To: Hilton Head Island Planning Commission

From: Darrin A. Shoemaker, Traffic and Transportation Engineer

Via: Teri Lewis, LMO Official

Cc: Town Council
Steve Riley, Town Manager
Shawn Colin, Director of Community Development
Scott Liggett, Director of Public Projects & Facilities/Chief Engineer
Jeff Buckalew, Town Engineer

Date: February 20th, 2019

Re: 2018 TRAFFIC MONITORING AND EVALUATION REPORT

PART ONE – EXECUTIVE SUMMARY

The Town collected three days' worth of 24-hour bi-directional traffic counts at ten locations on designated major arterials in June 2018, covering a Tuesday, Wednesday, and Thursday, June 5th through June 7th. Based exclusively on these 24-hour counts, aggregate demand increased 2.5 percent over the comparable numbers recorded in June 2017. The aggregate demand recorded was 11.0 percent higher than the comparable demand recorded five years ago in June 2013, equating to growth in June traffic demand on the Town's major arterials that has increased at an effective annual rate of just over 2.1 percent during the most recent five years of data. The Town also collected morning and afternoon peak hour turning movement counts at all signalized intersections within the Town. Based on these counts, composite morning peak hour volume on the signalized intersections within the Town increased 4.8 percent over that recorded in June 2017, but composite afternoon peak hour demand decreased by 2.7 percent. This is similar to the peak hour composite volume trend identified in June 2016, but reverses that identified in June 2017, when morning peak hour demand was down nearly two percent while afternoon peak hour volume was up slightly. South Carolina Department of Transportation (SCDOT) figures for 2018 will be released later in early 2019, but their calendar-year-average 24-hour counts conducted on major and minor arterials and collector facilities throughout the island in calendar year 2017 reflect an aggregate 0.9 percent decrease over their comparable figures collected five years earlier in 2012. The SCDOT calendar-year-average figures, however, indicate that average daily demand on the bridges connecting Hilton Head

Island to the mainland is up over eleven percent over their comparable figure in 2012, a rate of increase that is supported by the Town's daily monitoring of the SCDOT's real-time count station located on Jenkins Island. Federal Highway Administration (FHWA) figures indicate that nationally, June 2018 traffic demand increased 0.3 percent compared with June 2017. It has increased 8.2 percent compared with June 2013, five years ago. The FHWA's data indicates that total traffic demand in the southeast region, comprised of all coastal states from Delaware south to Florida and also West Virginia, increased 1.3 percent over that recorded in June 2017. The FHWA's data for the state of South Carolina indicates a 2.0 percent increase over that recorded in June 2017.

Based exclusively on the June 2018 data for 24-hour demand on major arterials summarized in Table One on page eight of this report, the June 2018 annual traffic count numbers yielded the second highest total ever, lower only than those collected in 2005. For many years, 2005 and 2006 were the highest and second-highest, respectively, volume demand numbers collected during the Town's annual June counting effort. The numbers collected in 2018 exceed those collected in June 2006, however, and have pushed the 2006 totals down to the third-highest demand recorded.

Once again, the only signalized intersection found to be non-compliant with the Town's operational goals as outlined in the Land Management Ordinance (LMO) in June of 2018 was the intersection of William Hilton Parkway with Squire Pope Road and Chamberlin Drive, an intersection that has been identified as being deficient relative to the goals numerous times during the previous two decades. This intersection was found to be deficient during both the morning and afternoon peak hours in June 2018. The last time that any other signalized intersection was analyzed as being non-compliant with the LMO goals was in 2013.

The LMO requires that Sea Pines Circle be counted and analyzed in calendar years that are multiples of five. Staff has elected to exceed this requirement by ensuring that Sea Pines Circle is counted and analyzed in all even years. Hence, Sea Pines Circle was counted and analyzed in 2018. Sea Pines Circle was also found to be operating non-compliant with LMO goals in June 2018, but only due to the approach of Palmetto Bay Road exceeding 150 seconds in average delay-per-vehicle during the morning peak hour, based on the Highway Capacity Manual methodology mandated by the Town's Land Management Ordinance.

PART TWO – INTRODUCTION

As required by Section 16-2-103.J.10 of the Town's Land Management Ordinance (LMO), this report will summarize 2018 traffic volume demand on the Town's

major roadway network and recommend improvements to mitigate operating conditions identified as being non-compliant with the Town's adopted operational goals, which are outlined in Section 16-5-106.C of the LMO. The minimum requirements of the report are also outlined in Section 16-2-103.J.10 of the LMO as follow: 1) Summary of June 2018 weekday morning and afternoon peak hour turning movement counts for all signalized intersections within the Town 2) Summary of twenty-four hour volume demand on the Town's major arterial network 3) Historical trends during the previous five years 4) Description of existing operating conditions as compared with the adopted traffic goals by utilizing the analysis methodology outlined in the current (2016) edition of the Transportation Research Board's *Highway Capacity Manual*, and how these conditions have changed since the preparation of the 2017 Traffic Monitoring and Evaluation Report, and 5) Recommendations on improvements to mitigate any existing conditions found to be non-compliant with the Town's goals.

The Town's adopted traffic goals are outlined in Section 16-5-106.C of the LMO. To satisfy the goals, each signalized intersection within the Town must operate at a volume-to-capacity ratio of 0.9 or lower and with an average total delay-per-vehicle of 55.0 seconds or less during both the morning and afternoon peak hours of an average June weekday, figures which are applicable to the intersection's operation as a whole. The Town's LMO requires that morning peak volume hour and afternoon peak volume hour be evaluated and analyzed annually for each signalized intersection.

This report will examine the morning and afternoon weekday peak hour turning movement demand at signalized intersections within the Town in accordance with the definition of "peak hour" offered in Section 16-10-105 of the LMO. The LMO requires that this report be based on data collected on a typical June weekday in order to avoid identifying deficiencies based on atypically high traffic volume days such as major summer holiday weekends or major traffic-generating events such as the RBC Heritage Presented by Boeing golf tournament or Concours D'Elegance. The Town retained a traffic counting contractor to collect the data on a weekday during the first complete week in June, traditionally selected to approximate the 45th highest volume day of the year. The counts summarized in this report were collected only on Tuesdays, Wednesdays, or Thursdays, eliminating Mondays and Fridays to ensure that the results are not skewed by Monday and Friday demands adjacent to weekends. All of the morning and afternoon peak hour turning movement count data summarized in Appendix A was collected on the same calendar day, Tuesday, June 5th, 2018, save for the turning movement count at Sea Pines Circle, which was conducted on Wednesday, June 6th. Town staff conducted field measurements of delay on the approaches to Sea Pines Circle coincident with this count in order to enable comparisons of the resulting field data with the circle's analysis results. The 24-hour count data summarized in Table One of this report on page seven was collected by pneumatic tube mechanical

counters on three consecutive days from Tuesday, June 5th through Thursday, June 7th, and represents an average demand for these three days. Town staff monitored traffic conditions on these dates to ensure that the collected data was not influenced by atypical events such as adverse weather, road construction, or unforeseen incidents such as traffic collisions. As required by the LMO, this report includes historical data for these 24-hour counts that enable the reader to draw conclusions based on five-year volume trends in addition to the morning and afternoon peak hour turning movement counts collected at individual intersections each June. All of the traffic counts collected in June 2018 were judged by staff to be consistent with expectations based on previous counts, and none of the collected data was found to be aberrant or unsuitable for analysis purposes. The data set was certified by the LMO Official as being the official background data to be employed for analysis purposes within this report and for use as background data in the preparation of traffic impact studies on November 28th, 2018.

The operational goals for all signalized intersections as outlined in Section 16-5-106.C of the LMO are based on the intersection's volume-to-capacity (v/c) ratio and the average total delay experienced by motorists based on operating conditions during the weekday morning and afternoon peak traffic volume hour. Midday peak hour analysis has historically been conducted on Sea Pines Circle in addition to the morning and afternoon peak periods in response to typically light demands on the circle during the traditional morning peak period and its history of experiencing operational problems during the lunch period. The volume-to-capacity ratio is essentially a percentage of the intersection's capacity to discharge traffic that is being demanded by motorized and non-motorized traffic. The denominator in this ratio ("c"), the signalized intersection's capacity, is dependent to a large extent on the lanes available at the intersection, the manner in which they are assigned to specific movements of traffic, or lane-use, timing settings programmed into the traffic signal, and the number of conflicting bicycle and pedestrian movements. Other factors affecting capacity are more subtle, such as the physical widths of lanes, vertical grades, and how evenly or unevenly demand is distributed over multiple lanes serving the same movements. The numerator in the ratio ("v") is the intersection's hourly vehicular demand adjusted to account for a variety of factors such as variability in flow during the peak hour, the percentage of heavy vehicles in the traffic stream, and the influence on operations from neighboring traffic signals.

The Town's operational goals are a v/c ratio that does not exceed 0.9 during the morning or afternoon peak volume hours, or ninety percent of the intersection's theoretical hourly capacity based on the signal's current timing plan, and an average total delay of 55 seconds or less experienced by motorists when passing through the intersection during these peak volume hours. The 55-second delay figure is the maximum average delay at the overall intersection that corresponds with Level-of-Service "D" in the *Highway Capacity Manual,* a measure of operational effectiveness

commonly cited by traffic engineers as being the limit of acceptable operations during peak volume hours associated with morning and afternoon commuting periods. Total delay experienced by a motorist at a traffic signal or rotary intersection is comprised of stopped delay, when a motorist is physically stopped in traffic, and non-stopped delay, which results from acceleration, deceleration, or advancing at a slower pace than what would be considered a “free-flow” speed. The total delay experienced by a motorist at a traffic signal or roundabout is the actual time required to pass through the intersection from the time that a motorist brakes in advance of queued traffic until free-flow speed is reestablished on the downstream side of the intersection less the time that would’ve been required to traverse the roadway segment at free-flow speed if no intersection, traffic signal, nor conflicting motor vehicle, bicycle, or pedestrian traffic were present to impede flow. Total delay may therefore be experienced by motorists that are forced to slow for congestion even if they are ultimately not required to bring their vehicle to a stop. At roundabouts, a small amount of total delay is always inherent even in the absence of any conflicting traffic due to the need for motorists to decelerate and the travel time required to traverse the circulating roadway and accelerate back to free-flow speed on its downstream side.

Conventional engineering wisdom dictates that capacity at signals can be increased by employing long cycle lengths at a signalized intersection by ensuring that the signal changes as infrequently as is practical. Each time a traffic signal changes, one group of motorists must come to a stop while flow must be reestablished on a different group of traffic lanes. There are routinely a couple of seconds where no one at all is moving. Therefore, a signalized intersection's capacity can theoretically be increased by changing traffic signals less frequently, thereby keeping traffic flowing to the extent practicable and reducing signal changes with their associated starts and stops. Traffic signals within the Town change somewhat infrequently (usually every two to three minutes) during peak volume hours in order to help ensure that capacity is increased and the Town’s capacity-based goals are met. Changing signals less frequently, however, means that motorists may be confronted with red signals for longer periods of time, and this can cause the average delay experienced by motorists to increase. Therefore, the Town's operational goals simultaneously ensure that the traffic signals are operated in a balanced manner that does not result in long delays due to long signal cycle times nor insufficient capacity resulting from signals that change too frequently.

The current (2016) version of the software package that performs the intersection analysis methodology as outlined in the *Highway Capacity Manual* (HCM) produces average delay per vehicle quantifications but does not calculate intersection volume-to-capacity ratio. The Transportation Research Board discontinued endorsement of the intersection volume-to-capacity ratio as an operational measure

several years ago, and the analysis software does not output this value. The current version of the HCM includes instructions for calculating the intersection volume-to-capacity ratio by hand, and this manual calculation was performed for all forty-six signalized intersection analyses summarized in Tables Four and Five of this report on pages eleven and twelve. Hence, the volume-to-capacity ratio, designated as X_c in the HCM, has been manually calculated and is handwritten on each analysis kept on file in the Engineering Division office.

PART THREE – TURNING MOVEMENT COUNTS AT SIGNALIZED INTERSECTIONS – JUNE 2018 PEAK VOLUME HOURS

Turning movement counts for all signalized intersections during the intersection's morning and afternoon peak volume hours were conducted on Tuesday, June 5th, 2018. Morning, midday, and afternoon peak hour counts were conducted at Sea Pines Circle on June 6th. These forty-nine turning movement counts are summarized in diagrammatic form in Appendix A. Each turning movement diagram depicts a total peak hour intersection demand and the demand on each traffic movement during this peak volume hour. Separate counts of pedestrians and bicyclists crossing each intersection approach were also collected and are reflected on the diagrams. On each of the diagrams, the percentage change in the June 2018 motor-vehicle turning movement volume relative to the comparable June 2017 figure is rounded to the nearest whole percent, excepting instances where the hourly volume demand on the movement was less than fifty vehicles in both 2017 and 2018. The percentage change in the total intersection volume demand relative to the previous year's counts is shown rounded to the nearest tenth of one percent in the center of the diagram, and is also summarized in Table Three on page ten of this report. Where pedestrian or bicycle crossing activity was observed, these demands are shown adjacent to the vehicular volume data for each approach. Therefore, the bicycle and pedestrian volume data reflects total number of crossings but do not distinguish the specific direction of the crossing, as crossing demand for each approach but not directional crossing data is required for the HCM analyses. For purposes of consistency, and because William Hilton Parkway is oriented in varying alignments relative to cardinal directions as it traverses the Town, the off-island (westbound) direction is shown to the right of each diagram for William Hilton Parkway and the on-island direction toward Sea Pines Circle is shown to the left. Palmetto Bay Road and Pope Avenue are generally oriented in a north-south alignment, and the diagrams for these roadways as well as Sea Pines Circle show the direction toward the Charles Fraser toll bridge at the top of the diagram, and the on-island direction toward Coligny Circle at the bottom of the diagram.

PART FOUR – AVERAGE DAILY DEMAND ON MAJOR TOWN ARTERIALS AND INTERSECTIONS

Average twenty-four hour traffic demand at strategic locations on major arterials within the Town as counted on Tuesday, June 5th through Thursday, June 7th, 2018 is shown in Table One on the following page. Comparable figures are shown for each of the ten count locations throughout the Town for each year from 2013 through 2018. The 2013 column readily enables five-year comparisons as required by the LMO. The *average annual rate of change* during the previous five years for each location is shown in the far right column. When reviewing Table One, the word east or south may also be read as "on-island side of" and the word west may be read as "off-island side of" in each instance. A map showing the exact location of each count location shown in Table One is included as Appendix B.

Table Two on the following page shows similar data supplied by the South Carolina Department of Transportation (SCDOT) for average daily traffic demand on US 278 on Jenkins Island near the J. Wilton Graves Bridge spanning Skull Creek for the years 2013 through 2017. These figures represent calendar year averages, and the SCDOT typically releases figures for the previous calendar year in late spring each year. Hence, their 2018 figures are not available at the time of this report. The Town's June 24-hour counts typically generate figures that average approximately ten percent higher than SCDOT's calendar year average figures due to seasonal demand variations. The total traffic volume counted in June 2018 was 2.5 percent higher than that counted in June 2017 and was 11.0 percent higher than that counted five years previous in June 2013. The aggregate volume recorded in June 2018 was the second-highest total recorded during the annual June count effort, lagging the June 2005 count results by one percent.

TABLE ONE

24-HOUR BI-DIRECTIONAL TRAFFIC DEMAND – JUNE 2013-2018

Map Ref.	Location	2013	2014	2015	2016	2017	2018	5-year %change/yr.
1)	Wm. Hilton Pkwy. at J. Wilton Graves Br.	56,079	58,355	65,445	62,510	60,602	62,620	+2.2
2)	Wm. Hilton Pkwy. west of Cross Is. Pkwy.	46,177	48,042	62,797	53,474	54,881	56,601	+4.2
3)	Wm. Hilton Pkwy. east of Whooping Crane	43,794	44,009	45,554	46,382	46,056	46,449	+1.2
4)	Wm. Hilton Pkwy. east of Coggins Pt. Rd.	31,249	32,264	32,920	33,908	33,607	34,095	+1.8
5)	Wm. Hilton Pkwy. west of Queens Folly Rd	39,182	39,460	41,637	40,267	40,457	40,603	+0.7
6)	Wm. Hilton Pkwy. west of Arrow Road	31,214	29,190	25,496	25,745	29,773	29,046	- 1.4
7)	Pope Avenue south of New Orleans Rd.	30,252	29,544	33,361	31,999	30,252	33,137	+1.8
8)	Palmetto Bay Rd. south of Pt. Comfort Rd.	23,207	24,941	24,850	22,431	26,126	26,959	+3.1
9)	Sol Blatt Jr. XIP south of W.Hilton Pkwy.	13,273	15,833	17,194	16,232	17,377	17,929	+6.2
10)	Sol Blatt Jr. Cross-Is. at Toll Plaza	22,489	24,034	25,151	25,390	26,655	27,578	+4.2
	TOTAL OF ALL TEN STATIONS	337,942	349,398	370,624	361,924	365,786	375,017	+2.1

Composite Rate of Change – 2017-2018 = +2.5 % *

Composite Rate of Change – 2016-2017 = +1.1 % *

Effective Composite *Annual* Rate of Change – 2013-2018 = +2.1 % *

***All three rates based *exclusively* on data in Table One**

TABLE TWO

SCDOT 24-HOUR AVERAGE BI-DIRECTIONAL DEMAND ON HHI BRIDGES (calendar year average – AADT)

2012 - 50700
2013 - 52200
2014 - 53200
2015 - 54700
2016 - 54700
2017 - 56300

% change 2016 vs. 2015: 0.0%
% change 2017 vs. 2016: +2.9%
Avg. annual rate of change 2012 – 2017: +2.1%

Based exclusively on the 24-hour counts summarized in Table One, the average annual rate of change in aggregate June traffic demand during the most recent five year period from 2013 to 2018 has been 2.1 percent, a figure also indicated by the SCDOT's calendar year averages for the bridges connecting Hilton Head Island to the mainland during the five-year period from 2012 to 2017.

Appendix C to this report is a report released by the *Federal Highway Administration* in August 2018 that summarizes trends in volume demand on the nation's roadways nationwide and regionally as updated through June 2018. The report indicates that nationally, vehicle-miles traveled during the month of June have increased at an effective annual rate of 1.6% during the most recent 5-year period. A 2.0% increase in vehicle-miles traveled in the state of South Carolina in June 2018 compared with June 2017 is reported. The southeast region of the United States, comprised of all states on the Atlantic seaboard from Delaware south to Florida and including West Virginia, experienced an increase in total vehicle-miles traveled of 1.3% from June 2017 to June 2018.

Table Three on the following page shows the total combined vehicular, bicycle, and pedestrian morning and peak hour demand on each of the Town's twenty-three signalized intersections in June 2018, and the percentage change from the comparable June 2017 figure. Based exclusively on the data contained in Table Three below, aggregate morning peak hour volume demand at signalized intersections increased 4.8 percent from June 2017 to June 2018, while afternoon peak hour volume decreased 2.7 percent over that recorded in June 2017.

TABLE THREE

PEAK HOUR SIGNALIZED INTERSECTION VOLUME – June 2018

	AM			PM		
	2018 Vol.	2017 Vol.	%Chg.	2018 Vol.	2017 Vol.	%Chg.
William Hilton Pkwy. / Squire Pope Rd.	4459	4389	+1.6	5262	5347	-1.6
William Hilton Pkwy. / Spanish Wells Rd.	4328	4290	+0.9	5054	5224	-3.3
William Hilton Pkwy. / Gumtree Rd.	3554	3429	+3.8	4309	4388	-1.8
William Hilton Pkwy. / Wilborn Rd.	3291	3207	+2.6	3783	4036	-6.3
William Hilton Pkwy. / Pembroke Dr.	3094	3130	-1.2	3645	3716	-1.9
William Hilton Pkwy. / Whooping Crane Way	3390	3362	+0.8	4015	4135	-2.9
William Hilton Pkwy. / Beach City Rd.	3211	3084	+4.1	3813	3831	-0.5
William Hilton Pkwy. / Mathews Dr. (north)	2971	2919	+1.8	3797	3926	-3.3
William Hilton Pkwy. / Dillon Rd.	2521	2343	+7.6	3201	3210	-0.3
William Hilton Pkwy. / Coggins Point Rd.	2284	2184	+4.6	2940	3047	-3.5
William Hilton Pkwy. / Beachwood Dr.	2100	1861	+12.8	2546	2624	-3.0
William Hilton Pkwy. / Mathews / Folly Field	2943	2696	+9.2	3730	3736	-0.2
William Hilton Pkwy. / Singleton Beach Rd.	2573	2389	+7.7	3305	3337	-1.0
William Hilton Pkwy. / Shelter Cove Lane	2495	2269	+10.0	3289	3419	-3.8
William Hilton Pkwy. / Queens Folly Rd.	2732	2474	+10.4	3681	3743	-1.7
William Hilton Pkwy. / Queens Way	2113	2021	+4.6	2911	3045	-4.4
William Hilton Pkwy. / Shipyard / Wexford	2258	2039	+10.7	3077	3217	-4.4
William Hilton Pkwy. / New Orleans Rd.	1956	1815	+7.8	2732	2906	-6.0
William Hilton Pkwy. / Arrow Rd.	1944	1802	+7.9	2546	2642	-3.6
Pope Ave. / New Orleans / Office Park	2027	1904	+6.5	2874	2996	-4.1
Pope Ave. / Cordillo Pkwy.	1958	1748	+12.0	2724	2798	-2.6
Palmetto Bay Rd. / Target Rd.	2212	2190	+1.0	2774	2855	-2.8
Palmetto Bay Rd. / Arrow / Point Comfort	2345	2322	+1.0	2786	2766	+0.7
TOTAL	62759	59867	+4.8	78794	80944	-2.7

PART FIVE – DESCRIPTION OF OPERATING CONDITIONS RELATIVE TO ADOPTED SERVICE GOALS

This analysis of the Town's signalized intersections is based on the traffic volume data collected during the morning and afternoon peak volume hours counted on Tuesday, June 5th, 2018. The analysis was conducted in accordance with the 2016 edition of the Transportation Research Board's *Highway Capacity Manual* as required by the LMO. It should be noted that the HCM methodology isolates the peak 15-minute volume period within the peak hour being analyzed, and bases the analysis results on projected conditions within this peak quarter-hour period, not the average condition experienced within the peak volume hour. Hence, the analysis results portray conditions during the highest-volume 15-minute period within the peak volume hours analyzed.

A summary of existing volume-to-capacity ratios and average total delay per vehicle resulting from analyses conducted of morning peak hour conditions in June 2018 is shown in Table Four on page twelve. Table Four also includes comparable results for June 2017, June 2010, and June 2005 for comparison purposes. The same information for the afternoon peak hour is summarized in Table Five on page thirteen. Values that are non-compliant with the Town's operational goals are shown in bold. It should be noted that the results in Tables Four and Five reflect June 2018 operating conditions when the intersection of Pope Avenue with New Orleans and Office Park Roads remained under construction with temporary signal timings and constricted geometrics. An additional line has been inserted into Tables Four and Five reflecting the June 2018 recorded demands analyzed relative to the post-construction improved intersection geometrics and revised signal operation.

TABLE FOUR – MORNING PEAK HOUR
INTERSECTION VOLUME-TO-CAPACITY RATIOS AND AVERAGE TOTAL DELAY PER VEHICLE – JUNE 2018 AND COMPARABLE 2017, 2010 AND 2005 FIGURES

	2018		2017		2010		2005	
	v/c	dpv	v/c	dpv	v/c	dpv	v/c	dpv
WHP w/ Squire Pope Rd/Chamberlin Drive	0.85	18.3	0.83	21.7	0.84	53.6	**1.08**	54.7
WHP w/ Spanish Wells Rd./Wild Horse Road	0.64	13.7	0.64	14.0	0.76	16.8	0.72	17.9
WHP w/ Gumtree Road/XIP Ramps	0.78	31.5	0.79	27.9	0.79	42.6	0.83	47.4
WHP w/ Wilborn Road/Jarvis Park Road	0.77	5.7	0.77	6.7	0.81	26.5	0.63	18.2
WHP w/ Pembroke Dr./Museum Street	0.62	8.6	0.63	10.4	0.74	19.1	0.64	15.1
WHP w/ Whooping Crane Way/Indigo Run Dr.	0.80	24.8	0.70	20.8	0.70	32.2	0.73	25.5
WHP w/ Beach City Rd./Gardner Dr.	0.72	15.7	0.61	16.6	0.58	24.1	0.80	22.7
WHP w/ Mathews Drive (north)	0.55	21.6	0.53	22.6	0.53	38.5	0.65	45.8
WHP w/ Dillon Road	0.55	14.2	0.50	13.7	0.56	20.0	0.52	28.0
WHP w/ Coggins Point Rd.	0.44	15.1	0.47	13.9	0.53	38.2	0.60	44.1
WHP w/ Beachwood Dr.	0.40	1.6	0.35	1.7	0.34	8.5	0.36	9.8
WHP w/ Folly Field Rd./Mathews Dr.	0.49	21.6	0.47	24.3	0.42	27.6	0.49	29.1
WHP w/ Singleton Beach Rd.	0.53	2.8	0.52	2.8	0.54	4.3	0.68	8.4
WHP w/ Shelter Cove Lane	0.57	8.0	0.48	6.8	0.52	24.4	0.49	22.9
WHP w/ Queens Folly Rd./King Neptune Dr.	0.66	19.6	0.57	18.8	0.56	29.5	0.56	31.7
WHP w/ Queens Way	0.42	4.5	0.42	5.2		*Not signalized*		
WHP w/ Shipyard Dr./Wexford Dr.	0.49	15.2	0.48	14.8	0.46	23.4	0.53	31.0
WHP w/ New Orleans Rd.	0.47	11.3	0.47	9.1	0.36	12.8	0.43	21.0
WHP w/ Arrow Road	0.42	17.1	0.39	15.0	0.47	22.2	0.53	27.2
Pope Ave. w/ New Orleans/Office Park Rds. (June 2018)	0.47	38.0	0.44	22.1	0.51	34.2	0.62	34.5
Pope Ave. w/ New Orleans/Office Park Rds. (post-constr.)	0.43	22.5	--	--	--	--	--	--
Pope Ave. w/ Cordillo Parkway	0.51	24.4	0.41	20.8	0.48	28.7	0.60	33.8
Palmetto Bay Road w/ Target Road	0.48	12.2	0.49	14.4	0.52	22.7	0.53	27.9
Palmetto Bay Road w/ Arrow Road/Point Comfort Road	0.61	20.0	0.65	17.2	0.61	27.0	0.54	18.7

v/c – volume-to-capacity ratio
dpv – average total delay per vehicle in seconds
WHP-William Hilton Parkway

TABLE FIVE – AFTERNOON PEAK HOUR
INTERSECTION VOLUME-TO-CAPACITY RATIOS AND AVERAGE TOTAL DELAY PER VEHICLE – JUNE 2018 AND COMPARABLE 2017, 2010 AND 2005 FIGURES

	2018		2017		2010		2005	
	v/c	**dpv**	**v/c**	**dpv**	**v/c**	**dpv**	**v/c**	**dpv**
WHP w/ Squire Pope Rd/Chamberlin Drive	**1.10**	**65.8**	**1.11**	**58.8**	**1.19**	**69.4**	**1.02**	54.8
WHP w/ Spanish Wells Rd./Wild Horse Road	0.74	20.0	0.80	19.0	0.71	22.2	0.62	17.2
WHP w/ Gumtree Road/XIP Ramps	0.76	34.2	0.81	26.4	0.82	46.5	0.84	51.5
WHP w/ Wilborn Road/Jarvis Park Road	0.77	7.9	0.80	7.4	0.78	14.4	0.73	16.8
WHP w/ Pembroke Dr./Museum Street	0.70	18.6	0.69	16.8	0.90	28.0	0.74	24.1
WHP w/ Whooping Crane Way/Indigo Run Dr.	0.78	26.5	0.80	18.4	0.89	29.6	**0.92**	28.2
WHP w/ Beach City Rd./Gardner Dr.	0.70	19.6	0.69	18.9	0.72	23.2	**1.04**	**56.5**
WHP w/ Mathews Drive (north)	0.67	25.2	0.72	27.5	0.77	42.9	0.84	43.1
WHP w/ Dillon Road	0.70	14.2	0.69	13.7	0.73	19.4	0.61	21.0
WHP w/ Coggins Point Rd.	0.66	10.0	0.66	10.0	0.78	29.0	0.83	32.0
WHP w/ Beachwood Dr.	0.46	1.9	0.49	1.6	0.51	7.9	0.51	7.4
WHP w/ Folly Field Rd./Mathews Dr.	0.72	27.8	0.70	27.2	0.78	43.2	0.69	39.6
WHP w/ Singleton Beach Rd.	0.55	3.7	0.55	4.4	0.62	5.9	**0.94**	27.0
WHP w/ Shelter Cove Lane	0.60	15.6	0.61	16.9	0.90	45.2	0.67	30.4
WHP w/ Queens Folly Rd./King Neptune Dr.	0.69	28.5	0.72	26.4	0.88	39.4	**1.00**	**59.6**
WHP w/ Queens Way	0.53	6.6	0.58	8.2		*Not Signalized*		
WHP w/ Shipyard Dr./Wexford Dr.	0.58	15.5	0.64	16.3	0.74	20.9	0.72	20.8
WHP w/ New Orleans Rd.	0.70	19.7	0.75	28,2	0.54	19.2	0.60	24.4
WHP w/ Arrow Road	0.53	28.2	0.56	27.0	0.74	36.6	0.80	32.8
Pope Ave. w/ New Orleans/Office Park Rds. (June 2018)	0.66	40.7	0.65	27.0	0.83	41.8	**1.06**	**66.2**
Pope Ave. w/ New Orleans/Office Park Rds. (post-constr.)	0.58	21.5	--	--	--	--	--	--
Pope Ave. w/ Cordillo Parkway	0.55	33.0	0.57	33.6	0.79	46.9	0.85	40.2
Palmetto Bay Road w/ Target Road	0.56	22.2	0.64	17.9	0.67	26.6	0.74	31.4
Palmetto Bay Road w/ Arrow Road/Point Comfort Road	0.67	22.9	0.69	22.0	0.82	36.3	0.74	21.8

v/c – volume-to-capacity ratio
dpv – average total delay per vehicle in seconds
WHP-William Hilton Parkway

As shown in bold in Table Five, the intersection of William Hilton Parkway with Squire Pope Road and Chamberlin Drive is the only signalized intersection identified as failing to meet the Town's operational goals in June 2018, based on a volume-to-capacity ratio of 1.10 and an average delay of 65.8 seconds per vehicle, respectively, during the afternoon peak hour. The analyses indicate that all other signalized intersections within the Town were fully compliant with the Town's goals during the afternoon peak volume hour. All signalized intersections were found to be compliant with the Town's goals during the morning peak volume hour.

