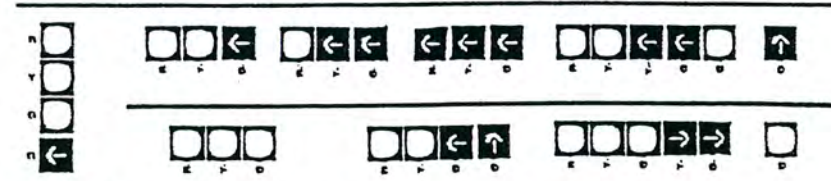
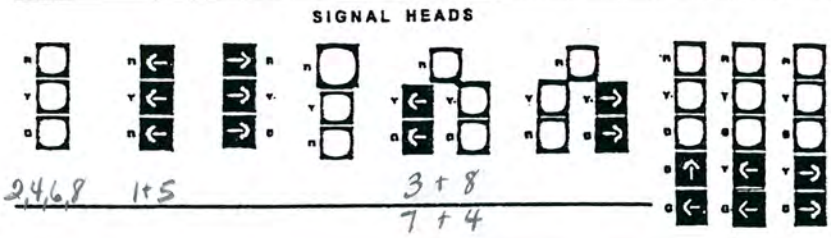
T.B.C. DAY PLAN 1: M-Th patt 1-7 Day Plan 2: Sat patt 9
DAY PLAN 3: Sun patt 9 DAY PLAN 4: Fri patt 5 @ 1500



Mylar Filed: 1/13/2003 CITY OF TAMPA - Phasing Diagram 85 Page 1 of 3

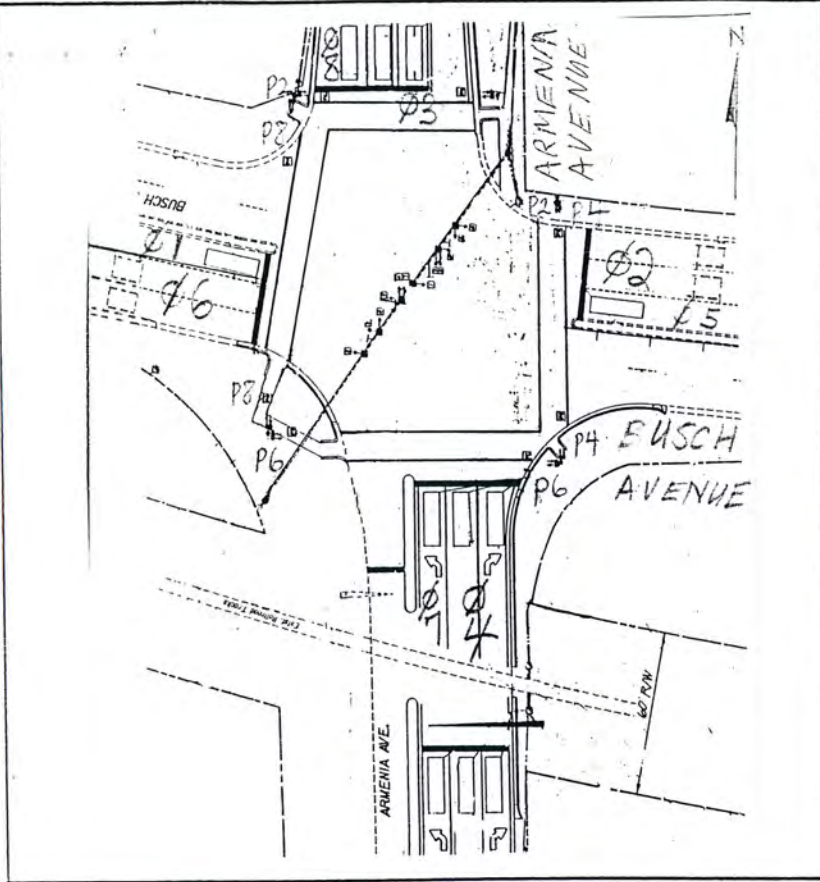
Location: Busch Blvd + Armenia Ave. Prep. By: SK Date: 9/11/00

Vehicle Movements	Signal Head Number	Flashing Operation								P2	P4	P6	P8
		1	2	3/8	4	5	6	7/4	8				
Phase	Interval	Display Sequence											
		1 + 5	RW	←G	R	R	R	←G	R	R	R	DW	DW
CLR TO	←G		R	R	R	←Y	R	R	R	DW	DW	DW	DW
1+6	←G		R	R	R	←R	R	R	R	DW	DW	DW	DW
CLR TO	←Y		R	R	R	←G	R	R	R	DW	DW	DW	DW
2+5	←R		R	R	R	←G	R	R	R	DW	DW	DW	DW
CLR TO	←Y		R	R	R	←Y	R	R	R	DW	DW	DW	DW
All Other	←R		R	R	R	←R	R	R	R	DW	DW	DW	DW
CLR TO	←Y		R	R	R	←Y	R	R	R	DW	DW	DW	DW
RR Preempt	←R		R	R	R	←R	R	R	R	DW	DW	DW	DW
1 + 6	RW	←G	R	R	R	←R	G	R	R	DW	DW	W	DW
	CLR PED	←G	R	R	R	←R	G	R	R	DW	DW	FDW	DW
	CLR TO	←G	R	R	R	←R	Y	R	R	DW	DW	DW	DW
	1+5	←G	R	R	R	←R	R	R	R	DW	DW	DW	DW
	CLR TO	←Y	R	R	R	←R	G	R	R	DW	DW	DW	DW
	2+6	←R	R	R	R	←R	G	R	R	DW	DW	DW	DW
	CLR TO	←Y	R	R	R	←R	Y	R	R	DW	DW	DW	DW
	All Other	←R	R	R	R	←R	R	R	R	DW	DW	DW	DW
	CLR TO	←Y	R	R	R	←R	Y	R	R	DW	DW	DW	DW
RR Preempt	←R	R	R	R	←R	R	R	R	DW	DW	DW	DW	
2 + 5	RW	←R	G	R	R	←G	R	R	R	W	DW	DW	DW
	CLR PED	←R	G	R	R	←G	R	R	R	FDW	DW	DW	DW
	CLR TO	←R	Y	R	R	←G	R	R	R	DW	DW	DW	DW
	1+5	←R	R	R	R	←G	R	R	R	DW	DW	DW	DW
	CLR TO	←R	G	R	R	←Y	R	R	R	DW	DW	DW	DW
	2+6	←R	G	R	R	←R	R	R	R	DW	DW	DW	DW
	CLR TO	←R	Y	R	R	←Y	R	R	R	DW	DW	DW	DW
	All Other	←R	R	R	R	←R	R	R	R	DW	DW	DW	DW
	CLR TO	←R	Y	R	R	←Y	R	R	R	DW	DW	DW	DW
RR Preempt	←R	R	R	R	←R	R	R	R	DW	DW	DW	DW	
2 + 6	RW	←R	G	R	R	←R	G	R	R	W	DW	W	DW
	CLR PED	←R	G	R	R	←R	G	R	R	FDW	DW	FDW	DW
	CLR TO	←R	Y	R	R	←R	G	R	R	DW	DW	DW	DW
	1+6	←R	R	R	R	←R	G	R	R	DW	DW	DW	DW
	CLR TO	←R	G	R	R	←R	Y	R	R	DW	DW	DW	DW
	2+5	←R	G	R	R	←R	R	R	R	DW	DW	DW	DW
	CLR TO	←R	Y	R	R	←R	Y	R	R	DW	DW	DW	DW
	All Other	←R	R	R	R	←R	R	R	R	DW	DW	DW	DW
	CLR TO	←R	Y	R	R	←R	Y	R	R	DW	DW	DW	DW
RR Preempt	←R	R	R	R	←R	R	R	R	DW	DW	DW	DW	

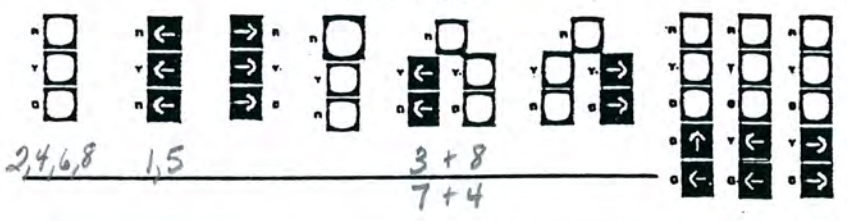


Notes: 8 phase semi-actuated controller + operation
 w/ concurrent ped operation. Heads + buttons all around
 @ 1+6, 2+6, @ 3 cycle during preemption dwell

Location: Busch Blvd + Armenia Ave Prep. By: SK Date: 9/11/00



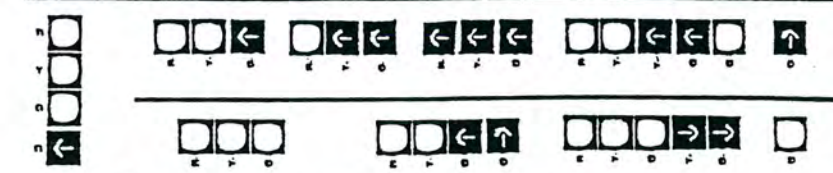
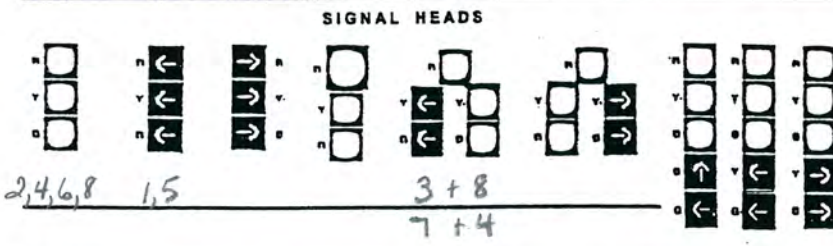
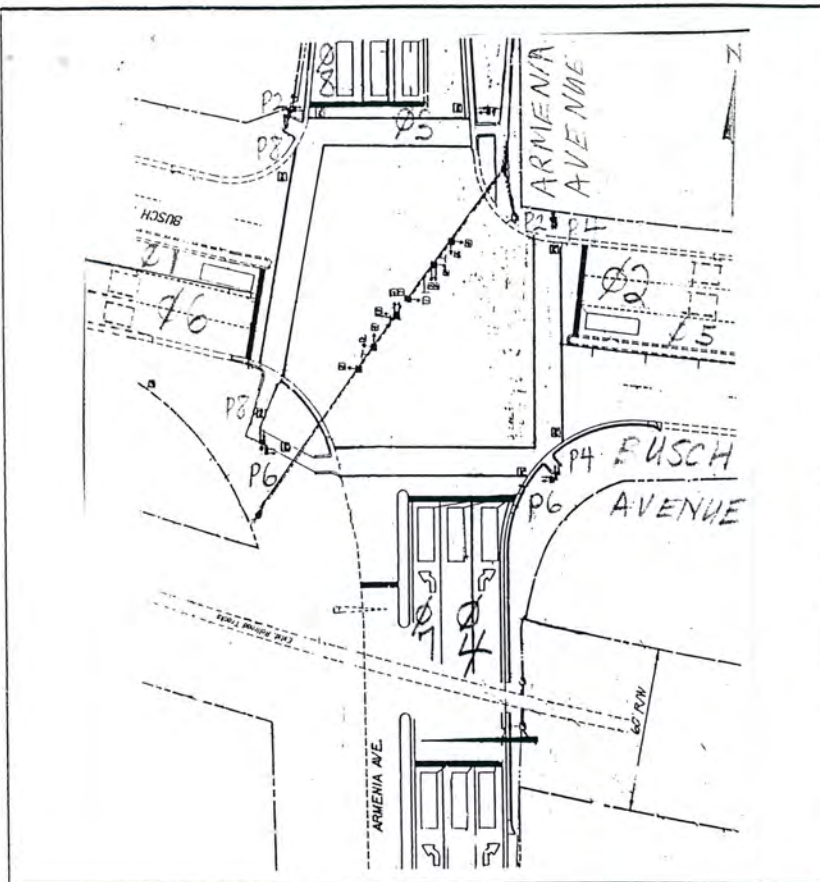
SIGNAL HEADS



Notes: 8 phase semi-actuated controller + operation w/ concurrent ped operation. Heads + buttons all around. @1+6, 2+6, @3 cycle during preemption dwell

Signal Head Number	1	2	3/8	4	5	6	7/4	8	P2	P4	P6	P8
Flashing Operation	←R	Y	R R	←R	Y	R R						
Vehicle Movements	Phase	Interval	Display Sequence									
3 + 7	RW	←R	R ←G	R R	←R	R ←G	R R	DW	DW	DW	DW	
	CLR TO	←R	R ←G	R R	←R	R ←Y	R R	DW	DW	DW	DW	
	3+8	←R	R ←G	R R	←R	R	R R	DW	DW	DW	DW	
	CLR TO	←R	R ←Y	R R	←R	R ←G	R R	DW	DW	DW	DW	
	4+7	←R	R	R R	←R	R ←G	R R	DW	DW	DW	DW	
	CLR TO	←R	R ←Y	R R	←R	R ←Y	R R	DW	DW	DW	DW	
	All Other	←R	R	R R	←R	R	R R	DW	DW	DW	DW	
	CLR TO	←R	R ←Y	R R	←R	R ←G	R R	DW	DW	DW	DW	
RR Preempt	←R	R	R R	←R	R ←G	R R	DW	DW	DW	DW		
3 + 8	RW	←R	R ←G	G R	←R	R	R G	DW	DW	DW	W	
	CLR PED	←R	R ←G	G R	←R	R	R G	DW	DW	DW	FDW	
	CLR TO	←R	R ←G	Y R	←R	R	R Y	DW	DW	DW	DW	
	3+7	←R	R ←G	R R	←R	R	R R	DW	DW	DW	DW	
	CLR TO	←R	R ←Y	G R	←R	R	R G	DW	DW	DW	DW	
	4+8	←R	R	G R	←R	R	R G	DW	DW	DW	DW	
	CLR TO	←R	R ←Y	Y R	←R	R	R Y	DW	DW	DW	DW	
	All Other	←R	R	R R	←R	R	R R	DW	DW	DW	DW	
CLR TO	←R	R ←Y	Y R	←R	R	R Y	DW	DW	DW	DW		
RR Preempt	←R	R	R R	←R	R	R R	DW	DW	DW	DW		
4 + 7	RW	←R	R	R G	←R	R ←G	G R	DW	W	DW	DW	
	CLR PED	←R	R	R G	←R	R ←G	G R	DW	FDW	DW	DW	
	CLR TO	←R	R	R Y	←R	R ←G	Y R	DW	DW	DW	DW	
	3+7	←R	R	R R	←R	R ←G	R R	DW	DW	DW	DW	
	CLR TO	←R	R	R G	←R	R ←Y	G R	DW	DW	DW	DW	
	4+8	←R	R	R G	←R	R	G R	DW	DW	DW	DW	
	CLR TO	←R	R	R Y	←R	R ←Y	Y R	DW	DW	DW	DW	
	All Other	←R	R	R R	←R	R	R R	DW	DW	DW	DW	
CLR TO	←R	R	R G	←R	R ←G	G R	DW	DW	DW	DW		
RR Preempt	←R	R	R G	←R	R ←G	G R	DW	DW	DW	DW		
4 + 8	RW	←R	R	G G	←R	R	G G	DW	W	DW	W	
	CLR PED	←R	R	G G	←R	R	G G	DW	FDW	DW	FDW	
	CLR TO	←R	R	G Y	←R	R	Y G	DW	DW	DW	DW	
	3+7	←R	R	G R	←R	R	R G	DW	DW	DW	DW	
	CLR TO	←R	R	Y G	←R	R	G Y	DW	DW	DW	DW	
	4+7	←R	R	R G	←R	R	G R	DW	DW	DW	DW	
	CLR TO	←R	R	Y Y	←R	R	Y Y	DW	DW	DW	DW	
	All Other	←R	R	R R	←R	R	R R	DW	DW	DW	DW	
CLR TO	←R	R	Y G	←R	R	G Y	DW	DW	DW	DW		
RR Preempt	←R	R	R G	←R	R	G R	DW	DW	DW	DW		

Location: Busch Blvd + Armenia Ave Prep. By: SK Date: 9/11/00



Notes: 8 phase semi-actuated controller + operation w/ concurrent ped operation. Heads + buttons all around 1+6, 2+6, 3 cycle during preemption dwell

Vehicle Movements	Signal Head Number		Flashing Operation								Display Sequence				
	Phase	Interval	1	2	3/8	4	5	6	7	4	8	P2	P4	P6	P8
4 + 7 TRACK CLEAR	RW	←R	R	R	R	G	←R	R	←G	G	R	DW	DW	DW	DW
	CLR TO	←R	R	R	Y	←R	R	←Y	Y	R		DW	DW	DW	DW
	All other	←R	R	R	R	←R	R	R	R	R		DW	DW	DW	DW
1 + 6 DWELE	RW	←G	R	R	R	←R	G	R	R	R		DW	DW	W	DW
	CLR PED	←G	R	R	R	←R	G	R	R	R		DW	DW	FDW	DW
	CLR TO	←Y	R	R	R	←R	G	R	R	R		DW	DW	DW	DW
	2+6	←R	R	R	R	←R	G	R	R	R		DW	DW	DW	DW
	CLR TO	←Y	R	R	R	←R	Y	R	R	R		DW	DW	DW	DW
All other	←R	R	R	R	←R	R	R	R	R		DW	DW	DW	DW	
2 + 6	RW	←R	G	R	R	←R	G	R	R	R		W	DW	W	DW
	CLR PED	←R	G	R	R	←R	G	R	R	R		FDW	DW	FDW	DW
	CLR TO	←R	Y	R	R	←R	G	R	R	R		DW	DW	DW	DW
	1+6	←R	R	R	R	←R	G	R	R	R		DW	DW	DW	DW
	CLR TO	←R	Y	R	R	←R	Y	R	R	R		DW	DW	DW	DW
All other	←R	R	R	R	←R	R	R	R	R		DW	DW	DW	DW	
3	RW	←R	R	←G	R	R	←R	R	R	R		DW	DW	DW	DW
	CLR TO	←R	R	←Y	R	R	←R	R	R	R		DW	DW	DW	DW
	All other	←R	R	R	R	←R	R	R	R	R		DW	DW	DW	DW

Preempt release to next phases called.

CITY OF TAMPA COMPUTER PATTERN SHEET
STRUCTURE 1

902

902 - BUSCH & BOULEVARD

PEEK 3000

Timing Date: 07/29/2015	MIN	15	5	5	10	5
MSX: M CCU: 59 Drop: 8	YEL	3.9	3.9	3.2	3.2	3.9
Structures: 123	RED	2	2	2.6	2.4	2
Lead / Lag: 12	WLK	7			7	
	FDW	27			25	
	Min - 89	40	11	11	16	11
Pat	CYC FOS OS	2+6	1+6	3+7	4+8	2+5
1 Am 0630 - 0900 ⁹³⁰						
2						
2 Am Off 0930 - 1130	200 73 98	52	25	58	40	25
2						
3 Noon 1130 - 1330	200 73 98	52	25	58	40	25
2						
4 Pm Off 1330 - 1530	200 73 98	52	25	58	40	25
5 Pm 1530 - 1900						
6 Evening 1900 - 2100						
7 Late 2200 - 0615						
2						
8 WE 0800 - 2000	200 73 98	80	25	30	40	25
9						
10						
11						
12						
13						
14						
15						
2						
16 Hurricane	200 85 99	49	40	58	39	14

S.F. #1 - 1+6 Lead
S.F. #2 - 2+5 Lead

T.B.C. DAY PLAN 1: M-Th patt 1-7 Day Plan 2: Fri patt 1-7 w/5 @ 14:45
DAY PLAN 3: S-SU patt 8 and patt 7 all other times

CITY OF TAMPA COMPUTER PATTERN SHEET
STRUCTURE 2

902

902 - BUSCH & BOULEVARD

PEEK 3000

Timing Date: 07/29/2015 MSX: M CCU: 59 Drop: 8 Structures: 123 Lead / Lag: 12	MIN	15	5	5	10	5
	YEL	3.9	3.9	3.2	3.2	3.9
	RED	2	2	2.6	2.4	2
	WLK	7			7	
	FDW	27			25	
	Min - 89	40	11	11	16	11
Pat	CYC FOS OS	2+6	2+5	3+7	4+8	1+6
1 Am 0630 - 0900 ⁹³⁰						
2 Am Off 0930 - 1130						
3 Noon 1130 - 1330						
4 Pm Off 1330 - 1530						
1						
5 Pm 1530 - 1900	220 152 177	94	25	21	55	25
1						
6 Evening 1900 - 2100	180 163 3	82	20	18	40	20
7 Late 2200 - 0615						
8 WE 0800 - 2000						
9						
10						
11						
12						
13						
14						
15						
16 Hurricane						

S.F. #1 - 1+6 Lead
S.F. #2 - 2+5 Lead

T.B.C. DAY PLAN 1: M-Th patt 1-7 Day Plan 2: Fri patt 1-7 w/5 @ 14:45
DAY PLAN 3: S-SU patt 8 and patt 7 all other times

CITY OF TAMPA COMPUTER PATTERN SHEET
STRUCTURE 3

902

902 - BUSCH & BOULEVARD

PEEK 3000

Timing Date: 07/29/2015 MSX: M CCU: 59 Drop: 8 Structures: 123 Lead / Lag: 12	MIN	15	5	10	5	
	YEL	3.9	3.2	3.2	3.9	
	RED	2	2.6	2.4	1.8	
	WLK	7		7		
	FDW	27		25		
	Min - 78	40	11	16	11	
Pat	CYC	OS	2+6	3+7	4+8	1+5
1 Am 0630 - 0900 ⁹³⁰	190	58	90	18	60	22
2 Am Off 0930 - 1130						
3 Noon 1130 - 1330						
4 Pm Off 1330 - 1530						
5 Pm 1530 - 1900						
6 Evening 1900 - 2100						
7 Late 2200 - 0615	130	46	54	23	30	23
8 WE 0800 - 2000						
9						
10						
11						
12						
13						
14						
15						
16 Hurricane						

S.F. #1 - 1+6 Lead
S.F. #2 - 2+5 Lead

T.B.C. DAY PLAN 1: M-Th patt 1-7 Day Plan 2: Fri patt 1-7 w/5 @ 14:45
DAY PLAN 3: S-SU patt 8 and patt 7 all other times

City of Tampa - Phasing Diagram

Ø Diagram 4/2/2015
 Form Vers. 2/15/2012
 Pg: 1 of 4

FDOT SOP# 10	Sect. I.D.# 902	Location: BUSCH / BOULEVARD																Prepared by GT	Reviewed by								
Signal Head Display:		Phasing Date: 4/2/2015	Overlaps		Signal Head Numbers		1 2		4 5 6		8		4/4R 8/8R		1 3/FY		7/FY		P2	P4	P6	P8					
		Controller: Econolite ASC3S	Flashing Operation		Display Sequence																						
Vehicle Movements		Phase	Interval	Display Sequence																							
		Ø1 & Ø5	RW	←-G R	R ←-G R	R	R	R	R	R	R	R	R	R	R	R	R	R	OFF ←-R	←-R	DW	DW	DW	DW			
			Clear to	←-G R	R ←-Y R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	OFF ←-R	←-R	DW	DW	DW	DW		
			Ø1 & Ø6	←-G R	R ←-R R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	OFF ←-R	←-R	DW	DW	DW	DW		
			Clear to	←-Y R	R ←-G R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	OFF ←-R	←-R	DW	DW	DW	DW		
			Ø2 & Ø5	←-R R	R ←-G R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	OFF ←-R	←-R	DW	DW	DW	DW		
			Clear to	←-Y R	R ←-Y R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	OFF ←-R	←-R	DW	DW	DW	DW		
				Ø2 & Ø6	RW	←-R R	R ←-R R	R	R	R	R	R	R	R	R	R	R	R	R	R	OFF ←-R	←-R	DW	DW	DW	DW	
					Clear to	←-Y R	R ←-Y R	R	R	R	R	R	R	R	R	R	R	R	R	R	OFF ←-R	←-R	DW	DW	DW	DW	
					Ø2 & Ø6	←-R R	R ←-Y R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	OFF ←-R	←-R	DW	DW	DW	DW
					Clear to	←-Y R	R ←-Y R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	OFF ←-R	←-R	DW	DW	DW	DW
					Preempt	←-R R	R ←-R R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	OFF ←-R	←-R	DW	DW	DW	DW
					Preempt	←-R R	R ←-R R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	OFF ←-R	←-R	DW	DW	DW	DW
		Ø1 & Ø6	RW	←-G R	R ←-R G	R	R	R	R	R	R	R	R	R	R	R	R	R	OFF ←-R	←-R	DW	DW	W	DW			
			Clear Ped	←-G R	R ←-R G	R	R	R	R	R	R	R	R	R	R	R	R	R	R	OFF ←-R	←-R	DW	DW	FDW	DW		
			Clear to	←-Y R	R ←-R G	R	R	R	R	R	R	R	R	R	R	R	R	R	R	OFF ←-R	←-R	DW	DW	DW	DW		
			Ø2 & Ø6	←-R R	R ←-R G	R	R	R	R	R	R	R	R	R	R	R	R	R	R	OFF ←-R	←-R	DW	DW	DW	DW		
			Clear to	←-Y R	R ←-R Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	OFF ←-R	←-R	DW	DW	DW	DW		
			Preempt	←-R R	R ←-R Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	OFF ←-R	←-R	DW	DW	DW	DW		
		Ø2 & Ø5	RW	←-R G	R ←-G R	R	R	R	R	R	R	R	R	R	R	R	R	R	OFF ←-R	←-R	W	DW	DW	DW			
			Clear Ped	←-R G	R ←-G R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	OFF ←-R	←-R	FDW	DW	DW	DW		
			Clear to	←-R G	R ←-Y R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	OFF ←-R	←-R	DW	DW	DW	DW		
			Ø2 & Ø6	←-R G	R ←-R R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	OFF ←-R	←-R	DW	DW	DW	DW		
			Clear to	←-R Y	R ←-Y R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	OFF ←-R	←-R	DW	DW	DW	DW		
			Preempt	←-R R	R ←-R R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	OFF ←-R	←-R	DW	DW	DW	DW		
		Ø1 & Ø6	RW	←-R G	R ←-R G	R	R	R	R	R	R	R	R	R	R	R	R	R	OFF ←-R	←-R	W	DW	W	DW			
			Clear Ped	←-R G	R ←-R G	R	R	R	R	R	R	R	R	R	R	R	R	R	R	OFF ←-R	←-R	FDW	DW	FDW	DW		
			Clear to	←-R Y	R ←-R G	R	R	R	R	R	R	R	R	R	R	R	R	R	R	OFF ←-R	←-R	DW	DW	DW	DW		
			Ø1 & Ø6	←-R R	R ←-R G	R	R	R	R	R	R	R	R	R	R	R	R	R	R	OFF ←-R	←-R	DW	DW	DW	DW		
			Clear to	←-R G	R ←-R Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	OFF ←-R	←-R	DW	DW	DW	DW		
			Clear to	←-R Y	R ←-R Y	R	R	R	R	R	R	R	R	R	R	R	R	R	R	OFF ←-R	←-R	DW	DW	DW	DW		
		Ø2 & Ø5	Clear to	←-R Y	R ←-R Y	R	R	R	R	R	R	R	R	R	R	R	R	R	OFF ←-R	←-R	DW	DW	DW	DW			
			All Other & Preempt	←-R R	R ←-R R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	OFF ←-R	←-R	DW	DW	DW	DW		
			Signal Head #	1	2	4	5	6	8	4	4R	8	8R	3/FY	7/FY	P2	P4	P6	P8								
			Econolite Overlaps											OLB	OLD												
			Load Switch #	LS1	LS2	LS4	LS5	LS6	LS8	LS4	LS5	LS8	LS1	LS3	LS14	LS7	LS14	LS13	LS14	LS15	LS16						
			Peek Overlaps																								

Comments:
 CNA ON Ø2 & Ø6. PED HEADS AND BUTTONS ALL AROUND.

City of Tampa Signal Timing Sheet

Section ID: 903 Computer: M CCU: 59 Drop: 1 Shop ID: 1529

Timing Date: 4/1/2014 Phase Date: 9/22/2000 Controller: Econo ASC2S

Intersection: BUSCH / FLORIDA

Phase Numbers	1	2	3	4	5	6	7	8
Direction	EB LT	WB	SB LT	NB	WB LT	EB	NB LT	SB
Minimum Green	5	10	5	15	5	10	5	15
Walk	---	7	---	7	---	7	---	7
Flash Don't Walk	---	40	---	33	---	40	---	33
Vehicle Extension	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Max. Green I	30	70	20	45	30	70	20	45
Max. Green II	30	70	20	45	30	70	20	45
Yellow Clearance	4.4	4.4	4.8	4.8	4.4	4.4	4.8	4.8
All Red Clearance	2.2	2.7	2.6	2.6	2.2	2.7	2.6	2.6
Phase Recall	---	MAX	---	---	---	MAX	---	---
Detector Memory	ON	---	ON	ON	ON	---	ON	ON
Ped. Recall	---	ON	---	---	---	ON	---	---
Flash Operation	RED	RED	RED	RED	RED	RED	RED	RED

Special Modes and Times of Operation:

Surveillance Times:

Flash Source: Flash Times:

C = Computer Flash T = Time Clock/Controller

Special Functions:

FDOT SOP:

Backup Protection (Y/N):

FDOT FDW (Y/N): **N**

Please Implement Within : 1 Week 1 Month

Comments:

MAX II: MONDAY THRU FRIDAY (06:15 - 09:00 & 15:15 - 18:30) / FRIDAY (06:15 - 09:00 & 14:45 - 18:30)

MAX I ALL OTHER TIMES

RXR PREEMPT LOCATION

Submitted By: _____ Reviewed By: _____ Approved By: _____
 Date: _____ Date: _____ Date: _____

Signal Timing Implemented: As sent With the following revisions

Date: 8/28/14 By: [Signature]

Signal Timing Not Implemented: Reasons: _____

Date: _____ By: _____

CITY OF TAMPA COMPUTER PATTERN SHEET

903

903 - BUSCH & FLORIDA

ECONOLITE

Timing Date: 04/08/2014	MIN	10	5	15	5	
DownLd Date: 06/03/2003	YEL	4.4	4.8	4.8	4.4	
MSX: M CCU: 59 Drop: 1	RED	2.7	2.6	2.6	2.2	
Structures: 1	WLK	7		7		
	FDW	40		33		
	Min -103	55	13	23	12	
Pat	CYC	OS	2+6	3+7	4+8	1+5
1 Am 0630 - 0900	220	185	81	33	70	36
2 Am Off 0930 - 1130	200	29	73	31	52	44
3 Noon 1130 - 1330	200	29	73	31	52	44
4 Pm Off 1330 - 1530	200	29	73	31	52	44
5 Pm 1530 - 1900	220	185	86	34	55	45
6 Evening 1900 - 2100	180	10	66	28	49	37
7 Late 2200 - 0615	130	104	66	20	25	19
8 WE 0800 - 2000	200	29	73	31	52	44
9						
10						
11						
12						
13						
14						
15						
16 1 Hurricane	200	143	90	30	50	30

T.B.C. DAY PLAN 1: M-Th patt 1-7 Day Plan 2: Fri patt 1-7 w/5 @ 14:45
 DAY PLAN 3: S-SU patt 8 and patt 7 all other times

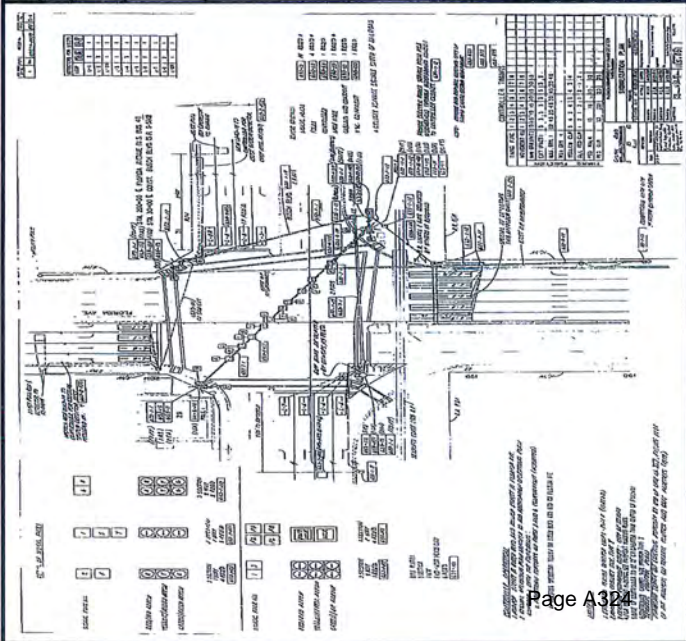
CITY OF TAMPA - Phasing Diagram

Sect. I.D.#: 903 Busch Blvd & Florida Ave Mylar #: 61 Pg: 2 of 3

Date: 3/19/2003 Signal Head Numbers P 2 P 4 P 6 P 8

Vehicle Movements Flashing Operation Interval RR PREEMPT RR PREEMPT RR PREEMPT RR PREEMPT

Phase	Flashing Operation Interval	Display Sequence							
		1	2	3	4	5	6	7	8
∅	RW	←R	←R	←G	←R	←R	←R	←Y	←R
3	CLR TO 3 & 8	←R	←R	←G	←R	←R	←R	←Y	←R
&	CLR TO 4 & 7	←R	←R	←Y	←R	←R	←R	←G	←R
7	CLR TO ALL OTHER	←R	←R	←Y	←R	←R	←R	←G	←R
	RR PREEMPT	←R	←R	←Y	←R	←R	←R	←G	←R
∅	RW	←R	←R	←G	←R	←R	←R	←Y	←R
3	CLR PED CLR TO 3 & 7	←R	←R	←G	←R	←R	←R	←Y	←R
&	CLR TO 4 & 8	←R	←R	←Y	←R	←R	←R	←G	←R
8	CLR TO ALL OTHER	←R	←R	←Y	←R	←R	←R	←G	←R
	RR PREEMPT	←R	←R	←Y	←R	←R	←R	←G	←R
∅	RW	←R	←R	←G	←R	←R	←R	←Y	←R
4	CLR PED CLR TO 3 & 7	←R	←R	←G	←R	←R	←R	←Y	←R
&	CLR TO 4 & 8	←R	←R	←Y	←R	←R	←R	←G	←R
7	CLR TO ALL OTHER	←R	←R	←Y	←R	←R	←R	←G	←R
	RR PREEMPT	←R	←R	←Y	←R	←R	←R	←G	←R
∅	RW	←R	←R	←G	←R	←R	←R	←Y	←R
4	CLR PED CLR TO 3 & 7	←R	←R	←G	←R	←R	←R	←Y	←R
&	CLR TO 4 & 8	←R	←R	←Y	←R	←R	←R	←G	←R
7	CLR TO ALL OTHER	←R	←R	←Y	←R	←R	←R	←G	←R
	RR PREEMPT	←R	←R	←Y	←R	←R	←R	←G	←R
∅	RW	←R	←R	←G	←R	←R	←R	←Y	←R
4	CLR PED CLR TO 3 & 7	←R	←R	←G	←R	←R	←R	←Y	←R
&	CLR TO 4 & 8	←R	←R	←Y	←R	←R	←R	←G	←R
7	CLR TO ALL OTHER	←R	←R	←Y	←R	←R	←R	←G	←R
	RR PREEMPT	←R	←R	←Y	←R	←R	←R	←G	←R



2,4,6,8

1,3,5,7

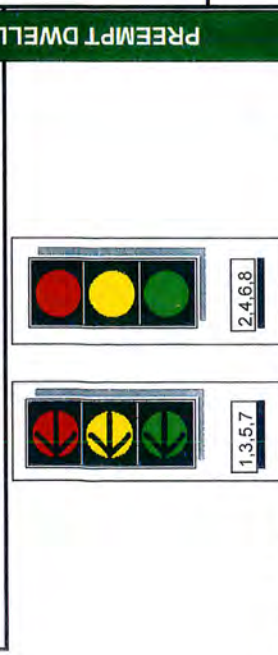
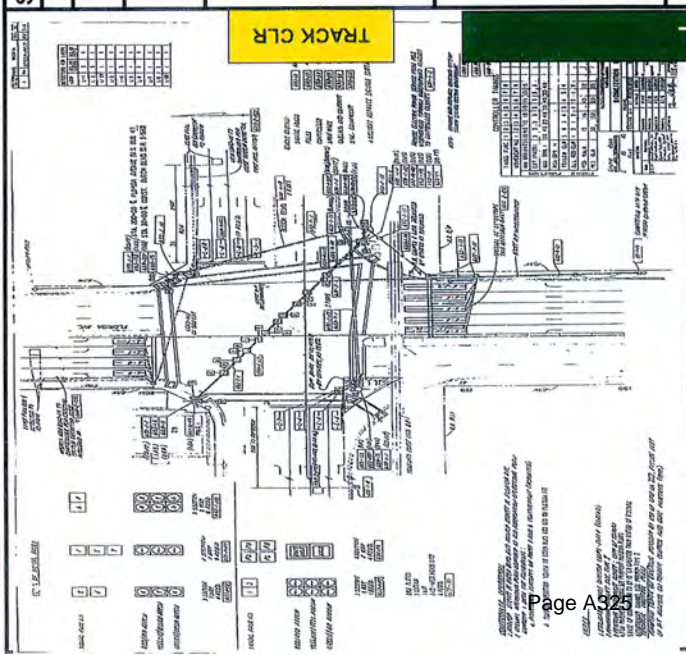
Notes: 8 phase semi-actuated operation w/ concurrent ped phases w/ ped heads & buttons all corners. RXR preempt location. ∅ 1,2,3, and 6 are preempt dwell phases. *Flash exit phases

CITY OF TAMPA - Phasing Diagram

Sect. I.D.#: 903
 Location: Busch Blvd. & Florida Ave.
 Mylar #: 61
 Pg: 3 of 3

Date: 3/19/2003
 Prep: SK
 Rev. P P P P
 2 4 6 8

Signal Head Numbers	Display Sequence							
	1	2	3	4	5	6	7	8
Flashing Operation Interval	←R	Y	←R	←R	←R	Y	←R	R
Phase	∅	4	&	7				
Vehicle Movements								
Flashing Operation Interval	←R	←R	←R	←R	←R	←R	←R	←R
Phase	∅	1	&	6				
Vehicle Movements								
Flashing Operation Interval	←R	←R	←R	←R	←R	←R	←R	←R
Phase	∅	2	&	6				
Vehicle Movements								
Flashing Operation Interval	←R	←R	←R	←R	←R	←R	←R	←R
Phase	∅	3						
Vehicle Movements								



Notes: 8 phase semi-actuated operation w/ concurrent ped phases w/ ped heads & buttons all corners. RXR preempt location. ∅ 1,2,3, and 6 are preempt dwell phases.
 *Flash exit phases

City of Tampa Signal Timing Sheet

Section ID: 904 Computer: M CCU: 60 Drop: 1 Shop ID: 1835

Timing Date: 4/1/2014 Phase Date: 4/30/2004 Controller: Econo ASC3S

Intersection: BUSCH / I-275 (W)

Phase Numbers	1	2	3	6
Direction	EBLT	WB	SB	EB
Minimum Green	5	10	10	10
Walk		7	7	7
Flash Don't Walk		12	24	12
Vehicle Extension	5.0	3.0	4.0	3.0
Max. Green I	50	85	35	85
Max. Green II	65	110	35	110
Yellow Clearance	4.4	4.4	4.0	4.4
All Red Clearance	2.1	2.1	2.4	2.1
Phase Recall	---	MAX	---	MAX
Detector Memory	ON	---	ON	---
Ped. Recall	---	ON	--	ON
Flash Operation	RED	YEL	RED	YEL

Special Modes and Times of Operation:

Surveillance Times:

Flash Source: Flash Times:

C = Computer Flash T = Time Clock/Controller

Special Functions: 0
 0
 0

FDOT SOP: 12 MOD

Backup Protection (Y/N): N

FDOT FDW (Y/N): Y

Please Implement Within : [] 1 Week [] 1 Month

Comments:

IP 172.19.46.42
 UPDATED FDOT CLEARANCES - AGI RETIMING PROJECT

Submitted By: _____ Reviewed By: _____ Approved By: _____
 Date: _____ Date: _____ Date: _____

Signal Timing Implemented: As sent . [] With the following revisions

Date: 4-1-2014 By: [Signature]
 Signal Timing Not Implemented: [] Reasons: _____

Date: _____ By: _____

CITY OF TAMPA COMPUTER PATTERN SHEET
STRUCTURE 1

904

904 - BUSCH & I-275 (W)

ECONOLITE

Timing Date: 04/08/2014	MIN	10	10	5
DownLd Date: / /	YEL	4.4	4	4.4
MSX: M CCU: 60 Drop: 1	RED	2.1	2.4	2.1
Structures: 12	WLK	7	7	
	FDW	12	24	
	Min - 55	26	17	12
Pat	CYC OS	2+6	3	1+6
1 Am 0630 - 0900	220 92	107	42	71
2 Am Off 0930 - 1130	200 176	91	53	56
3 Noon 1130 - 1330	200 176	91	53	56
4 Pm Off 1330 - 1530	200 176	91	53	56
5 Pm 1530 - 1900	220 105	116	43	61
6 Evening 1900 - 2100				
7 Late 2200 - 0615	130 60	52	38	40
8 WE 0800 - 2000	200 176	91	53	56
9				
10				
11				
12				
13				
14				
15				
16 Hurricane	200 11	115	38	47

S.F. #1 - 1+6 Lead
S.F. #2 - 2+5 Lead
AM Spec - Max Recall on 1 via action plan 10

T.B.C. DAY PLAN 1: M-Th patt 1-7 Day Plan 2: Fri patt 1-7 w/5 @ 14:45
DAY PLAN 3: S-SU patt 8 and patt 7 all other times

CITY OF TAMPA COMPUTER PATTERN SHEET
STRUCTURE 2

904

904 - BUSCH & I-275 (W)

ECONOLITE

Timing Date: 04/08/2014	MIN	10	5	10
DownLd Date: / /	YEL	4.4	4.4	4
MSX: M CCU: 60 Drop: 1	RED	2.1	2.1	2.4
Structures: 12	WLK	7		7
	FDW	12		24
	Min - 55	26	12	17
Pat	CYC OS	2+6	1+6	3
1 Am 0630 - 0900				
2 Am Off 0930 - 1130				
3 Noon 1130 - 1330				
4 Pm Off 1330 - 1530				
5 Pm 1530 - 1900				
2				
6 Evening 1900 - 2100	180 147	82	60	38
7 Late 2200 - 0615				
8 WE 0800 - 2000				
9				
10				
11				
12				
13				
14				
15				
16 Hurricane				

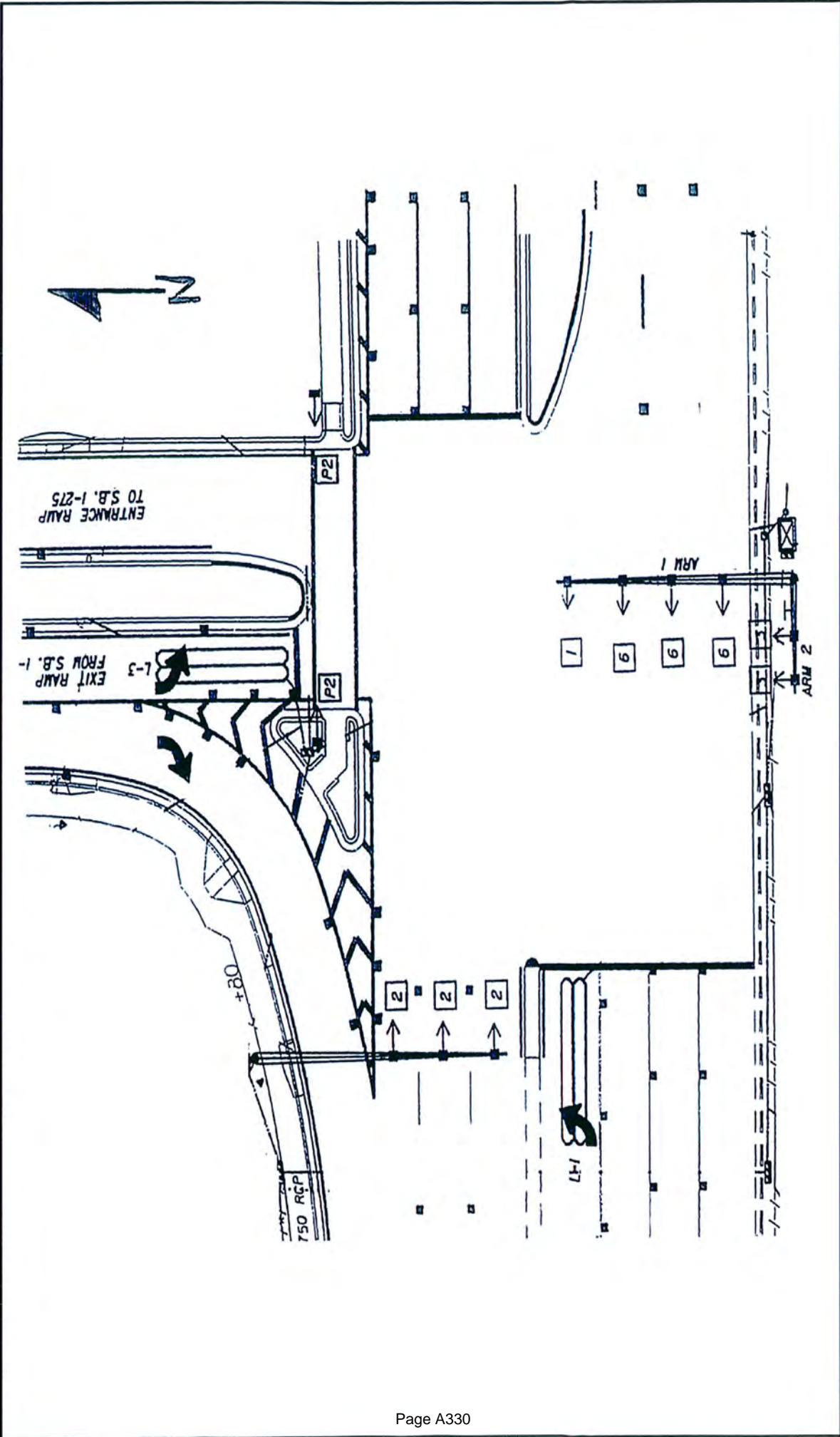
S.F. #1 - 1+6 Lead
S.F. #2 - 2+5 Lead
AM Spec - Max Recall on 1 via action plan 10

T.B.C. DAY PLAN 1: M-Th patt 1-7 Day Plan 2: Fri patt 1-7 w/5 @ 14:45
DAY PLAN 3: S-SU patt 8 and patt 7 all other times

Intersection Drawing

Ø Diagram	8/15/2013
Form Vers.	2/15/2012
Pg:	2 of 2

FDOT SOP#	12	Sect. I.D.#	904
Phasing Date:	8/15/2013	Location:	BUSCH / I-275 (W)



City of Tampa Signal Timing Sheet

Section ID: 905 Computer: M CCU: 60 Drop: 8 Shop ID: 1833
 Timing Date: 4/1/2014 Phase Date: 8/15/2013 Controller: Econo ASC3S
 Intersection: BUSCH / I-275 (E)

Phase Numbers	1	2	3	6
Direction	EBLT	WB	SB	EB
Minimum Green	5	10	10	10
Walk		7		7
Flash Don't Walk		28		28
Vehicle Extension	5.0	3.0	4.0	3.0
Max. Green I	40	90	55	90
Max. Green II	45	120	55	120
Yellow Clearance	4.4	4.4	4.0	4.4
All Red Clearance	2.1	2.1	2.8	2.1
Phase Recall	---	MAX	---	MAX
Detector Memory	ON	---	ON	---
Ped. Recall	---	ON	---	ON
Flash Operation	RED	YEL	RED	YEL

Special Modes and Times of Operation:

Surveillance Times:

Flash Source: Flash Times:

C = Computer Flash T = Time Clock/Controller

Special Functions: 0
 0
 0

FDOT SOP: 12 MOD

Backup Protection (Y/N): N

FDOT FDW (Y/N): Y

Please Implement Within : 1 Week 1 Month

Comments:

Sequence - Ø2(OLF+P2)+Ø6(OLJ), Ø1(OLE+OLL)+Ø6(OLJ), Ø3(OLG+OLL).

*SBRT is overlap OLL (1 + 3). *

IP 172.19.46.90.

UPDATED FDOT CLEARANCES - AGI RETIMING PROJECT

Submitted By: _____ Reviewed By: _____ Approved By: _____
 Date: _____ Date: _____ Date: _____

Signal Timing Implemented: As sent . With the following revisions

Date: 4-1-2014 By: [Signature]

Signal Timing Not Implemented: Reasons: _____

Date: _____ By: _____

CITY OF TAMPA COMPUTER PATTERN SHEET
STRUCTURE 1

905

905 - BUSCH & I-275 (E)

PEEK 3000

Timing Date: 04/08/2014	MIN	10	5	10	
DownLd Date: / /	YEL	4.4	4.4	4	
MSX: M CCU: 60 Drop: 8	RED	2.1	2.1	2.8	
Structures: 12	WLK	7			
	FDW	28			
	Min - 71	42	12	17	
Pat	CYC	OS	2+6	1+6	3
1 Am 2 0630 - 0900	220	134	125	45	50
2 Am Off 2 0930 - 1130	200	190	110	45	45
3 Noon 2 1130 - 1330	200	190	110	45	45
4 Pm Off 2 1330 - 1530	200	190	110	45	45
5 Pm 2 1530 - 1900	220	136	125	70	25
6 Evening 1900 - 2100					
7 Late 2200 - 0615					
8 WE 2 0800 - 2000	200	190	110	45	45
9					
10					
11					
12					
13					
14					
15					
16 Hurricane 2	200	93	120	50	30

S.F. #1 - 1+6
S.F. #2 - 2+5

T.B.C. DAY PLAN 1: M-Th patt 1-7 Day Plan 2: Fri patt 1-7 w/5 @ 14:45
DAY PLAN 3: S-SU patt 8 and patt 7 all other times

CITY OF TAMPA COMPUTER PATTERN SHEET
STRUCTURE 2

905

905 - BUSCH & I-275 (E)

PEEK 3000

Timing Date: 04/08/2014 DownLd Date: / / MSX: M CCU: 60 Drop: 8 Structures: 12	MIN	10	10	5
	YEL	4.4	4	4.4
	RED	2.1	2.8	2.1
	WLK	7		
	FDW	28		
	Min - 71	42	17	12
Pat	CYC OS	2+6	3	1+6
1 Am 0630 - 0900				
2 Am Off 0930 - 1130				
3 Noon 1130 - 1330				
4 Pm Off 1330 - 1530				
5 Pm 1530 - 1900				
1				
6 Evening 1900 - 2100	180 53	100	50	30
1				
7 Late 2200 - 0615	130 68	64	30	36
8 WE 0800 - 2000				
9				
10				
11				
12				
13				
14				
15				
16 Hurricane				

S.F. #1 - 1+6
S.F. #2 - 2+5

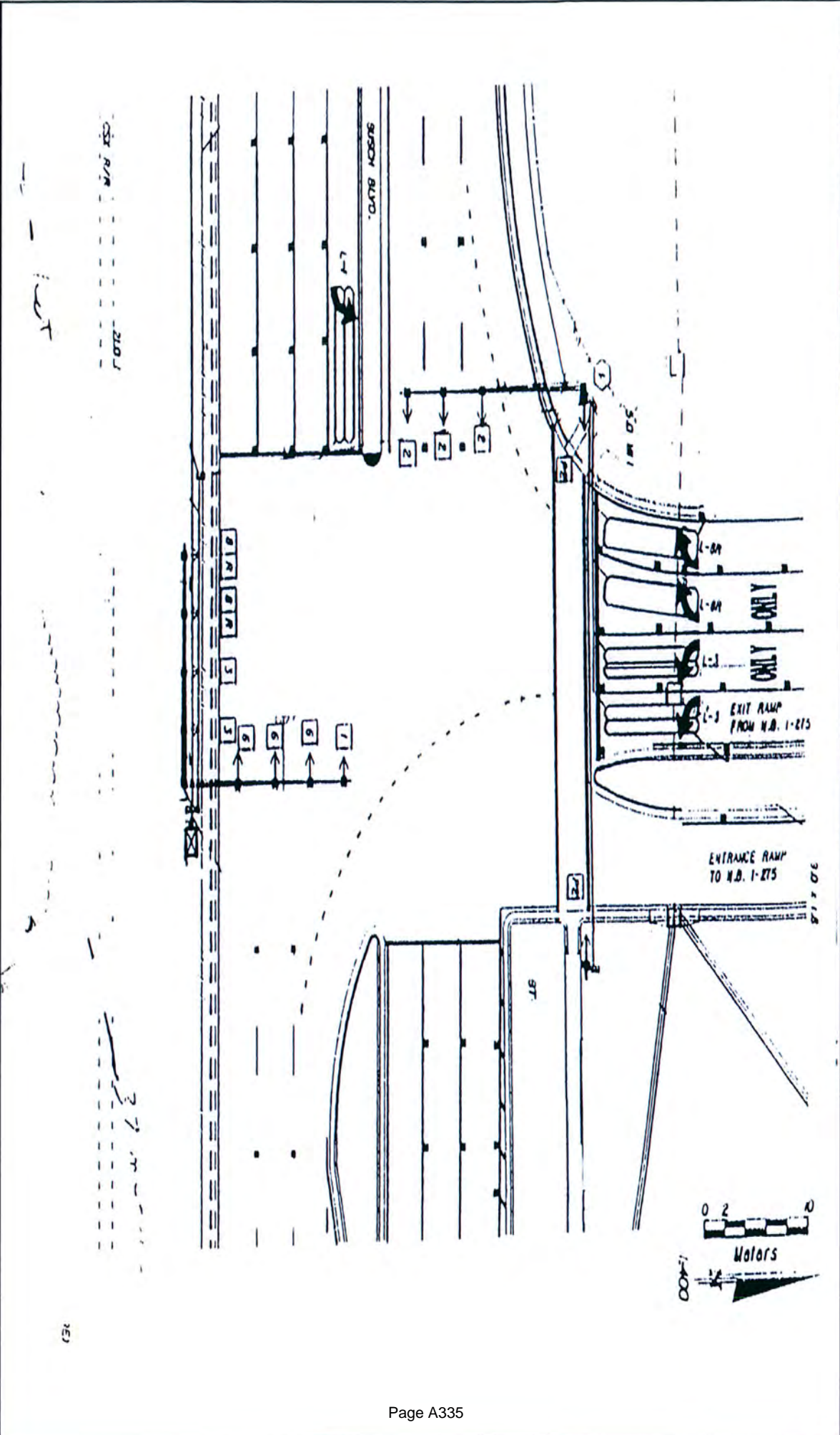
T.B.C. DAY PLAN 1: M-Th patt 1-7 Day Plan 2: Fri patt 1-7 w/5 @ 14:45
DAY PLAN 3: S-SU patt 8 and patt 7 all other times

FDOT SOP#	12 MOD	Sect. I.D.#	905
Phasing Date:	8/14/2013	Location:	

BUSCH / I-275 (E)

Intersection Drawing

Ø Diagram	8/14/2013
Form Vers.	2/15/2012
Pg: 2	of 2



City of Tampa Signal Timing Sheet

Section ID: 906 Computer: M CCU: 60 DROP 2 SHOP ID 1568

Timing Date: 4/1/2008 Phase Date: 4/1/2008 Controller: ECONOLITE

Intersection: BUSCH and NEBRASKA

Phase Numbers	1	2	3	4	5	6	7	8
Direction	EB LT	WB	SB LT	NB	WB LT	EB	NBLT	SB
Minimum Green	5	15	5	10	5	15	5	10
Walk	---	4	---	4	---	4	---	4
Flash Don't Walk	---	36	---	32	---	36	---	32
Vehicle Extension	2.0	3.0	2.0	3.0	2.0	3.0	2.0	3.0
Max. Green I	30	55	20	50	30	55	20	50
Max. Green II	30	55	20	50	30	55	20	50
Yellow Clearance	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
All Red Clearance	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Phase Recall	---	MAX	---	---	---	MAX	---	---
Detector Memory	ON	---	ON	ON	ON	---	ON	ON
Ped. Recall	---	ON	---	---	---	ON	---	---
Flash Operation	RED	YEL	RED	RED	RED	YEL	RED	RED

Special Modes and Times of Operations:

Surveillance Times:

Flash Source: Times:

C = Computer Flash T = Time Clock/Controller

Special Functions: 0
0
0

Please Implement Within: 1 Week 1 Month

Comments:

UPDATED TIMING SHEET & TBC.

(EBLT IS A LAG, WB LT IS A LEAD) PHASE 1 VEH. CALL ON DURING ALL

PATTERNS, COMPUTER AND T.B.C.

Submitted By: *[Signature]* Reviewed By: *[Signature]* Approved By: *[Signature]*
 Date: 4/1/08 Date: 4-16-08 Date: 4/16/08

Signal Timing Implemented: As Sent With Following Revisions

_____ Date: 6-11-08 *K. Neal*

Signal Timing Not Implemented Reason:

_____ Date: _____ By: _____

CITY OF TAMPA COMPUTER PATTERN SHEET
STRUCTURE 1

906

906 - BUSCH & NEBRASKA

ECONOLITE

Timing Date: 04/08/2014	MIN	10	5	5	10	5	
DownLd Date: 06/03/2003	YEL	4.4	4.4	4.4	4.4	4.4	
MSX: M CCU: 60 Drop: 2	RED	2.6	2.5	2.8	3.2	2.5	
Structures: 123	WLK	7			7		
	FDW	44			36		
	Min -114	59	12	13	18	12	
Pat	CYC	OS	2+6	1+6	3+7	4+8	2+5
1 Am 2 0630 - 0900	220	142	72	29	29	55	35
2 Am Off 2 0930 - 1130	200	1	70	28	20	54	28
3 Noon 2 1130 - 1330	200	1	59	31	26	53	31
4 Pm Off 2 1330 - 1530	200	1	59	31	26	53	31
5 Pm 2 1530 - 1900	220	142	72	29	23	61	35
6 Evening 1900 - 2100							
7 Late 2200 - 0615							
8 WE 2 0800 - 2000	200	1	70	28	20	54	28
9							
10							
11							
12							
13							
14							
15							
16 Hurricane 2	200	179	66	29	20	55	30

S.F. #1 - 1+6 Lead

S.F. #2 - 2+5 Lead

T.B.C. DAY PLAN 1: M-Th patt 1-7 Day Plan 2: Fri patt 1-7 w/5 @ 14:45
DAY PLAN 3: S-SU patt 8 and patt 7 all other times

CITY OF TAMPA COMPUTER PATTERN SHEET
STRUCTURE 2

906

906 - BUSCH & NEBRASKA

ECONOLITE

Timing Date: 04/08/2014	MIN	10	5	5	10	5
DownLd Date: / /	YEL	4.4	4.4	4.4	4.4	4.4
MSX: M CCU: 60 Drop: 2	RED	2.6	2.5	2.8	3.2	2.5
Structures: 123	WLK	7			7	
	FDW	44			36	
	Min -114	59	12	13	18	12
Pat	CYC OS	2+6	2+5	3+7	4+8	1+6
1 Am 0630 - 0900						
2 Am Off 0930 - 1130						
3 Noon 1130 - 1330						
4 Pm Off 1330 - 1530						
5 Pm 1530 - 1900						
6 Evening 1900 - 2100	180 78	59	24	20	53	24
7 Late 2200 - 0615						
8 WE 0800 - 2000						
9						
10						
11						
12						
13						
14						
15						
16 Hurricane						

S.F. #1 - 1+6 Lead
S.F. #2 - 2+5 Lead

T.B.C. DAY PLAN 1: M-Th patt 1-7 Day Plan 2: Fri patt 1-7 w/5 @ 14:45
DAY PLAN 3: S-SU patt 8 and patt 7 all other times

CITY OF TAMPA COMPUTER PATTERN SHEET
STRUCTURE 3

906

906 - BUSCH & NEBRASKA

ECONOLITE

Timing Date: 04/08/2014	MIN	10	5	10	5
DownLd Date: / /	YEL	4.4	4.4	4.4	4.4
MSX: M CCU: 60 Drop: 2	RED	2.6	2.8	3.2	2.5
Structures: 123	WLK	7		7	
	FDW	44		36	
	Min -102	59	13	18	12
Pat	CYC OS	2+6	3+7	4+8	1+5
1 Am 0630 - 0900					
2 Am Off 0930 - 1130					
3 Noon 1130 - 1330					
4 Pm Off 1330 - 1530					
5 Pm 1530 - 1900					
6 Evening 1900 - 2100					
7 Late 2200 - 0615	130 98	74	17	22	17
8 WE 0800 - 2000					
9					
10					
11					
12					
13					
14					
15					
16 Hurricane					

S.F. #1 - 1+6 Lead
S.F. #2 - 2+5 Lead

T.B.C. DAY PLAN 1: M-Th patt 1-7 Day Plan 2: Fri patt 1-7 w/5 @ 14:45
DAY PLAN 3: S-SU patt 8 and patt 7 all other times



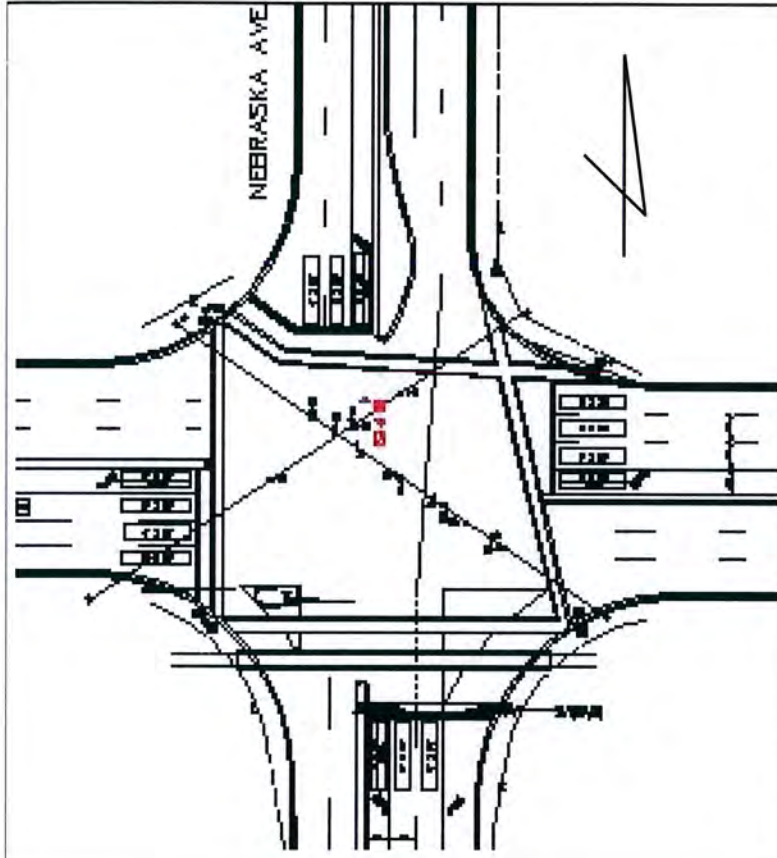
City of Tampa - Phasing Diagram



Vers. 12/21/2006

Pg: 1 of 3

Prepared by GT Reviewed by *JS*



Sect. I.D.# 906

Location: **BUSCH / NEBRASKA**

Date: 3/7/2008

Signal Head Numbers

1	2	3	4	5	6	7	8
---	---	---	---	---	---	---	---

P 2	P 4	P 6	P 8
-----	-----	-----	-----

Controller: Econolite

Vehicle Movements

Flashing Operation

←R	Y	←R	R	←R	Y	←R	R
----	---	----	---	----	---	----	---

--	--	--	--

Phase

Interval

Display Sequence

--	--	--	--

←	→	↔	↔	↔	↔	↔	↔
↔	↔	↔	↔	↔	↔	↔	↔
↔	↔	↔	↔	↔	↔	↔	↔
↔	↔	↔	↔	↔	↔	↔	↔
↔	↔	↔	↔	↔	↔	↔	↔
↔	↔	↔	↔	↔	↔	↔	↔
↔	↔	↔	↔	↔	↔	↔	↔
↔	↔	↔	↔	↔	↔	↔	↔

RW	←R	G	←R	R	←G	R	←R	R
Clear Ped	←R	G	←R	R	←G	R	←R	R
Clear to	←R	G	←R	R	←Y	R	←R	R
Ø2 & Ø6	←R	G	←R	R	←R	R	←R	R
Clear to	←R	Y	←R	R	←Y	R	←R	R
Preempt	←R	R	←R	R	←R	R	←R	R

W	DW	DW	DW
FDW	DW	DW	DW
DW	DW	DW	DW
DW	DW	DW	DW
DW	DW	DW	DW

←	→	↔	↔	↔	↔	↔	↔
↔	↔	↔	↔	↔	↔	↔	↔
↔	↔	↔	↔	↔	↔	↔	↔
↔	↔	↔	↔	↔	↔	↔	↔
↔	↔	↔	↔	↔	↔	↔	↔
↔	↔	↔	↔	↔	↔	↔	↔
↔	↔	↔	↔	↔	↔	↔	↔
↔	↔	↔	↔	↔	↔	↔	↔

RW	←R	G	←R	R	←R	G	←R	R
Clear Ped	←R	G	←R	R	←R	G	←R	R
Clear to	←R	Y	←R	R	←R	G	←R	R
Ø1 & Ø6	←R	R	←R	R	←R	G	←R	R
Clear to	←R	G	←R	R	←R	Y	←R	R
Ø2 & Ø5	←R	G	←R	R	←R	R	←R	R
Clear to	←R	Y	←R	R	←R	Y	←R	R
All Others	←R	R	←R	R	←R	R	←R	R
Clear to	←R	Y	←R	R	←R	Y	←R	R
Preempt	←R	R	←R	R	←R	R	←R	R

W	DW	W	DW
FDW	DW	FDW	DW
DW	DW	DW	DW
DW	DW	DW	DW
DW	DW	DW	DW

←	→	↔	↔	↔	↔	↔	↔
↔	↔	↔	↔	↔	↔	↔	↔
↔	↔	↔	↔	↔	↔	↔	↔
↔	↔	↔	↔	↔	↔	↔	↔
↔	↔	↔	↔	↔	↔	↔	↔
↔	↔	↔	↔	↔	↔	↔	↔
↔	↔	↔	↔	↔	↔	↔	↔
↔	↔	↔	↔	↔	↔	↔	↔

RW	←G	R	←R	R	←R	G	←R	R
Clear Ped	←G	R	←R	R	←R	G	←R	R
Clear to	←Y	R	←R	R	←R	G	←R	R
Ø2 & Ø6	←R	R	←R	R	←R	G	←R	R
Clear to	←Y	R	←R	R	←R	Y	←R	R
All Others	←R	R	←R	R	←R	R	←R	R
Clear to	←R	R	←R	R	←R	Y	←R	R
Preempt	←R	R	←R	R	←R	R	←R	R

DW	DW	W	DW
DW	DW	FDW	DW
DW	DW	DW	DW
DW	DW	DW	DW
DW	DW	DW	DW

←	→	↔	↔	↔	↔	↔	↔
↔	↔	↔	↔	↔	↔	↔	↔
↔	↔	↔	↔	↔	↔	↔	↔
↔	↔	↔	↔	↔	↔	↔	↔
↔	↔	↔	↔	↔	↔	↔	↔
↔	↔	↔	↔	↔	↔	↔	↔
↔	↔	↔	↔	↔	↔	↔	↔
↔	↔	↔	↔	↔	↔	↔	↔

RW	←R	R	←G	R	←R	R	←G	R
Clear to	←R	R	←Y	R	←R	R	←G	R
Ø4 & Ø7	←R	R	←R	R	←R	R	←G	R
Clear to	←R	R	←G	R	←R	R	←Y	R
Ø3 & Ø8	←R	R	←G	R	←R	R	←R	R
Clear to	←R	R	←Y	R	←R	R	←Y	R
All Others	←R	R	←R	R	←R	R	←R	R
Clear to	←R	R	←Y	R	←R	R	←G	R
Preempt	←R	R	←R	R	←R	R	←G	R

DW	DW	DW	DW
DW	DW	DW	DW
DW	DW	DW	DW
DW	DW	DW	DW
DW	DW	DW	DW



1,3,5,7



2,4,6,8

8 Phase Controller in 7 phase semi-actuated operation. Concurrent ped phases w/heads & buttons all around. Phase sequence is Ø2+Ø5, Ø2+Ø6, Ø1+Ø6, Ø3+Ø7, Ø3+Ø8, Ø4+Ø7, Ø4+Ø8. Preempt sequence: Clearance Ø4+Ø7, Dwell (Ø2+Ø6), (Ø1+Ø6), (Ø3), Exit (Ø4+Ø7).



City of Tampa - Phasing Diagram



Vers. 12/21/2006

Pg: 2 of 3

Sect. I.D.# 906

Location: BUSCH / NEBRASKA

Prepared by GT Reviewed by

Date: 3/7/2008

Signal Head Numbers

1 2 3 4 5 6 7 8

Controller: Econolite

Vehicle Movements

Flashing Operation

← R Y ← R R ← Y Y ← R R

Phase

Interval

Display Sequence

Ø4 & Ø7

RW
Clear Ped
Clear to
Ø4 & Ø8
Clear to
All Others
Clear to
Preempt

← R R ← R G ← R R ← G R
← R R ← R G ← R R ← G R
← R R ← R G ← R R ← Y R
← R R ← R Y ← R R ← Y R
← R R ← R R ← R R ← R R
← R R ← R G ← R R ← G R
← R R ← R G ← R R ← G R

DW W DW DW
DW FDW DW DW
DW DW DW DW
DW DW DW DW
DW DW DW DW
DW DW DW DW
DW DW DW DW

Ø3 & Ø8

RW
Clear Ped
Clear to
Ø4 & Ø8
Clear to
All Others
Clear to
Preempt

← R R ← G R ← R R ← R G
← R R ← G R ← R R ← R G
← R R ← Y R ← R R ← R G
← R R ← Y R ← R R ← R Y
← R R ← R R ← R R ← R R
← R R ← Y R ← R R ← R Y
← R R ← R R ← R R ← R R

DW DW DW W
DW DW DW FDW
DW DW DW DW
DW DW DW DW
DW DW DW DW
DW DW DW DW
DW DW DW DW

Ø4 & Ø8

RW
Clear Ped
Clear to
All Others
Clear to
Preempt

← R R ← R G ← R R ← R G
← R R ← R G ← R R ← R G
← R R ← R Y ← R R ← R Y
← R R ← R R ← R R ← R R
← R R ← R G ← R R ← R Y
← R R ← R G ← R R ← R R

DW W DW W
DW FDW DW FDW
DW DW DW DW
DW DW DW DW
DW DW DW DW
DW DW DW DW
DW DW DW DW

Ø4 & Ø7

RW
Clear to
Dwell Ø2 & Ø6
Clear to
Dwell Ø1 & Ø6
Clear to
Dwell Ø3

← R R ← R G ← R R ← G R
← R R ← R Y ← R R ← Y R
← R R ← R R ← R R ← R R
← R R ← R Y ← R R ← Y R
← R R ← R R ← R R ← R R
← R R ← R Y ← R R ← Y R
← R R ← R R ← R R ← R R

DW DW DW DW
DW DW DW DW
DW DW DW DW
DW DW DW DW
DW DW DW DW
DW DW DW DW
DW DW DW DW



8 Phase Controller in 7 phase semi-actuated operation. Concurrent ped phases w/heads & buttons all around. Phase sequence is Ø2+Ø5, Ø2+Ø6, Ø1+Ø6, Ø3+Ø7, Ø3+Ø8, Ø4+Ø7, Ø4+Ø8. Preempt sequence: Clearance Ø4+Ø7, Dwell (Ø2+Ø6), (Ø1+Ø6), (Ø3), Exit (Ø4+Ø7).

Preempt Clearance

RAILROAD



City of Tampa - Phasing Diagram



Vers. 12/21/2006

Pg: 3 of 3

Sect. I.D.# 906

Location: BUSCH / NEBRASKA

Prepared by GT

Reviewed by *GT*

Date: 3/7/2008

Signal Head Numbers

1 2 3 4 5 6 7 8

Controller: Econolite

Vehicle Movements

Flashing Operation

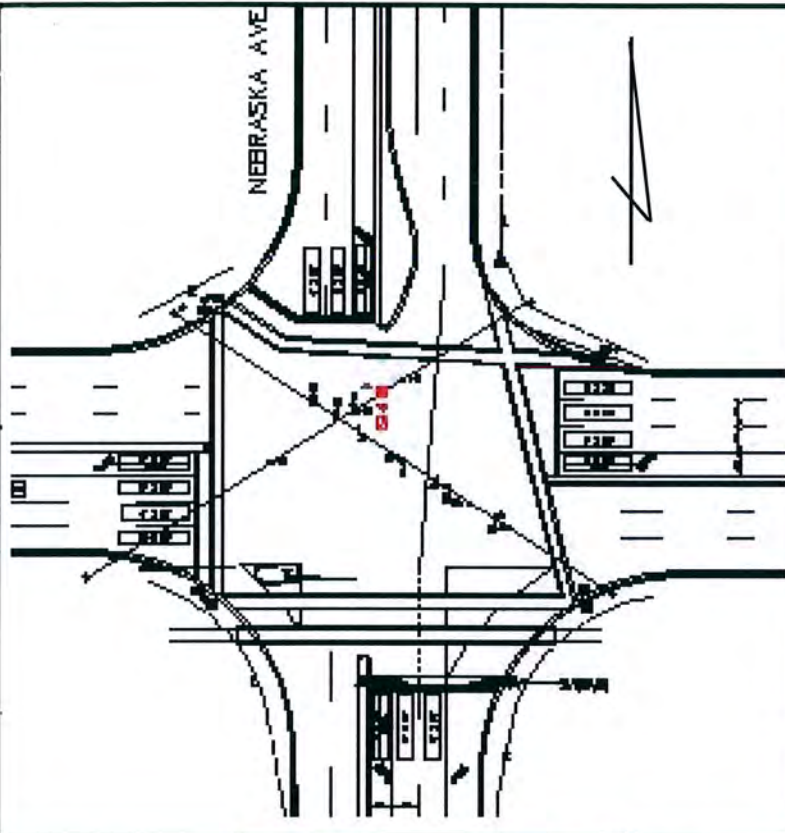
← R Y ← R R ← R Y ← R R

P 2 P 4 P 6 P 8

Phase

Interval

Display Sequence



Dwell	Ø2 & Ø6	RW	← R	G	← R	R	← R	G	← R	R					DW	DW	DW	DW
		CLEAR TO	← R	Y	← R	R	← R	G	← R	R					DW	DW	DW	DW
		Dwell Ø1 & Ø6	← R	R	← R	R	← R	G	← R	R					DW	DW	DW	DW
		CLEAR TO	← R	Y	← R	R	← R	Y	← R	R					DW	DW	DW	DW
		Dwell Ø3	← R	R	← R	R	← R	R	← R	R					DW	DW	DW	DW
		EXIT TO Ø4 & Ø7	← R	Y	← R	R	← R	Y	← R	R					DW	DW	DW	DW

Dwell	Ø1 & Ø6	RW	← G	R	← R	R	← R	G	← R	R					DW	DW	DW	DW
		CLEAR TO	← Y	R	← R	R	← R	Y	← R	R					DW	DW	DW	DW
		Dwell Ø3	← R	R	← R	R	← R	R	← R	R					DW	DW	DW	DW
		CLEAR TO	← Y	R	← R	R	← R	G	← R	R					DW	DW	DW	DW
		Dwell Ø2 & Ø6	← R	R	← R	R	← R	G	← R	R					DW	DW	DW	DW
		EXIT TO Ø4 & Ø7	← Y	R	← R	R	← R	Y	← R	R					DW	DW	DW	DW

Dwell	Ø3	RW	← R	R	← G	R	← R	R	← R	R					DW	DW	DW	DW
		CLEAR TO	← R	R	← Y	R	← R	R	← R	R					DW	DW	DW	DW
		Dwell Ø2 & Ø6	← R	R	← R	R	← R	R	← R	R					DW	DW	DW	DW
		CLEAR TO	← R	R	← Y	R	← R	R	← R	R					DW	DW	DW	DW
		Dwell Ø1 & Ø6	← R	R	← R	R	← R	R	← R	R					DW	DW	DW	DW
		EXIT TO Ø4 & Ø7	← R	R	← Y	R	← R	R	← R	R					DW	DW	DW	DW



1,3,5,7



2,4,6,8

Notes:

8 Phase Controller in 7 phase semi-actuated operation. Concurrent ped phases w/heads & buttons all around. Phase sequence is Ø2+Ø5, Ø2+Ø6, Ø1+Ø6, Ø3+Ø7, Ø3+Ø8, Ø4+Ø7, Ø4+Ø8. Preempt sequence: Clearance Ø4+Ø7, Dwell (Ø2+Ø6), (Ø1+Ø6), (Ø3), Exit (Ø4+Ø7).

Appendix G

Existing ARTPLAN Outputs

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst		Arterial Name	Busch Boulevard	Study Period	Dir Hr Demand Vol
Date Prepared	10/17/2017 1:20:06 PM	From	Dale Mabry SB Ramps	Modal Analysis	Multimodal
Agency	VHB	To	N Nebraska Ave	Program	ARTPLAN 2012
Area Type	Large Urbanized	Peak Direction	Eastbound	Version Date	12/12/2012
Arterial Class	1				
File Name	\\vhb\proj\Orlando\62966.00 FDOT D7 SR 580 Busch Blv\tech\Analysis\ARTPLAN\2017 - EB AM.xap				
User Notes	2017 Existing - EB AM				

Arterial Data

K	0.09	PHF	0.95	Control Type	FullyActuated
D	0.565	% Heavy Vehicles	2	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
Dale Mabry NB Ramps	150	0.45	3	2	2	0	Yes	Protected	1	235	0.15	No
N Himes Ave	150	0.45	3	2	0	27	Yes	Protected	1	235	0.15	Yes
Twin Lakes Blvd	150	0.45	3	2	0	12	Yes	Protected	1	235	0.15	Yes
Orange Grove Dr	150	0.45	3	2	6	0	Yes	Protected	1	235	0.15	No
N Armenia Ave	150	0.45	3	2	4	16	Yes	Protected	1	235	0.15	No
North Blvd	150	0.45	3	2	3	8	Yes	Protected	1	235	0.15	No
N Florida Ave	150	0.45	3	2	8	20	Yes	Protected	1	235	0.15	No
I-275 SB Ramps	150	0.45	3	3	16	0	Yes	Protected	1	235	0.15	No
I-275 NB Ramps	150	0.45	3	3	14	0	Yes	Protected	1	235	0.15	No
N Nebraska Ave	150	0.45	3	3	4	12	Yes	Protected	1	235	0.15	No

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to Dale Mabry NB Ramps)	1080	30000	2230	2	45	50	Restrictive	No	N/A
2 (to N Himes Ave)	920	30000	2310	2	45	50	Restrictive	No	N/A
3 (to Twin Lakes)	2630	30000	1810	2	45	50	Restrictive	No	N/A

Blvd)										
4 (to Orange Grove Dr)	1300	30000	1720	2	45	50	Restrictive	No	N/A	
5 (to N Armenia Ave)	1580	30000	1760	2	45	50	Restrictive	No	N/A	
6 (to North Blvd)	5280	30000	1660	2	45	50	Restrictive	No	N/A	
7 (to N Florida Ave)	2680	30000	1670	2	40	45	Restrictive	No	N/A	
8 (to I-275 SB Ramps)	1010	30000	1770	3	40	45	Restrictive	No	N/A	
9 (to I-275 NB Ramps)	980	30000	1660	3	40	45	Restrictive	No	N/A	
10 (to N Nebraska Ave)	670	30000	1710	3	40	45	Restrictive	No	N/A	

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS			
1 (to Dale Mabry NB Ramps)	2300	3773	1.355	218.27	F	0.18	3.28	F			
2 (to N Himes Ave)	1775	2729	1.445	265.73	F	0.00	2.37	F			
3 (to Twin Lakes Blvd)	1677	3486	1.069	76.20	E	0.00	15.77	E			
4 (to Orange Grove Dr)	1702	3773	1.002	48.48	D	0.44	13.34	F			
5 (to N Armenia Ave)	1779	3731	1.059	71.69	E	0.29	11.57	F			
6 (to North Blvd)	1695	3752	1.004	48.92	D	0.20	28.64	C			
7 (to N Florida Ave)	1617	3605	0.997	47.14	D	0.58	20.25	D			
8 (to I-275 SB Ramps)	1565	5364	0.648	32.08	C	#	14.44	F			
9 (to I-275 NB Ramps)	1503	5349	0.624	31.82	C	#	14.25	F			
10 (to N Nebraska Ave)	1728	5359	0.717	34.15	C	0.30	10.40	F			
Arterial Length	3.5473	Weighted g/C	0.45	FFS Delay	913.52	Threshold Delay	459.37	Auto Speed	###	Auto LOS	###

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	**	290	720	840
2	**	**	590	1530	1660
3	**	**	910	2350	2500
4	**	**	1210	3180	3360
*	**	**	650	1610	1660
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr / Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to Dale Mabry NB Ramps)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
2 (to N Himes Ave)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
3 (to Twin Lakes Blvd)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Fair	Typical
4 (to Orange Grove Dr)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Fair	Typical
5 (to N Armenia Ave)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
6 (to North Blvd)	Typical	Typical	No	No	N/A	No	N/A	No	2	0.8	Fair	Typical
7 (to N Florida Ave)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Excellent	Typical
8 (to I-275 SB Ramps)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
9 (to I-275 NB Ramps)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
10 (to N Nebraska Ave)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None

Pedestrian SubSegment Data

Segment #	% of Segment			Sidewalk			Separation			Barrier		
	1	2	3	1	2	3	1	2	3	1	2	3
1 (to Dale Mabry NB Ramps)	25	75		Yes	Yes		Adjacent	Adjacent		No	No	
2 (to N Himes Ave)	100			Yes			Adjacent			No		
3 (to Twin Lakes Blvd)	100			Yes			Adjacent			No		
4 (to Orange Grove Dr)	100			Yes			Adjacent			No		
5 (to N Armenia Ave)	100			Yes			Adjacent			No		
6 (to North Blvd)	100			No			N/A			No		
7 (to N Florida Ave)	100			Yes			Adjacent			No		
8 (to I-275 SB Ramps)	100			Yes			Adjacent			No		
9 (to I-275 NB Ramps)	100			Yes			Adjacent			No		
10 (to N Nebraska Ave)	100			Yes			Adjacent			No		

Multimodal LOS

Link #	Bicycle Street		Bicycle Sidepath		Pedestrian			Bus			
	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS
1 (to Dale Mabry NB Ramps)	4.74	E	N/A	N/A				4.92	E	1.83	E
2 (to N Himes Ave)	4.74	E	N/A	N/A				4.98	E	1.83	E
3 (to Twin Lakes Blvd)	4.68	E	N/A	N/A				4.55	E	2.03	D
4 (to Orange Grove Dr)	4.63	E	N/A	N/A				4.38	E	1.70	E
5 (to N Armenia Ave)	4.66	E	N/A	N/A				4.45	E	1.83	E
6 (to North Blvd)	4.65	E	N/A	N/A				5.85	F	1.32	E
7 (to N Florida Ave)	4.58	E	N/A	N/A				4.23	D	2.19	D

8 (to I-275 SB Ramps)	4.38	E	N/A	N/A	3.58	D	1.80	E	
9 (to I-275 NB Ramps)	4.33	E	N/A	N/A	3.49	C	1.89	E	
10 (to N Nebraska Ave)	4.30	E	N/A	N/A	3.43	C	1.89	E	
Bicycle LOS		4.61	E	Pedestrian LOS		4.89	E	Bus LOS	
								1.76	
								E	

MultiModal Service Volume Tables

Bicycle

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	**	160	460	1000
2	**	**	320	920	2000
3	**	**	480	1380	3000
4	**	**	640	1840	4000
*	**	**	340	960	3000
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Pedestrian

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	**	220	560	900
2	**	**	440	1120	1800
3	**	**	650	1670	2690
4	**	**	870	2230	3590
*	**	**	450	1150	1850
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
>= 7	>= 5	>= 4	>= 3	>= 2
Buses in Study Hour in Peak Direction (Daily)				

≥ 6.46	≥ 4.31	≥ 3.23	≥ 2.15	≥ 1.08
-------------	-------------	-------------	-------------	-------------

* Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.

** Cannot be achieved based on input data provided.

*** Not applicable for that level of service letter grade. See generalized tables notes for more details.

Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.

Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.

Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst		Arterial Name	Busch Boulevard	Study Period	Dir Hr Demand Vol
Date Prepared	10/17/2017 1:20:06 PM	From	N Nebraska Ave	Modal Analysis	Multimodal
Agency	VHB	To	Dale Mabry SB Ramps	Program	ARTPLAN 2012
Area Type	Large Urbanized	Peak Direction	Westbound	Version Date	12/12/2012
Arterial Class	1				
File Name	\\vhb\proj\Orlando\62966.00 FDOT D7 SR 580 Busch Blv\tech\Analysis\ARTPLAN\2017 - WB AM.xap				
User Notes	2017 Existing - WB AM				

Arterial Data

K	0.09	PHF	0.95	Control Type	FullyActuated
D	0.565	% Heavy Vehicles	2	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
I - 275 NB Ramps	150	0.45	3	3	0	12	Yes	Protected	1	235	0.15	Yes
I - 275 SB Ramps	150	0.45	3	3	0	27	Yes	Protected	1	235	0.15	Yes
N Florida Ave	150	0.45	3	2	12	9	Yes	Protected	1	235	0.15	Yes
North Blvd	150	0.45	3	2	7	6	Yes	Protected	1	235	0.15	No
N Armenia Ave	150	0.45	3	2	12	1	Yes	Protected	1	235	0.15	No
Orange Grove Dr	150	0.45	3	2	0	5	Yes	Protected	1	235	0.15	Yes
Twin Lakes Blvd	150	0.45	3	2	15	0	Yes	Protected	1	235	0.15	No
N. Himes Ave	150	0.45	3	2	22	0	Yes	Protected	1	235	0.15	No
Dale Mabry NB Ramps	150	0.45	3	2	0	19	Yes	Protected	1	235	0.15	No
Dale Mabry SB Ramps	150	0.45	3	2	0	24	Yes	Protected	1	235	0.15	Yes

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to I - 275 NB Ramps)	670	30000	2250	3	40	45	Restrictive	No	N/A
2 (to I - 275 SB Ramps)	980	30000	2230	3	40	45	Restrictive	No	N/A

3 (to N Florida Ave)	1010	30000	2230	2	40	45	Restrictive	No	N/A
4 (to North Blvd)	2680	30000	1880	2	40	45	Restrictive	No	N/A
5 (to N Armenia Ave)	5280	30000	1760	2	45	50	Restrictive	No	N/A
6 (to Orange Grove Dr)	1580	30000	2140	2	45	50	Restrictive	No	N/A
7 (to Twin Lakes Blvd)	1300	30000	2240	2	45	50	Restrictive	No	N/A
8 (to N. Himes Ave)	2630	30000	2400	2	45	50	Restrictive	No	N/A
9 (to Dale Mabry NB Ramps)	920	30000	2670	2	45	50	Restrictive	No	N/A
10 (to Dale Mabry SB Ramps)	1080	30000	2430	2	45	50	Restrictive	No	N/A

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS			
1 (to I - 275 NB Ramps)	2084	5075	0.913	40.40	D	0.00	9.17	F			
2 (to I - 275 SB Ramps)	1714	3907	0.975	47.20	D	0.00	10.84	F			
3 (to N Florida Ave)	1854	3463	1.190	135.43	F	#	4.71	F			
4 (to North Blvd)	1840	3641	1.123	102.30	F	0.57	12.63	F			
5 (to N Armenia Ave)	1630	3770	0.961	41.94	D	0.98	30.22	C			
6 (to Orange Grove Dr)	2140	3671	1.296	188.27	F	0.00	5.23	F			
7 (to Twin Lakes Blvd)	2004	3773	1.116	98.87	F	#	7.70	F			
8 (to N. Himes Ave)	1971	3736	0.772	34.95	C	#	24.15	C			
9 (to Dale Mabry NB Ramps)	2811	3723	1.678	398.89	F	0.00	1.61	F			
10 (to Dale Mabry SB Ramps)	1944	2935	1.472	279.94	F	0.00	2.60	F			
Arterial Length	3.5473	Weighted g/C	0.45	FFS Delay	1411.22	Threshold Delay	957.07	Auto Speed	###	Auto LOS	###

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	**	300	730	820
2	**	**	600	1510	1600
3	**	**	920	2330	2420
4	**	**	1240	3140	3240
*	**	**	650	1600	1680
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr / Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to I - 275 NB Ramps)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
2 (to I - 275 SB Ramps)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
3 (to N Florida Ave)	Typical	Typical	No	No	N/A	No	N/A	No	2	0.8	Poor	None
4 (to North Blvd)	Typical	Typical	No	No	N/A	Yes	Typical	No	2	0.8	Excellent	Typical
5 (to N Armenia Ave)	Typical	Typical	No	No	N/A	Yes	Typical	No	2	0.8	Fair	Typical
6 (to Orange Grove Dr)	Typical	Typical	Yes	No	N/A	Yes	Typical	No	2	0.8	Fair	Typical
7 (to Twin Lakes Blvd)	Typical	Typical	No	No	N/A	Yes	Typical	No	2	0.8	Excellent	Typical
8 (to N. Himes Ave)	Typical	Typical	Yes	No	N/A	Yes	Typical	No	2	0.8	Excellent	Typical
9 (to Dale Mabry NB Ramps)	Typical	Typical	No	No	N/A	Yes	Typical	No	2	0.8	Poor	None
10 (to Dale Mabry SB Ramps)	Typical	Typical	No	No	N/A	No	N/A	No	2	0.8	Poor	None

Pedestrian SubSegment Data

Segment #	% of Segment			Sidewalk			Separation			Barrier		
	1	2	3	1	2	3	1	2	3	1	2	3
1 (to I - 275 NB Ramps)	100			Yes			Adjacent			No		
2 (to I - 275 SB Ramps)	100			Yes			Adjacent			No		
3 (to N Florida Ave)	100			No			N/A			No		
4 (to North Blvd)	50	50		Yes	Yes		Typical	Adjacent		No	No	
5 (to N Armenia Ave)	100			Yes			Typical			No		
6 (to Orange Grove Dr)	75	25		Yes	Yes		Typical	Adjacent		No	No	
7 (to Twin Lakes Blvd)	100			Yes			Typical			No		
8 (to N. Himes Ave)	80	20		Yes	Yes		Typical	Adjacent		No	No	
9 (to Dale Mabry NB Ramps)	50	50		Yes	Yes		Typical	Adjacent		No	No	
10 (to Dale Mabry SB Ramps)	100			No			N/A			No		

Multimodal LOS

Link #	Bicycle Street		Bicycle Sidepath		Pedestrian			Bus			
	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS
1 (to I - 275 NB Ramps)	4.43	E	N/A	N/A				3.85	D	1.80	E
2 (to I - 275 SB Ramps)	4.48	E	N/A	N/A				3.93	D	2.15	D
3 (to N Florida Ave)	4.67	E	N/A	N/A				6.23	F	1.19	E
4 (to North Blvd)	4.64	E	N/A	N/A				4.40	E	2.24	D
5 (to N Armenia Ave)	4.68	E	N/A	N/A				4.37	E	2.03	D
6 (to Orange Grove Dr)	3.04	C	N/A	N/A				4.58	E	2.03	D
7 (to Twin Lakes Blvd)	4.75	E	N/A	N/A				4.82	E	2.24	D

8 (to N. Himes Ave)	3.09	C	N/A	N/A	4.78	E	1.87	E			
9 (to Dale Mabry NB Ramps)	4.68	E	N/A	N/A	4.59	E	2.29	D			
10 (to Dale Mabry SB Ramps)	4.78	E	N/A	N/A	6.60	F	1.19	E			
Bicycle LOS		4.39	E	Pedestrian LOS		4.79	E	Bus LOS		1.97	E

MultiModal Service Volume Tables

Bicycle

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	60	240	700	1000
2	**	120	470	1390	2000
3	**	180	700	2060	3000
4	**	240	940	2760	4000
*	**	130	490	1450	2000
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Pedestrian

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	100	440	760	1000
2	**	190	870	1530	2000
3	**	280	1300	2300	3000
4	**	380	1730	3070	4000
*	**	200	890	1570	2000
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
>= 6	>= 4	>= 3	>= 2	>= 1
Buses in Study Hour in Peak Direction (Daily)				

≥ 5.44	≥ 3.63	≥ 2.72	≥ 1.82	≥ 0.91
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* Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.

** Cannot be achieved based on input data provided.

*** Not applicable for that level of service letter grade. See generalized tables notes for more details.

Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.

Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.

Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst		Arterial Name	Busch Boulevard	Study Period	Dir Hr Demand Vol
Date Prepared	10/17/2017 1:20:06 PM	From	Dale Mabry SB Ramps	Modal Analysis	Multimodal
Agency	VHB	To	N Nebraska Ave	Program	ARTPLAN 2012
Area Type	Large Urbanized	Peak Direction	Eastbound	Version Date	12/12/2012
Arterial Class	1				
File Name	\\vhb\proj\Orlando\62966.00 FDOT D7 SR 580 Busch Blv\tech\Analysis\ARTPLAN\2017 - EB PM.xap				
User Notes	2017 Existing - EB PM				

Arterial Data

K	0.09	PHF	0.95	Control Type	FullyActuated
D	0.565	% Heavy Vehicles	2	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
Dale Mabry NB Ramps	150	0.45	3	2	6	0	Yes	Protected	1	235	0.15	No
N Himes Ave	150	0.45	3	2	0	14	Yes	Protected	1	235	0.15	Yes
Twin Lakes Blvd	150	0.45	3	2	0	4	Yes	Protected	1	235	0.15	Yes
Orange Grove Dr	150	0.45	3	2	9	0	Yes	Protected	1	235	0.15	No
N Armenia Ave	150	0.45	3	2	9	8	Yes	Protected	1	235	0.15	No
North Blvd	150	0.45	3	2	4	5	Yes	Protected	1	235	0.15	No
N Florida Ave	150	0.45	3	2	7	12	Yes	Protected	1	235	0.15	No
I-275 SB Ramps	150	0.45	3	3	15	0	Yes	Protected	1	235	0.15	No
I-275 NB Ramps	150	0.45	3	3	23	0	Yes	Protected	1	235	0.15	No
N Nebraska Ave	150	0.45	3	3	9	8	Yes	Protected	1	235	0.15	No

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to Dale Mabry NB Ramps)	1080	30000	1960	2	45	50	Restrictive	No	N/A
2 (to N Himes Ave)	920	30000	2010	2	45	50	Restrictive	No	N/A
3 (to Twin Lakes)	2630	30000	1980	2	45	50	Restrictive	No	N/A

Blvd)										
4 (to Orange Grove Dr)	1300	30000	2180	2	45	50	Restrictive	No	N/A	
5 (to N Armenia Ave)	1580	30000	2050	2	45	50	Restrictive	No	N/A	
6 (to North Blvd)	5280	30000	1840	2	45	50	Restrictive	No	N/A	
7 (to N Florida Ave)	2680	30000	1870	2	40	45	Restrictive	No	N/A	
8 (to I-275 SB Ramps)	1010	30000	2230	3	40	45	Restrictive	No	N/A	
9 (to I-275 NB Ramps)	980	30000	2170	3	40	45	Restrictive	No	N/A	
10 (to N Nebraska Ave)	670	30000	1900	3	40	45	Restrictive	No	N/A	

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS			
1 (to Dale Mabry NB Ramps)	1939	3773	1.142	111.51	F	0.50	5.99	F			
2 (to N Himes Ave)	1820	3419	1.183	131.43	F	0.00	4.53	F			
3 (to Twin Lakes Blvd)	2001	3692	1.204	141.98	F	0.00	10.06	F			
4 (to Orange Grove Dr)	2088	3773	1.230	154.84	F	0.89	5.26	F			
5 (to N Armenia Ave)	1964	3752	1.163	121.70	F	0.83	7.61	F			
6 (to North Blvd)	1859	3759	1.099	90.51	F	0.31	21.50	D			
7 (to N Florida Ave)	1831	3625	1.122	101.67	F	0.57	12.69	F			
8 (to I-275 SB Ramps)	1995	5470	0.811	35.90	D	#	13.37	F			
9 (to I-275 NB Ramps)	1759	5411	0.722	34.06	C	#	13.57	F			
10 (to N Nebraska Ave)	1820	5396	0.750	34.97	C	0.82	10.21	F			
Arterial Length	3.5473	Weighted g/C	0.45	FFS Delay	999.83	Threshold Delay	545.68	Auto Speed	###	Auto LOS	###

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	**	300	750	860
2	**	**	610	1580	1740
3	**	**	930	2440	2620
4	**	**	1250	3290	3480
*	**	**	670	1650	1740
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr / Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to Dale Mabry NB Ramps)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
2 (to N Himes Ave)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
3 (to Twin Lakes Blvd)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Fair	Typical
4 (to Orange Grove Dr)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Fair	Typical
5 (to N Armenia Ave)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
6 (to North Blvd)	Typical	Typical	No	No	N/A	No	N/A	No	2	0.8	Fair	Typical
7 (to N Florida Ave)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Excellent	Typical
8 (to I-275 SB Ramps)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
9 (to I-275 NB Ramps)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
10 (to N Nebraska Ave)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None

Pedestrian SubSegment Data

Segment #	% of Segment			Sidewalk			Separation			Barrier		
	1	2	3	1	2	3	1	2	3	1	2	3
1 (to Dale Mabry NB Ramps)	25	75		Yes	Yes		Adjacent	Adjacent		No	No	
2 (to N Himes Ave)	100			Yes			Adjacent			No		
3 (to Twin Lakes Blvd)	100			Yes			Adjacent			No		
4 (to Orange Grove Dr)	100			Yes			Adjacent			No		
5 (to N Armenia Ave)	100			Yes			Adjacent			No		
6 (to North Blvd)	100			No			N/A			No		
7 (to N Florida Ave)	100			Yes			Adjacent			No		
8 (to I-275 SB Ramps)	100			Yes			Adjacent			No		
9 (to I-275 NB Ramps)	100			Yes			Adjacent			No		
10 (to N Nebraska Ave)	100			Yes			Adjacent			No		

Multimodal LOS

Link #	Bicycle Street		Bicycle Sidepath		Pedestrian			Bus			
	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS
1 (to Dale Mabry NB Ramps)	4.68	E	N/A	N/A				4.62	E	1.83	E
2 (to N Himes Ave)	4.68	E	N/A	N/A				4.64	E	1.83	E
3 (to Twin Lakes Blvd)	4.72	E	N/A	N/A				4.74	E	2.03	D
4 (to Orange Grove Dr)	4.74	E	N/A	N/A				4.90	E	2.03	D
5 (to N Armenia Ave)	4.73	E	N/A	N/A				4.78	E	1.83	E
6 (to North Blvd)	4.70	E	N/A	N/A				6.05	F	1.32	E
7 (to N Florida Ave)	4.63	E	N/A	N/A				4.45	E	2.24	D

8 (to I-275 SB Ramps)	4.49	E	N/A	N/A	3.94	D	1.80	E		
9 (to I-275 NB Ramps)	4.47	E	N/A	N/A	3.88	D	1.80	E		
10 (to N Nebraska Ave)	4.35	E	N/A	N/A	3.58	D	1.80	E		
Bicycle LOS		4.66	E	Pedestrian LOS		5.07	F	Bus LOS	1.78	E

MultiModal Service Volume Tables

Bicycle

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	**	160	460	1000
2	**	**	320	920	2000
3	**	**	480	1380	3000
4	**	**	640	1840	4000
*	**	**	340	960	3000
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Pedestrian

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	**	220	560	900
2	**	**	440	1120	1800
3	**	**	650	1670	2690
4	**	**	870	2230	3590
*	**	**	450	1150	1850
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
>= 6	>= 4	>= 3	>= 2	>= 1
Buses in Study Hour in Peak Direction (Daily)				

≥ 5.62	≥ 3.75	≥ 2.81	≥ 1.88	≥ 0.94
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* Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.

** Cannot be achieved based on input data provided.

*** Not applicable for that level of service letter grade. See generalized tables notes for more details.

Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.

Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.

Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst		Arterial Name	Busch Boulevard	Study Period	Dir Hr Demand Vol
Date Prepared	10/17/2017 1:20:06 PM	From	N Nebraska Ave	Modal Analysis	Multimodal
Agency	VHB	To	Dale Mabry SB Ramps	Program	ARTPLAN 2012
Area Type	Large Urbanized	Peak Direction	Westbound	Version Date	12/12/2012
Arterial Class	1				
File Name	\\vhb\proj\Orlando\62966.00 FDOT D7 SR 580 Busch Blv\tech\Analysis\ARTPLAN\2017 - WB PM.xap				
User Notes	2017 Existing - WB PM				

Arterial Data

K	0.09	PHF	0.95	Control Type	FullyActuated
D	0.565	% Heavy Vehicles	2	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
I - 275 NB Ramps	150	0.45	3	3	0	16	Yes	Protected	1	235	0.15	Yes
I - 275 SB Ramps	150	0.45	3	3	0	26	Yes	Protected	1	235	0.15	Yes
N Florida Ave	150	0.45	3	2	12	12	Yes	Protected	1	235	0.15	Yes
North Blvd	150	0.45	3	2	5	3	Yes	Protected	1	235	0.15	No
N Armenia Ave	150	0.45	3	2	9	2	Yes	Protected	1	235	0.15	No
Orange Grove Dr	150	0.45	3	2	0	4	Yes	Protected	1	235	0.15	Yes
Twin Lakes Blvd	150	0.45	3	2	3	0	Yes	Protected	1	235	0.15	No
N. Himes Ave	150	0.45	3	2	8	0	Yes	Protected	1	235	0.15	No
Dale Mabry NB Ramps	150	0.45	3	2	0	19	Yes	Protected	1	235	0.15	No
Dale Mabry SB Ramps	150	0.45	3	2	0	15	Yes	Protected	1	235	0.15	Yes

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to I - 275 NB Ramps)	670	30000	2250	3	40	45	Restrictive	No	N/A
2 (to I - 275 SB Ramps)	980	30000	2230	3	40	45	Restrictive	No	N/A

3 (to N Florida Ave)	1010	30000	2230	2	40	45	Restrictive	No	N/A
4 (to North Blvd)	2680	30000	1880	2	40	45	Restrictive	No	N/A
5 (to N Armenia Ave)	5280	30000	1760	2	45	50	Restrictive	No	N/A
6 (to Orange Grove Dr)	1580	30000	2140	2	45	50	Restrictive	No	N/A
7 (to Twin Lakes Blvd)	1300	30000	2240	2	45	50	Restrictive	No	N/A
8 (to N. Himes Ave)	2630	30000	2400	2	45	50	Restrictive	No	N/A
9 (to Dale Mabry NB Ramps)	920	30000	2670	2	45	50	Restrictive	No	N/A
10 (to Dale Mabry SB Ramps)	1080	30000	2430	2	45	50	Restrictive	No	N/A

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS			
1 (to I - 275 NB Ramps)	1989	4845	0.912	40.47	D	0.00	9.15	F			
2 (to I - 275 SB Ramps)	1737	4014	0.962	45.14	D	0.00	11.19	F			
3 (to N Florida Ave)	1784	3378	1.174	127.61	F	#	4.96	F			
4 (to North Blvd)	1880	3648	1.145	112.90	F	0.40	11.79	F			
5 (to N Armenia Ave)	1686	3767	0.994	46.44	D	0.70	29.13	C			
6 (to Orange Grove Dr)	2163	3692	1.301	190.91	F	0.00	5.17	F			
7 (to Twin Lakes Blvd)	2287	3773	1.347	214.24	F	0.28	3.93	F			
8 (to N. Himes Ave)	2324	3773	1.369	225.52	F	0.87	6.88	F			
9 (to Dale Mabry NB Ramps)	2811	3723	1.678	397.68	F	0.00	1.61	F			
10 (to Dale Mabry SB Ramps)	2174	3382	1.429	256.77	F	0.00	2.82	F			
Arterial Length	3.5473	Weighted g/C	0.45	FFS Delay	1701.42	Threshold Delay	1247.27	Auto Speed	###	Auto LOS	###

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	**	290	720	820
2	**	**	590	1510	1640
3	**	**	900	2320	2460
4	**	**	1210	3130	3300
*	**	**	630	1580	1680
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr / Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to I - 275 NB Ramps)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
2 (to I - 275 SB Ramps)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
3 (to N Florida Ave)	Typical	Typical	No	No	N/A	No	N/A	No	2	0.8	Poor	None
4 (to North Blvd)	Typical	Typical	No	No	N/A	Yes	Typical	No	2	0.8	Excellent	Typical
5 (to N Armenia Ave)	Typical	Typical	No	No	N/A	Yes	Typical	No	2	0.8	Fair	Typical
6 (to Orange Grove Dr)	Typical	Typical	Yes	No	N/A	Yes	Typical	No	2	0.8	Fair	Typical
7 (to Twin Lakes Blvd)	Typical	Typical	No	No	N/A	Yes	Typical	No	2	0.8	Excellent	Typical
8 (to N. Himes Ave)	Typical	Typical	Yes	No	N/A	Yes	Typical	No	2	0.8	Excellent	Typical
9 (to Dale Mabry NB Ramps)	Typical	Typical	No	No	N/A	Yes	Typical	No	2	0.8	Poor	None
10 (to Dale Mabry SB Ramps)	Typical	Typical	No	No	N/A	No	N/A	No	2	0.8	Poor	None

Pedestrian SubSegment Data

Segment #	% of Segment			Sidewalk			Separation			Barrier		
	1	2	3	1	2	3	1	2	3	1	2	3
1 (to I - 275 NB Ramps)	100			Yes			Adjacent			No		
2 (to I - 275 SB Ramps)	100			Yes			Adjacent			No		
3 (to N Florida Ave)	100			No			N/A			No		
4 (to North Blvd)	50	50		Yes	Yes		Typical	Adjacent		No	No	
5 (to N Armenia Ave)	100			Yes			Typical			No		
6 (to Orange Grove Dr)	75	25		Yes	Yes		Typical	Adjacent		No	No	
7 (to Twin Lakes Blvd)	100			Yes			Typical			No		
8 (to N. Himes Ave)	80	20		Yes	Yes		Typical	Adjacent		No	No	
9 (to Dale Mabry NB Ramps)	50	50		Yes	Yes		Typical	Adjacent		No	No	
10 (to Dale Mabry SB Ramps)	100			No			N/A			No		

Multimodal LOS

Link #	Bicycle Street		Bicycle Sidepath		Pedestrian			Bus			
	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS
1 (to I - 275 NB Ramps)	4.43	E	N/A	N/A				3.85	D	1.80	E
2 (to I - 275 SB Ramps)	4.48	E	N/A	N/A				3.93	D	1.80	E
3 (to N Florida Ave)	4.67	E	N/A	N/A				6.23	F	1.19	E
4 (to North Blvd)	4.64	E	N/A	N/A				4.40	E	2.24	D
5 (to N Armenia Ave)	4.68	E	N/A	N/A				4.37	E	2.03	D
6 (to Orange Grove Dr)	3.04	C	N/A	N/A				4.58	E	2.03	D
7 (to Twin Lakes Blvd)	4.75	E	N/A	N/A				4.82	E	2.24	D

8 (to N. Himes Ave)	3.11	C	N/A	N/A	4.90	E	2.24	D		
9 (to Dale Mabry NB Ramps)	4.80	E	N/A	N/A	5.32	F	1.48	E		
10 (to Dale Mabry SB Ramps)	4.78	E	N/A	N/A	6.60	F	1.19	E		
Bicycle LOS		4.40	E	Pedestrian LOS		4.84	E	Bus LOS	1.96	E

MultiModal Service Volume Tables

Bicycle

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	60	240	700	1000
2	**	120	470	1390	2000
3	**	180	700	2060	3000
4	**	240	940	2760	4000
*	**	130	490	1450	2000
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Pedestrian

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	100	440	760	1000
2	**	190	870	1530	2000
3	**	280	1300	2300	3000
4	**	380	1730	3070	4000
*	**	200	890	1570	2000
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
>= 6	>= 4	>= 3	>= 2	>= 1
Buses in Study Hour in Peak Direction (Daily)				

≥ 5.44	≥ 3.63	≥ 2.72	≥ 1.82	≥ 0.91
-------------	-------------	-------------	-------------	-------------

* Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.

** Cannot be achieved based on input data provided.

*** Not applicable for that level of service letter grade. See generalized tables notes for more details.

Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.

Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.

Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

Appendix H

Future Synchro Outputs

HCM 6th Signalized Intersection Summary
 1: Busch Blvd & Dale Mabry Hwy SB Ramps

2020 No Build - AM

04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	201	1925	1	7	1266	0	0	0	0	356	5	20
Future Volume (veh/h)	201	1925	1	7	1266	0	0	0	0	356	5	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1885	1885	1856	1856	0	1900	1900	1900	1870	1900	1796
Adj Flow Rate, veh/h	207	1985	1	7	1305	0	0	0	0	371	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	1	1	3	3	0	0	0	0	2	0	7
Cap, veh/h	311	3001	2	24	2520	0	0	1	1	405	0	
Arrive On Green	0.04	0.82	0.82	0.50	0.50	0.00	0.00	0.00	0.00	0.11	0.00	0.00
Sat Flow, veh/h	1767	3674	2	6	3490	0	0	1900	1610	3563	0	1522
Grp Volume(v), veh/h	207	968	1018	696	616	0	0	0	0	371	0	0
Grp Sat Flow(s),veh/h/ln	1767	1791	1885	1808	1604	0	0	1900	1610	1781	0	1522
Q Serve(g_s), s	5.3	40.9	40.9	0.0	49.5	0.0	0.0	0.0	0.0	19.6	0.0	0.0
Cycle Q Clear(g_c), s	5.3	40.9	40.9	48.0	49.5	0.0	0.0	0.0	0.0	19.6	0.0	0.0
Prop In Lane	1.00		0.00	0.01		0.00	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	311	1463	1540	1357	1187	0	0	1	1	405	0	
V/C Ratio(X)	0.67	0.66	0.66	0.51	0.52	0.00	0.00	0.00	0.00	0.92	0.00	
Avail Cap(c_a), veh/h	650	1463	1540	1357	1187	0	0	76	64	405	0	
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	18.5	6.9	6.9	24.6	24.9	0.0	0.0	0.0	0.0	83.3	0.0	0.0
Incr Delay (d2), s/veh	2.4	2.4	2.3	1.4	1.6	0.0	0.0	0.0	0.0	25.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	13.8	14.5	23.1	20.6	0.0	0.0	0.0	0.0	10.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	20.9	9.3	9.2	25.9	26.6	0.0	0.0	0.0	0.0	108.7	0.0	0.0
LnGrp LOS	C	A	A	C	C	A	A	A	A	F	A	
Approach Vol, veh/h		2193			1312			0			371	A
Approach Delay, s/veh		10.3			26.2			0.0			108.7	
Approach LOS		B			C						F	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	14.6	147.4		0.0		162.0		28.0				
Change Period (Y+Rc), s	6.8	6.8		* 8.4		6.8		6.4				
Max Green Setting (Gmax), s	44.2	88.2		* 7.6		139.2		21.6				
Max Q Clear Time (g_c+I1), s	7.3	51.5		0.0		42.9		21.6				
Green Ext Time (p_c), s	0.6	16.0		0.0		52.1		0.0				

Intersection Summary

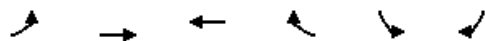
HCM 6th Ctrl Delay	25.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [SWR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
2: Busch Blvd & Dale Mabry Hwy NB Ramps

2020 No Build - AM
04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↕↕	↕↕	↵	↵↵	↵
Traffic Volume (veh/h)	38	2243	1514	348	121	154
Future Volume (veh/h)	38	2243	1514	348	121	154
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1781	1885	1900	1856	1826	1885
Adj Flow Rate, veh/h	39	2289	1545	0	123	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	8	1	0	3	5	1
Cap, veh/h	339	3154	2967		161	
Arrive On Green	0.02	0.88	1.00	0.00	0.05	0.00
Sat Flow, veh/h	1697	3676	3705	1572	3374	1598
Grp Volume(v), veh/h	39	2289	1545	0	123	0
Grp Sat Flow(s),veh/h/ln	1697	1791	1805	1572	1687	1598
Q Serve(g_s), s	0.6	40.1	0.0	0.0	6.8	0.0
Cycle Q Clear(g_c), s	0.6	40.1	0.0	0.0	6.8	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	339	3154	2967		161	
V/C Ratio(X)	0.11	0.73	0.52		0.76	
Avail Cap(c_a), veh/h	472	3154	2967		341	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.45	0.00	1.00	0.00
Uniform Delay (d), s/veh	2.0	3.7	0.0	0.0	89.4	0.0
Incr Delay (d2), s/veh	0.1	1.5	0.3	0.0	7.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	9.4	0.1	0.0	3.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	2.2	5.2	0.3	0.0	96.7	0.0
LnGrp LOS	A	A	A		F	
Approach Vol, veh/h		2328	1545	A	123	A
Approach Delay, s/veh		5.2	0.3		96.7	
Approach LOS		A	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	11.2	163.0			174.1	15.9
Change Period (Y+Rc), s	6.8	6.8			6.8	6.8
Max Green Setting (Gmax), s	19.2	131.2			157.2	19.2
Max Q Clear Time (g_c+I1), s	2.6	2.0			42.1	8.8
Green Ext Time (p_c), s	0.0	31.3			75.9	0.2

Intersection Summary

HCM 6th Ctrl Delay	6.1
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 3: N Himes Ave & Busch Blvd






















2020 No Build - AM
 04/04/2018

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑↑	↑
Traffic Volume (veh/h)	1738	626	417	1502	360	112
Future Volume (veh/h)	1738	626	417	1502	360	112
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1885	1885	1856	1856	1900
Adj Flow Rate, veh/h	1792	645	430	1548	243	252
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	1	1	3	3	0
Cap, veh/h	2281	1025	444	3010	132	120
Arrive On Green	1.00	1.00	0.23	1.00	0.07	0.07
Sat Flow, veh/h	3647	1598	1795	3618	1767	1610
Grp Volume(v), veh/h	1792	645	430	1548	243	252
Grp Sat Flow(s),veh/h/ln	1777	1598	1795	1763	1767	1610
Q Serve(g_s), s	0.0	0.0	31.2	0.0	14.2	14.2
Cycle Q Clear(g_c), s	0.0	0.0	31.2	0.0	14.2	14.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2281	1025	444	3010	132	120
V/C Ratio(X)	0.79	0.63	0.97	0.51	1.84	2.09
Avail Cap(c_a), veh/h	2281	1025	461	3010	132	120
HCM Platoon Ratio	2.00	2.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.60	0.60	0.74	0.74	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	44.7	0.0	87.9	87.9
Incr Delay (d2), s/veh	1.7	1.8	27.5	0.5	405.8	519.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	34.6	22.1	0.2	21.4	29.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.7	1.8	72.2	0.5	493.7	607.4
LnGrp LOS	A	A	E	A	F	F
Approach Vol, veh/h	2437			1978	495	
Approach Delay, s/veh	1.7			16.1	551.5	
Approach LOS	A			B	F	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		169.0		21.0	40.3	128.7
Change Period (Y+Rc), s		6.8		* 6.8	6.8	6.8
Max Green Setting (Gmax), s		162.2		* 14	35.2	120.2
Max Q Clear Time (g_c+I1), s		2.0		16.2	33.2	2.0
Green Ext Time (p_c), s		32.1		0.0	0.2	65.8
Intersection Summary						
HCM 6th Ctrl Delay			62.9			
HCM 6th LOS			E			
Notes						
User approved volume balancing among the lanes for turning movement.						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

HCM 6th Signalized Intersection Summary
 4: Twin Lakes Blvd/Mossvale Ln & Busch Blvd

2020 No Build - AM

04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	1634	214	318	1835	0	84	0	119	2	0	0
Future Volume (veh/h)	2	1634	214	318	1835	0	84	0	119	2	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1900	1885	1870	1870	1885	0	1900	1900	1900	1900
Adj Flow Rate, veh/h	2	1667	218	324	1872	0	86	0	121	2	0	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	2	0	1	2	2	1	0	0	0	0	0
Cap, veh/h	228	2721	1233	217	3282	0	0	0	0	6	0	0
Arrive On Green	0.25	0.25	0.25	0.24	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	248	3554	1610	1795	3647	0		0		1809	0	0
Grp Volume(v), veh/h	2	1667	218	324	1872	0		0.0		2	0	0
Grp Sat Flow(s),veh/h/ln	248	1777	1610	1795	1777	0				1810	0	0
Q Serve(g_s), s	1.1	78.8	20.1	23.0	0.0	0.0				0.2	0.0	0.0
Cycle Q Clear(g_c), s	1.1	78.8	20.1	23.0	0.0	0.0				0.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	228	2721	1233	217	3282	0				6	0	0
V/C Ratio(X)	0.01	0.61	0.18	1.49	0.57	0.00				0.35	0.00	0.00
Avail Cap(c_a), veh/h	228	2721	1233	217	3282	0				87	0	0
HCM Platoon Ratio	0.33	0.33	0.33	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.50	0.50	0.50	0.40	0.40	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	17.1	46.1	24.1	72.0	0.0	0.0				94.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.5	0.2	230.5	0.3	0.0				32.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.1	38.0	8.8	23.3	0.1	0.0				0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	17.1	46.6	24.3	302.5	0.3	0.0				127.3	0.0	0.0
LnGrp LOS	B	D	C	F	A	A				F	A	A
Approach Vol, veh/h		1887			2196							2
Approach Delay, s/veh		44.0			44.9							127.3
Approach LOS		D			D							F
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	30.0	152.5		7.5		182.5						
Change Period (Y+Rc), s	* 7	* 7		6.9		* 7						
Max Green Setting (Gmax), s	* 23	* 1.2E2		9.1		* 1.5E2						
Max Q Clear Time (g_c+I1), s	25.0	80.8		2.2		2.0						
Green Ext Time (p_c), s	0.0	25.3		0.0		52.6						
Intersection Summary												
HCM 6th Ctrl Delay				44.5								
HCM 6th LOS				D								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
5: Busch Blvd & Orange Grove Dr

2020 No Build - AM
04/04/2018



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations	↖	↗	↖	↗	↖	↗
Traffic Volume (veh/h)	97	1658	1702	83	135	451
Future Volume (veh/h)	97	1658	1702	83	135	451
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1870	1856	1900	1900	1900
Adj Flow Rate, veh/h	104	1783	1830	89	145	485
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	3	0	0	0
Cap, veh/h	253	2690	2442	1115	307	273
Arrive On Green	0.06	1.00	1.00	1.00	0.17	0.17
Sat Flow, veh/h	1810	3647	3618	1610	1810	1610
Grp Volume(v), veh/h	104	1783	1830	89	145	485
Grp Sat Flow(s),veh/h/ln	1810	1777	1763	1610	1810	1610
Q Serve(g_s), s	3.2	0.0	0.0	0.0	13.7	32.2
Cycle Q Clear(g_c), s	3.2	0.0	0.0	0.0	13.7	32.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	253	2690	2442	1115	307	273
V/C Ratio(X)	0.41	0.66	0.75	0.08	0.47	1.78
Avail Cap(c_a), veh/h	432	2690	2442	1115	307	273
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.59	0.59	0.58	0.58	1.00	1.00
Uniform Delay (d), s/veh	7.1	0.0	0.0	0.0	71.2	78.9
Incr Delay (d2), s/veh	0.6	0.8	1.3	0.1	1.1	364.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.3	0.4	0.0	6.5	41.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.7	0.8	1.3	0.1	72.4	443.2
LnGrp LOS	A	A	A	A	E	F
Approach Vol, veh/h		1887	1919		630	
Approach Delay, s/veh		1.2	1.2		357.8	
Approach LOS		A	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	12.2	138.8			151.0	39.0
Change Period (Y+Rc), s	6.8	* 7.2			* 7.2	6.8
Max Green Setting (Gmax), s	24.2	* 1.1E2			* 1.4E2	32.2
Max Q Clear Time (g_c+I1), s	5.2	2.0			2.0	34.2
Green Ext Time (p_c), s	0.2	48.2			45.8	0.0

Intersection Summary

HCM 6th Ctrl Delay	51.8
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.


























HCM 6th Signalized Intersection Summary
6: N Armenia Ave & Busch Blvd

2020 No Build - AM
04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	1435	287	215	1507	10	180	253	158	59	385	98
Future Volume (veh/h)	71	1435	287	215	1507	10	180	253	158	59	385	98
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1870	1856	1856	1885	1856	1841	1870	1885	1900
Adj Flow Rate, veh/h	72	1464	293	219	1538	10	184	258	161	60	393	100
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	1	2	3	3	1	3	4	2	1	0
Cap, veh/h	88	1681	756	354	2235	15	183	571	253	198	472	212
Arrive On Green	0.10	0.95	0.95	0.20	0.62	0.62	0.07	0.16	0.16	0.04	0.13	0.13
Sat Flow, veh/h	1781	3554	1598	1781	3591	23	1795	3526	1560	1781	3582	1610
Grp Volume(v), veh/h	72	1464	293	219	755	793	184	258	161	60	393	100
Grp Sat Flow(s),veh/h/ln	1781	1777	1598	1781	1763	1851	1795	1763	1560	1781	1791	1610
Q Serve(g_s), s	7.5	23.9	2.2	21.3	53.7	53.8	13.0	12.6	12.6	5.5	20.3	10.9
Cycle Q Clear(g_c), s	7.5	23.9	2.2	21.3	53.7	53.8	13.0	12.6	12.6	5.5	20.3	10.9
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	88	1681	756	354	1097	1152	183	571	253	198	472	212
V/C Ratio(X)	0.82	0.87	0.39	0.62	0.69	0.69	1.00	0.45	0.64	0.30	0.83	0.47
Avail Cap(c_a), veh/h	196	1681	756	354	1097	1152	183	777	344	253	790	355
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.71	0.71	0.71	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	84.7	3.3	1.6	69.5	23.7	23.7	72.4	72.0	35.0	67.9	80.5	76.4
Incr Delay (d2), s/veh	12.2	4.7	1.1	0.3	0.3	0.3	67.6	0.6	2.7	0.8	3.9	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.6	3.0	1.0	9.7	21.7	22.8	6.1	5.8	5.1	2.6	9.7	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	96.9	8.1	2.6	69.8	24.0	24.0	140.0	72.5	37.7	68.8	84.4	78.0
LnGrp LOS	F	A	A	E	C	C	F	E	D	E	F	E
Approach Vol, veh/h		1829			1767			603			553	
Approach Delay, s/veh		10.7			29.7			83.8			81.5	
Approach LOS		B			C			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.5	124.4	13.2	36.9	43.9	96.0	19.0	31.1				
Change Period (Y+Rc), s	* 6.1	* 6.1	6.0	6.1	* 6.1	* 6.1	6.0	6.1				
Max Green Setting (Gmax), s	* 21	* 90	13.0	41.9	* 21	* 90	13.0	41.9				
Max Q Clear Time (g_c+I1), s	9.5	55.8	7.5	14.6	23.3	25.9	15.0	22.3				
Green Ext Time (p_c), s	0.1	13.3	0.0	2.2	0.0	18.0	0.0	2.7				
Intersection Summary												
HCM 6th Ctrl Delay			35.3									
HCM 6th LOS			D									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												





























HCM 6th Signalized Intersection Summary
7: N Boulevard & Busch Blvd

2020 No Build - AM
04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Traffic Volume (veh/h)	52	1495	144	119	1597	112	62	206	50	156	471	31
Future Volume (veh/h)	52	1495	144	119	1597	112	62	206	50	156	471	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1856	1856	1870	1900	1900	1856	1870	1900
Adj Flow Rate, veh/h	54	1541	148	123	1646	115	64	212	52	161	486	32
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	1	3	3	2	0	0	3	2	0
Cap, veh/h	153	1587	151	141	1593	110	80	480	533	113	509	576
Arrive On Green	0.09	0.48	0.48	0.08	0.48	0.48	0.04	0.25	0.25	0.06	0.27	0.27
Sat Flow, veh/h	1781	3279	312	1795	3345	232	1781	1900	1610	1767	1870	1610
Grp Volume(v), veh/h	54	829	860	123	861	900	64	212	52	161	486	32
Grp Sat Flow(s),veh/h/ln	1781	1777	1814	1795	1763	1814	1781	1900	1610	1767	1870	1610
Q Serve(g_s), s	5.4	85.7	88.4	12.9	90.5	90.5	6.8	17.8	4.2	12.2	48.6	2.5
Cycle Q Clear(g_c), s	5.4	85.7	88.4	12.9	90.5	90.5	6.8	17.8	4.2	12.2	48.6	2.5
Prop In Lane	1.00		0.17	1.00		0.13	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	153	860	878	141	840	864	80	480	533	113	509	576
V/C Ratio(X)	0.35	0.96	0.98	0.87	1.03	1.04	0.80	0.44	0.10	1.42	0.95	0.06
Avail Cap(c_a), veh/h	153	860	878	154	840	864	114	544	587	113	536	599
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.65	0.65	0.65	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	81.9	47.4	48.1	86.6	49.7	49.7	89.9	59.7	44.0	88.9	68.0	40.0
Incr Delay (d2), s/veh	4.1	17.5	20.1	34.8	37.8	41.8	15.1	0.6	0.1	232.1	27.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.7	40.9	43.7	7.3	47.8	50.1	3.5	8.8	1.8	13.0	27.2	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	86.0	64.9	68.2	121.5	87.5	91.6	105.1	60.4	44.0	321.0	95.3	40.0
LnGrp LOS	F	E	E	F	F	F	F	E	D	F	F	D
Approach Vol, veh/h		1743			1884			328			679	
Approach Delay, s/veh		67.2			91.7			66.5			146.2	
Approach LOS		E			F			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.0	96.4	18.0	53.6	20.6	97.8	14.3	57.3				
Change Period (Y+Rc), s	* 5.7	5.9	* 5.8	* 5.6	* 5.7	5.9	* 5.8	* 5.6				
Max Green Setting (Gmax), s	* 16	84.1	* 12	* 54	* 16	84.1	* 12	* 54				
Max Q Clear Time (g_c+I1), s	7.4	92.5	14.2	19.8	14.9	90.4	8.8	50.6				
Green Ext Time (p_c), s	0.0	0.0	0.0	1.5	0.0	0.0	0.0	1.1				
Intersection Summary												
HCM 6th Ctrl Delay			88.7									
HCM 6th LOS			F									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
8: Florida Ave & Busch Blvd

2020 No Build - AM
04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 		 	 	
Traffic Volume (veh/h)	141	1216	344	265	1755	195	136	625	319	278	1046	51
Future Volume (veh/h)	141	1216	344	265	1755	195	136	625	319	278	1046	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1856	1885	1870	1841	1841	1885	1870	1870
Adj Flow Rate, veh/h	144	1241	0	270	1791	199	139	638	326	284	1067	52
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	3	1	2	4	4	1	2	2
Cap, veh/h	214	1865		238	1336	605	155	1406	436	320	981	48
Arrive On Green	0.12	0.37	0.00	0.04	0.13	0.13	0.09	0.28	0.28	0.09	0.28	0.28
Sat Flow, veh/h	1781	5274	0	1781	3526	1598	1781	5025	1560	3483	3449	168
Grp Volume(v), veh/h	144	1241	0	270	1791	199	139	638	326	284	550	569
Grp Sat Flow(s),veh/h/ln	1781	1702	0	1781	1763	1598	1781	1675	1560	1742	1777	1840
Q Serve(g_s), s	17.0	44.8	0.0	29.4	83.3	25.0	17.0	23.0	41.9	17.7	62.6	62.6
Cycle Q Clear(g_c), s	17.0	44.8	0.0	29.4	83.3	25.0	17.0	23.0	41.9	17.7	62.6	62.6
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	214	1865		238	1336	605	155	1406	436	320	506	524
V/C Ratio(X)	0.67	0.67		1.13	1.34	0.33	0.90	0.45	0.75	0.89	1.09	1.09
Avail Cap(c_a), veh/h	214	1865		238	1336	605	207	1430	444	405	506	524
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.63	0.63	0.63	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	92.7	58.6	0.0	105.1	96.2	70.7	99.4	65.4	72.1	98.8	78.7	78.7
Incr Delay (d2), s/veh	15.7	1.9	0.0	88.0	156.7	0.9	29.6	0.2	6.7	17.5	65.7	65.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.8	19.7	0.0	20.1	69.0	11.0	9.1	9.9	17.5	8.8	37.6	38.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	108.4	60.5	0.0	193.2	253.0	71.6	129.1	65.6	78.8	116.3	144.4	143.9
LnGrp LOS	F	E		F	F	E	F	E	E	F	F	F
Approach Vol, veh/h		1385	A		2260			1103			1403	
Approach Delay, s/veh		65.4			229.9			77.5			138.5	
Approach LOS		E			F			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	33.0	90.4	27.6	69.0	36.0	87.4	26.6	70.0				
Change Period (Y+Rc), s	* 6.6	* 7.1	7.4	7.4	* 6.6	* 7.1	7.4	7.4				
Max Green Setting (Gmax), s	* 26	* 77	25.6	62.6	* 29	* 74	25.6	62.6				
Max Q Clear Time (g_c+I1), s	19.0	85.3	19.7	43.9	31.4	46.8	19.0	64.6				
Green Ext Time (p_c), s	0.2	0.0	0.5	5.0	0.0	9.7	0.2	0.0				

Intersection Summary

HCM 6th Ctrl Delay	144.7
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 9: Busch Blvd & I-275 SB Ramps

2020 No Build - AM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↑↑↑	↑↑↑	↵	↵	↵
Traffic Volume (veh/h)	300	1513	1785	665	177	430
Future Volume (veh/h)	300	1513	1785	665	177	430
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1856	1885	1826	1841
Adj Flow Rate, veh/h	319	1610	1899	0	188	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	3	1	5	4
Cap, veh/h	349	4201	3017		206	
Arrive On Green	0.13	0.55	1.00	0.00	0.12	0.00
Sat Flow, veh/h	1767	5274	5233	1598	1739	1560
Grp Volume(v), veh/h	319	1610	1899	0	188	0
Grp Sat Flow(s),veh/h/ln	1767	1702	1689	1598	1739	1560
Q Serve(g_s), s	39.2	39.5	0.0	0.0	23.5	0.0
Cycle Q Clear(g_c), s	39.2	39.5	0.0	0.0	23.5	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	349	4201	3017		206	
V/C Ratio(X)	0.91	0.38	0.63		0.91	
Avail Cap(c_a), veh/h	518	4201	3017		281	
HCM Platoon Ratio	0.67	0.67	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.38	0.38	0.50	0.00	1.00	0.00
Uniform Delay (d), s/veh	93.6	17.6	0.0	0.0	95.8	0.0
Incr Delay (d2), s/veh	9.7	0.1	0.5	0.0	28.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.4	17.2	0.1	0.0	12.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	103.3	17.7	0.5	0.0	124.3	0.0
LnGrp LOS	F	B	A		F	
Approach Vol, veh/h		1929	1899	A	188	A
Approach Delay, s/veh		31.9	0.5		124.3	
Approach LOS		C	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	50.0	137.5			187.5	32.5
Change Period (Y+Rc), s	6.5	6.5			6.5	6.4
Max Green Setting (Gmax), s	64.5	100.5			171.5	35.6
Max Q Clear Time (g_c+I1), s	41.2	2.0			41.5	25.5
Green Ext Time (p_c), s	2.3	27.1			19.1	0.6

Intersection Summary

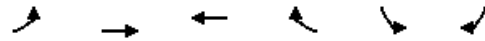
HCM 6th Ctrl Delay	21.4
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 10: Busch Blvd & I-275 NB Ramps

2020 No Build - AM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑↑	↑↑↑	↗	↖↗	↖↗
Traffic Volume (veh/h)	248	1442	1973	267	294	477
Future Volume (veh/h)	248	1442	1973	267	294	477
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1870	1856	1841	1856
Adj Flow Rate, veh/h	264	1534	2099	0	313	507
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	2	3	4	3
Cap, veh/h	315	3810	2750		657	535
Arrive On Green	0.36	1.00	1.00	0.00	0.19	0.19
Sat Flow, veh/h	1767	5274	5274	1572	3401	2768
Grp Volume(v), veh/h	264	1534	2099	0	313	507
Grp Sat Flow(s),veh/h/ln	1767	1702	1702	1572	1700	1384
Q Serve(g_s), s	30.2	0.0	0.0	0.0	18.0	39.8
Cycle Q Clear(g_c), s	30.2	0.0	0.0	0.0	18.0	39.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	315	3810	2750		657	535
V/C Ratio(X)	0.84	0.40	0.76		0.48	0.95
Avail Cap(c_a), veh/h	315	3810	2750		668	543
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.20	0.00	1.00	1.00
Uniform Delay (d), s/veh	67.9	0.0	0.0	0.0	78.8	87.6
Incr Delay (d2), s/veh	17.8	0.3	0.4	0.0	0.8	26.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.8	0.1	0.1	0.0	8.1	16.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	85.7	0.3	0.4	0.0	79.6	113.8
LnGrp LOS	F	A	A		E	F
Approach Vol, veh/h		1798	2099	A	820	
Approach Delay, s/veh		12.8	0.4		100.8	
Approach LOS		B	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	45.7	125.0			170.7	49.3
Change Period (Y+Rc), s	6.5	6.5			6.5	6.8
Max Green Setting (Gmax), s	38.5	118.5			163.5	43.2
Max Q Clear Time (g_c+I1), s	32.2	2.0			2.0	41.8
Green Ext Time (p_c), s	0.9	35.4			17.3	0.7

Intersection Summary

HCM 6th Ctrl Delay	22.6
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 11: Nebraska Ave & Busch Blvd

2020 No Build - AM
 04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	1449	209	215	2008	64	120	559	200	57	986	112
Future Volume (veh/h)	78	1449	209	215	2008	64	120	559	200	57	986	112
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1870	1870	1826	1870	1870	1796	1826	1841	1841	1870	1870
Adj Flow Rate, veh/h	83	1541	222	229	2136	68	128	595	0	61	1049	119
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	2	2	5	2	2	7	5	4	4	2	2
Cap, veh/h	175	1927	277	249	2391	76	143	889		75	693	79
Arrive On Green	0.20	0.85	0.85	0.14	0.47	0.47	0.08	0.26	0.00	0.04	0.22	0.22
Sat Flow, veh/h	1739	4509	648	1739	5084	161	1711	3469	1560	1753	3217	365
Grp Volume(v), veh/h	83	1162	601	229	1428	776	128	595	0	61	579	589
Grp Sat Flow(s),veh/h/ln	1739	1702	1754	1739	1702	1841	1711	1735	1560	1753	1777	1805
Q Serve(g_s), s	9.3	34.5	34.8	28.6	84.3	84.8	16.3	33.9	0.0	7.6	47.4	47.4
Cycle Q Clear(g_c), s	9.3	34.5	34.8	28.6	84.3	84.8	16.3	33.9	0.0	7.6	47.4	47.4
Prop In Lane	1.00		0.37	1.00		0.09	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	175	1454	749	249	1601	866	143	889		75	383	389
V/C Ratio(X)	0.48	0.80	0.80	0.92	0.89	0.90	0.90	0.67		0.81	1.51	1.51
Avail Cap(c_a), veh/h	175	1454	749	249	1601	866	170	889		174	383	389
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.91	0.91	0.91	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	82.8	11.7	11.7	93.0	53.2	53.3	99.9	73.5	0.0	104.4	86.3	86.3
Incr Delay (d2), s/veh	8.2	4.3	8.1	35.9	8.0	13.8	34.6	2.0	0.0	7.7	243.8	244.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	6.0	7.0	15.4	37.5	42.3	8.7	15.4	0.0	3.6	47.6	48.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	91.0	16.0	19.8	129.0	61.2	67.2	134.5	75.4	0.0	112.2	330.1	330.8
LnGrp LOS	F	B	B	F	E	E	F	E		F	F	F
Approach Vol, veh/h		1846			2433			723	A		1229	
Approach Delay, s/veh		20.6			69.5			85.9			319.6	
Approach LOS		C			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	29.0	110.5	16.6	63.9	38.5	101.0	25.5	55.0				
Change Period (Y+Rc), s	6.9	7.0	* 7.2	* 7.6	7.0	* 7	* 7.2	* 7.6				
Max Green Setting (Gmax), s	22.1	100.0	* 22	* 47	28.1	* 94	* 22	* 47				
Max Q Clear Time (g_c+I1), s	11.3	86.8	9.6	35.9	30.6	36.8	18.3	49.4				
Green Ext Time (p_c), s	0.1	10.6	0.0	2.9	0.0	19.5	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	106.2
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Arterial Level of Service: EB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
	II	45	22.0	15.3	37.3	0.20	19.5	D
Dale Mabry Hwy NB Ra	II	45	23.3	4.3	27.6	0.21	27.9	C
N Himes Ave	II	45	19.0	29.6	48.6	0.17	12.9	F
Twin Lakes Blvd	II	45	43.9	13.6	57.5	0.50	31.2	B
Orange Grove Dr	II	45	25.9	3.1	29.0	0.25	30.9	B
N Armenia Ave	II	45	29.7	28.1	57.8	0.30	18.7	D
N Boulevard	II	45	79.8	80.8	160.6	1.00	22.4	C
Florida Ave	II	40	47.3	81.9	129.2	0.51	14.2	E
I-275 SB Ramps	II	40	21.9	17.2	39.1	0.19	17.5	D
I-275 NB Ramps	II	40	21.3	14.5	35.8	0.19	18.7	D
Nebraska Ave	II	40	14.6	61.4	76.0	0.13	6.0	F
Total	II		348.7	349.8	698.5	3.65	18.8	D

Arterial Level of Service: WB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Nebraska Ave	II	40	27.0	68.8	95.8	0.25	9.2	F
I-275 NB Ramps	II	40	14.6	8.3	22.9	0.13	19.9	D
I-275 SB Ramps	II	40	21.3	49.0	70.3	0.19	9.5	F
Florida Ave	II	40	21.9	260.4	282.3	0.19	2.4	F
N Boulevard	II	40	47.3	120.6	167.9	0.51	10.9	F
N Armenia Ave	II	45	79.8	4.4	84.2	1.00	42.6	A
Orange Grove Dr	II	45	29.7	21.6	51.3	0.30	21.0	D
Mossvale Ln	II	45	25.9	7.2	33.1	0.25	27.1	C
N Himes Ave	II	45	43.9	6.6	50.5	0.50	35.5	A
Dale Mabry Hwy NB Ra	II	45	19.0	3.8	22.8	0.17	27.5	C
Dale Mabry Hwy SB Ra	II	45	23.3	19.7	43.0	0.21	17.9	D
Total	II		353.7	570.4	924.1	3.69	14.4	E

HCM 6th Signalized Intersection Summary
 1: Busch Blvd & Dale Mabry Hwy SB Ramps

2020 No Build - PM

04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	206	1663	0	0	2120	0	0	4	14	328	4	31
Future Volume (veh/h)	206	1663	0	0	2120	0	0	4	14	328	4	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1885	1885	1856	1856	0	1900	1900	1900	1870	1900	1796
Adj Flow Rate, veh/h	212	1714	0	0	2186	0	0	4	14	341	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	1	1	3	3	0	0	0	0	2	0	7
Cap, veh/h	200	2687	0	0	2194	0	0	38	32	392	0	
Arrive On Green	0.09	0.75	0.00	0.00	0.42	0.00	0.00	0.02	0.02	0.11	0.00	0.00
Sat Flow, veh/h	1767	3676	0	0	3711	0	0	1900	1610	3563	0	1522
Grp Volume(v), veh/h	212	1714	0	0	2186	0	0	4	14	341	0	0
Grp Sat Flow(s),veh/h/ln	1767	1791	0	0	1763	0	0	1900	1610	1781	0	1522
Q Serve(g_s), s	16.2	41.3	0.0	0.0	111.3	0.0	0.0	0.4	1.5	17.0	0.0	0.0
Cycle Q Clear(g_c), s	16.2	41.3	0.0	0.0	111.3	0.0	0.0	0.4	1.5	17.0	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.00	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	200	2687	0	0	2194	0	0	38	32	392	0	
V/C Ratio(X)	1.06	0.64	0.00	0.00	1.00	0.00	0.00	0.11	0.44	0.87	0.00	
Avail Cap(c_a), veh/h	200	2687	0	0	2194	0	0	70	59	566	0	
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	70.1	10.8	0.0	0.0	52.3	0.0	0.0	86.7	87.2	78.8	0.0	0.0
Incr Delay (d2), s/veh	80.9	1.2	0.0	0.0	18.4	0.0	0.0	1.2	9.2	9.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.7	15.1	0.0	0.0	55.7	0.0	0.0	0.2	0.7	8.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	151.0	12.0	0.0	0.0	70.7	0.0	0.0	87.9	96.5	88.6	0.0	0.0
LnGrp LOS	F	B	A	A	E	A	A	F	F	F	A	
Approach Vol, veh/h		1926			2186			18			341	A
Approach Delay, s/veh		27.3			70.7			94.6			88.6	
Approach LOS		C			E			F			F	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	23.0	118.8		12.0		141.8		26.2				
Change Period (Y+Rc), s	6.8	6.8		* 8.4		6.8		6.4				
Max Green Setting (Gmax), s	16.2	100.2		* 6.6		123.2		28.6				
Max Q Clear Time (g_c+I1), s	18.2	113.3		3.5		43.3		19.0				
Green Ext Time (p_c), s	0.0	0.0		0.0		35.5		0.9				

Intersection Summary

HCM 6th Ctrl Delay	53.4
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [SWR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 2: Busch Blvd & Dale Mabry Hwy NB Ramps

2020 No Build - PM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↶	↷	↷	↷	↶	↷
Traffic Volume (veh/h)	114	1891	2227	508	162	257
Future Volume (veh/h)	114	1891	2227	508	162	257
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1781	1885	1900	1856	1826	1885
Adj Flow Rate, veh/h	116	1930	2272	0	165	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	8	1	0	3	5	1
Cap, veh/h	212	3091	2879		208	
Arrive On Green	0.03	0.86	1.00	0.00	0.06	0.00
Sat Flow, veh/h	1697	3676	3705	1572	3374	1598
Grp Volume(v), veh/h	116	1930	2272	0	165	0
Grp Sat Flow(s),veh/h/ln	1697	1791	1805	1572	1687	1598
Q Serve(g_s), s	2.2	28.8	0.0	0.0	8.7	0.0
Cycle Q Clear(g_c), s	2.2	28.8	0.0	0.0	8.7	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	212	3091	2879		208	
V/C Ratio(X)	0.55	0.62	0.79		0.79	
Avail Cap(c_a), veh/h	308	3091	2879		435	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.16	0.00	1.00	0.00
Uniform Delay (d), s/veh	2.6	3.7	0.0	0.0	83.3	0.0
Incr Delay (d2), s/veh	2.2	1.0	0.4	0.0	6.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	7.3	0.1	0.0	4.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	4.8	4.6	0.4	0.0	90.1	0.0
LnGrp LOS	A	A	A		F	
Approach Vol, veh/h		2046	2272	A	165	A
Approach Delay, s/veh		4.6	0.4		90.1	
Approach LOS		A	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	11.8	150.3			162.1	17.9
Change Period (Y+Rc), s	6.8	6.8			6.8	6.8
Max Green Setting (Gmax), s	15.2	121.2			143.2	23.2
Max Q Clear Time (g_c+I1), s	4.2	2.0			30.8	10.7
Green Ext Time (p_c), s	0.2	76.4			52.2	0.4

Intersection Summary

HCM 6th Ctrl Delay	5.6
HCM 6th LOS	A

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 3: N Himes Ave & Busch Blvd






















2020 No Build - PM
 04/04/2018

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑↑	↑
Traffic Volume (veh/h)	1764	289	194	2266	469	251
Future Volume (veh/h)	1764	289	194	2266	469	251
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1885	1885	1856	1856	1900
Adj Flow Rate, veh/h	1819	298	200	2336	372	380
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	1	1	3	3	0
Cap, veh/h	2409	1083	255	2687	287	261
Arrive On Green	1.00	1.00	0.06	1.00	0.16	0.16
Sat Flow, veh/h	3647	1598	1795	3618	1767	1610
Grp Volume(v), veh/h	1819	298	200	2336	372	380
Grp Sat Flow(s),veh/h/ln	1777	1598	1795	1763	1767	1610
Q Serve(g_s), s	0.0	0.0	6.1	0.0	29.2	29.2
Cycle Q Clear(g_c), s	0.0	0.0	6.1	0.0	29.2	29.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2409	1083	255	2687	287	261
V/C Ratio(X)	0.75	0.28	0.79	0.87	1.30	1.45
Avail Cap(c_a), veh/h	2409	1083	333	2687	287	261
HCM Platoon Ratio	2.00	2.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.72	0.72	0.42	0.42	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	9.0	0.0	75.4	75.4
Incr Delay (d2), s/veh	1.6	0.5	3.5	1.8	157.3	224.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	15.0	2.4	0.7	25.8	40.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.6	0.5	12.5	1.8	232.7	300.1
LnGrp LOS	A	A	B	A	F	F
Approach Vol, veh/h	2117			2536	752	
Approach Delay, s/veh	1.5			2.7	266.7	
Approach LOS	A			A	F	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		144.0		36.0	15.2	128.8
Change Period (Y+Rc), s		6.8		* 6.8	6.8	6.8
Max Green Setting (Gmax), s		137.2		* 29	16.2	114.2
Max Q Clear Time (g_c+I1), s		2.0		31.2	8.1	2.0
Green Ext Time (p_c), s		87.5		0.0	0.2	53.6
Intersection Summary						
HCM 6th Ctrl Delay			38.9			
HCM 6th LOS			D			
Notes						
User approved volume balancing among the lanes for turning movement.						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

HCM 6th Signalized Intersection Summary
 4: Twin Lakes Blvd/Mossvale Ln & Busch Blvd

2020 No Build - PM

04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1936	74	76	2225	1	234	0	281	0	0	1
Future Volume (veh/h)	5	1936	74	76	2225	1	234	0	281	0	0	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1900	1885	1870	1870	1885	0	1900	1900	1900	1900
Adj Flow Rate, veh/h	5	1976	76	78	2270	1	239	0	287	0	0	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	2	0	1	2	2	1	0	0	0	0	0
Cap, veh/h	151	2355	1067	95	2750	1	229	0	0	0	0	3
Arrive On Green	1.00	1.00	1.00	0.07	1.00	1.00	0.13	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	167	3554	1610	1795	3645	2	1795	239		0	0	1610
Grp Volume(v), veh/h	5	1976	76	78	1106	1165	239	149.3		0	0	1
Grp Sat Flow(s),veh/h/ln	167	1777	1610	1795	1777	1870	1795	F		0	0	1610
Q Serve(g_s), s	0.0	0.0	0.0	7.7	0.0	0.0	23.0			0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.0	0.0	0.0	7.7	0.0	0.0	23.0			0.0	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00			0.00		1.00
Lane Grp Cap(c), veh/h	151	2355	1067	95	1341	1411	229			0	0	3
V/C Ratio(X)	0.03	0.84	0.07	0.82	0.83	0.83	1.04			0.00	0.00	0.38
Avail Cap(c_a), veh/h	151	2355	1067	110	1341	1411	229			0	0	81
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33	1.00			1.00	1.00	1.00
Upstream Filter(I)	0.49	0.49	0.49	0.29	0.29	0.29	1.00			0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	82.8	0.0	0.0	78.5			0.0	0.0	89.8
Incr Delay (d2), s/veh	0.2	1.9	0.1	12.9	1.8	1.7	70.8			0.0	0.0	72.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.6	0.0	3.8	0.7	0.7	15.2			0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.2	1.9	0.1	95.7	1.8	1.7	149.3			0.0	0.0	162.5
LnGrp LOS	A	A	A	F	A	A	F			A	A	F
Approach Vol, veh/h		2057			2349							1
Approach Delay, s/veh		1.8			4.9							162.5
Approach LOS		A			A							F
Timer - Assigned Phs	1	2	3	4		6						
Phs Duration (G+Y+Rc), s	16.5	126.3	30.0	7.2		142.8						
Change Period (Y+Rc), s	* 7	* 7	7.0	6.9		* 7						
Max Green Setting (Gmax), s	* 11	* 1.1E2	23.0	9.1		* 1.3E2						
Max Q Clear Time (g_c+I1), s	9.7	2.0	25.0	2.1		2.0						
Green Ext Time (p_c), s	0.0	56.8	0.0	0.0		83.0						
Intersection Summary												
HCM 6th Ctrl Delay				11.0								
HCM 6th LOS				B								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
5: Busch Blvd & Orange Grove Dr

2020 No Build - PM
04/04/2018



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations	↘	↗	↗	↘	↘	↘
Traffic Volume (veh/h)	200	2017	2112	79	64	219
Future Volume (veh/h)	200	2017	2112	79	64	219
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1870	1856	1900	1900	1900
Adj Flow Rate, veh/h	215	2169	2271	85	69	235
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	3	0	0	0
Cap, veh/h	234	2977	2669	1219	153	136
Arrive On Green	0.09	1.00	1.00	1.00	0.08	0.08
Sat Flow, veh/h	1810	3647	3618	1610	1810	1610
Grp Volume(v), veh/h	215	2169	2271	85	69	235
Grp Sat Flow(s),veh/h/ln	1810	1777	1763	1610	1810	1610
Q Serve(g_s), s	5.2	0.0	0.0	0.0	6.5	15.2
Cycle Q Clear(g_c), s	5.2	0.0	0.0	0.0	6.5	15.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	234	2977	2669	1219	153	136
V/C Ratio(X)	0.92	0.73	0.85	0.07	0.45	1.73
Avail Cap(c_a), veh/h	410	2977	2669	1219	153	136
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.44	0.44	0.23	0.23	1.00	1.00
Uniform Delay (d), s/veh	17.5	0.0	0.0	0.0	78.4	82.4
Incr Delay (d2), s/veh	7.9	0.7	0.9	0.0	2.1	356.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.8	0.3	0.3	0.0	3.2	19.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	25.5	0.7	0.9	0.0	80.5	439.0
LnGrp LOS	C	A	A	A	F	F
Approach Vol, veh/h		2384	2356		304	
Approach Delay, s/veh		2.9	0.8		357.6	
Approach LOS		A	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	14.5	143.5			158.0	22.0
Change Period (Y+Rc), s	6.8	* 7.2			* 7.2	6.8
Max Green Setting (Gmax), s	25.2	* 1.2E2			* 1.5E2	15.2
Max Q Clear Time (g_c+I1), s	7.2	2.0			2.0	17.2
Green Ext Time (p_c), s	0.5	77.7			77.8	0.0

Intersection Summary




























HCM 6th Ctrl Delay	23.3
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
6: N Armenia Ave & Busch Blvd


























2020 No Build - PM
04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	186	1726	169	157	1620	32	299	452	168	78	268	272
Future Volume (veh/h)	186	1726	169	157	1620	32	299	452	168	78	268	272
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1870	1856	1856	1885	1856	1841	1870	1885	1900
Adj Flow Rate, veh/h	190	1761	172	160	1653	33	305	461	171	80	273	278
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	1	2	3	3	1	3	4	2	1	0
Cap, veh/h	197	1852	833	157	1764	35	289	733	324	195	577	259
Arrive On Green	0.22	1.00	1.00	0.09	0.50	0.50	0.09	0.21	0.21	0.05	0.16	0.16
Sat Flow, veh/h	1781	3554	1598	1781	3535	70	1795	3526	1560	1781	3582	1610
Grp Volume(v), veh/h	190	1761	172	160	823	863	305	461	171	80	273	278
Grp Sat Flow(s),veh/h/ln	1781	1777	1598	1781	1763	1843	1795	1763	1560	1781	1791	1610
Q Serve(g_s), s	19.0	0.0	0.0	15.9	78.9	79.5	17.0	21.4	14.1	6.7	12.5	29.0
Cycle Q Clear(g_c), s	19.0	0.0	0.0	15.9	78.9	79.5	17.0	21.4	14.1	6.7	12.5	29.0
Prop In Lane	1.00		1.00	1.00		0.04	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	197	1852	833	157	879	919	289	733	324	195	577	259
V/C Ratio(X)	0.96	0.95	0.21	1.02	0.94	0.94	1.06	0.63	0.53	0.41	0.47	1.07
Avail Cap(c_a), veh/h	197	1852	833	157	879	919	289	733	324	216	577	259
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.63	0.63	0.63	0.25	0.25	0.25	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.8	0.0	0.0	82.1	42.4	42.5	64.5	64.9	40.9	59.5	68.6	75.5
Incr Delay (d2), s/veh	41.3	8.6	0.4	40.2	6.1	6.2	68.3	1.7	1.6	1.4	0.6	76.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.9	2.2	0.1	9.0	34.7	36.5	10.6	9.8	5.7	3.1	5.8	17.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	111.1	8.6	0.4	122.2	48.5	48.7	132.9	66.7	42.5	60.9	69.2	151.7
LnGrp LOS	F	A	A	F	D	D	F	E	D	E	E	F
Approach Vol, veh/h		2123			1846			937			631	
Approach Delay, s/veh		17.1			55.0			83.8			104.5	
Approach LOS		B			D			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	26.0	95.9	14.6	43.5	22.0	99.9	23.0	35.1				
Change Period (Y+Rc), s	* 6.1	* 6.1	6.0	6.1	* 6.1	* 6.1	6.0	6.1				
Max Green Setting (Gmax), s	* 20	* 90	10.6	35.4	* 16	* 94	17.0	29.0				
Max Q Clear Time (g_c+I1), s	21.0	81.5	8.7	23.4	17.9	2.0	19.0	31.0				
Green Ext Time (p_c), s	0.0	6.1	0.0	2.8	0.0	26.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			51.0									
HCM 6th LOS			D									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
7: N Boulevard & Busch Blvd
























2020 No Build - PM

04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Traffic Volume (veh/h)	68	1712	97	94	1771	66	106	339	86	103	216	39
Future Volume (veh/h)	68	1712	97	94	1771	66	106	339	86	103	216	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1856	1856	1870	1900	1900	1856	1870	1900
Adj Flow Rate, veh/h	70	1765	100	97	1826	68	109	349	89	106	223	40
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	1	3	3	2	0	0	3	2	0
Cap, veh/h	124	1969	111	112	1971	73	124	361	407	119	351	414
Arrive On Green	0.07	0.58	0.58	0.06	0.57	0.57	0.07	0.19	0.19	0.07	0.19	0.19
Sat Flow, veh/h	1781	3420	192	1795	3467	128	1781	1900	1610	1767	1870	1610
Grp Volume(v), veh/h	70	910	955	97	923	971	109	349	89	106	223	40
Grp Sat Flow(s),veh/h/ln	1781	1777	1836	1795	1763	1832	1781	1900	1610	1767	1870	1610
Q Serve(g_s), s	8.4	98.0	101.2	11.8	104.4	106.9	13.3	40.1	9.6	13.1	24.2	4.2
Cycle Q Clear(g_c), s	8.4	98.0	101.2	11.8	104.4	106.9	13.3	40.1	9.6	13.1	24.2	4.2
Prop In Lane	1.00		0.10	1.00		0.07	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	124	1023	1057	112	1002	1042	124	361	407	119	351	414
V/C Ratio(X)	0.57	0.89	0.90	0.86	0.92	0.93	0.88	0.97	0.22	0.89	0.64	0.10
Avail Cap(c_a), veh/h	124	1023	1057	120	1002	1042	151	361	407	119	351	414
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.43	0.43	0.43	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	99.1	40.6	41.3	102.2	43.0	43.5	101.4	88.4	65.1	101.8	82.5	62.3
Incr Delay (d2), s/veh	7.8	5.5	6.0	40.0	14.8	15.6	32.1	38.5	0.3	49.5	3.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	43.3	46.3	6.8	48.7	52.0	7.4	23.8	4.1	7.7	12.2	1.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	106.9	46.1	47.3	142.2	57.8	59.1	133.5	126.9	65.3	151.3	86.2	62.4
LnGrp LOS	F	D	D	F	E	E	F	F	E	F	F	E
Approach Vol, veh/h		1935			1991			547			369	
Approach Delay, s/veh		48.9			62.6			118.2			102.3	
Approach LOS		D			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.0	131.0	20.6	47.4	19.5	132.5	21.2	46.8				
Change Period (Y+Rc), s	* 5.7	5.9	* 5.8	* 5.6	* 5.7	5.9	* 5.8	* 5.6				
Max Green Setting (Gmax), s	* 15	125.1	* 15	* 42	* 15	125.7	* 19	* 38				
Max Q Clear Time (g_c+I1), s	10.4	108.9	15.1	42.1	13.8	103.2	15.3	26.2				
Green Ext Time (p_c), s	0.0	11.8	0.0	0.0	0.0	14.3	0.0	1.0				
Intersection Summary												
HCM 6th Ctrl Delay			66.4									
HCM 6th LOS			E									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
8: Florida Ave & Busch Blvd

2020 No Build - PM
04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	125	1538	238	269	1735	270	176	1082	419	328	693	126
Future Volume (veh/h)	125	1538	238	269	1735	270	176	1082	419	328	693	126
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1856	1885	1870	1841	1841	1885	1870	1870
Adj Flow Rate, veh/h	128	1569	0	274	1770	276	180	1104	428	335	707	129
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	3	1	2	4	4	1	2	2
Cap, veh/h	254	1884		254	1301	589	196	1270	394	370	747	136
Arrive On Green	0.14	0.37	0.00	0.05	0.12	0.12	0.11	0.25	0.25	0.11	0.25	0.25
Sat Flow, veh/h	1781	5274	0	1781	3526	1598	1781	5025	1560	3483	3001	547
Grp Volume(v), veh/h	128	1569	0	274	1770	276	180	1104	428	335	418	418
Grp Sat Flow(s),veh/h/ln	1781	1702	0	1781	1763	1598	1781	1675	1560	1742	1777	1772
Q Serve(g_s), s	14.6	61.6	0.0	31.4	81.2	35.4	22.0	46.3	55.6	20.9	50.9	51.0
Cycle Q Clear(g_c), s	14.6	61.6	0.0	31.4	81.2	35.4	22.0	46.3	55.6	20.9	50.9	51.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		0.31
Lane Grp Cap(c), veh/h	254	1884		254	1301	589	196	1270	394	370	442	441
V/C Ratio(X)	0.50	0.83		1.08	1.36	0.47	0.92	0.87	1.09	0.91	0.95	0.95
Avail Cap(c_a), veh/h	254	1884		254	1301	589	223	1270	394	421	442	441
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.44	0.44	0.44	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	87.1	63.2	0.0	104.8	96.6	76.5	97.0	78.7	82.2	97.3	81.1	81.2
Incr Delay (d2), s/veh	7.0	4.5	0.0	60.1	164.7	1.2	36.5	6.7	70.3	21.3	29.4	29.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.3	27.4	0.0	19.5	68.7	15.6	12.2	20.6	29.9	10.6	26.8	26.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	94.1	67.7	0.0	164.9	261.3	77.7	133.5	85.4	152.5	118.6	110.5	110.8
LnGrp LOS	F	E		F	F	E	F	F	F	F	F	F
Approach Vol, veh/h		1697	A		2320			1712			1171	
Approach Delay, s/veh		69.7			228.1			107.3			112.9	
Approach LOS		E			F			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	38.0	88.3	30.7	63.0	38.0	88.3	31.6	62.2				
Change Period (Y+Rc), s	* 6.6	* 7.1	7.4	7.4	* 6.6	* 7.1	7.4	7.4				
Max Green Setting (Gmax), s	* 31	* 78	26.6	55.6	* 31	* 78	27.6	54.6				
Max Q Clear Time (g_c+I1), s	16.6	83.2	22.9	57.6	33.4	63.6	24.0	53.0				
Green Ext Time (p_c), s	0.2	0.0	0.4	0.0	0.0	8.9	0.1	0.8				

Intersection Summary

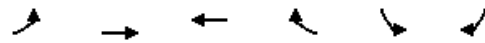
HCM 6th Ctrl Delay	139.6
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 9: Busch Blvd & I-275 SB Ramps

2020 No Build - PM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↰	↑↑↑	↑↑↑	↱	↰	↱
Traffic Volume (veh/h)	348	1937	1680	597	288	594
Future Volume (veh/h)	348	1937	1680	597	288	594
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1856	1885	1826	1841
Adj Flow Rate, veh/h	370	2061	1787	0	306	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	3	1	5	4
Cap, veh/h	389	3856	2562		324	
Arrive On Green	0.22	0.76	0.67	0.00	0.19	0.00
Sat Flow, veh/h	1767	5274	5233	1598	1739	1560
Grp Volume(v), veh/h	370	2061	1787	0	306	0
Grp Sat Flow(s),veh/h/ln	1767	1702	1689	1598	1739	1560
Q Serve(g_s), s	45.4	36.4	47.9	0.0	38.2	0.0
Cycle Q Clear(g_c), s	45.4	36.4	47.9	0.0	38.2	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	389	3856	2562		324	
V/C Ratio(X)	0.95	0.53	0.70		0.95	
Avail Cap(c_a), veh/h	414	3856	2562		360	
HCM Platoon Ratio	1.00	1.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.21	0.21	0.21	0.00	1.00	0.00
Uniform Delay (d), s/veh	84.7	11.0	25.6	0.0	88.4	0.0
Incr Delay (d2), s/veh	11.3	0.1	0.3	0.0	32.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	22.0	13.4	17.5	0.0	20.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	95.9	11.2	26.0	0.0	121.2	0.0
LnGrp LOS	F	B	C		F	
Approach Vol, veh/h		2431	1787	A	306	A
Approach Delay, s/veh		24.1	26.0		121.2	
Approach LOS		C	C		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	54.9	117.8			172.7	47.3
Change Period (Y+Rc), s	6.5	6.5			6.5	6.4
Max Green Setting (Gmax), s	51.5	103.5			161.5	45.6
Max Q Clear Time (g_c+I1), s	47.4	49.9			38.4	40.2
Green Ext Time (p_c), s	0.9	20.9			34.0	0.7

Intersection Summary

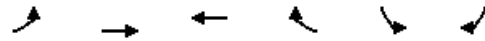
HCM 6th Ctrl Delay	31.4
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 10: Busch Blvd & I-275 NB Ramps

2020 No Build - PM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑↑	↑↑↑	↗	↖↗	↖↗
Traffic Volume (veh/h)	519	1706	1933	378	233	344
Future Volume (veh/h)	519	1706	1933	378	233	344
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1870	1856	1841	1856
Adj Flow Rate, veh/h	552	1815	2056	0	248	366
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	2	3	4	3
Cap, veh/h	614	4120	2193		451	367
Arrive On Green	0.70	1.00	0.43	0.00	0.13	0.13
Sat Flow, veh/h	1767	5274	5274	1572	3401	2768
Grp Volume(v), veh/h	552	1815	2056	0	248	366
Grp Sat Flow(s),veh/h/ln	1767	1702	1702	1572	1700	1384
Q Serve(g_s), s	55.8	0.0	84.6	0.0	15.0	29.1
Cycle Q Clear(g_c), s	55.8	0.0	84.6	0.0	15.0	29.1
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	614	4120	2193		451	367
V/C Ratio(X)	0.90	0.44	0.94		0.55	1.00
Avail Cap(c_a), veh/h	614	4120	2193		451	367
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.78	0.78	0.09	0.00	1.00	1.00
Uniform Delay (d), s/veh	30.3	0.0	59.9	0.0	89.2	95.3
Incr Delay (d2), s/veh	13.8	0.3	1.1	0.0	1.8	45.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	19.9	0.1	36.4	0.0	6.8	13.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.2	0.3	61.0	0.0	91.1	141.3
LnGrp LOS	D	A	E		F	F
Approach Vol, veh/h		2367	2056	A	614	
Approach Delay, s/veh		10.5	61.0		121.0	
Approach LOS		B	E		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	83.0	101.0			184.0	36.0
Change Period (Y+Rc), s	6.5	6.5			6.5	6.8
Max Green Setting (Gmax), s	76.5	94.5			177.5	29.2
Max Q Clear Time (g_c+I1), s	57.8	86.6			2.0	31.1
Green Ext Time (p_c), s	4.2	6.6			25.1	0.0

Intersection Summary

HCM 6th Ctrl Delay	44.6
HCM 6th LOS	D

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 11: Nebraska Ave & Busch Blvd

2020 No Build - PM
 04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	169	1619	151	180	2008	99	119	811	223	139	685	184
Future Volume (veh/h)	169	1619	151	180	2008	99	119	811	223	139	685	184
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1870	1870	1826	1870	1870	1796	1826	1841	1841	1870	1870
Adj Flow Rate, veh/h	180	1722	161	191	2136	105	127	863	0	148	729	196
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	2	2	5	2	2	7	5	4	4	2	2
Cap, veh/h	159	1974	184	183	2139	105	123	915		150	768	206
Arrive On Green	0.09	0.42	0.42	0.11	0.43	0.43	0.07	0.26	0.00	0.09	0.28	0.28
Sat Flow, veh/h	1739	4752	443	1739	4987	244	1711	3469	1560	1753	2769	744
Grp Volume(v), veh/h	180	1232	651	191	1455	786	127	863	0	148	468	457
Grp Sat Flow(s),veh/h/ln	1739	1702	1791	1739	1702	1826	1711	1735	1560	1753	1777	1736
Q Serve(g_s), s	20.1	73.0	73.4	23.1	93.8	94.4	15.8	53.6	0.0	18.6	56.8	56.8
Cycle Q Clear(g_c), s	20.1	73.0	73.4	23.1	93.8	94.4	15.8	53.6	0.0	18.6	56.8	56.8
Prop In Lane	1.00		0.25	1.00		0.13	1.00		1.00	1.00		0.43
Lane Grp Cap(c), veh/h	159	1414	744	183	1460	784	123	915		150	493	482
V/C Ratio(X)	1.13	0.87	0.87	1.05	1.00	1.00	1.03	0.94		0.99	0.95	0.95
Avail Cap(c_a), veh/h	159	1414	744	183	1460	784	123	952		150	512	500
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	99.9	58.9	59.1	98.4	62.6	62.8	102.1	79.4	0.0	100.5	78.0	78.0
Incr Delay (d2), s/veh	107.6	6.9	12.3	79.3	22.7	32.9	90.5	16.8	0.0	69.6	27.0	27.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.9	32.6	35.7	14.5	44.7	50.5	10.1	26.0	0.0	11.4	29.5	28.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	207.6	65.8	71.4	177.7	85.4	95.7	192.6	96.2	0.0	170.1	105.0	105.4
LnGrp LOS	F	E	E	F	F	F	F	F		F	F	F
Approach Vol, veh/h		2063			2432			990	A		1073	
Approach Delay, s/veh		79.9			96.0			108.5			114.1	
Approach LOS		E			F			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	27.0	101.4	26.0	65.6	30.0	98.4	23.0	68.6				
Change Period (Y+Rc), s	6.9	7.0	* 7.2	* 7.6	6.9	7.0	* 7.2	* 7.6				
Max Green Setting (Gmax), s	20.1	92.0	* 19	* 60	23.1	89.0	* 16	* 63				
Max Q Clear Time (g_c+I1), s	22.1	96.4	20.6	55.6	25.1	75.4	17.8	58.8				
Green Ext Time (p_c), s	0.0	0.0	0.0	2.3	0.0	9.7	0.0	2.2				

Intersection Summary

HCM 6th Ctrl Delay	95.8
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Arterial Level of Service: EB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
	II	45	22.0	14.8	36.8	0.20	19.8	D
Dale Mabry Hwy NB Ra	II	45	23.3	5.1	28.4	0.21	27.1	C
N Himes Ave	II	45	19.0	20.5	39.5	0.17	15.9	E
Twin Lakes Blvd	II	45	43.9	20.4	64.3	0.50	27.9	C
Orange Grove Dr	II	45	25.9	13.4	39.3	0.25	22.8	C
N Armenia Ave	II	45	29.7	40.1	69.8	0.30	15.5	E
N Boulevard	II	45	79.8	50.5	130.3	1.00	27.6	C
Florida Ave	II	40	47.3	88.8	136.1	0.51	13.5	E
I-275 SB Ramps	II	40	21.9	35.7	57.6	0.19	11.9	F
I-275 NB Ramps	II	40	21.3	4.4	25.7	0.19	26.0	C
Nebraska Ave	II	40	14.6	69.0	83.6	0.13	5.5	F
Total	II		348.7	362.7	711.4	3.65	18.4	D





















Arterial Level of Service: WB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Nebraska Ave	II	40	27.0	97.7	124.7	0.25	7.1	F
I-275 NB Ramps	II	40	14.6	88.0	102.6	0.13	4.4	F
I-275 SB Ramps	II	40	21.3	48.6	69.9	0.19	9.6	F
Florida Ave	II	40	21.9	236.0	257.9	0.19	2.7	F
N Boulevard	II	40	47.3	59.0	106.3	0.51	17.2	D
N Armenia Ave	II	45	79.8	51.9	131.7	1.00	27.3	C
Orange Grove Dr	II	45	29.7	30.5	60.2	0.30	17.9	D
Mossvale Ln	II	45	25.9	12.3	38.2	0.25	23.5	C
N Himes Ave	II	45	43.9	6.1	50.0	0.50	35.9	A
Dale Mabry Hwy NB Ra	II	45	19.0	18.4	37.4	0.17	16.8	E
Dale Mabry Hwy SB Ra	II	45	23.3	77.3	100.6	0.21	7.7	F
Total	II		353.7	725.8	1079.5	3.69	12.3	F

HCM 6th Signalized Intersection Summary
 1: Busch Blvd & Dale Mabry Hwy SB Ramps

2030 No Build - AM

04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	213	2046	1	8	1328	0	0	0	0	395	6	22
Future Volume (veh/h)	213	2046	1	8	1328	0	0	0	0	395	6	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1885	1885	1856	1856	0	1900	1900	1900	1870	1900	1796
Adj Flow Rate, veh/h	220	2109	1	8	1369	0	0	0	0	411	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	1	1	3	3	0	0	0	0	2	0	7
Cap, veh/h	295	3001	1	25	2500	0	0	1	1	405	0	
Arrive On Green	0.04	0.82	0.82	0.49	0.49	0.00	0.00	0.00	0.00	0.11	0.00	0.00
Sat Flow, veh/h	1767	3674	2	7	3473	0	0	1900	1610	3563	0	1522
Grp Volume(v), veh/h	220	1028	1082	729	648	0	0	0	0	411	0	0
Grp Sat Flow(s),veh/h/ln	1767	1791	1885	1792	1604	0	0	1900	1610	1781	0	1522
Q Serve(g_s), s	5.6	46.9	46.9	0.0	53.3	0.0	0.0	0.0	0.0	21.6	0.0	0.0
Cycle Q Clear(g_c), s	5.6	46.9	46.9	51.2	53.3	0.0	0.0	0.0	0.0	21.6	0.0	0.0
Prop In Lane	1.00		0.00	0.01		0.00	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	295	1463	1540	1341	1183	0	0	1	1	405	0	
V/C Ratio(X)	0.75	0.70	0.70	0.54	0.55	0.00	0.00	0.00	0.00	1.01	0.00	
Avail Cap(c_a), veh/h	629	1463	1540	1341	1183	0	0	76	64	405	0	
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	22.9	7.5	7.5	25.6	26.1	0.0	0.0	0.0	0.0	84.2	0.0	0.0
Incr Delay (d2), s/veh	3.8	2.8	2.7	1.6	1.8	0.0	0.0	0.0	0.0	48.5	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.2	15.9	16.7	24.6	22.2	0.0	0.0	0.0	0.0	12.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	26.7	10.3	10.2	27.1	27.9	0.0	0.0	0.0	0.0	132.7	0.0	0.0
LnGrp LOS	C	B	B	C	C	A	A	A	A	F	A	
Approach Vol, veh/h		2330			1377			0			411	A
Approach Delay, s/veh		11.8			27.5			0.0			132.7	
Approach LOS		B			C						F	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	15.0	147.0		0.0		162.0		28.0				
Change Period (Y+Rc), s	6.8	6.8		* 8.4		6.8		6.4				
Max Green Setting (Gmax), s	44.2	88.2		* 7.6		139.2		21.6				
Max Q Clear Time (g_c+I1), s	7.6	55.3		0.0		48.9		23.6				
Green Ext Time (p_c), s	0.6	16.4		0.0		57.6		0.0				

Intersection Summary

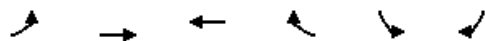
HCM 6th Ctrl Delay	29.1
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [SWR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
2: Busch Blvd & Dale Mabry Hwy NB Ramps

2030 No Build - AM
04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↕↕	↕↕	↕	↕↕	↕
Traffic Volume (veh/h)	39	2402	1595	370	126	160
Future Volume (veh/h)	39	2402	1595	370	126	160
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1781	1885	1900	1856	1826	1885
Adj Flow Rate, veh/h	40	2451	1628	0	129	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	8	1	0	3	5	1
Cap, veh/h	319	3148	2960		167	
Arrive On Green	0.02	0.88	1.00	0.00	0.05	0.00
Sat Flow, veh/h	1697	3676	3705	1572	3374	1598
Grp Volume(v), veh/h	40	2451	1628	0	129	0
Grp Sat Flow(s),veh/h/ln	1697	1791	1805	1572	1687	1598
Q Serve(g_s), s	0.7	49.9	0.0	0.0	7.2	0.0
Cycle Q Clear(g_c), s	0.7	49.9	0.0	0.0	7.2	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	319	3148	2960		167	
V/C Ratio(X)	0.13	0.78	0.55		0.77	
Avail Cap(c_a), veh/h	451	3148	2960		341	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.39	0.00	1.00	0.00
Uniform Delay (d), s/veh	2.1	4.4	0.0	0.0	89.2	0.0
Incr Delay (d2), s/veh	0.2	2.0	0.3	0.0	7.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	12.0	0.1	0.0	3.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	2.3	6.4	0.3	0.0	96.5	0.0
LnGrp LOS	A	A	A		F	
Approach Vol, veh/h		2491	1628	A	129	A
Approach Delay, s/veh		6.3	0.3		96.5	
Approach LOS		A	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	11.2	162.6			173.8	16.2
Change Period (Y+Rc), s	6.8	6.8			6.8	6.8
Max Green Setting (Gmax), s	19.2	131.2			157.2	19.2
Max Q Clear Time (g_c+I1), s	2.7	2.0			51.9	9.2
Green Ext Time (p_c), s	0.1	35.6			80.0	0.3

Intersection Summary

HCM 6th Ctrl Delay	6.8
HCM 6th LOS	A

Notes

User approved pedestrian interval to be less than phase max green.
Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 3: N Himes Ave & Busch Blvd

2030 No Build - AM
 04/04/2018

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑↑	↑
Traffic Volume (veh/h)	1855	673	444	1580	385	120
Future Volume (veh/h)	1855	673	444	1580	385	120
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1885	1885	1856	1856	1900
Adj Flow Rate, veh/h	1912	694	458	1629	260	270
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	1	1	3	3	0
Cap, veh/h	2229	1002	445	2991	141	129
Arrive On Green	1.00	1.00	0.25	1.00	0.08	0.08
Sat Flow, veh/h	3647	1598	1795	3618	1767	1610
Grp Volume(v), veh/h	1912	694	458	1629	260	270
Grp Sat Flow(s),veh/h/ln	1777	1598	1795	1763	1767	1610
Q Serve(g_s), s	0.0	0.0	35.2	0.0	15.2	15.2
Cycle Q Clear(g_c), s	0.0	0.0	35.2	0.0	15.2	15.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2229	1002	445	2991	141	129
V/C Ratio(X)	0.86	0.69	1.03	0.54	1.84	2.10
Avail Cap(c_a), veh/h	2229	1002	445	2991	141	129
HCM Platoon Ratio	2.00	2.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.52	0.52	0.69	0.69	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	48.7	0.0	87.4	87.4
Incr Delay (d2), s/veh	2.4	2.1	43.0	0.5	403.7	518.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	37.2	25.2	0.2	22.8	31.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	2.4	2.1	91.7	0.5	491.1	606.0
LnGrp LOS	A	A	F	A	F	F
Approach Vol, veh/h	2606			2087	530	
Approach Delay, s/veh	2.3			20.5	549.6	
Approach LOS	A			C	F	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		168.0		22.0	42.0	126.0
Change Period (Y+Rc), s		6.8		* 6.8	6.8	6.8
Max Green Setting (Gmax), s		161.2		* 15	35.2	119.2
Max Q Clear Time (g_c+I1), s		2.0		17.2	37.2	2.0
Green Ext Time (p_c), s		36.6		0.0	0.0	74.9
Intersection Summary						
HCM 6th Ctrl Delay			65.1			
HCM 6th LOS			E			
Notes						
User approved volume balancing among the lanes for turning movement.						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

HCM 6th Signalized Intersection Summary
 4: Twin Lakes Blvd/Mossvale Ln & Busch Blvd

2030 No Build - AM

04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	1741	232	339	1939	0	85	0	123	2	0	0
Future Volume (veh/h)	2	1741	232	339	1939	0	85	0	123	2	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1900	1885	1870	1870	1885	0	1900	1900	1900	1900
Adj Flow Rate, veh/h	2	1777	237	346	1979	0	87	0	126	2	0	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	2	0	1	2	2	1	0	0	0	0	0
Cap, veh/h	215	2815	1275	170	3282	0	0	0	0	6	0	0
Arrive On Green	0.79	0.79	0.79	0.19	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	223	3554	1610	1795	3647	0		0		1809	0	0
Grp Volume(v), veh/h	2	1777	237	346	1979	0		0.0		2	0	0
Grp Sat Flow(s),veh/h/ln	223	1777	1610	1795	1777	0				1810	0	0
Q Serve(g_s), s	0.4	39.5	6.8	18.0	0.0	0.0				0.2	0.0	0.0
Cycle Q Clear(g_c), s	0.4	39.5	6.8	18.0	0.0	0.0				0.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	215	2815	1275	170	3282	0				6	0	0
V/C Ratio(X)	0.01	0.63	0.19	2.03	0.60	0.00				0.35	0.00	0.00
Avail Cap(c_a), veh/h	215	2815	1275	170	3282	0				125	0	0
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.39	0.39	0.39	0.30	0.30	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	4.1	8.2	4.8	77.0	0.0	0.0				94.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.4	0.1	471.6	0.2	0.0				32.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	13.4	2.3	29.8	0.1	0.0				0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.2	8.6	4.9	548.6	0.2	0.0				127.3	0.0	0.0
LnGrp LOS	A	A	A	F	A	A				F	A	A
Approach Vol, veh/h		2016			2325							2
Approach Delay, s/veh		8.2			81.8							127.3
Approach LOS		A			F							F
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	25.0	157.5		7.5		182.5						
Change Period (Y+Rc), s	* 7	* 7		6.9		* 7						
Max Green Setting (Gmax), s	* 18	* 1.2E2		13.1		* 1.4E2						
Max Q Clear Time (g_c+I1), s	20.0	41.5		2.2		2.0						
Green Ext Time (p_c), s	0.0	41.5		0.0		60.0						

Intersection Summary

HCM 6th Ctrl Delay	47.7
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
5: Busch Blvd & Orange Grove Dr

2030 No Build - AM
04/04/2018



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations	↵	↶↶	↶↶	↵	↵	↵
Traffic Volume (veh/h)	105	1761	1819	88	137	459
Future Volume (veh/h)	105	1761	1819	88	137	459
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1870	1856	1900	1900	1900
Adj Flow Rate, veh/h	113	1894	1956	95	147	494
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	3	0	0	0
Cap, veh/h	236	2690	2436	1112	307	273
Arrive On Green	0.06	1.00	1.00	1.00	0.17	0.17
Sat Flow, veh/h	1810	3647	3618	1610	1810	1610
Grp Volume(v), veh/h	113	1894	1956	95	147	494
Grp Sat Flow(s),veh/h/ln	1810	1777	1763	1610	1810	1610
Q Serve(g_s), s	3.5	0.0	0.0	0.0	14.0	32.2
Cycle Q Clear(g_c), s	3.5	0.0	0.0	0.0	14.0	32.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	236	2690	2436	1112	307	273
V/C Ratio(X)	0.48	0.70	0.80	0.09	0.48	1.81
Avail Cap(c_a), veh/h	412	2690	2436	1112	307	273
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.49	0.49	0.47	0.47	1.00	1.00
Uniform Delay (d), s/veh	7.1	0.0	0.0	0.0	71.3	78.9
Incr Delay (d2), s/veh	0.7	0.8	1.4	0.1	1.2	378.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.3	0.5	0.0	6.6	42.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.8	0.8	1.4	0.1	72.5	457.7
LnGrp LOS	A	A	A	A	E	F
Approach Vol, veh/h		2007	2051		641	
Approach Delay, s/veh		1.2	1.3		369.4	
Approach LOS		A	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	12.5	138.5			151.0	39.0
Change Period (Y+Rc), s	6.8	* 7.2			* 7.2	6.8
Max Green Setting (Gmax), s	24.2	* 1.1E2			* 1.4E2	32.2
Max Q Clear Time (g_c+I1), s	5.5	2.0			2.0	34.2
Green Ext Time (p_c), s	0.2	56.1			53.7	0.0

Intersection Summary

HCM 6th Ctrl Delay	51.5
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
6: N Armenia Ave & Busch Blvd


























2030 No Build - AM
04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	1510	311	230	1614	11	184	258	163	72	432	109
Future Volume (veh/h)	77	1510	311	230	1614	11	184	258	163	72	432	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1870	1856	1856	1885	1856	1841	1870	1885	1900
Adj Flow Rate, veh/h	79	1541	317	235	1647	11	188	263	166	73	441	111
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	1	2	3	3	1	3	4	2	1	0
Cap, veh/h	96	1681	756	329	2169	14	183	599	265	216	522	235
Arrive On Green	0.11	0.95	0.95	0.18	0.60	0.60	0.07	0.17	0.17	0.04	0.15	0.15
Sat Flow, veh/h	1781	3554	1598	1781	3590	24	1795	3526	1560	1781	3582	1610
Grp Volume(v), veh/h	79	1541	317	235	808	850	188	263	166	73	441	111
Grp Sat Flow(s),veh/h/ln	1781	1777	1598	1781	1763	1851	1795	1763	1560	1781	1791	1610
Q Serve(g_s), s	8.3	33.3	2.5	23.5	63.7	63.8	13.0	12.7	13.2	6.6	22.8	12.0
Cycle Q Clear(g_c), s	8.3	33.3	2.5	23.5	63.7	63.8	13.0	12.7	13.2	6.6	22.8	12.0
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	96	1681	756	329	1065	1118	183	599	265	216	522	235
V/C Ratio(X)	0.83	0.92	0.42	0.71	0.76	0.76	1.03	0.44	0.63	0.34	0.84	0.47
Avail Cap(c_a), veh/h	196	1681	756	329	1065	1118	183	777	344	258	790	355
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.66	0.66	0.66	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	83.9	3.6	1.6	72.7	27.5	27.5	71.4	70.7	35.9	65.1	79.0	74.4
Incr Delay (d2), s/veh	11.2	6.6	1.1	0.7	0.5	0.5	73.7	0.5	2.4	0.9	5.3	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	3.5	1.0	10.8	26.0	27.4	6.4	5.8	5.3	3.1	10.9	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	95.1	10.2	2.7	73.4	28.0	28.0	145.1	71.3	38.3	66.1	84.4	75.9
LnGrp LOS	F	B	A	E	C	C	F	E	D	E	F	E
Approach Vol, veh/h		1937			1893			617			625	
Approach Delay, s/veh		12.4			33.6			84.9			80.7	
Approach LOS		B			C			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.3	120.9	14.4	38.4	41.2	96.0	19.0	33.8				
Change Period (Y+Rc), s	* 6.1	* 6.1	6.0	6.1	* 6.1	* 6.1	6.0	6.1				
Max Green Setting (Gmax), s	* 21	* 90	13.0	41.9	* 21	* 90	13.0	41.9				
Max Q Clear Time (g_c+I1), s	10.3	65.8	8.6	15.2	25.5	35.3	15.0	24.8				
Green Ext Time (p_c), s	0.1	12.6	0.0	2.2	0.0	19.3	0.0	2.9				
Intersection Summary												
HCM 6th Ctrl Delay			37.6									
HCM 6th LOS			D									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
7: N Boulevard & Busch Blvd

2030 No Build - AM

04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Traffic Volume (veh/h)	57	1579	155	128	1722	120	64	213	51	165	500	32
Future Volume (veh/h)	57	1579	155	128	1722	120	64	213	51	165	500	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1856	1856	1870	1900	1900	1856	1870	1900
Adj Flow Rate, veh/h	59	1628	160	132	1775	124	66	220	53	170	515	33
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	1	3	3	2	0	0	3	2	0
Cap, veh/h	125	1568	152	126	1603	111	82	505	540	113	531	570
Arrive On Green	0.07	0.48	0.48	0.07	0.48	0.48	0.05	0.27	0.27	0.06	0.28	0.28
Sat Flow, veh/h	1781	3272	318	1795	3345	231	1781	1900	1610	1767	1870	1610
Grp Volume(v), veh/h	59	875	913	132	926	973	66	220	53	170	515	33
Grp Sat Flow(s),veh/h/ln	1781	1777	1813	1795	1763	1814	1781	1900	1610	1767	1870	1610
Q Serve(g_s), s	6.1	91.0	91.0	13.3	91.0	91.0	7.0	18.3	4.3	12.2	51.7	2.6
Cycle Q Clear(g_c), s	6.1	91.0	91.0	13.3	91.0	91.0	7.0	18.3	4.3	12.2	51.7	2.6
Prop In Lane	1.00		0.18	1.00		0.13	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	125	851	869	126	845	869	82	505	540	113	531	570
V/C Ratio(X)	0.47	1.03	1.05	1.05	1.10	1.12	0.81	0.44	0.10	1.50	0.97	0.06
Avail Cap(c_a), veh/h	125	851	869	126	845	869	114	544	574	113	536	574
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.58	0.58	0.58	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	85.0	49.5	49.5	88.4	49.5	49.5	89.8	57.9	43.4	88.9	67.2	40.5
Incr Delay (d2), s/veh	7.3	31.0	37.8	94.4	60.8	68.9	17.1	0.6	0.1	264.6	31.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.0	46.4	49.0	9.5	53.4	56.9	3.6	9.0	1.8	14.0	29.4	1.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	92.3	80.5	87.3	182.7	110.3	118.4	107.0	58.5	43.4	353.5	98.3	40.5
LnGrp LOS	F	F	F	F	F	F	F	E	D	F	F	D
Approach Vol, veh/h		1847			2031			339			718	
Approach Delay, s/veh		84.2			118.9			65.6			156.1	
Approach LOS		F			F			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.0	96.9	18.0	56.1	19.0	96.9	14.5	59.6				
Change Period (Y+Rc), s	* 5.7	5.9	* 5.8	* 5.6	* 5.7	5.9	* 5.8	* 5.6				
Max Green Setting (Gmax), s	* 13	87.1	* 12	* 54	* 13	87.1	* 12	* 54				
Max Q Clear Time (g_c+I1), s	8.1	93.0	14.2	20.3	15.3	93.0	9.0	53.7				
Green Ext Time (p_c), s	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.3				
Intersection Summary												
HCM 6th Ctrl Delay			107.7									
HCM 6th LOS			F									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
8: Florida Ave & Busch Blvd

2030 No Build - AM
04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	152	1271	372	290	1857	214	155	714	364	312	1174	57
Future Volume (veh/h)	152	1271	372	290	1857	214	155	714	364	312	1174	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1856	1885	1870	1841	1841	1885	1870	1870
Adj Flow Rate, veh/h	155	1297	0	296	1895	218	158	729	371	318	1198	58
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	3	1	2	4	4	1	2	2
Cap, veh/h	157	1904		206	1411	639	174	1412	438	352	982	47
Arrive On Green	0.09	0.37	0.00	0.04	0.13	0.13	0.10	0.28	0.28	0.10	0.28	0.28
Sat Flow, veh/h	1781	5274	0	1781	3526	1598	1781	5025	1560	3483	3450	167
Grp Volume(v), veh/h	155	1297	0	296	1895	218	158	729	371	318	617	639
Grp Sat Flow(s),veh/h/ln	1781	1702	0	1781	1763	1598	1781	1675	1560	1742	1777	1840
Q Serve(g_s), s	19.1	47.0	0.0	25.4	88.0	27.3	19.3	26.8	49.4	19.9	62.6	62.6
Cycle Q Clear(g_c), s	19.1	47.0	0.0	25.4	88.0	27.3	19.3	26.8	49.4	19.9	62.6	62.6
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	157	1904		206	1411	639	174	1412	438	352	506	524
V/C Ratio(X)	0.99	0.68		1.44	1.34	0.34	0.91	0.52	0.85	0.90	1.22	1.22
Avail Cap(c_a), veh/h	157	1904		206	1411	639	207	1430	444	405	506	524
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.51	0.51	0.51	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	100.2	58.0	0.0	105.8	95.5	69.1	98.3	66.5	74.6	97.8	78.7	78.7
Incr Delay (d2), s/veh	68.4	2.0	0.0	211.4	156.9	0.7	35.0	0.3	14.0	21.1	115.7	115.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.9	20.6	0.0	24.4	73.0	12.0	10.6	11.5	21.4	10.0	44.6	46.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	168.6	60.0	0.0	317.2	252.4	69.8	133.3	66.8	88.6	118.9	194.4	194.5
LnGrp LOS	F	E		F	F	E	F	E	F	F	F	F
Approach Vol, veh/h		1452	A		2409			1258			1574	
Approach Delay, s/veh		71.6			243.9			81.6			179.2	
Approach LOS		E			F			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	26.0	95.1	29.7	69.2	32.0	89.1	28.9	70.0				
Change Period (Y+Rc), s	* 6.6	* 7.1	7.4	7.4	* 6.6	* 7.1	7.4	7.4				
Max Green Setting (Gmax), s	* 19	* 84	25.6	62.6	* 25	* 78	25.6	62.6				
Max Q Clear Time (g_c+I1), s	21.1	90.0	21.9	51.4	27.4	49.0	21.3	64.6				
Green Ext Time (p_c), s	0.0	0.0	0.4	4.5	0.0	10.5	0.1	0.0				

Intersection Summary

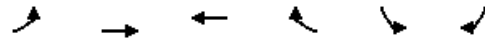
HCM 6th Ctrl Delay	160.8
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 9: Busch Blvd & I-275 SB Ramps

2030 No Build - AM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↑↑↑	↑↑↑	↵	↵	↵
Traffic Volume (veh/h)	335	1612	1896	729	192	465
Future Volume (veh/h)	335	1612	1896	729	192	465
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1856	1885	1826	1841
Adj Flow Rate, veh/h	356	1715	2017	0	204	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	3	1	5	4
Cap, veh/h	387	4155	2864		222	
Arrive On Green	0.15	0.55	1.00	0.00	0.13	0.00
Sat Flow, veh/h	1767	5274	5233	1598	1739	1560
Grp Volume(v), veh/h	356	1715	2017	0	204	0
Grp Sat Flow(s),veh/h/ln	1767	1702	1689	1598	1739	1560
Q Serve(g_s), s	43.7	43.4	0.0	0.0	25.5	0.0
Cycle Q Clear(g_c), s	43.7	43.4	0.0	0.0	25.5	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	387	4155	2864		222	
V/C Ratio(X)	0.92	0.41	0.70		0.92	
Avail Cap(c_a), veh/h	518	4155	2864		281	
HCM Platoon Ratio	0.67	0.67	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.34	0.34	0.40	0.00	1.00	0.00
Uniform Delay (d), s/veh	92.0	19.2	0.0	0.0	94.9	0.0
Incr Delay (d2), s/veh	9.6	0.1	0.6	0.0	31.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	21.6	18.9	0.2	0.0	13.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	101.6	19.3	0.6	0.0	125.9	0.0
LnGrp LOS	F	B	A		F	
Approach Vol, veh/h		2071	2017	A	204	A
Approach Delay, s/veh		33.4	0.6		125.9	
Approach LOS		C	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	54.6	130.9			185.5	34.5
Change Period (Y+Rc), s	6.5	6.5			6.5	6.4
Max Green Setting (Gmax), s	64.5	100.5			171.5	35.6
Max Q Clear Time (g_c+I1), s	45.7	2.0			45.4	27.5
Green Ext Time (p_c), s	2.4	31.2			21.9	0.6

Intersection Summary

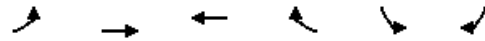
HCM 6th Ctrl Delay	22.4
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 10: Busch Blvd & I-275 NB Ramps

2030 No Build - AM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↕↕↕	↕↕↕	↕	↵↵	↕↕
Traffic Volume (veh/h)	276	1528	2128	298	306	497
Future Volume (veh/h)	276	1528	2128	298	306	497
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1870	1856	1841	1856
Adj Flow Rate, veh/h	294	1626	2264	0	326	529
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	2	3	4	3
Cap, veh/h	309	3795	2750		668	543
Arrive On Green	0.35	1.00	1.00	0.00	0.20	0.20
Sat Flow, veh/h	1767	5274	5274	1572	3401	2768
Grp Volume(v), veh/h	294	1626	2264	0	326	529
Grp Sat Flow(s),veh/h/ln	1767	1702	1702	1572	1700	1384
Q Serve(g_s), s	35.7	0.0	0.0	0.0	18.7	41.8
Cycle Q Clear(g_c), s	35.7	0.0	0.0	0.0	18.7	41.8
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	309	3795	2750		668	543
V/C Ratio(X)	0.95	0.43	0.82		0.49	0.97
Avail Cap(c_a), veh/h	309	3795	2750		668	543
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.16	0.00	1.00	1.00
Uniform Delay (d), s/veh	70.6	0.0	0.0	0.0	78.6	87.8
Incr Delay (d2), s/veh	35.8	0.3	0.5	0.0	0.8	31.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	17.6	0.1	0.1	0.0	8.4	17.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	106.4	0.3	0.5	0.0	79.4	119.7
LnGrp LOS	F	A	A		E	F
Approach Vol, veh/h		1920	2264	A	855	
Approach Delay, s/veh		16.6	0.5		104.3	
Approach LOS		B	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	45.0	125.0			170.0	50.0
Change Period (Y+Rc), s	6.5	6.5			6.5	6.8
Max Green Setting (Gmax), s	38.5	118.5			163.5	43.2
Max Q Clear Time (g_c+I1), s	37.7	2.0			2.0	43.8
Green Ext Time (p_c), s	0.2	43.0			19.5	0.0
Intersection Summary						
HCM 6th Ctrl Delay			24.2			
HCM 6th LOS			C			
Notes						
Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.						

