

College Road Affordable Housing

5220 – 5230 College Road
Stock Island, Florida

TRAFFIC IMPACT STUDY

prepared for:
William P. Horn Architect, P.A.

KBP CONSULTING, INC.

May 2019

College Road Affordable Housing

5220 – 5230 College Road

Stock Island, Florida

Traffic Impact Study

May 2019

Prepared for:
William P. Horn Architect, P.A.

Prepared by:
KBP Consulting, Inc.
8400 N. University Drive, Suite 309
Tamarac, Florida 33321
Phone: (954) 560-7103
E-mail: karl@traftech.biz



Karl B. Peterson, P.E.
Florida Registration Number 49897
KBP Consulting, Inc.
8400 N. University Drive, Suite 309
Tamarac, Florida 33321
CA # 29939

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INTRODUCTION

The College Road Affordable Housing development is proposed to be located at 5220 - 5230 College Road on Stock Island, Monroe County, Florida. The subject site is located on the north (bay) side of Overseas Highway / US 1, near Mile Marker 4. A Project Location Map is presented in Figure 1 on the following page.

KBP Consulting, Inc. has been retained by William P. Horn Architect, P.A. to prepare a traffic impact study for this proposed residential development. This study addresses the trip generation and the traffic impacts created by the proposed project on the nearby transportation network. The study is divided into seven (7) sections, as listed below:

1. Inventory
2. Existing Conditions
3. Traffic Counts
4. Trip Generation
5. Trip Distribution and Traffic Assignment
6. Traffic Analyses
7. Summary & Conclusions



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Project Location Map

FIGURE 1
College Road Affordable Housing
Key West, Florida

INVENTORY

Existing Land Uses and Access

The subject site for the College Road Affordable Housing development consists of the following four (4) parcels:

- 5220 College Road, Parcel ID 00072082-002200
- 5224 College Road, Parcel ID 00072082-002100
- 5228 College Road, Parcel ID 00072080-002200
- 5230 College Road, Parcel ID 00072082-002400

The total area of the site is approximately 2.66 acres and, until recently, each of these parcels were owned or leased by the Florida Easter Seal Society, the Mosquito Control District, and the Monroe County Animal Shelter. Various structures and parking areas were located throughout the site and vehicular access to the site is provided via multiple full access driveways along College Road. A site plan depicting the previous conditions is presented in Appendix A.

Proposed Land Use and Access

The proposed development on this site will consist of 104 multi-family residential dwelling units. Vehicular access to the site will be provided via three (3) full access driveways along College Road. The proposed site plan is presented in Appendix B and, for the purposes of performing this traffic impact analysis, the project is planned to be completed by the year 2021.

EXISTING CONDITIONS

This section of the report addresses the existing roadway network in the project study area and the general traffic conditions.

Existing Roadway Network

Overseas Highway / US 1 through the study area is a four-lane divided (4LD) principal arterial roadway. Based upon a review of the study area, the following intersections along Overseas Highway / US 1 were selected to be evaluated:

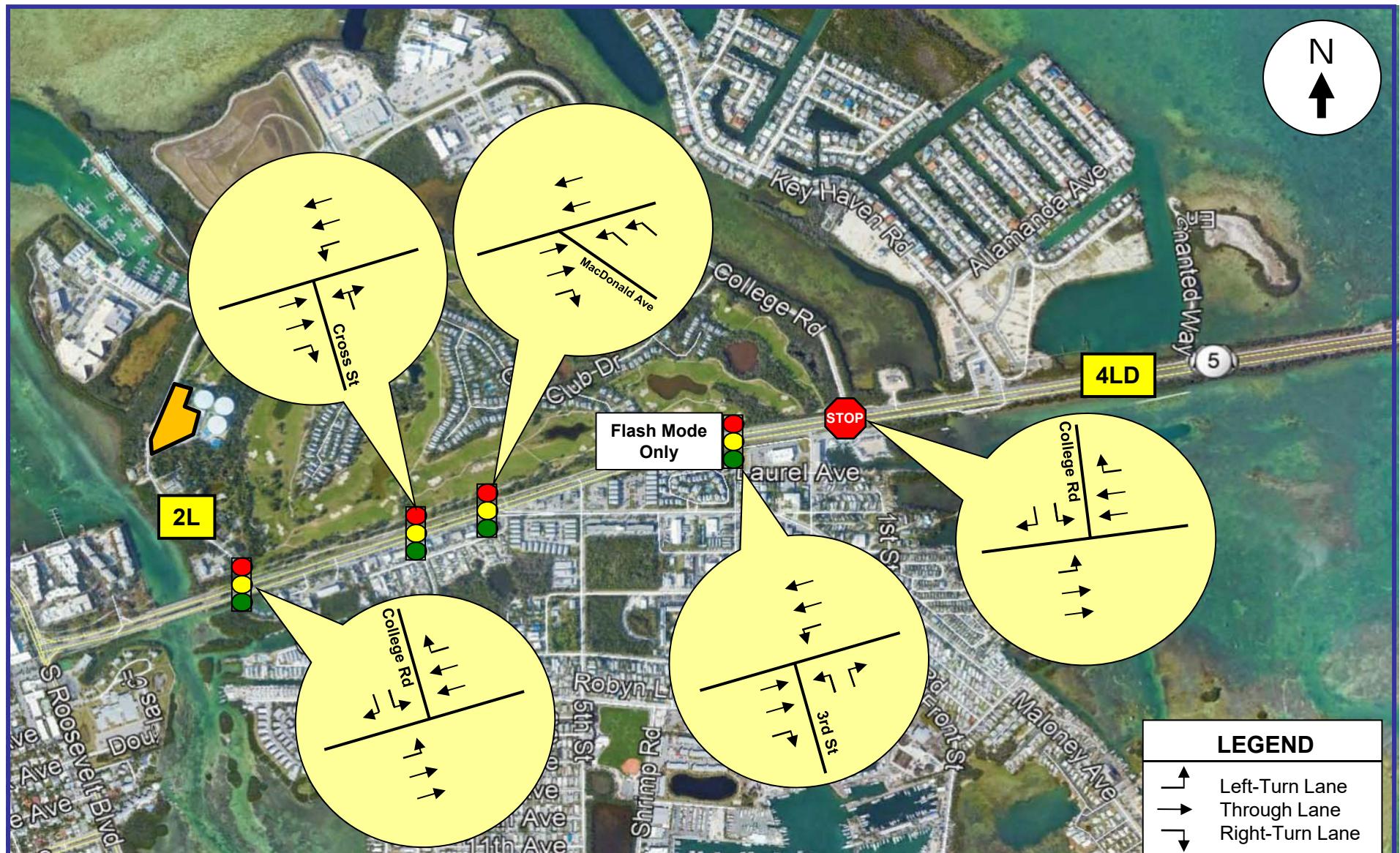
- Overseas Highway / US 1 & College Road (East)
- Overseas Highway / US 1 & 3rd Street
- Overseas Highway / US 1 & MacDonald Avenue
- Overseas Highway / US 1 & Cross Street
- Overseas Highway / US 1 & College Road (West)

Figure 2 on the following page depicts the lane geometry and type of intersection control at each of the study intersections within the project study area.

Existing Traffic Conditions

The Florida Department of Transportation (FDOT) collects and reports historical traffic data at four (4) traffic count stations within the proximity of the study area. Traffic volume data recorded over the past five (5) year period at these stations is summarized in Table 1 on page 6 of this report. This traffic data indicates moderate traffic volume growth in the immediate study area for the past five (5) year period (2013 to 2018). The overall annual growth in traffic for this area is 1.93%; therefore, a background growth rate of 2.0% per year (compounded) has been applied for this traffic impact study. Appendix C contains the historical traffic data published by FDOT.

Additionally, it is noted that the Gerald Adams Elementary School is located immediately east of the site. There is a 15 mile per hour (mph) school zone on College Road that extends approximately 150 feet on either side of the school property.



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Existing Roadway Network & Geometry

FIGURE 2
College Road Affordable Housing
Key West, Florida

Table 1
College Road Affordable Housing
Average Annual Daily Traffic (AADT) Volumes
Stock Island, Florida

Year	Average Annual Daily Traffic (AADT) Volumes			
	Station #900048	Station #900165	Station #900201	Station #900030
2018	11,300	40,284	47,000	4,700
2017	9,000	35,525	43,500	4,700
2016	10,100	42,403	41,000	4,100
2015	10,900	39,909	41,000	4,800
2014	12,400	37,452	43,500	4,600
2013	10,300	36,287	43,000	4,300

Station #900048 - MacDonald Avenue, 200 feet southeast of US 1

Station #900165 - US 1 200 feet east of Cow Key Bridge #00000170, Monroe County

Station #900201 - US 1 200 feet east of Cow Key Bridge @ R-165

Station #900030 - College Road 200 feet north of US 1

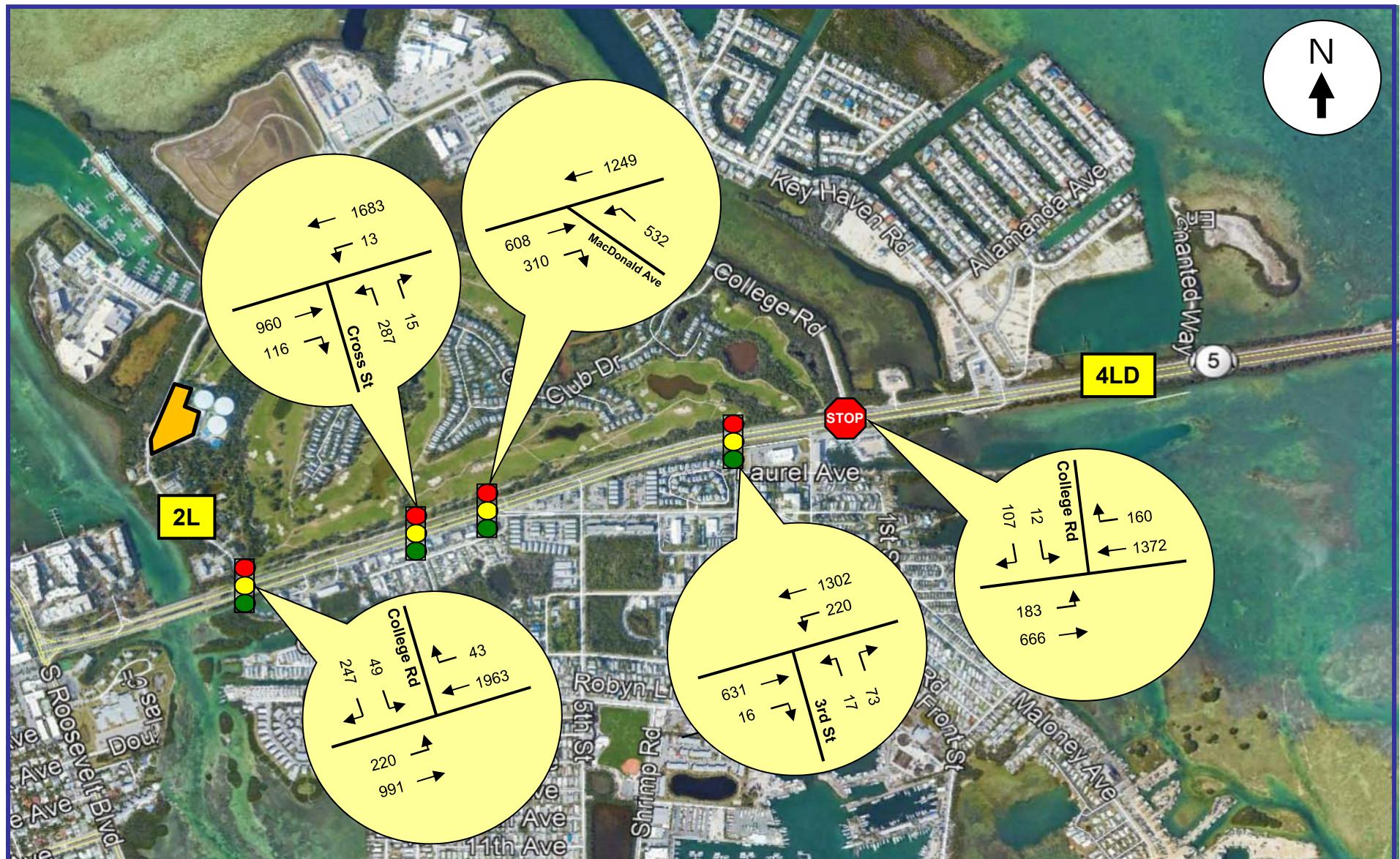
Source: Florida Department of Transportation

Compiled by: KBP Consulting, Inc. (May 2019)

KBP Consulting, Inc., in association with Video Data Solutions, Inc., collected morning (7:00 AM – 9:00 AM) and afternoon (4:00 PM – 6:00 PM) peak period turning movement counts at the following intersections on Wednesday, December 19, 2018:

- Overseas Highway / US 1 & College Road (East)
- Overseas Highway / US 1 & 3rd Street
- Overseas Highway / US 1 & MacDonald Avenue
- Overseas Highway / US 1 & Cross Street
- Overseas Highway / US 1 & College Road (West)

Figures 3 and 4 summarize the existing (Year 2018) AM and PM peak hour turning movement counts at these intersections. Appendix D contains the results of this traffic data collection effort.

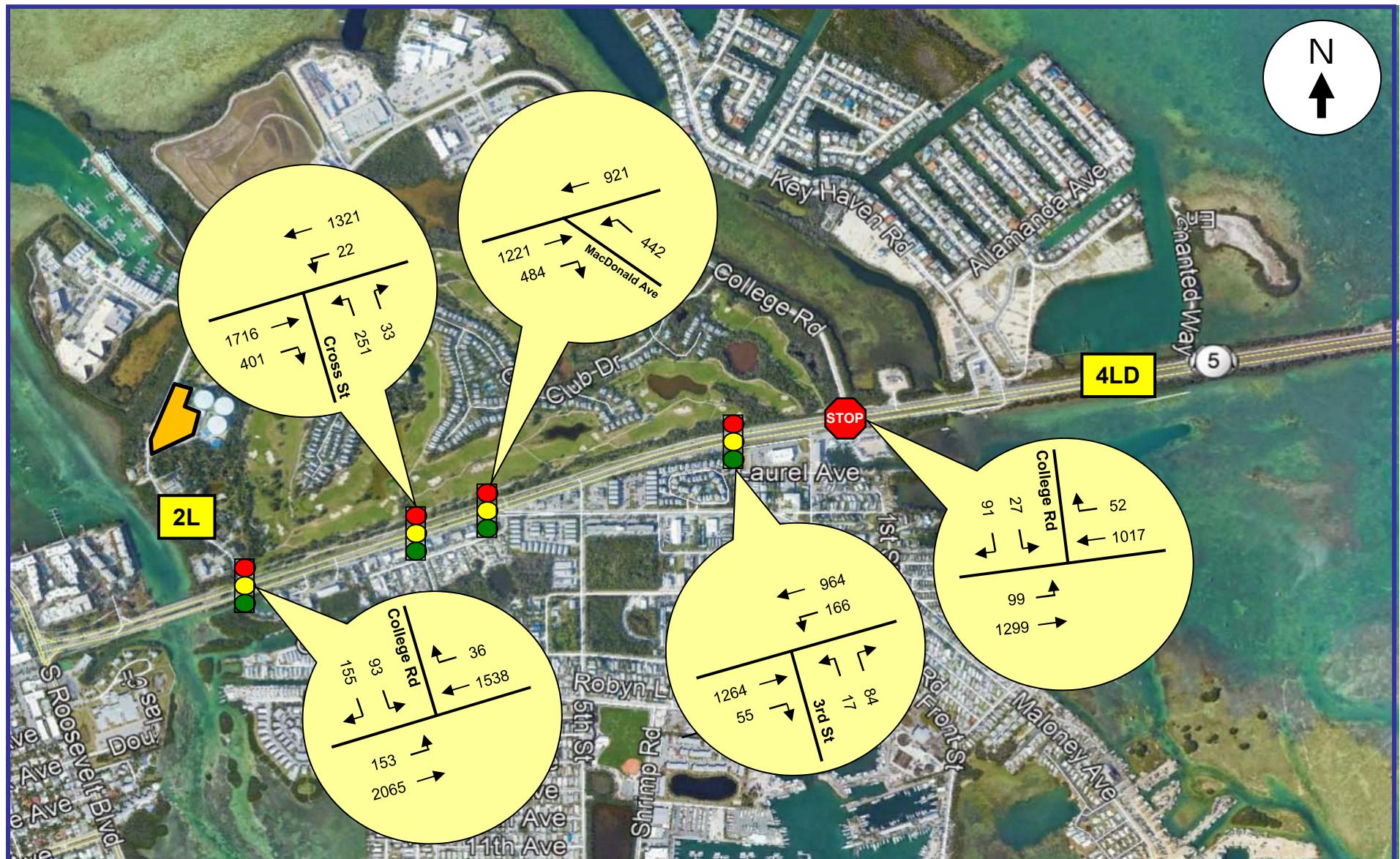


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Existing (Year 2018) AM Peak Hour Traffic Counts

Source: Video Data Solutions, Inc. – December 19, 2018

FIGURE 3
College Road Affordable Housing
Key West, Florida



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Existing (Year 2018) PM Peak Hour Traffic Counts

Source: Video Data Solutions, Inc. – December 19, 2018

TRIP GENERATION

The trip generation for this project was determined using the trip generation information published in the Institute of Transportation Engineers' (ITE) *Trip Generation Manual (10th Edition)*. Based upon this information, the daily, AM peak hour, and PM peak hour trip generation rates/equations for the proposed development are as follows:

Multifamily Housing (Mid-Rise) – ITE Land Use #221

- Daily (wt. avg.) Rate: $T = 5.17 (X)$
where $T = \text{number of trips}$ and $X = \text{number of dwelling units}$
- AM Peak Hour: $\ln(T) = 0.98 \ln(X) - 0.98$ (26% in / 74% out)
- PM Peak Hour: $\ln(T) = 0.96 \ln(X) - 0.63$ (61% in / 39% out)

Table 2 below presents the trip generation analysis for the proposed residential development to be located on College Road.

Table 2 Trip Generation Summary College Road Affordable Housing - Stock Island, Florida								
Land Use	Size	Daily Trips	AM Peak Hour Trips			PM Peak Hour Trips		
			In	Out	Total	In	Out	Total
<i>Proposed</i> Multifamily Housing (Mid-Rise)	104 DU	538	9	27	36	28	18	46

Compiled by: KBP Consulting, Inc. (May 2019).

Source: Institute of Transportation Engineers (ITE) Trip Generation Manual (10th Edition).

As indicated in Table 2, the proposed multi-family residential dwelling units are anticipated to generate 538 net new daily vehicle trips, 36 net new vehicle trips in the AM peak hour (9 inbound and 27 outbound), and 46 net new PM peak hour vehicle trips (28 inbound and 18 outbound).

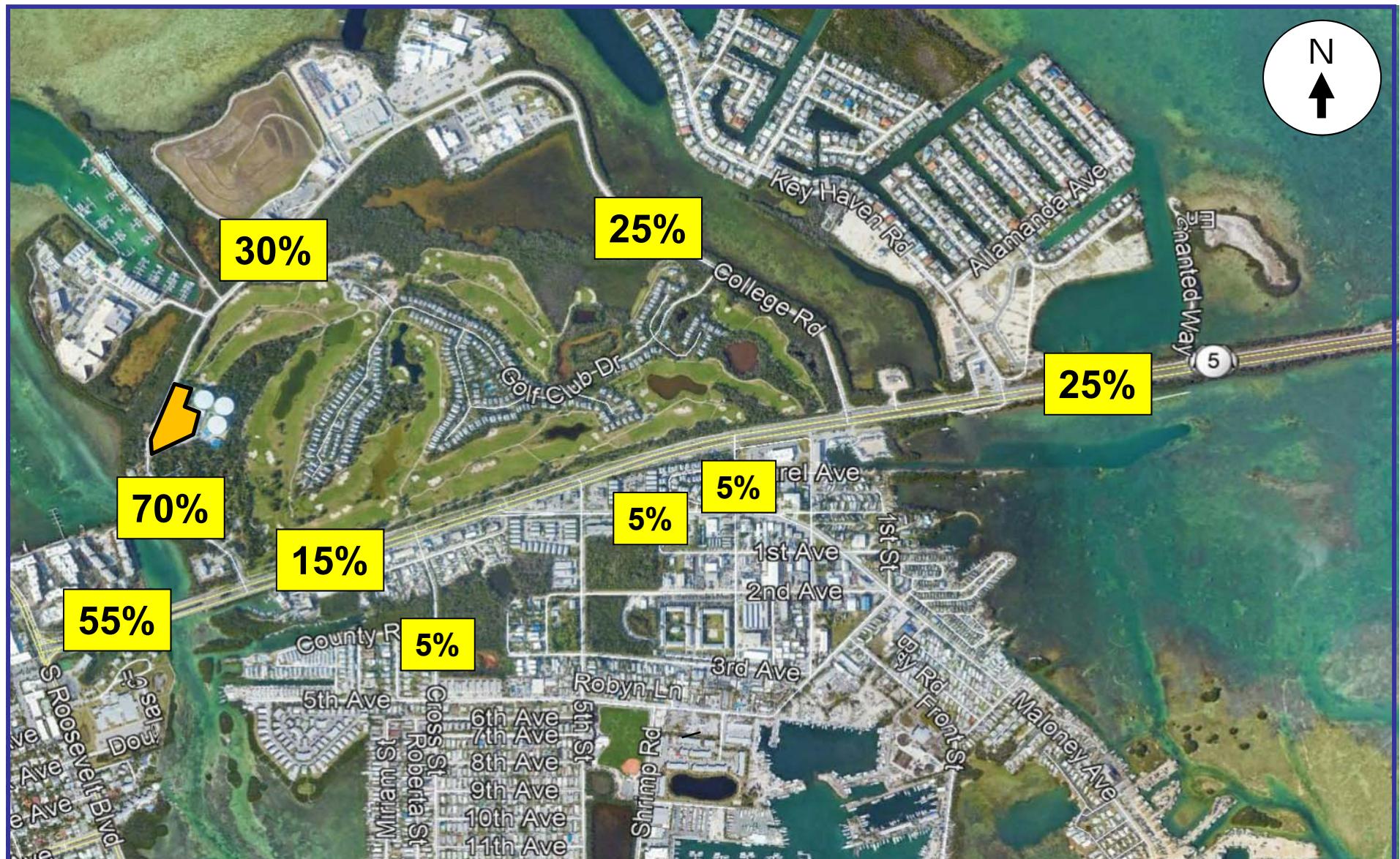
(It is noted that, until recently, this site was occupied by a variety of governmental and public service uses. While these uses generated a substantial amount of traffic, this analysis was prepared without taking into consideration the “vested” traffic associated with these former uses. This was done in order to present a conservative, or “worst-case”, scenario for this analysis.)

TRIP DISTRIBUTION

A trip distribution analysis was performed based on the nearby population areas, the existing transportation network, the location of the subject project, and engineering judgment. Most of the project-related trips are anticipated to access US 1 / Overseas Highway. (*It is estimated that approximately 5% of the project traffic will remain on the north side of Stock Island.*) Table 3 below summarizes the anticipated trip distribution for the proposed residential development. Figure 5 on the following page depicts the trip distribution in a graphical format.

Table 3 College Road Affordable Housing Project Trip Distribution Stock Island, Florida	
Direction	Distribution (%)
East (US 1 North)	25%
West (US 1 South)	55%
South Side of Stock Island	15%
North Side of Stock Island	5%

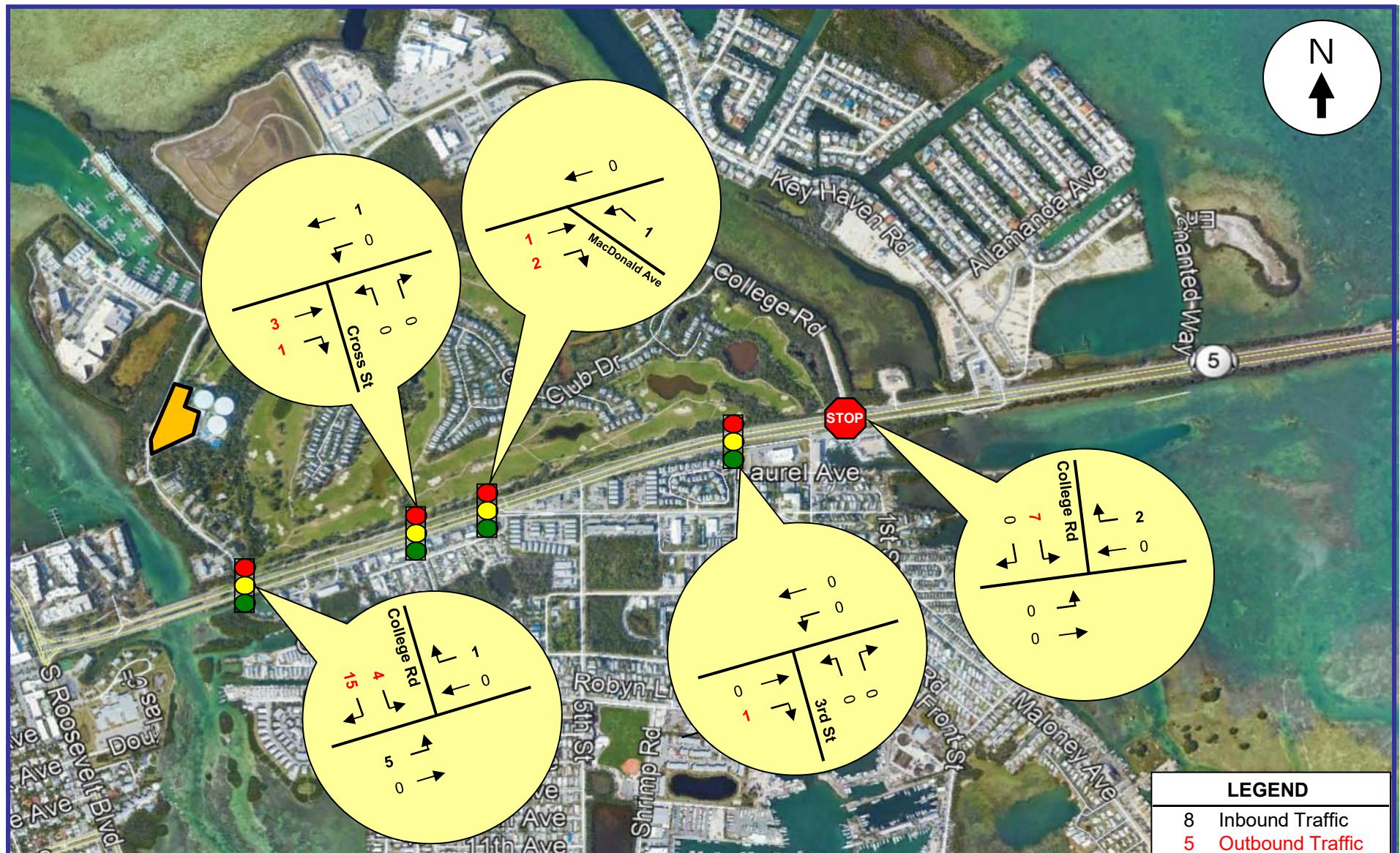
The net new AM and PM peak hour traffic generated by the project was assigned to the study area transportation network utilizing this trip distribution. The resulting project traffic assignment is summarized in Figures 6 and 7.



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Project Trip Distribution

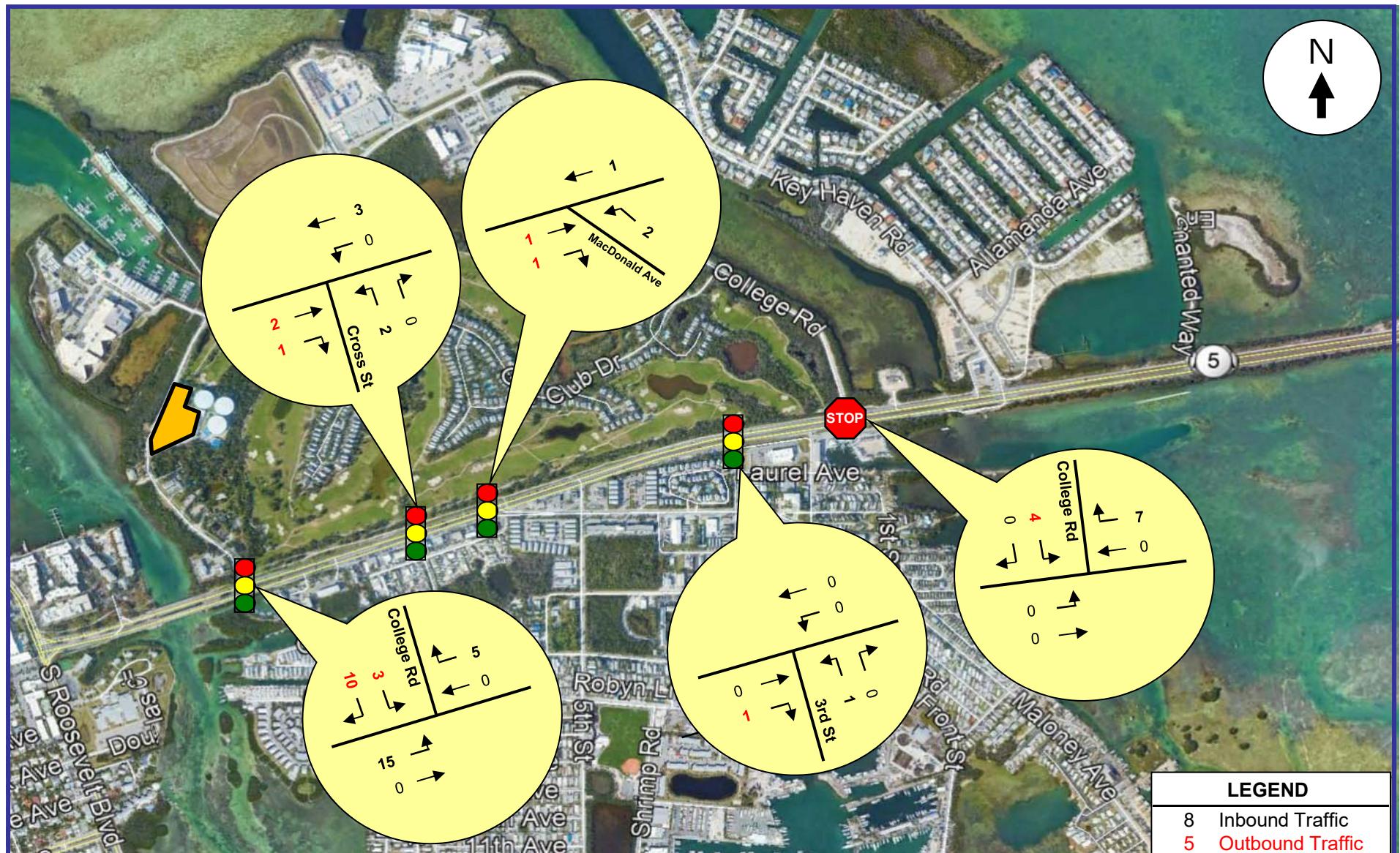
FIGURE 5
College Road Affordable Housing
Key West, Florida



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New AM Peak Hour Project Traffic Assignment

FIGURE 6
College Road Affordable Housing
Key West, Florida



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New PM Peak Hour Project Traffic Assignment

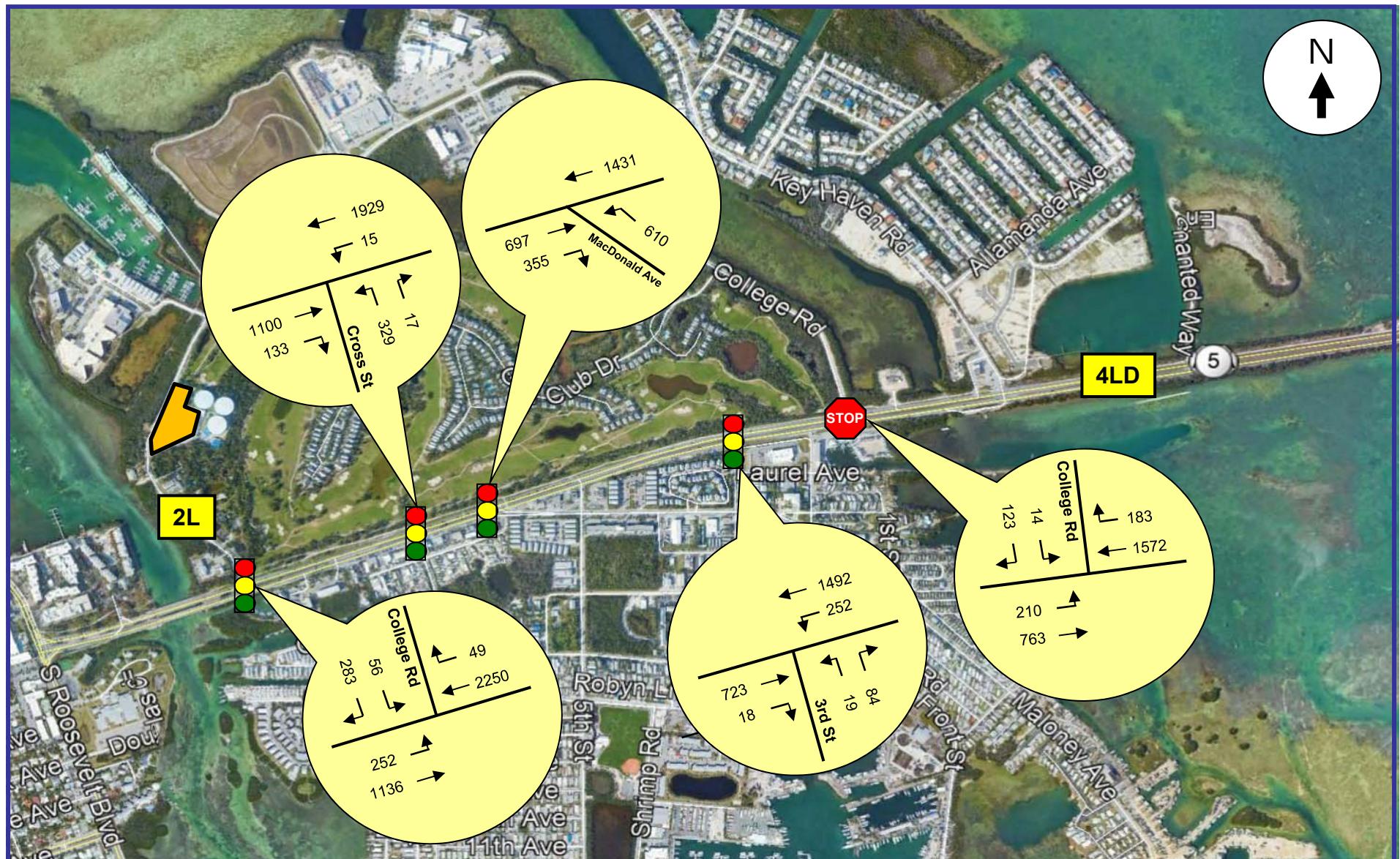
FIGURE 7
College Road Affordable Housing
Key West, Florida

FUTURE TRAFFIC VOLUMES

This section of the report involves the development of future (2021) traffic volumes within the project study area both with and without the new residential development on College Road. The traffic volumes were developed in the following manner:

- **Average Peak Season Conversion Factor:** Traffic data collected on December 19, 2018 was reviewed with respect to average peak season conditions. FDOT's Peak Season Factor Category report (see Appendix E) was consulted for this analysis. The peak season adjustment factor reported for Monroe County for this time period (traffic counts collected between December 16th and 22nd) is 1.08.
- **Historic Traffic Growth:** As indicated in the Existing Conditions section of this report, historic FDOT traffic data for the project study area indicates moderate growth in traffic volumes for the past five (5) year period (2013 to 2018). Accordingly, a background growth rate of 2.0% per year (compounded) has been applied for this traffic impact study.

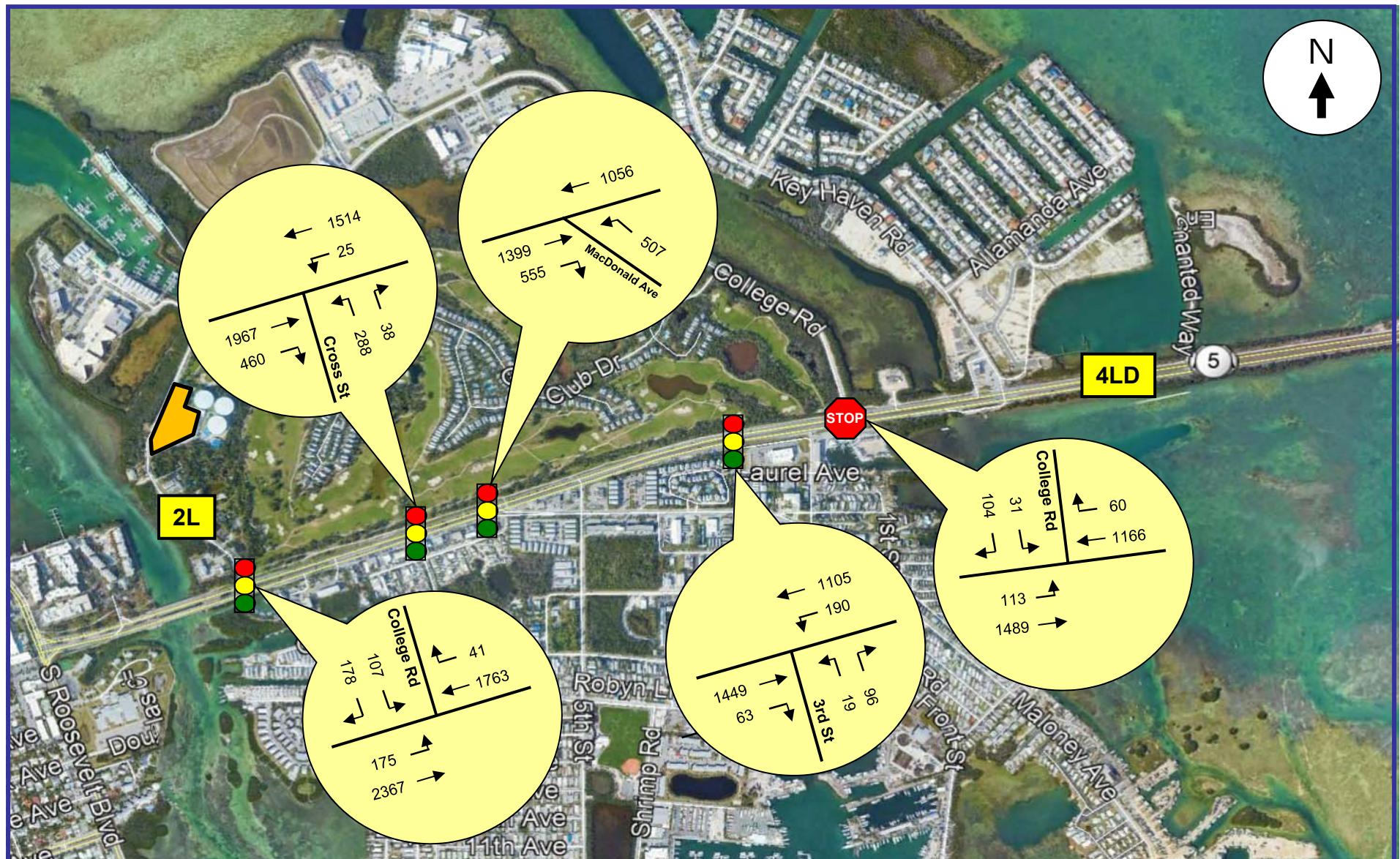
The future traffic calculations (including peak season adjustments, background traffic growth, and the traffic associated with the College Road Affordable Housing project) for the study intersections are contained in Appendix F in tabular format. Figures 8 and 9 include future background traffic only (without the proposed project) and Figures 10 and 11 include the additional traffic anticipated to be generated by the new residences within the College Road Affordable Housing development.