PART SIX – SEA PINES CIRCLE

The LMO requires that Sea Pines Circle traffic demands be surveyed and resulting morning and afternoon peak hour analyses be conducted in calendar years evenly divisible by five. Despite the LMO not requiring analysis of Sea Pines Circle in 2018, Town staff recently elected to count and analyze Sea Pines Circle in all even-numbered years due to Town and public interest in operational conditions at this rotary intersection hub of the southern part of the island. Hence, the most recent analysis of Sea Pines Circle previous to this report was conducted in June 2016.

Due to the fact that Sea Pines Circle historically experiences a substantial amount of backups and delays during the midday peak hour, and that this peak hour may overlap the morning and afternoon periods, the Town has traditionally surveyed traffic demands during this midday peak hour in addition to the traditional morning and afternoon peak commuting hours. All three peak hour volume surveys for Sea Pines Circle are summarized in Appendix A on pages A-48 through A-50. The total volume demand on Sea Pines Circle during all three peak volume hours counted in June 2018, June 2016, June 2010, and June 2005 is shown in Table Six below.

TABLE SIX – SEA PINES CIRCLE TOTAL INTERSECTION VOLUME IN JUNE – 2018, 2016, 2010, AND 2005

	2018	***2016***	***2010***	***2005***	***% Chg. '16-'18***
Morning Peak Volume Hour	**3028**	**3072**	**2493**	**3264**	**-1.4**
Midday Peak Volume Hour	**3510**	**3696**	**3508**	**4026**	**-5.0**
Afternoon Peak Volume Hour	**3559**	**4168**	**3525**	**4199**	**-14.6**

As shown in Table Six, total demand on the circle during the morning and midday peak volume hours was measured to be 1.4 and 5.0 percent lower, respectively, in June 2018 compared with June 2016. The afternoon peak volume hour demand declined 14.6 percent relative to June 2016. Total demand on the circle during all three peak volume hours remains significantly lower in June 2018 than that recorded in June 2005. It is suggested that the ongoing construction on the intersection of Pope Avenue with New Orleans and Office Park Roads in June 2018 may have contributed to the decline in demand relative to June 2016. Town staff also periodically observed congestion and vehicle queues on eastbound Greenwood Drive departing Sea Pines Circle that may have contributed to decreases in the intersection's capacity to discharge traffic in June 2018.

The LMO states that the operational goal at Sea Pines Circle during the morning and afternoon peak volume hours is a maximum of 150.0 seconds in average total delay on each individual approach to the circle. As indicated in Section Two on page four, total delay takes into account all additional delay experienced in decelerating and accelerating and traveling around the circle over the travel time that would be required under free-flowing conditions that disregard the presence of the intersection. Therefore, the total delay referenced by the LMO operating goal corresponds with, but is a different (typically larger) quantity than the actual stopped delay experienced by queued motorists awaiting entry into the circle. Generally, the average time that a motorist spends waiting in line to enter the circle is a primary component of the average total delay experienced, but it is important to note that the 150 average delay-per-vehicle goal outlined in the LMO does not correspond exactly with 150 seconds of delay on average experienced by motorists waiting in line to enter the circle. The June 2018 average total delay-per-vehicle analysis results for each approach of Sea Pines Circle based on the *Highway Capacity Manual* methodology are summarized in Table Seven below, with results failing to meet the Town's operational goal shown in bold. This methodology is cited in the LMO as that which will be employed to evaluate Sea Pines Circle relative to the operational goal.

TABLE SEVEN – SEA PINES CIRCLE AVERAGE TOTAL DELAY PER VEHICLE BY APPROACH – JUNE 2018

	Peak Hour Average Total Delay-Per-Vehicle (in seconds)		
	Morning	**Midday**	**Afternoon**
Greenwood Drive	113.4	64.6	89.2
Palmetto Bay Road	**192.5**	77.9	63.0
Pope Avenue	43.5	44.5	108.7
William Hilton Parkway	99.4	102.9	138.1
Sea Pines Circle	84.1	46.3	63.4

Town staff developed an estimate of total delay for each approach of Sea Pines Circle in June 2018 by conducting field measurements using a stopwatch during each of the three peak volume hours. These field measurements were conducted coincident with the collection of the intersection's peak hour turning movement counts summarized on pages A-48 through A-50. The stopwatch readings were then compared with geometric field data to calculate the actual total delay being experienced on each approach during each peak hour. The results of these observations are summarized in Table Eight below, with values failing to satisfy the LMO operational goal for Sea Pines Circle shown in bold.

TABLE EIGHT – SEA PINES CIRCLE AVERAGE TOTAL DELAY PER VEHICLE BY APPROACH – FIELD MEASURED - JUNE 2018

	Peak Hour Average Total Delay-Per-Vehicle (in seconds)		
	Morning	**Midday**	**Afternoon**
Greenwood Drive	85.3	120.8	114.1
Palmetto Bay Road	45.6	49.0	31.1
Pope Avenue	35.3	11.7	31.2
William Hilton Parkway	21.4	74.2	**151.9**

Based on the field measurements made by Town staff, only the approach of William Hilton Parkway during the afternoon peak volume hour is failing to satisfy the operational goals for Sea Pines Circle as defined in the LMO. But the LMO requires that each approach be compliant with the operational goal during both the morning and afternoon peak volume hours, meaning that Sea Pines Circle is operating out of compliance with the goal. A discussion on options for mitigating this intersection as well as that of William Hilton Parkway with Squire Pope Road and Chamberlin Drive is provided in Part Seven below.

PART SEVEN – TWO INTERSECTIONS OPERATING OUT OF COMPLIANCE WITH TOWN OPERATIONAL GOALS IN JUNE 2018

INTERSECTION OF WM. HILTON PARKWAY WITH SQUIRE POPE ROAD AND CHAMBERLIN DRIVE

As shown in Tables Four and Five, the intersection of William Hilton Parkway with Squire Pope Road and Chamberlin Drive is the only signalized intersection that was found to be failing to meet the Town's operational goals in June 2018, based on a

volume-to-capacity ratio of 1.10 and an average delay-per-vehicle of 65.8 seconds calculated during the afternoon morning peak volume hour. Both the Town's volume-to-capacity and average delay-per-vehicle based goals were satisfied during the morning peak volume hour. Both the volume-to-capacity ratio and average delay-per-vehicle based goals were satisfied during the morning peak hour in June 2017 and found to be non-compliant during the afternoon peak hour in June 2017 as well

The deficiency at this intersection during the afternoon peak volume hours is due primarily to the high volume demand on William Hilton Parkway during this hour that is served by only two through lanes. A third westbound lane terminates as an exclusive right-turn lane serving turns onto Squire Pope Road. Further, the opposing left-turn demand onto Squire Pope Road is very high during the afternoon peak volume hour and requires that the protected-movement green arrow signal indication be illuminated for a certain minimum amount of time to avoid inordinate backups and a proliferation of citizen complaints from motorists making this left turn. Also exacerbating operational difficulties is the high demand associated with the right-turn movement from Squire Pope Road onto westbound William Hilton Parkway. This right-turn demand is served by a "YIELD" sign, requiring these motorists to identify gaps in westbound traffic to enter William Hilton Parkway, gaps that are virtually non-existent during the afternoon peak volume hour. Hence, a signal change that halts westbound flow is often required to adequately serve these motorists, exacerbating the operational issues that result from the westbound through demand being served by only two lanes. While annual analyses have historically indicated that the provision of a third westbound through lane substantially improves conditions at the intersection, the provision of a free-flowing acceleration lane to serve right turns from Squire Pope Road that facilitates the removal of the "YIELD" condition is necessary to completely mitigate this intersection's non-compliance with the LMO goals during the afternoon peak hour.

During the morning peak hour, the very heavy eastbound through flow is served more adequately due to a third eastbound lane beginning just in advance of the intersection. This third eastbound lane is under-utilized, as it begins a very short distance in advance of the intersection and may give the appearance of a right-turn lane to motorists unfamiliar with the intersection's geometrics. Further, the opposing westbound left-turn demand onto Chamberlin Drive is very light, and requires service with the protected-movement left-turn signal only infrequently and for brief intervals.

The operational difficulties at this intersection periodically generate calls to serve William Hilton Parkway with inordinately long green signals, to prohibit left-turn movements during high-demand periods, or to simply place the signal in a flashing operation. Extending the green signals inordinately for William Hilton Parkway would be expected to generate red-light running and safety issues with side street motorists or

those turning left from the arterial. Time-based turn prohibitions where exclusive turn lanes are provided typically require the deployment of traffic control to close the affected turn lane(s) at the beginning of the time period that the prohibition is in effect and its removal from the roadway at the end of the prohibited period. Intentional, regularly scheduled efforts to take the signal out of operation and place it in a flashing operation, or suspending the signals service provided to certain turning movements generate a substantial liability risk and are not recommended. Serving the high-demand right-turn movement from Squire Pope Road onto westbound William Hilton Parkway with a free-flowing acceleration lane and permanently prohibiting the high-demand eastbound left-turn onto Squire Pope Road, however, would enable substantial improvements in William Hilton Parkway flow to be realized, and would potentially eliminate the need for this traffic signal entirely.

This intersection lies within the current SCDOT gateway corridor improvement project area. As such, the Town and Beaufort County must be deferential to this effort to avoid adversely impacting the SCDOT's environmental assessment effort, associated available funding, and communications with the public and major stakeholders.

SEA PINES CIRCLE

Only the movement entering Sea Pines Circle from Palmetto Bay Road was found to be deficient relative to the Town's operational goal in June 2018 based on the LMO-mandated *Highway Capacity Manual* methodology. Only the movement entering Sea Pines Circle from William Hilton Parkway during the afternoon peak hour was found to be deficient based on Town staff's field observations and measurements during all three peak volume hours that were made coincident with the June 2018 turning movement counts conducted at this intersection. Since the previous analysis of Sea Pines Circle in the 2016 version of this report, refinements have been made to the Highway Capacity Manual methodology for analyzing rotary intersections. The Town has implemented significant improvements to the circle's advance signage and pavement markings. A project to install new overhead and shoulder mounted guide signs was undertaken in 2018 that has improved motorists in selecting the correct lane for their intended destination. The Town has also taken remedial actions to improve sight lines around signs and landscaping, focusing on the median areas on motorists' left as they enter the circle.

Also, all of the traffic signals on Palmetto Bay Road, Pope Avenue, and within a mile of the circle on William Hilton Parkway have been incorporated into a new south-end coordinated traffic signal system that generally releases traffic into Sea Pines

Circle in a staggered, systematic fashion. This staggering of the various signals' release of traffic toward Sea Pines Circle is accomplished in a clockwise fashion in order to further optimize operations relative to the counter-clockwise flow in the rotary's circulating roadway, so that William Hilton Parkway follows Palmetto Bay Road and Pope Avenue follows William Hilton Parkway, thereby proceeding "upstream" around the circle's circulating roadway as opposed to releasing William Hilton Parkway traffic into the circle a relatively short time after Pope Avenue traffic is released toward the circle. While there are no signals on Greenwood Drive to release traffic toward the circle in this systematic fashion, a gap twice as long occurs between the release of Pope Avenue traffic and Palmetto Bay Road traffic to assist these motorists entering from Greenwood Drive. Hence, Palmetto Bay Road motorists are always released toward the circle exactly one-half of the system's cycle following Pope Avenue.

The Town's former Circle-to-Circle Committee evaluated a variety of alternatives for improvements to Sea Pines Circle toward reduced delays, increasing capacity, and enhancing the motorist experience at Sea Pines Circle during 2015 and 2016, ultimately determining that providing a second lane of travel throughout the rotary's circulating roadway was the optimal design improvement. Based on the operational difficulties and significantly increased collision experience that occurred prior to 2001 when three side-by-side lanes existed in each of the circle's quadrants, as well as the operational issues that may be generated by multi-lane roundabouts, it is recommended that caution be employed in pursuing such a modification to the circle's design. The intersection of Bluffton Parkway with SC 46 (Bluffton Road) on the mainland is an example of a multi-lane roundabout that generates the referenced operational issues and a large number of collisions.

Sea Pines Circle continues to experience a large number of high-speed intrusions into the center island late at night. Larger "YIELD" signs and better delineation of the left-edge of the median splitter islands and interior island with retro-reflective sheeting may be considered to mitigate this issue. The Town is currently employing a similar retro-reflective treatment at raised islands and median noses at unsignlized crosswalks on William Hilton Parkway to draw motorists attention to the crosswalks and improve visibility.

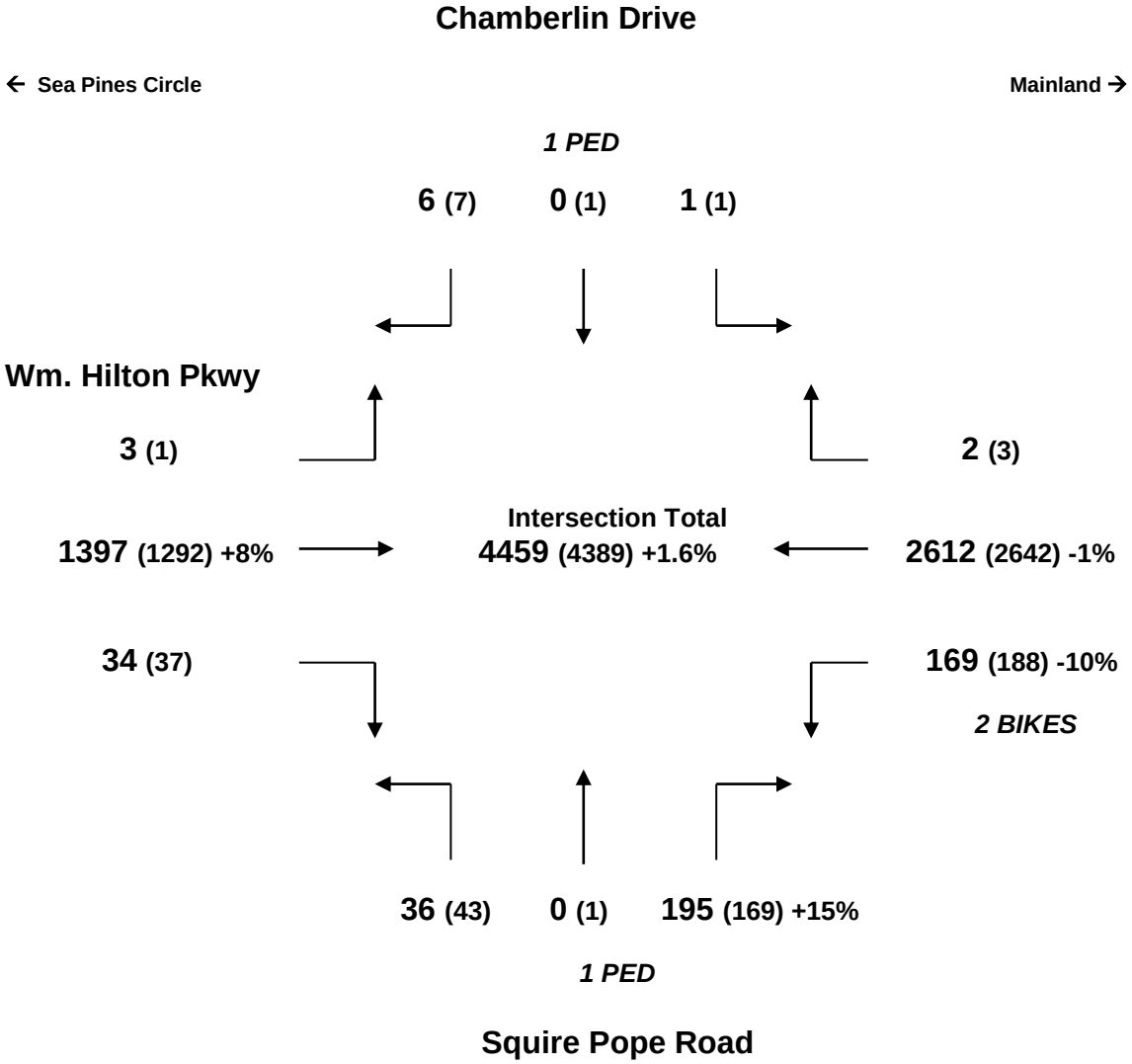
APPENDIX A

PEAK HOUR TURNING MOVEMENT DIAGRAMS
FOR EACH SIGNALIZED
INTERSECTION WITHIN THE TOWN

JUNE 2018

William Hilton Parkway with Squire Pope Road and Chamberlin Drive

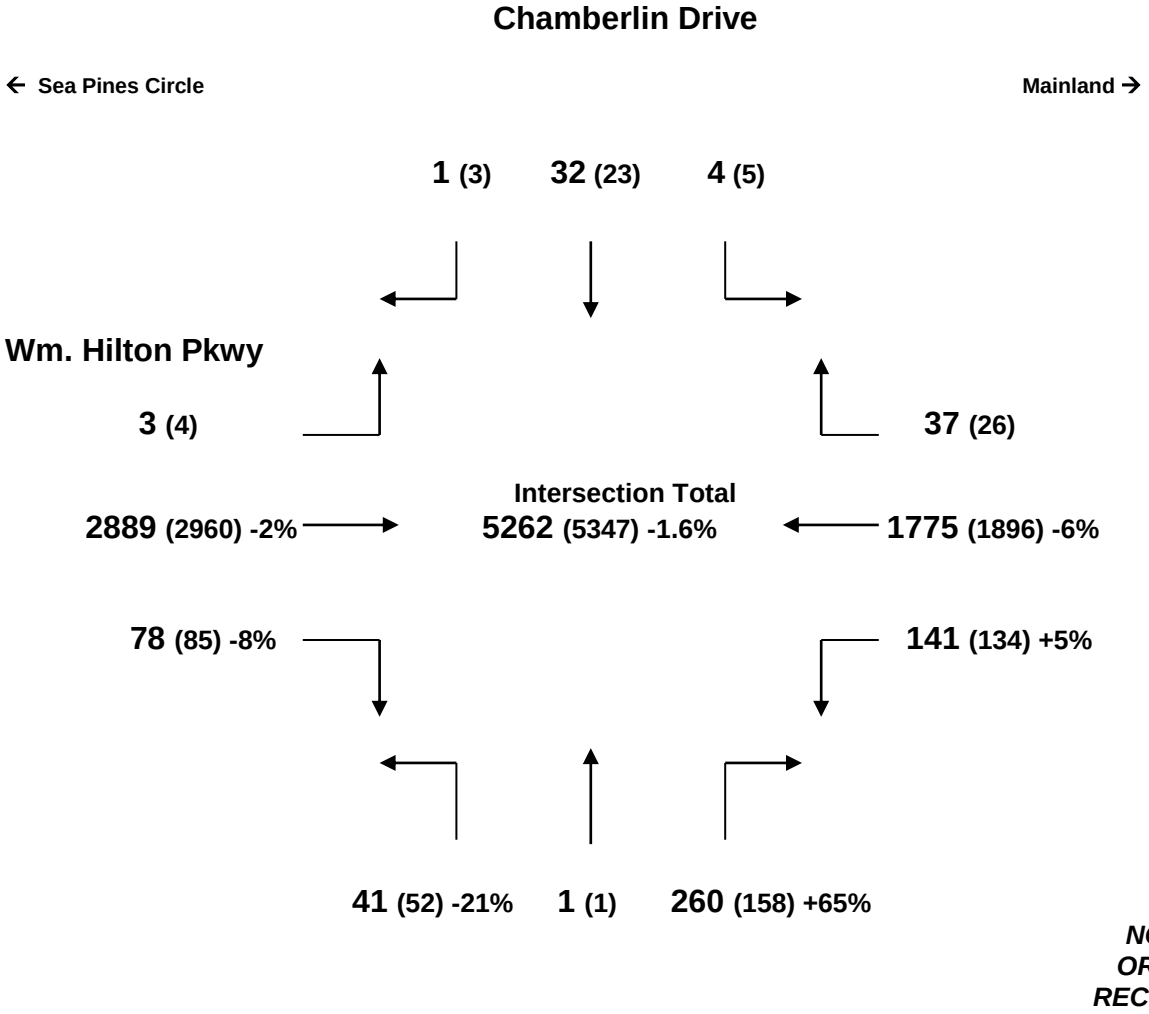
A.M. PEAK HOUR (8:00 to 9:00 a.m. – Tue. 6/5/18)



2018 (2017) %chg

William Hilton Parkway with Squire Pope Road and Chamberlin Drive

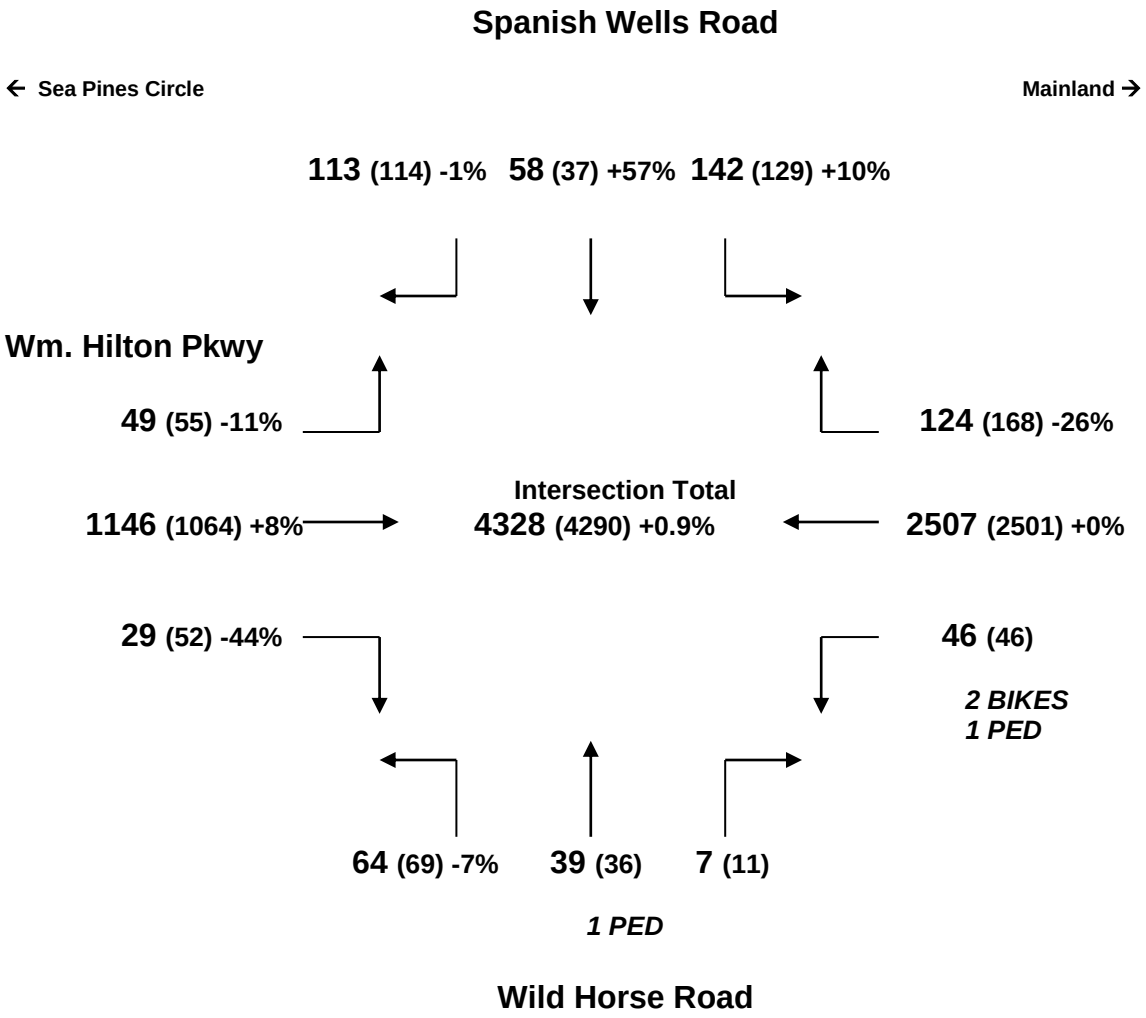
P.M. PEAK HOUR (4:30 to 5:30 p.m. – Tue. 6/5/18)



