ATTACHMENT A

ICWW Bridge Travel Time and Delay Study, dated 2009

Kimley-Horn
and Associates, Inc.

July 16, 2009

Suite 300
8657 Baypine Road
Jacksonville, Florida
32256

D. Scot Leftwich, Ph.D., P.E.
President
Leftwich Consulting Engineers, Inc.
12151 Science Drive
Orlando, Florida 32826

Re: Level of Service Analysis
Intracoastal Waterway Bridge -- Hammock Dunes Parkway
Flagler County, Florida

Dear Dr. Leftwich:

Per our telephone conversation, Kimley-Horn and Associates, Inc. (KHA) has been retained by Rogers Towers to conduct a level of service (LOS) analysis of the Intracoastal Waterway (ICWW) Bridge, located on Hammock Dunes Parkway. This technical letter provides a summary of the data collected, analyses conducted, and conclusions reached as a part of the LOS analysis. This information is being provided for your review and use in preparing the Annual Report for Traffic and Air Quality associated with the Hammock Dunes DRI.

Study Limits and Facility:

KHA conducted a Level of Service (LOS) analysis for the ICWW Bridge, located on Hammock Dunes Parkway. The study limits consisted of Hammock Dunes Parkway between the east side of the existing toll plaza and Camino del Mar. This section of Hammock Dunes Parkway is a two-lane undivided roadway with a posted speed limit of 35 mph.

Data Collection:

The LOS of the ICWW Bridge on Hammock Dunes Parkway was analyzed by conducting a travel time and delay study within the study limits. The travel time and delay study was conducted according to the Florida Department of Transportation's (FDOT's) *Manual on Uniform Traffic Studies*, also known as the *MUTS* manual. The *MUTS* manual states that for studies involving

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efficiency, the permitted margin of error should be +/-3 mph. A test car utilizing GPS (Global Positioning System) was used to make test runs in the peak period (3:15 pm - 4:15 pm) and in an off peak period (6:00 pm – 6:30 pm) on May 5th and 6th, 2009. A summary of the data collected is included as Attachment A.

The estimated minimum sample size for the number of test runs needed to provide a 95 percent confidence level for the permitted margin of error is determined by using Figure 14-1 in the *MUTS* manual along with the equation provided to determine the Average Range in Running Speed (**R**) from the test car's runs. The **R** is determined by summing the absolute difference in Running Speed (**RS**) between each sequential test run giving the sum of absolute differences (**S**). Then **S** is divided by the number of runs (**N**) minus one. See the equation below:

$$R = S / (N - 1)$$

Where R = average range in running speed in mph
S = sum of absolute differences
N = number of completed test runs

Westbound Test Runs

In the peak period the test runs in the westbound direction had an Average Range in Running Speed (**R**) of 2.59 mph. With this Average Range in Running Speed, the number of test runs required for a permitted margin of error of +/- 3.0 mph (with a 95 percent confidence level) is three test runs. Twenty-three test runs were made in the peak period for the westbound direction, which provides a sufficient number of test runs to achieve statistical significance. With the number of test runs made, the margin of error is further reduced below +/- 1.0 mph (with a 95 percent confidence level).

In the off peak period the westbound direction had an **R** of 3.16 mph. With this Average Range in Running Speed, the number of test runs required for a permitted margin of error of +/- 3.0 mph (with a 95 percent confidence level) is two test runs. Four test runs were made in the off peak period for the westbound direction, which provides a sufficient number of test runs to achieve statistical significance. With the number of test runs made, the margin of error is further reduced below +/- 2.0 mph (with a 95 percent confidence level).

Eastbound Test Runs

In the peak period the test runs in the eastbound direction had an **R** of 2.15 mph. With this Average Range in Running Speed, the number of test runs required for a permitted margin of error of +/- 3.0 mph (with a 95 percent confidence level) is two test runs. Twenty-five test runs were made in the peak period for the eastbound direction, which provides a sufficient number of test runs to achieve statistical significance. With the number of test runs made, the margin of error is further reduced below +/- 1.0 mph (with a 95 percent confidence level).

In the off peak period the eastbound direction had an **R** of 1.3 mph. With this Average Range in Running Speed, the number of test runs required for a permitted margin of error of +/- 3.0 mph (with a 95 percent confidence level) is two test runs. Three test runs were made in the off peak period for the eastbound direction, which provides a sufficient number of test runs to achieve statistical significance. With the number of test runs made, the margin of error is further reduced below +/- 2.0 mph (with a 95 percent confidence level).

Table 1 provides a summary of the data collected by direction during the study periods.

Table 1: Summary of Test Runs
Hammock Dunes Parkway, Bridge over the ICWW

Direction	Period	Time	Distance (miles)	Average Travel Time (mins)	Average Congested Time (mins)	Average Travel Speed (mph)	Average Running Speed (mph)
Eastbound	Off-Peak	6:00-6:30 p.m.	0.75	1.19	0.09	37.82	41.04
	Peak	3:15-4:15 p.m.	0.75	1.26	0.17	36.07	41.26
Westbound	Off-Peak	6:00-6:30 p.m.	0.75	1.11	0.00	40.84	40.84
	Peak	3:15-4:15 p.m.	0.75	1.10	0.00	41.26	41.42

Level of Service (LOS) Analyses:

The *Highway Capacity Manual 2000* was used to determine the LOS of the study segment. The ICWW Bridge on Hammock Dunes Parkway is classified as an urban street, class II (suburban minor arterial). The average travel speed

experienced on urban streets is used to measure operating LOS. The average travel speed threshold for each LOS is shown in the table below.

Table 2: Urban Street LOS, Class II

LOS	Average Travel Speed (mph)
A	>35
B	>28-35
C	>22-28
D	>17-22
E	>13-17
F	≤13

Source: *Highway Capacity Manual 2000*, Exhibit 15-2

The LOS of the ICWW Bridge on Hammock Dunes Parkway was determined by comparing the LOS thresholds to the Average Travel Speed, as collected during the travel time and delay study. Each direction (eastbound and westbound) was found to operate at LOS A for both the peak and off-peak periods. Table 3 summarizes the LOS determinations.

Table 3: Summary of LOS Determination
Hammock Dunes Parkway, Bridge over the ICWW

Direction	Period	Time	Average Travel Speed (mph)	LOS
Eastbound	Off-Peak	6:00-6:30 p.m.	37.82	A
	Peak	3:15-4:15 p.m.	36.07	A
Westbound	Off-Peak	6:00-6:30 p.m.	40.84	A
	Peak	3:15-4:15 p.m.	41.26	A

Conclusion

As detailed above, the ICWW Bridge, located on Hammock Dunes Parkway, was found to operate at a Level of Service A in both the eastbound and westbound

directions. This finding is based upon the data collected on May 5th and 6th, 2009. This conclusion is also based on the accepted methodologies for measuring average travel speed and LOS contained in the FDOT's *MUTS* manual and the Transportation Research Board's *Highway Capacity Manual 2000*.

Please do not hesitate to contact me with any questions pertaining to the analyses contained in this technical letter.

Very truly yours,

KIMLEY-HORN AND ASSOCIATES, INC.

William J. Schilling Jr., P.E.
Vice President

cc: Bob Cuff
Emily Pierce
Ellen Avery-Smith

Attachment A

ATTACHMENT A

Data Collected

Collected Data

Travel Time and Delay Study

Hammock Dunes Pkwy

From Toll Plaza to Camino del Mar

Route	Distance (mi)	Travel Time (min)	Avg Speed (mph)	Running Speed (mph)	Absolute Difference in Running Speed (mph)	Number of Stops	Start Time	Stopped Time (min)	Congested Time (min)
Off-Peak EB	0.75	1.20	37.50	41.67		1	5/5/2009 18:16	0.02	0.12
Off-Peak EB	0.75	1.20	37.50	40.18	1.49	1	5/5/2009 18:22	0.02	0.08
Off-Peak EB	0.75	1.17	38.46	41.28	1.11	1	5/5/2009 18:27	0.02	0.08
Totals (3 runs)	2.25	3.57			2.59			0.06	0.28
Average	**0.75**	**1.19**	**37.82**	**41.04**				**0.02**	**0.09**

Collected Data

Travel Time and Delay Study

Hammock Dunes Pkwy
From Toll Plaza to Camino del Mar

Route	Distance (mi)	Travel Time (min)	Avg Speed (mph)	Running Speed (mph)	Absolute Difference in Running Speed (mph)	Number of Stops	Start Time	Stopped Time (min)	Congested Time (min)
Off-Peak WB	0.75	1.02	44.12	44.12		0	5/5/2009 18:13	0	0
Off-Peak WB	0.75	1.18	38.14	38.14	5.98	0	5/5/2009 18:18	0	0
Off-Peak WB	0.75	1.10	40.91	40.91	2.77	0	5/5/2009 18:24	0	0
Off-Peak WB	0.75	1.12	40.18	40.18	0.73	0	5/5/2009 18:29	0	0
Totals (4 runs)	3.00	4.42			9.49			0	0
Average	**0.75**	**1.11**	**40.84**	**40.84**				**0.00**	**0.00**

Collected Data

Travel Time and Delay Study

Hammock Dunes Pkwy
From Toll Plaza to Camino del Mar

Route	Distance (mi)	Travel Time (min)	Avg Speed (mph)	Running Speed (mph)	Absolute Difference in Running Speed (mph)	Number of Stops	Start Time	Stopped Time (min)	Congested Time (min)
Peak EB	0.75	1.25	36.00	38.46		1	5/5/2009 15:14	0.03	0.08
Peak EB	0.75	1.37	32.85	39.47	1.01	2	5/5/2009 15:19	0.07	0.23
Peak EB	0.75	1.40	32.14	38.14	1.34	1	5/5/2009 15:25	0.03	0.22
Peak EB	0.75	1.27	35.43	39.13	0.99	1	5/5/2009 15:30	0.05	0.12
Peak EB	0.75	1.42	31.69	40.91	1.78	3	5/5/2009 15:36	0.15	0.32
Peak EB	0.75	1.45	31.03	43.69	2.78	2	5/5/2009 15:42	0.08	0.42
Peak EB	0.75	1.40	32.14	36.59	7.10	1	5/5/2009 15:47	0.02	0.17
Peak EB	0.75	1.32	34.09	40.91	4.32	2	5/5/2009 15:52	0.1	0.22
Peak EB	0.75	1.18	38.14	41.67	0.76	1	5/5/2009 15:58	0.03	0.1
Peak EB	0.75	1.13	39.82	42.86	1.19	0	5/5/2009 16:03	0	0.08
Peak EB	0.75	1.28	35.16	40.91	1.95	2	5/5/2009 16:09	0.03	0.18
Peak EB	0.75	1.43	31.47	40.91	0.00	2	5/5/2009 16:15	0.22	0.33
Peak EB	0.75	1.10	40.91	43.69	2.78	0	5/6/2009 15:15	0	0.07
Peak EB	0.75	1.07	42.06	44.12	0.43	1	5/6/2009 15:20	0.02	0.05
Peak EB	0.75	1.33	33.83	40.54	3.58	1	5/6/2009 15:25	0.03	0.22
Peak EB	0.75	1.35	33.33	39.13	1.41	0	5/6/2009 15:30	0	0.2
Peak EB	0.75	1.15	39.13	43.69	4.56	1	5/6/2009 15:35	0.02	0.12
Peak EB	0.75	1.27	35.43	40.18	3.51	2	5/6/2009 15:40	0.03	0.15
Peak EB	0.75	1.10	40.91	43.69	3.51	1	5/6/2009 15:46	0.02	0.07
Peak EB	0.75	1.13	39.82	43.69	0.00	1	5/6/2009 15:50	0.02	0.1
Peak EB	0.75	1.10	40.91	43.69	0.00	1	5/6/2009 15:56	0.03	0.07
Peak EB	0.75	1.25	36.00	42.06	1.63	2	5/6/2009 16:01	0.13	0.18
Peak EB	0.75	1.07	42.06	44.12	2.06	1	5/6/2009 16:06	0.02	0.05
Peak EB	0.75	1.37	32.85	39.47	4.64	1	5/6/2009 16:11	0.08	0.23
Peak EB	0.75	1.30	34.62	39.82	0.35	0	5/6/2009 16:17	0	0.17
Totals (25 runs)	18.75	31.49			51.69			1.21	4.15
Average	**0.75**	**1.26**	**36.07**	**41.26**				**0.05**	**0.17**

Collected Data

Travel Time and Delay Study

Hammock Dunes Pkwy
From Toll Plaza to Camino del Mar

Route	Distance (mi)	Travel Time (min)	Avg Speed (mph)	Running Speed (mph)	Absolute Difference in Running Speed (mph)	Number of Stops	Start Time	Stopped Time (min)	Congested Time (min)
Peak WB	0.75	1.13	39.82	39.82		0	5/5/2009 15:16	0	0
Peak WB	0.75	1.17	38.46	38.46	1.36	0	5/5/2009 15:22	0	0
Peak WB	0.75	1.08	41.67	41.67	3.21	0	5/5/2009 15:28	0	0
Peak WB	0.75	1.22	36.89	36.89	4.78	0	5/5/2009 15:33	0	0
Peak WB	0.75	1.10	40.91	40.91	4.02	0	5/5/2009 15:38	0	0
Peak WB	0.75	1.17	38.46	42.06	1.15	0	5/5/2009 15:44	0	0.1
Peak WB	0.75	1.10	40.91	40.91	1.15	0	5/5/2009 15:49	0	0
Peak WB	0.75	1.08	41.67	41.67	0.76	0	5/5/2009 15:55	0	0
Peak WB	0.75	0.97	46.39	46.39	4.73	0	5/5/2009 16:00	0	0
Peak WB	0.75	1.07	42.06	42.06	4.34	0	5/5/2009 16:05	0	0
Peak WB	0.75	1.08	41.67	41.67	0.39	0	5/5/2009 16:11	0	0
Peak WB	0.75	1.00	45.00	45.00	3.33	0	5/6/2009 15:16	0	0
Peak WB	0.75	1.05	42.86	42.86	2.14	0	5/6/2009 15:22	0	0
Peak WB	0.75	1.18	38.14	38.14	4.72	0	5/6/2009 15:27	0	0
Peak WB	0.75	1.08	41.67	41.67	3.53	0	5/6/2009 15:32	0	0
Peak WB	0.75	1.07	42.06	42.06	0.39	0	5/6/2009 15:37	0	0
Peak WB	0.75	1.05	42.86	42.86	0.80	0	5/6/2009 15:42	0	0
Peak WB	0.75	1.05	42.86	42.86	0.00	0	5/6/2009 15:47	0	0
Peak WB	0.75	1.12	40.18	40.18	2.68	0	5/6/2009 15:52	0	0
Peak WB	0.75	1.03	43.69	43.69	3.51	0	5/6/2009 15:58	0	0
Peak WB	0.75	1.02	44.12	44.12	0.43	0	5/6/2009 16:03	0	0
Peak WB	0.75	1.07	42.06	42.06	2.06	0	5/6/2009 16:08	0	0
Peak WB	0.75	1.30	34.62	34.62	7.44	0	5/6/2009 16:13	0	0
Totals (23 runs)	17.25	25.19			56.91			0	0.1
Average	**0.75**	**1.10**	**41.26**	**41.42**				**0.00**	**0.00**

ATTACHMENT B

ICWW Bridge Travel Time and Delay Study, dated 2011

Kimley-Horn
and Associates, Inc.

October 21, 2011

Suite 300
8657 Baypine Road
Jacksonville, Florida
32256

Ellen Avery-Smith, Esquire
Rogers Towers
100 Whetstone Place, Suite 100
St. Augustine, Florida 32086

Re: Traffic Technical Memorandum
Hammock Dunes DRI
Flagler County, Florida

Dear Ms. Avery-Smith:

Kimley-Horn and Associates, Inc. (KHA) has prepared this Traffic Technical Memorandum at the request of the Rogers Towers law firm to evaluate the Development Order (DO) conditions for the Hammock Dunes Development of Regional Impact (DRI) associated with the Hammock Dunes Parkway Intracoastal Waterway (ICWW) Bridge and Palm Harbor Parkway. Specifically, KHA has updated the level of service (LOS) analysis for the ICWW Bridge, located on Hammock Dunes Parkway (Palm Coast Parkway), dated July 16, 2009. This traffic update has been prepared to determine if the LOS thresholds in DO Condition 4.1.b have been met or are anticipated to be met over the required three year analysis period. In addition, traffic data has been collected on Palm Harbor Parkway to determine if the traffic volume thresholds contained in DO Condition 4.7 have been met. This technical letter provides a summary of the data collected, analyses conducted, and conclusions reached as a part of this analysis update. This information is being provided for your review and use in preparing the Essentially Built-out Agreement for the Hammock Dunes DRI.

HAMMOCK DUNES PARKWAY ICWW BRIDGE LOS UPDATE

Study Limits and Facility:

KHA conducted an LOS analysis for the ICWW Bridge, located on Hammock Dunes Parkway. The study limits consisted of Hammock Dunes Parkway between the east side of the existing toll plaza and the western approach to the

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Camino del Mar stop controlled intersection. This section of Hammock Dunes Parkway is a two-lane undivided roadway with a posted speed limit of 35 mph.

Data Collection:

The LOS of the ICWW Bridge on Hammock Dunes Parkway was analyzed by conducting a travel time and delay study within the study limits. The travel time and delay study was conducted in accordance with the Florida Department of Transportation's (FDOT's) *Manual on Uniform Traffic Studies*, also known as the *MUTS* manual. The *MUTS* manual states that for studies involving efficiency (i.e., timing studies), the permitted margin of error should be +/- 3.0 mph. A test car utilizing GPS (Global Positioning System) was used to make test runs during the peak period (4:15 pm - 5:15 pm) and in an off peak period (3:15 pm - 3:45 pm) on October 4th, 2011. Please see Attachment A for a summary of the traffic count data collected. A summary of the travel time data collected is included as Attachment B.

The estimated minimum sample size for the number of test runs needed to provide a 95 percent confidence level for the permitted margin of error is determined by using Figure 14-1 in the *MUTS* manual along with the equation provided to determine the Average Range in Running Speed (**R**) from the test car's runs. The **R** is determined by summing the absolute difference in Running Speed (**RS**) between each sequential test run giving the sum of absolute differences (**S**). Then **S** is divided by the number of runs (**N**) minus one. See the equation below:

$$R = \frac{S}{N - 1}$$

Where R = average range in running speed in mph
S = sum of absolute differences
N = number of completed test runs

Westbound Test Runs

In the peak period the test runs in the westbound direction had an **R** of 0.69 mph. With this Average Range in Running Speed, the number of test runs required for a permitted margin of error of +/- 3.0 mph (with a 95 percent confidence level) is two test runs. Six test runs were made in the peak period for the westbound direction, which provides a sufficient number of test runs to achieve statistical significance. With the number of test runs made, the margin of error is further reduced below +/- 1.0 mph (with a 95 percent confidence level).

In the off peak period the westbound direction had an **R** of 3.16 mph. With this Average Range in Running Speed, the number of test runs required for a permitted margin of error of +/- 3.0 mph (with a 95 percent confidence level) is three test runs. Six test runs were made in the off peak period for the westbound direction, which provides a sufficient number of test runs to achieve statistical significance. With the number of test runs made, the margin of error is further reduced below +/- 1.0 mph (with a 95 percent confidence level).

Eastbound Test Runs

In the peak period the test runs in the eastbound direction had an **R** of 1.62 mph. With this Average Range in Running Speed, the number of test runs required for a permitted margin of error of +/- 3.0 mph (with a 95 percent confidence level) is two test runs. Six test runs were made in the peak period for the eastbound direction, which provides a sufficient number of test runs to achieve statistical significance. With the number of test runs made, the margin of error is further reduced below +/- 1.0 mph (with a 95 percent confidence level).

In the off peak period the eastbound direction had an **R** of 1.30 mph. With this Average Range in Running Speed, the number of test runs required for a permitted margin of error of +/- 3.0 mph (with a 95 percent confidence level) is two test runs. Six test runs were made in the off peak period for the eastbound direction, which provides a sufficient number of test runs to achieve statistical significance. With the number of test runs made, the margin of error is further reduced below +/- 1.0 mph (with a 95 percent confidence level).

Table 1 provides a summary of the travel time data collected by direction during the study periods.

Table 1: Summary of Travel Time Test Runs
Hammock Dunes Parkway, ICWW Bridge

Direction	Period	Time	Distance (miles)	Average Travel Time (mins)	Average Congested Time (mins)	Average Travel Speed (mph)	Average Running Speed (mph)
Westbound	Peak	4:15-5:15 p.m.	0.74	1.09	0.00	40.76	40.76
	Off Peak	3:15-3:45 p.m.	0.74	1.12	0.00	39.59	39.59
Eastbound	Peak	4:15-5:15 p.m.	0.74	1.26	0.20	35.19	41.67
	Off Peak	3:15-3:45 p.m.	0.74	1.23	0.18	35.88	42.15

Level of Service (LOS) Analyses:

In order to be consistent with the methodologies utilized in the 2009 LOS analysis, the methodology contained in the Transportation Research Board's (TRB) *Highway Capacity Manual (HCM) 2000* was utilized to determine the 2011 LOS of the study segment based on average travel speed. The TRB released an updated version of the *HCM* in 2010, which includes an updated methodology for determining the LOS of a segment based on travel speed. Therefore, KHA also performed the LOS analysis utilizing the updated methodology contained in the *HCM 2010* for the study segment. Summaries of the LOS analyses using both the *HCM 2000* and *HCM 2010* methodologies are provided below.

HCM 2000 Methodology

The methodology contained in the *HCM 2000* was used to determine the LOS of the study segment based on average travel speed. The ICWW Bridge on Hammock Dunes Parkway is classified as an urban street, class II (suburban minor arterial). The average travel speed experienced on urban streets is used to measure operating LOS. The average travel speed threshold for each LOS is shown in the table below.

Table 2: Urban Street LOS, Class II

LOS	Average Travel Speed (mph)
A	>35
B	>28-35
C	>22-28
D	>17-22
E	>13-17
F	≤13

Source: *Highway Capacity Manual 2000*, Exhibit 15-2

The LOS of the ICWW Bridge on Hammock Dunes Parkway was determined by comparing the LOS thresholds in the table above to the Average Travel Speed, as collected during the travel time and delay study. Each direction (eastbound and westbound) was found to operate at LOS A for both the peak and off peak periods. Table 3 summarizes the LOS determinations.

Table 3: Summary of HCM 2000 LOS Determination
Hammock Dunes Parkway, ICWW Bridge

Direction	Period	Time	Average Travel Speed (mph)	LOS
Westbound	Peak	4:15-5:15 p.m.	40.76	A
	Off Peak	3:15-3:45 p.m.	39.59	A
Eastbound	Peak	4:15-5:15 p.m.	35.19	A
	Off Peak	3:15-3:45 p.m.	35.88	A

HCM 2010 Methodology

The methodology contained in the *Highway Capacity Manual 2010* was also utilized to determine the LOS of the study segment. Using this methodology, the study segment LOS is dependent on two factors: (1) Travel Speed as a percentage of Base Free-Flow Speed; and (2) the Volume-to-Capacity (V/C) Ratio for the through movement at the downstream boundary intersection. The LOS is determined by the Travel Speed if the boundary intersection V/C ratio is lesser than or equal to 1.0. However, if the boundary intersection V/C ratio is greater than 1.0 then the study segment is determined to operate at LOS F regardless of the Travel Speed. Since the ICWW Bridge on Hammock Dunes Parkway does not have any traffic control at either of the ends of the bridge, the V/C ratio was assumed to be less than 1.0 for the LOS analysis, therefore the LOS was determined by the Travel Speed. The threshold for each LOS, assuming a boundary intersection V/C ratio lesser than or equal to 1.0, is shown in the table below.

Table 4: LOS for Volume-to-Capacity Ratio $\leq$ 1.0

LOS	Travel Speed as a Percentage of Base Free-Flow Speed (%)	LOS
A	> 85	A
B	> 67-85	B
C	> 50-67	C
D	> 40-50	D
E	> 30-40	E
F	$\leq$30	F

Source: *Highway Capacity Manual 2010*, Exhibit 17-2

The LOS of the ICWW Bridge on Hammock Dunes Parkway was determined by comparing the LOS thresholds to the Travel Speed, as calculated from the data

collected during the travel time and delay study, as a percentage of Base Free-Flow Speed. The Base Free-Flow Speed is calculated utilizing the following equation:

$$S_{fo} = S_0 + f_{CS} + f_A$$

where

S_{fo} = base free-flow speed (mph),

S_0 = speed constant (mph),

f_{CS} = adjustment for cross section (mph), and

f_A = adjustment for access points (mph)

Exhibit 17-11 of the *HCM 2010* provides the speed constant and adjustment factors. Utilizing the data detailed above, each direction (eastbound and westbound) was determined to operate at LOS A for both the peak and off-peak periods. Table 5 summarizes the LOS determinations.

Table 5: Summary of HCM 2010 LOS Determination
Hammock Dunes Parkway, ICWW Bridge

Direction	Period	Time	Average Travel Speed (mph)	Base Free Flow Speed (mph)	Travel Speed / Base Free-Flow Speed (%)	LOS
Westbound	Peak	4:15-5:15 p.m.	40.76	40.30	101.1%	A
	Off-Peak	3:15-3:45 p.m.	39.59	40.30	98.2%	A
Eastbound	Peak	4:15-5:15 p.m.	35.19	40.30	87.3%	A
	Off-Peak	3:15-3:45 p.m.	35.88	40.30	89.0%	A

ICWW Bridge LOS Summary

As detailed above, the ICWW Bridge, located on Hammock Dunes Parkway, was found to operate at LOS A in both the eastbound and westbound directions. This finding is based upon the data collected on October 4th, 2011. This conclusion is also based on the accepted methodologies for measuring average travel speed and LOS contained in the FDOT's *MUTS* manual, the TRB's *HCM 2000*, and the TRB's *HCM 2010*. This updated finding, based on the 2011 data collected, is similar to the LOS A determination summarized in the July 2009 analysis for the Hammock Dunes Parkway ICWW Bridge.

DO Condition 4.1.b requires commencement of design activities for the addition of two lanes to the Hammock Dunes Parkway ICWW Bridge three years before LOS C is predicted to be reached on the existing two-lane bridge. As determined in 2009 and in this technical letter for 2011, the existing two-lane bridge is operating at LOS A. KHA conducted an evaluation of the growth trends utilizing the most recent five and ten years of count data from the bridge (see growth trend analyses contained in Attachment C). The trend analysis demonstrates that traffic has increased by a growth rate of approximately negative 3.8 percent and positive 0.6 percent per year over the five and ten year periods, respectively (2007 through 2011 counts and 2002 through 2011 counts). Based on these negative to slightly positive growth rates, the LOS A operating condition on the bridge from 2009 through present conditions, and the fact that the two-lane segment has not degraded below LOS A, KHA believes, based upon our professional opinion, that an LOS C operating condition on the bridge will not occur for the foreseeable future, let alone, over the three year horizon specified in the DO condition. Therefore, neither commencement of design nor the widening of the bridge is warranted based on DO Condition 4.1.b.

PALM HARBOR PARKWAY ANALYSIS

KHA evaluated Palm Harbor Parkway, from Clubhouse Drive to Florida Park Drive, to determine if the thresholds in DO Condition 4.7 had been met. Specifically, DO Condition 4.7 requires the four-laning of this segment of roadway when existing traffic volumes exceed 10,000 average daily trips (ADT) on the segment. Additionally, commencement of the design and pre-construction activities for the four-laning shall occur when traffic on the segment reaches 8,000 ADT.

KHA obtained the most recent count for the Palm Harbor Parkway segment that was conducted by the City of Palm Coast on February 17, 2011. Based on that count, the average ADT observed was 4,700 vehicles (see Attachment D for the count data).

KHA also conducted a growth trend analysis using the available historic count data. The study segment of Palm Harbor Parkway has count data available beginning in 2004. Therefore, a growth trend analysis was developed for eight years of count data (2004 through 2011 counts). The trend analysis demonstrated a negative traffic growth trend of approximately 2.6 percent per year (see growth trend analysis contained in Attachment E). Based on the observed 2011 ADT of 4,700 vehicles and the historic negative growth trend it is not anticipated that the 8,000 or 10,000 ADT thresholds in DO Condition 4.7 for the study segment of Palm Harbor Parkway will be met in the foreseeable future.

CONCLUSION

As detailed in the sections above, the ICWW Bridge, located on Hammock Dunes Parkway, was found to operate at LOS A in both the eastbound and westbound directions. In addition, based on the historic growth trend analyses, the ICWW Bridge is not anticipated to operate at LOS C for the foreseeable future. These findings and conclusions are based upon the 2009 and 2011 LOS analysis study results that were obtained using the accepted methodologies for measuring average travel speed and LOS contained in the FDOT's *MUTS* manual, the TRB's *HCM 2000*, and the TRB's *HCM 2010*.

In addition, traffic on the segment of Palm Harbor Parkway from Clubhouse Drive to Florida Park Drive is well below the thresholds contained in DO Condition 4.7. Therefore, the requirements for the design and construction of four lanes for this study segment are not currently required. Based on the traffic growth trend analysis, it is anticipated that the DO thresholds will not be met for some time.

Please do not hesitate to contact me with any questions pertaining to the analyses contained in this technical letter.

Very truly yours,

KIMLEY-HORN AND ASSOCIATES, INC.

William J. Schilling Jr., P.E.
Vice President

Attachments

ATTACHMENT A

Hammock Dunes Parkway ICWW Bridge Count Data

Hammock Dunes Parkway
ICWW Bridge
October 4, 2011

Begin Time	EB	WB	Sum Both Directions	Hourly Sum
00:00	1	4	5	
00:15	6	3	9	
00:30	4	2	6	
00:45	2	1	3	23
01:00	2	1	3	21
01:15	3	0	3	15
01:30	1	2	3	12
01:45	0	2	2	11
02:00	1	1	2	10
02:15	1	0	1	8
02:30	3	2	5	10
02:45	3	1	4	12
03:00	1	1	2	12
03:15	0	2	2	13
03:30	2	4	6	14
03:45	2	4	6	16
04:00	2	0	2	16
04:15	0	2	2	16
04:30	0	2	2	12
04:45	4	2	6	12
05:00	2	4	6	16
05:15	5	1	6	20
05:30	19	10	29	47
05:45	32	12	44	85
06:00	8	18	26	105
06:15	19	20	39	138
06:30	26	38	64	173
06:45	41	38	79	208
07:00	30	46	76	258
07:15	28	67	95	314
07:30	50	69	119	369
07:45	62	74	136	426
08:00	59	84	143	493
08:15	56	57	113	511
08:30	66	76	142	534
08:45	81	70	151	549
09:00	52	78	130	536
09:15	62	70	132	555
09:30	48	82	130	543
09:45	72	71	143	535
10:00	54	78	132	537
10:15	55	62	117	522
10:30	62	68	130	522
10:45	64	74	138	517
11:00	49	92	141	526
11:15	56	56	112	521
11:30	62	71	133	524
11:45	66	84	150	536
12:00	45	80	125	520
12:15	68	96	164	572
12:30	56	84	140	579
12:45	70	72	142	571
13:00	69	82	151	597
13:15	68	78	146	579
13:30	60	86	146	585
13:45	67	76	143	586
14:00	57	92	149	584
14:15	59	86	145	583
14:30	66	84	150	587
14:45	80	85	165	609
15:00	55	104	159	619
15:15	52	88	140	614
15:30	62	91	153	617
15:45	81	89	170	622
16:00	62	81	143	606
16:15	**76**	**90**	**166**	632
16:30	**53**	**107**	**160**	639
16:45	**61**	**82**	**143**	612
17:00	**64**	**107**	**171**	**640**
17:15	64	82	146	620
17:30	64	84	148	608
17:45	54	66	120	585
18:00	53	74	127	541
18:15	46	63	109	504
18:30	28	54	82	438
18:45	46	44	90	408
19:00	37	38	75	356
19:15	38	30	68	315
19:30	28	33	61	294
19:45	32	32	64	268
20:00	35	25	60	253
20:15	30	32	62	247
20:30	18	29	47	233
20:45	29	27	56	225
21:00	12	11	23	188
21:15	18	18	36	162
21:30	17	13	30	145
21:45	9	11	20	109
22:00	17	16	33	119
22:15	9	20	29	112
22:30	12	17	29	111
22:45	6	10	16	107
23:00	7	15	22	96
23:15	7	8	15	82
23:30	1	5	6	59
23:45	4	2	6	49
TOTAL	**3,376**	**4,305**	**7,681**	

Kimley-Horn and Associates, Inc.