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Future (2021) Background (w/out Project) AM Peak Hour Traffic Volumes

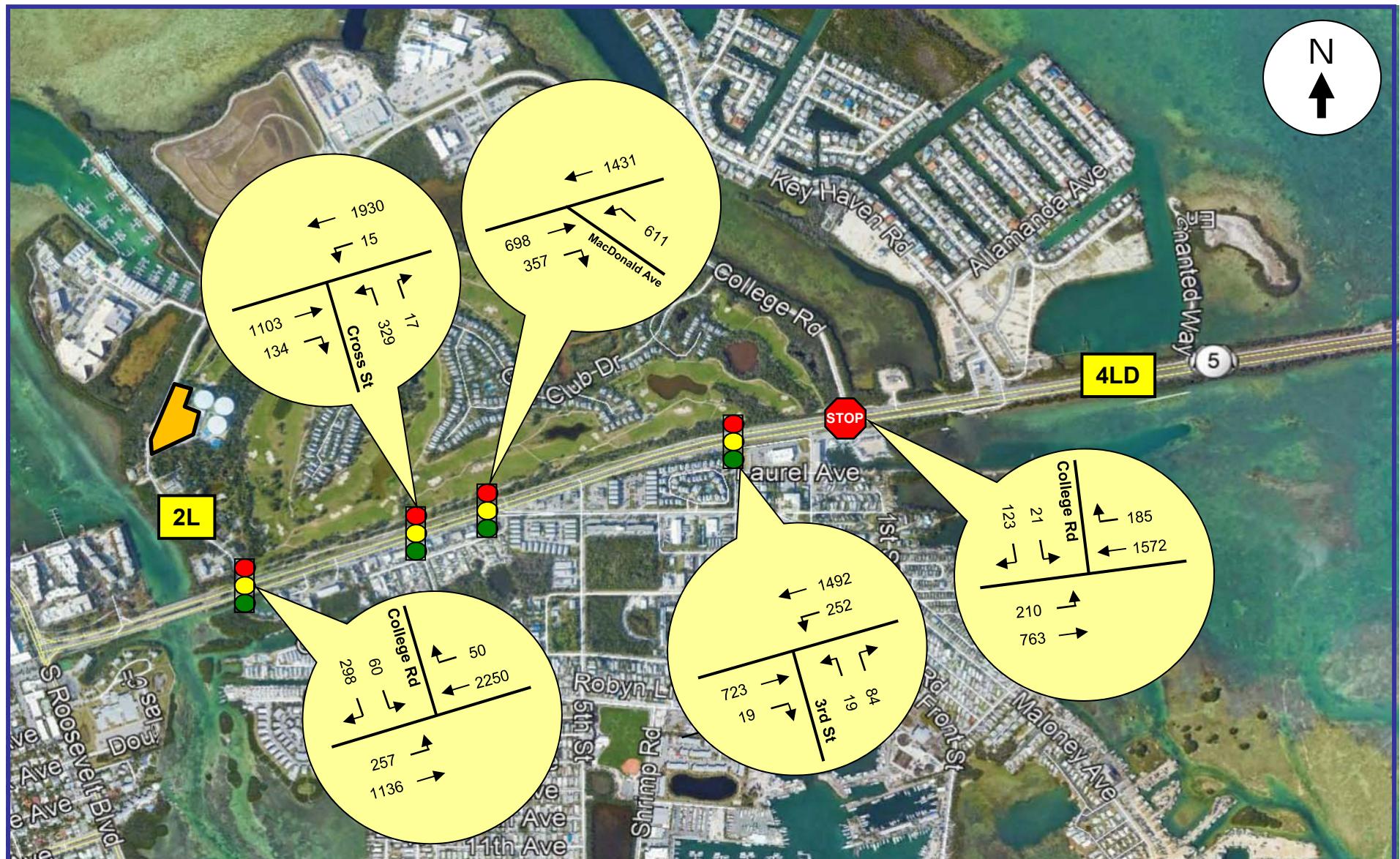
FIGURE 8
College Road Affordable Housing
Key West, Florida



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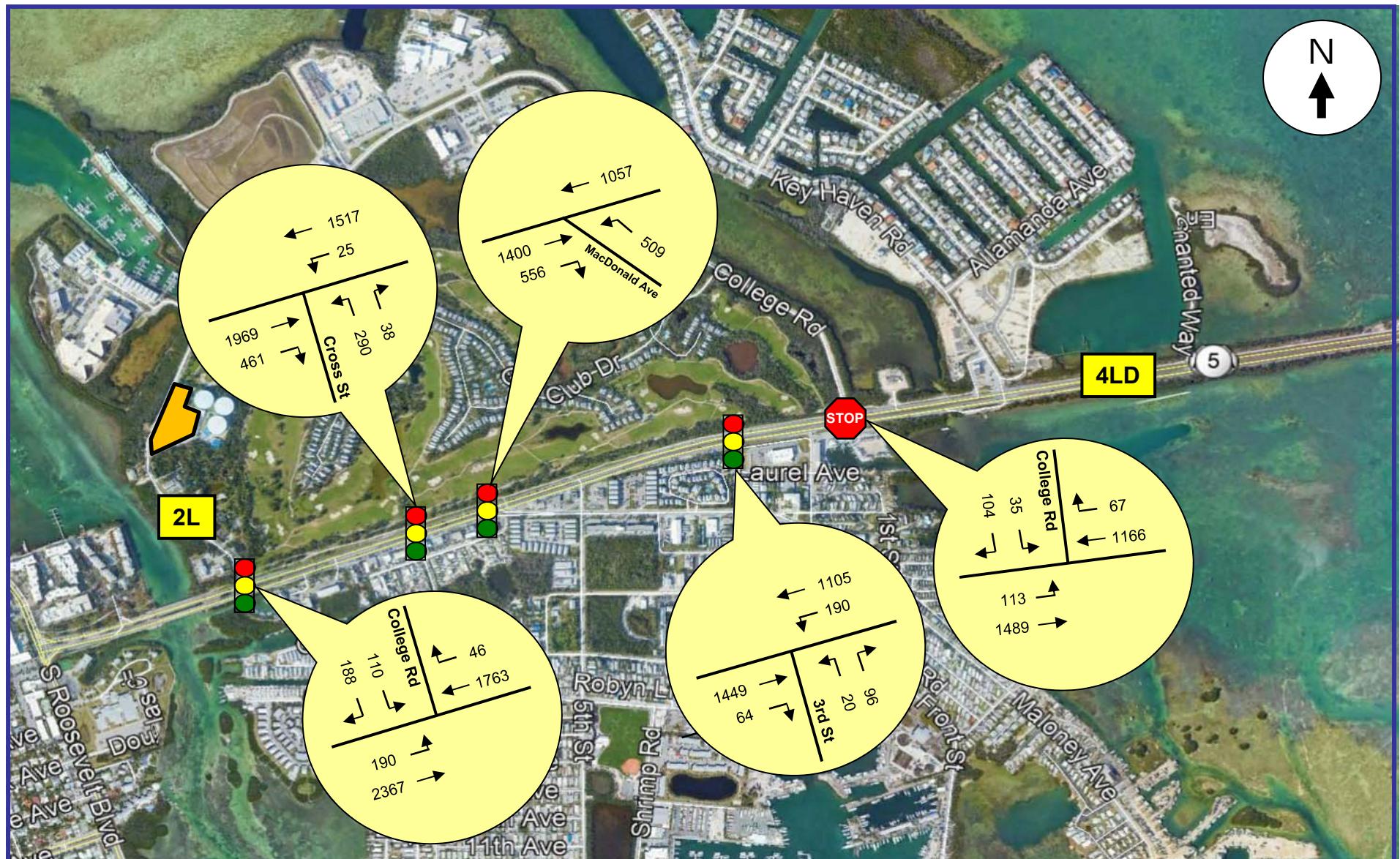
Future (2021) Background (w/out Project) PM Peak Hour Traffic Volumes

FIGURE 9
College Road Affordable Housing
Key West, Florida



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**Future (2021) Total (w/ Project)
AM Peak Hour Traffic Volumes**



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Future (2021) Total (w/ Project) PM Peak Hour Traffic Volumes

FIGURE 11
College Road Affordable Housing
Key West, Florida

TRAFFIC IMPACT ANALYSIS

This section of the traffic report is divided into three parts: 1) intersection analyses, 2) link analysis, and 3) impacts to Overseas Highway / US 1 by mile marker.

Intersection Analyses

Intersection capacity/level of service (LOS) analyses were conducted for the five (5) study intersections for existing conditions (2018), future background conditions (2021) without project traffic, and future conditions (2021) with project traffic. These analyses were undertaken following the capacity / level of service procedures outlined in the Highway Capacity Manual (HCM) using the SYNCHRO software. The results of these capacity analyses are summarized in Table 4 below.

Table 4 College Road Affordable Housing Intersection Levels of Service Stock Island, Florida						
Intersection	Existing (2018) Conditions		Future (2021) Conditions Without Project Traffic		Future (2021) Conditions With Project Traffic	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
Overseas Hwy / US 1 & College Road (East) *	B (13.9)	B (12.9)	C (16.8)	B (14.3)	C (18.8)	B (14.6)
Overseas Hwy / US 1 & 3rd Street *	C (16.1)	C (20.0)	C (20.9)	D (31.6)	C (20.9)	D (33.0)
Overseas Hwy / US 1 & MacDonald Avenue **	B (15.8)	B (11.6)	B (18.2)	B (12.8)	B (18.2)	B (12.8)
Overseas Hwy / US 1 & Cross Street **	B (14.8)	B (13.1)	B (18.6)	B (16.9)	B (18.6)	B (17.1)
Overseas Hwy / US 1 & College Road (West) **	B (19.5)	B (11.8)	D (37.0)	B (18.9)	D (38.6)	B (19.6)

Source: Highway Capacity Manual and SYNCHRO.

Legend: C (21.4) = LOS (Average Delay in Seconds / Vehicle)

* At stop-control intersections, the LOS on the critical side street is documented in this table.

** At signalized intersections, the LOS for the intersection as a whole is documented in this table.

As indicated in Table 4, each of the study intersections is currently operating at an acceptable Level of Service (LOS) and they are expected to continue operating at an acceptable LOS in the project design year (2021) both with and without the project traffic. Signal timing data provided by Keys Energy Services and the Florida Department of Transportation (FDOT) is presented in Appendix G and the SYNCHRO output for the intersection analyses is presented in Appendix H.

Link Analysis

A roadway link analysis of Overseas Highway / US 1, consistent with Monroe County traffic study requirements, has been performed. The link analysis compares the maximum number of reserve trips on Overseas Highway / US 1 through the Stock Island area (per Monroe County's Level of Service and Reserve Capacity Table) with the project's traffic impacts. Based upon a 55% / 25% / 15% trip distribution, the project will add a maximum of 296 daily trips (55% of the additional 538 daily trips) to Segment Number 1 (Stock Island).

According to Monroe County's Level of Service and Reserve Capacity Table (see Appendix I), Segment Number 1 has a maximum reserve volume of 1,348 trips. Therefore, Overseas Highway / US 1 through Stock Island has sufficient capacity to absorb the maximum impacts generated by the College Road Affordable Housing residential project.

US 1 / Overseas Highway Impacts by Mile Marker

Roadway impacts by Mile Marker were also evaluated. For this project, it was assumed that the typical maximum trip length will be approximately five (5) miles to the west (to Key West) and 50 miles to the east (toward Marathon). The average trip length was assumed to be one-half (1/2) of the maximum trip length in either direction, or 3 miles to the west and 25 miles to the east. Based upon these trip length assumptions, the US 1 / Overseas Highway segments identified in Monroe County's Traffic Report Guidelines, and the traffic assignment discussed previously, an estimate of the number of primary trips by segment on Overseas Highway / US 1 was performed. Table 5 summarizes the number of primary trips by segment on Overseas Highway / US 1 (Arterial Trip Assignment). As indicated in this table, this project will add approximately 538 daily trips.

Table 5
College Road Affordable Housing
Arterial Trip Assignment Summary (Overseas Highway / US 1)
Stock Island, Florida

Project:	College Road Affordable Housing	US 1
		Mile Marker: 4
Location:	Stock Island	ITE Land Use Category: 221
Type of Development:	Multifamily Housing	Daily Trip Generation Rate / Formula:
Project Size:	104 Dwelling Units	Residential: T = 5.17 (X)
Average Trip Length:	3 Miles South / 25 Miles North	

Total Daily Trips	Percent Primary Trips	US 1 Segment Number	Percent Directional Split	% Impact Based On Trip Length	Project Generated Daily Trips	2017 Reserve Capacity
538	100%	1	55% / 25% / 15%	100%	296	1,348
		2	25%	90%	121	6,071
		3	25%	80%	108	1,341
		4	25%	75%	101	4,034
		5	25%	60%	81	7,944
		6	25%	50%	67	3,188
		7	25%	40%	54	1,639
		8	25%	30%	40	2,133
		9	25%	20%	27	2,504
		10	25%	10%	13	1,295
		11	25%	0%	0	6,723

Sources: Monroe County Planning Department.

Compiled by: KBP Consulting, Inc. (May 2019).

SUMMARY & CONCLUSIONS

Based upon the results of the traffic analyses performed for the proposed affordable multi-family residential dwelling units to be located on College Road, the proposed development will not have an adverse impact on the operating characteristics of Overseas Highway / US 1, nor will it inhibit the safe flow of traffic traveling through Stock Island. Overseas Highway / US 1 and the study intersections have adequate capacity to accommodate the traffic volumes generated by the project.

Appendix A

College Road Affordable Housing

Existing Site Plan

WILLIAM P. HORN
ARCHITECT, P.A.

915 EATON ST.
KEY WEST,
FLORIDA
33040

TEL. (305) 296-5302
FAX (305) 296-1022

LICENSE NO.
AA 0003040

COLLEGE ROAD
AFFORDABLE HOUSING
5220, 5224, 5228 & 5230
College Road

STOCK ISLAND, FLORIDA.

SEAL

DATE
03-15-19 DRC
03-20-19 TREE COMMISSION
04-05-19 DEMO SUBMISSION
04-15-19 PL. BD. SUBMISSION

REVISIONS

DRAWN BY
JW

PROJECT NUMBER
1808



SITE PLAN BASED ON INFORMATION OBTAINED FROM SURVEY PREPARED
BY FLORIDA KEYS LAND SURVEYING, DATED ON 10-16-18.

SCALE: 1"=20'-0"

COLLEGE ROAD AFFORDABLE HOUSING
5220, 5224, 5228 & 5230 College Road
STOCK ISLAND, FLORIDA

Appendix B

College Road Affordable Housing

Proposed Site Plan

COLLEGE ROAD AFFORDABLE HOUSING

5220, 5224, 5228, 5230 COLLEGE ROAD
STOCK ISLAND, FL



PROPERTY LINE



BUILDING DATA		
FLORIDA BUILDING CODE INFORMATION		
OCCUPANCY TYPE:	R-2 APARTMENTS	
CONSTRUCTION TYPE:	TYPE III B, SPRINKLERED	
ALLOWABLE HEIGHT:	60' (SPRINKLERED)	
ALLOWABLE NUMBER OF STORIES:	16	
ALLOWABLE AREA/FLOOR:	16,000 S.F./FLOOR (S) 48,000 S.F./FLOOR (SM)	
ENCLOSED		COVERED
BUILDING A		
GROUND FLOOR:	-----	-----
FIRST FLOOR:	3,084 S.F.	861 S.F.
SECOND FLOOR:	-----	-----
THIRD FLOOR:	-----	-----
BUILDING B		
GROUND FLOOR:	213 S.F.	16,820 S.F.
FIRST FLOOR:	13,759 S.F.	3,271 S.F.
SECOND FLOOR:	13,759 S.F.	3,271 S.F.
THIRD FLOOR:	13,759 S.F.	3,271 S.F.
BUILDING C		
GROUND FLOOR:	213 S.F.	9,071 S.F.
FIRST FLOOR:	6,982 S.F.	2,378 S.F.
SECOND FLOOR:	6,982 S.F.	2,378 S.F.
THIRD FLOOR:	6,982 S.F.	2,378 S.F.
TOTAL:	65,733 S.F.	43,699 S.F.

RESIDENTIAL UNIT COUNT		
104 - 1 BEDROOM UNITS	ENCLOSED	COVERED
W/BALCONY	611 S.F.	49 S.F.
(6 OF THE UNITS ARE FULLY HANDICAP COMPLIANT)		

SITE DATA

SITE AREA: 116,024.8 S.F. (2.66 ACRES)

LAND USE: HDR-1 (HIGH DENSITY RESIDENTIAL 1)

FLOOD ZONE: AE EL. +9.0', AE EL. +10.0', VE EL. 11.0'

FAIR: N/A

DENSITY: ALLOWED = 40 UNITS/ACRE

2.66 ACRES x 40 UNITS/ACRE = 106.4 UNITS ALLOWED
104.0 UNITS PROVIDED

HEIGHT: ALLOWED = 40' + 4' MAX. IF OVER FLOOD
PROPOSED = 44' + 11"
PROPOSED = 43'-11"

SETBACKS:

FRONT SETBACK:	REQUIRED = 20'-0"
	EXISTING = 6'-2"
	PROPOSED = 20'-0"
SOUTH SIDE SETBACK:	REQUIRED = 10'-0"
	EXISTING = 53'-6"
	PROPOSED = 13'-0"
NORTH SIDE SETBACK:	REQUIRED = 10'-0"
	EXISTING = 31'-10"/5'-3"
	PROPOSED = 10'-0"
REAR SETBACK:	REQUIRED = 10'-0"
	EXISTING = 4'-10"
	PROPOSED = 10'-6"

BUILDING COVERAGE AREA:

ALLOWED:	46,409.79 S.F. (40% MAX.)
EXISTING:	18,535. S.F. (16%)
PROPOSED:	36,724.8 S.F. (33.3%)

IMPERVIOUS AREA:

ALLOWED:	69,614.68 S.F. (60% MAX.)
EXISTING:	57,481.48 S.F. (49.54%)
PROPOSED:	90,406. S.F. (77.9%)
	(VARIANCE REQUIRED)

LANDSCAPE AREA:

REQUIRED:	40,608.56 S.F. (35% MIN.)
EXISTING:	58,543. (50.46%)
PROPOSED:	25,618.8 S.F. (22.12%)
	(VARIANCE REQUIRED)

OPEN SPACE AREA:

REQUIRED:	40,608.56 S.F. (35% MIN.)
EXISTING:	58,543. (50.46%)
PROPOSED:	25,618.8 S.F. (22.12%)
	(VARIANCE REQUIRED)

PARKING:

REQUIRED:	2 SPACES PER UNIT 104 UNITS x 2 = 208 REQUIRED
PROPOSED:	125 SPACES PROVIDED
	93 REGULAR 9'x18" SPACES
	27 BIKE 4'x5'15" SPACES
	8 HANDICAP 12'x18" SPACES
	(VARIANCE OR BIKE SUBSTITUTION REQUIRED)

BIKE:

REQUIRED:	10% OF REQUIRED CAR SPACES 208 x 0.10= 20.8 (21 SPACES)
PROPOSED:	75 SPACES PROVIDED

WILLIAM P. HORN
ARCHITECT, P.A.

915 EATON ST
KEY WEST,
FLORIDA
33040

TEL (305) 296-8302
FAX (305) 296-1033

LICENSE NO.
AA 0003040

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SEAL

DATE
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03-20-19 TREE COMMISSION
04-05-19 DEMO SUBMISSION
04-15-19 PL BD SUBMISSION

REVISIONS

DRAWN BY

PROJECT

**PROJECT
NUMBER**

NUMBER

COLLEGE ROAD AFFORDABLE HOUSING
5220, 5224, 5228 & 5230 College Road
STOCK ISLAND, FLORIDA

COLLEGE ROAD
AFFORDABLE HOUSING
5220, 5224, 5228 & 5230
College Road
STOCK ISLAND, FLORIDA.

SEAL _____



GOOGLE AERIAL SITE PLAN
N S E W
SCALE: 1"=40'-0"
SITE PLAN BASED ON INFORMATION OBTAINED FROM SURVEY
PREPARED BY FLORIDA KEYS LAND SURVEYING,
DATED ON 10-16-18.

DATE
03-15-19 DRC
03-20-19 TREE COMMISSION
04-05-19 DEMO SUBMISSION
04-15-19 PL. BD. SUBMISSION

REVISIONS _____

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JW

PROJECT NUMBER
1808

A-1

COLLEGE ROAD AFFORDABLE HOUSING
5220, 5224, 5228 & 5230 College Road
STOCK ISLAND, FLORIDA

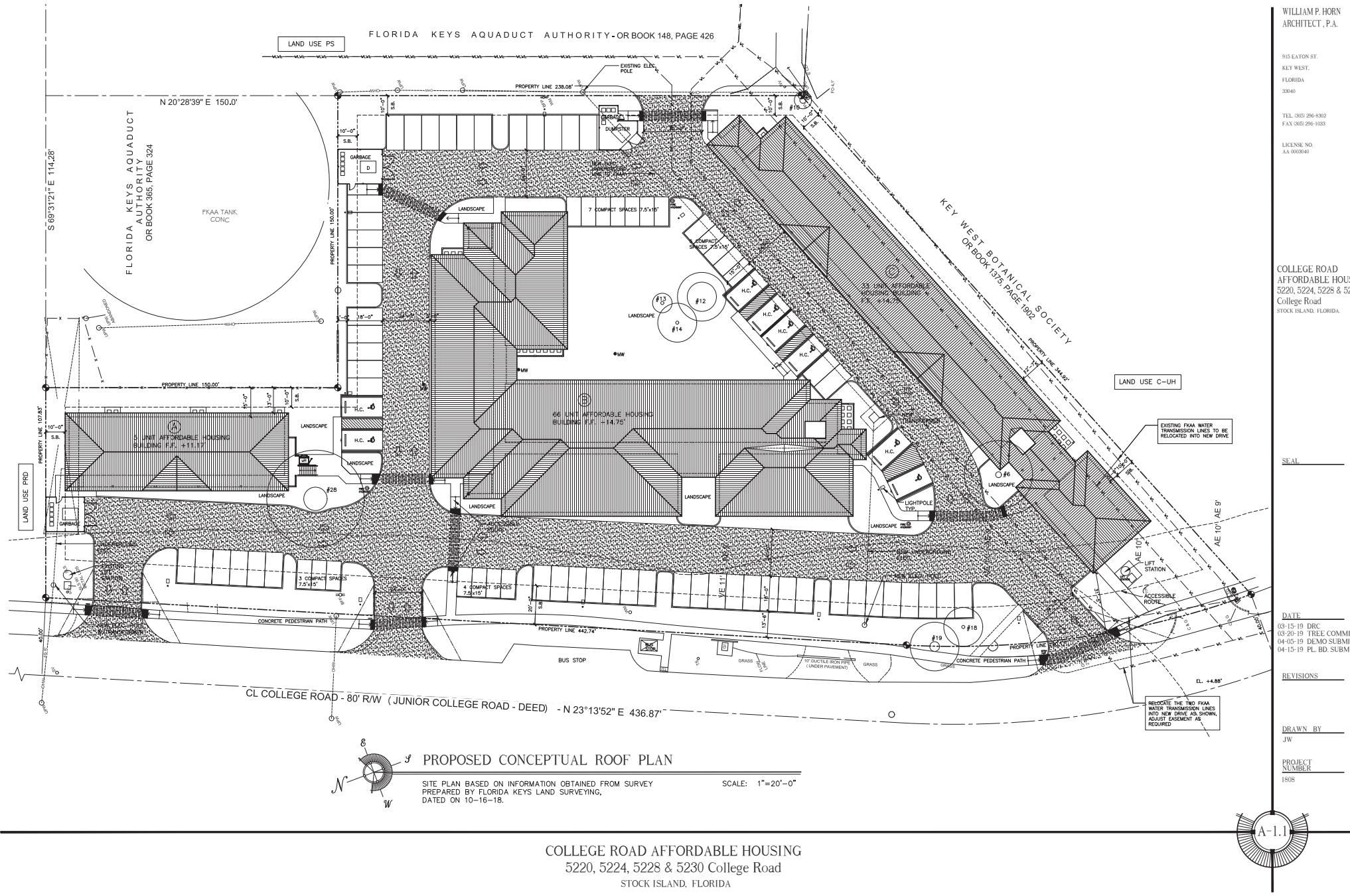
WILLIAM P. HORN
ARCHITECT, P.A.

915 EATON ST.
KEY WEST,
FLORIDA
33040

TEL (305) 296-8302
FAX (305) 296-1033

LICENSE NO.
AA 0003040

**COLLEGE ROAD
AFFORDABLE HOUSING
5220, 5224, 5228 & 5230
College Road
STOCK ISLAND, FLORIDA.**



Appendix C

FDOT – Historic Traffic Count Data

FLORIDA DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION STATISTICS OFFICE
 2018 HISTORICAL AADT REPORT

COUNTY: 90 - MONROE

SITE: 0030 - COLLEGE RD, 200' N SR 5/US-1/OVERSEAS

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2018	4700 F	N 2200	S 2500	9.00	55.10	6.60
2017	4700 C	N 2200	S 2500	9.00	53.90	4.70
2016	4100 C	N 2000	S 2100	9.00	54.90	8.80
2015	4800 C	N 2400	S 2400	9.00	54.30	8.10
2014	4600 C	N 2400	S 2200	9.00	55.20	3.80
2013	4300 C	N 1900	S 2400	9.50	54.80	7.30
2012	2900 C	N 1500	S 1400	9.50	55.00	8.20
2011	3200 C	N 1600	S 1600	9.50	55.10	8.30
2010	3800 C	N 2000	S 1800	10.26	56.84	10.30
2009	3900 C	N 1700	S 2200	10.23	56.56	8.40
2008	3600 C	N 2000	S 1600	10.45	54.98	8.60
2007	3800 C	N 1700	S 2100	10.00	55.10	9.80
2006	4100 C	N 2300	S 1800	10.08	55.69	12.30
2005	5400 C	N 3100	S 2300	10.40	55.70	4.20
2004	6200 C	N 3400	S 2800	10.00	56.00	3.10
2003	7300 C	N		10.10	56.30	4.40

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

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

FLORIDA DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION STATISTICS OFFICE
 2018 HISTORICAL AADT REPORT

COUNTY: 90 - MONROE

SITE: 0048 - MACDONALD AV, 200' E 5 STREET

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2018	11300 C	N 5600	S 5700	9.00	55.10	5.80
2017	9000 C	N 4600	S 4400	9.00	53.90	5.20
2016	10100 C	N 5500	S 4600	9.00	54.90	8.80
2015	10900 C	N 5400	S 5500	9.00	54.30	8.10
2014	12400 C	N 5800	S 6600	9.00	55.20	3.80
2013	10300 C	N 5200	S 5100	9.00	54.80	7.30
2012	9600 C	N 4400	S 5200	9.00	55.00	8.20
2011	10400 C	N 5300	S 5100	9.00	55.10	8.30
2010	10200 C	N 4800	S 5400	10.26	56.84	10.30
2009	9900 C	N 5000	S 4900	10.23	56.56	8.40
2008	10200 C	N 4700	S 5500	10.45	54.98	8.60
2007	10000 C	N 5000	S 5000	10.00	55.10	9.80
2006	9200 C	N 4300	S 4900	10.08	55.69	12.30
2005	10200 C	N 4900	S 5300	10.40	55.70	6.20
2004	13500 C	N 5900	S 7600	10.00	56.00	3.10
2003	11500 C	N		10.10	56.30	4.40

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

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

FLORIDA DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION STATISTICS OFFICE
 2018 HISTORICAL AADT REPORT

COUNTY: 90 - MONROE

SITE: 0165 - SR-5/US-1, 200' E COW KEY BRDG#00000170, MONROE CO.

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2018	40284	C	N 20428	S 19856	9.00	56.00
2017	35525	C	N 18060	S 17465	9.00	55.80
2016	42403	C	N 21765	S 20638	9.00	55.80
2015	39909	C	N 20155	S 19754	9.00	55.80
2014	37452	C	N 18810	S 18642	9.00	56.20
2013	36287	C	N 18217	S 18070	9.00	54.90
2012	36564	C	N 18323	S 18241	9.00	55.10
2011	36540	C	N 18298	S 18242	9.00	55.60
2010	36027	C	N 17980	S 18047	9.71	56.29
2009	35471	C	N 17672	S 17799	9.59	58.14
2008	34602	C	N 17266	S 17336	10.14	56.24
2007	36080	C	N 18055	S 18025	9.60	57.50
2006	36598	C	N 18353	S 18245	9.61	57.90
2005	37137	C	N 18583	S 18554	9.40	58.50
2004	37926	C	N 19091	S 18835	9.40	58.50
2003	37403	C	N 19079	S 18324	9.60	56.70

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

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

FLORIDA DEPARTMENT OF TRANSPORTATION
 TRANSPORTATION STATISTICS OFFICE
 2018 HISTORICAL AADT REPORT

COUNTY: 90 - MONROE

SITE: 0201 - SR 5/US-1, 200' E COWKEY CHANNEL BRIDG @ R-165

YEAR	AADT	DIRECTION 1	DIRECTION 2	*K FACTOR	D FACTOR	T FACTOR
2018	47000 C	W 25500	E 21500	9.00	55.10	6.60
2017	43500 C	W 22500	E 21000	9.00	53.90	4.70
2016	41000 C	W 20500	E 20500	9.00	54.90	8.80
2015	41000 C	W 22000	E 19000	9.00	54.30	8.10
2014	43500 C	W 21500	E 22000	9.00	55.20	3.80
2013	43000 C	W 21500	E 21500	9.00	54.80	4.50
2012	37500 C	W 19500	E 18000	9.00	55.00	5.40
2011	38500 C	W 18500	E 20000	9.00	55.10	5.50
2010	35500 C	W 18000	E 17500	10.26	56.84	11.70
2009	39500 C	W 20500	E 19000	10.23	56.56	5.20
2008	48500 C	N 25500	S 23000	10.45	54.98	8.60
2007	38500 C	N 20500	S 18000	10.00	55.10	9.80
2006	45500 C	N 23500	S 22000	10.08	55.69	12.30
2005	43500 C	N 22000	S 21500	10.40	55.70	3.10
2004	41500 C	N 21000	S 20500	10.00	56.00	3.10
2003	44000 C	N 21500	S 22500	10.10	56.30	4.40

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

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

College Road Affordable Housing

Stock Island, Florida

Growth Rate Analysis

Site #900165 - US 1, 200 feet east of the Cow Key Bridge

Year	Volume	Growth Rate
2013	36287	
2018	40284	2.11%

Site #900048 - MacDonald Avenue, 200 feet southeast of US 1

Year	Volume	Growth Rate
2013	10300	
2018	11300	1.87%

Site #900201 - US 1, 200 feet east of Cow Key Bridge A R-165

Year	Volume	Growth Rate
2013	43000	
2018	47000	1.79%

Site #900030 - College Road, 200 feet north of US 1

Year	Volume	Growth Rate
2013	4300	
2018	4700	1.79%

Total - All Count Stations

Year	Volume	Growth Rate
2013	93887	
2018	103284	1.93%

Appendix D

2018 Traffic Counts

Traf Tech Engineering Inc.

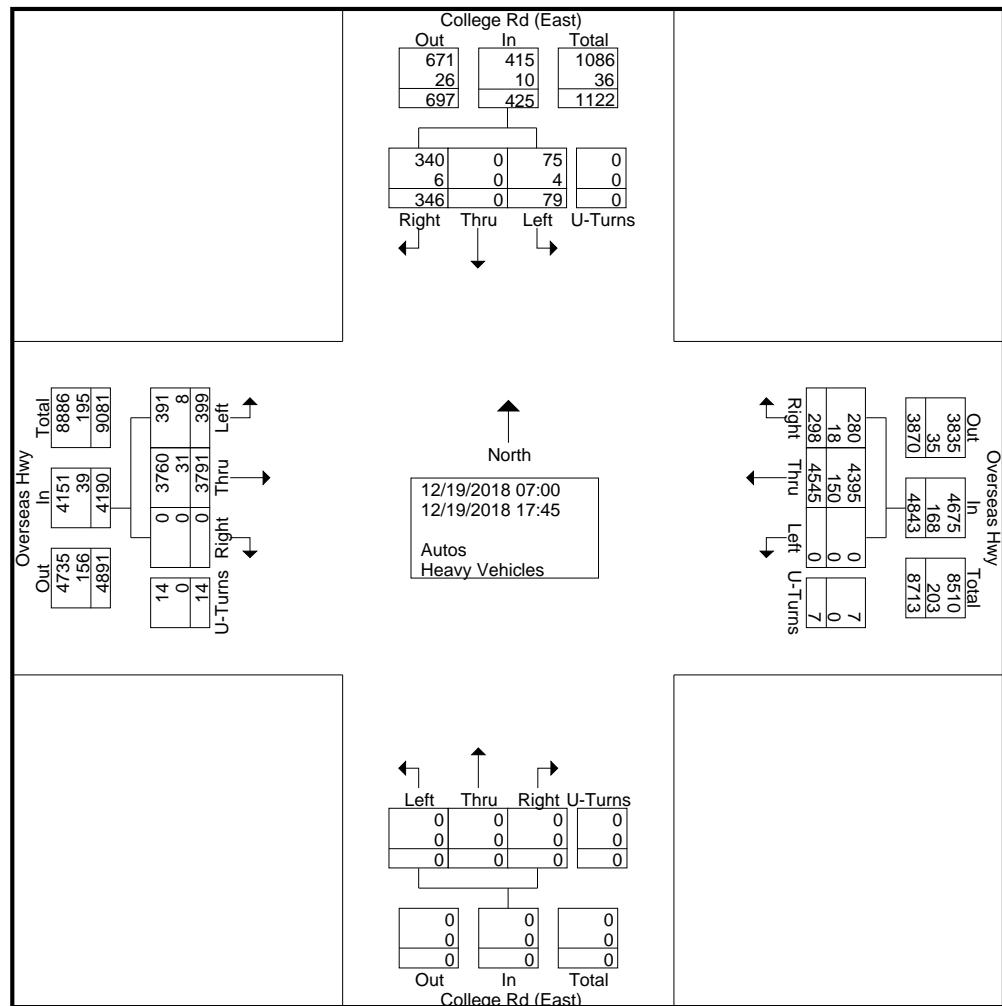
File Name : 8-Overseas Highway & College Road
Site Code : 00000000
Start Date : 12/19/2018
Page No : 1

Groups Printed- Autos - Heavy Vehicles

	College Rd (East) From North					Overseas Hwy From East					College Rd (East) From South					Overseas Hwy From West					
Start Time	Right	Thru	Left	U-Turns	App.Total	Right	Thru	Left	U-Turns	App.Total	Right	Thru	Left	U-Turns	App.Total	Right	Thru	Left	U-Turns	App.Total	Int. Total
07:00	17	0	4	0	21	17	331	0	0	348	0	0	0	0	0	0	123	11	0	134	503
07:15	20	0	4	0	24	18	436	0	0	454	0	0	0	0	0	0	166	18	0	184	662
07:30	21	0	4	0	25	57	367	0	0	424	0	0	0	0	0	0	169	47	1	217	666
07:45	26	0	1	0	27	55	320	0	1	376	0	0	0	0	0	0	163	69	0	232	635
Total	84	0	13	0	97	147	1454	0	1	1602	0	0	0	0	0	0	621	145	1	767	2466
08:00	40	0	3	0	43	30	249	0	0	279	0	0	0	0	0	0	168	48	0	216	538
08:15	14	0	4	0	18	15	257	0	1	273	0	0	0	0	0	0	186	17	0	203	494
08:30	22	0	2	0	24	13	263	0	2	278	0	0	0	0	0	0	180	19	1	200	502
08:45	18	0	2	0	20	14	246	0	0	260	0	0	0	0	0	0	171	12	0	183	463
Total	94	0	11	0	105	72	1015	0	3	1090	0	0	0	0	0	0	705	96	1	802	1997
16:00	20	0	12	0	32	9	297	0	0	306	0	0	0	0	0	0	308	20	2	330	668
16:15	9	0	3	0	12	7	266	0	0	273	0	0	0	0	0	0	242	15	1	258	543
16:30	26	0	7	0	33	10	287	0	0	297	0	0	0	0	0	0	311	22	1	334	664
16:45	21	0	6	0	27	11	222	0	1	234	0	0	0	0	0	0	333	12	3	348	609
Total	76	0	28	0	104	37	1072	0	1	1110	0	0	0	0	0	0	1194	69	7	1270	2484
17:00	21	0	8	0	29	20	274	0	1	295	0	0	0	0	0	0	336	23	1	360	684
17:15	23	0	6	0	29	11	234	0	1	246	0	0	0	0	0	0	319	35	2	356	631
17:30	27	0	6	0	33	5	238	0	0	243	0	0	0	0	0	0	329	18	1	348	624
17:45	21	0	7	0	28	6	258	0	0	264	0	0	0	0	0	0	287	13	1	301	593
Total	92	0	27	0	119	42	1004	0	2	1048	0	0	0	0	0	0	1271	89	5	1365	2532
Grand Total	346	0	79	0	425	298	4545	0	7	4850	0	0	0	0	0	0	3791	399	14	4204	9479
Apprch %	81.4	0	18.6	0		6.1	93.7	0	0.1		0	0	0	0	0	0	90.2	9.5	0.3		
Total %	3.7	0	0.8	0	4.5	3.1	47.9	0	0.1	51.2	0	0	0	0	0	0	40	4.2	0.1	44.4	
Autos	340	0	75	0	415	280	4395										3760				
% Autos	98.3	0	94.9	0	97.6	94	96.7	0	100	96.5	0	0	0	0	0	0	99.2	98	100	99.1	97.7
Heavy Vehicles																					
% Heavy Vehicles	1.7	0	5.1	0	2.4	6	3.3	0	0	3.5	0	0	0	0	0	0	0.8	2	0	0.9	2.3

Traf Tech Engineering Inc.