2018 (2017) %chg

William Hilton Parkway with Spanish Wells Road and Wild Horse Road

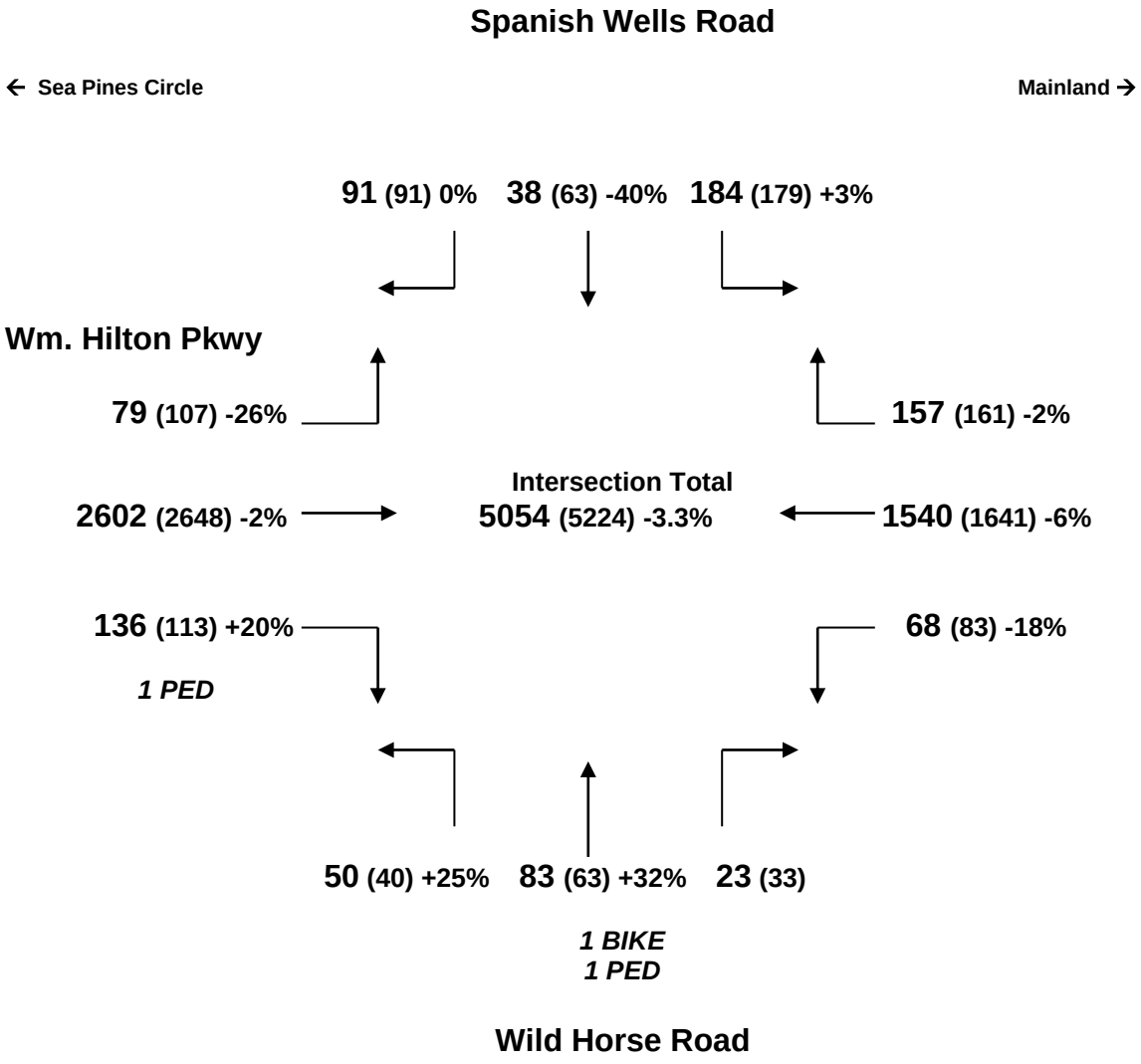
A.M. PEAK HOUR (7:30 to 8:30 a.m. – Tue. 6/5/18)



2018 (2017) %chg

William Hilton Parkway with Spanish Wells Road and Wild Horse Road

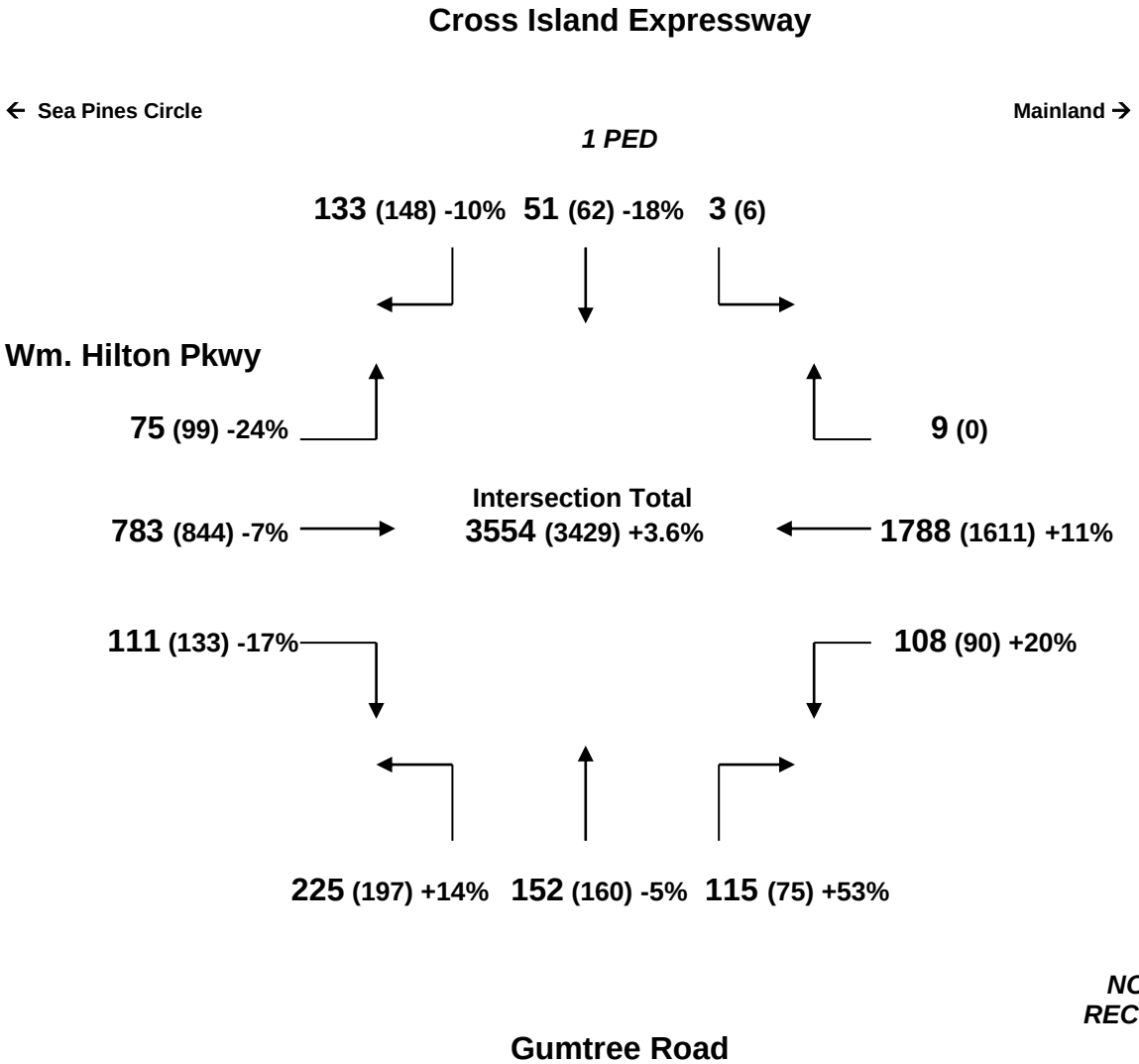
P.M. PEAK HOUR (4:45 to 5:45 p.m. – Tue. 6/5/18)



2018 (2017) %chg

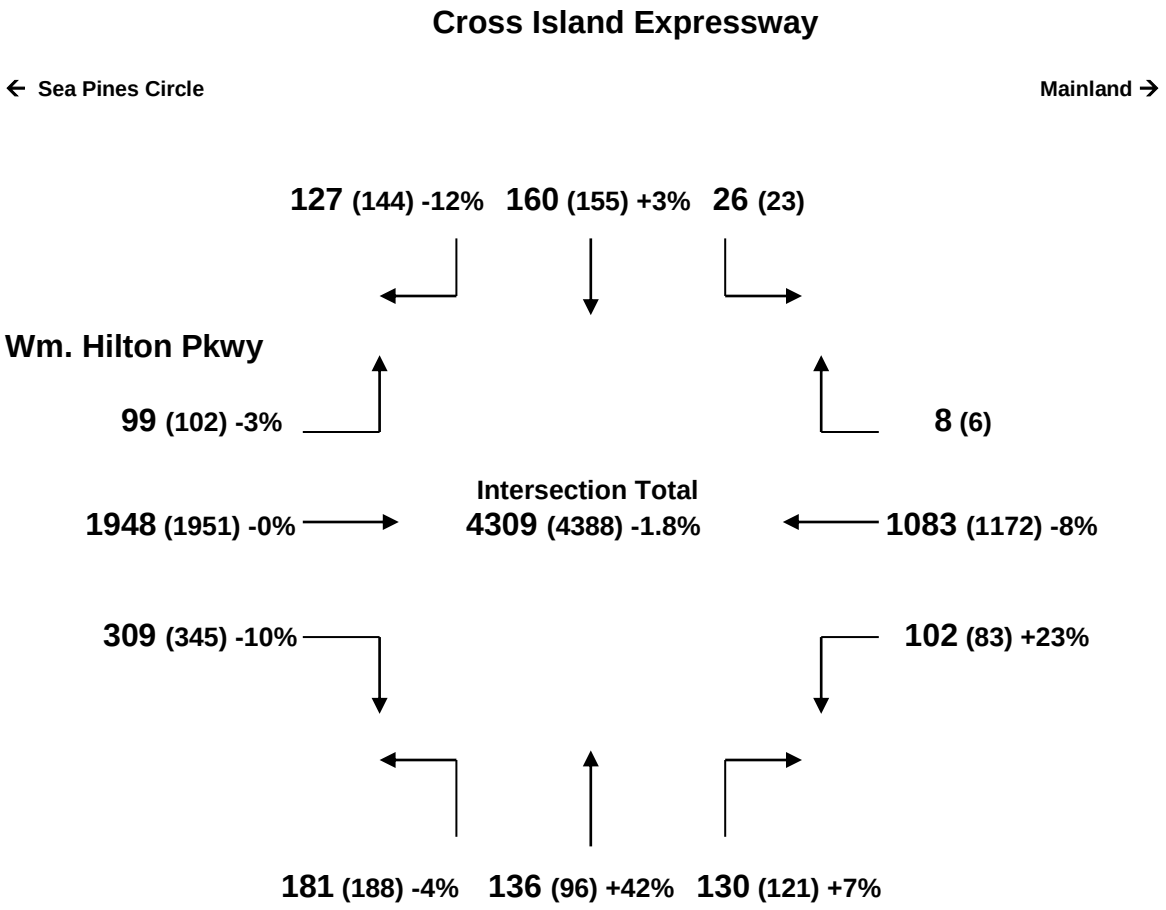
William Hilton Parkway with Gum Tree Road and Cross Island Parkway

A.M. PEAK HOUR (7:15 to 8:15 a.m. – Tue. 6/5/18)



William Hilton Parkway with Gum Tree Road and Cross Island Parkway

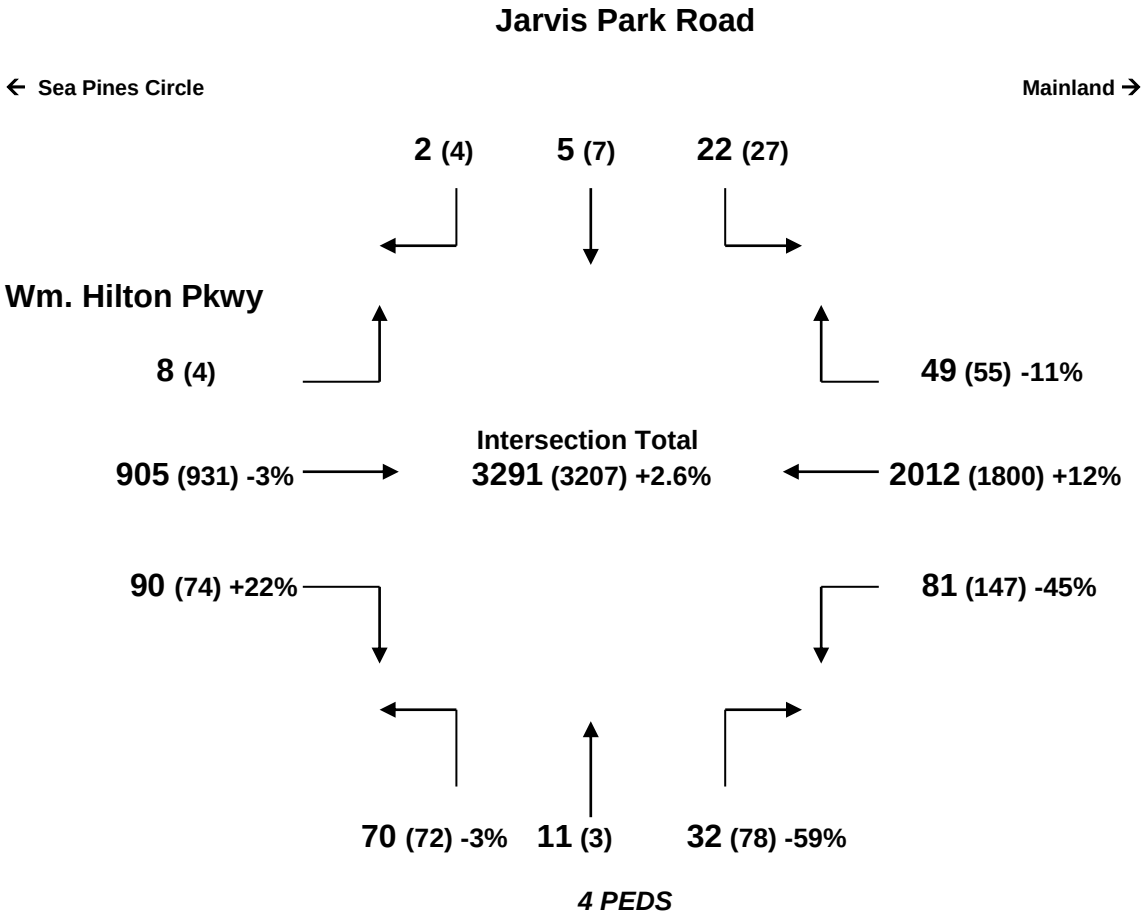
P.M. PEAK HOUR (4:45 to 5:45 p.m. – Tue. 6/5/18)



2018 (2017) %chg

William Hilton Parkway with Wilborn Road and Jarvis Park Road

A.M. PEAK HOUR (7:15 to 8:15 a.m. – Tue. 6/5/18)



William Hilton Parkway with Wilborn Road and Jarvis Park Road

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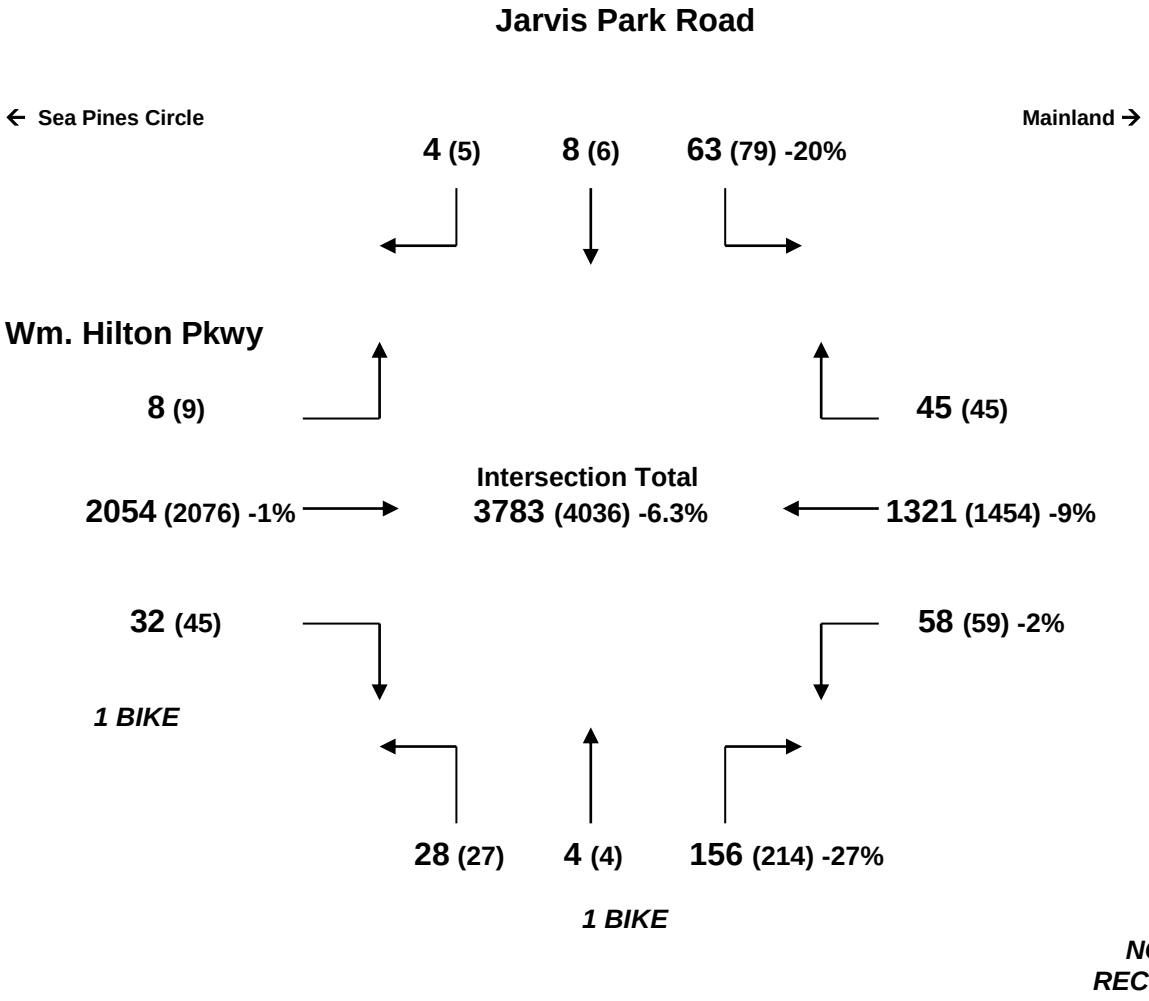
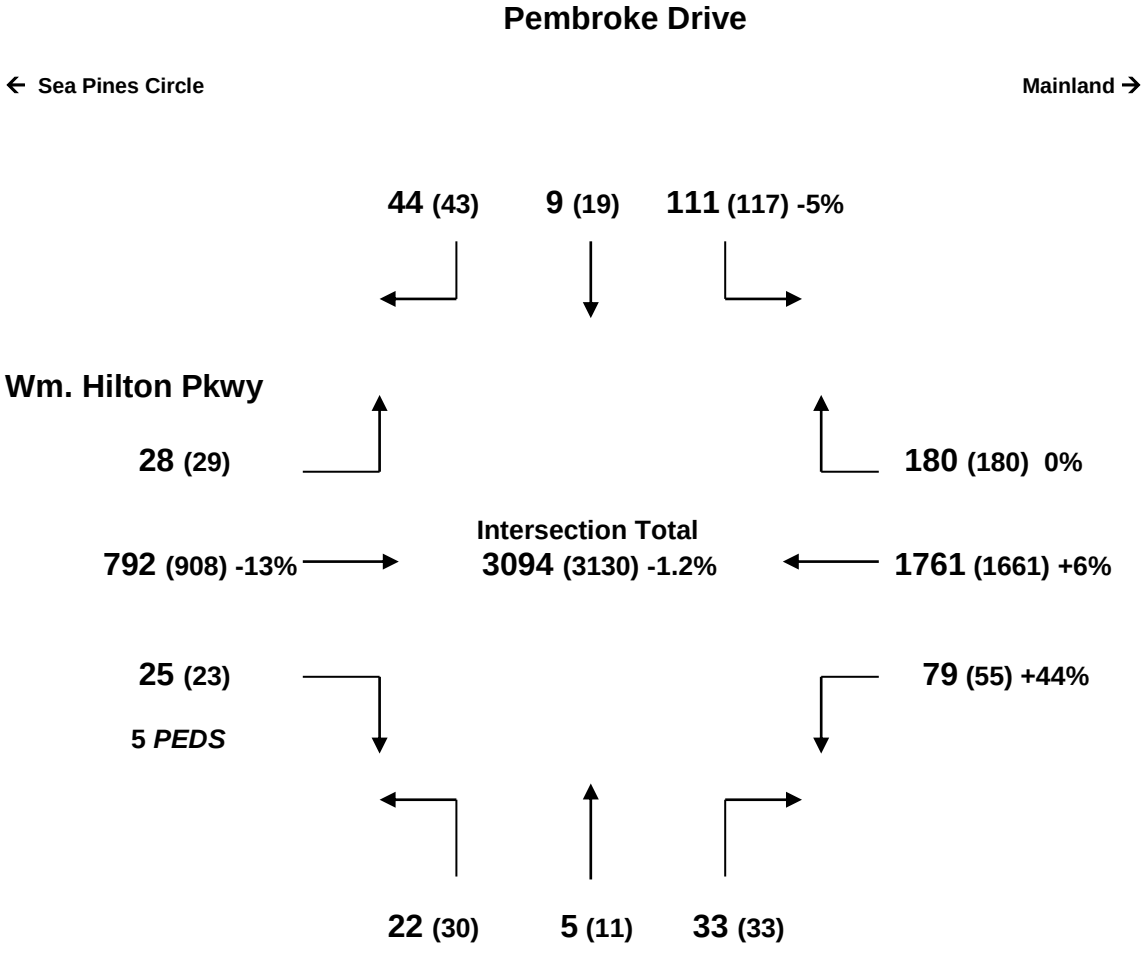


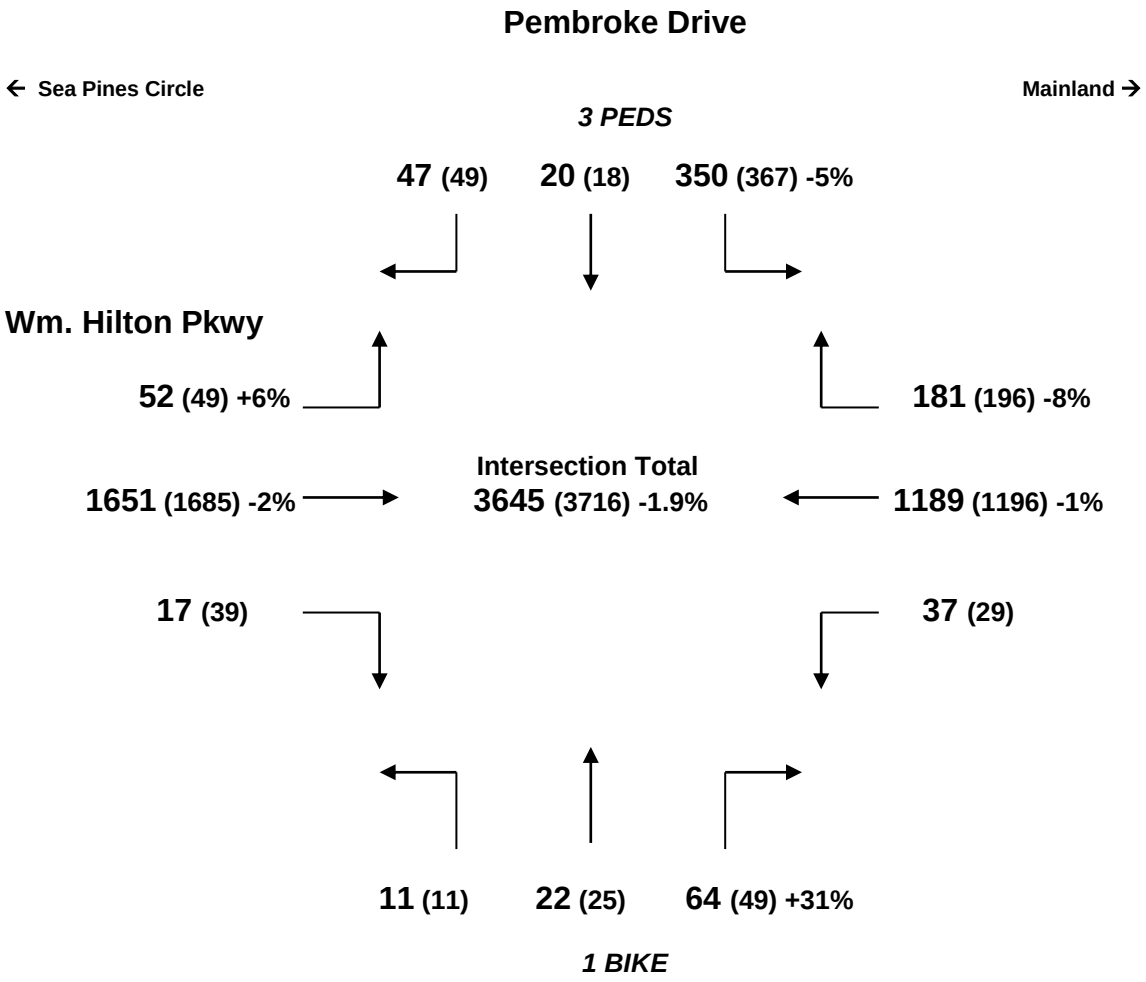
William Hilton Parkway with Pembroke Drive and Museum Street

A.M. PEAK HOUR (7:15 to 8:15 a.m. – Tue. 6/5/18)