Traffic Count Analysis Summary Sheet
Hammock Dunes Parkway ICWW Bridge

P.M. Peak Hour (4:15 p.m. to 5:15 p.m.)

	Date of Count (2011)
Peak Hour Total	10/4 (Tue.)
Eastbound	254
Westbound	386
Total	640
Seasonal Factor (Source: FDOT County-wide)	0.99
Axle Adjustment Factor =	0.99
Peak Hour Volume =	627

Daily Traffic

Daily Total	10/4 (Tue.)
Eastbound	3,376
Westbound	4,305
	7,681
P.M. Peak to Daily Ratio=	8.3%
3-yr average MOCF * =	0.94
$K_{pm\ pk}$ =	**8.9%**
$D_{pm\ pk}$ (westbound)**=**	**60.3%**
Seasonal Factor (Source: FDOT County-wide)	0.99
Axle Adjustment Factor =	0.99
Average Annual Daily Traffic (AADT) =	**7,500**

* Average Seasonal Factor (MOCF) for past three years that data is available for 2008, 2009, and 2010 (0.92, 0.94, 0.96 respectively).

ATTACHMENT B

Hammock Dunes Parkway ICWW Bridge Travel Time Data

Collected Data

Travel Time and Delay Study

Hammock Dunes Pkwy

From Toll Plaza to Camino del Mar

Route	Distance (mi)	Travel Time (min)	Avg Speed (mph)	Running Speed (mph)	Absolute Difference in Running Speed (mph)	Number of Stops	Start Time	Stopped Time (min)	Congested Time (min)
Peak WB	0.73	1.07	40.93	40.93	0.00	0	10/4/2011 16:21	0	0
Peak WB	0.74	1.08	41.11	41.11	0.18	0	10/4/2011 16:29	0	0
Peak WB	0.74	1.07	41.50	41.50	0.39	0	10/4/2011 16:36	0	0
Peak WB	0.74	1.07	41.50	41.50	0.00	0	10/4/2011 16:42	0	0
Peak WB	0.73	1.07	40.93	40.93	0.57	0	10/4/2011 16:47	0	0
Peak WB	0.74	1.15	38.61	38.61	2.32	0	10/4/2011 16:52	0	0
Totals (6 runs)	4.42	6.51			3.46			0	0
Average	**0.74**	**1.09**	**40.76**	**40.76**	**0.69**			**0.00**	**0.00**

Collected Data

Travel Time and Delay Study

Hammock Dunes Pkwy

From Toll Plaza to Camino del Mar

Route	Distance (mi)	Travel Time (min)	Avg Speed (mph)	Running Speed (mph)	Absolute Difference in Running Speed (mph)	Number of Stops	Start Time	Stopped Time (min)	Congested Time (min)
Off-Peak WB	0.74	1.10	40.36	40.36	0.00	0	10/4/2011 15:18	0	0
Off-Peak WB	0.74	1.25	35.52	35.52	4.84	0	10/4/2011 15:24	0	0
Off-Peak WB	0.74	1.12	39.64	39.64	4.12	0	10/4/2011 15:29	0	0
Off-Peak WB	0.74	1.17	37.95	37.95	1.69	0	10/4/2011 15:35	0	0
Off-Peak WB	0.73	1.07	40.93	40.93	2.98	0	10/4/2011 15:41	0	0
Off-Peak WB	0.74	1.03	43.11	43.11	2.18	0	10/4/2011 15:47	0	0
Totals (6 runs)	4.43	6.74			15.81			0	0
Average	**0.74**	**1.12**	**39.59**	**39.59**	**3.16**			**0.00**	**0.00**

Collected Data

Travel Time and Delay Study

Hammock Dunes Pkwy

From Toll Plaza to Camino del Mar

Route	Distance (mi)	Travel Time (min)	Avg Speed (mph)	Running Speed (mph)	Absolute Difference in Running Speed (mph)	Number of Stops	Start Time	Stopped Time (min)	Congested Time (min)
Peak EB	0.74	1.33	33.38	38.61	0.00	1	10/4/2011 16:19	0.03	0.18
Peak EB	0.74	1.25	35.52	42.29	3.68	1	10/4/2011 16:24	0.08	0.2
Peak EB	0.74	1.23	36.10	43.11	0.82	1	10/4/2011 16:32	0.07	0.2
Peak EB	0.74	1.25	35.52	43.53	0.42	1	10/4/2011 16:39	0.07	0.23
Peak EB	0.73	1.22	35.90	42.12	1.41	1	10/4/2011 16:44	0.05	0.18
Peak EB	0.74	1.28	34.69	40.36	1.76	1	10/4/2011 16:50	0.05	0.18
Totals (6 runs)	4.43	7.56			8.09			0.35	1.17
Average	**0.74**	**1.26**	**35.19**	**41.67**	**1.62**			**0.06**	**0.20**

Collected Data

Travel Time and Delay Study

Hammock Dunes Pkwy

From Toll Plaza to Camino del Mar

Route	Distance (mi)	Travel Time (min)	Avg Speed (mph)	Running Speed (mph)	Absolute Difference in Running Speed (mph)	Number of Stops	Start Time	Stopped Time (min)	Congested Time (min)
Off-Peak EB	0.74	1.27	34.96	40.36	0.00	1	10/4/2011 15:16	0.05	0.17
Off-Peak EB	0.74	1.25	35.52	41.50	1.14	1	10/4/2011 15:21	0.07	0.18
Off-Peak EB	0.73	1.23	35.61	41.71	0.21	1	10/4/2011 15:27	0.03	0.18
Off-Peak EB	0.73	1.25	35.04	40.93	0.78	1	10/4/2011 15:32	0.07	0.18
Off-Peak EB	0.74	1.25	35.52	43.11	2.18	1	10/4/2011 15:39	0.05	0.22
Off-Peak EB	0.74	1.15	38.61	45.31	2.20	1	10/4/2011 15:44	0.07	0.17
Totals (6 runs)	4.42	7.40			6.51			0.34	1.1
Average	**0.74**	**1.23**	**35.88**	**42.15**	**1.30**			**0.06**	**0.18**

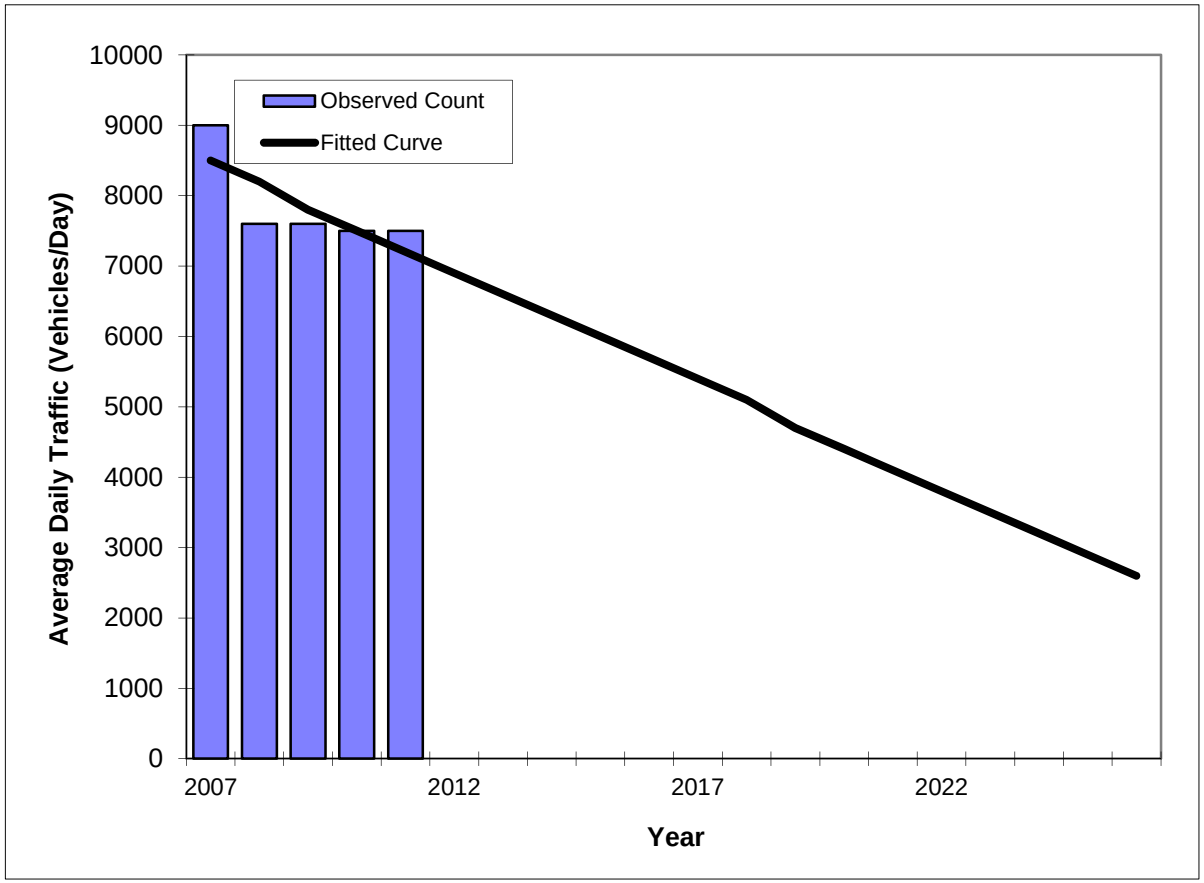
ATTACHMENT C

Hammock Dunes Parkway ICWW Bridge Five and Ten Year Growth Trend Summary

TRAFFIC TRENDS

Palm Coast Pkwy -- East of Palm Harbor Parkway

County:	Flagler
Station #:	2880
Highway:	Palm Coast Pkwy



Year	Traffic (ADT/AADT) Count*	Trend**
2007	9000	8500
2008	7600	8200
2009	7600	7800
2010	7500	7500
2011	7500	7200
2016 Opening Year Trend		
2016	N/A	5700
2021 Mid-Year Trend		
2021	N/A	4100
2026 Design Year Trend		
2026	N/A	2600
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

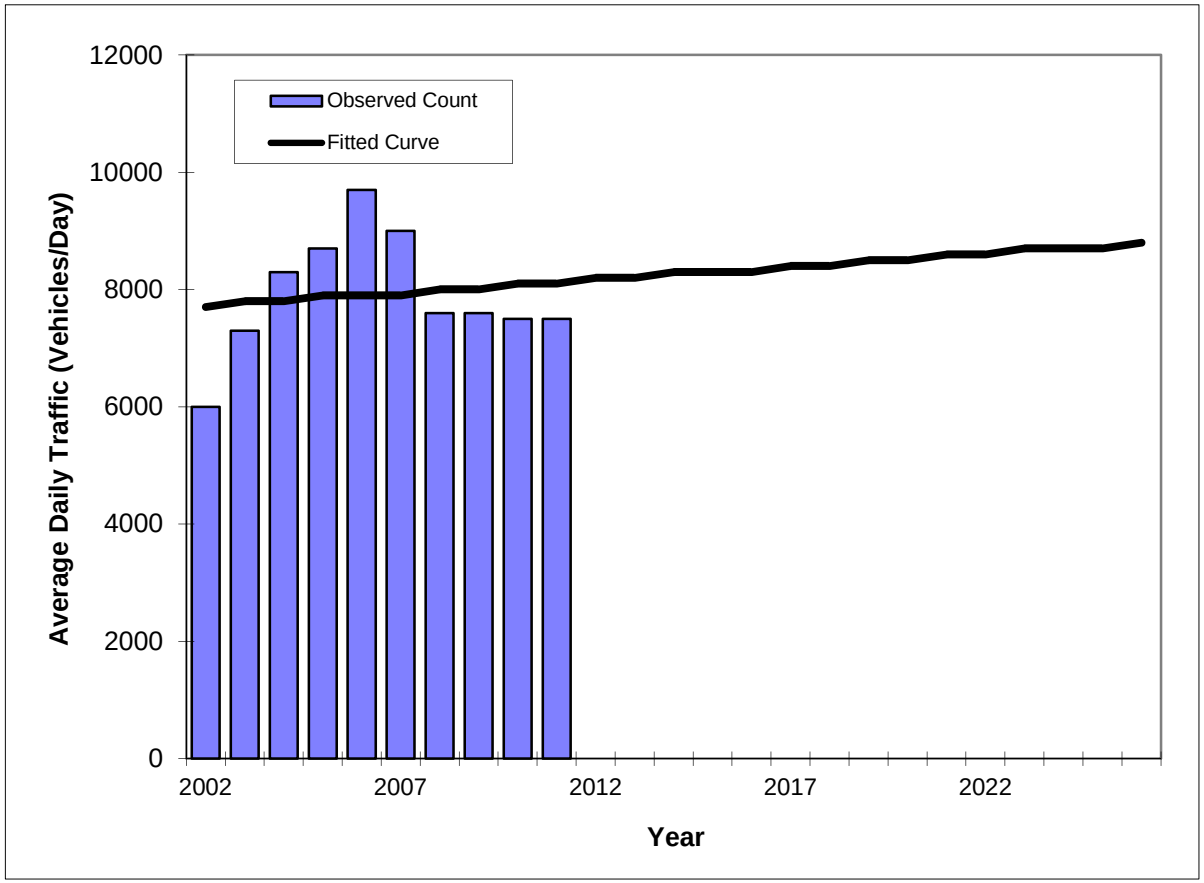
** Annual Trend Increase:	-310
Trend R-squared:	56.8%
Trend Annual Historic Growth Rate:	-3.82%
Trend Growth Rate (2011 to Design Year):	-4.26%
Printed:	21-Oct-11

Straight Line Growth Option

TRAFFIC TRENDS

Hammock Dunes Pkwy -- ICWW Bridge

County:	Flagler
Station #:	2880
Highway:	Hammock Dunes Pkwy



Year	Traffic (ADT/AADT) Count*	Trend**
2002	6000	7700
2003	7300	7800
2004	8300	7800
2005	8700	7900
2006	9700	7900
2007	9000	7900
2008	7600	8000
2009	7600	8000
2010	7500	8100
2011	7500	8100
2016 Opening Year Trend		
2016	N/A	8300
2021 Mid-Year Trend		
2021	N/A	8600
2026 Design Year Trend		
2026	N/A	8800
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

** Annual Trend Increase:	45
Trend R-squared:	1.7%
Trend Annual Historic Growth Rate:	0.58%
Trend Growth Rate (2011 to Design Year):	0.58%
Printed:	18-Oct-11

Straight Line Growth Option

ATTACHMENT D

Palm Harbor Parkway Count Data

Palm Harbor Parkway
Florida Park Dr to Club House Dr
February 17, 2011

Begin Time	Sum Both Directions	Hourly Sum
0:00	4	
00:15	11	
00:30	3	
00:45	4	22
01:00	2	20
01:15	1	10
01:30	4	11
01:45	3	10
02:00	1	9
02:15	3	11
02:30	0	7
02:45	2	6
03:00	1	6
03:15	3	6
03:30	0	6
03:45	3	7
04:00	3	9
04:15	0	6
04:30	3	9
04:45	3	9
05:00	2	8
05:15	9	17
05:30	7	21
05:45	14	32
06:00	11	41
06:15	14	46
06:30	22	61
06:45	35	82
07:00	51	122
07:15	67	175
07:30	58	211
07:45	73	249
08:00	76	274
08:15	63	270
08:30	63	275
08:45	94	296
09:00	82	302
09:15	90	329
09:30	97	363
09:45	80	349
10:00	82	349
10:15	73	332
10:30	66	301
10:45	92	313
11:00	94	325
11:15	90	342
11:30	96	372
11:45	105	385
12:00	87	378
12:15	104	392
12:30	83	379
12:45	85	359
13:00	75	347
13:15	75	318
13:30	84	319
13:45	91	325
14:00	76	326
14:15	89	340
14:30	97	353
14:45	106	368
15:00	101	393
15:15	79	383
15:30	97	383
15:45	108	385
16:00	116	400
16:15	105	426
16:30	88	417
16:45	101	410
17:00	**101**	395
17:15	**151**	441
17:30	**100**	453
17:45	**109**	**461**
18:00	91	451
18:15	73	373
18:30	88	361
18:45	76	328
19:00	68	305
19:15	54	286
19:30	42	240
19:45	37	201
20:00	38	171
20:15	36	153
20:30	42	153
20:45	44	160
21:00	55	177
21:15	38	179
21:30	29	166
21:45	21	143
22:00	25	113
22:15	16	91
22:30	20	82
22:45	25	86
23:00	16	77
23:15	17	78
23:30	11	69
23:45	11	55
TOTAL	**5,041**	

Kimley-Horn and Associates, Inc.

Traffic Count Analysis Summary Sheet
Palm Harbor Parkway - Florida Park Dr to Club House Dr

P.M. Peak Hour (5:00 p.m. to 6:00 p.m.)		Date of Count (2011)
	Peak Hour Total	2/17 (Thurs.)
	Eastbound	-
	Westbound	-
	Total	461
	Seasonal Factor (Source: FDOT County-wide)	0.98
	Axle Adjustment Factor =	0.95
	Peak Hour Volume =	429
Daily Traffic	Daily Total	5/18 (Wed.)
	Eastbound	-
	Westbound	-
		5,041
	P.M. Peak to Daily Ratio=	9.1%
	3-yr average MOCF * =	0.96
	$K_{pm\ pk}$ =	9.79%
	$D_{pm\ pk}$ (westbound)=	-
	Seasonal Factor (Source: FDOT County-wide)	0.98
	Axle Adjustment Factor =	0.95
	Average Annual Daily Traffic (AADT) =	**4,700**

* Average Seasonal Factor (MOCF) for past three years that data is available for 2008, 2009, and 2010 (0.92, 0.94, 0.96 respectively).

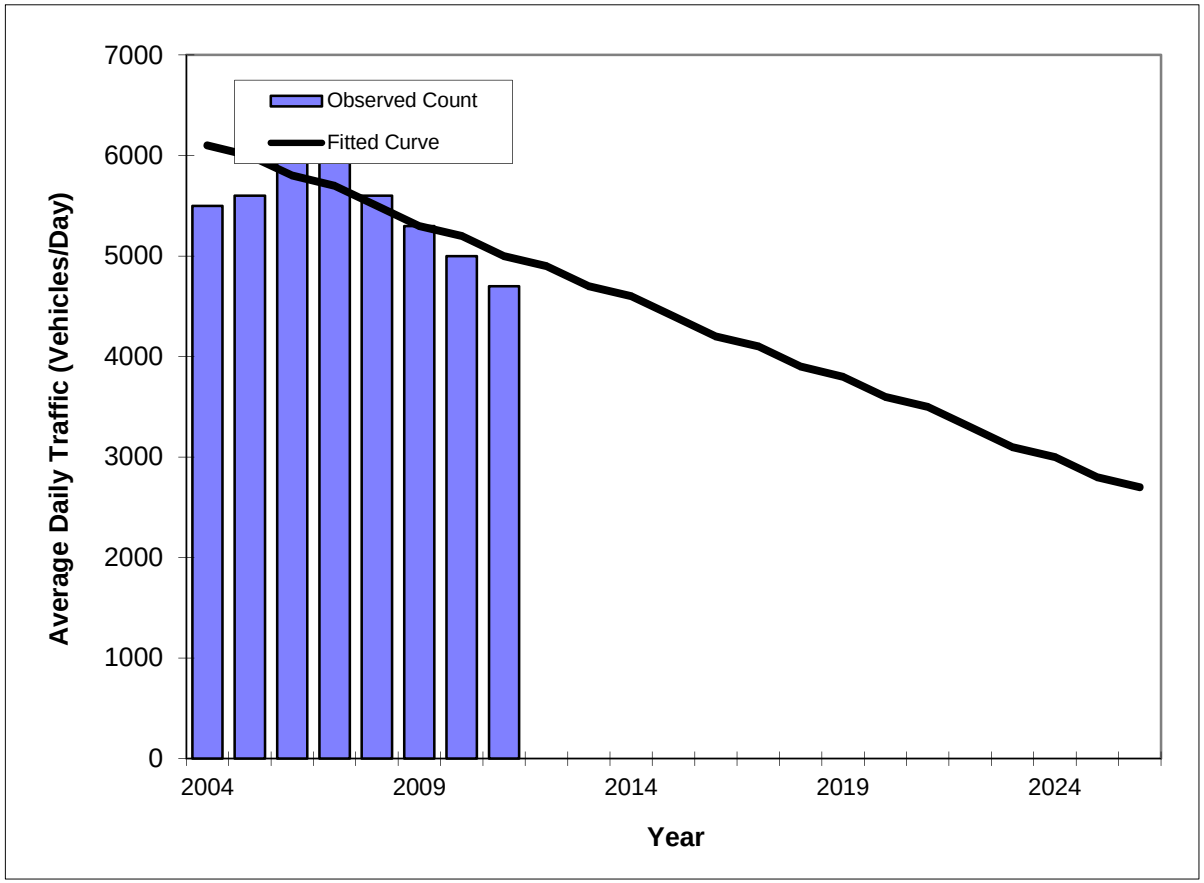
ATTACHMENT E

Palm Harbor Parkway Eight Year Growth Trend Summary

TRAFFIC TRENDS

Palm Harbor Pkwy -- Florida Park Drive to Club House Drive

County:	Flagler
Station #:	2910
Highway:	Palm Harbor Pkwy



Year	Traffic (ADT/AADT) Count*	Trend**
2004	5500	6100
2005	5600	6000
2006	6600	5800
2007	6300	5700
2008	5600	5500
2009	5300	5300
2010	5000	5200
2011	4700	5000
2016 Opening Year Trend		
2016	N/A	4200
2021 Mid-Year Trend		
2021	N/A	3500
2026 Design Year Trend		
2026	N/A	2700
TRANPLAN Forecasts/Trends		

*Axle-Adjusted

** Annual Trend Increase:	-157
Trend R-squared:	37.6%
Trend Annual Historic Growth Rate:	-2.58%
Trend Growth Rate (2011 to Design Year):	-3.07%
Printed:	18-Oct-11

Straight Line Growth Option

ATTACHMENT C

2011 Roadway Link Count Data

Kimley-Horn and Associates, Inc.

Traffic Count Analysis Summary Sheet
Hammock Dunes Parkway ICWW Bridge

P.M. Peak Hour (4:15 p.m. to 5:15 p.m.)

	Date of Count (2011)
Peak Hour Total	10/4 (Tue.)
Eastbound	254
Westbound	386
Total	640
Seasonal Factor (Source: FDOT County-wide)	0.99
Axle Adjustment Factor =	0.99
Peak Hour Volume =	627

Daily Traffic

Daily Total	10/4 (Tue.)
Eastbound	3,376
Westbound	4,305
	7,681
P.M. Peak to Daily Ratio=	8.3%
3-yr average MOCF * =	0.94
$K_{pm\ pk}$ =	**8.9%**
$D_{pm\ pk}$ (westbound)**=**	**60.3%**
Seasonal Factor (Source: FDOT County-wide)	0.99
Axle Adjustment Factor =	0.99
Average Annual Daily Traffic (AADT) =	**7,500**

* Average Seasonal Factor (MOCF) for past three years that data is available for 2008, 2009, and 2010 (0.92, 0.94, 0.96 respectively).

Hammock Dunes Parkway
ICWW Bridge
October 4, 2011

Begin Time	EB	WB	Sum Both Directions	Hourly Sum
00:00	1	4	5	
00:15	6	3	9	
00:30	4	2	6	
00:45	2	1	3	23
01:00	2	1	3	21
01:15	3	0	3	15
01:30	1	2	3	12
01:45	0	2	2	11
02:00	1	1	2	10
02:15	1	0	1	8
02:30	3	2	5	10
02:45	3	1	4	12
03:00	1	1	2	12
03:15	0	2	2	13
03:30	2	4	6	14
03:45	2	4	6	16
04:00	2	0	2	16
04:15	0	2	2	16
04:30	0	2	2	12
04:45	4	2	6	12
05:00	2	4	6	16
05:15	5	1	6	20
05:30	19	10	29	47
05:45	32	12	44	85
06:00	8	18	26	105
06:15	19	20	39	138
06:30	26	38	64	173
06:45	41	38	79	208
07:00	30	46	76	258
07:15	28	67	95	314
07:30	50	69	119	369
07:45	62	74	136	426
08:00	59	84	143	493
08:15	56	57	113	511
08:30	66	76	142	534
08:45	81	70	151	549
09:00	52	78	130	536
09:15	62	70	132	555
09:30	48	82	130	543
09:45	72	71	143	535
10:00	54	78	132	537
10:15	55	62	117	522
10:30	62	68	130	522
10:45	64	74	138	517
11:00	49	92	141	526
11:15	56	56	112	521
11:30	62	71	133	524
11:45	66	84	150	536
12:00	45	80	125	520
12:15	68	96	164	572
12:30	56	84	140	579
12:45	70	72	142	571
13:00	69	82	151	597
13:15	68	78	146	579
13:30	60	86	146	585
13:45	67	76	143	586
14:00	57	92	149	584
14:15	59	86	145	583
14:30	66	84	150	587
14:45	80	85	165	609
15:00	55	104	159	619
15:15	52	88	140	614
15:30	62	91	153	617
15:45	81	89	170	622
16:00	62	81	143	606
16:15	**76**	**90**	**166**	632
16:30	**53**	**107**	**160**	639
16:45	**61**	**82**	**143**	612
17:00	**64**	**107**	**171**	**640**
17:15	64	82	146	620
17:30	64	84	148	608
17:45	54	66	120	585
18:00	53	74	127	541
18:15	46	63	109	504
18:30	28	54	82	438
18:45	46	44	90	408
19:00	37	38	75	356
19:15	38	30	68	315
19:30	28	33	61	294
19:45	32	32	64	268
20:00	35	25	60	253
20:15	30	32	62	247
20:30	18	29	47	233
20:45	29	27	56	225
21:00	12	11	23	188
21:15	18	18	36	162
21:30	17	13	30	145
21:45	9	11	20	109
22:00	17	16	33	119
22:15	9	20	29	112
22:30	12	17	29	111
22:45	6	10	16	107
23:00	7	15	22	96
23:15	7	8	15	82
23:30	1	5	6	59
23:45	4	2	6	49
TOTAL	**3,376**	**4,305**	**7,681**	

ALL TRAFFIC DATA SERVICES, INC

4301 Confederate Point Road #10
Jacksonville, FL 32210
904.707.8618

Site Code: 1
Station ID: 1
PALM COAST PARKWAY EAST OF
PALM HARBOR PARKWAY
Latitude: 0' 0.000 Undefined
Longitude: 0' 0.000 Undefined

Start	04-Oct-11	EB		Hour Totals		WB		Hour Totals		Combined Totals	
Time	Tue	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
12:00		1	45			4	80				
12:15		6	68			3	96				
12:30		4	56			2	84				
12:45		2	70	13	239	1	72	10	332	23	571
01:00		2	69			1	82				
01:15		3	68			0	78				
01:30		1	60			2	86				
01:45		0	67	6	264	2	76	5	322	11	586
02:00		1	57			1	92				
02:15		1	59			0	86				
02:30		3	66			2	84				
02:45		3	80	8	262	1	85	4	347	12	609
03:00		1	55			1	104				
03:15		0	52			2	88				
03:30		2	62			4	91				
03:45		2	81	5	250	4	89	11	372	16	622
04:00		2	62			0	81				
04:15		0	76			2	90				
04:30		0	53			2	107				
04:45		4	61	6	252	2	82	6	360	12	612
05:00		2	64			4	107				
05:15		5	64			1	82				
05:30		19	64			10	84				
05:45		32	54	58	246	12	66	27	339	85	585
06:00		8	53			18	74				
06:15		19	46			20	63				
06:30		26	28			38	54				
06:45		41	46	94	173	38	44	114	235	208	408
07:00		30	37			46	38				
07:15		28	38			67	30				
07:30		50	28			69	33				
07:45		62	32	170	135	74	32	256	133	426	268
08:00		59	35			84	25				
08:15		56	30			57	32				
08:30		66	18			76	29				
08:45		81	29	262	112	70	27	287	113	549	225
09:00		52	12			78	11				
09:15		62	18			70	18				
09:30		48	17			82	13				
09:45		72	9	234	56	71	11	301	53	535	109
10:00		54	17			78	16				
10:15		55	9			62	20				
10:30		62	12			68	17				
10:45		64	6	235	44	74	10	282	63	517	107
11:00		49	7			92	15				
11:15		56	7			56	8				
11:30		62	1			71	5				
11:45		66	4	233	19	84	2	303	30	536	49
Total		1324	2052			1606	2699			2930	4751
Percent		39.2%	60.8%			37.3%	62.7%			38.1%	61.9%
Grand Total		1324	2052			1606	2699			2930	4751
Percent		39.2%	60.8%			37.3%	62.7%			38.1%	61.9%

ADT ADT 7,681 AADT 7,681

Kimley-Horn and Associates, Inc.

Traffic Count Analysis Summary Sheet
Palm Harbor Parkway - Florida Park Dr to Club House Dr

P.M. Peak Hour (5:00 p.m. to 6:00 p.m.)		Date of Count (2011)
	Peak Hour Total	2/17 (Thurs.)
	Eastbound	-
	Westbound	-
	Total	461
	Seasonal Factor (Source: FDOT County-wide)	0.98
	Axle Adjustment Factor =	0.95
	Peak Hour Volume =	429
Daily Traffic	Daily Total	5/18 (Wed.)
	Eastbound	-
	Westbound	-
		5,041
	P.M. Peak to Daily Ratio=	9.1%
	3-yr average MOCF * =	0.96
	$K_{pm\ pk}$ =	9.79%
	$D_{pm\ pk}$ (westbound)=	-
	Seasonal Factor (Source: FDOT County-wide)	0.98
	Axle Adjustment Factor =	0.95
	Average Annual Daily Traffic (AADT) =	**4,700**

* Average Seasonal Factor (MOCF) for past three years that data is available for 2008, 2009, and 2010 (0.92, 0.94, 0.96 respectively).