HCM 6th Signalized Intersection Summary
 11: Nebraska Ave & Busch Blvd

2030 No Build - AM
 04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	1520	228	231	2158	69	141	654	234	66	1125	127
Future Volume (veh/h)	86	1520	228	231	2158	69	141	654	234	66	1125	127
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1870	1870	1826	1870	1870	1796	1826	1841	1841	1870	1870
Adj Flow Rate, veh/h	91	1617	243	246	2296	73	150	696	0	70	1197	135
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	2	2	5	2	2	7	5	4	4	2	2
Cap, veh/h	111	1915	287	248	2575	82	123	924		84	782	88
Arrive On Green	0.13	0.85	0.85	0.14	0.51	0.51	0.07	0.27	0.00	0.05	0.24	0.24
Sat Flow, veh/h	1739	4482	671	1739	5084	161	1711	3469	1560	1753	3220	362
Grp Volume(v), veh/h	91	1227	633	246	1534	835	150	696	0	70	659	673
Grp Sat Flow(s),veh/h/ln	1739	1702	1750	1739	1702	1841	1711	1735	1560	1753	1777	1805
Q Serve(g_s), s	11.2	41.3	42.0	31.1	89.1	90.1	15.8	40.5	0.0	8.7	53.4	53.4
Cycle Q Clear(g_c), s	11.2	41.3	42.0	31.1	89.1	90.1	15.8	40.5	0.0	8.7	53.4	53.4
Prop In Lane	1.00		0.38	1.00		0.09	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	111	1454	748	248	1724	932	123	924		84	431	438
V/C Ratio(X)	0.82	0.84	0.85	0.99	0.89	0.90	1.22	0.75		0.83	1.53	1.54
Avail Cap(c_a), veh/h	111	1454	748	248	1724	932	123	924		126	431	438
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.90	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	94.6	12.2	12.2	94.2	48.8	49.0	102.1	74.0	0.0	103.8	83.3	83.3
Incr Delay (d2), s/veh	42.6	5.6	10.4	54.5	7.4	13.0	152.3	3.5	0.0	15.8	249.3	252.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.1	6.5	7.8	17.8	39.2	44.3	12.3	18.5	0.0	4.4	54.2	55.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	137.3	17.7	22.7	148.6	56.2	62.0	254.4	77.6	0.0	119.6	332.6	335.6
LnGrp LOS	F	B	C	F	E	E	F	E		F	F	F
Approach Vol, veh/h		1951			2615			846	A		1402	
Approach Delay, s/veh		24.9			66.7			108.9			323.4	
Approach LOS		C			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.0	118.5	17.8	66.2	38.5	101.0	23.0	61.0				
Change Period (Y+Rc), s	6.9	7.0	* 7.2	* 7.6	7.0	* 7	* 7.2	* 7.6				
Max Green Setting (Gmax), s	14.1	108.0	* 16	* 53	28.1	* 94	* 16	* 53				
Max Q Clear Time (g_c+I1), s	13.2	92.1	10.7	42.5	33.1	44.0	17.8	55.4				
Green Ext Time (p_c), s	0.0	13.1	0.0	3.3	0.0	20.6	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	112.8
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 1: Busch Blvd & Dale Mabry Hwy SB Ramps

2030 No Build PM

04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	219	1762	0	0	2283	0	0	5	16	364	5	35
Future Volume (veh/h)	219	1762	0	0	2283	0	0	5	16	364	5	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1885	1885	1856	1856	0	1900	1900	1900	1870	1900	1796
Adj Flow Rate, veh/h	226	1816	0	0	2354	0	0	5	16	379	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	1	1	3	3	0	0	0	0	2	0	7
Cap, veh/h	199	2642	0	0	2150	0	0	41	35	430	0	
Arrive On Green	0.09	0.74	0.00	0.00	0.61	0.00	0.00	0.02	0.02	0.12	0.00	0.00
Sat Flow, veh/h	1767	3676	0	0	3711	0	0	1900	1610	3563	0	1522
Grp Volume(v), veh/h	226	1816	0	0	2354	0	0	5	16	379	0	0
Grp Sat Flow(s),veh/h/ln	1767	1791	0	0	1763	0	0	1900	1610	1781	0	1522
Q Serve(g_s), s	16.2	48.6	0.0	0.0	109.8	0.0	0.0	0.5	1.8	18.8	0.0	0.0
Cycle Q Clear(g_c), s	16.2	48.6	0.0	0.0	109.8	0.0	0.0	0.5	1.8	18.8	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.00	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	199	2642	0	0	2150	0	0	41	35	430	0	
V/C Ratio(X)	1.14	0.69	0.00	0.00	1.09	0.00	0.00	0.12	0.46	0.88	0.00	
Avail Cap(c_a), veh/h	199	2642	0	0	2150	0	0	70	59	566	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	69.8	12.6	0.0	0.0	35.1	0.0	0.0	86.4	87.0	77.9	0.0	0.0
Incr Delay (d2), s/veh	105.0	1.5	0.0	0.0	50.8	0.0	0.0	1.3	9.1	12.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.0	18.2	0.0	0.0	59.1	0.0	0.0	0.2	0.8	9.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	174.8	14.0	0.0	0.0	85.9	0.0	0.0	87.7	96.1	90.1	0.0	0.0
LnGrp LOS	F	B	A	A	F	A	A	F	F	F	A	
Approach Vol, veh/h		2042			2354			21			379	A
Approach Delay, s/veh		31.8			85.9			94.1			90.1	
Approach LOS		C			F			F			F	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	23.0	116.6		12.3		139.6		28.1				
Change Period (Y+Rc), s	6.8	6.8		* 8.4		6.8		6.4				
Max Green Setting (Gmax), s	16.2	100.2		* 6.6		123.2		28.6				
Max Q Clear Time (g_c+I1), s	18.2	111.8		3.8		50.6		20.8				
Green Ext Time (p_c), s	0.0	0.0		0.0		38.1		0.9				

Intersection Summary

HCM 6th Ctrl Delay	63.2
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [SWR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 2: Busch Blvd & Dale Mabry Hwy NB Ramps

2030 No Build PM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↕↕	↕↕	↗	↖↖	↗
Traffic Volume (veh/h)	123	2019	2400	540	169	268
Future Volume (veh/h)	123	2019	2400	540	169	268
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1781	1885	1900	1856	1826	1885
Adj Flow Rate, veh/h	126	2060	2449	0	172	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	8	1	0	3	5	1
Cap, veh/h	192	3083	2871		215	
Arrive On Green	0.03	0.86	1.00	0.00	0.06	0.00
Sat Flow, veh/h	1697	3676	3705	1572	3374	1598
Grp Volume(v), veh/h	126	2060	2449	0	172	0
Grp Sat Flow(s),veh/h/ln	1697	1791	1805	1572	1687	1598
Q Serve(g_s), s	2.4	33.9	0.0	0.0	9.1	0.0
Cycle Q Clear(g_c), s	2.4	33.9	0.0	0.0	9.1	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	192	3083	2871		215	
V/C Ratio(X)	0.66	0.67	0.85		0.80	
Avail Cap(c_a), veh/h	288	3083	2871		435	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.09	0.00	1.00	0.00
Uniform Delay (d), s/veh	2.9	4.1	0.0	0.0	83.1	0.0
Incr Delay (d2), s/veh	3.8	1.2	0.3	0.0	6.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	8.7	0.1	0.0	4.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	6.7	5.3	0.3	0.0	89.9	0.0
LnGrp LOS	A	A	A		F	
Approach Vol, veh/h		2186	2449	A	172	A
Approach Delay, s/veh		5.4	0.3		89.9	
Approach LOS		A	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	11.8	149.9			161.7	18.3
Change Period (Y+Rc), s	6.8	6.8			6.8	6.8
Max Green Setting (Gmax), s	15.2	121.2			143.2	23.2
Max Q Clear Time (g_c+I1), s	4.4	2.0			35.9	11.1
Green Ext Time (p_c), s	0.2	87.5			59.1	0.4

Intersection Summary

HCM 6th Ctrl Delay	5.8
HCM 6th LOS	A

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.






















HCM 6th Signalized Intersection Summary
 3: N Himes Ave & Busch Blvd

2030 No Build PM
 04/04/2018

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑↑	↑
Traffic Volume (veh/h)	1878	310	206	2439	501	269
Future Volume (veh/h)	1878	310	206	2439	501	269
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1885	1885	1856	1856	1900
Adj Flow Rate, veh/h	1936	320	212	2514	396	405
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	1	1	3	3	0
Cap, veh/h	2411	1084	237	2687	287	261
Arrive On Green	1.00	1.00	0.02	0.25	0.16	0.16
Sat Flow, veh/h	3647	1598	1795	3618	1767	1610
Grp Volume(v), veh/h	1936	320	212	2514	396	405
Grp Sat Flow(s),veh/h/ln	1777	1598	1795	1763	1767	1610
Q Serve(g_s), s	0.0	0.0	6.0	125.6	29.2	29.2
Cycle Q Clear(g_c), s	0.0	0.0	6.0	125.6	29.2	29.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2411	1084	237	2687	287	261
V/C Ratio(X)	0.80	0.30	0.89	0.94	1.38	1.55
Avail Cap(c_a), veh/h	2411	1084	316	2687	287	261
HCM Platoon Ratio	2.00	2.00	0.33	0.33	1.00	1.00
Upstream Filter(I)	0.66	0.66	0.30	0.30	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	18.5	63.0	75.4	75.4
Incr Delay (d2), s/veh	2.0	0.5	7.4	2.7	191.9	265.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	16.2	5.1	60.6	28.6	43.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	2.0	0.5	26.0	65.7	267.3	341.2
LnGrp LOS	A	A	C	E	F	F
Approach Vol, veh/h	2256			2726	801	
Approach Delay, s/veh	1.8			62.6	304.7	
Approach LOS	A			E	F	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		144.0		36.0	15.1	128.9
Change Period (Y+Rc), s		6.8		* 6.8	6.8	6.8
Max Green Setting (Gmax), s		137.2		* 29	16.2	114.2
Max Q Clear Time (g_c+I1), s		127.6		31.2	8.0	2.0
Green Ext Time (p_c), s		9.3		0.0	0.3	61.6
Intersection Summary						
HCM 6th Ctrl Delay			72.4			
HCM 6th LOS			E			
Notes						
User approved volume balancing among the lanes for turning movement.						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

HCM 6th Signalized Intersection Summary
 4: Twin Lakes Blvd/Mossvale Ln & Busch Blvd

2030 No Build PM
 04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	2061	80	81	2402	1	242	0	289	0	0	1
Future Volume (veh/h)	6	2061	80	81	2402	1	242	0	289	0	0	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1900	1885	1870	1870	1885	0	1900	1900	1900	1900
Adj Flow Rate, veh/h	6	2103	82	83	2451	1	247	0	295	0	0	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	2	0	1	2	2	1	0	0	0	0	0
Cap, veh/h	132	2344	1062	100	2750	1	229	0	0	0	0	3
Arrive On Green	1.00	1.00	1.00	0.07	1.00	1.00	0.13	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	140	3554	1610	1795	3645	1	1795	247		0	0	1610
Grp Volume(v), veh/h	6	2103	82	83	1195	1257	247	159.8		0	0	1
Grp Sat Flow(s),veh/h/ln	140	1777	1610	1795	1777	1870	1795	F		0	0	1610
Q Serve(g_s), s	0.0	0.0	0.0	8.2	0.0	0.0	23.0			0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.0	0.0	0.0	8.2	0.0	0.0	23.0			0.0	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00			0.00		1.00
Lane Grp Cap(c), veh/h	132	2344	1062	100	1341	1411	229			0	0	3
V/C Ratio(X)	0.05	0.90	0.08	0.83	0.89	0.89	1.08			0.00	0.00	0.38
Avail Cap(c_a), veh/h	132	2344	1062	110	1341	1411	229			0	0	81
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33	1.00			1.00	1.00	1.00
Upstream Filter(I)	0.39	0.39	0.39	0.11	0.11	0.11	1.00			0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	82.4	0.0	0.0	78.5			0.0	0.0	89.8
Incr Delay (d2), s/veh	0.3	2.5	0.1	5.8	1.2	1.1	81.3			0.0	0.0	72.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.8	0.0	3.9	0.4	0.4	15.9			0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.3	2.5	0.1	88.3	1.2	1.1	159.8			0.0	0.0	162.5
LnGrp LOS	A	A	A	F	A	A	F			A	A	F
Approach Vol, veh/h		2191			2535							1
Approach Delay, s/veh		2.4			4.0							162.5
Approach LOS		A			A							F
Timer - Assigned Phs	1	2	3	4		6						
Phs Duration (G+Y+Rc), s	17.1	125.7	30.0	7.2		142.8						
Change Period (Y+Rc), s	* 7	* 7	7.0	6.9		* 7						
Max Green Setting (Gmax), s	* 11	* 1.1E2	23.0	9.1		* 1.3E2						
Max Q Clear Time (g_c+I1), s	10.2	2.0	25.0	2.1		2.0						
Green Ext Time (p_c), s	0.0	64.9	0.0	0.0		97.3						
Intersection Summary												
HCM 6th Ctrl Delay				11.1								
HCM 6th LOS				B								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
5: Busch Blvd & Orange Grove Dr




























2030 No Build PM
04/04/2018



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations	↵	↶↶	↶↶	↵	↵	↵
Traffic Volume (veh/h)	216	2134	2278	84	65	223
Future Volume (veh/h)	216	2134	2278	84	65	223
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1870	1856	1900	1900	1900
Adj Flow Rate, veh/h	232	2295	2449	90	70	240
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	3	0	0	0
Cap, veh/h	251	2977	2593	1184	153	136
Arrive On Green	0.13	1.00	1.00	1.00	0.08	0.08
Sat Flow, veh/h	1810	3647	3618	1610	1810	1610
Grp Volume(v), veh/h	232	2295	2449	90	70	240
Grp Sat Flow(s),veh/h/ln	1810	1777	1763	1610	1810	1610
Q Serve(g_s), s	9.1	0.0	0.0	0.0	6.6	15.2
Cycle Q Clear(g_c), s	9.1	0.0	0.0	0.0	6.6	15.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	251	2977	2593	1184	153	136
V/C Ratio(X)	0.92	0.77	0.94	0.08	0.46	1.77
Avail Cap(c_a), veh/h	388	2977	2593	1184	153	136
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.34	0.34	0.09	0.09	1.00	1.00
Uniform Delay (d), s/veh	28.1	0.0	0.0	0.0	78.5	82.4
Incr Delay (d2), s/veh	8.8	0.7	1.0	0.0	2.1	372.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.4	0.3	0.4	0.0	3.2	20.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	36.9	0.7	1.0	0.0	80.6	454.9
LnGrp LOS	D	A	A	A	F	F
Approach Vol, veh/h		2527	2539		310	
Approach Delay, s/veh		4.0	1.0		370.4	
Approach LOS		A	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	18.4	139.6			158.0	22.0
Change Period (Y+Rc), s	6.8	* 7.2			* 7.2	6.8
Max Green Setting (Gmax), s	25.2	* 1.2E2			* 1.5E2	15.2
Max Q Clear Time (g_c+I1), s	11.1	2.0			2.0	17.2
Green Ext Time (p_c), s	0.5	88.2			89.0	0.0
Intersection Summary						
HCM 6th Ctrl Delay			23.7			
HCM 6th LOS			C			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						























HCM 6th Signalized Intersection Summary
6: N Armenia Ave & Busch Blvd

2030 No Build PM
04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	201	1815	183	169	1752	43	305	462	176	87	300	305
Future Volume (veh/h)	201	1815	183	169	1752	43	305	462	176	87	300	305
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1870	1856	1856	1885	1856	1841	1870	1885	1900
Adj Flow Rate, veh/h	205	1852	187	172	1788	44	311	471	180	89	306	311
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	1	2	3	3	1	3	4	2	1	0
Cap, veh/h	197	1852	833	157	1754	43	277	718	318	196	577	259
Arrive On Green	0.22	1.00	1.00	0.09	0.50	0.50	0.09	0.20	0.20	0.05	0.16	0.16
Sat Flow, veh/h	1781	3554	1598	1781	3517	86	1795	3526	1560	1781	3582	1610
Grp Volume(v), veh/h	205	1852	187	172	893	939	311	471	180	89	306	311
Grp Sat Flow(s),veh/h/ln	1781	1777	1598	1781	1763	1840	1795	1763	1560	1781	1791	1610
Q Serve(g_s), s	19.9	93.8	0.0	15.9	89.8	89.8	17.0	22.1	15.0	7.4	14.1	29.0
Cycle Q Clear(g_c), s	19.9	93.8	0.0	15.9	89.8	89.8	17.0	22.1	15.0	7.4	14.1	29.0
Prop In Lane	1.00		1.00	1.00		0.05	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	197	1852	833	157	879	918	277	718	318	196	577	259
V/C Ratio(X)	1.04	1.00	0.22	1.09	1.02	1.02	1.12	0.66	0.57	0.45	0.53	1.20
Avail Cap(c_a), veh/h	197	1852	833	157	879	918	277	718	318	208	577	259
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.57	0.57	0.57	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.1	0.0	0.0	82.1	45.1	45.1	64.0	65.9	41.7	59.3	69.3	75.5
Incr Delay (d2), s/veh	59.5	15.8	0.4	51.7	13.4	15.4	91.5	2.2	2.4	1.6	0.9	120.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	11.3	4.1	0.1	9.5	41.0	43.3	11.5	10.2	6.1	3.5	6.6	20.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	129.6	15.8	0.4	133.7	58.5	60.5	155.5	68.1	44.1	61.0	70.2	196.0
LnGrp LOS	F	F	A	F	F	F	F	E	D	E	E	F
Approach Vol, veh/h		2244			2004			962			706	
Approach Delay, s/veh		24.9			65.9			91.9			124.5	
Approach LOS		C			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	26.0	95.9	15.4	42.7	22.0	99.9	23.0	35.1				
Change Period (Y+Rc), s	* 6.1	* 6.1	6.0	6.1	* 6.1	* 6.1	6.0	6.1				
Max Green Setting (Gmax), s	* 20	* 90	10.6	35.4	* 16	* 94	17.0	29.0				
Max Q Clear Time (g_c+I1), s	21.9	91.8	9.4	24.1	17.9	95.8	19.0	31.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			61.6									
HCM 6th LOS			E									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
7: N Boulevard & Busch Blvd

2030 No Build PM
04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	1821	105	102	1910	71	110	351	89	109	230	41
Future Volume (veh/h)	73	1821	105	102	1910	71	110	351	89	109	230	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1856	1856	1870	1900	1900	1856	1870	1900
Adj Flow Rate, veh/h	75	1877	108	105	1969	73	113	362	92	112	237	42
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	1	3	3	2	0	0	3	2	0
Cap, veh/h	124	1953	111	120	1972	73	128	361	414	119	346	410
Arrive On Green	0.07	0.57	0.57	0.07	0.57	0.57	0.07	0.19	0.19	0.07	0.19	0.19
Sat Flow, veh/h	1781	3417	195	1795	3468	128	1781	1900	1610	1767	1870	1610
Grp Volume(v), veh/h	75	967	1018	105	995	1047	113	362	92	112	237	42
Grp Sat Flow(s),veh/h/ln	1781	1777	1835	1795	1763	1833	1781	1900	1610	1767	1870	1610
Q Serve(g_s), s	9.0	112.6	117.4	12.8	122.9	125.1	13.8	41.8	9.9	13.9	26.0	4.4
Cycle Q Clear(g_c), s	9.0	112.6	117.4	12.8	122.9	125.1	13.8	41.8	9.9	13.9	26.0	4.4
Prop In Lane	1.00		0.11	1.00		0.07	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	124	1015	1049	120	1002	1042	128	361	414	119	346	410
V/C Ratio(X)	0.61	0.95	0.97	0.88	0.99	1.00	0.88	1.00	0.22	0.94	0.68	0.10
Avail Cap(c_a), veh/h	124	1015	1049	120	1002	1042	151	361	414	119	346	410
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.34	0.34	0.34	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	99.4	44.3	45.4	101.7	47.0	47.5	101.1	89.1	64.4	102.2	83.6	62.7
Incr Delay (d2), s/veh	7.3	8.6	10.7	45.0	26.7	29.1	34.2	48.1	0.3	63.8	5.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	50.5	54.8	7.5	60.0	64.0	7.7	25.6	4.2	8.6	13.3	1.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	106.7	53.0	56.1	146.8	73.7	76.5	135.4	137.2	64.7	166.0	89.1	62.8
LnGrp LOS	F	D	E	F	E	F	F	F	E	F	F	E
Approach Vol, veh/h		2060			2147			567			391	
Approach Delay, s/veh		56.5			78.6			125.0			108.3	
Approach LOS		E			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.0	131.0	20.6	47.4	20.4	131.6	21.6	46.4				
Change Period (Y+Rc), s	* 5.7	5.9	* 5.8	* 5.6	* 5.7	5.9	* 5.8	* 5.6				
Max Green Setting (Gmax), s	* 15	125.1	* 15	* 42	* 15	125.7	* 19	* 38				
Max Q Clear Time (g_c+I1), s	11.0	127.1	15.9	43.8	14.8	119.4	15.8	28.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	5.3	0.0	1.0				
Intersection Summary												
HCM 6th Ctrl Delay			77.1									
HCM 6th LOS			E									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
8: Florida Ave & Busch Blvd

2030 No Build PM
04/04/2018

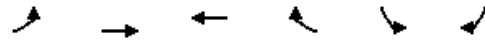
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	136	1626	257	294	1840	295	201	1237	479	368	778	141
Future Volume (veh/h)	136	1626	257	294	1840	295	201	1237	479	368	778	141
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1856	1885	1870	1841	1841	1885	1870	1870
Adj Flow Rate, veh/h	139	1659	0	300	1878	301	205	1262	489	376	794	144
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	3	1	2	4	4	1	2	2
Cap, veh/h	189	1819		254	1384	627	220	1280	397	407	746	135
Arrive On Green	0.11	0.36	0.00	0.10	0.26	0.26	0.12	0.25	0.25	0.12	0.25	0.25
Sat Flow, veh/h	1781	5274	0	1781	3526	1598	1781	5025	1560	3483	3004	545
Grp Volume(v), veh/h	139	1659	0	300	1878	301	205	1262	489	376	470	468
Grp Sat Flow(s),veh/h/ln	1781	1702	0	1781	1763	1598	1781	1675	1560	1742	1777	1772
Q Serve(g_s), s	16.6	68.2	0.0	31.4	86.4	35.0	25.1	55.0	56.0	23.5	54.6	54.6
Cycle Q Clear(g_c), s	16.6	68.2	0.0	31.4	86.4	35.0	25.1	55.0	56.0	23.5	54.6	54.6
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		0.31
Lane Grp Cap(c), veh/h	189	1819		254	1384	627	220	1280	397	407	441	440
V/C Ratio(X)	0.73	0.91		1.18	1.36	0.48	0.93	0.99	1.23	0.92	1.06	1.06
Avail Cap(c_a), veh/h	189	1819		254	1384	627	223	1280	397	421	441	440
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.30	0.30	0.30	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	95.3	67.5	0.0	99.5	81.1	62.1	95.6	81.6	82.0	96.2	82.7	82.7
Incr Delay (d2), s/veh	22.1	8.4	0.0	93.1	161.9	0.8	41.8	21.8	124.1	25.7	61.2	61.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.9	30.9	0.0	21.5	71.3	14.8	14.1	26.2	36.1	12.1	32.3	32.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	117.4	76.0	0.0	192.6	243.0	62.9	137.4	103.3	206.0	121.9	143.9	143.9
LnGrp LOS	F	E		F	F	E	F	F	F	F	F	F
Approach Vol, veh/h		1798	A		2479			1956			1314	
Approach Delay, s/veh		79.2			215.0			132.6			137.6	
Approach LOS		E			F			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	30.0	93.5	33.1	63.4	38.0	85.5	34.5	62.0				
Change Period (Y+Rc), s	* 6.6	* 7.1	7.4	7.4	* 6.6	* 7.1	7.4	7.4				
Max Green Setting (Gmax), s	* 23	* 86	26.6	55.6	* 31	* 78	27.6	54.6				
Max Q Clear Time (g_c+I1), s	18.6	88.4	25.5	58.0	33.4	70.2	27.1	56.6				
Green Ext Time (p_c), s	0.1	0.0	0.2	0.0	0.0	5.7	0.0	0.0				

Intersection Summary												
HCM 6th Ctrl Delay	147.8											
HCM 6th LOS	F											

Notes
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 9: Busch Blvd & I-275 SB Ramps

2030 No Build PM
 04/04/2018



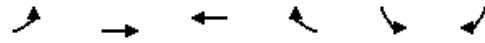
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑↑	↑↑↑	↗	↖	↗
Traffic Volume (veh/h)	388	2085	1787	654	311	642
Future Volume (veh/h)	388	2085	1787	654	311	642
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1856	1885	1826	1841
Adj Flow Rate, veh/h	413	2218	1901	0	331	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	3	1	5	4
Cap, veh/h	414	3790	2425		346	
Arrive On Green	0.23	0.74	0.64	0.00	0.20	0.00
Sat Flow, veh/h	1767	5274	5233	1598	1739	1560
Grp Volume(v), veh/h	413	2218	1901	0	331	0
Grp Sat Flow(s),veh/h/ln	1767	1702	1689	1598	1739	1560
Q Serve(g_s), s	51.4	43.5	59.9	0.0	41.4	0.0
Cycle Q Clear(g_c), s	51.4	43.5	59.9	0.0	41.4	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	414	3790	2425		346	
V/C Ratio(X)	1.00	0.59	0.78		0.96	
Avail Cap(c_a), veh/h	414	3790	2425		360	
HCM Platoon Ratio	1.00	1.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.00	1.00	0.00
Uniform Delay (d), s/veh	84.2	12.9	31.7	0.0	87.2	0.0
Incr Delay (d2), s/veh	12.9	0.1	0.2	0.0	35.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.9	16.2	22.5	0.0	22.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	97.1	13.0	32.0	0.0	122.9	0.0
LnGrp LOS	F	B	C		F	
Approach Vol, veh/h		2631	1901	A	331	A
Approach Delay, s/veh		26.2	32.0		122.9	
Approach LOS		C	C		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	58.0	111.8			169.8	50.2
Change Period (Y+Rc), s	6.5	6.5			6.5	6.4
Max Green Setting (Gmax), s	51.5	103.5			161.5	45.6
Max Q Clear Time (g_c+I1), s	53.4	61.9			45.5	43.4
Green Ext Time (p_c), s	0.0	20.9			40.7	0.4

Intersection Summary						
HCM 6th Ctrl Delay			35.0			
HCM 6th LOS			D			

Notes
 Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 10: Busch Blvd & I-275 NB Ramps

2030 No Build PM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑↑	↑↑↑	↗	↖↗	↖↗
Traffic Volume (veh/h)	577	1819	2082	423	242	359
Future Volume (veh/h)	577	1819	2082	423	242	359
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1870	1856	1841	1856
Adj Flow Rate, veh/h	614	1935	2215	0	257	382
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	2	3	4	3
Cap, veh/h	614	4120	2193		451	367
Arrive On Green	0.70	1.00	0.43	0.00	0.13	0.13
Sat Flow, veh/h	1767	5274	5274	1572	3401	2768
Grp Volume(v), veh/h	614	1935	2215	0	257	382
Grp Sat Flow(s),veh/h/ln	1767	1702	1702	1572	1700	1384
Q Serve(g_s), s	76.3	0.0	94.5	0.0	15.6	29.2
Cycle Q Clear(g_c), s	76.3	0.0	94.5	0.0	15.6	29.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	614	4120	2193		451	367
V/C Ratio(X)	1.00	0.47	1.01		0.57	1.04
Avail Cap(c_a), veh/h	614	4120	2193		451	367
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.73	0.73	0.09	0.00	1.00	1.00
Uniform Delay (d), s/veh	33.5	0.0	62.7	0.0	89.5	95.4
Incr Delay (d2), s/veh	30.8	0.3	8.4	0.0	2.1	57.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	29.3	0.1	42.1	0.0	7.1	13.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	64.3	0.3	71.2	0.0	91.6	153.1
LnGrp LOS	E	A	F		F	F
Approach Vol, veh/h		2549	2215	A	639	
Approach Delay, s/veh		15.7	71.2		128.4	
Approach LOS		B	E		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	83.0	101.0			184.0	36.0
Change Period (Y+Rc), s	6.5	6.5			6.5	6.8
Max Green Setting (Gmax), s	76.5	94.5			177.5	29.2
Max Q Clear Time (g_c+I1), s	78.3	96.5			2.0	31.2
Green Ext Time (p_c), s	0.0	0.0			29.5	0.0

Intersection Summary























HCM 6th Ctrl Delay	51.8
HCM 6th LOS	D

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 11: Nebraska Ave & Busch Blvd

2030 No Build PM
 04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	1712	165	194	2156	107	139	948	261	158	782	210
Future Volume (veh/h)	184	1712	165	194	2156	107	139	948	261	158	782	210
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1870	1870	1826	1870	1870	1796	1826	1841	1841	1870	1870
Adj Flow Rate, veh/h	196	1821	176	206	2294	114	148	1009	0	168	832	223
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	2	2	5	2	2	7	5	4	4	2	2
Cap, veh/h	159	1916	184	183	2084	103	123	952		150	799	214
Arrive On Green	0.09	0.40	0.40	0.11	0.42	0.42	0.07	0.27	0.00	0.09	0.29	0.29
Sat Flow, veh/h	1739	4737	456	1739	4984	246	1711	3469	1560	1753	2771	742
Grp Volume(v), veh/h	196	1307	690	206	1562	846	148	1009	0	168	533	522
Grp Sat Flow(s),veh/h/ln	1739	1702	1788	1739	1702	1826	1711	1735	1560	1753	1777	1737
Q Serve(g_s), s	20.1	81.6	82.4	23.1	92.0	92.0	15.8	60.4	0.0	18.8	63.4	63.4
Cycle Q Clear(g_c), s	20.1	81.6	82.4	23.1	92.0	92.0	15.8	60.4	0.0	18.8	63.4	63.4
Prop In Lane	1.00		0.25	1.00		0.13	1.00		1.00	1.00		0.43
Lane Grp Cap(c), veh/h	159	1377	723	183	1424	764	123	952		150	512	500
V/C Ratio(X)	1.23	0.95	0.95	1.13	1.10	1.11	1.20	1.06		1.12	1.04	1.04
Avail Cap(c_a), veh/h	159	1377	723	183	1424	764	123	952		150	512	500
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.87	0.87	0.87	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	99.9	63.3	63.5	98.4	64.0	64.0	102.1	79.8	0.0	100.6	78.3	78.3
Incr Delay (d2), s/veh	143.3	13.3	21.9	105.2	55.0	66.4	146.3	46.2	0.0	109.8	51.0	51.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.4	37.6	41.6	15.8	50.3	56.4	12.1	33.0	0.0	13.1	36.0	35.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	243.3	76.6	85.4	203.7	119.0	130.4	248.4	126.0	0.0	210.4	129.3	129.9
LnGrp LOS	F	E	F	F	F	F	F	F		F	F	F
Approach Vol, veh/h		2193			2614			1157	A		1223	
Approach Delay, s/veh		94.3			129.4			141.7			140.7	
Approach LOS		F			F			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	27.0	99.0	26.0	68.0	30.0	96.0	23.0	71.0				
Change Period (Y+Rc), s	6.9	7.0	* 7.2	* 7.6	6.9	7.0	* 7.2	* 7.6				
Max Green Setting (Gmax), s	20.1	92.0	* 19	* 60	23.1	89.0	* 16	* 63				
Max Q Clear Time (g_c+I1), s	22.1	94.0	20.8	62.4	25.1	84.4	17.8	65.4				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	3.9	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	122.6
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Arterial Level of Service: EB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
	II	45	22.0	16.7	38.7	0.20	18.8	D
Dale Mabry Hwy NB Ra	II	45	23.3	5.6	28.9	0.21	26.7	C
N Himes Ave	II	45	19.0	23.4	42.4	0.17	14.8	E
Twin Lakes Blvd	II	45	43.9	24.6	68.5	0.50	26.2	C
Orange Grove Dr	II	45	25.9	14.3	40.2	0.25	22.3	C
N Armenia Ave	II	45	29.7	46.2	75.9	0.30	14.2	E
N Boulevard	II	45	79.8	61.8	141.6	1.00	25.4	C
Florida Ave	II	40	47.3	108.8	156.1	0.51	11.7	F
I-275 SB Ramps	II	40	21.9	35.8	57.7	0.19	11.9	F
I-275 NB Ramps	II	40	21.3	4.3	25.6	0.19	26.1	C
Nebraska Ave	II	40	14.6	74.5	89.1	0.13	5.1	F
Total	II		348.7	416.0	764.7	3.65	17.2	D

Arterial Level of Service: WB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Nebraska Ave	II	40	27.0	125.0	152.0	0.25	5.8	F
I-275 NB Ramps	II	40	14.6	95.6	110.2	0.13	4.1	F
I-275 SB Ramps	II	40	21.3	51.0	72.3	0.19	9.2	F
Florida Ave	II	40	21.9	209.4	231.3	0.19	3.0	F
N Boulevard	II	40	47.3	64.5	111.8	0.51	16.4	E
N Armenia Ave	II	45	79.8	76.9	156.7	1.00	22.9	C
Orange Grove Dr	II	45	29.7	42.9	72.6	0.30	14.9	E
Mossvale Ln	II	45	25.9	15.1	41.0	0.25	21.9	D
N Himes Ave	II	45	43.9	10.3	54.2	0.50	33.1	B
Dale Mabry Hwy NB Ra	II	45	19.0	22.2	41.2	0.17	15.2	E
Dale Mabry Hwy SB Ra	II	45	23.3	130.7	154.0	0.21	5.0	F
Total	II		353.7	843.6	1197.3	3.69	11.1	F

HCM 6th Signalized Intersection Summary
 1: Busch Blvd & Dale Mabry Hwy SB Ramps

2040 No Build - AM

04/09/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	226	2169	1	8	1394	0	0	0	0	434	6	24
Future Volume (veh/h)	226	2169	1	8	1394	0	0	0	0	434	6	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1885	1885	1856	1856	0	1900	1900	1900	1870	1900	1796
Adj Flow Rate, veh/h	233	2236	1	8	1437	0	0	0	0	451	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	1	1	3	3	0	0	0	0	2	0	7
Cap, veh/h	279	3001	1	24	2489	0	0	1	1	405	0	
Arrive On Green	0.05	0.82	0.82	0.49	0.49	0.00	0.00	0.00	0.00	0.11	0.00	0.00
Sat Flow, veh/h	1767	3674	2	7	3468	0	0	1900	1610	3563	0	1522
Grp Volume(v), veh/h	233	1090	1147	764	681	0	0	0	0	451	0	0
Grp Sat Flow(s),veh/h/ln	1767	1791	1885	1787	1604	0	0	1900	1610	1781	0	1522
Q Serve(g_s), s	6.0	54.1	54.1	0.0	57.1	0.0	0.0	0.0	0.0	21.6	0.0	0.0
Cycle Q Clear(g_c), s	6.0	54.1	54.1	54.8	57.1	0.0	0.0	0.0	0.0	21.6	0.0	0.0
Prop In Lane	1.00		0.00	0.01		0.00	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	279	1463	1540	1333	1180	0	0	1	1	405	0	
V/C Ratio(X)	0.84	0.74	0.75	0.57	0.58	0.00	0.00	0.00	0.00	1.11	0.00	
Avail Cap(c_a), veh/h	609	1463	1540	1333	1180	0	0	76	64	405	0	
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	29.2	8.1	8.1	26.7	27.2	0.0	0.0	0.0	0.0	84.2	0.0	0.0
Incr Delay (d2), s/veh	6.5	3.5	3.3	1.8	2.1	0.0	0.0	0.0	0.0	79.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.7	18.5	19.4	26.4	23.9	0.0	0.0	0.0	0.0	14.5	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	35.7	11.6	11.5	28.5	29.3	0.0	0.0	0.0	0.0	163.4	0.0	0.0
LnGrp LOS	D	B	B	C	C	A	A	A	A	F	A	
Approach Vol, veh/h		2470			1445			0			451	A
Approach Delay, s/veh		13.8			28.9			0.0			163.4	
Approach LOS		B			C						F	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	15.5	146.5		0.0		162.0		28.0				
Change Period (Y+Rc), s	6.8	6.8		* 8.4		6.8		6.4				
Max Green Setting (Gmax), s	44.2	88.2		* 7.6		139.2		21.6				
Max Q Clear Time (g_c+I1), s	8.0	59.1		0.0		56.1		23.6				
Green Ext Time (p_c), s	0.7	16.4		0.0		60.9		0.0				

Intersection Summary

HCM 6th Ctrl Delay	34.3
HCM 6th LOS	C

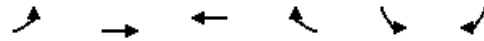
Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [SWR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 2: Busch Blvd & Dale Mabry Hwy NB Ramps

2040 No Build - AM

04/09/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↕↕	↕↕	↵	↵↵	↵
Traffic Volume (veh/h)	42	2561	1677	393	131	167
Future Volume (veh/h)	42	2561	1677	393	131	167
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1781	1885	1900	1856	1826	1885
Adj Flow Rate, veh/h	43	2613	1711	0	134	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	8	1	0	3	5	1
Cap, veh/h	300	3142	2953		172	
Arrive On Green	0.02	0.88	1.00	0.00	0.05	0.00
Sat Flow, veh/h	1697	3676	3705	1572	3374	1598
Grp Volume(v), veh/h	43	2613	1711	0	134	0
Grp Sat Flow(s),veh/h/ln	1697	1791	1805	1572	1687	1598
Q Serve(g_s), s	0.7	62.9	0.0	0.0	7.5	0.0
Cycle Q Clear(g_c), s	0.7	62.9	0.0	0.0	7.5	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	300	3142	2953		172	
V/C Ratio(X)	0.14	0.83	0.58		0.78	
Avail Cap(c_a), veh/h	432	3142	2953		341	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.34	0.00	1.00	0.00
Uniform Delay (d), s/veh	2.1	5.3	0.0	0.0	89.1	0.0
Incr Delay (d2), s/veh	0.2	2.7	0.3	0.0	7.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.2	15.4	0.1	0.0	3.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	2.4	8.0	0.3	0.0	96.4	0.0
LnGrp LOS	A	A	A		F	
Approach Vol, veh/h		2656	1711	A	134	A
Approach Delay, s/veh		7.9	0.3		96.4	
Approach LOS		A	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	11.3	162.2			173.5	16.5
Change Period (Y+Rc), s	6.8	6.8			6.8	6.8
Max Green Setting (Gmax), s	19.2	131.2			157.2	19.2
Max Q Clear Time (g_c+I1), s	2.7	2.0			64.9	9.5
Green Ext Time (p_c), s	0.1	40.3			78.0	0.3

Intersection Summary

HCM 6th Ctrl Delay	7.7
HCM 6th LOS	A

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 3: N Himes Ave & Busch Blvd






















2040 No Build - AM
 04/09/2018

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑↑	↑↑
Traffic Volume (veh/h)	1973	719	471	1660	410	128
Future Volume (veh/h)	1973	719	471	1660	410	128
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1885	1885	1856	1856	1900
Adj Flow Rate, veh/h	2034	741	486	1711	278	288
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	1	1	3	3	0
Cap, veh/h	2211	994	433	2973	151	137
Arrive On Green	1.00	1.00	0.25	1.00	0.09	0.09
Sat Flow, veh/h	3647	1598	1795	3618	1767	1610
Grp Volume(v), veh/h	2034	741	486	1711	278	288
Grp Sat Flow(s),veh/h/ln	1777	1598	1795	1763	1767	1610
Q Serve(g_s), s	0.0	0.0	35.2	0.0	16.2	16.2
Cycle Q Clear(g_c), s	0.0	0.0	35.2	0.0	16.2	16.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2211	994	433	2973	151	137
V/C Ratio(X)	0.92	0.75	1.12	0.58	1.85	2.10
Avail Cap(c_a), veh/h	2211	994	433	2973	151	137
HCM Platoon Ratio	2.00	2.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.43	0.43	0.65	0.65	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	51.0	0.0	86.9	86.9
Incr Delay (d2), s/veh	3.7	2.2	73.6	0.5	404.8	517.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	39.7	28.3	0.2	24.4	33.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	3.7	2.2	124.6	0.5	491.7	604.8
LnGrp LOS	A	A	F	A	F	F
Approach Vol, veh/h	2775			2197	566	
Approach Delay, s/veh	3.3			28.0	549.2	
Approach LOS	A			C	F	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		167.0		23.0	42.0	125.0
Change Period (Y+Rc), s		6.8		* 6.8	6.8	6.8
Max Green Setting (Gmax), s		160.2		* 16	35.2	118.2
Max Q Clear Time (g_c+I1), s		2.0		18.2	37.2	2.0
Green Ext Time (p_c), s		41.7		0.0	0.0	83.0
Intersection Summary						
HCM 6th Ctrl Delay			68.9			
HCM 6th LOS			E			
Notes						
User approved volume balancing among the lanes for turning movement.						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

HCM 6th Signalized Intersection Summary
 4: Twin Lakes Blvd/Mossvale Ln & Busch Blvd

2040 No Build - AM

04/09/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	1850	249	361	2043	0	88	0	126	2	0	0
Future Volume (veh/h)	2	1850	249	361	2043	0	88	0	126	2	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1900	1885	1870	1870	1885	0	1900	1900	1900	1900
Adj Flow Rate, veh/h	2	1888	254	368	2085	0	90	0	129	2	0	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	2	0	1	2	2	1	0	0	0	0	0
Cap, veh/h	197	2815	1275	170	3282	0	0	0	0	6	0	0
Arrive On Green	1.00	1.00	1.00	0.19	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	201	3554	1610	1795	3647	0		0		1809	0	0
Grp Volume(v), veh/h	2	1888	254	368	2085	0		0.0		2	0	0
Grp Sat Flow(s),veh/h/ln	201	1777	1610	1795	1777	0				1810	0	0
Q Serve(g_s), s	0.0	0.0	0.0	18.0	0.0	0.0				0.2	0.0	0.0
Cycle Q Clear(g_c), s	0.0	0.0	0.0	18.0	0.0	0.0				0.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	197	2815	1275	170	3282	0				6	0	0
V/C Ratio(X)	0.01	0.67	0.20	2.16	0.64	0.00				0.35	0.00	0.00
Avail Cap(c_a), veh/h	197	2815	1275	170	3282	0				87	0	0
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.26	0.26	0.26	0.19	0.19	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	77.0	0.0	0.0				94.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.3	0.1	527.3	0.2	0.0				32.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.1	0.0	32.4	0.1	0.0				0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.0	0.3	0.1	604.3	0.2	0.0				127.3	0.0	0.0
LnGrp LOS	A	A	A	F	A	A				F	A	A
Approach Vol, veh/h		2144			2453							2
Approach Delay, s/veh		0.3			90.8							127.3
Approach LOS		A			F							F
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	25.0	157.5		7.5		182.5						
Change Period (Y+Rc), s	* 7	* 7		6.9		* 7						
Max Green Setting (Gmax), s	* 18	* 1.2E2		9.1		* 1.4E2						
Max Q Clear Time (g_c+I1), s	20.0	2.0		2.2		2.0						
Green Ext Time (p_c), s	0.0	57.7		0.0		68.9						

Intersection Summary

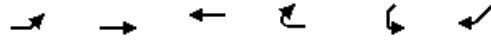
HCM 6th Ctrl Delay	48.6
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
5: Busch Blvd & Orange Grove Dr

2040 No Build - AM
04/09/2018



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations	↵	↕↕	↕↕	↕	↵	↕
Traffic Volume (veh/h)	113	1865	1938	94	139	466
Future Volume (veh/h)	113	1865	1938	94	139	466
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1870	1856	1900	1900	1900
Adj Flow Rate, veh/h	122	2005	2084	101	149	501
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	3	0	0	0
Cap, veh/h	222	2708	2449	1119	297	264
Arrive On Green	0.06	1.00	1.00	1.00	0.16	0.16
Sat Flow, veh/h	1810	3647	3618	1610	1810	1610
Grp Volume(v), veh/h	122	2005	2084	101	149	501
Grp Sat Flow(s),veh/h/ln	1810	1777	1763	1610	1810	1610
Q Serve(g_s), s	3.8	0.0	0.0	0.0	14.2	31.2
Cycle Q Clear(g_c), s	3.8	0.0	0.0	0.0	14.2	31.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	222	2708	2449	1119	297	264
V/C Ratio(X)	0.55	0.74	0.85	0.09	0.50	1.89
Avail Cap(c_a), veh/h	395	2708	2449	1119	297	264
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.43	0.43	0.34	0.34	1.00	1.00
Uniform Delay (d), s/veh	6.9	0.0	0.0	0.0	72.3	79.4
Incr Delay (d2), s/veh	0.9	0.8	1.4	0.1	1.3	416.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.3	0.5	0.0	6.8	43.6
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	7.8	0.8	1.4	0.1	73.6	496.0
LnGrp LOS	A	A	A	A	E	F
Approach Vol, veh/h		2127	2185		650	
Approach Delay, s/veh		1.2	1.3		399.2	
Approach LOS		A	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	12.8	139.2			152.0	38.0
Change Period (Y+Rc), s	6.8	* 7.2			* 7.2	6.8
Max Green Setting (Gmax), s	24.2	* 1.1E2			* 1.4E2	31.2
Max Q Clear Time (g_c+I1), s	5.8	2.0			2.0	33.2
Green Ext Time (p_c), s	0.3	64.5			62.6	0.0

Intersection Summary

HCM 6th Ctrl Delay	53.4
HCM 6th LOS	D




























Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
6: N Armenia Ave & Busch Blvd

2040 No Build - AM


























04/09/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	83	1586	335	246	1723	12	188	264	168	85	479	121
Future Volume (veh/h)	83	1586	335	246	1723	12	188	264	168	85	479	121
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1870	1856	1856	1885	1856	1841	1870	1885	1900
Adj Flow Rate, veh/h	85	1618	342	251	1758	12	192	269	171	87	489	123
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	1	2	3	3	1	3	4	2	1	0
Cap, veh/h	102	1681	756	304	2107	14	183	625	277	232	572	257
Arrive On Green	0.11	0.95	0.95	0.17	0.59	0.59	0.07	0.18	0.18	0.05	0.16	0.16
Sat Flow, veh/h	1781	3554	1598	1781	3589	24	1795	3526	1560	1781	3582	1610
Grp Volume(v), veh/h	85	1618	342	251	863	907	192	269	171	87	489	123
Grp Sat Flow(s),veh/h/ln	1781	1777	1598	1781	1763	1851	1795	1763	1560	1781	1791	1610
Q Serve(g_s), s	8.9	51.9	2.9	25.8	75.2	75.5	13.0	12.9	13.7	7.7	25.2	13.2
Cycle Q Clear(g_c), s	8.9	51.9	2.9	25.8	75.2	75.5	13.0	12.9	13.7	7.7	25.2	13.2
Prop In Lane	1.00		1.00	1.00		0.01	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	102	1681	756	304	1035	1086	183	625	277	232	572	257
V/C Ratio(X)	0.83	0.96	0.45	0.82	0.83	0.84	1.05	0.43	0.62	0.37	0.86	0.48
Avail Cap(c_a), veh/h	196	1681	756	304	1035	1086	183	777	344	264	790	355
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.61	0.61	0.61	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	83.3	4.1	1.6	76.0	31.7	31.8	69.9	69.6	36.8	62.5	77.7	72.6
Incr Delay (d2), s/veh	10.3	10.3	1.2	1.8	0.8	0.7	80.9	0.5	2.3	1.0	6.8	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.2	4.5	1.1	11.9	31.0	32.7	6.7	5.9	5.5	3.6	12.2	5.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	93.6	14.4	2.8	77.8	32.5	32.5	150.8	70.1	39.1	63.5	84.5	74.0
LnGrp LOS	F	B	A	E	C	C	F	E	D	E	F	E
Approach Vol, veh/h		2045			2021			632			699	
Approach Delay, s/veh		15.8			38.2			86.2			80.0	
Approach LOS		B			D			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	117.6	15.7	39.8	38.6	96.0	19.0	36.4				
Change Period (Y+Rc), s	* 6.1	* 6.1	6.0	6.1	* 6.1	* 6.1	6.0	6.1				
Max Green Setting (Gmax), s	* 21	* 90	13.0	41.9	* 21	* 90	13.0	41.9				
Max Q Clear Time (g_c+I1), s	10.9	77.5	9.7	15.7	27.8	53.9	15.0	27.2				
Green Ext Time (p_c), s	0.1	8.7	0.0	2.3	0.0	18.0	0.0	3.1				
Intersection Summary												
HCM 6th Ctrl Delay			40.7									
HCM 6th LOS			D									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
7: N Boulevard & Busch Blvd

2040 No Build - AM

04/09/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Traffic Volume (veh/h)	61	1663	167	138	1848	129	66	220	53	175	529	34
Future Volume (veh/h)	61	1663	167	138	1848	129	66	220	53	175	529	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1856	1856	1870	1900	1900	1856	1870	1900
Adj Flow Rate, veh/h	63	1714	172	142	1905	133	68	227	55	180	545	35
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	1	3	3	2	0	0	3	2	0
Cap, veh/h	141	1638	162	143	1680	116	68	355	428	197	486	546
Arrive On Green	0.08	0.50	0.50	0.08	0.50	0.50	0.04	0.19	0.19	0.11	0.26	0.26
Sat Flow, veh/h	1781	3266	323	1795	3346	231	1781	1900	1610	1767	1870	1610
Grp Volume(v), veh/h	63	921	965	142	993	1045	68	227	55	180	545	35
Grp Sat Flow(s),veh/h/ln	1781	1777	1812	1795	1763	1814	1781	1900	1610	1767	1870	1610
Q Serve(g_s), s	6.4	95.3	95.3	15.0	95.4	95.4	7.2	21.0	4.9	19.1	49.4	2.8
Cycle Q Clear(g_c), s	6.4	95.3	95.3	15.0	95.4	95.4	7.2	21.0	4.9	19.1	49.4	2.8
Prop In Lane	1.00		0.18	1.00		0.13	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	141	891	909	143	885	911	68	355	428	197	486	546
V/C Ratio(X)	0.45	1.03	1.06	1.00	1.12	1.15	1.01	0.64	0.13	0.92	1.12	0.06
Avail Cap(c_a), veh/h	141	891	909	143	885	911	68	355	428	197	486	546
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.49	0.49	0.49	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	83.5	47.3	47.4	87.4	47.3	47.3	91.4	71.4	53.0	83.5	70.3	42.4
Incr Delay (d2), s/veh	5.0	30.1	39.6	73.8	69.6	79.2	111.6	3.9	0.1	40.3	78.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	48.1	51.5	9.9	57.8	62.0	5.5	10.7	2.1	11.0	34.3	1.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	88.5	77.5	87.0	161.2	116.9	126.5	203.0	75.2	53.1	123.8	148.5	42.5
LnGrp LOS	F	F	F	F	F	F	F	E	D	F	F	D
Approach Vol, veh/h		1949			2180			350			760	
Approach Delay, s/veh		82.5			124.4			96.6			137.8	
Approach LOS		F			F			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.7	101.3	26.9	41.1	20.8	101.2	13.0	55.0				
Change Period (Y+Rc), s	* 5.7	5.9	* 5.8	* 5.6	* 5.7	5.9	* 5.8	* 5.6				
Max Green Setting (Gmax), s	* 15	95.4	* 21	* 35	* 15	95.3	* 7.2	* 49				
Max Q Clear Time (g_c+I1), s	8.4	97.4	21.1	23.0	17.0	97.3	9.2	51.4				
Green Ext Time (p_c), s	0.0	0.0	0.0	1.1	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			108.9									
HCM 6th LOS			F									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
8: Florida Ave & Busch Blvd

2040 No Build - AM

04/09/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	1326	401	315	1959	232	175	803	410	346	1301	63
Future Volume (veh/h)	164	1326	401	315	1959	232	175	803	410	346	1301	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1856	1885	1870	1841	1841	1885	1870	1870
Adj Flow Rate, veh/h	167	1353	0	321	1999	237	179	819	418	353	1328	64
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	2	2	3	1	2	4	4	1	2	2
Cap, veh/h	117	1924		222	1537	696	126	1299	403	385	1029	50
Arrive On Green	0.07	0.38	0.00	0.04	0.14	0.14	0.07	0.26	0.26	0.11	0.30	0.30
Sat Flow, veh/h	1781	5274	0	1781	3526	1598	1781	5025	1560	3483	3451	166
Grp Volume(v), veh/h	167	1353	0	321	1999	237	179	819	418	353	683	709
Grp Sat Flow(s),veh/h/ln	1781	1702	0	1781	1763	1598	1781	1675	1560	1742	1777	1840
Q Serve(g_s), s	14.4	49.4	0.0	27.4	95.9	29.4	15.6	31.8	56.9	22.1	65.6	65.6
Cycle Q Clear(g_c), s	14.4	49.4	0.0	27.4	95.9	29.4	15.6	31.8	56.9	22.1	65.6	65.6
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		0.09
Lane Grp Cap(c), veh/h	117	1924		222	1537	696	126	1299	403	385	530	549
V/C Ratio(X)	1.43	0.70		1.45	1.30	0.34	1.42	0.63	1.04	0.92	1.29	1.29
Avail Cap(c_a), veh/h	117	1924		222	1537	696	126	1299	403	415	530	549
HCM Platoon Ratio	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.38	0.38	0.38	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	102.8	58.1	0.0	105.5	94.2	65.7	102.2	72.3	81.6	96.8	77.2	77.2
Incr Delay (d2), s/veh	236.6	2.2	0.0	210.6	137.2	0.5	227.6	1.0	54.7	23.9	143.6	144.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.4	21.7	0.0	26.3	75.2	12.8	15.2	13.7	28.8	11.3	50.8	52.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	339.4	60.3	0.0	316.1	231.4	66.2	329.8	73.3	136.3	120.7	220.8	222.0
LnGrp LOS	F	E		F	F	E	F	E	F	F	F	F
Approach Vol, veh/h		1520	A		2557			1416			1745	
Approach Delay, s/veh		91.0			226.7			124.3			201.0	
Approach LOS		F			F			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.0	103.0	31.7	64.3	34.0	90.0	23.0	73.0				
Change Period (Y+Rc), s	* 6.6	* 7.1	7.4	7.4	* 6.6	* 7.1	7.4	7.4				
Max Green Setting (Gmax), s	* 14	* 96	26.2	55.0	* 27	* 83	15.6	65.6				
Max Q Clear Time (g_c+I1), s	16.4	97.9	24.1	58.9	29.4	51.4	17.6	67.6				
Green Ext Time (p_c), s	0.0	0.0	0.3	0.0	0.0	11.4	0.0	0.0				

Intersection Summary

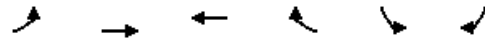
HCM 6th Ctrl Delay	172.0
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 9: Busch Blvd & I-275 SB Ramps

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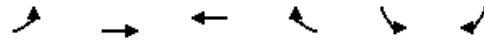
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↑↑↑	↑↑↑	↵	↵	↵
Traffic Volume (veh/h)	370	1712	2007	792	206	499
Future Volume (veh/h)	370	1712	2007	792	206	499
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1856	1885	1826	1841
Adj Flow Rate, veh/h	394	1821	2135	0	219	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	3	1	5	4
Cap, veh/h	416	4105	2731		239	
Arrive On Green	0.16	0.54	0.72	0.00	0.14	0.00
Sat Flow, veh/h	1767	5274	5233	1598	1739	1560
Grp Volume(v), veh/h	394	1821	2135	0	219	0
Grp Sat Flow(s),veh/h/ln	1767	1702	1689	1598	1739	1560
Q Serve(g_s), s	48.6	47.6	59.7	0.0	27.3	0.0
Cycle Q Clear(g_c), s	48.6	47.6	59.7	0.0	27.3	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	416	4105	2731		239	
V/C Ratio(X)	0.95	0.44	0.78		0.92	
Avail Cap(c_a), veh/h	446	4105	2731		353	
HCM Platoon Ratio	0.67	0.67	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.31	0.31	0.29	0.00	1.00	0.00
Uniform Delay (d), s/veh	91.3	20.9	22.8	0.0	93.6	0.0
Incr Delay (d2), s/veh	13.5	0.1	0.7	0.0	24.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	24.4	20.8	21.0	0.0	14.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	104.8	21.0	23.5	0.0	117.7	0.0
LnGrp LOS	F	C	C		F	
Approach Vol, veh/h		2215	2135	A	219	A
Approach Delay, s/veh		35.9	23.5		117.7	
Approach LOS		D	C		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	58.3	125.1			183.4	36.6
Change Period (Y+Rc), s	6.5	6.5			6.5	6.4
Max Green Setting (Gmax), s	55.5	100.5			162.5	44.6
Max Q Clear Time (g_c+I1), s	50.6	61.7			49.6	29.3
Green Ext Time (p_c), s	1.2	23.8			24.9	0.9
Intersection Summary						
HCM 6th Ctrl Delay			34.0			
HCM 6th LOS			C			

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 10: Busch Blvd & I-275 NB Ramps

2040 No Build - AM
 04/09/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑↑	↑↑↑	↗	↖↗	↖↗
Traffic Volume (veh/h)	303	1615	2282	330	318	517
Future Volume (veh/h)	303	1615	2282	330	318	517
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1870	1856	1841	1856
Adj Flow Rate, veh/h	322	1718	2428	0	338	550
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	2	3	4	3
Cap, veh/h	309	3795	2750		668	543
Arrive On Green	0.35	1.00	1.00	0.00	0.20	0.20
Sat Flow, veh/h	1767	5274	5274	1572	3401	2768
Grp Volume(v), veh/h	322	1718	2428	0	338	550
Grp Sat Flow(s),veh/h/ln	1767	1702	1702	1572	1700	1384
Q Serve(g_s), s	38.5	0.0	0.0	0.0	19.5	43.2
Cycle Q Clear(g_c), s	38.5	0.0	0.0	0.0	19.5	43.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	309	3795	2750		668	543
V/C Ratio(X)	1.04	0.45	0.88		0.51	1.01
Avail Cap(c_a), veh/h	309	3795	2750		668	543
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.09	0.00	1.00	1.00
Uniform Delay (d), s/veh	71.5	0.0	0.0	0.0	78.9	88.4
Incr Delay (d2), s/veh	58.6	0.3	0.4	0.0	0.9	41.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	20.8	0.1	0.1	0.0	8.8	18.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	130.1	0.3	0.4	0.0	79.8	130.0
LnGrp LOS	F	A	A		E	F
Approach Vol, veh/h		2040	2428	A	888	
Approach Delay, s/veh		20.8	0.4		110.9	
Approach LOS		C	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	45.0	125.0			170.0	50.0
Change Period (Y+Rc), s	6.5	6.5			6.5	6.8
Max Green Setting (Gmax), s	38.5	118.5			163.5	43.2
Max Q Clear Time (g_c+I1), s	40.5	2.0			2.0	45.2
Green Ext Time (p_c), s	0.0	51.5			22.1	0.0

Intersection Summary

HCM 6th Ctrl Delay	26.5
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 11: Nebraska Ave & Busch Blvd

2040 No Build - AM
 04/09/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	1592	248	247	2308	74	161	748	268	74	1265	143
Future Volume (veh/h)	93	1592	248	247	2308	74	161	748	268	74	1265	143
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1870	1870	1826	1870	1870	1796	1826	1841	1841	1870	1870
Adj Flow Rate, veh/h	99	1694	264	263	2455	79	171	796	0	79	1346	152
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	2	2	5	2	2	7	5	4	4	2	2
Cap, veh/h	80	1520	236	224	2158	69	131	1253		94	1089	122
Arrive On Green	0.09	0.68	0.68	0.13	0.42	0.42	0.08	0.36	0.00	0.05	0.34	0.34
Sat Flow, veh/h	1739	4459	691	1739	5083	163	1711	3469	1560	1753	3220	362
Grp Volume(v), veh/h	99	1291	667	263	1640	894	171	796	0	79	739	759
Grp Sat Flow(s),veh/h/ln	1739	1702	1746	1739	1702	1841	1711	1735	1560	1753	1777	1805
Q Serve(g_s), s	10.1	75.0	75.0	28.4	93.4	93.4	16.8	41.9	0.0	9.8	74.4	74.4
Cycle Q Clear(g_c), s	10.1	75.0	75.0	28.4	93.4	93.4	16.8	41.9	0.0	9.8	74.4	74.4
Prop In Lane	1.00		0.40	1.00		0.09	1.00		1.00	1.00		0.20
Lane Grp Cap(c), veh/h	80	1160	595	224	1445	782	131	1253		94	601	611
V/C Ratio(X)	1.24	1.11	1.12	1.17	1.13	1.14	1.31	0.64		0.84	1.23	1.24
Avail Cap(c_a), veh/h	80	1160	595	224	1445	782	131	1253		147	601	611
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	99.9	35.0	35.0	95.8	63.3	63.3	101.6	58.3	0.0	103.2	72.8	72.8
Incr Delay (d2), s/veh	172.3	61.6	72.9	114.2	69.7	79.8	183.3	1.1	0.0	13.1	117.7	122.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	33.2	35.9	20.0	53.9	60.5	14.2	18.6	0.0	4.8	53.1	54.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	272.2	96.6	107.9	210.0	133.0	143.1	284.9	59.3	0.0	116.3	190.5	195.5
LnGrp LOS	F	F	F	F	F	F	F	E		F	F	F
Approach Vol, veh/h		2057			2797			967	A		1577	
Approach Delay, s/veh		108.7			143.4			99.2			189.2	
Approach LOS		F			F			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	17.0	100.5	19.0	87.0	35.5	82.0	24.0	82.0				
Change Period (Y+Rc), s	6.9	7.0	* 7.2	* 7.6	7.0	* 7	* 7.2	* 7.6				
Max Green Setting (Gmax), s	10.1	90.0	* 18	* 73	25.1	* 75	* 17	* 74				
Max Q Clear Time (g_c+I1), s	12.1	95.4	11.8	43.9	30.4	77.0	18.8	76.4				
Green Ext Time (p_c), s	0.0	0.0	0.0	5.8	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			137.8									
HCM 6th LOS			F									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.												

Arterial Level of Service: EB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
	II	45	22.0	24.9	46.9	0.20	15.5	E
Dale Mabry Hwy NB Ra	II	45	23.3	5.5	28.8	0.21	26.8	C
N Himes Ave	II	45	19.0	33.6	52.6	0.17	11.9	F
Twin Lakes Blvd	II	45	43.9	14.1	58.0	0.50	31.0	B
Orange Grove Dr	II	45	25.9	3.5	29.4	0.25	30.5	B
N Armenia Ave	II	45	29.7	41.3	71.0	0.30	15.2	E
N Boulevard	II	45	79.8	96.3	176.1	1.00	20.4	D
Florida Ave	II	40	47.3	74.8	122.1	0.51	15.0	E
I-275 SB Ramps	II	40	21.9	2.5	24.4	0.19	28.1	B
I-275 NB Ramps	II	40	21.3	15.5	36.8	0.19	18.2	D
Nebraska Ave	II	40	14.6	122.0	136.6	0.13	3.3	F
Total	II		348.7	434.0	782.7	3.65	16.8	E

Arterial Level of Service: WB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Nebraska Ave	II	40	27.0	157.7	184.7	0.25	4.8	F
I-275 NB Ramps	II	40	14.6	11.6	26.2	0.13	17.4	D
I-275 SB Ramps	II	40	21.3	64.9	86.2	0.19	7.8	F
Florida Ave	II	40	21.9	207.4	229.3	0.19	3.0	F
N Boulevard	II	40	47.3	124.6	171.9	0.51	10.6	F
N Armenia Ave	II	45	79.8	10.7	90.5	1.00	39.7	A
Orange Grove Dr	II	45	29.7	27.4	57.1	0.30	18.9	D
Mossvale Ln	II	45	25.9	8.0	33.9	0.25	26.4	C
N Himes Ave	II	45	43.9	8.3	52.2	0.50	34.4	B
Dale Mabry Hwy NB Ra	II	45	19.0	5.4	24.4	0.17	25.7	C
Dale Mabry Hwy SB Ra	II	45	23.3	34.1	57.4	0.21	13.4	E
Total	II		353.7	660.1	1013.8	3.69	13.1	E

HCM 6th Signalized Intersection Summary
 1: Busch Blvd & Dale Mabry Hwy SB Ramps

2040 No Build - PM

04/09/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	232	1860	0	0	2446	0	0	5	17	400	5	38
Future Volume (veh/h)	232	1860	0	0	2446	0	0	5	17	400	5	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	0	1900	1900	1900	1856	1900	1841
Adj Flow Rate, veh/h	239	1918	0	0	2522	0	0	5	18	416	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	1	1	0	0	0	0	3	0	4
Cap, veh/h	200	2659	0	0	2223	0	0	43	37	385	0	
Arrive On Green	0.09	0.75	0.00	0.00	0.62	0.00	0.00	0.02	0.02	0.11	0.00	0.00
Sat Flow, veh/h	1781	3647	0	0	3770	0	0	1900	1610	3534	0	1560
Grp Volume(v), veh/h	239	1918	0	0	2522	0	0	5	18	416	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1791	0	0	1900	1610	1767	0	1560
Q Serve(g_s), s	16.2	53.1	0.0	0.0	111.7	0.0	0.0	0.5	2.0	19.6	0.0	0.0
Cycle Q Clear(g_c), s	16.2	53.1	0.0	0.0	111.7	0.0	0.0	0.5	2.0	19.6	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.00	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	200	2659	0	0	2223	0	0	43	37	385	0	
V/C Ratio(X)	1.19	0.72	0.00	0.00	1.13	0.00	0.00	0.12	0.49	1.08	0.00	
Avail Cap(c_a), veh/h	200	2659	0	0	2223	0	0	63	54	385	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	70.3	12.4	0.0	0.0	34.2	0.0	0.0	86.2	86.9	80.2	0.0	0.0
Incr Delay (d2), s/veh	125.4	1.7	0.0	0.0	66.8	0.0	0.0	1.2	9.8	69.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.2	19.5	0.0	0.0	65.8	0.0	0.0	0.2	0.9	12.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	195.7	14.1	0.0	0.0	100.9	0.0	0.0	87.3	96.7	149.5	0.0	0.0
LnGrp LOS	F	B	A	A	F	A	A	F	F	F	A	
Approach Vol, veh/h		2157			2522			23			416	A
Approach Delay, s/veh		34.2			100.9			94.7			149.5	
Approach LOS		C			F			F			F	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	23.0	118.5		12.5		141.5		26.0				
Change Period (Y+Rc), s	6.8	6.8		* 8.4		6.8		6.4				
Max Green Setting (Gmax), s	16.2	109.8		* 6		132.8		19.6				
Max Q Clear Time (g_c+I1), s	18.2	113.7		4.0		55.1		21.6				
Green Ext Time (p_c), s	0.0	0.0		0.0		43.6		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				76.7								
HCM 6th LOS				E								
Notes												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [SWR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
 2: Busch Blvd & Dale Mabry Hwy NB Ramps

2040 No Build - PM
 04/09/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↕↕	↕↕	↵	↵↵	↵
Traffic Volume (veh/h)	131	2146	2574	573	176	279
Future Volume (veh/h)	131	2146	2574	573	176	279
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	139	2283	2738	0	187	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	2	2	1	1	1
Cap, veh/h	173	3049	2817		231	
Arrive On Green	0.03	0.86	1.00	0.00	0.07	0.00
Sat Flow, veh/h	1810	3647	3647	1598	3483	1598
Grp Volume(v), veh/h	139	2283	2738	0	187	0
Grp Sat Flow(s),veh/h/ln	1810	1777	1777	1598	1742	1598
Q Serve(g_s), s	2.5	45.9	0.0	0.0	9.5	0.0
Cycle Q Clear(g_c), s	2.5	45.9	0.0	0.0	9.5	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	173	3049	2817		231	
V/C Ratio(X)	0.80	0.75	0.97		0.81	
Avail Cap(c_a), veh/h	246	3049	2817		410	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.09	0.00	1.00	0.00
Uniform Delay (d), s/veh	18.2	5.1	0.0	0.0	82.9	0.0
Incr Delay (d2), s/veh	11.8	1.7	1.8	0.0	6.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.4	12.0	0.7	0.0	4.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	30.0	6.8	1.8	0.0	89.5	0.0
LnGrp LOS	C	A	A		F	
Approach Vol, veh/h		2422	2738	A	187	A
Approach Delay, s/veh		8.1	1.8		89.5	
Approach LOS		A	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	11.8	149.5			161.3	18.7
Change Period (Y+Rc), s	6.8	6.8			6.8	6.8
Max Green Setting (Gmax), s	12.2	126.2			145.2	21.2
Max Q Clear Time (g_c+I1), s	4.5	2.0			47.9	11.5
Green Ext Time (p_c), s	0.2	105.5			67.8	0.4

Intersection Summary

HCM 6th Ctrl Delay	7.7
HCM 6th LOS	A

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 3: N Himes Ave & Busch Blvd






















2040 No Build - PM
 04/09/2018

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑	↑	↑↑	↑↑	↑
Traffic Volume (veh/h)	1991	331	219	2614	533	286
Future Volume (veh/h)	1991	331	219	2614	533	286
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1885	1870	1900	1885	1900
Adj Flow Rate, veh/h	2212	368	243	2904	455	465
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	1	2	0	1	0
Cap, veh/h	2018	907	238	2511	411	369
Arrive On Green	1.00	1.00	0.18	1.00	0.23	0.23
Sat Flow, veh/h	3647	1598	1781	3705	1795	1610
Grp Volume(v), veh/h	2212	368	243	2904	455	465
Grp Sat Flow(s),veh/h/ln	1777	1598	1781	1805	1795	1610
Q Serve(g_s), s	0.0	0.0	16.2	125.2	41.2	41.2
Cycle Q Clear(g_c), s	0.0	0.0	16.2	125.2	41.2	41.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2018	907	238	2511	411	369
V/C Ratio(X)	1.10	0.41	1.02	1.16	1.11	1.26
Avail Cap(c_a), veh/h	2018	907	238	2511	411	369
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.54	0.54	0.16	0.16	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	47.3	0.0	69.4	69.4
Incr Delay (d2), s/veh	48.1	0.7	29.2	71.3	76.7	137.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.5	18.6	11.6	24.9	27.6	46.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	48.1	0.7	76.5	71.3	146.1	207.3
LnGrp LOS	F	A	F	F	F	F
Approach Vol, veh/h	2580			3147	920	
Approach Delay, s/veh	41.3			71.7	177.0	
Approach LOS	D			E	F	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		132.0		48.0	23.0	109.0
Change Period (Y+Rc), s		6.8		* 6.8	6.8	6.8
Max Green Setting (Gmax), s		125.2		* 41	16.2	102.2
Max Q Clear Time (g_c+I1), s		127.2		43.2	18.2	2.0
Green Ext Time (p_c), s		0.0		0.0	0.0	73.2
Intersection Summary						
HCM 6th Ctrl Delay			74.5			
HCM 6th LOS			E			
Notes						
User approved volume balancing among the lanes for turning movement.						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

HCM 6th Signalized Intersection Summary
4: Twin Lakes Blvd/Mossvale Ln & Busch Blvd

2040 No Build - PM

04/09/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	2185	86	86	2583	1	249	0	298	0	0	1
Future Volume (veh/h)	6	2185	86	86	2583	1	249	0	298	0	0	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1856	1900	1870	1870	1885	0	1885	1900	1900	1900
Adj Flow Rate, veh/h	6	2230	88	88	2636	1	254	0	304	0	0	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	2	3	0	2	2	1	0	1	0	0	0
Cap, veh/h	116	2337	1034	105	2751	1	229	0	0	0	0	3
Arrive On Green	1.00	1.00	1.00	0.12	1.00	1.00	0.13	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	116	3554	1572	1810	3646	1	1795	254		0	0	1610
Grp Volume(v), veh/h	6	2230	88	88	1285	1352	254	169.6		0	0	1
Grp Sat Flow(s),veh/h/ln	116	1777	1572	1810	1777	1870	1795	F		0	0	1610
Q Serve(g_s), s	0.0	0.0	0.0	8.6	0.0	0.0	23.0			0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.0	0.0	0.0	8.6	0.0	0.0	23.0			0.0	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00			0.00		1.00
Lane Grp Cap(c), veh/h	116	2337	1034	105	1341	1411	229			0	0	3
V/C Ratio(X)	0.05	0.95	0.09	0.84	0.96	0.96	1.11			0.00	0.00	0.38
Avail Cap(c_a), veh/h	116	2337	1034	111	1341	1411	229			0	0	81
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00			1.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.09	0.09	0.09	1.00			0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	78.7	0.0	0.0	78.5			0.0	0.0	89.8
Incr Delay (d2), s/veh	0.1	1.4	0.0	5.3	2.5	2.4	91.1			0.0	0.0	72.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.0	0.4	0.0	3.9	0.9	0.9	16.5			0.0	0.0	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.1	1.4	0.0	84.0	2.5	2.4	169.6			0.0	0.0	162.5
LnGrp LOS	A	A	A	F	A	A	F			A	A	F
Approach Vol, veh/h		2324			2725							1
Approach Delay, s/veh		1.3			5.0							162.5
Approach LOS		A			A							F
Timer - Assigned Phs	1	2	3	4		6						
Phs Duration (G+Y+Rc), s	17.5	125.4	30.0	7.2		142.8						
Change Period (Y+Rc), s	* 7	* 7	7.0	6.9		* 7						
Max Green Setting (Gmax), s	* 11	* 1.1E2	23.0	9.1		* 1.3E2						
Max Q Clear Time (g_c+I1), s	10.6	2.0	25.0	2.1		2.0						
Green Ext Time (p_c), s	0.0	72.5	0.0	0.0		108.8						
Intersection Summary												
HCM 6th Ctrl Delay			11.3									
HCM 6th LOS			B									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
5: Busch Blvd & Orange Grove Dr

2040 No Build - PM
04/09/2018



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations	↖	↗	↗	↖	↖	↖
Traffic Volume (veh/h)	233	2250	2444	90	66	226
Future Volume (veh/h)	233	2250	2444	90	66	226
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1885	1870	1870	1870	1856	1900
Adj Flow Rate, veh/h	238	2296	2494	92	67	231
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	2	2	2	3	0
Cap, veh/h	210	2780	2348	1047	247	225
Arrive On Green	0.17	1.00	1.00	1.00	0.14	0.14
Sat Flow, veh/h	1795	3647	3647	1585	1767	1610
Grp Volume(v), veh/h	238	2296	2494	92	67	231
Grp Sat Flow(s),veh/h/ln	1795	1777	1777	1585	1767	1610
Q Serve(g_s), s	15.1	0.0	0.0	0.0	6.1	25.2
Cycle Q Clear(g_c), s	15.1	0.0	0.0	0.0	6.1	25.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	210	2780	2348	1047	247	225
V/C Ratio(X)	1.13	0.83	1.06	0.09	0.27	1.02
Avail Cap(c_a), veh/h	331	2780	2348	1047	247	225
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.22	0.22	0.09	0.09	1.00	1.00
Uniform Delay (d), s/veh	58.8	0.0	0.0	0.0	69.2	77.4
Incr Delay (d2), s/veh	67.0	0.7	29.2	0.0	0.6	66.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.6	0.3	9.5	0.0	2.8	14.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	125.8	0.7	29.2	0.0	69.8	143.9
LnGrp LOS	F	A	F	A	E	F
Approach Vol, veh/h		2534	2586		298	
Approach Delay, s/veh		12.4	28.2		127.2	
Approach LOS		B	C		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	23.1	124.9			148.0	32.0
Change Period (Y+Rc), s	6.8	* 7.2			* 7.2	6.8
Max Green Setting (Gmax), s	27.2	* 1.1E2			* 1.4E2	25.2
Max Q Clear Time (g_c+I1), s	17.1	2.0			2.0	27.2
Green Ext Time (p_c), s	0.5	83.2			85.6	0.0

Intersection Summary

HCM 6th Ctrl Delay	26.3
HCM 6th LOS	C
























Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
6: N Armenia Ave & Busch Blvd


























2040 No Build - PM

04/09/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	217	1902	197	180	1884	55	312	472	185	97	333	338
Future Volume (veh/h)	217	1902	197	180	1884	55	312	472	185	97	333	338
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1900	1885	1870	1870	1870	1885	1885	1900	1885	1870
Adj Flow Rate, veh/h	231	2023	210	191	2004	59	332	502	197	103	354	360
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	0	1	2	2	2	1	1	0	1	2
Cap, veh/h	197	1852	839	159	1759	52	259	708	316	196	577	255
Arrive On Green	0.22	1.00	1.00	0.09	0.50	0.50	0.09	0.20	0.20	0.06	0.16	0.16
Sat Flow, veh/h	1781	3554	1610	1795	3525	103	1781	3582	1598	1810	3582	1585
Grp Volume(v), veh/h	231	2023	210	191	1005	1058	332	502	197	103	354	360
Grp Sat Flow(s),veh/h/ln	1781	1777	1610	1795	1777	1852	1781	1791	1598	1810	1791	1585
Q Serve(g_s), s	19.9	93.8	0.0	15.9	89.8	89.8	17.0	23.5	16.4	8.5	16.6	29.0
Cycle Q Clear(g_c), s	19.9	93.8	0.0	15.9	89.8	89.8	17.0	23.5	16.4	8.5	16.6	29.0
Prop In Lane	1.00		1.00	1.00		0.06	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	197	1852	839	159	886	924	259	708	316	196	577	255
V/C Ratio(X)	1.17	1.09	0.25	1.20	1.13	1.15	1.28	0.71	0.62	0.53	0.61	1.41
Avail Cap(c_a), veh/h	197	1852	839	159	886	924	259	708	316	197	577	255
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.57	0.57	0.57	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.1	0.0	0.0	82.1	45.1	45.1	63.1	67.4	42.9	59.1	70.3	75.5
Incr Delay (d2), s/veh	104.2	47.3	0.4	97.6	61.7	66.7	152.8	3.3	3.8	2.5	1.9	206.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.7	12.2	0.1	11.6	53.2	56.7	14.7	11.1	6.9	4.1	7.8	26.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	174.3	47.3	0.4	179.7	106.8	111.8	215.9	70.7	46.7	61.7	72.2	281.6
LnGrp LOS	F	F	A	F	F	F	F	E	D	E	E	F
Approach Vol, veh/h		2464			2254			1031			817	
Approach Delay, s/veh		55.2			115.3			112.9			163.1	
Approach LOS		E			F			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	26.0	95.9	16.4	41.7	22.0	99.9	23.0	35.1				
Change Period (Y+Rc), s	* 6.1	* 6.1	6.0	6.1	* 6.1	* 6.1	6.0	6.1				
Max Green Setting (Gmax), s	* 20	* 90	10.6	35.4	* 16	* 94	17.0	29.0				
Max Q Clear Time (g_c+I1), s	21.9	91.8	10.5	25.5	17.9	95.8	19.0	31.0				
Green Ext Time (p_c), s	0.0	0.0	0.0	2.8	0.0	0.0	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			98.3									
HCM 6th LOS			F									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
7: N Boulevard & Busch Blvd

2040 No Build - PM
04/09/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Traffic Volume (veh/h)	79	1930	113	109	2050	76	113	362	92	116	243	44
Future Volume (veh/h)	79	1930	113	109	2050	76	113	362	92	116	243	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1870	1870	1870	1870	1870	1900	1870	1856	1885	1841	1826
Adj Flow Rate, veh/h	81	1969	115	111	2092	78	115	369	94	118	248	45
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	5	2	2	2	2	2	0	2	3	1	4	5
Cap, veh/h	121	1951	113	119	1987	74	131	355	404	121	341	394
Arrive On Green	0.07	0.57	0.57	0.07	0.57	0.57	0.07	0.19	0.19	0.07	0.19	0.19
Sat Flow, veh/h	1739	3414	197	1781	3494	129	1810	1870	1572	1795	1841	1547
Grp Volume(v), veh/h	81	1015	1069	111	1057	1113	115	369	94	118	248	45
Grp Sat Flow(s),veh/h/ln	1739	1777	1835	1781	1777	1847	1810	1870	1572	1795	1841	1547
Q Serve(g_s), s	10.0	125.7	125.7	13.6	125.1	125.1	13.9	41.8	10.4	14.4	27.9	4.9
Cycle Q Clear(g_c), s	10.0	125.7	125.7	13.6	125.1	125.1	13.9	41.8	10.4	14.4	27.9	4.9
Prop In Lane	1.00		0.11	1.00		0.07	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	121	1015	1048	119	1010	1050	131	355	404	121	341	394
V/C Ratio(X)	0.67	1.00	1.02	0.93	1.05	1.06	0.88	1.04	0.23	0.98	0.73	0.11
Avail Cap(c_a), veh/h	121	1015	1048	119	1010	1050	153	355	404	121	341	394
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.12	0.12	0.12	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	99.9	47.1	47.2	102.2	47.4	47.5	101.1	89.1	64.6	102.4	84.4	62.9
Incr Delay (d2), s/veh	3.5	9.8	15.0	60.9	41.2	45.0	33.9	58.0	0.3	74.2	7.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.6	56.4	59.7	8.4	65.5	69.1	7.8	26.2	4.3	9.3	14.2	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	103.4	56.9	62.2	163.1	88.7	92.4	135.0	147.1	64.9	176.6	92.0	63.1
LnGrp LOS	F	F	F	F	F	F	F	F	E	F	F	E
Approach Vol, veh/h		2165			2281			578			411	
Approach Delay, s/veh		61.3			94.1			131.4			113.2	
Approach LOS		E			F			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.0	131.0	20.6	47.4	20.4	131.6	21.7	46.3				
Change Period (Y+Rc), s	* 5.7	5.9	* 5.8	* 5.6	* 5.7	5.9	* 5.8	* 5.6				
Max Green Setting (Gmax), s	* 15	125.1	* 15	* 42	* 15	125.7	* 19	* 38				
Max Q Clear Time (g_c+I1), s	12.0	127.1	16.4	43.8	15.6	127.7	15.9	29.9				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9				
Intersection Summary												
HCM 6th Ctrl Delay			86.4									
HCM 6th LOS			F									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
8: Florida Ave & Busch Blvd

2040 No Build - PM

04/09/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	146	1715	277	319	1945	320	226	1391	539	408	862	156
Future Volume (veh/h)	146	1715	277	319	1945	320	226	1391	539	408	862	156
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1870	1870	1870	1870	1885	1885	1870	1856	1885	1885	1885
Adj Flow Rate, veh/h	149	1750	0	326	1985	327	231	1419	550	416	880	159
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	2	2	2	2	1	1	2	3	1	1	1
Cap, veh/h	116	1947		254	1630	733	176	1290	397	326	752	136
Arrive On Green	0.07	0.38	0.00	0.14	0.46	0.46	0.10	0.25	0.25	0.09	0.25	0.25
Sat Flow, veh/h	1767	5274	0	1781	3554	1598	1795	5106	1572	3483	3030	547
Grp Volume(v), veh/h	149	1750	0	326	1985	327	231	1419	550	416	520	519
Grp Sat Flow(s),veh/h/ln	1767	1702	0	1781	1777	1598	1795	1702	1572	1742	1791	1787
Q Serve(g_s), s	14.4	71.0	0.0	31.4	100.9	30.7	21.6	55.6	55.6	20.6	54.6	54.6
Cycle Q Clear(g_c), s	14.4	71.0	0.0	31.4	100.9	30.7	21.6	55.6	55.6	20.6	54.6	54.6
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		0.31
Lane Grp Cap(c), veh/h	116	1947		254	1630	733	176	1290	397	326	444	443
V/C Ratio(X)	1.29	0.90		1.28	1.22	0.45	1.31	1.10	1.38	1.28	1.17	1.17
Avail Cap(c_a), veh/h	116	1947		254	1630	733	176	1290	397	326	444	443
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.35	0.35	0.35	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	102.8	64.0	0.0	94.3	59.5	40.5	99.2	82.2	82.2	99.7	82.7	82.7
Incr Delay (d2), s/veh	179.8	7.1	0.0	137.4	100.2	0.7	174.3	56.9	187.8	145.7	98.2	98.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	12.4	31.9	0.0	24.2	67.4	12.3	18.6	31.0	43.1	15.9	37.2	37.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	282.6	71.1	0.0	231.7	159.7	41.2	273.5	139.1	270.0	245.4	180.9	181.1
LnGrp LOS	F	E		F	F	D	F	F	F	F	F	F
Approach Vol, veh/h		1899	A		2638			2200			1455	
Approach Delay, s/veh		87.7			153.9			186.0			199.4	
Approach LOS		F			F			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.0	108.0	28.0	63.0	38.0	91.0	29.0	62.0				
Change Period (Y+Rc), s	* 6.6	* 7.1	7.4	7.4	* 6.6	* 7.1	7.4	7.4				
Max Green Setting (Gmax), s	* 14	* 1E2	20.6	55.6	* 31	* 84	21.6	54.6				
Max Q Clear Time (g_c+I1), s	16.4	102.9	22.6	57.6	33.4	73.0	23.6	56.6				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	7.9	0.0	0.0				

Intersection Summary

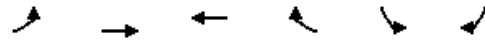
HCM 6th Ctrl Delay	155.3
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 9: Busch Blvd & I-275 SB Ramps

2040 No Build - PM
 04/09/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↑↑↑	↑↑↑	↵	↵	↵
Traffic Volume (veh/h)	428	2234	1895	711	334	689
Future Volume (veh/h)	428	2234	1895	711	334	689
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1870	1885	1856	1841
Adj Flow Rate, veh/h	437	2280	1934	0	341	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	2	2	1	3	4
Cap, veh/h	309	3957	2913		294	
Arrive On Green	0.35	1.00	1.00	0.00	0.17	0.00
Sat Flow, veh/h	1767	5274	5274	1598	1767	1560
Grp Volume(v), veh/h	437	2280	1934	0	341	0
Grp Sat Flow(s),veh/h/ln	1767	1702	1702	1598	1767	1560
Q Serve(g_s), s	38.5	0.0	0.0	0.0	36.6	0.0
Cycle Q Clear(g_c), s	38.5	0.0	0.0	0.0	36.6	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	309	3957	2913		294	
V/C Ratio(X)	1.41	0.58	0.66		1.16	
Avail Cap(c_a), veh/h	309	3957	2913		294	
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.09	0.00	1.00	0.00
Uniform Delay (d), s/veh	71.5	0.0	0.0	0.0	91.7	0.0
Incr Delay (d2), s/veh	187.7	0.1	0.1	0.0	103.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	31.8	0.0	0.0	0.0	25.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	259.2	0.1	0.1	0.0	194.7	0.0
LnGrp LOS	F	A	A		F	
Approach Vol, veh/h		2717	1934	A	341	A
Approach Delay, s/veh		41.7	0.1		194.7	
Approach LOS		D	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	45.0	132.0			177.0	43.0
Change Period (Y+Rc), s	6.5	6.5			6.5	6.4
Max Green Setting (Gmax), s	38.5	125.5			170.5	36.6
Max Q Clear Time (g_c+I1), s	40.5	2.0			2.0	38.6
Green Ext Time (p_c), s	0.0	29.0			47.0	0.0

Intersection Summary

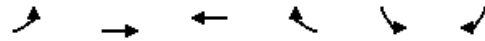
HCM 6th Ctrl Delay	36.1
HCM 6th LOS	D

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 10: Busch Blvd & I-275 NB Ramps

2040 No Build - PM
 04/09/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↑↑↑	↑↑↑	↵	↵↵	↵↵
Traffic Volume (veh/h)	634	1934	2233	468	252	373
Future Volume (veh/h)	634	1934	2233	468	252	373
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1856	1870	1885
Adj Flow Rate, veh/h	667	2036	2351	0	265	393
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	1	3	2	1
Cap, veh/h	660	4120	2094		459	373
Arrive On Green	0.74	1.00	0.81	0.00	0.13	0.13
Sat Flow, veh/h	1781	5274	5316	1572	3456	2812
Grp Volume(v), veh/h	667	2036	2351	0	265	393
Grp Sat Flow(s),veh/h/ln	1781	1702	1716	1572	1728	1406
Q Serve(g_s), s	81.5	0.0	89.5	0.0	15.8	29.2
Cycle Q Clear(g_c), s	81.5	0.0	89.5	0.0	15.8	29.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	660	4120	2094		459	373
V/C Ratio(X)	1.01	0.49	1.12		0.58	1.05
Avail Cap(c_a), veh/h	660	4120	2094		459	373
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.71	0.71	0.09	0.00	1.00	1.00
Uniform Delay (d), s/veh	28.5	0.0	20.5	0.0	89.6	95.4
Incr Delay (d2), s/veh	32.2	0.3	56.0	0.0	2.2	61.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	29.2	0.1	28.5	0.0	7.4	14.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	60.7	0.3	76.5	0.0	91.8	156.6
LnGrp LOS	F	A	F		F	F
Approach Vol, veh/h		2703	2351	A	658	
Approach Delay, s/veh		15.2	76.5		130.5	
Approach LOS		B	E		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	88.0	96.0			184.0	36.0
Change Period (Y+Rc), s	6.5	6.5			6.5	6.8
Max Green Setting (Gmax), s	81.5	89.5			177.5	29.2
Max Q Clear Time (g_c+I1), s	83.5	91.5			2.0	31.2
Green Ext Time (p_c), s	0.0	0.0			33.9	0.0

Intersection Summary

HCM 6th Ctrl Delay	53.7
HCM 6th LOS	D

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 11: Nebraska Ave & Busch Blvd