William Hilton Parkway with Pembroke Drive and Museum Street

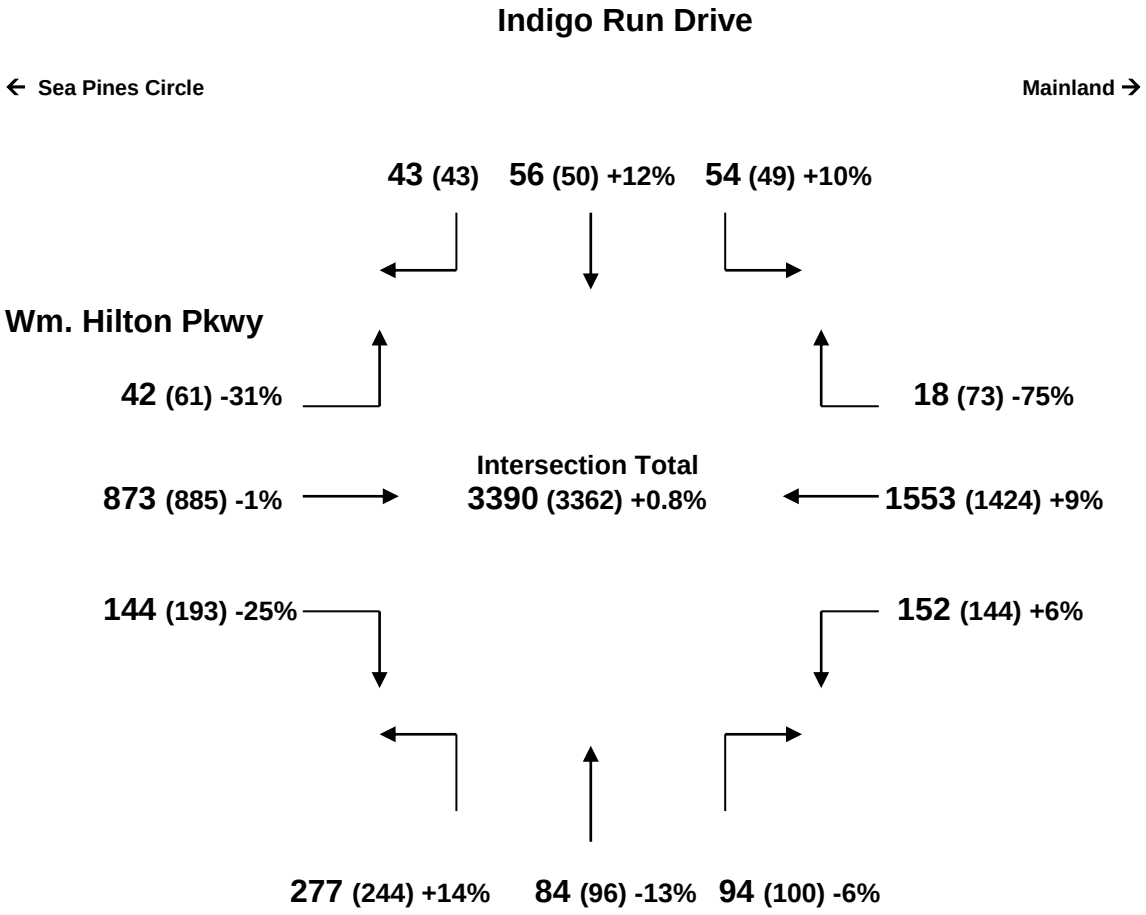
P.M. PEAK HOUR (4:00 to 5:00 p.m. – Tue. 6/5/18)



2018 (2017) %chg

William Hilton Parkway with Indigo Run Drive and Whooping Crane Way

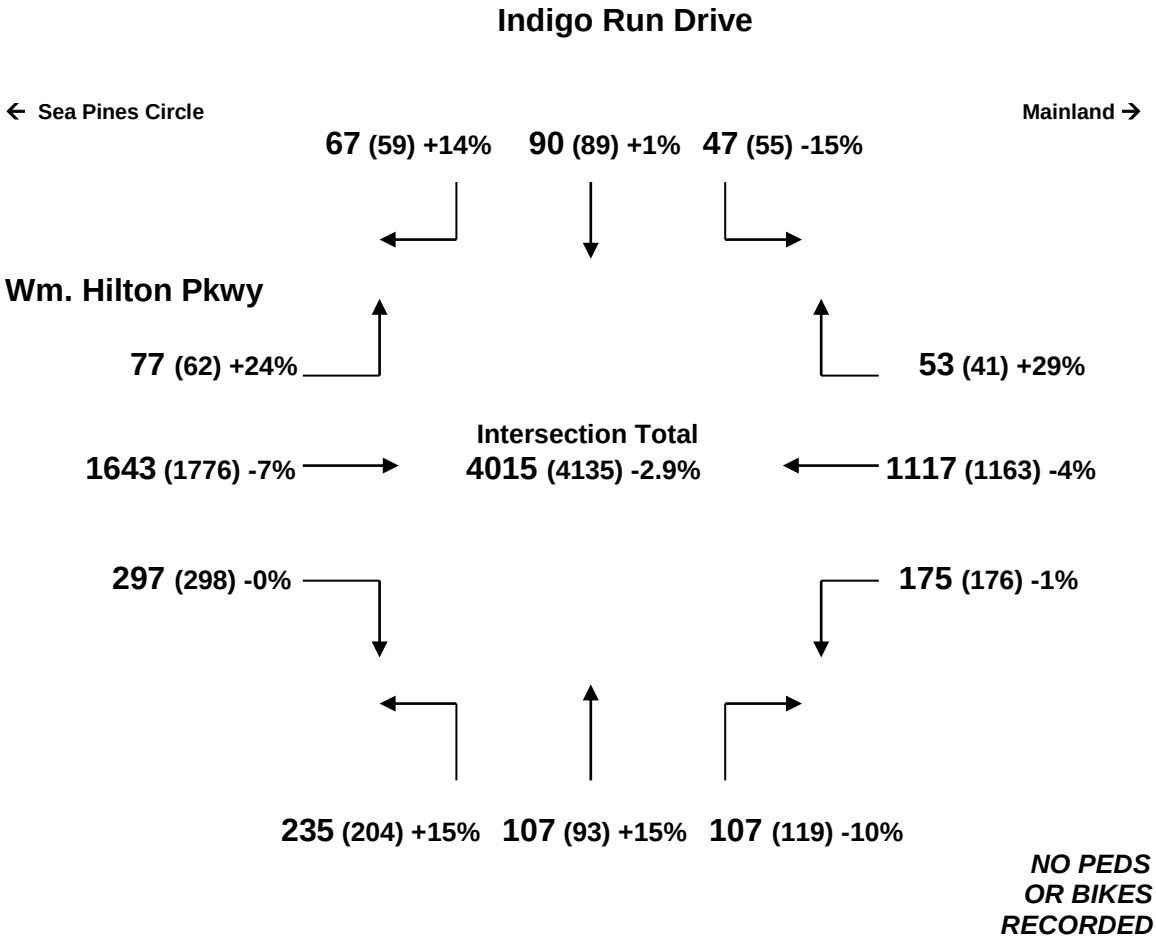
A.M. PEAK HOUR (8:00 to 9:00 a.m. – Tue. 6/5/18)



2018 (2017) %chg

William Hilton Parkway with Indigo Run Drive and Whooping Crane Way

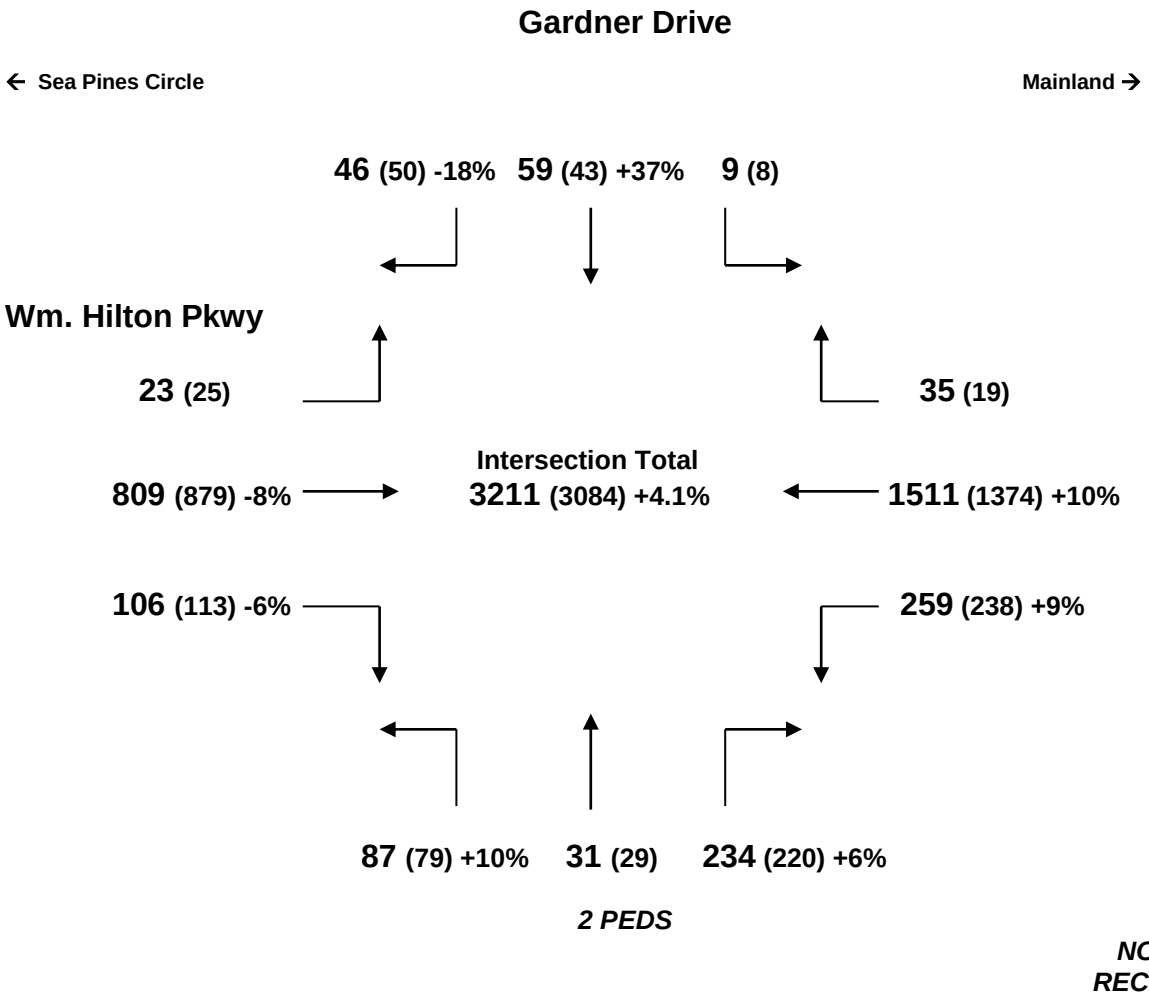
P.M. PEAK HOUR (4:15 to 5:15 p.m. – Tue. 6/5/18)



2018 (2017) %chg

William Hilton Parkway with Beach City Road and Gardner Drive

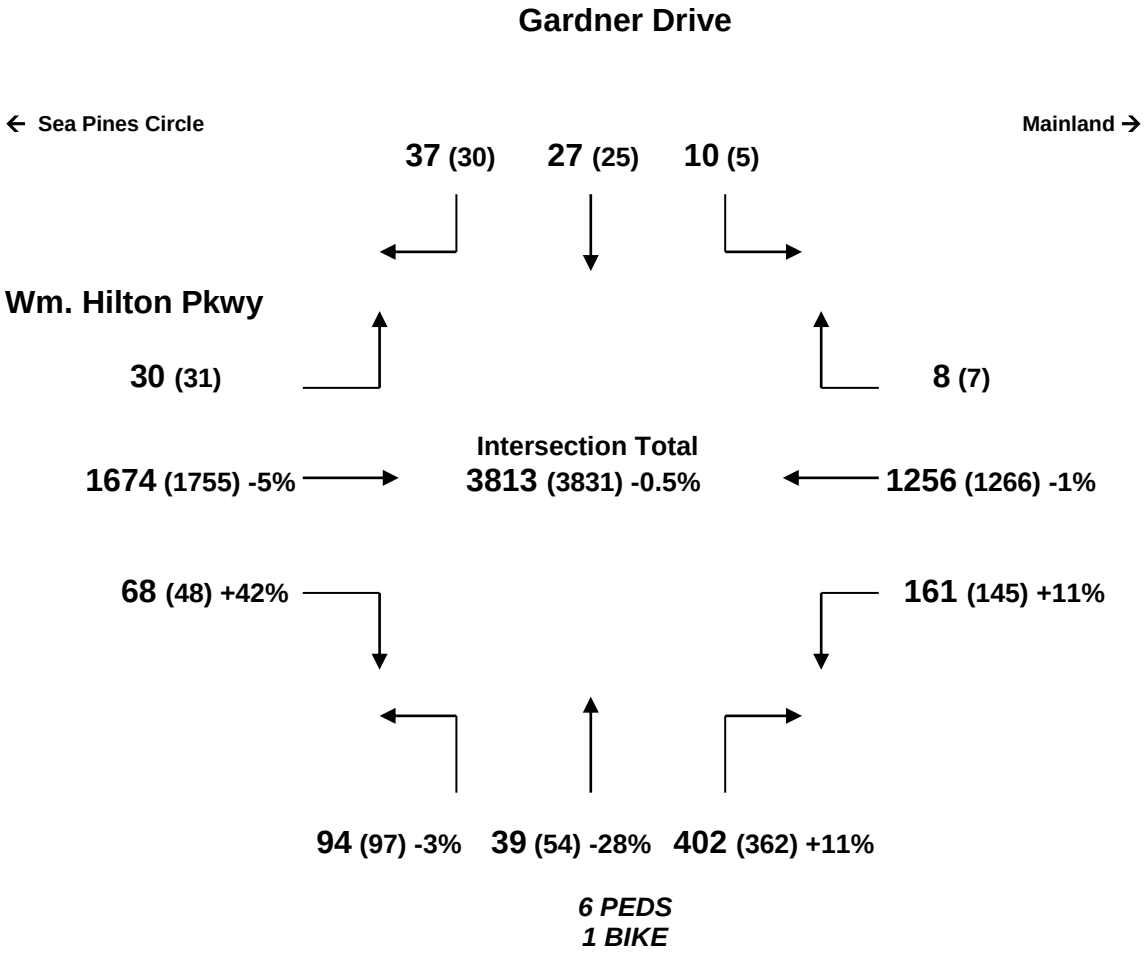
A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Tue. 6/5/18)



2018 (2017) %chg

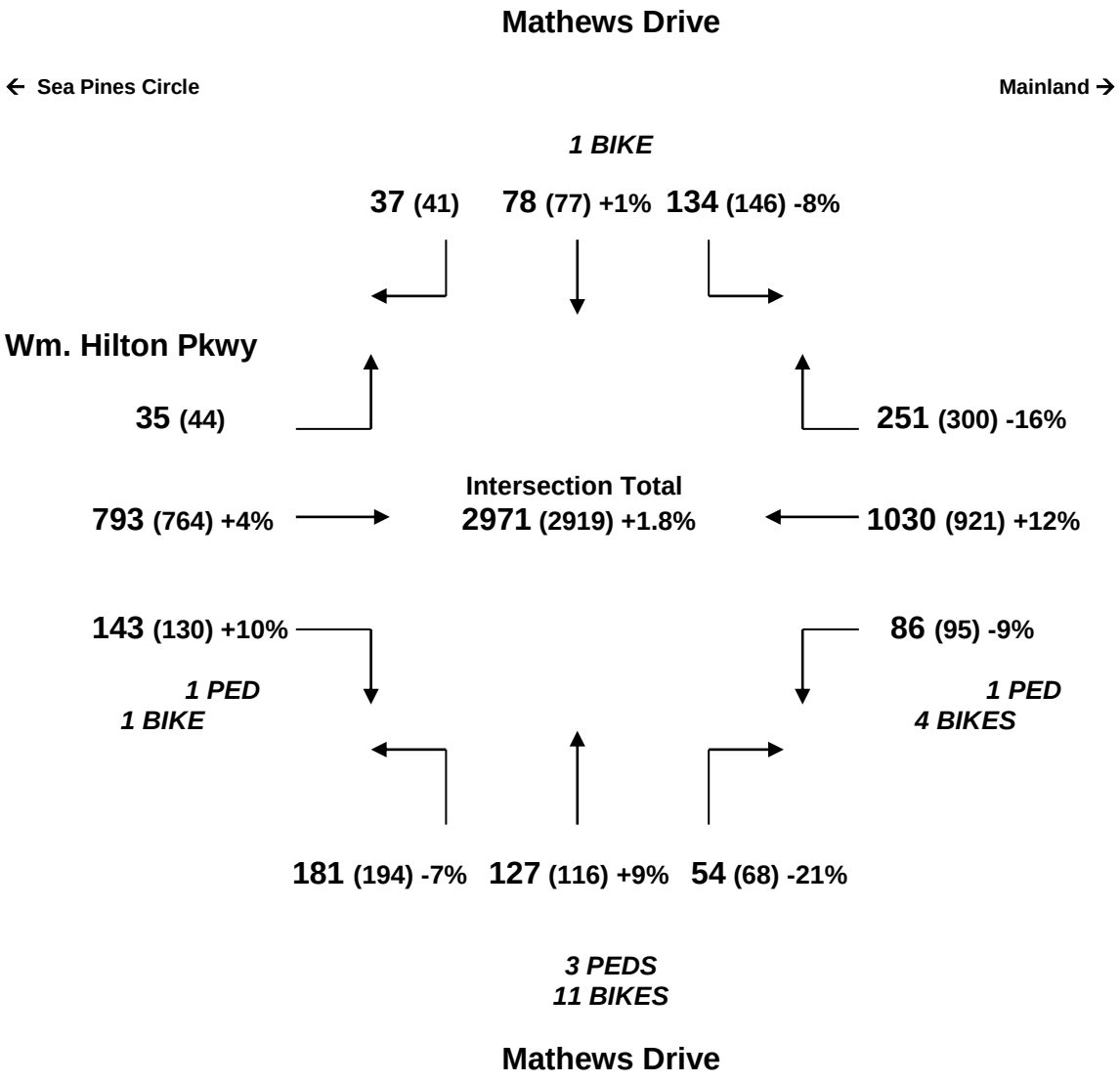
William Hilton Parkway with Beach City Road and Gardner Drive

P.M. PEAK HOUR - (4:15 to 5:15 p.m. – Tue. 6/5/18)



2018 (2017) %chg

William Hilton Parkway with Mathews Drive
(NORTHERN INTERSECTION)
A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Tue. 6/5/18)



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William Hilton Parkway with Mathews Drive
(NORTHERN INTERSECTION)
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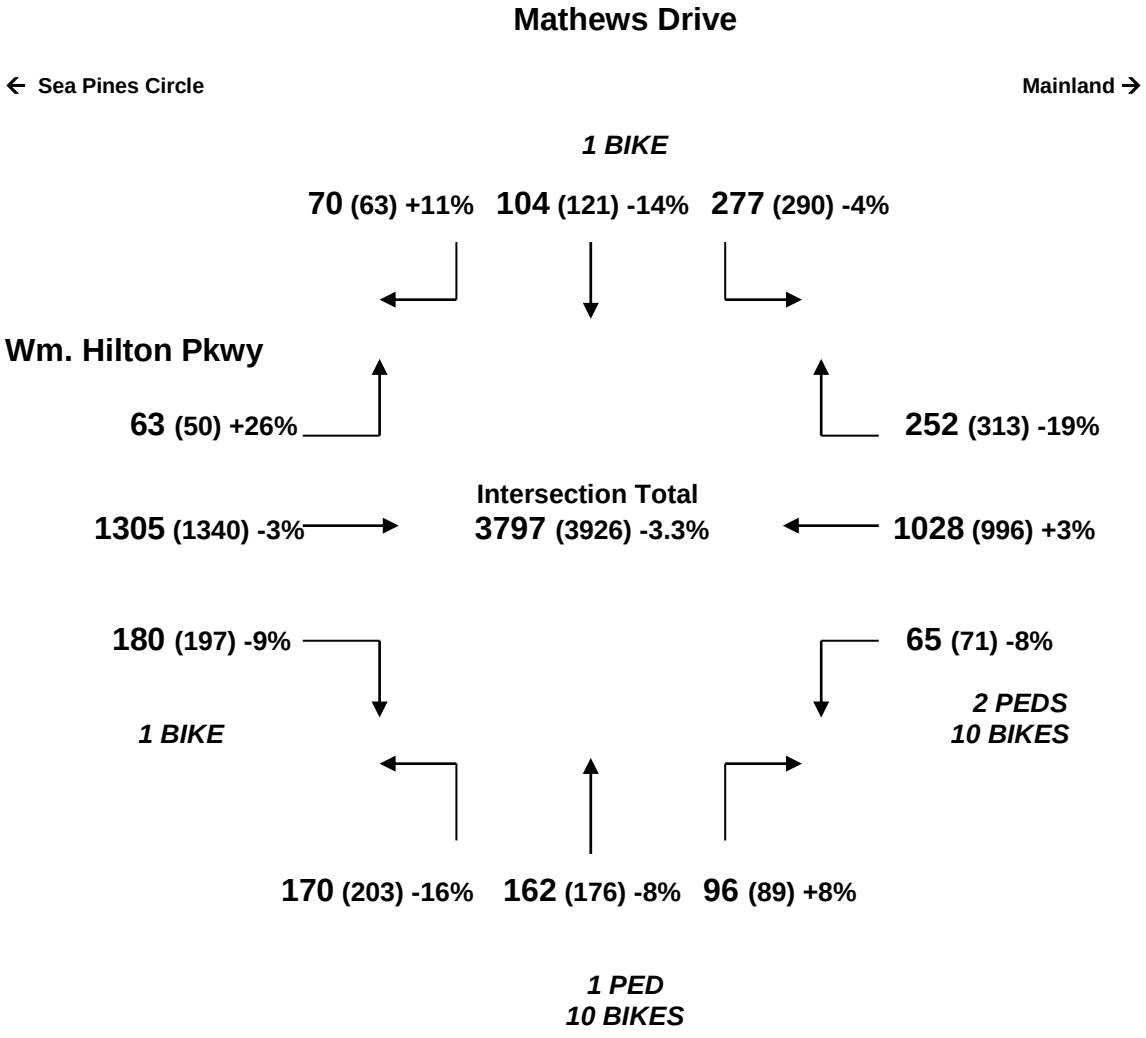

2018 (2017) %chg

William Hilton Parkway with Dillon Road and Port Royal Plaza

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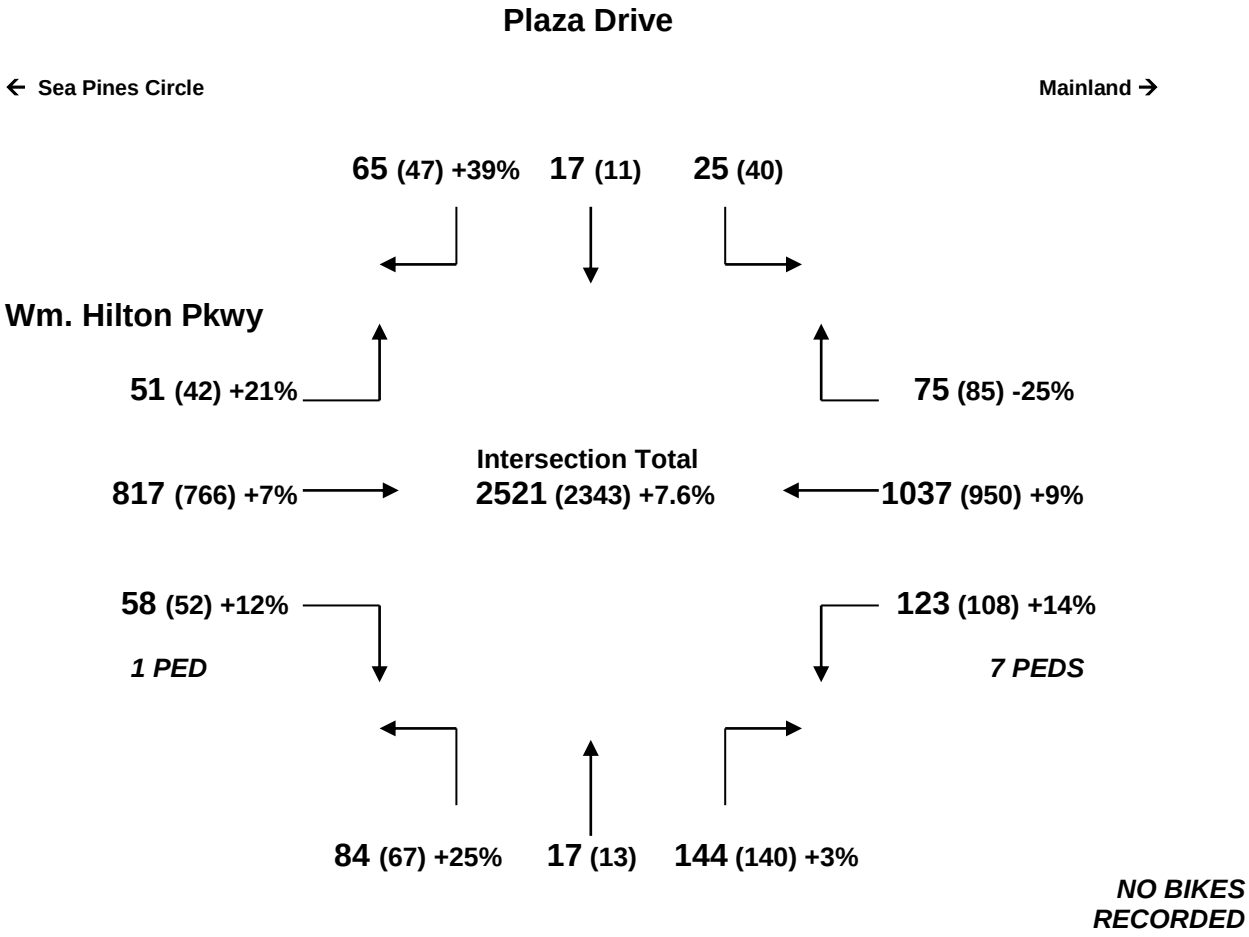
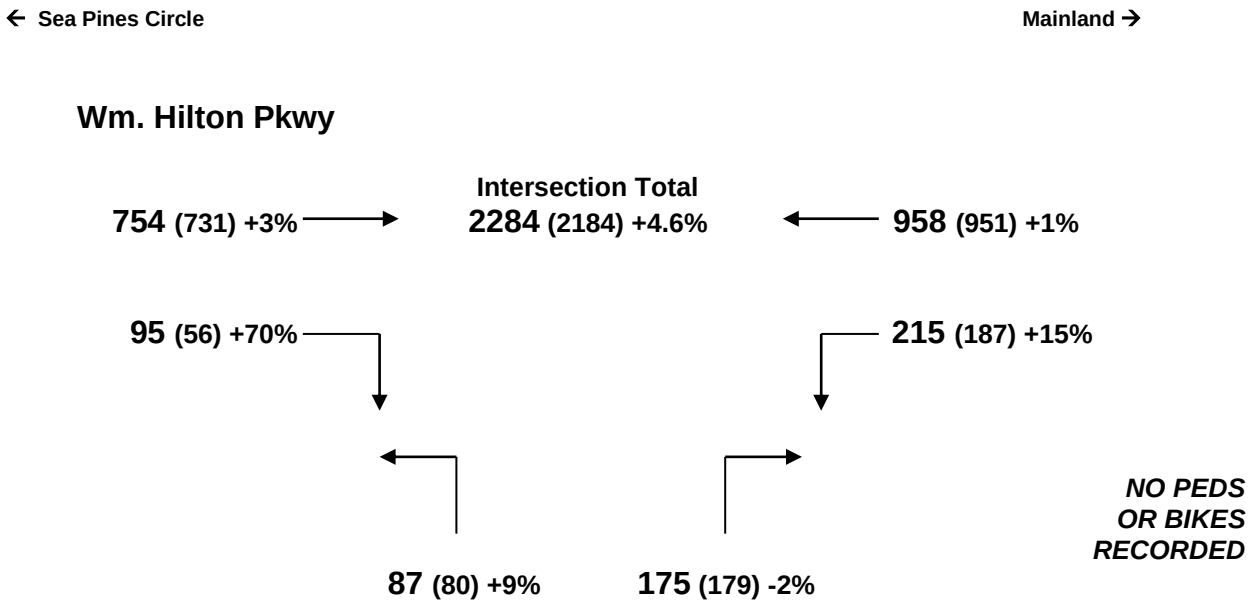