Palm Harbor Parkway
Florida Park Dr to Club House Dr
February 17, 2011

Begin Time	Sum Both Directions	Hourly Sum
0:00	4	
00:15	11	
00:30	3	
00:45	4	22
01:00	2	20
01:15	1	10
01:30	4	11
01:45	3	10
02:00	1	9
02:15	3	11
02:30	0	7
02:45	2	6
03:00	1	6
03:15	3	6
03:30	0	6
03:45	3	7
04:00	3	9
04:15	0	6
04:30	3	9
04:45	3	9
05:00	2	8
05:15	9	17
05:30	7	21
05:45	14	32
06:00	11	41
06:15	14	46
06:30	22	61
06:45	35	82
07:00	51	122
07:15	67	175
07:30	58	211
07:45	73	249
08:00	76	274
08:15	63	270
08:30	63	275
08:45	94	296
09:00	82	302
09:15	90	329
09:30	97	363
09:45	80	349
10:00	82	349
10:15	73	332
10:30	66	301
10:45	92	313
11:00	94	325
11:15	90	342
11:30	96	372
11:45	105	385
12:00	87	378
12:15	104	392
12:30	83	379
12:45	85	359
13:00	75	347
13:15	75	318
13:30	84	319
13:45	91	325
14:00	76	326
14:15	89	340
14:30	97	353
14:45	106	368
15:00	101	393
15:15	79	383
15:30	97	383
15:45	108	385
16:00	116	400
16:15	105	426
16:30	88	417
16:45	101	410
17:00	**101**	395
17:15	**151**	441
17:30	**100**	453
17:45	**109**	**461**
18:00	91	451
18:15	73	373
18:30	88	361
18:45	76	328
19:00	68	305
19:15	54	286
19:30	42	240
19:45	37	201
20:00	38	171
20:15	36	153
20:30	42	153
20:45	44	160
21:00	55	177
21:15	38	179
21:30	29	166
21:45	21	143
22:00	25	113
22:15	16	91
22:30	20	82
22:45	25	86
23:00	16	77
23:15	17	78
23:30	11	69
23:45	11	55
TOTAL	**5,041**	

City of Palm Coast
Vehicle Counts

VehicleCount-1326 -- English (ENU)

Datasets:

Site:	**[2910] Palm Harbor Pkwy from Florida Park Dr to Clubhouse Dr**
Direction:	7 - North bound A>B, South bound B>A. **Lane:** 0
Survey Duration:	5:35 Wednesday, February 16, 2011 => 14:30 Tuesday, February 22, 2011
Zone:	
File:	291022Feb2011.EC0 (Plus)
Identifier:	CG8653GP MC56-L5 [MC55] (c)Microcom 19Oct04
Algorithm:	Factory default (v3.21 - 15275)
Data type:	Axle sensors - Paired (Class/Speed/Count)

Profile:

Filter time:	**5:36 Wednesday, February 16, 2011 => 14:30 Tuesday, February 22, 2011**
Included classes:	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13
Speed range:	6 - 99 mph.
Direction:	North, East, South, West (bound)
Separation:	All - (Headway)
Name:	Default Profile
Scheme:	Vehicle classification (FLDOT)
Units:	Non metric (ft, mi, ft/s, mph, lb, ton)
In profile:	Vehicles = 9446 / 9452 (99.94%)

* Wednesday, February 16, 2011 - Total=4298 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
-	-	-	-	-	-	99	265	314	288	267	280	290	276	336	345	344	372	276	159	130	121	84	52	
-	-	-	-	-	-	10	55	72	65	75	78	70	70	75	67	85	90	77	57	39	30	26	12	4
-	-	-	-	-	-	17	74	88	91	62	66	70	52	86	93	78	106	79	34	24	33	16	13	11
-	-	-	-	-	4	26	67	62	72	57	84	80	85	100	89	97	94	49	35	33	31	21	14	3
-	-	-	-	-	13	46	69	92	60	73	52	70	69	75	96	84	82	71	33	34	27	21	13	4

PM Peak 1630 - 1730 (377), PM PHF=0.89

* Thursday, February 17, 2011 - Total=5041, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
22	10	6	7	9	32	82	249	296	349	313	385	359	325	368	385	410	461	328	201	160	143	86	55	
4	2	1	1	3	2	11	51	76	82	82	94	87	75	76	101	116	101	91	68	38	55	25	16	11
11	1	3	3	0	9	14	67	63	90	73	90	104	75	89	79	105	151	73	54	36	38	16	17	6
3	4	0	0	3	7	22	58	63	97	66	96	83	84	97	97	88	100	88	42	42	29	20	11	7
4	3	2	3	3	14	35	73	94	80	92	105	85	91	106	108	101	109	76	37	44	21	25	11	5

AM Peak 1130 - 1230 (392), AM PHF=0.93 PM Peak 1700 - 1800 (461), PM PHF=0.76

* Friday, February 18, 2011 - Total=90, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
29	16	20	9	11	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
11	6	8	4	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6	6	4	2	0	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
7	2	4	2	6	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
5	2	4	1	4	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 0000 - 0100 (29), AM PHF=0.66 PM Peak 1200 - 1300 (0), PM PHF=1.00

* Saturday, February 19, 2011 - Total=0, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 0000 - 0100 (0), AM PHF=1.00 PM Peak 1200 - 1300 (0), PM PHF=1.00

* Sunday, February 20, 2011 - Total=0, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 0000 - 0100 (0), AM PHF=1.00 PM Peak 1200 - 1300 (0), PM PHF=1.00

* Monday, February 21, 2011 - Total=0, 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

AM Peak 0000 - 0100 (0), AM PHF=1.00 PM Peak 1200 - 1300 (0), PM PHF=1.00

* Tuesday, February 22, 2011 - Total=0 (Incomplete) , 15 minute drops

0000	0100	0200	0300	0400	0500	0600	0700	0800	0900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	2300	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-	
0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-
0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-
0	0	0	0	0	0	0	0	0	0	0	0	0	0	-	-	-	-	-	-	-	-	-	-	-

AM Peak 0000 - 0100 (0), AM PHF=1.00

ATTACHMENT D

2010 FDOT Seasonal Factor and Axle Correction Factor Summaries

2010 PEAK SEASON FACTOR CATEGORY REPORT - REPORT TYPE: ALL
CATEGORY: 7300 FLAGLER COUNTYWIDE

MOCF: 0.96

WEEK	DATES	SF	PSCF
1	01/01/2010 - 01/02/2010	1.08	1.13
2	01/03/2010 - 01/09/2010	1.07	1.12
3	01/10/2010 - 01/16/2010	1.06	1.11
4	01/17/2010 - 01/23/2010	1.05	1.10
5	01/24/2010 - 01/30/2010	1.03	1.08
6	01/31/2010 - 02/06/2010	1.02	1.07
7	02/07/2010 - 02/13/2010	1.00	1.05
8	02/14/2010 - 02/20/2010	0.98	1.02
* 9	02/21/2010 - 02/27/2010	0.97	1.01
*10	02/28/2010 - 03/06/2010	0.97	1.01
*11	03/07/2010 - 03/13/2010	0.96	1.00
*12	03/14/2010 - 03/20/2010	0.95	0.99
*13	03/21/2010 - 03/27/2010	0.95	0.99
*14	03/28/2010 - 04/03/2010	0.95	0.99
*15	04/04/2010 - 04/10/2010	0.94	0.98
*16	04/11/2010 - 04/17/2010	0.94	0.98
*17	04/18/2010 - 04/24/2010	0.95	0.99
*18	04/25/2010 - 05/01/2010	0.96	1.00
*19	05/02/2010 - 05/08/2010	0.96	1.00
*20	05/09/2010 - 05/15/2010	0.97	1.01
*21	05/16/2010 - 05/22/2010	0.97	1.01
22	05/23/2010 - 05/29/2010	0.98	1.02
23	05/30/2010 - 06/05/2010	0.98	1.02
24	06/06/2010 - 06/12/2010	0.99	1.03
25	06/13/2010 - 06/19/2010	0.99	1.03
26	06/20/2010 - 06/26/2010	0.99	1.03
27	06/27/2010 - 07/03/2010	1.00	1.05
28	07/04/2010 - 07/10/2010	1.00	1.05
29	07/11/2010 - 07/17/2010	1.00	1.05
30	07/18/2010 - 07/24/2010	1.01	1.06
31	07/25/2010 - 07/31/2010	1.01	1.06
32	08/01/2010 - 08/07/2010	1.01	1.06
33	08/08/2010 - 08/14/2010	1.02	1.07
34	08/15/2010 - 08/21/2010	1.02	1.07
35	08/22/2010 - 08/28/2010	1.02	1.07
36	08/29/2010 - 09/04/2010	1.02	1.07
37	09/05/2010 - 09/11/2010	1.02	1.07
38	09/12/2010 - 09/18/2010	1.02	1.07
39	09/19/2010 - 09/25/2010	1.01	1.06
40	09/26/2010 - 10/02/2010	1.00	1.05
41	10/03/2010 - 10/09/2010	0.99	1.03
42	10/10/2010 - 10/16/2010	0.98	1.02
43	10/17/2010 - 10/23/2010	0.99	1.03
44	10/24/2010 - 10/30/2010	1.00	1.05
45	10/31/2010 - 11/06/2010	1.01	1.06
46	11/07/2010 - 11/13/2010	1.02	1.07
47	11/14/2010 - 11/20/2010	1.03	1.08
48	11/21/2010 - 11/27/2010	1.04	1.09
49	11/28/2010 - 12/04/2010	1.05	1.10
50	12/05/2010 - 12/11/2010	1.07	1.12
51	12/12/2010 - 12/18/2010	1.08	1.13
52	12/19/2010 - 12/25/2010	1.07	1.12
53	12/26/2010 - 12/31/2010	1.06	1.11

* PEAK SEASON

2010 WEEKLY AXLE FACTOR CATEGORY REPORT - REPORT TYPE: ALL

COUNTY: 73 - FLAGLER

WEEK	DATES	7301 FLAGLER COUNTYWIDE	7302 US1	7303 SR20	7304 SR11
1	01/01/2010 - 01/02/2010	0.95	0.95	0.94	0.91
2	01/03/2010 - 01/09/2010	0.95	0.95	0.94	0.91
3	01/10/2010 - 01/16/2010	0.95	0.95	0.94	0.91
4	01/17/2010 - 01/23/2010	0.95	0.95	0.94	0.91
5	01/24/2010 - 01/30/2010	0.95	0.95	0.94	0.91
6	01/31/2010 - 02/06/2010	0.95	0.95	0.94	0.91
7	02/07/2010 - 02/13/2010	0.95	0.95	0.94	0.91
8	02/14/2010 - 02/20/2010	0.95	0.95	0.94	0.91
9	02/21/2010 - 02/27/2010	0.95	0.95	0.94	0.91
10	02/28/2010 - 03/06/2010	0.95	0.95	0.94	0.91
11	03/07/2010 - 03/13/2010	0.95	0.95	0.94	0.91
12	03/14/2010 - 03/20/2010	0.95	0.95	0.94	0.91
13	03/21/2010 - 03/27/2010	0.95	0.95	0.94	0.91
14	03/28/2010 - 04/03/2010	0.95	0.95	0.94	0.91
15	04/04/2010 - 04/10/2010	0.95	0.95	0.94	0.91
16	04/11/2010 - 04/17/2010	0.95	0.95	0.94	0.91
17	04/18/2010 - 04/24/2010	0.95	0.95	0.94	0.91
18	04/25/2010 - 05/01/2010	0.95	0.95	0.94	0.91
19	05/02/2010 - 05/08/2010	0.95	0.95	0.94	0.91
20	05/09/2010 - 05/15/2010	0.94	0.94	0.94	0.91
21	05/16/2010 - 05/22/2010	0.94	0.94	0.94	0.91
22	05/23/2010 - 05/29/2010	0.94	0.94	0.94	0.91
23	05/30/2010 - 06/05/2010	0.94	0.94	0.94	0.91
24	06/06/2010 - 06/12/2010	0.94	0.94	0.94	0.91
25	06/13/2010 - 06/19/2010	0.94	0.94	0.94	0.91
26	06/20/2010 - 06/26/2010	0.94	0.94	0.94	0.91
27	06/27/2010 - 07/03/2010	0.94	0.94	0.94	0.91
28	07/04/2010 - 07/10/2010	0.94	0.94	0.94	0.91
29	07/11/2010 - 07/17/2010	0.94	0.94	0.94	0.91
30	07/18/2010 - 07/24/2010	0.94	0.94	0.94	0.91
31	07/25/2010 - 07/31/2010	0.94	0.94	0.94	0.91
32	08/01/2010 - 08/07/2010	0.94	0.94	0.94	0.91
33	08/08/2010 - 08/14/2010	0.94	0.94	0.94	0.91
34	08/15/2010 - 08/21/2010	0.94	0.94	0.94	0.91
35	08/22/2010 - 08/28/2010	0.94	0.94	0.94	0.91
36	08/29/2010 - 09/04/2010	0.94	0.94	0.94	0.91
37	09/05/2010 - 09/11/2010	0.94	0.94	0.94	0.91
38	09/12/2010 - 09/18/2010	0.94	0.94	0.94	0.91
39	09/19/2010 - 09/25/2010	0.95	0.94	0.94	0.91
40	09/26/2010 - 10/02/2010	0.95	0.94	0.94	0.91
41	10/03/2010 - 10/09/2010	0.96	0.95	0.94	0.91
42	10/10/2010 - 10/16/2010	0.97	0.95	0.94	0.91
43	10/17/2010 - 10/23/2010	0.96	0.95	0.94	0.91
44	10/24/2010 - 10/30/2010	0.96	0.95	0.94	0.91
45	10/31/2010 - 11/06/2010	0.95	0.94	0.94	0.91
46	11/07/2010 - 11/13/2010	0.95	0.94	0.94	0.91
47	11/14/2010 - 11/20/2010	0.94	0.94	0.94	0.91
48	11/21/2010 - 11/27/2010	0.94	0.94	0.94	0.91
49	11/28/2010 - 12/04/2010	0.94	0.94	0.94	0.91
50	12/05/2010 - 12/11/2010	0.95	0.95	0.94	0.91
51	12/12/2010 - 12/18/2010	0.95	0.95	0.94	0.91
52	12/19/2010 - 12/25/2010	0.95	0.95	0.94	0.91
53	12/26/2010 - 12/31/2010	0.95	0.95	0.94	0.91

2010 WEEKLY AXLE FACTOR CATEGORY REPORT - REPORT TYPE: ALL

COUNTY: 73 - FLAGLER

WEEK	DATES	7305 A1A	7306 SR100, US1 - A1A	7307 I95
1	01/01/2010 - 01/02/2010	0.99	0.98	0.86
2	01/03/2010 - 01/09/2010	0.99	0.99	0.86
3	01/10/2010 - 01/16/2010	0.99	0.99	0.86
4	01/17/2010 - 01/23/2010	0.99	0.99	0.86
5	01/24/2010 - 01/30/2010	0.99	0.99	0.86
6	01/31/2010 - 02/06/2010	0.99	0.98	0.86
7	02/07/2010 - 02/13/2010	0.99	0.98	0.86
8	02/14/2010 - 02/20/2010	0.99	0.98	0.86
9	02/21/2010 - 02/27/2010	0.99	0.98	0.86
10	02/28/2010 - 03/06/2010	0.99	0.98	0.86
11	03/07/2010 - 03/13/2010	0.99	0.98	0.86
12	03/14/2010 - 03/20/2010	0.99	0.98	0.86
13	03/21/2010 - 03/27/2010	0.99	0.98	0.86
14	03/28/2010 - 04/03/2010	0.99	0.98	0.86
15	04/04/2010 - 04/10/2010	0.99	0.98	0.86
16	04/11/2010 - 04/17/2010	0.99	0.98	0.86
17	04/18/2010 - 04/24/2010	0.99	0.98	0.86
18	04/25/2010 - 05/01/2010	0.99	0.98	0.86
19	05/02/2010 - 05/08/2010	0.99	0.98	0.86
20	05/09/2010 - 05/15/2010	0.99	0.98	0.86
21	05/16/2010 - 05/22/2010	0.99	0.98	0.86
22	05/23/2010 - 05/29/2010	0.99	0.98	0.86
23	05/30/2010 - 06/05/2010	0.99	0.98	0.86
24	06/06/2010 - 06/12/2010	0.99	0.98	0.86
25	06/13/2010 - 06/19/2010	0.99	0.98	0.86
26	06/20/2010 - 06/26/2010	0.99	0.98	0.86
27	06/27/2010 - 07/03/2010	0.99	0.98	0.87
28	07/04/2010 - 07/10/2010	0.99	0.98	0.87
29	07/11/2010 - 07/17/2010	0.99	0.98	0.87
30	07/18/2010 - 07/24/2010	0.99	0.98	0.87
31	07/25/2010 - 07/31/2010	0.99	0.98	0.87
32	08/01/2010 - 08/07/2010	0.99	0.98	0.86
33	08/08/2010 - 08/14/2010	0.99	0.98	0.86
34	08/15/2010 - 08/21/2010	0.99	0.98	0.86
35	08/22/2010 - 08/28/2010	0.99	0.98	0.86
36	08/29/2010 - 09/04/2010	0.99	0.98	0.86
37	09/05/2010 - 09/11/2010	0.99	0.98	0.85
38	09/12/2010 - 09/18/2010	0.99	0.98	0.85
39	09/19/2010 - 09/25/2010	0.99	0.98	0.87
40	09/26/2010 - 10/02/2010	0.99	0.98	0.88
41	10/03/2010 - 10/09/2010	0.99	0.99	0.90
42	10/10/2010 - 10/16/2010	0.99	0.99	0.92
43	10/17/2010 - 10/23/2010	0.99	0.99	0.91
44	10/24/2010 - 10/30/2010	0.99	0.98	0.89
45	10/31/2010 - 11/06/2010	0.99	0.98	0.88
46	11/07/2010 - 11/13/2010	0.99	0.98	0.86
47	11/14/2010 - 11/20/2010	0.99	0.98	0.85
48	11/21/2010 - 11/27/2010	0.99	0.98	0.85
49	11/28/2010 - 12/04/2010	0.99	0.98	0.86
50	12/05/2010 - 12/11/2010	0.99	0.98	0.86
51	12/12/2010 - 12/18/2010	0.99	0.98	0.86
52	12/19/2010 - 12/25/2010	0.99	0.99	0.86
53	12/26/2010 - 12/31/2010	0.99	0.99	0.86

ATTACHMENT E

Dunes CDD Bridge Count Data

ICWW Bridge Toll Data
Toll Collected EB Only

Year	Month	Average Daily Count	AADT
2010	January	2,894	
	February	3,312	
	March	3,618	
	April	3,829	
	May	3,460	
	June	3,569	
	July	3,752	
	August	3,301	
	September	3,034	
	October	3,200	
	November	3,124	
	December	2,913	3,334
2011	January	2,937	
	February	3,502	
	March	3,917	
	April	4,010	
	May	3,596	
	June	3,627	
	July	3,815	
	August	3,429	
	September	3,213	
	October	3,251	
	November	3,285	
	December	N/A	3,507

ATTACHMENT F

2011 Raw Turning Movement Count Data

All Traffic Data Services, Inc

4301 Confederate Point Road #10
Jacksonville, FL. 32210
(904) 707-8618

File Name : PalmCoast&PalmHarborPM
Site Code : 1_____
Start Date : 12/1/2011
Page No : 1

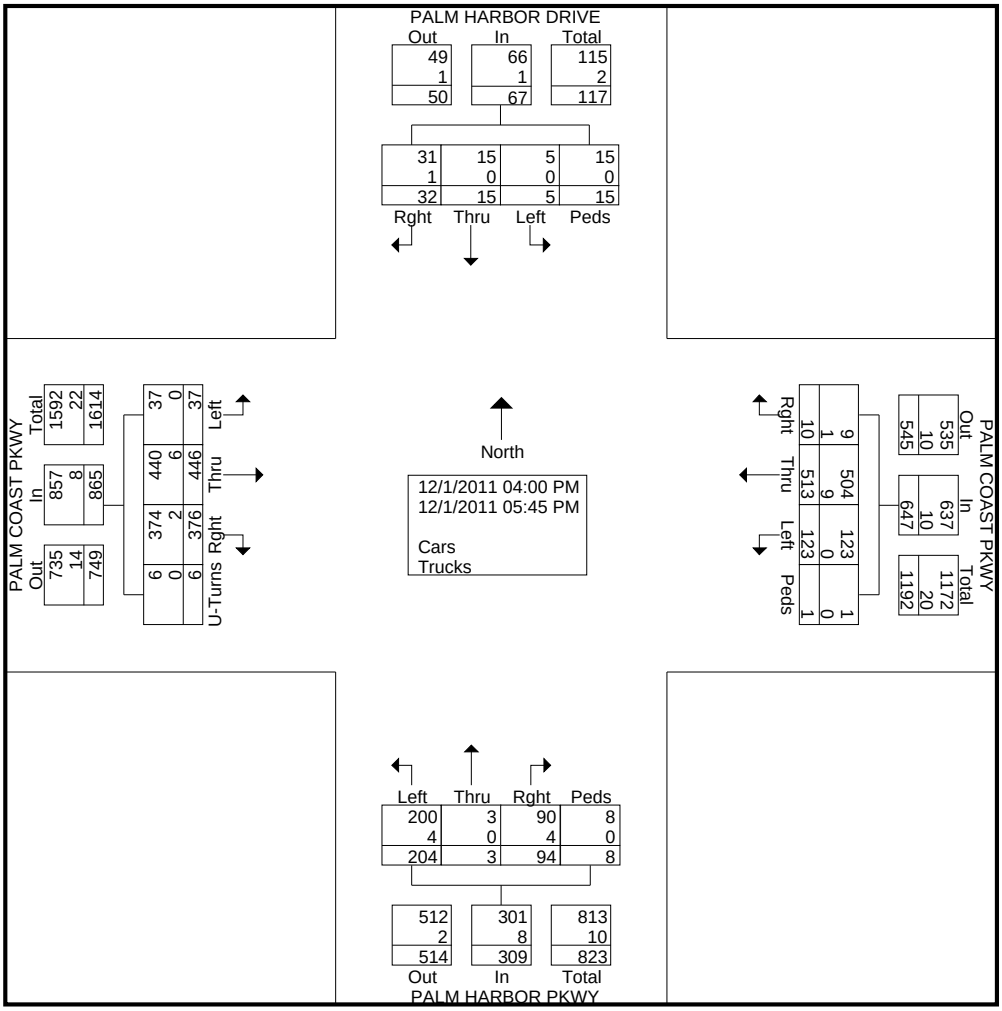
Groups Printed- Cars - Trucks

	PALM HARBOR DRIVE Southbound					PALM COAST PKWY Westbound					PALM HARBOR PKWY Northbound					PALM COAST PKWY Eastbound					
Start Time	Left	Thru	Rght	Peds	App. Total	Left	Thru	Rght	Peds	App. Total	Left	Thru	Rght	Peds	App. Total	Left	Thru	Rght	U-Turns	App. Total	Int. Total
04:00 PM	0	3	7	2	12	16	71	1	0	88	30	0	20	0	50	4	53	58	2	117	267
04:15 PM	0	1	5	2	8	11	67	2	0	80	23	2	11	4	40	8	63	36	1	108	236
04:30 PM	0	1	6	0	7	16	63	1	0	80	17	1	7	0	25	4	73	44	1	122	234
04:45 PM	2	3	1	4	10	13	78	4	1	96	21	0	10	0	31	2	69	34	0	105	242
Total	2	8	19	8	37	56	279	8	1	344	91	3	48	4	146	18	258	172	4	452	979
05:00 PM	1	2	4	3	10	25	70	1	0	96	34	0	11	2	47	4	46	51	2	103	256
05:15 PM	1	2	3	4	10	13	66	0	0	79	25	0	15	1	41	6	52	45	0	103	233
05:30 PM	1	1	2	0	4	12	51	0	0	63	31	0	8	0	39	5	53	54	0	112	218
05:45 PM	0	2	4	0	6	17	47	1	0	65	23	0	12	1	36	4	37	54	0	95	202
Total	3	7	13	7	30	67	234	2	0	303	113	0	46	4	163	19	188	204	2	413	909
Grand Total	5	15	32	15	67	123	513	10	1	647	204	3	94	8	309	37	446	376	6	865	1888
Apprch %	7.5	22.4	47.8	22.4		19	79.3	1.5	0.2		66	1	30.4	2.6		4.3	51.6	43.5	0.7		
Total %	0.3	0.8	1.7	0.8	3.5	6.5	27.2	0.5	0.1	34.3	10.8	0.2	5	0.4	16.4	2	23.6	19.9	0.3	45.8	
Cars	5	15	31	15	66	123	504	9	1	637	200	3	90	8	301	37	440	374	6	857	1861
% Cars	100	100	96.9	100	98.5	100	98.2	90	100	98.5	98	100	95.7	100	97.4	100	98.7	99.5	100	99.1	98.6
Trucks	0	0	1	0	1	0	9	1	0	10	4	0	4	0	8	0	6	2	0	8	27
% Trucks	0	0	3.1	0	1.5	0	1.8	10	0	1.5	2	0	4.3	0	2.6	0	1.3	0.5	0	0.9	1.4

All Traffic Data Services, Inc

4301 Confederate Point Road #10
Jacksonville, FL. 32210
(904) 707-8618

File Name : PalmCoast&PalmHarborPM
Site Code : 1_____
Start Date : 12/1/2011
Page No : 2

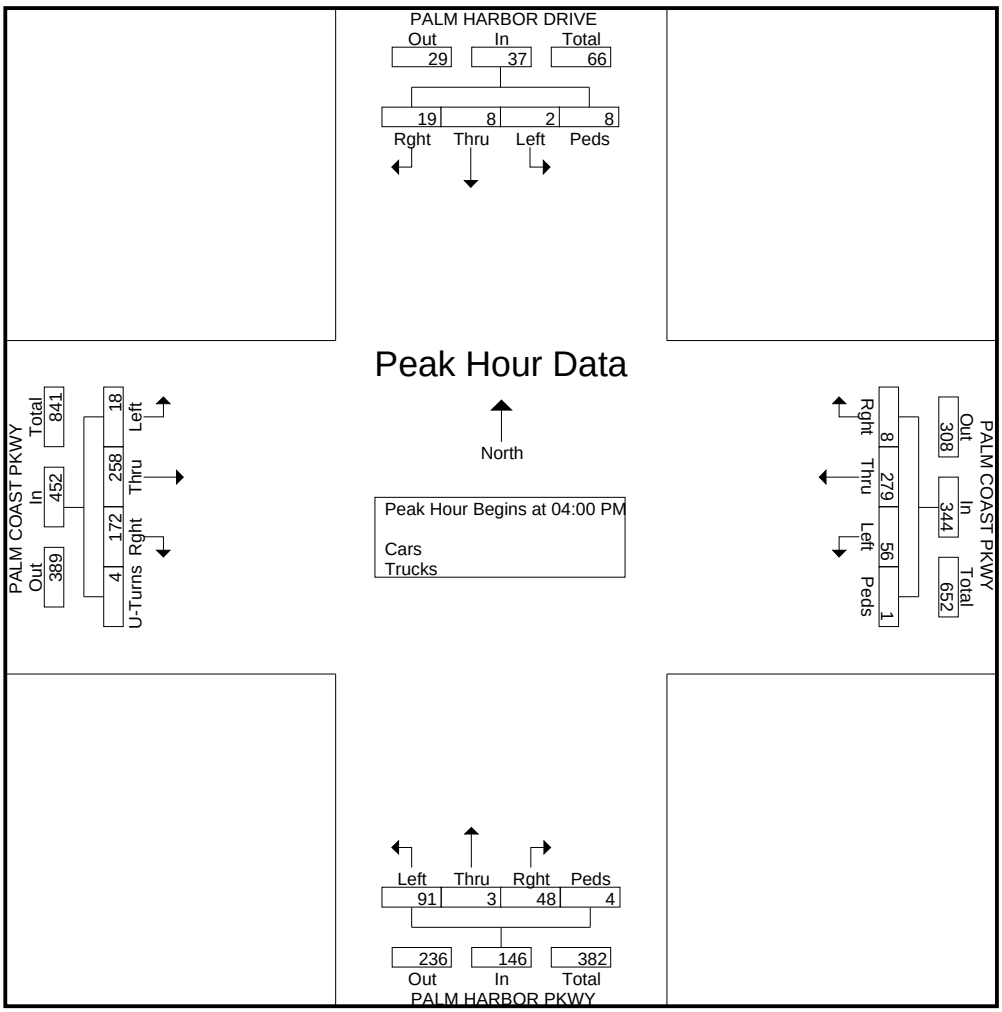


All Traffic Data Services, Inc

4301 Confederate Point Road #10
Jacksonville, FL. 32210
(904) 707-8618

File Name : PalmCoast&PalmHarborPM
Site Code : 1_____
Start Date : 12/1/2011
Page No : 3

	PALM HARBOR DRIVE Southbound					PALM COAST PKWY Westbound					PALM HARBOR PKWY Northbound					PALM COAST PKWY Eastbound					
Start Time	Left	Thru	Rght	Peds	App. Total	Left	Thru	Rght	Peds	App. Total	Left	Thru	Rght	Peds	App. Total	Left	Thru	Rght	U-Turns	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	**3**	**7**	2	**12**	**16**	71	1	0	88	**30**	0	**20**	0	**50**	4	53	**58**	**2**	117	**267**
04:15 PM	0	1	5	2	8	11	67	2	0	80	23	**2**	11	**4**	40	**8**	63	36	1	108	236
04:30 PM	0	1	6	0	7	16	63	1	0	80	17	1	7	0	25	4	**73**	44	1	**122**	234
04:45 PM	**2**	3	1	**4**	10	13	**78**	**4**	**1**	**96**	21	0	10	0	31	2	69	34	0	105	242
Total Volume	2	8	19	8	37	56	279	8	1	344	91	3	48	4	146	18	258	172	4	452	979
% App. Total	5.4	21.6	51.4	21.6		16.3	81.1	2.3	0.3		62.3	2.1	32.9	2.7		4	57.1	38.1	0.9		
PHF	.250	.667	.679	.500	.771	.875	.894	.500	.250	.896	.758	.375	.600	.250	.730	.563	.884	.741	.500	.926	.917



All Traffic Data Services, Inc

4301 Confederate Point Road #10
Jacksonville, FL. 32210
(904) 707-8618

File Name : PalmCoast&CamDelMarPM
Site Code : 2_____
Start Date : 12/1/2011
Page No : 1