2040 No Build - PM
 04/09/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	1807	179	207	2306	114	159	1085	299	178	879	236
Future Volume (veh/h)	200	1807	179	207	2306	114	159	1085	299	178	879	236
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1856	1841	1870	1870	1885	1856	1811	1811	1870	1870
Adj Flow Rate, veh/h	213	1922	190	220	2453	127	169	1154	0	189	935	251
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.90	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	3	4	2	2	1	3	6	6	2	2
Cap, veh/h	161	1897	186	210	2157	111	129	968		147	799	214
Arrive On Green	0.18	0.81	0.81	0.12	0.43	0.43	0.07	0.27	0.00	0.09	0.29	0.29
Sat Flow, veh/h	1767	4689	461	1753	4974	255	1795	3526	1535	1725	2771	742
Grp Volume(v), veh/h	213	1381	731	220	1671	909	169	1154	0	189	599	587
Grp Sat Flow(s),veh/h/ln	1767	1689	1773	1753	1702	1824	1795	1763	1535	1725	1777	1737
Q Serve(g_s), s	20.1	89.0	89.0	26.4	95.4	95.4	15.8	60.4	0.0	18.8	63.4	63.4
Cycle Q Clear(g_c), s	20.1	89.0	89.0	26.4	95.4	95.4	15.8	60.4	0.0	18.8	63.4	63.4
Prop In Lane	1.00		0.26	1.00		0.14	1.00		1.00	1.00		0.43
Lane Grp Cap(c), veh/h	161	1366	717	210	1476	791	129	968		147	512	500
V/C Ratio(X)	1.32	1.01	1.02	1.05	1.13	1.15	1.31	1.19		1.28	1.17	1.17
Avail Cap(c_a), veh/h	161	1366	717	210	1476	791	129	968		147	512	500
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	89.9	21.0	21.0	96.8	62.3	62.3	102.1	79.8	0.0	100.6	78.3	78.3
Incr Delay (d2), s/veh	175.7	25.1	36.0	74.6	68.5	81.4	184.4	96.8	0.0	168.8	95.5	97.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	16.4	22.6	25.9	16.4	54.8	61.6	14.0	40.3	0.0	15.3	42.3	41.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	265.6	46.1	57.0	171.4	130.8	143.7	286.5	176.6	0.0	269.4	173.8	175.8
LnGrp LOS	F	F	F	F	F	F	F	F		F	F	F
Approach Vol, veh/h		2325			2800			1323	A		1375	
Approach Delay, s/veh		69.6			138.2			190.7			187.8	
Approach LOS		E			F			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	27.0	102.5	26.0	68.0	33.5	96.0	23.0	71.0				
Change Period (Y+Rc), s	6.9	7.0	* 7.2	* 7.6	7.0	* 7	* 7.2	* 7.6				
Max Green Setting (Gmax), s	20.1	92.0	* 19	* 60	23.1	* 89	* 16	* 63				
Max Q Clear Time (g_c+I1), s	22.1	97.4	20.8	62.4	28.4	91.0	17.8	65.4				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	135.4
HCM 6th LOS	F

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Arterial Level of Service: EB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
	II	45	22.0	19.3	41.3	0.20	17.6	D
Dale Mabry Hwy NB Ra	II	45	23.3	7.4	30.7	0.21	25.1	C
N Himes Ave	II	45	19.0	36.9	55.9	0.17	11.2	F
Twin Lakes Blvd	II	45	43.9	29.3	73.2	0.50	24.5	C
Orange Grove Dr	II	45	25.9	14.1	40.0	0.25	22.4	C
N Armenia Ave	II	45	29.7	77.3	107.0	0.30	10.1	F
N Boulevard	II	45	79.8	76.1	155.9	1.00	23.0	C
Florida Ave	II	40	47.2	133.4	180.6	0.51	10.1	F
I-275 SB Ramps	II	40	21.9	36.4	58.3	0.19	11.7	F
I-275 NB Ramps	II	40	21.3	4.4	25.7	0.19	26.0	C
Nebraska Ave	II	40	14.6	89.4	104.0	0.13	4.4	F
Total	II		348.6	524.0	872.6	3.65	15.0	E

Arterial Level of Service: WB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Nebraska Ave	II	40	27.0	155.0	182.0	0.25	4.8	F
I-275 NB Ramps	II	40	14.6	111.7	126.3	0.13	3.6	F
I-275 SB Ramps	II	40	21.3	50.7	72.0	0.19	9.3	F
Florida Ave	II	40	21.9	236.5	258.4	0.19	2.6	F
N Boulevard	II	40	47.2	86.1	133.3	0.51	13.7	E
N Armenia Ave	II	45	79.8	124.2	204.0	1.00	17.6	D
Orange Grove Dr	II	45	29.7	44.3	74.0	0.30	14.6	E
Mossvale Ln	II	45	25.9	20.6	46.5	0.25	19.3	D
N Himes Ave	II	45	43.9	42.0	85.9	0.50	20.9	D
Dale Mabry Hwy NB Ra	II	45	19.0	79.6	98.6	0.17	6.4	F
Dale Mabry Hwy SB Ra	II	45	23.3	162.7	186.0	0.21	4.1	F
Total	II		353.6	1113.4	1467.0	3.69	9.1	F

HCM 6th Signalized Intersection Summary
 1: Busch Blvd & Dale Mabry Hwy SB Ramps

2020 Build Alt 1 - AM
 04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	201	1925	1	7	1266	0	0	0	0	356	5	20
Future Volume (veh/h)	201	1925	1	7	1266	0	0	0	0	356	5	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1885	1885	1856	1856	0	1900	1900	1900	1870	1900	1796
Adj Flow Rate, veh/h	207	1985	1	7	1305	0	0	0	0	371	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	1	1	3	3	0	0	0	0	2	0	7
Cap, veh/h	485	2969	1	24	2040	0	0	1	1	422	0	
Arrive On Green	0.17	0.81	0.81	0.60	0.60	0.00	0.00	0.00	0.00	0.12	0.00	0.00
Sat Flow, veh/h	1767	3674	2	6	3491	0	0	1900	1610	3563	0	1522
Grp Volume(v), veh/h	207	968	1018	696	616	0	0	0	0	371	0	0
Grp Sat Flow(s),veh/h/ln	1767	1791	1885	1808	1604	0	0	1900	1610	1781	0	1522
Q Serve(g_s), s	0.0	40.6	40.6	0.0	45.0	0.0	0.0	0.0	0.0	18.4	0.0	0.0
Cycle Q Clear(g_c), s	0.0	40.6	40.6	43.4	45.0	0.0	0.0	0.0	0.0	18.4	0.0	0.0
Prop In Lane	1.00		0.00	0.01		0.00	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	485	1447	1523	1103	961	0	0	1	1	422	0	
V/C Ratio(X)	0.43	0.67	0.67	0.63	0.64	0.00	0.00	0.00	0.00	0.88	0.00	
Avail Cap(c_a), veh/h	485	1447	1523	1103	961	0	0	63	54	566	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	41.0	7.2	7.2	23.2	23.5	0.0	0.0	0.0	0.0	78.1	0.0	0.0
Incr Delay (d2), s/veh	0.6	2.5	2.3	2.7	3.3	0.0	0.0	0.0	0.0	11.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.5	19.8	20.6	26.4	24.2	0.0	0.0	0.0	0.0	14.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	41.6	9.7	9.6	25.9	26.8	0.0	0.0	0.0	0.0	89.8	0.0	0.0
LnGrp LOS	D	A	A	C	C	A	A	A	A	F	A	
Approach Vol, veh/h		2193			1312			0			371	A
Approach Delay, s/veh		12.6			26.3			0.0			89.8	
Approach LOS		B			C						F	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	37.7	114.6		0.0		152.3		27.7				
Change Period (Y+Rc), s	6.8	6.8		* 8.4		6.8		6.4				
Max Green Setting (Gmax), s	9.2	107.8		* 6		123.8		28.6				
Max Q Clear Time (g_c+I1), s	2.0	47.0		0.0		42.6		20.4				
Green Ext Time (p_c), s	0.3	18.8		0.0		47.7		0.9				

Intersection Summary

HCM 6th Ctrl Delay	24.6
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [SWR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
2: Busch Blvd & Dale Mabry Hwy NB Ramps

2020 Build Alt 1 - AM
04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↗↗	↗↗	↖	↖↖	↖
Traffic Volume (veh/h)	38	2243	1514	348	121	154
Future Volume (veh/h)	38	2243	1514	348	121	154
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1781	1885	1900	1856	1826	1885
Adj Flow Rate, veh/h	39	2289	1545	0	123	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	8	1	0	3	5	1
Cap, veh/h	340	3138	2940		163	
Arrive On Green	0.02	0.88	1.00	0.00	0.05	0.00
Sat Flow, veh/h	1697	3676	3705	1572	3374	1598
Grp Volume(v), veh/h	39	2289	1545	0	123	0
Grp Sat Flow(s),veh/h/ln	1697	1791	1805	1572	1687	1598
Q Serve(g_s), s	0.6	39.5	0.0	0.0	6.5	0.0
Cycle Q Clear(g_c), s	0.6	39.5	0.0	0.0	6.5	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	340	3138	2940		163	
V/C Ratio(X)	0.11	0.73	0.53		0.75	
Avail Cap(c_a), veh/h	355	3138	2940		341	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.76	0.00	1.00	0.00
Uniform Delay (d), s/veh	2.1	3.8	0.0	0.0	84.6	0.0
Incr Delay (d2), s/veh	0.1	1.5	0.5	0.0	6.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	14.0	0.4	0.0	5.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	2.2	5.4	0.5	0.0	91.5	0.0
LnGrp LOS	A	A	A		F	
Approach Vol, veh/h		2328	1545	A	123	A
Approach Delay, s/veh		5.3	0.5		91.5	
Approach LOS		A	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	11.1	153.4			164.5	15.5
Change Period (Y+Rc), s	6.8	6.8			6.8	6.8
Max Green Setting (Gmax), s	5.8	135.6			148.2	18.2
Max Q Clear Time (g_c+I1), s	2.6	2.0			41.5	8.5
Green Ext Time (p_c), s	0.0	31.4			72.3	0.2

Intersection Summary







HCM 6th Ctrl Delay	6.1
HCM 6th LOS	A

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

























HCM 6th Signalized Intersection Summary
 3: N Himes Ave & Busch Blvd

2020 Build Alt 1 - AM
 04/04/2018

						
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑↑	↑↑	↑↑	↑↑	↑
Traffic Volume (veh/h)	1738	626	417	1502	360	112
Future Volume (veh/h)	1738	626	417	1502	360	112
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1885	1885	1856	1856	1900
Adj Flow Rate, veh/h	1792	645	430	1548	371	115
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	1	1	3	3	0
Cap, veh/h	2241	2113	471	2833	415	195
Arrive On Green	1.00	1.00	0.14	0.80	0.12	0.12
Sat Flow, veh/h	3647	2812	3483	3618	3428	1610
Grp Volume(v), veh/h	1792	645	430	1548	371	115
Grp Sat Flow(s),veh/h/ln	1777	1406	1742	1763	1714	1610
Q Serve(g_s), s	0.0	0.0	21.9	27.7	19.2	12.2
Cycle Q Clear(g_c), s	0.0	0.0	21.9	27.7	19.2	12.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2241	2113	471	2833	415	195
V/C Ratio(X)	0.80	0.31	0.91	0.55	0.89	0.59
Avail Cap(c_a), veh/h	2241	2113	526	2833	480	225
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.60	0.60	0.73	0.73	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	76.8	6.2	78.0	74.9
Incr Delay (d2), s/veh	1.9	0.2	14.7	0.6	16.8	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.1	21.3	15.3	13.0	14.5	16.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.9	0.2	91.5	6.8	94.8	77.2
LnGrp LOS	A	A	F	A	F	E
Approach Vol, veh/h	2437			1978	486	
Approach Delay, s/veh	1.4			25.2	90.7	
Approach LOS	A			C	F	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		151.4		28.6	31.1	120.3
Change Period (Y+Rc), s		6.8		* 6.8	6.8	6.8
Max Green Setting (Gmax), s		141.2		* 25	27.2	107.2
Max Q Clear Time (g_c+I1), s		29.7		21.2	23.9	2.0
Green Ext Time (p_c), s		31.0		0.6	0.4	62.0
Intersection Summary						
HCM 6th Ctrl Delay			19.9			
HCM 6th LOS			B			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

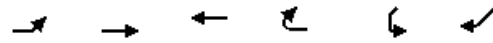
HCM 6th Signalized Intersection Summary
 4: Twin Lakes Blvd/Mossvale Ln & Busch Blvd

2020 Build Alt 1 - AM
 04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 						 	
Traffic Volume (veh/h)	2	1634	214	318	1835	0	84	0	119	2	0	0
Future Volume (veh/h)	2	1634	214	318	1835	0	84	0	119	2	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1900	1885	1870	1870	1885	0	1900	1900	1900	1900
Adj Flow Rate, veh/h	2	1667	218	324	1872	0	86	0	121	2	0	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	2	0	1	2	2	1	0	0	0	0	0
Cap, veh/h	211	2455	1113	341	3268	0	0	0	0	6	0	0
Arrive On Green	0.92	0.92	0.92	0.38	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	248	3554	1610	1795	3647	0		0		1809	0	0
Grp Volume(v), veh/h	2	1667	218	324	1872	0		0.0		2	0	0
Grp Sat Flow(s),veh/h/ln	248	1777	1610	1795	1777	0				1810	0	0
Q Serve(g_s), s	0.1	18.2	2.4	31.5	0.0	0.0				0.2	0.0	0.0
Cycle Q Clear(g_c), s	0.1	18.2	2.4	31.5	0.0	0.0				0.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	211	2455	1113	341	3268	0				6	0	0
V/C Ratio(X)	0.01	0.68	0.20	0.95	0.57	0.00				0.35	0.00	0.00
Avail Cap(c_a), veh/h	211	2455	1113	379	3268	0				60	0	0
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.50	0.50	0.50	0.28	0.28	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	2.3	3.0	2.4	55.0	0.0	0.0				89.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.2	14.0	0.2	0.0				32.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	5.3	1.4	16.6	0.2	0.0				0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2.3	3.8	2.5	69.1	0.2	0.0				122.1	0.0	0.0
LnGrp LOS	A	A	A	E	A	A				F	A	A
Approach Vol, veh/h		1887			2196							2
Approach Delay, s/veh		3.6			10.4							122.1
Approach LOS		A			B							F
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	41.2	131.4		7.5		172.5						
Change Period (Y+Rc), s	* 7	* 7		6.9		* 7						
Max Green Setting (Gmax), s	* 38	* 98		6.0		* 1.4E2						
Max Q Clear Time (g_c+I1), s	33.5	20.2		2.2		2.0						
Green Ext Time (p_c), s	0.6	37.5		0.0		52.0						
Intersection Summary												
HCM 6th Ctrl Delay				7.3								
HCM 6th LOS				A								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
5: Busch Blvd & Orange Grove Dr

























2020 Build Alt 1 - AM
04/04/2018



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations	↘	↗↗	↗↗	↗	↘	↗
Traffic Volume (veh/h)	97	1658	1702	83	135	451
Future Volume (veh/h)	97	1658	1702	83	135	451
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1870	1856	1900	1900	1900
Adj Flow Rate, veh/h	104	1783	1830	89	145	485
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	3	0	0	0
Cap, veh/h	243	2385	2115	966	454	404
Arrive On Green	0.07	1.00	1.00	1.00	0.25	0.25
Sat Flow, veh/h	1810	3647	3618	1610	1810	1610
Grp Volume(v), veh/h	104	1783	1830	89	145	485
Grp Sat Flow(s),veh/h/ln	1810	1777	1763	1610	1810	1610
Q Serve(g_s), s	4.0	0.0	0.0	0.0	11.7	45.2
Cycle Q Clear(g_c), s	4.0	0.0	0.0	0.0	11.7	45.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	243	2385	2115	966	454	404
V/C Ratio(X)	0.43	0.75	0.87	0.09	0.32	1.20
Avail Cap(c_a), veh/h	270	2385	2115	966	454	404
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.56	0.56	0.62	0.62	1.00	1.00
Uniform Delay (d), s/veh	11.7	0.0	0.0	0.0	54.9	67.4
Incr Delay (d2), s/veh	0.7	1.2	3.2	0.1	0.4	111.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.8	0.7	1.7	0.1	9.3	44.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.4	1.2	3.2	0.1	55.3	178.8
LnGrp LOS	B	A	A	A	E	F
Approach Vol, veh/h		1887	1919		630	
Approach Delay, s/veh		1.9	3.1		150.3	
Approach LOS		A	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	12.8	115.2			128.0	52.0
Change Period (Y+Rc), s	6.8	* 7.2			* 7.2	6.8
Max Green Setting (Gmax), s	8.8	* 1.1E2			* 1.2E2	45.2
Max Q Clear Time (g_c+I1), s	6.0	2.0			2.0	47.2
Green Ext Time (p_c), s	0.1	47.0			44.0	0.0
Intersection Summary						
HCM 6th Ctrl Delay			23.5			
HCM 6th LOS			C			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

HCM 6th Signalized Intersection Summary
6: N Armenia Ave & Busch Blvd

2020 Build Alt 1 - AM
04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	71	1435	287	215	1507	10	180	253	158	59	385	98
Future Volume (veh/h)	71	1435	287	215	1507	10	180	253	158	59	385	98
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1870	1856	1900	1885	1856	1841	1870	1885	1900
Adj Flow Rate, veh/h	72	1464	293	219	1538	10	184	258	161	60	393	100
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	1	2	3	0	1	3	4	2	1	0
Cap, veh/h	88	1753	868	346	2250	1028	174	490	520	177	456	285
Arrive On Green	0.10	0.99	0.99	0.19	0.64	0.64	0.05	0.14	0.14	0.04	0.13	0.13
Sat Flow, veh/h	1781	3554	1598	1781	3526	1610	3483	3526	1560	1781	3582	1610
Grp Volume(v), veh/h	72	1464	293	219	1538	10	184	258	161	60	393	100
Grp Sat Flow(s),veh/h/ln	1781	1777	1598	1781	1763	1610	1742	1763	1560	1781	1791	1610
Q Serve(g_s), s	7.1	5.6	0.2	20.3	50.4	0.4	9.0	12.2	1.5	5.2	19.4	9.8
Cycle Q Clear(g_c), s	7.1	5.6	0.2	20.3	50.4	0.4	9.0	12.2	1.5	5.2	19.4	9.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	88	1753	868	346	2250	1028	174	490	520	177	456	285
V/C Ratio(X)	0.82	0.84	0.34	0.63	0.68	0.01	1.06	0.53	0.31	0.34	0.86	0.35
Avail Cap(c_a), veh/h	120	1753	868	346	2250	1028	174	588	563	178	557	330
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.63	0.63	0.63	0.45	0.45	0.45	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	80.3	0.6	0.2	66.6	20.9	11.8	85.5	72.0	28.4	65.2	77.0	65.0
Incr Delay (d2), s/veh	17.7	3.1	0.7	1.7	0.8	0.0	84.0	0.9	0.3	1.1	11.3	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.0	2.1	0.4	12.7	25.0	0.3	10.3	9.5	7.6	4.4	14.8	7.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	97.9	3.8	0.9	68.3	21.7	11.9	169.5	72.9	28.7	66.3	88.3	65.8
LnGrp LOS	F	A	A	E	C	B	F	E	C	E	F	E
Approach Vol, veh/h		1829			1767			603			553	
Approach Delay, s/veh		7.0			27.4			90.6			81.8	
Approach LOS		A			C			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	121.0	12.9	31.1	41.1	94.9	15.0	29.0				
Change Period (Y+Rc), s	* 6.1	* 6.1	6.0	6.1	* 6.1	* 6.1	6.0	6.1				
Max Green Setting (Gmax), s	* 12	* 1.1E2	7.0	30.0	* 30	* 89	9.0	28.0				
Max Q Clear Time (g_c+I1), s	9.1	52.4	7.2	14.2	22.3	7.6	11.0	21.4				
Green Ext Time (p_c), s	0.0	16.6	0.0	1.9	0.3	18.6	0.0	1.5				
Intersection Summary												
HCM 6th Ctrl Delay			33.9									
HCM 6th LOS			C									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

































HCM 6th Signalized Intersection Summary
7: N Boulevard & Busch Blvd

2020 Build Alt 1 - AM
04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	52	1495	144	119	1597	112	62	206	50	156	471	31
Future Volume (veh/h)	52	1495	144	119	1597	112	62	206	50	156	471	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1900	1885	1856	1841	1870	1900	1900	1856	1870	1900
Adj Flow Rate, veh/h	54	1541	148	123	1646	115	64	212	52	161	486	32
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	0	1	3	4	2	0	0	3	2	0
Cap, veh/h	293	2058	932	142	1738	769	80	401	179	168	573	260
Arrive On Green	0.16	0.58	0.58	0.08	0.49	0.49	0.05	0.11	0.11	0.10	0.16	0.16
Sat Flow, veh/h	1781	3554	1610	1795	3526	1560	1781	3610	1610	1767	3554	1610
Grp Volume(v), veh/h	54	1541	148	123	1646	115	64	212	52	161	486	32
Grp Sat Flow(s),veh/h/ln	1781	1777	1610	1795	1763	1560	1781	1805	1610	1767	1777	1610
Q Serve(g_s), s	4.4	54.8	7.2	11.5	75.5	4.6	6.0	9.4	5.0	15.4	22.6	2.1
Cycle Q Clear(g_c), s	4.4	54.8	7.2	11.5	75.5	4.6	6.0	9.4	5.0	15.4	22.6	2.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	293	2058	932	142	1738	769	80	401	179	168	573	260
V/C Ratio(X)	0.18	0.75	0.16	0.86	0.95	0.15	0.80	0.53	0.29	0.96	0.85	0.12
Avail Cap(c_a), veh/h	293	2058	932	147	1738	769	101	680	303	168	807	366
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.59	0.59	0.59	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	61.2	26.6	16.6	77.4	41.0	10.8	80.4	71.4	69.4	76.5	69.3	31.9
Incr Delay (d2), s/veh	0.8	1.5	0.2	35.7	12.2	0.4	23.2	1.1	0.9	55.9	6.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.7	28.6	4.9	11.0	44.4	4.7	6.0	7.9	3.9	14.8	16.2	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	62.1	28.1	16.8	113.0	53.2	11.2	103.6	72.4	70.3	132.4	75.3	32.1
LnGrp LOS	E	C	B	F	D	B	F	E	E	F	E	C
Approach Vol, veh/h		1743			1884			328			679	
Approach Delay, s/veh		28.2			54.6			78.2			86.8	
Approach LOS		C			D			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	33.8	89.7	22.0	24.5	19.2	104.3	13.5	33.0				
Change Period (Y+Rc), s	5.9	* 5.9	* 5.8	* 5.6	* 5.7	5.9	* 5.8	* 5.6				
Max Green Setting (Gmax), s	15.0	* 84	* 16	* 32	* 14	84.9	* 9.6	* 39				
Max Q Clear Time (g_c+I1), s	6.4	77.5	17.4	11.4	13.5	56.8	8.0	24.6				
Green Ext Time (p_c), s	0.0	5.0	0.0	1.4	0.0	13.9	0.0	2.8				
Intersection Summary												
HCM 6th Ctrl Delay			51.1									
HCM 6th LOS			D									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

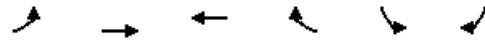
HCM 6th Signalized Intersection Summary
8: Florida Ave & Busch Blvd

2020 Build Alt 1 - AM
04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		 	  			  		 	 	
Traffic Volume (veh/h)	141	1216	344	265	1755	195	136	625	319	278	1046	51
Future Volume (veh/h)	141	1216	344	265	1755	195	136	625	319	278	1046	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1870	1856	1885	1870	1841	1841	1885	1870	1870
Adj Flow Rate, veh/h	144	1241	0	270	1791	199	139	638	326	284	1067	52
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	1	2	3	1	2	4	4	1	2	2
Cap, veh/h	164	1825		311	1785	717	111	1451	591	335	1147	511
Arrive On Green	0.09	0.36	0.00	0.18	0.70	0.70	0.06	0.29	0.29	0.10	0.32	0.32
Sat Flow, veh/h	1781	5106	1598	3456	5066	1598	1781	5025	1560	3483	3554	1585
Grp Volume(v), veh/h	144	1241	0	270	1791	199	139	638	326	284	1067	52
Grp Sat Flow(s),veh/h/ln	1781	1702	1598	1728	1689	1598	1781	1675	1560	1742	1777	1585
Q Serve(g_s), s	13.6	35.1	0.0	12.9	59.9	4.3	10.6	17.6	27.9	13.6	49.4	2.9
Cycle Q Clear(g_c), s	13.6	35.1	0.0	12.9	59.9	4.3	10.6	17.6	27.9	13.6	49.4	2.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	164	1825		311	1785	717	111	1451	591	335	1147	511
V/C Ratio(X)	0.88	0.68		0.87	1.00	0.28	1.25	0.44	0.55	0.85	0.93	0.10
Avail Cap(c_a), veh/h	164	1825		400	1785	717	111	1451	591	565	1204	537
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.75	0.75	0.75	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	76.2	46.4	0.0	68.7	25.1	5.3	79.7	49.2	41.5	75.6	55.7	22.0
Incr Delay (d2), s/veh	44.0	2.1	0.0	11.7	19.3	0.7	167.6	0.2	1.1	6.0	12.4	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.9	21.5	0.0	9.1	23.9	3.0	16.2	11.8	16.2	10.5	31.6	2.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	120.3	48.4	0.0	80.4	44.4	6.1	247.3	49.5	42.6	81.6	68.1	22.1
LnGrp LOS	F	D		F	F	A	F	D	D	F	E	C
Approach Vol, veh/h		1385	A		2260			1103			1403	
Approach Delay, s/veh		55.9			45.3			72.4			69.1	
Approach LOS		E			D			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.7	67.0	23.8	56.5	21.9	67.8	18.0	62.3				
Change Period (Y+Rc), s	* 7.1	* 7.1	7.4	7.4	* 6.6	* 7.1	7.4	7.4				
Max Green Setting (Gmax), s	* 13	* 60	27.6	40.6	* 20	* 54	10.6	57.6				
Max Q Clear Time (g_c+I1), s	15.6	61.9	15.6	29.9	14.9	37.1	12.6	51.4				
Green Ext Time (p_c), s	0.0	0.0	0.7	3.8	0.4	7.7	0.0	3.5				
Intersection Summary												
HCM 6th Ctrl Delay			58.0									
HCM 6th LOS			E									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
 9: Busch Blvd & I-275 SB Ramps

2020 Build Alt 1 - AM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↑↑↑	↑↑↑	↵	↵	↵↵
Traffic Volume (veh/h)	300	1513	1785	665	177	430
Future Volume (veh/h)	300	1513	1785	665	177	430
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1856	1885	1826	1841
Adj Flow Rate, veh/h	319	1610	1899	0	188	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	3	1	5	4
Cap, veh/h	398	4092	2726		213	
Arrive On Green	0.45	1.00	0.72	0.00	0.12	0.00
Sat Flow, veh/h	1767	5274	5233	1598	1739	2745
Grp Volume(v), veh/h	319	1610	1899	0	188	0
Grp Sat Flow(s),veh/h/ln	1767	1702	1689	1598	1739	1373
Q Serve(g_s), s	26.4	0.0	36.1	0.0	18.1	0.0
Cycle Q Clear(g_c), s	26.4	0.0	36.1	0.0	18.1	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	398	4092	2726		213	
V/C Ratio(X)	0.80	0.39	0.70		0.88	
Avail Cap(c_a), veh/h	398	4092	2726		385	
HCM Platoon Ratio	2.00	2.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.69	0.69	0.65	0.00	1.00	0.00
Uniform Delay (d), s/veh	43.5	0.0	16.3	0.0	73.4	0.0
Incr Delay (d2), s/veh	9.1	0.2	1.0	0.0	15.1	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	15.1	0.1	16.1	0.0	14.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	52.5	0.2	17.3	0.0	88.4	0.0
LnGrp LOS	D	A	B		F	
Approach Vol, veh/h		1929	1899	A	188	A
Approach Delay, s/veh		8.9	17.3		88.4	
Approach LOS		A	B		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	44.8	98.0			142.8	27.2
Change Period (Y+Rc), s	6.5	6.5			6.5	6.4
Max Green Setting (Gmax), s	21.5	91.5			119.5	37.6
Max Q Clear Time (g_c+I1), s	28.4	38.1			2.0	20.1
Green Ext Time (p_c), s	0.0	23.2			19.0	0.8

Intersection Summary

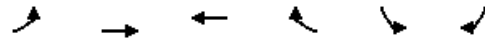
HCM 6th Ctrl Delay	16.6
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 10: Busch Blvd & I-275 NB Ramps

2020 Build Alt 1 - AM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑↑	↑↑↑	↗	↖↗	↖↗
Traffic Volume (veh/h)	248	1442	1973	267	294	477
Future Volume (veh/h)	248	1442	1973	267	294	477
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1870	1856	1841	1856
Adj Flow Rate, veh/h	264	1534	2099	0	313	507
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	2	3	4	3
Cap, veh/h	471	4049	2493		438	1094
Arrive On Green	0.53	1.00	0.98	0.00	0.13	0.13
Sat Flow, veh/h	1767	5274	5274	1572	3401	2768
Grp Volume(v), veh/h	264	1534	2099	0	313	507
Grp Sat Flow(s),veh/h/ln	1767	1702	1702	1572	1700	1384
Q Serve(g_s), s	16.9	0.0	9.2	0.0	15.0	0.0
Cycle Q Clear(g_c), s	16.9	0.0	9.2	0.0	15.0	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	471	4049	2493		438	1094
V/C Ratio(X)	0.56	0.38	0.84		0.71	0.46
Avail Cap(c_a), veh/h	471	4049	2493		698	1306
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.38	0.00	1.00	1.00
Uniform Delay (d), s/veh	33.1	0.0	1.1	0.0	71.1	38.1
Incr Delay (d2), s/veh	2.3	0.2	1.4	0.0	3.1	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.0	0.2	1.8	0.0	11.1	12.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	35.3	0.2	2.6	0.0	74.2	38.5
LnGrp LOS	D	A	A		E	D
Approach Vol, veh/h		1798	2099	A	820	
Approach Delay, s/veh		5.4	2.6		52.1	
Approach LOS		A	A		D	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	51.8	89.5			141.3	28.7
Change Period (Y+Rc), s	6.5	6.5			6.5	6.8
Max Green Setting (Gmax), s	32.3	83.0			121.8	34.9
Max Q Clear Time (g_c+I1), s	18.9	11.2			2.0	17.0
Green Ext Time (p_c), s	1.4	31.2			17.3	4.9

Intersection Summary

HCM 6th Ctrl Delay	12.3
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 11: Nebraska Ave & Busch Blvd

2020 Build Alt 1 - AM
 04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	1449	209	215	2008	64	120	559	200	57	986	112
Future Volume (veh/h)	78	1449	209	215	2008	64	120	559	200	57	986	112
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1870	1870	1826	1870	1841	1796	1826	1841	1841	1870	1856
Adj Flow Rate, veh/h	83	1541	222	229	2136	68	128	595	0	61	1049	119
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	2	2	5	2	4	7	5	4	4	2	3
Cap, veh/h	93	1654	513	195	2463	597	129	1218		77	1127	499
Arrive On Green	0.11	0.65	0.65	0.11	0.38	0.38	0.08	0.35	0.00	0.04	0.32	0.32
Sat Flow, veh/h	1739	5106	1585	1739	6434	1560	1711	3469	1560	1753	3554	1572
Grp Volume(v), veh/h	83	1541	222	229	2136	68	128	595	0	61	1049	119
Grp Sat Flow(s),veh/h/ln	1739	1702	1585	1739	1609	1560	1711	1735	1560	1753	1777	1572
Q Serve(g_s), s	8.0	45.6	8.9	19.1	52.1	4.8	12.7	22.8	0.0	5.9	48.6	7.6
Cycle Q Clear(g_c), s	8.0	45.6	8.9	19.1	52.1	4.8	12.7	22.8	0.0	5.9	48.6	7.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	93	1654	513	195	2463	597	129	1218		77	1127	499
V/C Ratio(X)	0.89	0.93	0.43	1.17	0.87	0.11	0.99	0.49		0.79	0.93	0.24
Avail Cap(c_a), veh/h	93	1654	513	195	2463	597	129	1218		159	1179	522
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.90	0.90	0.90	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	75.4	28.3	12.9	75.4	48.5	33.9	78.6	43.2	0.0	80.5	56.2	27.2
Incr Delay (d2), s/veh	62.7	10.1	2.4	118.5	4.4	0.4	77.2	0.3	0.0	6.8	12.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.5	20.4	6.8	22.7	29.0	3.4	13.1	15.0	0.0	5.0	31.2	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	138.1	38.3	15.3	193.9	52.9	34.2	155.8	43.5	0.0	87.3	68.8	27.5
LnGrp LOS	F	D	B	F	D	C	F	D		F	E	C
Approach Vol, veh/h		1846			2433			723	A		1229	
Approach Delay, s/veh		40.0			65.7			63.4			65.7	
Approach LOS		D			E			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.0	72.1	14.6	67.3	26.0	62.1	20.4	61.5				
Change Period (Y+Rc), s	6.9	7.0	* 7.2	* 7.6	6.9	7.0	* 7.6	* 7.6				
Max Green Setting (Gmax), s	9.1	63.0	* 15	* 54	19.1	53.0	* 13	* 56				
Max Q Clear Time (g_c+I1), s	10.0	54.1	7.9	24.8	21.1	47.6	14.7	50.6				
Green Ext Time (p_c), s	0.0	7.6	0.0	4.0	0.0	4.2	0.0	3.3				

Intersection Summary												
HCM 6th Ctrl Delay				57.8								
HCM 6th LOS				E								

Notes
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Arterial Level of Service: EB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
	II	45	22.0	13.2	35.2	0.20	20.6	D
Dale Mabry Hwy NB Ra	II	45	23.3	7.1	30.4	0.21	25.3	C
N Himes Ave	II	45	19.0	33.8	52.8	0.17	11.9	F
Twin Lakes Blvd	II	45	43.9	4.8	48.7	0.50	36.9	A
Orange Grove Dr	II	45	25.9	7.3	33.2	0.25	27.0	C
N Armenia Ave	II	45	29.7	31.3	61.0	0.30	17.7	D
N Boulevard	II	45	79.8	36.3	116.1	1.00	30.9	B
Florida Ave	II	40	47.3	48.9	96.2	0.51	19.0	D
I-275 SB Ramps	II	40	21.9	5.8	27.7	0.19	24.7	C
I-275 NB Ramps	II	40	21.3	16.1	37.4	0.19	17.9	D
Nebraska Ave	II	40	14.6	48.1	62.7	0.13	7.3	F
Total	II		348.7	252.7	601.4	3.65	21.8	D

Arterial Level of Service: WB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Nebraska Ave	II	40	27.0	56.7	83.7	0.25	10.5	F
I-275 NB Ramps	II	40	14.6	6.3	20.9	0.13	21.8	D
I-275 SB Ramps	II	40	21.3	11.6	32.9	0.19	20.3	D
Florida Ave	II	40	21.9	48.1	70.0	0.19	9.8	F
N Boulevard	II	40	47.3	16.5	63.8	0.51	28.7	B
N Armenia Ave	II	45	79.8	26.6	106.4	1.00	33.7	B
Orange Grove Dr	II	45	29.7	25.9	55.6	0.30	19.4	D
Mossvale Ln	II	45	25.9	5.7	31.6	0.25	28.4	B
N Himes Ave	II	45	43.9	12.0	55.9	0.50	32.1	B
Dale Mabry Hwy NB Ra	II	45	19.0	13.0	32.0	0.17	19.6	D
Dale Mabry Hwy SB Ra	II	45	23.3	33.4	56.7	0.21	13.6	E
Total	II		353.7	255.8	609.5	3.69	21.8	D

HCM 6th Signalized Intersection Summary
 1: Busch Blvd & Dale Mabry Hwy SB Ramps

2020 Build Alt1 - PM
 04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	206	1663	0	0	2120	0	0	4	14	328	4	31
Future Volume (veh/h)	206	1663	0	0	2120	0	0	4	14	328	4	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1885	1885	1856	1856	0	1900	1900	1900	1870	1900	1796
Adj Flow Rate, veh/h	212	1714	0	0	2186	0	0	4	14	341	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	1	1	3	3	0	0	0	0	2	0	7
Cap, veh/h	166	2698	0	0	2343	0	0	38	32	381	0	
Arrive On Green	0.06	0.75	0.00	0.00	0.45	0.00	0.00	0.02	0.02	0.11	0.00	0.00
Sat Flow, veh/h	1767	3676	0	0	3711	0	0	1900	1610	3563	0	1522
Grp Volume(v), veh/h	212	1714	0	0	2186	0	0	4	14	341	0	0
Grp Sat Flow(s),veh/h/ln	1767	1791	0	0	1763	0	0	1900	1610	1781	0	1522
Q Serve(g_s), s	11.5	40.7	0.0	0.0	105.9	0.0	0.0	0.4	1.5	17.0	0.0	0.0
Cycle Q Clear(g_c), s	11.5	40.7	0.0	0.0	105.9	0.0	0.0	0.4	1.5	17.0	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.00	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	166	2698	0	0	2343	0	0	38	32	381	0	
V/C Ratio(X)	1.27	0.64	0.00	0.00	0.93	0.00	0.00	0.11	0.44	0.90	0.00	
Avail Cap(c_a), veh/h	166	2698	0	0	2343	0	0	63	54	408	0	
HCM Platoon Ratio	1.00	1.00	1.00	0.67	0.67	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	66.8	10.5	0.0	0.0	46.1	0.0	0.0	86.7	87.2	79.4	0.0	0.0
Incr Delay (d2), s/veh	161.6	1.2	0.0	0.0	8.4	0.0	0.0	1.2	9.2	20.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	23.3	21.1	0.0	0.0	61.7	0.0	0.0	0.4	1.3	13.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	228.4	11.7	0.0	0.0	54.5	0.0	0.0	87.9	96.5	100.3	0.0	0.0
LnGrp LOS	F	B	A	A	D	A	A	F	F	F	A	
Approach Vol, veh/h		1926			2186			18			341	A
Approach Delay, s/veh		35.5			54.5			94.6			100.3	
Approach LOS		D			D			F			F	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	16.0	126.4		12.0		142.4		25.6				
Change Period (Y+Rc), s	4.5	6.8		* 8.4		6.8		6.4				
Max Green Setting (Gmax), s	11.5	115.8		* 6		131.8		20.6				
Max Q Clear Time (g_c+I1), s	13.5	107.9		3.5		42.7		19.0				
Green Ext Time (p_c), s	0.0	7.4		0.0		36.9		0.2				

Intersection Summary

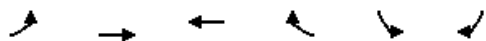
HCM 6th Ctrl Delay	50.0
HCM 6th LOS	D

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [SWR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
2: Busch Blvd & Dale Mabry Hwy NB Ramps

2020 Build Alt1 - PM
04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↕↕	↕↕	↵	↕↕	↵
Traffic Volume (veh/h)	114	1891	2227	508	162	257
Future Volume (veh/h)	114	1891	2227	508	162	257
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1781	1885	1900	1856	1826	1885
Adj Flow Rate, veh/h	116	1930	2272	0	165	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	8	1	0	3	5	1
Cap, veh/h	212	3089	2877		209	
Arrive On Green	0.03	0.86	1.00	0.00	0.06	0.00
Sat Flow, veh/h	1697	3676	3705	1572	3374	1598
Grp Volume(v), veh/h	116	1930	2272	0	165	0
Grp Sat Flow(s),veh/h/ln	1697	1791	1805	1572	1687	1598
Q Serve(g_s), s	2.2	28.9	0.0	0.0	8.7	0.0
Cycle Q Clear(g_c), s	2.2	28.9	0.0	0.0	8.7	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	212	3089	2877		209	
V/C Ratio(X)	0.55	0.62	0.79		0.79	
Avail Cap(c_a), veh/h	233	3089	2877		562	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.36	0.00	1.00	0.00
Uniform Delay (d), s/veh	2.7	3.7	0.0	0.0	83.2	0.0
Incr Delay (d2), s/veh	2.2	1.0	0.8	0.0	6.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.3	11.8	0.6	0.0	7.2	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	4.8	4.7	0.8	0.0	89.7	0.0
LnGrp LOS	A	A	A		F	
Approach Vol, veh/h		2046	2272	A	165	A
Approach Delay, s/veh		4.7	0.8		89.7	
Approach LOS		A	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	11.8	150.2			162.0	18.0
Change Period (Y+Rc), s	6.8	6.8			6.8	6.8
Max Green Setting (Gmax), s	7.2	122.4			136.4	30.0
Max Q Clear Time (g_c+I1), s	4.2	2.0			30.9	10.7
Green Ext Time (p_c), s	0.1	76.9			50.9	0.5

Intersection Summary

HCM 6th Ctrl Delay	5.9
HCM 6th LOS	A

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.






















HCM 6th Signalized Intersection Summary
 3: N Himes Ave & Busch Blvd

2020 Build Alt1 - PM
 04/04/2018

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑↑	↑↑	↑↑	↑↑	↑
Traffic Volume (veh/h)	1764	289	194	2266	469	251
Future Volume (veh/h)	1764	289	194	2266	469	251
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1885	1885	1856	1856	1900
Adj Flow Rate, veh/h	1819	298	200	2336	484	259
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	1	1	3	3	0
Cap, veh/h	2340	2302	237	2695	549	367
Arrive On Green	1.00	1.00	0.09	1.00	0.16	0.16
Sat Flow, veh/h	3647	2812	3483	3618	3428	1610
Grp Volume(v), veh/h	1819	298	200	2336	484	259
Grp Sat Flow(s),veh/h/ln	1777	1406	1742	1763	1714	1610
Q Serve(g_s), s	0.0	0.0	10.2	0.0	24.9	26.6
Cycle Q Clear(g_c), s	0.0	0.0	10.2	0.0	24.9	26.6
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2340	2302	237	2695	549	367
V/C Ratio(X)	0.78	0.13	0.84	0.87	0.88	0.71
Avail Cap(c_a), veh/h	2340	2302	265	2695	556	371
HCM Platoon Ratio	2.00	2.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.69	0.69	0.42	0.42	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	80.9	0.0	73.9	63.9
Incr Delay (d2), s/veh	1.8	0.1	9.0	1.8	15.0	5.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.1	11.2	7.1	1.2	17.8	31.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.8	0.1	89.9	1.8	88.9	69.5
LnGrp LOS	A	A	F	A	F	E
Approach Vol, veh/h	2117			2536	743	
Approach Delay, s/veh	1.6			8.7	82.1	
Approach LOS	A			A	F	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		144.4		35.6	19.0	125.3
Change Period (Y+Rc), s		6.8		* 6.8	6.8	6.8
Max Green Setting (Gmax), s		137.2		* 29	13.7	116.7
Max Q Clear Time (g_c+I1), s		2.0		28.6	12.2	2.0
Green Ext Time (p_c), s		87.5		0.2	0.1	54.8
Intersection Summary						
HCM 6th Ctrl Delay			16.0			
HCM 6th LOS			B			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

HCM 6th Signalized Intersection Summary
 4: Twin Lakes Blvd/Mossvale Ln & Busch Blvd

2020 Build Alt1 - PM
 04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1936	74	76	2225	1	234	0	281	0	0	1
Future Volume (veh/h)	5	1936	74	76	2225	1	234	0	281	0	0	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1900	1885	1870	1870	1885	0	1900	1900	1900	1900
Adj Flow Rate, veh/h	5	1976	76	78	2270	1	239	0	287	0	0	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	2	0	1	2	2	1	0	0	0	0	0
Cap, veh/h	150	2326	1054	90	2710	1	249	0	0	0	0	3
Arrive On Green	1.00	1.00	1.00	0.10	1.00	1.00	0.14	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	167	3554	1610	1795	3645	2	1795	239		0	0	1610
Grp Volume(v), veh/h	5	1976	76	78	1106	1165	239	122.4		0	0	1
Grp Sat Flow(s),veh/h/ln	167	1777	1610	1795	1777	1870	1795	F		0	0	1610
Q Serve(g_s), s	0.0	0.0	0.0	7.7	0.0	0.0	23.8			0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.0	0.0	0.0	7.7	0.0	0.0	23.8			0.0	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00			0.00		1.00
Lane Grp Cap(c), veh/h	150	2326	1054	90	1321	1390	249			0	0	3
V/C Ratio(X)	0.03	0.85	0.07	0.87	0.84	0.84	0.96			0.00	0.00	0.38
Avail Cap(c_a), veh/h	150	2326	1054	90	1321	1390	249			0	0	54
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00			1.00	1.00	1.00
Upstream Filter(I)	0.57	0.57	0.57	0.28	0.28	0.28	1.00			0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	80.4	0.0	0.0	77.0			0.0	0.0	89.8
Incr Delay (d2), s/veh	0.2	2.4	0.1	22.1	1.9	1.8	45.4			0.0	0.0	72.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	1.4	0.0	5.7	1.3	1.3	20.4			0.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.2	2.4	0.1	102.6	1.9	1.8	122.4			0.0	0.0	162.5
LnGrp LOS	A	A	A	F	A	A	F			A	A	F
Approach Vol, veh/h		2057			2349							1
Approach Delay, s/veh		2.3			5.2							162.5
Approach LOS		A			A							F
Timer - Assigned Phs	1	2	3	4		6						
Phs Duration (G+Y+Rc), s	16.0	124.8	32.0	7.2		140.8						
Change Period (Y+Rc), s	* 7	* 7	7.0	6.9		* 7						
Max Green Setting (Gmax), s	* 9	* 1.1E2	25.0	6.0		* 1.3E2						
Max Q Clear Time (g_c+I1), s	9.7	2.0	25.8	2.1		2.0						
Green Ext Time (p_c), s	0.0	57.6	0.0	0.0		83.4						
Intersection Summary												
HCM 6th Ctrl Delay			10.0									
HCM 6th LOS			A									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
5: Busch Blvd & Orange Grove Dr

2020 Build Alt1 - PM
04/04/2018



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations	↵	↶↷	↶↷	↵	↵	↵
Traffic Volume (veh/h)	200	2017	2112	79	64	219
Future Volume (veh/h)	200	2017	2112	79	64	219
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1870	1856	1900	1900	1900
Adj Flow Rate, veh/h	215	2169	2271	85	69	235
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	3	0	0	0
Cap, veh/h	234	2969	2662	1216	157	140
Arrive On Green	0.09	1.00	1.00	1.00	0.09	0.09
Sat Flow, veh/h	1810	3647	3618	1610	1810	1610
Grp Volume(v), veh/h	215	2169	2271	85	69	235
Grp Sat Flow(s),veh/h/ln	1810	1777	1763	1610	1810	1610
Q Serve(g_s), s	5.3	0.0	0.0	0.0	6.5	15.6
Cycle Q Clear(g_c), s	5.3	0.0	0.0	0.0	6.5	15.6
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	234	2969	2662	1216	157	140
V/C Ratio(X)	0.92	0.73	0.85	0.07	0.44	1.68
Avail Cap(c_a), veh/h	345	2969	2662	1216	157	140
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.41	0.41	0.44	0.44	1.00	1.00
Uniform Delay (d), s/veh	17.6	0.0	0.0	0.0	78.1	82.2
Incr Delay (d2), s/veh	11.3	0.7	1.7	0.0	1.9	336.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.6	0.5	1.1	0.0	5.7	31.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	28.9	0.7	1.7	0.0	80.0	419.0
LnGrp LOS	C	A	A	A	E	F
Approach Vol, veh/h		2384	2356		304	
Approach Delay, s/veh		3.2	1.6		342.1	
Approach LOS		A	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	14.5	143.1			157.6	22.4
Change Period (Y+Rc), s	6.8	* 7.2			* 7.2	6.8
Max Green Setting (Gmax), s	18.8	* 1.2E2			* 1.5E2	15.6
Max Q Clear Time (g_c+I1), s	7.3	2.0			2.0	17.6
Green Ext Time (p_c), s	0.4	80.2			77.7	0.0
Intersection Summary						
HCM 6th Ctrl Delay			22.9			
HCM 6th LOS			C			

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.





























HCM 6th Signalized Intersection Summary
6: N Armenia Ave & Busch Blvd

2020 Build Alt1 - PM
04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	186	1726	169	157	1620	32	299	452	168	78	268	272
Future Volume (veh/h)	186	1726	169	157	1620	32	299	452	168	78	268	272
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1870	1856	1900	1885	1856	1841	1870	1885	1900
Adj Flow Rate, veh/h	190	1761	172	160	1653	33	305	461	171	80	273	278
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	1	2	3	0	1	3	4	2	1	0
Cap, veh/h	319	2076	1075	167	1759	803	310	540	385	100	351	446
Arrive On Green	0.36	1.00	1.00	0.09	0.50	0.50	0.09	0.15	0.15	0.03	0.10	0.10
Sat Flow, veh/h	1781	3554	1598	1781	3526	1610	3483	3526	1560	1781	3582	1610
Grp Volume(v), veh/h	190	1761	172	160	1653	33	305	461	171	80	273	278
Grp Sat Flow(s),veh/h/ln	1781	1777	1598	1781	1763	1610	1742	1763	1560	1781	1791	1610
Q Serve(g_s), s	15.7	0.0	0.0	16.1	79.6	1.9	15.7	22.9	13.7	3.9	13.4	0.0
Cycle Q Clear(g_c), s	15.7	0.0	0.0	16.1	79.6	1.9	15.7	22.9	13.7	3.9	13.4	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	319	2076	1075	167	1759	803	310	540	385	100	351	446
V/C Ratio(X)	0.60	0.85	0.16	0.96	0.94	0.04	0.99	0.85	0.44	0.80	0.78	0.62
Avail Cap(c_a), veh/h	319	2076	1075	167	1759	803	310	697	455	133	577	548
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.63	0.63	0.63	0.10	0.10	0.10	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	52.4	0.0	0.0	81.2	42.6	23.1	81.9	74.3	39.1	85.0	79.3	56.8
Incr Delay (d2), s/veh	1.9	2.9	0.2	13.2	1.5	0.0	46.9	8.1	0.8	21.7	3.7	1.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.5	1.5	0.1	9.4	36.8	1.2	14.1	16.5	9.2	7.7	10.5	16.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.3	2.9	0.2	94.4	44.1	23.1	128.8	82.4	39.9	106.6	83.0	58.3
LnGrp LOS	D	A	A	F	D	C	F	F	D	F	F	E
Approach Vol, veh/h		2123			1846			937			631	
Approach Delay, s/veh		7.3			48.1			89.7			75.1	
Approach LOS		A			D			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	38.4	95.9	12.1	33.7	23.0	111.3	22.0	23.7				
Change Period (Y+Rc), s	* 6.1	* 6.1	6.0	6.1	* 6.1	* 6.1	6.0	6.1				
Max Green Setting (Gmax), s	* 21	* 90	9.4	35.6	* 17	* 94	16.0	29.0				
Max Q Clear Time (g_c+I1), s	17.7	81.6	5.9	24.9	18.1	2.0	17.7	15.4				
Green Ext Time (p_c), s	0.1	6.1	0.0	2.6	0.0	26.0	0.0	2.2				
Intersection Summary												
HCM 6th Ctrl Delay			42.6									
HCM 6th LOS			D									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												


































HCM 6th Signalized Intersection Summary
7: N Boulevard & Busch Blvd

2020 Build Alt1 - PM
04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	68	1712	97	94	1771	66	106	339	86	103	216	39
Future Volume (veh/h)	68	1712	97	94	1771	66	106	339	86	103	216	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1900	1885	1856	1841	1870	1900	1900	1856	1870	1900
Adj Flow Rate, veh/h	70	1765	100	97	1826	68	109	349	89	106	223	40
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	0	1	3	4	2	0	0	3	2	0
Cap, veh/h	167	2166	981	112	2039	902	181	435	194	113	294	133
Arrive On Green	0.09	0.61	0.61	0.06	0.58	0.58	0.10	0.12	0.12	0.06	0.08	0.08
Sat Flow, veh/h	1781	3554	1610	1795	3526	1560	1781	3610	1610	1767	3554	1610
Grp Volume(v), veh/h	70	1765	100	97	1826	68	109	349	89	106	223	40
Grp Sat Flow(s),veh/h/ln	1781	1777	1610	1795	1763	1560	1781	1805	1610	1767	1777	1610
Q Serve(g_s), s	5.9	61.6	2.3	8.6	72.5	2.1	9.4	15.1	7.0	9.6	9.8	3.1
Cycle Q Clear(g_c), s	5.9	61.6	2.3	8.6	72.5	2.1	9.4	15.1	7.0	9.6	9.8	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	167	2166	981	112	2039	902	181	435	194	113	294	133
V/C Ratio(X)	0.42	0.81	0.10	0.86	0.90	0.08	0.60	0.80	0.46	0.94	0.76	0.30
Avail Cap(c_a), veh/h	167	2166	981	112	2039	902	181	722	322	113	711	322
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.37	0.37	0.37	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.4	24.2	4.0	74.3	29.5	6.8	68.8	68.5	47.2	74.6	71.8	46.5
Incr Delay (d2), s/veh	2.8	1.3	0.1	44.4	6.6	0.2	4.0	3.5	1.7	65.5	4.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.5	29.5	2.7	9.1	40.2	2.1	8.0	11.6	5.3	10.6	8.2	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.2	25.6	4.1	118.8	36.1	6.9	72.8	72.0	48.9	140.1	75.8	47.7
LnGrp LOS	E	C	A	F	D	A	E	E	D	F	E	D
Approach Vol, veh/h		1935			1991			547			369	
Approach Delay, s/veh		26.1			39.2			68.4			91.2	
Approach LOS		C			D			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.7	98.4	16.0	24.9	15.7	103.4	22.0	18.9				
Change Period (Y+Rc), s	* 5.7	5.9	* 5.8	* 5.6	* 5.7	5.9	* 5.8	* 5.6				
Max Green Setting (Gmax), s	* 15	79.8	* 10	* 32	* 10	84.8	* 10	* 32				
Max Q Clear Time (g_c+I1), s	7.9	74.5	11.6	17.1	10.6	63.6	11.4	11.8				
Green Ext Time (p_c), s	0.0	4.5	0.0	2.2	0.0	13.6	0.0	1.4				
Intersection Summary												
HCM 6th Ctrl Delay			41.2									
HCM 6th LOS			D									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

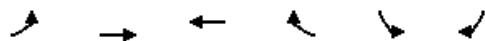
HCM 6th Signalized Intersection Summary
8: Florida Ave & Busch Blvd

2020 Build Alt1 - PM
04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		 	  			  		 	 	
Traffic Volume (veh/h)	125	1538	238	269	1735	270	176	1082	419	328	693	126
Future Volume (veh/h)	125	1538	238	269	1735	270	176	1082	419	328	693	126
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1870	1856	1885	1870	1841	1841	1885	1870	1870
Adj Flow Rate, veh/h	128	1569	0	274	1770	276	180	1104	428	335	707	129
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	1	2	3	1	2	4	4	1	2	2
Cap, veh/h	147	1784		393	1944	786	201	1243	563	377	863	385
Arrive On Green	0.08	0.35	0.00	0.23	0.77	0.77	0.11	0.25	0.25	0.11	0.24	0.24
Sat Flow, veh/h	1781	5106	1598	3456	5066	1598	1781	5025	1560	3483	3554	1585
Grp Volume(v), veh/h	128	1569	0	274	1770	276	180	1104	428	335	707	129
Grp Sat Flow(s),veh/h/ln	1781	1702	1598	1728	1689	1598	1781	1675	1560	1742	1777	1585
Q Serve(g_s), s	11.4	46.2	0.0	11.6	43.2	8.1	16.0	33.9	15.0	15.2	30.1	10.7
Cycle Q Clear(g_c), s	11.4	46.2	0.0	11.6	43.2	8.1	16.0	33.9	15.0	15.2	30.1	10.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	147	1784		393	1944	786	201	1243	563	377	863	385
V/C Ratio(X)	0.87	0.88		0.70	0.91	0.35	0.90	0.89	0.76	0.89	0.82	0.33
Avail Cap(c_a), veh/h	147	1784		393	1944	786	218	1300	581	396	888	396
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.57	0.57	0.57	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.6	48.9	0.0	59.3	16.5	8.6	70.1	58.1	22.9	70.4	57.2	49.9
Incr Delay (d2), s/veh	46.1	6.6	0.0	3.1	4.8	0.7	33.1	7.6	5.6	20.5	6.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.4	27.8	0.0	7.5	11.6	4.1	14.0	21.3	9.0	12.3	20.1	7.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	118.7	55.5	0.0	62.4	21.3	9.3	103.1	65.7	28.5	90.9	63.2	50.4
LnGrp LOS	F	E		E	C	A	F	E	C	F	E	D
Approach Vol, veh/h		1697	A		2320			1712			1171	
Approach Delay, s/veh		60.2			24.7			60.3			69.7	
Approach LOS		E			C			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.8	68.5	24.7	47.0	25.3	63.0	25.4	46.3				
Change Period (Y+Rc), s	* 6.6	* 7.1	7.4	7.4	* 7.1	* 7.1	7.4	7.4				
Max Green Setting (Gmax), s	* 13	* 59	18.2	41.4	* 16	* 56	19.6	40.0				
Max Q Clear Time (g_c+I1), s	13.4	45.2	17.2	35.9	13.6	48.2	18.0	32.1				
Green Ext Time (p_c), s	0.0	10.0	0.1	3.7	0.2	5.5	0.1	3.0				
Intersection Summary												
HCM 6th Ctrl Delay			49.9									
HCM 6th LOS			D									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
 9: Busch Blvd & I-275 SB Ramps

2020 Build Alt1 - PM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↑↑↑	↑↑↑	↵	↵	↵↵
Traffic Volume (veh/h)	348	1937	1680	597	288	594
Future Volume (veh/h)	348	1937	1680	597	288	594
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1856	1885	1826	1841
Adj Flow Rate, veh/h	370	2061	1787	0	306	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	3	1	5	4
Cap, veh/h	462	3729	2169		329	
Arrive On Green	0.52	1.00	0.86	0.00	0.19	0.00
Sat Flow, veh/h	1767	5274	5233	1598	1739	2745
Grp Volume(v), veh/h	370	2061	1787	0	306	0
Grp Sat Flow(s),veh/h/ln	1767	1702	1689	1598	1739	1373
Q Serve(g_s), s	27.5	0.0	27.6	0.0	27.7	0.0
Cycle Q Clear(g_c), s	27.5	0.0	27.6	0.0	27.7	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	462	3729	2169		329	
V/C Ratio(X)	0.80	0.55	0.82		0.93	
Avail Cap(c_a), veh/h	462	3729	2169		365	
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.45	0.45	0.54	0.00	1.00	0.00
Uniform Delay (d), s/veh	34.7	0.0	8.6	0.0	63.8	0.0
Incr Delay (d2), s/veh	5.2	0.3	2.0	0.0	29.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	13.4	0.2	6.5	0.0	21.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	39.9	0.3	10.6	0.0	93.2	0.0
LnGrp LOS	D	A	B		F	
Approach Vol, veh/h		2431	1787	A	306	A
Approach Delay, s/veh		6.3	10.6		93.2	
Approach LOS		A	B		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	48.3	75.0			123.3	36.7
Change Period (Y+Rc), s	6.5	6.5			6.5	6.4
Max Green Setting (Gmax), s	38.5	68.5			113.5	33.6
Max Q Clear Time (g_c+I1), s	29.5	29.6			2.0	29.7
Green Ext Time (p_c), s	1.7	18.5			33.5	0.5

Intersection Summary

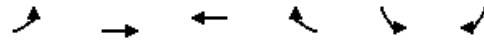
HCM 6th Ctrl Delay	13.9
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 10: Busch Blvd & I-275 NB Ramps

2020 Build Alt1 - PM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↑↑↑	↑↑↑	↵	↵↵	↵↵
Traffic Volume (veh/h)	519	1706	1933	378	233	344
Future Volume (veh/h)	519	1706	1933	378	233	344
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1870	1856	1841	1856
Adj Flow Rate, veh/h	552	1815	2056	0	248	366
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	2	3	4	3
Cap, veh/h	577	4189	2314		328	1171
Arrive On Green	0.65	1.00	0.91	0.00	0.10	0.10
Sat Flow, veh/h	1767	5274	5274	1572	3401	2768
Grp Volume(v), veh/h	552	1815	2056	0	248	366
Grp Sat Flow(s),veh/h/ln	1767	1702	1702	1572	1700	1384
Q Serve(g_s), s	46.2	0.0	31.0	0.0	11.4	0.0
Cycle Q Clear(g_c), s	46.2	0.0	31.0	0.0	11.4	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	577	4189	2314		328	1171
V/C Ratio(X)	0.96	0.43	0.89		0.76	0.31
Avail Cap(c_a), veh/h	577	4189	2314		429	1253
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.76	0.76	0.37	0.00	1.00	1.00
Uniform Delay (d), s/veh	26.7	0.0	5.6	0.0	70.4	30.7
Incr Delay (d2), s/veh	22.9	0.2	2.2	0.0	6.6	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	22.3	0.2	4.9	0.0	9.1	8.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	49.6	0.2	7.8	0.0	77.1	30.9
LnGrp LOS	D	A	A		E	C
Approach Vol, veh/h		2367	2056	A	614	
Approach Delay, s/veh		11.8	7.8		49.5	
Approach LOS		B	A		D	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	58.8	79.0			137.8	22.2
Change Period (Y+Rc), s	6.5	6.5			6.5	6.8
Max Green Setting (Gmax), s	47.5	72.5			126.5	20.2
Max Q Clear Time (g_c+I1), s	48.2	33.0			2.0	13.4
Green Ext Time (p_c), s	0.0	22.8			24.9	2.1

Intersection Summary

HCM 6th Ctrl Delay	14.7
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 11: Nebraska Ave & Busch Blvd

2020 Build Alt1 - PM
 04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	169	1619	151	180	2008	99	119	811	223	139	685	184
Future Volume (veh/h)	169	1619	151	180	2008	99	119	811	223	139	685	184
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1870	1870	1826	1870	1841	1796	1826	1841	1841	1870	1856
Adj Flow Rate, veh/h	180	1722	161	191	2136	105	127	863	0	148	729	196
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	2	2	5	2	4	7	5	4	4	2	3
Cap, veh/h	181	1873	581	164	2292	556	147	939		151	973	431
Arrive On Green	0.21	0.73	0.73	0.09	0.36	0.36	0.09	0.27	0.00	0.09	0.27	0.27
Sat Flow, veh/h	1739	5106	1585	1739	6434	1560	1711	3469	1560	1753	3554	1572
Grp Volume(v), veh/h	180	1722	161	191	2136	105	127	863	0	148	729	196
Grp Sat Flow(s),veh/h/ln	1739	1702	1585	1739	1609	1560	1711	1735	1560	1753	1777	1572
Q Serve(g_s), s	16.5	44.2	5.4	15.1	51.2	7.4	11.7	38.6	0.0	13.5	30.0	12.1
Cycle Q Clear(g_c), s	16.5	44.2	5.4	15.1	51.2	7.4	11.7	38.6	0.0	13.5	30.0	12.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	181	1873	581	164	2292	556	147	939		151	973	431
V/C Ratio(X)	0.99	0.92	0.28	1.16	0.93	0.19	0.87	0.92		0.98	0.75	0.46
Avail Cap(c_a), veh/h	181	1873	581	164	2292	556	172	1006		151	979	433
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.3	19.4	14.2	72.4	49.6	35.5	72.2	56.6	0.0	73.0	53.1	25.7
Incr Delay (d2), s/veh	60.9	7.9	1.0	121.1	8.4	0.8	28.0	12.5	0.0	66.4	3.2	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	14.3	15.5	3.4	19.0	29.2	5.3	10.4	25.3	0.0	13.6	19.6	8.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	124.2	27.3	15.3	193.6	58.1	36.3	100.3	69.2	0.0	139.3	56.3	26.5
LnGrp LOS	F	C	B	F	E	D	F	E		F	E	C
Approach Vol, veh/h		2063			2432			990	A		1073	
Approach Delay, s/veh		34.8			67.8			73.2			62.3	
Approach LOS		C			E			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.7	64.0	21.4	50.9	22.0	65.7	20.9	51.4				
Change Period (Y+Rc), s	7.0	* 7	* 7.6	* 7.6	6.9	7.0	* 7.2	* 7.6				
Max Green Setting (Gmax), s	14.1	* 57	* 14	* 46	15.1	56.0	* 16	* 44				
Max Q Clear Time (g_c+I1), s	18.5	53.2	15.5	40.6	17.1	46.2	13.7	32.0				
Green Ext Time (p_c), s	0.0	3.5	0.0	2.7	0.0	7.4	0.0	4.1				

Intersection Summary

HCM 6th Ctrl Delay	57.3
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Arterial Level of Service: EB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
	II	45	22.0	12.4	34.4	0.20	21.1	D
Dale Mabry Hwy NB Ra	II	45	23.3	15.6	38.9	0.21	19.8	D
N Himes Ave	II	45	19.0	23.6	42.6	0.17	14.7	E
Twin Lakes Blvd	II	45	43.9	23.4	67.3	0.50	26.7	C
Orange Grove Dr	II	45	25.9	6.7	32.6	0.25	27.5	C
N Armenia Ave	II	45	29.7	30.0	59.7	0.30	18.1	D
N Boulevard	II	45	79.8	39.6	119.4	1.00	30.1	B
Florida Ave	II	40	47.2	28.4	75.6	0.51	24.2	C
I-275 SB Ramps	II	40	21.9	3.1	25.0	0.19	27.4	C
I-275 NB Ramps	II	40	21.3	1.9	23.2	0.19	28.8	B
Nebraska Ave	II	40	14.6	59.6	74.2	0.13	6.1	F
Total	II		348.6	244.3	592.9	3.65	22.1	C

Arterial Level of Service: WB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Nebraska Ave	II	40	27.0	56.7	83.7	0.25	10.5	F
I-275 NB Ramps	II	40	14.6	24.5	39.1	0.13	11.7	F
I-275 SB Ramps	II	40	21.3	24.0	45.3	0.19	14.8	E
Florida Ave	II	40	21.9	40.5	62.4	0.19	11.0	F
N Boulevard	II	40	47.2	64.3	111.5	0.51	16.4	E
N Armenia Ave	II	45	79.8	48.2	128.0	1.00	28.0	B
Orange Grove Dr	II	45	29.7	34.0	63.7	0.30	16.9	E
Mossvale Ln	II	45	25.9	25.2	51.1	0.25	17.5	D
N Himes Ave	II	45	43.9	17.2	61.1	0.50	29.4	B
Dale Mabry Hwy NB Ra	II	45	19.0	26.1	45.1	0.17	13.9	E
Dale Mabry Hwy SB Ra	II	45	23.3	59.3	82.6	0.21	9.3	F
Total	II		353.6	420.0	773.6	3.69	17.2	D

HCM 6th Signalized Intersection Summary
 1: Busch Blvd & Dale Mabry Hwy SB Ramps

2030 Build Alt 1 - AM

04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	213	2046	1	8	1328	0	0	0	0	395	6	22
Future Volume (veh/h)	213	2046	1	8	1328	0	0	0	0	395	6	22
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1885	1885	1856	1856	0	1900	1900	1900	1870	1900	1796
Adj Flow Rate, veh/h	220	2109	1	8	1369	0	0	0	0	411	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	1	1	3	3	0	0	0	0	2	0	7
Cap, veh/h	488	2928	1	24	1906	0	0	1	1	462	0	
Arrive On Green	0.20	0.80	0.80	0.56	0.56	0.00	0.00	0.00	0.00	0.13	0.00	0.00
Sat Flow, veh/h	1767	3674	2	7	3474	0	0	1900	1610	3563	0	1522
Grp Volume(v), veh/h	220	1028	1082	729	648	0	0	0	0	411	0	0
Grp Sat Flow(s),veh/h/ln	1767	1791	1885	1793	1604	0	0	1900	1610	1781	0	1522
Q Serve(g_s), s	4.3	49.2	49.3	0.0	53.4	0.0	0.0	0.0	0.0	20.4	0.0	0.0
Cycle Q Clear(g_c), s	4.3	49.2	49.3	51.0	53.4	0.0	0.0	0.0	0.0	20.4	0.0	0.0
Prop In Lane	1.00		0.00	0.01		0.00	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	488	1427	1502	1028	902	0	0	1	1	462	0	
V/C Ratio(X)	0.45	0.72	0.72	0.71	0.72	0.00	0.00	0.00	0.00	0.89	0.00	
Avail Cap(c_a), veh/h	488	1427	1502	1028	902	0	0	91	77	586	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	48.0	8.7	8.7	28.4	28.9	0.0	0.0	0.0	0.0	77.0	0.0	0.0
Incr Delay (d2), s/veh	0.7	3.2	3.0	4.1	4.9	0.0	0.0	0.0	0.0	13.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	13.0	24.0	25.0	31.1	28.7	0.0	0.0	0.0	0.0	15.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	48.6	11.9	11.7	32.5	33.9	0.0	0.0	0.0	0.0	90.2	0.0	0.0
LnGrp LOS	D	B	B	C	C	A	A	A	A	F	A	
Approach Vol, veh/h		2330			1377			0			411	A
Approach Delay, s/veh		15.3			33.2			0.0			90.2	
Approach LOS		B			C						F	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	42.2	108.0		0.0		150.2		29.8				
Change Period (Y+Rc), s	6.8	6.8		* 8.4		6.8		6.4				
Max Green Setting (Gmax), s	12.2	101.2		* 8.6		120.2		29.6				
Max Q Clear Time (g_c+I1), s	6.3	55.4		0.0		51.3		22.4				
Green Ext Time (p_c), s	0.3	19.0		0.0		48.3		0.9				

Intersection Summary

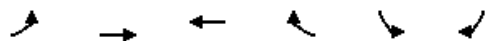
HCM 6th Ctrl Delay	28.7
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [SWR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 2: Busch Blvd & Dale Mabry Hwy NB Ramps

2030 Build Alt 1 - AM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↗↗	↗↗	↖	↖↖	↖
Traffic Volume (veh/h)	39	2402	1595	370	126	160
Future Volume (veh/h)	39	2402	1595	370	126	160
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1781	1885	1900	1856	1826	1885
Adj Flow Rate, veh/h	40	2451	1628	0	129	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	8	1	0	3	5	1
Cap, veh/h	320	3132	2933		169	
Arrive On Green	0.02	0.87	1.00	0.00	0.05	0.00
Sat Flow, veh/h	1697	3676	3705	1572	3374	1598
Grp Volume(v), veh/h	40	2451	1628	0	129	0
Grp Sat Flow(s),veh/h/ln	1697	1791	1805	1572	1687	1598
Q Serve(g_s), s	0.7	49.0	0.0	0.0	6.8	0.0
Cycle Q Clear(g_c), s	0.7	49.0	0.0	0.0	6.8	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	320	3132	2933		169	
V/C Ratio(X)	0.12	0.78	0.56		0.76	
Avail Cap(c_a), veh/h	334	3132	2933		341	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.72	0.00	1.00	0.00
Uniform Delay (d), s/veh	2.2	4.5	0.0	0.0	84.4	0.0
Incr Delay (d2), s/veh	0.2	2.0	0.5	0.0	6.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	17.1	0.4	0.0	5.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	2.3	6.5	0.5	0.0	91.4	0.0
LnGrp LOS	A	A	A		F	
Approach Vol, veh/h		2491	1628	A	129	A
Approach Delay, s/veh		6.5	0.5		91.4	
Approach LOS		A	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	11.1	153.1			164.2	15.8
Change Period (Y+Rc), s	6.8	6.8			6.8	6.8
Max Green Setting (Gmax), s	5.8	135.6			148.2	18.2
Max Q Clear Time (g_c+I1), s	2.7	2.0			51.0	8.8
Green Ext Time (p_c), s	0.0	35.7			75.3	0.2

Intersection Summary

HCM 6th Ctrl Delay	6.8
HCM 6th LOS	A

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.






















HCM 6th Signalized Intersection Summary
3: N Himes Ave & Busch Blvd

2030 Build Alt 1 - AM
04/04/2018

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑↑	↑↑	↑↑	↑↑	↑
Traffic Volume (veh/h)	1855	673	444	1580	385	120
Future Volume (veh/h)	1855	673	444	1580	385	120
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1885	1885	1856	1856	1900
Adj Flow Rate, veh/h	1912	694	458	1629	397	124
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	1	1	3	3	0
Cap, veh/h	2190	2093	496	2808	438	206
Arrive On Green	1.00	1.00	0.14	0.80	0.13	0.13
Sat Flow, veh/h	3647	2812	3483	3618	3428	1610
Grp Volume(v), veh/h	1912	694	458	1629	397	124
Grp Sat Flow(s),veh/h/ln	1777	1406	1742	1763	1714	1610
Q Serve(g_s), s	0.0	0.0	23.4	31.4	20.6	13.1
Cycle Q Clear(g_c), s	0.0	0.0	23.4	31.4	20.6	13.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2190	2093	496	2808	438	206
V/C Ratio(X)	0.87	0.33	0.92	0.58	0.91	0.60
Avail Cap(c_a), veh/h	2190	2093	526	2808	480	225
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.51	0.51	0.69	0.69	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	76.2	6.9	77.4	74.2
Incr Delay (d2), s/veh	2.7	0.2	16.0	0.6	19.3	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.5	22.3	16.1	14.6	15.5	17.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	2.7	0.2	92.2	7.5	96.7	77.4
LnGrp LOS	A	A	F	A	F	E
Approach Vol, veh/h	2606			2087	521	
Approach Delay, s/veh	2.1			26.1	92.1	
Approach LOS	A			C	F	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		150.2		29.8	32.4	117.7
Change Period (Y+Rc), s		6.8		* 6.8	6.8	6.8
Max Green Setting (Gmax), s		141.2		* 25	27.2	107.2
Max Q Clear Time (g_c+I1), s		33.4		22.6	25.4	2.0
Green Ext Time (p_c), s		34.7		0.4	0.3	69.8
Intersection Summary						
HCM 6th Ctrl Delay			20.7			
HCM 6th LOS			C			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

HCM 6th Signalized Intersection Summary
 4: Twin Lakes Blvd/Mossvale Ln & Busch Blvd

2030 Build Alt 1 - AM
 04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	1741	232	339	1939	0	85	0	123	2	0	0
Future Volume (veh/h)	2	1741	232	339	1939	0	85	0	123	2	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1900	1885	1870	1870	1885	0	1900	1900	1900	1900
Adj Flow Rate, veh/h	2	1777	237	346	1979	0	87	0	126	2	0	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	2	0	1	2	2	1	0	0	0	0	0
Cap, veh/h	192	2416	1095	361	3268	0	0	0	0	6	0	0
Arrive On Green	0.90	0.90	0.90	0.40	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	223	3554	1610	1795	3647	0		0		1809	0	0
Grp Volume(v), veh/h	2	1777	237	346	1979	0		0.0		2	0	0
Grp Sat Flow(s),veh/h/ln	223	1777	1610	1795	1777	0				1810	0	0
Q Serve(g_s), s	0.2	25.7	3.2	33.8	0.0	0.0				0.2	0.0	0.0
Cycle Q Clear(g_c), s	0.2	25.7	3.2	33.8	0.0	0.0				0.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	192	2416	1095	361	3268	0				6	0	0
V/C Ratio(X)	0.01	0.74	0.22	0.96	0.61	0.00				0.35	0.00	0.00
Avail Cap(c_a), veh/h	192	2416	1095	379	3268	0				60	0	0
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.39	0.39	0.39	0.16	0.16	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	2.8	4.0	2.9	53.1	0.0	0.0				89.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.2	10.6	0.1	0.0				32.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	6.2	1.8	16.3	0.1	0.0				0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2.8	4.8	3.1	63.7	0.1	0.0				122.1	0.0	0.0
LnGrp LOS	A	A	A	E	A	A				F	A	A
Approach Vol, veh/h		2016			2325							2
Approach Delay, s/veh		4.6			9.6							122.1
Approach LOS		A			A							F
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	43.1	129.4		7.5		172.5						
Change Period (Y+Rc), s	* 7	* 7		6.9		* 7						
Max Green Setting (Gmax), s	* 38	* 98		6.0		* 1.4E2						
Max Q Clear Time (g_c+I1), s	35.8	27.7		2.2		2.0						
Green Ext Time (p_c), s	0.4	40.2		0.0		60.3						

Intersection Summary

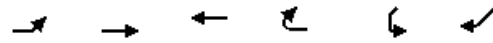
HCM 6th Ctrl Delay	7.3
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
5: Busch Blvd & Orange Grove Dr

























2030 Build Alt 1 - AM
04/04/2018



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations	↖	↗	↖	↗	↖	↗
Traffic Volume (veh/h)	105	1761	1819	88	137	459
Future Volume (veh/h)	105	1761	1819	88	137	459
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1870	1856	1900	1900	1900
Adj Flow Rate, veh/h	113	1894	1956	95	147	494
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	3	0	0	0
Cap, veh/h	229	2385	2107	962	454	404
Arrive On Green	0.07	1.00	1.00	1.00	0.25	0.25
Sat Flow, veh/h	1810	3647	3618	1610	1810	1610
Grp Volume(v), veh/h	113	1894	1956	95	147	494
Grp Sat Flow(s),veh/h/ln	1810	1777	1763	1610	1810	1610
Q Serve(g_s), s	4.4	0.0	0.0	0.0	11.9	45.2
Cycle Q Clear(g_c), s	4.4	0.0	0.0	0.0	11.9	45.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	229	2385	2107	962	454	404
V/C Ratio(X)	0.49	0.79	0.93	0.10	0.32	1.22
Avail Cap(c_a), veh/h	253	2385	2107	962	454	404
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.44	0.44	0.54	0.54	1.00	1.00
Uniform Delay (d), s/veh	11.7	0.0	0.0	0.0	54.9	67.4
Incr Delay (d2), s/veh	0.7	1.3	5.2	0.1	0.4	120.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.0	0.8	2.7	0.1	9.4	46.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.5	1.3	5.2	0.1	55.3	187.6
LnGrp LOS	B	A	A	A	E	F
Approach Vol, veh/h		2007	2051		641	
Approach Delay, s/veh		1.9	4.9		157.2	
Approach LOS		A	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	13.2	114.8			128.0	52.0
Change Period (Y+Rc), s	6.8	* 7.2			* 7.2	6.8
Max Green Setting (Gmax), s	8.8	* 1.1E2			* 1.2E2	45.2
Max Q Clear Time (g_c+I1), s	6.4	2.0			2.0	47.2
Green Ext Time (p_c), s	0.1	54.3			51.0	0.0
Intersection Summary						
HCM 6th Ctrl Delay			24.4			
HCM 6th LOS			C			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						





























HCM 6th Signalized Intersection Summary
6: N Armenia Ave & Busch Blvd

2030 Build Alt 1 - AM
04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	77	1510	311	230	1614	11	184	258	163	72	432	109
Future Volume (veh/h)	77	1510	311	230	1614	11	184	258	163	72	432	109
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1870	1856	1900	1885	1856	1841	1870	1885	1900
Adj Flow Rate, veh/h	79	1541	317	235	1647	11	188	263	166	73	441	111
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	1	2	3	0	1	3	4	2	1	0
Cap, veh/h	96	1753	868	326	2194	1002	174	529	519	187	498	310
Arrive On Green	0.11	0.99	0.99	0.18	0.62	0.62	0.05	0.15	0.15	0.04	0.14	0.14
Sat Flow, veh/h	1781	3554	1598	1781	3526	1610	3483	3526	1560	1781	3582	1610
Grp Volume(v), veh/h	79	1541	317	235	1647	11	188	263	166	73	441	111
Grp Sat Flow(s),veh/h/ln	1781	1777	1598	1781	1763	1610	1742	1763	1560	1781	1791	1610
Q Serve(g_s), s	7.8	7.8	0.3	22.4	59.6	0.5	9.0	12.3	1.5	6.3	21.8	10.8
Cycle Q Clear(g_c), s	7.8	7.8	0.3	22.4	59.6	0.5	9.0	12.3	1.5	6.3	21.8	10.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	96	1753	868	326	2194	1002	174	529	519	187	498	310
V/C Ratio(X)	0.83	0.88	0.37	0.72	0.75	0.01	1.08	0.50	0.32	0.39	0.89	0.36
Avail Cap(c_a), veh/h	120	1753	868	326	2194	1002	174	588	545	187	557	337
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.56	0.56	0.56	0.29	0.29	0.29	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	79.5	0.7	0.2	69.2	24.1	12.9	85.5	70.3	28.5	63.8	76.1	63.0
Incr Delay (d2), s/veh	18.9	3.9	0.7	2.3	0.7	0.0	91.0	0.7	0.4	1.3	14.7	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.3	2.5	0.4	13.1	28.2	0.3	10.6	9.5	7.8	5.3	16.5	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	98.4	4.6	0.8	71.6	24.8	12.9	176.5	71.0	28.9	65.1	90.8	63.7
LnGrp LOS	F	A	A	E	C	B	F	E	C	E	F	E
Approach Vol, veh/h		1937			1893			617			625	
Approach Delay, s/veh		7.8			30.5			91.8			83.0	
Approach LOS		A			C			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.8	118.1	13.0	33.1	39.0	94.9	15.0	31.1				
Change Period (Y+Rc), s	* 6.1	* 6.1	6.0	6.1	* 6.1	* 6.1	6.0	6.1				
Max Green Setting (Gmax), s	* 12	* 1.1E2	7.0	30.0	* 30	* 89	9.0	28.0				
Max Q Clear Time (g_c+I1), s	9.8	61.6	8.3	14.3	24.4	9.8	11.0	23.8				
Green Ext Time (p_c), s	0.0	17.9	0.0	1.9	0.3	20.7	0.0	1.2				
Intersection Summary												
HCM 6th Ctrl Delay			35.8									
HCM 6th LOS			D									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
7: N Boulevard & Busch Blvd

2030 Build Alt 1 - AM
04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 			 	
Traffic Volume (veh/h)	57	1579	155	128	1722	120	64	213	51	165	500	32
Future Volume (veh/h)	57	1579	155	128	1722	120	64	213	51	165	500	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1900	1885	1856	1841	1870	1900	1900	1856	1870	1900
Adj Flow Rate, veh/h	59	1628	160	132	1775	124	66	220	53	170	515	33
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	0	1	3	4	2	0	0	3	2	0
Cap, veh/h	276	2016	913	147	1738	769	83	435	194	168	602	273
Arrive On Green	0.15	0.57	0.57	0.08	0.49	0.49	0.05	0.12	0.12	0.10	0.17	0.17
Sat Flow, veh/h	1781	3554	1610	1795	3526	1560	1781	3610	1610	1767	3554	1610
Grp Volume(v), veh/h	59	1628	160	132	1775	124	66	220	53	170	515	33
Grp Sat Flow(s),veh/h/ln	1781	1777	1610	1795	1763	1560	1781	1805	1610	1767	1777	1610
Q Serve(g_s), s	4.9	62.2	8.1	12.4	83.8	5.0	6.2	9.7	5.1	16.2	23.9	2.2
Cycle Q Clear(g_c), s	4.9	62.2	8.1	12.4	83.8	5.0	6.2	9.7	5.1	16.2	23.9	2.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	276	2016	913	147	1738	769	83	435	194	168	602	273
V/C Ratio(X)	0.21	0.81	0.18	0.90	1.02	0.16	0.80	0.51	0.27	1.01	0.86	0.12
Avail Cap(c_a), veh/h	276	2016	913	147	1738	769	101	680	303	168	807	366
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.52	0.52	0.52	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	62.8	29.4	17.7	77.4	43.1	10.9	80.3	70.0	68.0	76.9	68.6	32.1
Incr Delay (d2), s/veh	0.9	1.9	0.2	44.8	27.1	0.4	25.0	0.9	0.8	71.8	6.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.1	31.9	5.3	12.0	53.4	5.1	6.2	8.1	3.9	16.2	17.1	2.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	63.7	31.3	17.9	122.2	70.2	11.3	105.3	70.9	68.7	148.7	75.5	32.3
LnGrp LOS	E	C	B	F	F	B	F	E	E	F	E	C
Approach Vol, veh/h		1847			2031			339			718	
Approach Delay, s/veh		31.2			70.0			77.3			90.9	
Approach LOS		C			E			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	32.2	89.7	22.0	26.1	19.6	102.3	13.7	34.4				
Change Period (Y+Rc), s	5.9	* 5.9	* 5.8	* 5.6	* 5.7	5.9	* 5.8	* 5.6				
Max Green Setting (Gmax), s	15.0	* 84	* 16	* 32	* 14	84.9	* 9.6	* 39				
Max Q Clear Time (g_c+I1), s	6.9	85.8	18.2	11.7	14.4	64.2	8.2	25.9				
Green Ext Time (p_c), s	0.0	0.0	0.0	1.5	0.0	12.5	0.0	2.9				
Intersection Summary												
HCM 6th Ctrl Delay			59.0									
HCM 6th LOS			E									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
 8: Florida Ave & Busch Blvd

2030 Build Alt 1 - AM
 04/04/2018

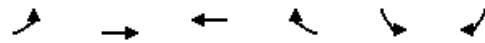
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	152	1271	372	290	1857	214	155	714	364	312	1174	57
Future Volume (veh/h)	152	1271	372	290	1857	214	155	714	364	312	1174	57
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1870	1856	1885	1870	1841	1841	1885	1870	1870
Adj Flow Rate, veh/h	155	1297	0	296	1895	218	158	729	371	318	1198	58
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	1	2	3	1	2	4	4	1	2	2
Cap, veh/h	313	2217		335	1785	732	111	1483	612	370	1204	537
Arrive On Green	0.18	0.43	0.00	0.19	0.70	0.70	0.06	0.30	0.30	0.11	0.34	0.34
Sat Flow, veh/h	1781	5106	1598	3456	5066	1598	1781	5025	1560	3483	3554	1585
Grp Volume(v), veh/h	155	1297	0	296	1895	218	158	729	371	318	1198	58
Grp Sat Flow(s),veh/h/ln	1781	1702	1598	1728	1689	1598	1781	1675	1560	1742	1777	1585
Q Serve(g_s), s	13.4	32.8	0.0	14.2	59.9	4.9	10.6	20.3	32.2	15.3	57.2	3.2
Cycle Q Clear(g_c), s	13.4	32.8	0.0	14.2	59.9	4.9	10.6	20.3	32.2	15.3	57.2	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	313	2217		335	1785	732	111	1483	612	370	1204	537
V/C Ratio(X)	0.49	0.59		0.88	1.06	0.30	1.42	0.49	0.61	0.86	0.99	0.11
Avail Cap(c_a), veh/h	313	2217		400	1785	732	111	1483	612	565	1204	537
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.61	0.61	0.61	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.2	36.5	0.0	67.6	25.1	6.8	79.7	49.4	41.2	74.7	56.1	22.1
Incr Delay (d2), s/veh	5.5	1.1	0.0	11.8	35.9	0.6	234.4	0.3	1.7	8.3	24.7	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.7	19.9	0.0	9.4	27.5	2.5	19.6	13.3	18.3	11.6	38.0	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	68.7	37.6	0.0	79.4	61.0	7.4	314.1	49.7	42.9	83.1	80.7	22.1
LnGrp LOS	E	D		E	F	A	F	D	D	F	F	C
Approach Vol, veh/h		1452	A		2409			1258			1574	
Approach Delay, s/veh		40.9			58.4			80.9			79.0	
Approach LOS		D			E			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	37.5	67.0	25.4	57.6	23.1	81.4	18.0	65.0				
Change Period (Y+Rc), s	* 7.1	* 7.1	7.4	7.4	* 6.6	* 7.1	7.4	7.4				
Max Green Setting (Gmax), s	* 13	* 60	27.6	40.6	* 20	* 54	10.6	57.6				
Max Q Clear Time (g_c+I1), s	15.4	61.9	17.3	34.2	16.2	34.8	12.6	59.2				
Green Ext Time (p_c), s	0.0	0.0	0.8	3.1	0.3	8.7	0.0	0.0				

Intersection Summary												
HCM 6th Ctrl Delay	63.7											
HCM 6th LOS	E											

Notes
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 9: Busch Blvd & I-275 SB Ramps

2030 Build Alt 1 - AM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑↑	↑↑↑	↗	↖	↗
Traffic Volume (veh/h)	335	1612	1896	729	192	465
Future Volume (veh/h)	335	1612	1896	729	192	465
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1856	1885	1826	1841
Adj Flow Rate, veh/h	356	1715	2017	0	204	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	3	1	5	4
Cap, veh/h	446	4052	2548		227	
Arrive On Green	0.50	1.00	0.67	0.00	0.13	0.00
Sat Flow, veh/h	1767	5274	5233	1598	1739	2745
Grp Volume(v), veh/h	356	1715	2017	0	204	0
Grp Sat Flow(s),veh/h/ln	1767	1702	1689	1598	1739	1373
Q Serve(g_s), s	28.4	0.0	47.6	0.0	19.6	0.0
Cycle Q Clear(g_c), s	28.4	0.0	47.6	0.0	19.6	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	446	4052	2548		227	
V/C Ratio(X)	0.80	0.42	0.79		0.90	
Avail Cap(c_a), veh/h	446	4052	2548		303	
HCM Platoon Ratio	2.00	2.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.61	0.61	0.57	0.00	1.00	0.00
Uniform Delay (d), s/veh	38.5	0.0	21.9	0.0	72.8	0.0
Incr Delay (d2), s/veh	7.1	0.2	1.5	0.0	25.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	15.1	0.1	21.4	0.0	15.7	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	45.6	0.2	23.4	0.0	97.8	0.0
LnGrp LOS	D	A	C		F	
Approach Vol, veh/h		2071	2017	A	204	A
Approach Delay, s/veh		8.0	23.4		97.8	
Approach LOS		A	C		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	49.4	92.0			141.4	28.6
Change Period (Y+Rc), s	6.5	6.5			6.5	6.4
Max Green Setting (Gmax), s	35.5	85.5			127.5	29.6
Max Q Clear Time (g_c+I1), s	30.4	49.6			2.0	21.6
Green Ext Time (p_c), s	1.1	21.1			21.9	0.5

Intersection Summary

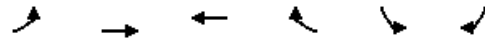
HCM 6th Ctrl Delay	19.5
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 10: Busch Blvd & I-275 NB Ramps

2030 Build Alt 1 - AM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑↑	↑↑↑	↗	↖↗	↖↗
Traffic Volume (veh/h)	276	1528	2128	298	306	497
Future Volume (veh/h)	276	1528	2128	298	306	497
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1870	1856	1841	1856
Adj Flow Rate, veh/h	294	1626	2264	0	326	529
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	2	3	4	3
Cap, veh/h	463	4026	2493		453	1094
Arrive On Green	0.52	1.00	0.65	0.00	0.13	0.13
Sat Flow, veh/h	1767	5274	5274	1572	3401	2768
Grp Volume(v), veh/h	294	1626	2264	0	326	529
Grp Sat Flow(s),veh/h/ln	1767	1702	1702	1572	1700	1384
Q Serve(g_s), s	20.2	0.0	64.4	0.0	15.6	0.0
Cycle Q Clear(g_c), s	20.2	0.0	64.4	0.0	15.6	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	463	4026	2493		453	1094
V/C Ratio(X)	0.63	0.40	0.91		0.72	0.48
Avail Cap(c_a), veh/h	463	4026	2493		698	1293
HCM Platoon Ratio	2.00	2.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.27	0.00	1.00	1.00
Uniform Delay (d), s/veh	34.7	0.0	26.5	0.0	70.6	38.4
Incr Delay (d2), s/veh	3.5	0.3	1.8	0.0	3.1	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.6	0.2	26.8	0.0	11.5	13.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	38.2	0.3	28.4	0.0	73.7	38.9
LnGrp LOS	D	A	C		E	D
Approach Vol, veh/h		1920	2264	A	855	
Approach Delay, s/veh		6.1	28.4		52.2	
Approach LOS		A	C		D	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	51.0	89.5			140.5	29.5
Change Period (Y+Rc), s	6.5	6.5			6.5	6.8
Max Green Setting (Gmax), s	32.3	83.0			121.8	34.9
Max Q Clear Time (g_c+I1), s	22.2	66.4			2.0	17.6
Green Ext Time (p_c), s	1.4	13.5			19.5	5.0

Intersection Summary

HCM 6th Ctrl Delay	23.9
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 11: Nebraska Ave & Busch Blvd

2030 Build Alt 1 - AM
 04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	86	1520	228	231	2158	69	141	654	234	66	1125	127
Future Volume (veh/h)	86	1520	228	231	2158	69	141	654	234	66	1125	127
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1870	1870	1826	1870	1841	1796	1826	1841	1841	1870	1856
Adj Flow Rate, veh/h	91	1617	243	246	2296	73	150	696	0	70	1197	135
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	2	2	5	2	4	7	5	4	4	2	3
Cap, veh/h	83	1988	617	195	2922	708	139	1248		87	1158	512
Arrive On Green	0.05	0.39	0.39	0.11	0.45	0.45	0.08	0.36	0.00	0.05	0.33	0.33
Sat Flow, veh/h	1739	5106	1585	1739	6434	1560	1711	3469	1560	1753	3554	1572
Grp Volume(v), veh/h	91	1617	243	246	2296	73	150	696	0	70	1197	135
Grp Sat Flow(s),veh/h/ln	1739	1702	1585	1739	1609	1560	1711	1735	1560	1753	1777	1572
Q Serve(g_s), s	8.1	48.1	16.1	19.1	51.5	4.6	13.8	27.3	0.0	6.7	55.4	9.9
Cycle Q Clear(g_c), s	8.1	48.1	16.1	19.1	51.5	4.6	13.8	27.3	0.0	6.7	55.4	9.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	83	1988	617	195	2922	708	139	1248		87	1158	512
V/C Ratio(X)	1.10	0.81	0.39	1.26	0.79	0.10	1.08	0.56		0.81	1.03	0.26
Avail Cap(c_a), veh/h	83	1988	617	195	2922	708	139	1248		159	1158	512
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	80.9	46.4	27.5	75.4	39.4	26.6	78.1	43.6	0.0	80.0	57.3	35.9
Incr Delay (d2), s/veh	122.3	3.4	1.7	151.1	2.2	0.3	99.4	0.6	0.0	6.4	35.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.6	27.8	10.3	25.6	27.9	3.2	15.5	17.4	0.0	5.7	39.9	6.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	203.3	49.7	29.2	226.6	41.6	26.9	177.5	44.1	0.0	86.4	92.8	36.1
LnGrp LOS	F	D	C	F	D	C	F	D		F	F	D
Approach Vol, veh/h		1951			2615			846	A		1402	
Approach Delay, s/veh		54.3			58.6			67.8			87.0	
Approach LOS		D			E			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	84.6	15.6	68.8	26.0	73.6	21.4	63.0				
Change Period (Y+Rc), s	6.9	7.0	* 7.2	* 7.6	6.9	7.0	* 7.6	* 7.6				
Max Green Setting (Gmax), s	8.1	64.0	* 15	* 54	19.1	53.0	* 14	* 55				
Max Q Clear Time (g_c+I1), s	10.1	53.5	8.7	29.3	21.1	50.1	15.8	57.4				
Green Ext Time (p_c), s	0.0	9.2	0.0	4.7	0.0	2.4	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	64.4
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Arterial Level of Service: EB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
	II	45	22.0	17.0	39.0	0.20	18.6	D
Dale Mabry Hwy NB Ra	II	45	23.3	7.0	30.3	0.21	25.4	C
N Himes Ave	II	45	19.0	31.8	50.8	0.17	12.4	F
Twin Lakes Blvd	II	45	43.9	6.2	50.1	0.50	35.8	A
Orange Grove Dr	II	45	25.9	8.1	34.0	0.25	26.4	C
N Armenia Ave	II	45	29.7	36.1	65.8	0.30	16.4	E
N Boulevard	II	45	79.8	41.1	120.9	1.00	29.7	B
Florida Ave	II	40	47.3	50.1	97.4	0.51	18.8	D
I-275 SB Ramps	II	40	21.9	5.7	27.6	0.19	24.8	C
I-275 NB Ramps	II	40	21.3	18.0	39.3	0.19	17.0	D
Nebraska Ave	II	40	14.6	66.4	81.0	0.13	5.6	F
Total	II		348.7	287.5	636.2	3.65	20.6	D

Arterial Level of Service: WB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Nebraska Ave	II	40	27.0	61.5	88.5	0.25	10.0	F
I-275 NB Ramps	II	40	14.6	18.5	33.1	0.13	13.8	E
I-275 SB Ramps	II	40	21.3	18.6	39.9	0.19	16.7	E
Florida Ave	II	40	21.9	62.6	84.5	0.19	8.1	F
N Boulevard	II	40	47.3	18.3	65.6	0.51	27.9	C
N Armenia Ave	II	45	79.8	29.9	109.7	1.00	32.7	B
Orange Grove Dr	II	45	29.7	32.8	62.5	0.30	17.3	D
Mossvale Ln	II	45	25.9	6.3	32.2	0.25	27.8	C
N Himes Ave	II	45	43.9	12.7	56.6	0.50	31.7	B
Dale Mabry Hwy NB Ra	II	45	19.0	13.7	32.7	0.17	19.2	D
Dale Mabry Hwy SB Ra	II	45	23.3	22.2	45.5	0.21	16.9	E
Total	II		353.7	297.1	650.8	3.69	20.4	D

HCM 6th Signalized Intersection Summary
 1: Busch Blvd & Dale Mabry Hwy SB Ramps

2030 Build Alt1 - PM
 04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	219	1762	0	0	2283	0	0	5	16	364	5	35
Future Volume (veh/h)	219	1762	0	0	2283	0	0	5	16	364	5	35
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1885	1885	1856	1856	0	1900	1900	1900	1870	1900	1796
Adj Flow Rate, veh/h	226	1816	0	0	2354	0	0	5	16	379	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	1	1	3	3	0	0	0	0	2	0	7
Cap, veh/h	153	2664	0	0	2309	0	0	41	35	408	0	
Arrive On Green	0.06	0.74	0.00	0.00	0.65	0.00	0.00	0.02	0.02	0.11	0.00	0.00
Sat Flow, veh/h	1767	3676	0	0	3711	0	0	1900	1610	3563	0	1522
Grp Volume(v), veh/h	226	1816	0	0	2354	0	0	5	16	379	0	0
Grp Sat Flow(s),veh/h/ln	1767	1791	0	0	1763	0	0	1900	1610	1781	0	1522
Q Serve(g_s), s	11.5	47.4	0.0	0.0	117.9	0.0	0.0	0.5	1.8	19.0	0.0	0.0
Cycle Q Clear(g_c), s	11.5	47.4	0.0	0.0	117.9	0.0	0.0	0.5	1.8	19.0	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.00	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	153	2664	0	0	2309	0	0	41	35	408	0	
V/C Ratio(X)	1.48	0.68	0.00	0.00	1.02	0.00	0.00	0.12	0.46	0.93	0.00	
Avail Cap(c_a), veh/h	153	2664	0	0	2309	0	0	63	54	408	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	70.0	12.0	0.0	0.0	31.1	0.0	0.0	86.4	87.0	79.0	0.0	0.0
Incr Delay (d2), s/veh	246.8	1.4	0.0	0.0	23.8	0.0	0.0	1.3	9.1	27.7	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	27.3	24.5	0.0	0.0	66.7	0.0	0.0	0.4	1.5	15.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	316.9	13.4	0.0	0.0	54.8	0.0	0.0	87.7	96.1	106.7	0.0	0.0
LnGrp LOS	F	B	A	A	F	A	A	F	F	F	A	
Approach Vol, veh/h		2042			2354			21			379	A
Approach Delay, s/veh		47.0			54.8			94.1			106.7	
Approach LOS		D			D			F			F	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	16.0	124.7		12.3		140.7		27.0				
Change Period (Y+Rc), s	4.5	6.8		* 8.4		6.8		6.4				
Max Green Setting (Gmax), s	11.5	115.8		* 6		131.8		20.6				
Max Q Clear Time (g_c+I1), s	13.5	119.9		3.8		49.4		21.0				
Green Ext Time (p_c), s	0.0	0.0		0.0		40.3		0.0				

Intersection Summary

HCM 6th Ctrl Delay	55.8
HCM 6th LOS	E

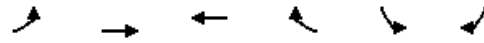
Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [SWR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 2: Busch Blvd & Dale Mabry Hwy NB Ramps

2030 Build Alt1 - PM

04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↗↗	↗↗	↖	↖↖	↖
Traffic Volume (veh/h)	123	2019	2400	540	169	268
Future Volume (veh/h)	123	2019	2400	540	169	268
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1781	1885	1900	1856	1826	1885
Adj Flow Rate, veh/h	126	2060	2449	0	172	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	8	1	0	3	5	1
Cap, veh/h	192	3081	2869		217	
Arrive On Green	0.03	0.86	1.00	0.00	0.06	0.00
Sat Flow, veh/h	1697	3676	3705	1572	3374	1598
Grp Volume(v), veh/h	126	2060	2449	0	172	0
Grp Sat Flow(s),veh/h/ln	1697	1791	1805	1572	1687	1598
Q Serve(g_s), s	2.4	34.1	0.0	0.0	9.0	0.0
Cycle Q Clear(g_c), s	2.4	34.1	0.0	0.0	9.0	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	192	3081	2869		217	
V/C Ratio(X)	0.66	0.67	0.85		0.79	
Avail Cap(c_a), veh/h	212	3081	2869		562	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.23	0.00	1.00	0.00
Uniform Delay (d), s/veh	3.0	4.1	0.0	0.0	83.0	0.0
Incr Delay (d2), s/veh	6.3	1.2	0.8	0.0	6.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.8	13.7	0.6	0.0	7.5	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	9.2	5.3	0.8	0.0	89.5	0.0
LnGrp LOS	A	A	A		F	
Approach Vol, veh/h		2186	2449	A	172	A
Approach Delay, s/veh		5.5	0.8		89.5	
Approach LOS		A	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	11.8	149.8			161.6	18.4
Change Period (Y+Rc), s	6.8	6.8			6.8	6.8
Max Green Setting (Gmax), s	7.2	122.4			136.4	30.0
Max Q Clear Time (g_c+I1), s	4.4	2.0			36.1	11.0
Green Ext Time (p_c), s	0.1	88.1			57.1	0.5

Intersection Summary

HCM 6th Ctrl Delay	6.1
HCM 6th LOS	A

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.






