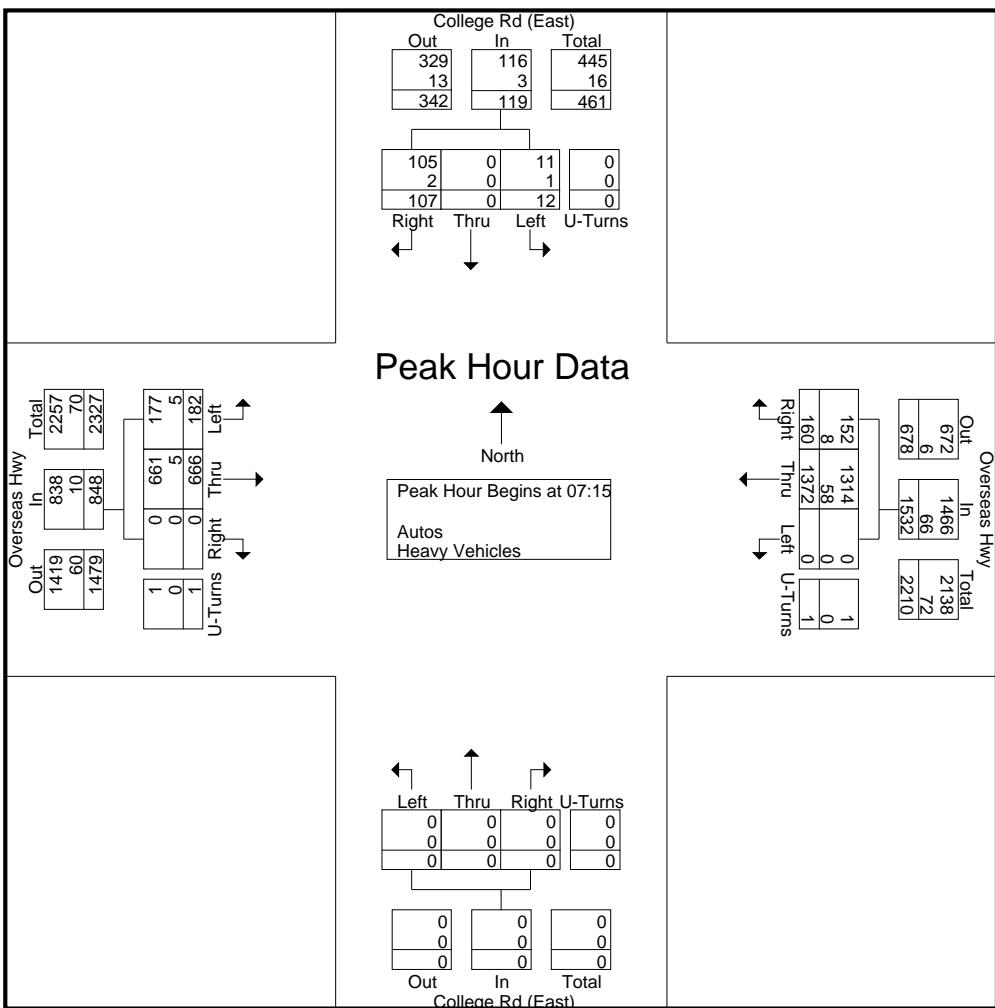
File Name : 8-Overseas Highway & College Road
 Site Code : 00000000
 Start Date : 12/19/2018
 Page No : 2



Traf Tech Engineering Inc.

File Name : 8-Overseas Highway & College Road
Site Code : 00000000
Start Date : 12/19/2018
Page No : 4

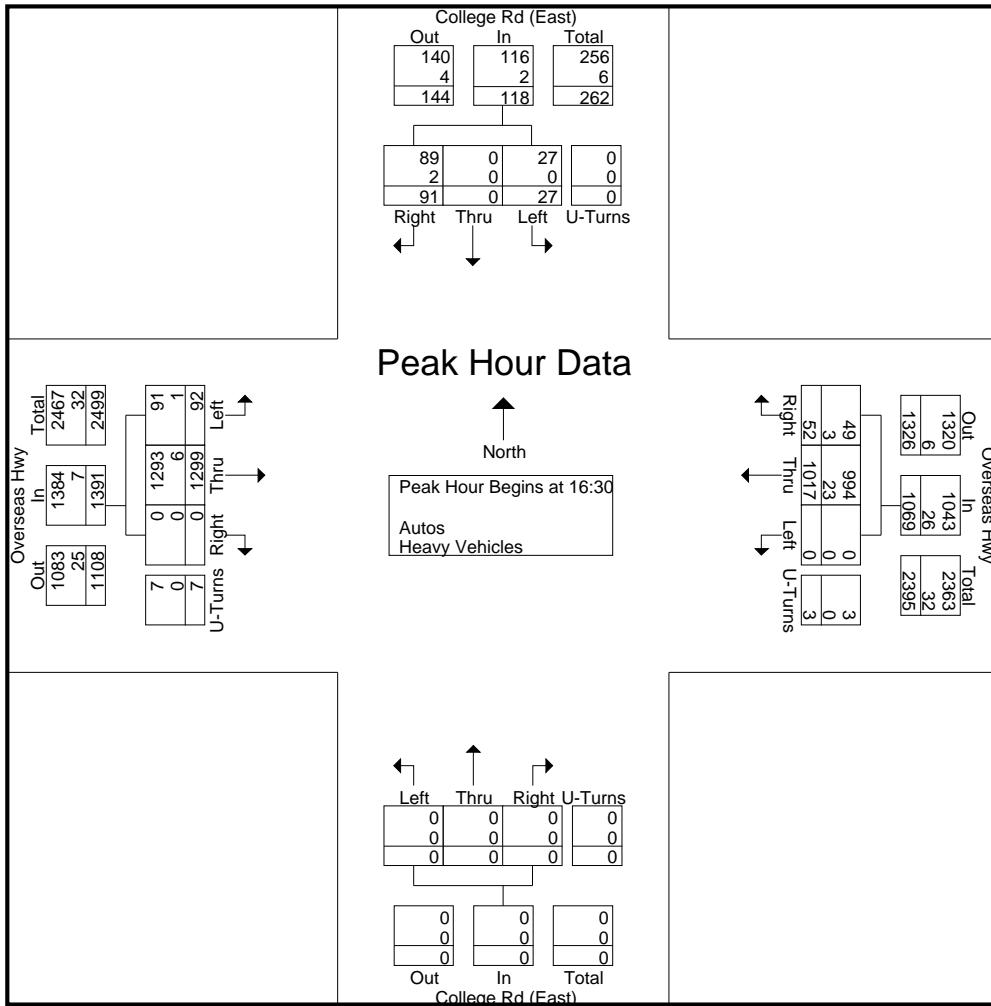
	College Rd (East) From North					Overseas Hwy From East					College Rd (East) From South					Overseas Hwy From West					
Start Time	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	20	0	4	0	24	18	436	0	0	454	0	0	0	0	0	0	166	18	0	184	662
07:30	21	0	4	0	25	57	367	0	0	424	0	0	0	0	0	0	169	47	1	217	666
07:45	26	0	1	0	27	55	320	0	1	376	0	0	0	0	0	0	163	69	0	232	635
08:00	40	0	3	0	43	30	249	0	0	279	0	0	0	0	0	0	168	48	0	216	538
Total Volume	107	0	12	0	119	160	1372	0	1	1533	0	0	0	0	0	0	666	182	1	849	2501
% App. Total	89.9	0	10.1	0		10.4	89.5	0	0.1		0	0	0	0	0	0	78.4	21.4	0.1		
PHF	.669	.000	.750	.000	.692	.702	.787	.000	.250	.844	.000	.000	.000	.000	.000	.000	.985	.659	.250	.915	.939
Autos	105	0	11	0	116	152	1314														
% Autos	98.1	0	91.7	0	97.5	95.0	95.8	0	100	95.7	0	0	0	0	0	0	99.2	97.3	100	98.8	96.8
Heavy Vehicles	1.9	0	8.3	0	2.5	5.0	4.2	0	0	4.3	0	0	0	0	0	0	0.8	2.7	0	1.2	3.2



Traf Tech Engineering Inc.

File Name : 8-Overseas Highway & College Road
 Site Code : 00000000
 Start Date : 12/19/2018
 Page No : 5

	College Rd (East) From North					Overseas Hwy From East					College Rd (East) From South					Overseas Hwy From West						
	Start Time	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																						
Peak Hour for Entire Intersection Begins at 16:30																						
16:30	26	0	7	0	33	10	287	0	0	297	0	0	0	0	0	0	0	311	22	1	334	664
16:45	21	0	6	0	27	11	222	0	1	234	0	0	0	0	0	0	0	333	12	3	348	609
17:00	21	0	8	0	29	20	274	0	1	295	0	0	0	0	0	0	0	336	23	1	360	684
17:15	23	0	6	0	29	11	234	0	1	246	0	0	0	0	0	0	0	319	35	2	356	631
Total Volume	91	0	27	0	118	52	1017	0	3	1072	0	0	0	0	0	0	0	1299	92	7	1398	2588
% App. Total	77.1	0	22.9	0		4.9	94.9	0	0.3		0	0	0	0	0	0	0	92.9	6.6	0.5		
PHF	.875	.000	.844	.000	.894	.650	.886	.000	.750	.902	.000	.000	.000	.000	.000	.000	.000	.967	.657	.583	.971	.946
Autos	89	0	27	0	116	49	994	0	3	1046	0	0	0	0	0	0	0	1293				
% Autos	97.8	0	100	0	98.3	94.2	97.7	0	100	97.6	0	0	0	0	0	0	0	99.5	98.9	100	99.5	98.6
Heavy Vehicles																						
% Heavy Vehicles	2.2	0	0	0	1.7	5.8	2.3	0	0	2.4	0	0	0	0	0	0	0	0.5	1.1	0	0.5	1.4



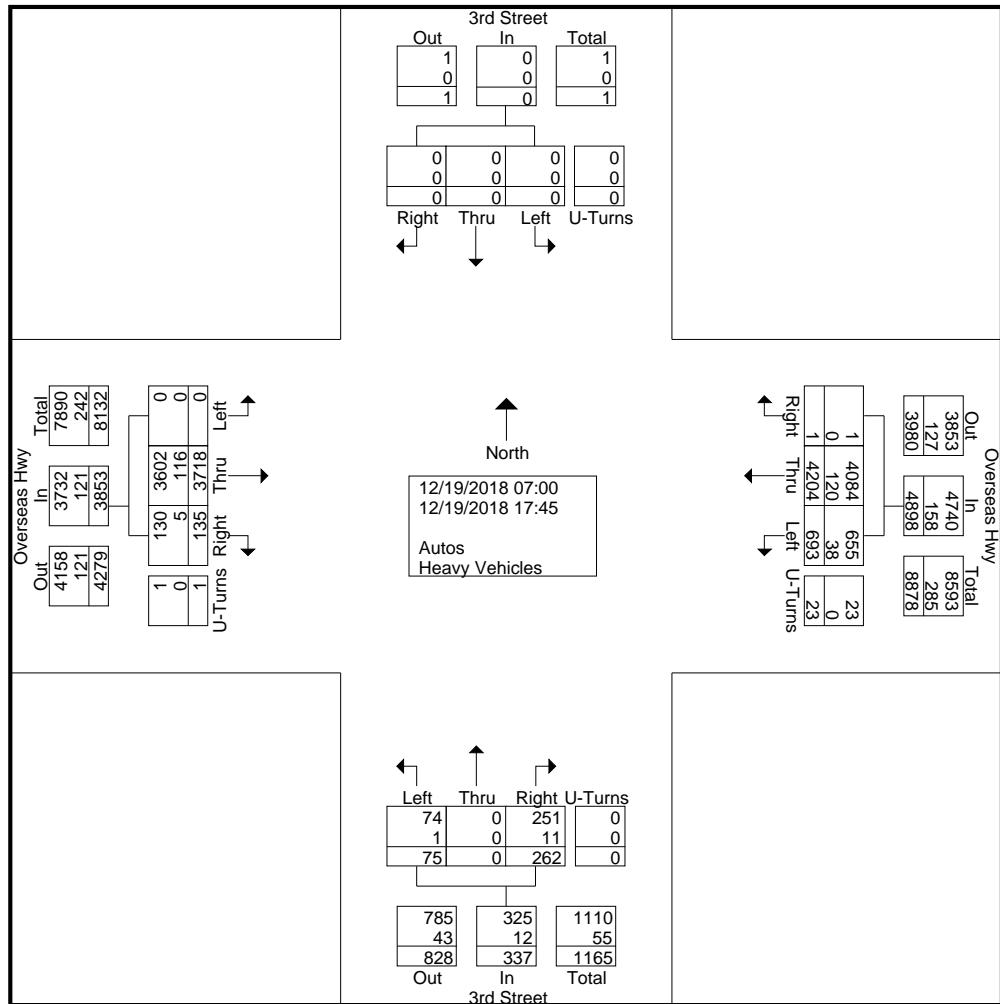
Traf Tech Engineering Inc.

File Name : 7-Overseas Highway & 3rd Street
Site Code : 00000000
Start Date : 12/19/2018
Page No : 1

Groups Printed- Autos - Heavy Vehicles

Traf Tech Engineering Inc.

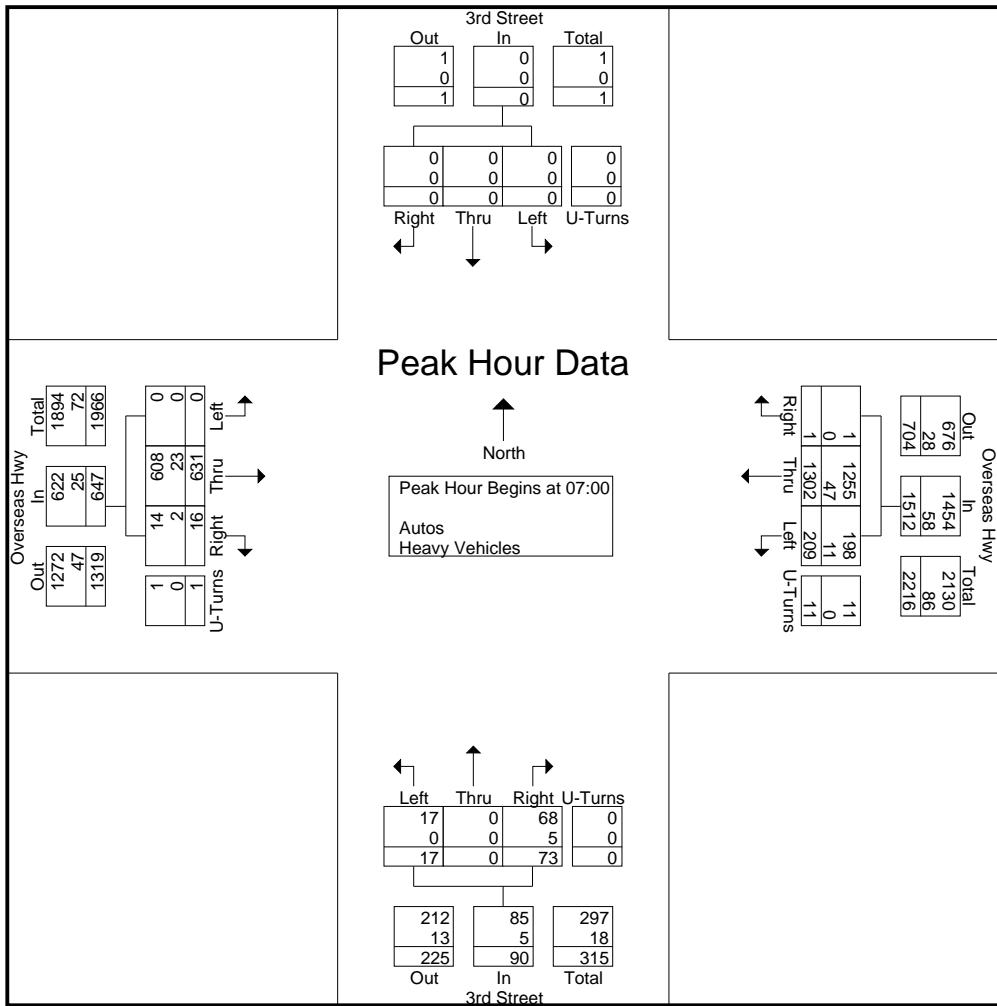
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 Start Date : 12/19/2018
 Page No : 2



Traf Tech Engineering Inc.

File Name : 7-Overseas Highway & 3rd Street
 Site Code : 00000000
 Start Date : 12/19/2018
 Page No : 4

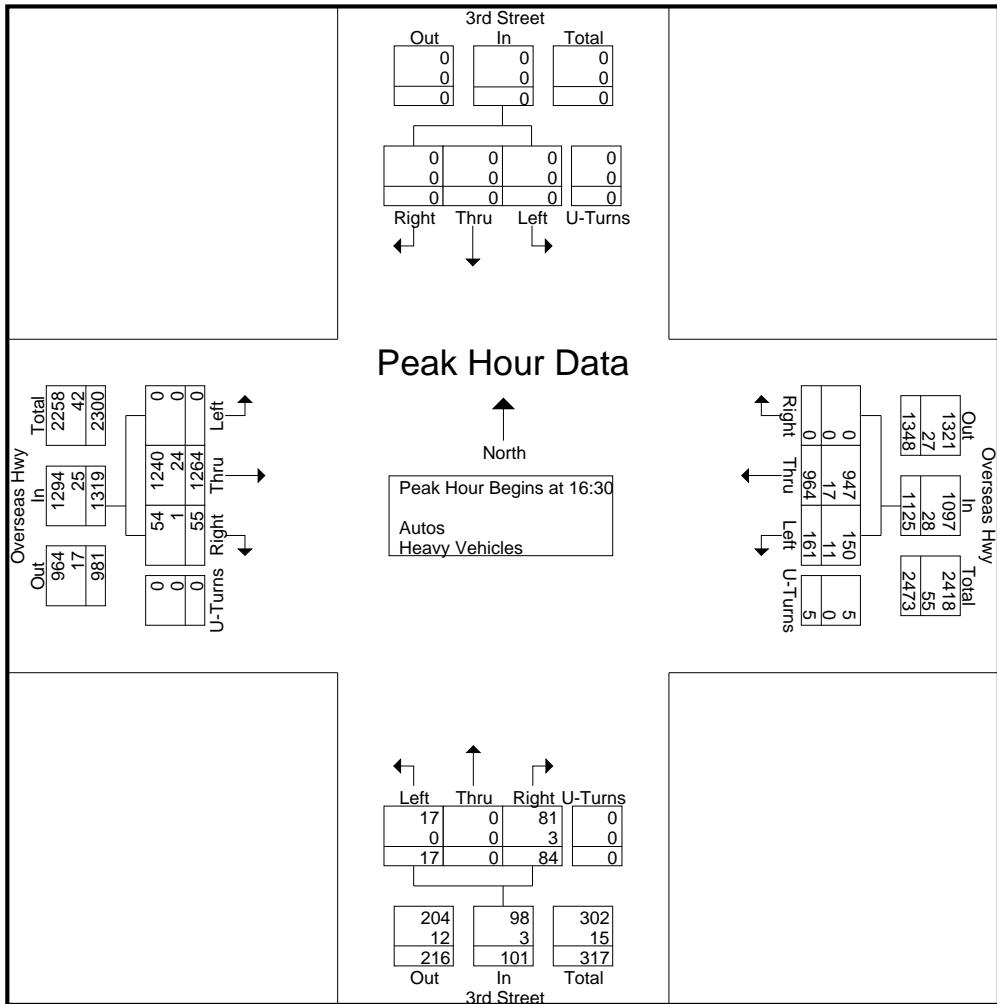
	3rd Street From North					Overseas Hwy From East					3rd Street From South					Overseas Hwy From West						
Start Time	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Int. Total	
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																						
Peak Hour for Entire Intersection Begins at 07:00																						
07:00	0	0	0	0	0	0	336	38	0	374	8	0	4	0	12	5	116	0	0	121	507	
07:15	0	0	0	0	0	0	412	34	1	447	11	0	6	0	17	6	158	0	0	164	628	
07:30	0	0	0	0	0	0	304	61	3	368	27	0	4	0	31	3	182	0	1	186	585	
07:45	0	0	0	0	0	1	250	76	7	334	27	0	3	0	30	2	175	0	0	177	541	
Total Volume	0	0	0	0	0	1	1302	209	11	1523	73	0	17	0	90	16	631	0	1	648	2261	
% App. Total	0	0	0	0	0	0.1	85.5	13.7	0.7	81.1	0	18.9	0	0	2.5	97.4	0	0.2	0	0.2		
PHF	.000	.000	.000	.000	.000	.250	.790	.688	.393	.852	.676	.000	.708	.000	.726	.667	.867	.000	.250	.871	.900	
Autos	0	0	0	0	0	0	1	1255														
% Autos	0	0	0	0	0	0	100	96.4	94.7	100	96.2	93.2	0	100	0	94.4	87.5	96.4	0	100	96.1	96.1
Heavy Vehicles	0	0	0	0	0	0	0	3.6	5.3	0	3.8	6.8	0	0	0	5.6	12.5	3.6	0	0	3.9	3.9



Traf Tech Engineering Inc.

File Name : 7-Overseas Highway & 3rd Street
 Site Code : 00000000
 Start Date : 12/19/2018
 Page No : 5

Start Time	3rd Street From North					Overseas Hwy From East					3rd Street From South					Overseas Hwy From West					
	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:30																					
16:30	0	0	0	0	0	0	265	46	2	313	16	0	3	0	19	14	297	0	0	311	643
16:45	0	0	0	0	0	0	212	36	1	249	12	0	5	0	17	11	321	0	0	332	598
17:00	0	0	0	0	0	0	265	36	2	303	26	0	6	0	32	16	303	0	0	319	654
17:15	0	0	0	0	0	0	222	43	0	265	30	0	3	0	33	14	343	0	0	357	655
Total Volume	0	0	0	0	0	0	964	161	5	1130	84	0	17	0	101	55	1264	0	0	1319	2550
% App. Total	0	0	0	0	0	0	85.3	14.2	0.4		83.2	0	16.8	0		4.2	95.8	0	0		
PHF	.000	.000	.000	.000	.000	.000	.909	.875	.625	.903	.700	.000	.708	.000	.765	.859	.921	.000	.000	.924	.973
Autos	0	0	0	0	0	0	947	150	5	1102	81	0	17	0	98	54	1240				
% Autos	0	0	0	0	0	0	98.2	93.2	100	97.5	96.4	0	100	0	97.0	98.2	98.1	0	0	98.1	97.8
Heavy Vehicles	0	0	0	0	0	0	1.8	6.8	0	2.5	3.6	0	0	0	3.0	1.8	1.9	0	0	1.9	2.2



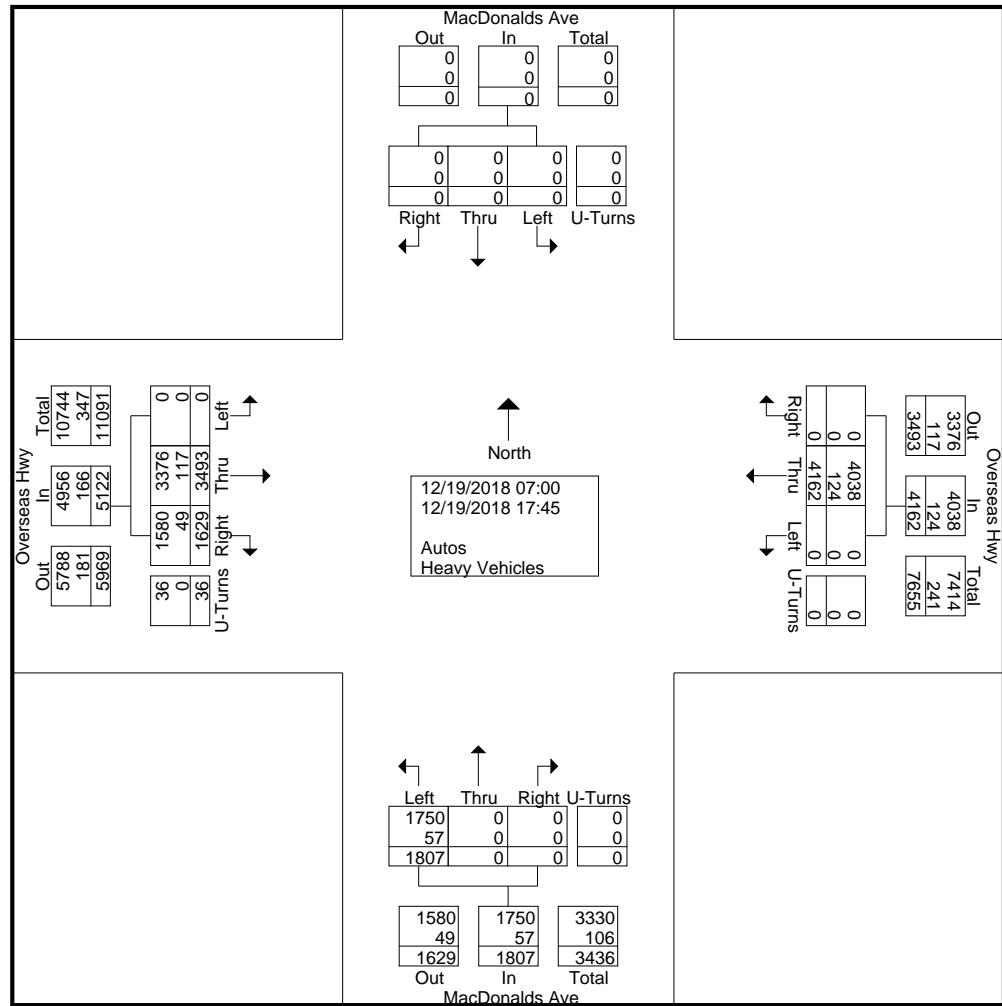
Traf Tech Engineering Inc.

File Name : 5-Overseas Highway & MacDonald Avenue
Site Code : 00000000
Start Date : 12/19/2018
Page No : 1

Groups Printed- Autos - Heavy Vehicles

Traf Tech Engineering Inc.

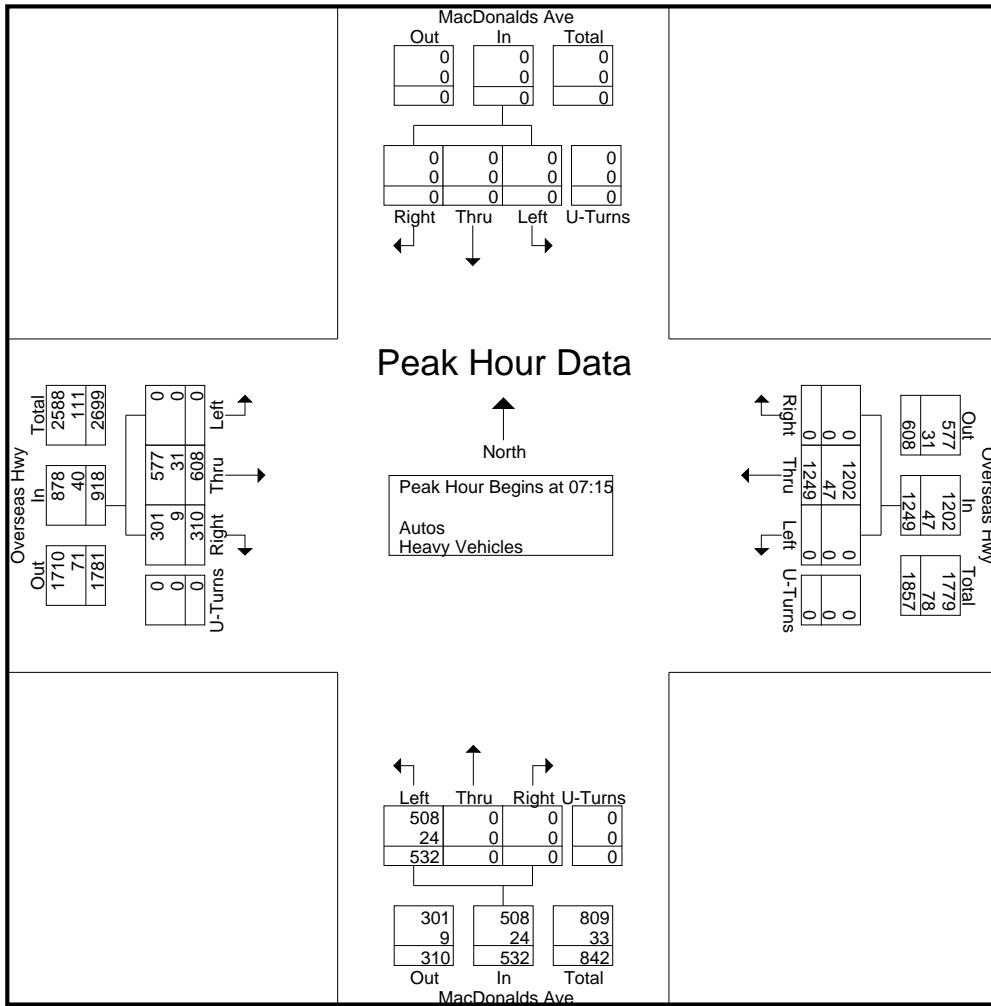
File Name : 5-Overseas Highway & MacDonald Avenue
 Site Code : 00000000
 Start Date : 12/19/2018
 Page No : 2



Traf Tech Engineering Inc.

File Name : 5-Overseas Highway & MacDonald Avenue
 Site Code : 00000000
 Start Date : 12/19/2018
 Page No : 4

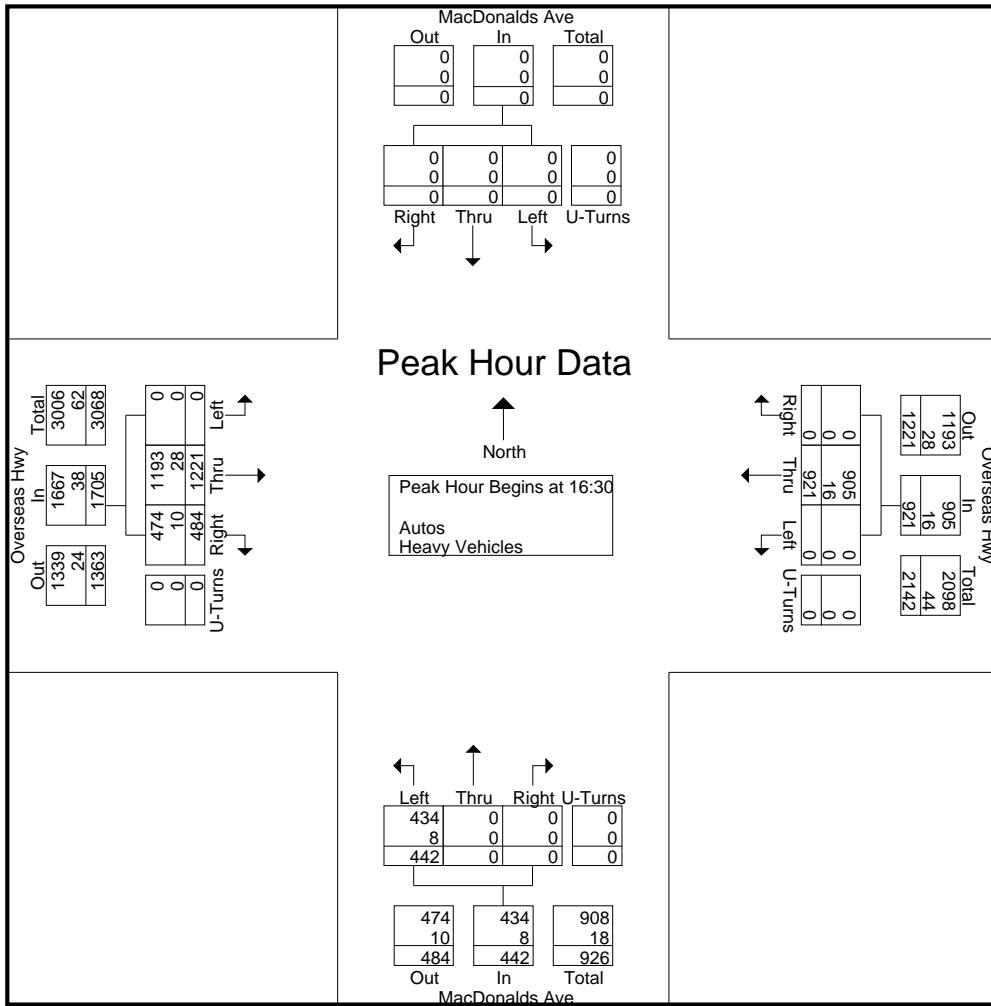
	MacDonalds Ave From North					Overseas Hwy From East					MacDonalds Ave From South					Overseas Hwy From West					
Start Time	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:15																					
07:15	0	0	0	0	0	0	403	0	0	403	0	0	117	0	117	54	136	0	0	190	710
07:30	0	0	0	0	0	0	269	0	0	269	0	0	149	0	149	71	163	0	0	234	652
07:45	0	0	0	0	0	0	283	0	0	283	0	0	159	0	159	93	152	0	0	245	687
08:00	0	0	0	0	0	0	294	0	0	294	0	0	107	0	107	92	157	0	0	249	650
Total Volume	0	0	0	0	0	0	1249	0	0	1249	0	0	532	0	532	310	608	0	0	918	2699
% App. Total	0	0	0	0	0	0	100	0	0	0	0	0	100	0	0	33.8	66.2	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.775	.000	.000	.775	.000	.000	.836	.000	.836	.833	.933	.000	.000	.922	.950
Autos	0	0	0	0	0	0	1202														
% Autos	0	0	0	0	0	0	96.2	0	0	96.2	0	0	95.5	0	95.5	97.1	94.9	0	0	95.6	95.9
Heavy Vehicles	0	0	0	0	0	0	3.8	0	0	3.8	0	0	4.5	0	4.5	2.9	5.1	0	0	4.4	4.1



Traf Tech Engineering Inc.

File Name : 5-Overseas Highway & MacDonald Avenue
 Site Code : 00000000
 Start Date : 12/19/2018
 Page No : 5

	MacDonalds Ave From North					Overseas Hwy From East					MacDonalds Ave From South					Overseas Hwy From West					
Start Time	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:30																					
16:30	0	0	0	0	0	0	252	0	0	252	0	0	111	0	111	111	294	0	0	405	768
16:45	0	0	0	0	0	0	187	0	0	187	0	0	124	0	124	119	319	0	0	438	749
17:00	0	0	0	0	0	0	268	0	0	268	0	0	107	0	107	124	286	0	0	410	785
17:15	0	0	0	0	0	0	214	0	0	214	0	0	100	0	100	130	322	0	0	452	766
Total Volume	0	0	0	0	0	0	921	0	0	921	0	0	442	0	442	484	1221	0	0	1705	3068
% App. Total	0	0	0	0	0	0	100	0	0	0	0	0	100	0	0	28.4	71.6	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.859	.000	.000	.859	.000	.000	.891	.000	.891	.931	.948	.000	.000	.943	.977
Autos	0	0	0	0	0	0	905	0	0	905	0	0	434	0	434	474	1193				
% Autos	0	0	0	0	0	0	98.3	0	0	98.3	0	0	98.2	0	98.2	97.9	97.7	0	0	97.8	98.0
Heavy Vehicles	0	0	0	0	0	0	1.7	0	0	1.7	0	0	1.8	0	1.8	2.1	2.3	0	0	2.2	2.0



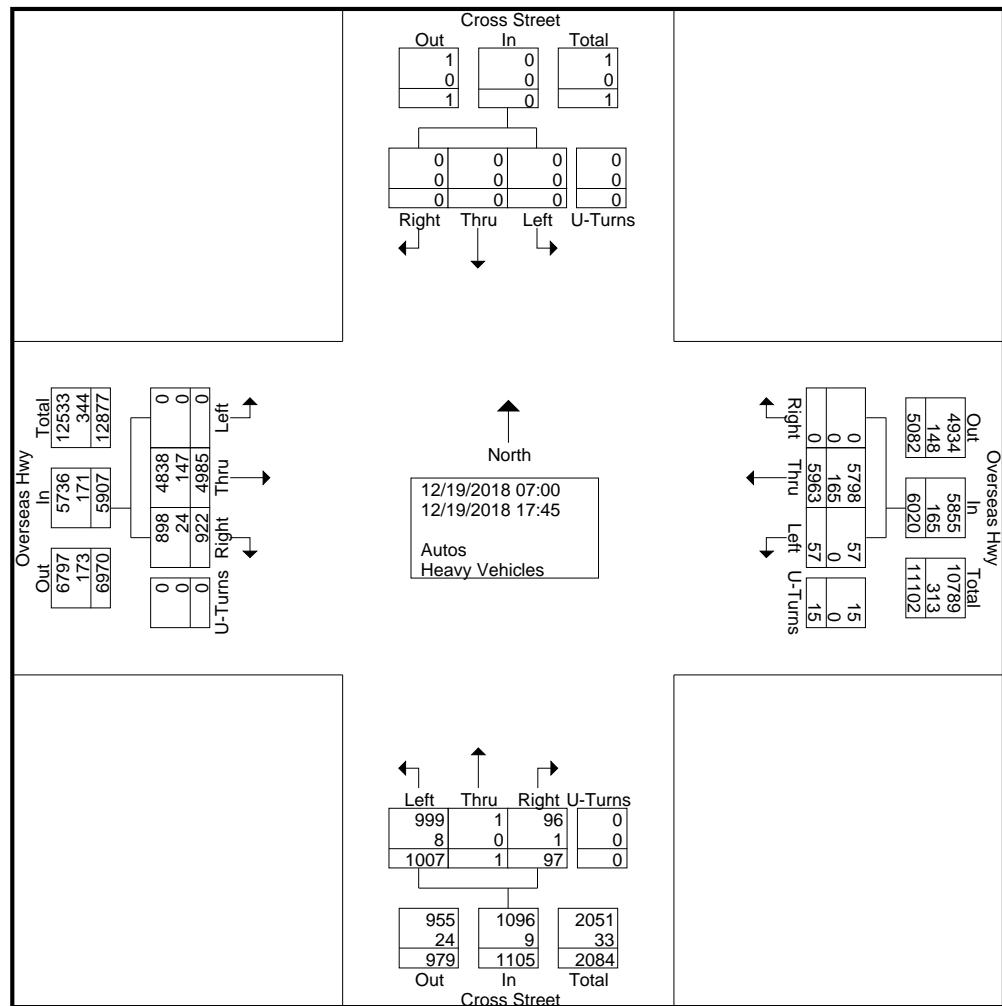
Traf Tech Engineering Inc.