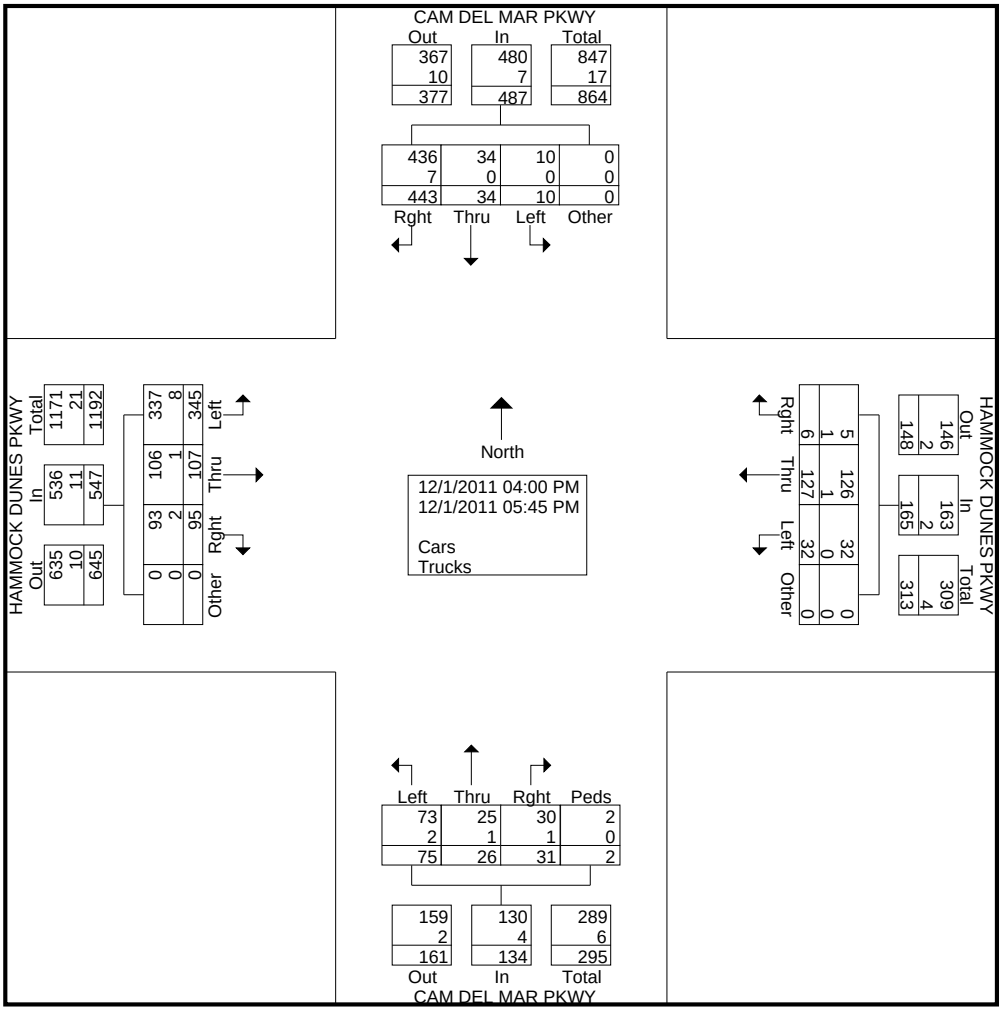
Groups Printed- Cars - Trucks

	CAM DEL MAR PKWY Southbound					HAMMOCK DUNES PKWY Westbound					CAM DEL MAR PKWY Northbound					HAMMOCK DUNES PKWY Eastbound					
Start Time	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Peds	App. Total	Left	Thru	Rght	Other	App. Total	Int. Total
04:00 PM	0	6	59	0	65	9	19	0	0	28	10	5	3	0	18	52	11	10	0	73	184
04:15 PM	2	6	57	0	65	4	10	1	0	15	13	6	5	0	24	45	11	18	0	74	178
04:30 PM	0	6	58	0	64	3	14	0	0	17	8	0	4	0	12	42	24	13	0	79	172
04:45 PM	2	2	64	0	68	3	12	3	0	18	10	3	2	0	15	51	25	11	0	87	188
Total	4	20	238	0	262	19	55	4	0	78	41	14	14	0	69	190	71	52	0	313	722
05:00 PM	2	1	66	0	69	2	28	0	0	30	16	3	5	0	24	35	5	13	0	53	176
05:15 PM	3	5	53	0	61	5	13	0	0	18	4	2	4	2	12	49	13	7	0	69	160
05:30 PM	1	3	45	0	49	1	14	2	0	17	5	4	3	0	12	43	6	13	0	62	140
05:45 PM	0	5	41	0	46	5	17	0	0	22	9	3	5	0	17	28	12	10	0	50	135
Total	6	14	205	0	225	13	72	2	0	87	34	12	17	2	65	155	36	43	0	234	611
Grand Total	10	34	443	0	487	32	127	6	0	165	75	26	31	2	134	345	107	95	0	547	1333
Apprch %	2.1	7	91	0		19.4	77	3.6	0		56	19.4	23.1	1.5		63.1	19.6	17.4	0		
Total %	0.8	2.6	33.2	0	36.5	2.4	9.5	0.5	0	12.4	5.6	2	2.3	0.2	10.1	25.9	8	7.1	0	41	
Cars	10	34	436	0	480	32	126	5	0	163	73	25	30	2	130	337	106	93	0	536	1309
% Cars	100	100	98.4	0	98.6	100	99.2	83.3	0	98.8	97.3	96.2	96.8	100	97	97.7	99.1	97.9	0	98	98.2
Trucks	0	0	7	0	7	0	1	1	0	2	2	1	1	0	4	8	1	2	0	11	24
% Trucks	0	0	1.6	0	1.4	0	0.8	16.7	0	1.2	2.7	3.8	3.2	0	3	2.3	0.9	2.1	0	2	1.8

All Traffic Data Services, Inc

4301 Confederate Point Road #10
Jacksonville, FL. 32210
(904) 707-8618

File Name : PalmCoast&CamDelMarPM
Site Code : 2_____
Start Date : 12/1/2011
Page No : 2



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4301 Confederate Point Road #10
Jacksonville, FL. 32210
(904) 707-8618

File Name : PalmCoast&CamDelMarPM
Site Code : 2_____
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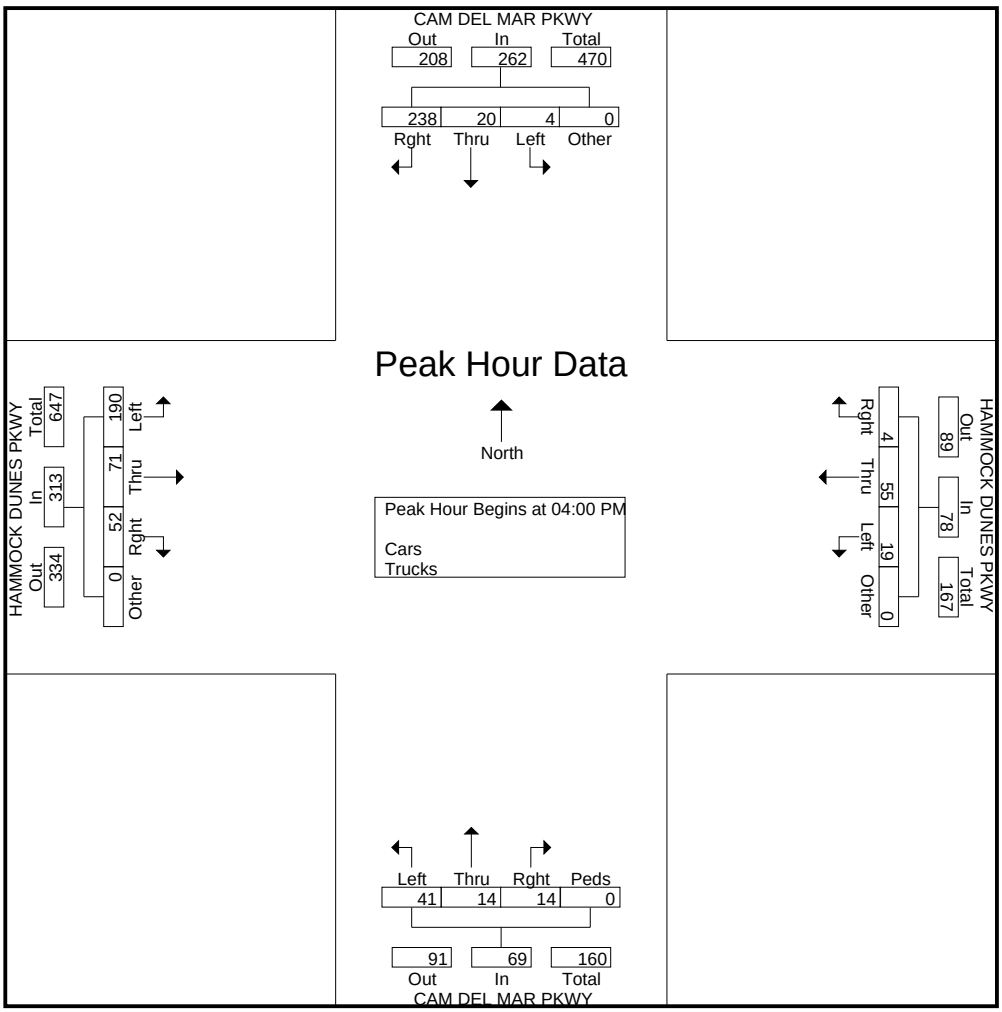
	CAM DEL MAR PKWY Southbound					HAMMOCK DUNES PKWY Westbound					CAM DEL MAR PKWY Northbound					HAMMOCK DUNES PKWY Eastbound					
Start Time	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Peds	App. Total	Left	Thru	Rght	Other	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	0	**6**	59	0	65	**9**	**19**	0	0	**28**	10	5	3	0	18	**52**	11	10	0	73	184
04:15 PM	**2**	6	57	0	65	4	10	1	0	15	**13**	**6**	**5**	0	**24**	45	11	**18**	0	74	178
04:30 PM	0	6	58	0	64	3	14	0	0	17	8	0	4	0	12	42	24	13	0	79	172
04:45 PM	2	2	**64**	0	**68**	3	12	**3**	0	18	10	3	2	0	15	51	**25**	11	0	**87**	**188**
Total Volume	4	20	238	0	262	19	55	4	0	78	41	14	14	0	69	190	71	52	0	313	722
% App. Total	1.5	7.6	90.8	0		24.4	70.5	5.1	0		59.4	20.3	20.3	0		60.7	22.7	16.6	0		
PHF	.500	.833	.930	.000	.963	.528	.724	.333	.000	.696	.788	.583	.700	.000	.719	.913	.710	.722	.000	.899	.960



All Traffic Data Services, Inc

4301 Confederate Point Road #10
Jacksonville, FL. 32210
(904) 707-8618

File Name : CamDelMar&OceanShorePM
Site Code : 3_____
Start Date : 12/1/2011
Page No : 1

Groups Printed- Cars - Trucks

	OCEAN SHORE BLVD Southbound					CAM DEL MAR PKWY Westbound					OCEAN SHORE BLVD Northbound					CAM DEL MAR PKWY Eastbound					
Start Time	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Peds	App. Total	Int. Total
04:00 PM	44	34	1	0	79	12	5	37	0	54	0	25	21	0	46	0	1	0	0	1	180
04:15 PM	32	27	5	0	64	11	4	39	0	54	2	30	26	0	58	0	6	0	0	6	182
04:30 PM	42	32	0	0	74	8	4	31	0	43	1	32	24	0	57	2	3	3	1	9	183
04:45 PM	39	28	2	0	69	14	2	40	0	56	1	24	20	0	45	0	7	0	1	8	178
Total	157	121	8	0	286	45	15	147	0	207	4	111	91	0	206	2	17	3	2	24	723
05:00 PM	45	23	1	0	69	7	1	30	0	38	2	18	21	0	41	2	1	0	0	3	151
05:15 PM	38	27	3	0	68	12	0	40	0	52	0	36	17	0	53	1	7	0	0	8	181
05:30 PM	30	13	0	0	43	11	1	36	0	48	0	20	13	0	33	1	2	0	0	3	127
05:45 PM	37	22	1	0	60	6	1	25	0	32	1	28	12	0	41	1	0	0	0	1	134
Total	150	85	5	0	240	36	3	131	0	170	3	102	63	0	168	5	10	0	0	15	593
Grand Total	307	206	13	0	526	81	18	278	0	377	7	213	154	0	374	7	27	3	2	39	1316
Apprch %	58.4	39.2	2.5	0		21.5	4.8	73.7	0		1.9	57	41.2	0		17.9	69.2	7.7	5.1		
Total %	23.3	15.7	1	0	40	6.2	1.4	21.1	0	28.6	0.5	16.2	11.7	0	28.4	0.5	2.1	0.2	0.2	3	
Cars	301	198	13	0	512	78	18	271	0	367	6	209	152	0	367	7	27	3	2	39	1285
% Cars	98	96.1	100	0	97.3	96.3	100	97.5	0	97.3	85.7	98.1	98.7	0	98.1	100	100	100	100	100	97.6
Trucks	6	8	0	0	14	3	0	7	0	10	1	4	2	0	7	0	0	0	0	0	31
% Trucks	2	3.9	0	0	2.7	3.7	0	2.5	0	2.7	14.3	1.9	1.3	0	1.9	0	0	0	0	0	2.4

All Traffic Data Services, Inc

4301 Confederate Point Road #10
Jacksonville, FL. 32210
(904) 707-8618

File Name : CamDelMar&OceanShorePM
Site Code : 3_____
Start Date : 12/1/2011
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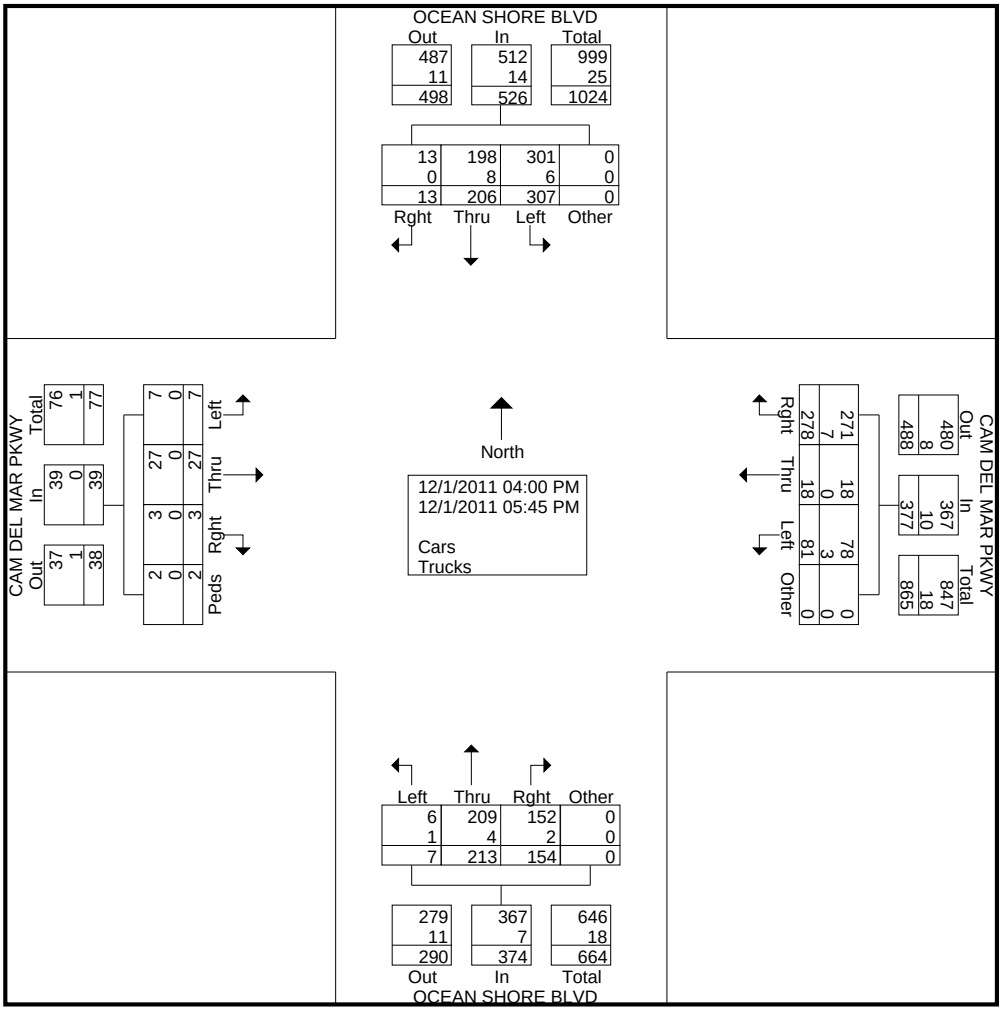
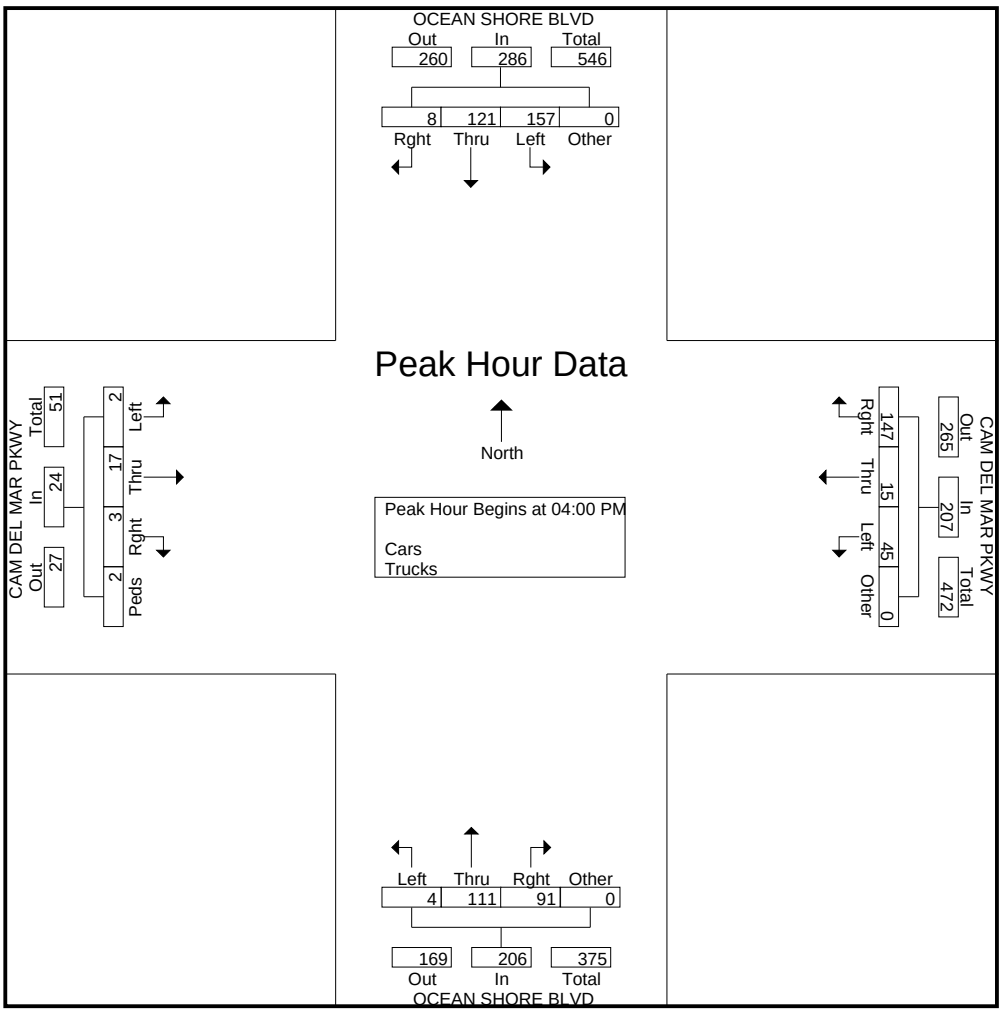


All Traffic Data Services, Inc

4301 Confederate Point Road #10
Jacksonville, FL. 32210
(904) 707-8618

File Name : CamDelMar&OceanShorePM
Site Code : 3_____
Start Date : 12/1/2011
Page No : 3

	OCEAN SHORE BLVD Southbound					CAM DEL MAR PKWY Westbound					OCEAN SHORE BLVD Northbound					CAM DEL MAR PKWY Eastbound					
Start Time	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	**44**	**34**	1	0	**79**	12	**5**	37	0	54	0	25	21	0	46	0	1	0	0	1	180
04:15 PM	32	27	**5**	0	64	11	4	39	0	54	**2**	30	**26**	0	**58**	0	6	0	0	6	182
04:30 PM	42	32	0	0	74	8	4	31	0	43	1	**32**	24	0	57	**2**	3	**3**	**1**	**9**	**183**
04:45 PM	39	28	2	0	69	**14**	2	**40**	0	**56**	1	24	20	0	45	0	**7**	0	1	8	178
Total Volume	157	121	8	0	286	45	15	147	0	207	4	111	91	0	206	2	17	3	2	24	723
% App. Total	54.9	42.3	2.8	0		21.7	7.2	71	0		1.9	53.9	44.2	0		8.3	70.8	12.5	8.3		
PHF	.892	.890	.400	.000	.905	.804	.750	.919	.000	.924	.500	.867	.875	.000	.888	.250	.607	.250	.500	.667	.988



All Traffic Data Services, Inc

4301 Confederate Point Road #10
Jacksonville, FL. 32210
(904) 707-8618

File Name : JungleHut&OceanShorePM
Site Code : 4_____
Start Date : 12/1/2011
Page No : 1

Groups Printed- Cars - Trucks

	OCEAN SHORE BLVD Southbound					JUNGLE HUT ROAD Westbound					OCEAN SHORE BLVD Northbound					JUNGLE HUT ROAD Eastbound					
Start Time	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Peds	App. Total	Int. Total
04:00 PM	3	78	0	0	81	1	0	4	0	5	1	62	1	0	64	0	0	1	0	1	151
04:15 PM	0	62	0	0	62	1	0	1	0	2	1	66	2	0	69	0	0	1	0	1	134
04:30 PM	2	71	0	0	73	2	0	1	0	3	0	66	0	0	66	1	0	0	1	2	144
04:45 PM	0	69	0	0	69	1	1	1	0	3	0	65	1	0	66	0	0	2	1	3	141
Total	5	280	0	0	285	5	1	7	0	13	2	259	4	0	265	1	0	4	2	7	570
05:00 PM	0	71	0	0	71	1	0	1	0	2	0	47	1	0	48	0	0	1	0	1	122
05:15 PM	0	61	0	0	61	3	0	1	0	4	1	74	2	0	77	2	0	1	0	3	145
05:30 PM	0	43	0	0	43	1	0	1	0	2	0	55	4	0	59	0	0	0	0	0	104
05:45 PM	0	56	0	0	56	1	0	0	0	1	0	47	3	0	50	0	0	0	0	0	107
Total	0	231	0	0	231	6	0	3	0	9	1	223	10	0	234	2	0	2	0	4	478
Grand Total	5	511	0	0	516	11	1	10	0	22	3	482	14	0	499	3	0	6	2	11	1048
Apprch %	1	99	0	0		50	4.5	45.5	0		0.6	96.6	2.8	0		27.3	0	54.5	18.2		
Total %	0.5	48.8	0	0	49.2	1	0.1	1	0	2.1	0.3	46	1.3	0	47.6	0.3	0	0.6	0.2	1	
Cars	5	497	0	0	502	11	1	8	0	20	3	475	12	0	490	2	0	5	2	9	1021
% Cars	100	97.3	0	0	97.3	100	100	80	0	90.9	100	98.5	85.7	0	98.2	66.7	0	83.3	100	81.8	97.4
Trucks	0	14	0	0	14	0	0	2	0	2	0	7	2	0	9	1	0	1	0	2	27
% Trucks	0	2.7	0	0	2.7	0	0	20	0	9.1	0	1.5	14.3	0	1.8	33.3	0	16.7	0	18.2	2.6

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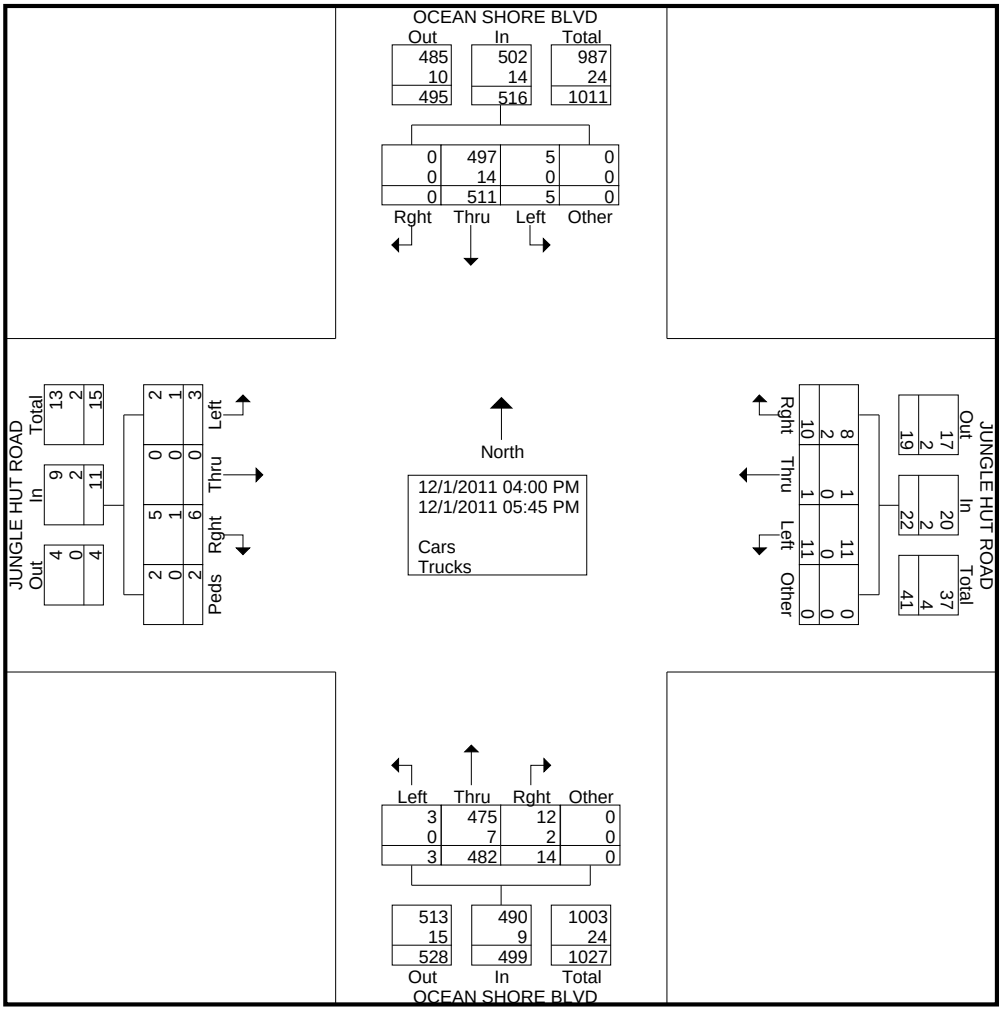

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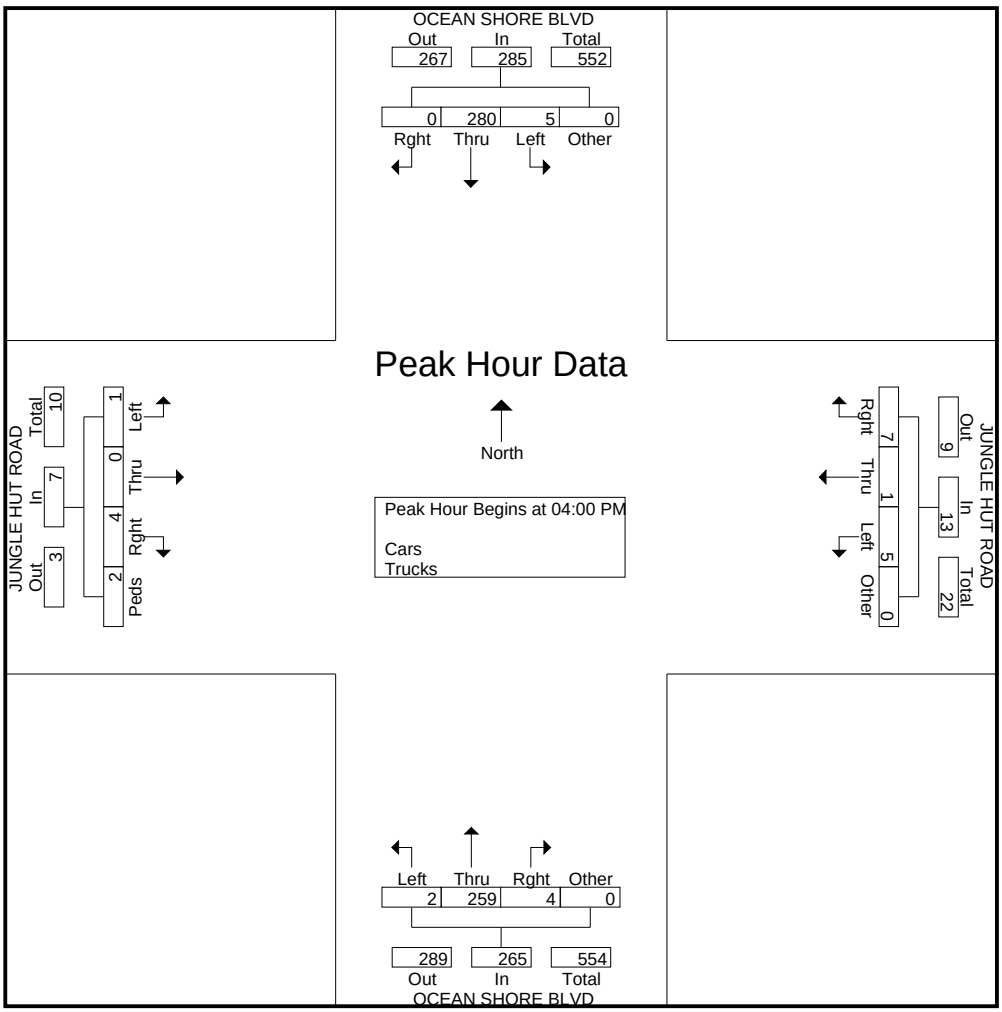
(904) 707-8618

File Name : JungleHut&OceanShorePM
Site Code : 4_____
Start Date : 12/1/2011
Page No : 3

	OCEAN SHORE BLVD Southbound					JUNGLE HUT ROAD Westbound					OCEAN SHORE BLVD Northbound					JUNGLE HUT ROAD Eastbound					
Start Time	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Other	App. Total	Left	Thru	Rght	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	**3**	**78**	0	0	**81**	1	0	**4**	0	**5**	**1**	62	1	0	64	0	0	1	0	1	**151**
04:15 PM	0	62	0	0	62	1	0	1	0	2	1	**66**	**2**	0	**69**	0	0	1	0	1	134
04:30 PM	2	71	0	0	73	**2**	0	1	0	3	0	66	0	0	66	**1**	0	0	**1**	2	144
04:45 PM	0	69	0	0	69	1	**1**	1	0	3	0	65	1	0	66	0	0	**2**	1	**3**	141
Total Volume	5	280	0	0	285	5	1	7	0	13	2	259	4	0	265	1	0	4	2	7	570
% App. Total	1.8	98.2	0	0		38.5	7.7	53.8	0		0.8	97.7	1.5	0		14.3	0	57.1	28.6		
PHF	.417	.897	.000	.000	.880	.625	.250	.438	.000	.650	.500	.981	.500	.000	.960	.250	.000	.500	.500	.583	.944