HCM 6th Signalized Intersection Summary
 3: N Himes Ave & Busch Blvd

2030 Build Alt1 - PM
 04/04/2018

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑↑	↑↑	↑↑	↑↑	↑
Traffic Volume (veh/h)	1878	310	206	2439	501	269
Future Volume (veh/h)	1878	310	206	2439	501	269
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1885	1885	1856	1856	1900
Adj Flow Rate, veh/h	1936	320	212	2514	516	277
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	1	1	3	3	0
Cap, veh/h	2321	2293	248	2687	556	376
Arrive On Green	1.00	1.00	0.09	1.00	0.16	0.16
Sat Flow, veh/h	3647	2812	3483	3618	3428	1610
Grp Volume(v), veh/h	1936	320	212	2514	516	277
Grp Sat Flow(s),veh/h/ln	1777	1406	1742	1763	1714	1610
Q Serve(g_s), s	0.0	0.0	10.8	0.0	26.7	28.7
Cycle Q Clear(g_c), s	0.0	0.0	10.8	0.0	26.7	28.7
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2321	2293	248	2687	556	376
V/C Ratio(X)	0.83	0.14	0.85	0.94	0.93	0.74
Avail Cap(c_a), veh/h	2321	2293	265	2687	556	376
HCM Platoon Ratio	2.00	2.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.63	0.63	0.29	0.29	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	80.5	0.0	74.4	63.9
Incr Delay (d2), s/veh	2.4	0.1	7.3	2.6	21.9	7.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.4	11.7	6.9	1.7	19.5	33.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	2.4	0.1	87.8	2.6	96.2	70.9
LnGrp LOS	A	A	F	A	F	E
Approach Vol, veh/h	2256			2726	793	
Approach Delay, s/veh	2.1			9.2	87.4	
Approach LOS	A			A	F	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		144.0		36.0	19.6	124.4
Change Period (Y+Rc), s		6.8		* 6.8	6.8	6.8
Max Green Setting (Gmax), s		137.2		* 29	13.7	116.7
Max Q Clear Time (g_c+I1), s		2.0		30.7	12.8	2.0
Green Ext Time (p_c), s		100.2		0.0	0.0	62.9
Intersection Summary						
HCM 6th Ctrl Delay			17.2			
HCM 6th LOS			B			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

HCM 6th Signalized Intersection Summary
 4: Twin Lakes Blvd/Mossvale Ln & Busch Blvd

2030 Build Alt1 - PM
 04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	2061	80	81	2402	1	242	0	289	0	0	1
Future Volume (veh/h)	6	2061	80	81	2402	1	242	0	289	0	0	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1900	1885	1870	1870	1885	0	1900	1900	1900	1900
Adj Flow Rate, veh/h	6	2103	82	83	2451	1	247	0	295	0	0	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	2	0	1	2	2	1	0	0	0	0	0
Cap, veh/h	132	2326	1054	90	2710	1	249	0	0	0	0	3
Arrive On Green	1.00	1.00	1.00	0.07	0.99	0.99	0.14	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	140	3554	1610	1795	3645	1	1795	247		0	0	1610
Grp Volume(v), veh/h	6	2103	82	83	1195	1257	247	131.6		0	0	1
Grp Sat Flow(s),veh/h/ln	140	1777	1610	1795	1777	1870	1795	F		0	0	1610
Q Serve(g_s), s	0.0	0.0	0.0	8.3	12.9	13.0	24.7			0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.0	0.0	0.0	8.3	12.9	13.0	24.7			0.0	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00			0.00		1.00
Lane Grp Cap(c), veh/h	132	2326	1054	90	1321	1390	249			0	0	3
V/C Ratio(X)	0.05	0.90	0.08	0.92	0.90	0.90	0.99			0.00	0.00	0.38
Avail Cap(c_a), veh/h	132	2326	1054	90	1321	1390	249			0	0	54
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33	1.00			1.00	1.00	1.00
Upstream Filter(I)	0.48	0.48	0.48	0.12	0.12	0.12	1.00			0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	83.7	0.3	0.3	77.4			0.0	0.0	89.8
Incr Delay (d2), s/veh	0.3	3.3	0.1	17.4	1.5	1.4	54.2			0.0	0.0	72.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	1.9	0.0	5.3	1.6	1.7	21.7			0.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.3	3.3	0.1	101.1	1.8	1.8	131.6			0.0	0.0	162.5
LnGrp LOS	A	A	A	F	A	A	F			A	A	F
Approach Vol, veh/h		2191			2535							1
Approach Delay, s/veh		3.1			5.0							162.5
Approach LOS		A			A							F
Timer - Assigned Phs	1	2	3	4		6						
Phs Duration (G+Y+Rc), s	16.0	124.8	32.0	7.2		140.8						
Change Period (Y+Rc), s	* 7	* 7	7.0	6.9		* 7						
Max Green Setting (Gmax), s	* 9	* 1.1E2	25.0	6.0		* 1.3E2						
Max Q Clear Time (g_c+I1), s	10.3	2.0	26.7	2.1		15.0						
Green Ext Time (p_c), s	0.0	66.0	0.0	0.0		90.0						
Intersection Summary												
HCM 6th Ctrl Delay				10.5								
HCM 6th LOS				B								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
5: Busch Blvd & Orange Grove Dr

2030 Build Alt1 - PM
04/04/2018



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations	↘	↗	↗	↘	↘	↘
Traffic Volume (veh/h)	216	2134	2278	84	65	223
Future Volume (veh/h)	216	2134	2278	84	65	223
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1870	1856	1900	1900	1900
Adj Flow Rate, veh/h	232	2295	2449	90	70	240
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	3	0	0	0
Cap, veh/h	326	3068	2346	1072	243	216
Arrive On Green	0.21	1.00	1.00	1.00	0.13	0.13
Sat Flow, veh/h	1810	3647	3618	1610	1810	1610
Grp Volume(v), veh/h	232	2295	2449	90	70	240
Grp Sat Flow(s),veh/h/ln	1810	1777	1763	1610	1810	1610
Q Serve(g_s), s	17.2	0.0	119.8	0.0	6.3	24.2
Cycle Q Clear(g_c), s	17.2	0.0	119.8	0.0	6.3	24.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	326	3068	2346	1072	243	216
V/C Ratio(X)	0.71	0.75	1.04	0.08	0.29	1.11
Avail Cap(c_a), veh/h	326	3068	2346	1072	243	216
HCM Platoon Ratio	1.33	1.33	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.30	0.30	0.29	0.29	1.00	1.00
Uniform Delay (d), s/veh	65.2	0.0	0.0	0.0	70.1	77.9
Incr Delay (d2), s/veh	2.2	0.5	24.0	0.0	0.6	93.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.3	0.4	10.7	0.0	5.4	23.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	67.4	0.5	24.0	0.0	70.8	171.2
LnGrp LOS	E	A	F	A	E	F
Approach Vol, veh/h		2527	2539		310	
Approach Delay, s/veh		6.7	23.2		148.6	
Approach LOS		A	C		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	36.0	127.0			163.0	31.0
Change Period (Y+Rc), s	* 7.2	* 7.2			* 7.2	6.8
Max Green Setting (Gmax), s	* 15	* 1.2E2			* 1.4E2	24.2
Max Q Clear Time (g_c+I1), s	19.2	121.8			2.0	26.2
Green Ext Time (p_c), s	0.0	0.0			85.9	0.0
Intersection Summary						
HCM 6th Ctrl Delay			22.6			
HCM 6th LOS			C			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

HCM 6th Signalized Intersection Summary
6: N Armenia Ave & Busch Blvd

2030 Build Alt1 - PM
04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	201	1815	183	169	1752	43	305	462	176	87	300	305
Future Volume (veh/h)	201	1815	183	169	1752	43	305	462	176	87	300	305
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1870	1856	1900	1885	1856	1841	1870	1885	1900
Adj Flow Rate, veh/h	205	1852	187	172	1788	44	311	471	180	89	306	311
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	1	2	3	0	1	3	4	2	1	0
Cap, veh/h	302	2041	1060	167	1759	803	310	550	390	113	386	446
Arrive On Green	0.34	1.00	1.00	0.09	0.50	0.50	0.09	0.16	0.16	0.04	0.11	0.11
Sat Flow, veh/h	1781	3554	1598	1781	3526	1610	3483	3526	1560	1781	3582	1610
Grp Volume(v), veh/h	205	1852	187	172	1788	44	311	471	180	89	306	311
Grp Sat Flow(s),veh/h/ln	1781	1777	1598	1781	1763	1610	1742	1763	1560	1781	1791	1610
Q Serve(g_s), s	17.8	0.0	0.0	16.9	89.8	2.5	16.0	23.4	14.3	4.8	15.0	0.7
Cycle Q Clear(g_c), s	17.8	0.0	0.0	16.9	89.8	2.5	16.0	23.4	14.3	4.8	15.0	0.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	302	2041	1060	167	1759	803	310	550	390	113	386	446
V/C Ratio(X)	0.68	0.91	0.18	1.03	1.02	0.05	1.00	0.86	0.46	0.79	0.79	0.70
Avail Cap(c_a), veh/h	302	2041	1060	167	1759	803	310	697	455	133	577	532
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.54	0.54	0.54	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.3	0.0	0.0	81.6	45.1	23.2	82.0	74.0	38.2	84.0	78.3	58.3
Incr Delay (d2), s/veh	3.3	4.2	0.2	28.5	11.2	0.0	52.3	8.5	0.9	23.2	4.5	3.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.4	2.2	0.1	10.7	44.3	1.5	14.5	16.8	9.5	8.4	11.6	19.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.6	4.2	0.2	110.1	56.3	23.2	134.3	82.5	39.1	107.3	82.8	61.4
LnGrp LOS	E	A	A	F	F	C	F	F	D	F	F	E
Approach Vol, veh/h		2244			2004			962			706	
Approach Delay, s/veh		8.9			60.2			91.1			76.5	
Approach LOS		A			E			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	36.6	95.9	13.3	34.2	23.0	109.5	22.0	25.5				
Change Period (Y+Rc), s	* 6.1	* 6.1	6.0	6.1	* 6.1	* 6.1	6.0	6.1				
Max Green Setting (Gmax), s	* 21	* 90	9.4	35.6	* 17	* 94	16.0	29.0				
Max Q Clear Time (g_c+I1), s	19.8	91.8	6.8	25.4	18.9	2.0	18.0	17.0				
Green Ext Time (p_c), s	0.1	0.0	0.0	2.6	0.0	29.4	0.0	2.4				
Intersection Summary												
HCM 6th Ctrl Delay			47.7									
HCM 6th LOS			D									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
7: N Boulevard & Busch Blvd

2030 Build Alt1 - PM
04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	1821	105	102	1910	71	110	351	89	109	230	41
Future Volume (veh/h)	73	1821	105	102	1910	71	110	351	89	109	230	41
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1900	1885	1856	1841	1870	1900	1900	1856	1870	1900
Adj Flow Rate, veh/h	75	1877	108	105	1969	73	113	362	92	112	237	42
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	0	1	3	4	2	0	0	3	2	0
Cap, veh/h	167	2153	975	112	2025	896	180	449	200	113	310	140
Arrive On Green	0.09	0.61	0.61	0.06	0.57	0.57	0.10	0.12	0.12	0.06	0.09	0.09
Sat Flow, veh/h	1781	3554	1610	1795	3526	1560	1781	3610	1610	1767	3554	1610
Grp Volume(v), veh/h	75	1877	108	105	1969	73	113	362	92	112	237	42
Grp Sat Flow(s),veh/h/ln	1781	1777	1610	1795	1763	1560	1781	1805	1610	1767	1777	1610
Q Serve(g_s), s	6.4	70.6	2.5	9.3	86.1	2.3	9.7	15.6	7.2	10.1	10.4	3.2
Cycle Q Clear(g_c), s	6.4	70.6	2.5	9.3	86.1	2.3	9.7	15.6	7.2	10.1	10.4	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	167	2153	975	112	2025	896	180	449	200	113	310	140
V/C Ratio(X)	0.45	0.87	0.11	0.94	0.97	0.08	0.63	0.81	0.46	0.99	0.76	0.30
Avail Cap(c_a), veh/h	167	2153	975	112	2025	896	180	722	322	113	711	322
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.25	0.25	0.25	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.6	26.4	4.2	74.7	32.8	7.0	69.1	68.2	46.8	74.9	71.4	46.0
Incr Delay (d2), s/veh	2.2	1.4	0.1	64.1	14.4	0.2	5.2	3.5	1.6	82.8	3.9	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.4	32.6	2.7	10.4	49.0	2.2	8.3	12.0	5.5	11.6	8.6	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.8	27.7	4.2	138.7	47.2	7.2	74.3	71.7	48.4	157.7	75.4	47.2
LnGrp LOS	E	C	A	F	D	A	E	E	D	F	E	D
Approach Vol, veh/h		2060			2147			567			391	
Approach Delay, s/veh		28.1			50.3			68.5			95.9	
Approach LOS		C			D			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.7	97.8	16.0	25.5	15.7	102.8	21.9	19.6				
Change Period (Y+Rc), s	* 5.7	5.9	* 5.8	* 5.6	* 5.7	5.9	* 5.8	* 5.6				
Max Green Setting (Gmax), s	* 15	79.8	* 10	* 32	* 10	84.8	* 10	* 32				
Max Q Clear Time (g_c+I1), s	8.4	88.1	12.1	17.6	11.3	72.6	11.7	12.4				
Green Ext Time (p_c), s	0.0	0.0	0.0	2.3	0.0	9.4	0.0	1.5				
Intersection Summary												
HCM 6th Ctrl Delay			46.9									
HCM 6th LOS			D									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
8: Florida Ave & Busch Blvd

2030 Build Alt1 - PM
04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	136	1626	257	294	1840	295	201	1237	479	368	778	141
Future Volume (veh/h)	136	1626	257	294	1840	295	201	1237	479	368	778	141
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1870	1856	1885	1870	1841	1841	1885	1870	1870
Adj Flow Rate, veh/h	139	1659	0	300	1878	301	205	1262	489	376	794	144
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	1	2	3	1	2	4	4	1	2	2
Cap, veh/h	147	1784		347	1876	773	218	1300	560	396	888	396
Arrive On Green	0.08	0.35	0.00	0.20	0.74	0.74	0.12	0.26	0.26	0.11	0.25	0.25
Sat Flow, veh/h	1781	5106	1598	3456	5066	1598	1781	5025	1560	3483	3554	1585
Grp Volume(v), veh/h	139	1659	0	300	1878	301	205	1262	489	376	794	144
Grp Sat Flow(s),veh/h/ln	1781	1702	1598	1728	1689	1598	1781	1675	1560	1742	1777	1585
Q Serve(g_s), s	12.4	50.1	0.0	13.4	59.3	10.3	18.3	39.8	24.4	17.2	34.5	12.0
Cycle Q Clear(g_c), s	12.4	50.1	0.0	13.4	59.3	10.3	18.3	39.8	24.4	17.2	34.5	12.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	147	1784		347	1876	773	218	1300	560	396	888	396
V/C Ratio(X)	0.95	0.93		0.86	1.00	0.39	0.94	0.97	0.87	0.95	0.89	0.36
Avail Cap(c_a), veh/h	147	1784		347	1876	773	218	1300	560	396	888	396
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.49	0.49	0.49	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.0	50.2	0.0	62.9	20.7	9.9	69.6	58.7	27.5	70.4	57.9	49.5
Incr Delay (d2), s/veh	61.0	10.1	0.0	10.9	14.8	0.7	44.2	18.3	14.2	32.3	11.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.8	30.4	0.0	8.6	18.6	4.7	16.3	25.8	15.5	14.3	23.3	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	134.1	60.3	0.0	73.8	35.5	10.6	113.8	77.0	41.7	102.7	69.4	50.1
LnGrp LOS	F	E		E	F	B	F	E	D	F	E	D
Approach Vol, veh/h		1798	A		2479			1956			1314	
Approach Delay, s/veh		66.0			37.1			72.0			76.8	
Approach LOS		E			D			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.8	66.4	25.6	48.8	23.2	63.0	27.0	47.4				
Change Period (Y+Rc), s	* 6.6	* 7.1	7.4	7.4	* 7.1	* 7.1	7.4	7.4				
Max Green Setting (Gmax), s	* 13	* 59	18.2	41.4	* 16	* 56	19.6	40.0				
Max Q Clear Time (g_c+I1), s	14.4	61.3	19.2	41.8	15.4	52.1	20.3	36.5				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.1	3.1	0.0	1.8				

Intersection Summary

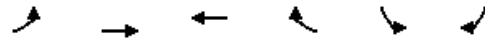
HCM 6th Ctrl Delay	60.0
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 9: Busch Blvd & I-275 SB Ramps

2030 Build Alt1 - PM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↗↗↗	↖↖↖	↗	↖	↗↗
Traffic Volume (veh/h)	388	2085	1787	654	311	642
Future Volume (veh/h)	388	2085	1787	654	311	642
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1856	1885	1826	1841
Adj Flow Rate, veh/h	413	2218	1901	0	331	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	3	1	5	4
Cap, veh/h	440	3664	2169		351	
Arrive On Green	0.50	1.00	0.86	0.00	0.20	0.00
Sat Flow, veh/h	1767	5274	5233	1598	1739	2745
Grp Volume(v), veh/h	413	2218	1901	0	331	0
Grp Sat Flow(s),veh/h/ln	1767	1702	1689	1598	1739	1373
Q Serve(g_s), s	35.3	0.0	34.6	0.0	30.0	0.0
Cycle Q Clear(g_c), s	35.3	0.0	34.6	0.0	30.0	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	440	3664	2169		351	
V/C Ratio(X)	0.94	0.61	0.88		0.94	
Avail Cap(c_a), veh/h	440	3664	2169		365	
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.31	0.31	0.43	0.00	1.00	0.00
Uniform Delay (d), s/veh	39.1	0.0	9.1	0.0	62.9	0.0
Incr Delay (d2), s/veh	12.6	0.2	2.4	0.0	32.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	17.0	0.1	6.6	0.0	23.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	51.6	0.2	11.5	0.0	95.5	0.0
LnGrp LOS	D	A	B		F	
Approach Vol, veh/h		2631	1901	A	331	A
Approach Delay, s/veh		8.3	11.5		95.5	
Approach LOS		A	B		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	46.3	75.0			121.3	38.7
Change Period (Y+Rc), s	6.5	6.5			6.5	6.4
Max Green Setting (Gmax), s	38.5	68.5			113.5	33.6
Max Q Clear Time (g_c+I1), s	37.3	36.6			2.0	32.0
Green Ext Time (p_c), s	0.4	18.2			40.4	0.3

Intersection Summary

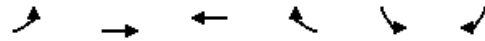
HCM 6th Ctrl Delay	15.5
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 10: Busch Blvd & I-275 NB Ramps

2030 Build Alt1 - PM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑↑	↑↑↑	↗	↖↗	↖↗
Traffic Volume (veh/h)	577	1819	2082	423	242	359
Future Volume (veh/h)	577	1819	2082	423	242	359
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1870	1856	1841	1856
Adj Flow Rate, veh/h	614	1935	2215	0	257	382
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	2	3	4	3
Cap, veh/h	573	4176	2314		337	1171
Arrive On Green	0.65	1.00	0.91	0.00	0.10	0.10
Sat Flow, veh/h	1767	5274	5274	1572	3401	2768
Grp Volume(v), veh/h	614	1935	2215	0	257	382
Grp Sat Flow(s),veh/h/ln	1767	1702	1702	1572	1700	1384
Q Serve(g_s), s	51.8	0.0	49.1	0.0	11.8	0.0
Cycle Q Clear(g_c), s	51.8	0.0	49.1	0.0	11.8	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	573	4176	2314		337	1171
V/C Ratio(X)	1.07	0.46	0.96		0.76	0.33
Avail Cap(c_a), veh/h	573	4176	2314		429	1246
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.71	0.71	0.21	0.00	1.00	1.00
Uniform Delay (d), s/veh	28.2	0.0	6.4	0.0	70.2	30.9
Incr Delay (d2), s/veh	52.9	0.3	3.1	0.0	7.1	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	31.1	0.2	5.0	0.0	9.4	8.8
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	81.1	0.3	9.6	0.0	77.4	31.1
LnGrp LOS	F	A	A		E	C
Approach Vol, veh/h		2549	2215	A	639	
Approach Delay, s/veh		19.7	9.6		49.7	
Approach LOS		B	A		D	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	58.3	79.0			137.3	22.7
Change Period (Y+Rc), s	6.5	6.5			6.5	6.8
Max Green Setting (Gmax), s	47.5	72.5			126.5	20.2
Max Q Clear Time (g_c+I1), s	53.8	51.1			2.0	13.8
Green Ext Time (p_c), s	0.0	16.3			29.0	2.1

Intersection Summary

HCM 6th Ctrl Delay	19.1
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 11: Nebraska Ave & Busch Blvd

2030 Build Alt1 - PM
 04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	184	1712	165	194	2156	107	139	948	261	158	782	210
Future Volume (veh/h)	184	1712	165	194	2156	107	139	948	261	158	782	210
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1870	1870	1826	1870	1841	1796	1826	1841	1841	1870	1856
Adj Flow Rate, veh/h	196	1821	176	206	2294	114	148	1009	0	168	832	223
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	2	2	5	2	4	7	5	4	4	2	3
Cap, veh/h	333	2317	719	164	2292	556	167	1006		151	998	442
Arrive On Green	0.38	0.91	0.91	0.09	0.36	0.36	0.10	0.29	0.00	0.09	0.28	0.28
Sat Flow, veh/h	1739	5106	1585	1739	6434	1560	1711	3469	1560	1753	3554	1572
Grp Volume(v), veh/h	196	1821	176	206	2294	114	148	1009	0	168	832	223
Grp Sat Flow(s),veh/h/ln	1739	1702	1585	1739	1609	1560	1711	1735	1560	1753	1777	1572
Q Serve(g_s), s	14.4	18.4	2.1	15.1	57.0	8.1	13.7	46.4	0.0	13.8	35.2	14.4
Cycle Q Clear(g_c), s	14.4	18.4	2.1	15.1	57.0	8.1	13.7	46.4	0.0	13.8	35.2	14.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	333	2317	719	164	2292	556	167	1006		151	998	442
V/C Ratio(X)	0.59	0.79	0.24	1.26	1.00	0.21	0.88	1.00		1.11	0.83	0.50
Avail Cap(c_a), veh/h	333	2317	719	164	2292	556	172	1006		151	998	442
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.4	4.9	4.1	72.4	51.5	35.8	71.3	56.8	0.0	73.1	54.0	27.5
Incr Delay (d2), s/veh	6.5	2.4	0.7	154.9	19.0	0.8	36.0	29.1	0.0	106.1	6.2	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.6	5.0	1.4	21.5	33.8	5.8	12.2	32.1	0.0	16.5	22.9	9.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.8	7.3	4.8	227.3	70.5	36.6	107.3	85.9	0.0	179.2	60.2	28.4
LnGrp LOS	D	A	A	F	F	D	F	F		F	E	C
Approach Vol, veh/h		2193			2614			1157	A		1223	
Approach Delay, s/veh		11.0			81.4			88.6			70.7	
Approach LOS		B			F			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	38.1	64.0	21.4	54.0	22.0	80.1	22.9	52.5				
Change Period (Y+Rc), s	7.0	* 7	* 7.6	* 7.6	6.9	7.0	* 7.2	* 7.6				
Max Green Setting (Gmax), s	14.1	* 57	* 14	* 46	15.1	56.0	* 16	* 44				
Max Q Clear Time (g_c+I1), s	16.4	59.0	15.8	48.4	17.1	20.4	15.7	37.2				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	19.3	0.0	3.3				

Intersection Summary

HCM 6th Ctrl Delay	59.2
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Arterial Level of Service: EB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
	II	45	22.0	14.6	36.6	0.20	19.9	D
Dale Mabry Hwy NB Ra	II	45	23.3	14.2	37.5	0.21	20.5	D
N Himes Ave	II	45	19.0	28.1	47.1	0.17	13.3	E
Twin Lakes Blvd	II	45	43.9	26.3	70.2	0.50	25.6	C
Orange Grove Dr	II	45	25.9	29.1	55.0	0.25	16.3	E
N Armenia Ave	II	45	29.7	56.1	85.8	0.30	12.6	F
N Boulevard	II	45	79.8	51.0	130.8	1.00	27.4	C
Florida Ave	II	40	47.2	31.5	78.7	0.51	23.2	C
I-275 SB Ramps	II	40	21.9	3.7	25.6	0.19	26.7	C
I-275 NB Ramps	II	40	21.3	1.9	23.2	0.19	28.8	B
Nebraska Ave	II	40	14.6	74.1	88.7	0.13	5.1	F
Total	II		348.6	330.6	679.2	3.65	19.3	D

Arterial Level of Service: WB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Nebraska Ave	II	40	27.0	70.8	97.8	0.25	9.0	F
I-275 NB Ramps	II	40	14.6	27.3	41.9	0.13	10.9	F
I-275 SB Ramps	II	40	21.3	28.9	50.2	0.19	13.3	E
Florida Ave	II	40	21.9	52.2	74.1	0.19	9.2	F
N Boulevard	II	40	47.2	94.8	142.0	0.51	12.9	F
N Armenia Ave	II	45	79.8	63.9	143.7	1.00	25.0	C
Orange Grove Dr	II	45	29.7	42.5	72.2	0.30	14.9	E
Mossvale Ln	II	45	25.9	26.8	52.7	0.25	17.0	D
N Himes Ave	II	45	43.9	23.3	67.2	0.50	26.7	C
Dale Mabry Hwy NB Ra	II	45	19.0	34.5	53.5	0.17	11.7	F
Dale Mabry Hwy SB Ra	II	45	23.3	88.4	111.7	0.21	6.9	F
Total	II		353.6	553.4	907.0	3.69	14.6	E

HCM 6th Signalized Intersection Summary
 1: Busch Blvd & Dale Mabry Hwy SB Ramps

2040 Build Alt 1 - AM
 04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	226	2169	1	8	1394	0	0	0	0	434	6	24
Future Volume (veh/h)	226	2169	1	8	1394	0	0	0	0	434	6	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1885	1885	1856	1856	0	1900	1900	1900	1870	1900	1796
Adj Flow Rate, veh/h	233	2236	1	8	1437	0	0	0	0	451	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	1	1	3	3	0	0	0	0	2	0	7
Cap, veh/h	470	2891	1	24	1858	0	0	1	1	498	0	
Arrive On Green	0.20	0.79	0.79	0.55	0.55	0.00	0.00	0.00	0.00	0.14	0.00	0.00
Sat Flow, veh/h	1767	3674	2	7	3469	0	0	1900	1610	3563	0	1522
Grp Volume(v), veh/h	233	1090	1147	765	680	0	0	0	0	451	0	0
Grp Sat Flow(s),veh/h/ln	1767	1791	1885	1788	1604	0	0	1900	1610	1781	0	1522
Q Serve(g_s), s	8.3	59.6	59.6	0.0	59.8	0.0	0.0	0.0	0.0	22.4	0.0	0.0
Cycle Q Clear(g_c), s	8.3	59.6	59.6	56.9	59.8	0.0	0.0	0.0	0.0	22.4	0.0	0.0
Prop In Lane	1.00		0.00	0.01		0.00	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	470	1409	1483	1001	880	0	0	1	1	498	0	
V/C Ratio(X)	0.50	0.77	0.77	0.76	0.77	0.00	0.00	0.00	0.00	0.91	0.00	
Avail Cap(c_a), veh/h	470	1409	1483	1001	880	0	0	63	54	566	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	52.8	10.4	10.4	31.2	31.8	0.0	0.0	0.0	0.0	76.3	0.0	0.0
Incr Delay (d2), s/veh	0.8	4.2	4.0	5.5	6.5	0.0	0.0	0.0	0.0	16.9	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	13.9	29.0	30.2	34.6	32.0	0.0	0.0	0.0	0.0	17.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	53.6	14.6	14.4	36.7	38.3	0.0	0.0	0.0	0.0	93.2	0.0	0.0
LnGrp LOS	D	B	B	D	D	A	A	A	A	F	A	
Approach Vol, veh/h		2470			1445			0			451	A
Approach Delay, s/veh		18.2			37.5			0.0			93.2	
Approach LOS		B			D						F	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	42.8	105.6		0.0		148.4		31.6				
Change Period (Y+Rc), s	6.8	6.8		* 8.4		6.8		6.4				
Max Green Setting (Gmax), s	18.2	98.8		* 6		123.8		28.6				
Max Q Clear Time (g_c+I1), s	10.3	61.8		0.0		61.6		24.4				
Green Ext Time (p_c), s	0.4	18.7		0.0		48.9		0.7				

Intersection Summary

HCM 6th Ctrl Delay	32.3
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [SWR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 2: Busch Blvd & Dale Mabry Hwy NB Ramps

2040 Build Alt 1 - AM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↗↗	↗↗	↖	↖↖	↖
Traffic Volume (veh/h)	42	2561	1677	393	131	167
Future Volume (veh/h)	42	2561	1677	393	131	167
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1781	1885	1900	1856	1826	1885
Adj Flow Rate, veh/h	43	2613	1711	0	134	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	8	1	0	3	5	1
Cap, veh/h	302	3126	2926		174	
Arrive On Green	0.02	0.87	1.00	0.00	0.05	0.00
Sat Flow, veh/h	1697	3676	3705	1572	3374	1598
Grp Volume(v), veh/h	43	2613	1711	0	134	0
Grp Sat Flow(s),veh/h/ln	1697	1791	1805	1572	1687	1598
Q Serve(g_s), s	0.7	61.8	0.0	0.0	7.1	0.0
Cycle Q Clear(g_c), s	0.7	61.8	0.0	0.0	7.1	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	302	3126	2926		174	
V/C Ratio(X)	0.14	0.84	0.58		0.77	
Avail Cap(c_a), veh/h	315	3126	2926		341	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.68	0.00	1.00	0.00
Uniform Delay (d), s/veh	2.2	5.4	0.0	0.0	84.3	0.0
Incr Delay (d2), s/veh	0.2	2.8	0.6	0.0	7.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	21.1	0.4	0.0	5.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	2.4	8.2	0.6	0.0	91.2	0.0
LnGrp LOS	A	A	A		F	
Approach Vol, veh/h		2656	1711	A	134	A
Approach Delay, s/veh		8.1	0.6		91.2	
Approach LOS		A	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	11.2	152.7			163.9	16.1
Change Period (Y+Rc), s	6.8	6.8			6.8	6.8
Max Green Setting (Gmax), s	5.8	135.6			148.2	18.2
Max Q Clear Time (g_c+I1), s	2.7	2.0			63.8	9.1
Green Ext Time (p_c), s	0.0	40.5			72.3	0.3
Intersection Summary						
HCM 6th Ctrl Delay			7.7			
HCM 6th LOS			A			
Notes						
Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.						






















HCM 6th Signalized Intersection Summary
 3: N Himes Ave & Busch Blvd

2040 Build Alt 1 - AM
 04/04/2018

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑↑	↑↑	↑↑	↑↑	↑
Traffic Volume (veh/h)	1973	719	471	1660	410	128
Future Volume (veh/h)	1973	719	471	1660	410	128
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1885	1885	1856	1856	1900
Adj Flow Rate, veh/h	2034	741	486	1711	423	132
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	1	1	3	3	0
Cap, veh/h	2142	2073	520	2785	461	216
Arrive On Green	1.00	1.00	0.15	0.79	0.13	0.13
Sat Flow, veh/h	3647	2812	3483	3618	3428	1610
Grp Volume(v), veh/h	2034	741	486	1711	423	132
Grp Sat Flow(s),veh/h/ln	1777	1406	1742	1763	1714	1610
Q Serve(g_s), s	0.0	0.0	24.8	35.6	21.9	13.9
Cycle Q Clear(g_c), s	0.0	0.0	24.8	35.6	21.9	13.9
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2142	2073	520	2785	461	216
V/C Ratio(X)	0.95	0.36	0.93	0.61	0.92	0.61
Avail Cap(c_a), veh/h	2142	2073	526	2785	480	225
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.42	0.42	0.65	0.65	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	75.7	7.7	76.9	73.5
Incr Delay (d2), s/veh	5.4	0.2	17.4	0.7	22.0	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.9	23.2	16.9	16.3	16.6	18.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	5.4	0.2	93.1	8.4	98.9	77.3
LnGrp LOS	A	A	F	A	F	E
Approach Vol, veh/h	2775			2197	555	
Approach Delay, s/veh	4.0			27.1	93.8	
Approach LOS	A			C	F	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		149.0		31.0	33.7	115.3
Change Period (Y+Rc), s		6.8		* 6.8	6.8	6.8
Max Green Setting (Gmax), s		141.2		* 25	27.2	107.2
Max Q Clear Time (g_c+I1), s		37.6		23.9	26.8	2.0
Green Ext Time (p_c), s		38.5		0.3	0.1	77.0
Intersection Summary						
HCM 6th Ctrl Delay			22.2			
HCM 6th LOS			C			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

HCM 6th Signalized Intersection Summary
 4: Twin Lakes Blvd/Mossvale Ln & Busch Blvd

2040 Build Alt 1 - AM
 04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	1850	249	361	2043	0	88	0	126	2	0	0
Future Volume (veh/h)	2	1850	249	361	2043	0	88	0	126	2	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1900	1885	1870	1870	1885	0	1900	1900	1900	1900
Adj Flow Rate, veh/h	2	1888	254	368	2085	0	90	0	129	2	0	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	2	0	1	2	2	1	0	0	0	0	0
Cap, veh/h	175	2380	1078	379	3268	0	0	0	0	6	0	0
Arrive On Green	0.89	0.89	0.89	0.42	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	201	3554	1610	1795	3647	0		0		1809	0	0
Grp Volume(v), veh/h	2	1888	254	368	2085	0		0.0		2	0	0
Grp Sat Flow(s),veh/h/ln	201	1777	1610	1795	1777	0				1810	0	0
Q Serve(g_s), s	0.2	35.7	3.9	36.1	0.0	0.0				0.2	0.0	0.0
Cycle Q Clear(g_c), s	0.2	35.7	3.9	36.1	0.0	0.0				0.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	175	2380	1078	379	3268	0				6	0	0
V/C Ratio(X)	0.01	0.79	0.24	0.97	0.64	0.00				0.35	0.00	0.00
Avail Cap(c_a), veh/h	175	2380	1078	379	3268	0				60	0	0
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	2.00				1.00	1.00	1.00
Upstream Filter(I)	0.27	0.27	0.27	0.09	0.09	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	3.3	5.2	3.5	51.5	0.0	0.0				89.5	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.8	0.1	8.4	0.1	0.0				32.6	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	7.1	2.2	16.3	0.1	0.0				0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.3	6.0	3.6	59.8	0.1	0.0				122.1	0.0	0.0
LnGrp LOS	A	A	A	E	A	A				F	A	A
Approach Vol, veh/h		2144			2453							2
Approach Delay, s/veh		5.7			9.0							122.1
Approach LOS		A			A							F
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	45.0	127.5		7.5		172.5						
Change Period (Y+Rc), s	* 7	* 7		6.9		* 7						
Max Green Setting (Gmax), s	* 38	* 98		6.0		* 1.4E2						
Max Q Clear Time (g_c+I1), s	38.1	37.7		2.2		2.0						
Green Ext Time (p_c), s	0.0	40.4		0.0		68.9						

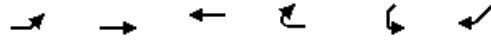
Intersection Summary												
HCM 6th Ctrl Delay				7.5								
HCM 6th LOS				A								

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
5: Busch Blvd & Orange Grove Dr

2040 Build Alt 1 - AM
04/04/2018



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations	↗	↕↕	↕↕	↗	↖	↗
Traffic Volume (veh/h)	113	1865	1938	94	139	466
Future Volume (veh/h)	113	1865	1938	94	139	466
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1870	1856	1900	1900	1900
Adj Flow Rate, veh/h	122	2005	2084	101	149	501
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	3	0	0	0
Cap, veh/h	217	2385	2099	959	454	404
Arrive On Green	0.08	1.00	1.00	1.00	0.25	0.25
Sat Flow, veh/h	1810	3647	3618	1610	1810	1610
Grp Volume(v), veh/h	122	2005	2084	101	149	501
Grp Sat Flow(s),veh/h/ln	1810	1777	1763	1610	1810	1610
Q Serve(g_s), s	4.8	0.0	0.0	0.0	12.1	45.2
Cycle Q Clear(g_c), s	4.8	0.0	0.0	0.0	12.1	45.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	217	2385	2099	959	454	404
V/C Ratio(X)	0.56	0.84	0.99	0.11	0.33	1.24
Avail Cap(c_a), veh/h	237	2385	2099	959	454	404
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.29	0.29	0.45	0.45	1.00	1.00
Uniform Delay (d), s/veh	11.8	0.0	0.0	0.0	55.0	67.4
Incr Delay (d2), s/veh	0.7	1.1	11.6	0.1	0.4	127.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.0	0.7	5.4	0.0	9.6	47.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	12.5	1.1	11.6	0.1	55.4	194.5
LnGrp LOS	B	A	B	A	E	F
Approach Vol, veh/h		2127	2185		650	
Approach Delay, s/veh		1.8	11.1		162.6	
Approach LOS		A	B		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	13.6	114.4			128.0	52.0
Change Period (Y+Rc), s	6.8	* 7.2			* 7.2	6.8
Max Green Setting (Gmax), s	8.8	* 1.1E2			* 1.2E2	45.2
Max Q Clear Time (g_c+I1), s	6.8	2.0			2.0	47.2
Green Ext Time (p_c), s	0.0	61.8			58.4	0.0
Intersection Summary						
HCM 6th Ctrl Delay			26.9			
HCM 6th LOS			C			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

HCM 6th Signalized Intersection Summary
6: N Armenia Ave & Busch Blvd

2040 Build Alt 1 - AM
04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	1586	335	246	1723	12	188	264	168	85	479	121
Future Volume (veh/h)	83	1586	335	246	1723	12	188	264	168	85	479	121
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1870	1856	1900	1885	1856	1841	1870	1885	1900
Adj Flow Rate, veh/h	85	1618	342	251	1758	12	192	269	171	87	489	123
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	1	2	3	0	1	3	4	2	1	0
Cap, veh/h	102	1753	868	307	2146	980	174	565	519	196	535	332
Arrive On Green	0.11	0.99	0.99	0.17	0.61	0.61	0.05	0.16	0.16	0.04	0.15	0.15
Sat Flow, veh/h	1781	3554	1598	1781	3526	1610	3483	3526	1560	1781	3582	1610
Grp Volume(v), veh/h	85	1618	342	251	1758	12	192	269	171	87	489	123
Grp Sat Flow(s),veh/h/ln	1781	1777	1598	1781	1763	1610	1742	1763	1560	1781	1791	1610
Q Serve(g_s), s	8.4	12.2	0.3	24.4	70.1	0.5	9.0	12.5	1.6	7.0	24.2	11.8
Cycle Q Clear(g_c), s	8.4	12.2	0.3	24.4	70.1	0.5	9.0	12.5	1.6	7.0	24.2	11.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	102	1753	868	307	2146	980	174	565	519	196	535	332
V/C Ratio(X)	0.84	0.92	0.39	0.82	0.82	0.01	1.10	0.48	0.33	0.44	0.91	0.37
Avail Cap(c_a), veh/h	120	1753	868	307	2146	980	174	588	529	196	557	342
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.49	0.49	0.49	0.11	0.11	0.11	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	78.9	0.7	0.2	71.8	27.5	13.9	85.5	68.7	28.6	63.3	75.4	61.4
Incr Delay (d2), s/veh	19.0	5.2	0.7	2.0	0.4	0.0	98.3	0.6	0.4	1.6	19.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.5	3.1	0.4	13.0	31.1	0.4	10.9	9.6	8.0	6.3	18.4	8.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	97.9	5.9	0.8	73.8	27.9	13.9	183.8	69.3	29.0	64.9	94.8	62.1
LnGrp LOS	F	A	A	E	C	B	F	E	C	E	F	E
Approach Vol, veh/h		2045			2021			632			699	
Approach Delay, s/veh		8.9			33.5			93.2			85.3	
Approach LOS		A			C			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.4	115.6	13.0	35.0	37.1	94.9	15.0	33.0				
Change Period (Y+Rc), s	* 6.1	* 6.1	6.0	6.1	* 6.1	* 6.1	6.0	6.1				
Max Green Setting (Gmax), s	* 12	* 1.1E2	7.0	30.0	* 30	* 89	9.0	28.0				
Max Q Clear Time (g_c+I1), s	10.4	72.1	9.0	14.5	26.4	14.2	11.0	26.2				
Green Ext Time (p_c), s	0.0	17.7	0.0	2.0	0.2	23.0	0.0	0.7				
Intersection Summary												
HCM 6th Ctrl Delay			37.9									
HCM 6th LOS			D									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
 7: N Boulevard & Busch Blvd

2040 Build Alt 1 - AM
 04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	61	1663	167	138	1848	129	66	220	53	175	529	34
Future Volume (veh/h)	61	1663	167	138	1848	129	66	220	53	175	529	34
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1900	1885	1856	1841	1870	1900	1900	1856	1870	1900
Adj Flow Rate, veh/h	63	1714	172	142	1905	133	68	227	55	180	545	35
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	0	1	3	4	2	0	0	3	2	0
Cap, veh/h	259	1982	898	147	1738	769	85	469	209	168	631	286
Arrive On Green	0.15	0.56	0.56	0.08	0.49	0.49	0.05	0.13	0.13	0.10	0.18	0.18
Sat Flow, veh/h	1781	3554	1610	1795	3526	1560	1781	3610	1610	1767	3554	1610
Grp Volume(v), veh/h	63	1714	172	142	1905	133	68	227	55	180	545	35
Grp Sat Flow(s),veh/h/ln	1781	1777	1610	1795	1763	1560	1781	1805	1610	1767	1777	1610
Q Serve(g_s), s	5.3	70.1	9.0	13.4	83.8	5.4	6.4	9.9	5.2	16.2	25.3	2.3
Cycle Q Clear(g_c), s	5.3	70.1	9.0	13.4	83.8	5.4	6.4	9.9	5.2	16.2	25.3	2.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	259	1982	898	147	1738	769	85	469	209	168	631	286
V/C Ratio(X)	0.24	0.86	0.19	0.97	1.10	0.17	0.80	0.48	0.26	1.07	0.86	0.12
Avail Cap(c_a), veh/h	259	1982	898	147	1738	769	101	680	303	168	807	366
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.43	0.43	0.43	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	64.4	32.1	18.6	77.8	43.1	10.9	80.2	68.7	66.6	76.9	67.9	32.3
Incr Delay (d2), s/veh	1.0	2.4	0.2	63.8	52.9	0.5	26.7	0.8	0.7	88.9	7.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.2	35.1	5.5	13.6	63.9	5.5	6.5	8.2	4.0	17.6	18.0	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	65.3	34.5	18.8	141.7	96.0	11.4	106.9	69.4	67.3	165.8	75.8	32.5
LnGrp LOS	E	C	B	F	F	B	F	E	E	F	E	C
Approach Vol, veh/h		1949			2180			350			760	
Approach Delay, s/veh		34.1			93.8			76.4			95.1	
Approach LOS		C			F			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	30.6	89.7	22.0	27.7	19.6	100.7	13.9	35.8				
Change Period (Y+Rc), s	5.9	* 5.9	* 5.8	* 5.6	* 5.7	5.9	* 5.8	* 5.6				
Max Green Setting (Gmax), s	15.0	* 84	* 16	* 32	* 14	84.9	* 9.6	* 39				
Max Q Clear Time (g_c+I1), s	7.3	85.8	18.2	11.9	15.4	72.1	8.4	27.3				
Green Ext Time (p_c), s	0.0	0.0	0.0	1.5	0.0	9.3	0.0	2.9				

Intersection Summary												
HCM 6th Ctrl Delay				70.6								
HCM 6th LOS				E								

Notes
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
 8: Florida Ave & Busch Blvd

2040 Build Alt 1 - AM
 04/04/2018

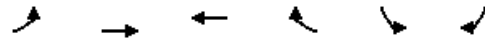
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	164	1326	401	315	1959	232	175	803	410	346	1301	63
Future Volume (veh/h)	164	1326	401	315	1959	232	175	803	410	346	1301	63
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1870	1856	1885	1870	1841	1841	1885	1870	1870
Adj Flow Rate, veh/h	167	1353	0	321	1999	237	179	819	418	353	1328	64
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	1	2	3	1	2	4	4	1	2	2
Cap, veh/h	313	2182		359	1785	748	111	1432	606	405	1204	537
Arrive On Green	0.18	0.43	0.00	0.21	0.70	0.70	0.06	0.29	0.29	0.12	0.34	0.34
Sat Flow, veh/h	1781	5106	1598	3456	5066	1598	1781	5025	1560	3483	3554	1585
Grp Volume(v), veh/h	167	1353	0	321	1999	237	179	819	418	353	1328	64
Grp Sat Flow(s),veh/h/ln	1781	1702	1598	1728	1689	1598	1781	1675	1560	1742	1777	1585
Q Serve(g_s), s	14.5	35.1	0.0	15.4	59.9	5.4	10.6	23.7	38.0	16.9	57.6	3.6
Cycle Q Clear(g_c), s	14.5	35.1	0.0	15.4	59.9	5.4	10.6	23.7	38.0	16.9	57.6	3.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	313	2182		359	1785	748	111	1432	606	405	1204	537
V/C Ratio(X)	0.53	0.62		0.90	1.12	0.32	1.61	0.57	0.69	0.87	1.10	0.12
Avail Cap(c_a), veh/h	313	2182		400	1785	748	111	1432	606	565	1204	537
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.54	0.54	0.54	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	63.7	37.9	0.0	66.5	25.1	6.6	79.7	51.9	43.4	73.9	56.2	22.1
Incr Delay (d2), s/veh	6.4	1.3	0.0	12.6	58.7	0.6	312.8	0.5	3.3	10.6	58.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.5	21.1	0.0	9.8	32.8	2.6	23.5	15.1	21.4	12.8	47.8	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	70.1	39.2	0.0	79.1	83.8	7.2	392.5	52.5	46.7	84.5	115.1	22.2
LnGrp LOS	E	D		E	F	A	F	D	D	F	F	C
Approach Vol, veh/h		1520	A		2557			1416			1745	
Approach Delay, s/veh		42.6			76.1			93.7			105.5	
Approach LOS		D			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	37.5	67.0	27.1	55.9	24.2	80.3	18.0	65.0				
Change Period (Y+Rc), s	* 7.1	* 7.1	7.4	7.4	* 6.6	* 7.1	7.4	7.4				
Max Green Setting (Gmax), s	* 13	* 60	27.6	40.6	* 20	* 54	10.6	57.6				
Max Q Clear Time (g_c+I1), s	16.5	61.9	18.9	40.0	17.4	37.1	12.6	59.6				
Green Ext Time (p_c), s	0.0	0.0	0.8	0.4	0.3	8.4	0.0	0.0				

Intersection Summary												
HCM 6th Ctrl Delay				79.6								
HCM 6th LOS				E								

Notes
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 9: Busch Blvd & I-275 SB Ramps

2040 Build Alt 1 - AM
 04/04/2018



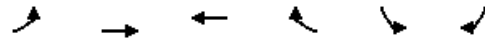
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↑↑↑	↑↑↑	↵	↵	↵↵
Traffic Volume (veh/h)	370	1712	2007	792	206	499
Future Volume (veh/h)	370	1712	2007	792	206	499
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1856	1885	1826	1841
Adj Flow Rate, veh/h	394	1821	2135	0	219	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	3	1	5	4
Cap, veh/h	431	4009	2548		242	
Arrive On Green	0.49	1.00	0.67	0.00	0.14	0.00
Sat Flow, veh/h	1767	5274	5233	1598	1739	2745
Grp Volume(v), veh/h	394	1821	2135	0	219	0
Grp Sat Flow(s),veh/h/ln	1767	1702	1689	1598	1739	1373
Q Serve(g_s), s	35.0	0.0	54.0	0.0	21.1	0.0
Cycle Q Clear(g_c), s	35.0	0.0	54.0	0.0	21.1	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	431	4009	2548		242	
V/C Ratio(X)	0.91	0.45	0.84		0.91	
Avail Cap(c_a), veh/h	431	4009	2548		303	
HCM Platoon Ratio	2.00	2.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.55	0.55	0.48	0.00	1.00	0.00
Uniform Delay (d), s/veh	41.9	0.0	22.9	0.0	72.1	0.0
Incr Delay (d2), s/veh	15.7	0.2	1.7	0.0	27.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	18.9	0.1	23.4	0.0	16.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	57.5	0.2	24.6	0.0	99.3	0.0
LnGrp LOS	E	A	C		F	
Approach Vol, veh/h		2215	2135	A	219	A
Approach Delay, s/veh		10.4	24.6		99.3	
Approach LOS		B	C		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	48.0	92.0			140.0	30.0
Change Period (Y+Rc), s	6.5	6.5			6.5	6.4
Max Green Setting (Gmax), s	35.5	85.5			127.5	29.6
Max Q Clear Time (g_c+I1), s	37.0	56.0			2.0	23.1
Green Ext Time (p_c), s	0.0	20.0			25.1	0.5

Intersection Summary						
HCM 6th Ctrl Delay			21.3			
HCM 6th LOS			C			

Notes
 Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 10: Busch Blvd & I-275 NB Ramps

2040 Build Alt 1 - AM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑↑	↑↑↑	↗	↖↗	↖↗
Traffic Volume (veh/h)	303	1615	2282	330	318	517
Future Volume (veh/h)	303	1615	2282	330	318	517
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1870	1856	1841	1856
Adj Flow Rate, veh/h	322	1718	2428	0	338	550
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	2	3	4	3
Cap, veh/h	456	4005	2493		467	1094
Arrive On Green	0.52	1.00	0.65	0.00	0.14	0.14
Sat Flow, veh/h	1767	5274	5274	1572	3401	2768
Grp Volume(v), veh/h	322	1718	2428	0	338	550
Grp Sat Flow(s),veh/h/ln	1767	1702	1702	1572	1700	1384
Q Serve(g_s), s	23.6	0.0	77.1	0.0	16.2	0.0
Cycle Q Clear(g_c), s	23.6	0.0	77.1	0.0	16.2	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	456	4005	2493		467	1094
V/C Ratio(X)	0.71	0.43	0.97		0.72	0.50
Avail Cap(c_a), veh/h	456	4005	2493		698	1282
HCM Platoon Ratio	2.00	2.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.11	0.00	1.00	1.00
Uniform Delay (d), s/veh	36.3	0.0	28.8	0.0	70.2	38.8
Incr Delay (d2), s/veh	5.3	0.3	2.5	0.0	3.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	13.4	0.2	30.1	0.0	11.8	13.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	41.6	0.3	31.2	0.0	73.3	39.3
LnGrp LOS	D	A	C		E	D
Approach Vol, veh/h		2040	2428	A	888	
Approach Delay, s/veh		6.8	31.2		52.2	
Approach LOS		A	C		D	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	50.3	89.5			139.8	30.2
Change Period (Y+Rc), s	6.5	6.5			6.5	6.8
Max Green Setting (Gmax), s	32.3	83.0			121.8	34.9
Max Q Clear Time (g_c+I1), s	25.6	79.1			2.0	18.2
Green Ext Time (p_c), s	1.2	3.6			21.9	5.2

Intersection Summary

HCM 6th Ctrl Delay	25.4
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 11: Nebraska Ave & Busch Blvd

2040 Build Alt 1 - AM
 04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	93	1592	248	247	2308	74	161	748	268	74	1265	143
Future Volume (veh/h)	93	1592	248	247	2308	74	161	748	268	74	1265	143
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1870	1870	1826	1870	1841	1796	1826	1841	1841	1870	1856
Adj Flow Rate, veh/h	99	1694	264	263	2455	79	171	796	0	79	1346	152
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	2	2	5	2	4	7	5	4	4	2	3
Cap, veh/h	83	1988	617	195	2922	708	139	1229		97	1158	512
Arrive On Green	0.06	0.52	0.52	0.11	0.45	0.45	0.08	0.35	0.00	0.06	0.33	0.33
Sat Flow, veh/h	1739	5106	1585	1739	6434	1560	1711	3469	1560	1753	3554	1572
Grp Volume(v), veh/h	99	1694	264	263	2455	79	171	796	0	79	1346	152
Grp Sat Flow(s),veh/h/ln	1739	1702	1585	1739	1609	1560	1711	1735	1560	1753	1777	1572
Q Serve(g_s), s	8.1	48.7	15.0	19.1	57.3	5.0	13.8	32.7	0.0	7.6	55.4	11.3
Cycle Q Clear(g_c), s	8.1	48.7	15.0	19.1	57.3	5.0	13.8	32.7	0.0	7.6	55.4	11.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	83	1988	617	195	2922	708	139	1229		97	1158	512
V/C Ratio(X)	1.19	0.85	0.43	1.35	0.84	0.11	1.23	0.65		0.82	1.16	0.30
Avail Cap(c_a), veh/h	83	1988	617	195	2922	708	139	1229		159	1158	512
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	79.6	36.7	21.5	75.4	41.0	26.7	78.1	46.0	0.0	79.5	57.3	36.3
Incr Delay (d2), s/veh	154.3	4.3	1.9	185.8	3.1	0.3	151.5	1.2	0.0	6.2	82.8	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.8	26.0	9.0	28.7	30.7	3.4	18.9	20.4	0.0	6.4	52.5	7.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	233.9	41.1	23.4	261.2	44.1	27.0	229.6	47.2	0.0	85.6	140.1	36.6
LnGrp LOS	F	D	C	F	D	C	F	D		F	F	D
Approach Vol, veh/h		2057			2797			967	A		1577	
Approach Delay, s/veh		48.1			64.0			79.5			127.4	
Approach LOS		D			E			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	84.6	16.6	67.8	26.0	73.6	21.4	63.0				
Change Period (Y+Rc), s	6.9	7.0	* 7.2	* 7.6	6.9	7.0	* 7.6	* 7.6				
Max Green Setting (Gmax), s	8.1	64.0	* 15	* 54	19.1	53.0	* 14	* 55				
Max Q Clear Time (g_c+I1), s	10.1	59.3	9.6	34.7	21.1	50.7	15.8	57.4				
Green Ext Time (p_c), s	0.0	4.4	0.0	5.1	0.0	2.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	75.1
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Arterial Level of Service: EB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
	II	45	22.0	22.4	44.4	0.20	16.4	E
Dale Mabry Hwy NB Ra	II	45	23.3	15.1	38.4	0.21	20.1	D
N Himes Ave	II	45	19.0	39.0	58.0	0.17	10.8	F
Twin Lakes Blvd	II	45	43.9	10.2	54.1	0.50	33.2	B
Orange Grove Dr	II	45	25.9	9.4	35.3	0.25	25.4	C
N Armenia Ave	II	45	29.7	41.6	71.3	0.30	15.1	E
N Boulevard	II	45	79.8	48.5	128.3	1.00	28.0	C
Florida Ave	II	40	47.3	49.2	96.5	0.51	19.0	D
I-275 SB Ramps	II	40	21.9	6.0	27.9	0.19	24.5	C
I-275 NB Ramps	II	40	21.3	18.0	39.3	0.19	17.0	D
Nebraska Ave	II	40	14.6	75.6	90.2	0.13	5.1	F
Total	II		348.7	335.0	683.7	3.65	19.2	D

Arterial Level of Service: WB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Nebraska Ave	II	40	27.0	74.6	101.6	0.25	8.7	F
I-275 NB Ramps	II	40	14.6	16.4	31.0	0.13	14.7	E
I-275 SB Ramps	II	40	21.3	20.1	41.4	0.19	16.1	E
Florida Ave	II	40	21.9	86.4	108.3	0.19	6.3	F
N Boulevard	II	40	47.3	31.2	78.5	0.51	23.3	C
N Armenia Ave	II	45	79.8	33.9	113.7	1.00	31.6	B
Orange Grove Dr	II	45	29.7	47.5	77.2	0.30	14.0	E
Mossvale Ln	II	45	25.9	6.7	32.6	0.25	27.5	C
N Himes Ave	II	45	43.9	13.5	57.4	0.50	31.3	B
Dale Mabry Hwy NB Ra	II	45	19.0	14.8	33.8	0.17	18.6	D
Dale Mabry Hwy SB Ra	II	45	23.3	55.8	79.1	0.21	9.7	F
Total	II		353.7	400.9	754.6	3.69	17.6	D

HCM 6th Signalized Intersection Summary
 1: Busch Blvd & Dale Mabry Hwy SB Ramps

2040 Build Alt1 - PM
 04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	232	1860	0	0	2446	0	0	5	17	400	5	38
Future Volume (veh/h)	232	1860	0	0	2446	0	0	5	17	400	5	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	0	1900	1900	1900	1856	1900	1841
Adj Flow Rate, veh/h	239	1918	0	0	2522	0	0	5	18	416	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	1	1	0	0	0	0	3	0	4
Cap, veh/h	154	2640	0	0	2342	0	0	43	37	404	0	
Arrive On Green	0.06	0.74	0.00	0.00	0.65	0.00	0.00	0.02	0.02	0.11	0.00	0.00
Sat Flow, veh/h	1781	3647	0	0	3770	0	0	1900	1610	3534	0	1560
Grp Volume(v), veh/h	239	1918	0	0	2522	0	0	5	18	416	0	0
Grp Sat Flow(s),veh/h/ln	1781	1777	0	0	1791	0	0	1900	1610	1767	0	1560
Q Serve(g_s), s	11.5	54.3	0.0	0.0	117.7	0.0	0.0	0.5	2.0	20.6	0.0	0.0
Cycle Q Clear(g_c), s	11.5	54.3	0.0	0.0	117.7	0.0	0.0	0.5	2.0	20.6	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.00	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	154	2640	0	0	2342	0	0	43	37	404	0	
V/C Ratio(X)	1.55	0.73	0.00	0.00	1.08	0.00	0.00	0.12	0.49	1.03	0.00	
Avail Cap(c_a), veh/h	154	2640	0	0	2342	0	0	63	54	404	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	70.1	12.9	0.0	0.0	31.2	0.0	0.0	86.2	86.9	79.7	0.0	0.0
Incr Delay (d2), s/veh	278.6	1.8	0.0	0.0	43.2	0.0	0.0	1.2	9.8	52.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	29.6	27.4	0.0	0.0	78.5	0.0	0.0	0.4	1.7	18.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	348.7	14.7	0.0	0.0	74.3	0.0	0.0	87.3	96.7	131.9	0.0	0.0
LnGrp LOS	F	B	A	A	F	A	A	F	F	F	A	
Approach Vol, veh/h		2157			2522			23			416	A
Approach Delay, s/veh		51.7			74.3			94.7			131.9	
Approach LOS		D			E			F			F	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	16.0	124.5		12.5		140.5		27.0				
Change Period (Y+Rc), s	4.5	6.8		* 8.4		6.8		6.4				
Max Green Setting (Gmax), s	11.5	115.8		* 6		131.8		20.6				
Max Q Clear Time (g_c+I1), s	13.5	119.7		4.0		56.3		22.6				
Green Ext Time (p_c), s	0.0	0.0		0.0		42.9		0.0				

Intersection Summary

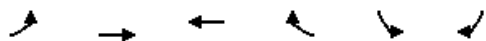
HCM 6th Ctrl Delay	69.6
HCM 6th LOS	E

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [SWR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
2: Busch Blvd & Dale Mabry Hwy NB Ramps

2040 Build Alt1 - PM
04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↗↗	↗↗	↖	↖↖	↖
Traffic Volume (veh/h)	131	2146	2574	573	176	279
Future Volume (veh/h)	131	2146	2574	573	176	279
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	139	2283	2738	0	187	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	2	2	1	1	1
Cap, veh/h	173	3047	2814		234	
Arrive On Green	0.03	0.86	1.00	0.00	0.07	0.00
Sat Flow, veh/h	1810	3647	3647	1598	3483	1598
Grp Volume(v), veh/h	139	2283	2738	0	187	0
Grp Sat Flow(s),veh/h/ln	1810	1777	1777	1598	1742	1598
Q Serve(g_s), s	2.5	46.2	0.0	0.0	9.5	0.0
Cycle Q Clear(g_c), s	2.5	46.2	0.0	0.0	9.5	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	173	3047	2814		234	
V/C Ratio(X)	0.80	0.75	0.97		0.80	
Avail Cap(c_a), veh/h	196	3047	2814		581	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.09	0.00	1.00	0.00
Uniform Delay (d), s/veh	18.2	5.1	0.0	0.0	82.8	0.0
Incr Delay (d2), s/veh	18.9	1.7	1.8	0.0	6.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	8.3	17.8	1.1	0.0	8.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	37.1	6.9	1.8	0.0	89.0	0.0
LnGrp LOS	D	A	A		F	
Approach Vol, veh/h		2422	2738	A	187	A
Approach Delay, s/veh		8.6	1.8		89.0	
Approach LOS		A	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	11.8	149.3			161.1	18.9
Change Period (Y+Rc), s	6.8	6.8			6.8	6.8
Max Green Setting (Gmax), s	7.2	122.4			136.4	30.0
Max Q Clear Time (g_c+I1), s	4.5	2.0			48.2	11.5
Green Ext Time (p_c), s	0.1	102.7			63.3	0.6
Intersection Summary						
HCM 6th Ctrl Delay			7.9			
HCM 6th LOS			A			
Notes						
Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.						






















HCM 6th Signalized Intersection Summary
 3: N Himes Ave & Busch Blvd

2040 Build Alt1 - PM
 04/04/2018

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑	↑↑	↑↑	↑↑	↑↑	↑
Traffic Volume (veh/h)	1991	331	219	2614	533	286
Future Volume (veh/h)	1991	331	219	2614	533	286
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1885	1870	1900	1885	1885
Adj Flow Rate, veh/h	2212	368	243	2904	592	318
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	1	2	0	1	1
Cap, veh/h	2304	2279	263	2752	565	381
Arrive On Green	1.00	1.00	0.10	1.00	0.16	0.16
Sat Flow, veh/h	3647	2812	3456	3705	3483	1598
Grp Volume(v), veh/h	2212	368	243	2904	592	318
Grp Sat Flow(s),veh/h/ln	1777	1406	1728	1805	1742	1598
Q Serve(g_s), s	0.0	0.0	12.5	137.2	29.2	29.2
Cycle Q Clear(g_c), s	0.0	0.0	12.5	137.2	29.2	29.2
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2304	2279	263	2752	565	381
V/C Ratio(X)	0.96	0.16	0.92	1.06	1.05	0.84
Avail Cap(c_a), veh/h	2304	2279	263	2752	565	381
HCM Platoon Ratio	2.00	2.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.49	0.49	0.15	0.15	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	80.4	0.0	75.4	65.2
Incr Delay (d2), s/veh	6.7	0.1	8.7	26.7	51.0	14.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.8	12.7	7.2	12.9	24.4	38.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	6.7	0.1	89.0	26.7	126.4	79.7
LnGrp LOS	A	A	F	F	F	E
Approach Vol, veh/h	2580			3147	910	
Approach Delay, s/veh	5.8			31.5	110.0	
Approach LOS	A			C	F	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		144.0		36.0	20.5	123.5
Change Period (Y+Rc), s		6.8		* 6.8	6.8	6.8
Max Green Setting (Gmax), s		137.2		* 29	13.7	116.7
Max Q Clear Time (g_c+I1), s		139.2		31.2	14.5	2.0
Green Ext Time (p_c), s		0.0		0.0	0.0	81.0
Intersection Summary						
HCM 6th Ctrl Delay			32.3			
HCM 6th LOS			C			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

HCM 6th Signalized Intersection Summary
 4: Twin Lakes Blvd/Mossvale Ln & Busch Blvd

2040 Build Alt1 - PM
 04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	6	2185	86	86	2583	1	249	0	298	0	0	1
Future Volume (veh/h)	6	2185	86	86	2583	1	249	0	298	0	0	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1856	1900	1870	1870	1885	0	1885	1900	1900	1900
Adj Flow Rate, veh/h	6	2230	88	88	2636	1	254	0	304	0	0	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	2	3	0	2	2	1	0	1	0	0	0
Cap, veh/h	102	2326	1029	90	2710	1	249	0	0	0	0	3
Arrive On Green	1.00	1.00	1.00	0.07	0.99	0.99	0.14	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	116	3554	1572	1810	3646	1	1795	254		0	0	1610
Grp Volume(v), veh/h	6	2230	88	88	1285	1352	254	139.4		0	0	1
Grp Sat Flow(s),veh/h/ln	116	1777	1572	1810	1777	1870	1795	F		0	0	1610
Q Serve(g_s), s	1.9	0.0	0.0	8.7	38.4	38.5	25.0			0.0	0.0	0.1
Cycle Q Clear(g_c), s	24.4	0.0	0.0	8.7	38.4	38.5	25.0			0.0	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00			0.00		1.00
Lane Grp Cap(c), veh/h	102	2326	1029	90	1321	1390	249			0	0	3
V/C Ratio(X)	0.06	0.96	0.09	0.97	0.97	0.97	1.02			0.00	0.00	0.38
Avail Cap(c_a), veh/h	102	2326	1029	90	1321	1390	249			0	0	54
HCM Platoon Ratio	2.00	2.00	2.00	1.33	1.33	1.33	1.00			1.00	1.00	1.00
Upstream Filter(I)	0.25	0.25	0.25	0.10	0.10	0.10	1.00			0.00	0.00	1.00
Uniform Delay (d), s/veh	2.3	0.0	0.0	83.9	0.5	0.5	77.5			0.0	0.0	89.8
Incr Delay (d2), s/veh	0.3	3.7	0.0	23.4	3.7	3.6	61.9			0.0	0.0	72.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.1	2.1	0.0	5.7	2.6	2.7	22.7			0.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2.6	3.7	0.0	107.3	4.2	4.1	139.4			0.0	0.0	162.5
LnGrp LOS	A	A	A	F	A	A	F			A	A	F
Approach Vol, veh/h		2324			2725							1
Approach Delay, s/veh		3.6			7.5							162.5
Approach LOS		A			A							F
Timer - Assigned Phs	1	2	3	4		6						
Phs Duration (G+Y+Rc), s	16.0	124.8	32.0	7.2		140.8						
Change Period (Y+Rc), s	* 7	* 7	7.0	6.9		* 7						
Max Green Setting (Gmax), s	* 9	* 1.1E2	25.0	6.0		* 1.3E2						
Max Q Clear Time (g_c+I1), s	10.7	26.4	27.0	2.1		40.5						
Green Ext Time (p_c), s	0.0	62.3	0.0	0.0		79.4						
Intersection Summary												
HCM 6th Ctrl Delay				12.1								
HCM 6th LOS				B								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
5: Busch Blvd & Orange Grove Dr

2040 Build Alt1 - PM
04/04/2018



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations	↗	↗↗	↗↗	↗	↗	↗
Traffic Volume (veh/h)	233	2250	2444	90	66	226
Future Volume (veh/h)	233	2250	2444	90	66	226
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1885	1870	1870	1870	1856	1900
Adj Flow Rate, veh/h	238	2296	2494	92	67	231
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	2	2	2	3	0
Cap, veh/h	322	2963	2424	1081	160	146
Arrive On Green	0.22	1.00	1.00	1.00	0.09	0.09
Sat Flow, veh/h	1795	3647	3647	1585	1767	1610
Grp Volume(v), veh/h	238	2296	2494	92	67	231
Grp Sat Flow(s),veh/h/ln	1795	1777	1777	1585	1767	1610
Q Serve(g_s), s	8.6	0.0	0.0	0.0	6.5	16.3
Cycle Q Clear(g_c), s	8.6	0.0	0.0	0.0	6.5	16.3
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	322	2963	2424	1081	160	146
V/C Ratio(X)	0.74	0.77	1.03	0.09	0.42	1.58
Avail Cap(c_a), veh/h	322	2963	2424	1081	160	146
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.17	0.17	0.09	0.09	1.00	1.00
Uniform Delay (d), s/veh	42.6	0.0	0.0	0.0	77.4	81.9
Incr Delay (d2), s/veh	1.6	0.4	15.0	0.0	1.7	293.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.0	0.3	6.3	0.0	5.5	29.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.1	0.4	15.0	0.0	79.1	374.8
LnGrp LOS	D	A	F	A	E	F
Approach Vol, veh/h		2534	2586		298	
Approach Delay, s/veh		4.5	14.5		308.3	
Approach LOS		A	B		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	27.3	130.0			157.3	23.1
Change Period (Y+Rc), s	* 7.2	* 7.2			* 7.2	6.8
Max Green Setting (Gmax), s	* 20	* 1.2E2			* 1.5E2	16.3
Max Q Clear Time (g_c+I1), s	10.6	2.0			2.0	18.3
Green Ext Time (p_c), s	0.4	92.9			88.7	0.0
Intersection Summary						
HCM 6th Ctrl Delay			25.9			
HCM 6th LOS			C			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

HCM 6th Signalized Intersection Summary
6: N Armenia Ave & Busch Blvd

2040 Build Alt1 - PM
04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	217	1902	197	180	1884	55	312	472	185	97	333	338
Future Volume (veh/h)	217	1902	197	180	1884	55	312	472	185	97	333	338
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1900	1885	1870	1900	1870	1885	1885	1900	1885	1870
Adj Flow Rate, veh/h	231	2023	210	191	2004	59	332	502	197	103	354	360
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	0	1	2	0	2	1	1	0	1	2
Cap, veh/h	277	1992	1046	169	1773	803	307	582	409	127	435	439
Arrive On Green	0.31	1.00	1.00	0.09	0.50	0.50	0.09	0.16	0.16	0.05	0.12	0.12
Sat Flow, veh/h	1781	3554	1610	1795	3554	1610	3456	3582	1598	1810	3582	1585
Grp Volume(v), veh/h	231	2023	210	191	2004	59	332	502	197	103	354	360
Grp Sat Flow(s),veh/h/ln	1781	1777	1610	1795	1777	1610	1728	1791	1598	1810	1791	1585
Q Serve(g_s), s	21.7	0.0	0.0	16.9	89.8	3.4	16.0	24.6	15.1	6.1	17.3	10.2
Cycle Q Clear(g_c), s	21.7	0.0	0.0	16.9	89.8	3.4	16.0	24.6	15.1	6.1	17.3	10.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	277	1992	1046	169	1773	803	307	582	409	127	435	439
V/C Ratio(X)	0.83	1.02	0.20	1.13	1.13	0.07	1.08	0.86	0.48	0.81	0.81	0.82
Avail Cap(c_a), veh/h	277	1992	1046	169	1773	803	307	708	466	134	577	502
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.57	0.57	0.57	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	59.8	0.0	0.0	81.6	45.1	23.5	82.0	73.4	37.0	83.3	77.1	60.8
Incr Delay (d2), s/veh	11.8	19.2	0.2	67.2	59.4	0.0	74.6	9.2	0.9	28.7	6.6	9.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	13.2	8.2	0.1	13.3	62.7	1.9	16.1	17.8	10.1	9.7	13.2	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	71.6	19.2	0.2	148.7	104.5	23.5	156.6	82.7	37.8	112.0	83.6	70.1
LnGrp LOS	E	F	A	F	F	C	F	F	D	F	F	E
Approach Vol, veh/h		2464			2254			1031			817	
Approach Delay, s/veh		22.5			106.2			97.9			81.3	
Approach LOS		C			F			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	34.1	95.9	14.7	35.3	23.0	107.0	22.0	28.0				
Change Period (Y+Rc), s	* 6.1	* 6.1	6.0	6.1	* 6.1	* 6.1	6.0	6.1				
Max Green Setting (Gmax), s	* 21	* 90	9.4	35.6	* 17	* 94	16.0	29.0				
Max Q Clear Time (g_c+I1), s	23.7	91.8	8.1	26.6	18.9	2.0	18.0	19.3				
Green Ext Time (p_c), s	0.0	0.0	0.0	2.6	0.0	36.6	0.0	2.5				
Intersection Summary												
HCM 6th Ctrl Delay			70.4									
HCM 6th LOS			E									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
7: N Boulevard & Busch Blvd

2040 Build Alt1 - PM
04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	79	1930	113	109	2050	76	113	362	92	116	243	44
Future Volume (veh/h)	79	1930	113	109	2050	76	113	362	92	116	243	44
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1870	1856	1870	1870	1856	1900	1870	1856	1885	1841	1826
Adj Flow Rate, veh/h	81	1969	115	111	2092	78	115	369	94	118	248	45
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	5	2	3	2	2	3	0	2	3	1	4	5
Cap, veh/h	163	2140	947	111	2029	898	181	454	201	114	321	142
Arrive On Green	0.09	0.60	0.60	0.06	0.57	0.57	0.10	0.13	0.13	0.06	0.09	0.09
Sat Flow, veh/h	1739	3554	1572	1781	3554	1572	1810	3554	1572	1795	3497	1547
Grp Volume(v), veh/h	81	1969	115	111	2092	78	115	369	94	118	248	45
Grp Sat Flow(s),veh/h/ln	1739	1777	1572	1781	1777	1572	1810	1777	1572	1795	1749	1547
Q Serve(g_s), s	7.1	79.1	2.8	10.0	91.3	2.4	9.8	16.2	7.5	10.2	11.1	3.6
Cycle Q Clear(g_c), s	7.1	79.1	2.8	10.0	91.3	2.4	9.8	16.2	7.5	10.2	11.1	3.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	163	2140	947	111	2029	898	181	454	201	114	321	142
V/C Ratio(X)	0.50	0.92	0.12	1.00	1.03	0.09	0.64	0.81	0.47	1.03	0.77	0.32
Avail Cap(c_a), veh/h	163	2140	947	111	2029	898	181	711	314	114	699	309
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.09	0.09	0.09	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.9	28.4	4.4	75.0	34.3	7.2	69.2	67.9	46.5	74.9	71.0	45.6
Incr Delay (d2), s/veh	1.0	0.9	0.0	84.3	28.5	0.2	5.6	4.0	1.7	92.7	4.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.0	34.2	2.4	11.5	57.8	2.4	8.4	12.2	5.6	12.3	8.9	3.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	69.9	29.2	4.4	159.3	62.8	7.4	74.8	71.9	48.2	167.6	75.0	46.9
LnGrp LOS	E	C	A	F	F	A	E	E	D	F	E	D
Approach Vol, veh/h		2165			2281			578			411	
Approach Delay, s/veh		29.4			65.6			68.6			98.5	
Approach LOS		C			E			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.7	97.2	16.0	26.1	15.7	102.2	21.8	20.3				
Change Period (Y+Rc), s	* 5.7	5.9	* 5.8	* 5.6	* 5.7	5.9	* 5.8	* 5.6				
Max Green Setting (Gmax), s	* 15	79.8	* 10	* 32	* 10	84.8	* 10	* 32				
Max Q Clear Time (g_c+I1), s	9.1	93.3	12.2	18.2	12.0	81.1	11.8	13.1				
Green Ext Time (p_c), s	0.0	0.0	0.0	2.3	0.0	3.3	0.0	1.6				
Intersection Summary												
HCM 6th Ctrl Delay			54.0									
HCM 6th LOS			D									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
 8: Florida Ave & Busch Blvd

2040 Build Alt1 - PM
 04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	146	1715	277	319	1945	320	226	1391	539	408	862	156
Future Volume (veh/h)	146	1715	277	319	1945	320	226	1391	539	408	862	156
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1870	1856	1870	1870	1885	1885	1870	1856	1885	1885	1856
Adj Flow Rate, veh/h	149	1750	0	326	1985	327	231	1419	550	416	880	159
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	2	3	2	2	1	1	2	3	1	1	3
Cap, veh/h	146	1784		481	2089	835	220	1321	626	396	895	393
Arrive On Green	0.08	0.35	0.00	0.28	0.82	0.82	0.12	0.26	0.26	0.11	0.25	0.25
Sat Flow, veh/h	1767	5106	1572	3456	5106	1598	1795	5106	1572	3483	3582	1572
Grp Volume(v), veh/h	149	1750	0	326	1985	327	231	1419	550	416	880	159
Grp Sat Flow(s),veh/h/ln	1767	1702	1572	1728	1702	1598	1795	1702	1572	1742	1791	1572
Q Serve(g_s), s	13.2	54.3	0.0	13.4	50.8	8.1	19.6	41.4	25.4	18.2	39.1	13.5
Cycle Q Clear(g_c), s	13.2	54.3	0.0	13.4	50.8	8.1	19.6	41.4	25.4	18.2	39.1	13.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	146	1784		481	2089	835	220	1321	626	396	895	393
V/C Ratio(X)	1.02	0.98		0.68	0.95	0.39	1.05	1.07	0.88	1.05	0.98	0.40
Avail Cap(c_a), veh/h	146	1784		481	2089	835	220	1321	626	396	895	393
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.47	0.47	0.47	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	73.4	51.5	0.0	54.5	13.2	6.2	70.2	59.3	27.5	70.9	59.7	50.1
Incr Delay (d2), s/veh	80.5	17.3	0.0	1.8	6.1	0.6	74.5	47.2	13.6	58.9	25.8	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	14.3	33.8	0.0	7.9	9.3	3.6	19.9	32.5	15.7	17.1	28.0	9.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	153.9	68.8	0.0	56.4	19.3	6.8	144.7	106.5	41.1	129.8	85.4	50.7
LnGrp LOS	F	E		E	B	A	F	F	D	F	F	D
Approach Vol, veh/h		1899	A		2638			2200			1455	
Approach Delay, s/veh		75.5			22.3			94.2			94.3	
Approach LOS		E			C			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.8	72.6	25.6	48.8	29.4	63.0	27.0	47.4				
Change Period (Y+Rc), s	* 6.6	* 7.1	7.4	7.4	* 7.1	* 7.1	7.4	7.4				
Max Green Setting (Gmax), s	* 13	* 59	18.2	41.4	* 16	* 56	19.6	40.0				
Max Q Clear Time (g_c+I1), s	15.2	52.8	20.2	43.4	15.4	56.3	21.6	41.1				
Green Ext Time (p_c), s	0.0	5.2	0.0	0.0	0.1	0.0	0.0	0.0				

Intersection Summary

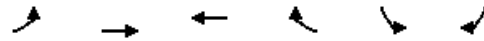
HCM 6th Ctrl Delay	66.7
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 9: Busch Blvd & I-275 SB Ramps

2040 Build Alt1 - PM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↑↑↑	↑↑↑	↵	↵	↵↵
Traffic Volume (veh/h)	428	2234	1895	711	334	689
Future Volume (veh/h)	428	2234	1895	711	334	689
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1870	1885	1856	1841
Adj Flow Rate, veh/h	437	2280	1934	0	341	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	2	2	1	3	4
Cap, veh/h	436	3652	2186		361	
Arrive On Green	0.49	1.00	0.86	0.00	0.20	0.00
Sat Flow, veh/h	1767	5274	5274	1598	1767	2745
Grp Volume(v), veh/h	437	2280	1934	0	341	0
Grp Sat Flow(s),veh/h/ln	1767	1702	1702	1598	1767	1373
Q Serve(g_s), s	39.4	0.0	35.9	0.0	30.4	0.0
Cycle Q Clear(g_c), s	39.4	0.0	35.9	0.0	30.4	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	436	3652	2186		361	
V/C Ratio(X)	1.00	0.62	0.88		0.95	
Avail Cap(c_a), veh/h	436	3652	2186		371	
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.16	0.16	0.34	0.00	1.00	0.00
Uniform Delay (d), s/veh	40.6	0.0	9.2	0.0	62.8	0.0
Incr Delay (d2), s/veh	18.0	0.1	2.1	0.0	32.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	18.4	0.1	6.4	0.0	23.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	58.6	0.1	11.2	0.0	95.6	0.0
LnGrp LOS	F	A	B		F	
Approach Vol, veh/h		2717	1934	A	341	A
Approach Delay, s/veh		9.5	11.2		95.6	
Approach LOS		A	B		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	45.9	75.0			120.9	39.1
Change Period (Y+Rc), s	6.5	6.5			6.5	6.4
Max Green Setting (Gmax), s	38.5	68.5			113.5	33.6
Max Q Clear Time (g_c+I1), s	41.4	37.9			2.0	32.4
Green Ext Time (p_c), s	0.0	18.1			43.3	0.2

Intersection Summary

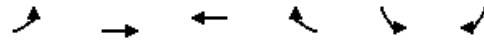
HCM 6th Ctrl Delay	16.1
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 10: Busch Blvd & I-275 NB Ramps

2040 Build Alt1 - PM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑↑	↑↑↑	↗	↖↗	↖↗
Traffic Volume (veh/h)	634	1934	2233	468	252	373
Future Volume (veh/h)	634	1934	2233	468	252	373
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1856	1870	1885
Adj Flow Rate, veh/h	667	2036	2351	0	265	393
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	1	3	2	1
Cap, veh/h	575	4169	2332		347	1190
Arrive On Green	0.65	1.00	0.91	0.00	0.10	0.10
Sat Flow, veh/h	1781	5274	5316	1572	3456	2812
Grp Volume(v), veh/h	667	2036	2351	0	265	393
Grp Sat Flow(s),veh/h/ln	1781	1702	1716	1572	1728	1406
Q Serve(g_s), s	51.7	0.0	72.5	0.0	12.0	0.0
Cycle Q Clear(g_c), s	51.7	0.0	72.5	0.0	12.0	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	575	4169	2332		347	1190
V/C Ratio(X)	1.16	0.49	1.01		0.76	0.33
Avail Cap(c_a), veh/h	575	4169	2332		436	1263
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.69	0.69	0.09	0.00	1.00	1.00
Uniform Delay (d), s/veh	28.3	0.0	7.5	0.0	70.1	30.9
Incr Delay (d2), s/veh	85.2	0.3	7.7	0.0	7.2	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	39.2	0.2	5.8	0.0	9.6	9.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	113.5	0.3	15.2	0.0	77.3	31.2
LnGrp LOS	F	A	F		E	C
Approach Vol, veh/h		2703	2351	A	658	
Approach Delay, s/veh		28.2	15.2		49.8	
Approach LOS		C	B		D	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	58.2	79.0			137.2	22.8
Change Period (Y+Rc), s	6.5	6.5			6.5	6.8
Max Green Setting (Gmax), s	47.5	72.5			126.5	20.2
Max Q Clear Time (g_c+I1), s	53.7	74.5			2.0	14.0
Green Ext Time (p_c), s	0.0	0.0			33.0	2.1

Intersection Summary

HCM 6th Ctrl Delay	25.4
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 11: Nebraska Ave & Busch Blvd

2040 Build Alt1 - PM
 04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	200	1807	179	207	2306	114	159	1085	299	178	879	236
Future Volume (veh/h)	200	1807	179	207	2306	114	159	1085	299	178	879	236
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1870	1841	1870	1900	1885	1856	1811	1811	1870	1870
Adj Flow Rate, veh/h	213	1922	190	220	2453	127	169	1154	0	189	935	251
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.90	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	2	4	2	0	1	3	6	6	2	2
Cap, veh/h	338	2299	719	165	2292	574	181	1022		149	988	441
Arrive On Green	0.38	0.91	0.91	0.09	0.36	0.36	0.10	0.29	0.00	0.09	0.28	0.28
Sat Flow, veh/h	1767	5066	1585	1753	6434	1610	1795	3526	1535	1725	3554	1585
Grp Volume(v), veh/h	213	1922	190	220	2453	127	169	1154	0	189	935	251
Grp Sat Flow(s),veh/h/ln	1767	1689	1585	1753	1609	1610	1795	1763	1535	1725	1777	1585
Q Serve(g_s), s	15.7	23.3	2.3	15.1	57.0	8.8	15.0	46.4	0.0	13.8	41.2	16.4
Cycle Q Clear(g_c), s	15.7	23.3	2.3	15.1	57.0	8.8	15.0	46.4	0.0	13.8	41.2	16.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	338	2299	719	165	2292	574	181	1022		149	988	441
V/C Ratio(X)	0.63	0.84	0.26	1.33	1.07	0.22	0.94	1.13		1.27	0.95	0.57
Avail Cap(c_a), veh/h	338	2299	719	165	2292	574	181	1022		149	988	441
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.84	0.84	0.84	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.8	5.1	4.2	72.4	51.5	36.0	71.4	56.8	0.0	73.1	56.6	28.3
Incr Delay (d2), s/veh	7.3	3.2	0.8	183.8	40.8	0.9	48.0	70.6	0.0	163.9	17.1	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.4	5.6	1.5	23.9	39.6	6.5	14.2	42.5	0.0	20.3	27.8	10.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	52.1	8.3	4.9	256.3	92.3	36.9	119.4	127.4	0.0	237.0	73.7	30.0
LnGrp LOS	D	A	A	F	F	D	F	F		F	E	C
Approach Vol, veh/h		2325			2800			1323	A		1375	
Approach Delay, s/veh		12.1			102.7			126.4			88.2	
Approach LOS		B			F			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	38.1	64.0	21.4	54.0	22.0	80.1	23.3	52.1				
Change Period (Y+Rc), s	7.0	* 7	* 7.6	* 7.6	6.9	7.0	* 7.2	* 7.6				
Max Green Setting (Gmax), s	14.1	* 57	* 14	* 46	15.1	56.0	* 16	* 44				
Max Q Clear Time (g_c+I1), s	17.7	59.0	15.8	48.4	17.1	25.3	17.0	43.2				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	19.0	0.0	0.6				

Intersection Summary

HCM 6th Ctrl Delay	77.2
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Arterial Level of Service: EB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
	II	45	22.0	17.3	39.3	0.20	18.5	D
Dale Mabry Hwy NB Ra	II	45	23.3	19.5	42.8	0.21	18.0	D
N Himes Ave	II	45	19.0	36.8	55.8	0.17	11.3	F
Twin Lakes Blvd	II	45	43.9	29.0	72.9	0.50	24.6	C
Orange Grove Dr	II	45	25.9	24.4	50.3	0.25	17.8	D
N Armenia Ave	II	45	29.7	86.8	116.5	0.30	9.3	F
N Boulevard	II	45	79.8	68.3	148.1	1.00	24.2	C
Florida Ave	II	40	47.2	35.2	82.4	0.51	22.2	C
I-275 SB Ramps	II	40	21.9	3.8	25.7	0.19	26.6	C
I-275 NB Ramps	II	40	21.3	2.1	23.4	0.19	28.6	B
Nebraska Ave	II	40	14.6	95.6	110.2	0.13	4.1	F
Total	II		348.6	418.8	767.4	3.65	17.1	D

Arterial Level of Service: WB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Nebraska Ave	II	40	27.0	90.9	117.9	0.25	7.5	F
I-275 NB Ramps	II	40	14.6	29.1	43.7	0.13	10.4	F
I-275 SB Ramps	II	40	21.3	31.0	52.3	0.19	12.8	F
Florida Ave	II	40	21.9	67.3	89.2	0.19	7.7	F
N Boulevard	II	40	47.2	117.9	165.1	0.51	11.1	F
N Armenia Ave	II	45	79.8	109.8	189.6	1.00	18.9	D
Orange Grove Dr	II	45	29.7	35.4	65.1	0.30	16.6	E
Mossvale Ln	II	45	25.9	32.8	58.7	0.25	15.3	E
N Himes Ave	II	45	43.9	53.5	97.4	0.50	18.4	D
Dale Mabry Hwy NB Ra	II	45	19.0	86.8	105.8	0.17	5.9	F
Dale Mabry Hwy SB Ra	II	45	23.3	107.9	131.2	0.21	5.9	F
Total	II		353.6	762.4	1116.0	3.69	11.9	F

HCM 6th Signalized Intersection Summary
 1: Busch Blvd & Dale Mabry Hwy SB Ramps

2020 Build Alt2- AM
 04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	203	1978	1	7	1303	0	0	0	0	366	5	20
Future Volume (veh/h)	203	1978	1	7	1303	0	0	0	0	366	5	20
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1885	1885	1856	1856	0	1900	1900	1900	1870	1900	1796
Adj Flow Rate, veh/h	209	2039	1	7	1343	0	0	0	0	381	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	1	1	3	3	0	0	0	0	2	0	7
Cap, veh/h	231	4217	2	28	3014	0	0	1	1	441	0	
Arrive On Green	0.13	0.79	0.79	1.00	1.00	0.00	0.00	0.00	0.00	0.12	0.00	0.00
Sat Flow, veh/h	1767	5313	3	8	5009	0	0	1900	1610	3563	0	1522
Grp Volume(v), veh/h	209	1317	723	497	853	0	0	0	0	381	0	0
Grp Sat Flow(s),veh/h/ln	1767	1716	1885	1792	1537	0	0	1900	1610	1781	0	1522
Q Serve(g_s), s	18.7	20.6	20.6	0.0	0.0	0.0	0.0	0.0	0.0	16.8	0.0	0.0
Cycle Q Clear(g_c), s	18.7	20.6	20.6	0.0	0.0	0.0	0.0	0.0	0.0	16.8	0.0	0.0
Prop In Lane	1.00		0.00	0.01		0.00	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	231	2723	1496	1135	1907	0	0	1	1	441	0	
V/C Ratio(X)	0.90	0.48	0.48	0.44	0.45	0.00	0.00	0.00	0.00	0.86	0.00	
Avail Cap(c_a), veh/h	289	2723	1496	1135	1907	0	0	71	60	637	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	68.6	5.5	5.5	0.0	0.0	0.0	0.0	0.0	0.0	68.8	0.0	0.0
Incr Delay (d2), s/veh	26.0	0.6	1.1	1.2	0.8	0.0	0.0	0.0	0.0	8.4	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	15.2	10.3	11.4	0.7	0.4	0.0	0.0	0.0	0.0	13.0	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	94.6	6.1	6.6	1.2	0.8	0.0	0.0	0.0	0.0	77.2	0.0	0.0
LnGrp LOS	F	A	A	A	A	A	A	A	A	E	A	
Approach Vol, veh/h		2249			1350			0			381	A
Approach Delay, s/veh		14.5			0.9			0.0			77.2	
Approach LOS		B			A						E	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	27.7	106.1		0.0		133.8		26.2				
Change Period (Y+Rc), s	6.8	6.8		* 8.4		6.8		6.4				
Max Green Setting (Gmax), s	26.2	70.8		* 6		103.8		28.6				
Max Q Clear Time (g_c+I1), s	20.7	2.0		0.0		22.6		18.8				
Green Ext Time (p_c), s	0.3	19.3		0.0		42.4		1.0				

Intersection Summary

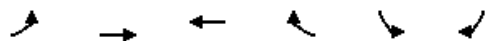
HCM 6th Ctrl Delay	15.9
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [SWR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
2: Busch Blvd & Dale Mabry Hwy NB Ramps

2020 Build Alt2- AM
04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↑↑↑	↑↑↑	↵	↵↵	↵
Traffic Volume (veh/h)	37	2307	1555	355	123	157
Future Volume (veh/h)	37	2307	1555	355	123	157
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1781	1885	1900	1856	1826	1885
Adj Flow Rate, veh/h	38	2354	1587	0	126	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	8	1	0	3	5	1
Cap, veh/h	332	4445	4128		173	
Arrive On Green	0.03	0.86	1.00	0.00	0.05	0.00
Sat Flow, veh/h	1697	5316	5358	1572	3374	1598
Grp Volume(v), veh/h	38	2354	1587	0	126	0
Grp Sat Flow(s),veh/h/ln	1697	1716	1729	1572	1687	1598
Q Serve(g_s), s	0.6	18.4	0.0	0.0	5.9	0.0
Cycle Q Clear(g_c), s	0.6	18.4	0.0	0.0	5.9	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	332	4445	4128		173	
V/C Ratio(X)	0.11	0.53	0.38		0.73	
Avail Cap(c_a), veh/h	365	4445	4128		552	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.87	0.00	1.00	0.00
Uniform Delay (d), s/veh	2.3	2.7	0.0	0.0	74.8	0.0
Incr Delay (d2), s/veh	0.2	0.5	0.2	0.0	5.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	6.9	0.2	0.0	4.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	2.4	3.2	0.2	0.0	80.6	0.0
LnGrp LOS	A	A	A		F	
Approach Vol, veh/h		2392	1587	A	126	A
Approach Delay, s/veh		3.2	0.2		80.6	
Approach LOS		A	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	10.9	134.1			145.0	15.0
Change Period (Y+Rc), s	6.8	6.8			6.8	6.8
Max Green Setting (Gmax), s	7.2	106.2			120.2	26.2
Max Q Clear Time (g_c+I1), s	2.6	2.0			20.4	7.9
Green Ext Time (p_c), s	0.0	29.1			64.7	0.3
Intersection Summary						
HCM 6th Ctrl Delay			4.4			
HCM 6th LOS			A			
Notes						
Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.						