2018 (2017)%chg

William Hilton Parkway with Coggins Point Road

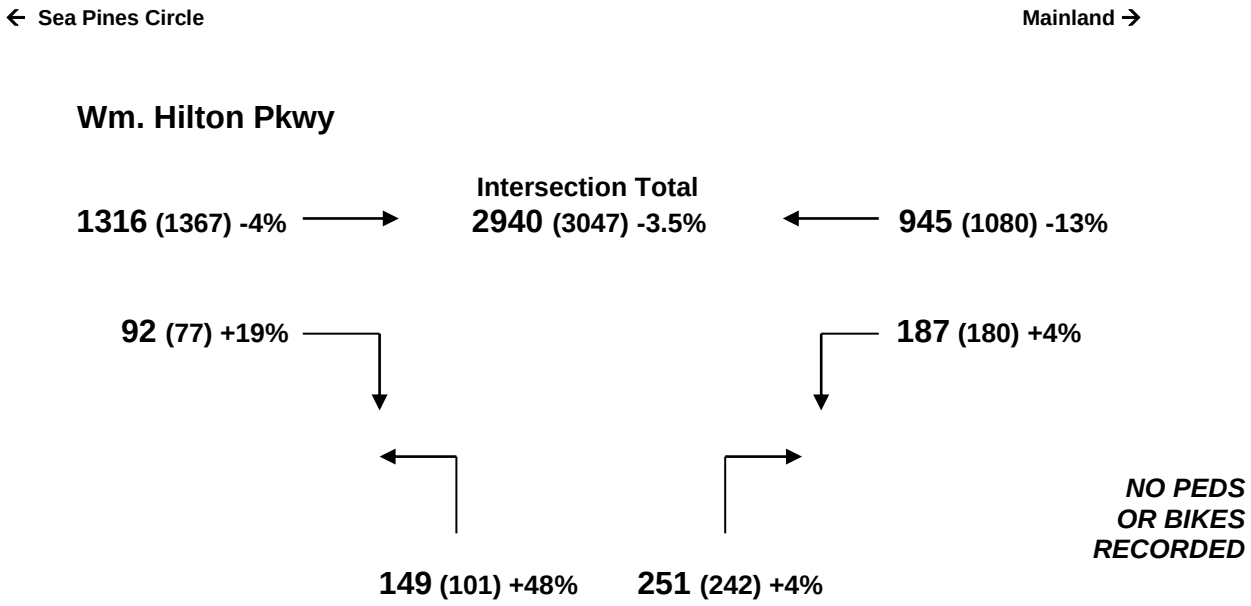
A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Tue. 6/5/18)



2018 (2017) %chg

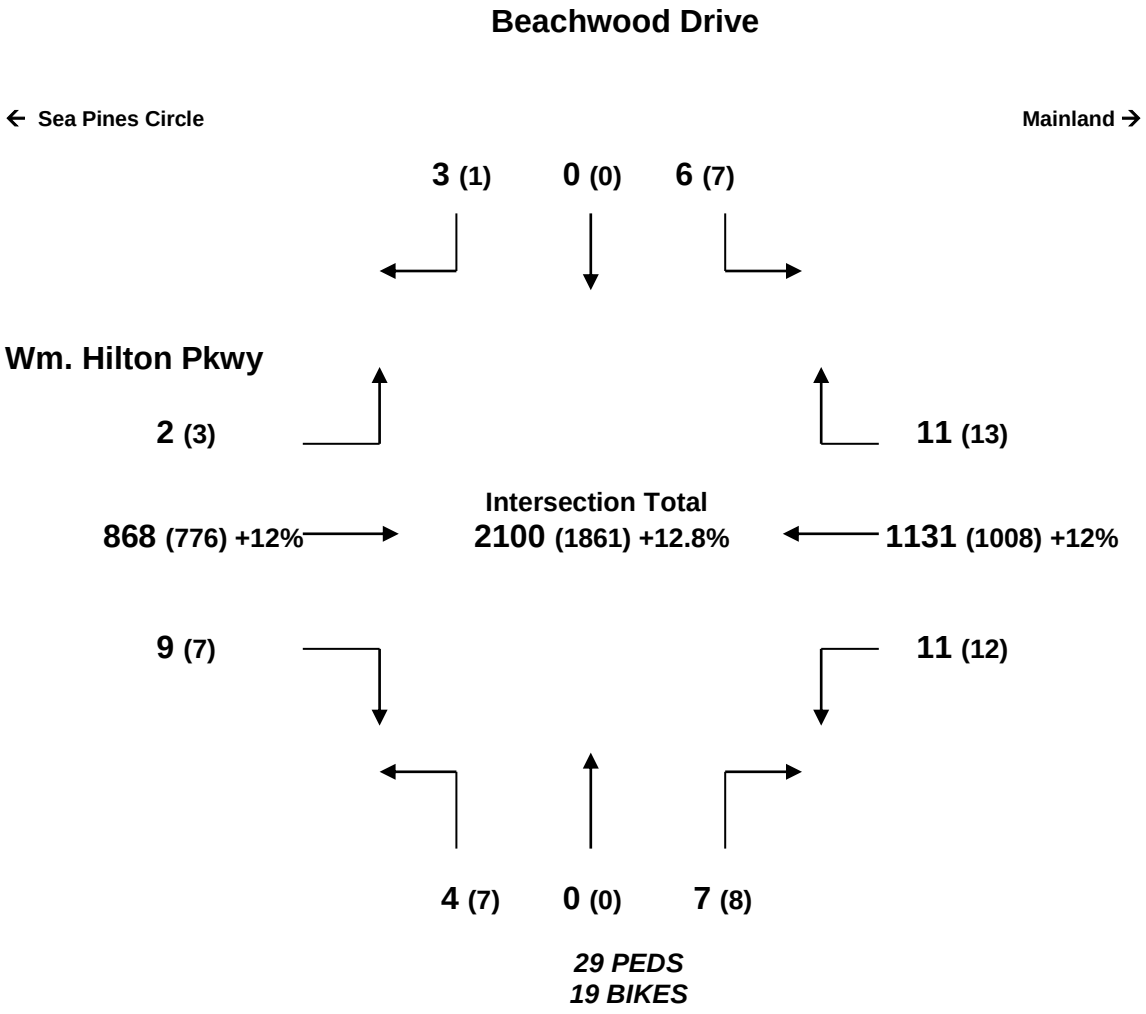
William Hilton Parkway with Coggins Point Road

P.M. PEAK HOUR - (4:15 to 5:15 p.m. – Tue. 6/5/18)



William Hilton Parkway with Beachwood Drive

A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Tue. 6/5/18)



2018 (2017) %chg

William Hilton Parkway with Beachwood Drive

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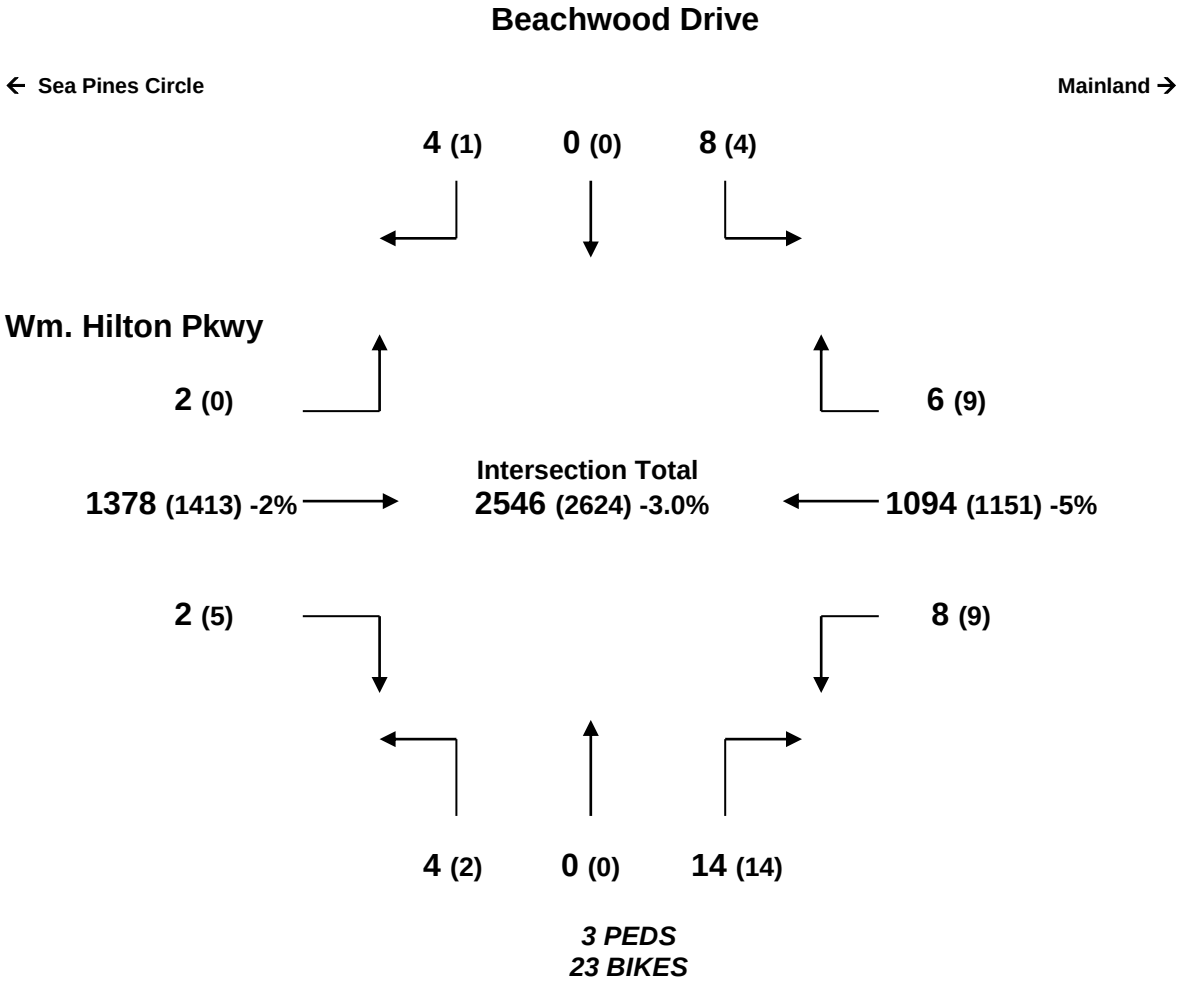

2018 (2017) %chg

William Hilton Parkway with Mathews Drive and Folly Field Road

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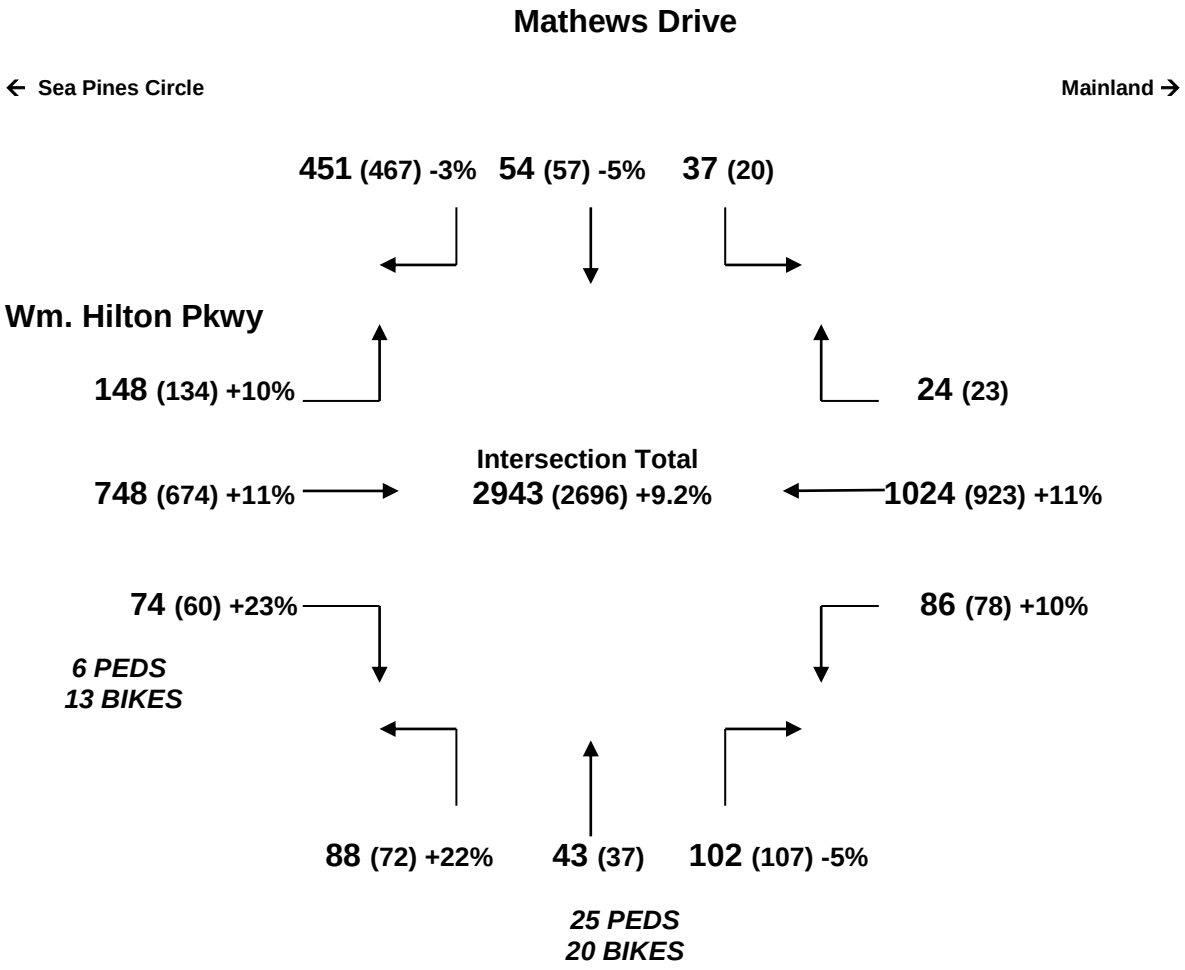
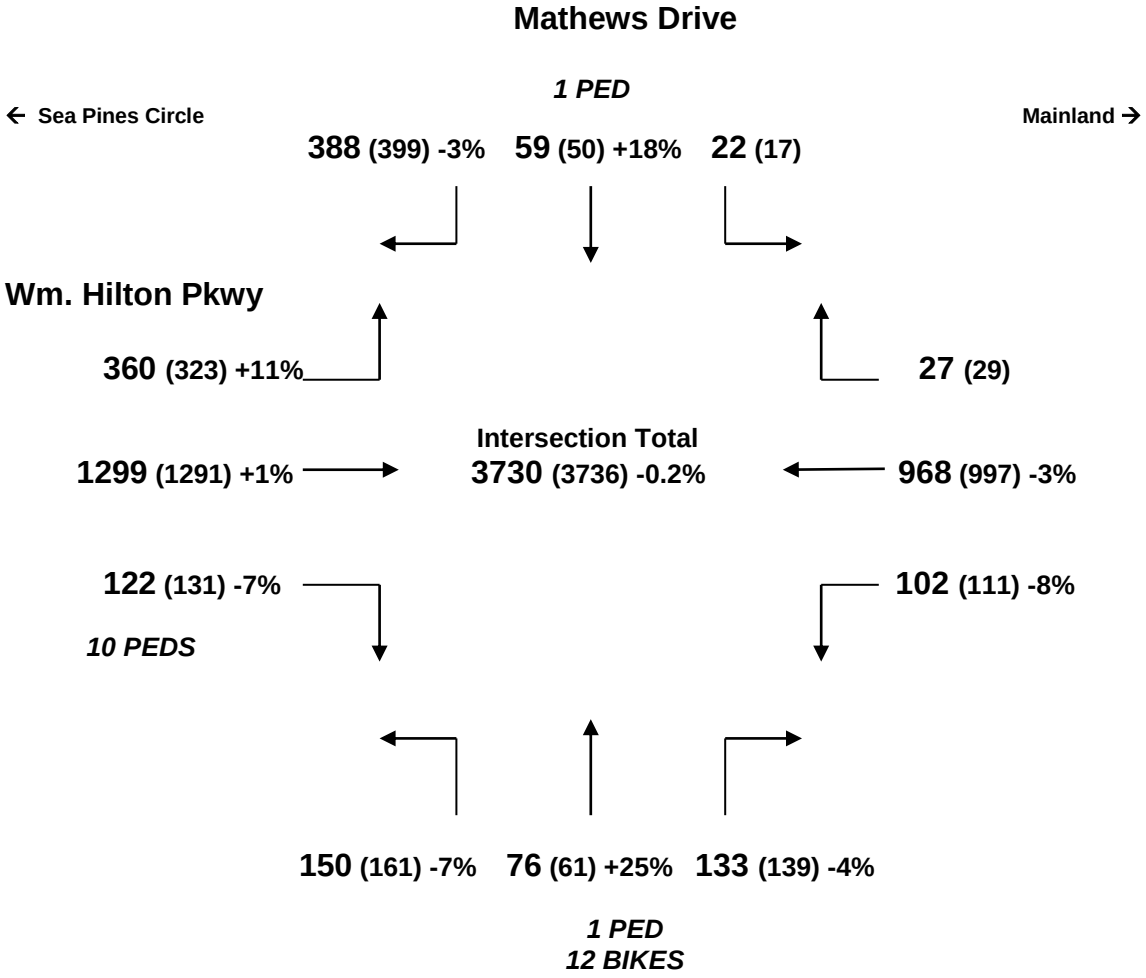


2018 (2017) %chg

William Hilton Parkway with Mathews Drive and Folly Field Road

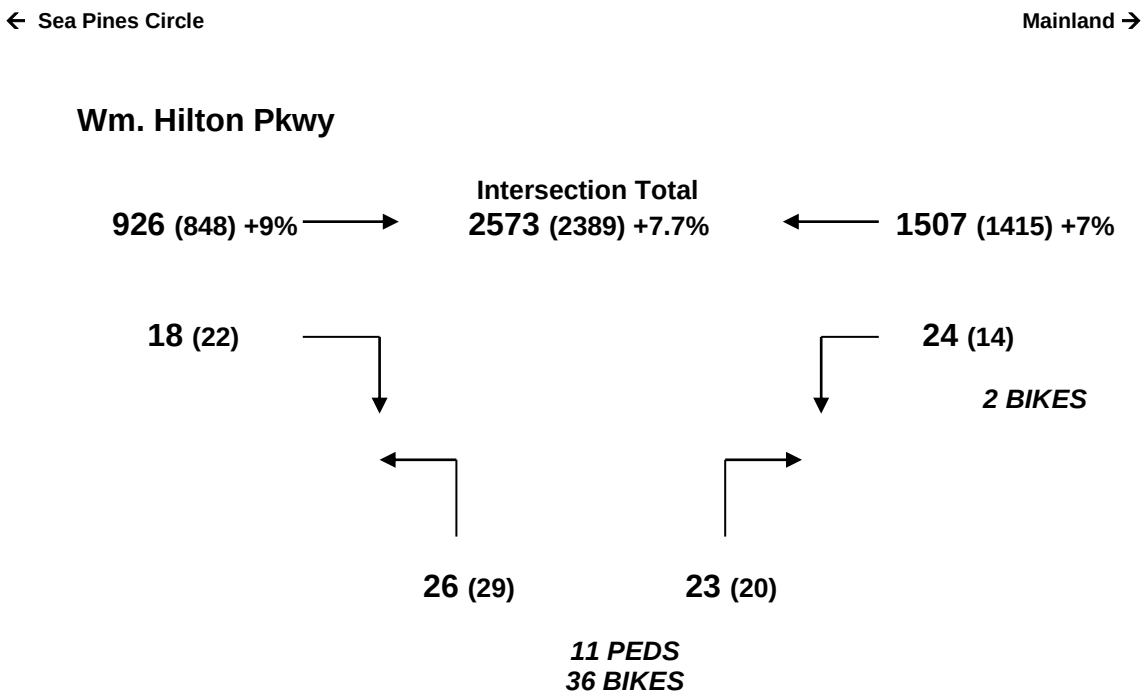
P.M. PEAK HOUR - (4:30 to 5:30 p.m. – Tue. 6/5/18)



2018 (2017) %chg

William Hilton Parkway with Singleton Beach Road

A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Tue. 6/5/18)



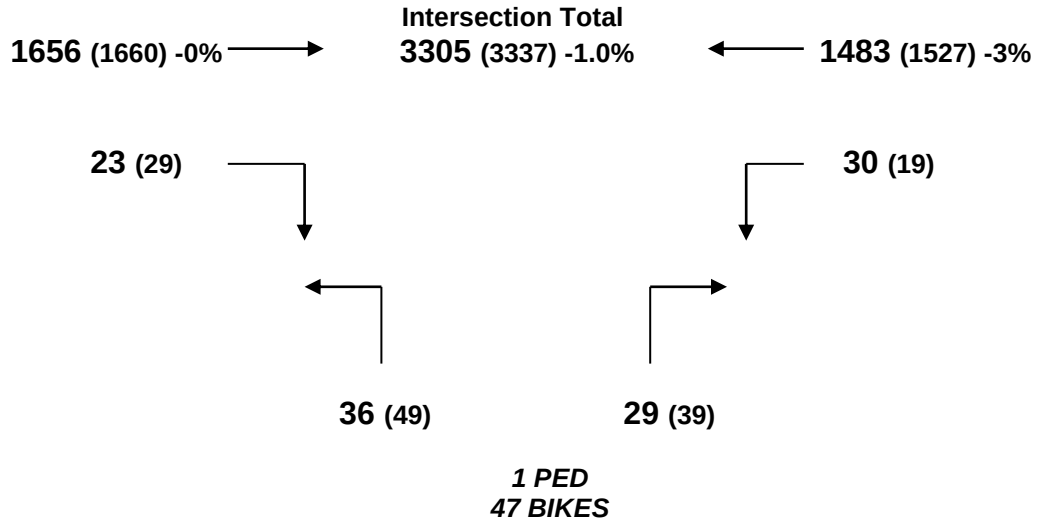
2018 (2017) %chg

William Hilton Parkway with Singleton Beach Road

P.M. PEAK HOUR - (4:15 to 5:15 p.m. – Tue. 6/5/18)

← **Sea Pines Circle** **Mainland** →

Wm. Hilton Pkwy

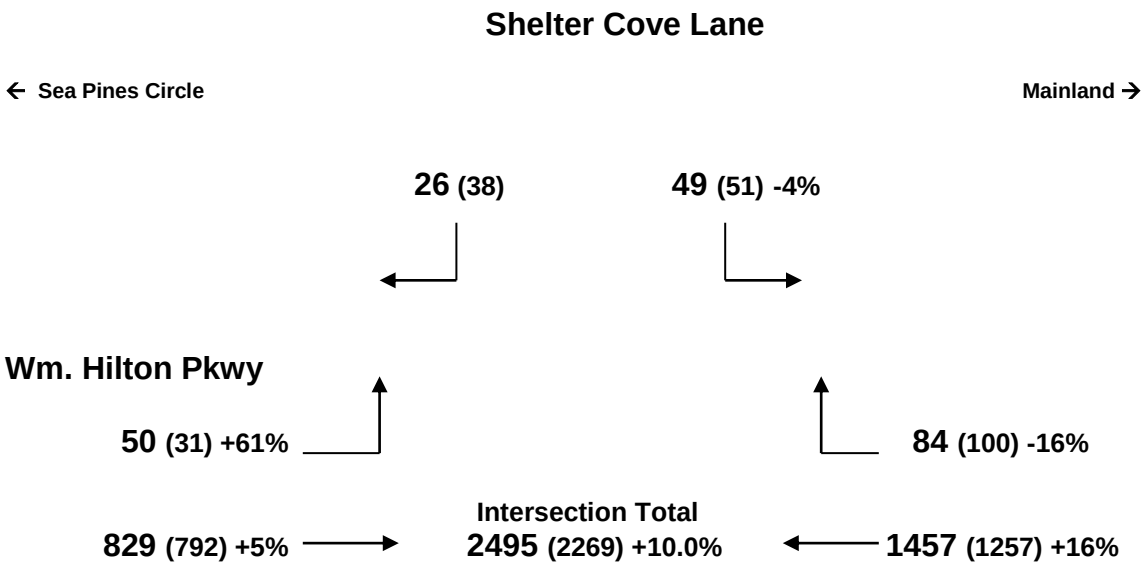


Singleton Beach Road

2018 (2017) %chg

William Hilton Parkway with Shelter Cove Lane

A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Tue. 6/5/18)

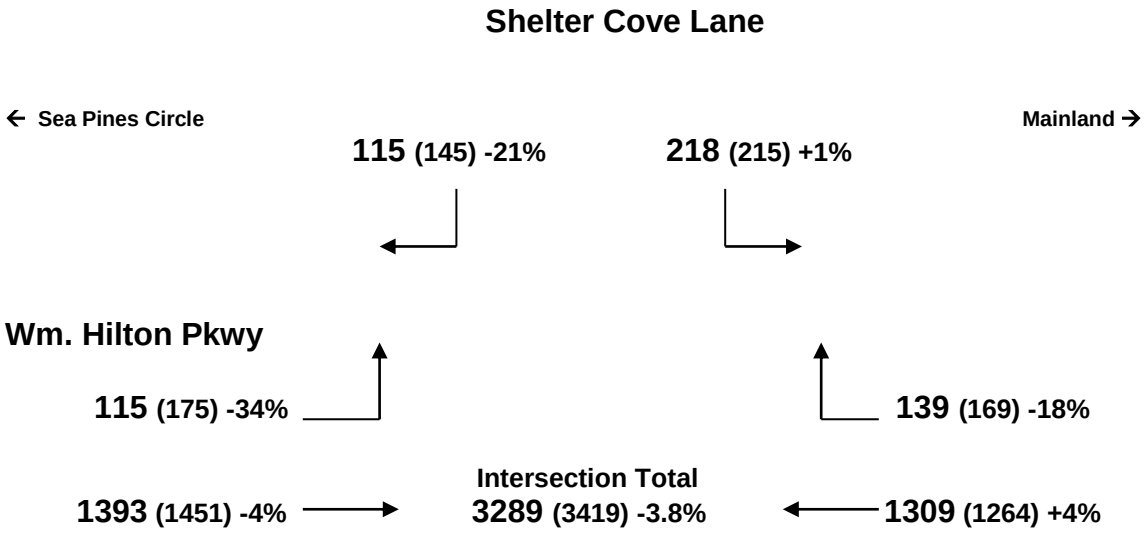


NO PEDS OR BIKES RECORDED

2018 (2017) %chg

William Hilton Parkway with Shelter Cove Lane

P.M. PEAK HOUR - (4:15 to 5:15 p.m. – Tue. 6/5/18)