All Traffic Data Services, Inc

4301 Confederate Point Road #10
Jacksonville, FL. 32210
(904) 707-8618

File Name : 16thRoad&OceanShorePM
Site Code : 5_____
Start Date : 12/1/2011
Page No : 1

Groups Printed- Cars - Trucks

	OCEAN SHORE BLVD Southbound					16th ROAD Westbound					OCEAN SHORE BLVD Northbound					16th ROAD Eastbound					
Start Time	Left	Thru	Rght	Peds	App. Total	Left	Thru	Rght	Peds	App. Total	Left	Thru	Rght	Peds	App. Total	Left	Thru	Rght	Peds	App. Total	Int. Total
04:00 PM	6	71	1	0	78	7	0	9	0	16	0	53	6	0	59	2	0	0	0	2	155
04:15 PM	7	55	0	0	62	3	1	7	0	11	0	54	4	1	59	0	0	0	0	0	132
04:30 PM	5	65	0	0	70	9	0	15	0	24	1	54	7	0	62	0	0	1	1	2	158
04:45 PM	7	55	0	0	62	6	0	8	1	15	0	57	5	0	62	0	0	1	0	1	140
Total	25	246	1	0	272	25	1	39	1	66	1	218	22	1	242	2	0	2	1	5	585
05:00 PM	9	55	0	1	65	10	0	14	1	25	0	44	2	0	46	0	0	0	0	0	136
05:15 PM	5	52	0	0	57	3	0	7	0	10	0	56	8	0	64	0	0	0	0	0	131
05:30 PM	6	42	0	0	48	4	1	9	2	16	0	50	4	0	54	1	1	0	0	2	120
05:45 PM	5	64	0	0	69	5	0	12	1	18	0	41	4	0	45	0	0	0	0	0	132
Total	25	213	0	1	239	22	1	42	4	69	0	191	18	0	209	1	1	0	0	2	519
Grand Total	50	459	1	1	511	47	2	81	5	135	1	409	40	1	451	3	1	2	1	7	1104
Apprch %	9.8	89.8	0.2	0.2		34.8	1.5	60	3.7		0.2	90.7	8.9	0.2		42.9	14.3	28.6	14.3		
Total %	4.5	41.6	0.1	0.1	46.3	4.3	0.2	7.3	0.5	12.2	0.1	37	3.6	0.1	40.9	0.3	0.1	0.2	0.1	0.6	
Cars	50	448	1	1	500	44	2	75	5	126	1	403	36	1	441	3	1	2	1	7	1074
% Cars	100	97.6	100	100	97.8	93.6	100	92.6	100	93.3	100	98.5	90	100	97.8	100	100	100	100	100	97.3
Trucks	0	11	0	0	11	3	0	6	0	9	0	6	4	0	10	0	0	0	0	0	30
% Trucks	0	2.4	0	0	2.2	6.4	0	7.4	0	6.7	0	1.5	10	0	2.2	0	0	0	0	0	2.7

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File Name : 16thRoad&OceanShorePM
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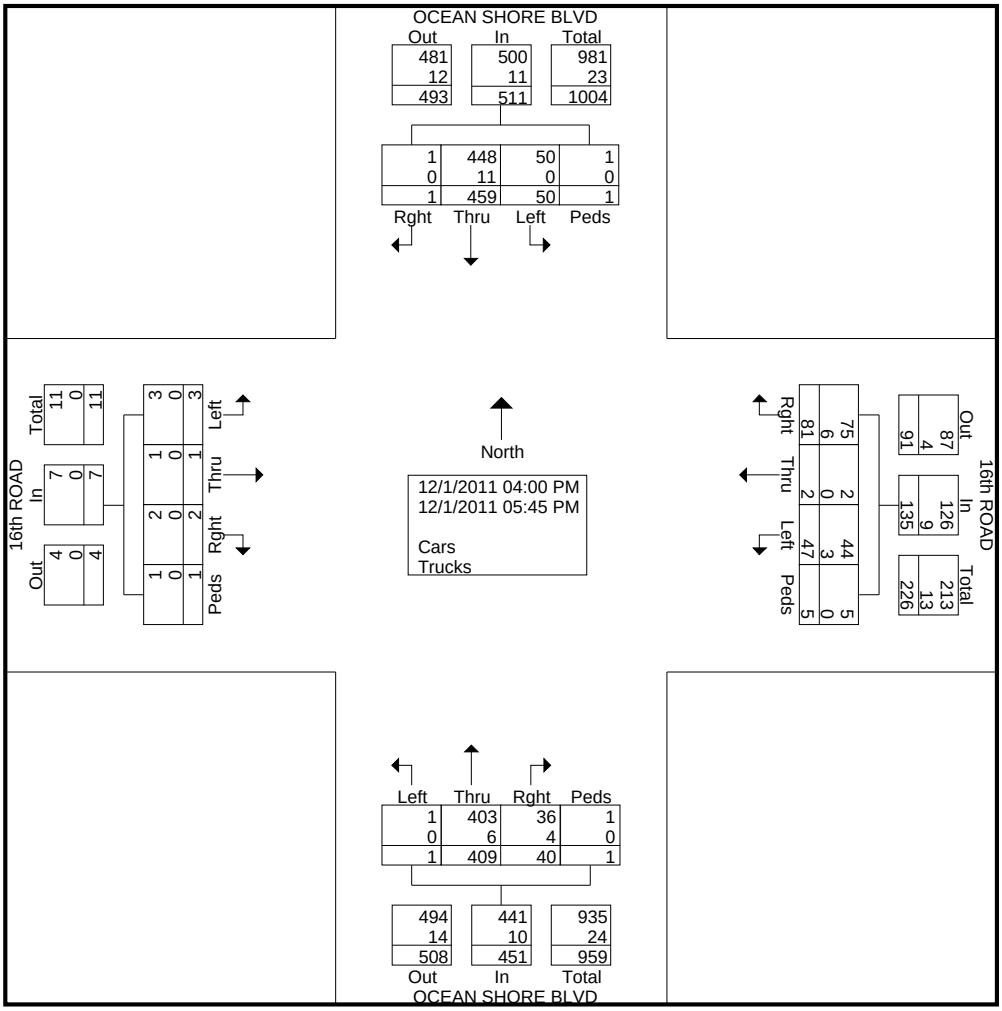

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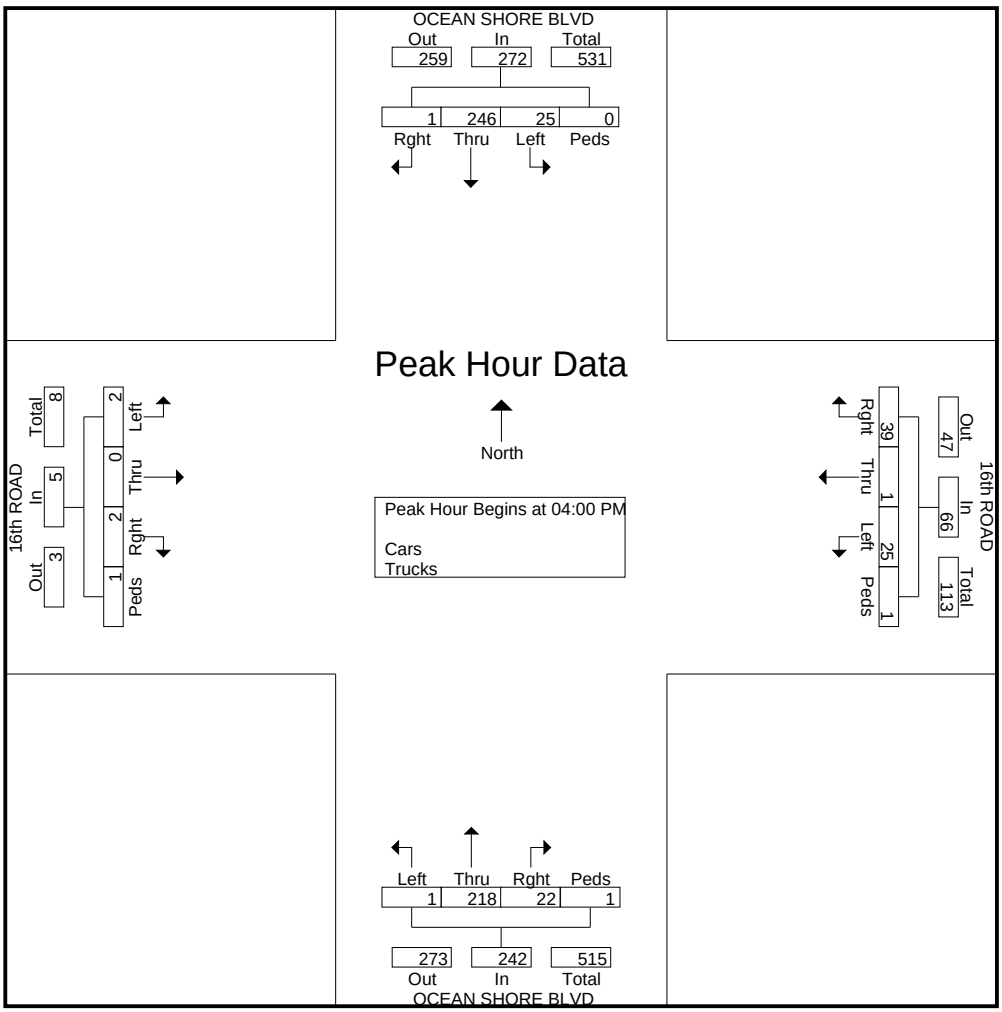
(904) 707-8618

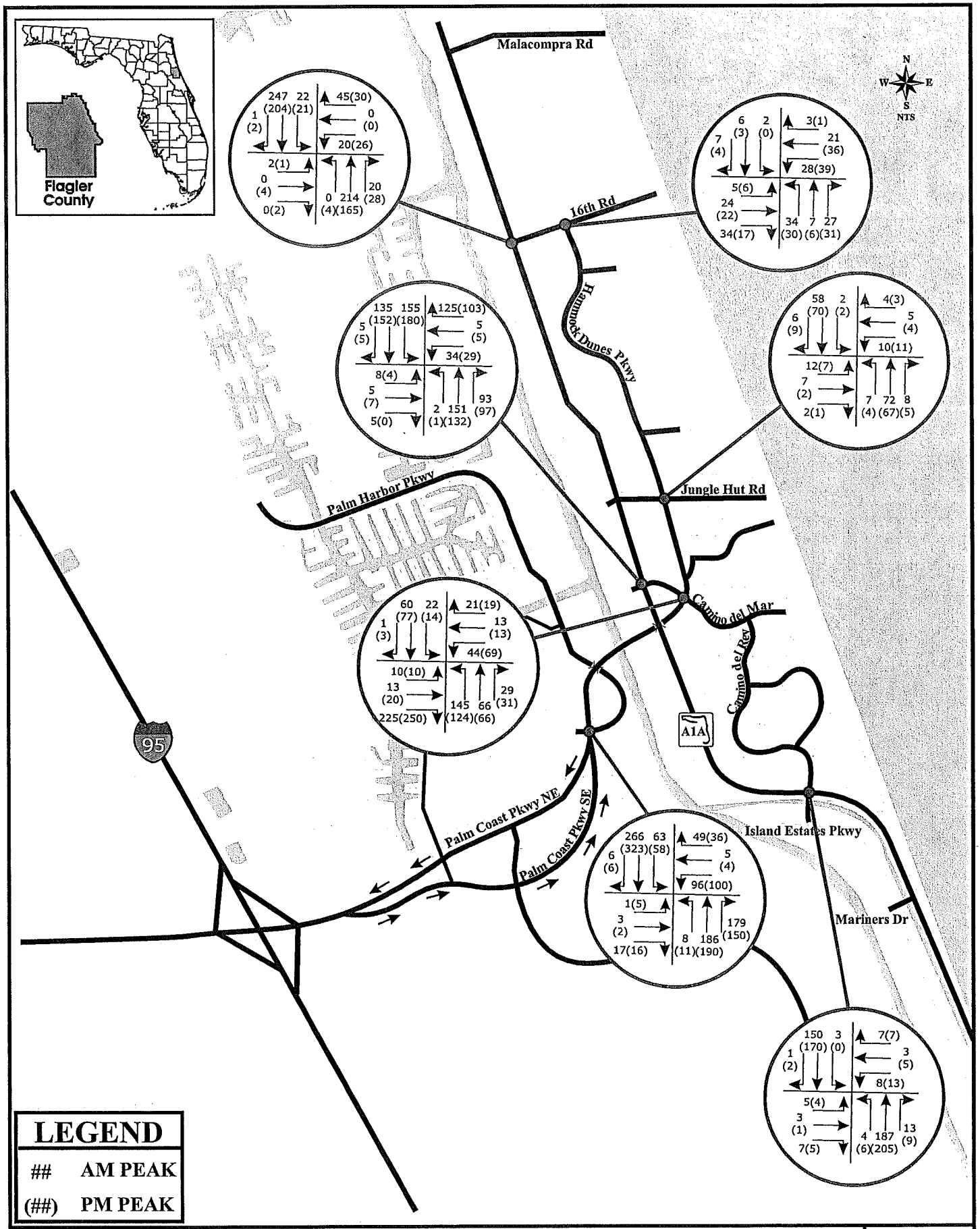
File Name : 16thRoad&OceanShorePM
Site Code : 5_____
Start Date : 12/1/2011
Page No : 3

	OCEAN SHORE BLVD Southbound					16th ROAD Westbound					OCEAN SHORE BLVD Northbound					16th ROAD Eastbound					
Start Time	Left	Thru	Rght	Peds	App. Total	Left	Thru	Rght	Peds	App. Total	Left	Thru	Rght	Peds	App. Total	Left	Thru	Rght	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	6	**71**	**1**	0	**78**	7	0	9	0	16	0	53	6	0	59	**2**	0	0	0	**2**	155
04:15 PM	**7**	55	0	0	62	3	**1**	7	0	11	0	54	4	**1**	59	0	0	0	0	0	132
04:30 PM	5	65	0	0	70	**9**	0	**15**	0	**24**	**1**	54	**7**	0	**62**	0	0	**1**	**1**	2	**158**
04:45 PM	7	55	0	0	62	6	0	8	**1**	15	0	**57**	5	0	62	0	0	1	0	1	140
Total Volume	25	246	1	0	272	25	1	39	1	66	1	218	22	1	242	2	0	2	1	5	585
% App. Total	9.2	90.4	0.4	0		37.9	1.5	59.1	1.5		0.4	90.1	9.1	0.4		40	0	40	20		
PHF	.893	.866	.250	.000	.872	.694	.250	.650	.250	.688	.250	.956	.786	.250	.976	.250	.000	.500	.250	.625	.926



ATTACHMENT G

2008 Turning Movement Count Data from the 2008 Traffic Study by Leftwich Consulting Engineers, Inc.



Leftwich Consulting Engineers, Inc.

Hammock Dunes Development Annual Report (2008)

Existing Year 2008 Turning Movement Counts

Fig. 3

ATTACHMENT H

Internal Capture Worksheets

ITE MULTI-USE PROJECT INTERNAL CAPTURE WORKSHEET

(Source: Chapter 7, ITE *Trip Generation Handbook*, June 2004)

Project Number:
Project Name: Hammock Dunes DRI
Scenario: Existing - Northern Parcel
Analysis Period: Daily
Analyst: KHA_Analyst

Land Use A: Residential (Recreational Home)

ITE Land Use Code 260
Size: 502 Units

	Total	Internal	External
Enter	793	3	790
Exit	793	0	793
Total	1,586	3	1,583
%	100%	**0.2%**	99.8%

Enter from External: 790
Exit to External: 793

Land Use B: Office (General Office)

ITE Land Use Code 710
Size: 25 KSF

	Total	Internal	External
Enter	138	0	138
Exit	137	3	134
Total	275	3	272
%	100%	**1.1%**	98.9%

Enter from External: 138
Exit to External: 134

Land Use C: None

ITE Land Use Code
Size:

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%			

Enter from External: 0
Exit to External: 0

Land Use D: None

ITE Land Use Code
Size:

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%			

Enter from External: 0
Exit to External: 0

Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
	3.0%	24	Demand
	3		Balanced
	2.0%	3	Demand
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
	0.0%	0	
	0		Balanced
	0.0%	0	Demand
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
	0.0%	0	Demand
	0		Balanced
	0.0%	0	Demand
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
	0.0%	0	Demand
	0		Balanced
	0.0%	0	Demand
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	

NET EXTERNAL TRIPS FOR MULTI-USE DEVELOPMENT

Category	Land Use A	Land Use B	Land Use C	Land Use D	Total
Enter	790	138	0	0	928
Exit	793	134	0	0	927
Total	1,583	272	0	0	**1,855**
Single Use Trip Gen Estimate	1,586	275	0	0	**1,861**

Overall Internal Capture = **0.32%**

ITE MULTI-USE PROJECT INTERNAL CAPTURE WORKSHEET

(Source: Chapter 7, ITE *Trip Generation Handbook*, June 2004)

Project Number:
Project Name: Hammock Dunes DRI
Scenario: Northern Parcel - With Northshore Units
Analysis Period: Daily
Analyst: KHA_Analyst

Land Use A: Residential (Recreational Home)

ITE Land Use Code 260
Size: 1,147 Units

	Total	Internal	External
Enter	1,813	3	1,810
Exit	1,812	0	1,812
Total	3,625	3	3,622
%	100%	**0.1%**	99.9%

Enter from External: 1,810
Exit to External: 1,812

Land Use B: Office (General Office)

ITE Land Use Code 710
Size: 25 KSF

	Total	Internal	External
Enter	138	0	138
Exit	137	3	134
Total	275	3	272
%	100%	**1.1%**	98.9%

Enter from External: 138
Exit to External: 134

Land Use C: None

ITE Land Use Code
Size:

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%			

Enter from External: 0
Exit to External: 0

Land Use D: None

ITE Land Use Code
Size:

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%			

Enter from External: 0
Exit to External: 0

Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
	3.0%	54	Demand
	3		Balanced
	2.0%	3	Demand
Demand	0.0%	0	
	0		Balanced
	0.0%	0	Demand
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	

NET EXTERNAL TRIPS FOR MULTI-USE DEVELOPMENT

Category	Land Use A	Land Use B	Land Use C	Land Use D	Total
Enter	1,810	138	0	0	1,948
Exit	1,812	134	0	0	1,946
Total	3,622	272	0	0	**3,894**
Single Use Trip Gen Estimate	3,625	275	0	0	**3,900**

Overall Internal Capture = **0.15%**

ITE MULTI-USE PROJECT INTERNAL CAPTURE WORKSHEET

(Source: Chapter 7, ITE *Trip Generation Handbook*, June 2004)

Adjusted

Project Number:
Project Name: Hammock Dunes DRI
Scenario: Southern Parcel - With Northshore Units
Analysis Period: Daily
Analyst: KHA_Analyst

Land Use A: Residential (Recreational Home)

ITE Land Use Code 260
Size: 898 Units

	Total	Internal	External
Enter	1,419	111	1,308
Exit	1,419	88	1,331
Total	2,838	199	2,639
%	100%	**7.0%**	93.0%

Land Use B: Office (General Office)

ITE Land Use Code 710
Size: 32 KSF

	Total	Internal	External
Enter	176	29	147
Exit	177	43	134
Total	353	72	281
%	100%	**20.4%**	79.6%

Land Use C: Retail (Specialty Retail)

ITE Land Use Code 814
Size: 20.2 KSF

	Total	Internal	External
Enter	448	80	368
Exit	447	84	363
Total	895	164	731
%	100%	**18.3%**	81.7%

Land Use D: Retail (Quality Restaurant)

ITE Land Use Code 931
Size: 11.8. KSF

	Total	Internal	External
Enter	531	91	440
Exit	530	96	434
Total	1061	187	874
%	100%	**17.6%**	82.4%

Enter from External: 1,308
Exit to External: 1,331

Demand 0.0% 0
Balanced 0
Demand 0.0% 0

33.0% 468 Demand
58 Balanced
11.0% 58 Demand

Demand 38.0% 539
Balanced 40
Demand 9.0% 40

3.0% 43 Demand
4 Balanced
2.0% 4 Demand

Demand 38.0% 539
Balanced 48
Demand 9.0% 48

Demand 15.0% 26
Balanced 16
Demand 3.0% 16

Demand 4.0% 21
21 Balanced
22.0% 39 Demand

Enter from External: 147
Exit to External: 134

15.0% 26 Demand
13 Balanced
3.0% 13 Demand

Demand 33.0% 468
Balanced 49
Demand 11.0% 49 Demand

Demand 5.0% 27
Balanced 22
Demand 5.0% 22

Enter from External: 440
Exit to External: 434

Demand 22.0% 39
Balanced 18
Demand 4.0% 18

5.0% 27 Demand
22 Balanced
5.0% 22 Demand

Enter from External: 368
Exit to External: 363

NET EXTERNAL TRIPS FOR MULTI-USE DEVELOPMENT

Category	Land Use A	B	C	D	Total
Enter	1,308	147	368	440	2,263
Exit	1,331	134	363	434	2,262
Total	2,639	281	731	874	**4,525**
Single Use Trip Gen Estimate	2,838	353	895	1,061	**5,147**

Overall Internal Capture = 12.08%

ITE MULTI-USE PROJECT INTERNAL CAPTURE WORKSHEET

(Source: Chapter 7, ITE *Trip Generation Handbook*, June 2004)

Project Number:
Project Name: Hammock Dunes DRI
Scenario: Existing - Northern Parcel
Analysis Period: Daily
Analyst: KHA_Analyst

Land Use A: Residential (Recreational Home)

ITE Land Use Code 260
Size: 502 Units

	Total	Internal	External
Enter	793	3	790
Exit	793	0	793
Total	1,586	3	1,583
%	100%	**0.2%**	99.8%

Land Use B: Office (General Office)

ITE Land Use Code 710
Size: 25 KSF

	Total	Internal	External
Enter	138	0	138
Exit	137	3	134
Total	275	3	272
%	100%	**1.1%**	98.9%

Land Use C: None

ITE Land Use Code
Size:

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%			

Land Use D: None

ITE Land Use Code
Size:

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%			

Enter from External:	790		
Exit to External:	793		
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
	3.0%	24	Demand
	3		Balanced
	2.0%	3	Demand
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
0.0%	0	Demand	
0	Balanced		
0.0%	0	Demand	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
	0	Balanced	
0.0%	0	Demand	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Enter from External:	138		
Exit to External:	134		
0.0%	0	Demand	
0	Balanced		
0.0%	0	Demand	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Enter from External:	0		
Exit to External:	0		
0.0%	0	Demand	
0	Balanced		
0.0%	0	Demand	
Enter from External:	0		
Exit to External:	0		

NET EXTERNAL TRIPS FOR MULTI-USE DEVELOPMENT

Category	Land Use A	Land Use B	Land Use C	Land Use D	Total
Enter	790	138	0	0	928
Exit	793	134	0	0	927
Total	1,583	272	0	0	**1,855**
Single Use Trip Gen Estimate	1,586	275	0	0	**1,861**

Overall Internal Capture = **0.32%**

ITE MULTI-USE PROJECT INTERNAL CAPTURE WORKSHEET

(Source: Chapter 7, ITE *Trip Generation Handbook*, June 2004)

Project Number:
Project Name: Hammock Dunes DRI
Scenario: Northern Parcel - Without Northshore Units
Analysis Period: Daily
Analyst: KHA_Analyst

Land Use A: Residential (Recreational Home)

ITE Land Use Code 260
Size: 866 Units

	Total	Internal	External
Enter	1,369	3	1,366
Exit	1,368	0	1,368
Total	2,737	3	2,734
%	100%	**0.1%**	99.9%

Enter from External: 1,366
Exit to External: 1,368

Land Use B: Office (General Office)

ITE Land Use Code 710
Size: 25 KSF

	Total	Internal	External
Enter	138	0	138
Exit	137	3	134
Total	275	3	272
%	100%	**1.1%**	98.9%

Enter from External: 138
Exit to External: 134

Land Use C: None

ITE Land Use Code
Size:

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%			

Enter from External: 0
Exit to External: 0

Land Use D: None

ITE Land Use Code
Size:

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%			

Enter from External: 0
Exit to External: 0

Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
	3.0%	41	Demand
	3		Balanced
	2.0%	3	Demand
Demand	0.0%	0	
	0		Balanced
	0.0%	0	Demand
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	

NET EXTERNAL TRIPS FOR MULTI-USE DEVELOPMENT

Category	Land Use A	Land Use B	Land Use C	Land Use D	Total
Enter	1,366	138	0	0	1,504
Exit	1,368	134	0	0	1,502
Total	2,734	272	0	0	**3,006**
Single Use Trip Gen Estimate	2,737	275	0	0	**3,012**

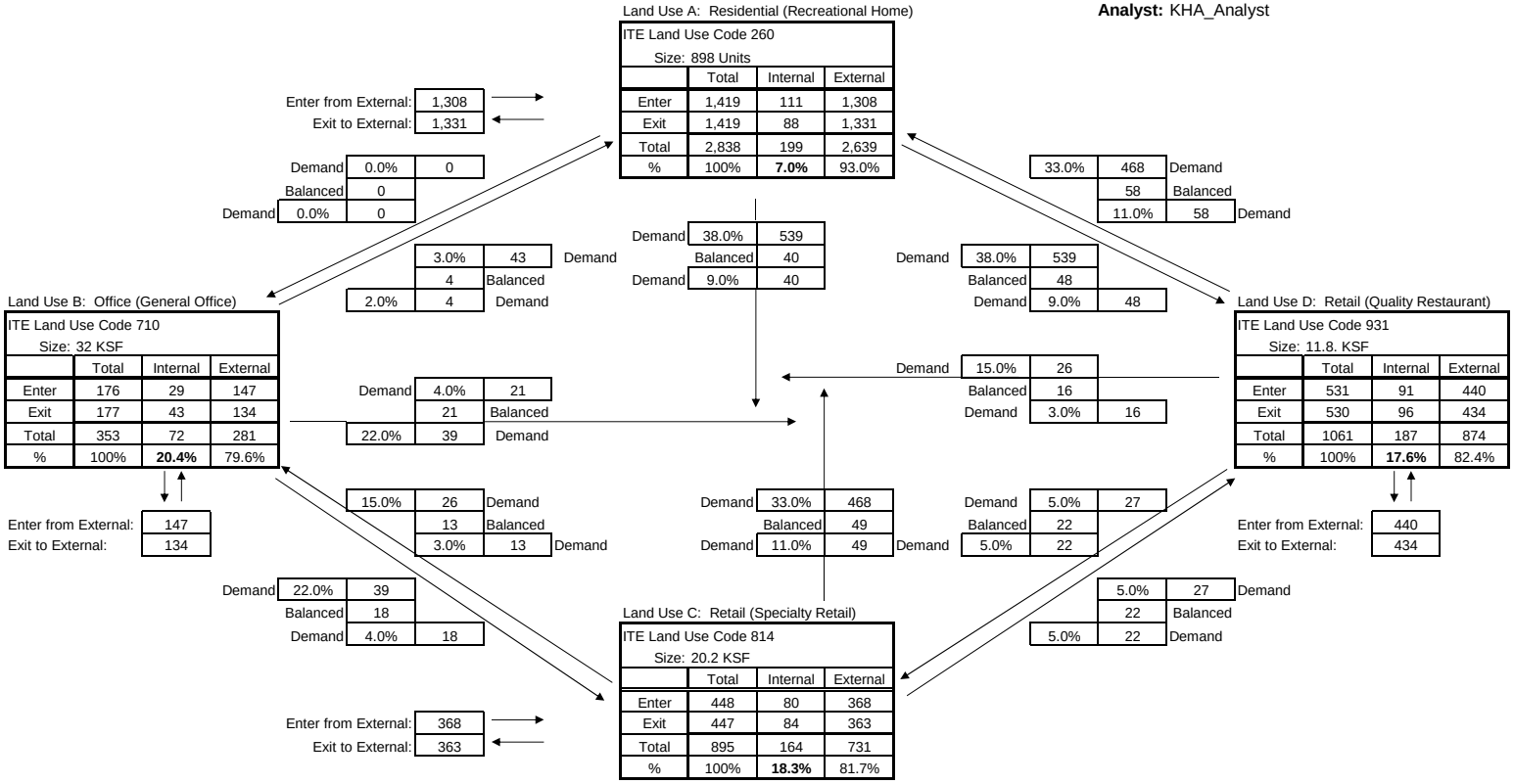
Overall Internal Capture = 0.20%

ITE MULTI-USE PROJECT INTERNAL CAPTURE WORKSHEET

(Source: Chapter 7, ITE *Trip Generation Handbook*, June 2004)

Adjusted

Project Number:
Project Name: Hammock Dunes DRI
Scenario: Southern Parcel - Without Northshore Units
Analysis Period: Daily
Analyst: KHA_Analyst



NET EXTERNAL TRIPS FOR MULTI-USE DEVELOPMENT

Category	Land Use A	Land Use B	Land Use C	Land Use D	Total
Enter	1,308	147	368	440	2,263
Exit	1,331	134	363	434	2,262
Total	2,639	281	731	874	**4,525**
Single Use Trip Gen Estimate	2,838	353	895	1,061	**5,147**

Overall Internal Capture = 12.08%

ITE MULTI-USE PROJECT INTERNAL CAPTURE WORKSHEET

(Source: Chapter 7, ITE *Trip Generation Handbook*, June 2004)

Project Number:
Project Name: Hammock Dunes DRI
Scenario: Existing - Northern Parcel
Analysis Period: PM Peak
Analyst: KHA_Analyst

Land Use A: Residential (Recreational Home)

ITE Land Use Code 260
Size: 502 Units

	Total	Internal	External
Enter	54	1	53
Exit	77	0	77
Total	131	1	130
%	100%	**0.8%**	99.2%

Land Use B: Office (General Office)

ITE Land Use Code 710
Size: 25 KSF

	Total	Internal	External
Enter	6	0	6
Exit	31	1	30
Total	37	1	36
%	100%	**2.7%**	97.3%

Land Use C: None

ITE Land Use Code
Size:

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%			

Land Use D: None

ITE Land Use Code
Size:

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%			

Enter from External: 53
Exit to External: 77

Enter from External: 6
Exit to External: 30

Enter from External: 0
Exit to External: 0

Enter from External: 0
Exit to External: 0

Demand	0.0%	0	
Balanced		0	
Demand	0.0%	0	
	2.0%	1	Demand
		1	Balanced
	2.0%	1	Demand
Demand	0.0%	0	
Balanced		0	
Demand	0.0%	0	
	0.0%	0	Demand
		0	Balanced
	0.0%	0	Demand
Demand	0.0%	0	
Balanced		0	
Demand	0.0%	0	
	0.0%	0	Demand
		0	Balanced
	0.0%	0	Demand
Demand	0.0%	0	
Balanced		0	
Demand	0.0%	0	
	0.0%	0	Demand
		0	Balanced
	0.0%	0	Demand
Demand	0.0%	0	
Balanced		0	
Demand	0.0%	0	
	0.0%	0	Demand
		0	Balanced
	0.0%	0	Demand
Demand	0.0%	0	
Balanced		0	
Demand	0.0%	0	
	0.0%	0	Demand
		0	Balanced
	0.0%	0	Demand