HCM 6th Signalized Intersection Summary
3: N Himes Ave & Busch Blvd

2020 Build Alt2- AM
04/04/2018

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑↑	↑↑	↑↑↑	↑↑	↑
Traffic Volume (veh/h)	1791	639	421	1546	364	114
Future Volume (veh/h)	1791	639	421	1546	364	114
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1885	1885	1856	1856	1900
Adj Flow Rate, veh/h	1846	659	434	1594	375	118
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	1	1	3	3	0
Cap, veh/h	3110	2063	483	4003	428	201
Arrive On Green	1.00	1.00	0.18	1.00	0.12	0.12
Sat Flow, veh/h	5274	2812	3483	5233	3428	1610
Grp Volume(v), veh/h	1846	659	434	1594	375	118
Grp Sat Flow(s),veh/h/ln	1702	1406	1742	1689	1714	1610
Q Serve(g_s), s	0.0	0.0	19.5	0.0	17.2	11.1
Cycle Q Clear(g_c), s	0.0	0.0	19.5	0.0	17.2	11.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	3110	2063	483	4003	428	201
V/C Ratio(X)	0.59	0.32	0.90	0.40	0.88	0.59
Avail Cap(c_a), veh/h	3110	2063	614	4003	540	254
HCM Platoon Ratio	2.00	2.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.82	0.82	0.88	0.88	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	64.2	0.0	68.8	66.1
Incr Delay (d2), s/veh	0.7	0.3	11.8	0.3	12.0	2.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	20.5	13.6	0.2	13.0	15.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.7	0.3	75.9	0.3	80.8	68.2
LnGrp LOS	A	A	E	A	F	E
Approach Vol, veh/h	2505			2028	493	
Approach Delay, s/veh	0.6			16.5	77.8	
Approach LOS	A			B	E	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		133.2		26.8	29.0	104.3
Change Period (Y+Rc), s		6.8		* 6.8	6.8	6.8
Max Green Setting (Gmax), s		121.2		* 25	28.2	86.2
Max Q Clear Time (g_c+I1), s		2.0		19.2	21.5	2.0
Green Ext Time (p_c), s		30.1		0.8	0.7	53.3
Intersection Summary						
HCM 6th Ctrl Delay			14.6			
HCM 6th LOS			B			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

HCM 6th Signalized Intersection Summary
 4: Twin Lakes Blvd/Mossvale Ln & Busch Blvd

2020 Build Alt2- AM
 04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2	1683	220	319	1884	0	83	0	119	2	0	0
Future Volume (veh/h)	2	1683	220	319	1884	0	83	0	119	2	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1900	1885	1870	0	1885	0	1900	1900	1900	1900
Adj Flow Rate, veh/h	2	1717	224	326	1922	0	85	0	121	2	0	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	2	0	1	2	0	1	0	0	0	0	0
Cap, veh/h	204	3436	1083	347	4646	0	0	0	0	6	0	0
Arrive On Green	0.89	0.89	0.89	0.39	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	236	5106	1610	1795	5274	0		0		1809	0	0
Grp Volume(v), veh/h	2	1717	224	326	1922	0		0.0		2	0	0
Grp Sat Flow(s),veh/h/ln	236	1702	1610	1795	1702	0				1810	0	0
Q Serve(g_s), s	0.1	10.2	2.9	28.0	0.0	0.0				0.2	0.0	0.0
Cycle Q Clear(g_c), s	0.1	10.2	2.9	28.0	0.0	0.0				0.2	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	204	3436	1083	347	4646	0				6	0	0
V/C Ratio(X)	0.01	0.50	0.21	0.94	0.41	0.00				0.35	0.00	0.00
Avail Cap(c_a), veh/h	204	3436	1083	426	4646	0				68	0	0
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.76	0.76	0.76	0.61	0.61	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	2.8	3.3	2.9	48.2	0.0	0.0				79.6	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.4	0.3	19.3	0.2	0.0				32.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	4.3	1.8	16.6	0.1	0.0				0.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	2.8	3.7	3.2	67.5	0.2	0.0				111.8	0.0	0.0
LnGrp LOS	A	A	A	E	A	A				F	A	A
Approach Vol, veh/h		1943			2248							2
Approach Delay, s/veh		3.6			9.9							111.8
Approach LOS		A			A							F
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	37.9	114.7		7.4		152.6						
Change Period (Y+Rc), s	* 7	* 7		6.9		* 7						
Max Green Setting (Gmax), s	* 38	* 78		6.0		* 1.2E2						
Max Q Clear Time (g_c+I1), s	30.0	12.2		2.2		2.0						
Green Ext Time (p_c), s	1.0	33.8		0.0		46.3						

Intersection Summary

HCM 6th Ctrl Delay	7.1
HCM 6th LOS	A

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
5: Busch Blvd & Orange Grove Dr

























2020 Build Alt2- AM
04/04/2018



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations	↘	↑↑↑	↑↑↑	↗	↘	↗
Traffic Volume (veh/h)	100	1704	1751	85	135	452
Future Volume (veh/h)	100	1704	1751	85	135	452
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1870	1856	1900	1900	1900
Adj Flow Rate, veh/h	108	1832	1883	91	145	486
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	3	0	0	0
Cap, veh/h	240	3281	2847	905	489	435
Arrive On Green	0.08	1.00	1.00	1.00	0.27	0.27
Sat Flow, veh/h	1810	5274	5233	1610	1810	1610
Grp Volume(v), veh/h	108	1832	1883	91	145	486
Grp Sat Flow(s),veh/h/ln	1810	1702	1689	1610	1810	1610
Q Serve(g_s), s	4.0	0.0	0.0	0.0	10.2	43.2
Cycle Q Clear(g_c), s	4.0	0.0	0.0	0.0	10.2	43.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	240	3281	2847	905	489	435
V/C Ratio(X)	0.45	0.56	0.66	0.10	0.30	1.12
Avail Cap(c_a), veh/h	298	3281	2847	905	489	435
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.79	0.79	0.81	0.81	1.00	1.00
Uniform Delay (d), s/veh	12.3	0.0	0.0	0.0	46.3	58.4
Incr Delay (d2), s/veh	1.0	0.5	1.0	0.2	0.3	79.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.8	0.3	0.5	0.1	8.3	38.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	13.4	0.5	1.0	0.2	46.7	137.7
LnGrp LOS	B	A	A	A	D	F
Approach Vol, veh/h		1940	1974		631	
Approach Delay, s/veh		1.3	1.0		116.8	
Approach LOS		A	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	12.9	97.1			110.0	50.0
Change Period (Y+Rc), s	6.8	* 7.2			* 7.2	6.8
Max Green Setting (Gmax), s	11.2	* 85			* 1E2	43.2
Max Q Clear Time (g_c+I1), s	6.0	2.0			2.0	45.2
Green Ext Time (p_c), s	0.1	40.8			39.5	0.0
Intersection Summary						
HCM 6th Ctrl Delay			17.2			
HCM 6th LOS			B			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

HCM 6th Signalized Intersection Summary
6: N Armenia Ave & Busch Blvd

2020 Build Alt2- AM
04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	73	1472	294	221	1555	11	182	255	160	62	385	99
Future Volume (veh/h)	73	1472	294	221	1555	11	182	255	160	62	385	99
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1870	1856	1900	1885	1856	1841	1870	1885	1900
Adj Flow Rate, veh/h	74	1502	300	226	1587	11	186	260	163	63	393	101
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	1	2	3	0	1	3	4	2	1	0
Cap, veh/h	92	2093	760	429	3036	965	228	554	621	203	472	295
Arrive On Green	0.10	0.82	0.82	0.24	0.60	0.60	0.07	0.16	0.16	0.04	0.13	0.13
Sat Flow, veh/h	1781	5106	1598	1781	5066	1610	3483	3526	1560	1781	3582	1610
Grp Volume(v), veh/h	74	1502	300	226	1587	11	186	260	163	63	393	101
Grp Sat Flow(s),veh/h/ln	1781	1702	1598	1781	1689	1610	1742	1763	1560	1781	1791	1610
Q Serve(g_s), s	6.5	20.6	2.5	17.7	29.2	0.4	8.4	10.7	1.5	4.9	17.1	8.7
Cycle Q Clear(g_c), s	6.5	20.6	2.5	17.7	29.2	0.4	8.4	10.7	1.5	4.9	17.1	8.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	92	2093	760	429	3036	965	228	554	621	203	472	295
V/C Ratio(X)	0.81	0.72	0.39	0.53	0.52	0.01	0.82	0.47	0.26	0.31	0.83	0.34
Avail Cap(c_a), veh/h	137	2093	760	429	3036	965	244	721	694	215	649	375
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	0.74	0.74	0.74	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	71.0	10.3	2.8	52.8	18.7	12.9	73.8	61.4	18.5	57.0	67.7	56.9
Incr Delay (d2), s/veh	16.2	1.8	1.3	0.9	0.5	0.0	18.0	0.6	0.2	0.9	6.6	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.8	7.2	2.1	11.9	15.8	0.3	7.8	8.5	5.6	4.0	13.0	6.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	87.2	12.1	4.1	53.7	19.2	12.9	91.8	62.0	18.7	57.8	74.3	57.6
LnGrp LOS	F	B	A	D	B	B	F	E	B	E	E	E
Approach Vol, veh/h		1876			1824			609			557	
Approach Delay, s/veh		13.8			23.4			59.5			69.4	
Approach LOS		B			C			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.3	102.0	12.4	31.2	44.6	71.7	16.5	27.2				
Change Period (Y+Rc), s	* 6.1	* 6.1	6.0	6.1	* 6.1	* 6.1	6.0	6.1				
Max Green Setting (Gmax), s	* 12	* 83	7.5	32.7	* 30	* 66	11.2	29.0				
Max Q Clear Time (g_c+I1), s	8.5	31.2	6.9	12.7	19.7	22.6	10.4	19.1				
Green Ext Time (p_c), s	0.0	16.2	0.0	2.0	0.4	16.2	0.0	2.0				
Intersection Summary												
HCM 6th Ctrl Delay			29.5									
HCM 6th LOS			C									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
7: N Boulevard & Busch Blvd

2020 Build Alt2- AM
04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	54	1537	148	123	1643	115	62	207	50	157	471	31
Future Volume (veh/h)	54	1537	148	123	1643	115	62	207	50	157	471	31
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1900	1885	1856	1841	1870	1900	1900	1856	1870	1900
Adj Flow Rate, veh/h	56	1585	153	127	1694	119	64	213	52	162	486	32
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	0	1	3	4	2	0	0	3	2	0
Cap, veh/h	343	2891	912	148	2305	710	81	373	166	182	577	261
Arrive On Green	0.19	0.57	0.57	0.08	0.46	0.46	0.05	0.10	0.10	0.10	0.16	0.16
Sat Flow, veh/h	1781	5106	1610	1795	5066	1560	1781	3610	1610	1767	3554	1610
Grp Volume(v), veh/h	56	1585	153	127	1694	119	64	213	52	162	486	32
Grp Sat Flow(s),veh/h/ln	1781	1702	1610	1795	1689	1560	1781	1805	1610	1767	1777	1610
Q Serve(g_s), s	4.2	31.2	5.3	11.2	43.8	4.9	5.7	9.0	4.8	14.5	21.2	2.7
Cycle Q Clear(g_c), s	4.2	31.2	5.3	11.2	43.8	4.9	5.7	9.0	4.8	14.5	21.2	2.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	343	2891	912	148	2305	710	81	373	166	182	577	261
V/C Ratio(X)	0.16	0.55	0.17	0.86	0.73	0.17	0.79	0.57	0.31	0.89	0.84	0.12
Avail Cap(c_a), veh/h	343	2891	912	183	2305	710	145	722	322	190	804	364
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.76	0.76	0.76	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	53.9	21.8	8.8	72.5	35.7	11.8	75.6	68.3	66.5	70.9	65.0	57.3
Incr Delay (d2), s/veh	0.8	0.6	0.3	23.7	2.1	0.5	6.3	1.4	1.1	34.3	5.9	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.5	17.2	5.0	10.1	25.2	5.0	5.0	7.6	3.7	13.1	15.4	2.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	54.7	22.4	9.1	96.2	37.8	12.3	81.9	69.7	67.5	105.2	70.9	57.5
LnGrp LOS	D	C	A	F	D	B	F	E	E	F	E	E
Approach Vol, veh/h		1794			1940			329			680	
Approach Delay, s/veh		22.3			40.1			71.8			78.5	
Approach LOS		C			D			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	36.7	78.7	22.3	22.3	18.9	96.5	13.1	31.6				
Change Period (Y+Rc), s	5.9	* 5.9	* 5.8	* 5.8	* 5.7	5.9	* 5.8	* 5.6				
Max Green Setting (Gmax), s	15.0	* 73	* 17	* 32	* 16	71.5	* 13	* 36				
Max Q Clear Time (g_c+I1), s	6.2	45.8	16.5	11.0	13.2	33.2	7.7	23.2				
Green Ext Time (p_c), s	0.0	14.9	0.0	1.4	0.0	15.7	0.0	2.7				
Intersection Summary												
HCM 6th Ctrl Delay			41.0									
HCM 6th LOS			D									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
8: Florida Ave & Busch Blvd

2020 Build Alt2- AM
04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	144	1247	353	267	1784	196	136	626	319	279	1050	51
Future Volume (veh/h)	144	1247	353	267	1784	196	136	626	319	279	1050	51
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1870	1856	1885	1870	1841	1841	1885	1870	1870
Adj Flow Rate, veh/h	147	1272	0	272	1820	200	139	639	326	285	1071	52
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	1	2	3	1	2	4	4	1	2	2
Cap, veh/h	127	1752		343	1896	751	118	1409	592	334	1102	491
Arrive On Green	0.07	0.34	0.00	0.20	0.75	0.75	0.07	0.28	0.28	0.10	0.31	0.31
Sat Flow, veh/h	1781	5106	1598	3456	5066	1598	1781	5025	1560	3483	3554	1585
Grp Volume(v), veh/h	147	1272	0	272	1820	200	139	639	326	285	1071	52
Grp Sat Flow(s),veh/h/ln	1781	1702	1598	1728	1689	1598	1781	1675	1560	1742	1777	1585
Q Serve(g_s), s	11.4	34.9	0.0	12.0	51.3	5.7	10.6	16.8	6.5	12.9	47.6	2.9
Cycle Q Clear(g_c), s	11.4	34.9	0.0	12.0	51.3	5.7	10.6	16.8	6.5	12.9	47.6	2.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	127	1752		343	1896	751	118	1409	592	334	1102	491
V/C Ratio(X)	1.16	0.73		0.79	0.96	0.27	1.18	0.45	0.55	0.85	0.97	0.11
Avail Cap(c_a), veh/h	127	1752		354	1896	751	118	1409	592	440	1102	491
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.61	0.61	0.61	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	74.3	46.0	0.0	62.5	19.0	9.6	74.7	47.5	17.6	71.2	54.5	23.3
Incr Delay (d2), s/veh	128.7	2.7	0.0	7.2	9.2	0.5	138.4	0.2	1.1	11.9	20.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	15.6	21.4	0.0	8.0	15.6	3.2	15.1	11.3	9.8	10.3	32.0	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	203.0	48.6	0.0	69.7	28.2	10.2	213.1	47.7	18.6	83.2	75.1	23.4
LnGrp LOS	F	D		E	C	B	F	D	B	F	E	C
Approach Vol, veh/h		1419	A		2292			1104			1408	
Approach Delay, s/veh		64.6			31.5			59.9			74.9	
Approach LOS		E			C			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	67.0	22.7	52.3	23.0	62.0	18.0	57.0				
Change Period (Y+Rc), s	* 6.6	* 7.1	7.4	7.4	* 7.1	* 7.1	7.4	7.4				
Max Green Setting (Gmax), s	* 11	* 60	20.2	40.0	* 16	* 55	10.6	49.6				
Max Q Clear Time (g_c+I1), s	13.4	53.3	14.9	18.8	14.0	36.9	12.6	49.6				
Green Ext Time (p_c), s	0.0	5.4	0.4	5.2	0.2	8.3	0.0	0.0				

Intersection Summary

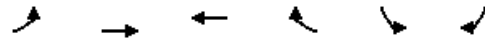
HCM 6th Ctrl Delay	53.9
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 9: Busch Blvd & I-275 SB Ramps

2020 Build Alt2- AM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↶	↷	↶	↷	↶	↷
Traffic Volume (veh/h)	302	1543	1814	665	178	433
Future Volume (veh/h)	302	1543	1814	665	178	433
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1856	1885	1826	1841
Adj Flow Rate, veh/h	321	1641	1930	0	189	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	3	1	5	4
Cap, veh/h	461	4075	2517		211	
Arrive On Green	0.52	1.00	0.66	0.00	0.12	0.00
Sat Flow, veh/h	1767	5274	5233	1598	1739	2745
Grp Volume(v), veh/h	321	1641	1930	0	189	0
Grp Sat Flow(s),veh/h/ln	1767	1702	1689	1598	1739	1373
Q Serve(g_s), s	21.8	0.0	41.9	0.0	17.1	0.0
Cycle Q Clear(g_c), s	21.8	0.0	41.9	0.0	17.1	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	461	4075	2517		211	
V/C Ratio(X)	0.70	0.40	0.77		0.90	
Avail Cap(c_a), veh/h	461	4075	2517		246	
HCM Platoon Ratio	2.00	2.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.66	0.66	0.66	0.00	1.00	0.00
Uniform Delay (d), s/veh	33.5	0.0	20.8	0.0	69.3	0.0
Incr Delay (d2), s/veh	3.9	0.2	1.5	0.0	30.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.6	0.1	19.2	0.0	14.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	37.4	0.2	22.3	0.0	99.8	0.0
LnGrp LOS	D	A	C		F	
Approach Vol, veh/h		1962	1930	A	189	A
Approach Delay, s/veh		6.3	22.3		99.8	
Approach LOS		A	C		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	48.2	86.0			134.2	25.8
Change Period (Y+Rc), s	6.5	6.5			6.5	6.4
Max Green Setting (Gmax), s	38.5	79.5			124.5	22.6
Max Q Clear Time (g_c+I1), s	23.8	43.9			2.0	19.1
Green Ext Time (p_c), s	1.9	19.8			19.8	0.3

Intersection Summary

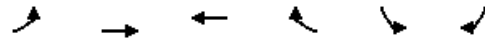
HCM 6th Ctrl Delay	18.2
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 10: Busch Blvd & I-275 NB Ramps

2020 Build Alt2- AM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑↑	↑↑↑	↗	↖↗	↖↗
Traffic Volume (veh/h)	249	1472	2002	267	294	477
Future Volume (veh/h)	249	1472	2002	267	294	477
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1870	1856	1841	1856
Adj Flow Rate, veh/h	265	1566	2130	0	313	507
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	2	3	4	3
Cap, veh/h	289	4101	3059		387	767
Arrive On Green	0.33	1.00	1.00	0.00	0.11	0.11
Sat Flow, veh/h	1767	5274	5274	1572	3401	2768
Grp Volume(v), veh/h	265	1566	2130	0	313	507
Grp Sat Flow(s),veh/h/ln	1767	1702	1702	1572	1700	1384
Q Serve(g_s), s	23.1	0.0	0.0	0.0	14.4	18.2
Cycle Q Clear(g_c), s	23.1	0.0	0.0	0.0	14.4	18.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	289	4101	3059		387	767
V/C Ratio(X)	0.92	0.38	0.70		0.81	0.66
Avail Cap(c_a), veh/h	370	4101	3059		387	767
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.43	0.00	1.00	1.00
Uniform Delay (d), s/veh	52.8	0.0	0.0	0.0	69.2	51.2
Incr Delay (d2), s/veh	25.5	0.2	0.6	0.0	12.6	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	15.9	0.2	0.3	0.0	11.4	14.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	78.3	0.2	0.6	0.0	81.9	53.6
LnGrp LOS	E	A	A		F	D
Approach Vol, veh/h		1831	2130	A	820	
Approach Delay, s/veh		11.5	0.6		64.4	
Approach LOS		B	A		E	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	32.6	102.4			135.0	25.0
Change Period (Y+Rc), s	6.5	6.5			6.5	6.8
Max Green Setting (Gmax), s	33.5	88.5			128.5	18.2
Max Q Clear Time (g_c+I1), s	25.1	2.0			2.0	20.2
Green Ext Time (p_c), s	1.1	34.2			18.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	15.7
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 11: Nebraska Ave & Busch Blvd

2020 Build Alt2- AM
 04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	78	1479	209	215	2036	64	121	561	201	58	987	112
Future Volume (veh/h)	78	1479	209	215	2036	64	121	561	201	58	987	112
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1870	1870	1826	1870	1841	1796	1826	1841	1841	1870	1856
Adj Flow Rate, veh/h	83	1573	222	229	2166	68	129	597	0	62	1050	119
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	2	2	5	2	4	7	5	4	4	2	3
Cap, veh/h	77	1766	548	164	2547	618	115	1165		78	1103	488
Arrive On Green	0.06	0.46	0.46	0.09	0.40	0.40	0.07	0.34	0.00	0.04	0.31	0.31
Sat Flow, veh/h	1739	5106	1585	1739	6434	1560	1711	3469	1560	1753	3554	1572
Grp Volume(v), veh/h	83	1573	222	229	2166	68	129	597	0	62	1050	119
Grp Sat Flow(s),veh/h/ln	1739	1702	1585	1739	1609	1560	1711	1735	1560	1753	1777	1572
Q Serve(g_s), s	7.1	45.1	11.3	15.1	49.1	4.4	10.8	22.1	0.0	5.6	46.3	7.3
Cycle Q Clear(g_c), s	7.1	45.1	11.3	15.1	49.1	4.4	10.8	22.1	0.0	5.6	46.3	7.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	77	1766	548	164	2547	618	115	1165		78	1103	488
V/C Ratio(X)	1.08	0.89	0.40	1.40	0.85	0.11	1.12	0.51		0.79	0.95	0.24
Avail Cap(c_a), veh/h	77	1766	548	164	2547	618	115	1165		119	1119	495
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.89	0.89	0.89	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	75.3	40.4	18.5	72.4	44.0	30.5	74.6	42.6	0.0	75.7	54.0	26.6
Incr Delay (d2), s/veh	118.7	6.5	2.0	210.6	3.8	0.4	118.7	0.4	0.0	9.3	16.5	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.5	25.1	7.3	25.7	27.2	3.1	13.8	14.6	0.0	4.9	30.5	6.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	194.0	47.0	20.5	283.1	47.8	30.9	193.3	43.0	0.0	85.0	70.5	26.9
LnGrp LOS	F	D	C	F	D	C	F	D		F	E	C
Approach Vol, veh/h		1878			2463			726	A		1231	
Approach Delay, s/veh		50.3			69.2			69.7			67.0	
Approach LOS		D			E			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.0	70.3	14.3	61.3	22.0	62.3	18.4	57.3				
Change Period (Y+Rc), s	6.9	7.0	* 7.2	* 7.6	6.9	7.0	* 7.6	* 7.6				
Max Green Setting (Gmax), s	7.1	63.0	* 11	* 50	15.1	55.0	* 11	* 50				
Max Q Clear Time (g_c+I1), s	9.1	51.1	7.6	24.1	17.1	47.1	12.8	48.3				
Green Ext Time (p_c), s	0.0	9.9	0.0	4.0	0.0	5.9	0.0	1.4				

Intersection Summary

HCM 6th Ctrl Delay	63.2
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Arterial Level of Service: EB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
	II	45	22.0	8.8	30.8	0.20	23.6	C
Dale Mabry Hwy NB Ra	II	45	23.3	3.9	27.2	0.21	28.3	B
N Himes Ave	II	45	19.0	16.7	35.7	0.17	17.6	D
Twin Lakes Blvd	II	45	43.9	6.7	50.6	0.50	35.5	A
Orange Grove Dr	II	45	25.9	4.8	30.7	0.25	29.2	B
N Armenia Ave	II	45	29.7	20.0	49.7	0.30	21.7	D
N Boulevard	II	45	79.8	31.6	111.4	1.00	32.2	B
Florida Ave	II	40	47.3	40.3	87.6	0.51	20.9	D
I-275 SB Ramps	II	40	21.9	1.6	23.5	0.19	29.1	B
I-275 NB Ramps	II	40	21.3	3.0	24.3	0.19	27.5	C
Nebraska Ave	II	40	14.6	52.0	66.6	0.13	6.8	F
Total	II		348.7	189.4	538.1	3.65	24.4	C

Arterial Level of Service: WB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Nebraska Ave	II	40	27.0	48.7	75.7	0.25	11.7	F
I-275 NB Ramps	II	40	14.6	14.3	28.9	0.13	15.8	E
I-275 SB Ramps	II	40	21.3	53.6	74.9	0.19	8.9	F
Florida Ave	II	40	21.9	33.2	55.1	0.19	12.4	F
N Boulevard	II	40	47.3	2.7	50.0	0.51	36.6	A
N Armenia Ave	II	45	79.8	1.9	81.7	1.00	43.9	A
Orange Grove Dr	II	45	29.7	45.2	74.9	0.30	14.4	E
Mossvale Ln	II	45	25.9	3.5	29.4	0.25	30.5	B
N Himes Ave	II	45	43.9	12.2	56.1	0.50	32.0	B
Dale Mabry Hwy NB Ra	II	45	19.0	11.0	30.0	0.17	20.9	D
Dale Mabry Hwy SB Ra	II	45	23.3	13.8	37.1	0.21	20.8	D
Total	II		353.7	240.1	593.8	3.69	22.4	C

HCM 6th Signalized Intersection Summary
 1: Busch Blvd & Dale Mabry Hwy SB Ramps

2020 Build Alt 2 - PM
 04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	208	1719	0	0	2192	0	0	4	15	337	4	32
Future Volume (veh/h)	208	1719	0	0	2192	0	0	4	15	337	4	32
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	0	1900	1900	1900	1856	1900	1841
Adj Flow Rate, veh/h	214	1772	0	0	2260	0	0	4	15	350	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	1	1	0	0	0	0	3	0	4
Cap, veh/h	233	3775	0	0	2926	0	0	40	34	399	0	
Arrive On Green	0.13	0.74	0.00	0.00	0.76	0.00	0.00	0.02	0.02	0.11	0.00	0.00
Sat Flow, veh/h	1781	5274	0	0	5486	0	0	1900	1610	3534	0	1560
Grp Volume(v), veh/h	214	1772	0	0	2260	0	0	4	15	350	0	0
Grp Sat Flow(s),veh/h/ln	1781	1702	0	0	1716	0	0	1900	1610	1767	0	1560
Q Serve(g_s), s	20.2	23.6	0.0	0.0	43.8	0.0	0.0	0.4	1.6	16.6	0.0	0.0
Cycle Q Clear(g_c), s	20.2	23.6	0.0	0.0	43.8	0.0	0.0	0.4	1.6	16.6	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.00	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	233	3775	0	0	2926	0	0	40	34	399	0	
V/C Ratio(X)	0.92	0.47	0.00	0.00	0.77	0.00	0.00	0.10	0.45	0.88	0.00	
Avail Cap(c_a), veh/h	243	3775	0	0	2926	0	0	67	57	491	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	73.0	8.8	0.0	0.0	14.3	0.0	0.0	81.7	82.2	74.3	0.0	0.0
Incr Delay (d2), s/veh	35.8	0.4	0.0	0.0	2.0	0.0	0.0	1.1	9.0	14.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	17.0	12.7	0.0	0.0	18.7	0.0	0.0	0.3	1.3	13.2	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	108.8	9.3	0.0	0.0	16.3	0.0	0.0	82.7	91.2	88.5	0.0	0.0
LnGrp LOS	F	A	A	A	B	A	A	F	F	F	A	
Approach Vol, veh/h		1986			2260			19			350	A
Approach Delay, s/veh		20.0			16.3			89.4			88.5	
Approach LOS		B			B			F			F	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	29.0	103.4		12.0		132.5		25.6				
Change Period (Y+Rc), s	6.8	6.8		* 8.4		6.8		6.4				
Max Green Setting (Gmax), s	23.2	88.8		* 6		118.8		23.6				
Max Q Clear Time (g_c+I1), s	22.2	45.8		3.6		25.6		18.6				
Green Ext Time (p_c), s	0.1	33.7		0.0		36.0		0.6				

Intersection Summary

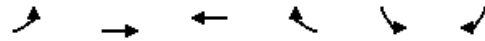
HCM 6th Ctrl Delay	23.7
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [SWR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 2: Busch Blvd & Dale Mabry Hwy NB Ramps

2020 Build Alt 2 - PM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑↑	↑↑↑	↗	↖↗	↗
Traffic Volume (veh/h)	117	1954	2299	518	165	262
Future Volume (veh/h)	117	1954	2299	518	165	262
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	124	2079	2446	0	176	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	2	2	1	1	1
Cap, veh/h	144	4367	3757		225	
Arrive On Green	0.08	0.86	1.00	0.00	0.06	0.00
Sat Flow, veh/h	1810	5274	5274	1598	3483	1598
Grp Volume(v), veh/h	124	2079	2446	0	176	0
Grp Sat Flow(s),veh/h/ln	1810	1702	1702	1598	1742	1598
Q Serve(g_s), s	11.5	16.9	0.0	0.0	8.5	0.0
Cycle Q Clear(g_c), s	11.5	16.9	0.0	0.0	8.5	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	144	4367	3757		225	
V/C Ratio(X)	0.86	0.48	0.65		0.78	
Avail Cap(c_a), veh/h	167	4367	3757		615	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.64	0.00	1.00	0.00
Uniform Delay (d), s/veh	77.3	3.0	0.0	0.0	78.3	0.0
Incr Delay (d2), s/veh	30.9	0.4	0.6	0.0	5.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.7	7.2	0.4	0.0	7.3	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	108.2	3.4	0.6	0.0	84.1	0.0
LnGrp LOS	F	A	A		F	
Approach Vol, veh/h		2203	2446	A	176	A
Approach Delay, s/veh		9.3	0.6		84.1	
Approach LOS		A	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	20.3	131.9			152.2	17.8
Change Period (Y+Rc), s	6.8	6.8			6.8	6.8
Max Green Setting (Gmax), s	15.7	103.9			126.4	30.0
Max Q Clear Time (g_c+I1), s	13.5	2.0			18.9	10.5
Green Ext Time (p_c), s	0.1	70.0			53.0	0.5

Intersection Summary						
HCM 6th Ctrl Delay			7.6			
HCM 6th LOS			A			

Notes
 Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.




























HCM 6th Signalized Intersection Summary
 3: N Himes Ave & Busch Blvd

2020 Build Alt 2 - PM
 04/04/2018

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑↑	↑↑	↑↑↑	↑↑	↑
Traffic Volume (veh/h)	1824	295	195	2343	474	254
Future Volume (veh/h)	1824	295	195	2343	474	254
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1885	1870	1900	1885	1885
Adj Flow Rate, veh/h	2027	328	217	2603	527	282
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	1	2	0	1	1
Cap, veh/h	3139	1728	256	3780	666	306
Arrive On Green	1.00	1.00	0.15	1.00	0.19	0.19
Sat Flow, veh/h	5274	2812	3456	5358	3483	1598
Grp Volume(v), veh/h	2027	328	217	2603	527	282
Grp Sat Flow(s),veh/h/ln	1702	1406	1728	1729	1742	1598
Q Serve(g_s), s	0.0	0.0	10.4	0.0	24.5	29.5
Cycle Q Clear(g_c), s	0.0	0.0	10.4	0.0	24.5	29.5
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	3139	1728	256	3780	666	306
V/C Ratio(X)	0.65	0.19	0.85	0.69	0.79	0.92
Avail Cap(c_a), veh/h	3139	1728	323	3780	729	335
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.72	0.72	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	71.5	0.0	65.5	67.5
Incr Delay (d2), s/veh	0.9	0.2	11.0	0.8	5.2	28.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.5	12.0	7.6	0.5	16.9	34.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	0.9	0.2	82.5	0.8	70.7	95.9
LnGrp LOS	A	A	F	A	E	F
Approach Vol, veh/h	2355			2820	809	
Approach Delay, s/veh	0.8			7.0	79.5	
Approach LOS	A			A	E	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		130.7		39.3	19.4	111.3
Change Period (Y+Rc), s		6.8		* 6.8	6.8	6.8
Max Green Setting (Gmax), s		120.8		* 36	15.9	98.1
Max Q Clear Time (g_c+I1), s		2.0		31.5	12.4	2.0
Green Ext Time (p_c), s		85.8		1.1	0.2	56.5
Intersection Summary						
HCM 6th Ctrl Delay			14.4			
HCM 6th LOS			B			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

HCM 6th Signalized Intersection Summary
 4: Twin Lakes Blvd/Mossvale Ln & Busch Blvd

2020 Build Alt 2 - PM
 04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  						  	
Traffic Volume (veh/h)	5	1997	76	76	2302	1	235	0	281	0	0	1
Future Volume (veh/h)	5	1997	76	76	2302	1	235	0	281	0	0	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1856	1900	1870	1870	1885	0	1885	1900	1900	1900
Adj Flow Rate, veh/h	5	2038	78	78	2349	1	240	0	287	0	0	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	2	3	0	2	2	1	0	1	0	0	0
Cap, veh/h	131	2916	898	214	3850	2	260	0	0	0	0	3
Arrive On Green	1.00	1.00	1.00	0.24	1.00	1.00	0.15	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	155	5106	1572	1810	5272	2	1795	240		0	0	1610
Grp Volume(v), veh/h	5	2038	78	78	1517	833	240	102.3		0	0	1
Grp Sat Flow(s),veh/h/ln	155	1702	1572	1810	1702	1870	1795	F		0	0	1610
Q Serve(g_s), s	0.0	0.0	0.0	6.1	0.0	0.0	22.4			0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.0	0.0	0.0	6.1	0.0	0.0	22.4			0.0	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00			0.00		1.00
Lane Grp Cap(c), veh/h	131	2916	898	214	2486	1366	260			0	0	3
V/C Ratio(X)	0.04	0.70	0.09	0.37	0.61	0.61	0.92			0.00	0.00	0.38
Avail Cap(c_a), veh/h	131	2916	898	214	2486	1366	296			0	0	57
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00			1.00	1.00	1.00
Upstream Filter(I)	0.71	0.71	0.71	0.70	0.70	0.70	1.00			0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	59.6	0.0	0.0	71.7			0.0	0.0	84.8
Incr Delay (d2), s/veh	0.4	1.0	0.1	1.0	0.8	1.4	30.6			0.0	0.0	72.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.5	0.1	4.9	0.5	1.0	18.4			0.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.4	1.0	0.1	60.7	0.8	1.4	102.3			0.0	0.0	157.4
LnGrp LOS	A	A	A	E	A	A	F			A	A	F
Approach Vol, veh/h		2121			2428							1
Approach Delay, s/veh		1.0			2.9							157.4
Approach LOS		A			A							F
Timer - Assigned Phs	1	2	3	4		6						
Phs Duration (G+Y+Rc), s	27.1	104.1	31.7	7.2		131.2						
Change Period (Y+Rc), s	* 7	* 7	7.0	6.9		* 7						
Max Green Setting (Gmax), s	* 11	* 97	28.0	6.0		* 1.2E2						
Max Q Clear Time (g_c+I1), s	8.1	2.0	24.4	2.1		2.0						
Green Ext Time (p_c), s	0.1	50.9	0.2	0.0		65.9						
Intersection Summary												
HCM 6th Ctrl Delay				7.1								
HCM 6th LOS				A								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
5: Busch Blvd & Orange Grove Dr

2020 Build Alt 2 - PM
04/04/2018



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations	↖	↑↑↑	↑↑↑	↗	↖	↗
Traffic Volume (veh/h)	205	2073	2159	81	64	220
Future Volume (veh/h)	205	2073	2159	81	64	220
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1885	1870	1870	1870	1856	1900
Adj Flow Rate, veh/h	209	2115	2203	83	65	224
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	2	2	2	3	0
Cap, veh/h	228	4169	3315	1029	179	163
Arrive On Green	0.25	1.00	1.00	1.00	0.10	0.10
Sat Flow, veh/h	1795	5274	5274	1585	1767	1610
Grp Volume(v), veh/h	209	2115	2203	83	65	224
Grp Sat Flow(s),veh/h/ln	1795	1702	1702	1585	1767	1610
Q Serve(g_s), s	19.2	0.0	0.0	0.0	5.8	17.2
Cycle Q Clear(g_c), s	19.2	0.0	0.0	0.0	5.8	17.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	228	4169	3315	1029	179	163
V/C Ratio(X)	0.91	0.51	0.66	0.08	0.36	1.37
Avail Cap(c_a), veh/h	340	4169	3315	1029	179	163
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.73	0.73	0.63	0.63	1.00	1.00
Uniform Delay (d), s/veh	62.5	0.0	0.0	0.0	71.3	76.4
Incr Delay (d2), s/veh	17.0	0.3	0.7	0.1	1.2	202.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.9	0.2	0.4	0.0	4.9	25.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	79.4	0.3	0.7	0.1	72.5	278.9
LnGrp LOS	E	A	A	A	E	F
Approach Vol, veh/h		2324	2286		289	
Approach Delay, s/veh		7.4	0.7		232.5	
Approach LOS		A	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	28.4	117.6			146.0	24.0
Change Period (Y+Rc), s	6.8	* 7.2			* 7.2	6.8
Max Green Setting (Gmax), s	32.2	* 1E2			* 1.4E2	17.2
Max Q Clear Time (g_c+I1), s	21.2	2.0			2.0	19.2
Green Ext Time (p_c), s	0.4	58.7			60.4	0.0

Intersection Summary

























HCM 6th Ctrl Delay	17.5
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
6: N Armenia Ave & Busch Blvd

2020 Build Alt 2 - PM
04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	190	1774	173	162	1667	32	301	455	170	81	269	272
Future Volume (veh/h)	190	1774	173	162	1667	32	301	455	170	81	269	272
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1900	1885	1870	1900	1870	1885	1885	1900	1885	1870
Adj Flow Rate, veh/h	202	1887	184	172	1773	34	320	484	181	86	286	289
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	0	1	2	0	2	1	1	0	1	2
Cap, veh/h	380	2791	1041	192	2247	708	346	570	425	122	371	503
Arrive On Green	0.43	1.00	1.00	0.11	0.44	0.44	0.10	0.16	0.16	0.04	0.10	0.10
Sat Flow, veh/h	1781	5106	1610	1795	5106	1610	3456	3582	1598	1810	3582	1585
Grp Volume(v), veh/h	202	1887	184	172	1773	34	320	484	181	86	286	289
Grp Sat Flow(s),veh/h/ln	1781	1702	1610	1795	1702	1610	1728	1791	1598	1810	1791	1585
Q Serve(g_s), s	14.3	0.0	0.0	16.1	50.6	2.1	15.6	22.3	12.7	3.9	13.2	0.0
Cycle Q Clear(g_c), s	14.3	0.0	0.0	16.1	50.6	2.1	15.6	22.3	12.7	3.9	13.2	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	380	2791	1041	192	2247	708	346	570	425	122	371	503
V/C Ratio(X)	0.53	0.68	0.18	0.90	0.79	0.05	0.93	0.85	0.43	0.70	0.77	0.58
Avail Cap(c_a), veh/h	380	2791	1041	221	2247	708	346	731	497	163	611	609
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.86	0.86	0.86	0.62	0.62	0.62	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	42.4	0.0	0.0	75.0	40.8	27.2	75.9	69.5	33.1	78.5	74.2	48.5
Incr Delay (d2), s/veh	1.2	1.1	0.3	22.1	1.8	0.1	30.2	7.5	0.7	8.5	3.4	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	9.1	0.5	0.2	12.3	27.0	1.5	13.1	16.2	8.7	7.2	10.4	15.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.6	1.1	0.3	97.1	42.7	27.3	106.1	77.0	33.8	87.1	77.7	49.5
LnGrp LOS	D	A	A	F	D	C	F	E	C	F	E	D
Approach Vol, veh/h		2273			1979			985			661	
Approach Delay, s/veh		4.9			47.1			78.5			66.6	
Approach LOS		A			D			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	42.4	80.9	13.5	33.2	24.3	99.0	23.0	23.7				
Change Period (Y+Rc), s	* 6.1	* 6.1	6.0	6.1	* 6.1	* 6.1	6.0	6.1				
Max Green Setting (Gmax), s	* 25	* 75	11.3	34.7	* 21	* 79	17.0	29.0				
Max Q Clear Time (g_c+I1), s	16.3	52.6	5.9	24.3	18.1	2.0	17.6	15.2				
Green Ext Time (p_c), s	0.3	13.2	0.1	2.7	0.1	26.4	0.0	2.4				

Intersection Summary

























HCM 6th Ctrl Delay	38.3
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
7: N Boulevard & Busch Blvd

2020 Build Alt 2 - PM
04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	1775	100	97	1817	68	106	342	86	103	217	39
Future Volume (veh/h)	70	1775	100	97	1817	68	106	342	86	103	217	39
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1870	1856	1870	1870	1856	1900	1870	1856	1885	1841	1826
Adj Flow Rate, veh/h	71	1811	102	99	1854	69	108	349	88	105	221	40
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	5	2	3	2	2	3	0	2	3	1	4	5
Cap, veh/h	163	3053	940	119	2915	898	196	433	192	125	291	129
Arrive On Green	0.09	0.60	0.60	0.07	0.57	0.57	0.11	0.12	0.12	0.07	0.08	0.08
Sat Flow, veh/h	1739	5106	1572	1781	5106	1572	1810	3554	1572	1795	3497	1547
Grp Volume(v), veh/h	71	1811	102	99	1854	69	108	349	88	105	221	40
Grp Sat Flow(s),veh/h/ln	1739	1702	1572	1781	1702	1572	1810	1777	1572	1795	1749	1547
Q Serve(g_s), s	6.2	35.4	2.4	8.8	39.1	2.1	9.1	15.3	7.0	9.2	9.9	3.2
Cycle Q Clear(g_c), s	6.2	35.4	2.4	8.8	39.1	2.1	9.1	15.3	7.0	9.2	9.9	3.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	163	3053	940	119	2915	898	196	433	192	125	291	129
V/C Ratio(X)	0.44	0.59	0.11	0.83	0.64	0.08	0.55	0.81	0.46	0.84	0.76	0.31
Avail Cap(c_a), veh/h	163	3053	940	146	2915	898	196	711	314	134	710	314
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.65	0.65	0.65	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.5	20.0	4.2	73.8	23.1	6.9	67.7	68.4	46.5	73.5	71.8	46.5
Incr Delay (d2), s/veh	5.4	0.6	0.2	23.5	1.1	0.2	2.0	3.6	1.7	31.7	4.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.2	18.4	2.9	8.4	22.0	2.1	7.7	11.6	5.2	9.2	8.2	2.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	73.9	20.6	4.3	97.3	24.2	7.0	69.6	72.0	48.2	105.3	75.8	47.8
LnGrp LOS	E	C	A	F	C	A	E	E	D	F	E	D
Approach Vol, veh/h		1984			2022			545			366	
Approach Delay, s/veh		21.7			27.2			67.7			81.2	
Approach LOS		C			C			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.7	97.3	16.9	25.1	16.4	101.6	23.1	18.9				
Change Period (Y+Rc), s	* 5.7	5.9	* 5.8	* 5.6	* 5.7	5.9	* 5.8	* 5.6				
Max Green Setting (Gmax), s	* 15	78.1	* 12	* 32	* 13	80.0	* 11	* 33				
Max Q Clear Time (g_c+I1), s	8.2	41.1	11.2	17.3	10.8	37.4	11.1	11.9				
Green Ext Time (p_c), s	0.0	19.4	0.0	2.2	0.0	19.6	0.0	1.4				
Intersection Summary												
HCM 6th Ctrl Delay			33.5									
HCM 6th LOS			C									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
8: Florida Ave & Busch Blvd

2020 Build Alt 2 - PM
04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	129	1590	245	270	1761	271	176	1085	420	329	696	126
Future Volume (veh/h)	129	1590	245	270	1761	271	176	1085	420	329	696	126
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1870	1856	1870	1870	1885	1885	1870	1856	1885	1885	1856
Adj Flow Rate, veh/h	132	1622	0	276	1797	277	180	1107	429	336	710	129
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	2	3	2	2	1	1	2	3	1	1	3
Cap, veh/h	139	2039		314	2116	818	186	1233	523	340	844	370
Arrive On Green	0.08	0.40	0.00	0.18	0.83	0.83	0.10	0.24	0.24	0.10	0.24	0.24
Sat Flow, veh/h	1767	5106	1572	3456	5106	1598	1795	5106	1572	3483	3582	1572
Grp Volume(v), veh/h	132	1622	0	276	1797	277	180	1107	429	336	710	129
Grp Sat Flow(s),veh/h/ln	1767	1702	1572	1728	1702	1598	1795	1702	1572	1742	1791	1572
Q Serve(g_s), s	12.6	47.5	0.0	13.2	34.6	6.4	17.0	35.7	21.7	16.4	32.1	11.6
Cycle Q Clear(g_c), s	12.6	47.5	0.0	13.2	34.6	6.4	17.0	35.7	21.7	16.4	32.1	11.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	139	2039		314	2116	818	186	1233	523	340	844	370
V/C Ratio(X)	0.95	0.80		0.88	0.85	0.34	0.97	0.90	0.82	0.99	0.84	0.35
Avail Cap(c_a), veh/h	139	2039		314	2116	818	186	1280	537	340	876	385
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.61	0.61	0.61	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	78.0	44.9	0.0	68.6	11.5	6.4	75.9	62.4	31.6	76.6	62.0	54.1
Incr Delay (d2), s/veh	63.4	3.3	0.0	15.9	2.8	0.7	56.6	8.5	9.6	45.4	7.2	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.9	27.8	0.0	9.1	8.2	3.3	16.0	22.8	13.6	14.4	21.6	8.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	141.3	48.2	0.0	84.5	14.3	7.1	132.5	71.0	41.3	122.0	69.2	54.7
LnGrp LOS	F	D		F	B	A	F	E	D	F	E	D
Approach Vol, veh/h		1754	A		2350			1716			1175	
Approach Delay, s/veh		55.2			21.7			70.0			82.7	
Approach LOS		E			C			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	77.6	24.0	48.4	22.6	75.0	25.0	47.4				
Change Period (Y+Rc), s	* 6.6	* 7.1	7.4	7.4	* 7.1	* 7.1	7.4	7.4				
Max Green Setting (Gmax), s	* 13	* 69	16.6	42.6	* 14	* 68	17.6	41.6				
Max Q Clear Time (g_c+I1), s	14.6	36.6	18.4	37.7	15.2	49.5	19.0	34.1				
Green Ext Time (p_c), s	0.0	18.6	0.0	3.3	0.0	10.8	0.0	2.9				

Intersection Summary

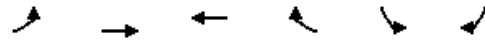
HCM 6th Ctrl Delay	52.2
HCM 6th LOS	D

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 9: Busch Blvd & I-275 SB Ramps

2020 Build Alt 2 - PM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↑↑↑	↑↑↑	↵	↵	↵↵
Traffic Volume (veh/h)	350	1989	1705	597	289	597
Future Volume (veh/h)	350	1989	1705	597	289	597
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1870	1885	1856	1841
Adj Flow Rate, veh/h	357	2030	1740	0	295	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	2	2	1	3	4
Cap, veh/h	494	3799	2178		318	
Arrive On Green	0.56	1.00	0.85	0.00	0.18	0.00
Sat Flow, veh/h	1767	5274	5274	1598	1767	2745
Grp Volume(v), veh/h	357	2030	1740	0	295	0
Grp Sat Flow(s),veh/h/ln	1767	1702	1702	1598	1767	1373
Q Serve(g_s), s	25.4	0.0	26.8	0.0	27.9	0.0
Cycle Q Clear(g_c), s	25.4	0.0	26.8	0.0	27.9	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	494	3799	2178		318	
V/C Ratio(X)	0.72	0.53	0.80		0.93	
Avail Cap(c_a), veh/h	494	3799	2178		370	
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.50	0.50	0.63	0.00	1.00	0.00
Uniform Delay (d), s/veh	32.7	0.0	9.1	0.0	68.6	0.0
Incr Delay (d2), s/veh	3.3	0.3	2.0	0.0	27.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.4	0.2	7.0	0.0	21.6	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	35.9	0.3	11.2	0.0	96.4	0.0
LnGrp LOS	D	A	B		F	
Approach Vol, veh/h		2387	1740	A	295	A
Approach Delay, s/veh		5.6	11.2		96.4	
Approach LOS		A	B		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	54.0	79.0			133.0	37.0
Change Period (Y+Rc), s	6.5	6.5			6.5	6.4
Max Green Setting (Gmax), s	42.5	72.5			121.5	35.6
Max Q Clear Time (g_c+I1), s	27.4	28.8			2.0	29.9
Green Ext Time (p_c), s	2.2	18.6			32.6	0.7

Intersection Summary

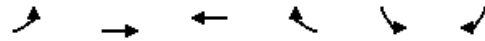
HCM 6th Ctrl Delay	13.9
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 10: Busch Blvd & I-275 NB Ramps

2020 Build Alt 2 - PM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑↑	↑↑↑	↗	↖↗	↖↗
Traffic Volume (veh/h)	521	1757	1957	379	233	345
Future Volume (veh/h)	521	1757	1957	379	233	345
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1856	1870	1885
Adj Flow Rate, veh/h	548	1849	2060	0	245	363
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	1	3	2	1
Cap, veh/h	521	4228	2558		324	1087
Arrive On Green	0.59	1.00	0.99	0.00	0.09	0.09
Sat Flow, veh/h	1781	5274	5316	1572	3456	2812
Grp Volume(v), veh/h	548	1849	2060	0	245	363
Grp Sat Flow(s),veh/h/ln	1781	1702	1716	1572	1728	1406
Q Serve(g_s), s	49.8	0.0	2.0	0.0	11.8	0.0
Cycle Q Clear(g_c), s	49.8	0.0	2.0	0.0	11.8	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	521	4228	2558		324	1087
V/C Ratio(X)	1.05	0.44	0.81		0.76	0.33
Avail Cap(c_a), veh/h	521	4228	2558		431	1174
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.78	0.78	0.45	0.00	1.00	1.00
Uniform Delay (d), s/veh	35.2	0.0	0.3	0.0	75.1	36.7
Incr Delay (d2), s/veh	48.9	0.3	1.3	0.0	6.6	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	31.3	0.2	0.8	0.0	9.5	9.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	84.2	0.3	1.5	0.0	81.7	37.0
LnGrp LOS	F	A	A		F	D
Approach Vol, veh/h		2397	2060	A	608	
Approach Delay, s/veh		19.4	1.5		55.0	
Approach LOS		B	A		E	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	56.3	91.0			147.3	22.7
Change Period (Y+Rc), s	6.5	6.5			6.5	6.8
Max Green Setting (Gmax), s	44.5	84.5			135.5	21.2
Max Q Clear Time (g_c+I1), s	51.8	4.0			2.0	13.8
Green Ext Time (p_c), s	0.0	31.1			26.1	2.2
Intersection Summary						
HCM 6th Ctrl Delay			16.4			
HCM 6th LOS			B			

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 11: Nebraska Ave & Busch Blvd

2020 Build Alt 2 - PM
 04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	169	1670	151	180	2033	99	119	814	224	139	685	184
Future Volume (veh/h)	169	1670	151	180	2033	99	119	814	224	139	685	184
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1870	1841	1870	1900	1885	1856	1811	1811	1870	1870
Adj Flow Rate, veh/h	180	1777	161	191	2163	110	127	866	0	148	729	196
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.90	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	2	4	2	0	1	3	6	6	2	2
Cap, veh/h	147	2047	641	145	2600	651	147	940		130	933	416
Arrive On Green	0.17	0.81	0.81	0.08	0.40	0.40	0.08	0.27	0.00	0.08	0.26	0.26
Sat Flow, veh/h	1767	5066	1585	1753	6434	1610	1795	3526	1535	1725	3554	1585
Grp Volume(v), veh/h	180	1777	161	191	2163	110	127	866	0	148	729	196
Grp Sat Flow(s),veh/h/ln	1767	1689	1585	1753	1609	1610	1795	1763	1535	1725	1777	1585
Q Serve(g_s), s	14.1	38.3	4.2	14.1	51.3	5.4	11.9	40.6	0.0	12.8	32.4	17.7
Cycle Q Clear(g_c), s	14.1	38.3	4.2	14.1	51.3	5.4	11.9	40.6	0.0	12.8	32.4	17.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	147	2047	641	145	2600	651	147	940		130	933	416
V/C Ratio(X)	1.23	0.87	0.25	1.31	0.83	0.17	0.87	0.92		1.14	0.78	0.47
Avail Cap(c_a), veh/h	147	2047	641	145	2600	651	174	1004		130	934	417
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.9	13.4	10.1	78.0	45.5	17.2	77.1	60.6	0.0	78.6	58.2	52.8
Incr Delay (d2), s/veh	144.1	4.7	0.8	181.5	3.3	0.6	27.4	12.9	0.0	121.4	4.3	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	18.1	10.1	2.6	21.6	28.3	5.3	10.8	26.9	0.0	15.9	21.2	11.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	215.0	18.1	10.9	259.4	48.8	17.8	104.5	73.6	0.0	200.0	62.5	53.6
LnGrp LOS	F	B	B	F	D	B	F	E		F	E	D
Approach Vol, veh/h		2118			2464			993	A		1073	
Approach Delay, s/veh		34.3			63.7			77.5			79.8	
Approach LOS		C			E			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.0	75.7	20.4	52.9	21.0	75.7	21.1	52.2				
Change Period (Y+Rc), s	6.9	7.0	* 7.6	* 7.6	6.9	7.0	* 7.2	* 7.6				
Max Green Setting (Gmax), s	14.1	66.0	* 13	* 48	14.1	66.0	* 17	* 45				
Max Q Clear Time (g_c+I1), s	16.1	53.3	14.8	42.6	16.1	40.3	13.9	34.4				
Green Ext Time (p_c), s	0.0	10.5	0.0	2.7	0.0	15.4	0.0	3.8				

Intersection Summary

HCM 6th Ctrl Delay	59.0
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Arterial Level of Service: EB Busch Blvd





















Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
	II	45	22.0	10.1	32.1	0.20	22.6	C
Dale Mabry Hwy NB Ra	II	45	23.3	4.4	27.7	0.21	27.8	C
N Himes Ave	II	45	19.0	15.7	34.7	0.17	18.1	D
Twin Lakes Blvd	II	45	43.9	22.2	66.1	0.50	27.2	C
Orange Grove Dr	II	45	25.9	8.1	34.0	0.25	26.4	C
N Armenia Ave	II	45	29.7	42.0	71.7	0.30	15.0	E
N Boulevard	II	45	79.8	27.0	106.8	1.00	33.6	B
Florida Ave	II	40	47.2	47.6	94.8	0.51	19.3	D
I-275 SB Ramps	II	40	21.9	7.4	29.3	0.19	23.4	C
I-275 NB Ramps	II	40	21.3	2.2	23.5	0.19	28.4	B
Nebraska Ave	II	40	14.6	71.7	86.3	0.13	5.3	F
Total	II		348.6	258.4	607.0	3.65	21.6	D

Arterial Level of Service: WB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Nebraska Ave	II	40	27.0	52.8	79.8	0.25	11.1	F
I-275 NB Ramps	II	40	14.6	8.9	23.5	0.13	19.4	D
I-275 SB Ramps	II	40	21.3	23.9	45.2	0.19	14.8	E
Florida Ave	II	40	21.9	24.0	45.9	0.19	14.9	E
N Boulevard	II	40	47.2	35.4	82.6	0.51	22.1	C
N Armenia Ave	II	45	79.8	39.3	119.1	1.00	30.1	B
Orange Grove Dr	II	45	29.7	5.8	35.5	0.30	30.4	B
Mossvale Ln	II	45	25.9	29.9	55.8	0.25	16.1	E
N Himes Ave	II	45	43.9	6.5	50.4	0.50	35.6	A
Dale Mabry Hwy NB Ra	II	45	19.0	15.9	34.9	0.17	18.0	D
Dale Mabry Hwy SB Ra	II	45	23.3	20.0	43.3	0.21	17.8	D
Total	II		353.6	262.4	616.0	3.69	21.6	D

HCM 6th Signalized Intersection Summary
 1: Busch Blvd & Dale Mabry Hwy SB Ramps

2030 Build Alt 2 - AM
 04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	224	2284	1	8	1500	0	0	0	0	439	6	24
Future Volume (veh/h)	224	2284	1	8	1500	0	0	0	0	439	6	24
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1885	1885	1856	1856	0	1900	1900	1900	1870	1900	1796
Adj Flow Rate, veh/h	231	2355	1	8	1546	0	0	0	0	457	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	1	1	3	3	0	0	0	0	2	0	7
Cap, veh/h	252	4107	2	28	2837	0	0	1	1	515	0	
Arrive On Green	0.14	0.77	0.77	1.00	1.00	0.00	0.00	0.00	0.00	0.14	0.00	0.00
Sat Flow, veh/h	1767	5314	2	8	4979	0	0	1900	1610	3563	0	1522
Grp Volume(v), veh/h	231	1521	835	567	987	0	0	0	0	457	0	0
Grp Sat Flow(s),veh/h/ln	1767	1716	1885	1762	1537	0	0	1900	1610	1781	0	1522
Q Serve(g_s), s	20.6	28.9	28.9	0.0	0.0	0.0	0.0	0.0	0.0	20.1	0.0	0.0
Cycle Q Clear(g_c), s	20.6	28.9	28.9	0.0	0.0	0.0	0.0	0.0	0.0	20.1	0.0	0.0
Prop In Lane	1.00		0.00	0.01		0.00	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	252	2652	1457	1058	1806	0	0	1	1	515	0	
V/C Ratio(X)	0.92	0.57	0.57	0.54	0.55	0.00	0.00	0.00	0.00	0.89	0.00	
Avail Cap(c_a), veh/h	289	2652	1457	1058	1806	0	0	71	60	637	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	67.6	7.4	7.4	0.0	0.0	0.0	0.0	0.0	0.0	67.2	0.0	0.0
Incr Delay (d2), s/veh	29.7	0.9	1.6	1.9	1.2	0.0	0.0	0.0	0.0	12.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	16.8	14.3	15.8	1.0	0.5	0.0	0.0	0.0	0.0	15.4	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	97.4	8.3	9.1	1.9	1.2	0.0	0.0	0.0	0.0	79.5	0.0	0.0
LnGrp LOS	F	A	A	A	A	A	A	A	A	E	A	
Approach Vol, veh/h		2587			1554			0			457	A
Approach Delay, s/veh		16.5			1.5			0.0			79.5	
Approach LOS		B			A						E	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	29.6	100.8		0.0		130.5		29.5				
Change Period (Y+Rc), s	6.8	6.8		* 8.4		6.8		6.4				
Max Green Setting (Gmax), s	26.2	70.8		* 6		103.8		28.6				
Max Q Clear Time (g_c+I1), s	22.6	2.0		0.0		30.9		22.1				
Green Ext Time (p_c), s	0.2	25.2		0.0		50.5		1.0				

Intersection Summary

HCM 6th Ctrl Delay	17.7
HCM 6th LOS	B

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [SWR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
2: Busch Blvd & Dale Mabry Hwy NB Ramps

2030 Build Alt 2 - AM
04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑↑	↑↑↑	↗	↖↗	↗
Traffic Volume (veh/h)	42	2681	1781	400	135	173
Future Volume (veh/h)	42	2681	1781	400	135	173
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1781	1885	1900	1856	1826	1885
Adj Flow Rate, veh/h	43	2736	1817	0	138	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	8	1	0	3	5	1
Cap, veh/h	284	4426	4102		186	
Arrive On Green	0.03	0.86	1.00	0.00	0.06	0.00
Sat Flow, veh/h	1697	5316	5358	1572	3374	1598
Grp Volume(v), veh/h	43	2736	1817	0	138	0
Grp Sat Flow(s),veh/h/ln	1697	1716	1729	1572	1687	1598
Q Serve(g_s), s	0.7	25.4	0.0	0.0	6.4	0.0
Cycle Q Clear(g_c), s	0.7	25.4	0.0	0.0	6.4	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	284	4426	4102		186	
V/C Ratio(X)	0.15	0.62	0.44		0.74	
Avail Cap(c_a), veh/h	315	4426	4102		552	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.83	0.00	1.00	0.00
Uniform Delay (d), s/veh	2.4	3.4	0.0	0.0	74.5	0.0
Incr Delay (d2), s/veh	0.2	0.7	0.3	0.0	5.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.3	9.4	0.2	0.0	5.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	2.6	4.0	0.3	0.0	80.2	0.0
LnGrp LOS	A	A	A		F	
Approach Vol, veh/h		2779	1817	A	138	A
Approach Delay, s/veh		4.0	0.3		80.2	
Approach LOS		A	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	11.1	133.3			144.4	15.6
Change Period (Y+Rc), s	6.8	6.8			6.8	6.8
Max Green Setting (Gmax), s	7.2	106.2			120.2	26.2
Max Q Clear Time (g_c+I1), s	2.7	2.0			27.4	8.4
Green Ext Time (p_c), s	0.0	39.0			76.0	0.4

Intersection Summary

HCM 6th Ctrl Delay	4.8
HCM 6th LOS	A

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 3: N Himes Ave & Busch Blvd

2030 Build Alt 2 - AM
 04/04/2018

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑↑	↑↑	↑↑↑	↑↑	↑
Traffic Volume (veh/h)	2093	723	460	1779	402	125
Future Volume (veh/h)	2093	723	460	1779	402	125
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1885	1885	1856	1856	1900
Adj Flow Rate, veh/h	2158	745	474	1834	414	129
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	1	1	3	3	0
Cap, veh/h	2996	2031	523	3949	464	218
Arrive On Green	1.00	1.00	0.15	0.78	0.14	0.14
Sat Flow, veh/h	5274	2812	3483	5233	3428	1610
Grp Volume(v), veh/h	2158	745	474	1834	414	129
Grp Sat Flow(s),veh/h/ln	1702	1406	1742	1689	1714	1610
Q Serve(g_s), s	0.0	0.0	21.4	20.0	19.0	12.0
Cycle Q Clear(g_c), s	0.0	0.0	21.4	20.0	19.0	12.0
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2996	2031	523	3949	464	218
V/C Ratio(X)	0.72	0.37	0.91	0.46	0.89	0.59
Avail Cap(c_a), veh/h	2996	2031	614	3949	540	254
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.73	0.73	0.84	0.84	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	66.9	6.1	68.0	65.0
Incr Delay (d2), s/veh	1.1	0.4	13.1	0.3	14.8	2.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.6	22.4	15.2	9.8	14.3	16.2
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.1	0.4	80.0	6.4	82.9	67.1
LnGrp LOS	A	A	E	A	F	E
Approach Vol, veh/h	2903			2308	543	
Approach Delay, s/veh	0.9			21.5	79.1	
Approach LOS	A			C	E	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		131.5		28.5	30.8	100.7
Change Period (Y+Rc), s		6.8		* 6.8	6.8	6.8
Max Green Setting (Gmax), s		121.2		* 25	28.2	86.2
Max Q Clear Time (g_c+I1), s		22.0		21.0	23.4	2.0
Green Ext Time (p_c), s		39.4		0.7	0.6	65.4
Intersection Summary						
HCM 6th Ctrl Delay			16.6			
HCM 6th LOS			B			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

HCM 6th Signalized Intersection Summary
 4: Twin Lakes Blvd/Mossvale Ln & Busch Blvd

2030 Build Alt 2 - AM
 04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	3	1959	256	344	2153	0	86	0	124	3	0	0
Future Volume (veh/h)	3	1959	256	344	2153	0	86	0	124	3	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1900	1885	1870	0	1885	0	1900	1900	1900	1900
Adj Flow Rate, veh/h	3	1999	261	351	2197	0	88	0	127	3	0	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	2	0	1	2	0	1	0	0	0	0	0
Cap, veh/h	164	3362	1060	370	4639	0	0	0	0	8	0	0
Arrive On Green	0.88	0.88	0.88	0.41	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	180	5106	1610	1795	5274	0		0		1809	0	0
Grp Volume(v), veh/h	3	1999	261	351	2197	0		0.0		3	0	0
Grp Sat Flow(s),veh/h/ln	180	1702	1610	1795	1702	0				1810	0	0
Q Serve(g_s), s	0.3	16.3	4.1	30.2	0.0	0.0				0.3	0.0	0.0
Cycle Q Clear(g_c), s	0.3	16.3	4.1	30.2	0.0	0.0				0.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	164	3362	1060	370	4639	0				8	0	0
V/C Ratio(X)	0.02	0.59	0.25	0.95	0.47	0.00				0.35	0.00	0.00
Avail Cap(c_a), veh/h	164	3362	1060	426	4639	0				68	0	0
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.61	0.61	0.61	0.45	0.45	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	3.4	4.4	3.7	46.2	0.0	0.0				79.4	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.5	0.3	17.2	0.2	0.0				23.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	5.8	2.4	16.6	0.1	0.0				0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	3.5	4.9	4.0	63.4	0.2	0.0				102.7	0.0	0.0
LnGrp LOS	A	A	A	E	A	A				F	A	A
Approach Vol, veh/h		2263			2548							3
Approach Delay, s/veh		4.8			8.9							102.7
Approach LOS		A			A							F
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	40.0	112.3		7.6		152.4						
Change Period (Y+Rc), s	* 7	* 7		6.9		* 7						
Max Green Setting (Gmax), s	* 38	* 78		6.0		* 1.2E2						
Max Q Clear Time (g_c+I1), s	32.2	18.3		2.3		2.0						
Green Ext Time (p_c), s	0.8	40.4		0.0		62.8						
Intersection Summary												
HCM 6th Ctrl Delay				7.0								
HCM 6th LOS				A								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
5: Busch Blvd & Orange Grove Dr

2030 Build Alt 2 - AM
04/04/2018



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations	↵	↑↑↑	↑↑↑	↵	↵	↵
Traffic Volume (veh/h)	116	1970	2036	99	137	461
Future Volume (veh/h)	116	1970	2036	99	137	461
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1870	1856	1900	1900	1900
Adj Flow Rate, veh/h	125	2118	2189	106	147	496
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	3	0	0	0
Cap, veh/h	212	3281	2828	899	489	435
Arrive On Green	0.04	0.64	1.00	1.00	0.27	0.27
Sat Flow, veh/h	1810	5274	5233	1610	1810	1610
Grp Volume(v), veh/h	125	2118	2189	106	147	496
Grp Sat Flow(s),veh/h/ln	1810	1702	1689	1610	1810	1610
Q Serve(g_s), s	4.6	40.5	0.0	0.0	10.3	43.2
Cycle Q Clear(g_c), s	4.6	40.5	0.0	0.0	10.3	43.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	212	3281	2828	899	489	435
V/C Ratio(X)	0.59	0.65	0.77	0.12	0.30	1.14
Avail Cap(c_a), veh/h	263	3281	2828	899	489	435
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.67	0.67	0.70	0.70	1.00	1.00
Uniform Delay (d), s/veh	13.0	17.5	0.0	0.0	46.4	58.4
Incr Delay (d2), s/veh	1.8	0.7	1.5	0.2	0.3	87.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.5	20.3	0.7	0.1	8.4	39.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	14.7	18.1	1.5	0.2	46.7	146.1
LnGrp LOS	B	B	A	A	D	F
Approach Vol, veh/h		2243	2295		643	
Approach Delay, s/veh		17.9	1.4		123.4	
Approach LOS		B	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	13.5	96.5			110.0	50.0
Change Period (Y+Rc), s	6.8	* 7.2			* 7.2	6.8
Max Green Setting (Gmax), s	11.2	* 85			* 1E2	43.2
Max Q Clear Time (g_c+I1), s	6.6	2.0			42.5	45.2
Green Ext Time (p_c), s	0.1	53.1			40.0	0.0

Intersection Summary

HCM 6th Ctrl Delay	23.7
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

HCM 6th Signalized Intersection Summary
6: N Armenia Ave & Busch Blvd

2030 Build Alt 2 - AM
04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	1680	343	260	1828	12	190	267	175	86	453	117
Future Volume (veh/h)	84	1680	343	260	1828	12	190	267	175	86	453	117
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1870	1856	1900	1885	1856	1841	1870	1885	1900
Adj Flow Rate, veh/h	86	1714	350	265	1865	12	194	272	179	88	462	119
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	1	2	3	0	1	3	4	2	1	0
Cap, veh/h	104	2093	763	393	2896	921	236	602	610	224	538	336
Arrive On Green	0.12	0.82	0.82	0.22	0.57	0.57	0.07	0.17	0.17	0.05	0.15	0.15
Sat Flow, veh/h	1781	5106	1598	1781	5066	1610	3483	3526	1560	1781	3582	1610
Grp Volume(v), veh/h	86	1714	350	265	1865	12	194	272	179	88	462	119
Grp Sat Flow(s),veh/h/ln	1781	1702	1598	1781	1689	1610	1742	1763	1560	1781	1791	1610
Q Serve(g_s), s	7.5	29.4	3.6	21.8	39.9	0.5	8.8	11.1	1.7	6.7	20.1	10.1
Cycle Q Clear(g_c), s	7.5	29.4	3.6	21.8	39.9	0.5	8.8	11.1	1.7	6.7	20.1	10.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	104	2093	763	393	2896	921	236	602	610	224	538	336
V/C Ratio(X)	0.82	0.82	0.46	0.68	0.64	0.01	0.82	0.45	0.29	0.39	0.86	0.35
Avail Cap(c_a), veh/h	137	2093	763	393	2896	921	244	721	663	224	649	386
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.75	0.75	0.75	0.59	0.59	0.59	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.8	11.1	2.7	57.1	23.2	14.8	73.6	59.6	18.8	54.5	66.3	54.1
Incr Delay (d2), s/veh	20.1	2.8	1.5	2.7	0.7	0.0	19.5	0.5	0.3	1.1	9.7	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.6	8.1	2.3	14.0	20.4	0.4	8.1	8.7	6.2	5.5	15.1	7.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	89.9	14.0	4.2	59.8	23.9	14.8	93.1	60.1	19.1	55.6	76.0	54.7
LnGrp LOS	F	B	A	E	C	B	F	E	B	E	E	D
Approach Vol, veh/h		2150			2142			645			669	
Approach Delay, s/veh		15.4			28.3			58.6			69.6	
Approach LOS		B			C			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.5	97.6	13.5	33.4	41.4	71.7	16.8	30.1				
Change Period (Y+Rc), s	* 6.1	* 6.1	6.0	6.1	* 6.1	* 6.1	6.0	6.1				
Max Green Setting (Gmax), s	* 12	* 83	7.5	32.7	* 30	* 66	11.2	29.0				
Max Q Clear Time (g_c+I1), s	9.5	41.9	8.7	13.1	23.8	31.4	10.8	22.1				
Green Ext Time (p_c), s	0.0	19.6	0.0	2.2	0.4	18.0	0.0	1.9				
Intersection Summary												
HCM 6th Ctrl Delay			31.8									
HCM 6th LOS			C									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

































HCM 6th Signalized Intersection Summary
7: N Boulevard & Busch Blvd

2030 Build Alt 2 - AM
04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	63	1764	174	144	1921	136	66	219	52	168	500	36
Future Volume (veh/h)	63	1764	174	144	1921	136	66	219	52	168	500	36
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1900	1885	1856	1841	1870	1900	1900	1856	1870	1900
Adj Flow Rate, veh/h	65	1819	179	148	1980	140	68	226	54	173	515	37
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	0	1	3	4	2	0	0	3	2	0
Cap, veh/h	324	2778	876	169	2305	710	85	396	176	190	605	274
Arrive On Green	0.18	0.54	0.54	0.09	0.46	0.46	0.05	0.11	0.11	0.11	0.17	0.17
Sat Flow, veh/h	1781	5106	1610	1795	5066	1560	1781	3610	1610	1767	3554	1610
Grp Volume(v), veh/h	65	1819	179	148	1980	140	68	226	54	173	515	37
Grp Sat Flow(s),veh/h/ln	1781	1702	1610	1795	1689	1560	1781	1805	1610	1767	1777	1610
Q Serve(g_s), s	5.0	40.4	6.7	13.0	56.0	5.7	6.0	9.5	4.9	15.5	22.5	3.1
Cycle Q Clear(g_c), s	5.0	40.4	6.7	13.0	56.0	5.7	6.0	9.5	4.9	15.5	22.5	3.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	324	2778	876	169	2305	710	85	396	176	190	605	274
V/C Ratio(X)	0.20	0.65	0.20	0.88	0.86	0.20	0.80	0.57	0.31	0.91	0.85	0.13
Avail Cap(c_a), veh/h	324	2778	876	183	2305	710	145	722	322	190	804	364
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.63	0.63	0.63	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	55.6	25.8	10.1	71.6	39.0	11.7	75.4	67.7	65.6	70.6	64.4	56.4
Incr Delay (d2), s/veh	0.9	0.8	0.3	31.6	4.4	0.6	6.2	1.3	1.0	40.3	6.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.1	21.1	4.5	11.9	31.5	5.9	5.3	8.0	3.8	14.1	16.2	2.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	56.5	26.6	10.4	103.2	43.5	12.3	81.6	69.0	66.6	110.9	71.1	56.6
LnGrp LOS	E	C	B	F	D	B	F	E	E	F	E	E
Approach Vol, veh/h		2063			2268			348			725	
Approach Delay, s/veh		26.2			45.4			71.1			79.9	
Approach LOS		C			D			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	35.0	78.7	23.0	23.3	20.7	92.9	13.5	32.9				
Change Period (Y+Rc), s	5.9	* 5.9	* 5.8	* 5.8	* 5.7	5.9	* 5.8	* 5.6				
Max Green Setting (Gmax), s	15.0	* 73	* 17	* 32	* 16	71.5	* 13	* 36				
Max Q Clear Time (g_c+I1), s	7.0	58.0	17.5	11.5	15.0	42.4	8.0	24.5				
Green Ext Time (p_c), s	0.0	11.4	0.0	1.5	0.0	16.7	0.0	2.8				
Intersection Summary												
HCM 6th Ctrl Delay				44.3								
HCM 6th LOS				D								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

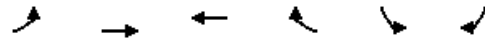
HCM 6th Signalized Intersection Summary
8: Florida Ave & Busch Blvd

2030 Build Alt 2 - AM
04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  		 	  			  		 	 	
Traffic Volume (veh/h)	169	1401	414	295	1984	218	157	720	367	317	1191	58
Future Volume (veh/h)	169	1401	414	295	1984	218	157	720	367	317	1191	58
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1870	1856	1885	1870	1841	1841	1885	1870	1870
Adj Flow Rate, veh/h	172	1430	0	301	2024	222	160	735	374	323	1215	59
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	1	2	3	1	2	4	4	1	2	2
Cap, veh/h	127	1752		343	1896	768	118	1357	576	370	1102	491
Arrive On Green	0.07	0.34	0.00	0.20	0.75	0.75	0.07	0.27	0.27	0.11	0.31	0.31
Sat Flow, veh/h	1781	5106	1598	3456	5066	1598	1781	5025	1560	3483	3554	1585
Grp Volume(v), veh/h	172	1430	0	301	2024	222	160	735	374	323	1215	59
Grp Sat Flow(s),veh/h/ln	1781	1702	1598	1728	1689	1598	1781	1675	1560	1742	1777	1585
Q Serve(g_s), s	11.4	40.9	0.0	13.5	59.9	6.4	10.6	20.0	11.3	14.6	49.6	3.3
Cycle Q Clear(g_c), s	11.4	40.9	0.0	13.5	59.9	6.4	10.6	20.0	11.3	14.6	49.6	3.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	127	1752		343	1896	768	118	1357	576	370	1102	491
V/C Ratio(X)	1.36	0.82		0.88	1.07	0.29	1.36	0.54	0.65	0.87	1.10	0.12
Avail Cap(c_a), veh/h	127	1752		354	1896	768	118	1357	576	440	1102	491
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.48	0.48	0.48	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	74.3	47.9	0.0	63.1	20.1	9.3	74.7	49.9	20.6	70.4	55.2	23.5
Incr Delay (d2), s/veh	202.5	4.3	0.0	11.3	36.3	0.5	205.4	0.4	2.6	15.4	59.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	19.8	24.7	0.0	8.6	23.5	3.5	18.7	13.1	11.5	11.6	42.5	3.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	276.8	52.3	0.0	74.5	56.4	9.8	280.1	50.4	23.1	85.8	115.1	23.6
LnGrp LOS	F	D		E	F	A	F	D	C	F	F	C
Approach Vol, veh/h		1602	A		2547			1269			1597	
Approach Delay, s/veh		76.4			54.5			71.3			105.8	
Approach LOS		E			D			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	67.0	24.4	50.6	23.0	62.0	18.0	57.0				
Change Period (Y+Rc), s	* 6.6	* 7.1	7.4	7.4	* 7.1	* 7.1	7.4	7.4				
Max Green Setting (Gmax), s	* 11	* 60	20.2	40.0	* 16	* 55	10.6	49.6				
Max Q Clear Time (g_c+I1), s	13.4	61.9	16.6	22.0	15.5	42.9	12.6	51.6				
Green Ext Time (p_c), s	0.0	0.0	0.4	5.7	0.1	7.2	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			74.2									
HCM 6th LOS			E									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
 9: Busch Blvd & I-275 SB Ramps

2030 Build Alt 2 - AM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↑↑↑	↑↑↑	↵	↵	↵↵
Traffic Volume (veh/h)	341	1744	2022	730	196	475
Future Volume (veh/h)	341	1744	2022	730	196	475
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1856	1885	1826	1841
Adj Flow Rate, veh/h	363	1855	2151	0	209	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	3	1	5	4
Cap, veh/h	442	4020	2517		230	
Arrive On Green	0.50	1.00	0.66	0.00	0.13	0.00
Sat Flow, veh/h	1767	5274	5233	1598	1739	2745
Grp Volume(v), veh/h	363	1855	2151	0	209	0
Grp Sat Flow(s),veh/h/ln	1767	1702	1689	1598	1739	1373
Q Serve(g_s), s	27.9	0.0	52.9	0.0	19.0	0.0
Cycle Q Clear(g_c), s	27.9	0.0	52.9	0.0	19.0	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	442	4020	2517		230	
V/C Ratio(X)	0.82	0.46	0.85		0.91	
Avail Cap(c_a), veh/h	442	4020	2517		246	
HCM Platoon Ratio	2.00	2.00	1.33	1.33	1.00	1.00
Upstream Filter(I)	0.54	0.54	0.54	0.00	1.00	0.00
Uniform Delay (d), s/veh	37.0	0.0	22.6	0.0	68.5	0.0
Incr Delay (d2), s/veh	7.5	0.2	2.2	0.0	34.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	14.4	0.1	23.1	0.0	16.1	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	44.5	0.2	24.8	0.0	102.7	0.0
LnGrp LOS	D	A	C		F	
Approach Vol, veh/h		2218	2151	A	209	A
Approach Delay, s/veh		7.5	24.8		102.7	
Approach LOS		A	C		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	46.5	86.0			132.5	27.5
Change Period (Y+Rc), s	6.5	6.5			6.5	6.4
Max Green Setting (Gmax), s	38.5	79.5			124.5	22.6
Max Q Clear Time (g_c+I1), s	29.9	54.9			2.0	21.0
Green Ext Time (p_c), s	1.6	17.6			26.2	0.1

Intersection Summary

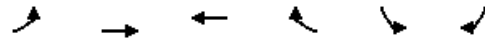
HCM 6th Ctrl Delay	20.0
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 10: Busch Blvd & I-275 NB Ramps

2030 Build Alt 2 - AM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑↑	↑↑↑	↗	↖↗	↖↗
Traffic Volume (veh/h)	278	1662	2253	299	307	499
Future Volume (veh/h)	278	1662	2253	299	307	499
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1870	1856	1841	1856
Adj Flow Rate, veh/h	296	1768	2397	0	327	531
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	2	3	4	3
Cap, veh/h	317	4133	3008		366	795
Arrive On Green	0.36	1.00	1.00	0.00	0.11	0.11
Sat Flow, veh/h	1767	5274	5274	1572	3401	2768
Grp Volume(v), veh/h	296	1768	2397	0	327	531
Grp Sat Flow(s),veh/h/ln	1767	1702	1702	1572	1700	1384
Q Serve(g_s), s	25.8	0.0	0.0	0.0	15.2	17.2
Cycle Q Clear(g_c), s	25.8	0.0	0.0	0.0	15.2	17.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	317	4133	3008		366	795
V/C Ratio(X)	0.93	0.43	0.80		0.89	0.67
Avail Cap(c_a), veh/h	370	4133	3008		366	795
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.21	0.00	1.00	1.00
Uniform Delay (d), s/veh	50.3	0.0	0.0	0.0	70.5	50.3
Incr Delay (d2), s/veh	27.4	0.3	0.5	0.0	23.7	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	17.4	0.2	0.2	0.0	12.5	14.9
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	77.7	0.3	0.5	0.0	94.2	52.7
LnGrp LOS	E	A	A		F	D
Approach Vol, veh/h		2064	2397	A	858	
Approach Delay, s/veh		11.4	0.5		68.6	
Approach LOS		B	A		E	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	35.2	100.8			136.0	24.0
Change Period (Y+Rc), s	6.5	6.5			6.5	6.8
Max Green Setting (Gmax), s	33.5	89.5			129.5	17.2
Max Q Clear Time (g_c+I1), s	27.8	2.0			2.0	19.2
Green Ext Time (p_c), s	0.9	44.6			23.4	0.0

Intersection Summary

HCM 6th Ctrl Delay	15.7
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 11: Nebraska Ave & Busch Blvd

2030 Build Alt 2 - AM
 04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	87	1652	230	231	2283	69	142	662	237	66	1128	127
Future Volume (veh/h)	87	1652	230	231	2283	69	142	662	237	66	1128	127
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1870	1870	1826	1870	1841	1796	1826	1841	1841	1870	1856
Adj Flow Rate, veh/h	93	1757	245	246	2429	73	151	704	0	70	1200	135
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	2	2	5	2	4	7	5	4	4	2	3
Cap, veh/h	77	2176	676	164	3064	743	115	1163		87	1119	495
Arrive On Green	0.06	0.57	0.57	0.09	0.48	0.48	0.07	0.34	0.00	0.05	0.31	0.31
Sat Flow, veh/h	1739	5106	1585	1739	6434	1560	1711	3469	1560	1753	3554	1572
Grp Volume(v), veh/h	93	1757	245	246	2429	73	151	704	0	70	1200	135
Grp Sat Flow(s),veh/h/ln	1739	1702	1585	1739	1609	1560	1711	1735	1560	1753	1777	1572
Q Serve(g_s), s	7.1	44.0	11.7	15.1	50.8	4.1	10.8	27.1	0.0	6.3	50.4	9.5
Cycle Q Clear(g_c), s	7.1	44.0	11.7	15.1	50.8	4.1	10.8	27.1	0.0	6.3	50.4	9.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	77	2176	676	164	3064	743	115	1163		87	1119	495
V/C Ratio(X)	1.21	0.81	0.36	1.50	0.79	0.10	1.31	0.61		0.80	1.07	0.27
Avail Cap(c_a), veh/h	77	2176	676	164	3064	743	115	1163		119	1119	495
HCM Platoon Ratio	1.33	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	75.3	29.4	17.3	72.4	35.3	23.0	74.6	44.4	0.0	75.2	54.8	35.3
Incr Delay (d2), s/veh	159.7	2.9	1.3	253.7	2.2	0.3	187.4	0.9	0.0	16.8	48.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	10.9	22.7	7.2	28.8	27.2	2.8	17.5	17.3	0.0	5.8	40.2	6.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	235.0	32.2	18.6	326.1	37.4	23.3	262.0	45.3	0.0	92.0	103.2	35.6
LnGrp LOS	F	C	B	F	D	C	F	D		F	F	D
Approach Vol, veh/h		2095			2748			855	A		1405	
Approach Delay, s/veh		39.7			62.9			83.5			96.2	
Approach LOS		D			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.0	83.6	15.2	61.2	22.0	75.6	18.4	58.0				
Change Period (Y+Rc), s	6.9	7.0	* 7.2	* 7.6	6.9	7.0	* 7.6	* 7.6				
Max Green Setting (Gmax), s	7.1	63.0	* 11	* 50	15.1	55.0	* 11	* 50				
Max Q Clear Time (g_c+I1), s	9.1	52.8	8.3	29.1	17.1	46.0	12.8	52.4				
Green Ext Time (p_c), s	0.0	9.1	0.0	4.6	0.0	7.1	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	65.1
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Arterial Level of Service: EB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
	II	45	22.0	12.3	34.3	0.20	21.2	D
Dale Mabry Hwy NB Ra	II	45	23.3	4.6	27.9	0.21	27.6	C
N Himes Ave	II	45	19.0	18.9	37.9	0.17	16.6	E
Twin Lakes Blvd	II	45	43.9	6.1	50.0	0.50	35.9	A
Orange Grove Dr	II	45	25.9	3.8	29.7	0.25	30.2	B
N Armenia Ave	II	45	29.7	30.7	60.4	0.30	17.9	D
N Boulevard	II	45	79.8	35.0	114.8	1.00	31.3	B
Florida Ave	II	40	47.3	37.6	84.9	0.51	21.6	D
I-275 SB Ramps	II	40	21.9	1.8	23.7	0.19	28.9	B
I-275 NB Ramps	II	40	21.3	2.9	24.2	0.19	27.6	C
Nebraska Ave	II	40	14.6	66.2	80.8	0.13	5.6	F
Total	II		348.7	219.9	568.6	3.65	23.1	C

Arterial Level of Service: WB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Nebraska Ave	II	40	27.0	58.3	85.3	0.25	10.3	F
I-275 NB Ramps	II	40	14.6	20.5	35.1	0.13	13.0	F
I-275 SB Ramps	II	40	21.3	52.0	73.3	0.19	9.1	F
Florida Ave	II	40	21.9	62.9	84.8	0.19	8.1	F
N Boulevard	II	40	47.3	4.1	51.4	0.51	35.6	A
N Armenia Ave	II	45	79.8	2.7	82.5	1.00	43.5	A
Orange Grove Dr	II	45	29.7	17.3	47.0	0.30	22.9	C
Mossvale Ln	II	45	25.9	10.0	35.9	0.25	25.0	C
N Himes Ave	II	45	43.9	2.3	46.2	0.50	38.9	A
Dale Mabry Hwy NB Ra	II	45	19.0	7.6	26.6	0.17	23.6	C
Dale Mabry Hwy SB Ra	II	45	23.3	21.5	44.8	0.21	17.2	D
Total	II		353.7	259.2	612.9	3.69	21.7	D

HCM 6th Signalized Intersection Summary
 1: Busch Blvd & Dale Mabry Hwy SB Ramps

2030 Build Alt2 - PM
 04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	230	2002	0	0	2470	0	0	5	17	404	5	38
Future Volume (veh/h)	230	2002	0	0	2470	0	0	5	17	404	5	38
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	0	1900	1900	1900	1856	1900	1841
Adj Flow Rate, veh/h	237	2064	0	0	2546	0	0	5	18	420	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	1	1	0	0	0	0	3	0	4
Cap, veh/h	243	3670	0	0	2791	0	0	44	38	462	0	
Arrive On Green	0.14	0.72	0.00	0.00	0.72	0.00	0.00	0.02	0.02	0.13	0.00	0.00
Sat Flow, veh/h	1781	5274	0	0	5486	0	0	1900	1610	3534	0	1560
Grp Volume(v), veh/h	237	2064	0	0	2546	0	0	5	18	420	0	0
Grp Sat Flow(s),veh/h/ln	1781	1702	0	0	1716	0	0	1900	1610	1767	0	1560
Q Serve(g_s), s	22.5	32.4	0.0	0.0	68.5	0.0	0.0	0.4	1.9	19.9	0.0	0.0
Cycle Q Clear(g_c), s	22.5	32.4	0.0	0.0	68.5	0.0	0.0	0.4	1.9	19.9	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.00	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	243	3670	0	0	2791	0	0	44	38	462	0	
V/C Ratio(X)	0.97	0.56	0.00	0.00	0.91	0.00	0.00	0.11	0.48	0.91	0.00	
Avail Cap(c_a), veh/h	243	3670	0	0	2791	0	0	67	57	491	0	
HCM Platoon Ratio	1.00	1.00	1.00	1.33	1.33	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	73.1	11.3	0.0	0.0	20.4	0.0	0.0	81.3	82.0	72.9	0.0	0.0
Incr Delay (d2), s/veh	50.5	0.6	0.0	0.0	5.8	0.0	0.0	1.1	9.1	20.1	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	19.6	17.0	0.0	0.0	30.2	0.0	0.0	0.4	1.6	15.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	123.6	11.9	0.0	0.0	26.2	0.0	0.0	82.4	91.1	93.0	0.0	0.0
LnGrp LOS	F	B	A	A	C	A	A	F	F	F	A	
Approach Vol, veh/h		2301			2546			23			420	A
Approach Delay, s/veh		23.4			26.2			89.2			93.0	
Approach LOS		C			C			F			F	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	30.0	99.0		12.4		129.0		28.6				
Change Period (Y+Rc), s	6.8	6.8		* 8.4		6.8		6.4				
Max Green Setting (Gmax), s	23.2	88.8		* 6		118.8		23.6				
Max Q Clear Time (g_c+I1), s	24.5	70.5		3.9		34.4		21.9				
Green Ext Time (p_c), s	0.0	17.0		0.0		46.7		0.3				

Intersection Summary

HCM 6th Ctrl Delay	30.6
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [SWR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
2: Busch Blvd & Dale Mabry Hwy NB Ramps

2030 Build Alt2 - PM
04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↗↗↗	↖↖↖	↗	↖↖	↗
Traffic Volume (veh/h)	132	2291	2592	584	182	289
Future Volume (veh/h)	132	2291	2592	584	182	289
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	140	2437	2757	0	194	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	2	2	1	1	1
Cap, veh/h	160	4340	3685		244	
Arrive On Green	0.09	0.85	1.00	0.00	0.07	0.00
Sat Flow, veh/h	1810	5274	5274	1598	3483	1598
Grp Volume(v), veh/h	140	2437	2757	0	194	0
Grp Sat Flow(s),veh/h/ln	1810	1702	1702	1598	1742	1598
Q Serve(g_s), s	13.0	23.3	0.0	0.0	9.3	0.0
Cycle Q Clear(g_c), s	13.0	23.3	0.0	0.0	9.3	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	160	4340	3685		244	
V/C Ratio(X)	0.88	0.56	0.75		0.79	
Avail Cap(c_a), veh/h	167	4340	3685		615	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.51	0.00	1.00	0.00
Uniform Delay (d), s/veh	76.6	3.7	0.0	0.0	77.8	0.0
Incr Delay (d2), s/veh	36.2	0.5	0.7	0.0	5.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.1	9.6	0.5	0.0	7.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	112.8	4.2	0.7	0.0	83.6	0.0
LnGrp LOS	F	A	A		F	
Approach Vol, veh/h		2577	2757	A	194	A
Approach Delay, s/veh		10.1	0.7		83.6	
Approach LOS		B	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	21.8	129.5			151.3	18.7
Change Period (Y+Rc), s	6.8	6.8			6.8	6.8
Max Green Setting (Gmax), s	15.7	103.9			126.4	30.0
Max Q Clear Time (g_c+I1), s	15.0	2.0			25.3	11.3
Green Ext Time (p_c), s	0.0	82.8			69.2	0.6

Intersection Summary

HCM 6th Ctrl Delay	8.0
HCM 6th LOS	A

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.


