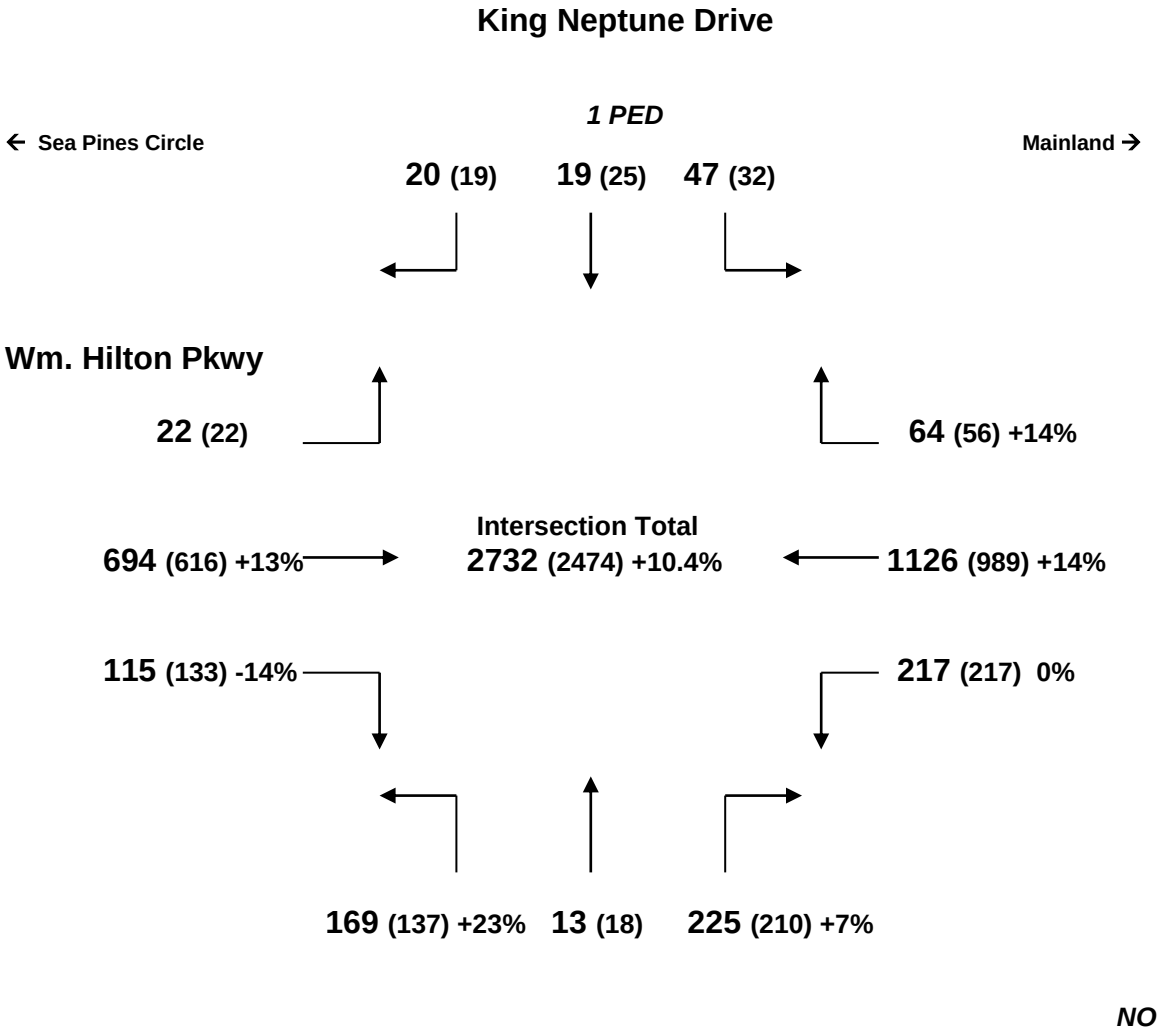


NO PEDS OR BIKES RECORDED

2018 (2017) %chg

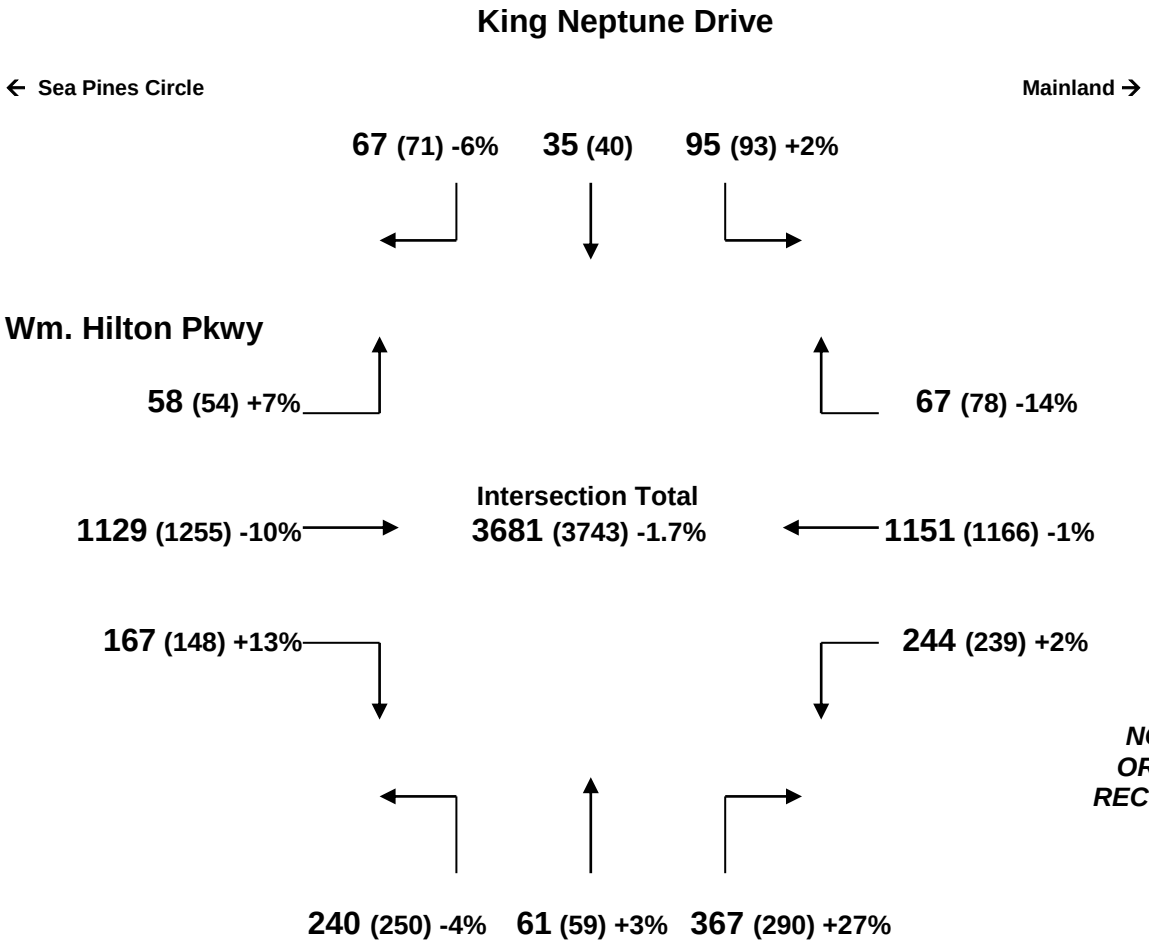
William Hilton Parkway with Queens Folly Road and King Neptune Drive

A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Tue. 6/5/18)



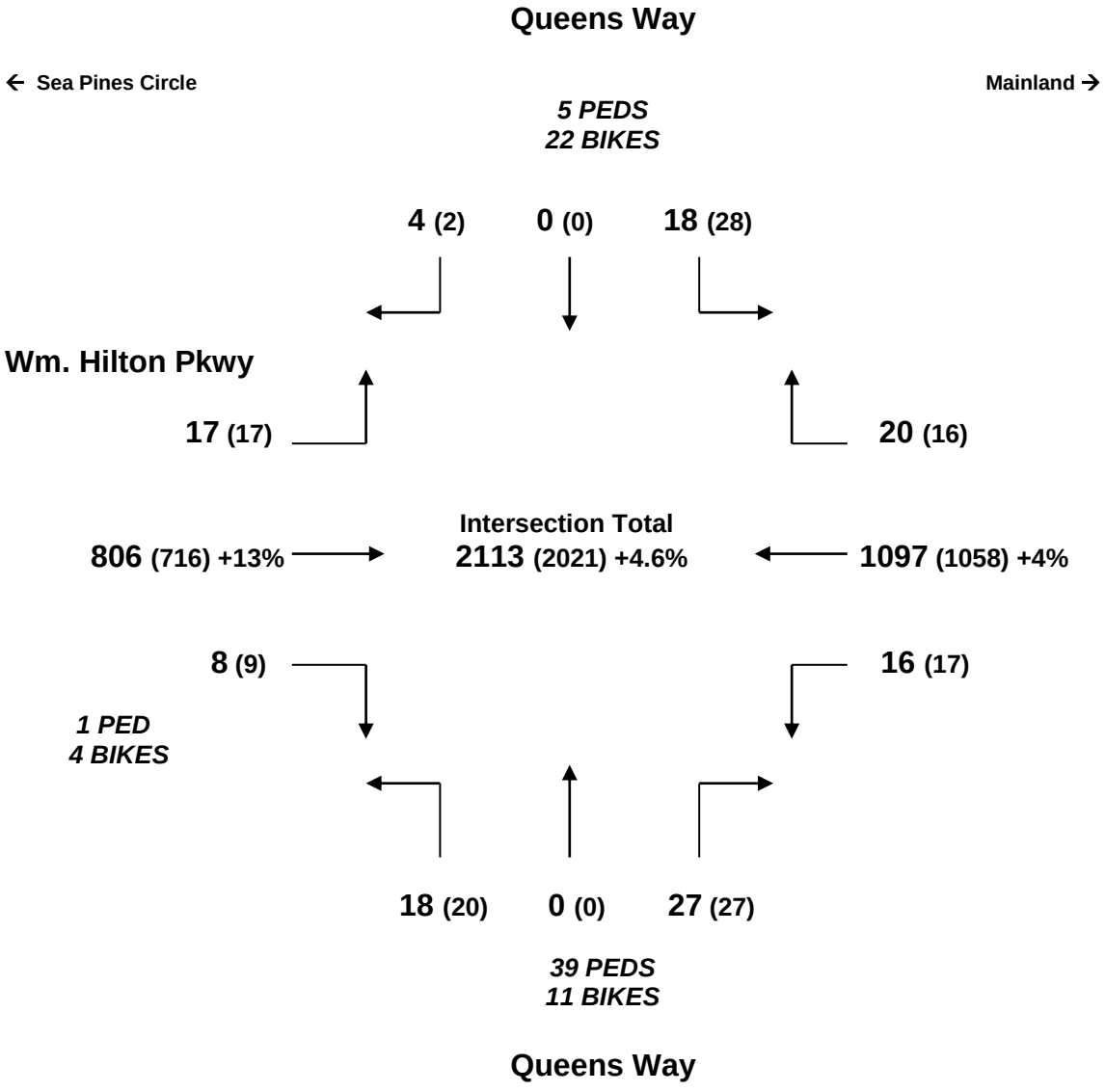
William Hilton Parkway with Queens Folly Road and King Neptune Drive

P.M. PEAK HOUR - (4:30 to 5:30 p.m. – Tue. 6/5/18)



William Hilton Parkway with Queens Way

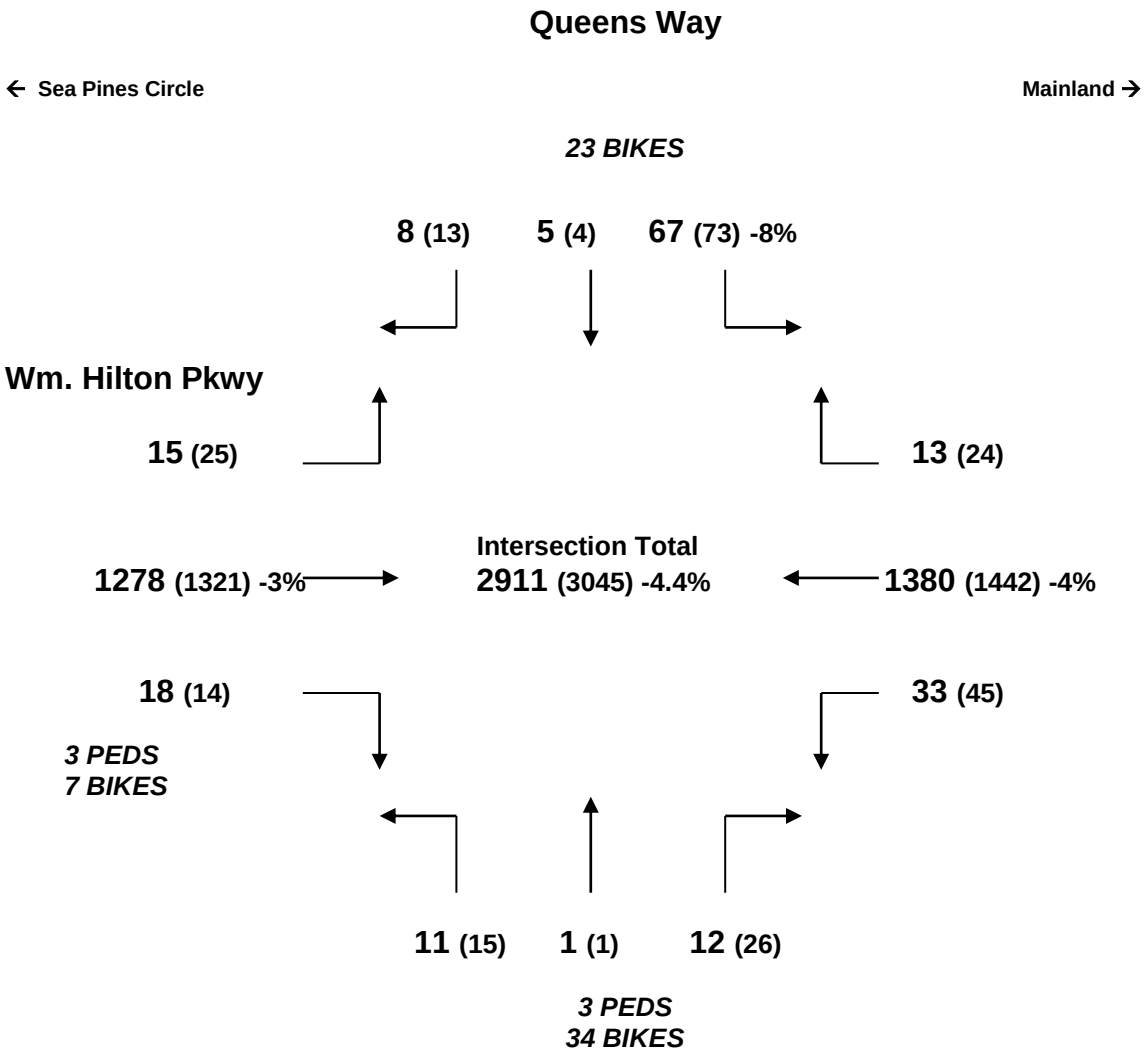
A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Tue. 6/5/18)



2018 (2017) %chg

William Hilton Parkway with Queens Way

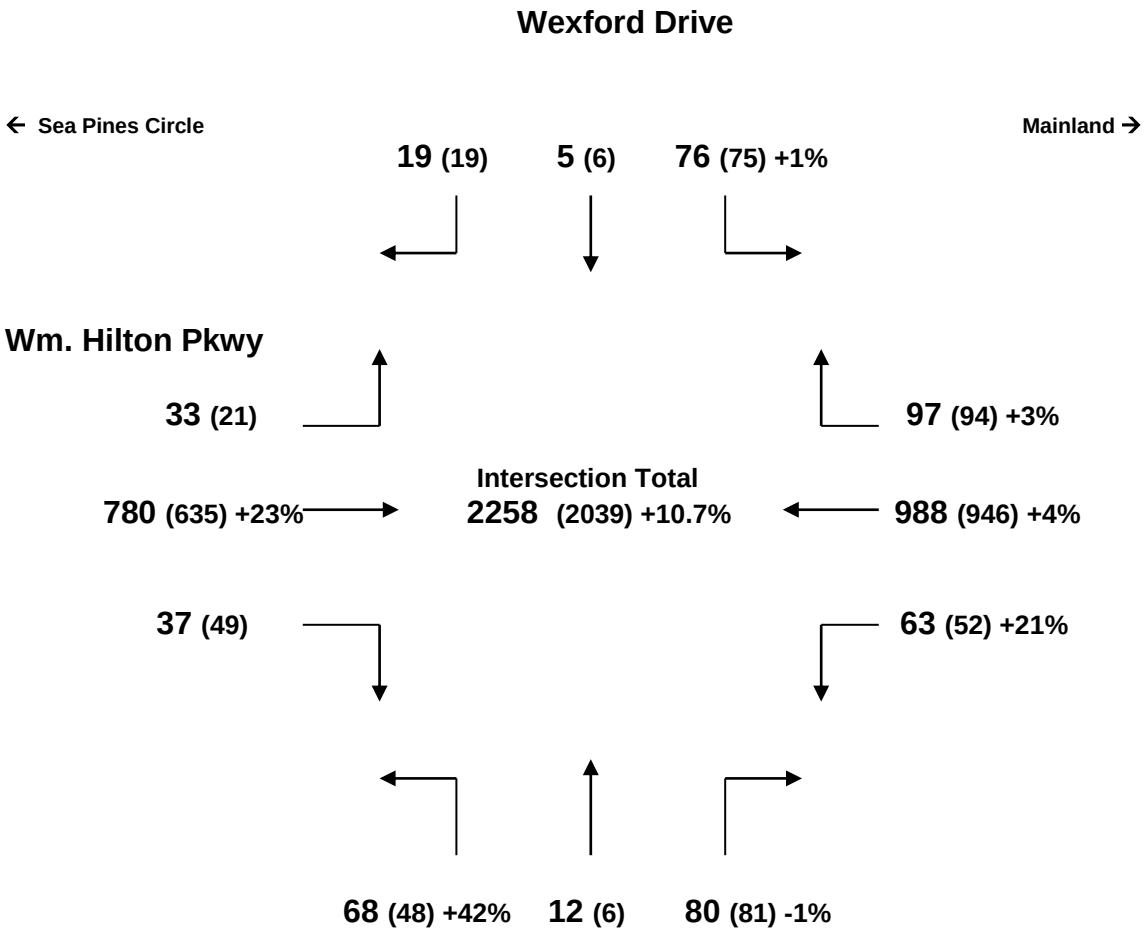
P.M. PEAK HOUR - (4:30 to 5:30 p.m. – Tue. 6/5/18)



2018 (2017) %chg

William Hilton Parkway with Shipyard Drive and Wexford Drive

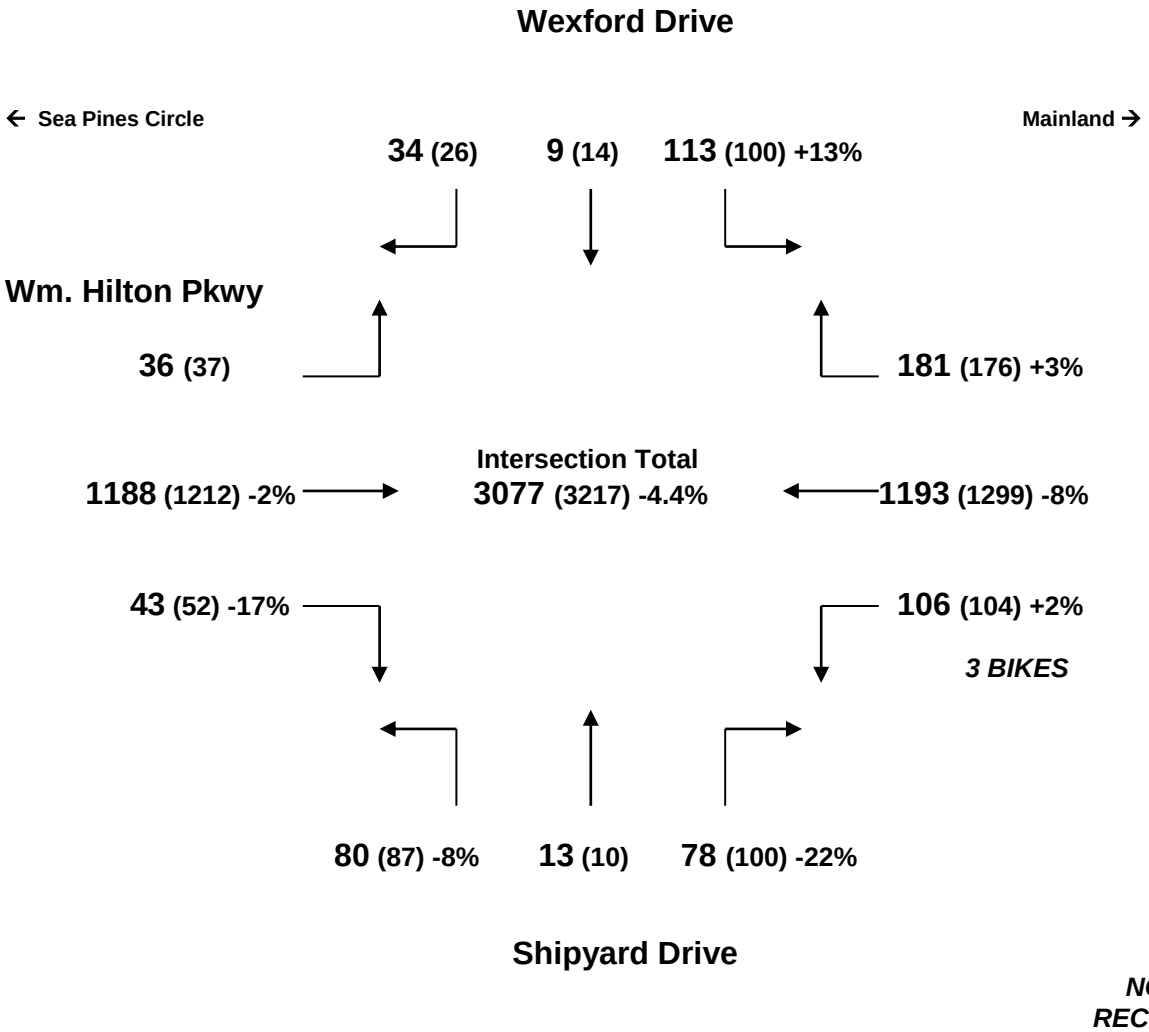
A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Tue. 6/5/18)



2018 (2017) %chg

William Hilton Parkway with Shipyard Drive and Wexford Drive

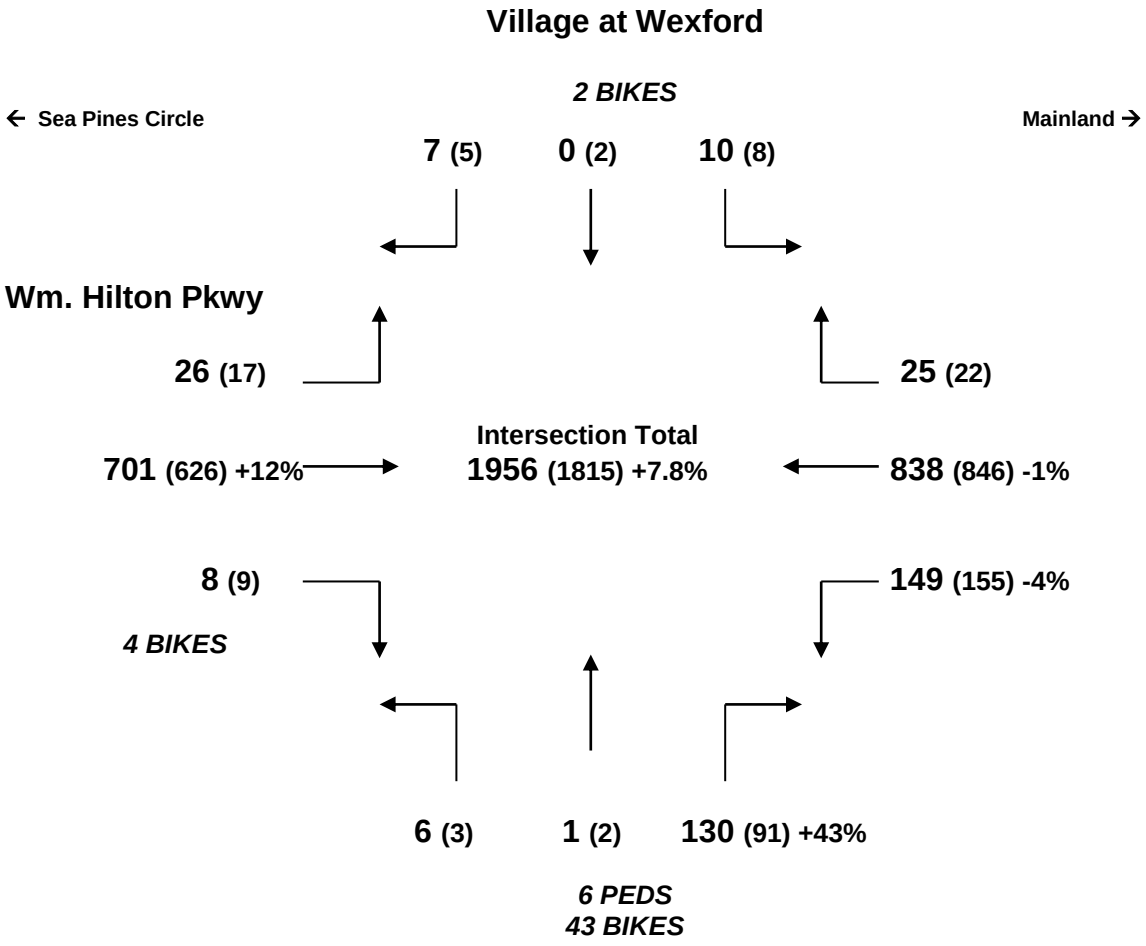
P.M. PEAK HOUR - (4:30 to 5:30 p.m. – Tue. 6/5/18)