NET EXTERNAL TRIPS FOR MULTI-USE DEVELOPMENT

Category	Land Use A	Land Use B	Land Use C	Land Use D	Total
Enter	53	6	0	0	59
Exit	77	30	0	0	107
Total	130	36	0	0	**166**
Single Use Trip Gen Estimate	131	37	0	0	**168**

Overall Internal Capture = 1.19%

ITE MULTI-USE PROJECT INTERNAL CAPTURE WORKSHEET

(Source: Chapter 7, ITE *Trip Generation Handbook*, June 2004)

Project Number:
Project Name: Hammock Dunes DRI
Scenario: Northern Parcel - With Northshore Units
Analysis Period: PM Peak
Analyst: KHA_Analyst

Land Use A: Residential (Recreational Home)

ITE Land Use Code 260
Size: 1,147 Units

	Total	Internal	External
Enter	122	1	121
Exit	176	0	176
Total	298	1	297
%	100%	**0.3%**	99.7%

Enter from External: 121
Exit to External: 176

Land Use B: Office (General Office)

ITE Land Use Code 710
Size: 25 KSF

	Total	Internal	External
Enter	6	0	6
Exit	31	1	30
Total	37	1	36
%	100%	**2.7%**	97.3%

Enter from External: 6
Exit to External: 30

Land Use C: None

ITE Land Use Code
Size:

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%			

Enter from External: 0
Exit to External: 0

Land Use D: None

ITE Land Use Code
Size:

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%			

Enter from External: 0
Exit to External: 0

Demand	0.0%	0	
Balanced		0	
Demand	0.0%	0	
	2.0%	2	Demand
		1	Balanced
	2.0%	1	Demand
Demand	0.0%	0	
Balanced		0	
Demand	0.0%	0	
Demand	0.0%	0	
Balanced		0	
Demand	0.0%	0	
	0.0%	0	Demand
		0	Balanced
	0.0%	0	Demand
Demand	0.0%	0	
Balanced		0	
Demand	0.0%	0	
	0.0%	0	Demand
		0	Balanced
	0.0%	0	Demand
Demand	0.0%	0	
Balanced		0	
Demand	0.0%	0	
Demand	0.0%	0	
Balanced		0	
Demand	0.0%	0	
Demand	0.0%	0	
Balanced		0	
Demand	0.0%	0	
	0.0%	0	Demand
		0	Balanced
	0.0%	0	Demand

NET EXTERNAL TRIPS FOR MULTI-USE DEVELOPMENT

Category	Land Use A	Land Use B	Land Use C	Land Use D	Total
Enter	121	6	0	0	127
Exit	176	30	0	0	206
Total	297	36	0	0	**333**
Single Use Trip Gen Estimate	298	37	0	0	**335**

Overall Internal Capture = **0.60%**

ITE MULTI-USE PROJECT INTERNAL CAPTURE WORKSHEET

(Source: Chapter 7, ITE *Trip Generation Handbook*, June 2004)

Adjusted

Project Number:
Project Name: Hammock Dunes DRI
Scenario: Southern Parcel - With Northshore Units
Analysis Period: PM Peak
Analyst: KHA_Analyst

Land Use A: Residential (Recreational Home)

ITE Land Use Code 260
Size: 898 Units

	Total	Internal	External
Enter	96	9	87
Exit	137	7	130
Total	233	16	217
%	100%	**6.9%**	93.1%

Land Use B: Office (General Office)

ITE Land Use Code 710
Size: 32 KSF

	Total	Internal	External
Enter	8	2	6
Exit	41	2	39
Total	49	4	45
%	100%	**8.2%**	91.8%

Land Use C: Retail (Specialty Retail)

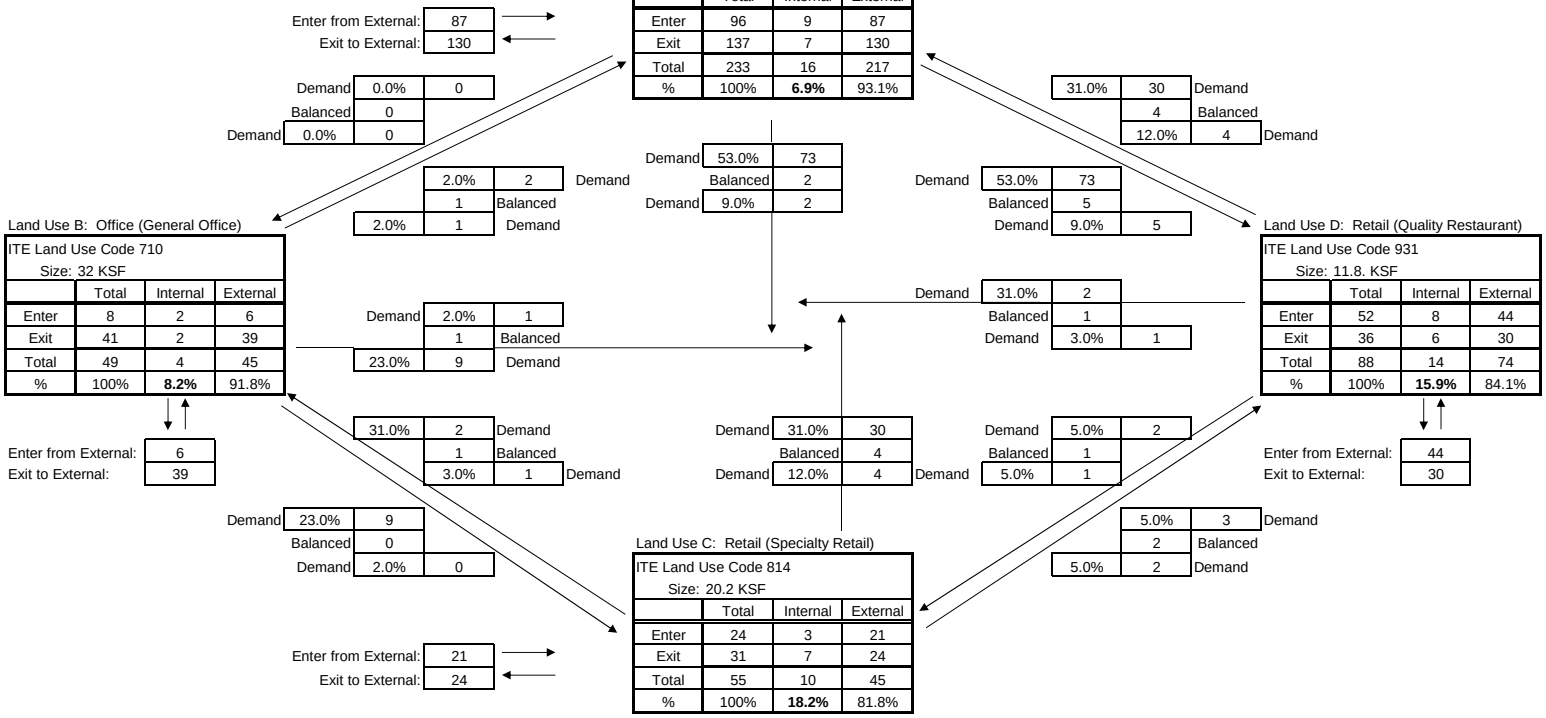
ITE Land Use Code 814
Size: 20.2 KSF

	Total	Internal	External
Enter	24	3	21
Exit	31	7	24
Total	55	10	45
%	100%	**18.2%**	81.8%

Land Use D: Retail (Quality Restaurant)

ITE Land Use Code 931
Size: 11.8. KSF

	Total	Internal	External
Enter	52	8	44
Exit	36	6	30
Total	88	14	74
%	100%	**15.9%**	84.1%



NET EXTERNAL TRIPS FOR MULTI-USE DEVELOPMENT

Category	Land Use A	Land Use B	Land Use C	Land Use D	Total
Enter	87	6	21	44	158
Exit	130	39	24	30	223
Total	217	45	45	74	**381**
Single Use Trip Gen Estimate	233	49	55	88	**425**

Overall Internal Capture = 10.35%

ITE MULTI-USE PROJECT INTERNAL CAPTURE WORKSHEET

(Source: Chapter 7, ITE *Trip Generation Handbook*, June 2004)

Project Number:
Project Name: Hammock Dunes DRI
Scenario: Existing - Northern Parcel
Analysis Period: PM Peak
Analyst: KHA_Analyst

Land Use A: Residential (Recreational Home)

ITE Land Use Code 260
Size: 502 Units

	Total	Internal	External
Enter	54	1	53
Exit	77	0	77
Total	131	1	130
%	100%	**0.8%**	99.2%

Land Use B: Office (General Office)

ITE Land Use Code 710
Size: 25 KSF

	Total	Internal	External
Enter	6	0	6
Exit	31	1	30
Total	37	1	36
%	100%	**2.7%**	97.3%

Land Use C: None

ITE Land Use Code
Size:

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%			

Land Use D: None

ITE Land Use Code
Size:

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%			

Enter from External: 53
Exit to External: 77

Enter from External: 6
Exit to External: 30

Enter from External: 0
Exit to External: 0

Enter from External: 0
Exit to External: 0

Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
	2.0%	1	Demand
	1	Balanced	
	2.0%	1	Demand
Demand	0.0%	0	
	0	Balanced	
	0.0%	0	Demand
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
0.0%	0	Demand	
0	Balanced		
0.0%	0	Demand	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
0.0%	0	Demand	
0	Balanced		
0.0%	0	Demand	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	

NET EXTERNAL TRIPS FOR MULTI-USE DEVELOPMENT

Category	Land Use A	B	C	D	Total
Enter	53	6	0	0	59
Exit	77	30	0	0	107
Total	130	36	0	0	**166**
Single Use Trip Gen Estimate	131	37	0	0	**168**

Overall Internal Capture = **1.19%**

ITE MULTI-USE PROJECT INTERNAL CAPTURE WORKSHEET

(Source: Chapter 7, ITE *Trip Generation Handbook*, June 2004)

Project Number:
Project Name: Hammock Dunes DRI
Scenario: Northern Parcel - Without Northshore Units
Analysis Period: PM Peak
Analyst: KHA_Analyst

Land Use A: Residential (Recreational Home)

ITE Land Use Code 260
Size: 866 Units

	Total	Internal	External
Enter	92	1	91
Exit	133	0	133
Total	225	1	224
%	100%	**0.4%**	99.6%

Enter from External: 91
Exit to External: 133

Land Use B: Office (General Office)

ITE Land Use Code 710
Size: 25 KSF

	Total	Internal	External
Enter	6	0	6
Exit	31	1	30
Total	37	1	36
%	100%	**2.7%**	97.3%

Enter from External: 6
Exit to External: 30

Land Use C: None

ITE Land Use Code
Size:

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%			

Enter from External: 0
Exit to External: 0

Land Use D: None

ITE Land Use Code
Size:

	Total	Internal	External
Enter	0	0	0
Exit	0	0	0
Total	0	0	0
%			

Enter from External: 0
Exit to External: 0

Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
	2.0%	2	Demand
	1		Balanced
	2.0%	1	Demand
Demand	0.0%	0	
	0		Balanced
	0.0%	0	Demand
	0.0%	0	Demand
	0		Balanced
	0.0%	0	Demand
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	
Demand	0.0%	0	
Balanced	0		
Demand	0.0%	0	

NET EXTERNAL TRIPS FOR MULTI-USE DEVELOPMENT

Category	Land Use A	Land Use B	Land Use C	Land Use D	Total
Enter	91	6	0	0	97
Exit	133	30	0	0	163
Total	224	36	0	0	**260**
Single Use Trip Gen Estimate	225	37	0	0	**262**

Overall Internal Capture = 0.76%

ITE MULTI-USE PROJECT INTERNAL CAPTURE WORKSHEET

(Source: Chapter 7, ITE *Trip Generation Handbook*, June 2004)

Adjusted

Project Number:
Project Name: Hammock Dunes DRI
Scenario: Southern Parcel - Without Northshore Units
Analysis Period: PM Peak
Analyst: KHA_Analyst

Land Use A: Residential (Recreational Home)

ITE Land Use Code 260
Size: 898 Units

	Total	Internal	External
Enter	96	9	87
Exit	137	7	130
Total	233	16	217
%	100%	**6.9%**	93.1%

Land Use B: Office (General Office)

ITE Land Use Code 710
Size: 32 KSF

	Total	Internal	External
Enter	8	2	6
Exit	41	2	39
Total	49	4	45
%	100%	**8.2%**	91.8%

Land Use C: Retail (Specialty Retail)

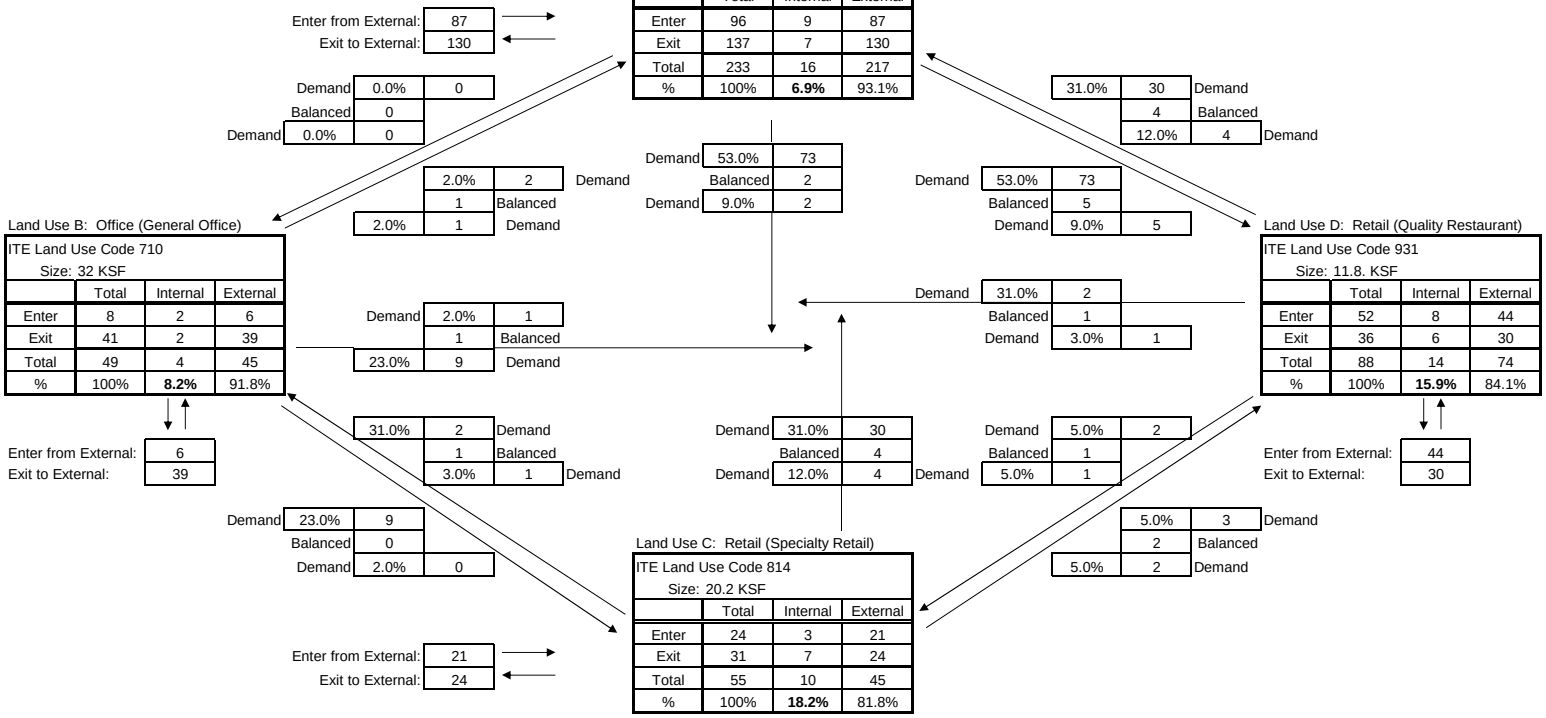
ITE Land Use Code 814
Size: 20.2 KSF

	Total	Internal	External
Enter	24	3	21
Exit	31	7	24
Total	55	10	45
%	100%	**18.2%**	81.8%

Land Use D: Retail (Quality Restaurant)

ITE Land Use Code 931
Size: 11.8. KSF

	Total	Internal	External
Enter	52	8	44
Exit	36	6	30
Total	88	14	74
%	100%	**15.9%**	84.1%



NET EXTERNAL TRIPS FOR MULTI-USE DEVELOPMENT

Category	Land Use A	Land Use B	Land Use C	Land Use D	Total
Enter	87	6	21	44	158
Exit	130	39	24	30	223
Total	217	45	45	74	**381**
Single Use Trip Gen Estimate	233	49	55	88	**425**

Overall Internal Capture = **10.35%**

ATTACHMENT I

Intersection Volume Development Worksheets

EXISTING (2011) AND BUILD-OUT FUTURE VOLUME DEVELOPMENT SHEET
WITH NORTHSHORE UNITS

Palm Coast Parkway & Palm Harbor Drive

PM PEAK HOUR

	Palm Harbor Drive			Palm Coast Parkway			Palm Harbor Drive			Palm Coast Parkway			
		Southbound			**Westbound**			**Northbound**			**Eastbound**		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	U-Turn	Left	Through	Right
4:00 PM	0	3	7	16	71	1	30	0	20	2	4	53	58
4:15 PM	0	1	5	11	67	2	23	2	11	1	8	63	36
4:30 PM	0	1	6	16	63	1	17	1	7	1	4	73	44
4:45 PM	2	3	1	13	78	4	21	0	10	0	2	69	34
PHF		0.73			0.90			0.71			0.93		
2011 Existing Traffic	**2**	**8**	**19**	**56**	**279**	**8**	**91**	**3**	**48**	**4**	**18**	**258**	**172**
PSCF	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*
2011 Peak Season Traffic	2	9	21	62	307	9	100	3	53	4	20	284	189
Volume Balancing	0	0	0	-1	-5	0	0	0	1	0	0	5	0
2011 Factored Traffic	2	9	21	61	302	9	100	3	54	4	20	289	189
Inbound Future Project Traffic	1	0	0	0	0	0	0	0	23	0	0	112	0
Outbound Future Project Traffic	0	0	0	33	162	3	0	0	0	0	0	0	0
Total Future Project Traffic	**1**	**0**	**0**	**33**	**162**	**3**	**0**	**0**	**23**	**0**	**0**	**112**	**0**
Build-Out Final Volume	**3**	**9**	**21**	**94**	**464**	**12**	**100**	**3**	**77**	**4**	**20**	**401**	**189**

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EXISTING (2011) AND BUILD-OUT FUTURE VOLUME DEVELOPMENT SHEET
WITH NORTHSHORE UNITS

Hammock Dunes Parkway & Camino del Mar Parkway

PM PEAK HOUR

	Camino del Mar Parkway **Southbound**			Hammock Dunes Parkway **Westbound**			Camino del Mar Parkway **Northbound**			Hammock Dunes Parkway **Eastbound**		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
4:00 PM	0	6	59	9	19	0	10	5	3	52	11	10
4:15 PM	2	6	57	4	10	1	13	6	5	45	11	18
4:30 PM	0	6	58	3	14	0	8	0	4	42	24	13
4:45 PM	2	2	64	3	12	3	10	3	2	51	25	11
PHF		0.96			0.70			0.72			0.90	
2011 Existing Traffic	**4**	**20**	**238**	**19**	**55**	**4**	**41**	**14**	**14**	**190**	**71**	**52**
PSCF	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*
2011 Peak Season Traffic	4	22	262	21	61	4	45	15	15	209	78	57
Volume Balancing	0	0	4	0	0	0	0	0	0	1	0	0
2011 Factored Traffic	4	22	266	21	61	4	45	15	15	210	78	57
Inbound Future Project Traffic	0	15	0	15	0	0	0	0	0	37	59	40
Outbound Future Project Traffic	0	0	51	0	87	0	60	23	22	0	0	0
Total Future Project Traffic	0	15	51	15	87	0	60	23	22	37	59	40
Build-Out Final Volume	**4**	**37**	**317**	**36**	**148**	**4**	**105**	**38**	**37**	**247**	**137**	**97**

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EXISTING (2011) AND BUILD-OUT FUTURE VOLUME DEVELOPMENT SHEET
WITH NORTHSHORE UNITS

Oceanshore Boulevard & Camino del Mar Parkway

PM PEAK HOUR

	Oceanshore Blvd **Southbound**			Camino del Mar Parkway **Westbound**			Oceanshore Blvd **Northbound**			Camino del Mar Parkway **Eastbound**		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
4:00 PM	44	34	1	12	5	37	0	25	21	0	1	0
4:15 PM	32	27	5	11	4	39	2	30	26	0	6	0
4:30 PM	42	32	0	8	4	31	1	32	24	2	3	3
4:45 PM	39	28	2	14	2	40	1	24	20	0	7	0
PHF		0.91			0.92			0.89			0.69	
2011 Existing Traffic	**157**	**121**	**8**	**45**	**15**	**147**	**4**	**111**	**91**	**2**	**17**	**3**
PSCF	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*
2011 Peak Season Traffic	173	133	9	50	17	162	4	122	100	2	19	3
Volume Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2011 Factored Traffic	173	133	9	50	17	162	4	122	100	2	19	3
Inbound Future Project Traffic	13	3	2	6	13	18	3	11	2	0	0	0
Outbound Future Project Traffic	26	18	0	8	0	15	0	3	10	3	15	3
Total Future Project Traffic	39	21	2	14	13	33	3	14	12	3	15	3
Build-Out Final Volume	**212**	**154**	**11**	**64**	**30**	**195**	**7**	**136**	**112**	**5**	**34**	**6**

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EXISTING (2011) AND BUILD-OUT FUTURE VOLUME DEVELOPMENT SHEET
WITH NORTHSHORE UNITS

Oceanshore Boulevard & Jungle Hut Road

PM PEAK HOUR

	Oceanshore Blvd **Southbound**			Jungle Hut Road **Westbound**			Oceanshore Blvd **Northbound**			Jungle Hut Road **Eastbound**		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
4:00 PM	3	78	0	1	0	4	1	62	1	0	0	1
4:15 PM	0	62	0	1	0	1	1	66	2	0	0	1
4:30 PM	2	71	0	2	0	1	0	66	0	1	0	0
4:45 PM	0	69	0	1	1	1	0	65	1	0	0	2
PHF		0.88			0.65			0.96			0.63	
2011 Existing Traffic	**5**	**280**	**0**	**5**	**1**	**7**	**2**	**259**	**4**	**1**	**0**	**4**
PSCF	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*
2011 Peak Season Traffic	6	308	0	6	1	8	2	285	4	1	0	4
Volume Balancing	0	-3	0	0	0	0	0	-5	0	0	0	0
2011 Factored Traffic	6	305	0	6	1	8	2	280	4	1	0	4
Inbound Future Project Traffic	8	18	2	0	0	0	0	23	6	0	0	0
Outbound Future Project Traffic	0	35	0	8	0	13	0	21	0	3	3	1
Total Future Project Traffic	8	53	2	8	0	13	0	44	6	3	3	1
Build-Out Final Volume	**14**	**358**	**2**	**14**	**1**	**21**	**2**	**324**	**10**	**4**	**3**	**5**

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WITH NORTHSHORE UNITS

Oceanshore Boulevard & 16th Road

PM PEAK HOUR

	Oceanshore Blvd **Southbound**			16th Road **Westbound**			Oceanshore Blvd **Northbound**			16th Road **Eastbound**		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
4:00 PM	6	71	1	7	0	9	0	53	6	2	0	0
4:15 PM	7	55	0	3	1	7	0	54	4	0	0	0
4:30 PM	5	65	0	9	0	15	1	54	7	0	0	1
4:45 PM	7	55	0	6	0	8	0	57	5	0	0	1
PHF		0.87			0.68			0.97			0.50	
2011 Existing Traffic	**25**	**246**	**1**	**25**	**1**	**39**	**1**	**218**	**22**	**2**	**0**	**2**
PSCF	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*
2011 Peak Season Traffic	28	271	1	28	1	43	1	240	24	2	0	2
Volume Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2011 Factored Traffic	28	271	1	28	1	43	1	240	24	2	0	2
Inbound Future Project Traffic	15	25	0	0	0	0	0	0	27	0	0	0
Outbound Future Project Traffic	0	0	0	38	0	21	0	33	0	0	0	0
Total Future Project Traffic	15	25	0	38	0	21	0	33	27	0	0	0
Build-Out Final Volume	**43**	**296**	**1**	**66**	**1**	**64**	**1**	**273**	**51**	**2**	**0**	**2**

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EXISTING (2011) AND BUILD-OUT FUTURE VOLUME DEVELOPMENT SHEET
WITHOUT NORTHSHORE UNITS

Palm Coast Parkway & Palm Harbor Drive

PM PEAK HOUR

	Palm Harbor Drive			Palm Coast Parkway			Palm Harbor Drive			Palm Coast Parkway			
	Southbound			**Westbound**			**Northbound**			**Eastbound**			
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	U-Turn	Left	Through	Right
4:00 PM	0	3	7	16	71	1	30	0	20	2	4	53	58
4:15 PM	0	1	5	11	67	2	23	2	11	1	8	63	36
4:30 PM	0	1	6	16	63	1	17	1	7	1	4	73	44
4:45 PM	2	3	1	13	78	4	21	0	10	0	2	69	34
PHF		0.73			0.90			0.71			0.93		
2011 Existing Traffic	**2**	**8**	**19**	**56**	**279**	**8**	**91**	**3**	**48**	**4**	**18**	**258**	**172**
PSCF	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*
2011 Peak Season Traffic	2	9	21	62	307	9	100	3	53	4	20	284	189
Volume Balancing	0	0	0	-1	-5	0	0	0	1	0	0	5	0
2011 Factored Traffic	2	9	21	61	302	9	100	3	54	4	20	289	189
Inbound Future Project Traffic	0	0	0	0	0	0	0	0	18	0	0	77	0
Outbound Future Project Traffic	0	0	0	23	112	2	0	0	0	0	0	0	0
Total Future Project Traffic	**0**	**0**	**0**	**23**	**112**	**2**	**0**	**0**	**18**	**0**	**0**	**77**	**0**
Build-Out Final Volume	**2**	**9**	**21**	**84**	**414**	**11**	**100**	**3**	**72**	**4**	**20**	**366**	**189**

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EXISTING (2011) AND BUILD-OUT FUTURE VOLUME DEVELOPMENT SHEET
WITHOUT NORTHSHORE UNITS

Hammock Dunes Parkway & Camino del Mar Parkway

PM PEAK HOUR

	Camino del Mar Parkway **Southbound**			Hammock Dunes Parkway **Westbound**			Camino del Mar Parkway **Northbound**			Hammock Dunes Parkway **Eastbound**		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
4:00 PM	0	6	59	9	19	0	10	5	3	52	11	10
4:15 PM	2	6	57	4	10	1	13	6	5	45	11	18
4:30 PM	0	6	58	3	14	0	8	0	4	42	24	13
4:45 PM	2	2	64	3	12	3	10	3	2	51	25	11
PHF		0.96			0.70			0.72			0.90	
2011 Existing Traffic	**4**	**20**	**238**	**19**	**55**	**4**	**41**	**14**	**14**	**190**	**71**	**52**
PSCF	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*
2011 Peak Season Traffic	4	22	262	21	61	4	45	15	15	209	78	57
Volume Balancing	0	0	4	0	0	0	0	0	0	1	0	0
2011 Factored Traffic	4	22	266	21	61	4	45	15	15	210	78	57
Inbound Future Project Traffic	0	15	0	15	0	0	0	0	0	26	25	40
Outbound Future Project Traffic	0	0	37	0	40	0	60	23	22	0	0	0
Total Future Project Traffic	0	15	37	15	40	0	60	23	22	26	25	40
Build-Out Final Volume	**4**	**37**	**303**	**36**	**101**	**4**	**105**	**38**	**37**	**236**	**103**	**97**

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WITHOUT NORTHSHORE UNITS

Oceanshore Boulevard & Camino del Mar Parkway

PM PEAK HOUR

	Oceanshore Blvd **Southbound**			Camino del Mar Parkway **Westbound**			Oceanshore Blvd **Northbound**			Camino del Mar Parkway **Eastbound**		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
4:00 PM	44	34	1	12	5	37	0	25	21	0	1	0
4:15 PM	32	27	5	11	4	39	2	30	26	0	6	0
4:30 PM	42	32	0	8	4	31	1	32	24	2	3	3
4:45 PM	39	28	2	14	2	40	1	24	20	0	7	0
PHF		0.91			0.92			0.89			0.69	
2011 Existing Traffic	**157**	**121**	**8**	**45**	**15**	**147**	**4**	**111**	**91**	**2**	**17**	**3**
PSCF	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*
2011 Peak Season Traffic	173	133	9	50	17	162	4	122	100	2	19	3
Volume Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2011 Factored Traffic	173	133	9	50	17	162	4	122	100	2	19	3
Inbound Future Project Traffic	13	3	2	6	13	7	3	6	2	0	0	0
Outbound Future Project Traffic	12	8	0	8	0	15	0	3	10	3	15	3
Total Future Project Traffic	25	11	2	14	13	22	3	9	12	3	15	3
Build-Out Final Volume	**198**	**144**	**11**	**64**	**30**	**184**	**7**	**131**	**112**	**5**	**34**	**6**

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EXISTING (2011) AND BUILD-OUT FUTURE VOLUME DEVELOPMENT SHEET
WITHOUT NORTHSHORE UNITS

Oceanshore Boulevard & Jungle Hut Road

PM PEAK HOUR

	Oceanshore Blvd **Southbound**			Jungle Hut Road **Westbound**			Oceanshore Blvd **Northbound**			Jungle Hut Road **Eastbound**		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
4:00 PM	3	78	0	1	0	4	1	62	1	0	0	1
4:15 PM	0	62	0	1	0	1	1	66	2	0	0	1
4:30 PM	2	71	0	2	0	1	0	66	0	1	0	0
4:45 PM	0	69	0	1	1	1	0	65	1	0	0	2
PHF		0.88			0.65			0.96			0.63	
2011 Existing Traffic	**5**	**280**	**0**	**5**	**1**	**7**	**2**	**259**	**4**	**1**	**0**	**4**
PSCF	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*
2011 Peak Season Traffic	6	308	0	6	1	8	2	285	4	1	0	4
Volume Balancing	0	-3	0	0	0	0	0	-5	0	0	0	0
2011 Factored Traffic	6	305	0	6	1	8	2	280	4	1	0	4
Inbound Future Project Traffic	4	18	2	0	0	0	0	10	3	0	0	0
Outbound Future Project Traffic	0	15	0	4	0	7	0	21	0	3	3	1
Total Future Project Traffic	4	33	2	4	0	7	0	31	3	3	3	1
Build-Out Final Volume	**10**	**338**	**2**	**10**	**1**	**15**	**2**	**311**	**7**	**4**	**3**	**5**

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EXISTING (2011) AND BUILD-OUT FUTURE VOLUME DEVELOPMENT SHEET
WITHOUT NORTHSHORE UNITS

Oceanshore Boulevard & 16th Road

PM PEAK HOUR

	Oceanshore Blvd **Southbound**			16th Road **Westbound**			Oceanshore Blvd **Northbound**			16th Road **Eastbound**		
Description	Left	Through	Right	Left	Through	Right	Left	Through	Right	Left	Through	Right
4:00 PM	6	71	1	7	0	9	0	53	6	2	0	0
4:15 PM	7	55	0	3	1	7	0	54	4	0	0	0
4:30 PM	5	65	0	9	0	15	1	54	7	0	0	1
4:45 PM	7	55	0	6	0	8	0	57	5	0	0	1
PHF		0.87			0.68			0.97			0.50	
2011 Existing Traffic	**25**	**246**	**1**	**25**	**1**	**39**	**1**	**218**	**22**	**2**	**0**	**2**
PSCF	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*	*1.10*
2011 Peak Season Traffic	28	271	1	28	1	43	1	240	24	2	0	2
Volume Balancing	0	0	0	0	0	0	0	0	0	0	0	0
2011 Factored Traffic	28	271	1	28	1	43	1	240	24	2	0	2
Inbound Future Project Traffic	9	21	0	0	0	0	0	0	14	0	0	0
Outbound Future Project Traffic	0	0	0	18	0	12	0	27	0	0	0	0
Total Future Project Traffic	9	21	0	18	0	12	0	27	14	0	0	0
Build-Out Final Volume	**37**	**292**	**1**	**46**	**1**	**55**	**1**	**267**	**38**	**2**	**0**	**2**

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ATTACHMENT J

ARTPLAN output

ARTPLAN 2009 Conceptual Planning Analysis

Project Information

Analyst	KHA Analyst	**Arterial Name**	Hammock Dunes Parkway	**Study Period**	K100
Date Prepared	12/1/2011 2:47:53 PM	**From**	Camino Real Drive	**Modal Analysis**	Auto Only
Agency	KHA	**To**	Palm Harbor Parkway	**Program**	ARTPLAN 2009
Area Type	Large Urbanized	**Peak Direction**	Westbound	**Version Date**	12/12/10
Arterial Class	1				

File Name	C:\Documents and Settings\ian.rairden\Local Settings\Temp\preview.xml
User Notes	

Arterial Data

K	0.09	**PHF**	0.936	**Control Type**	Semiactuated
D	0.6	**% Heavy Vehicles**	2	**Base Sat. Flow Rate**	1950

Automobile Intersection and Segment Data

Segment #	Cycle Length	Thru g/C	Arr. Type	INT # Dir.Lanes	% Left Turns	% Right Turns	Left Turn Lanes	# Left Turn Lanes	LT Storage Length	Left g/C	Right Turn Lanes	Length	AADT	Hourly Vol.	SEG # Dir.Lanes	FFS	Median Type
1 (to Palm Harbor Parkway)	60	1	3	1	0	0	No				No	4488	7500	405	1	40	None

Automobile LOS

Segment #	Thru Mvmt Flow Rate	Adj. Sat. Flow Rate	v/c	Control Delay	Int. Approach LOS	Queue Ratio	Speed (mph)	Segment LOS
1 (to Palm Harbor Parkway)	433	1561	0.277	0.00	A	0.00	37.04	B

Arterial Length	**0.8500**	**Weighted g/C**	**##**	**FFS Delay**	**6.11**	**Threshold Delay**	**0.00**	**Auto Speed**	**37.04**	**Auto LOS**	**B**

Automobile Service Volumes

Note: The maximum normally acceptable directional service volume for LOS E in Florida for this facility type and area type is 1000 veh/h/ln.