HCM 6th Signalized Intersection Summary
 3: N Himes Ave & Busch Blvd

2030 Build Alt2 - PM
 04/04/2018

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑↑	↑↑	↑↑↑	↑↑	↑
Traffic Volume (veh/h)	2140	333	213	2653	523	280
Future Volume (veh/h)	2140	333	213	2653	523	280
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1885	1870	1900	1885	1885
Adj Flow Rate, veh/h	2378	370	237	2948	581	311
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	1	2	0	1	1
Cap, veh/h	3037	1672	275	3705	717	329
Arrive On Green	1.00	1.00	0.16	1.00	0.21	0.21
Sat Flow, veh/h	5274	2812	3456	5358	3483	1598
Grp Volume(v), veh/h	2378	370	237	2948	581	311
Grp Sat Flow(s),veh/h/ln	1702	1406	1728	1729	1742	1598
Q Serve(g_s), s	0.0	0.0	11.4	0.0	27.0	32.6
Cycle Q Clear(g_c), s	0.0	0.0	11.4	0.0	27.0	32.6
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	3037	1672	275	3705	717	329
V/C Ratio(X)	0.78	0.22	0.86	0.80	0.81	0.95
Avail Cap(c_a), veh/h	3037	1672	323	3705	729	335
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.77	0.77	0.62	0.62	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	70.6	0.0	64.4	66.6
Incr Delay (d2), s/veh	1.6	0.2	11.8	1.2	6.6	34.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.8	13.1	8.0	0.7	18.5	38.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	1.6	0.2	82.4	1.2	70.9	101.4
LnGrp LOS	A	A	F	A	E	F
Approach Vol, veh/h	2748			3185	892	
Approach Delay, s/veh	1.4			7.2	81.5	
Approach LOS	A			A	F	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		128.2		41.8	20.3	107.9
Change Period (Y+Rc), s		6.8		* 6.8	6.8	6.8
Max Green Setting (Gmax), s		120.8		* 36	15.9	98.1
Max Q Clear Time (g_c+I1), s		2.0		34.6	13.4	2.0
Green Ext Time (p_c), s		101.2		0.3	0.1	72.2
Intersection Summary						
HCM 6th Ctrl Delay			14.6			
HCM 6th LOS			B			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

HCM 6th Signalized Intersection Summary
 4: Twin Lakes Blvd/Mossvale Ln & Busch Blvd

2030 Build Alt2 - PM
 04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  						 	
Traffic Volume (veh/h)	6	2326	88	83	2622	1	243	0	292	0	0	1
Future Volume (veh/h)	6	2326	88	83	2622	1	243	0	292	0	0	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1856	1900	1870	1870	1885	0	1885	1900	1900	1900
Adj Flow Rate, veh/h	6	2373	90	85	2676	1	248	0	298	0	0	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	2	3	0	2	2	1	0	1	0	0	0
Cap, veh/h	113	3207	988	103	3828	1	268	0	0	0	0	3
Arrive On Green	1.00	1.00	1.00	0.11	1.00	1.00	0.15	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	112	5106	1572	1810	5272	2	1795	248		0	0	1610
Grp Volume(v), veh/h	6	2373	90	85	1728	949	248	103.2		0	0	1
Grp Sat Flow(s),veh/h/ln	112	1702	1572	1810	1702	1870	1795	F		0	0	1610
Q Serve(g_s), s	0.0	0.0	0.0	7.8	0.0	0.0	23.2			0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.0	0.0	0.0	7.8	0.0	0.0	23.2			0.0	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00			0.00		1.00
Lane Grp Cap(c), veh/h	113	3207	988	103	2472	1358	268			0	0	3
V/C Ratio(X)	0.05	0.74	0.09	0.83	0.70	0.70	0.93			0.00	0.00	0.38
Avail Cap(c_a), veh/h	113	3207	988	117	2472	1358	296			0	0	57
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00			1.00	1.00	1.00
Upstream Filter(I)	0.55	0.55	0.55	0.56	0.56	0.56	1.00			0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	74.5	0.0	0.0	71.4			0.0	0.0	84.8
Incr Delay (d2), s/veh	0.5	0.9	0.1	22.5	0.9	1.7	31.9			0.0	0.0	72.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.5	0.0	6.5	0.6	1.2	19.0			0.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.5	0.9	0.1	97.0	0.9	1.7	103.2			0.0	0.0	157.4
LnGrp LOS	A	A	A	F	A	A	F			A	A	F
Approach Vol, veh/h		2469			2762							1
Approach Delay, s/veh		0.8			4.2							157.4
Approach LOS		A			A							F
Timer - Assigned Phs	1	2	3	4		6						
Phs Duration (G+Y+Rc), s	16.7	113.8	32.4	7.2		130.4						
Change Period (Y+Rc), s	* 7	* 7	7.0	6.9		* 7						
Max Green Setting (Gmax), s	* 11	* 97	28.0	6.0		* 1.2E2						
Max Q Clear Time (g_c+I1), s	9.8	2.0	25.2	2.1		2.0						
Green Ext Time (p_c), s	0.0	66.7	0.2	0.0		83.0						
Intersection Summary												
HCM 6th Ctrl Delay				7.2								
HCM 6th LOS				A								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
5: Busch Blvd & Orange Grove Dr

2030 Build Alt2 - PM
04/04/2018



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations	↗	↑↑↑	↑↑↑	↘	↙	↘
Traffic Volume (veh/h)	239	2379	2481	94	65	225
Future Volume (veh/h)	239	2379	2481	94	65	225
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1885	1870	1870	1870	1856	1900
Adj Flow Rate, veh/h	244	2428	2532	96	66	230
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	2	2	2	3	0
Cap, veh/h	262	4199	3248	1008	168	153
Arrive On Green	0.29	1.00	1.00	1.00	0.10	0.10
Sat Flow, veh/h	1795	5274	5274	1585	1767	1610
Grp Volume(v), veh/h	244	2428	2532	96	66	230
Grp Sat Flow(s),veh/h/ln	1795	1702	1702	1585	1767	1610
Q Serve(g_s), s	22.5	0.0	0.0	0.0	6.0	16.2
Cycle Q Clear(g_c), s	22.5	0.0	0.0	0.0	6.0	16.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	262	4199	3248	1008	168	153
V/C Ratio(X)	0.93	0.58	0.78	0.10	0.39	1.50
Avail Cap(c_a), veh/h	340	4199	3248	1008	168	153
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.59	0.59	0.43	0.43	1.00	1.00
Uniform Delay (d), s/veh	59.3	0.0	0.0	0.0	72.3	76.9
Incr Delay (d2), s/veh	18.7	0.3	0.8	0.1	1.5	255.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	14.2	0.2	0.5	0.0	5.0	28.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	78.0	0.3	0.8	0.1	73.8	332.4
LnGrp LOS	E	A	A	A	E	F
Approach Vol, veh/h		2672	2628		296	
Approach Delay, s/veh		7.4	0.8		274.7	
Approach LOS		A	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	31.7	115.3			147.0	23.0
Change Period (Y+Rc), s	6.8	* 7.2			* 7.2	6.8
Max Green Setting (Gmax), s	32.2	* 1E2			* 1.4E2	16.2
Max Q Clear Time (g_c+I1), s	24.5	2.0			2.0	18.2
Green Ext Time (p_c), s	0.4	74.0			83.1	0.0

Intersection Summary

























HCM 6th Ctrl Delay	18.5
HCM 6th LOS	B

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.































HCM 6th Signalized Intersection Summary
6: N Armenia Ave & Busch Blvd

2030 Build Alt2 - PM
04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	222	2020	202	190	1953	46	316	477	186	100	304	306
Future Volume (veh/h)	222	2020	202	190	1953	46	316	477	186	100	304	306
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1900	1885	1870	1900	1870	1885	1885	1900	1885	1870
Adj Flow Rate, veh/h	236	2149	215	202	2078	49	336	507	198	106	323	326
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	0	1	2	0	2	1	1	0	1	2
Cap, veh/h	361	2653	998	221	2247	708	346	592	461	131	411	503
Arrive On Green	0.40	1.00	1.00	0.12	0.44	0.44	0.10	0.17	0.17	0.05	0.11	0.11
Sat Flow, veh/h	1781	5106	1610	1795	5106	1610	3456	3582	1598	1810	3582	1585
Grp Volume(v), veh/h	236	2149	215	202	2078	49	336	507	198	106	323	326
Grp Sat Flow(s),veh/h/ln	1781	1702	1610	1795	1702	1610	1728	1791	1598	1810	1791	1585
Q Serve(g_s), s	18.2	0.0	0.0	18.9	65.3	3.0	16.5	23.4	13.4	5.8	14.9	0.0
Cycle Q Clear(g_c), s	18.2	0.0	0.0	18.9	65.3	3.0	16.5	23.4	13.4	5.8	14.9	0.0
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	361	2653	998	221	2247	708	346	592	461	131	411	503
V/C Ratio(X)	0.65	0.81	0.22	0.92	0.92	0.07	0.97	0.86	0.43	0.81	0.79	0.65
Avail Cap(c_a), veh/h	361	2653	998	221	2247	708	346	731	523	163	611	591
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.81	0.81	0.81	0.44	0.44	0.44	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	45.8	0.0	0.0	73.7	44.9	27.5	76.3	69.0	30.6	78.4	73.2	49.9
Incr Delay (d2), s/veh	3.4	2.3	0.4	21.5	3.9	0.1	40.9	8.3	0.6	20.9	4.1	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.0	1.0	0.2	13.4	33.2	2.2	14.3	16.9	9.1	9.1	11.5	18.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.2	2.3	0.4	95.1	48.8	27.6	117.1	77.3	31.3	99.4	77.3	51.8
LnGrp LOS	D	A	A	F	D	C	F	E	C	F	E	D
Approach Vol, veh/h		2600			2329			1041			755	
Approach Delay, s/veh		6.4			52.4			81.4			69.4	
Approach LOS		A			D			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	40.5	80.9	14.4	34.2	27.0	94.4	23.0	25.6				
Change Period (Y+Rc), s	* 6.1	* 6.1	6.0	6.1	* 6.1	* 6.1	6.0	6.1				
Max Green Setting (Gmax), s	* 25	* 75	11.3	34.7	* 21	* 79	17.0	29.0				
Max Q Clear Time (g_c+I1), s	20.2	67.3	7.8	25.4	20.9	2.0	18.5	16.9				
Green Ext Time (p_c), s	0.3	6.3	0.1	2.7	0.0	34.8	0.0	2.6				
Intersection Summary												
HCM 6th Ctrl Delay			41.0									
HCM 6th LOS			D									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
7: N Boulevard & Busch Blvd

2030 Build Alt2 - PM
04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (veh/h)	82	2085	118	114	2108	79	111	361	91	112	233	42
Future Volume (veh/h)	82	2085	118	114	2108	79	111	361	91	112	233	42
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1870	1856	1870	1870	1856	1900	1870	1856	1885	1841	1826
Adj Flow Rate, veh/h	84	2128	120	116	2151	81	113	368	93	114	238	43
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	5	2	3	2	2	3	0	2	3	1	4	5
Cap, veh/h	163	2951	909	136	2863	882	205	453	201	134	310	137
Arrive On Green	0.09	0.58	0.58	0.08	0.56	0.56	0.11	0.13	0.13	0.07	0.09	0.09
Sat Flow, veh/h	1739	5106	1572	1781	5106	1572	1810	3554	1572	1795	3497	1547
Grp Volume(v), veh/h	84	2128	120	116	2151	81	113	368	93	114	238	43
Grp Sat Flow(s),veh/h/ln	1739	1702	1572	1781	1702	1572	1810	1777	1572	1795	1749	1547
Q Serve(g_s), s	7.4	48.3	3.1	10.3	51.2	2.5	9.5	16.1	7.3	10.0	10.6	3.4
Cycle Q Clear(g_c), s	7.4	48.3	3.1	10.3	51.2	2.5	9.5	16.1	7.3	10.0	10.6	3.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	163	2951	909	136	2863	882	205	453	201	134	310	137
V/C Ratio(X)	0.52	0.72	0.13	0.85	0.75	0.09	0.55	0.81	0.46	0.85	0.77	0.31
Avail Cap(c_a), veh/h	163	2951	909	146	2863	882	205	711	314	134	710	314
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.45	0.45	0.45	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.0	24.4	4.8	73.0	26.7	7.2	67.1	67.9	44.7	73.2	71.3	45.9
Incr Delay (d2), s/veh	5.2	0.7	0.1	32.0	1.9	0.2	1.9	4.0	1.7	36.9	4.0	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.5	23.4	3.6	9.9	28.0	2.6	8.0	12.1	5.4	10.0	8.6	3.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	74.2	25.1	4.9	105.0	28.6	7.4	69.0	71.9	46.4	110.0	75.3	47.2
LnGrp LOS	E	C	A	F	C	A	E	E	D	F	E	D
Approach Vol, veh/h		2332			2348			574			395	
Approach Delay, s/veh		25.9			31.6			67.2			82.3	
Approach LOS		C			C			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.7	95.6	17.7	26.0	17.9	98.4	23.9	19.8				
Change Period (Y+Rc), s	* 5.7	5.9	* 5.8	* 5.6	* 5.7	5.9	* 5.8	* 5.6				
Max Green Setting (Gmax), s	* 15	78.1	* 12	* 32	* 13	80.0	* 11	* 33				
Max Q Clear Time (g_c+I1), s	9.4	53.2	12.0	18.1	12.3	50.3	11.5	12.6				
Green Ext Time (p_c), s	0.0	18.1	0.0	2.3	0.0	20.0	0.0	1.5				
Intersection Summary												
HCM 6th Ctrl Delay			36.4									
HCM 6th LOS			D									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
8: Florida Ave & Busch Blvd

2030 Build Alt2 - PM
04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	151	1850	287	299	1957	300	202	1247	482	373	789	143
Future Volume (veh/h)	151	1850	287	299	1957	300	202	1247	482	373	789	143
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1870	1856	1870	1870	1885	1885	1870	1856	1885	1885	1856
Adj Flow Rate, veh/h	154	1888	0	305	1997	306	206	1272	492	381	805	146
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	2	3	2	2	1	1	2	3	1	1	3
Cap, veh/h	139	2039		595	2530	948	186	1280	665	340	876	385
Arrive On Green	0.08	0.40	0.00	0.34	0.99	0.99	0.10	0.25	0.25	0.10	0.24	0.24
Sat Flow, veh/h	1767	5106	1572	3456	5106	1598	1795	5106	1572	3483	3582	1572
Grp Volume(v), veh/h	154	1888	0	305	1997	306	206	1272	492	381	805	146
Grp Sat Flow(s),veh/h/ln	1767	1702	1572	1728	1702	1598	1795	1702	1572	1742	1791	1572
Q Serve(g_s), s	13.4	59.9	0.0	12.0	2.7	0.4	17.6	42.3	15.8	16.6	37.2	13.1
Cycle Q Clear(g_c), s	13.4	59.9	0.0	12.0	2.7	0.4	17.6	42.3	15.8	16.6	37.2	13.1
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	139	2039		595	2530	948	186	1280	665	340	876	385
V/C Ratio(X)	1.11	0.93		0.51	0.79	0.32	1.11	0.99	0.74	1.12	0.92	0.38
Avail Cap(c_a), veh/h	139	2039		595	2530	948	186	1280	665	340	876	385
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.47	0.47	0.47	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	78.3	48.6	0.0	50.1	0.4	0.2	76.2	63.6	28.8	76.7	62.5	53.5
Incr Delay (d2), s/veh	107.4	8.7	0.0	0.4	1.2	0.4	98.0	23.7	4.4	85.4	14.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	16.0	35.1	0.0	7.1	1.0	0.4	19.8	28.3	19.1	17.7	25.5	9.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	185.7	57.4	0.0	50.4	1.6	0.7	174.2	87.3	33.2	162.1	77.0	54.1
LnGrp LOS	F	E		D	A	A	F	F	C	F	E	D
Approach Vol, veh/h		2042	A		2608			1970			1332	
Approach Delay, s/veh		67.0			7.2			82.8			98.8	
Approach LOS		E			A			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	91.5	24.0	50.0	36.5	75.0	25.0	49.0				
Change Period (Y+Rc), s	* 6.6	* 7.1	7.4	7.4	* 7.1	* 7.1	7.4	7.4				
Max Green Setting (Gmax), s	* 13	* 69	16.6	42.6	* 14	* 68	17.6	41.6				
Max Q Clear Time (g_c+I1), s	15.4	4.7	18.6	44.3	14.0	61.9	19.6	39.2				
Green Ext Time (p_c), s	0.0	30.7	0.0	0.0	0.1	5.0	0.0	1.3				

Intersection Summary

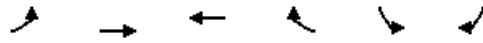
HCM 6th Ctrl Delay	56.7
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 9: Busch Blvd & I-275 SB Ramps

2030 Build Alt2 - PM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↙	↑↑↑	↑↑↑	↘	↙	↘
Traffic Volume (veh/h)	396	2309	1900	655	318	656
Future Volume (veh/h)	396	2309	1900	655	318	656
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1870	1885	1856	1841
Adj Flow Rate, veh/h	404	2356	1939	0	324	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	2	2	1	3	4
Cap, veh/h	468	3726	2178		344	
Arrive On Green	0.53	1.00	0.85	0.00	0.19	0.00
Sat Flow, veh/h	1767	5274	5274	1598	1767	2745
Grp Volume(v), veh/h	404	2356	1939	0	324	0
Grp Sat Flow(s),veh/h/ln	1767	1702	1702	1598	1767	1373
Q Serve(g_s), s	33.7	0.0	39.5	0.0	30.7	0.0
Cycle Q Clear(g_c), s	33.7	0.0	39.5	0.0	30.7	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	468	3726	2178		344	
V/C Ratio(X)	0.86	0.63	0.89		0.94	
Avail Cap(c_a), veh/h	468	3726	2178		360	
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.24	0.24	0.50	0.00	1.00	0.00
Uniform Delay (d), s/veh	37.3	0.0	10.1	0.0	67.5	0.0
Incr Delay (d2), s/veh	4.6	0.2	3.2	0.0	32.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	14.9	0.1	7.6	0.0	24.0	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	41.9	0.2	13.2	0.0	100.3	0.0
LnGrp LOS	D	A	B		F	
Approach Vol, veh/h		2760	1939	A	324	A
Approach Delay, s/veh		6.3	13.2		100.3	
Approach LOS		A	B		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	51.5	79.0			130.5	39.5
Change Period (Y+Rc), s	6.5	6.5			6.5	6.4
Max Green Setting (Gmax), s	43.5	72.5			122.5	34.6
Max Q Clear Time (g_c+I1), s	35.7	41.5			2.0	32.7
Green Ext Time (p_c), s	1.7	18.4			48.2	0.3

Intersection Summary

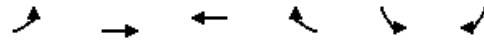
HCM 6th Ctrl Delay	15.0
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 10: Busch Blvd & I-275 NB Ramps

2030 Build Alt2 - PM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↑↑↑	↑↑↑	↵	↵↵	↵↵
Traffic Volume (veh/h)	582	2045	2196	424	244	359
Future Volume (veh/h)	582	2045	2196	424	244	359
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1856	1870	1885
Adj Flow Rate, veh/h	613	2153	2312	0	257	378
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	1	3	2	1
Cap, veh/h	516	4211	2558		335	1087
Arrive On Green	0.58	1.00	0.99	0.00	0.10	0.10
Sat Flow, veh/h	1781	5274	5316	1572	3456	2812
Grp Volume(v), veh/h	613	2153	2312	0	257	378
Grp Sat Flow(s),veh/h/ln	1781	1702	1716	1572	1728	1406
Q Serve(g_s), s	49.2	0.0	4.4	0.0	12.3	0.0
Cycle Q Clear(g_c), s	49.2	0.0	4.4	0.0	12.3	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	516	4211	2558		335	1087
V/C Ratio(X)	1.19	0.51	0.90		0.77	0.35
Avail Cap(c_a), veh/h	516	4211	2558		431	1165
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.68	0.68	0.27	0.00	1.00	1.00
Uniform Delay (d), s/veh	35.8	0.0	0.3	0.0	74.9	37.0
Incr Delay (d2), s/veh	98.0	0.3	1.7	0.0	7.3	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	41.9	0.2	1.1	0.0	9.9	9.7
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	133.7	0.3	2.0	0.0	82.2	37.2
LnGrp LOS	F	A	A		F	D
Approach Vol, veh/h		2766	2312	A	635	
Approach Delay, s/veh		29.9	2.0		55.4	
Approach LOS		C	A		E	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	55.7	91.0			146.7	23.3
Change Period (Y+Rc), s	6.5	6.5			6.5	6.8
Max Green Setting (Gmax), s	44.5	84.5			135.5	21.2
Max Q Clear Time (g_c+I1), s	51.2	6.4			2.0	14.3
Green Ext Time (p_c), s	0.0	39.3			38.6	2.2
Intersection Summary						
HCM 6th Ctrl Delay			21.4			
HCM 6th LOS			C			

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 11: Nebraska Ave & Busch Blvd

2030 Build Alt2 - PM
 04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	185	1939	165	194	2269	107	141	959	264	158	783	210
Future Volume (veh/h)	185	1939	165	194	2269	107	141	959	264	158	783	210
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1870	1841	1870	1900	1885	1856	1811	1811	1870	1870
Adj Flow Rate, veh/h	197	2063	176	206	2414	119	150	1020	0	168	833	223
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.90	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	2	4	2	0	1	3	6	6	2	2
Cap, veh/h	147	2360	738	145	2998	750	169	1004		130	953	425
Arrive On Green	0.17	0.93	0.93	0.08	0.47	0.47	0.09	0.28	0.00	0.08	0.27	0.27
Sat Flow, veh/h	1767	5066	1585	1753	6434	1610	1795	3526	1535	1725	3554	1585
Grp Volume(v), veh/h	197	2063	176	206	2414	119	150	1020	0	168	833	223
Grp Sat Flow(s),veh/h/ln	1767	1689	1585	1753	1609	1610	1795	1763	1535	1725	1777	1585
Q Serve(g_s), s	14.1	25.5	1.7	14.1	54.5	6.1	14.0	48.4	0.0	12.8	38.1	20.4
Cycle Q Clear(g_c), s	14.1	25.5	1.7	14.1	54.5	6.1	14.0	48.4	0.0	12.8	38.1	20.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	147	2360	738	145	2998	750	169	1004		130	953	425
V/C Ratio(X)	1.34	0.87	0.24	1.42	0.81	0.16	0.89	1.02		1.29	0.87	0.52
Avail Cap(c_a), veh/h	147	2360	738	145	2998	750	174	1004		130	953	425
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.83	0.83	0.83	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.9	4.0	3.2	78.0	38.8	18.8	76.1	60.8	0.0	78.6	59.5	53.0
Incr Delay (d2), s/veh	187.7	4.1	0.6	222.9	2.4	0.5	36.1	32.5	0.0	177.6	9.1	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	20.8	5.3	1.1	24.3	29.3	5.1	12.8	34.6	0.0	19.3	25.0	12.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	258.6	8.1	3.8	300.9	41.2	19.3	112.2	93.3	0.0	256.2	68.6	54.2
LnGrp LOS	F	A	A	F	D	B	F	F		F	E	D
Approach Vol, veh/h		2436			2739			1170	A		1224	
Approach Delay, s/veh		28.0			59.8			95.7			91.7	
Approach LOS		C			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.0	86.6	20.4	56.0	21.0	86.6	23.2	53.2				
Change Period (Y+Rc), s	6.9	7.0	* 7.6	* 7.6	6.9	7.0	* 7.2	* 7.6				
Max Green Setting (Gmax), s	14.1	66.0	* 13	* 48	14.1	66.0	* 17	* 45				
Max Q Clear Time (g_c+I1), s	16.1	56.5	14.8	50.4	16.1	27.5	16.0	40.1				
Green Ext Time (p_c), s	0.0	8.6	0.0	0.0	0.0	23.8	0.0	2.4				

Intersection Summary

HCM 6th Ctrl Delay	60.3
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Arterial Level of Service: EB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
	II	45	22.0	12.2	34.2	0.20	21.3	D
Dale Mabry Hwy NB Ra	II	45	23.3	5.3	28.6	0.21	26.9	C
N Himes Ave	II	45	19.0	18.4	37.4	0.17	16.8	E
Twin Lakes Blvd	II	45	43.9	19.7	63.6	0.50	28.2	B
Orange Grove Dr	II	45	25.9	6.1	32.0	0.25	28.0	C
N Armenia Ave	II	45	29.7	37.1	66.8	0.30	16.1	E
N Boulevard	II	45	79.8	32.6	112.4	1.00	31.9	B
Florida Ave	II	40	47.2	57.9	105.1	0.51	17.4	D
I-275 SB Ramps	II	40	21.9	7.2	29.1	0.19	23.5	C
I-275 NB Ramps	II	40	21.3	3.2	24.5	0.19	27.3	C
Nebraska Ave	II	40	14.6	97.9	112.5	0.13	4.1	F
Total	II		348.6	297.6	646.2	3.65	20.3	D

Arterial Level of Service: WB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Nebraska Ave	II	40	27.0	63.1	90.1	0.25	9.8	F
I-275 NB Ramps	II	40	14.6	11.4	26.0	0.13	17.5	D
I-275 SB Ramps	II	40	21.3	27.3	48.6	0.19	13.7	E
Florida Ave	II	40	21.9	29.5	51.4	0.19	13.3	E
N Boulevard	II	40	47.2	41.1	88.3	0.51	20.7	D
N Armenia Ave	II	45	79.8	48.4	128.2	1.00	28.0	B
Orange Grove Dr	II	45	29.7	6.6	36.3	0.30	29.7	B
Mossvale Ln	II	45	25.9	33.0	58.9	0.25	15.2	E
N Himes Ave	II	45	43.9	7.8	51.7	0.50	34.7	B
Dale Mabry Hwy NB Ra	II	45	19.0	19.4	38.4	0.17	16.4	E
Dale Mabry Hwy SB Ra	II	45	23.3	28.6	51.9	0.21	14.8	E
Total	II		353.6	316.2	669.8	3.69	19.8	D

HCM 6th Signalized Intersection Summary
 1: Busch Blvd & Dale Mabry Hwy SB Ramps

2040 Build Alt 2 - AM
 04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	245	2588	1	9	1694	0	0	0	0	512	7	28
Future Volume (veh/h)	245	2588	1	9	1694	0	0	0	0	512	7	28
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1885	1885	1856	1856	0	1900	1900	1900	1870	1900	1796
Adj Flow Rate, veh/h	253	2668	1	9	1746	0	0	0	0	533	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	1	1	3	3	0	0	0	0	2	0	7
Cap, veh/h	273	4005	2	27	2664	0	0	1	1	584	0	
Arrive On Green	0.15	0.75	0.75	1.00	1.00	0.00	0.00	0.00	0.00	0.16	0.00	0.00
Sat Flow, veh/h	1767	5314	2	8	4939	0	0	1900	1610	3563	0	1522
Grp Volume(v), veh/h	253	1723	946	631	1124	0	0	0	0	533	0	0
Grp Sat Flow(s),veh/h/ln	1767	1716	1885	1722	1537	0	0	1900	1610	1781	0	1522
Q Serve(g_s), s	22.6	39.7	39.8	0.0	0.0	0.0	0.0	0.0	0.0	23.5	0.0	0.0
Cycle Q Clear(g_c), s	22.6	39.7	39.8	0.0	0.0	0.0	0.0	0.0	0.0	23.5	0.0	0.0
Prop In Lane	1.00		0.00	0.01		0.00	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	273	2586	1420	981	1711	0	0	1	1	584	0	
V/C Ratio(X)	0.93	0.67	0.67	0.64	0.66	0.00	0.00	0.00	0.00	0.91	0.00	
Avail Cap(c_a), veh/h	289	2586	1420	981	1711	0	0	71	60	637	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	0.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	66.7	9.8	9.8	0.0	0.0	0.0	0.0	0.0	0.0	65.8	0.0	0.0
Incr Delay (d2), s/veh	33.3	1.4	2.5	3.2	2.0	0.0	0.0	0.0	0.0	16.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	18.4	19.3	21.4	1.6	0.9	0.0	0.0	0.0	0.0	17.9	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	100.0	11.1	12.2	3.2	2.0	0.0	0.0	0.0	0.0	82.6	0.0	0.0
LnGrp LOS	F	B	B	A	A	A	A	A	A	F	A	
Approach Vol, veh/h		2922			1755			0			533	A
Approach Delay, s/veh		19.2			2.4			0.0			82.6	
Approach LOS		B			A						F	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	31.5	95.9		0.0		127.4		32.6				
Change Period (Y+Rc), s	6.8	6.8		* 8.4		6.8		6.4				
Max Green Setting (Gmax), s	26.2	70.8		* 6		103.8		28.6				
Max Q Clear Time (g_c+I1), s	24.6	2.0		0.0		41.8		25.5				
Green Ext Time (p_c), s	0.1	31.9		0.0		51.7		0.7				

Intersection Summary

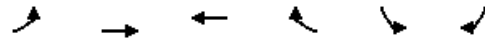
HCM 6th Ctrl Delay	20.0
HCM 6th LOS	C

Notes

User approved volume balancing among the lanes for turning movement.
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [SWR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 2: Busch Blvd & Dale Mabry Hwy NB Ramps

2040 Build Alt 2 - AM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑↑	↑↑↑	↗	↖↗	↗
Traffic Volume (veh/h)	47	3053	2005	445	148	189
Future Volume (veh/h)	47	3053	2005	445	148	189
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1781	1885	1900	1856	1826	1885
Adj Flow Rate, veh/h	48	3115	2046	0	151	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	8	1	0	3	5	1
Cap, veh/h	246	4405	4076		200	
Arrive On Green	0.03	0.86	1.00	0.00	0.06	0.00
Sat Flow, veh/h	1697	5316	5358	1572	3374	1598
Grp Volume(v), veh/h	48	3115	2046	0	151	0
Grp Sat Flow(s),veh/h/ln	1697	1716	1729	1572	1687	1598
Q Serve(g_s), s	0.8	35.4	0.0	0.0	7.1	0.0
Cycle Q Clear(g_c), s	0.8	35.4	0.0	0.0	7.1	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	246	4405	4076		200	
V/C Ratio(X)	0.20	0.71	0.50		0.76	
Avail Cap(c_a), veh/h	275	4405	4076		552	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.77	0.00	1.00	0.00
Uniform Delay (d), s/veh	2.5	4.2	0.0	0.0	74.1	0.0
Incr Delay (d2), s/veh	0.4	1.0	0.3	0.0	5.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.4	12.5	0.2	0.0	5.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	2.9	5.2	0.3	0.0	79.9	0.0
LnGrp LOS	A	A	A		E	
Approach Vol, veh/h		3163	2046	A	151	A
Approach Delay, s/veh		5.2	0.3		79.9	
Approach LOS		A	A		E	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	11.2	132.5			143.7	16.3
Change Period (Y+Rc), s	6.8	6.8			6.8	6.8
Max Green Setting (Gmax), s	7.2	106.2			120.2	26.2
Max Q Clear Time (g_c+I1), s	2.8	2.0			37.4	9.1
Green Ext Time (p_c), s	0.0	50.4			76.7	0.4

Intersection Summary

HCM 6th Ctrl Delay	5.4
HCM 6th LOS	A

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.




























HCM 6th Signalized Intersection Summary
 3: N Himes Ave & Busch Blvd

2040 Build Alt 2 - AM
 04/04/2018

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑↑	↑↑	↑↑↑	↑↑	↑
Traffic Volume (veh/h)	2394	807	500	2010	440	137
Future Volume (veh/h)	2394	807	500	2010	440	137
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1885	1885	1856	1856	1900
Adj Flow Rate, veh/h	2468	832	515	2072	454	141
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	1	1	3	3	0
Cap, veh/h	2888	2000	561	3896	500	235
Arrive On Green	1.00	1.00	0.16	0.77	0.15	0.15
Sat Flow, veh/h	5274	2812	3483	5233	3428	1610
Grp Volume(v), veh/h	2468	832	515	2072	454	141
Grp Sat Flow(s),veh/h/ln	1702	1406	1742	1689	1714	1610
Q Serve(g_s), s	0.0	0.0	23.3	25.6	20.9	13.1
Cycle Q Clear(g_c), s	0.0	0.0	23.3	25.6	20.9	13.1
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2888	2000	561	3896	500	235
V/C Ratio(X)	0.85	0.42	0.92	0.53	0.91	0.60
Avail Cap(c_a), veh/h	2888	2000	614	3896	540	254
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.60	0.60	0.78	0.78	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	66.1	7.2	67.3	64.0
Incr Delay (d2), s/veh	2.1	0.4	14.7	0.4	18.1	2.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.0	24.1	16.2	12.1	15.7	17.4
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	2.1	0.4	80.7	7.6	85.4	66.8
LnGrp LOS	A	A	F	A	F	E
Approach Vol, veh/h	3300			2587	595	
Approach Delay, s/veh	1.7			22.2	81.0	
Approach LOS	A			C	F	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		129.9		30.1	32.6	97.3
Change Period (Y+Rc), s		6.8		* 6.8	6.8	6.8
Max Green Setting (Gmax), s		121.2		* 25	28.2	86.2
Max Q Clear Time (g_c+I1), s		27.6		22.9	25.3	2.0
Green Ext Time (p_c), s		49.5		0.5	0.5	73.9
Intersection Summary						
HCM 6th Ctrl Delay			17.1			
HCM 6th LOS			B			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

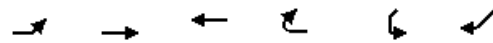
HCM 6th Signalized Intersection Summary
 4: Twin Lakes Blvd/Mossvale Ln & Busch Blvd

2040 Build Alt 2 - AM
 04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  						  	
Traffic Volume (veh/h)	3	2236	292	370	2421	0	89	0	128	3	0	0
Future Volume (veh/h)	3	2236	292	370	2421	0	89	0	128	3	0	0
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1900	1885	1870	0	1885	0	1900	1900	1900	1900
Adj Flow Rate, veh/h	3	2282	298	378	2470	0	91	0	131	3	0	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	2	0	1	2	0	1	0	0	0	0	0
Cap, veh/h	134	3292	1038	395	4639	0	0	0	0	8	0	0
Arrive On Green	0.86	0.86	0.86	0.44	1.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	137	5106	1610	1795	5274	0		0		1809	0	0
Grp Volume(v), veh/h	3	2282	298	378	2470	0		0.0		3	0	0
Grp Sat Flow(s),veh/h/ln	137	1702	1610	1795	1702	0				1810	0	0
Q Serve(g_s), s	0.5	25.1	5.6	32.6	0.0	0.0				0.3	0.0	0.0
Cycle Q Clear(g_c), s	0.5	25.1	5.6	32.6	0.0	0.0				0.3	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.00				1.00		0.00
Lane Grp Cap(c), veh/h	134	3292	1038	395	4639	0				8	0	0
V/C Ratio(X)	0.02	0.69	0.29	0.96	0.53	0.00				0.35	0.00	0.00
Avail Cap(c_a), veh/h	134	3292	1038	426	4639	0				68	0	0
HCM Platoon Ratio	1.33	1.33	1.33	2.00	2.00	1.00				1.00	1.00	1.00
Upstream Filter(I)	0.41	0.41	0.41	0.26	0.26	0.00				1.00	0.00	0.00
Uniform Delay (d), s/veh	4.1	5.8	4.5	44.1	0.0	0.0				79.4	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.5	0.3	13.2	0.1	0.0				23.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0				0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	7.0	3.1	16.1	0.1	0.0				0.3	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.2	6.3	4.7	57.3	0.1	0.0				102.7	0.0	0.0
LnGrp LOS	A	A	A	E	A	A				F	A	A
Approach Vol, veh/h		2583			2848							3
Approach Delay, s/veh		6.2			7.7							102.7
Approach LOS		A			A							F
Timer - Assigned Phs	1	2		4		6						
Phs Duration (G+Y+Rc), s	42.2	110.2		7.6		152.4						
Change Period (Y+Rc), s	* 7	* 7		6.9		* 7						
Max Green Setting (Gmax), s	* 38	* 78		6.0		* 1.2E2						
Max Q Clear Time (g_c+I1), s	34.6	27.1		2.3		2.0						
Green Ext Time (p_c), s	0.6	41.5		0.0		79.6						
Intersection Summary												
HCM 6th Ctrl Delay				7.0								
HCM 6th LOS				A								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
5: Busch Blvd & Orange Grove Dr

2040 Build Alt 2 - AM
04/04/2018



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations	↖	↑↑↑	↑↑↑	↗	↖	↗
Traffic Volume (veh/h)	132	2235	2321	113	140	470
Future Volume (veh/h)	132	2235	2321	113	140	470
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1870	1856	1900	1900	1900
Adj Flow Rate, veh/h	142	2403	2496	122	151	505
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	0	2	3	0	0	0
Cap, veh/h	194	3281	2806	892	489	435
Arrive On Green	0.05	0.64	1.00	1.00	0.27	0.27
Sat Flow, veh/h	1810	5274	5233	1610	1810	1610
Grp Volume(v), veh/h	142	2403	2496	122	151	505
Grp Sat Flow(s),veh/h/ln	1810	1702	1689	1610	1810	1610
Q Serve(g_s), s	5.3	50.8	0.0	0.0	10.6	43.2
Cycle Q Clear(g_c), s	5.3	50.8	0.0	0.0	10.6	43.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	194	3281	2806	892	489	435
V/C Ratio(X)	0.73	0.73	0.89	0.14	0.31	1.16
Avail Cap(c_a), veh/h	237	3281	2806	892	489	435
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.49	0.49	0.56	0.56	1.00	1.00
Uniform Delay (d), s/veh	18.2	19.3	0.0	0.0	46.5	58.4
Incr Delay (d2), s/veh	4.4	0.7	2.7	0.2	0.4	95.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.1	23.8	1.3	0.1	8.5	41.5
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	22.6	20.0	2.7	0.2	46.9	153.8
LnGrp LOS	C	C	A	A	D	F
Approach Vol, veh/h		2545	2618		656	
Approach Delay, s/veh		20.2	2.6		129.2	
Approach LOS		C	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	14.2	95.8			110.0	50.0
Change Period (Y+Rc), s	6.8	* 7.2			* 7.2	6.8
Max Green Setting (Gmax), s	11.2	* 85			* 1E2	43.2
Max Q Clear Time (g_c+I1), s	7.3	2.0			52.8	45.2
Green Ext Time (p_c), s	0.1	64.0			40.3	0.0

Intersection Summary

HCM 6th Ctrl Delay	24.6
HCM 6th LOS	C

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.































HCM 6th Signalized Intersection Summary
6: N Armenia Ave & Busch Blvd

2040 Build Alt 2 - AM
04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	96	1888	391	298	2100	14	199	279	190	110	480	135
Future Volume (veh/h)	96	1888	391	298	2100	14	199	279	190	110	480	135
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1870	1856	1900	1885	1856	1841	1870	1885	1900
Adj Flow Rate, veh/h	98	1927	399	304	2143	14	203	285	194	112	490	138
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	1	2	3	0	1	3	4	2	1	0
Cap, veh/h	117	2093	767	376	2814	894	244	635	610	228	563	359
Arrive On Green	0.13	0.82	0.82	0.21	0.56	0.56	0.07	0.18	0.18	0.05	0.16	0.16
Sat Flow, veh/h	1781	5106	1598	1781	5066	1610	3483	3526	1560	1781	3582	1610
Grp Volume(v), veh/h	98	1927	399	304	2143	14	203	285	194	112	490	138
Grp Sat Flow(s),veh/h/ln	1781	1702	1598	1781	1689	1610	1742	1763	1560	1781	1791	1610
Q Serve(g_s), s	8.6	44.3	4.8	26.0	52.2	0.6	9.2	11.5	1.9	7.5	21.4	11.7
Cycle Q Clear(g_c), s	8.6	44.3	4.8	26.0	52.2	0.6	9.2	11.5	1.9	7.5	21.4	11.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	117	2093	767	376	2814	894	244	635	610	228	563	359
V/C Ratio(X)	0.84	0.92	0.52	0.81	0.76	0.02	0.83	0.45	0.32	0.49	0.87	0.38
Avail Cap(c_a), veh/h	137	2093	767	376	2814	894	244	721	648	228	649	397
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.65	0.65	0.65	0.38	0.38	0.38	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.7	12.5	2.7	60.0	27.4	15.9	73.5	58.5	19.0	55.2	65.8	52.9
Incr Delay (d2), s/veh	22.2	5.6	1.6	5.1	0.8	0.0	21.1	0.5	0.3	1.6	11.1	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.1	9.4	2.7	15.6	24.8	0.4	8.4	9.0	6.8	1.0	16.0	8.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	90.9	18.1	4.4	65.1	28.2	16.0	94.6	59.0	19.3	56.9	77.0	53.5
LnGrp LOS	F	B	A	E	C	B	F	E	B	E	E	D
Approach Vol, veh/h		2424			2461			682			740	
Approach Delay, s/veh		18.8			32.7			58.3			69.6	
Approach LOS		B			C			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.6	95.0	13.5	34.9	39.9	71.7	17.2	31.2				
Change Period (Y+Rc), s	* 6.1	* 6.1	6.0	6.1	* 6.1	* 6.1	6.0	6.1				
Max Green Setting (Gmax), s	* 12	* 83	7.5	32.7	* 30	* 66	11.2	29.0				
Max Q Clear Time (g_c+I1), s	10.6	54.2	9.5	13.5	28.0	46.3	11.2	23.4				
Green Ext Time (p_c), s	0.0	19.4	0.0	2.3	0.2	14.2	0.0	1.8				
Intersection Summary												
HCM 6th Ctrl Delay			34.4									
HCM 6th LOS			C									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
7: N Boulevard & Busch Blvd

2040 Build Alt 2 - AM
04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  			 			 	
Traffic Volume (veh/h)	73	1990	200	166	2200	156	70	230	55	180	530	40
Future Volume (veh/h)	73	1990	200	166	2200	156	70	230	55	180	530	40
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1900	1885	1856	1841	1870	1900	1900	1856	1870	1900
Adj Flow Rate, veh/h	75	2052	206	171	2268	161	72	237	57	186	546	41
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	0	1	3	4	2	0	0	3	2	0
Cap, veh/h	304	2681	845	183	2305	710	90	435	194	190	635	288
Arrive On Green	0.17	0.53	0.53	0.10	0.46	0.46	0.05	0.12	0.12	0.11	0.18	0.18
Sat Flow, veh/h	1781	5106	1610	1795	5066	1560	1781	3610	1610	1767	3554	1610
Grp Volume(v), veh/h	75	2052	206	171	2268	161	72	237	57	186	546	41
Grp Sat Flow(s),veh/h/ln	1781	1702	1610	1795	1689	1560	1781	1805	1610	1767	1777	1610
Q Serve(g_s), s	5.8	51.1	8.2	15.1	70.7	6.7	6.4	9.9	5.2	16.8	23.9	3.4
Cycle Q Clear(g_c), s	5.8	51.1	8.2	15.1	70.7	6.7	6.4	9.9	5.2	16.8	23.9	3.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	304	2681	845	183	2305	710	90	435	194	190	635	288
V/C Ratio(X)	0.25	0.77	0.24	0.93	0.98	0.23	0.80	0.54	0.29	0.98	0.86	0.14
Avail Cap(c_a), veh/h	304	2681	845	183	2305	710	145	722	322	190	804	364
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.48	0.48	0.48	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	57.4	30.2	11.3	71.3	43.0	11.8	75.2	66.2	64.1	71.2	63.7	55.4
Incr Delay (d2), s/veh	0.9	1.0	0.3	47.5	15.3	0.7	6.0	1.1	0.8	58.8	7.7	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	4.5	25.4	5.1	14.3	41.1	4.6	5.6	8.2	3.9	16.1	17.1	2.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	58.4	31.2	11.6	118.8	58.4	12.6	81.2	67.3	65.0	130.0	71.4	55.6
LnGrp LOS	E	C	B	F	E	B	F	E	E	F	E	E
Approach Vol, veh/h		2333			2600			366			773	
Approach Delay, s/veh		30.4			59.5			69.7			84.7	
Approach LOS		C			E			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	33.2	78.7	23.0	25.1	22.0	89.9	13.9	34.2				
Change Period (Y+Rc), s	5.9	* 5.9	* 5.8	* 5.8	* 5.7	5.9	* 5.8	* 5.6				
Max Green Setting (Gmax), s	15.0	* 73	* 17	* 32	* 16	71.5	* 13	* 36				
Max Q Clear Time (g_c+I1), s	7.8	72.7	18.8	11.9	17.1	53.1	8.4	25.9				
Green Ext Time (p_c), s	0.0	0.1	0.0	1.6	0.0	13.8	0.0	2.8				
Intersection Summary												
HCM 6th Ctrl Delay			52.1									
HCM 6th LOS			D									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
8: Florida Ave & Busch Blvd

2040 Build Alt 2 - AM
04/04/2018

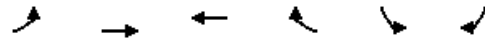
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	194	1556	475	324	2184	239	177	813	415	354	1331	65
Future Volume (veh/h)	194	1556	475	324	2184	239	177	813	415	354	1331	65
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1870	1856	1885	1870	1841	1841	1885	1870	1870
Adj Flow Rate, veh/h	198	1588	0	331	2229	244	181	830	423	361	1358	66
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	2	2	1	2	3	1	2	4	4	1	2	2
Cap, veh/h	127	1752		468	2079	841	118	1306	617	405	1102	491
Arrive On Green	0.07	0.34	0.00	0.27	0.82	0.82	0.07	0.26	0.26	0.12	0.31	0.31
Sat Flow, veh/h	1781	5106	1598	3456	5066	1598	1781	5025	1560	3483	3554	1585
Grp Volume(v), veh/h	198	1588	0	331	2229	244	181	830	423	361	1358	66
Grp Sat Flow(s),veh/h/ln	1781	1702	1598	1728	1689	1598	1781	1675	1560	1742	1777	1585
Q Serve(g_s), s	11.4	47.4	0.0	13.8	65.7	5.1	10.6	23.4	11.1	16.3	49.6	3.9
Cycle Q Clear(g_c), s	11.4	47.4	0.0	13.8	65.7	5.1	10.6	23.4	11.1	16.3	49.6	3.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	127	1752		468	2079	841	118	1306	617	405	1102	491
V/C Ratio(X)	1.56	0.91		0.71	1.07	0.29	1.53	0.64	0.69	0.89	1.23	0.13
Avail Cap(c_a), veh/h	127	1752		468	2079	841	118	1306	617	440	1102	491
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.51	0.51	0.51	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	74.3	50.1	0.0	55.5	14.3	5.8	74.7	52.5	20.2	69.7	55.2	26.9
Incr Delay (d2), s/veh	286.8	8.3	0.0	2.5	38.1	0.4	278.1	1.0	3.2	18.9	112.8	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	24.6	28.8	0.0	8.2	17.9	2.6	22.5	15.0	13.2	13.0	55.8	3.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	361.1	58.4	0.0	58.0	52.4	6.3	352.8	53.5	23.4	88.6	168.0	27.0
LnGrp LOS	F	E		E	F	A	F	D	C	F	F	C
Approach Vol, veh/h		1786	A		2804			1434			1785	
Approach Delay, s/veh		92.0			49.1			82.4			146.7	
Approach LOS		F			D			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	18.0	72.8	26.0	49.0	28.8	62.0	18.0	57.0				
Change Period (Y+Rc), s	* 6.6	* 7.1	7.4	7.4	* 7.1	* 7.1	7.4	7.4				
Max Green Setting (Gmax), s	* 11	* 60	20.2	40.0	* 16	* 55	10.6	49.6				
Max Q Clear Time (g_c+I1), s	13.4	67.7	18.3	25.4	15.8	49.4	12.6	51.6				
Green Ext Time (p_c), s	0.0	0.0	0.3	6.0	0.1	4.1	0.0	0.0				

Intersection Summary												
HCM 6th Ctrl Delay	87.3											
HCM 6th LOS	F											

Notes
 * HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 9: Busch Blvd & I-275 SB Ramps

2040 Build Alt 2 - AM
 04/04/2018



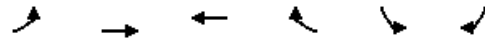
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↑↑↑	↑↑↑	↵	↵	↵↵
Traffic Volume (veh/h)	381	1944	2230	794	213	517
Future Volume (veh/h)	381	1944	2230	794	213	517
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1856	1885	1826	1841
Adj Flow Rate, veh/h	405	2068	2372	0	227	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	3	1	5	4
Cap, veh/h	289	3962	2897		249	
Arrive On Green	0.33	1.00	1.00	0.00	0.14	0.00
Sat Flow, veh/h	1767	5274	5233	1598	1739	2745
Grp Volume(v), veh/h	405	2068	2372	0	227	0
Grp Sat Flow(s),veh/h/ln	1767	1702	1689	1598	1739	1373
Q Serve(g_s), s	26.2	0.0	0.0	0.0	20.6	0.0
Cycle Q Clear(g_c), s	26.2	0.0	0.0	0.0	20.6	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	289	3962	2897		249	
V/C Ratio(X)	1.40	0.52	0.82		0.91	
Avail Cap(c_a), veh/h	289	3962	2897		289	
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.40	0.40	0.41	0.00	1.00	0.00
Uniform Delay (d), s/veh	53.8	0.0	0.0	0.0	67.5	0.0
Incr Delay (d2), s/veh	189.3	0.2	1.1	0.0	29.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	35.5	0.1	0.5	0.0	16.8	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	243.1	0.2	1.1	0.0	97.1	0.0
LnGrp LOS	F	A	A		F	
Approach Vol, veh/h		2473	2372	A	227	A
Approach Delay, s/veh		40.0	1.1		97.1	
Approach LOS		D	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	32.7	98.0			130.7	29.3
Change Period (Y+Rc), s	6.5	6.5			6.5	6.4
Max Green Setting (Gmax), s	22.5	91.5			120.5	26.6
Max Q Clear Time (g_c+I1), s	28.2	2.0			2.0	22.6
Green Ext Time (p_c), s	0.0	44.1			34.2	0.4

Intersection Summary						
HCM 6th Ctrl Delay			24.4			
HCM 6th LOS			C			

Notes
 Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 10: Busch Blvd & I-275 NB Ramps

2040 Build Alt 2 - AM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↵	↑↑↑	↑↑↑	↵	↵↵	↵↵
Traffic Volume (veh/h)	308	1849	2504	332	320	520
Future Volume (veh/h)	308	1849	2504	332	320	520
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1870	1856	1841	1856
Adj Flow Rate, veh/h	328	1967	2664	0	340	553
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	2	2	3	4	3
Cap, veh/h	326	4101	2952		387	825
Arrive On Green	0.37	1.00	1.00	0.00	0.11	0.11
Sat Flow, veh/h	1767	5274	5274	1572	3401	2768
Grp Volume(v), veh/h	328	1967	2664	0	340	553
Grp Sat Flow(s),veh/h/ln	1767	1702	1702	1572	1700	1384
Q Serve(g_s), s	29.5	0.0	0.0	0.0	15.8	18.2
Cycle Q Clear(g_c), s	29.5	0.0	0.0	0.0	15.8	18.2
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	326	4101	2952		387	825
V/C Ratio(X)	1.01	0.48	0.90		0.88	0.67
Avail Cap(c_a), veh/h	326	4101	2952		387	825
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.80	0.80	0.09	0.00	1.00	1.00
Uniform Delay (d), s/veh	50.5	0.0	0.0	0.0	69.8	49.3
Incr Delay (d2), s/veh	46.3	0.3	0.5	0.0	20.4	2.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	21.0	0.2	0.2	0.0	12.7	15.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	96.8	0.3	0.5	0.0	90.3	51.6
LnGrp LOS	F	A	A		F	D
Approach Vol, veh/h		2295	2664	A	893	
Approach Delay, s/veh		14.1	0.5		66.3	
Approach LOS		B	A		E	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	36.0	99.0			135.0	25.0
Change Period (Y+Rc), s	6.5	6.5			6.5	6.8
Max Green Setting (Gmax), s	29.5	92.5			128.5	18.2
Max Q Clear Time (g_c+I1), s	31.5	2.0			2.0	20.2
Green Ext Time (p_c), s	0.0	56.4			30.3	0.0

Intersection Summary

HCM 6th Ctrl Delay	15.9
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 11: Nebraska Ave & Busch Blvd

2040 Build Alt 2 - AM
 04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	95	1824	250	248	2529	74	164	762	273	75	1270	143
Future Volume (veh/h)	95	1824	250	248	2529	74	164	762	273	75	1270	143
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1870	1870	1826	1870	1841	1796	1826	1841	1841	1870	1856
Adj Flow Rate, veh/h	101	1940	266	264	2690	79	174	811	0	80	1351	152
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	5	2	2	5	2	4	7	5	4	4	2	3
Cap, veh/h	77	2176	676	164	3064	743	115	1141		98	1119	565
Arrive On Green	0.09	0.85	0.85	0.09	0.48	0.48	0.07	0.33	0.00	0.06	0.31	0.31
Sat Flow, veh/h	1739	5106	1585	1739	6434	1560	1711	3469	1560	1753	3554	1572
Grp Volume(v), veh/h	101	1940	266	264	2690	79	174	811	0	80	1351	152
Grp Sat Flow(s),veh/h/ln	1739	1702	1585	1739	1609	1560	1711	1735	1560	1753	1777	1572
Q Serve(g_s), s	7.1	37.3	5.2	15.1	60.2	4.5	10.8	32.8	0.0	7.2	50.4	8.9
Cycle Q Clear(g_c), s	7.1	37.3	5.2	15.1	60.2	4.5	10.8	32.8	0.0	7.2	50.4	8.9
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	77	2176	676	164	3064	743	115	1141		98	1119	565
V/C Ratio(X)	1.31	0.89	0.39	1.61	0.88	0.11	1.51	0.71		0.81	1.21	0.27
Avail Cap(c_a), veh/h	77	2176	676	164	3064	743	115	1141		119	1119	565
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.82	0.82	0.82	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	72.9	9.5	5.5	72.4	37.7	23.1	74.6	47.0	0.0	74.7	54.8	25.1
Incr Delay (d2), s/veh	196.4	5.0	1.4	300.3	3.9	0.3	267.6	2.1	0.0	24.4	101.7	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.0	8.5	3.3	32.2	31.9	3.1	21.6	20.6	0.0	7.0	53.7	6.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	269.3	14.6	6.9	372.8	41.7	23.4	342.2	49.1	0.0	99.1	156.5	25.4
LnGrp LOS	F	B	A	F	D	C	F	D		F	F	C
Approach Vol, veh/h		2307			3033			985	A		1583	
Approach Delay, s/veh		24.8			70.0			100.9			141.0	
Approach LOS		C			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.0	83.6	16.2	60.2	22.0	75.6	18.4	58.0				
Change Period (Y+Rc), s	6.9	7.0	* 7.2	* 7.6	6.9	7.0	* 7.6	* 7.6				
Max Green Setting (Gmax), s	7.1	63.0	* 11	* 50	15.1	55.0	* 11	* 50				
Max Q Clear Time (g_c+I1), s	9.1	62.2	9.2	34.8	17.1	39.3	12.8	52.4				
Green Ext Time (p_c), s	0.0	0.8	0.0	4.8	0.0	12.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	74.9
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Arterial Level of Service: EB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
	II	45	22.0	18.5	40.5	0.20	17.9	D
Dale Mabry Hwy NB Ra	II	45	23.3	4.9	28.2	0.21	27.3	C
N Himes Ave	II	45	19.0	24.7	43.7	0.17	14.4	E
Twin Lakes Blvd	II	45	43.9	9.1	53.0	0.50	33.9	B
Orange Grove Dr	II	45	25.9	3.8	29.7	0.25	30.2	B
N Armenia Ave	II	45	29.7	39.3	69.0	0.30	15.6	E
N Boulevard	II	45	79.8	41.3	121.1	1.00	29.6	B
Florida Ave	II	40	47.3	36.5	83.8	0.51	21.8	D
I-275 SB Ramps	II	40	21.9	3.2	25.1	0.19	27.3	C
I-275 NB Ramps	II	40	21.3	3.1	24.4	0.19	27.4	C
Nebraska Ave	II	40	14.6	96.9	111.5	0.13	4.1	F
Total	II		348.7	281.3	630.0	3.65	20.8	D

Arterial Level of Service: WB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Nebraska Ave	II	40	27.0	84.6	111.6	0.25	7.9	F
I-275 NB Ramps	II	40	14.6	24.4	39.0	0.13	11.7	F
I-275 SB Ramps	II	40	21.3	32.5	53.8	0.19	12.4	F
Florida Ave	II	40	21.9	117.1	139.0	0.19	4.9	F
N Boulevard	II	40	47.3	8.6	55.9	0.51	32.7	B
N Armenia Ave	II	45	79.8	3.5	83.3	1.00	43.1	A
Orange Grove Dr	II	45	29.7	23.9	53.6	0.30	20.1	D
Mossvale Ln	II	45	25.9	12.5	38.4	0.25	23.3	C
N Himes Ave	II	45	43.9	3.0	46.9	0.50	38.3	A
Dale Mabry Hwy NB Ra	II	45	19.0	9.4	28.4	0.17	22.1	C
Dale Mabry Hwy SB Ra	II	45	23.3	28.4	51.7	0.21	14.9	E
Total	II		353.7	347.9	701.6	3.69	18.9	D

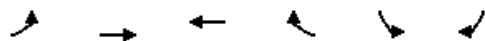
HCM 6th Signalized Intersection Summary
 1: Busch Blvd & Dale Mabry Hwy SB Ramps

2040 Build Alt 2 - PM
 04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NEL	NET	NER	SWL	SWT	SWR
Lane Configurations												
Traffic Volume (veh/h)	251	2285	0	0	2752	0	0	5	19	471	6	45
Future Volume (veh/h)	251	2285	0	0	2752	0	0	5	19	471	6	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1885	1885	0	1900	1900	1900	1856	1900	1841
Adj Flow Rate, veh/h	259	2356	0	0	2837	0	0	5	20	490	0	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	1	1	0	0	0	0	3	0	4
Cap, veh/h	243	3624	0	0	2744	0	0	46	39	491	0	
Arrive On Green	0.14	0.71	0.00	0.00	1.00	0.00	0.00	0.02	0.02	0.14	0.00	0.00
Sat Flow, veh/h	1781	5274	0	0	5486	0	0	1900	1610	3534	0	1560
Grp Volume(v), veh/h	259	2356	0	0	2837	0	0	5	20	490	0	0
Grp Sat Flow(s),veh/h/ln	1781	1702	0	0	1716	0	0	1900	1610	1767	0	1560
Q Serve(g_s), s	23.2	42.3	0.0	0.0	90.6	0.0	0.0	0.4	2.1	23.6	0.0	0.0
Cycle Q Clear(g_c), s	23.2	42.3	0.0	0.0	90.6	0.0	0.0	0.4	2.1	23.6	0.0	0.0
Prop In Lane	1.00		0.00	0.00		0.00	0.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	243	3624	0	0	2744	0	0	46	39	491	0	
V/C Ratio(X)	1.07	0.65	0.00	0.00	1.03	0.00	0.00	0.11	0.51	1.00	0.00	
Avail Cap(c_a), veh/h	243	3624	0	0	2744	0	0	67	57	491	0	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.00	1.00	0.00	0.00	1.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	73.4	13.3	0.0	0.0	0.0	0.0	0.0	81.1	81.9	73.2	0.0	0.0
Incr Delay (d2), s/veh	76.1	0.9	0.0	0.0	26.7	0.0	0.0	1.0	9.8	40.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	22.8	21.5	0.0	0.0	11.3	0.0	0.0	0.4	1.8	19.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	149.5	14.2	0.0	0.0	26.7	0.0	0.0	82.1	91.7	113.4	0.0	0.0
LnGrp LOS	F	B	A	A	F	A	A	F	F	F	A	
Approach Vol, veh/h		2615			2837			25			490	A
Approach Delay, s/veh		27.6			26.7			89.8			113.4	
Approach LOS		C			C			F			F	
Timer - Assigned Phs	1	2		4		6		8				
Phs Duration (G+Y+Rc), s	30.0	97.4		12.6		127.4		30.0				
Change Period (Y+Rc), s	6.8	6.8		* 8.4		6.8		6.4				
Max Green Setting (Gmax), s	23.2	88.8		* 6		118.8		23.6				
Max Q Clear Time (g_c+I1), s	25.2	92.6		4.1		44.3		25.6				
Green Ext Time (p_c), s	0.0	0.0		0.0		53.4		0.0				
Intersection Summary												
HCM 6th Ctrl Delay				34.5								
HCM 6th LOS				C								
Notes												
User approved volume balancing among the lanes for turning movement.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												
Unsignalized Delay for [SWR] is excluded from calculations of the approach delay and intersection delay.												

HCM 6th Signalized Intersection Summary
2: Busch Blvd & Dale Mabry Hwy NB Ramps

2040 Build Alt 2 - PM
04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑↑	↑↑↑	↗	↖↗	↗
Traffic Volume (veh/h)	147	2628	2888	650	199	316
Future Volume (veh/h)	147	2628	2888	650	199	316
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1900	1870	1870	1885	1885	1885
Adj Flow Rate, veh/h	156	2796	3072	0	212	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	0	2	2	1	1	1
Cap, veh/h	167	4312	3636		263	
Arrive On Green	0.09	0.84	1.00	0.00	0.08	0.00
Sat Flow, veh/h	1810	5274	5274	1598	3483	1598
Grp Volume(v), veh/h	156	2796	3072	0	212	0
Grp Sat Flow(s),veh/h/ln	1810	1702	1702	1598	1742	1598
Q Serve(g_s), s	14.6	32.0	0.0	0.0	10.2	0.0
Cycle Q Clear(g_c), s	14.6	32.0	0.0	0.0	10.2	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	167	4312	3636		263	
V/C Ratio(X)	0.93	0.65	0.84		0.81	
Avail Cap(c_a), veh/h	167	4312	3636		615	
HCM Platoon Ratio	1.00	1.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.34	0.00	1.00	0.00
Uniform Delay (d), s/veh	76.6	4.5	0.0	0.0	77.4	0.0
Incr Delay (d2), s/veh	50.4	0.8	0.9	0.0	5.8	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	14.0	12.8	0.5	0.0	8.4	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	127.1	5.3	0.9	0.0	83.1	0.0
LnGrp LOS	F	A	A		F	
Approach Vol, veh/h		2952	3072	A	212	A
Approach Delay, s/veh		11.7	0.9		83.1	
Approach LOS		B	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	22.5	127.9			150.4	19.6
Change Period (Y+Rc), s	6.8	6.8			6.8	6.8
Max Green Setting (Gmax), s	15.7	103.9			126.4	30.0
Max Q Clear Time (g_c+I1), s	16.6	2.0			34.0	12.2
Green Ext Time (p_c), s	0.0	91.9			77.6	0.6

Intersection Summary

HCM 6th Ctrl Delay	8.8
HCM 6th LOS	A

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 3: N Himes Ave & Busch Blvd

2040 Build Alt 2 - PM
 04/04/2018

	→	↘	↙	←	↖	↗
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑↑↑	↑↑	↑↑	↑↑↑	↑↑	↑
Traffic Volume (veh/h)	2455	372	230	2966	572	306
Future Volume (veh/h)	2455	372	230	2966	572	306
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)		1.00	1.00		1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach	No			No	No	
Adj Sat Flow, veh/h/ln	1870	1885	1870	1900	1885	1885
Adj Flow Rate, veh/h	2728	413	256	3296	636	340
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	1	2	0	1	1
Cap, veh/h	2987	1645	296	3686	729	335
Arrive On Green	1.00	1.00	0.09	0.71	0.21	0.21
Sat Flow, veh/h	5274	2812	3456	5358	3483	1598
Grp Volume(v), veh/h	2728	413	256	3296	636	340
Grp Sat Flow(s),veh/h/ln	1702	1406	1728	1729	1742	1598
Q Serve(g_s), s	0.0	0.0	12.4	85.8	30.0	35.6
Cycle Q Clear(g_c), s	0.0	0.0	12.4	85.8	30.0	35.6
Prop In Lane		1.00	1.00		1.00	1.00
Lane Grp Cap(c), veh/h	2987	1645	296	3686	729	335
V/C Ratio(X)	0.91	0.25	0.87	0.89	0.87	1.02
Avail Cap(c_a), veh/h	2987	1645	323	3686	729	335
HCM Platoon Ratio	2.00	2.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.66	0.66	0.50	0.50	1.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	76.8	19.5	65.0	67.2
Incr Delay (d2), s/veh	3.8	0.2	10.9	2.0	11.1	53.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.9	14.0	8.7	37.6	20.7	43.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	3.8	0.2	87.6	21.5	76.1	120.6
LnGrp LOS	A	A	F	C	E	F
Approach Vol, veh/h	3141			3552	976	
Approach Delay, s/veh	3.3			26.3	91.6	
Approach LOS	A			C	F	
Timer - Assigned Phs		2		4	5	6
Phs Duration (G+Y+Rc), s		127.6		42.4	21.3	106.3
Change Period (Y+Rc), s		6.8		* 6.8	6.8	6.8
Max Green Setting (Gmax), s		120.8		* 36	15.9	98.1
Max Q Clear Time (g_c+I1), s		87.8		37.6	14.4	2.0
Green Ext Time (p_c), s		32.4		0.0	0.1	83.6
Intersection Summary						
HCM 6th Ctrl Delay			25.2			
HCM 6th LOS			C			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

HCM 6th Signalized Intersection Summary
 4: Twin Lakes Blvd/Mossvale Ln & Busch Blvd

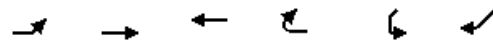
2040 Build Alt 2 - PM

04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	7	2653	101	90	2943	1	252	0	302	0	0	1
Future Volume (veh/h)	7	2653	101	90	2943	1	252	0	302	0	0	1
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1900	1870	1856	1900	1870	1870	1885	0	1885	1900	1900	1900
Adj Flow Rate, veh/h	7	2707	103	92	3003	1	257	0	308	0	0	1
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	0	2	3	0	2	2	1	0	1	0	0	0
Cap, veh/h	92	3169	976	110	3809	1	275	0	0	0	0	3
Arrive On Green	1.00	1.00	1.00	0.12	1.00	1.00	0.15	0.00	0.00	0.00	0.00	0.00
Sat Flow, veh/h	80	5106	1572	1810	5272	2	1795	257		0	0	1610
Grp Volume(v), veh/h	7	2707	103	92	1939	1065	257	108.6		0	0	1
Grp Sat Flow(s),veh/h/ln	80	1702	1572	1810	1702	1870	1795	F		0	0	1610
Q Serve(g_s), s	0.0	0.0	0.0	8.5	0.0	0.0	24.1			0.0	0.0	0.1
Cycle Q Clear(g_c), s	0.0	0.0	0.0	8.5	0.0	0.0	24.1			0.0	0.0	0.1
Prop In Lane	1.00		1.00	1.00		0.00	1.00			0.00		1.00
Lane Grp Cap(c), veh/h	92	3169	976	110	2459	1351	275			0	0	3
V/C Ratio(X)	0.08	0.85	0.11	0.84	0.79	0.79	0.94			0.00	0.00	0.38
Avail Cap(c_a), veh/h	92	3169	976	117	2459	1351	275			0	0	76
HCM Platoon Ratio	2.00	2.00	2.00	2.00	2.00	2.00	1.00			1.00	1.00	1.00
Upstream Filter(I)	0.32	0.32	0.32	0.37	0.37	0.37	1.00			0.00	0.00	1.00
Uniform Delay (d), s/veh	0.0	0.0	0.0	73.8	0.0	0.0	71.2			0.0	0.0	84.8
Incr Delay (d2), s/veh	0.5	1.0	0.1	17.6	1.0	1.8	37.5			0.0	0.0	72.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	0.0	0.6	0.0	6.3	0.6	1.2	20.1			0.0	0.0	0.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	0.5	1.0	0.1	91.5	1.0	1.8	108.6			0.0	0.0	157.4
LnGrp LOS	A	A	A	F	A	A	F			A	A	F
Approach Vol, veh/h		2817			3096							1
Approach Delay, s/veh		1.0			4.0							157.4
Approach LOS		A			A							F
Timer - Assigned Phs	1	2	3	4		6						
Phs Duration (G+Y+Rc), s	17.3	112.5	33.0	7.2		129.8						
Change Period (Y+Rc), s	* 7	* 7	7.0	6.9		* 7						
Max Green Setting (Gmax), s	* 11	* 97	26.0	8.0		* 1.2E2						
Max Q Clear Time (g_c+I1), s	10.5	2.0	26.1	2.1		2.0						
Green Ext Time (p_c), s	0.0	79.0	0.0	0.0		96.1						
Intersection Summary												
HCM 6th Ctrl Delay				7.0								
HCM 6th LOS				A								
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
5: Busch Blvd & Orange Grove Dr
































2040 Build Alt 2 - PM
04/04/2018



Movement	EBL	EBT	WBT	WBR	SWL	SWR
Lane Configurations	↵	↑↑↑	↑↑↑	↵	↵	↵
Traffic Volume (veh/h)	272	2683	2804	107	66	230
Future Volume (veh/h)	272	2683	2804	107	66	230
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1885	1870	1870	1870	1856	1900
Adj Flow Rate, veh/h	278	2738	2861	109	67	235
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	1	2	2	2	3	0
Cap, veh/h	295	4283	3240	1006	139	127
Arrive On Green	0.33	1.00	1.00	1.00	0.08	0.08
Sat Flow, veh/h	1795	5274	5274	1585	1767	1610
Grp Volume(v), veh/h	278	2738	2861	109	67	235
Grp Sat Flow(s),veh/h/ln	1795	1702	1702	1585	1767	1610
Q Serve(g_s), s	25.6	0.0	0.0	0.0	6.2	13.4
Cycle Q Clear(g_c), s	25.6	0.0	0.0	0.0	6.2	13.4
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	295	4283	3240	1006	139	127
V/C Ratio(X)	0.94	0.64	0.88	0.11	0.48	1.85
Avail Cap(c_a), veh/h	340	4283	3240	1006	139	127
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.42	0.42	0.16	0.16	1.00	1.00
Uniform Delay (d), s/veh	56.3	0.0	0.0	0.0	75.0	78.3
Incr Delay (d2), s/veh	17.7	0.3	0.7	0.0	2.6	411.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	14.9	0.2	0.4	0.0	5.3	32.3
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	74.0	0.3	0.7	0.0	77.5	490.2
LnGrp LOS	E	A	A	A	E	F
Approach Vol, veh/h		3016	2970		302	
Approach Delay, s/veh		7.1	0.6		398.6	
Approach LOS		A	A		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	34.7	115.1			149.8	20.2
Change Period (Y+Rc), s	6.8	* 7.2			* 7.2	6.8
Max Green Setting (Gmax), s	32.2	* 1E2			* 1.4E2	13.4
Max Q Clear Time (g_c+I1), s	27.6	2.0			2.0	15.4
Green Ext Time (p_c), s	0.3	87.3			105.1	0.0
Intersection Summary						
HCM 6th Ctrl Delay			22.9			
HCM 6th LOS			C			
Notes						
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.						

HCM 6th Signalized Intersection Summary
6: N Armenia Ave & Busch Blvd

2040 Build Alt 2 - PM
04/04/2018

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		  			  		 	 			 	
Traffic Volume (veh/h)	253	2266	230	218	2241	60	330	498	203	120	340	340
Future Volume (veh/h)	253	2266	230	218	2241	60	330	498	203	120	340	340
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1900	1885	1870	1900	1870	1885	1885	1900	1885	1870
Adj Flow Rate, veh/h	269	2411	245	232	2384	64	351	530	216	128	362	362
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	0	1	2	0	2	1	1	0	1	2
Cap, veh/h	334	2575	980	221	2247	708	359	614	470	148	451	496
Arrive On Green	0.37	1.00	1.00	0.12	0.44	0.44	0.10	0.17	0.17	0.06	0.13	0.13
Sat Flow, veh/h	1781	5106	1610	1795	5106	1610	3456	3582	1598	1810	3582	1585
Grp Volume(v), veh/h	269	2411	245	232	2384	64	351	530	216	128	362	362
Grp Sat Flow(s),veh/h/ln	1781	1702	1610	1795	1702	1610	1728	1791	1598	1810	1791	1585
Q Serve(g_s), s	23.0	0.0	0.0	20.9	74.8	3.9	17.2	24.5	14.4	7.9	16.7	2.7
Cycle Q Clear(g_c), s	23.0	0.0	0.0	20.9	74.8	3.9	17.2	24.5	14.4	7.9	16.7	2.7
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	334	2575	980	221	2247	708	359	614	470	148	451	496
V/C Ratio(X)	0.81	0.94	0.25	1.05	1.06	0.09	0.98	0.86	0.46	0.87	0.80	0.73
Avail Cap(c_a), veh/h	334	2575	980	221	2247	708	359	731	523	163	611	567
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(l)	0.74	0.74	0.74	0.21	0.21	0.21	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	50.4	0.0	0.0	74.6	47.6	27.8	76.0	68.5	29.6	77.8	72.3	52.0
Incr Delay (d2), s/veh	10.3	6.2	0.5	42.2	30.2	0.1	41.3	9.2	0.7	33.5	5.5	4.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	14.0	2.7	0.2	15.1	43.6	2.5	14.8	17.7	9.6	11.2	12.7	20.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	60.7	6.2	0.5	116.7	77.8	27.8	117.2	77.7	30.3	111.3	77.8	56.1
LnGrp LOS	E	A	A	F	F	C	F	E	C	F	E	E
Approach Vol, veh/h		2925			2680			1097			852	
Approach Delay, s/veh		10.8			79.9			81.0			73.6	
Approach LOS		B			E			F			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	37.9	80.9	15.9	35.2	27.0	91.8	23.7	27.5				
Change Period (Y+Rc), s	* 6.1	* 6.1	6.0	6.1	* 6.1	* 6.1	6.0	6.1				
Max Green Setting (Gmax), s	* 25	* 75	11.3	34.7	* 21	* 79	17.0	29.0				
Max Q Clear Time (g_c+I1), s	25.0	76.8	9.9	26.5	22.9	2.0	19.2	18.7				
Green Ext Time (p_c), s	0.0	0.0	0.0	2.7	0.0	44.0	0.0	2.7				
Intersection Summary												
HCM 6th Ctrl Delay			52.6									
HCM 6th LOS			D									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
7: N Boulevard & Busch Blvd

2040 Build Alt 2 - PM
04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	2397	136	131	2400	91	115	380	95	120	250	45
Future Volume (veh/h)	94	2397	136	131	2400	91	115	380	95	120	250	45
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1826	1870	1856	1870	1870	1856	1900	1870	1856	1885	1841	1826
Adj Flow Rate, veh/h	96	2446	139	134	2449	93	117	388	97	122	255	46
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	5	2	3	2	2	3	0	2	3	1	4	5
Cap, veh/h	163	2893	891	146	2833	872	206	474	210	134	329	145
Arrive On Green	0.09	0.57	0.57	0.08	0.55	0.55	0.11	0.13	0.13	0.07	0.09	0.09
Sat Flow, veh/h	1739	5106	1572	1781	5106	1572	1810	3554	1572	1795	3497	1547
Grp Volume(v), veh/h	96	2446	139	134	2449	93	117	388	97	122	255	46
Grp Sat Flow(s),veh/h/ln	1739	1702	1572	1781	1702	1572	1810	1777	1572	1795	1749	1547
Q Serve(g_s), s	8.5	63.8	3.8	11.9	65.7	3.0	9.8	17.0	7.5	10.8	11.4	3.6
Cycle Q Clear(g_c), s	8.5	63.8	3.8	11.9	65.7	3.0	9.8	17.0	7.5	10.8	11.4	3.6
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	163	2893	891	146	2833	872	206	474	210	134	329	145
V/C Ratio(X)	0.59	0.85	0.16	0.92	0.86	0.11	0.57	0.82	0.46	0.91	0.78	0.32
Avail Cap(c_a), veh/h	163	2893	891	146	2833	872	206	711	314	134	710	314
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.20	0.20	0.20	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	69.5	28.8	5.3	72.9	30.5	7.5	67.2	67.5	43.5	73.5	70.8	45.3
Incr Delay (d2), s/veh	3.1	0.7	0.1	50.1	3.8	0.2	2.4	4.7	1.6	51.6	3.9	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.3	28.4	3.5	11.9	35.3	3.0	8.3	12.7	5.5	11.2	9.1	3.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	72.7	29.5	5.4	123.0	34.3	7.8	69.5	72.1	45.1	125.1	74.8	46.6
LnGrp LOS	E	C	A	F	C	A	E	E	D	F	E	D
Approach Vol, veh/h		2681			2676			602			423	
Approach Delay, s/veh		29.8			37.8			67.3			86.2	
Approach LOS		C			D			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.7	94.7	17.7	26.9	18.8	96.6	24.0	20.6				
Change Period (Y+Rc), s	* 5.7	5.9	* 5.8	* 5.6	* 5.7	5.9	* 5.8	* 5.6				
Max Green Setting (Gmax), s	* 15	78.1	* 12	* 32	* 13	80.0	* 11	* 33				
Max Q Clear Time (g_c+I1), s	10.5	67.7	12.8	19.0	13.9	65.8	11.8	13.4				
Green Ext Time (p_c), s	0.0	9.4	0.0	2.3	0.0	12.4	0.0	1.6				
Intersection Summary												
HCM 6th Ctrl Delay			40.4									
HCM 6th LOS			D									
Notes												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

HCM 6th Signalized Intersection Summary
8: Florida Ave & Busch Blvd

2040 Build Alt 2 - PM
04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	173	2110	329	328	2153	329	228	1409	545	417	882	160
Future Volume (veh/h)	173	2110	329	328	2153	329	228	1409	545	417	882	160
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1870	1856	1870	1870	1885	1885	1870	1856	1885	1885	1856
Adj Flow Rate, veh/h	177	2153	0	335	2197	336	233	1438	556	426	900	163
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	2	3	2	2	1	1	2	3	1	1	3
Cap, veh/h	139	2039		628	2580	963	186	1280	680	340	876	385
Arrive On Green	0.08	0.40	0.00	0.36	1.00	1.00	0.10	0.25	0.25	0.10	0.24	0.24
Sat Flow, veh/h	1767	5106	1572	3456	5106	1598	1795	5106	1572	3483	3582	1572
Grp Volume(v), veh/h	177	2153	0	335	2197	336	233	1438	556	426	900	163
Grp Sat Flow(s),veh/h/ln	1767	1702	1572	1728	1702	1598	1795	1702	1572	1742	1791	1572
Q Serve(g_s), s	13.4	67.9	0.0	13.0	0.0	0.0	17.6	42.6	23.3	16.6	41.6	14.8
Cycle Q Clear(g_c), s	13.4	67.9	0.0	13.0	0.0	0.0	17.6	42.6	23.3	16.6	41.6	14.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	139	2039		628	2580	963	186	1280	680	340	876	385
V/C Ratio(X)	1.27	1.06		0.53	0.85	0.35	1.25	1.12	0.82	1.25	1.03	0.42
Avail Cap(c_a), veh/h	139	2039		628	2580	963	186	1280	680	340	876	385
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	0.31	0.31	0.31	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	78.3	51.0	0.0	48.4	0.0	0.0	76.2	63.7	32.3	76.7	64.2	54.1
Incr Delay (d2), s/veh	166.3	36.5	0.0	0.3	1.2	0.3	150.4	66.4	7.8	135.6	37.4	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	19.8	46.8	0.0	7.0	0.5	0.1	24.3	36.8	13.4	21.6	31.6	9.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	244.6	87.6	0.0	48.7	1.2	0.3	226.6	130.1	40.0	212.3	101.6	54.8
LnGrp LOS	F	F		D	A	A	F	F	D	F	F	D
Approach Vol, veh/h		2330	A		2868			2227			1489	
Approach Delay, s/veh		99.5			6.7			117.7			128.2	
Approach LOS		F			A			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	20.0	93.5	24.0	50.0	38.5	75.0	25.0	49.0				
Change Period (Y+Rc), s	* 6.6	* 7.1	7.4	7.4	* 7.1	* 7.1	7.4	7.4				
Max Green Setting (Gmax), s	* 13	* 69	16.6	42.6	* 14	* 68	17.6	41.6				
Max Q Clear Time (g_c+I1), s	15.4	2.0	18.6	44.6	15.0	69.9	19.6	43.6				
Green Ext Time (p_c), s	0.0	37.3	0.0	0.0	0.0	0.0	0.0	0.0				

Intersection Summary

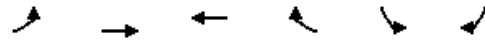
HCM 6th Ctrl Delay	79.0
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 9: Busch Blvd & I-275 SB Ramps

2040 Build Alt 2 - PM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↗↗↗	↖↖↖	↗	↖	↗↗
Traffic Volume (veh/h)	442	2630	2096	713	346	714
Future Volume (veh/h)	442	2630	2096	713	346	714
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1856	1870	1870	1885	1856	1841
Adj Flow Rate, veh/h	451	2684	2139	0	353	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	3	2	2	1	3	4
Cap, veh/h	452	3679	2178		360	
Arrive On Green	0.51	1.00	0.85	0.00	0.20	0.00
Sat Flow, veh/h	1767	5274	5274	1598	1767	2745
Grp Volume(v), veh/h	451	2684	2139	0	353	0
Grp Sat Flow(s),veh/h/ln	1767	1702	1702	1598	1767	1373
Q Serve(g_s), s	43.3	0.0	64.6	0.0	33.8	0.0
Cycle Q Clear(g_c), s	43.3	0.0	64.6	0.0	33.8	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	452	3679	2178		360	
V/C Ratio(X)	1.00	0.73	0.98		0.98	
Avail Cap(c_a), veh/h	452	3679	2178		360	
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.09	0.09	0.32	0.00	1.00	0.00
Uniform Delay (d), s/veh	41.4	0.0	11.9	0.0	67.4	0.0
Incr Delay (d2), s/veh	12.1	0.1	7.5	0.0	42.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	18.6	0.1	8.7	0.0	26.9	0.0
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	53.5	0.1	19.5	0.0	109.8	0.0
LnGrp LOS	D	A	B		F	
Approach Vol, veh/h		3135	2139	A	353	A
Approach Delay, s/veh		7.8	19.5		109.8	
Approach LOS		A	B		F	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	50.0	79.0			129.0	41.0
Change Period (Y+Rc), s	6.5	6.5			6.5	6.4
Max Green Setting (Gmax), s	43.5	72.5			122.5	34.6
Max Q Clear Time (g_c+I1), s	45.3	66.6			2.0	35.8
Green Ext Time (p_c), s	0.0	5.2			67.0	0.0

Intersection Summary

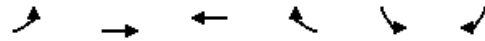
HCM 6th Ctrl Delay	18.6
HCM 6th LOS	B

Notes

Unsignalized Delay for [WBR, SBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 10: Busch Blvd & I-275 NB Ramps

2040 Build Alt 2 - PM
 04/04/2018



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations	↖	↑↑↑	↑↑↑	↗	↖↗	↖↗
Traffic Volume (veh/h)	644	2332	2434	470	255	375
Future Volume (veh/h)	644	2332	2434	470	255	375
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00			1.00	1.00	1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No	No		No	
Adj Sat Flow, veh/h/ln	1870	1870	1885	1856	1870	1885
Adj Flow Rate, veh/h	678	2455	2562	0	268	395
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	2	2	1	3	2	1
Cap, veh/h	510	4196	2558		345	1087
Arrive On Green	0.57	1.00	0.99	0.00	0.10	0.10
Sat Flow, veh/h	1781	5274	5316	1572	3456	2812
Grp Volume(v), veh/h	678	2455	2562	0	268	395
Grp Sat Flow(s),veh/h/ln	1781	1702	1716	1572	1728	1406
Q Serve(g_s), s	48.7	0.0	84.5	0.0	12.9	0.0
Cycle Q Clear(g_c), s	48.7	0.0	84.5	0.0	12.9	0.0
Prop In Lane	1.00			1.00	1.00	1.00
Lane Grp Cap(c), veh/h	510	4196	2558		345	1087
V/C Ratio(X)	1.33	0.59	1.00		0.78	0.36
Avail Cap(c_a), veh/h	510	4196	2558		431	1156
HCM Platoon Ratio	2.00	2.00	2.00	2.00	1.00	1.00
Upstream Filter(I)	0.56	0.56	0.09	0.00	1.00	1.00
Uniform Delay (d), s/veh	36.3	0.0	0.5	0.0	74.6	37.2
Incr Delay (d2), s/veh	155.4	0.3	5.7	0.0	8.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	54.0	0.2	2.2	0.0	10.2	10.1
Unsig. Movement Delay, s/veh						
LnGrp Delay(d),s/veh	191.7	0.3	6.2	0.0	82.6	37.5
LnGrp LOS	F	A	F		F	D
Approach Vol, veh/h		3133	2562	A	663	
Approach Delay, s/veh		41.8	6.2		55.7	
Approach LOS		D	A		E	
Timer - Assigned Phs	1	2			6	8
Phs Duration (G+Y+Rc), s	55.2	91.0			146.2	23.8
Change Period (Y+Rc), s	6.5	6.5			6.5	6.8
Max Green Setting (Gmax), s	44.5	84.5			135.5	21.2
Max Q Clear Time (g_c+I1), s	50.7	86.5			2.0	14.9
Green Ext Time (p_c), s	0.0	0.0			55.5	2.1

Intersection Summary

HCM 6th Ctrl Delay	28.9
HCM 6th LOS	C

Notes

Unsignalized Delay for [WBR] is excluded from calculations of the approach delay and intersection delay.

HCM 6th Signalized Intersection Summary
 11: Nebraska Ave & Busch Blvd

2040 Build Alt 2 - PM
 04/04/2018

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	202	2206	179	208	2505	115	162	1104	304	178	880	237
Future Volume (veh/h)	202	2206	179	208	2505	115	162	1104	304	178	880	237
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1856	1856	1870	1841	1870	1900	1885	1856	1811	1811	1870	1870
Adj Flow Rate, veh/h	215	2347	190	221	2665	128	172	1174	0	189	936	252
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.90	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	3	3	2	4	2	0	1	3	6	6	2	2
Cap, veh/h	147	2360	738	145	2998	750	174	1012		130	934	548
Arrive On Green	0.17	0.93	0.93	0.08	0.47	0.47	0.10	0.29	0.00	0.08	0.26	0.26
Sat Flow, veh/h	1767	5066	1585	1753	6434	1610	1795	3526	1535	1725	3554	1585
Grp Volume(v), veh/h	215	2347	190	221	2665	128	172	1174	0	189	936	252
Grp Sat Flow(s),veh/h/ln	1767	1689	1585	1753	1609	1610	1795	1763	1535	1725	1777	1585
Q Serve(g_s), s	14.1	73.3	1.5	14.1	64.2	7.8	16.3	48.8	0.0	12.8	44.7	16.3
Cycle Q Clear(g_c), s	14.1	73.3	1.5	14.1	64.2	7.8	16.3	48.8	0.0	12.8	44.7	16.3
Prop In Lane	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	147	2360	738	145	2998	750	174	1012		130	934	548
V/C Ratio(X)	1.47	0.99	0.26	1.52	0.89	0.17	0.99	1.16		1.46	1.00	0.46
Avail Cap(c_a), veh/h	147	2360	738	145	2998	750	174	1012		130	934	548
HCM Platoon Ratio	2.00	2.00	2.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	0.76	0.76	0.76	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.9	5.6	2.1	78.0	41.4	26.3	76.6	60.6	0.0	78.6	62.7	28.0
Incr Delay (d2), s/veh	236.2	14.9	0.6	265.8	4.4	0.5	64.1	83.2	0.0	242.3	29.9	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	23.8	9.0	1.2	27.1	34.1	5.6	15.9	46.7	0.0	23.1	31.7	10.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	307.1	20.5	2.7	343.8	45.8	26.8	140.7	143.8	0.0	320.9	92.5	28.6
LnGrp LOS	F	C	A	F	D	C	F	F		F	F	C
Approach Vol, veh/h		2752			3014			1346	A		1377	
Approach Delay, s/veh		41.7			66.9			143.4			112.2	
Approach LOS		D			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	21.0	86.6	20.0	56.4	21.0	86.6	24.1	52.3				
Change Period (Y+Rc), s	6.9	7.0	* 7.2	* 7.6	6.9	7.0	* 7.6	* 7.6				
Max Green Setting (Gmax), s	14.1	66.0	* 13	* 48	14.1	66.0	* 17	* 45				
Max Q Clear Time (g_c+I1), s	16.1	66.2	14.8	50.8	16.1	75.3	18.3	46.7				
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0				

Intersection Summary

HCM 6th Ctrl Delay	78.2
HCM 6th LOS	E

Notes

* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
 Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.

Arterial Level of Service: EB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
	II	45	22.0	16.1	38.1	0.20	19.1	D
Dale Mabry Hwy NB Ra	II	45	23.3	6.6	29.9	0.21	25.8	C
N Himes Ave	II	45	19.0	23.6	42.6	0.17	14.7	E
Twin Lakes Blvd	II	45	43.9	6.4	50.3	0.50	35.7	A
Orange Grove Dr	II	45	25.9	1.1	27.0	0.25	33.2	B
N Armenia Ave	II	45	29.7	48.7	78.4	0.30	13.8	E
N Boulevard	II	45	79.8	42.6	122.4	1.00	29.3	B
Florida Ave	II	40	47.2	86.5	133.7	0.51	13.7	E
I-275 SB Ramps	II	40	21.9	7.6	29.5	0.19	23.2	C
I-275 NB Ramps	II	40	21.3	4.4	25.7	0.19	26.0	C
Nebraska Ave	II	40	14.6	145.6	160.2	0.13	2.8	F
Total	II		348.6	389.2	737.8	3.65	17.8	D

Arterial Level of Service: WB Busch Blvd

Cross Street	Arterial Class	Flow Speed	Running Time	Signal Delay	Travel Time (s)	Dist (mi)	Arterial Speed	Arterial LOS
Nebraska Ave	II	40	27.0	89.6	116.6	0.25	7.6	F
I-275 NB Ramps	II	40	14.6	25.6	40.2	0.13	11.3	F
I-275 SB Ramps	II	40	21.3	35.6	56.9	0.19	11.7	F
Florida Ave	II	40	21.9	55.1	77.0	0.19	8.9	F
N Boulevard	II	40	47.2	55.3	102.5	0.51	17.8	D
N Armenia Ave	II	45	79.8	78.6	158.4	1.00	22.7	C
Orange Grove Dr	II	45	29.7	8.0	37.7	0.30	28.6	B
Mossvale Ln	II	45	25.9	21.3	47.2	0.25	19.0	D
N Himes Ave	II	45	43.9	18.2	62.1	0.50	28.9	B
Dale Mabry Hwy NB Ra	II	45	19.0	27.0	46.0	0.17	13.7	E
Dale Mabry Hwy SB Ra	II	45	23.3	65.5	88.8	0.21	8.7	F
Total	II		353.6	479.8	833.4	3.69	15.9	E

Appendix I

Future ARTPLAN Outputs

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst		Arterial Name	Busch Boulevard	Study Period	Dir Hr Demand Vol
Date Prepared	10/17/2017 1:20:06 PM	From	Dale Mabry SB Ramps	Modal Analysis	Multimodal
Agency	VHB	To	N Nebraska Ave	Program	ARTPLAN 2012
Area Type	Large Urbanized	Peak Direction	Eastbound	Version Date	12/12/2012
Arterial Class	1				
File Name	\\vhb\proj\Orlando\62966.00 FDOT D7 SR 580 Busch Blv\tech\Analysis\ARTPLAN\2040 NB - EB AM.xap				
User Notes	2040 No Build - EB AM				

Arterial Data

K	0.09	PHF	0.95	Control Type	FullyActuated
D	0.565	% Heavy Vehicles	2	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
Dale Mabry NB Ramps	150	0.45	3	2	2	0	Yes	Protected	1	235	0.15	No
N Himes Ave	150	0.45	3	2	0	27	Yes	Protected	1	235	0.15	Yes
Twin Lakes Blvd	150	0.45	3	2	0	12	Yes	Protected	1	235	0.15	Yes
Orange Grove Dr	150	0.45	3	2	6	0	Yes	Protected	1	235	0.15	No
N Armenia Ave	150	0.45	3	2	4	16	Yes	Protected	1	235	0.15	No
North Blvd	150	0.45	3	2	3	8	Yes	Protected	1	235	0.15	No
N Florida Ave	150	0.45	3	2	8	20	Yes	Protected	1	235	0.15	No
I-275 SB Ramps	150	0.45	3	3	16	0	Yes	Protected	1	235	0.15	No
I-275 NB Ramps	150	0.45	3	3	14	0	Yes	Protected	1	235	0.15	No
N Nebraska Ave	150	0.45	3	3	4	12	Yes	Protected	1	235	0.15	No

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to Dale Mabry NB Ramps)	1080	30000	2600	2	45	50	Restrictive	No	N/A
2 (to N Himes Ave)	920	30000	2690	2	45	50	Restrictive	No	N/A
3 (to Twin Lakes)	2630	30000	2100	2	45	50	Restrictive	No	N/A

Blvd)										
4 (to Orange Grove Dr)	1300	30000	1980	2	45	50	Restrictive	No	N/A	
5 (to N Armenia Ave)	1580	30000	2000	2	45	50	Restrictive	No	N/A	
6 (to North Blvd)	5280	30000	1890	2	45	50	Restrictive	No	N/A	
7 (to N Florida Ave)	2680	30000	1890	2	40	45	Restrictive	No	N/A	
8 (to I-275 SB Ramps)	1010	30000	2080	3	40	45	Restrictive	No	N/A	
9 (to I-275 NB Ramps)	980	30000	1920	3	40	45	Restrictive	No	N/A	
10 (to N Nebraska Ave)	670	30000	1930	3	40	45	Restrictive	No	N/A	

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS			
1 (to Dale Mabry NB Ramps)	2682	3773	1.580	339.68	F	0.21	2.17	F			
2 (to N Himes Ave)	2067	2729	1.683	401.24	F	0.00	1.60	F			
3 (to Twin Lakes Blvd)	1945	3486	1.240	159.89	F	0.00	9.15	F			
4 (to Orange Grove Dr)	1959	3773	1.154	117.21	F	0.51	6.70	F			
5 (to N Armenia Ave)	2021	3731	1.204	141.78	F	0.33	6.69	F			
6 (to North Blvd)	1930	3752	1.143	111.86	F	0.23	19.07	D			
7 (to N Florida Ave)	1830	3605	1.128	104.61	F	0.67	12.44	F			
8 (to I-275 SB Ramps)	1839	5431	0.753	34.41	C	#	13.77	F			
9 (to I-275 NB Ramps)	1738	5406	0.714	33.94	C	#	13.63	F			
10 (to N Nebraska Ave)	1950	5413	0.801	36.64	D	0.33	9.87	F			
Arterial Length	3.5473	Weighted g/C	0.45	FFS Delay	1523.60	Threshold Delay	1069.45	Auto Speed	###	Auto LOS	###

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	**	290	720	840
2	**	**	590	1530	1660
3	**	**	910	2350	2500
4	**	**	1210	3180	3360
*	**	**	650	1610	1660
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr / Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to Dale Mabry NB Ramps)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
2 (to N Himes Ave)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
3 (to Twin Lakes Blvd)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Fair	Typical
4 (to Orange Grove Dr)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Fair	Typical
5 (to N Armenia Ave)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
6 (to North Blvd)	Typical	Typical	No	No	N/A	No	N/A	No	2	0.8	Fair	Typical
7 (to N Florida Ave)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Excellent	Typical
8 (to I-275 SB Ramps)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
9 (to I-275 NB Ramps)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
10 (to N Nebraska Ave)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None

Pedestrian SubSegment Data

Segment #	% of Segment			Sidewalk			Separation			Barrier		
	1	2	3	1	2	3	1	2	3	1	2	3
1 (to Dale Mabry NB Ramps)	25	75		Yes	Yes		Adjacent	Adjacent		No	No	
2 (to N Himes Ave)	100			Yes			Adjacent			No		
3 (to Twin Lakes Blvd)	100			Yes			Adjacent			No		
4 (to Orange Grove Dr)	100			Yes			Adjacent			No		
5 (to N Armenia Ave)	100			Yes			Adjacent			No		
6 (to North Blvd)	100			No			N/A			No		
7 (to N Florida Ave)	100			Yes			Adjacent			No		
8 (to I-275 SB Ramps)	100			Yes			Adjacent			No		
9 (to I-275 NB Ramps)	100			Yes			Adjacent			No		
10 (to N Nebraska Ave)	100			Yes			Adjacent			No		

Multimodal LOS

Link #	Bicycle Street		Bicycle Sidepath		Pedestrian			Bus			
	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS
1 (to Dale Mabry NB Ramps)	4.81	E	N/A	N/A				5.34	F	1.48	E
2 (to N Himes Ave)	4.80	E	N/A	N/A				5.41	F	1.48	E
3 (to Twin Lakes Blvd)	4.75	E	N/A	N/A				4.87	E	2.03	D
4 (to Orange Grove Dr)	4.70	E	N/A	N/A				4.67	E	2.03	D
5 (to N Armenia Ave)	4.71	E	N/A	N/A				4.72	E	1.83	E
6 (to North Blvd)	4.71	E	N/A	N/A				6.11	F	1.32	E
7 (to N Florida Ave)	4.64	E	N/A	N/A				4.48	E	2.24	D

8 (to I-275 SB Ramps)	4.45	E	N/A	N/A	3.82	D	1.80	E		
9 (to I-275 NB Ramps)	4.41	E	N/A	N/A	3.69	D	1.80	E		
10 (to N Nebraska Ave)	4.36	E	N/A	N/A	3.60	D	1.80	E		
Bicycle LOS		4.67	E	Pedestrian LOS		5.17	F	Bus LOS	1.74	E

MultiModal Service Volume Tables

Bicycle

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	**	160	460	1000
2	**	**	320	920	2000
3	**	**	480	1380	3000
4	**	**	640	1840	4000
*	**	**	340	960	3000
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Pedestrian

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	**	220	560	900
2	**	**	440	1120	1800
3	**	**	650	1670	2690
4	**	**	870	2230	3590
*	**	**	450	1150	1850
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
>= 6	>= 4	>= 3	>= 2	>= 1
Buses in Study Hour in Peak Direction (Daily)				

≥ 5.85	≥ 3.90	≥ 2.93	≥ 1.95	≥ 0.98
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* Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.