File Name : 4-Overseas Highway & Cross Street
Site Code : 00000000
Start Date : 12/19/2018
Page No : 1

Groups Printed- Autos - Heavy Vehicles

Traf Tech Engineering Inc.

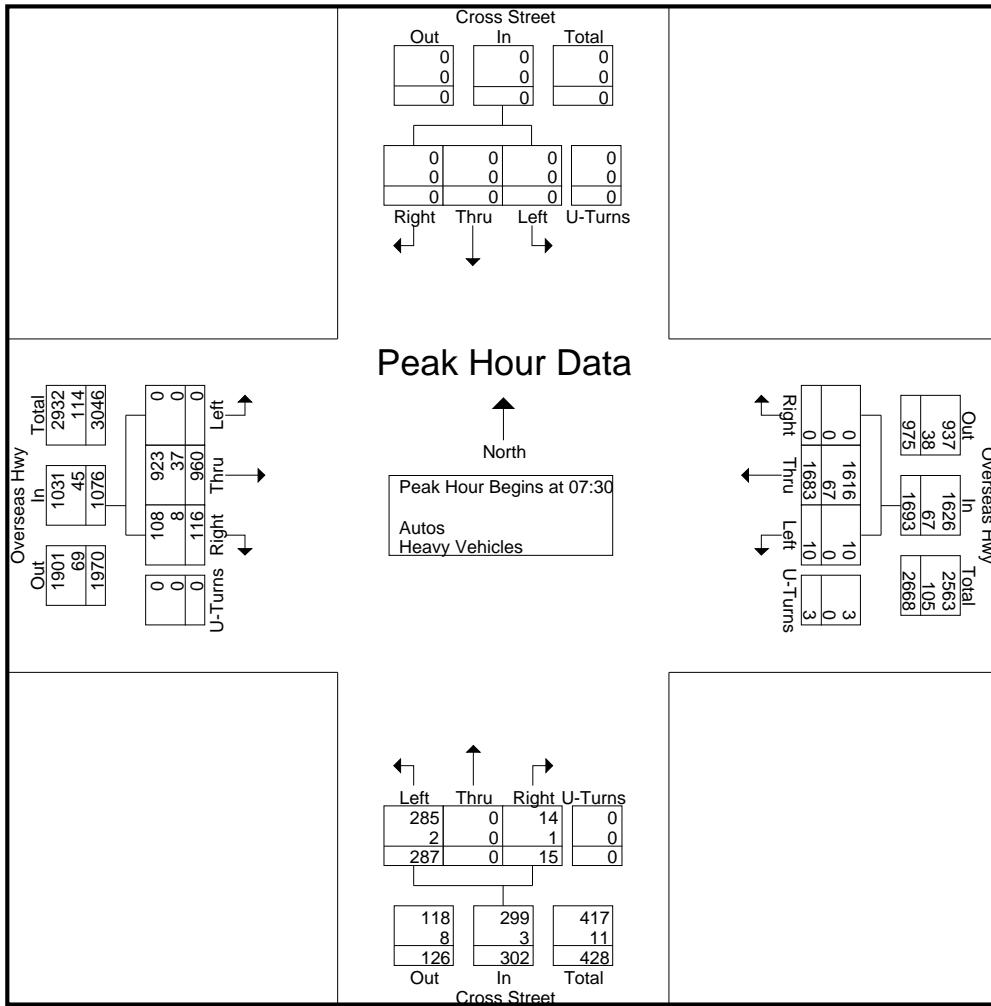
File Name : 4-Overseas Highway & Cross Street
 Site Code : 00000000
 Start Date : 12/19/2018
 Page No : 2



Traf Tech Engineering Inc.

File Name : 4-Overseas Highway & Cross Street
 Site Code : 00000000
 Start Date : 12/19/2018
 Page No : 4

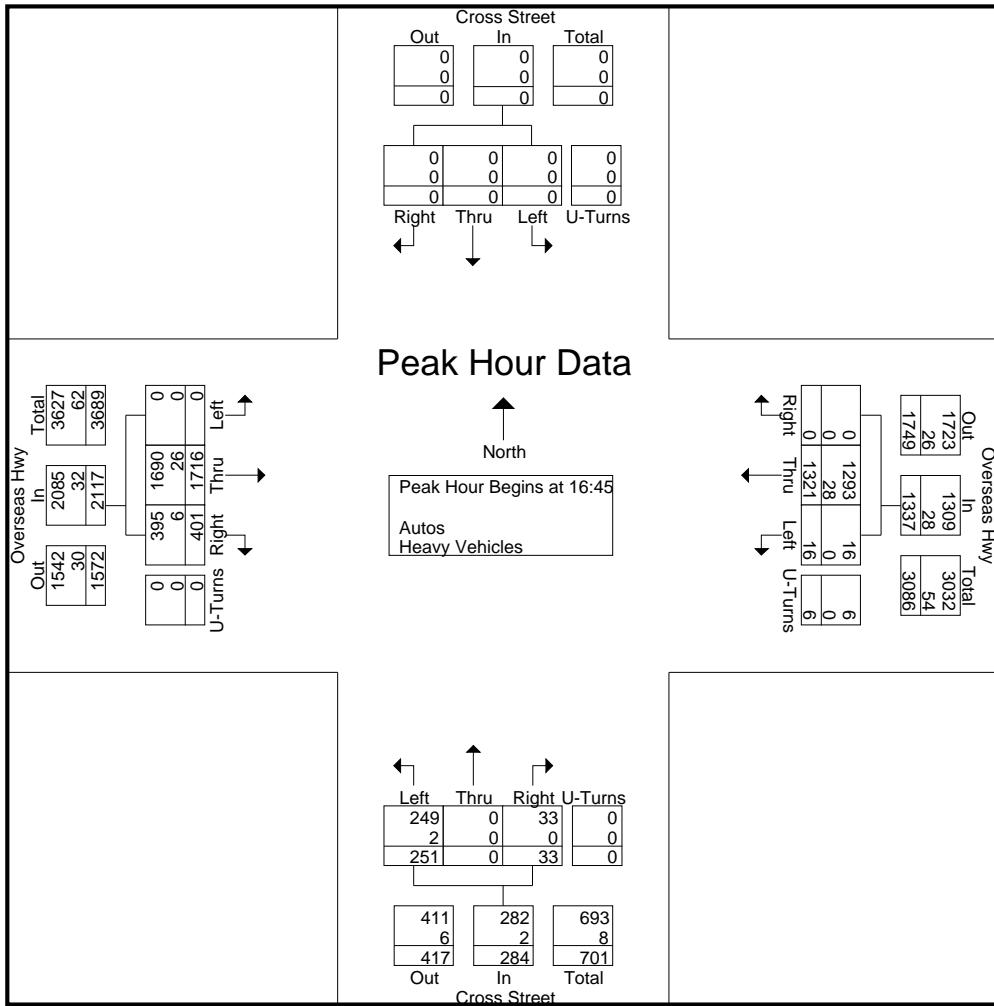
	Cross Street From North					Overseas Hwy From East					Cross Street From South					Overseas Hwy From West					
Start Time	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30																					
07:30	0	0	0	0	0	0	454	0	0	454	2	0	74	0	76	23	229	0	0	252	782
07:45	0	0	0	0	0	0	453	1	1	455	3	0	78	0	81	25	244	0	0	269	805
08:00	0	0	0	0	0	0	389	8	0	397	2	0	75	0	77	33	241	0	0	274	748
08:15	0	0	0	0	0	0	387	1	2	390	8	0	60	0	68	35	246	0	0	281	739
Total Volume	0	0	0	0	0	0	1683	10	3	1696	15	0	287	0	302	116	960	0	0	1076	3074
% App. Total	0	0	0	0	0	0	99.2	0.6	0.2	0	5	0	95	0	0	10.8	89.2	0	0	0	0
PHF	.000	.000	.000	.000	.000	.000	.927	.313	.375	.932	.469	.000	.920	.000	.932	.829	.976	.000	.000	.957	.955
Autos	0	0	0	0	0	0	1616														
% Autos	0	0	0	0	0	0	96.0	100	100	96.0	93.3	0	99.3	0	99.0	93.1	96.1	0	0	95.8	96.3
Heavy Vehicles	0	0	0	0	0	0	4.0	0	0	4.0	6.7	0	0.7	0	1.0	6.9	3.9	0	0	4.2	3.7



Traf Tech Engineering Inc.

File Name : 4-Overseas Highway & Cross Street
 Site Code : 00000000
 Start Date : 12/19/2018
 Page No : 5

	Cross Street From North					Overseas Hwy From East					Cross Street From South					Overseas Hwy From West					
Start Time	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Int. Total
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:45																					
16:45	0	0	0	0	0	0	330	3	2	335	11	0	57	0	68	68	420	0	0	488	891
17:00	0	0	0	0	0	0	366	6	0	372	6	0	69	0	75	107	438	0	0	545	992
17:15	0	0	0	0	0	0	310	5	2	317	7	0	57	0	64	117	458	0	0	575	956
17:30	0	0	0	0	0	0	315	2	2	319	9	0	68	0	77	109	400	0	0	509	905
Total Volume	0	0	0	0	0	0	1321	16	6	1343	33	0	251	0	284	401	1716	0	0	2117	3744
% App. Total	0	0	0	0	0	0	98.4	1.2	0.4		11.6	0	88.4	0		18.9	81.1	0	0		
PHF	.000	.000	.000	.000	.000	.000	.902	.667	.750	.903	.750	.000	.909	.000	.922	.857	.937	.000	.000	.920	.944
Autos	0	0	0	0	0	0	1293													1690	
% Autos	0	0	0	0	0	0	97.9	100	100	97.9	100	0	99.2	0	99.3	98.5	98.5	0	0	98.5	98.3
Heavy Vehicles	0	0	0	0	0	0	2.1	0	0	2.1	0	0	0.8	0	0.7	1.5	1.5	0	0	1.5	1.7



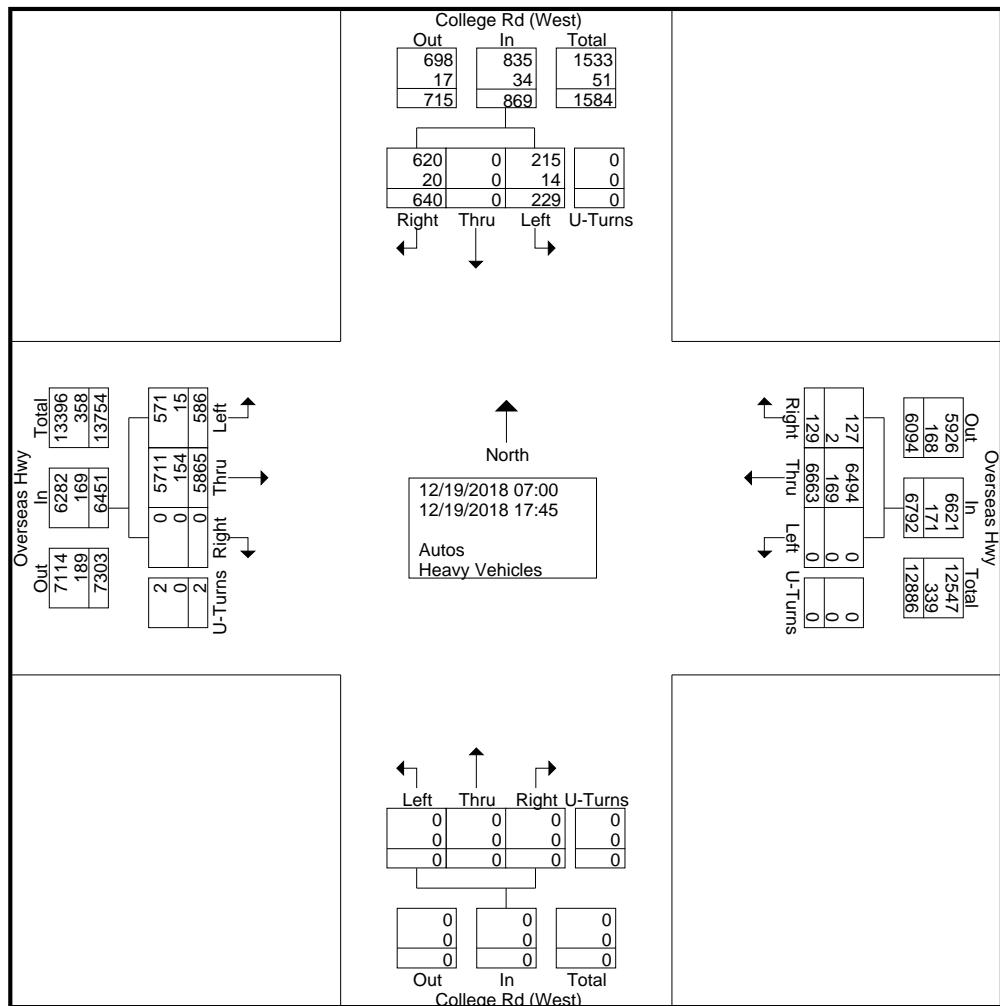
Traf Tech Engineering Inc.

File Name : 3-Overseas Highway & College Road (West)
Site Code : 00000000
Start Date : 12/19/2018
Page No : 1

Groups Printed- Autos - Heavy Vehicles

Traf Tech Engineering Inc.

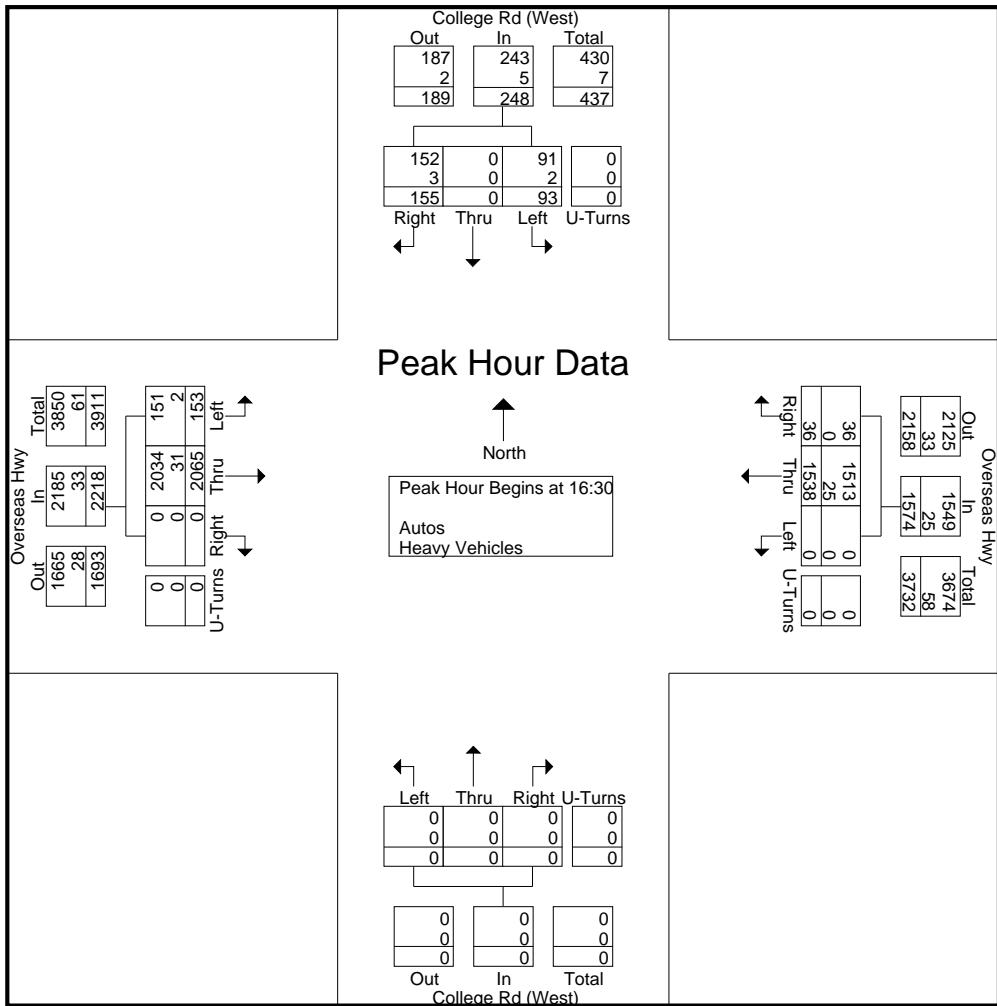
File Name : 3-Overseas Highway & College Road (West)
 Site Code : 00000000
 Start Date : 12/19/2018
 Page No : 2



Traf Tech Engineering Inc.

File Name : 3-Overseas Highway & College Road (West)
 Site Code : 00000000
 Start Date : 12/19/2018
 Page No : 3

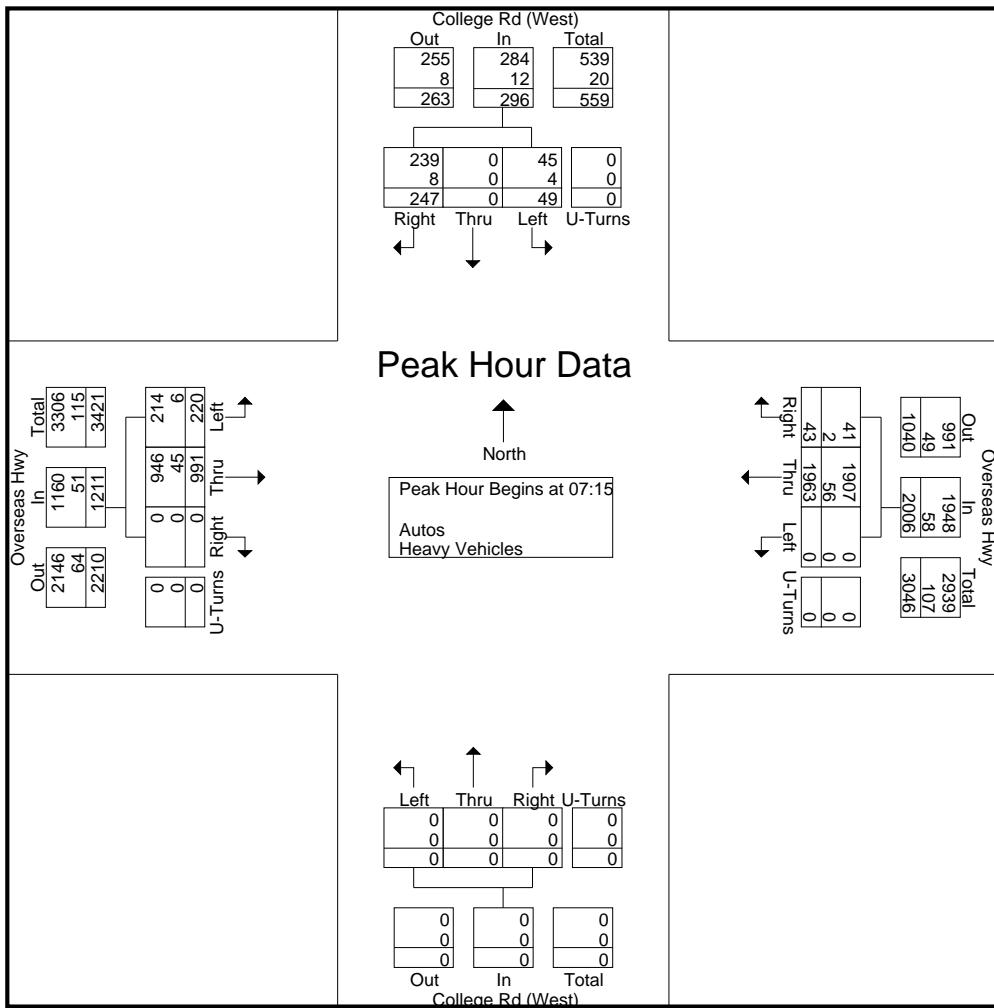
	College Rd (West) From North					Overseas Hwy From East					College Rd (West) From South					Overseas Hwy From West					
Start Time	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 17:45 - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 16:30																					
16:30	44	0	25	0	69	11	386	0	0	397	0	0	0	0	0	0	467	20	0	487	953
16:45	33	0	21	0	54	10	373	0	0	383	0	0	0	0	0	0	482	48	0	530	967
17:00	39	0	30	0	69	11	390	0	0	401	0	0	0	0	0	0	527	39	0	566	1036
17:15	39	0	17	0	56	4	389	0	0	393	0	0	0	0	0	0	589	46	0	635	1084
Total Volume	155	0	93	0	248	36	1538	0	0	1574	0	0	0	0	0	0	2065	153	0	2218	4040
% App. Total	62.5	0	37.5	0		2.3	97.7	0	0		0	0	0	0	0	0	93.1	6.9	0		
PHF	.881	.000	.775	.000	.899	.818	.986	.000	.000	.981	.000	.000	.000	.000	.000	.000	.876	.797	.000	.873	.932
Autos	152	0	91	0	243	36	1513														2034
% Autos	98.1	0	97.8	0	98.0	100	98.4	0	0	98.4	0	0	0	0	0	0	98.5	98.7	0	98.5	98.4
Heavy Vehicles	1.9	0	2.2	0	2.0	0	1.6	0	0	1.6	0	0	0	0	0	0	1.5	1.3	0	1.5	1.6
% Heavy Vehicles																					



Traf Tech Engineering Inc.

File Name : 3-Overseas Highway & College Road (West)
 Site Code : 00000000
 Start Date : 12/19/2018
 Page No : 4

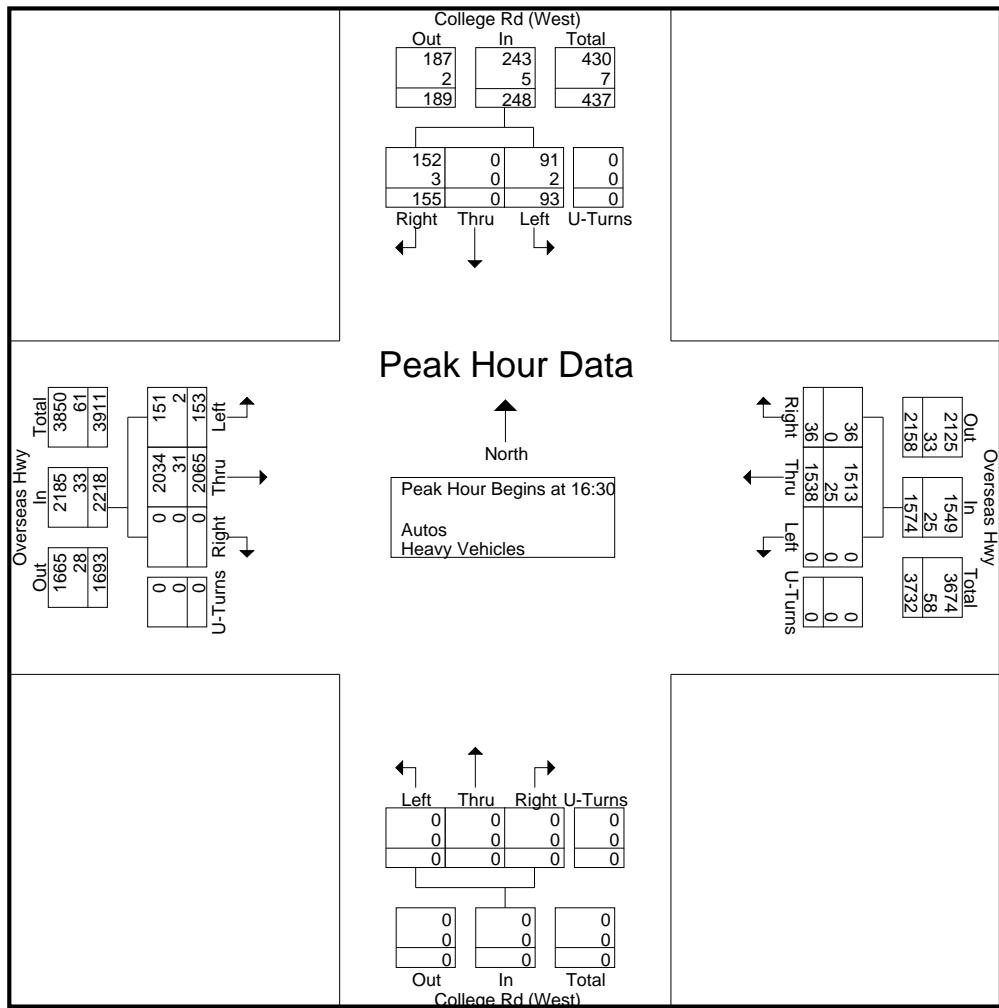
	College Rd (West) From North					Overseas Hwy From East					College Rd (West) From South					Overseas Hwy From West						
	Start Time	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Int. Total
Peak Hour Analysis From 07:00 to 08:45 - Peak 1 of 1																						
Peak Hour for Entire Intersection Begins at 07:15																						
07:15	37	0	6	0	43	8	535	0	0	543	0	0	0	0	0	0	0	210	54	0	264	850
07:30	65	0	10	0	75	8	526	0	0	534	0	0	0	0	0	0	0	242	58	0	300	909
07:45	73	0	13	0	86	15	485	0	0	500	0	0	0	0	0	0	0	286	64	0	350	936
08:00	72	0	20	0	92	12	417	0	0	429	0	0	0	0	0	0	0	253	44	0	297	818
Total Volume	247	0	49	0	296	43	1963	0	0	2006	0	0	0	0	0	0	0	991	220	0	1211	3513
% App. Total	83.4	0	16.6	0		2.1	97.9	0	0		0	0	0	0	0	0	0	81.8	18.2	0		
PHF	.846	.000	.613	.000	.804	.717	.917	.000	.000	.924	.000	.000	.000	.000	.000	.000	.000	.866	.859	.000	.865	.938
Autos	239	0	45	0	284	41	1907															
% Autos	96.8	0	91.8	0	95.9	95.3	97.1	0	0	97.1	0	0	0	0	0	0	0	95.5	97.3	0	95.8	96.6
Heavy Vehicles	3.2	0	8.2	0	4.1	4.7	2.9	0	0	2.9	0	0	0	0	0	0	0	4.5	2.7	0	4.2	3.4



Traf Tech Engineering Inc.

File Name : 3-Overseas Highway & College Road (West)
 Site Code : 00000000
 Start Date : 12/19/2018
 Page No : 5

	College Rd (West) From North					Overseas Hwy From East					College Rd (West) From South					Overseas Hwy From West						
Start Time	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Right	Thru	Left	U-Turns	App. Total	Int. Total	
Peak Hour Analysis From 16:00 to 17:45 - Peak 1 of 1																						
Peak Hour for Entire Intersection Begins at 16:30																						
16:30	44	0	25	0	69	11	386	0	0	397	0	0	0	0	0	0	0	467	20	0	487	953
16:45	33	0	21	0	54	10	373	0	0	383	0	0	0	0	0	0	0	482	48	0	530	967
17:00	39	0	30	0	69	11	390	0	0	401	0	0	0	0	0	0	0	527	39	0	566	1036
17:15	39	0	17	0	56	4	389	0	0	393	0	0	0	0	0	0	0	589	46	0	635	1084
Total Volume	155	0	93	0	248	36	1538	0	0	1574	0	0	0	0	0	0	0	2065	153	0	2218	4040
% App. Total	62.5	0	37.5	0		2.3	97.7	0	0		0	0	0	0	0	0	0	93.1	6.9	0		
PHF	.881	.000	.775	.000	.899	.818	.986	.000	.000	.981	.000	.000	.000	.000	.000	.000	.000	.876	.797	.000	.873	.932
Autos	152	0	91	0	243	36	1513														2034	
% Autos	98.1	0	97.8	0	98.0	100	98.4	0	0	98.4	0	0	0	0	0	0	0	98.5	98.7	0	98.5	98.4
Heavy Vehicles	1.9	0	2.2	0	2.0	0	1.6	0	0	1.6	0	0	0	0	0	0	0	1.5	1.3	0	1.5	1.6



Appendix E

FDOT Peak Season Conversion Factors

2018 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
 CATEGORY: 9000 MONROE COUNTYWIDE

MOCF: 0.93
 PSCF

WEEK	DATES	SF	
=====			
1	01/01/2018 - 01/06/2018	1.00	1.08
2	01/07/2018 - 01/13/2018	1.00	1.08
3	01/14/2018 - 01/20/2018	1.00	1.08
4	01/21/2018 - 01/27/2018	0.98	1.05
* 5	01/28/2018 - 02/03/2018	0.97	1.04
* 6	02/04/2018 - 02/10/2018	0.95	1.02
* 7	02/11/2018 - 02/17/2018	0.93	1.00
* 8	02/18/2018 - 02/24/2018	0.93	1.00
* 9	02/25/2018 - 03/03/2018	0.92	0.99
*10	03/04/2018 - 03/10/2018	0.91	0.98
*11	03/11/2018 - 03/17/2018	0.90	0.97
*12	03/18/2018 - 03/24/2018	0.91	0.98
*13	03/25/2018 - 03/31/2018	0.92	0.99
*14	04/01/2018 - 04/07/2018	0.93	1.00
*15	04/08/2018 - 04/14/2018	0.94	1.01
*16	04/15/2018 - 04/21/2018	0.95	1.02
*17	04/22/2018 - 04/28/2018	0.97	1.04
18	04/29/2018 - 05/05/2018	0.99	1.06
19	05/06/2018 - 05/12/2018	1.01	1.09
20	05/13/2018 - 05/19/2018	1.03	1.11
21	05/20/2018 - 05/26/2018	1.02	1.10
22	05/27/2018 - 06/02/2018	1.01	1.09
23	06/03/2018 - 06/09/2018	1.00	1.08
24	06/10/2018 - 06/16/2018	0.98	1.05
25	06/17/2018 - 06/23/2018	0.98	1.05
26	06/24/2018 - 06/30/2018	0.97	1.04
27	07/01/2018 - 07/07/2018	0.96	1.03
28	07/08/2018 - 07/14/2018	0.95	1.02
29	07/15/2018 - 07/21/2018	0.95	1.02
30	07/22/2018 - 07/28/2018	0.96	1.03
31	07/29/2018 - 08/04/2018	0.97	1.04
32	08/05/2018 - 08/11/2018	0.98	1.05
33	08/12/2018 - 08/18/2018	0.99	1.06
34	08/19/2018 - 08/25/2018	1.03	1.11
35	08/26/2018 - 09/01/2018	1.06	1.14
36	09/02/2018 - 09/08/2018	1.09	1.17
37	09/09/2018 - 09/15/2018	1.12	1.20
38	09/16/2018 - 09/22/2018	1.11	1.19
39	09/23/2018 - 09/29/2018	1.10	1.18
40	09/30/2018 - 10/06/2018	1.09	1.17
41	10/07/2018 - 10/13/2018	1.09	1.17
42	10/14/2018 - 10/20/2018	1.08	1.16
43	10/21/2018 - 10/27/2018	1.06	1.14
44	10/28/2018 - 11/03/2018	1.05	1.13
45	11/04/2018 - 11/10/2018	1.04	1.12
46	11/11/2018 - 11/17/2018	1.03	1.11
47	11/18/2018 - 11/24/2018	1.02	1.10
48	11/25/2018 - 12/01/2018	1.01	1.09
49	12/02/2018 - 12/08/2018	1.01	1.09
50	12/09/2018 - 12/15/2018	1.00	1.08
51	12/16/2018 - 12/22/2018	1.00	1.08
52	12/23/2018 - 12/29/2018	1.00	1.08
53	12/30/2018 - 12/31/2018	1.00	1.08

* PEAK SEASON

25-FEB-2019 16:26:28

830UPD

6_9000_PKSEASON.TXT

Appendix F

Intersection Turning Movement Volume Spreadsheets

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Overseas Highway / US 1 and College Road (East) AM Peak Hour

Description	Northbound			College Road (East) Southbound			Overseas Highway / US 1 Eastbound			Overseas Highway / US 1 Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (12/19/2018)	0	0	0	12	0	107	183	666	0	0	1,372	160
Season Adjustment Factor	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
2018 Peak Season Traffic	0	0	0	13	0	116	198	719	0	0	1,482	173
Annual Growth Rate	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
2021 Background Traffic	0	0	0	14	0	123	210	763	0	0	1,572	183
New Project Trips				7								2
2021 Total Traffic	0	0	0	21	0	123	210	763	0	0	1,572	185

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Overseas Highway / US 1 and College Road (East) PM Peak Hour

Description	Northbound			College Road (East) Southbound			Overseas Highway / US 1 Eastbound			Overseas Highway / US 1 Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (12/19/2018)	0	0	0	27	0	91	99	1,299	0	0	1,017	52
Season Adjustment Factor	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
2018 Peak Season Traffic	0	0	0	29	0	98	107	1,403	0	0	1,098	56
Annual Growth Rate	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
2021 Background Traffic	0	0	0	31	0	104	113	1,489	0	0	1,166	60
New Project Trips				4								7
2021 Total Traffic	0	0	0	35	0	104	113	1,489	0	0	1,166	67

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Overseas Highway / US 1 and 3rd Street AM Peak Hour

Description	3rd Street Northbound			Southbound			Overseas Highway / US 1 Eastbound			Overseas Highway / US 1 Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (12/19/2018)	17	0	73	0	0	0	0	631	16	220	1,302	0
Season Adjustment Factor	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
2018 Peak Season Traffic	18	0	79	0	0	0	0	681	17	238	1,406	0
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
2021 Background Traffic	19	0	84	0	0	0	0	723	18	252	1,492	0
New Project Trips									1			
2021 Total Traffic	19	0	84	0	0	0	0	723	19	252	1,492	0

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Overseas Highway / US 1 and 3rd Street PM Peak Hour

Description	3rd Street Northbound			Southbound			Overseas Highway / US 1 Eastbound			Overseas Highway / US 1 Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (12/19/2018)	17	0	84	0	0	0	0	1,264	55	166	964	0
Season Adjustment Factor	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
2018 Peak Season Traffic	18	0	91	0	0	0	0	1,365	59	179	1,041	0
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
2021 Background Traffic	19	0	96	0	0	0	0	1,449	63	190	1,105	0
New Project Trips	1								1			
2021 Total Traffic	20	0	96	0	0	0	0	1,449	64	190	1,105	0

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Overseas Highway / US 1 and MacDonald Avenue AM Peak Hour

Description	MacDonald Avenue Northbound			Southbound			Overseas Highway / US 1 Eastbound			Overseas Highway / US 1 Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (12/19/2018)	532	0	0	0	0	0	0	608	310	0	1,249	0
Season Adjustment Factor	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
2018 Peak Season Traffic	575	0	0	0	0	0	0	657	335	0	1,349	0
Annual Growth Rate	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
2021 Background Traffic	610	0	0	0	0	0	0	697	355	0	1,431	0
New Project Trips	1						1	2				
2021 Total Traffic	611	0	0	0	0	0	0	698	357	0	1,431	0

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Overseas Highway / US 1 and MacDonald Avenue PM Peak Hour

Description	MacDonald Avenue Northbound			Southbound			Overseas Highway / US 1 Eastbound			Overseas Highway / US 1 Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (12/19/2018)	442	0	0	0	0	0	0	1,221	484	0	921	0
Season Adjustment Factor	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
2018 Peak Season Traffic	477	0	0	0	0	0	0	1,319	523	0	995	0
Annual Growth Rate	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%	2.00%
2021 Background Traffic	507	0	0	0	0	0	0	1,399	555	0	1,056	0
New Project Trips	2						1	1			1	
2021 Total Traffic	509	0	0	0	0	0	0	1,400	556	0	1,057	0

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Overseas Highway / US 1 and Cross Street AM Peak Hour

Description	Cross Street Northbound			Southbound			Overseas Highway / US 1 Eastbound			Overseas Highway / US 1 Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (12/19/2018)	287	0	15	0	0	0	0	960	116	13	1,683	0
Season Adjustment Factor	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
2018 Peak Season Traffic	310	0	16	0	0	0	0	1,037	125	14	1,818	0
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
2021 Background Traffic	329	0	17	0	0	0	0	1,100	133	15	1,929	0
New Project Trips							3	1			1	
2021 Total Traffic	329	0	17	0	0	0	0	1,103	134	15	1,930	0

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Overseas Highway / US 1 and Cross Street PM Peak Hour

Description	Cross Street Northbound			Southbound			Overseas Highway / US 1 Eastbound			Overseas Highway / US 1 Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (12/19/2018)	251	0	33	0	0	0	0	1,716	401	22	1,321	0
Season Adjustment Factor	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
2018 Peak Season Traffic	271	0	36	0	0	0	0	1,853	433	24	1,427	0
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
2021 Background Traffic	288	0	38	0	0	0	0	1,967	460	25	1,514	0
New Project Trips	2						2	1			3	
2021 Total Traffic	290	0	38	0	0	0	0	1,969	461	25	1,517	0

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Overseas Highway / US 1 and College Road (West) AM Peak Hour

Description	Northbound			College Road (West) Southbound			Overseas Highway / US 1 Eastbound			Overseas Highway / US 1 Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (12/19/2018)	0	0	0	49	0	247	220	991	0	0	1,963	43
Season Adjustment Factor	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
2018 Peak Season Traffic	0	0	0	53	0	267	238	1,070	0	0	2,120	46
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
2021 Background Traffic	0	0	0	56	0	283	252	1,136	0	0	2,250	49
New Project Trips				4		15	5					1
2021 Total Traffic	0	0	0	60	0	298	257	1,136	0	0	2,250	50

FUTURE TURNING MOVEMENT VOLUME ANALYSIS

Overseas Highway / US 1 and College Road (West) PM Peak Hour

Description	Northbound			College Road (West) Southbound			Overseas Highway / US 1 Eastbound			Overseas Highway / US 1 Westbound		
	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
Existing Traffic (12/19/2018)	0	0	0	93	0	155	153	2,065	0	0	1,538	36
Season Adjustment Factor	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08	1.08
2018 Peak Season Traffic	0	0	0	100	0	167	165	2,230	0	0	1,661	39
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
2021 Background Traffic	0	0	0	107	0	178	175	2,367	0	0	1,763	41
New Project Trips				3		10	15					5
2021 Total Traffic	0	0	0	110	0	188	190	2,367	0	0	1,763	46

Appendix G

Signal Timing Data

INTERSECTION: College rd & US-1

QuickNet
System

Group Assignment: NONE
d Master Assignment: NONE
m Reference Number: 17
ommunications Channel: COM1

Drop Address: 1
Area Number: 1
Area Address: 100

N/S Street Name: college rd
E/W Street Name: US 1

Last QuicNet Database Change: 4/22/2019 11:29

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Notes:

Excl Ped Assignment	
Exclusive Walk	0
Exclusive FDW	0
All Red Clear	0.0

Note: Set the Exclusive Ped Outputs on the "Outputs / General" page

Walk Output	0
Don't Walk Output	0

Exclusive Ped Phase

Alternate Timing - Bank 1

Yellow Change	3.7	4.0	0.0	0.0	0.0	4.0	0.0	3.4
Red Clear	2.3	2.0	0.0	0.0	0.0	2.0	0.0	3.6