2018 (2017) %chg

William Hilton Parkway with New Orleans Road and Village at Wexford

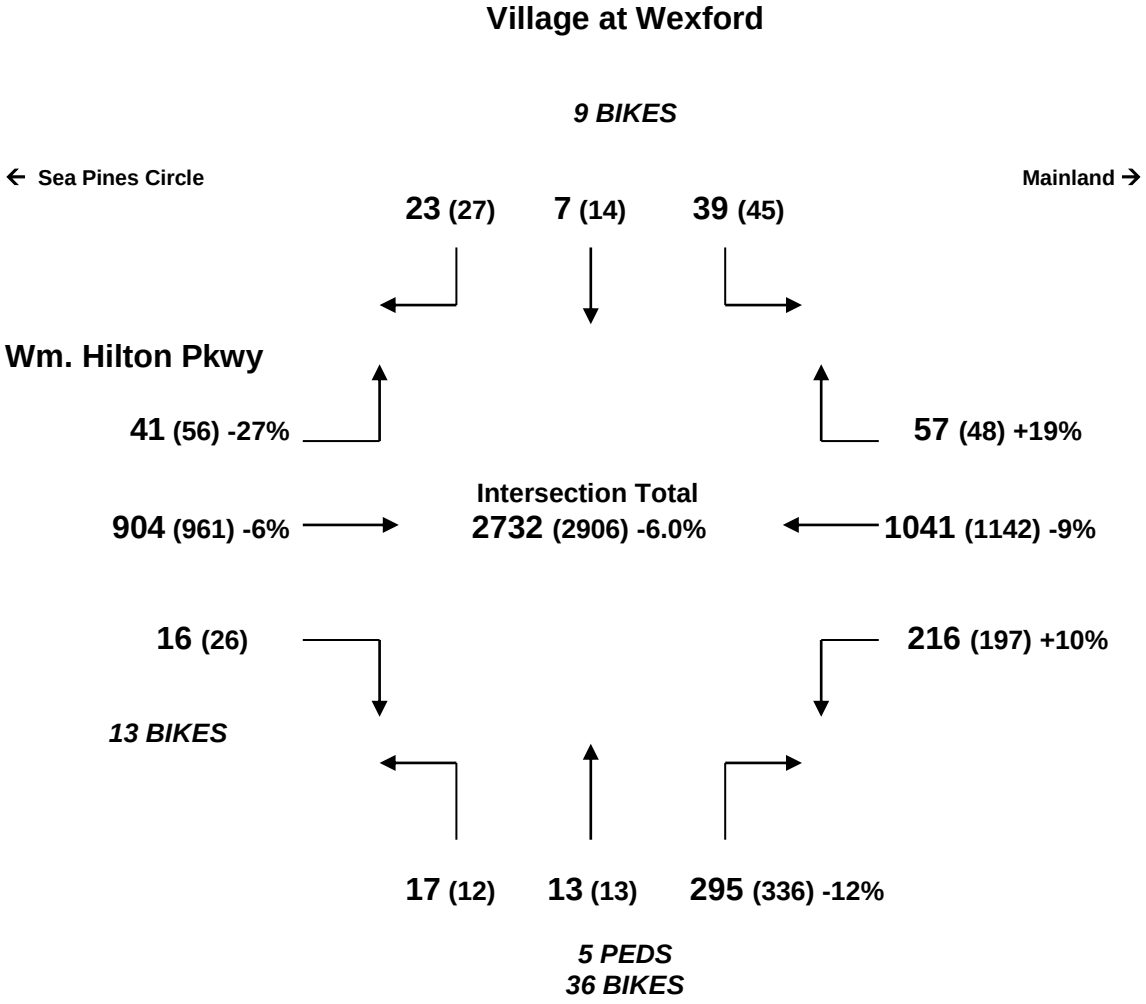
A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Tue. 6/5/18)



2018 (2017) %chg

William Hilton Parkway with New Orleans Road and Village at Wexford

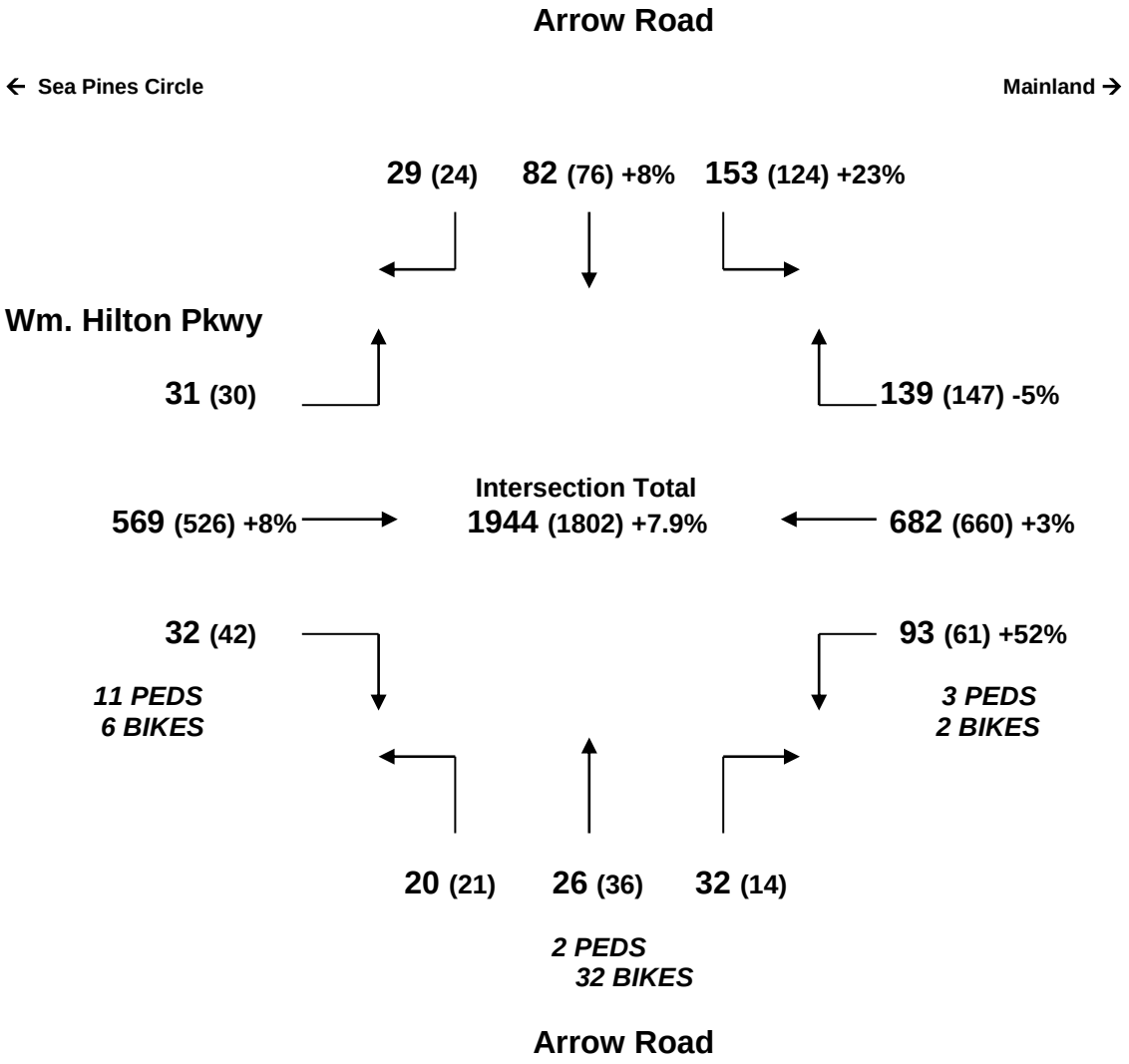
P.M. PEAK HOUR - (4:30 to 5:30 p.m. – Tue. 6/5/18)



2018 (2017) %chg

William Hilton Parkway with Arrow Road

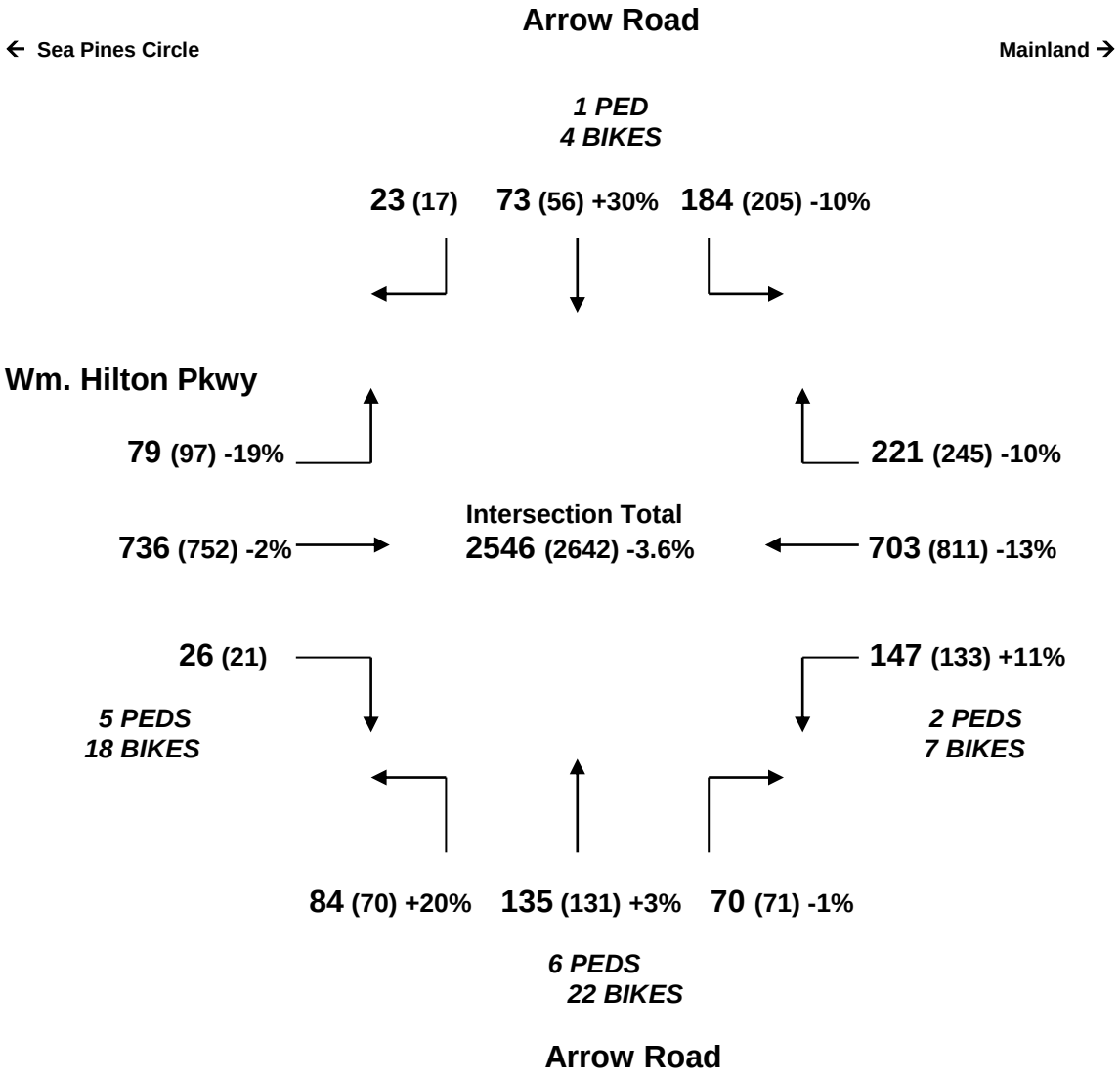
A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Tue. 6/5/18)



2018 (2017) %chg

William Hilton Parkway with Arrow Road

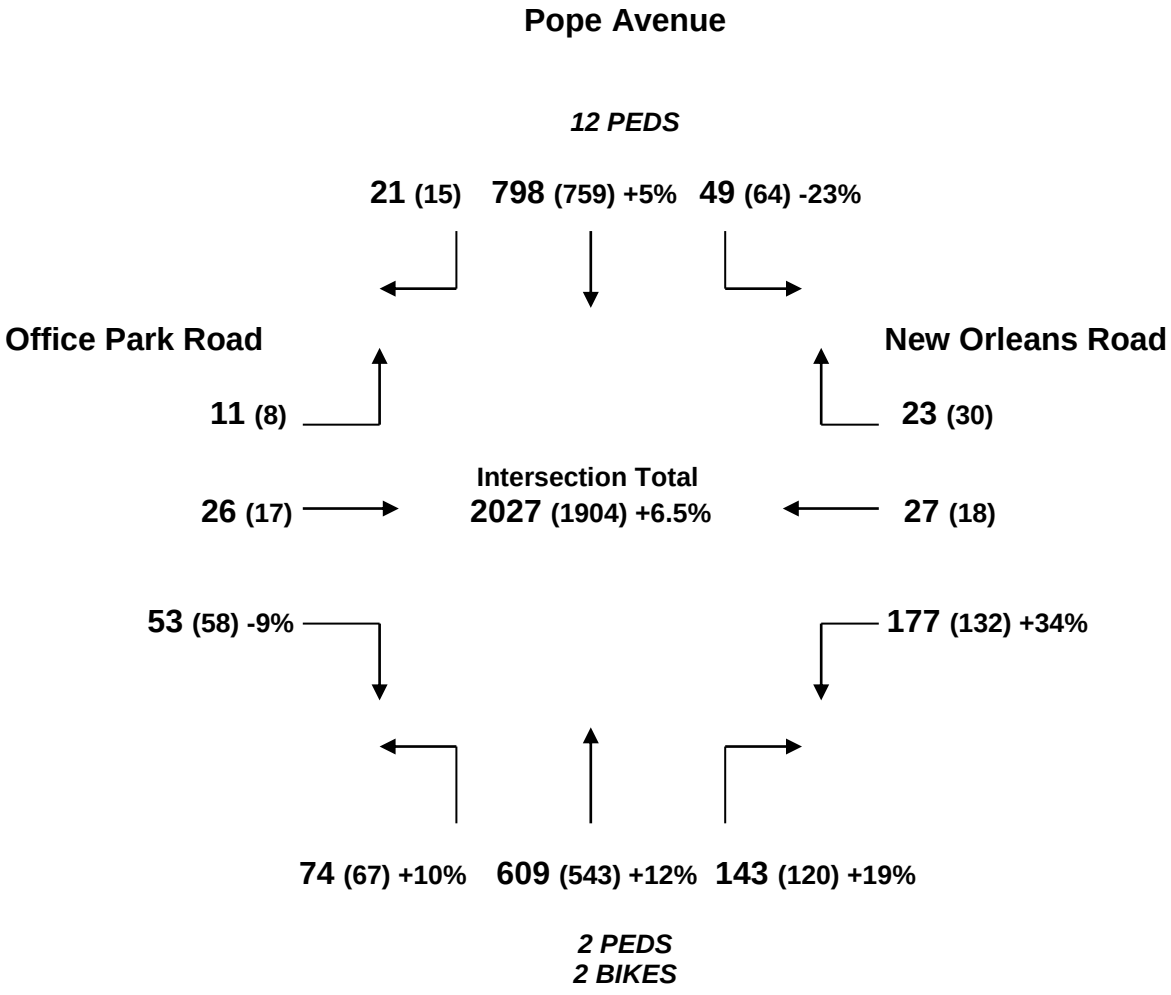
P.M. PEAK HOUR - (4:30 to 5:30 p.m. – Tue. 6/5/18)



2018 (2017) %chg

Pope Avenue with New Orleans Road and Office Park Road

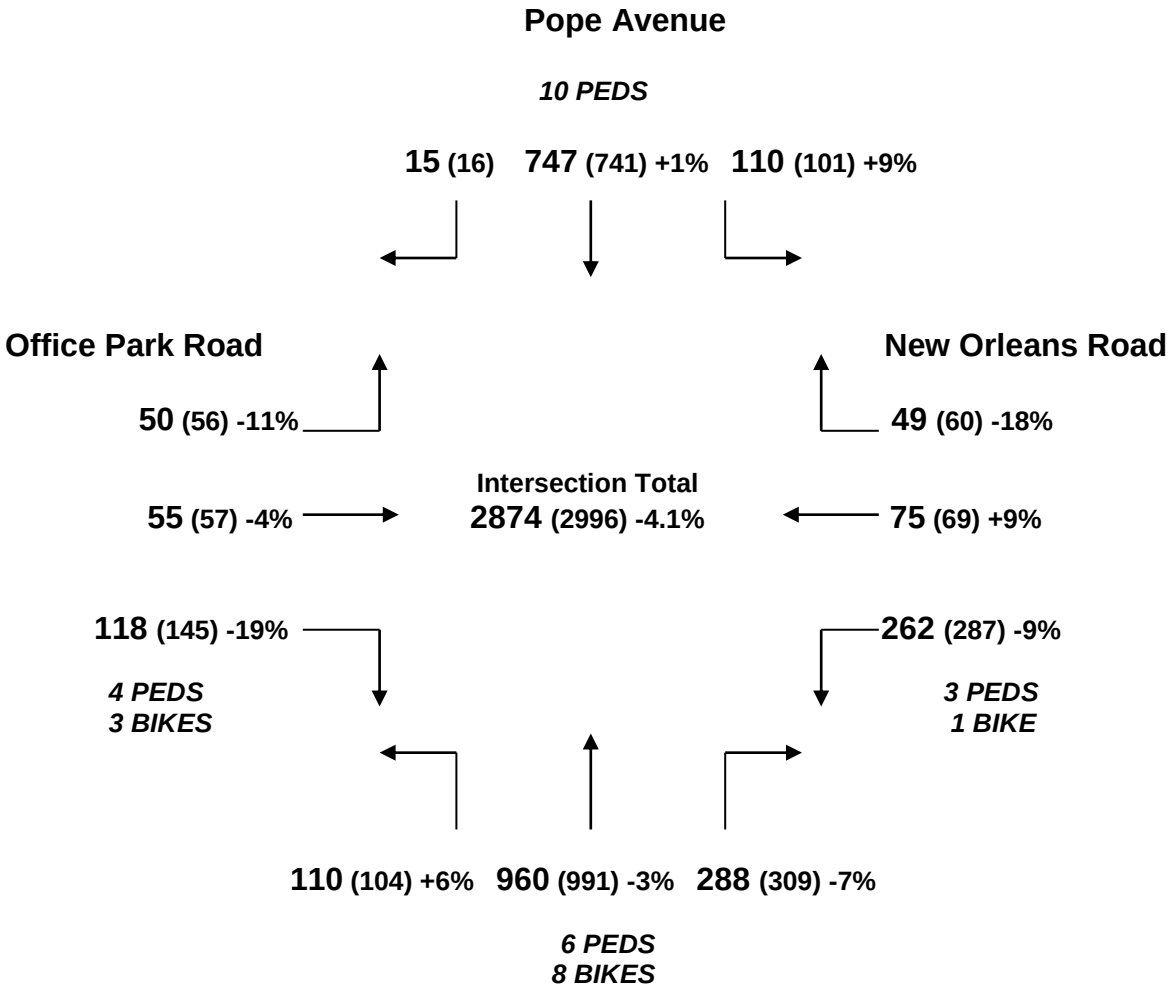
A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Tue. 6/5/18)



2018 **(2017) %chg**

Pope Avenue with New Orleans Road and Office Park Road

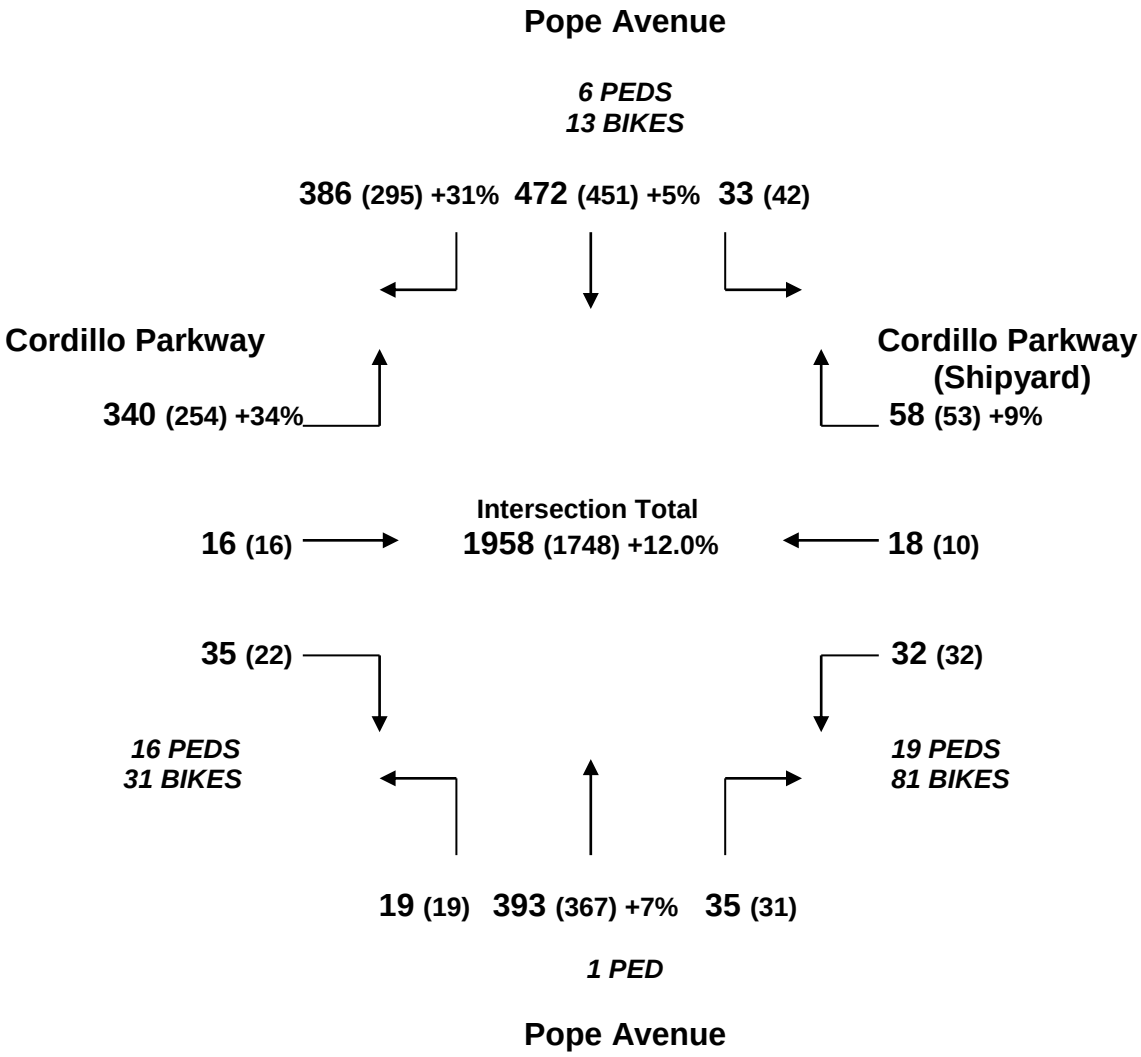
P.M. PEAK HOUR - (4:00 to 5:00 p.m. – Tue. 6/5/18)



2018 (2017) %chg

Pope Avenue with Cordillo Parkway

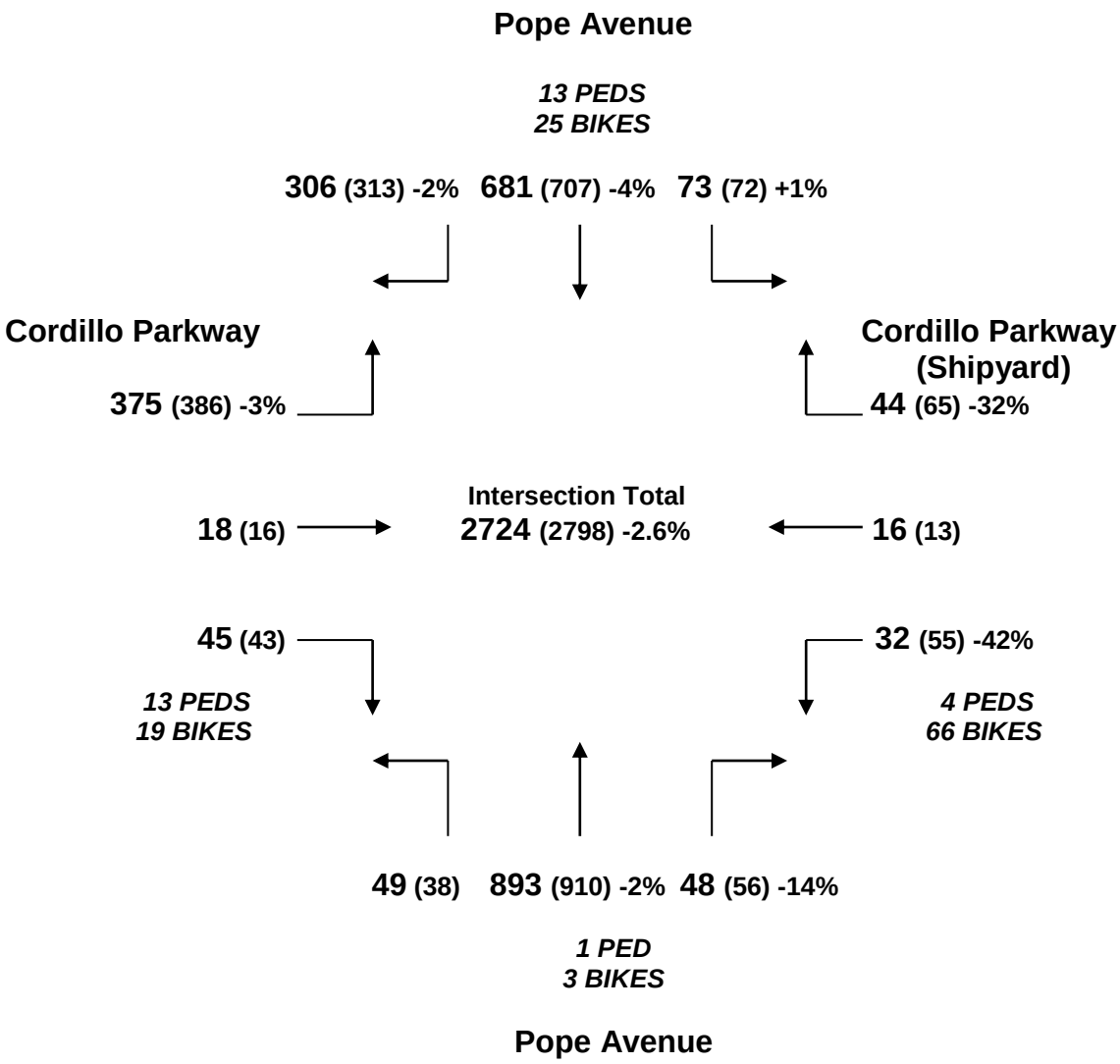
A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Tue. 6/5/18)