** Cannot be achieved based on input data provided.

*** Not applicable for that level of service letter grade. See generalized tables notes for more details.

Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.

Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.

Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst		Arterial Name	Busch Boulevard	Study Period	Dir Hr Demand Vol
Date Prepared	10/17/2017 1:20:06 PM	From	N Nebraska Ave	Modal Analysis	Multimodal
Agency	VHB	To	Dale Mabry SB Ramps	Program	ARTPLAN 2012
Area Type	Large Urbanized	Peak Direction	Westbound	Version Date	12/12/2012
Arterial Class	1				
File Name	\\vhb\proj\Orlando\62966.00 FDOT D7 SR 580 Busch Blv\tech\Analysis\ARTPLAN\2040 NB - WB AM.xap				
User Notes	2040 No Build - WB AM				

Arterial Data

K	0.09	PHF	0.95	Control Type	FullyActuated
D	0.565	% Heavy Vehicles	2	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
I - 275 NB Ramps	150	0.45	3	3	0	12	Yes	Protected	1	235	0.15	Yes
I - 275 SB Ramps	150	0.45	3	3	0	27	Yes	Protected	1	235	0.15	Yes
N Florida Ave	150	0.45	3	2	12	9	Yes	Protected	1	235	0.15	Yes
North Blvd	150	0.45	3	2	7	6	Yes	Protected	1	235	0.15	No
N Armenia Ave	150	0.45	3	2	12	1	Yes	Protected	1	235	0.15	No
Orange Grove Dr	150	0.45	3	2	0	5	Yes	Protected	1	235	0.15	Yes
Twin Lakes Blvd	150	0.45	3	2	15	0	Yes	Protected	1	235	0.15	No
N. Himes Ave	150	0.45	3	2	22	0	Yes	Protected	1	235	0.15	No
Dale Mabry NB Ramps	150	0.45	3	2	0	19	Yes	Protected	1	235	0.15	No
Dale Mabry SB Ramps	150	0.45	3	2	0	24	Yes	Protected	1	235	0.15	Yes

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to I - 275 NB Ramps)	670	30000	2610	3	40	45	Restrictive	No	N/A
2 (to I - 275 SB Ramps)	980	30000	2800	3	40	45	Restrictive	No	N/A

3 (to N Florida Ave)	1010	30000	2500	2	40	45	Restrictive	No	N/A
4 (to North Blvd)	2680	30000	2110	2	40	45	Restrictive	No	N/A
5 (to N Armenia Ave)	5280	30000	1980	2	45	50	Restrictive	No	N/A
6 (to Orange Grove Dr)	1580	30000	2030	2	45	50	Restrictive	No	N/A
7 (to Twin Lakes Blvd)	1300	30000	2400	2	45	50	Restrictive	No	N/A
8 (to N. Himes Ave)	2630	30000	2130	2	45	50	Restrictive	No	N/A
9 (to Dale Mabry NB Ramps)	920	30000	2070	2	45	50	Restrictive	No	N/A
10 (to Dale Mabry SB Ramps)	1080	30000	1840	2	45	50	Restrictive	No	N/A

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS			
1 (to I - 275 NB Ramps)	2418	5092	1.055	69.27	E	0.00	5.98	F			
2 (to I - 275 SB Ramps)	2152	3985	1.200	139.76	F	0.00	4.48	F			
3 (to N Florida Ave)	2079	3463	1.334	207.53	F	#	3.21	F			
4 (to North Blvd)	2066	3641	1.261	170.30	F	0.65	8.63	F			
5 (to N Armenia Ave)	1834	3770	1.081	81.91	F	#	22.58	D			
6 (to Orange Grove Dr)	2030	3671	1.229	154.31	F	0.00	6.23	F			
7 (to Twin Lakes Blvd)	2147	3773	1.195	137.18	F	#	5.84	F			
8 (to N. Himes Ave)	1749	3694	0.680	32.77	C	#	25.04	C			
9 (to Dale Mabry NB Ramps)	2179	3723	1.301	193.02	F	0.00	3.20	F			
10 (to Dale Mabry SB Ramps)	1472	2935	1.115	98.22	F	0.00	6.68	F			
Arterial Length	3.5473	Weighted g/C	0.45	FFS Delay	1328.01	Threshold Delay	873.86	Auto Speed	###	Auto LOS	###

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	**	300	730	820
2	**	**	600	1510	1600
3	**	**	920	2330	2420
4	**	**	1240	3140	3240
*	**	**	650	1600	1680
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr / Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to I - 275 NB Ramps)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
2 (to I - 275 SB Ramps)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
3 (to N Florida Ave)	Typical	Typical	No	No	N/A	No	N/A	No	2	0.8	Poor	None
4 (to North Blvd)	Typical	Typical	No	No	N/A	Yes	Typical	No	2	0.8	Excellent	Typical
5 (to N Armenia Ave)	Typical	Typical	No	No	N/A	Yes	Typical	No	2	0.8	Fair	Typical
6 (to Orange Grove Dr)	Typical	Typical	Yes	No	N/A	Yes	Typical	No	2	0.8	Fair	Typical
7 (to Twin Lakes Blvd)	Typical	Typical	No	No	N/A	Yes	Typical	No	2	0.8	Excellent	Typical
8 (to N. Himes Ave)	Typical	Typical	Yes	No	N/A	Yes	Typical	No	2	0.8	Excellent	Typical
9 (to Dale Mabry NB Ramps)	Typical	Typical	No	No	N/A	Yes	Typical	No	2	0.8	Poor	None
10 (to Dale Mabry SB Ramps)	Typical	Typical	No	No	N/A	No	N/A	No	2	0.8	Poor	None

Pedestrian SubSegment Data

Segment #	% of Segment			Sidewalk			Separation			Barrier		
	1	2	3	1	2	3	1	2	3	1	2	3
1 (to I - 275 NB Ramps)	100			Yes			Adjacent			No		
2 (to I - 275 SB Ramps)	100			Yes			Adjacent			No		
3 (to N Florida Ave)	100			No			N/A			No		
4 (to North Blvd)	50	50		Yes	Yes		Typical	Adjacent		No	No	
5 (to N Armenia Ave)	100			Yes			Typical			No		
6 (to Orange Grove Dr)	75	25		Yes	Yes		Typical	Adjacent		No	No	
7 (to Twin Lakes Blvd)	100			Yes			Typical			No		
8 (to N. Himes Ave)	80	20		Yes	Yes		Typical	Adjacent		No	No	
9 (to Dale Mabry NB Ramps)	50	50		Yes	Yes		Typical	Adjacent		No	No	
10 (to Dale Mabry SB Ramps)	100			No			N/A			No		

Multimodal LOS

Link #	Bicycle Street		Bicycle Sidepath		Pedestrian			Bus			
	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS
1 (to I - 275 NB Ramps)	4.50	E	N/A	N/A				4.13	D	2.15	D
2 (to I - 275 SB Ramps)	4.59	E	N/A	N/A				4.37	E	1.83	E
3 (to N Florida Ave)	4.71	E	N/A	N/A				6.54	F	1.19	E
4 (to North Blvd)	4.69	E	N/A	N/A				4.66	E	2.24	D
5 (to N Armenia Ave)	4.73	E	N/A	N/A				4.61	E	2.03	D
6 (to Orange Grove Dr)	3.02	C	N/A	N/A				4.45	E	2.03	D
7 (to Twin Lakes Blvd)	4.78	E	N/A	N/A				5.01	F	1.45	E

8 (to N. Himes Ave)	3.03	C	N/A	N/A	4.47	E	1.87	E			
9 (to Dale Mabry NB Ramps)	4.53	E	N/A	N/A	3.96	D	2.15	D			
10 (to Dale Mabry SB Ramps)	4.65	E	N/A	N/A	5.93	F	1.19	E			
Bicycle LOS		4.42	E	Pedestrian LOS		4.81	E	Bus LOS		1.90	E

MultiModal Service Volume Tables

Bicycle

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	60	240	700	1000
2	**	120	470	1390	2000
3	**	180	700	2060	3000
4	**	240	940	2760	4000
*	**	130	490	1450	2000
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Pedestrian

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	100	440	760	1000
2	**	190	870	1530	2000
3	**	280	1300	2300	3000
4	**	380	1730	3070	4000
*	**	200	890	1570	2000
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
>= 6	>= 4	>= 3	>= 2	>= 1
Buses in Study Hour in Peak Direction (Daily)				

≥ 5.30	≥ 3.54	≥ 2.65	≥ 1.77	≥ 0.89
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*** Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.**

**** Cannot be achieved based on input data provided.**

***** Not applicable for that level of service letter grade. See generalized tables notes for more details.**

Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.

Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.

Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst		Arterial Name	Busch Boulevard	Study Period	Dir Hr Demand Vol
Date Prepared	10/17/2017 1:20:06 PM	From	Dale Mabry SB Ramps	Modal Analysis	Multimodal
Agency	VHB	To	N Nebraska Ave	Program	ARTPLAN 2012
Area Type	Large Urbanized	Peak Direction	Eastbound	Version Date	12/12/2012
Arterial Class	1				
File Name	\\vhb\proj\Orlando\62966.00 FDOT D7 SR 580 Busch Blv\tech\Analysis\ARTPLAN\2040 NB - EB PM.xap				
User Notes	2040 No Build - EB PM				

Arterial Data

K	0.09	PHF	0.95	Control Type	FullyActuated
D	0.565	% Heavy Vehicles	2	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
Dale Mabry NB Ramps	150	0.45	3	2	6	0	Yes	Protected	1	235	0.15	No
N Himes Ave	150	0.45	3	2	0	14	Yes	Protected	1	235	0.15	Yes
Twin Lakes Blvd	150	0.45	3	2	0	4	Yes	Protected	1	235	0.15	Yes
Orange Grove Dr	150	0.45	3	2	9	0	Yes	Protected	1	235	0.15	No
N Armenia Ave	150	0.45	3	2	9	8	Yes	Protected	1	235	0.15	No
North Blvd	150	0.45	3	2	4	5	Yes	Protected	1	235	0.15	No
N Florida Ave	150	0.45	3	2	7	12	Yes	Protected	1	235	0.15	No
I-275 SB Ramps	150	0.45	3	3	15	0	Yes	Protected	1	235	0.15	No
I-275 NB Ramps	150	0.45	3	3	23	0	Yes	Protected	1	235	0.15	No
N Nebraska Ave	150	0.45	3	3	9	8	Yes	Protected	1	235	0.15	No

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to Dale Mabry NB Ramps)	1080	30000	2280	2	45	50	Restrictive	No	N/A
2 (to N Himes Ave)	920	30000	2320	2	45	50	Restrictive	No	N/A
3 (to Twin Lakes)	2630	30000	2280	2	45	50	Restrictive	No	N/A

Blvd)									
4 (to Orange Grove Dr)	1300	30000	2480	2	45	50	Restrictive	No	N/A
5 (to N Armenia Ave)	1580	30000	2320	2	45	50	Restrictive	No	N/A
6 (to North Blvd)	5280	30000	2120	2	45	50	Restrictive	No	N/A
7 (to N Florida Ave)	2680	30000	2140	2	40	45	Restrictive	No	N/A
8 (to I-275 SB Ramps)	1010	30000	2660	3	40	45	Restrictive	No	N/A
9 (to I-275 NB Ramps)	980	30000	2570	3	40	45	Restrictive	No	N/A
10 (to N Nebraska Ave)	670	30000	2190	3	40	45	Restrictive	No	N/A

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS			
1 (to Dale Mabry NB Ramps)	2256	3773	1.329	204.81	F	0.59	3.48	F			
2 (to N Himes Ave)	2100	3419	1.365	223.55	F	0.00	2.79	F			
3 (to Twin Lakes Blvd)	2304	3692	1.387	234.67	F	0.00	6.65	F			
4 (to Orange Grove Dr)	2376	3773	1.399	241.29	F	#	3.52	F			
5 (to N Armenia Ave)	2222	3752	1.316	198.41	F	0.96	4.99	F			
6 (to North Blvd)	2142	3759	1.266	173.04	F	0.36	14.40	F			
7 (to N Florida Ave)	2095	3625	1.284	182.04	F	0.66	8.18	F			
8 (to I-275 SB Ramps)	2380	5511	0.960	41.28	D	#	12.13	F			
9 (to I-275 NB Ramps)	2083	5492	0.843	37.06	D	#	12.79	F			
10 (to N Nebraska Ave)	2098	5465	0.853	38.11	D	0.96	9.57	F			
Arterial Length	3.5473	Weighted g/C	0.45	FFS Delay	1619.40	Threshold Delay	1165.25	Auto Speed	###	Auto LOS	###

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	**	300	750	860
2	**	**	610	1580	1740
3	**	**	930	2440	2620
4	**	**	1250	3290	3480
*	**	**	670	1650	1740
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr / Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to Dale Mabry NB Ramps)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
2 (to N Himes Ave)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
3 (to Twin Lakes Blvd)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Fair	Typical
4 (to Orange Grove Dr)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Fair	Typical
5 (to N Armenia Ave)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
6 (to North Blvd)	Typical	Typical	No	No	N/A	No	N/A	No	2	0.8	Fair	Typical
7 (to N Florida Ave)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Excellent	Typical
8 (to I-275 SB Ramps)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
9 (to I-275 NB Ramps)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
10 (to N Nebraska Ave)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None

Pedestrian SubSegment Data

Segment #	% of Segment			Sidewalk			Separation			Barrier		
	1	2	3	1	2	3	1	2	3	1	2	3
1 (to Dale Mabry NB Ramps)	25	75		Yes	Yes		Adjacent	Adjacent		No	No	
2 (to N Himes Ave)	100			Yes			Adjacent			No		
3 (to Twin Lakes Blvd)	100			Yes			Adjacent			No		
4 (to Orange Grove Dr)	100			Yes			Adjacent			No		
5 (to N Armenia Ave)	100			Yes			Adjacent			No		
6 (to North Blvd)	100			No			N/A			No		
7 (to N Florida Ave)	100			Yes			Adjacent			No		
8 (to I-275 SB Ramps)	100			Yes			Adjacent			No		
9 (to I-275 NB Ramps)	100			Yes			Adjacent			No		
10 (to N Nebraska Ave)	100			Yes			Adjacent			No		

Multimodal LOS

Link #	Bicycle Street		Bicycle Sidepath		Pedestrian			Bus			
	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS
1 (to Dale Mabry NB Ramps)	4.75	E	N/A	N/A				4.98	E	1.83	E
2 (to N Himes Ave)	4.74	E	N/A	N/A				4.99	E	1.83	E
3 (to Twin Lakes Blvd)	4.79	E	N/A	N/A				5.07	F	1.32	E
4 (to Orange Grove Dr)	4.80	E	N/A	N/A				5.24	F	1.32	E
5 (to N Armenia Ave)	4.78	E	N/A	N/A				5.08	F	1.19	E
6 (to North Blvd)	4.76	E	N/A	N/A				6.37	F	1.32	E
7 (to N Florida Ave)	4.69	E	N/A	N/A				4.76	E	2.24	D

8 (to I-275 SB Ramps)	4.57	E	N/A	N/A	4.26	E	1.53	E	
9 (to I-275 NB Ramps)	4.55	E	N/A	N/A	4.19	D	1.80	E	
10 (to N Nebraska Ave)	4.42	E	N/A	N/A	3.81	D	1.80	E	
Bicycle LOS		4.72	E	Pedestrian LOS		5.38	F	Bus LOS	

MultiModal Service Volume Tables

Bicycle

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	**	160	460	1000
2	**	**	320	920	2000
3	**	**	480	1380	3000
4	**	**	640	1840	4000
*	**	**	340	960	3000
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Pedestrian

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	**	220	560	900
2	**	**	440	1120	1800
3	**	**	650	1670	2690
4	**	**	870	2230	3590
*	**	**	450	1150	1850
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
>= 7	>= 5	>= 4	>= 3	>= 2
Buses in Study Hour in Peak Direction (Daily)				

≥ 6.39	≥ 4.26	≥ 3.20	≥ 2.13	≥ 1.07
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* Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.

** Cannot be achieved based on input data provided.

*** Not applicable for that level of service letter grade. See generalized tables notes for more details.

Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.

Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.

Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst		Arterial Name	Busch Boulevard	Study Period	Dir Hr Demand Vol
Date Prepared	10/17/2017 1:20:06 PM	From	N Nebraska Ave	Modal Analysis	Multimodal
Agency	VHB	To	Dale Mabry SB Ramps	Program	ARTPLAN 2012
Area Type	Large Urbanized	Peak Direction	Westbound	Version Date	12/12/2012
Arterial Class	1				
File Name	\\vhb\proj\Orlando\62966.00 FDOT D7 SR 580 Busch Blv\tech\Analysis\ARTPLAN\2040 NB - WB PM.xap				
User Notes	2040 No Build - WB PM				

Arterial Data

K	0.09	PHF	0.95	Control Type	FullyActuated
D	0.565	% Heavy Vehicles	2	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
I - 275 NB Ramps	150	0.45	3	3	0	16	Yes	Protected	1	235	0.15	Yes
I - 275 SB Ramps	150	0.45	3	3	0	26	Yes	Protected	1	235	0.15	Yes
N Florida Ave	150	0.45	3	2	12	12	Yes	Protected	1	235	0.15	Yes
North Blvd	150	0.45	3	2	5	3	Yes	Protected	1	235	0.15	No
N Armenia Ave	150	0.45	3	2	9	2	Yes	Protected	1	235	0.15	No
Orange Grove Dr	150	0.45	3	2	0	4	Yes	Protected	1	235	0.15	Yes
Twin Lakes Blvd	150	0.45	3	2	3	0	Yes	Protected	1	235	0.15	No
N. Himes Ave	150	0.45	3	2	8	0	Yes	Protected	1	235	0.15	No
Dale Mabry NB Ramps	150	0.45	3	2	0	19	Yes	Protected	1	235	0.15	No
Dale Mabry SB Ramps	150	0.45	3	2	0	15	Yes	Protected	1	235	0.15	Yes

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to I - 275 NB Ramps)	670	30000	2700	3	40	45	Restrictive	No	N/A
2 (to I - 275 SB Ramps)	980	30000	2610	3	40	45	Restrictive	No	N/A

3 (to N Florida Ave)	1010	30000	2580	2	40	45	Restrictive	No	N/A
4 (to North Blvd)	2680	30000	2230	2	40	45	Restrictive	No	N/A
5 (to N Armenia Ave)	5280	30000	2120	2	45	50	Restrictive	No	N/A
6 (to Orange Grove Dr)	1580	30000	2530	2	45	50	Restrictive	No	N/A
7 (to Twin Lakes Blvd)	1300	30000	2670	2	45	50	Restrictive	No	N/A
8 (to N. Himes Ave)	2630	30000	2830	2	45	50	Restrictive	No	N/A
9 (to Dale Mabry NB Ramps)	920	30000	3150	2	45	50	Restrictive	No	N/A
10 (to Dale Mabry SB Ramps)	1080	30000	2850	2	45	50	Restrictive	No	N/A

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS			
1 (to I - 275 NB Ramps)	2387	4883	1.086	84.18	F	0.00	5.07	F			
2 (to I - 275 SB Ramps)	2033	4068	1.110	95.93	F	0.00	6.20	F			
3 (to N Florida Ave)	2064	3378	1.358	219.72	F	#	3.05	F			
4 (to North Blvd)	2230	3648	1.358	220.00	F	0.48	7.01	F			
5 (to N Armenia Ave)	2031	3767	1.198	138.83	F	0.86	16.65	E			
6 (to Orange Grove Dr)	2557	3692	1.539	316.44	F	0.00	3.27	F			
7 (to Twin Lakes Blvd)	2726	3773	1.606	354.67	F	0.34	2.46	F			
8 (to N. Himes Ave)	2741	3773	1.614	359.64	F	#	4.56	F			
9 (to Dale Mabry NB Ramps)	3316	3723	1.979	648.16	F	0.00	1.00	F			
10 (to Dale Mabry SB Ramps)	2550	3382	1.676	396.50	F	0.00	1.87	F			
Arterial Length	3.5473	Weighted g/C	0.45	FFS Delay	2883.37	Threshold Delay	2429.22	Auto Speed	###	Auto LOS	###

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	**	290	720	820
2	**	**	590	1510	1640
3	**	**	900	2320	2460
4	**	**	1210	3130	3300
*	**	**	630	1580	1680
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr / Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to I - 275 NB Ramps)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
2 (to I - 275 SB Ramps)	Typical	Typical	No	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
3 (to N Florida Ave)	Typical	Typical	No	No	N/A	No	N/A	No	2	0.8	Poor	None
4 (to North Blvd)	Typical	Typical	No	No	N/A	Yes	Typical	No	2	0.8	Excellent	Typical
5 (to N Armenia Ave)	Typical	Typical	No	No	N/A	Yes	Typical	No	2	0.8	Fair	Typical
6 (to Orange Grove Dr)	Typical	Typical	Yes	No	N/A	Yes	Typical	No	2	0.8	Fair	Typical
7 (to Twin Lakes Blvd)	Typical	Typical	No	No	N/A	Yes	Typical	No	2	0.8	Excellent	Typical
8 (to N. Himes Ave)	Typical	Typical	Yes	No	N/A	Yes	Typical	No	2	0.8	Excellent	Typical
9 (to Dale Mabry NB Ramps)	Typical	Typical	No	No	N/A	Yes	Typical	No	2	0.8	Poor	None
10 (to Dale Mabry SB Ramps)	Typical	Typical	No	No	N/A	No	N/A	No	2	0.8	Poor	None

Pedestrian SubSegment Data

Segment #	% of Segment			Sidewalk			Separation			Barrier		
	1	2	3	1	2	3	1	2	3	1	2	3
1 (to I - 275 NB Ramps)	100			Yes			Adjacent			No		
2 (to I - 275 SB Ramps)	100			Yes			Adjacent			No		
3 (to N Florida Ave)	100			No			N/A			No		
4 (to North Blvd)	50	50		Yes	Yes		Typical	Adjacent		No	No	
5 (to N Armenia Ave)	100			Yes			Typical			No		
6 (to Orange Grove Dr)	75	25		Yes	Yes		Typical	Adjacent		No	No	
7 (to Twin Lakes Blvd)	100			Yes			Typical			No		
8 (to N. Himes Ave)	80	20		Yes	Yes		Typical	Adjacent		No	No	
9 (to Dale Mabry NB Ramps)	50	50		Yes	Yes		Typical	Adjacent		No	No	
10 (to Dale Mabry SB Ramps)	100			No			N/A			No		

Multimodal LOS

Link #	Bicycle Street		Bicycle Sidepath		Pedestrian			Bus			
	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS
1 (to I - 275 NB Ramps)	4.51	E	N/A	N/A				4.20	D	2.15	D
2 (to I - 275 SB Ramps)	4.56	E	N/A	N/A				4.22	D	2.15	D
3 (to N Florida Ave)	4.73	E	N/A	N/A				6.63	F	1.19	E
4 (to North Blvd)	4.71	E	N/A	N/A				4.79	E	2.24	D
5 (to N Armenia Ave)	4.76	E	N/A	N/A				4.77	E	2.03	D
6 (to Orange Grove Dr)	3.12	C	N/A	N/A				5.01	F	1.32	E
7 (to Twin Lakes Blvd)	4.83	E	N/A	N/A				5.31	F	1.45	E

8 (to N. Himes Ave)	3.18	C	N/A	N/A	5.38	F	1.81	E	
9 (to Dale Mabry NB Ramps)	4.87	E	N/A	N/A	5.86	F	1.48	E	
10 (to Dale Mabry SB Ramps)	4.84	E	N/A	N/A	7.08	F	1.48	E	
Bicycle LOS		4.48	E	Pedestrian LOS		5.27	F	Bus LOS	
								1.83	
								E	

MultiModal Service Volume Tables

Bicycle

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	60	240	700	1000
2	**	120	470	1390	2000
3	**	180	700	2060	3000
4	**	240	940	2760	4000
*	**	130	490	1450	2000
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Pedestrian

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	100	440	760	1000
2	**	190	870	1530	2000
3	**	280	1300	2300	3000
4	**	380	1730	3070	4000
*	**	200	890	1570	2000
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
>= 6	>= 4	>= 3	>= 2	>= 1
Buses in Study Hour in Peak Direction (Daily)				

≥ 5.69	≥ 3.79	≥ 2.85	≥ 1.90	≥ 0.95
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* Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.

** Cannot be achieved based on input data provided.

*** Not applicable for that level of service letter grade. See generalized tables notes for more details.

Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.

Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.

Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst		Arterial Name	Busch Boulevard	Study Period	Dir Hr Demand Vol
Date Prepared	10/17/2017 1:20:06 PM	From	Dale Mabry SB Ramps	Modal Analysis	Multimodal
Agency	VHB	To	N Nebraska Ave	Program	ARTPLAN 2012
Area Type	Large Urbanized	Peak Direction	Eastbound	Version Date	12/12/2012
Arterial Class	1				
File Name	\\vhb\proj\Orlando\62966.00 FDOT D7 SR 580 Busch Blv\tech\Analysis\ARTPLAN\2040 NB - EB AM - Alt1.xap				
User Notes	2040 Build - EB AM Alt 1 - Continuous Side Walks & 7' Buffered Bicycle Lanes				

Arterial Data

K	0.09	PHF	0.95	Control Type	FullyActuated
D	0.565	% Heavy Vehicles	2	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
Dale Mabry NB Ramps	150	0.45	3	2	2	0	Yes	Protected	1	235	0.15	No
N Himes Ave	150	0.45	3	2	0	27	Yes	Protected	1	235	0.15	Yes
Twin Lakes Blvd	150	0.45	3	2	0	12	Yes	Protected	1	235	0.15	Yes
Orange Grove Dr	150	0.45	3	2	6	0	Yes	Protected	1	235	0.15	No
N Armenia Ave	150	0.45	3	2	4	16	Yes	Protected	1	235	0.15	No
North Blvd	150	0.45	3	2	3	8	Yes	Protected	1	235	0.15	No
N Florida Ave	150	0.45	3	2	8	20	Yes	Protected	1	235	0.15	No
I-275 SB Ramps	150	0.45	3	3	16	0	Yes	Protected	1	235	0.15	No
I-275 NB Ramps	150	0.45	3	3	14	0	Yes	Protected	1	235	0.15	No
N Nebraska Ave	150	0.45	3	3	4	12	Yes	Protected	1	235	0.15	No

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to Dale Mabry NB Ramps)	1080	30000	2600	2	45	50	Restrictive	No	N/A
2 (to N Himes Ave)	920	30000	2690	2	45	50	Restrictive	No	N/A
3 (to Twin Lakes)	2630	30000	2100	2	45	50	Restrictive	No	N/A

Blvd)										
4 (to Orange Grove Dr)	1300	30000	1980	2	45	50	Restrictive	No	N/A	
5 (to N Armenia Ave)	1580	30000	2000	2	45	50	Restrictive	No	N/A	
6 (to North Blvd)	5280	30000	1890	2	45	50	Restrictive	No	N/A	
7 (to N Florida Ave)	2680	30000	1890	2	40	45	Restrictive	No	N/A	
8 (to I-275 SB Ramps)	1010	30000	2080	3	40	45	Restrictive	No	N/A	
9 (to I-275 NB Ramps)	980	30000	1920	3	40	45	Restrictive	No	N/A	
10 (to N Nebraska Ave)	670	30000	1930	3	40	45	Restrictive	No	N/A	

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS			
1 (to Dale Mabry NB Ramps)	2682	3773	1.580	339.68	F	0.21	2.17	F			
2 (to N Himes Ave)	2067	2729	1.683	401.24	F	0.00	1.60	F			
3 (to Twin Lakes Blvd)	1945	3486	1.240	159.89	F	0.00	9.15	F			
4 (to Orange Grove Dr)	1959	3773	1.154	117.21	F	0.51	6.70	F			
5 (to N Armenia Ave)	2021	3731	1.204	141.78	F	0.33	6.69	F			
6 (to North Blvd)	1930	3752	1.143	111.86	F	0.23	19.07	D			
7 (to N Florida Ave)	1830	3605	1.128	104.61	F	0.67	12.44	F			
8 (to I-275 SB Ramps)	1839	5431	0.753	34.41	C	#	13.77	F			
9 (to I-275 NB Ramps)	1738	5406	0.714	33.94	C	#	13.63	F			
10 (to N Nebraska Ave)	1950	5413	0.801	36.64	D	0.33	9.87	F			
Arterial Length	3.5473	Weighted g/C	0.45	FFS Delay	1523.60	Threshold Delay	1069.45	Auto Speed	###	Auto LOS	###

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	**	290	720	840
2	**	**	590	1530	1660
3	**	**	910	2350	2500
4	**	**	1210	3180	3360
*	**	**	650	1610	1660
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr / Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to Dale Mabry NB Ramps)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
2 (to N Himes Ave)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
3 (to Twin Lakes Blvd)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Fair	Typical
4 (to Orange Grove Dr)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Fair	Typical
5 (to N Armenia Ave)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
6 (to North Blvd)	Typical	Typical	Yes	No	N/A	Yes	Typical	No	2	0.8	Fair	Typical
7 (to N Florida Ave)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Excellent	Typical
8 (to I-275 SB Ramps)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
9 (to I-275 NB Ramps)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
10 (to N Nebraska Ave)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None

Pedestrian SubSegment Data

Segment #	% of Segment			Sidewalk			Separation			Barrier		
	1	2	3	1	2	3	1	2	3	1	2	3
1 (to Dale Mabry NB Ramps)	100			Yes			Adjacent			No		
2 (to N Himes Ave)	100			Yes			Adjacent			No		
3 (to Twin Lakes Blvd)	100			Yes			Adjacent			No		
4 (to Orange Grove Dr)	100			Yes			Adjacent			No		
5 (to N Armenia Ave)	100			Yes			Adjacent			No		
6 (to North Blvd)	100			Yes			Typical			No		
7 (to N Florida Ave)	100			Yes			Adjacent			No		
8 (to I-275 SB Ramps)	100			Yes			Adjacent			No		
9 (to I-275 NB Ramps)	100			Yes			Adjacent			No		
10 (to N Nebraska Ave)	100			Yes			Adjacent			No		

Multimodal LOS

Link #	Bicycle Street		Bicycle Sidepath		Pedestrian			Bus			
	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS
1 (to Dale Mabry NB Ramps)	3.11	C	N/A	N/A				5.13	F	1.48	E
2 (to N Himes Ave)	3.10	C	N/A	N/A				5.19	F	1.48	E
3 (to Twin Lakes Blvd)	3.05	C	N/A	N/A				4.66	E	2.03	D
4 (to Orange Grove Dr)	3.00	C	N/A	N/A				4.46	E	2.03	D
5 (to N Armenia Ave)	3.01	C	N/A	N/A				4.51	E	1.83	E
6 (to North Blvd)	3.01	C	N/A	N/A				4.32	E	2.03	D
7 (to N Florida Ave)	2.94	C	N/A	N/A				4.26	E	2.24	D

8 (to I-275 SB Ramps)	2.75	C	N/A	N/A	3.61	D	1.80	E		
9 (to I-275 NB Ramps)	2.71	B	N/A	N/A	3.48	C	1.89	E		
10 (to N Nebraska Ave)	2.66	B	N/A	N/A	3.39	C	1.89	E		
Bicycle LOS		2.98	C	Pedestrian LOS		4.40	E	Bus LOS	1.96	E

MultiModal Service Volume Tables

Bicycle

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	220	590	1000	> 1000	***
2	440	1190	2000	> 2000	***
3	660	1770	3000	> 3000	***
4	870	2360	4000	> 4000	***
*	460	1280	3000	> 3000	***
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Pedestrian

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	260	590	910	1000
2	**	510	1180	1840	2000
3	**	760	1750	2730	3000
4	**	1020	2340	3660	4000
*	**	530	1220	1900	2000
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
>= 6	>= 4	>= 3	>= 2	>= 1
Buses in Study Hour in Peak Direction (Daily)				

≥ 5.19	≥ 3.46	≥ 2.60	≥ 1.73	≥ 0.87
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* Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.

** Cannot be achieved based on input data provided.

*** Not applicable for that level of service letter grade. See generalized tables notes for more details.

Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.

Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.

Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst		Arterial Name	Busch Boulevard	Study Period	Dir Hr Demand Vol
Date Prepared	10/17/2017 1:20:06 PM	From	N Nebraska Ave	Modal Analysis	Multimodal
Agency	VHB	To	Dale Mabry SB Ramps	Program	ARTPLAN 2012
Area Type	Large Urbanized	Peak Direction	Westbound	Version Date	12/12/2012
Arterial Class	1				
File Name	\\vhb\proj\Orlando\62966.00 FDOT D7 SR 580 Busch Blv\tech\Analysis\ARTPLAN\2040 NB - WB AM - Alt1.xap				
User Notes	2040 Build - WB AM Alt 1 - Continuous Side Walks & 7' Bicycle Lanes				

Arterial Data

K	0.09	PHF	0.95	Control Type	FullyActuated
D	0.565	% Heavy Vehicles	2	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
I - 275 NB Ramps	150	0.45	3	3	0	12	Yes	Protected	1	235	0.15	Yes
I - 275 SB Ramps	150	0.45	3	3	0	27	Yes	Protected	1	235	0.15	Yes
N Florida Ave	150	0.45	3	2	12	9	Yes	Protected	1	235	0.15	Yes
North Blvd	150	0.45	3	2	7	6	Yes	Protected	1	235	0.15	No
N Armenia Ave	150	0.45	3	2	12	1	Yes	Protected	1	235	0.15	No
Orange Grove Dr	150	0.45	3	2	0	5	Yes	Protected	1	235	0.15	Yes
Twin Lakes Blvd	150	0.45	3	2	15	0	Yes	Protected	1	235	0.15	No
N. Himes Ave	150	0.45	3	2	22	0	Yes	Protected	1	235	0.15	No
Dale Mabry NB Ramps	150	0.45	3	2	0	19	Yes	Protected	1	235	0.15	No
Dale Mabry SB Ramps	150	0.45	3	2	0	24	Yes	Protected	1	235	0.15	Yes

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to I - 275 NB Ramps)	670	30000	2610	3	40	45	Restrictive	No	N/A
2 (to I - 275 SB Ramps)	980	30000	2800	3	40	45	Restrictive	No	N/A

3 (to N Florida Ave)	1010	30000	2500	2	40	45	Restrictive	No	N/A
4 (to North Blvd)	2680	30000	2110	2	40	45	Restrictive	No	N/A
5 (to N Armenia Ave)	5280	30000	1980	2	45	50	Restrictive	No	N/A
6 (to Orange Grove Dr)	1580	30000	2030	2	45	50	Restrictive	No	N/A
7 (to Twin Lakes Blvd)	1300	30000	2400	2	45	50	Restrictive	No	N/A
8 (to N. Himes Ave)	2630	30000	2130	2	45	50	Restrictive	No	N/A
9 (to Dale Mabry NB Ramps)	920	30000	2070	2	45	50	Restrictive	No	N/A
10 (to Dale Mabry SB Ramps)	1080	30000	1840	2	45	50	Restrictive	No	N/A

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS			
1 (to I - 275 NB Ramps)	2418	5092	1.055	69.27	E	0.00	5.98	F			
2 (to I - 275 SB Ramps)	2152	3985	1.200	139.76	F	0.00	4.48	F			
3 (to N Florida Ave)	2079	3463	1.334	207.53	F	#	3.21	F			
4 (to North Blvd)	2066	3641	1.261	170.30	F	0.65	8.63	F			
5 (to N Armenia Ave)	1834	3770	1.081	81.91	F	#	22.58	D			
6 (to Orange Grove Dr)	2030	3671	1.229	154.31	F	0.00	6.23	F			
7 (to Twin Lakes Blvd)	2147	3773	1.195	137.18	F	#	5.84	F			
8 (to N. Himes Ave)	1749	3694	0.680	32.77	C	#	25.04	C			
9 (to Dale Mabry NB Ramps)	2179	3723	1.301	193.02	F	0.00	3.20	F			
10 (to Dale Mabry SB Ramps)	1472	2935	1.115	98.22	F	0.00	6.68	F			
Arterial Length	3.5473	Weighted g/C	0.45	FFS Delay	1328.01	Threshold Delay	873.86	Auto Speed	###	Auto LOS	###

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	**	300	730	820
2	**	**	600	1510	1600
3	**	**	920	2330	2420
4	**	**	1240	3140	3240
*	**	**	650	1600	1680
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr / Bike Lane	Side Path	Side Path Separation	Sidewalk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to I - 275 NB Ramps)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
2 (to I - 275 SB Ramps)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
3 (to N Florida Ave)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
4 (to North Blvd)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Excellent	Typical
5 (to N Armenia Ave)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Fair	Typical
6 (to Orange Grove Dr)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Fair	Typical
7 (to Twin Lakes Blvd)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Excellent	Typical
8 (to N. Himes Ave)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Excellent	Typical
9 (to Dale Mabry NB Ramps)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
10 (to Dale Mabry SB Ramps)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None

Pedestrian SubSegment Data

Segment #	% of Segment			Sidewalk			Separation			Barrier		
	1	2	3	1	2	3	1	2	3	1	2	3
1 (to I - 275 NB Ramps)	100			Yes			Adjacent			No		
2 (to I - 275 SB Ramps)	100			Yes			Adjacent			No		
3 (to N Florida Ave)	100			Yes			Adjacent			No		
4 (to North Blvd)	100			Yes			Adjacent			No		
5 (to N Armenia Ave)	100			Yes			Adjacent			No		
6 (to Orange Grove Dr)	100			Yes			Adjacent			No		
7 (to Twin Lakes Blvd)	100			Yes			Adjacent			No		
8 (to N. Himes Ave)	100			Yes			Adjacent			No		
9 (to Dale Mabry NB Ramps)	100			Yes			Adjacent			No		
10 (to Dale Mabry SB Ramps)	100			Yes			Adjacent			No		

Multimodal LOS

Link #	Bicycle Street		Bicycle Sidepath		Pedestrian			Bus			
	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS
1 (to I - 275 NB Ramps)	2.80	C	N/A	N/A				3.92	D	2.15	D
2 (to I - 275 SB Ramps)	2.89	C	N/A	N/A				4.15	D	2.15	D
3 (to N Florida Ave)	3.01	C	N/A	N/A				4.87	E	1.83	E
4 (to North Blvd)	2.99	C	N/A	N/A				4.51	E	2.24	D
5 (to N Armenia Ave)	3.03	C	N/A	N/A				4.54	E	2.03	D
6 (to Orange Grove Dr)	3.02	C	N/A	N/A				4.54	E	2.03	D
7 (to Twin Lakes Blvd)	3.08	C	N/A	N/A				4.93	E	2.24	D

8 (to N. Himes Ave)	3.03	C	N/A	N/A	4.56	E	1.87	E		
9 (to Dale Mabry NB Ramps)	2.83	C	N/A	N/A	3.82	D	2.15	D		
10 (to Dale Mabry SB Ramps)	2.95	C	N/A	N/A	4.27	E	1.83	E		
Bicycle LOS		3.00	C	Pedestrian LOS		4.50	E	Bus LOS	2.05	D

MultiModal Service Volume Tables

Bicycle

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	220	590	1000	> 1000	***
2	440	1190	2000	> 2000	***
3	660	1770	3000	> 3000	***
4	870	2360	4000	> 4000	***
*	450	1240	2000	> 2000	***
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Pedestrian

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	240	570	890	1000
2	**	480	1140	1800	2000
3	**	720	1700	2680	3000
4	**	950	2270	3590	4000
*	**	490	1170	1830	2000
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
>= 5	>= 4	>= 3	>= 2	>= 1
Buses in Study Hour in Peak Direction (Daily)				

≥ 4.91	≥ 3.28	≥ 2.46	≥ 1.64	≥ 0.82
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* Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.

** Cannot be achieved based on input data provided.

*** Not applicable for that level of service letter grade. See generalized tables notes for more details.

Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.

Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.

Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst		Arterial Name	Busch Boulevard	Study Period	Dir Hr Demand Vol
Date Prepared	10/17/2017 1:20:06 PM	From	Dale Mabry SB Ramps	Modal Analysis	Multimodal
Agency	VHB	To	N Nebraska Ave	Program	ARTPLAN 2012
Area Type	Large Urbanized	Peak Direction	Eastbound	Version Date	12/12/2012
Arterial Class	1				
File Name	\\vhb\proj\Orlando\62966.00 FDOT D7 SR 580 Busch Blv\tech\Analysis\ARTPLAN\2040 NB - EB PM - Alt1.xap				
User Notes	2040 Build - EB PM Alt 1 - Continuous Side Walks & 7' Bicycle Lane				

Arterial Data

K	0.09	PHF	0.95	Control Type	FullyActuated
D	0.565	% Heavy Vehicles	2	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
Dale Mabry NB Ramps	150	0.45	3	2	6	0	Yes	Protected	1	235	0.15	No
N Himes Ave	150	0.45	3	2	0	14	Yes	Protected	1	235	0.15	Yes
Twin Lakes Blvd	150	0.45	3	2	0	4	Yes	Protected	1	235	0.15	Yes
Orange Grove Dr	150	0.45	3	2	9	0	Yes	Protected	1	235	0.15	No
N Armenia Ave	150	0.45	3	2	9	8	Yes	Protected	1	235	0.15	No
North Blvd	150	0.45	3	2	4	5	Yes	Protected	1	235	0.15	No
N Florida Ave	150	0.45	3	2	7	12	Yes	Protected	1	235	0.15	No
I-275 SB Ramps	150	0.45	3	3	15	0	Yes	Protected	1	235	0.15	No
I-275 NB Ramps	150	0.45	3	3	23	0	Yes	Protected	1	235	0.15	No
N Nebraska Ave	150	0.45	3	3	9	8	Yes	Protected	1	235	0.15	No

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to Dale Mabry NB Ramps)	1080	30000	2280	2	45	50	Restrictive	No	N/A
2 (to N Himes Ave)	920	30000	2320	2	45	50	Restrictive	No	N/A
3 (to Twin Lakes)	2630	30000	2280	2	45	50	Restrictive	No	N/A

Blvd)										
4 (to Orange Grove Dr)	1300	30000	2480	2	45	50	Restrictive	No	N/A	
5 (to N Armenia Ave)	1580	30000	2320	2	45	50	Restrictive	No	N/A	
6 (to North Blvd)	5280	30000	2120	2	45	50	Restrictive	No	N/A	
7 (to N Florida Ave)	2680	30000	2140	2	40	45	Restrictive	No	N/A	
8 (to I-275 SB Ramps)	1010	30000	2660	3	40	45	Restrictive	No	N/A	
9 (to I-275 NB Ramps)	980	30000	2570	3	40	45	Restrictive	No	N/A	
10 (to N Nebraska Ave)	670	30000	2190	3	40	45	Restrictive	No	N/A	

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS			
1 (to Dale Mabry NB Ramps)	2256	3773	1.329	204.81	F	0.59	3.48	F			
2 (to N Himes Ave)	2100	3419	1.365	223.55	F	0.00	2.79	F			
3 (to Twin Lakes Blvd)	2304	3692	1.387	234.67	F	0.00	6.65	F			
4 (to Orange Grove Dr)	2376	3773	1.399	241.29	F	#	3.52	F			
5 (to N Armenia Ave)	2222	3752	1.316	198.41	F	0.96	4.99	F			
6 (to North Blvd)	2142	3759	1.266	173.04	F	0.36	14.40	F			
7 (to N Florida Ave)	2095	3625	1.284	182.04	F	0.66	8.18	F			
8 (to I-275 SB Ramps)	2380	5511	0.960	41.28	D	#	12.13	F			
9 (to I-275 NB Ramps)	2083	5492	0.843	37.06	D	#	12.79	F			
10 (to N Nebraska Ave)	2098	5465	0.853	38.11	D	0.96	9.57	F			
Arterial Length	3.5473	Weighted g/C	0.45	FFS Delay	1619.40	Threshold Delay	1165.25	Auto Speed	###	Auto LOS	###

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	**	300	750	860
2	**	**	610	1580	1740
3	**	**	930	2440	2620
4	**	**	1250	3290	3480
*	**	**	670	1650	1740
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr / Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to Dale Mabry NB Ramps)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
2 (to N Himes Ave)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
3 (to Twin Lakes Blvd)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Fair	Typical
4 (to Orange Grove Dr)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Fair	Typical
5 (to N Armenia Ave)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
6 (to North Blvd)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Fair	Typical
7 (to N Florida Ave)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Excellent	Typical
8 (to I-275 SB Ramps)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
9 (to I-275 NB Ramps)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
10 (to N Nebraska Ave)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None

Pedestrian SubSegment Data

Segment #	% of Segment			Sidewalk			Separation			Barrier		
	1	2	3	1	2	3	1	2	3	1	2	3
1 (to Dale Mabry NB Ramps)	100			Yes			Adjacent			No		
2 (to N Himes Ave)	100			Yes			Adjacent			No		
3 (to Twin Lakes Blvd)	100			Yes			Adjacent			No		
4 (to Orange Grove Dr)	100			Yes			Adjacent			No		
5 (to N Armenia Ave)	100			Yes			Adjacent			No		
6 (to North Blvd)	100			Yes			Adjacent			No		
7 (to N Florida Ave)	100			Yes			Adjacent			No		
8 (to I-275 SB Ramps)	100			Yes			Adjacent			No		
9 (to I-275 NB Ramps)	100			Yes			Adjacent			No		
10 (to N Nebraska Ave)	100			Yes			Adjacent			No		

Multimodal LOS

Link #	Bicycle Street		Bicycle Sidepath		Pedestrian			Bus			
	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS
1 (to Dale Mabry NB Ramps)	3.05	C	N/A	N/A				4.76	E	1.83	E
2 (to N Himes Ave)	3.04	C	N/A	N/A				4.77	E	1.83	E
3 (to Twin Lakes Blvd)	3.09	C	N/A	N/A				4.86	E	2.03	D
4 (to Orange Grove Dr)	3.10	C	N/A	N/A				5.02	F	1.32	E
5 (to N Armenia Ave)	3.08	C	N/A	N/A				4.87	E	1.83	E
6 (to North Blvd)	3.06	C	N/A	N/A				4.70	E	2.03	D
7 (to N Florida Ave)	2.99	C	N/A	N/A				4.54	E	2.24	D

8 (to I-275 SB Ramps)	2.87	C	N/A	N/A	4.05	D	1.80	E		
9 (to I-275 NB Ramps)	2.85	C	N/A	N/A	3.98	D	1.80	E		
10 (to N Nebraska Ave)	2.72	B	N/A	N/A	3.59	D	1.80	E		
Bicycle LOS		3.02	C	Pedestrian LOS		4.65	E	Bus LOS	1.94	E

MultiModal Service Volume Tables

Bicycle

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	220	590	1000	> 1000	***
2	440	1190	2000	> 2000	***
3	660	1770	3000	> 3000	***
4	870	2360	4000	> 4000	***
*	460	1280	3000	> 3000	***
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Pedestrian

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	240	570	890	1000
2	**	480	1140	1800	2000
3	**	720	1700	2680	3000
4	**	950	2270	3590	4000
*	**	500	1190	1870	2000
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
>= 6	>= 4	>= 3	>= 2	>= 1
Buses in Study Hour in Peak Direction (Daily)				

≥ 5.12	≥ 3.41	≥ 2.56	≥ 1.71	≥ 0.86
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*** Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.**

**** Cannot be achieved based on input data provided.**

***** Not applicable for that level of service letter grade. See generalized tables notes for more details.**

Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.

Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.

Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst		Arterial Name	Busch Boulevard	Study Period	Dir Hr Demand Vol
Date Prepared	10/17/2017 1:20:06 PM	From	N Nebraska Ave	Modal Analysis	Multimodal
Agency	VHB	To	Dale Mabry SB Ramps	Program	ARTPLAN 2012
Area Type	Large Urbanized	Peak Direction	Westbound	Version Date	12/12/2012
Arterial Class	1				
File Name	\\vhb\proj\Orlando\62966.00 FDOT D7 SR 580 Busch Blv\tech\Analysis\ARTPLAN\2040 NB - WB PM - Alt1.xap				
User Notes	2040 Build - WB PM Alt1 - Continuous Sidewalks and 7' Bicycle Lanes				

Arterial Data

K	0.09	PHF	0.95	Control Type	FullyActuated
D	0.565	% Heavy Vehicles	2	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
I - 275 NB Ramps	150	0.45	3	3	0	16	Yes	Protected	1	235	0.15	Yes
I - 275 SB Ramps	150	0.45	3	3	0	26	Yes	Protected	1	235	0.15	Yes
N Florida Ave	150	0.45	3	2	12	12	Yes	Protected	1	235	0.15	Yes
North Blvd	150	0.45	3	2	5	3	Yes	Protected	1	235	0.15	No
N Armenia Ave	150	0.45	3	2	9	2	Yes	Protected	1	235	0.15	No
Orange Grove Dr	150	0.45	3	2	0	4	Yes	Protected	1	235	0.15	Yes
Twin Lakes Blvd	150	0.45	3	2	3	0	Yes	Protected	1	235	0.15	No
N. Himes Ave	150	0.45	3	2	8	0	Yes	Protected	1	235	0.15	No
Dale Mabry NB Ramps	150	0.45	3	2	0	19	Yes	Protected	1	235	0.15	No
Dale Mabry SB Ramps	150	0.45	3	2	0	15	Yes	Protected	1	235	0.15	Yes

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to I - 275 NB Ramps)	670	30000	2700	3	40	45	Restrictive	No	N/A
2 (to I - 275 SB Ramps)	980	30000	2610	3	40	45	Restrictive	No	N/A

3 (to N Florida Ave)	1010	30000	2580	2	40	45	Restrictive	No	N/A
4 (to North Blvd)	2680	30000	2230	2	40	45	Restrictive	No	N/A
5 (to N Armenia Ave)	5280	30000	2120	2	45	50	Restrictive	No	N/A
6 (to Orange Grove Dr)	1580	30000	2530	2	45	50	Restrictive	No	N/A
7 (to Twin Lakes Blvd)	1300	30000	2670	2	45	50	Restrictive	No	N/A
8 (to N. Himes Ave)	2630	30000	2830	2	45	50	Restrictive	No	N/A
9 (to Dale Mabry NB Ramps)	920	30000	3150	2	45	50	Restrictive	No	N/A
10 (to Dale Mabry SB Ramps)	1080	30000	2850	2	45	50	Restrictive	No	N/A

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS			
1 (to I - 275 NB Ramps)	2387	4883	1.086	84.18	F	0.00	5.07	F			
2 (to I - 275 SB Ramps)	2033	4068	1.110	95.93	F	0.00	6.20	F			
3 (to N Florida Ave)	2064	3378	1.358	219.72	F	#	3.05	F			
4 (to North Blvd)	2230	3648	1.358	220.00	F	0.48	7.01	F			
5 (to N Armenia Ave)	2031	3767	1.198	138.83	F	0.86	16.65	E			
6 (to Orange Grove Dr)	2557	3692	1.539	316.44	F	0.00	3.27	F			
7 (to Twin Lakes Blvd)	2726	3773	1.606	354.67	F	0.34	2.46	F			
8 (to N. Himes Ave)	2741	3773	1.614	359.64	F	#	4.56	F			
9 (to Dale Mabry NB Ramps)	3316	3723	1.979	648.16	F	0.00	1.00	F			
10 (to Dale Mabry SB Ramps)	2550	3382	1.676	396.50	F	0.00	1.87	F			
Arterial Length	3.5473	Weighted g/C	0.45	FFS Delay	2883.37	Threshold Delay	2429.22	Auto Speed	###	Auto LOS	###

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	**	290	720	820
2	**	**	590	1510	1640
3	**	**	900	2320	2460
4	**	**	1210	3130	3300
*	**	**	630	1580	1680
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr / Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to I - 275 NB Ramps)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
2 (to I - 275 SB Ramps)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
3 (to N Florida Ave)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
4 (to North Blvd)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Excellent	Typical
5 (to N Armenia Ave)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Fair	Typical
6 (to Orange Grove Dr)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Fair	Typical
7 (to Twin Lakes Blvd)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Excellent	Typical
8 (to N. Himes Ave)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Excellent	Typical
9 (to Dale Mabry NB Ramps)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
10 (to Dale Mabry SB Ramps)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None

Pedestrian SubSegment Data

Segment #	% of Segment			Sidewalk			Separation			Barrier		
	1	2	3	1	2	3	1	2	3	1	2	3
1 (to I - 275 NB Ramps)	100			Yes			Adjacent			No		
2 (to I - 275 SB Ramps)	100			Yes			Adjacent			No		
3 (to N Florida Ave)	100			Yes			Adjacent			No		
4 (to North Blvd)	100			Yes			Adjacent			No		
5 (to N Armenia Ave)	100			Yes			Adjacent			No		
6 (to Orange Grove Dr)	100			Yes			Adjacent			No		
7 (to Twin Lakes Blvd)	100			Yes			Adjacent			No		
8 (to N. Himes Ave)	100			Yes			Adjacent			No		
9 (to Dale Mabry NB Ramps)	100			Yes			Adjacent			No		
10 (to Dale Mabry SB Ramps)	100			Yes			Adjacent			No		

Multimodal LOS

Link #	Bicycle Street		Bicycle Sidepath		Pedestrian			Bus			
	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS
1 (to I - 275 NB Ramps)	2.81	C	N/A	N/A				3.99	D	2.15	D
2 (to I - 275 SB Ramps)	2.86	C	N/A	N/A				4.01	D	2.15	D
3 (to N Florida Ave)	3.03	C	N/A	N/A				4.96	E	1.83	E
4 (to North Blvd)	3.01	C	N/A	N/A				4.65	E	2.24	D
5 (to N Armenia Ave)	3.06	C	N/A	N/A				4.70	E	2.03	D
6 (to Orange Grove Dr)	3.12	C	N/A	N/A				5.10	F	1.32	E
7 (to Twin Lakes Blvd)	3.13	C	N/A	N/A				5.24	F	1.45	E

8 (to N. Himes Ave)	3.18	C	N/A	N/A	5.47	F	1.81	E		
9 (to Dale Mabry NB Ramps)	3.17	C	N/A	N/A	5.71	F	1.48	E		
10 (to Dale Mabry SB Ramps)	3.14	C	N/A	N/A	5.41	F	1.48	E		
Bicycle LOS		3.07	C	Pedestrian LOS		4.96	E	Bus LOS	1.86	E

MultiModal Service Volume Tables

Bicycle

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	220	590	1000	> 1000	***
2	440	1190	2000	> 2000	***
3	660	1770	3000	> 3000	***
4	870	2360	4000	> 4000	***
*	450	1240	2000	> 2000	***
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Pedestrian

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	240	570	890	1000
2	**	480	1140	1800	2000
3	**	720	1700	2680	3000
4	**	950	2270	3590	4000
*	**	490	1170	1830	2000
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
>= 6	>= 4	>= 3	>= 2	>= 1
Buses in Study Hour in Peak Direction (Daily)				

≥ 5.57	≥ 3.72	≥ 2.79	≥ 1.86	≥ 0.93
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*** Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.**

**** Cannot be achieved based on input data provided.**

***** Not applicable for that level of service letter grade. See generalized tables notes for more details.**

Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.

Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.

Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst		Arterial Name	Busch Boulevard	Study Period	Dir Hr Demand Vol
Date Prepared	10/17/2017 1:20:06 PM	From	Dale Mabry SB Ramps	Modal Analysis	Multimodal
Agency	VHB	To	N Nebraska Ave	Program	ARTPLAN 2012
Area Type	Large Urbanized	Peak Direction	Eastbound	Version Date	12/12/2012
Arterial Class	1				
File Name	\\vhb\proj\Orlando\62966.00 FDOT D7 SR 580 Busch Blv\tech\Analysis\ARTPLAN\2040 B - EB AM - Alt1.xap				
User Notes	2040 Build - EB AM Alt 2 - Continuous Side Walks & 7' Buffered Bicycle Lanes				

Arterial Data

K	0.09	PHF	0.95	Control Type	FullyActuated
D	0.565	% Heavy Vehicles	2	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
Dale Mabry NB Ramps	160	0.46	3	3	2	0	Yes	Protected	1	235	0.15	No
N Himes Ave	160	0.46	3	3	0	25	Yes	Protected	1	235	0.15	Yes
Twin Lakes Blvd	160	0.46	3	3	0	12	Yes	Protected	1	235	0.15	Yes
Orange Grove Dr	160	0.46	3	3	6	0	Yes	Protected	1	235	0.15	No
N Armenia Ave	160	0.46	3	3	4	16	Yes	Protected	1	235	0.15	No
North Blvd	160	0.46	3	3	3	9	Yes	Protected	1	235	0.15	No
N Florida Ave	160	0.46	3	3	9	21	Yes	Protected	1	235	0.15	No
I-275 SB Ramps	160	0.46	3	3	16	0	Yes	Protected	1	235	0.15	No
I-275 NB Ramps	160	0.46	3	3	14	0	Yes	Protected	1	235	0.15	No
N Nebraska Ave	160	0.46	3	3	4	12	Yes	Protected	1	235	0.15	No

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to Dale Mabry NB Ramps)	1080	30000	3100	3	45	50	Restrictive	No	N/A
2 (to N Himes Ave)	920	30000	3200	3	45	50	Restrictive	No	N/A
3 (to Twin Lakes)	2630	30000	2530	3	45	50	Restrictive	No	N/A

Blvd)									
4 (to Orange Grove Dr)	1300	30000	2370	3	45	50	Restrictive	No	N/A
5 (to N Armenia Ave)	1580	30000	2380	3	45	50	Restrictive	No	N/A
6 (to North Blvd)	5280	30000	2260	3	45	50	Restrictive	No	N/A
7 (to N Florida Ave)	2680	30000	2220	3	40	45	Restrictive	No	N/A
8 (to I-275 SB Ramps)	1010	30000	2320	3	40	45	Restrictive	No	N/A
9 (to I-275 NB Ramps)	980	30000	2160	3	40	45	Restrictive	No	N/A
10 (to N Nebraska Ave)	670	30000	2170	3	40	45	Restrictive	No	N/A

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS			
1 (to Dale Mabry NB Ramps)	3198	5687	1.222	153.73	F	0.27	4.52	F			
2 (to N Himes Ave)	2526	4326	1.269	177.71	F	0.00	3.45	F			
3 (to Twin Lakes Blvd)	2344	5255	0.970	43.89	D	0.00	21.96	D			
4 (to Orange Grove Dr)	2345	5687	0.896	40.47	D	0.67	15.13	E			
5 (to N Armenia Ave)	2405	5624	0.930	43.15	D	0.44	16.49	E			
6 (to North Blvd)	2308	5651	0.888	40.50	D	0.30	30.93	C			
7 (to N Florida Ave)	2127	5431	0.851	39.34	D	#	22.28	D			
8 (to I-275 SB Ramps)	2051	5511	0.809	37.95	D	#	12.88	F			
9 (to I-275 NB Ramps)	1955	5492	0.774	36.91	D	#	12.87	F			
10 (to N Nebraska Ave)	2193	5465	0.872	40.92	D	0.40	9.08	F			
Arterial Length	3.5473	Weighted g/C	0.46	FFS Delay	691.17	Threshold Delay	237.02	Auto Speed	###	Auto LOS	###

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	**	250	720	860
2	**	**	520	1520	1740
3	**	**	790	2350	2620
4	**	**	1060	3170	3500
*	**	**	790	2350	2620
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr / Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to Dale Mabry NB Ramps)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
2 (to N Himes Ave)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
3 (to Twin Lakes Blvd)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Fair	Typical
4 (to Orange Grove Dr)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Fair	Typical
5 (to N Armenia Ave)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
6 (to North Blvd)	Typical	Typical	Yes	No	N/A	Yes	Typical	No	2	0.8	Fair	Typical
7 (to N Florida Ave)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Excellent	Typical
8 (to I-275 SB Ramps)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
9 (to I-275 NB Ramps)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
10 (to N Nebraska Ave)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None

Pedestrian SubSegment Data

Segment #	% of Segment			Sidewalk			Separation			Barrier		
	1	2	3	1	2	3	1	2	3	1	2	3
1 (to Dale Mabry NB Ramps)	100			Yes			Adjacent			No		
2 (to N Himes Ave)	100			Yes			Adjacent			No		
3 (to Twin Lakes Blvd)	100			Yes			Adjacent			No		
4 (to Orange Grove Dr)	100			Yes			Adjacent			No		
5 (to N Armenia Ave)	100			Yes			Adjacent			No		
6 (to North Blvd)	100			Yes			Typical			No		
7 (to N Florida Ave)	100			Yes			Adjacent			No		
8 (to I-275 SB Ramps)	100			Yes			Adjacent			No		
9 (to I-275 NB Ramps)	100			Yes			Adjacent			No		
10 (to N Nebraska Ave)	100			Yes			Adjacent			No		

Multimodal LOS

Link #	Bicycle Street		Bicycle Sidepath		Pedestrian			Bus			
	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS
1 (to Dale Mabry NB Ramps)	3.01	C	N/A	N/A				4.53	E	1.83	E
2 (to N Himes Ave)	3.01	C	N/A	N/A				4.57	E	1.83	E
3 (to Twin Lakes Blvd)	2.95	C	N/A	N/A				4.20	D	2.00	E
4 (to Orange Grove Dr)	2.90	C	N/A	N/A				4.01	D	2.00	E
5 (to N Armenia Ave)	2.91	C	N/A	N/A				4.05	D	2.15	D
6 (to North Blvd)	2.91	C	N/A	N/A				3.90	D	2.39	D
7 (to N Florida Ave)	2.83	C	N/A	N/A				3.80	D	2.19	D

8 (to I-275 SB Ramps)	2.80	C	N/A	N/A	3.79	D	1.80	E		
9 (to I-275 NB Ramps)	2.77	C	N/A	N/A	3.66	D	1.80	E		
10 (to N Nebraska Ave)	2.71	B	N/A	N/A	3.58	D	1.80	E		
Bicycle LOS		2.89	C	Pedestrian LOS		4.01	D	Bus LOS	2.10	D

MultiModal Service Volume Tables

Bicycle

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	220	590	1000	> 1000	***
2	440	1190	2000	> 2000	***
3	660	1770	3000	> 3000	***
4	870	2360	4000	> 4000	***
*	660	1770	3000	> 3000	***
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Pedestrian

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	260	590	910	1000
2	**	510	1180	1840	2000
3	**	760	1750	2730	3000
4	**	1020	2340	3660	4000
*	**	760	1750	2730	3000
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
>= 7	>= 5	>= 4	>= 3	>= 2
Buses in Study Hour in Peak Direction (Daily)				

≥ 6.28	≥ 4.19	≥ 3.14	≥ 2.10	≥ 1.05
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*** Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.**

**** Cannot be achieved based on input data provided.**

***** Not applicable for that level of service letter grade. See generalized tables notes for more details.**

Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.

Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.

Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst		Arterial Name	Busch Boulevard	Study Period	Dir Hr Demand Vol
Date Prepared	10/17/2017 1:20:06 PM	From	N Nebraska Ave	Modal Analysis	Multimodal
Agency	VHB	To	Dale Mabry SB Ramps	Program	ARTPLAN 2012
Area Type	Large Urbanized	Peak Direction	Westbound	Version Date	12/12/2012
Arterial Class	1				
File Name	\\vhb\proj\Orlando\62966.00 FDOT D7 SR 580 Busch Blv\tech\Analysis\ARTPLAN\2040 B - WB AM - Alt1.xap				
User Notes	2040 Build - WB AM Alt 2 - Continuous Side Walks & 7' Bicycle Lanes				

Arterial Data

K	0.09	PHF	0.95	Control Type	FullyActuated
D	0.565	% Heavy Vehicles	2	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
I - 275 NB Ramps	150	0.45	3	3	0	12	Yes	Protected	1	235	0.15	Yes
I - 275 SB Ramps	150	0.45	3	3	0	26	Yes	Protected	1	235	0.15	Yes
N Florida Ave	150	0.45	3	3	12	9	Yes	Protected	2	470	0.15	Yes
North Blvd	150	0.45	3	3	7	6	Yes	Protected	1	235	0.15	No
N Armenia Ave	150	0.45	3	3	12	1	Yes	Protected	1	235	0.15	No
Orange Grove Dr	150	0.45	3	3	0	5	Yes	Protected	1	235	0.15	Yes
Twin Lakes Blvd	150	0.45	3	3	13	0	Yes	Protected	1	235	0.15	No
N. Himes Ave	150	0.45	3	3	20	0	Yes	Protected	2	470	0.15	No
Dale Mabry NB Ramps	150	0.45	3	3	0	18	Yes	Protected	1	235	0.15	No
Dale Mabry SB Ramps	150	0.45	3	3	0	22	Yes	Protected	1	235	0.15	Yes

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to I - 275 NB Ramps)	670	30000	2840	3	40	45	Restrictive	No	N/A
2 (to I - 275 SB Ramps)	980	30000	3020	3	40	45	Restrictive	No	N/A

3 (to N Florida Ave)	1010	30000	2750	3	40	45	Restrictive	No	N/A
4 (to North Blvd)	2680	30000	2520	3	40	45	Restrictive	No	N/A
5 (to N Armenia Ave)	5280	30000	2410	3	45	50	Restrictive	No	N/A
6 (to Orange Grove Dr)	1580	30000	2440	3	45	50	Restrictive	No	N/A
7 (to Twin Lakes Blvd)	1300	30000	2790	3	45	50	Restrictive	No	N/A
8 (to N. Himes Ave)	2630	30000	2510	3	45	50	Restrictive	No	N/A
9 (to Dale Mabry NB Ramps)	920	30000	2450	3	45	50	Restrictive	No	N/A
10 (to Dale Mabry SB Ramps)	1080	30000	2190	3	45	50	Restrictive	No	N/A

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS			
1 (to I - 275 NB Ramps)	2631	5092	1.148	114.10	F	0.00	3.88	F			
2 (to I - 275 SB Ramps)	2352	4092	1.277	178.63	F	0.00	3.60	F			
3 (to N Florida Ave)	2287	5220	0.974	42.43	D	0.37	11.89	F			
4 (to North Blvd)	2467	5488	0.999	48.06	D	0.80	20.09	D			
5 (to N Armenia Ave)	2232	5683	0.873	37.71	D	#	31.59	B			
6 (to Orange Grove Dr)	2440	5533	0.980	47.61	D	0.00	15.46	E			
7 (to Twin Lakes Blvd)	2555	5687	0.998	47.44	D	#	13.54	F			
8 (to N. Himes Ave)	2114	5675	0.828	36.37	D	0.63	24.14	C			
9 (to Dale Mabry NB Ramps)	2579	5616	1.020	59.55	E	0.00	8.87	F			
10 (to Dale Mabry SB Ramps)	1798	4530	0.882	38.08	D	0.00	13.91	F			
Arterial Length	3.5473	Weighted g/C	0.45	FFS Delay	687.71	Threshold Delay	233.55	Auto Speed	###	Auto LOS	###

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	**	300	730	820
2	**	**	600	1520	1640
3	**	**	920	2340	2460
4	**	**	1240	3160	3300
*	**	**	920	2340	2460
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr / Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to I - 275 NB Ramps)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
2 (to I - 275 SB Ramps)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
3 (to N Florida Ave)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
4 (to North Blvd)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Excellent	Typical
5 (to N Armenia Ave)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Fair	Typical
6 (to Orange Grove Dr)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Fair	Typical
7 (to Twin Lakes Blvd)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Excellent	Typical
8 (to N. Himes Ave)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Excellent	Typical
9 (to Dale Mabry NB Ramps)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
10 (to Dale Mabry SB Ramps)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None

Pedestrian SubSegment Data

Segment #	% of Segment			Sidewalk			Separation			Barrier		
	1	2	3	1	2	3	1	2	3	1	2	3
1 (to I - 275 NB Ramps)	100			Yes			Adjacent			No		
2 (to I - 275 SB Ramps)	100			Yes			Adjacent			No		
3 (to N Florida Ave)	100			Yes			Adjacent			No		
4 (to North Blvd)	100			Yes			Adjacent			No		
5 (to N Armenia Ave)	100			Yes			Adjacent			No		
6 (to Orange Grove Dr)	100			Yes			Adjacent			No		
7 (to Twin Lakes Blvd)	100			Yes			Adjacent			No		
8 (to N. Himes Ave)	100			Yes			Adjacent			No		
9 (to Dale Mabry NB Ramps)	100			Yes			Adjacent			No		
10 (to Dale Mabry SB Ramps)	100			Yes			Adjacent			No		

Multimodal LOS

Link #	Bicycle Street		Bicycle Sidepath		Pedestrian			Bus			
	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS
1 (to I - 275 NB Ramps)	2.84	C	N/A	N/A				4.09	D	2.15	D
2 (to I - 275 SB Ramps)	2.92	C	N/A	N/A				4.32	E	1.83	E
3 (to N Florida Ave)	2.88	C	N/A	N/A				4.12	D	1.80	E
4 (to North Blvd)	2.89	C	N/A	N/A				4.03	D	2.19	D
5 (to N Armenia Ave)	2.94	C	N/A	N/A				4.13	D	2.39	D
6 (to Orange Grove Dr)	2.92	C	N/A	N/A				4.10	D	2.00	E
7 (to Twin Lakes Blvd)	2.97	C	N/A	N/A				4.33	E	1.87	E

8 (to N. Himes Ave)	2.95	C	N/A	N/A	4.19	D	2.19	D		
9 (to Dale Mabry NB Ramps)	2.88	C	N/A	N/A	4.00	D	2.15	D		
10 (to Dale Mabry SB Ramps)	2.85	C	N/A	N/A	3.84	D	1.80	E		
Bicycle LOS		2.92	C	Pedestrian LOS			4.12	D	Bus LOS	
							2.14	D		

MultiModal Service Volume Tables

Bicycle

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	220	590	1000	> 1000	***
2	440	1190	2000	> 2000	***
3	660	1770	3000	> 3000	***
4	870	2360	4000	> 4000	***
*	660	1770	3000	> 3000	***
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Pedestrian

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	240	570	890	1000
2	**	480	1140	1800	2000
3	**	720	1700	2680	3000
4	**	950	2270	3590	4000
*	**	720	1700	2680	3000
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
>= 6	>= 4	>= 3	>= 2	>= 1
Buses in Study Hour in Peak Direction (Daily)				

≥ 5.67	≥ 3.78	≥ 2.84	≥ 1.89	≥ 0.95
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* Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.

** Cannot be achieved based on input data provided.

*** Not applicable for that level of service letter grade. See generalized tables notes for more details.

Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.

Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.

Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst		Arterial Name	Busch Boulevard	Study Period	Dir Hr Demand Vol
Date Prepared	10/17/2017 1:20:06 PM	From	Dale Mabry SB Ramps	Modal Analysis	Multimodal
Agency	VHB	To	N Nebraska Ave	Program	ARTPLAN 2012
Area Type	Large Urbanized	Peak Direction	Eastbound	Version Date	12/12/2012
Arterial Class	1				
File Name	\\vhb\proj\Orlando\62966.00 FDOT D7 SR 580 Busch Blv\tech\Analysis\ARTPLAN\2040 B - EB PM - Alt1.xap				
User Notes	2040 Build - EB PM Alt 2 - Continuous Side Walks & 7' Bicycle Lane				

Arterial Data

K	0.09	PHF	0.95	Control Type	FullyActuated
D	0.565	% Heavy Vehicles	2	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
Dale Mabry NB Ramps	150	0.45	3	3	5	0	Yes	Protected	1	235	0.15	No
N Himes Ave	150	0.45	3	3	0	13	Yes	Protected	1	235	0.15	Yes
Twin Lakes Blvd	150	0.45	3	3	0	4	Yes	Protected	1	235	0.15	Yes
Orange Grove Dr	150	0.45	3	3	9	0	Yes	Protected	1	235	0.15	No
N Armenia Ave	150	0.45	3	3	9	8	Yes	Protected	1	235	0.15	No
North Blvd	150	0.45	3	3	4	5	Yes	Protected	1	235	0.15	No
N Florida Ave	150	0.45	3	3	7	13	Yes	Protected	1	235	0.15	No
I-275 SB Ramps	150	0.45	3	3	14	0	Yes	Protected	1	235	0.15	No
I-275 NB Ramps	150	0.45	3	3	22	0	Yes	Protected	1	235	0.15	No
N Nebraska Ave	150	0.45	3	3	8	7	Yes	Protected	1	235	0.15	No

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to Dale Mabry NB Ramps)	1080	30000	2700	3	45	50	Restrictive	No	N/A
2 (to N Himes Ave)	920	30000	2800	3	45	50	Restrictive	No	N/A
3 (to Twin Lakes)	2630	30000	2800	3	45	50	Restrictive	No	N/A

Blvd)									
4 (to Orange Grove Dr)	1300	30000	2950	3	45	50	Restrictive	No	N/A
5 (to N Armenia Ave)	1580	30000	2750	3	45	50	Restrictive	No	N/A
6 (to North Blvd)	5280	30000	2630	3	45	50	Restrictive	No	N/A
7 (to N Florida Ave)	2680	30000	2610	3	40	45	Restrictive	No	N/A
8 (to I-275 SB Ramps)	1010	30000	3070	3	40	45	Restrictive	No	N/A
9 (to I-275 NB Ramps)	980	30000	2980	3	40	45	Restrictive	No	N/A
10 (to N Nebraska Ave)	670	30000	2590	3	40	45	Restrictive	No	N/A

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS			
1 (to Dale Mabry NB Ramps)	2700	5687	1.055	69.12	E	0.59	8.92	F			
2 (to N Himes Ave)	2564	5206	1.095	88.08	F	0.00	6.42	F			
3 (to Twin Lakes Blvd)	2829	5566	1.130	105.05	F	0.00	12.65	F			
4 (to Orange Grove Dr)	2826	5687	1.104	92.64	F	#	8.15	F			
5 (to N Armenia Ave)	2634	5655	1.035	59.96	E	#	13.18	F			
6 (to North Blvd)	2658	5667	1.042	63.15	E	0.45	25.79	C			
7 (to N Florida Ave)	2555	5461	1.040	62.07	E	0.83	17.44	E			
8 (to I-275 SB Ramps)	2779	5511	1.121	100.67	F	#	6.09	F			
9 (to I-275 NB Ramps)	2447	5511	0.987	43.90	D	#	11.35	F			
10 (to N Nebraska Ave)	2508	5484	1.016	52.86	D	0.97	7.44	F			
Arterial Length	3.5473	Weighted g/C	0.45	FFS Delay	776.88	Threshold Delay	322.73	Auto Speed	###	Auto LOS	###

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	**	300	740	850
2	**	**	610	1580	1740
3	**	**	930	2430	2620
4	**	**	1250	3280	3480
*	**	**	930	2430	2620
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr / Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to Dale Mabry NB Ramps)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
2 (to N Himes Ave)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
3 (to Twin Lakes Blvd)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Fair	Typical
4 (to Orange Grove Dr)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Fair	Typical
5 (to N Armenia Ave)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
6 (to North Blvd)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Fair	Typical
7 (to N Florida Ave)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Excellent	Typical
8 (to I-275 SB Ramps)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
9 (to I-275 NB Ramps)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
10 (to N Nebraska Ave)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None

Pedestrian SubSegment Data

Segment #	% of Segment			Sidewalk			Separation			Barrier		
	1	2	3	1	2	3	1	2	3	1	2	3
1 (to Dale Mabry NB Ramps)	100			Yes			Adjacent			No		
2 (to N Himes Ave)	100			Yes			Adjacent			No		
3 (to Twin Lakes Blvd)	100			Yes			Adjacent			No		
4 (to Orange Grove Dr)	100			Yes			Adjacent			No		
5 (to N Armenia Ave)	100			Yes			Adjacent			No		
6 (to North Blvd)	100			Yes			Adjacent			No		
7 (to N Florida Ave)	100			Yes			Adjacent			No		
8 (to I-275 SB Ramps)	100			Yes			Adjacent			No		
9 (to I-275 NB Ramps)	100			Yes			Adjacent			No		
10 (to N Nebraska Ave)	100			Yes			Adjacent			No		

Multimodal LOS

Link #	Bicycle Street		Bicycle Sidepath		Pedestrian			Bus			
	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS
1 (to Dale Mabry NB Ramps)	2.95	C	N/A	N/A				4.23	D	2.15	D
2 (to N Himes Ave)	2.95	C	N/A	N/A				4.27	E	1.83	E
3 (to Twin Lakes Blvd)	3.00	C	N/A	N/A				4.41	E	2.03	D
4 (to Orange Grove Dr)	3.00	C	N/A	N/A				4.45	E	1.70	E
5 (to N Armenia Ave)	2.98	C	N/A	N/A				4.33	E	1.83	E
6 (to North Blvd)	2.98	C	N/A	N/A				4.30	E	2.03	D
7 (to N Florida Ave)	2.90	C	N/A	N/A				4.10	D	2.63	D

8 (to I-275 SB Ramps)	2.93	C	N/A	N/A	4.36	E	1.83	E		
9 (to I-275 NB Ramps)	2.92	C	N/A	N/A	4.29	E	1.53	E		
10 (to N Nebraska Ave)	2.79	C	N/A	N/A	3.90	D	1.80	E		
Bicycle LOS		2.96	C	Pedestrian LOS			4.28	E	Bus LOS	
							2.03	D		

MultiModal Service Volume Tables

Bicycle

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	220	590	1000	> 1000	***
2	440	1190	2000	> 2000	***
3	660	1770	3000	> 3000	***
4	870	2360	4000	> 4000	***
*	660	1770	3000	> 3000	***
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Pedestrian

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	240	570	890	1000
2	**	480	1140	1800	2000
3	**	720	1700	2680	3000
4	**	950	2270	3590	4000
*	**	720	1700	2680	3000
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
>= 6	>= 4	>= 3	>= 2	>= 1
Buses in Study Hour in Peak Direction (Daily)				

≥ 5.39	≥ 3.60	≥ 2.70	≥ 1.80	≥ 0.90
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*** Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.**

**** Cannot be achieved based on input data provided.**

***** Not applicable for that level of service letter grade. See generalized tables notes for more details.**

Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.

Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.

Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

ARTPLAN 2012 Conceptual Planning Analysis

Project Information

Analyst		Arterial Name	Busch Boulevard	Study Period	Dir Hr Demand Vol
Date Prepared	10/17/2017 1:20:06 PM	From	N Nebraska Ave	Modal Analysis	Multimodal
Agency	VHB	To	Dale Mabry SB Ramps	Program	ARTPLAN 2012
Area Type	Large Urbanized	Peak Direction	Westbound	Version Date	12/12/2012
Arterial Class	1				
File Name	\\vhb\proj\Orlando\62966.00 FDOT D7 SR 580 Busch Blv\tech\Analysis\ARTPLAN\2040 B - WB PM - Alt1.xap				
User Notes	2040 Build - WB PM Alt 2 - Continuous Sidewalks and 7' Bicycle Lanes				

Arterial Data

K	0.09	PHF	0.95	Control Type	FullyActuated
D	0.565	% Heavy Vehicles	2	Base Sat. Flow Rate	1950

Automobile Intersection Data

Cross Street	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	Left Turn Phasing	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes
I - 275 NB Ramps	150	0.45	3	3	0	16	Yes	Protected	1	235	0.15	Yes
I - 275 SB Ramps	150	0.45	3	3	0	25	Yes	Protected	1	235	0.15	Yes
N Florida Ave	150	0.45	3	3	12	12	Yes	Protected	2	470	0.15	Yes
North Blvd	150	0.45	3	3	5	3	Yes	Protected	1	235	0.15	No
N Armenia Ave	150	0.45	3	3	9	2	Yes	Protected	1	235	0.15	No
Orange Grove Dr	150	0.45	3	3	0	4	Yes	Protected	1	235	0.15	Yes
Twin Lakes Blvd	150	0.45	3	3	3	0	Yes	Protected	1	235	0.15	No
N. Himes Ave	150	0.45	3	3	7	0	Yes	Protected	2	470	0.15	No
Dale Mabry NB Ramps	150	0.45	3	3	0	18	Yes	Protected	1	235	0.15	No
Dale Mabry SB Ramps	150	0.45	3	3	0	14	Yes	Protected	1	235	0.15	Yes

Automobile Segment Data

Segment #	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	Posted Speed	Free Flow Speed	Median Type	On-Street Parking	Parking Activity
1 (to I - 275 NB Ramps)	670	30000	2900	3	40	45	Restrictive	No	N/A
2 (to I - 275 SB Ramps)	980	30000	2810	3	40	45	Restrictive	No	N/A

3 (to N Florida Ave)	1010	30000	2810	3	40	45	Restrictive	No	N/A
4 (to North Blvd)	2680	30000	2620	3	40	45	Restrictive	No	N/A
5 (to N Armenia Ave)	5280	30000	2560	3	45	50	Restrictive	No	N/A
6 (to Orange Grove Dr)	1580	30000	2910	3	45	50	Restrictive	No	N/A
7 (to Twin Lakes Blvd)	1300	30000	3040	3	45	50	Restrictive	No	N/A
8 (to N. Himes Ave)	2630	30000	3200	3	45	50	Restrictive	No	N/A
9 (to Dale Mabry NB Ramps)	920	30000	3540	3	45	50	Restrictive	No	N/A
10 (to Dale Mabry SB Ramps)	1080	30000	3200	3	45	50	Restrictive	No	N/A

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS			
1 (to I - 275 NB Ramps)	2564	4883	1.167	123.39	F	0.00	3.62	F			
2 (to I - 275 SB Ramps)	2218	4192	1.176	127.92	F	0.00	4.84	F			
3 (to N Florida Ave)	2248	5092	0.981	43.30	D	0.38	11.72	F			
4 (to North Blvd)	2620	5499	1.059	71.42	E	0.57	16.04	E			
5 (to N Armenia Ave)	2452	5679	0.960	41.23	D	#	30.57	C			
6 (to Orange Grove Dr)	2941	5566	1.174	127.31	F	0.00	7.34	F			
7 (to Twin Lakes Blvd)	3104	5687	1.213	146.12	F	0.38	5.54	F			
8 (to N. Himes Ave)	3133	5687	1.224	151.70	F	0.24	9.55	F			
9 (to Dale Mabry NB Ramps)	3726	5616	1.474	281.11	F	0.00	2.25	F			
10 (to Dale Mabry SB Ramps)	2897	5153	1.249	164.28	F	0.00	4.26	F			
Arterial Length	3.5473	Weighted g/C	0.45	FFS Delay	1318.06	Threshold Delay	863.91	Auto Speed	###	Auto LOS	###

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	**	290	720	820
2	**	**	590	1510	1660
3	**	**	900	2330	2500
4	**	**	1210	3150	3340
*	**	**	900	2330	2500
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Multimodal Segment Data

Segment #	Outside Lane Width	Pave Cond	Pave Shldr / Bike Lane	Side Path	Side Path Separation	Side walk	Sidewalk Roadway Separation	Sidewalk Roadway Protective Barrier	Bus Freq	Passenger Load Factor	Amenities	Bus Stop Type
1 (to I - 275 NB Ramps)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
2 (to I - 275 SB Ramps)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
3 (to N Florida Ave)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
4 (to North Blvd)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Excellent	Typical
5 (to N Armenia Ave)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Fair	Typical
6 (to Orange Grove Dr)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Fair	Typical
7 (to Twin Lakes Blvd)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Excellent	Typical
8 (to N. Himes Ave)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Excellent	Typical
9 (to Dale Mabry NB Ramps)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None
10 (to Dale Mabry SB Ramps)	Typical	Typical	Yes	No	N/A	Yes	Adjacent	No	2	0.8	Poor	None

Pedestrian SubSegment Data

Segment #	% of Segment			Sidewalk			Separation			Barrier		
	1	2	3	1	2	3	1	2	3	1	2	3
1 (to I - 275 NB Ramps)	100			Yes			Adjacent			No		
2 (to I - 275 SB Ramps)	100			Yes			Adjacent			No		
3 (to N Florida Ave)	100			Yes			Adjacent			No		
4 (to North Blvd)	100			Yes			Adjacent			No		
5 (to N Armenia Ave)	100			Yes			Adjacent			No		
6 (to Orange Grove Dr)	100			Yes			Adjacent			No		
7 (to Twin Lakes Blvd)	100			Yes			Adjacent			No		
8 (to N. Himes Ave)	100			Yes			Adjacent			No		
9 (to Dale Mabry NB Ramps)	100			Yes			Adjacent			No		
10 (to Dale Mabry SB Ramps)	100			Yes			Adjacent			No		

Multimodal LOS

Link #	Bicycle Street		Bicycle Sidepath		Pedestrian			Bus			
	Score	LOS	Score	LOS	1	2	3	Score	LOS	Adj. Buses	LOS
1 (to I - 275 NB Ramps)	2.85	C	N/A	N/A				4.14	D	2.15	D
2 (to I - 275 SB Ramps)	2.89	C	N/A	N/A				4.16	D	2.15	D
3 (to N Florida Ave)	2.89	C	N/A	N/A				4.16	D	1.80	E
4 (to North Blvd)	2.91	C	N/A	N/A				4.11	D	2.63	D
5 (to N Armenia Ave)	2.97	C	N/A	N/A				4.25	D	2.39	D
6 (to Orange Grove Dr)	3.00	C	N/A	N/A				4.45	E	2.03	D
7 (to Twin Lakes Blvd)	3.01	C	N/A	N/A				4.52	E	2.24	D

8 (to N. Himes Ave)	3.06	C	N/A	N/A	4.71	E	2.24	D		
9 (to Dale Mabry NB Ramps)	3.05	C	N/A	N/A	4.83	E	1.83	E		
10 (to Dale Mabry SB Ramps)	3.02	C	N/A	N/A	4.61	E	1.83	E		
Bicycle LOS		2.97	C	Pedestrian LOS		4.38	E	Bus LOS	2.24	D

MultiModal Service Volume Tables

Bicycle

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	220	590	1000	> 1000	***
2	440	1190	2000	> 2000	***
3	660	1770	3000	> 3000	***
4	870	2360	4000	> 4000	***
*	660	1770	3000	> 3000	***
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Pedestrian

	A	B	C	D	E
Lanes	Hourly Volume In Peak Direction				
1	**	240	570	890	1000
2	**	480	1140	1800	2000
3	**	720	1700	2680	3000
4	**	950	2270	3590	4000
*	**	720	1700	2680	3000
Lanes	Hourly Volume In Both Directions				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A
Lanes	Annual Average Daily Traffic				
2	N/A	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A	N/A
6	N/A	N/A	N/A	N/A	N/A
8	N/A	N/A	N/A	N/A	N/A
*	N/A	N/A	N/A	N/A	N/A

Bus

A	B	C	D	E
Buses Per Hour In Peak Direction				
>= 5	>= 4	>= 3	>= 2	>= 1
Buses in Study Hour in Peak Direction (Daily)				

≥ 4.90	≥ 3.27	≥ 2.45	≥ 1.64	≥ 0.82
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* Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.

** Cannot be achieved based on input data provided.

*** Not applicable for that level of service letter grade. See generalized tables notes for more details.

Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.

Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.

Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

Appendix J

Storage Length Calculations

Storage Length Based on 95th Percentile Queue
Recommended Queue Length of Turn Lanes for Signalized Interscetions
Design Year 2040 Build Alt 1 (No Build with Improvements)

SR 580/Busch Boulevard	95th Percentile Queue (Veh/Lane)		95th Percentile Queue (ft/lane)		Existing Storage (ft./lane)	Recommended Storage Length (ft./lane)
	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour		
Dale Mabry Hwy SB Ramps						
EB Left	13.9	29.6	348	740	175	750
SB Left	17.2	18.4	430	460	235	475
Dale Mabry Hwy NB Ramps						
EB Left	0.4	8.3	10	208	200	225
SB Left	5.9	8.0	148	200	200	225
N Himes Avenue						
EB Right	23.2	12.7	580	318	275	600
WB Left	16.9	7.2	423	180	200	425
NB Left	16.6	24.4	415	610		625
NB Right	18.4	38.4	460	960		975
Twin Lakes Boulevard						
EB Right	2.2	0.0	55	0	220	75
WB Left	16.3	5.7	408	143	100	425
Orange Grove Drive						
EB Left	3.0	11.0	75	275	200	300
SB Left	9.6	5.5	240	138	70	250
SB Right	47.7	29.7	1193	743		1,200
N Armenia Avenue						
EB Left	6.5	13.2	163	330	250	350
EB Right	0.4	0.1	10	3		25
WB Left	13.0	13.3	325	333	535	350
WB Right	0.4	1.9	10	48		50
NB Left	10.9	16.1	273	403	200	425
NB Right	8.0	10.1	200	253	200	275
SB Left	6.3	9.7	158	243	150	250
SB Right	8.6	7.5	215	188	150	225
North Boulevard						
EB Left	4.2	4.0	105	100	215	125
EB Right	5.5	2.4	138	60		150
WB Left	13.6	11.5	340	288	215	350
WB Right	5.5	2.4	138	60		150
NB Left	6.5	8.4	163	210	125	225
NB Right	4.0	5.6	100	140	150	150
SB Left	17.6	12.3	440	308	135	450
SB Right	2.3	3.2	58	80	80	100
N Florida Avenue						
EB Left	11.5	14.3	288	358	200	375
EB Right	0.0	0.0	0	0		25
WB Left	9.8	7.9	245	198	370	250
WB Right	2.6	3.6	65	90		100
NB Left	23.5	19.9	588	498	250	600
NB Right	21.4	15.7	535	393	350	550
SB Left	12.8	17.1	320	428	400	450
SB Right	3.3	9.1	83	228		250
I-275 SB Ramps						
EB Left	18.9	18.4	473	460	350	475
SB Left	16.9	23.9	423	598		600
I-275 NB Ramps						
EB Left	13.4	39.2	335	980	260	1,000
SB Left	11.8	9.6	295	240	400	300
SB Right	13.9	9.1	348	228	400	350
N Nebraska Avenue						
EB Left	11.8	10.4	295	260	400	300
EB Right	9.0	1.5	225	38		250
WB Left	28.7	23.9	718	598	250	725
WB Right	3.4	6.5	85	163		175
NB Left	18.9	14.2	473	355	200	475
NB Right	0.0	0.0	0	0	50	25
SB Left	6.4	20.3	160	508	275	525
SB Right	7.8	10.5	195	263		275

Storage Length Based on 95th Percentile Queue
Recommended Queue Length of Turn Lanes for Signalized Interscetions
Design Year 2040 Build Alt 2 (Build with Improvements)

SR 580/Busch Boulevard	95th Percentile Queue (Veh/Lane)		95th Percentile Queue (ft/lane)		Existing Storage (ft./lane)	Recommended Storage Length (ft./lane)
	A.M. Peak Hour	P.M. Peak Hour	A.M. Peak Hour	P.M. Peak Hour		
Dale Mabry Hwy SB Ramps						
EB Left	18.4	22.8	460	570	175	575
SB Left	17.9	19.6	448	490	235	500
Dale Mabry Hwy NB Ramps						
EB Left	0.4	14.0	10	350	200	375
SB Left	5.9	8.4	148	210	200	225
N Himes Avenue						
EB Right	24.1	14.0	603	350	275	625
WB Left	16.2	8.7	405	218	200	425
NB Left	15.7	20.7	393	518		525
NB Right	17.4	43.1	435	1078		1,100
Twin Lakes Boulevard						
EB Right	3.1	0.0	78	0	220	100
WB Left	16.1	6.3	403	158	100	425
Orange Grove Drive						
EB Left	4.1	14.9	103	373	200	375
SB Left	8.5	5.3	213	133	70	225
SB Right	41.5	32.3	1038	808		1,050
N Armenia Avenue						
EB Left	7.1	14.0	178	350	250	375
EB Right	2.7	0.2	68	5		75
WB Left	15.6	15.1	390	378	535	400
WB Right	0.4	2.5	10	63		75
NB Left	8.4	14.8	210	370	200	375
NB Right	6.8	9.6	170	240	200	250
SB Left	1.0	11.2	25	280	150	300
SB Right	8.4	20.5	210	513	150	525
North Boulevard						
EB Left	4.5	5.3	113	133	215	150
EB Right	5.1	3.5	128	88		150
WB Left	14.3	11.9	358	298	215	375
WB Right	4.6	3.0	115	75		125
NB Left	5.6	8.3	140	208	125	225
NB Right	3.9	5.5	98	138	150	150
SB Left	16.1	11.2	403	280	135	425
SB Right	2.6	3.3	65	83	80	100
N Florida Avenue						
EB Left	24.6	19.8	615	495	200	625
EB Right	0.0	0.0	0	0		25
WB Left	8.2	7.0	205	175	370	225
WB Right	2.6	0.1	65	3		75
NB Left	22.5	24.3	563	608	250	625
NB Right	13.2	13.4	330	335	350	350
SB Left	13.0	21.6	325	540	400	550
SB Right	3.4	9.9	85	248		250
I-275 SB Ramps						
EB Left	35.5	18.6	888	465	350	900
SB Left	16.8	26.9	420	673		675
I-275 NB Ramps						
EB Left	21.0	54.0	525	1350	260	1,375
SB Left	12.7	10.2	318	255	400	325
SB Right	15.3	10.1	383	253	400	400
N Nebraska Avenue						
EB Left	12.0	23.8	300	595	400	600
EB Right	3.3	1.2	83	30		100
WB Left	32.2	27.1	805	678	250	825
WB Right	3.1	5.6	78	140		150
NB Left	21.6	15.9	540	398	200	550
NB Right	0.0	0.0	0	0	50	25
SB Left	7.0	23.1	175	578	275	600
SB Right	6.0	10.3	150	258		275