Phase Timing - Bank 1

Red Lock	_____
Yellow Lock	_____
Simultaneous Gap	_____
Rest In Walk	_____
Advance Walk	_____
Flashing Walk	_____
Max Extension	_____

Phase Functions - Page 1

Minimum Recall	_____
Ped Recall	_____
Maximum Recall	2 6
Green Flash	_____
Overlap Green Flash	_____

Phase Functions - Page 2

Soft Recall	_____
External Recall	_____
Manual Control Calls	_____
Fast Green Flash	_____
Fast Overlap G. Flash	_____

		Phase							
		1	2	3	4	5	6	7	8
Basic Phase Timing	Min Green	5	30	0	0	0	30	0	7
	Extension	2.0	3.0	0.0	0.0	0.0	3.0	0.0	3.0
	Max	19	50	0	0	0	50	0	18
	Max 2	0	0	0	0	0	0	0	0
	Cond Serve Check	0	0	0	0	0	0	0	0
Clear	Yellow Change	3.7	4.0	0.0	0.0	0.0	4.0	0.0	3.4
	Red Clear	2.3	2.0	0.0	0.0	0.0	2.0	0.0	3.6
Pedestrian Timing	Walk	0	7	0	0	0	0	0	4
	Ped Clear - FDW	0	7	0	0	0	0	0	21
	Adv / Delay Walk	0	0	0	0	0	0	0	0
	PE Min Ped FDW	0	0	0	0	0	0	0	0
Volume Density	Type 3 Disconnect	0	0	0	0	0	0	0	0
	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max Added Initial	0	0	0	0	0	0	0	0
	Min Gap	2.0	3.0	0.0	0.0	0.0	3.0	0.0	3.0
	Max Gap	2.0	3.0	0.0	0.0	0.0	3.0	0.0	3.0
	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Phase Timing - Bank 2									

		Phase							
		1	2	3	4	5	6	7	8
Basic Phase Timing	Min Green	5	30	0	0	0	30	0	7
	Extension	2.0	3.0	0.0	0.0	0.0	3.0	0.0	2.5
	Max	21	50	0	0	0	50	0	13
	Max 2	0	0	0	0	0	0	0	0
	Cond Serve Check	0	0	0	0	0	0	0	0
Clear	Yellow Change	3.7	4.0	0.0	0.0	0.0	4.0	0.0	3.4
	Red Clear	2.3	2.0	0.0	0.0	0.0	2.0	0.0	3.6
Pedestrian Timing	Walk	0	7	0	0	0	0	0	4
	Ped Clear - FDW	0	7	0	0	0	0	0	21
	Adv / Delay Walk	0	0	0	0	0	0	0	0
	PE Min Ped FDW	0	0	0	0	0	0	0	0
Volume Density	Type 3 Disconnect	0	0	0	0	0	0	0	0
	Added per Vehicle	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Max Added Initial	0	0	0	0	0	0	0	0
	Min Gap	2.0	3.0	0.0	0.0	0.0	3.0	0.0	2.5
	Max Gap	2.0	3.0	0.0	0.0	0.0	3.0	0.0	2.5
	Reduce Every	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Phase Timing - Bank 3									

		Phase							
		1	2	3	4	5	6	7	8
Alternate Walk	0	0	0	0	0	0	0	0	0
Alternate Ped Clear	0	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alternate Timing - Bank 2									

		Phase							
		1	2	3	4	5	6	7	8
Alternate Walk	0	0	0	0	0	0	0	0	0
Alternate Ped Clear	0	0	0	0	0	0	0	0	0
Alternate Minimum	0	0	0	0	0	0	0	0	0
Alternate Extension	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Alternate Timing - Bank 3									

Note: Set the Limited Service Interval on the "Utilities / Misc" page

Clear Phases	
Delay	0
Clear Time	0

Railroad - 1

Clear Phases	
Limited Service Phases	
Delay	0
Clear Time	0

Railroad - 2

Min Gm Before PE Force-Off	5
Max Pre-Empt Time	0
Min Time Before Same PE	0

	Delay	Clear	Clear Phases
EV - A	0	0	
EV - B	0	0	
EV - C	0	0	
EV - D	0	0	

Emergency Vehicle Preempt

SE - 1	1
SE - 2	1
EV - A	1
EV - B	1
EV - C	1
EV - D	1

Preempt Priority

Step	Time	Clear	Ped Call	Hold	Advance	Force Off	Vehicle Call	Permit	Ped Omit	Output
0	0									
1	0									
2	0									
3	0									
4	0									
5	0									
6	0									
7	0									
8	0									
9	0									
10	0									
11	0									
12	0									
13	0									
14	0									
15	0									

Special Event Sequence - 1

Step	Time	Clear	Ped Call	Hold	Advance	Force Off	Vehicle Call	Permit	Ped Omit	Output
0	0									
1	0									
2	0									
3	0									
4	0									
5	0									
6	0									
7	0									
8	0									
9	0									
10	0									
11	0									
12	0									
13	0									
14	0									
15	0									

Special Event Sequence - 2

Transition Type	0.2
Coord Extra Functions	
Phase 1 - Minimum	0
Phase 2 - Minimum	37
Phase 3 - Minimum	0
Phase 4 - Minimum	0
Phase 5 - Minimum	0
Phase 6 - Minimum	37
Phase 7 - Minimum	0
Phase 8 - Minimum	14
L Coordination - General	

Coord Extra
 1 = Programmed Walk Time
 for Sync Phases
 2 = Always Terminate Sync
 Phase Peds
 3 = Use "Floating Force Off"
 4 =
 5 = Use "Start of Green" for
 Sync Point

Transition Type
 0.X = Shortway
 1.X = Lengthen Only
 2.X = Shorten Only
 X.1 thru X.4 = Number of
 Cycles to get "In Step"

Note:
 The Ring-Banner Sum
 of these Minimums
 will Be the Minimum
 Cycle Length
 During Transition

Cycle	Coordination Plan								
	1	2	3	4	5	6	7	8	9
Offset - 1	140	120	140	90	100	100	130	120	130
Offset - 2	38	119	125	1	0	0	18	4	125
Offset - 3	0	0	0	0	0	0	0	0	0
Zone Offset	0	0	0	0	0	0	0	0	0
Ring Offset	0	0	0	0	0	0	0	0	0
Hold Release	255	255	255	255	255	255	255	255	255
Ped Adjust	0	0	0	0	0	0	0	0	0
Force Off - 1	54	68	70	47	60	60	56	68	70
Force Off - 2	0	0	0	0	0	0	0	0	0
Force Off - 3	0	0	0	0	20	20	0	0	0
Force Off - 4	0	0	0	0	40	40	0	0	0
Force Off - 5	0	0	0	0	60	60	0	0	0
Force Off - 6	0	0	0	0	0	0	0	0	0
Force Off - 7	0	0	0	0	20	20	0	0	0
Force Off - 8	42	42	42	30	40	40	42	42	42

Coordination - Cycle, Offsets, & Force Offs

	Coordination Plan								
	1	2	3	4	5	6	7	8	9
Perm 1 - Begin	0	0	0	0	0	0	0	0	0
Perm 1 - End	15	15	15	15	5	5	15	15	15
Perm 1 - Veh Phases	12_6_8	12_6_8	12_6_8	12_6_8	12345678	12345678	12_6_8	12_6_8	12_6_8
Perm 1 - Ped Phases	2_6_8	2_6_8	2_6_8	2_6_8	12345678	12345678	2_6_8	2_6_8	2_6_8
Perm 2 - Begin	0	0	0	0	0	0	0	0	0
Perm 2 - End	0	0	0	0	0	0	0	0	0
Perm 2 - Veh Phases	—	—	—	—	—	—	—	—	—
Perm 2 - Ped Phases	—	—	—	—	—	—	—	—	—
Perm 3 - Begin	0	0	0	0	0	0	0	0	0
Perm 3 - End	0	0	0	0	0	0	0	0	0
Perm 3 - Veh Phases	—	—	—	—	—	—	—	—	—
Perm 3 - Ped Phases	—	—	—	—	—	—	—	—	—
Max Inhibit Phases	—	—	—	—	12345678	12345678	—	—	—
Max Recall Phases	—	—	—	—	—	—	—	—	—
Sync Phases	2_6	2_6	2_6	2_6	2_6	2_6	2_6	2_6	2_6
Lag Phases	2_4_6_8	2_4_6_8	2_4_6_8	2_4_6_8	2_4_6_8	2_4_6_8	2_4_6_8	2_4_6_8	2_4_6_8
Pre-Timed Phases	2_6	2_6	2_6	2_6	—	—	2_6	2_6	2_6

Coordination - Permissives & Phase Sequence

Load Switch Number	Overlap Number							
	1	2	3	4	5	6	7	8
Vehicle Set 1	0	0	0	0	0	0	0	0
Vehicle Set 2	—	—	—	—	—	—	—	—
Vehicle Set 3	—	—	—	—	—	—	—	—
Negative Vehicle	—	—	—	—	—	—	—	—
Negative Ped	—	—	—	—	—	—	—	—
Green Omit	—	—	—	—	—	—	—	—
Green Clear Omit	—	—	—	—	—	—	—	—
Green Clearance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Yellow Change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Red Clearance	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Overlaps

	AND 1	AND 2	AND 3	AND 4
Input - A	0	0	0	0
Input - B	0	0	0	0
Output	0	0	0	0

AND Gates

	NAND 1	NAND 2	NAND 3	NAND 4
Input - A	0	0	0	0
Input - B	0	0	0	0
Output	0	0	0	0

NAND Gates

	OR 1	OR 2	OR 3	OR 4	OR 5	OR 6
Input - A	0	0	0	0	0	0
Input - B	0	0	0	0	0	0
Output	0	0	0	0	0	0

2 Input - OR Gates

	OR 7	OR 8
Input - A	0	0
Input - B	0	0
Input - C	0	0
Input - D	0	0
Output	0	0

4 Input - OR Gates

	NOT 1	NOT 2	NOT 3	NOT 4
Input	0	0	0	0
Output	0	0	0	0

NOT Gates (Inverters)

	DELAY 1	DELAY 2	DELAY 3	DELAY 4	DELAY 5	DELAY 6
Input	0	0	0	0	0	0
Delay Time	0	0	0	0	0	0
Output	0	0	0	0	0	0

DELAY Gates

Latch:	1	2	3	4	5	6	7	8
Set	0	0	0	0	0	0	0	0
Reset	0	0	0	0	0	0	0	0
Out	0	0	0	0	0	0	0	0
/Out	0	0	0	0	0	0	0	0

Logic Latches

Det. #	C-1 Pin #	Delay	Carry-over	Phase Assignments	Detector Attributes	Detector Set Assignments
1	39	0.0	0.0	2	45_7	123_8
2	40	0.0	0.0	6	45_7	123_8
3	42	10.0	0.0	1	5_7	2_8
4	42	10.0	0.0	8	5_7	1_8
5	43	0.0	0.0	2	45_7	123_8
6	44	0.0	0.0	6	45_7	123_8
7	45	0.0	0.0	4	45_7	123_8
8	46	0.0	0.0	8	5_7	123_8
9	47	0.0	0.0	2	67	123_8
10	48	0.0	0.0	6	67	123_8
11	49	0.0	0.0	4	67	123_8
12	50	0.0	0.0	8	67	123_8
13	55	0.0	0.0	5	45_7	123_8
14	56	0.0	0.0	1	45_7	123_8
15	57	0.0	0.0	7	45_7	123_8
16	58	0.0	0.0	3	45_7	123_8
17	59	0.0	0.0	5	45_7	123_8
18	60	0.0	0.0	1	45_7	123_8
19	61	0.0	0.0	7	45_7	123_8
20	62	0.0	0.0	3	45_7	123_8
21	63	0.0	0.0	2	45_7	123_8
22	64	0.0	0.0	6	45_7	123_8
23	65	0.0	0.0	4	45_7	123_8
24	66	0.0	0.0	8	45_7	123_8
25	67	0.0	0.0	2	2	123_8
26	68	0.0	0.0	6	2	123_8
27	69	0.0	0.0	4	2	123_8
28	70	0.0	0.0	8	2	123_8
29	76	0.0	0.0	2	45_7	123_8
30	77	0.0	0.0	6	45_7	123_8
31	78	0.0	0.0	4	45_7	123_8
32	79	0.0	0.0	8	45_7	123_8

Detector Assignments**Detector Attributes**

1 = Full Time Delay
 2 = Ped Call
 3 =
 4 = Count
 5 = Extension
 6 = Type 3
 7 = Calling
 8 = Alternate

Detector Assignments

1 = Detector Set 1
 2 = Detector Set 2
 3 = Detector Set 3
 4 =
 5 =
 6 = Failure - Min Recall
 7 = Failure - Max Recall
 8 = Report on Failure

C-1 Pin #
Flash Sense
External Permit - 1
External Permit - 2
External Permit - 3
Exclusive Ped Omit
Max. Term Inhibit
Max. 2
External Lag Phases
External Max. Recall
Stop Time
Manual Control Enable
Manual Cont. Advance
External Min. Recall

C-1 Pin #
Plan 1
Plan 2
Plan 3
Plan 4
Plan 5
Plan 6
Plan 7
Plan 8
Plan 9
Free
Flash

Coordination Plan Inputs

C-1 Pin #
Railroad - 1
Railroad - 2
Special Event - 1
Special Event - 2
Gate Down
EV - A
EV - B
EV - C
EV - D

C-1 Pin #
Phase Bank - 2
Phase Bank - 3
Detector Set - 2
Detector Set - 3
Overlap Vehicle Set - 2
Overlap Vehicle Set - 3

Bank & Set Inputs

C-1 Pin #
Door Ajar
UPS Battery
UPS Power
Cabinet Temperature

C-1 Pin #
Alarm - 1
Alarm - 2
Alarm - 3
Alarm - 4

	C-1 Pin #
Advance Warning - 1	0
Advance Warning - 2	0
Detector Failure	0
Flasher - Alternating 1	0
Flasher - Alternating 2	0
Fast Flasher	0
On Line	0
Exclusive - Walk	0
Exclusive - Don't Walk	0
<u>General Outputs</u>	

	C-1 Pin #
Output - 1	0
Output - 2	202
Output - 3	203
Output - 4	0
Output - 5	0
Output - 6	0
Output - 7	207
Output - 8	0
<u>Time of Day Outputs</u>	

	C-1 Pin #
Plan - 1	0
Plan - 2	0
Plan - 3	0
Plan - 4	0
Plan - 5	0
Plan - 6	0
Plan - 7	0
Plan - 8	0
Plan - 9	0
Free	0
<u>Coordination Plan Out</u>	

Ped Phase	
2	
4	
6	
8	
<u>Ped Loadswitch Assignment</u>	

	C-1 Pin #
Dial - 2	0
Dial - 3	0
Offset - 1	0
Offset - 2	0
Offset - 3	0
Free	0
Flash	0
<u>Seven Wire Outputs</u>	

	C-1 Pin #	On	Flash
Railroad - 1	0	0	
Railroad - 2	0	0	
Special Event - 1	0	0	
Special Event - 2	0	0	
Preempt Failure	0	0	
EV - A	0	0	
EV - B	0	0	
EV - C	0	0	
EV - D	0	0	
Any Preempt	0	0	
<u>Preemption Outputs</u>			

	C-1 Pin #
Output - 1	0
Output - 2	0
Output - 3	0
Output - 4	0
Output - 5	0
Output - 6	0
Output - 7	0
Output - 8	0
<u>Special Event Outputs</u>	

C-1 Pin#	
0	
0	
0	
0	
0	
0	
0	
0	
<u>Special Function Output</u>	

	Phase Number							
	1	2	3	4	5	6	7	8
Red	0	0	0	0	0	0	0	0
Yellow	0	0	0	0	0	0	0	0
Green	0	0	0	0	0	0	0	0
Walk	0	0	0	0	0	0	0	0
Don't Walk	0	0	0	0	0	0	0	0
<u>Phase Output Redirection</u>								

	Overlap Number							
	1	2	3	4	5	6	7	8
Red	0	0	0	0	0	0	0	0
Yellow	0	0	0	0	0	0	0	0
Green	0	0	0	0	0	0	0	0
<u>Overlap Output Redirection</u>								

Event	Day of Week	Season	Hour	Minute	Plan	Offset
0	1234567		0	0	4	A
1	_23456_		6	30	1	A
2	_23456_		9	30	2	A
3	_23456_		14	0	3	A
4	1234567		19	0	4	A
5	1_7		6	30	7	A
6	1_7		9	30	8	A
7	1_7		14	0	9	A
8	_____		0	0	0	0
9	_____		0	0	0	0
10	_____		0	0	0	0
11	_____		0	0	0	0
12	_____		0	0	0	0
13	_____		0	0	0	0
14	_____		0	0	0	0
15	_____		0	0	0	0
16	_____		0	0	0	0
17	_____		0	0	0	0
18	_____		0	0	0	0
19	_____		0	0	0	0
20	_____		0	0	0	0
21	_____		0	0	0	0
22	_____		0	0	0	0
23	_____		0	0	0	0
24	_____		0	0	0	0
25	_____		0	0	0	0
26	_____		0	0	0	0
27	_____		0	0	0	0
28	_____		0	0	0	0
29	_____		0	0	0	0
30	_____		0	0	0	0
31	_____		0	0	0	0

Time Base Coordination Events

Event	Day of Week	Season	Hour	Minute	Funct.	Phase / Bits
0	1234567		6	30	11	1_8
1	1234567		8	20	11	_____
2	_23456_		8	20	15	____7
3	_23456_		9	30	15	_2_7
4	_23456_		14	0	15	_3_7
5	1234567		19	0	15	_____
6	1_7		9	30	15	_2_____
7	1_7		14	0	15	_3_____
8	_____		0	0	0	_____
9	_____		0	0	0	_____
10	_____		0	0	0	_____
11	_____		0	0	0	_____
12	_____		0	0	0	_____
13	_____		0	0	0	_____
14	_____		0	0	0	_____
15	_____		0	0	0	_____

Time of Day Function EventsTOD Functions

- 0 = Permitted Phases
- 1 = Red Lock
- 2 = Yellow Lock
- 3 = Vehicle Min Recall
- 4 = Ped Recall
- 5 =
- 6 = Rest In Walk
- 7 = Red Rest
- 8 = Double Entry
- 9 = Vehicle Max Recall
- 10 = Soft Recall
- 11 = Max Extension 2
- 12 = Conditional Service
- 13 = Lag Free Phases
- 14, Bit 1 = Local Override
- 14, Bit 4 = Disable Det Off Monitoring
- 15 = TOD Outputs

#	Holiday Type	Day	Month	Year
0		0	0	0
1		0	0	0
2		0	0	0
3		0	0	0
4		0	0	0
5		0	0	0
6		0	0	0
7		0	0	0
8		0	0	0
9		0	0	0
10		0	0	0
11		0	0	0
12		0	0	0
13		0	0	0
14		0	0	0
15		0	0	0
16		0	0	0
17		0	0	0
18		0	0	0
19		0	0	0
20		0	0	0
21		0	0	0
22		0	0	0
23		0	0	0
24		0	0	0
25		0	0	0
26		0	0	0
27		0	0	0
28		0	0	0
29		0	0	0
30		0	0	0
31		0	0	0

Holiday Dates

Event	Holiday Type	Hour	Minute	Plan	Offset
0		0	0	0	0
1		0	0	0	0
2		0	0	0	0
3		0	0	0	0
4		0	0	0	0
5		0	0	0	0
6		0	0	0	0
7		0	0	0	0
8		0	0	0	0
9		0	0	0	0
10		0	0	0	0
11		0	0	0	0
12		0	0	0	0
13		0	0	0	0
14		0	0	0	0
15		0	0	0	0
16		0	0	0	0
17		0	0	0	0
18		0	0	0	0
19		0	0	0	0
20		0	0	0	0
21		0	0	0	0
22		0	0	0	0
23		0	0	0	0
24		0	0	0	0
25		0	0	0	0
26		0	0	0	0
27		0	0	0	0
28		0	0	0	0
29		0	0	0	0
30		0	0	0	0
31		0	0	0	0

Holiday Time Base Coordination Events

Event	Holiday Type	Hour	Minute	Funct.	Phase / Bits
0		0	0	0	
1		0	0	0	
2		0	0	0	
3		0	0	0	
4		0	0	0	
5		0	0	0	
6		0	0	0	
7		0	0	0	
8		0	0	0	
9		0	0	0	
10		0	0	0	
11		0	0	0	
12		0	0	0	
13		0	0	0	
14		0	0	0	
15		0	0	0	

Holiday Time of Day Function Events

Season #	Start Month	Start Day	End Month	End Day
1	1	1	12	31
2	0	0	0	0
3	0	0	0	0
4	0	0	0	0
5	0	0	0	0
6	0	0	0	0
7	0	0	0	0
8	0	0	0	0

Season Definitions

Red Start Time	5.0
Yellow Start Phases	
First Green Phases	2_6
Startup Vehicle Calls	12345678
Startup Ped Calls	

Startup

Max ON Time	5
Max OFF Time	15
Chatter	

Detector Check

	Sign 1	Sign 2
Phase Number	0	0
Time Before Yellow	0.0	0.0

Advance Warning Signs

Flash Entry Phases	8
Flash Phases Yellow	2_6
Flash Overlaps Yellow	
Flash Type	

Flash Setup

Exclusive Phases	
Protect / Permissive	
Disable Yellow Range	
Extra One	1_3_5
Lag Phases - Free	2_4_6_8

Configuration

Permitted Phases	12_6_8
Restricted Phases	
Disable Overlap Range	
Extra Two	
External Permit 1	
External Permit 2	
External Permit 3	

Configuration

Keyboard Beep	
Backlight Timeout	
Spec Evnt 1 - Ltd Serv Interval	0
Spec Evnt 2 - Ltd Serv Interval	0
Red Start	5.0
Flash Start	0
Red Revert	5.0

Miscellaneous

Spring Month (Begin)	
Spring Week (Begin)	
Fall Month (End)	
Fall Week (End)	
Daylight Savings Time	

Manual Plan	
Manual Offset	

Manual

Address	
Area Number	
Area Address	
IP Port	
IP Address	
Subnet Mask	
Gateway	

Ethernet Port Address

	Port 1	Port 2	Port 3	Port 4
Address				
Area Number				
Area Address				
Comm Time Out				
CTS Delay				
RTS Hold				
Baud Rate				
Data Format				

Communications Parameters

2.3 Phase Sequence 1

Ring 1	2,4
Ring 2	6
Ring 3	
Ring 4	

2.3 Phase Sequence 9

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 2

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 10

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 3

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 11

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 4

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 12

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 5

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 13

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 6

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 14

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 7

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 15

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 8

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 16

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.1 Phase Parameters Set 1	1	2	3	4	5	6	7	8
Min. Green	0	30	0	7	0	30	0	0
Pass/10	0	3	0	2.5	0	3	0	0
Max. 1	0	50	0	29	0	50	0	0
Max. 2	0	0	0	0	0	0	0	0
Yel/10	0	4	0	3.4	0	4	0	0
Red/10	0	2	0	2.6	0	2	0	0
Walk	0	7	0	7	0	7	0	0
Pedestrian Clear	0	9	0	17	0	9	0	0
Add In/10	0	0	0	0	0	0	0	0
Max. Initial	0	0	0	0	0	0	0	0
TBR	0	0	0	0	0	0	0	0
CBR	0	0	0	0	0	0	0	0
TTR	0	0	0	0	0	0	0	0
Reduce/10	0	0	0	0	0	0	0	0
Min Gp/10	0	3	0	2.5	0	3	0	0
DM Limit	0	0	0	0	0	0	0	0
DM Stp/10	0	0	0	0	0	0	0	0
Red Rv/10	0	5	0	5	0	5	0	0
Cond Svc Min	0	0	0	0	0	0	0	0
Alt Min Green	0	0	0	0	0	0	0	0
Alt Ps/10	0	0	0	0	0	0	0	0
Alternate Walk	0	0	0	0	0	0	0	0
Alt Ped Clear	0	0	0	0	0	0	0	0
Advanced Walk	0	0	0	0	0	0	0	0
Delay Walk	0	0	0	0	0	0	0	0
St Dly/10	0	0	0	0	0	0	0	0
Green Clear	0	0	0	0	0	0	0	0

2.2 Phase Options Set 1	1	2	3	4	5	6	7	8
Phase Omit	X		X		X		X	
Ped Omit	X		X		X		X	
Min Recall		X			X			
Max Recall		X			X			
Soft Recall								
Ped Recall								
Pedestrian Recycle								
Cond Srv								
Detector Lock								
Dual Entry		X			X			
Simul Gap								
Guar Pass								
Add Init Calc								
Walk Rest								
Red Rest								
Flash Entry				X				
Flash Exit								
CNA-1								
CNA-2								
No Backup								
Max Walk								
Max Extension								
Sequential Timing								
No Min Yellow								
FDW Ped Recycle								

2.1 Phase Parameters Set 2	1	2	3	4	5	6	7	8

Min. Green	4	30	4	7	4	30	4	0
Pass/10	2	5	2	3.5	2	5	2	0
Max. 1	15	50	15	29	15	50	15	0
Max. 2	15	45	15	45	15	45	15	0
Yel/10	3	4	3	3.4	3	4	3	0
Red/10	1	2	1	2.6	1	2	1	0
Walk	0	7	0	7	0	7	0	0
Pedestrian Clear	0	9	0	17	0	9	0	0
Add In/10	0	0	0	0	0	0	0	0
Max. Initial	0	0	0	0	0	0	0	0
TBR	0	0	0	0	0	0	0	0
CBR	0	0	0	0	0	0	0	0
TTR	0	0	0	0	0	0	0	0
Reduce/10	0	0	0	0	0	0	0	0
Min Gp/10	0	0	0	0	0	0	0	0
DM Limit	0	0	0	0	0	0	0	0
DM Stp/10	0	0	0	0	0	0	0	0
Red Rv/10	2	2	2	2	2	2	2	2
Cond Svc Min	0	0	0	0	0	0	0	0
Alt Min Green	0	0	0	0	0	0	0	0
Alt Ps/10	0	0	0	0	0	0	0	0
Alternate Walk	0	0	0	0	0	0	0	0
Alt Ped Clear	0	0	0	0	0	0	0	0
Advanced Walk	0	0	0	0	0	0	0	0
Delay Walk	0	0	0	0	0	0	0	0
St Dly/10	0	0	0	0	0	0	0	0
Green Clear	0	0	0	0	0	0	0	0

2.2 Phase Options Set 2

	1	2	3	4	5	6	7	8
Phase Omit								
Ped Omit								
Min Recall		X			X			
Max Recall								
Soft Recall								
Ped Recall								
Pedestrian Recycle								
Cond Srv								
Detector Lock	X	X	X	X	X	X	X	X
Dual Entry								
Simul Gap	X	X	X	X	X	X	X	X
Guar Pass								
Add Init Calc								
Walk Rest								
Red Rest								
Flash Entry								
Flash Exit								
CNA-1								
CNA-2								
No Backup								
Max Walk								
Max Extension								
Sequential Timing								
No Min Yellow								
FDW Ped Recycle								

2.1 Phase Parameters Set 3

	1	2	3	4	5	6	7	8
Min. Green	4	15	4	15	4	15	4	15

Pass/10	2	5	2	5	2	5	2	5
Max. 1	15	45	15	45	15	45	15	45
Max. 2	15	45	15	45	15	45	15	45
Yel/10	3	4	3	4	3	4	3	4
Red/10	1	2	1	2	1	2	1	2
Walk	0	7	0	7	0	7	0	7
Pedestrian Clear	0	15	0	15	0	15	0	15
Add In/10	0	0	0	0	0	0	0	0
Max. Initial	0	0	0	0	0	0	0	0
TBR	0	0	0	0	0	0	0	0
CBR	0	0	0	0	0	0	0	0
TTR	0	0	0	0	0	0	0	0
Reduce/10	0	0	0	0	0	0	0	0
Min Gp/10	0	0	0	0	0	0	0	0
DM Limit	0	0	0	0	0	0	0	0
DM Stp/10	0	0	0	0	0	0	0	0
Red Rv/10	2	2	2	2	2	2	2	2
Cond Svc Min	0	0	0	0	0	0	0	0
Alt Min Green	0	0	0	0	0	0	0	0
Alt Ps/10	0	0	0	0	0	0	0	0
Alternate Walk	0	0	0	0	0	0	0	0
Alt Ped Clear	0	0	0	0	0	0	0	0
Advanced Walk	0	0	0	0	0	0	0	0
Delay Walk	0	0	0	0	0	0	0	0
St Dly/10	0	0	0	0	0	0	0	0
Green Clear	0	0	0	0	0	0	0	0

2.2 Phase Options Set 3

	1	2	3	4	5	6	7	8
Phase Omit								
Ped Omit								
Min Recall		X				X		
Max Recall								
Soft Recall								
Ped Recall								
Pedestrian Recycle								
Cond Srv								
Detector Lock	X	X	X	X	X	X	X	X
Dual Entry								
Simul Gap	X	X	X	X	X	X	X	X
Guar Pass								
Add Init Calc								
Walk Rest								
Red Rest								
Flash Entry								
Flash Exit								
CNA-1								
CNA-2								
No Backup								
Max Walk								
Max Extension								
Sequential Timing								
No Min Yellow								
FDW Ped Recycle								

5.2 Patterns	1	2	3	4	5	6	7	8
Cycle Time	140	120	140	90	0	0	0	0
Offset Time	43	16	4	44	0	0	0	0
Split	1	2	3	4	5	6	7	8
Sequence	1	1	1	1	1	1	1	1
Correction Mode								
Maximum Mode								
Force Mode								
Perm Strategy								
Omit Strategy	Manual	Manual	Manual	Manual				
Early Return	Default							
Texas Diamond								
Max2 Phases								
Phase Timing Set	2	1	1	1	1	1	1	1
Phase Option Set	1	1	1	1	1	1	1	1
Overlap Set	1	1	1	1	1	1	1	1
Veh. Det. Set	1	1	1	1	1	1	1	1
Ped. Det. Set	1	1	1	1	1	1	1	1
Veh. Det. Diag Set	1	1	1	1	1	1	1	1
Ped. Det. Diag Set	1	1	1	1	1	1	1	1
Priority Set	1	1	1	1	1	1	1	1
Ped Ovlp Set	1	1	1	1	1	1	1	1
Det. Reset								

5.2 Patterns	9	10	11	12	13	14	15	16
Cycle Time	0	0	130	120	130	0	0	0
Offset Time	0	0	51	9	16	0	0	0
Split	9	10	11	12	13	14	15	16
Sequence	1	1	1	1	1	1	1	1
Correction Mode								
Maximum Mode								
Force Mode								
Perm Strategy								
Omit Strategy								
Early Return	Default							
Texas Diamond								
Max2 Phases								
Phase Timing Set	1	1	1	1	1	1	1	1
Phase Option Set	1	1	1	1	1	1	1	1
Overlap Set	1	1	1	1	1	1	1	1
Veh. Det. Set	1	1	1	1	1	1	1	1
Ped. Det. Set	1	1	1	1	1	1	1	1
Veh. Det. Diag Set	1	1	1	1	1	1	1	1
Ped. Det. Diag Set	1	1	1	1	1	1	1	1
Priority Set	1	1	1	1	1	1	1	1
Ped Ovlp Set	1	1	1	1	1	1	1	1
Det. Reset								

5.3 Split Table 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	106	0	34	0	106	0	0	0	0	0	0	0	0	0	0
Mode	NONE	NACT	NONE	NONE	NONE	NACT	NONE									
Coord. Phase		X				X										
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0
Min Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	85	0	35	0	85	0	0	0	0	0	0	0	0	0	0
Mode	NONE	NACT	NONE	NONE	NONE	NACT	NONE									
Coord. Phase		X				X										
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0
Min Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 3

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	110	0	30	0	110	0	0	0	0	0	0	0	0	0	0
Mode	NONE	NACT	NONE	NONE	NONE	NACT	NONE									
Coord. Phase		X				X										
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0
Min Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 4

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	55	0	35	0	55	0	0	0	0	0	0	0	0	0	0
Mode	NONE	MXVP	NONE	NONE	NONE	MXVP	NONE									
Coord. Phase		X				X										
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0
Min Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 5

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE															
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 6

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE															
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 7

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE															
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 8

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE															
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 9

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE															
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 10

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE															
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 11

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	99	0	31	0	99	0	0	0	0	0	0	0	0	0	0
Mode	NONE	NACT	NONE	NONE	NONE	NACT	NONE									
Coord. Phase		X				X										
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0
Min Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 12

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	85	0	35	0	85	0	0	0	0	0	0	0	0	0	0
Mode	NONE	NACT	NONE	NONE	NONE	NACT	NONE									
Coord. Phase		X				X										
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0
Min Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 13

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	97	0	33	0	97	0	0	0	0	0	0	0	0	0	0
Mode	NONE	NACT	NONE	NONE	NONE	NACT	NONE									
Coord. Phase	X					X										
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	15	0	0	0	0	0	0	0	0	0	0	0	0
Min Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 14

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE															
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 15

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE															
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 16

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE															
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

6.4 Schedules

	Month												Days Of Week							Date														Day Plan															
	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1						
2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	2									
3																																							0										
4																																							0										
5																																							0										
6																																							0										
7																																							0										
8																																							0										

	Month												Days Of Week							Date														Day Plan															
	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
9																																							0										
10																																							0										
11																																							0										
12																																							0										
13																																							0										
14																																							0										
15																																							0										
16																																							0										

6.5 Day Plan 1

Event#	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour	0	5	6	9	14	19	21	0	0	0	0	0	0	0	0	0
Minute	0	0	30	30	0	0	0	0	0	0	0	0	0	0	0	0
Action	1	2	3	4	5	6	7	0	0	0	0	0	0	0	0	0

6.5 Day Plan 2

Event#	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour	0	5	6	9	14	19	21	0	0	0	0	0	0	0	0	0
Minute	0	0	30	30	0	0	0	0	0	0	0	0	0	0	0	0
Action	1	2	11	12	13	6	7	0	0	0	0	0	0	0	0	0

6.5 Day Plan 3

Event#	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

6.5 Day Plan 4

Event#	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

6.5 Day Plan 5

Event#	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

6.5 Day Plan 6

Event#	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

6.6 Action Parameters	1	2	3	4	5	6	7	8
Pattern	4	4	1	2	3	4	4	0
Auxiliary Function								
Special Functions 1-8								
Special Functions 9-16	14	15						
Detector Reset								
Detector VOS Log	No Action	No Action	No Action	No Action	No Action	No Action	No Action	No Action
Speed Trap Log	No Action	No Action	No Action	No Action	No Action	No Action	No Action	No Action
Cycle MOE Log	Start Logging	No Action						
High Res Log	No Action	No Action	No Action	No Action	No Action	No Action	No Action	No Action

6.6 Action Parameters	9	10	11	12	13	14	15	16
Pattern	0	0	11	12	13	0	0	0
Auxiliary Function								
Special Functions 1-8								
Special Functions 9-16								
Detector Reset								
Detector VOS Log	No Action							
Speed Trap Log	No Action							
Cycle MOE Log	No Action							
High Res Log	No Action							

6.6 Action Parameters	17	18	19	20	21	22	23	24
Pattern	0	0	0	0	0	0	0	0
Auxiliary Function								
Special Functions 1-8								
Special Functions 9-16								
Detector Reset								
Detector VOS Log	No Action							
Speed Trap Log	No Action							
Cycle MOE Log	No Action							
High Res Log	No Action							

6.6 Action Parameters	25	26	27	28	29	30	31	32
Pattern	0	0	0	0	0	0	0	0
Auxiliary Function								
Special Functions 1-8								
Special Functions 9-16								
Detector Reset								
Detector VOS Log	No Action							
Speed Trap Log	No Action							
Cycle MOE Log	No Action							
High Res Log	No Action							

2.3 Phase Sequence 1

Ring 1	2
Ring 2	6,7
Ring 3	
Ring 4	

2.3 Phase Sequence 9

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 2

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 10

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 3

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 11

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 4

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 12

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 5

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 13

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 6

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 14

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 7

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 15

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 8

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.3 Phase Sequence 16

Ring 1	
Ring 2	
Ring 3	
Ring 4	

2.1 Phase Parameters Set 1	1	2	3	4	5	6	7	8
Min. Green	0	30	0	0	0	30	10	0
Pass/10	0	3	0	0	0	3	2.5	0
Max. 1	0	50	0	0	0	50	25	0
Max. 2	0	100	0	0	0	100	35	0
Yel/10	0	4.8	0	0	0	4.8	3.4	0
Red/10	0	2.5	0	0	0	2.5	3.3	0
Walk	0	0	0	0	0	7	7	0
Pedestrian Clear	0	0	0	0	0	5	14	0
Add In/10	0	0	0	0	0	0	0	0
Max. Initial	0	0	0	0	0	0	0	0
TBR	0	0	0	0	0	0	0	0
CBR	0	0	0	0	0	0	0	0
TTR	0	0	0	0	0	0	0	0
Reduce/10	0	0	0	0	0	0	0	0
Min Gp/10	0	0	0	0	0	0	0	0
DM Limit	0	0	0	0	0	0	0	0
DM Stp/10	0	0	0	0	0	0	0	0
Red Rv/10	2	2	2	2	2	2	2	2
Cond Svc Min	0	0	0	0	0	0	0	0
Alt Min Green	0	0	0	0	0	0	0	0
Alt Ps/10	0	0	0	0	0	0	0	0
Alternate Walk	0	0	0	0	0	0	0	0
Alt Ped Clear	0	0	0	0	0	0	0	0
Advanced Walk	0	0	0	0	0	0	0	0
Delay Walk	0	0	0	0	0	0	0	0
St Dly/10	0	0	0	0	0	0	0	0
Green Clear	0	0	0	0	0	0	0	0

2.2 Phase Options Set 1	1	2	3	4	5	6	7	8
Phase Omit								
Ped Omit								
Min Recall								
Max Recall		X				X		
Soft Recall								
Ped Recall					X			
Pedestrian Recycle								
Cond Srv								
Detector Lock	X	X	X	X	X	X	X	X
Dual Entry								
Simul Gap	X	X	X	X	X	X	X	X
Guar Pass								
Add Init Calc								
Walk Rest								
Red Rest								
Flash Entry								
Flash Exit								
CNA-1								
CNA-2								
No Backup								
Max Walk								
Max Extension								
Sequential Timing								
No Min Yellow								
FDW Ped Recycle								