	A	B	C	D	E
Lanes	**Hourly Volume In Peak Direction**				
1	**	890	1680	***	***
2	**	1780	3400	***	***
3	**	2670	5140	***	***
4	**	3560	6860	***	***
*	**	890	1680	***	***
Lanes	**Hourly Volume In Both Directions**				
2	**	1490	2800	***	***
4	**	2970	5680	***	***
6	**	4460	8560	***	***
8	**	5940	11440	***	***
*	**	1490	2800	***	***
Lanes	**Annual Average Daily Traffic**				
2	**	16500	31100	***	***
4	**	33000	63100	***	***
6	**	49500	95100	***	***
8	**	66000	127100	***	***
*	**	16500	31100	***	***

*** Service Volumes for the specific facility being analyzed, based on # of lanes from the intersection and segment data screens.**
**** Cannot be achieved based on input data provided.**
***** Not applicable for that level of service letter grade. See generalized tables notes for more details.**
 # Under the given conditions, left turn lane storage is highly likely to overflow. The number of directional thru lanes should be reduced accordingly.
Facility weighted g/C exceeds normally acceptable upper range (0.5); verify that g/C inputs are correct.
Intersection capacity (ies) are exceeded for the full hour; an operational level analysis tool is more appropriate for this situation.

ATTACHMENT K

Synchro Output

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	2	9	21	100	3	54	4	20	289	189	61	302
Movement Number	7	4	14	3	8	18		5	2	12	1	6
Initial Queue, veh	0	0	0	0	0	0		0	0	0	0	0
Ped-Bike Adj. Factor (A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00	1.00	
Parking, Bus Adj. Factors	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Adj. Sat. Flow Rate, veh/h/ln	1863	1863	1863	1863	1863	1863		1863	1863	1863	1863	1863
Lanes	0	1	0	0	1	1		1	2	1	1	2
Lane Assignment												
Capacity, veh/h	4	19	45	225	7	207		475	795	356	508	922
Proportion Arriving On Green	0.04	0.04	0.04	0.13	0.13	0.13		0.02	0.22	0.22	0.06	0.26
Movement Delay, s/veh	23.5	0.0	0.0	14.8	0.0	12.7		8.5	10.0	11.6	7.4	9.1
Movement LOS	C			B		B		A	A	B	A	A
Approach Volume, veh/h		44			221				535			413
Approach Delay, s/veh		23.5			14.1				10.5			8.8
Approach LOS		C			B				B			A

Timer:	1	2	3	4	5	6	7	8
Assigned Phase	1	2	8	4	5	6		
Case No	1.1	3.0	11.0	12.0	1.1	3.0		
Phase Duration (G+Y+Rc), s	5.70	10.58	7.83	5.20	4.64	11.64		
Change Period (Y+Rc), s	4.00	4.00	4.00	4.00	4.00	4.00		
Max. Allowable Headway (MAH), s	3.77	4.75	4.80	5.47	3.70	4.75		
Maximum Green Setting (Gmax), s	4.00	8.00	8.00	4.00	4.00	8.00		
Max. Queue Clearance Time (g_c+I1), s	2.79	5.35	4.27	2.76	2.27	4.27		
Green Extension Time (g_e), s	0.01	1.24	0.32	0.01	0.00	1.66		
Probability of Phase Call (p_c)	0.424	0.999	0.835	0.300	0.161	0.999		
Probability of Max Out (p_x)	1.000	1.000	1.000	1.000	1.000	1.000		

Left-Turn Movement Data					
Assigned Movement	1		3	7	5
Mvmt. Sat Flow, veh/h	1774.04		1724.76	104.05	1774.04

Through Movement Data					
Assigned Movement		2	8	4	6
Mvmt. Sat Flow, veh/h		3539.22	51.74	468.21	3539.22

Right-Turn Movement Data					
Assigned Movement		12	18	14	16
Mvmt. Sat Flow, veh/h		1583.33	1583.33	1092.49	1583.33

Left Lane Group Data								
Assigned Movement	1	0	3	7	5	0	0	0
Lane Assignment	L (Pr/Pm)		L+T	L+T+R	L (Pr/Pm)			
Lanes in Group	1	0	1	1	1	0	0	0
Group Volume (v), veh/h	67.8	0.0	145.1	43.8	21.5	0.0	0.0	0.0
Group Sat. Flow (s), veh/h/ln	1774.0	0.0	1776.5	1664.8	1774.0	0.0	0.0	0.0
Queue Serve Time (g_s), s	0.8	0.0	2.3	0.8	0.3	0.0	0.0	0.0
Cycle Queue Clear Time (g_c), s	0.8	0.0	2.3	0.8	0.3	0.0	0.0	0.0

Movement	SBR
Lane Configurations	
Volume (vph)	9
Movement Number	16
Initial Queue, veh	0
Ped-Bike Adj. Factor (A_pbT)	1.00
Parking, Bus Adj. Factors	1.00
Adj. Sat. Flow Rate, veh/h/ln	1863
Lanes	1
Lane Assignment	
Capacity, veh/h	413
Proportion Arriving On Green	0.26
Movement Delay, s/veh	8.1
Movement LOS	A
Approach Volume, veh/h	
Approach Delay, s/veh	
Approach LOS	

Timer:

Perm LT Sat Flow Rate (s_l), veh/h/ln	1064.3	0.0	0.0	0.0	1040.4	0.0	0.0	0.0
Shared LT Sat Flow (s_sh), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Eff. Green (g_p), s	7.6	0.0	0.0	0.0	6.6	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	4.4	0.0	0.0	0.0	5.4	0.0	0.0	0.0
Perm LT Que Serve Time (g_ps), s	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Proportion LT Inside Lane (P_L)	1.000	0.000	0.971	0.062	1.000	0.000	0.000	0.000
Lane Group Capacity (c), veh/h	507.9	0.0	232.1	68.2	475.0	0.0	0.0	0.0
Volume-to-Capacity Ratio (X)	0.133	0.000	0.625	0.643	0.045	0.000	0.000	0.000
Available Capacity (c_a), veh/h	647.4	0.0	484.9	227.2	678.3	0.0	0.0	0.0
Upstream Filter Factor (I)	1.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
Uniform Delay (d1), s/veh	7.3	0.0	12.1	13.8	8.4	0.0	0.0	0.0
Incremental Delay (d2), s/veh	0.1	0.0	2.7	9.7	0.0	0.0	0.0	0.0
Initial Queue Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	7.4	0.0	14.8	23.5	8.5	0.0	0.0	0.0
First-Term Queue (Q1), veh/ln	0.2	0.0	0.6	0.2	0.1	0.0	0.0	0.0
Second-Term Queue (Q2), veh/ln	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0
Third-Term Queue (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile bk-of-que factor (f_B%)	1.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
Percentile Back of Queue (Q%), veh/ln	0.2	0.0	0.8	0.4	0.1	0.0	0.0	0.0
Percentile Storage Ratio (RQ%)	0.02	0.00	0.05	0.03	0.01	0.00	0.00	0.00
Initial Queue (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Queue (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Saturated Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Saturated Queue (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Saturated Capacity (cs), veh/h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Queue Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Movement	0	2	8	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Group	0	2	0	0	0	2	0	0
Group Volume (v), veh/h	0.0	310.8	0.0	0.0	0.0	335.6	0.0	0.0
Group Sat. Flow (s), veh/h/ln	0.0	1769.6	0.0	0.0	0.0	1769.6	0.0	0.0
Queue Serve Time (g_s), s	0.0	2.2	0.0	0.0	0.0	2.3	0.0	0.0
Cycle Queue Clear Time (g_c), s	0.0	2.2	0.0	0.0	0.0	2.3	0.0	0.0
Lane Group Capacity (c), veh/h	0.0	794.8	0.0	0.0	0.0	922.1	0.0	0.0
Volume-to-Capacity Ratio (X)	0.000	0.391	0.000	0.000	0.000	0.364	0.000	0.000
Available Capacity (c_a), veh/h	0.0	966.1	0.0	0.0	0.0	966.1	0.0	0.0
Upstream Filter Factor (I)	0.000	1.000	0.000	0.000	0.000	1.000	0.000	0.000
Uniform Delay (d1), s/veh	0.0	9.7	0.0	0.0	0.0	8.9	0.0	0.0
Incremental Delay (d2), s/veh	0.0	0.3	0.0	0.0	0.0	0.2	0.0	0.0
Initial Queue Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.0	0.0	0.0	0.0	9.1	0.0	0.0
First-Term Queue (Q1), veh/ln	0.0	0.5	0.0	0.0	0.0	0.5	0.0	0.0
Second-Term Queue (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Third-Term Queue (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile bk-of-que factor (f_B%)	0.000	1.000	1.000	1.000	0.000	1.000	0.000	0.000
Percentile Back of Queue (Q%), veh/ln	0.0	0.5	0.0	0.0	0.0	0.6	0.0	0.0
Percentile Storage Ratio (RQ%)	0.00	0.04	0.00	0.00	0.00	0.03	0.00	0.00

Initial Queue (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Queue (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Saturated Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Saturated Queue (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Saturated Capacity (cs), veh/h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Queue Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Movement	0	12	18	14	0	16	0	0
Lane Assignment		R	R			R		
Lanes in Group	0	1	1	0	0	1	0	0
Group Volume (v), veh/h	0.0	203.2	76.1	0.0	0.0	10.0	0.0	0.0
Group Sat. Flow (s), veh/h/ln	0.0	1583.3	1583.3	0.0	0.0	1583.3	0.0	0.0
Queue Serve Time (g_s), s	0.0	3.3	1.3	0.0	0.0	0.1	0.0	0.0
Cycle Queue Clear Time (g_c), s	0.0	3.3	1.3	0.0	0.0	0.1	0.0	0.0
Prot RT Sat Flow Rate (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff. Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Proportion RT Outside Lane (P_R)	0.000	1.000	1.000	0.656	0.000	1.000	0.000	0.000
Lane Group Capacity (c), veh/h	0.0	355.6	206.9	0.0	0.0	412.5	0.0	0.0
Volume-to-Capacity Ratio (X)	0.000	0.572	0.368	0.000	0.000	0.024	0.000	0.000
Available Capacity (c_a), veh/h	0.0	432.2	432.2	0.0	0.0	432.2	0.0	0.0
Upstream Filter Factor (I)	0.000	1.000	1.000	0.000	0.000	1.000	0.000	0.000
Uniform Delay (d1), s/veh	0.0	10.1	11.6	0.0	0.0	8.1	0.0	0.0
Incremental Delay (d2), s/veh	0.0	1.4	1.1	0.0	0.0	0.0	0.0	0.0
Initial Queue Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.6	12.7	0.0	0.0	8.1	0.0	0.0
First-Term Queue (Q1), veh/ln	0.0	0.6	0.3	0.0	0.0	0.0	0.0	0.0
Second-Term Queue (Q2), veh/ln	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Third-Term Queue (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile bk-of-que factor (f_B%)	0.000	1.000	1.000	1.000	0.000	1.000	0.000	0.000
Percentile Back of Queue (Q%), veh/ln	0.0	0.8	0.4	0.0	0.0	0.0	0.0	0.0
Percentile Storage Ratio (RQ%)	0.00	0.07	0.04	0.00	0.00	0.00	0.00	0.00
Initial Queue (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Queue (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Saturated Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Saturated Queue (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Saturated Capacity (cs), veh/h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Queue Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Intersection Summary								
HCM Average Control Delay		11.0						
HCM Level of Service		B						

Intersection	
Intersection Delay (sec/veh)	15.6
Intersection LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	4	22	266	45	15	15	210	78	57	21	61	4
Peak Hour Factor	0.96	0.96	0.96	0.72	0.72	0.72	0.90	0.90	0.90	0.70	0.70	0.70
Heavy Vehicles(%)	2	2	2	2	2	2	2	2	2	2	2	2
Movement Flow Rate	4	23	277	63	21	21	233	87	63	30	87	6
Number of Lanes	0	1	0	1	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	1
HCM Control Delay	13.8	10.3	19.8	11.1
HCM LOS	B	B	C	B

Lane	NBLn1	EBLn1	WBLn1	WBLn2	WBLn3	SBLn1
Volume Left (%)	61%	1%	100%	0%	0%	24%
Volume Thru (%)	23%	8%	0%	100%	0%	71%
Volume Right (%)	17%	91%	0%	0%	100%	5%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Volume by Lane	345	292	45	15	15	86
Left Turning Volume	78	22	0	15	0	61
Through Volume	57	266	0	0	15	4
Right Turning Volume	210	4	45	0	0	21
Lane Flow Rate	383	304	62	21	21	123
Geometry Group	7	7	7	7	7	7
Degree of Utilization, X	0.654	0.483	0.125	0.039	0.034	0.222
Departure Headway, Hd	6.139	5.721	7.178	6.667	5.953	6.492
Convergence(Y/N)	Yes	Yes	Yes	Yes	Yes	Yes
Capacity	586	627	497	534	597	550
Service Time	3.886	3.484	4.955	4.444	3.729	4.257
HCM Lane V/C Ratio	0.654	0.485	0.125	0.039	0.035	0.224
HCM Control Delay	19.8	13.8	11	9.7	8.9	11.1
HCM Lane LOS	C	B	B	A	A	B
HCM 95th Percentile Queue	5.6	2.8	0.4	0.1	0.1	0.9

Intersection	
Intersection Delay (sec/veh):	6.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	2	19	3	50	17	162	4	122	100	173	133	9
Conflicting Peds.(#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
Right Turn Channelized	None	None	None	None	None	None	None	None	None	None	None	None
Storage Length	0		0	0		350	300		350	350		350
Median Width		0			0			12			12	
Grade (%)		0%			0%			0%			0%	
Peak Hour Factor	0.69	0.69	0.69	0.92	0.92	0.92	0.89	0.89	0.89	0.91	0.91	0.91
Heavy Vehicles(%)	2	2	2	2	2	2	2	2	2	2	2	2
Movement Flow Rate	3	28	4	54	18	176	4	137	112	190	146	10
Number of Lanes	0	1	1	0	1	1	1	1	1	1	1	1

Major/Minor		Minor 1			Minor 1			Major 1			Major 2	
Conflicting Flow Rate - All	769	672	146	688	672	137	156	0	0	249	0	0
Stage 1	526	526	0	146	146	0	0	0	0	0	0	0
Stage 2	243	146	0	542	526	0	0	0	0	0	0	0
Follow-up Headway	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	0	0
Pot Capacity-1 Maneuver	318	377	899	360	377	913	1425	-	-	1320	-	-
Stage 1	535	529	-	857	776	-	-	-	-	-	-	-
Stage 2	761	776	-	525	529	-	-	-	-	-	-	-
Mov Capacity-1 Maneuver	218.1	321.7	899	297.7	321.7	913	1425	-	-	1320	-	-
Mov Capacity-2 Maneuver	218.1	321.7	-	297.7	321.7	-	-	-	-	-	-	-
Stage 1	535	452.8	-	857	773.7	-	-	-	-	-	-	-
Stage 2	597.8	773.7	-	420	452.8	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay (s)	16.875	13.031	0.1	4.5
HCM LOS	C	B	A	A

Lane	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (vph)				308	899	303	913			
HCM Control Delay (s)	7.534	-	-	18	9	20.6	9.9	8.186	-	-
HCM Lane VC Ratio	0.003	-	-	0.099	0.005	0.24	0.193	0.144	-	-
HCM Lane LOS	A	-	-	C	A	C	A	A	-	-
HCM 95th Percentile Queue (veh)	0.009	-	-	0.326	0.015	0.92	0.711	0.503	-	-

Intersection	
Intersection Delay (sec/veh):	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	1	0	4	6	1	8	2	280	4	6	305	0
Conflicting Peds.(#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
Right Turn Channelized	None	None	None	None	None	None	None	None	None	None	None	None
Storage Length	0		0	0		0	475		0	420		420
Median Width		0			0			12			12	
Grade (%)		0%			0%			0%			0%	
Peak Hour Factor	0.63	0.63	0.63	0.65	0.65	0.65	0.96	0.96	0.96	0.88	0.88	0.88
Heavy Vehicles(%)	2	2	2	2	2	2	2	2	2	2	2	2
Movement Flow Rate	2	0	6	9	2	12	2	292	4	7	347	0
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

Major/Minor		Minor 1			Minor 1			Major 1			Major 2	
Conflicting Flow Rate - All	665	660	347	661	658	294	347	0	0	296	0	0
Stage 1	360	360	0	298	298	0	0	0	0	0	0	0
Stage 2	305	300	0	363	360	0	0	0	0	0	0	0
Follow-up Headway	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	0	0
Pot Capacity-1 Maneuver	374	383	695	376	384	745	1211	-	-	1267	-	-
Stage 1	658	626	-	711	667	-	-	-	-	-	-	-
Stage 2	705	666	-	656	626	-	-	-	-	-	-	-
Mov Capacity-1 Maneuver	364.7	380.3	695	370.6	381.3	745	1211	-	-	1267	-	-
Mov Capacity-2 Maneuver	364.7	380.3	-	370.6	381.3	-	-	-	-	-	-	-
Stage 1	658	622.9	-	711	665.7	-	-	-	-	-	-	-
Stage 2	690.4	664.7	-	646.8	622.9	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay (s)	11.14	12.4	0.1	0.2
HCM LOS	B	B	A	A

Lane	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (vph)				365	695	508			
HCM Control Delay (s)	7.978	-	-	14.9	10.2	12.4	7.857	-	-
HCM Lane VC Ratio	0.002	-	-	0.004	0.009	0.045	0.005	-	-
HCM Lane LOS	A	-	-	B	B	B	A	-	-
HCM 95th Percentile Queue (veh)	0.005	-	-	0.013	0.028	0.142	0.016	-	-

Intersection	
Intersection Delay (sec/veh):	2.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	2	0	2	28	1	43	1	240	24	28	271	1
Conflicting Peds.(#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
Right Turn Channelized	None	None	None	None	None	None	None	None	None	None	None	None
Storage Length	0		0	0		325	275		400	300		0
Median Width		0			0			12			12	
Grade (%)		0%			0%			0%			0%	
Peak Hour Factor	0.50	0.50	0.50	0.68	0.68	0.68	0.97	0.97	0.97	0.87	0.87	0.87
Heavy Vehicles(%)	2	2	2	2	2	2	2	2	2	2	2	2
Movement Flow Rate	4	0	4	41	1	63	1	247	25	32	311	1
Number of Lanes	0	1	0	0	1	1	1	1	1	1	1	0

Major/Minor		Minor 1			Minor 1			Major 1			Major 2	
Conflicting Flow Rate - All	658	625	312	627	626	247	313	0	0	272	0	0
Stage 1	376	376	0	249	249	0	0	0	0	0	0	0
Stage 2	282	249	0	378	377	0	0	0	0	0	0	0
Follow-up Headway	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	0	0
Pot Capacity-1 Maneuver	378	401	727	396	401	790	1247	-	-	1289	-	-
Stage 1	645	616	-	755	701	-	-	-	-	-	-	-
Stage 2	725	701	-	644	616	-	-	-	-	-	-	-
Mov Capacity-1 Maneuver	339.9	390.6	727	386	390.6	790	1247	-	-	1289	-	-
Mov Capacity-2 Maneuver	339.9	390.6	-	386	390.6	-	-	-	-	-	-	-
Stage 1	645	600.6	-	755	700.3	-	-	-	-	-	-	-
Stage 2	664.9	700.3	-	624.4	600.6	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay (s)	12.9	12.215	0	0.7
HCM LOS	B	B	A	A

Lane	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (vph)				463	386	790			
HCM Control Delay (s)	7.889	-	-	12.9	15.5	10	7.864	-	-
HCM Lane VC Ratio	0.001	-	-	0.017	0.11	0.08	0.025	-	-
HCM Lane LOS	A	-	-	B	C	B	A	-	-
HCM 95th Percentile Queue (veh)	0.002	-	-	0.053	0.369	0.26	0.077	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	2	9	21	100	3	72	4	20	366	189	84	414
Movement Number	7	4	14	3	8	18		5	2	12	1	6
Initial Queue, veh	0	0	0	0	0	0		0	0	0	0	0
Ped-Bike Adj. Factor (A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00	1.00	
Parking, Bus Adj. Factors	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Adj. Sat. Flow Rate, veh/h/ln	1863	1863	1863	1863	1863	1863		1863	1863	1863	1863	1863
Lanes	0	1	0	0	1	1		1	2	1	1	2
Lane Assignment												
Capacity, veh/h	4	19	44	228	7	209		441	848	379	501	1023
Proportion Arriving On Green	0.04	0.04	0.04	0.13	0.13	0.13		0.02	0.24	0.24	0.07	0.29
Movement Delay, s/veh	24.7	0.0	0.0	15.3	0.0	14.2		8.7	10.5	11.5	7.2	9.3
Movement LOS	C			B		B		A	B	B	A	A
Approach Volume, veh/h		44			246				618			566
Approach Delay, s/veh		24.7			14.9				10.7			8.9
Approach LOS		C			B				B			A

Timer:	1	2	3	4	5	6	7	8
Assigned Phase	1	2	8	4	5	6		
Case No	1.1	3.0	11.0	12.0	1.1	3.0		
Phase Duration (G+Y+Rc), s	6.21	11.42	8.10	5.26	4.68	12.95		
Change Period (Y+Rc), s	4.00	4.00	4.00	4.00	4.00	4.00		
Max. Allowable Headway (MAH), s	3.77	4.80	4.72	5.47	3.70	4.80		
Maximum Green Setting (Gmax), s	4.00	9.00	7.00	4.00	4.00	9.00		
Max. Queue Clearance Time (g_c+I1), s	3.10	5.47	4.39	2.80	2.28	5.29		
Green Extension Time (g_e), s	0.02	1.95	0.27	0.01	0.00	2.03		
Probability of Phase Call (p_c)	0.552	1.000	0.880	0.314	0.169	1.000		
Probability of Max Out (p_x)	1.000	1.000	1.000	1.000	1.000	1.000		

Left-Turn Movement Data					
Assigned Movement	1		3	7	5
Mvmt. Sat Flow, veh/h	1774.04		1724.76	104.05	1774.04

Through Movement Data					
Assigned Movement		2	8	4	6
Mvmt. Sat Flow, veh/h		3539.22	51.74	468.21	3539.22

Right-Turn Movement Data					
Assigned Movement		12	18	14	16
Mvmt. Sat Flow, veh/h		1583.33	1583.33	1092.49	1583.33

Left Lane Group Data								
Assigned Movement	1	0	3	7	5	0	0	0
Lane Assignment	L (Pr/Pm)		L+T	L+T+R	L (Pr/Pm)			
Lanes in Group	1	0	1	1	1	0	0	0
Group Volume (v), veh/h	93.3	0.0	145.1	43.8	21.5	0.0	0.0	0.0
Group Sat. Flow (s), veh/h/ln	1774.0	0.0	1776.5	1664.8	1774.0	0.0	0.0	0.0
Queue Serve Time (g_s), s	1.1	0.0	2.4	0.8	0.3	0.0	0.0	0.0
Cycle Queue Clear Time (g_c), s	1.1	0.0	2.4	0.8	0.3	0.0	0.0	0.0

Movement	SBR
Lane Configurations	
Volume (vph)	11
Movement Number	16
Initial Queue, veh	0
Ped-Bike Adj. Factor (A_pbT)	1.00
Parking, Bus Adj. Factors	1.00
Adj. Sat. Flow Rate, veh/h/ln	1863
Lanes	1
Lane Assignment	
Capacity, veh/h	458
Proportion Arriving On Green	0.29
Movement Delay, s/veh	7.9
Movement LOS	A
Approach Volume, veh/h	
Approach Delay, s/veh	
Approach LOS	

Timer:

Perm LT Sat Flow Rate (s_l), veh/h/ln	986.5	0.0	0.0	0.0	928.0	0.0	0.0	0.0
Shared LT Sat Flow (s_sh), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Eff. Green (g_p), s	9.0	0.0	0.0	0.0	7.4	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	4.5	0.0	0.0	0.0	5.7	0.0	0.0	0.0
Perm LT Que Serve Time (g_ps), s	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Proportion LT Inside Lane (P_L)	1.000	0.000	0.971	0.062	1.000	0.000	0.000	0.000
Lane Group Capacity (c), veh/h	501.2	0.0	235.0	67.5	440.7	0.0	0.0	0.0
Volume-to-Capacity Ratio (X)	0.186	0.000	0.617	0.649	0.049	0.000	0.000	0.000
Available Capacity (c_a), veh/h	603.8	0.0	401.3	214.9	631.0	0.0	0.0	0.0
Upstream Filter Factor (I)	1.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
Uniform Delay (d1), s/veh	7.1	0.0	12.7	14.6	8.6	0.0	0.0	0.0
Incremental Delay (d2), s/veh	0.2	0.0	2.6	10.0	0.0	0.0	0.0	0.0
Initial Queue Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	7.2	0.0	15.3	24.7	8.7	0.0	0.0	0.0
First-Term Queue (Q1), veh/ln	0.2	0.0	0.7	0.2	0.1	0.0	0.0	0.0
Second-Term Queue (Q2), veh/ln	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0
Third-Term Queue (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile bk-of-que factor (f_B%)	1.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
Percentile Back of Queue (Q%), veh/ln	0.3	0.0	0.9	0.4	0.1	0.0	0.0	0.0
Percentile Storage Ratio (RQ%)	0.03	0.00	0.06	0.03	0.01	0.00	0.00	0.00
Initial Queue (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Queue (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Saturated Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Saturated Queue (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Saturated Capacity (cs), veh/h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Queue Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Middle Lane Group Data								
Assigned Movement	0	2	8	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Group	0	2	0	0	0	2	0	0
Group Volume (v), veh/h	0.0	393.5	0.0	0.0	0.0	460.0	0.0	0.0
Group Sat. Flow (s), veh/h/ln	0.0	1769.6	0.0	0.0	0.0	1769.6	0.0	0.0
Queue Serve Time (g_s), s	0.0	2.9	0.0	0.0	0.0	3.3	0.0	0.0
Cycle Queue Clear Time (g_c), s	0.0	2.9	0.0	0.0	0.0	3.3	0.0	0.0
Lane Group Capacity (c), veh/h	0.0	847.6	0.0	0.0	0.0	1022.7	0.0	0.0
Volume-to-Capacity Ratio (X)	0.000	0.464	0.000	0.000	0.000	0.450	0.000	0.000
Available Capacity (c_a), veh/h	0.0	1028.0	0.0	0.0	0.0	1028.0	0.0	0.0
Upstream Filter Factor (I)	0.000	1.000	0.000	0.000	0.000	1.000	0.000	0.000
Uniform Delay (d1), s/veh	0.0	10.1	0.0	0.0	0.0	9.0	0.0	0.0
Incremental Delay (d2), s/veh	0.0	0.4	0.0	0.0	0.0	0.3	0.0	0.0
Initial Queue Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.5	0.0	0.0	0.0	9.3	0.0	0.0
First-Term Queue (Q1), veh/ln	0.0	0.7	0.0	0.0	0.0	0.8	0.0	0.0
Second-Term Queue (Q2), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Third-Term Queue (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile bk-of-que factor (f_B%)	0.000	1.000	1.000	1.000	0.000	1.000	0.000	0.000
Percentile Back of Queue (Q%), veh/ln	0.0	0.7	0.0	0.0	0.0	0.8	0.0	0.0
Percentile Storage Ratio (RQ%)	0.00	0.05	0.00	0.00	0.00	0.04	0.00	0.00