2.1 Phase Parameters Set 2	1	2	3	4	5	6	7	8
----------------------------	---	---	---	---	---	---	---	---

Min. Green	4	15	4	15	4	15	4	15
Pass/10	2	5	2	5	2	5	2	5
Max. 1	15	45	15	45	15	45	15	45
Max. 2	15	45	15	45	15	45	15	45
Yel/10	3	4	3	4	3	4	3	4
Red/10	1	2	1	2	1	2	1	2
Walk	0	7	0	7	0	7	0	7
Pedestrian Clear	0	15	0	15	0	15	0	15
Add In/10	0	0	0	0	0	0	0	0
Max. Initial	0	0	0	0	0	0	0	0
TBR	0	0	0	0	0	0	0	0
CBR	0	0	0	0	0	0	0	0
TTR	0	0	0	0	0	0	0	0
Reduce/10	0	0	0	0	0	0	0	0
Min Gp/10	0	0	0	0	0	0	0	0
DM Limit	0	0	0	0	0	0	0	0
DM Stp/10	0	0	0	0	0	0	0	0
Red Rv/10	2	2	2	2	2	2	2	2
Cond Svc Min	0	0	0	0	0	0	0	0
Alt Min Green	0	0	0	0	0	0	0	0
Alt Ps/10	0	0	0	0	0	0	0	0
Alternate Walk	0	0	0	0	0	0	0	0
Alt Ped Clear	0	0	0	0	0	0	0	0
Advanced Walk	0	0	0	0	0	0	0	0
Delay Walk	0	0	0	0	0	0	0	0
St Dly/10	0	0	0	0	0	0	0	0
Green Clear	0	0	0	0	0	0	0	0

2.2 Phase Options Set 2

	1	2	3	4	5	6	7	8
Phase Omit								
Ped Omit								
Min Recall		X			X			
Max Recall								
Soft Recall								
Ped Recall								
Pedestrian Recycle								
Cond Srv								
Detector Lock	X	X	X	X	X	X	X	X
Dual Entry								
Simul Gap	X	X	X	X	X	X	X	X
Guar Pass								
Add Init Calc								
Walk Rest								
Red Rest								
Flash Entry								
Flash Exit								
CNA-1								
CNA-2								
No Backup								
Max Walk								
Max Extension								
Sequential Timing								
No Min Yellow								
FDW Ped Recycle								

2.1 Phase Parameters Set 3

	1	2	3	4	5	6	7	8
Min. Green	4	15	4	15	4	15	4	15

Pass/10	2	5	2	5	2	5	2	5
Max. 1	15	45	15	45	15	45	15	45
Max. 2	15	45	15	45	15	45	15	45
Yel/10	3	4	3	4	3	4	3	4
Red/10	1	2	1	2	1	2	1	2
Walk	0	7	0	7	0	7	0	7
Pedestrian Clear	0	15	0	15	0	15	0	15
Add In/10	0	0	0	0	0	0	0	0
Max. Initial	0	0	0	0	0	0	0	0
TBR	0	0	0	0	0	0	0	0
CBR	0	0	0	0	0	0	0	0
TTR	0	0	0	0	0	0	0	0
Reduce/10	0	0	0	0	0	0	0	0
Min Gp/10	0	0	0	0	0	0	0	0
DM Limit	0	0	0	0	0	0	0	0
DM Stp/10	0	0	0	0	0	0	0	0
Red Rv/10	2	2	2	2	2	2	2	2
Cond Svc Min	0	0	0	0	0	0	0	0
Alt Min Green	0	0	0	0	0	0	0	0
Alt Ps/10	0	0	0	0	0	0	0	0
Alternate Walk	0	0	0	0	0	0	0	0
Alt Ped Clear	0	0	0	0	0	0	0	0
Advanced Walk	0	0	0	0	0	0	0	0
Delay Walk	0	0	0	0	0	0	0	0
St Dly/10	0	0	0	0	0	0	0	0
Green Clear	0	0	0	0	0	0	0	0

2.2 Phase Options Set 3

	1	2	3	4	5	6	7	8
Phase Omit								
Ped Omit								
Min Recall		X				X		
Max Recall								
Soft Recall								
Ped Recall								
Pedestrian Recycle								
Cond Srv								
Detector Lock	X	X	X	X	X	X	X	X
Dual Entry								
Simul Gap	X	X	X	X	X	X	X	X
Guar Pass								
Add Init Calc								
Walk Rest								
Red Rest								
Flash Entry								
Flash Exit								
CNA-1								
CNA-2								
No Backup								
Max Walk								
Max Extension								
Sequential Timing								
No Min Yellow								
FDW Ped Recycle								

5.2 Patterns	1	2	3	4	5	6	7	8
Cycle Time	140	120	140	90	0	0	0	0
Offset Time	41	28	8	21	0	0	0	0
Split	1	2	3	4	1	1	1	1
Sequence	1	1	1	1	1	1	1	1
Correction Mode								
Maximum Mode								
Force Mode								
Perm Strategy								
Omit Strategy								
Early Return	Default							
Texas Diamond								
Max2 Phases								
Phase Timing Set	1	1	1	1	1	1	1	1
Phase Option Set	1	1	1	1	1	1	1	1
Overlap Set	1	1	1	1	1	1	1	1
Veh. Det. Set	1	1	1	1	1	1	1	1
Ped. Det. Set	1	1	1	1	1	1	1	1
Veh. Det. Diag Set	1	1	1	1	1	1	1	1
Ped. Det. Diag Set	1	1	1	1	1	1	1	1
Priority Set	1	1	1	1	1	1	1	1
Ped Ovlp Set	1	1	1	1	1	1	1	1
Det. Reset								

5.2 Patterns	9	10	11	12	13	14	15	16
Cycle Time	0	0	130	120	130	0	0	0
Offset Time	0	0	46	5	17	0	0	0
Split	1	1	11	12	13	1	1	1
Sequence	1	1	1	1	1	1	1	1
Correction Mode								
Maximum Mode								
Force Mode								
Perm Strategy								
Omit Strategy								
Early Return	Default							
Texas Diamond								
Max2 Phases								
Phase Timing Set	1	1	1	1	1	1	1	1
Phase Option Set	1	1	1	1	1	1	1	1
Overlap Set	1	1	1	1	1	1	1	1
Veh. Det. Set	1	1	1	1	1	1	1	1
Ped. Det. Set	1	1	1	1	1	1	1	1
Veh. Det. Diag Set	1	1	1	1	1	1	1	1
Ped. Det. Diag Set	1	1	1	1	1	1	1	1
Priority Set	1	1	1	1	1	1	1	1
Ped Ovlp Set	1	1	1	1	1	1	1	1
Det. Reset								

5.3 Split Table 1

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	105	0	0	0	105	35	0	0	0	0	0	0	0	0	0
Mode	NONE	NACT	NONE	NONE	NONE	NACT	NONE									
Coord. Phase		X				X										
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 2

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	85	0	0	0	85	35	0	0	0	0	0	0	0	0	0
Mode	NONE	NACT	NONE	NONE	NONE	NACT	NONE									
Coord. Phase		X				X										
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 3

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	112	0	0	0	112	28	0	0	0	0	0	0	0	0	0
Mode	NONE	NACT	NONE	NONE	NONE	NACT	NONE									
Coord. Phase		X				X										
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 4

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	63	27	0	0	63	27	0	0	0	0	0	0	0	0	0
Mode	NONE															
Coord. Phase		X				X										
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 5

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE															
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 6

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE															
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 7

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE															
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 8

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE															
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 9

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE															
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 10

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE															
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 11

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	95	0	0	0	95	35	0	0	0	0	0	0	0	0	0
Mode	NONE	NACT	NONE	NONE	NONE	NACT	NONE									
Coord. Phase		X				X										
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 12

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	85	0	0	0	85	35	0	0	0	0	0	0	0	0	0
Mode	NONE	NACT	NONE	NONE	NONE	NACT	NONE									
Coord. Phase		X				X										
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 13

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	98	0	0	0	98	32	0	0	0	0	0	0	0	0	0
Mode	NONE	NACT	NONE	NONE	NONE	NACT	NONE									
Coord. Phase	X					X										
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 14

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE															
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 15

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE															
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

5.3 Split Table 16

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Time (sec)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mode	NONE															
Coord. Phase																
Manual Permit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Manual Omit	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Min Split	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

6.4 Schedules

	Month												Days Of Week							Date														Day Plan															
	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
1	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	1						
2	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	2									
3																																						0											
4																																						0											
5																																						0											
6																																						0											
7																																						0											
8																																						0											

	Month												Days Of Week							Date														Day Plan															
	J	F	M	A	M	J	J	A	S	O	N	D	S	M	T	W	T	F	S	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
9																																						0											
10																																						0											
11																																						0											
12																																						0											
13																																						0											
14																																						0											
15																																						0											
16																																						0											

6.5 Day Plan 1

Event#	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour	0	6	9	14	19	0	0	0	0	0	0	0	0	0	0	0
Minute	0	30	30	0	0	0	0	0	0	0	0	0	0	0	0	0
Action	4	1	2	3	4	0	0	0	0	0	0	0	0	0	0	0

6.5 Day Plan 2

Event#	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour	0	6	9	14	19	0	0	0	0	0	0	0	0	0	0	0
Minute	0	30	30	0	0	0	0	0	0	0	0	0	0	0	0	0
Action	4	11	12	13	4	0	0	0	0	0	0	0	0	0	0	0

6.5 Day Plan 3

Event#	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

6.5 Day Plan 4

Event#	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

6.5 Day Plan 5

Event#	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

6.5 Day Plan 6

Event#	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Hour	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Minute	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Action	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

6.6 Action Parameters	1	2	3	4	5	6	7	8
Pattern	1	2	3	4	0	0	0	0
Auxiliary Function								
Special Functions 1-8								
Special Functions 9-16								
Detector Reset								
Detector VOS Log	No Action	No Action	No Action	No Action	No Action	No Action	No Action	No Action
Speed Trap Log	No Action	No Action	No Action	No Action	No Action	No Action	No Action	No Action
Cycle MOE Log	Start Logging	No Action						
High Res Log	No Action	No Action	No Action	No Action	No Action	No Action	No Action	No Action

6.6 Action Parameters	9	10	11	12	13	14	15	16
Pattern	0	0	11	12	13	0	0	0
Auxiliary Function								
Special Functions 1-8								
Special Functions 9-16								
Detector Reset								
Detector VOS Log	No Action							
Speed Trap Log	No Action							
Cycle MOE Log	No Action							
High Res Log	No Action							

6.6 Action Parameters	17	18	19	20	21	22	23	24
Pattern	0	0	0	0	0	0	0	0
Auxiliary Function								
Special Functions 1-8								
Special Functions 9-16								
Detector Reset								
Detector VOS Log	No Action							
Speed Trap Log	No Action							
Cycle MOE Log	No Action							
High Res Log	No Action							

6.6 Action Parameters	25	26	27	28	29	30	31	32
Pattern	0	0	0	0	0	0	0	0
Auxiliary Function								
Special Functions 1-8								
Special Functions 9-16								
Detector Reset								
Detector VOS Log	No Action							
Speed Trap Log	No Action							
Cycle MOE Log	No Action							
High Res Log	No Action							

Appendix H

SYNCHRO Output

**Existing (2018) AM & PM Peak Hour
SYNCHRO Output**

Timings

101: US 1 & College Road (West)



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↑	↑	↑	↑↑	↑↑	↑
Traffic Volume (vph)	49	247	220	991	1963	43
Future Volume (vph)	49	247	220	991	1963	43
Turn Type	Perm	Over	pm+pt	NA	NA	Perm
Protected Phases				1	1	6
Permitted Phases					6	2
Detector Phase				8	1	1
Switch Phase					6	2
Minimum Initial (s)	10.0	5.0	5.0	20.0	20.0	20.0
Minimum Split (s)	20.0	9.5	9.5	25.0	25.0	25.0
Total Split (s)	20.0	20.0	20.0	90.0	70.0	70.0
Total Split (%)	18.2%	18.2%	18.2%	81.8%	63.6%	63.6%
Yellow Time (s)	4.0	3.5	3.5	4.0	4.0	4.0
All-Red Time (s)	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	4.5	4.5	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	Lag
Lead-Lag Optimize?		Yes	Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effect Green (s)	10.3	13.6	92.4	92.9	73.8	73.8
Actuated g/C Ratio	0.09	0.12	0.84	0.84	0.67	0.67
v/c Ratio	0.32	0.70	0.81	0.35	0.87	0.04
Control Delay	52.0	22.3	48.6	2.9	22.1	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.0	22.3	48.6	2.9	22.1	4.3
LOS	D	C	D	A	C	A
Approach Delay	27.3			11.2	21.7	
Approach LOS	C			B	C	

Intersection Summary

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 93 (85%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.87

Intersection Signal Delay: 18.6

Intersection LOS: B

Intersection Capacity Utilization 87.7%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 101: US 1 & College Road (West)



Queues

101: US 1 & College Road (West)



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	52	260	232	1043	2066	45
v/c Ratio	0.32	0.70	0.81	0.35	0.87	0.04
Control Delay	52.0	22.3	48.6	2.9	22.1	4.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.0	22.3	48.6	2.9	22.1	4.3
Queue Length 50th (ft)	35	38	108	81	613	3
Queue Length 95th (ft)	74	121	191	110	#930	18
Internal Link Dist (ft)	210			293	350	
Turn Bay Length (ft)			100			215
Base Capacity (vph)	225	406	330	2990	2375	1073
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.23	0.64	0.70	0.35	0.87	0.04

Intersection Summary

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

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

101: US 1 & College Road (West)



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↑ ↗	↗ ↘	↖ ↗	↑ ↑	↑ ↑	↗
Traffic Volume (vph)	49	247	220	991	1963	43
Future Volume (vph)	49	247	220	991	1963	43
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	4.5	4.5	5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.05	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	97	3539	3539	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	52	260	232	1043	2066	45
RTOR Reduction (vph)	0	176	0	0	0	11
Lane Group Flow (vph)	52	84	232	1043	2066	34
Turn Type	Perm	Over	pm+pt	NA	NA	Perm
Protected Phases		1	1	6	2	
Permitted Phases	8		6		2	
Actuated Green, G (s)	8.3	13.6	90.7	90.7	72.6	72.6
Effective Green, g (s)	8.3	13.6	90.7	90.7	72.6	72.6
Actuated g/C Ratio	0.08	0.12	0.82	0.82	0.66	0.66
Clearance Time (s)	6.0	4.5	4.5	5.0	5.0	5.0
Vehicle Extension (s)	2.5	2.0	2.0	3.0	3.0	3.0
Lane Grp Cap (vph)	133	195	286	2918	2335	1044
v/s Ratio Prot		0.05	c0.10	0.29	c0.58	
v/s Ratio Perm	c0.03		0.57		0.02	
v/c Ratio	0.39	0.43	0.81	0.36	0.88	0.03
Uniform Delay, d1	48.4	44.6	36.4	2.4	15.3	6.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.4	0.6	15.1	0.3	5.4	0.1
Delay (s)	49.8	45.2	51.5	2.7	20.6	6.6
Level of Service	D	D	D	A	C	A
Approach Delay (s)	45.9			11.6	20.3	
Approach LOS	D			B	C	
Intersection Summary						
HCM 2000 Control Delay			19.5	HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio			0.83			
Actuated Cycle Length (s)			110.0	Sum of lost time (s)		15.5
Intersection Capacity Utilization			87.7%	ICU Level of Service		E
Analysis Period (min)			15			
c Critical Lane Group						

HCM 2010 Signalized Intersection Summary
101: US 1 & College Road (West)

HCM 2010 Research does not support Non-NEMA phasing.

Timings

102: US 1 & Cross St



Lane Group	WBL	NBT	NBR	SBL	SBT
Lane Configurations	↑ ↗	↑ ↗	↗ ↘	↗ ↘	↑ ↗
Traffic Volume (vph)	287	960	116	13	1683
Future Volume (vph)	287	960	116	13	1683
Turn Type	Prot	NA	Perm	Perm	NA
Protected Phases	4	2			6
Permitted Phases			2	6	
Detector Phase	4	2	2	6	6
Switch Phase					
Minimum Initial (s)	10.0	20.0	20.0	20.0	20.0
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0
Total Split (s)	31.0	79.0	79.0	79.0	79.0
Total Split (%)	28.2%	71.8%	71.8%	71.8%	71.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	23.0	77.0	77.0	77.0	77.0
Actuated g/C Ratio	0.21	0.70	0.70	0.70	0.70
v/c Ratio	0.86	0.41	0.11	0.04	0.72
Control Delay	63.5	7.9	1.6	6.4	12.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	63.5	7.9	1.6	6.4	12.6
LOS	E	A	A	A	B
Approach Delay	63.5	7.2			12.5
Approach LOS	E	A			B

Intersection Summary

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 97 (88%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.86

Intersection Signal Delay: 15.7

Intersection LOS: B

Intersection Capacity Utilization 71.7%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 102: US 1 & Cross St



Queues

102: US 1 & Cross St



Lane Group	WBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	318	1011	122	14	1772
v/c Ratio	0.86	0.41	0.11	0.04	0.72
Control Delay	63.5	7.9	1.6	6.4	12.6
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	63.5	7.9	1.6	6.4	12.6
Queue Length 50th (ft)	212	148	1	3	374
Queue Length 95th (ft)	#334	194	19	10	477
Internal Link Dist (ft)	369	335			312
Turn Bay Length (ft)			100	50	
Base Capacity (vph)	418	2476	1142	327	2476
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.76	0.41	0.11	0.04	0.72

Intersection Summary

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

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

102: US 1 & Cross St



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	WBL	WBR	NBT	NBR	SBL	SBT
Traffic Volume (vph)	287	15	960	116	13	1683
Future Volume (vph)	287	15	960	116	13	1683
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0	5.0	5.0	5.0
Lane Util. Factor	1.00		0.95	1.00	1.00	0.95
Frt	0.99		1.00	0.85	1.00	1.00
Flt Protected	0.95		1.00	1.00	0.95	1.00
Satd. Flow (prot)	1766		3539	1583	1770	3539
Flt Permitted	0.95		1.00	1.00	0.25	1.00
Satd. Flow (perm)	1766		3539	1583	467	3539
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	302	16	1011	122	14	1772
RTOR Reduction (vph)	2	0	0	35	0	0
Lane Group Flow (vph)	316	0	1011	88	14	1772
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	4		2			6
Permitted Phases				2	6	
Actuated Green, G (s)	23.0		77.0	77.0	77.0	77.0
Effective Green, g (s)	23.0		77.0	77.0	77.0	77.0
Actuated g/C Ratio	0.21		0.70	0.70	0.70	0.70
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	2.5		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	369		2477	1108	326	2477
v/s Ratio Prot	c0.18		0.29			c0.50
v/s Ratio Perm				0.06	0.03	
v/c Ratio	0.86		0.41	0.08	0.04	0.72
Uniform Delay, d1	41.9		6.9	5.2	5.1	9.9
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	17.3		0.5	0.1	0.2	1.8
Delay (s)	59.3		7.4	5.4	5.4	11.7
Level of Service	E		A	A	A	B
Approach Delay (s)	59.3		7.2			11.7
Approach LOS	E		A			B
Intersection Summary						
HCM 2000 Control Delay		14.8		HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio		0.75				
Actuated Cycle Length (s)		110.0		Sum of lost time (s)		10.0
Intersection Capacity Utilization		71.7%		ICU Level of Service		C
Analysis Period (min)		15				

c Critical Lane Group

HCM 2010 Signalized Intersection Summary

102: US 1 & Cross St

HCM 2010 Computation does not support turning movement with Shared and Exclusive lanes.

Timings
103: US 1 & MacDonald Avenue



Lane Group	WBL	NBT	NBR	SBT
Lane Configurations	↑↑	↑↑	↑	↑↑
Traffic Volume (vph)	532	608	310	1249
Future Volume (vph)	532	608	310	1249
Turn Type	Prot	NA	Perm	NA
Protected Phases	1	2		2
Permitted Phases			2	
Detector Phase	1	2	2	2
Switch Phase				
Minimum Initial (s)	10.0	20.0	20.0	20.0
Minimum Split (s)	25.0	25.0	25.0	25.0
Total Split (s)	28.0	82.0	82.0	82.0
Total Split (%)	25.5%	74.5%	74.5%	74.5%
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	C-Max
Act Effect Green (s)	21.3	78.7	78.7	78.7
Actuated g/C Ratio	0.19	0.72	0.72	0.72
v/c Ratio	0.84	0.25	0.27	0.52
Control Delay	55.2	5.9	1.2	8.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	55.2	5.9	1.2	8.2
LOS	E	A	A	A
Approach Delay	55.2	4.3		8.2
Approach LOS	E	A		A

Intersection Summary

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 0 (0%), Referenced to phase 2:NBSB, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.84

Intersection Signal Delay: 16.1

Intersection LOS: B

Intersection Capacity Utilization 58.0%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 103: US 1 & MacDonald Avenue



Queues

103: US 1 & MacDonald Avenue



Lane Group	WBL	NBT	NBR	SBT
Lane Group Flow (vph)	560	640	326	1315
v/c Ratio	0.84	0.25	0.27	0.52
Control Delay	55.2	5.9	1.2	8.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	55.2	5.9	1.2	8.2
Queue Length 50th (ft)	194	75	0	203
Queue Length 95th (ft)	257	100	24	254
Internal Link Dist (ft)	385	403		417
Turn Bay Length (ft)				
Base Capacity (vph)	717	2532	1225	2532
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.78	0.25	0.27	0.52

Intersection Summary

HCM Signalized Intersection Capacity Analysis

103: US 1 & MacDonald Avenue



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑↑		↑↑	↑		↑↑
Traffic Volume (vph)	532	0	608	310	0	1249
Future Volume (vph)	532	0	608	310	0	1249
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0	5.0		5.0
Lane Util. Factor	0.97		0.95	1.00		0.95
Frt	1.00		1.00	0.85		1.00
Flt Protected	0.95		1.00	1.00		1.00
Satd. Flow (prot)	3433		3539	1583		3539
Flt Permitted	0.95		1.00	1.00		1.00
Satd. Flow (perm)	3433		3539	1583		3539
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	560	0	640	326	0	1315
RTOR Reduction (vph)	0	0	0	93	0	0
Lane Group Flow (vph)	560	0	640	233	0	1315
Turn Type	Prot		NA	Perm		NA
Protected Phases	1		2			2
Permitted Phases			2			
Actuated Green, G (s)	21.3		78.7	78.7		78.7
Effective Green, g (s)	21.3		78.7	78.7		78.7
Actuated g/C Ratio	0.19		0.72	0.72		0.72
Clearance Time (s)	5.0		5.0	5.0		5.0
Vehicle Extension (s)	2.5		3.0	3.0		3.0
Lane Grp Cap (vph)	664		2531	1132		2531
v/s Ratio Prot	c0.16		0.18			c0.37
v/s Ratio Perm			0.15			
v/c Ratio	0.84		0.25	0.21		0.52
Uniform Delay, d1	42.7		5.4	5.2		7.1
Progression Factor	1.00		1.00	1.00		1.00
Incremental Delay, d2	9.4		0.2	0.4		0.8
Delay (s)	52.2		5.7	5.6		7.9
Level of Service	D		A	A		A
Approach Delay (s)	52.2		5.7			7.9
Approach LOS	D		A			A
Intersection Summary						
HCM 2000 Control Delay		15.8		HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio		0.59				
Actuated Cycle Length (s)		110.0		Sum of lost time (s)		10.0
Intersection Capacity Utilization		58.0%		ICU Level of Service		B
Analysis Period (min)		15				

c Critical Lane Group

HCM 2010 Signalized Intersection Summary
103: US 1 & MacDonald Avenue

HCM 2010 Research does not support Non-NEMA phasing.

HCM Unsignalized Intersection Capacity Analysis

104: US 1 & 3rd Street



Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations	↑	↑	↑↑	↑	↑	↑↑		
Traffic Volume (veh/h)	17	73	631	16	220	1302		
Future Volume (Veh/h)	17	73	631	16	220	1302		
Sign Control	Stop		Free			Free		
Grade	0%		0%			0%		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90		
Hourly flow rate (vph)	19	81	701	18	244	1447		
Pedestrians								
Lane Width (ft)								
Walking Speed (ft/s)								
Percent Blockage								
Right turn flare (veh)								
Median type			None			None		
Median storage veh)								
Upstream signal (ft)								
pX, platoon unblocked								
vC, conflicting volume	1912	350			719			
vC1, stage 1 conf vol								
vC2, stage 2 conf vol								
vCu, unblocked vol	1912	350			719			
tC, single (s)	*5.0	*4.5			4.1			
tC, 2 stage (s)								
tF (s)	3.5	3.3			2.2			
p0 queue free %	83	90			72			
cM capacity (veh/h)	115	819			878			
Direction, Lane #	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	19	81	350	350	18	244	724	724
Volume Left	19	0	0	0	0	244	0	0
Volume Right	0	81	0	0	18	0	0	0
cSH	115	819	1700	1700	1700	878	1700	1700
Volume to Capacity	0.17	0.10	0.21	0.21	0.01	0.28	0.43	0.43
Queue Length 95th (ft)	14	8	0	0	0	28	0	0
Control Delay (s)	42.5	9.9	0.0	0.0	0.0	10.7	0.0	0.0
Lane LOS	E	A				B		
Approach Delay (s)	16.1		0.0			1.5		
Approach LOS	C							
Intersection Summary								
Average Delay			1.7					
Intersection Capacity Utilization		46.0%		ICU Level of Service			A	
Analysis Period (min)			15					
* User Entered Value								

HCM Unsignalized Intersection Capacity Analysis

105: US 1 & College Road



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations	↑	↑	↑	↑↑	↑↑	↑		
Traffic Volume (veh/h)	12	107	183	666	1372	160		
Future Volume (Veh/h)	12	107	183	666	1372	160		
Sign Control	Stop			Free	Free			
Grade	0%			0%	0%			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Hourly flow rate (vph)	13	115	197	716	1475	172		
Pedestrians								
Lane Width (ft)								
Walking Speed (ft/s)								
Percent Blockage								
Right turn flare (veh)								
Median type				Raised	Raised			
Median storage veh				1	1			
Upstream signal (ft)								
pX, platoon unblocked								
vC, conflicting volume	2227	738	1647					
vC1, stage 1 conf vol	1475							
vC2, stage 2 conf vol	752							
vCu, unblocked vol	2227	738	1647					
tC, single (s)	*5.0	*4.5	4.1					
tC, 2 stage (s)	4.0							
tF (s)	3.5	3.3	2.2					
p0 queue free %	93	81	49					
cM capacity (veh/h)	180	594	389					
Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	13	115	197	358	358	738	738	172
Volume Left	13	0	197	0	0	0	0	0
Volume Right	0	115	0	0	0	0	0	172
cSH	180	594	389	1700	1700	1700	1700	1700
Volume to Capacity	0.07	0.19	0.51	0.21	0.21	0.43	0.43	0.10
Queue Length 95th (ft)	6	18	69	0	0	0	0	0
Control Delay (s)	26.6	12.5	23.4	0.0	0.0	0.0	0.0	0.0
Lane LOS	D	B	C					
Approach Delay (s)	13.9		5.1			0.0		
Approach LOS	B							
Intersection Summary								
Average Delay			2.4					
Intersection Capacity Utilization			61.4%		ICU Level of Service			B
Analysis Period (min)			15					

* User Entered Value

Timings

101: US 1 & College Road (West)



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↑	↑	↑	↑↑	↑↑	↑
Traffic Volume (vph)	93	155	153	2065	1538	36
Future Volume (vph)	93	155	153	2065	1538	36
Turn Type	Perm	Over	pm+pt	NA	NA	Perm
Protected Phases		1	1	6	2	
Permitted Phases	8			6		2
Detector Phase	8	1	1	6	2	2
Switch Phase						
Minimum Initial (s)	10.0	5.0	5.0	20.0	20.0	20.0
Minimum Split (s)	20.0	9.5	9.5	25.0	25.0	25.0
Total Split (s)	23.0	20.0	20.0	77.0	57.0	57.0
Total Split (%)	23.0%	20.0%	20.0%	77.0%	57.0%	57.0%
Yellow Time (s)	4.0	3.5	3.5	4.0	4.0	4.0
All-Red Time (s)	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	4.5	4.5	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	Lag
Lead-Lag Optimize?		Yes	Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effect Green (s)	11.4	8.7	81.3	81.8	67.6	67.6
Actuated g/C Ratio	0.11	0.09	0.81	0.82	0.68	0.68
v/c Ratio	0.49	0.57	0.59	0.75	0.68	0.04
Control Delay	49.5	14.8	17.7	8.3	13.7	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.5	14.8	17.7	8.3	13.7	3.8
LOS	D	B	B	A	B	A
Approach Delay	27.8			9.0	13.5	
Approach LOS	C			A	B	

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 92 (92%), Referenced to phase 2:SBT and 6:NBL, Start of Yellow

Natural Cycle: 70

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.75

Intersection Signal Delay: 11.9

Intersection LOS: B

Intersection Capacity Utilization 74.6%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 101: US 1 & College Road (West)



Queues

101: US 1 & College Road (West)



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	98	163	161	2174	1619	38
v/c Ratio	0.49	0.57	0.59	0.75	0.68	0.04
Control Delay	49.5	14.8	17.7	8.3	13.7	3.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	49.5	14.8	17.7	8.3	13.7	3.8
Queue Length 50th (ft)	60	0	18	318	304	1
Queue Length 95th (ft)	108	57	85	516	519	16
Internal Link Dist (ft)	210			293	350	
Turn Bay Length (ft)			100			215
Base Capacity (vph)	300	383	383	2894	2391	1080
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.33	0.43	0.42	0.75	0.68	0.04

Intersection Summary

HCM Signalized Intersection Capacity Analysis

101: US 1 & College Road (West)



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↑	↑	↑	↑↑	↑↑	↑
Traffic Volume (vph)	93	155	153	2065	1538	36
Future Volume (vph)	93	155	153	2065	1538	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	4.5	4.5	5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.09	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	166	3539	3539	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	98	163	161	2174	1619	38
RTOR Reduction (vph)	0	149	0	0	0	11
Lane Group Flow (vph)	98	14	161	2174	1619	27
Turn Type	Perm	Over	pm+pt	NA	NA	Perm
Protected Phases		1	1	6	2	
Permitted Phases	8		6		2	
Actuated Green, G (s)	9.4	8.7	79.6	79.6	66.4	66.4
Effective Green, g (s)	9.4	8.7	79.6	79.6	66.4	66.4
Actuated g/C Ratio	0.09	0.09	0.80	0.80	0.66	0.66
Clearance Time (s)	6.0	4.5	4.5	5.0	5.0	5.0
Vehicle Extension (s)	2.5	2.0	2.0	3.0	3.0	3.0
Lane Grp Cap (vph)	166	137	271	2817	2349	1051
v/s Ratio Prot		0.01	0.05	c0.61	0.46	
v/s Ratio Perm	c0.06		0.42		0.02	
v/c Ratio	0.59	0.10	0.59	0.77	0.69	0.03
Uniform Delay, d1	43.5	42.1	12.4	5.4	10.4	5.7
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	4.6	0.1	2.3	2.1	1.7	0.0
Delay (s)	48.1	42.2	14.7	7.5	12.1	5.8
Level of Service	D	D	B	A	B	A
Approach Delay (s)	44.4			8.0	11.9	
Approach LOS	D			A	B	
Intersection Summary						
HCM 2000 Control Delay		11.8		HCM 2000 Level of Service	B	
HCM 2000 Volume to Capacity ratio		0.79				
Actuated Cycle Length (s)		100.0		Sum of lost time (s)	15.5	
Intersection Capacity Utilization		74.6%		ICU Level of Service	D	
Analysis Period (min)		15				

c Critical Lane Group

HCM 2010 Signalized Intersection Summary
101: US 1 & College Road (West)

HCM 2010 Research does not support Non-NEMA phasing.

Timings

102: US 1 & Cross St



Lane Group	WBL	NBT	NBR	SBL	SBT
Lane Configurations	↑ ↗	↑ ↗	↗ ↘	↗ ↘	↑ ↗
Traffic Volume (vph)	251	1716	401	22	1321
Future Volume (vph)	251	1716	401	22	1321
Turn Type	Prot	NA	Perm	Perm	NA
Protected Phases	4	2			6
Permitted Phases			2	6	
Detector Phase	4	2	2	6	6
Switch Phase					
Minimum Initial (s)	10.0	20.0	20.0	20.0	20.0
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0
Total Split (s)	27.0	73.0	73.0	73.0	73.0
Total Split (%)	27.0%	73.0%	73.0%	73.0%	73.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	20.0	70.0	70.0	70.0	70.0
Actuated g/C Ratio	0.20	0.70	0.70	0.70	0.70
v/c Ratio	0.85	0.74	0.36	0.24	0.57
Control Delay	59.8	12.0	3.4	14.0	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	59.8	12.0	3.4	14.0	8.9
LOS	E	B	A	B	A
Approach Delay	59.8	10.4			9.0
Approach LOS	E	B			A

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 94 (94%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow

Natural Cycle: 65

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.85

Intersection Signal Delay: 13.6

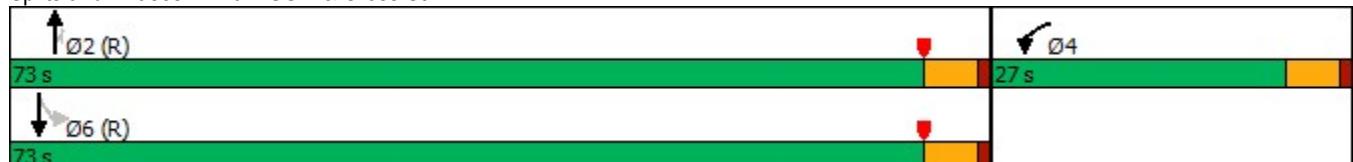
Intersection LOS: B

Intersection Capacity Utilization 71.7%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 102: US 1 & Cross St



Queues

102: US 1 & Cross St



Lane Group	WBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	302	1826	427	23	1405
v/c Ratio	0.85	0.74	0.36	0.24	0.57
Control Delay	59.8	12.0	3.4	14.0	8.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	59.8	12.0	3.4	14.0	8.9
Queue Length 50th (ft)	179	359	36	5	221
Queue Length 95th (ft)	#307	448	74	22	277
Internal Link Dist (ft)	369	335			312
Turn Bay Length (ft)			100	50	
Base Capacity (vph)	391	2478	1183	94	2478
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.77	0.74	0.36	0.24	0.57

Intersection Summary

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

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

102: US 1 & Cross St



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	251	33	1716	401	22	1321
Future Volume (vph)	251	33	1716	401	22	1321
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0	5.0	5.0	5.0
Lane Util. Factor	1.00		0.95	1.00	1.00	0.95
Frt	0.98		1.00	0.85	1.00	1.00
Flt Protected	0.96		1.00	1.00	0.95	1.00
Satd. Flow (prot)	1756		3539	1583	1770	3539
Flt Permitted	0.96		1.00	1.00	0.07	1.00
Satd. Flow (perm)	1756		3539	1583	134	3539
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	267	35	1826	427	23	1405
RTOR Reduction (vph)	5	0	0	75	0	0
Lane Group Flow (vph)	297	0	1826	352	23	1405
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	4		2			6
Permitted Phases				2	6	
Actuated Green, G (s)	20.0		70.0	70.0	70.0	70.0
Effective Green, g (s)	20.0		70.0	70.0	70.0	70.0
Actuated g/C Ratio	0.20		0.70	0.70	0.70	0.70
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	2.5		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	351		2477	1108	93	2477
v/s Ratio Prot	c0.17		c0.52			0.40
v/s Ratio Perm				0.22	0.17	
v/c Ratio	0.85		0.74	0.32	0.25	0.57
Uniform Delay, d1	38.5		9.3	5.8	5.4	7.5
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	16.7		2.0	0.8	6.2	0.9
Delay (s)	55.2		11.3	6.5	11.7	8.4
Level of Service	E		B	A	B	A
Approach Delay (s)	55.2		10.4			8.5
Approach LOS	E		B			A
Intersection Summary						
HCM 2000 Control Delay		13.1		HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio		0.76				
Actuated Cycle Length (s)		100.0		Sum of lost time (s)		10.0
Intersection Capacity Utilization		71.7%		ICU Level of Service		C
Analysis Period (min)		15				

c Critical Lane Group

HCM 2010 Signalized Intersection Summary

102: US 1 & Cross St

HCM 2010 Computation does not support turning movement with Shared and Exclusive lanes.

Timings
103: US 1 & MacDonald Avenue



Lane Group	WBL	NBT	NBR	SBT
Lane Configurations	↖ ↗	↑ ↑	↗ ↗	↑ ↑
Traffic Volume (vph)	442	1221	484	921
Future Volume (vph)	442	1221	484	921
Turn Type	Prot	NA	Perm	NA
Protected Phases	1	2		2
Permitted Phases			2	
Detector Phase	1	2	2	2
Switch Phase				
Minimum Initial (s)	10.0	20.0	20.0	20.0
Minimum Split (s)	25.0	25.0	25.0	25.0
Total Split (s)	27.0	73.0	73.0	73.0
Total Split (%)	27.0%	73.0%	73.0%	73.0%
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	C-Max
Act Effect Green (s)	17.9	72.1	72.1	72.1
Actuated g/C Ratio	0.18	0.72	0.72	0.72
v/c Ratio	0.74	0.49	0.39	0.37
Control Delay	46.5	7.2	1.4	6.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	46.5	7.2	1.4	6.1
LOS	D	A	A	A
Approach Delay	46.5	5.6		6.1
Approach LOS	D	A		A

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBSB, Start of Yellow

Natural Cycle: 55

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.74

Intersection Signal Delay: 11.6

Intersection LOS: B

Intersection Capacity Utilization 54.7%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 103: US 1 & MacDonald Avenue



Queues

103: US 1 & MacDonald Avenue



Lane Group	WBL	NBT	NBR	SBT
Lane Group Flow (vph)	456	1259	499	949
v/c Ratio	0.74	0.49	0.39	0.37
Control Delay	46.5	7.2	1.4	6.1
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	46.5	7.2	1.4	6.1
Queue Length 50th (ft)	143	157	0	104
Queue Length 95th (ft)	187	233	30	157
Internal Link Dist (ft)	385	403		417
Turn Bay Length (ft)				
Base Capacity (vph)	755	2553	1281	2553
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.60	0.49	0.39	0.37

Intersection Summary

HCM Signalized Intersection Capacity Analysis

103: US 1 & MacDonald Avenue



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑↑		↑↑	↑		↑↑
Traffic Volume (vph)	442	0	1221	484	0	921
Future Volume (vph)	442	0	1221	484	0	921
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0	5.0		5.0
Lane Util. Factor	0.97		0.95	1.00		0.95
Frt	1.00		1.00	0.85		1.00
Flt Protected	0.95		1.00	1.00		1.00
Satd. Flow (prot)	3433		3539	1583		3539
Flt Permitted	0.95		1.00	1.00		1.00
Satd. Flow (perm)	3433		3539	1583		3539
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	456	0	1259	499	0	949
RTOR Reduction (vph)	0	0	0	139	0	0
Lane Group Flow (vph)	456	0	1259	360	0	949
Turn Type	Prot		NA	Perm		NA
Protected Phases	1		2			2
Permitted Phases			2			
Actuated Green, G (s)	17.9		72.1	72.1		72.1
Effective Green, g (s)	17.9		72.1	72.1		72.1
Actuated g/C Ratio	0.18		0.72	0.72		0.72
Clearance Time (s)	5.0		5.0	5.0		5.0
Vehicle Extension (s)	2.5		3.0	3.0		3.0
Lane Grp Cap (vph)	614		2551	1141		2551
v/s Ratio Prot	c0.13		c0.36			0.27
v/s Ratio Perm			0.23			
v/c Ratio	0.74		0.49	0.32		0.37
Uniform Delay, d1	38.9		6.0	5.0		5.3
Progression Factor	1.00		1.00	1.00		1.00
Incremental Delay, d2	4.6		0.7	0.7		0.4
Delay (s)	43.5		6.7	5.8		5.7
Level of Service	D		A	A		A
Approach Delay (s)	43.5		6.5			5.7
Approach LOS	D		A			A
Intersection Summary						
HCM 2000 Control Delay		11.6		HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio		0.54				
Actuated Cycle Length (s)		100.0		Sum of lost time (s)		10.0
Intersection Capacity Utilization		54.7%		ICU Level of Service		A
Analysis Period (min)		15				

c Critical Lane Group

HCM 2010 Signalized Intersection Summary
103: US 1 & MacDonald Avenue

HCM 2010 Research does not support Non-NEMA phasing.

HCM Unsignalized Intersection Capacity Analysis

104: US 1 & 3rd Street



Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations	↑	↑	↑↑	↑	↑	↑↑		
Traffic Volume (veh/h)	17	84	1264	55	166	964		
Future Volume (Veh/h)	17	84	1264	55	166	964		
Sign Control	Stop		Free			Free		
Grade	0%		0%			0%		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97		
Hourly flow rate (vph)	18	87	1303	57	171	994		
Pedestrians								
Lane Width (ft)								
Walking Speed (ft/s)								
Percent Blockage								
Right turn flare (veh)								
Median type			None			None		
Median storage veh)								
Upstream signal (ft)								
pX, platoon unblocked								
vC, conflicting volume	2142	652			1360			
vC1, stage 1 conf vol								
vC2, stage 2 conf vol								
vCu, unblocked vol	2142	652			1360			
tC, single (s)	*5.0	*4.5			4.1			
tC, 2 stage (s)								
tF (s)	3.5	3.3			2.2			
p0 queue free %	78	86			66			
cM capacity (veh/h)	82	639			501			
Direction, Lane #	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	18	87	652	652	57	171	497	497
Volume Left	18	0	0	0	0	171	0	0
Volume Right	0	87	0	0	57	0	0	0
cSH	82	639	1700	1700	1700	501	1700	1700
Volume to Capacity	0.22	0.14	0.38	0.38	0.03	0.34	0.29	0.29
Queue Length 95th (ft)	19	12	0	0	0	37	0	0
Control Delay (s)	60.7	11.5	0.0	0.0	0.0	15.9	0.0	0.0
Lane LOS	F	B			C			
Approach Delay (s)	20.0		0.0			2.3		
Approach LOS	C							
Intersection Summary								
Average Delay			1.8					
Intersection Capacity Utilization			57.5%		ICU Level of Service			B
Analysis Period (min)			15					
* User Entered Value								

HCM Unsignalized Intersection Capacity Analysis

105: US 1 & College Road



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations	↑ ↗	↗ ↘	↖ ↗	↑ ↑	↑ ↑	↗		
Traffic Volume (veh/h)	27	91	99	1299	1017	52		
Future Volume (Veh/h)	27	91	99	1299	1017	52		
Sign Control	Stop			Free	Free			
Grade	0%			0%	0%			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Hourly flow rate (vph)	29	97	105	1382	1082	55		
Pedestrians								
Lane Width (ft)								
Walking Speed (ft/s)								
Percent Blockage								
Right turn flare (veh)								
Median type				Raised	Raised			
Median storage veh				1	1			
Upstream signal (ft)								
pX, platoon unblocked								
vC, conflicting volume	1983	541	1137					
vC1, stage 1 conf vol	1082							
vC2, stage 2 conf vol	901							
vCu, unblocked vol	1983	541	1137					
tC, single (s)	*5.0	*4.5	4.1					
tC, 2 stage (s)	4.0							
tF (s)	3.5	3.3	2.2					
p0 queue free %	89	86	83					
cM capacity (veh/h)	276	700	610					
Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	29	97	105	691	691	541	541	55
Volume Left	29	0	105	0	0	0	0	0
Volume Right	0	97	0	0	0	0	0	55
cSH	276	700	610	1700	1700	1700	1700	1700
Volume to Capacity	0.11	0.14	0.17	0.41	0.41	0.32	0.32	0.03
Queue Length 95th (ft)	9	12	15	0	0	0	0	0
Control Delay (s)	19.6	11.0	12.1	0.0	0.0	0.0	0.0	0.0
Lane LOS	C	B	B					
Approach Delay (s)	12.9		0.9			0.0		
Approach LOS	B							
Intersection Summary								
Average Delay			1.1					
Intersection Capacity Utilization		46.9%		ICU Level of Service			A	
Analysis Period (min)			15					

* User Entered Value

**Future (2021) Background AM & PM Peak Hour
SYNCHRO Output**

Timings

101: US 1 & College Road (West)



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↑	↑	↑	↑↑	↑↑	↑
Traffic Volume (vph)	56	283	252	1136	2250	49
Future Volume (vph)	56	283	252	1136	2250	49
Turn Type	Perm	Over	pm+pt	NA	NA	Perm
Protected Phases				1	1	6
Permitted Phases					6	2
Detector Phase				8	1	1
Switch Phase					6	2
Minimum Initial (s)	10.0	5.0	5.0	20.0	20.0	20.0
Minimum Split (s)	20.0	9.5	9.5	25.0	25.0	25.0
Total Split (s)	20.0	20.0	20.0	90.0	70.0	70.0
Total Split (%)	18.2%	18.2%	18.2%	81.8%	63.6%	63.6%
Yellow Time (s)	4.0	3.5	3.5	4.0	4.0	4.0
All-Red Time (s)	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	4.5	4.5	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	Lag
Lead-Lag Optimize?		Yes	Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effect Green (s)	10.4	15.6	92.3	92.8	71.7	71.7
Actuated g/C Ratio	0.09	0.14	0.84	0.84	0.65	0.65
v/c Ratio	0.36	0.76	0.83	0.40	1.03	0.05
Control Delay	52.8	28.5	50.8	3.2	47.8	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.8	28.5	50.8	3.2	47.8	5.0
LOS	D	C	D	A	D	A
Approach Delay	32.6			11.8	46.9	
Approach LOS	C			B	D	

Intersection Summary

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 93 (85%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 140

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 33.6

Intersection LOS: C

Intersection Capacity Utilization 97.4%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 101: US 1 & College Road (West)



Queues

101: US 1 & College Road (West)



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	59	298	265	1196	2368	52
v/c Ratio	0.36	0.76	0.83	0.40	1.03	0.05
Control Delay	52.8	28.5	50.8	3.2	47.8	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.8	28.5	50.8	3.2	47.8	5.0
Queue Length 50th (ft)	40	65	129	99	~997	5
Queue Length 95th (ft)	81	165	#252	138	#1161	22
Internal Link Dist (ft)	210			293	350	
Turn Bay Length (ft)			100			215
Base Capacity (vph)	225	412	342	2986	2306	1043
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.26	0.72	0.77	0.40	1.03	0.05

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

101: US 1 & College Road (West)

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↑ ↗	↑ ↗	↗ ↘	↑ ↑	↑ ↑	↗ ↘
Traffic Volume (vph)	56	283	252	1136	2250	49
Future Volume (vph)	56	283	252	1136	2250	49
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	4.5	4.5	5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.05	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	99	3539	3539	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	59	298	265	1196	2368	52
RTOR Reduction (vph)	0	169	0	0	0	11
Lane Group Flow (vph)	59	129	265	1196	2368	41
Turn Type	Perm	Over	pm+pt	NA	NA	Perm
Protected Phases		1	1	6	2	
Permitted Phases	8		6		2	
Actuated Green, G (s)	8.4	15.6	90.6	90.6	70.5	70.5
Effective Green, g (s)	8.4	15.6	90.6	90.6	70.5	70.5
Actuated g/C Ratio	0.08	0.14	0.82	0.82	0.64	0.64
Clearance Time (s)	6.0	4.5	4.5	5.0	5.0	5.0
Vehicle Extension (s)	2.5	2.0	2.0	3.0	3.0	3.0
Lane Grp Cap (vph)	135	224	318	2914	2268	1014
v/s Ratio Prot	0.08	c0.12	0.34	c0.67		
v/s Ratio Perm	c0.03		0.57		0.03	
v/c Ratio	0.44	0.58	0.83	0.41	1.04	0.04
Uniform Delay, d1	48.5	44.1	38.6	2.6	19.8	7.3
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.6	2.2	16.2	0.4	31.6	0.1
Delay (s)	50.2	46.3	54.7	3.0	51.4	7.4
Level of Service	D	D	D	A	D	A
Approach Delay (s)	47.0			12.4	50.4	
Approach LOS	D			B	D	
Intersection Summary						
HCM 2000 Control Delay			37.0	HCM 2000 Level of Service		D
HCM 2000 Volume to Capacity ratio			0.96			
Actuated Cycle Length (s)			110.0	Sum of lost time (s)		15.5
Intersection Capacity Utilization			97.4%	ICU Level of Service		F
Analysis Period (min)			15			

c Critical Lane Group

HCM 2010 Signalized Intersection Summary
101: US 1 & College Road (West)

HCM 2010 Research does not support Non-NEMA phasing.

Timings

102: US 1 & Cross St



Lane Group	WBL	NBT	NBR	SBL	SBT
Lane Configurations	↑ ↗	↑ ↗	↗ ↘	↗ ↘	↑ ↗
Traffic Volume (vph)	329	1100	133	15	1929
Future Volume (vph)	329	1100	133	15	1929
Turn Type	Prot	NA	Perm	Perm	NA
Protected Phases	4	2			6
Permitted Phases			2	6	
Detector Phase	4	2	2	6	6
Switch Phase					
Minimum Initial (s)	10.0	20.0	20.0	20.0	20.0
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0
Total Split (s)	31.0	79.0	79.0	79.0	79.0
Total Split (%)	28.2%	71.8%	71.8%	71.8%	71.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	24.8	75.2	75.2	75.2	75.2
Actuated g/C Ratio	0.23	0.68	0.68	0.68	0.68
v/c Ratio	0.91	0.48	0.13	0.06	0.84
Control Delay	69.6	9.2	2.0	6.9	17.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	69.6	9.2	2.0	6.9	17.5
LOS	E	A	A	A	B
Approach Delay	69.6	8.4			17.4
Approach LOS	E	A			B

Intersection Summary

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 97 (88%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 19.4

Intersection LOS: B

Intersection Capacity Utilization 80.9%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 102: US 1 & Cross St



Queues

102: US 1 & Cross St



Lane Group	WBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	364	1158	140	16	2031
v/c Ratio	0.91	0.48	0.13	0.06	0.84
Control Delay	69.6	9.2	2.0	6.9	17.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	69.6	9.2	2.0	6.9	17.5
Queue Length 50th (ft)	247	188	5	4	523
Queue Length 95th (ft)	#414	233	25	12	645
Internal Link Dist (ft)	369	335			312
Turn Bay Length (ft)			100	50	
Base Capacity (vph)	418	2419	1118	258	2419
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.87	0.48	0.13	0.06	0.84

Intersection Summary

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

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

102: US 1 & Cross St



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	329	17	1100	133	15	1929
Future Volume (vph)	329	17	1100	133	15	1929
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0	5.0	5.0	5.0
Lane Util. Factor	1.00		0.95	1.00	1.00	0.95
Frt	0.99		1.00	0.85	1.00	1.00
Flt Protected	0.95		1.00	1.00	0.95	1.00
Satd. Flow (prot)	1766		3539	1583	1770	3539
Flt Permitted	0.95		1.00	1.00	0.20	1.00
Satd. Flow (perm)	1766		3539	1583	378	3539
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	346	18	1158	140	16	2031
RTOR Reduction (vph)	2	0	0	36	0	0
Lane Group Flow (vph)	362	0	1158	104	16	2031
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	4		2			6
Permitted Phases				2	6	
Actuated Green, G (s)	24.8		75.2	75.2	75.2	75.2
Effective Green, g (s)	24.8		75.2	75.2	75.2	75.2
Actuated g/C Ratio	0.23		0.68	0.68	0.68	0.68
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	2.5		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	398		2419	1082	258	2419
v/s Ratio Prot	c0.21		0.33			c0.57
v/s Ratio Perm				0.07	0.04	
v/c Ratio	0.91		0.48	0.10	0.06	0.84
Uniform Delay, d1	41.5		8.2	5.9	5.7	12.9
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	24.5		0.7	0.2	0.5	3.7
Delay (s)	66.0		8.9	6.1	6.2	16.6
Level of Service	E		A	A	A	B
Approach Delay (s)	66.0		8.6			16.5
Approach LOS	E		A			B
Intersection Summary						
HCM 2000 Control Delay		18.6		HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio		0.86				
Actuated Cycle Length (s)		110.0		Sum of lost time (s)		10.0
Intersection Capacity Utilization		80.9%		ICU Level of Service		D
Analysis Period (min)		15				

c Critical Lane Group

HCM 2010 Signalized Intersection Summary

102: US 1 & Cross St

HCM 2010 Computation does not support turning movement with Shared and Exclusive lanes.

Timings
103: US 1 & MacDonald Avenue



Lane Group	WBL	NBT	NBR	SBT
Lane Configurations	↑↑	↑↑	↑	↑↑
Traffic Volume (vph)	610	697	355	1431
Future Volume (vph)	610	697	355	1431
Turn Type	Prot	NA	Perm	NA
Protected Phases	1	2		2
Permitted Phases			2	
Detector Phase	1	2	2	2
Switch Phase				
Minimum Initial (s)	10.0	20.0	20.0	20.0
Minimum Split (s)	25.0	25.0	25.0	25.0
Total Split (s)	28.0	82.0	82.0	82.0
Total Split (%)	25.5%	74.5%	74.5%	74.5%
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	C-Max
Act Effect Green (s)	22.5	77.5	77.5	77.5
Actuated g/C Ratio	0.20	0.70	0.70	0.70
v/c Ratio	0.92	0.29	0.31	0.60
Control Delay	61.8	6.5	1.2	9.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	61.8	6.5	1.2	9.7
LOS	E	A	A	A
Approach Delay	61.8	4.7		9.7
Approach LOS	E	A		A

Intersection Summary

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 0 (0%), Referenced to phase 2:NBSB, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 18.3

Intersection LOS: B

Intersection Capacity Utilization 65.3%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 103: US 1 & MacDonald Avenue



Queues

103: US 1 & MacDonald Avenue



Lane Group	WBL	NBT	NBR	SBT
Lane Group Flow (vph)	642	734	374	1506
v/c Ratio	0.92	0.29	0.31	0.60
Control Delay	61.8	6.5	1.2	9.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	61.8	6.5	1.2	9.7
Queue Length 50th (ft)	228	91	0	258
Queue Length 95th (ft)	#328	117	26	317
Internal Link Dist (ft)	385	403		417
Turn Bay Length (ft)				
Base Capacity (vph)	717	2493	1225	2493
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.90	0.29	0.31	0.60

Intersection Summary

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

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

103: US 1 & MacDonald Avenue



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑↑		↑↑	↑		↑↑
Traffic Volume (vph)	610	0	697	355	0	1431
Future Volume (vph)	610	0	697	355	0	1431
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0	5.0		5.0
Lane Util. Factor	0.97		0.95	1.00		0.95
Frt	1.00		1.00	0.85		1.00
Flt Protected	0.95		1.00	1.00		1.00
Satd. Flow (prot)	3433		3539	1583		3539
Flt Permitted	0.95		1.00	1.00		1.00
Satd. Flow (perm)	3433		3539	1583		3539
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	642	0	734	374	0	1506
RTOR Reduction (vph)	0	0	0	111	0	0
Lane Group Flow (vph)	642	0	734	264	0	1506
Turn Type	Prot		NA	Perm		NA
Protected Phases	1		2			2
Permitted Phases			2			
Actuated Green, G (s)	22.5		77.5	77.5		77.5
Effective Green, g (s)	22.5		77.5	77.5		77.5
Actuated g/C Ratio	0.20		0.70	0.70		0.70
Clearance Time (s)	5.0		5.0	5.0		5.0
Vehicle Extension (s)	2.5		3.0	3.0		3.0
Lane Grp Cap (vph)	702		2493	1115		2493
v/s Ratio Prot	c0.19		0.21		c0.43	
v/s Ratio Perm			0.17			
v/c Ratio	0.91		0.29	0.24		0.60
Uniform Delay, d1	42.8		6.1	5.8		8.4
Progression Factor	1.00		1.00	1.00		1.00
Incremental Delay, d2	16.4		0.3	0.5		1.1
Delay (s)	59.3		6.4	6.3		9.5
Level of Service	E		A	A		A
Approach Delay (s)	59.3		6.3			9.5
Approach LOS	E		A			A
Intersection Summary						
HCM 2000 Control Delay		18.2		HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio		0.67				
Actuated Cycle Length (s)		110.0		Sum of lost time (s)		10.0
Intersection Capacity Utilization		65.3%		ICU Level of Service		C
Analysis Period (min)		15				

c Critical Lane Group

HCM 2010 Signalized Intersection Summary
103: US 1 & MacDonald Avenue

HCM 2010 Research does not support Non-NEMA phasing.

HCM Unsignalized Intersection Capacity Analysis

104: US 1 & 3rd Street



Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Traffic Volume (veh/h)	19	84	723	18	252	1492		
Future Volume (Veh/h)	19	84	723	18	252	1492		
Sign Control	Stop		Free			Free		
Grade	0%		0%			0%		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90		
Hourly flow rate (vph)	21	93	803	20	280	1658		
Pedestrians								
Lane Width (ft)								
Walking Speed (ft/s)								
Percent Blockage								
Right turn flare (veh)								
Median type			None			None		
Median storage veh)								
Upstream signal (ft)								
pX, platoon unblocked								
vC, conflicting volume	2192	402			823			
vC1, stage 1 conf vol								
vC2, stage 2 conf vol								
vCu, unblocked vol	2192	402			823			
tC, single (s)	*5.0	*4.5			4.1			
tC, 2 stage (s)								
tF (s)	3.5	3.3			2.2			
p0 queue free %	73	88			65			
cM capacity (veh/h)	77	785			803			
Direction, Lane #	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	21	93	402	402	20	280	829	829
Volume Left	21	0	0	0	0	280	0	0
Volume Right	0	93	0	0	20	0	0	0
cSH	77	785	1700	1700	1700	803	1700	1700
Volume to Capacity	0.27	0.12	0.24	0.24	0.01	0.35	0.49	0.49
Queue Length 95th (ft)	25	10	0	0	0	39	0	0
Control Delay (s)	68.4	10.2	0.0	0.0	0.0	11.9	0.0	0.0
Lane LOS	F	B			B			
Approach Delay (s)	20.9		0.0			1.7		
Approach LOS	C							
Intersection Summary								
Average Delay			2.0					
Intersection Capacity Utilization			51.2%		ICU Level of Service			A
Analysis Period (min)			15					

* User Entered Value

HCM Unsignalized Intersection Capacity Analysis

105: US 1 & College Road



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations	↑ ↗	↗ ↘	↖ ↗	↑ ↑	↑ ↑	↗ ↘		
Traffic Volume (veh/h)	14	123	210	763	1572	183		
Future Volume (Veh/h)	14	123	210	763	1572	183		
Sign Control	Stop			Free	Free			
Grade	0%			0%	0%			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Hourly flow rate (vph)	15	132	226	820	1690	197		
Pedestrians								
Lane Width (ft)								
Walking Speed (ft/s)								
Percent Blockage								
Right turn flare (veh)								
Median type				Raised	Raised			
Median storage veh				1	1			
Upstream signal (ft)								
pX, platoon unblocked								
vC, conflicting volume	2552	845	1887					
vC1, stage 1 conf vol	1690							
vC2, stage 2 conf vol	862							
vCu, unblocked vol	2552	845	1887					
tC, single (s)	*5.0	*4.5	4.1					
tC, 2 stage (s)	4.0							
tF (s)	3.5	3.3	2.2					
p0 queue free %	86	76	28					
cM capacity (veh/h)	107	543	313					
Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	15	132	226	410	410	845	845	197
Volume Left	15	0	226	0	0	0	0	0
Volume Right	0	132	0	0	0	0	0	197
cSH	107	543	313	1700	1700	1700	1700	1700
Volume to Capacity	0.14	0.24	0.72	0.24	0.24	0.50	0.50	0.12
Queue Length 95th (ft)	12	24	131	0	0	0	0	0
Control Delay (s)	44.0	13.7	41.3	0.0	0.0	0.0	0.0	0.0
Lane LOS	E	B	E					
Approach Delay (s)	16.8		8.9			0.0		
Approach LOS	C							
Intersection Summary								
Average Delay			3.8					
Intersection Capacity Utilization			68.4%		ICU Level of Service		C	
Analysis Period (min)			15					

* User Entered Value

Timings

101: US 1 & College Road (West)



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↑ ↗	↗ ↘	↖ ↗	↑ ↑	↑ ↑	↗ ↘
Traffic Volume (vph)	107	178	175	2367	1763	41
Future Volume (vph)	107	178	175	2367	1763	41
Turn Type	Perm	Over	pm+pt	NA	NA	Perm
Protected Phases		1	1	6	2	
Permitted Phases	8			6		2
Detector Phase	8	1	1	6	2	2
Switch Phase						
Minimum Initial (s)	10.0	5.0	5.0	20.0	20.0	20.0
Minimum Split (s)	20.0	9.5	9.5	25.0	25.0	25.0
Total Split (s)	23.0	20.0	20.0	77.0	57.0	57.0
Total Split (%)	23.0%	20.0%	20.0%	77.0%	57.0%	57.0%
Yellow Time (s)	4.0	3.5	3.5	4.0	4.0	4.0
All-Red Time (s)	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	4.5	4.5	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	Lag
Lead-Lag Optimize?		Yes	Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effect Green (s)	12.0	9.9	77.5	77.0	62.6	62.6
Actuated g/C Ratio	0.12	0.10	0.78	0.77	0.63	0.63
v/c Ratio	0.53	0.58	0.74	0.91	0.84	0.04
Control Delay	50.4	13.4	37.1	16.5	20.8	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.4	13.4	37.1	16.5	20.8	4.8
LOS	D	B	D	B	C	A
Approach Delay	27.3			17.9	20.4	
Approach LOS	C			B	C	

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 92 (92%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 19.5

Intersection LOS: B

Intersection Capacity Utilization 82.9%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 101: US 1 & College Road (West)



Queues

101: US 1 & College Road (West)



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	113	187	184	2492	1856	43
v/c Ratio	0.53	0.58	0.74	0.91	0.84	0.04
Control Delay	50.4	13.4	37.1	16.5	20.8	4.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.4	13.4	37.1	16.5	20.8	4.8
Queue Length 50th (ft)	69	0	61	500	428	2
Queue Length 95th (ft)	120	60	131	#975	#784	19
Internal Link Dist (ft)	210			293	350	
Turn Bay Length (ft)			100			215
Base Capacity (vph)	300	404	345	2725	2216	1003
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.38	0.46	0.53	0.91	0.84	0.04

Intersection Summary

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

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

101: US 1 & College Road (West)



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↑ ↗	↑ ↗	↑ ↗	↑↑	↑↑	↑ ↗
Traffic Volume (vph)	107	178	175	2367	1763	41
Future Volume (vph)	107	178	175	2367	1763	41
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	4.5	4.5	5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.06	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	111	3539	3539	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	113	187	184	2492	1856	43
RTOR Reduction (vph)	0	168	0	0	0	12
Lane Group Flow (vph)	113	19	184	2492	1856	31
Turn Type	Perm	Over	pm+pt	NA	NA	Perm
Protected Phases		1	1	6	2	
Permitted Phases	8		6		2	
Actuated Green, G (s)	12.0	9.9	77.0	77.0	62.6	62.6
Effective Green, g (s)	12.0	9.9	77.0	77.0	62.6	62.6
Actuated g/C Ratio	0.12	0.10	0.77	0.77	0.63	0.63
Clearance Time (s)	6.0	4.5	4.5	5.0	5.0	5.0
Vehicle Extension (s)	2.5	2.0	2.0	3.0	3.0	3.0
Lane Grp Cap (vph)	212	156	249	2725	2215	990
v/s Ratio Prot		0.01	0.07	c0.70	0.52	
v/s Ratio Perm	c0.06		0.49		0.02	
v/c Ratio	0.53	0.12	0.74	0.91	0.84	0.03
Uniform Delay, d1	41.4	41.1	28.0	8.9	14.7	7.1
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.0	0.1	9.5	6.1	4.0	0.1
Delay (s)	43.4	41.2	37.5	15.0	18.7	7.2
Level of Service	D	D	D	B	B	A
Approach Delay (s)	42.0			16.6	18.4	
Approach LOS	D			B	B	
Intersection Summary						
HCM 2000 Control Delay			18.9	HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio			0.91			
Actuated Cycle Length (s)			100.0	Sum of lost time (s)		15.5
Intersection Capacity Utilization			82.9%	ICU Level of Service		E
Analysis Period (min)			15			

c Critical Lane Group

HCM 2010 Signalized Intersection Summary
101: US 1 & College Road (West)

HCM 2010 Research does not support Non-NEMA phasing.

Timings

102: US 1 & Cross St



Lane Group	WBL	NBT	NBR	SBL	SBT
Lane Configurations	↑ ↗	↑ ↗	↗ ↘	↗ ↘	↑ ↗
Traffic Volume (vph)	288	1967	460	25	1514
Future Volume (vph)	288	1967	460	25	1514
Turn Type	Prot	NA	Perm	Perm	NA
Protected Phases	4	2			6
Permitted Phases			2	6	
Detector Phase	4	2	2	6	6
Switch Phase					
Minimum Initial (s)	10.0	20.0	20.0	20.0	20.0
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0
Total Split (s)	27.0	73.0	73.0	73.0	73.0
Total Split (%)	27.0%	73.0%	73.0%	73.0%	73.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	21.2	68.8	68.8	68.8	68.8
Actuated g/C Ratio	0.21	0.69	0.69	0.69	0.69
v/c Ratio	0.92	0.86	0.42	0.36	0.66
Control Delay	68.4	17.0	4.3	23.7	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	68.4	17.0	4.3	23.7	10.8
LOS	E	B	A	C	B
Approach Delay	68.4	14.6			11.0
Approach LOS	E	B			B

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 94 (94%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 17.4

Intersection LOS: B

Intersection Capacity Utilization 81.0%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 102: US 1 & Cross St



Queues

102: US 1 & Cross St



Lane Group	WBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	346	2093	489	27	1611
v/c Ratio	0.92	0.86	0.42	0.36	0.66
Control Delay	68.4	17.0	4.3	23.7	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	68.4	17.0	4.3	23.7	10.8
Queue Length 50th (ft)	211	487	51	7	281
Queue Length 95th (ft)	#375	619	99	36	351
Internal Link Dist (ft)	369	335			312
Turn Bay Length (ft)			100	50	
Base Capacity (vph)	391	2434	1166	74	2434
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.88	0.86	0.42	0.36	0.66

Intersection Summary

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

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

102: US 1 & Cross St



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	288	38	1967	460	25	1514
Future Volume (vph)	288	38	1967	460	25	1514
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0	5.0	5.0	5.0
Lane Util. Factor	1.00		0.95	1.00	1.00	0.95
Frt	0.98		1.00	0.85	1.00	1.00
Flt Protected	0.96		1.00	1.00	0.95	1.00
Satd. Flow (prot)	1756		3539	1583	1770	3539
Flt Permitted	0.96		1.00	1.00	0.06	1.00
Satd. Flow (perm)	1756		3539	1583	108	3539
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	306	40	2093	489	27	1611
RTOR Reduction (vph)	5	0	0	78	0	0
Lane Group Flow (vph)	341	0	2093	411	27	1611
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	4		2			6
Permitted Phases				2	6	
Actuated Green, G (s)	21.2		68.8	68.8	68.8	68.8
Effective Green, g (s)	21.2		68.8	68.8	68.8	68.8
Actuated g/C Ratio	0.21		0.69	0.69	0.69	0.69
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	2.5		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	372		2434	1089	74	2434
v/s Ratio Prot	c0.19		c0.59			0.46
v/s Ratio Perm				0.26	0.25	
v/c Ratio	0.92		0.86	0.38	0.36	0.66
Uniform Delay, d1	38.5		11.9	6.6	6.5	8.9
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	26.8		4.3	1.0	13.3	1.4
Delay (s)	65.3		16.2	7.6	19.8	10.4
Level of Service	E		B	A	B	B
Approach Delay (s)	65.3		14.5			10.5
Approach LOS	E		B			B
Intersection Summary						
HCM 2000 Control Delay		16.9		HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio		0.87				
Actuated Cycle Length (s)		100.0		Sum of lost time (s)		10.0
Intersection Capacity Utilization		81.0%		ICU Level of Service		D
Analysis Period (min)		15				

c Critical Lane Group

HCM 2010 Signalized Intersection Summary

102: US 1 & Cross St

HCM 2010 Computation does not support turning movement with Shared and Exclusive lanes.

Timings

103: US 1 & MacDonald Avenue



Lane Group	WBL	NBT	NBR	SBT
Lane Configurations	↑↑	↑↑	↑	↑↑
Traffic Volume (vph)	507	1399	555	1056
Future Volume (vph)	507	1399	555	1056
Turn Type	Prot	NA	Perm	NA
Protected Phases	1	2		2
Permitted Phases			2	
Detector Phase	1	2	2	2
Switch Phase				
Minimum Initial (s)	10.0	20.0	20.0	20.0
Minimum Split (s)	25.0	25.0	25.0	25.0
Total Split (s)	27.0	73.0	73.0	73.0
Total Split (%)	27.0%	73.0%	73.0%	73.0%
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	C-Max
Act Effect Green (s)	19.3	70.7	70.7	70.7
Actuated g/C Ratio	0.19	0.71	0.71	0.71
v/c Ratio	0.79	0.58	0.44	0.44
Control Delay	47.4	8.7	1.7	7.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	47.4	8.7	1.7	7.2
LOS	D	A	A	A
Approach Delay	47.4	6.7		7.2
Approach LOS	D	A		A

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBSB, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 12.7

Intersection LOS: B

Intersection Capacity Utilization 61.5%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 103: US 1 & MacDonald Avenue



Queues

103: US 1 & MacDonald Avenue



Lane Group	WBL	NBT	NBR	SBT
Lane Group Flow (vph)	523	1442	572	1089
v/c Ratio	0.79	0.58	0.44	0.44
Control Delay	47.4	8.7	1.7	7.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	47.4	8.7	1.7	7.2
Queue Length 50th (ft)	163	212	0	137
Queue Length 95th (ft)	215	288	31	189
Internal Link Dist (ft)	385	403		417
Turn Bay Length (ft)				
Base Capacity (vph)	755	2501	1286	2501
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.69	0.58	0.44	0.44

Intersection Summary

HCM Signalized Intersection Capacity Analysis

103: US 1 & MacDonald Avenue



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑↑		↑↑	↑		↑↑
Traffic Volume (vph)	507	0	1399	555	0	1056
Future Volume (vph)	507	0	1399	555	0	1056
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0	5.0		5.0
Lane Util. Factor	0.97		0.95	1.00		0.95
Frt	1.00		1.00	0.85		1.00
Flt Protected	0.95		1.00	1.00		1.00
Satd. Flow (prot)	3433		3539	1583		3539
Flt Permitted	0.95		1.00	1.00		1.00
Satd. Flow (perm)	3433		3539	1583		3539
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	523	0	1442	572	0	1089
RTOR Reduction (vph)	0	0	0	168	0	0
Lane Group Flow (vph)	523	0	1442	404	0	1089
Turn Type	Prot		NA	Perm		NA
Protected Phases	1		2			2
Permitted Phases			2			
Actuated Green, G (s)	19.3		70.7	70.7		70.7
Effective Green, g (s)	19.3		70.7	70.7		70.7
Actuated g/C Ratio	0.19		0.71	0.71		0.71
Clearance Time (s)	5.0		5.0	5.0		5.0
Vehicle Extension (s)	2.5		3.0	3.0		3.0
Lane Grp Cap (vph)	662		2502	1119		2502
v/s Ratio Prot	c0.15		c0.41			0.31
v/s Ratio Perm			0.26			
v/c Ratio	0.79		0.58	0.36		0.44
Uniform Delay, d1	38.4		7.2	5.8		6.2
Progression Factor	1.00		1.00	1.00		1.00
Incremental Delay, d2	6.2		1.0	0.9		0.6
Delay (s)	44.6		8.2	6.7		6.8
Level of Service	D		A	A		A
Approach Delay (s)	44.6		7.8			6.8
Approach LOS	D		A			A
Intersection Summary						
HCM 2000 Control Delay		12.8		HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio		0.62				
Actuated Cycle Length (s)		100.0		Sum of lost time (s)		10.0
Intersection Capacity Utilization		61.5%		ICU Level of Service		B
Analysis Period (min)		15				

c Critical Lane Group

HCM 2010 Signalized Intersection Summary
103: US 1 & MacDonald Avenue

HCM 2010 Research does not support Non-NEMA phasing.

HCM Unsignalized Intersection Capacity Analysis

104: US 1 & 3rd Street



Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations	↑	↑	↑↑	↑	↑	↑↑		
Traffic Volume (veh/h)	19	96	1449	63	190	1105		
Future Volume (Veh/h)	19	96	1449	63	190	1105		
Sign Control	Stop		Free			Free		
Grade	0%		0%			0%		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97		
Hourly flow rate (vph)	20	99	1494	65	196	1139		
Pedestrians								
Lane Width (ft)								
Walking Speed (ft/s)								
Percent Blockage								
Right turn flare (veh)								
Median type			None			None		
Median storage veh)								
Upstream signal (ft)								
pX, platoon unblocked								
vC, conflicting volume	2456	747		1559				
vC1, stage 1 conf vol								
vC2, stage 2 conf vol								
vCu, unblocked vol	2456	747		1559				
tC, single (s)	*5.0	*4.5		4.1				
tC, 2 stage (s)								
tF (s)	3.5	3.3		2.2				
p0 queue free %	58	83		53				
cM capacity (veh/h)	48	590		420				
Direction, Lane #	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	20	99	747	747	65	196	570	570
Volume Left	20	0	0	0	0	196	0	0
Volume Right	0	99	0	0	65	0	0	0
cSH	48	590	1700	1700	1700	420	1700	1700
Volume to Capacity	0.42	0.17	0.44	0.44	0.04	0.47	0.34	0.34
Queue Length 95th (ft)	38	15	0	0	0	60	0	0
Control Delay (s)	127.2	12.3	0.0	0.0	0.0	20.8	0.0	0.0
Lane LOS	F	B			C			
Approach Delay (s)	31.6		0.0			3.1		
Approach LOS	D							
Intersection Summary								
Average Delay			2.6					
Intersection Capacity Utilization			63.9%		ICU Level of Service			B
Analysis Period (min)			15					

* User Entered Value

HCM Unsignalized Intersection Capacity Analysis

105: US 1 & College Road



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations	↑ ↗	↗ ↘	↖ ↗	↑ ↑	↑ ↑	↗		
Traffic Volume (veh/h)	31	104	113	1489	1166	60		
Future Volume (Veh/h)	31	104	113	1489	1166	60		
Sign Control	Stop			Free	Free			
Grade	0%			0%	0%			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Hourly flow rate (vph)	33	111	120	1584	1240	64		
Pedestrians								
Lane Width (ft)								
Walking Speed (ft/s)								
Percent Blockage								
Right turn flare (veh)								
Median type			Raised	Raised				
Median storage veh			1	1				
Upstream signal (ft)								
pX, platoon unblocked								
vC, conflicting volume	2272	620	1304					
vC1, stage 1 conf vol	1240							
vC2, stage 2 conf vol	1032							
vCu, unblocked vol	2272	620	1304					
tC, single (s)	*5.0	*4.5	4.1					
tC, 2 stage (s)	4.0							
tF (s)	3.5	3.3	2.2					
p0 queue free %	86	83	77					
cM capacity (veh/h)	230	656	527					
Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	33	111	120	792	792	620	620	64
Volume Left	33	0	120	0	0	0	0	0
Volume Right	0	111	0	0	0	0	0	64
cSH	230	656	527	1700	1700	1700	1700	1700
Volume to Capacity	0.14	0.17	0.23	0.47	0.47	0.36	0.36	0.04
Queue Length 95th (ft)	12	15	22	0	0	0	0	0
Control Delay (s)	23.3	11.6	13.8	0.0	0.0	0.0	0.0	0.0
Lane LOS	C	B	B					
Approach Delay (s)	14.3		1.0			0.0		
Approach LOS	B							
Intersection Summary								
Average Delay			1.2					
Intersection Capacity Utilization			51.8%	ICU Level of Service			A	
Analysis Period (min)			15					

* User Entered Value

Future (2021) Total AM & PM Peak Hour SYNCHRO Output

Timings

101: US 1 & College Road (West)



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↑ ↗	↗ ↘	↖ ↗	↑ ↑	↑ ↑	↗
Traffic Volume (vph)	60	298	257	1136	2250	50
Future Volume (vph)	60	298	257	1136	2250	50
Turn Type	Perm	Over	pm+pt	NA	NA	Perm
Protected Phases				1	1	6
Permitted Phases					6	2
Detector Phase				8	1	1
Switch Phase					6	2
Minimum Initial (s)	10.0	5.0	5.0	20.0	20.0	20.0
Minimum Split (s)	20.0	9.5	9.5	25.0	25.0	25.0
Total Split (s)	20.0	20.0	20.0	90.0	70.0	70.0
Total Split (%)	18.2%	18.2%	18.2%	81.8%	63.6%	63.6%
Yellow Time (s)	4.0	3.5	3.5	4.0	4.0	4.0
All-Red Time (s)	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	4.5	4.5	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	Lag
Lead-Lag Optimize?		Yes	Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effect Green (s)	10.5	15.9	92.2	92.7	71.3	71.3
Actuated g/C Ratio	0.10	0.14	0.84	0.84	0.65	0.65
v/c Ratio	0.38	0.79	0.83	0.40	1.03	0.05
Control Delay	53.2	31.9	51.2	3.3	49.7	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.2	31.9	51.2	3.3	49.7	4.9
LOS	D	C	D	A	D	A
Approach Delay	35.5			12.1	48.8	
Approach LOS	D			B	D	

Intersection Summary

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 93 (85%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 140

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 1.03

Intersection Signal Delay: 35.0

Intersection LOS: C

Intersection Capacity Utilization 97.7%

ICU Level of Service F

Analysis Period (min) 15

Splits and Phases: 101: US 1 & College Road (West)



Queues

101: US 1 & College Road (West)



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	63	314	271	1196	2368	53
v/c Ratio	0.38	0.79	0.83	0.40	1.03	0.05
Control Delay	53.2	31.9	51.2	3.3	49.7	4.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.2	31.9	51.2	3.3	49.7	4.9
Queue Length 50th (ft)	43	77	132	99	~1006	5
Queue Length 95th (ft)	85	#207	#265	141	#1161	22
Internal Link Dist (ft)	210			293	350	
Turn Bay Length (ft)			100			215
Base Capacity (vph)	225	412	344	2982	2294	1037
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.28	0.76	0.79	0.40	1.03	0.05

Intersection Summary

- ~ Volume exceeds capacity, queue is theoretically infinite.
- Queue shown is maximum after two cycles.
- # 95th percentile volume exceeds capacity, queue may be longer.
- Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

101: US 1 & College Road (West)

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↑	↑	↑	↑↑	↑↑	↑
Traffic Volume (vph)	60	298	257	1136	2250	50
Future Volume (vph)	60	298	257	1136	2250	50
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	4.5	4.5	5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.05	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	100	3539	3539	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	63	314	271	1196	2368	53
RTOR Reduction (vph)	0	169	0	0	0	12
Lane Group Flow (vph)	63	145	271	1196	2368	41
Turn Type	Perm	Over	pm+pt	NA	NA	Perm
Protected Phases		1	1	6	2	
Permitted Phases	8		6		2	
Actuated Green, G (s)	8.5	15.9	90.5	90.5	70.1	70.1
Effective Green, g (s)	8.5	15.9	90.5	90.5	70.1	70.1
Actuated g/C Ratio	0.08	0.14	0.82	0.82	0.64	0.64
Clearance Time (s)	6.0	4.5	4.5	5.0	5.0	5.0
Vehicle Extension (s)	2.5	2.0	2.0	3.0	3.0	3.0
Lane Grp Cap (vph)	136	228	323	2911	2255	1008
v/s Ratio Prot		0.09	c0.12	0.34	c0.67	
v/s Ratio Perm	c0.04		0.57		0.03	
v/c Ratio	0.46	0.64	0.84	0.41	1.05	0.04
Uniform Delay, d1	48.6	44.3	38.5	2.6	20.0	7.4
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1.8	4.3	16.4	0.4	33.7	0.1
Delay (s)	50.4	48.6	55.0	3.0	53.7	7.5
Level of Service	D	D	D	A	D	A
Approach Delay (s)	48.9			12.6	52.7	
Approach LOS	D			B	D	
Intersection Summary						
HCM 2000 Control Delay			38.6	HCM 2000 Level of Service		D
HCM 2000 Volume to Capacity ratio			0.96			
Actuated Cycle Length (s)			110.0	Sum of lost time (s)		15.5
Intersection Capacity Utilization			97.7%	ICU Level of Service		F
Analysis Period (min)			15			
c Critical Lane Group						

HCM 2010 Signalized Intersection Summary
101: US 1 & College Road (West)

HCM 2010 Research does not support Non-NEMA phasing.