Initial Queue (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Queue (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Saturated Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Saturated Queue (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Saturated Capacity (cs), veh/h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Queue Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Movement	0	12	18	14	0	16	0	0
Lane Assignment		R	R			R		
Lanes in Group	0	1	1	0	0	1	0	0
Group Volume (v), veh/h	0.0	203.2	101.4	0.0	0.0	12.2	0.0	0.0
Group Sat. Flow (s), veh/h/ln	0.0	1583.3	1583.3	0.0	0.0	1583.3	0.0	0.0
Queue Serve Time (g_s), s	0.0	3.5	1.8	0.0	0.0	0.2	0.0	0.0
Cycle Queue Clear Time (g_c), s	0.0	3.5	1.8	0.0	0.0	0.2	0.0	0.0
Prot RT Sat Flow Rate (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff. Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Proportion RT Outside Lane (P_R)	0.000	1.000	1.000	0.656	0.000	1.000	0.000	0.000
Lane Group Capacity (c), veh/h	0.0	379.2	209.4	0.0	0.0	457.5	0.0	0.0
Volume-to-Capacity Ratio (X)	0.000	0.536	0.484	0.000	0.000	0.027	0.000	0.000
Available Capacity (c_a), veh/h	0.0	459.9	357.7	0.0	0.0	459.9	0.0	0.0
Upstream Filter Factor (I)	0.000	1.000	1.000	0.000	0.000	1.000	0.000	0.000
Uniform Delay (d1), s/veh	0.0	10.3	12.5	0.0	0.0	7.9	0.0	0.0
Incremental Delay (d2), s/veh	0.0	1.2	1.7	0.0	0.0	0.0	0.0	0.0
Initial Queue Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.5	14.2	0.0	0.0	7.9	0.0	0.0
First-Term Queue (Q1), veh/ln	0.0	0.7	0.5	0.0	0.0	0.0	0.0	0.0
Second-Term Queue (Q2), veh/ln	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Third-Term Queue (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile bk-of-que factor (f_B%)	0.000	1.000	1.000	1.000	0.000	1.000	0.000	0.000
Percentile Back of Queue (Q%), veh/ln	0.0	0.8	0.6	0.0	0.0	0.0	0.0	0.0
Percentile Storage Ratio (RQ%)	0.00	0.08	0.06	0.00	0.00	0.00	0.00	0.00
Initial Queue (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Queue (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Saturated Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Saturated Queue (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Saturated Capacity (cs), veh/h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Queue Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Intersection Summary								
HCM Average Control Delay		11.2						
HCM Level of Service		B						

Intersection	
Intersection Delay (sec/veh)	38.1
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	4	37	303	105	38	37	236	103	97	36	101	4
Peak Hour Factor	0.96	0.96	0.96	0.72	0.72	0.72	0.90	0.90	0.90	0.70	0.70	0.70
Heavy Vehicles(%)	2	2	2	2	2	2	2	2	2	2	2	2
Movement Flow Rate	4	39	316	146	53	51	262	114	108	51	144	6
Number of Lanes	0	1	0	1	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	1
HCM Control Delay	27.6	14.4	66.4	18
HCM LOS	D	B	F	C

Lane	NBLn1	EBLn1	WBLn1	WBLn2	WBLn3	SBLn1
Volume Left (%)	54%	1%	100%	0%	0%	26%
Volume Thru (%)	24%	11%	0%	100%	0%	72%
Volume Right (%)	22%	88%	0%	0%	100%	3%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Volume by Lane	436	344	105	38	37	141
Left Turning Volume	103	37	0	38	0	101
Through Volume	97	303	0	0	37	4
Right Turning Volume	236	4	105	0	0	36
Lane Flow Rate	484	358	146	53	51	201
Geometry Group	7	7	7	7	7	7
Degree of Utilization, X	0.992	0.731	0.357	0.121	0.108	0.463
Departure Headway, Hd	7.516	7.346	8.803	8.285	7.561	8.283
Convergence(Y/N)	Yes	Yes	Yes	Yes	Yes	Yes
Capacity	484	494	410	434	475	435
Service Time	5.216	5.069	6.533	6.016	5.291	6.023
HCM Lane V/C Ratio	1	0.725	0.356	0.122	0.107	0.462
HCM Control Delay	66.4	27.6	16.4	12.2	11.2	18
HCM Lane LOS	F	D	C	B	B	C
HCM 95th Percentile Queue	90	8.1	1.7	0.4	0.4	2.6

Intersection	
Intersection Delay (sec/veh):	8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	5	34	6	64	30	184	7	131	112	198	144	11
Conflicting Peds.(#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
Right Turn Channelized	None	None	None	None	None	None	None	None	None	None	None	None
Storage Length	0		0	0		350	300		350	350		350
Median Width		0			0			12			12	
Grade (%)		0%			0%			0%			0%	
Peak Hour Factor	0.69	0.69	0.69	0.92	0.92	0.92	0.89	0.89	0.89	0.91	0.91	0.91
Heavy Vehicles(%)	2	2	2	2	2	2	2	2	2	2	2	2
Movement Flow Rate	7	49	9	70	33	200	8	147	126	218	158	12
Number of Lanes	0	1	1	0	1	1	1	1	1	1	1	1

Major/Minor		Minor 1			Minor 1			Major 1			Major 2	
Conflicting Flow Rate - All	872	756	158	785	756	147	170	0	0	273	0	0
Stage 1	593	593	0	163	163	0	0	0	0	0	0	0
Stage 2	279	163	0	622	593	0	0	0	0	0	0	0
Follow-up Headway	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	0	0
Pot Capacity-1 Maneuver	271	337	885	310	337	903	1403	-	-	1292	-	-
Stage 1	492	493	-	839	763	-	-	-	-	-	-	-
Stage 2	728	763	-	474	493	-	-	-	-	-	-	-
Mov Capacity-1 Maneuver	167	278.7	885	231	278.7	903	1403	-	-	1292	-	-
Mov Capacity-2 Maneuver	167	278.7	-	231	278.7	-	-	-	-	-	-	-
Stage 1	492	410.2	-	839	758.4	-	-	-	-	-	-	-
Stage 2	539.1	758.4	-	343.6	410.2	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay (s)	21.06	16.829	0.2	4.7
HCM LOS	C	C	A	A

Lane	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (vph)				257	885	244	903			
HCM Control Delay (s)	7.58	-	-	22.9	9.1	30	10.1	8.35	-	-
HCM Lane VC Ratio	0.006	-	-	0.22	0.01	0.419	0.221	0.168	-	-
HCM Lane LOS	A	-	-	C	A	D	B	A	-	-
HCM 95th Percentile Queue (veh)	0.017	-	-	0.819	0.03	1.947	0.845	0.605	-	-

Intersection	
Intersection Delay (sec/veh):	1.2

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	4	3	5	10	1	15	2	311	7	10	338	2
Conflicting Peds.(#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
Right Turn Channelized	None	None	None	None	None	None	None	None	None	None	None	None
Storage Length	0		0	0		0	475		0	420		420
Median Width		0			0			12			12	
Grade (%)		0%			0%			0%			0%	
Peak Hour Factor	0.63	0.63	0.63	0.65	0.65	0.65	0.96	0.96	0.96	0.88	0.88	0.88
Heavy Vehicles(%)	2	2	2	2	2	2	2	2	2	2	2	2
Movement Flow Rate	6	5	8	15	2	23	2	324	7	11	384	2
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

Major/Minor		Minor 1			Minor 1			Major 1			Major 2	
Conflicting Flow Rate - All	751	742	384	745	739	328	386	0	0	331	0	0
Stage 1	407	407	0	332	332	0	0	0	0	0	0	0
Stage 2	344	335	0	413	407	0	0	0	0	0	0	0
Follow-up Headway	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	0	0
Pot Capacity-1 Maneuver	327	344	664	330	345	714	1171	-	-	1228	-	-
Stage 1	621	597	-	681	644	-	-	-	-	-	-	-
Stage 2	671	643	-	616	597	-	-	-	-	-	-	-
Mov Capacity-1 Maneuver	312.7	340.2	664	319.9	341.2	714	1171	-	-	1228	-	-
Mov Capacity-2 Maneuver	312.7	340.2	-	319.9	341.2	-	-	-	-	-	-	-
Stage 1	621	591.6	-	681	642.7	-	-	-	-	-	-	-
Stage 2	646.5	641.7	-	598.3	591.6	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay (s)	14	13.4	0.1	0.2
HCM LOS	B	B	A	A

Lane	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (vph)				324	664	471			
HCM Control Delay (s)	8.08	-	-	16.5	10.5	13.4	7.959	-	-
HCM Lane VC Ratio	0.002	-	-	0.034	0.012	0.085	0.009	-	-
HCM Lane LOS	A	-	-	C	B	B	A	-	-
HCM 95th Percentile Queue (veh)	0.005	-	-	0.106	0.036	0.277	0.028	-	-

Intersection	
Intersection Delay (sec/veh):	3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	2	0	2	46	1	55	1	267	38	37	292	1
Conflicting Peds.(#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
Right Turn Channelized	None	None	None	None	None	None	None	None	None	None	None	None
Storage Length	0		0	0		325	275		400	300		0
Median Width		0			0			12			12	
Grade (%)		0%			0%			0%			0%	
Peak Hour Factor	0.50	0.50	0.50	0.68	0.68	0.68	0.97	0.97	0.97	0.87	0.87	0.87
Heavy Vehicles(%)	2	2	2	2	2	2	2	2	2	2	2	2
Movement Flow Rate	4	0	4	68	1	81	1	275	39	43	336	1
Number of Lanes	0	1	0	0	1	1	1	1	1	1	1	0

Major/Minor		Minor 1			Minor 1			Major 1			Major 2	
Conflicting Flow Rate - All	739	698	336	700	699	275	337	0	0	314	0	0
Stage 1	421	421	0	277	277	0	0	0	0	0	0	0
Stage 2	318	277	0	423	422	0	0	0	0	0	0	0
Follow-up Headway	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	0	0
Pot Capacity-1 Maneuver	333	364	705	354	364	765	1220	-	-	1249	-	-
Stage 1	610	589	-	729	681	-	-	-	-	-	-	-
Stage 2	693	681	-	609	588	-	-	-	-	-	-	-
Mov Capacity-1 Maneuver	288.9	351.3	705	342.6	351.3	765	1220	-	-	1249	-	-
Mov Capacity-2 Maneuver	288.9	351.3	-	342.6	351.3	-	-	-	-	-	-	-
Stage 1	610	569	-	729	680.3	-	-	-	-	-	-	-
Stage 2	617.8	680.3	-	585	568	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay (s)	14	13.894	0	0.9
HCM LOS	B	B	A	A

Lane	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (vph)				410	343	765			
HCM Control Delay (s)	7.953	-	-	14	18.1	10.3	7.984	-	-
HCM Lane VC Ratio	0.001	-	-	0.02	0.202	0.106	0.034	-	-
HCM Lane LOS	A	-	-	B	C	B	A	-	-
HCM 95th Percentile Queue (veh)	0.003	-	-	0.06	0.741	0.353	0.106	-	-

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBL	SBT
Lane Configurations												
Volume (vph)	3	9	21	100	3	77	4	20	401	189	94	464
Movement Number	7	4	14	3	8	18		5	2	12	1	6
Initial Queue, veh	0	0	0	0	0	0		0	0	0	0	0
Ped-Bike Adj. Factor (A_pbT)	1.00		1.00	1.00		1.00		1.00		1.00	1.00	
Parking, Bus Adj. Factors	1.00	1.00	1.00	1.00	1.00	1.00		1.00	1.00	1.00	1.00	1.00
Adj. Sat. Flow Rate, veh/h/ln	1863	1863	1863	1863	1863	1863		1863	1863	1863	1863	1863
Lanes	0	1	0	0	1	1		1	2	1	1	2
Lane Assignment												
Capacity, veh/h	6	19	44	230	7	211		420	843	377	491	1035
Proportion Arriving On Green	0.04	0.04	0.04	0.13	0.13	0.13		0.02	0.24	0.24	0.08	0.29
Movement Delay, s/veh	24.7	0.0	0.0	15.4	0.0	14.6		8.8	10.8	11.6	7.3	9.5
Movement LOS	C			B		B		A	B	B	A	A
Approach Volume, veh/h		45			254				656			633
Approach Delay, s/veh		24.7			15.0				11.0			9.1
Approach LOS		C			B				B			A

Timer:	1	2	3	4	5	6	7	8
Assigned Phase	1	2	8	4	5	6		
Case No	1.1	3.0	11.0	12.0	1.1	3.0		
Phase Duration (G+Y+Rc), s	6.39	11.46	8.17	5.30	4.68	13.16		
Change Period (Y+Rc), s	4.00	4.00	4.00	4.00	4.00	4.00		
Max. Allowable Headway (MAH), s	3.77	4.82	4.70	5.46	3.70	4.82		
Maximum Green Setting (Gmax), s	4.00	9.00	7.00	4.00	4.00	9.00		
Max. Queue Clearance Time (g_c+I1), s	3.24	5.51	4.41	2.84	2.28	5.78		
Green Extension Time (g_e), s	0.02	1.94	0.27	0.01	0.00	1.94		
Probability of Phase Call (p_c)	0.597	1.000	0.890	0.325	0.171	1.000		
Probability of Max Out (p_x)	1.000	1.000	1.000	1.000	1.000	1.000		

Left-Turn Movement Data					
Assigned Movement	1		3	7	5
Mvmt. Sat Flow, veh/h	1774.04		1724.76	151.62	1774.04

Through Movement Data					
Assigned Movement		2	8	4	6
Mvmt. Sat Flow, veh/h		3539.22	51.74	454.87	3539.22

Right-Turn Movement Data					
Assigned Movement		12	18	14	16
Mvmt. Sat Flow, veh/h		1583.33	1583.33	1061.37	1583.33

Left Lane Group Data								
Assigned Movement	1	0	3	7	5	0	0	0
Lane Assignment	L (Pr/Pm)		L+T	L+T+R	L (Pr/Pm)			
Lanes in Group	1	0	1	1	1	0	0	0
Group Volume (v), veh/h	104.4	0.0	145.1	45.2	21.5	0.0	0.0	0.0
Group Sat. Flow (s), veh/h/ln	1774.0	0.0	1776.5	1667.9	1774.0	0.0	0.0	0.0
Queue Serve Time (g_s), s	1.2	0.0	2.4	0.8	0.3	0.0	0.0	0.0
Cycle Queue Clear Time (g_c), s	1.2	0.0	2.4	0.8	0.3	0.0	0.0	0.0

Movement	SBR
Lane Configurations	
Volume (vph)	12
Movement Number	16
Initial Queue, veh	0
Ped-Bike Adj. Factor (A_pbT)	1.00
Parking, Bus Adj. Factors	1.00
Adj. Sat. Flow Rate, veh/h/ln	1863
Lanes	1
Lane Assignment	
Capacity, veh/h	463
Proportion Arriving On Green	0.29
Movement Delay, s/veh	7.9
Movement LOS	A
Approach Volume, veh/h	
Approach Delay, s/veh	
Approach LOS	

Timer:

Perm LT Sat Flow Rate (s_l), veh/h/ln	953.0	0.0	0.0	0.0	881.7	0.0	0.0	0.0
Shared LT Sat Flow (s_sh), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Perm LT Eff. Green (g_p), s	9.2	0.0	0.0	0.0	7.5	0.0	0.0	0.0
Perm LT Serve Time (g_u), s	4.1	0.0	0.0	0.0	5.4	0.0	0.0	0.0
Perm LT Que Serve Time (g_ps), s	0.6	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Time to First Blk (g_f), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Serve Time pre Blk (g_fs), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Proportion LT Inside Lane (P_L)	1.000	0.000	0.971	0.091	1.000	0.000	0.000	0.000
Lane Group Capacity (c), veh/h	491.4	0.0	236.5	69.3	420.2	0.0	0.0	0.0
Volume-to-Capacity Ratio (X)	0.213	0.000	0.613	0.653	0.051	0.000	0.000	0.000
Available Capacity (c_a), veh/h	582.7	0.0	397.1	213.1	608.1	0.0	0.0	0.0
Upstream Filter Factor (I)	1.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
Uniform Delay (d1), s/veh	7.1	0.0	12.8	14.8	8.8	0.0	0.0	0.0
Incremental Delay (d2), s/veh	0.2	0.0	2.6	9.9	0.0	0.0	0.0	0.0
Initial Queue Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	7.3	0.0	15.4	24.7	8.8	0.0	0.0	0.0
First-Term Queue (Q1), veh/ln	0.3	0.0	0.7	0.3	0.1	0.0	0.0	0.0
Second-Term Queue (Q2), veh/ln	0.0	0.0	0.2	0.2	0.0	0.0	0.0	0.0
Third-Term Queue (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile bk-of-que factor (f_B%)	1.000	0.000	1.000	1.000	1.000	0.000	0.000	0.000
Percentile Back of Queue (Q%), veh/ln	0.3	0.0	0.9	0.4	0.1	0.0	0.0	0.0
Percentile Storage Ratio (RQ%)	0.03	0.00	0.06	0.03	0.01	0.00	0.00	0.00
Initial Queue (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Queue (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Saturated Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Saturated Queue (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Saturated Capacity (cs), veh/h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Queue Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Middle Lane Group Data								
Assigned Movement	0	2	8	4	0	6	0	0
Lane Assignment		T				T		
Lanes in Group	0	2	0	0	0	2	0	0
Group Volume (v), veh/h	0.0	431.2	0.0	0.0	0.0	515.6	0.0	0.0
Group Sat. Flow (s), veh/h/ln	0.0	1769.6	0.0	0.0	0.0	1769.6	0.0	0.0
Queue Serve Time (g_s), s	0.0	3.3	0.0	0.0	0.0	3.8	0.0	0.0
Cycle Queue Clear Time (g_c), s	0.0	3.3	0.0	0.0	0.0	3.8	0.0	0.0
Lane Group Capacity (c), veh/h	0.0	842.7	0.0	0.0	0.0	1035.4	0.0	0.0
Volume-to-Capacity Ratio (X)	0.000	0.512	0.000	0.000	0.000	0.498	0.000	0.000
Available Capacity (c_a), veh/h	0.0	1017.3	0.0	0.0	0.0	1035.4	0.0	0.0
Upstream Filter Factor (I)	0.000	1.000	0.000	0.000	0.000	1.000	0.000	0.000
Uniform Delay (d1), s/veh	0.0	10.3	0.0	0.0	0.0	9.2	0.0	0.0
Incremental Delay (d2), s/veh	0.0	0.5	0.0	0.0	0.0	0.4	0.0	0.0
Initial Queue Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	10.8	0.0	0.0	0.0	9.5	0.0	0.0
First-Term Queue (Q1), veh/ln	0.0	0.8	0.0	0.0	0.0	0.9	0.0	0.0
Second-Term Queue (Q2), veh/ln	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.0
Third-Term Queue (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile bk-of-que factor (f_B%)	0.000	1.000	1.000	1.000	0.000	1.000	0.000	0.000
Percentile Back of Queue (Q%), veh/ln	0.0	0.8	0.0	0.0	0.0	1.0	0.0	0.0
Percentile Storage Ratio (RQ%)	0.00	0.06	0.00	0.00	0.00	0.05	0.00	0.00

Initial Queue (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Queue (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Saturated Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Saturated Queue (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Saturated Capacity (cs), veh/h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Queue Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Right Lane Group Data								
Assigned Movement	0	12	18	14	0	16	0	0
Lane Assignment		R	R			R		
Lanes in Group	0	1	1	0	0	1	0	0
Group Volume (v), veh/h	0.0	203.2	108.5	0.0	0.0	13.3	0.0	0.0
Group Sat. Flow (s), veh/h/ln	0.0	1583.3	1583.3	0.0	0.0	1583.3	0.0	0.0
Queue Serve Time (g_s), s	0.0	3.5	2.0	0.0	0.0	0.2	0.0	0.0
Cycle Queue Clear Time (g_c), s	0.0	3.5	2.0	0.0	0.0	0.2	0.0	0.0
Prot RT Sat Flow Rate (s_R), veh/h/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Prot RT Eff. Green (g_R), s	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Proportion RT Outside Lane (P_R)	0.000	1.000	1.000	0.636	0.000	1.000	0.000	0.000
Lane Group Capacity (c), veh/h	0.0	377.0	210.8	0.0	0.0	463.2	0.0	0.0
Volume-to-Capacity Ratio (X)	0.000	0.539	0.514	0.000	0.000	0.029	0.000	0.000
Available Capacity (c_a), veh/h	0.0	455.1	354.0	0.0	0.0	463.2	0.0	0.0
Upstream Filter Factor (I)	0.000	1.000	1.000	0.000	0.000	1.000	0.000	0.000
Uniform Delay (d1), s/veh	0.0	10.4	12.6	0.0	0.0	7.9	0.0	0.0
Incremental Delay (d2), s/veh	0.0	1.2	1.9	0.0	0.0	0.0	0.0	0.0
Initial Queue Delay (d3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	0.0	11.6	14.6	0.0	0.0	7.9	0.0	0.0
First-Term Queue (Q1), veh/ln	0.0	0.7	0.5	0.0	0.0	0.0	0.0	0.0
Second-Term Queue (Q2), veh/ln	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
Third-Term Queue (Q3), veh/ln	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Percentile bk-of-que factor (f_B%)	0.000	1.000	1.000	1.000	0.000	1.000	0.000	0.000
Percentile Back of Queue (Q%), veh/ln	0.0	0.8	0.6	0.0	0.0	0.0	0.0	0.0
Percentile Storage Ratio (RQ%)	0.00	0.08	0.07	0.00	0.00	0.00	0.00	0.00
Initial Queue (Qb), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Final (Residual) Queue (Qe), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Saturated Delay (ds), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Saturated Queue (Qs), veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Saturated Capacity (cs), veh/h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Initial Queue Clear Time (tc), h	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Intersection Summary								
HCM Average Control Delay		11.3						
HCM Level of Service		B						

Intersection	
Intersection Delay (sec/veh)	41.1
Intersection LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	4	37	317	105	38	37	247	137	97	36	148	4
Peak Hour Factor	0.96	0.96	0.96	0.72	0.72	0.72	0.90	0.90	0.90	0.70	0.70	0.70
Heavy Vehicles(%)	2	2	2	2	2	2	2	2	2	2	2	2
Movement Flow Rate	4	39	330	146	53	51	274	152	108	51	211	6
Number of Lanes	0	1	0	1	1	1	0	1	0	0	1	0

Approach	EB	WB	NB	SB
Opposing Approach	WB	EB	SB	NB
Opposing Lanes	3	1	1	1
Conflicting Approach Left	SB	NB	EB	WB
Conflicting Lanes Left	1	1	1	3
Conflicting Approach Right	NB	SB	WB	EB
Conflicting Lanes Right	1	1	3	1
HCM Control Delay	30.6	14.8	69.9	23
HCM LOS	D	B	F	C

Lane	NBLn1	EBLn1	WBLn1	WBLn2	WBLn3	SBLn1
Volume Left (%)	51%	1%	100%	0%	0%	19%
Volume Thru (%)	28%	10%	0%	100%	0%	79%
Volume Right (%)	20%	89%	0%	0%	100%	2%
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop
Traffic Volume by Lane	481	358	105	38	37	188
Left Turning Volume	137	37	0	38	0	148
Through Volume	97	317	0	0	37	4
Right Turning Volume	247	4	105	0	0	36
Lane Flow Rate	534	373	146	53	51	269
Geometry Group	7	7	7	7	7	7
Degree of Utilization, X	1	0.767	0.363	0.124	0.111	0.611
Departure Headway, Hd	7.781	7.4	8.969	8.469	7.769	8.185
Convergence(Y/N)	Yes	Yes	Yes	Yes	Yes	Yes
Capacity	465	489	401	424	461	440
Service Time	5.538	5.131	6.711	6.211	5.511	5.929
HCM Lane V/C Ratio	1.148	0.763	0.364	0.125	0.111	0.611
HCM Control Delay	69.9	30.6	16.8	12.4	11.5	23
HCM Lane LOS	F	D	C	B	B	C
HCM 95th Percentile Queue	101.7	9.8	1.7	0.4	0.4	4.7

Intersection	
Intersection Delay (sec/veh):	8.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	5	34	6	64	30	195	7	136	112	212	154	11
Conflicting Peds.(#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
Right Turn Channelized	None	None	None	None	None	None	None	None	None	None	None	None
Storage Length	0		0	0		350	300		350	350		350
Median Width		0			0			12			12	
Grade (%)		0%			0%			0%			0%	
Peak Hour Factor	0.69	0.69	0.69	0.92	0.92	0.92	0.89	0.89	0.89	0.91	0.91	0.91
Heavy Vehicles(%)	2	2	2	2	2	2	2	2	2	2	2	2
Movement Flow Rate	7	49	9	70	33	212	8	153	126	233	169	12
Number of Lanes	0	1	1	0	1	1	1	1	1	1	1	1

Major/Minor		Minor 1			Minor 1			Major 1			Major 2	
Conflicting Flow Rate - All	926	804	169	833	804	153	181	0	0	279	0	0
Stage 1	635	635	0	169	169	0	0	0	0	0	0	0
Stage 2	291	169	0	664	635	0	0	0	0	0	0	0
Follow-up Headway	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	0	0
Pot Capacity-1 Maneuver	249	316	874	288	316	893	1389	-	-	1283	-	-
Stage 1	467	472	-	833	759	-	-	-	-	-	-	-
Stage 2	717	759	-	450	472	-	-	-	-	-	-	-
Mov Capacity-1 Maneuver	147.3	256.9	874	209.2	256.9	893	1389	-	-	1283	-	-
Mov Capacity-2 Maneuver	147.3	256.9	-	209.2	256.9	-	-	-	-	-	-	-
Stage 1	467	386.1	-	833	754.4	-	-	-	-	-	-	-
Stage 2	520	754.4	-	317.9	386.1	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay (s)	22.98	18.106	0.2	4.7
HCM LOS	C	C	A	A

Lane	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (vph)				235	874	222	893			
HCM Control Delay (s)	7.607	-	-	25.1	9.2	34.3	10.3	8.427	-	-
HCM Lane VC Ratio	0.006	-	-	0.241	0.01	0.46	0.237	0.182	-	-
HCM Lane LOS	A	-	-	D	A	D	B	A	-	-
HCM 95th Percentile Queue (veh)	0.017	-	-	0.913	0.03	2.227	0.924	0.662	-	-

Intersection	
Intersection Delay (sec/veh):	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	4	3	5	14	1	21	2	324	10	14	358	2
Conflicting Peds.(#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
Right Turn Channelized	None	None	None	None	None	None	None	None	None	None	None	None
Storage Length	0		0	0		0	475		0	420		420
Median Width		0			0			12			12	
Grade (%)		0%			0%			0%			0%	
Peak Hour Factor	0.63	0.63	0.63	0.65	0.65	0.65	0.96	0.96	0.96	0.88	0.88	0.88
Heavy Vehicles(%)	2	2	2	2	2	2	2	2	2	2	2	2
Movement Flow Rate	6	5	8	22	2	32	2	338	10	16	407	2
Number of Lanes	0	1	1	0	1	0	1	1	0	1	1	1

Major/Minor		Minor 1			Minor 1			Major 1			Major 2	
Conflicting Flow Rate - All	803	791	407	792	786	343	409	0	0	348	0	0
Stage 1	439	439	0	347	347	0	0	0	0	0	0	0
Stage 2	364	352	0	445	439	0	0	0	0	0	0	0
Follow-up Headway	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	0	0
Pot Capacity-1 Maneuver	302	322	644	307	324	700	1150	-	-	1213	-	-
Stage 1	597	578	-	669	635	-	-	-	-	-	-	-
Stage 2	655	632	-	592	578	-	-	-	-	-	-	-
Mov Capacity-1 Maneuver	283.7	317.2	644	296.3	319.1	700	1150	-	-	1213	-	-
Mov Capacity-2 Maneuver	283.7	317.2	-	296.3	319.1	-	-	-	-	-	-	-
Stage 1	597	570.5	-	669	633.7	-	-	-	-	-	-	-
Stage 2	622	630.7	-	572.3	570.5	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay (s)	14.725	14.2	0	0.3
HCM LOS	B	B	A	A

Lane	NBL	NBT	NBR	EBLn1	EBLn2	WBLn1	SBL	SBT	SBR
Capacity (vph)				297	644	448			
HCM Control Delay (s)	8.136	-	-	17.6	10.7	14.2	8.007	-	-
HCM Lane VC Ratio	0.002	-	-	0.037	0.012	0.124	0.013	-	-
HCM Lane LOS	A	-	-	C	B	B	A	-	-
HCM 95th Percentile Queue (veh)	0.005	-	-	0.116	0.037	0.42	0.04	-	-

Intersection	
Intersection Delay (sec/veh):	3.8

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Volume (vph)	2	0	2	66	1	64	1	273	51	43	296	1
Conflicting Peds.(#/hr)	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
Right Turn Channelized	None	None	None	None	None	None	None	None	None	None	None	None
Storage Length	0		0	0		325	275		400	300		0
Median Width		0			0			12			12	
Grade (%)		0%			0%			0%			0%	
Peak Hour Factor	0.50	0.50	0.50	0.68	0.68	0.68	0.97	0.97	0.97	0.87	0.87	0.87
Heavy Vehicles(%)	2	2	2	2	2	2	2	2	2	2	2	2
Movement Flow Rate	4	0	4	97	1	94	1	281	53	49	340	1
Number of Lanes	0	1	0	0	1	1	1	1	1	1	1	0

Major/Minor		Minor 1			Minor 1			Major 1			Major 2	
Conflicting Flow Rate - All	771	724	341	726	724	281	341	0	0	334	0	0
Stage 1	440	440	0	284	284	0	0	0	0	0	0	0
Stage 2	331	284	0	442	440	0	0	0	0	0	0	0
Follow-up Headway	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	0	0
Pot Capacity-1 Maneuver	317	352	702	340	352	757	1219	-	-	1224	-	-
Stage 1	596	578	-	723	676	-	-	-	-	-	-	-
Stage 2	682	676	-	594	578	-	-	-	-	-	-	-
Mov Capacity-1 Maneuver	268	337.6	702	327.5	337.6	757	1219	-	-	1224	-	-
Mov Capacity-2 Maneuver	268	337.6	-	327.5	337.6	-	-	-	-	-	-	-
Stage 1	596	554.9	-	723	675.3	-	-	-	-	-	-	-
Stage 2	595.3	675.3	-	567	554.9	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay (s)	14.5	15.617	0	1
HCM LOS	B	C	A	A

Lane	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR
Capacity (vph)				388	328	757			
HCM Control Delay (s)	7.956	-	-	14.5	20.6	10.4	8.065	-	-
HCM Lane VC Ratio	0.001	-	-	0.021	0.3	0.124	0.04	-	-
HCM Lane LOS	A	-	-	B	C	B	A	-	-
HCM 95th Percentile Queue (veh)	0.003	-	-	0.063	1.235	0.424	0.126	-	-