Timings

102: US 1 & Cross St



Lane Group	WBL	NBT	NBR	SBL	SBT
Lane Configurations	↑ ↗	↑ ↗	↗ ↘	↗ ↘	↑ ↗
Traffic Volume (vph)	329	1103	134	15	1930
Future Volume (vph)	329	1103	134	15	1930
Turn Type	Prot	NA	Perm	Perm	NA
Protected Phases	4	2			6
Permitted Phases			2	6	
Detector Phase	4	2	2	6	6
Switch Phase					
Minimum Initial (s)	10.0	20.0	20.0	20.0	20.0
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0
Total Split (s)	31.0	79.0	79.0	79.0	79.0
Total Split (%)	28.2%	71.8%	71.8%	71.8%	71.8%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	24.8	75.2	75.2	75.2	75.2
Actuated g/C Ratio	0.23	0.68	0.68	0.68	0.68
v/c Ratio	0.91	0.48	0.13	0.06	0.84
Control Delay	69.6	9.2	2.0	6.9	17.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	69.6	9.2	2.0	6.9	17.5
LOS	E	A	A	A	B
Approach Delay	69.6	8.4			17.4
Approach LOS	E	A			B

Intersection Summary

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 97 (88%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow

Natural Cycle: 75

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.91

Intersection Signal Delay: 19.4

Intersection LOS: B

Intersection Capacity Utilization 80.9%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 102: US 1 & Cross St



Queues

102: US 1 & Cross St



Lane Group	WBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	364	1161	141	16	2032
v/c Ratio	0.91	0.48	0.13	0.06	0.84
Control Delay	69.6	9.2	2.0	6.9	17.5
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	69.6	9.2	2.0	6.9	17.5
Queue Length 50th (ft)	247	189	6	4	524
Queue Length 95th (ft)	#414	234	25	12	645
Internal Link Dist (ft)	369	335			312
Turn Bay Length (ft)			100	50	
Base Capacity (vph)	418	2419	1118	256	2419
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.87	0.48	0.13	0.06	0.84

Intersection Summary

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

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

102: US 1 & Cross St



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	329	17	1103	134	15	1930
Future Volume (vph)	329	17	1103	134	15	1930
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0	5.0	5.0	5.0
Lane Util. Factor	1.00		0.95	1.00	1.00	0.95
Frt	0.99		1.00	0.85	1.00	1.00
Flt Protected	0.95		1.00	1.00	0.95	1.00
Satd. Flow (prot)	1766		3539	1583	1770	3539
Flt Permitted	0.95		1.00	1.00	0.20	1.00
Satd. Flow (perm)	1766		3539	1583	377	3539
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	346	18	1161	141	16	2032
RTOR Reduction (vph)	2	0	0	36	0	0
Lane Group Flow (vph)	362	0	1161	105	16	2032
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	4		2			6
Permitted Phases				2	6	
Actuated Green, G (s)	24.8		75.2	75.2	75.2	75.2
Effective Green, g (s)	24.8		75.2	75.2	75.2	75.2
Actuated g/C Ratio	0.23		0.68	0.68	0.68	0.68
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	2.5		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	398		2419	1082	257	2419
v/s Ratio Prot	c0.21		0.33			c0.57
v/s Ratio Perm				0.07	0.04	
v/c Ratio	0.91		0.48	0.10	0.06	0.84
Uniform Delay, d1	41.5		8.2	5.9	5.7	12.9
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	24.5		0.7	0.2	0.5	3.7
Delay (s)	66.0		8.9	6.1	6.2	16.6
Level of Service	E		A	A	A	B
Approach Delay (s)	66.0		8.6			16.6
Approach LOS	E		A			B
Intersection Summary						
HCM 2000 Control Delay		18.6		HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio		0.86				
Actuated Cycle Length (s)		110.0		Sum of lost time (s)		10.0
Intersection Capacity Utilization		80.9%		ICU Level of Service		D
Analysis Period (min)		15				

c Critical Lane Group

HCM 2010 Signalized Intersection Summary

102: US 1 & Cross St

HCM 2010 Computation does not support turning movement with Shared and Exclusive lanes.

Timings

103: US 1 & MacDonald Avenue



Lane Group	WBL	NBT	NBR	SBT
Lane Configurations	↑↑	↑↑	↑	↑↑
Traffic Volume (vph)	611	698	357	1431
Future Volume (vph)	611	698	357	1431
Turn Type	Prot	NA	Perm	NA
Protected Phases	1	2		2
Permitted Phases			2	
Detector Phase	1	2	2	2
Switch Phase				
Minimum Initial (s)	10.0	20.0	20.0	20.0
Minimum Split (s)	25.0	25.0	25.0	25.0
Total Split (s)	28.0	82.0	82.0	82.0
Total Split (%)	25.5%	74.5%	74.5%	74.5%
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	C-Max
Act Effect Green (s)	22.5	77.5	77.5	77.5
Actuated g/C Ratio	0.20	0.70	0.70	0.70
v/c Ratio	0.92	0.29	0.31	0.60
Control Delay	62.0	6.5	1.2	9.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	62.0	6.5	1.2	9.7
LOS	E	A	A	A
Approach Delay	62.0	4.7		9.7
Approach LOS	E	A		A

Intersection Summary

Cycle Length: 110

Actuated Cycle Length: 110

Offset: 0 (0%), Referenced to phase 2:NBSB, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 18.3

Intersection LOS: B

Intersection Capacity Utilization 65.3%

ICU Level of Service C

Analysis Period (min) 15

Splits and Phases: 103: US 1 & MacDonald Avenue



Queues

103: US 1 & MacDonald Avenue



Lane Group	WBL	NBT	NBR	SBT
Lane Group Flow (vph)	643	735	376	1506
v/c Ratio	0.92	0.29	0.31	0.60
Control Delay	62.0	6.5	1.2	9.7
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	62.0	6.5	1.2	9.7
Queue Length 50th (ft)	229	91	0	258
Queue Length 95th (ft)	#330	117	26	317
Internal Link Dist (ft)	385	403		417
Turn Bay Length (ft)				
Base Capacity (vph)	717	2493	1226	2493
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.90	0.29	0.31	0.60

Intersection Summary

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

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

103: US 1 & MacDonald Avenue



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑↑		↑↑	↑		↑↑
Traffic Volume (vph)	611	0	698	357	0	1431
Future Volume (vph)	611	0	698	357	0	1431
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0	5.0		5.0
Lane Util. Factor	0.97		0.95	1.00		0.95
Frt	1.00		1.00	0.85		1.00
Flt Protected	0.95		1.00	1.00		1.00
Satd. Flow (prot)	3433		3539	1583		3539
Flt Permitted	0.95		1.00	1.00		1.00
Satd. Flow (perm)	3433		3539	1583		3539
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	643	0	735	376	0	1506
RTOR Reduction (vph)	0	0	0	111	0	0
Lane Group Flow (vph)	643	0	735	265	0	1506
Turn Type	Prot		NA	Perm		NA
Protected Phases	1		2			2
Permitted Phases			2			
Actuated Green, G (s)	22.5		77.5	77.5		77.5
Effective Green, g (s)	22.5		77.5	77.5		77.5
Actuated g/C Ratio	0.20		0.70	0.70		0.70
Clearance Time (s)	5.0		5.0	5.0		5.0
Vehicle Extension (s)	2.5		3.0	3.0		3.0
Lane Grp Cap (vph)	702		2493	1115		2493
v/s Ratio Prot	c0.19		0.21		c0.43	
v/s Ratio Perm			0.17			
v/c Ratio	0.92		0.29	0.24		0.60
Uniform Delay, d1	42.8		6.1	5.8		8.4
Progression Factor	1.00		1.00	1.00		1.00
Incremental Delay, d2	16.6		0.3	0.5		1.1
Delay (s)	59.4		6.4	6.3		9.5
Level of Service	E		A	A		A
Approach Delay (s)	59.4		6.3			9.5
Approach LOS	E		A			A
Intersection Summary						
HCM 2000 Control Delay		18.2		HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio		0.67				
Actuated Cycle Length (s)		110.0		Sum of lost time (s)		10.0
Intersection Capacity Utilization		65.3%		ICU Level of Service		C
Analysis Period (min)		15				

c Critical Lane Group

HCM 2010 Signalized Intersection Summary
103: US 1 & MacDonald Avenue

HCM 2010 Research does not support Non-NEMA phasing.

HCM Unsignalized Intersection Capacity Analysis

104: US 1 & 3rd Street



Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations								
Traffic Volume (veh/h)	19	84	723	19	252	1492		
Future Volume (Veh/h)	19	84	723	19	252	1492		
Sign Control	Stop		Free			Free		
Grade	0%		0%			0%		
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90		
Hourly flow rate (vph)	21	93	803	21	280	1658		
Pedestrians								
Lane Width (ft)								
Walking Speed (ft/s)								
Percent Blockage								
Right turn flare (veh)								
Median type			None			None		
Median storage veh)								
Upstream signal (ft)								
pX, platoon unblocked								
vC, conflicting volume	2192	402			824			
vC1, stage 1 conf vol								
vC2, stage 2 conf vol								
vCu, unblocked vol	2192	402			824			
tC, single (s)	*5.0	*4.5			4.1			
tC, 2 stage (s)								
tF (s)	3.5	3.3			2.2			
p0 queue free %	73	88			65			
cM capacity (veh/h)	77	785			802			
Direction, Lane #	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	21	93	402	402	21	280	829	829
Volume Left	21	0	0	0	0	280	0	0
Volume Right	0	93	0	0	21	0	0	0
cSH	77	785	1700	1700	1700	802	1700	1700
Volume to Capacity	0.27	0.12	0.24	0.24	0.01	0.35	0.49	0.49
Queue Length 95th (ft)	25	10	0	0	0	39	0	0
Control Delay (s)	68.5	10.2	0.0	0.0	0.0	11.9	0.0	0.0
Lane LOS	F	B				B		
Approach Delay (s)	20.9		0.0			1.7		
Approach LOS	C							
Intersection Summary								
Average Delay			2.0					
Intersection Capacity Utilization			51.2%		ICU Level of Service			A
Analysis Period (min)			15					

* User Entered Value

HCM Unsignalized Intersection Capacity Analysis

105: US 1 & College Road



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations	↑	↑	↑	↑↑	↑↑	↑		
Traffic Volume (veh/h)	21	123	210	763	1572	185		
Future Volume (Veh/h)	21	123	210	763	1572	185		
Sign Control	Stop			Free	Free			
Grade	0%			0%	0%			
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93		
Hourly flow rate (vph)	23	132	226	820	1690	199		
Pedestrians								
Lane Width (ft)								
Walking Speed (ft/s)								
Percent Blockage								
Right turn flare (veh)								
Median type			Raised	Raised				
Median storage veh			1	1				
Upstream signal (ft)								
pX, platoon unblocked								
vC, conflicting volume	2552	845	1889					
vC1, stage 1 conf vol	1690							
vC2, stage 2 conf vol	862							
vCu, unblocked vol	2552	845	1889					
tC, single (s)	*5.0	*4.5	4.1					
tC, 2 stage (s)	4.0							
tF (s)	3.5	3.3	2.2					
p0 queue free %	78	76	28					
cM capacity (veh/h)	107	543	313					
Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	23	132	226	410	410	845	845	199
Volume Left	23	0	226	0	0	0	0	0
Volume Right	0	132	0	0	0	0	0	199
cSH	107	543	313	1700	1700	1700	1700	1700
Volume to Capacity	0.22	0.24	0.72	0.24	0.24	0.50	0.50	0.12
Queue Length 95th (ft)	19	24	132	0	0	0	0	0
Control Delay (s)	47.8	13.7	41.5	0.0	0.0	0.0	0.0	0.0
Lane LOS	E	B	E					
Approach Delay (s)	18.8		9.0			0.0		
Approach LOS	C							
Intersection Summary								
Average Delay			4.0					
Intersection Capacity Utilization		68.4%		ICU Level of Service			C	
Analysis Period (min)			15					

* User Entered Value

Timings

101: US 1 & College Road (West)



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↑	↑	↑	↑↑	↑↑	↑
Traffic Volume (vph)	110	188	190	2367	1763	46
Future Volume (vph)	110	188	190	2367	1763	46
Turn Type	Perm	Over	pm+pt	NA	NA	Perm
Protected Phases		1	1	6	2	
Permitted Phases	8			6		2
Detector Phase	8	1	1	6	2	2
Switch Phase						
Minimum Initial (s)	10.0	5.0	5.0	20.0	20.0	20.0
Minimum Split (s)	20.0	9.5	9.5	25.0	25.0	25.0
Total Split (s)	23.0	20.0	20.0	77.0	57.0	57.0
Total Split (%)	23.0%	20.0%	20.0%	77.0%	57.0%	57.0%
Yellow Time (s)	4.0	3.5	3.5	4.0	4.0	4.0
All-Red Time (s)	2.0	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	4.5	4.5	5.0	5.0	5.0
Lead/Lag		Lead	Lead		Lag	Lag
Lead-Lag Optimize?		Yes	Yes		Yes	Yes
Recall Mode	None	None	None	C-Max	C-Max	C-Max
Act Effect Green (s)	12.1	10.7	77.4	76.9	61.7	61.7
Actuated g/C Ratio	0.12	0.11	0.77	0.77	0.62	0.62
v/c Ratio	0.54	0.57	0.76	0.92	0.85	0.05
Control Delay	50.6	12.6	39.6	16.7	21.9	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.6	12.6	39.6	16.7	21.9	5.0
LOS	D	B	D	B	C	A
Approach Delay	26.7			18.4	21.5	
Approach LOS	C			B	C	

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 92 (92%), Referenced to phase 2:SBT and 6:NBT, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 20.1

Intersection LOS: C

Intersection Capacity Utilization 82.9%

ICU Level of Service E

Analysis Period (min) 15

Splits and Phases: 101: US 1 & College Road (West)



Queues

101: US 1 & College Road (West)



Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Group Flow (vph)	116	198	200	2492	1856	48
v/c Ratio	0.54	0.57	0.76	0.92	0.85	0.05
Control Delay	50.6	12.6	39.6	16.7	21.9	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	50.6	12.6	39.6	16.7	21.9	5.0
Queue Length 50th (ft)	71	0	72	506	445	3
Queue Length 95th (ft)	122	61	145	#978	#795	21
Internal Link Dist (ft)	210			293	350	
Turn Bay Length (ft)			100			215
Base Capacity (vph)	300	415	347	2721	2185	990
Starvation Cap Reductn	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0
Reduced v/c Ratio	0.39	0.48	0.58	0.92	0.85	0.05

Intersection Summary

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

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

101: US 1 & College Road (West)



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	↑ ↗	↑ ↗	↑ ↗	↑↑	↑↑	↑ ↗
Traffic Volume (vph)	110	188	190	2367	1763	46
Future Volume (vph)	110	188	190	2367	1763	46
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	4.5	4.5	5.0	5.0	5.0
Lane Util. Factor	1.00	1.00	1.00	0.95	0.95	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	3539	3539	1583
Flt Permitted	0.95	1.00	0.06	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	113	3539	3539	1583
Peak-hour factor, PHF	0.95	0.95	0.95	0.95	0.95	0.95
Adj. Flow (vph)	116	198	200	2492	1856	48
RTOR Reduction (vph)	0	177	0	0	0	13
Lane Group Flow (vph)	116	21	200	2492	1856	35
Turn Type	Perm	Over	pm+pt	NA	NA	Perm
Protected Phases		1	1	6	2	
Permitted Phases	8		6		2	
Actuated Green, G (s)	12.1	10.7	76.9	76.9	61.7	61.7
Effective Green, g (s)	12.1	10.7	76.9	76.9	61.7	61.7
Actuated g/C Ratio	0.12	0.11	0.77	0.77	0.62	0.62
Clearance Time (s)	6.0	4.5	4.5	5.0	5.0	5.0
Vehicle Extension (s)	2.5	2.0	2.0	3.0	3.0	3.0
Lane Grp Cap (vph)	214	169	264	2721	2183	976
v/s Ratio Prot		0.01	0.08	c0.70	0.52	
v/s Ratio Perm	c0.07		0.50		0.02	
v/c Ratio	0.54	0.13	0.76	0.92	0.85	0.04
Uniform Delay, d1	41.3	40.4	29.0	9.0	15.4	7.5
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	2.2	0.1	10.5	6.2	4.4	0.1
Delay (s)	43.6	40.5	39.5	15.2	19.8	7.6
Level of Service	D	D	D	B	B	A
Approach Delay (s)	41.6			17.0	19.5	
Approach LOS	D			B	B	
Intersection Summary						
HCM 2000 Control Delay			19.6	HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio			0.91			
Actuated Cycle Length (s)			100.0	Sum of lost time (s)		15.5
Intersection Capacity Utilization			82.9%	ICU Level of Service		E
Analysis Period (min)			15			

c Critical Lane Group

HCM 2010 Signalized Intersection Summary
101: US 1 & College Road (West)

HCM 2010 Research does not support Non-NEMA phasing.

Timings

102: US 1 & Cross St



Lane Group	WBL	NBT	NBR	SBL	SBT
Lane Configurations	↑ ↗	↑ ↗	↗ ↘	↗ ↘	↑ ↗
Traffic Volume (vph)	290	1969	461	25	1517
Future Volume (vph)	290	1969	461	25	1517
Turn Type	Prot	NA	Perm	Perm	NA
Protected Phases	4	2			6
Permitted Phases			2	6	
Detector Phase	4	2	2	6	6
Switch Phase					
Minimum Initial (s)	10.0	20.0	20.0	20.0	20.0
Minimum Split (s)	25.0	25.0	25.0	25.0	25.0
Total Split (s)	27.0	73.0	73.0	73.0	73.0
Total Split (%)	27.0%	73.0%	73.0%	73.0%	73.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0	5.0
Lead/Lag					
Lead-Lag Optimize?					
Recall Mode	None	C-Max	C-Max	C-Max	C-Max
Act Effect Green (s)	21.3	68.7	68.7	68.7	68.7
Actuated g/C Ratio	0.21	0.69	0.69	0.69	0.69
v/c Ratio	0.92	0.86	0.42	0.36	0.66
Control Delay	69.2	17.2	4.3	23.7	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	69.2	17.2	4.3	23.7	10.8
LOS	E	B	A	C	B
Approach Delay	69.2	14.7			11.0
Approach LOS	E	B			B

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 94 (94%), Referenced to phase 2:NBT and 6:SBTL, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.92

Intersection Signal Delay: 17.6

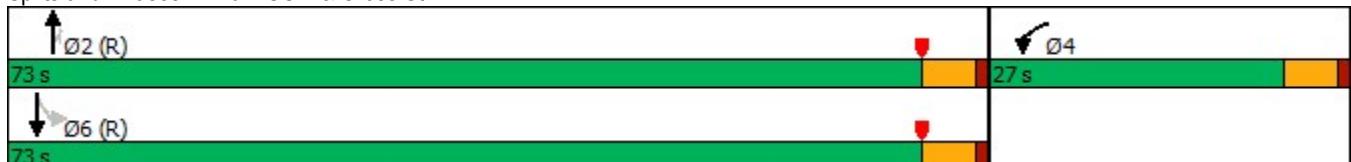
Intersection LOS: B

Intersection Capacity Utilization 81.1%

ICU Level of Service D

Analysis Period (min) 15

Splits and Phases: 102: US 1 & Cross St



Queues

102: US 1 & Cross St



Lane Group	WBL	NBT	NBR	SBL	SBT
Lane Group Flow (vph)	349	2095	490	27	1614
v/c Ratio	0.92	0.86	0.42	0.36	0.66
Control Delay	69.2	17.2	4.3	23.7	10.8
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	69.2	17.2	4.3	23.7	10.8
Queue Length 50th (ft)	214	488	51	7	282
Queue Length 95th (ft)	#378	620	100	36	352
Internal Link Dist (ft)	369	335			312
Turn Bay Length (ft)			100	50	
Base Capacity (vph)	391	2431	1166	74	2431
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.89	0.86	0.42	0.36	0.66

Intersection Summary

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

Queue shown is maximum after two cycles.

HCM Signalized Intersection Capacity Analysis

102: US 1 & Cross St



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	290	38	1969	461	25	1517
Future Volume (vph)	290	38	1969	461	25	1517
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0	5.0	5.0	5.0
Lane Util. Factor	1.00		0.95	1.00	1.00	0.95
Frt	0.98		1.00	0.85	1.00	1.00
Flt Protected	0.96		1.00	1.00	0.95	1.00
Satd. Flow (prot)	1756		3539	1583	1770	3539
Flt Permitted	0.96		1.00	1.00	0.06	1.00
Satd. Flow (perm)	1756		3539	1583	108	3539
Peak-hour factor, PHF	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	309	40	2095	490	27	1614
RTOR Reduction (vph)	5	0	0	78	0	0
Lane Group Flow (vph)	344	0	2095	412	27	1614
Turn Type	Prot		NA	Perm	Perm	NA
Protected Phases	4		2			6
Permitted Phases				2	6	
Actuated Green, G (s)	21.3		68.7	68.7	68.7	68.7
Effective Green, g (s)	21.3		68.7	68.7	68.7	68.7
Actuated g/C Ratio	0.21		0.69	0.69	0.69	0.69
Clearance Time (s)	5.0		5.0	5.0	5.0	5.0
Vehicle Extension (s)	2.5		3.0	3.0	3.0	3.0
Lane Grp Cap (vph)	374		2431	1087	74	2431
v/s Ratio Prot	c0.20		c0.59			0.46
v/s Ratio Perm				0.26	0.25	
v/c Ratio	0.92		0.86	0.38	0.36	0.66
Uniform Delay, d1	38.5		12.0	6.6	6.5	9.0
Progression Factor	1.00		1.00	1.00	1.00	1.00
Incremental Delay, d2	27.5		4.3	1.0	13.3	1.4
Delay (s)	66.0		16.3	7.6	19.9	10.5
Level of Service	E		B	A	B	B
Approach Delay (s)	66.0		14.7			10.6
Approach LOS	E		B			B
Intersection Summary						
HCM 2000 Control Delay		17.1		HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio		0.88				
Actuated Cycle Length (s)		100.0		Sum of lost time (s)		10.0
Intersection Capacity Utilization		81.1%		ICU Level of Service		D
Analysis Period (min)		15				

c Critical Lane Group

HCM 2010 Signalized Intersection Summary

102: US 1 & Cross St

HCM 2010 Computation does not support turning movement with Shared and Exclusive lanes.

Timings

103: US 1 & MacDonald Avenue



Lane Group	WBL	NBT	NBR	SBT
Lane Configurations	↑↑	↑↑	↑	↑↑
Traffic Volume (vph)	509	1400	556	1057
Future Volume (vph)	509	1400	556	1057
Turn Type	Prot	NA	Perm	NA
Protected Phases	1	2		2
Permitted Phases			2	
Detector Phase	1	2	2	2
Switch Phase				
Minimum Initial (s)	10.0	20.0	20.0	20.0
Minimum Split (s)	25.0	25.0	25.0	25.0
Total Split (s)	27.0	73.0	73.0	73.0
Total Split (%)	27.0%	73.0%	73.0%	73.0%
Yellow Time (s)	4.0	4.0	4.0	4.0
All-Red Time (s)	1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.0	5.0	5.0	5.0
Lead/Lag	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes
Recall Mode	None	C-Max	C-Max	C-Max
Act Effect Green (s)	19.3	70.7	70.7	70.7
Actuated g/C Ratio	0.19	0.71	0.71	0.71
v/c Ratio	0.79	0.58	0.45	0.44
Control Delay	47.6	8.7	1.7	7.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	47.6	8.7	1.7	7.2
LOS	D	A	A	A
Approach Delay	47.6	6.7		7.2
Approach LOS	D	A		A

Intersection Summary

Cycle Length: 100

Actuated Cycle Length: 100

Offset: 0 (0%), Referenced to phase 2:NBSB, Start of Yellow

Natural Cycle: 60

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.79

Intersection Signal Delay: 12.8

Intersection LOS: B

Intersection Capacity Utilization 61.6%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 103: US 1 & MacDonald Avenue



Queues

103: US 1 & MacDonald Avenue



Lane Group	WBL	NBT	NBR	SBT
Lane Group Flow (vph)	525	1443	573	1090
v/c Ratio	0.79	0.58	0.45	0.44
Control Delay	47.6	8.7	1.7	7.2
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	47.6	8.7	1.7	7.2
Queue Length 50th (ft)	164	212	0	137
Queue Length 95th (ft)	217	289	31	189
Internal Link Dist (ft)	385	403		417
Turn Bay Length (ft)				
Base Capacity (vph)	755	2500	1286	2500
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.70	0.58	0.45	0.44

Intersection Summary

HCM Signalized Intersection Capacity Analysis

103: US 1 & MacDonald Avenue



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	↑↑		↑↑	↑		↑↑
Traffic Volume (vph)	509	0	1400	556	0	1057
Future Volume (vph)	509	0	1400	556	0	1057
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0		5.0	5.0		5.0
Lane Util. Factor	0.97		0.95	1.00		0.95
Frt	1.00		1.00	0.85		1.00
Flt Protected	0.95		1.00	1.00		1.00
Satd. Flow (prot)	3433		3539	1583		3539
Flt Permitted	0.95		1.00	1.00		1.00
Satd. Flow (perm)	3433		3539	1583		3539
Peak-hour factor, PHF	0.97	0.97	0.97	0.97	0.97	0.97
Adj. Flow (vph)	525	0	1443	573	0	1090
RTOR Reduction (vph)	0	0	0	168	0	0
Lane Group Flow (vph)	525	0	1443	405	0	1090
Turn Type	Prot		NA	Perm		NA
Protected Phases	1		2			2
Permitted Phases			2			
Actuated Green, G (s)	19.3		70.7	70.7		70.7
Effective Green, g (s)	19.3		70.7	70.7		70.7
Actuated g/C Ratio	0.19		0.71	0.71		0.71
Clearance Time (s)	5.0		5.0	5.0		5.0
Vehicle Extension (s)	2.5		3.0	3.0		3.0
Lane Grp Cap (vph)	662		2502	1119		2502
v/s Ratio Prot	c0.15		c0.41			0.31
v/s Ratio Perm			0.26			
v/c Ratio	0.79		0.58	0.36		0.44
Uniform Delay, d1	38.4		7.2	5.8		6.2
Progression Factor	1.00		1.00	1.00		1.00
Incremental Delay, d2	6.3		1.0	0.9		0.6
Delay (s)	44.7		8.2	6.7		6.8
Level of Service	D		A	A		A
Approach Delay (s)	44.7		7.8			6.8
Approach LOS	D		A			A
Intersection Summary						
HCM 2000 Control Delay		12.8		HCM 2000 Level of Service		B
HCM 2000 Volume to Capacity ratio		0.62				
Actuated Cycle Length (s)		100.0		Sum of lost time (s)		10.0
Intersection Capacity Utilization		61.6%		ICU Level of Service		B
Analysis Period (min)		15				

c Critical Lane Group

HCM 2010 Signalized Intersection Summary
103: US 1 & MacDonald Avenue

HCM 2010 Research does not support Non-NEMA phasing.

HCM Unsignalized Intersection Capacity Analysis

104: US 1 & 3rd Street



Movement	WBL	WBR	NBT	NBR	SBL	SBT		
Lane Configurations	↑	↑	↑↑	↑	↑	↑↑		
Traffic Volume (veh/h)	20	96	1449	64	190	1105		
Future Volume (Veh/h)	20	96	1449	64	190	1105		
Sign Control	Stop		Free			Free		
Grade	0%		0%			0%		
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97		
Hourly flow rate (vph)	21	99	1494	66	196	1139		
Pedestrians								
Lane Width (ft)								
Walking Speed (ft/s)								
Percent Blockage								
Right turn flare (veh)								
Median type			None			None		
Median storage veh)								
Upstream signal (ft)								
pX, platoon unblocked								
vC, conflicting volume	2456	747		1560				
vC1, stage 1 conf vol								
vC2, stage 2 conf vol								
vCu, unblocked vol	2456	747		1560				
tC, single (s)	*5.0	*4.5		4.1				
tC, 2 stage (s)								
tF (s)	3.5	3.3		2.2				
p0 queue free %	56	83		53				
cM capacity (veh/h)	48	590		420				
Direction, Lane #	WB 1	WB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	21	99	747	747	66	196	570	570
Volume Left	21	0	0	0	0	196	0	0
Volume Right	0	99	0	0	66	0	0	0
cSH	48	590	1700	1700	1700	420	1700	1700
Volume to Capacity	0.44	0.17	0.44	0.44	0.04	0.47	0.34	0.34
Queue Length 95th (ft)	40	15	0	0	0	60	0	0
Control Delay (s)	130.7	12.3	0.0	0.0	0.0	20.9	0.0	0.0
Lane LOS	F	B			C			
Approach Delay (s)	33.0		0.0			3.1		
Approach LOS	D							
Intersection Summary								
Average Delay			2.7					
Intersection Capacity Utilization		63.9%		ICU Level of Service			B	
Analysis Period (min)			15					

* User Entered Value

HCM Unsignalized Intersection Capacity Analysis

105: US 1 & College Road



Movement	EBL	EBR	NBL	NBT	SBT	SBR		
Lane Configurations	↑	↑	↑	↑↑	↑↑	↑		
Traffic Volume (veh/h)	35	104	113	1489	1166	67		
Future Volume (Veh/h)	35	104	113	1489	1166	67		
Sign Control	Stop			Free	Free			
Grade	0%			0%	0%			
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94		
Hourly flow rate (vph)	37	111	120	1584	1240	71		
Pedestrians								
Lane Width (ft)								
Walking Speed (ft/s)								
Percent Blockage								
Right turn flare (veh)								
Median type			Raised	Raised				
Median storage veh			1	1				
Upstream signal (ft)								
pX, platoon unblocked								
vC, conflicting volume	2272	620	1311					
vC1, stage 1 conf vol	1240							
vC2, stage 2 conf vol	1032							
vCu, unblocked vol	2272	620	1311					
tC, single (s)	*5.0	*4.5	4.1					
tC, 2 stage (s)	4.0							
tF (s)	3.5	3.3	2.2					
p0 queue free %	84	83	77					
cM capacity (veh/h)	230	656	524					
Direction, Lane #	EB 1	EB 2	NB 1	NB 2	NB 3	SB 1	SB 2	SB 3
Volume Total	37	111	120	792	792	620	620	71
Volume Left	37	0	120	0	0	0	0	0
Volume Right	0	111	0	0	0	0	0	71
cSH	230	656	524	1700	1700	1700	1700	1700
Volume to Capacity	0.16	0.17	0.23	0.47	0.47	0.36	0.36	0.04
Queue Length 95th (ft)	14	15	22	0	0	0	0	0
Control Delay (s)	23.7	11.6	13.9	0.0	0.0	0.0	0.0	0.0
Lane LOS	C	B	B					
Approach Delay (s)	14.6		1.0			0.0		
Approach LOS	B							
Intersection Summary								
Average Delay			1.2					
Intersection Capacity Utilization			51.8%		ICU Level of Service			A
Analysis Period (min)			15					

* User Entered Value

Appendix I

Monroe County Level of Service and Reserve Capacity Table

2017 LEVEL OF SERVICE AND RESERVE CAPACITY

SEGMENT	LENGTH (miles)	FACILITY TYPE	POSTED SPEED		ADJ. FOR SIGNAL LIMITS (mph)	ADJUSTED LOS C CRITERIA (mph)	MEDIAN TRAVEL SPEED (mph)	LOS	RESERVE SPEED (mph)	2017		2015	
			Limits (mph)	Average (mph)						MAXIMUM RESERVE DAILY VOLUME (trips)	5% ALLOCATION BELOW LOS C (trips)	MAXIMUM RESERVE DAILY VOLUME (trips)	5% ALLOCATION BELOW LOS C (trips)
1 Stock Island (4.0- 5.0)	1.10	4-L/D	30/45	42.8	N/A	22.0	29.4	B	7.4	1,348	N/A	1,986	N/A
2 Boca Chica (5.0- 9.0)	3.9	4-L/D	45/55	54.7	N/A	50.2	59.6	A	9.4	6,071	N/A	5,167	N/A
3 Big Coppitt (9.0- 10.5)	1.5	2-L/U	45/55	45.7	N/A	41.2	46.6	B	5.4	1,341	N/A	1,292	N/A
4 Saddlebunch (10.5- 16.5)	5.8	2-L/U	45/55	53.6	N/A	49.1	53.3	B	4.2	4,034	N/A	2,497	N/A
5 Sugarloaf (16.5- 20.5)	3.9	2-L/U	45	45.0	4.5	36.0	48.3	A	12.3	7,944	N/A	7,363	N/A
6 Cudjoe (20.5- 23.0)	2.5	2-L/U	45	45.0	N/A	40.5	48.2	A	7.7	3,188	N/A	2,650	N/A
7 Summerland (23.0- 25.0)	2.2	2-L/U	45	45.0	N/A	40.5	45.0	B	4.5	1,639	N/A	1,312	N/A
8 Ramrod (25.0- 27.5)	2.3	2-L/U	45	45.0	N/A	40.5	46.1	B	5.6	2,133	N/A	2,323	N/A
9 Torch (27.5- 29.5)	2.1	2-L/U	45	45.0	N/A	40.5	47.7	A	7.2	2,504	N/A	2,434	N/A
10 Big Pine (29.5- 33.0)	3.4	2-L/U	45	45.0	3.4	37.1	39.4	C	2.3	1,295	N/A	394	N/A
11 Bahia Honda (33.0- 40.0)	7.0	2-L/U (70%) 4-L/D (30%)	45/50/55	52.4	N/A	47.9	53.7	B	5.8	6,723	N/A	5,448	N/A
12 7-Mile Bridge (40.0- 47.0)	6.8	2-L/U	45/50/55	54.6	N/A	50.1	53.3	B	3.2	3,603	N/A	2,703	N/A
13 Marathon (47.0- 54.0)	7.3	2-L/U (13%) 4-L/D (87%)	35/45	42.3	N/A	22.0	37.9	A	15.9	19,221	N/A	19,221	N/A
14 Grassy (54.0- 60.5)	6.4	2-L/U	45/55	54.5	1.5	48.5	51.6	C	3.1	3,286	N/A	3,286	N/A
15 Duck (60.5- 63.0)	2.7	2-L/U	55	55.0	N/A	50.5	53.3	C	2.8	1,252	N/A	1,788	N/A
16 Long (63.0- 73.0)	9.9	2-L/U	40/45/50/55	53.4	N/A	48.9	50.5	C	1.5	2,459	N/A	5,902	N/A
17 L Matecumbe (73.0- 77.5)	4.5	2-L/U	50/55	54.0	N/A	49.5	49.8	C	0.3	224	N/A	(894)	967
18 Tea Table (77.5- 79.5)	2.2	2-L/U	45/55	54.1	N/A	49.6	47.6	D	-1.9	(692)	193	(401)	459
19 U Matecumbe (79.5- 84.0)	4.1	2-L/U	30/40/45	45.0	N/A	40.5	39.2	D	-1.3	(883)	522	1,494	N/A
20 Windley (84.0- 86.0)	1.9	2-L/U	30/40/45	45.0	N/A	40.5	41.0	C	0.5	157	N/A	378	N/A
21 Plantation (86.0- 91.5)	5.8	2-L/U	45	45.0	3.4	37.1	40.5	B	3.4	3,266	N/A	1,057	N/A
22 Tavemier (91.5- 99.5)	8.0	4-L/D	45/50	47.2	2.0	40.7	47.4	A	6.7	8,876	N/A	10,466	N/A
23 Key Largo (99.5- 106.0)	6.8	4-L/D	45	45.0	3.5	37.0	44.4	A	7.4	8,333	N/A	8,558	N/A
24 Cross (106.0- 112.5)	6.2	2-L/U	45/55	51.4	N/A	46.9	52.7	B	5.7	5,852	N/A	4,723	N/A
Overall	108.3					45.0	46.0	C	1.0	18,547			