2018 (2017) %chg

Pope Avenue with Cordillo Parkway

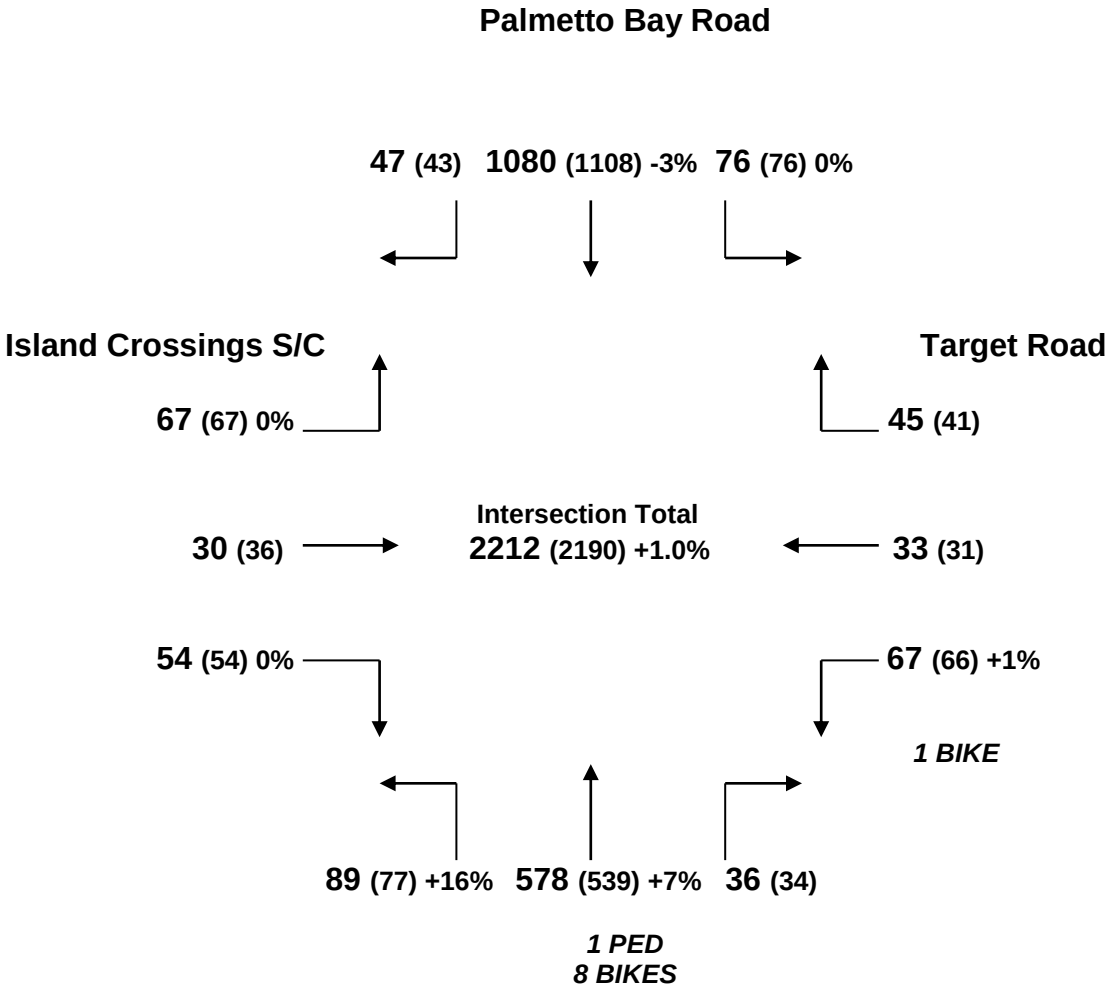
P.M. PEAK HOUR - (4:00 to 5:00 p.m. – Tue. 6/5/18)



2018 (2017) %chg

Palmetto Bay Road with Target Road and Entrance to Island Crossings S/C

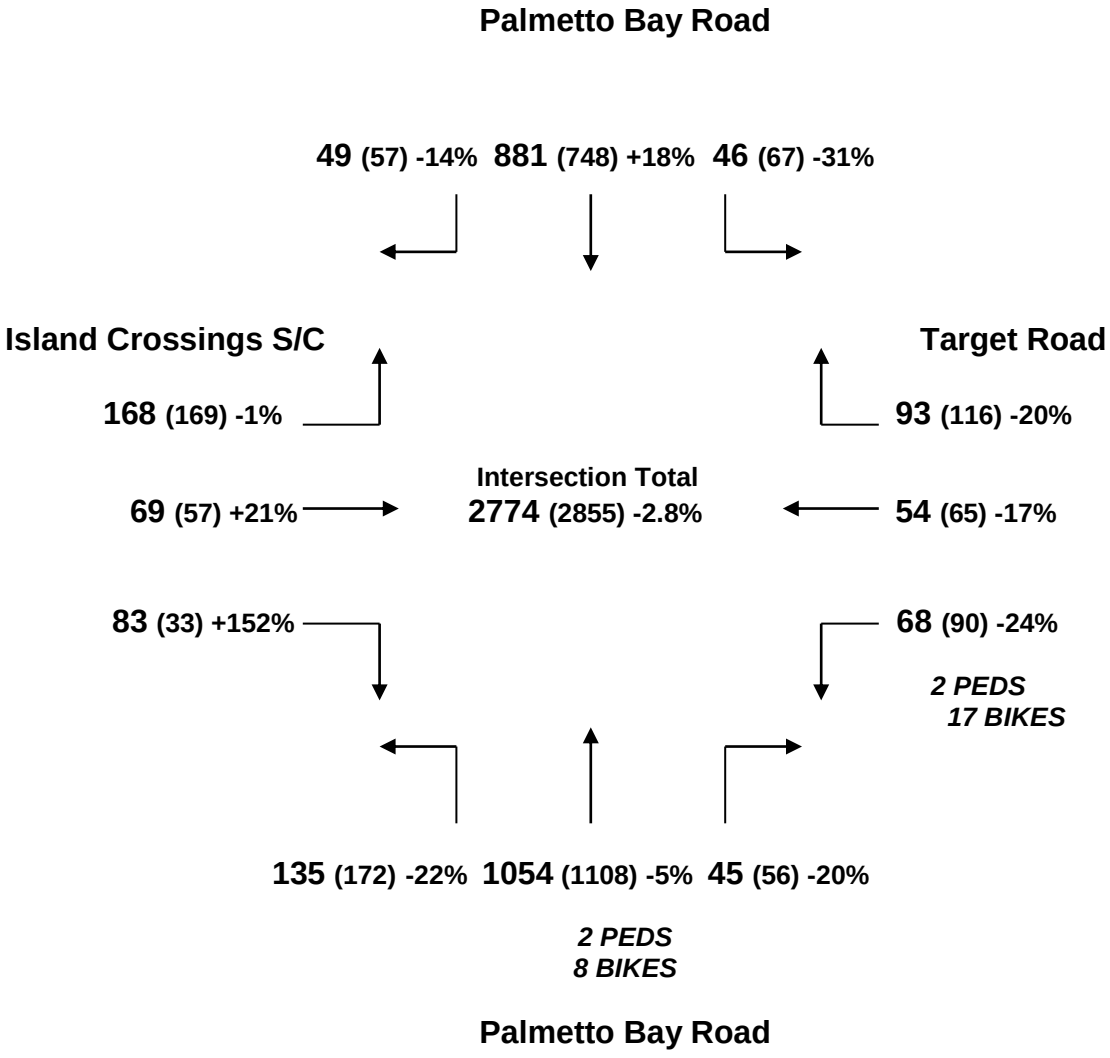
A.M. PEAK HOUR - (8:00 to 9:00 a.m. – Tue. 6/5/18)



2018 (2017) %chg

Palmetto Bay Road with Target Road and Entrance to Island Crossings S/C

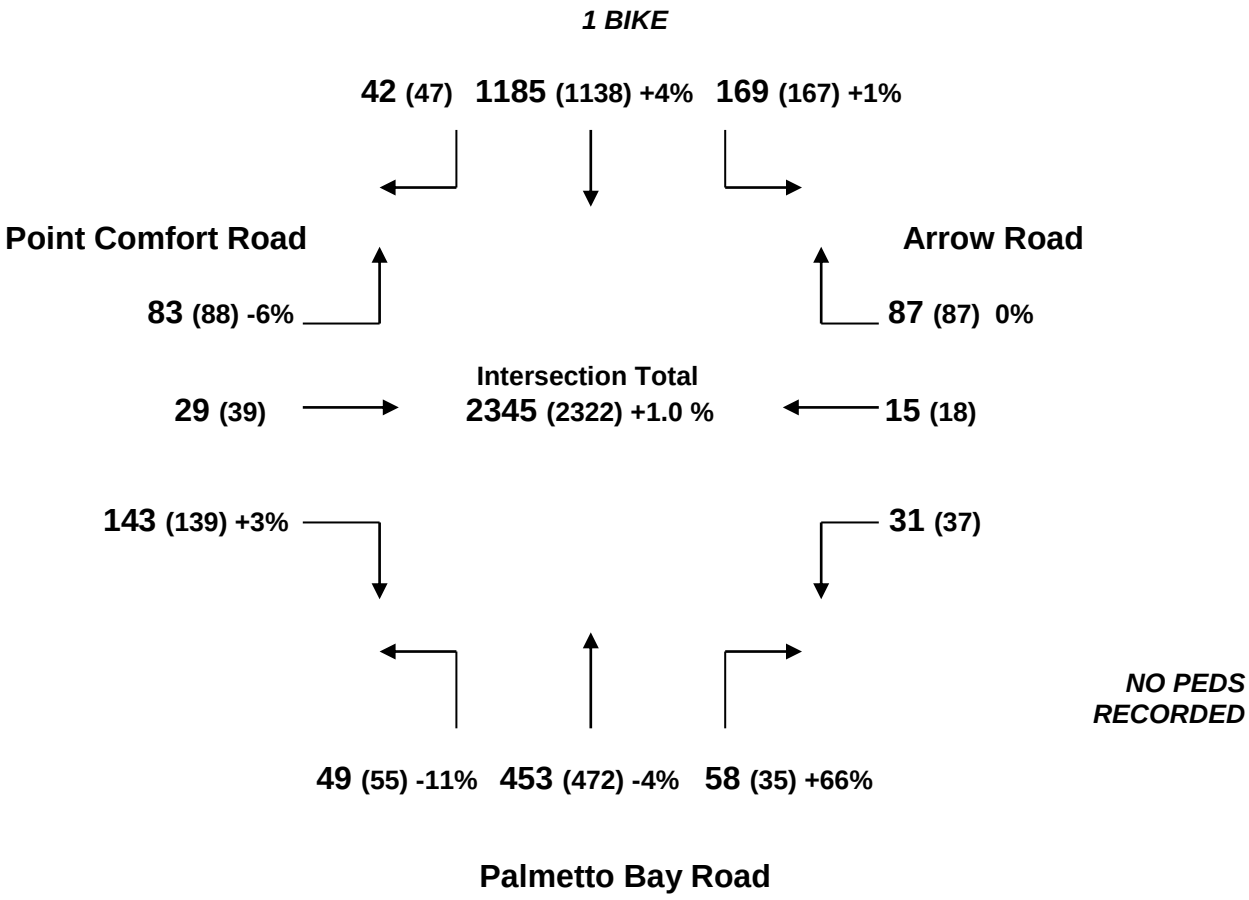
P.M. PEAK HOUR - (4:00 to 5:00 p.m. – Tue. 6/5/18)



2018 (2017) %chg

Palmetto Bay Road with Arrow Road and Point Comfort Road

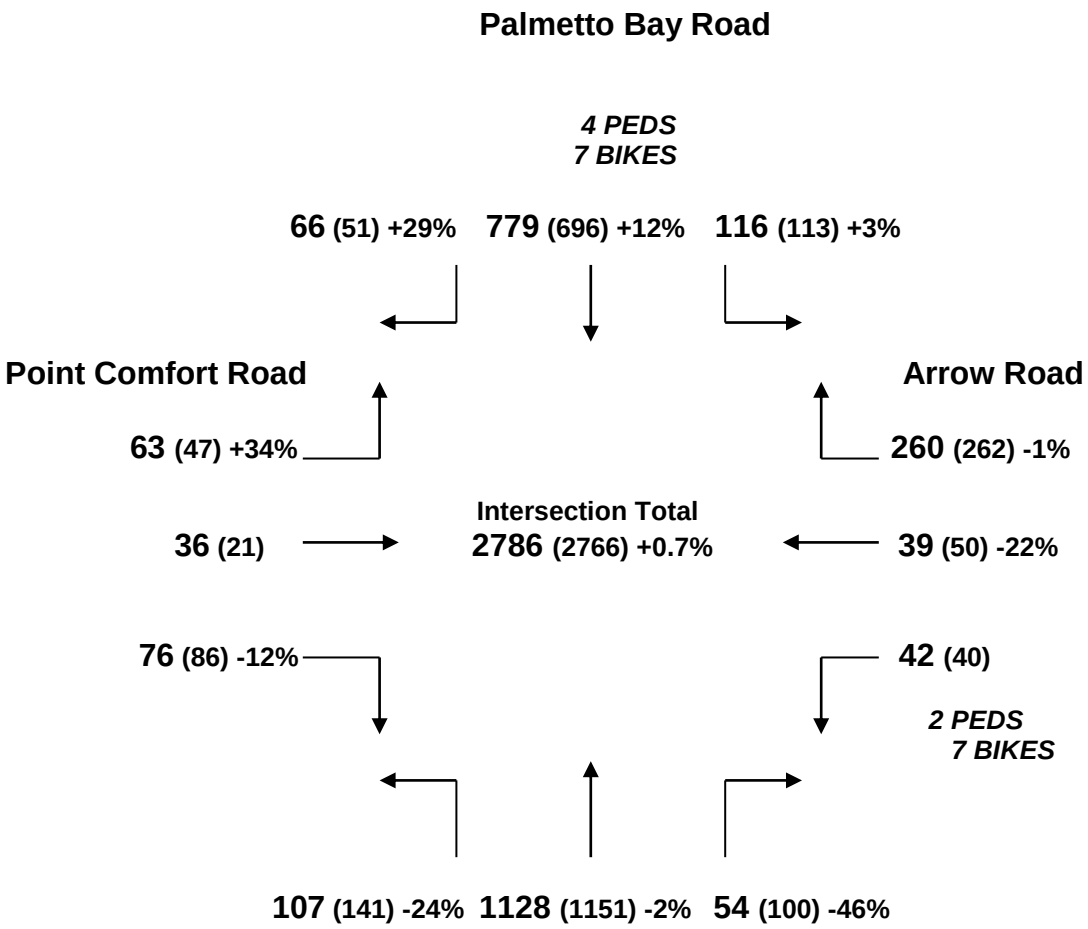
A.M. PEAK HOUR - (7:45 to 8:45 a.m. – Tue. 6/5/18)



2018 (2017) %chg

Palmetto Bay Road with Arrow Road and Point Comfort Road

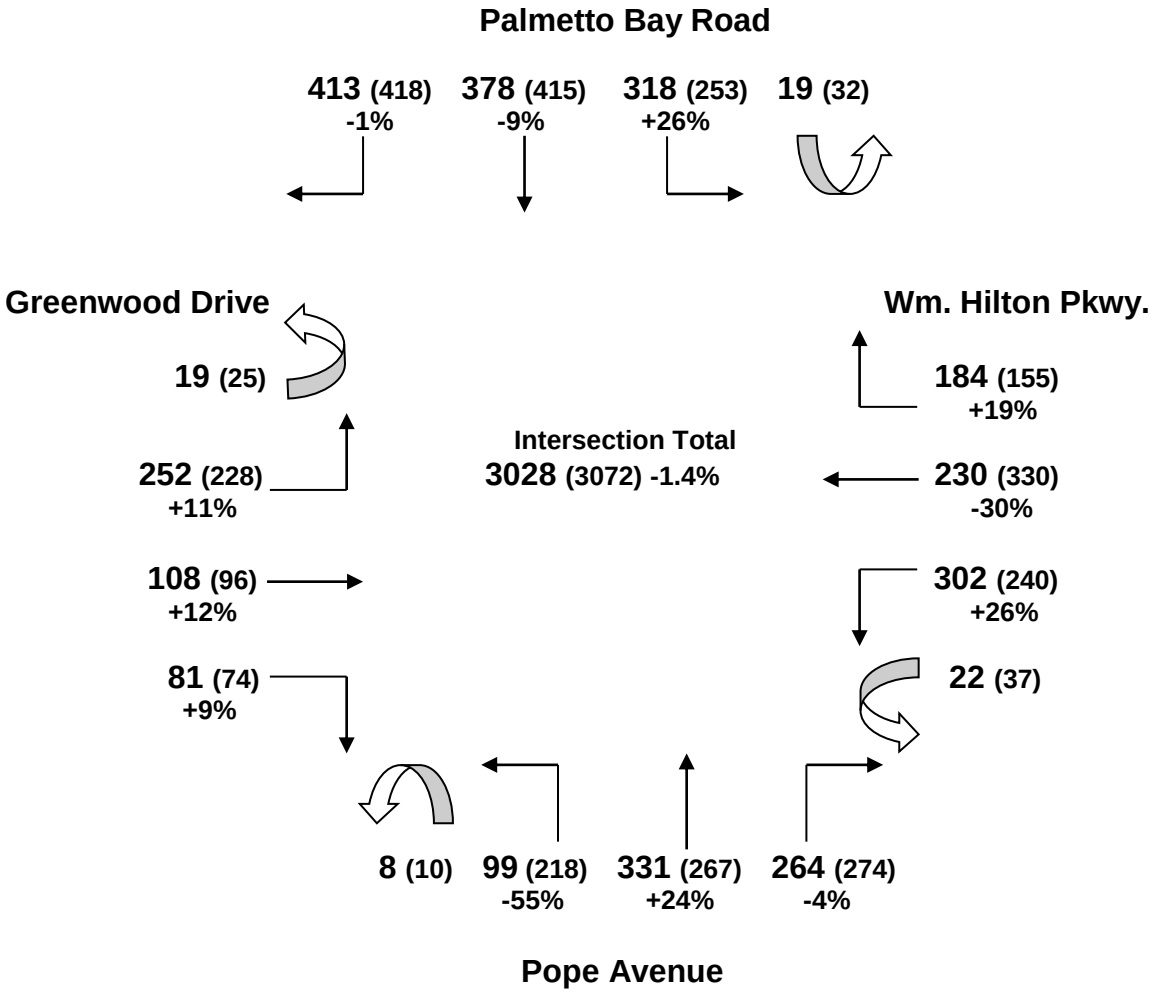
P.M. PEAK HOUR - (4:00 to 5:00 p.m. – Tue. 6/5/18)



2018 (2017) %chg

Sea Pines Circle

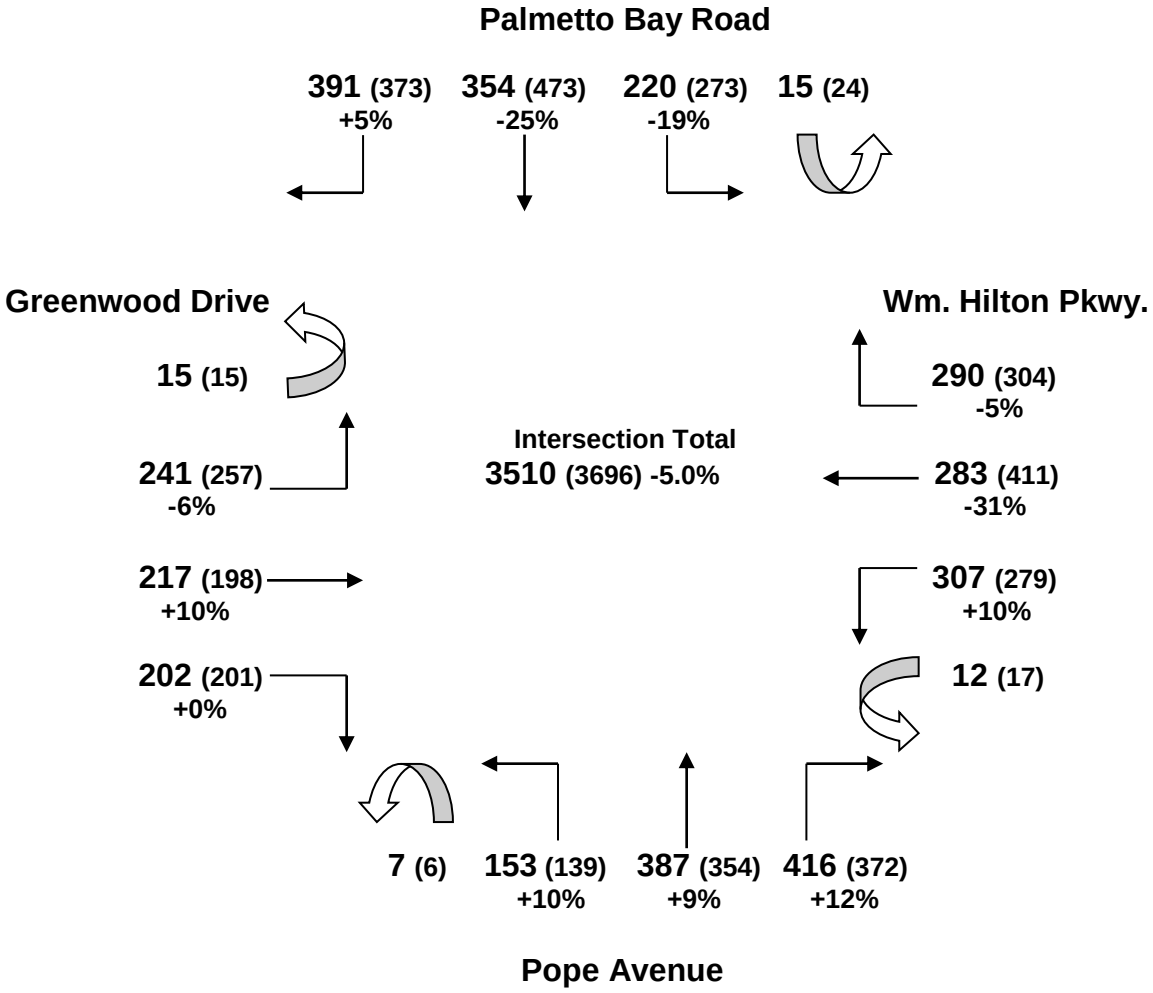
A.M. PEAK HOUR (8:00 to 9:00 a.m. – Wed. 6/6/18)



2018 (2016) %chg

Sea Pines Circle

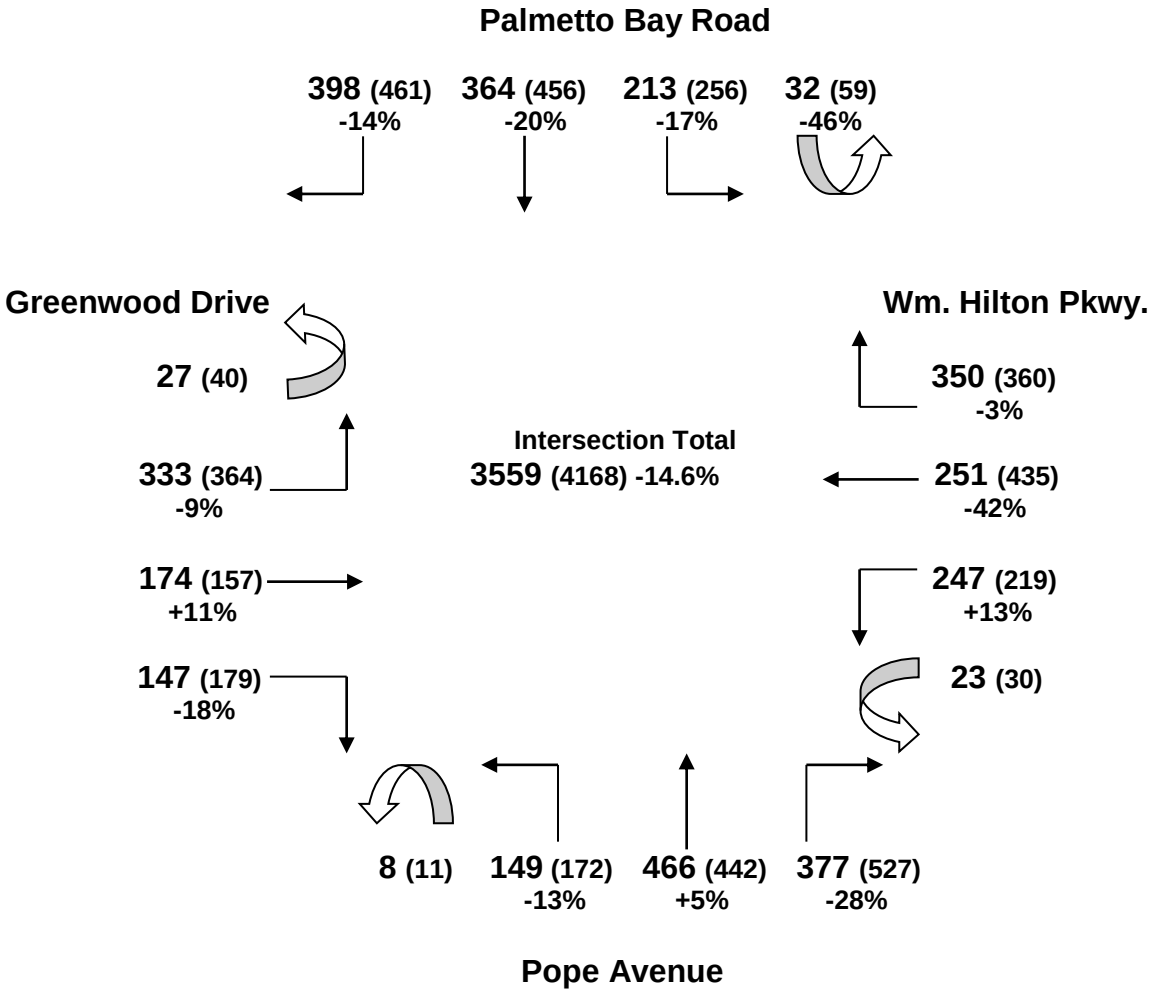
MIDDAY PEAK HOUR (11:45 a.m. to 12:45 p.m. – Wed. 6/6/18)



2018 (2016) %chg

Sea Pines Circle

P.M. PEAK HOUR (4:15 p.m. to 5:15 p.m. – Wed. 6/6/18)



2018 (2016) %chg

APPENDIX B

MAP SHOWING
LOCATIONS OF 24-HOUR BI-DIRECTIONAL COUNTS
SUMMARIZED IN TABLE ONE

JUNE 2017

Town of Hilton Head Island

24-Hour Traffic Count Locations

June 2018

TOWN OF HILTON HEAD ISLAND
ONE TOWN CENTER COURT
HILTON HEAD ISLAND, S.C. 29928
PHONE (843) 341- 4600

1 inch = 3,804 feet

APPENDIX C

FEDERAL HIGHWAY ADMINISTRATION REPORT

"TRAFFIC VOLUME TRENDS"

JUNE 2018

U. S. Department
of Transportation

Federal Highway Administration

Office of Highway
Policy Information

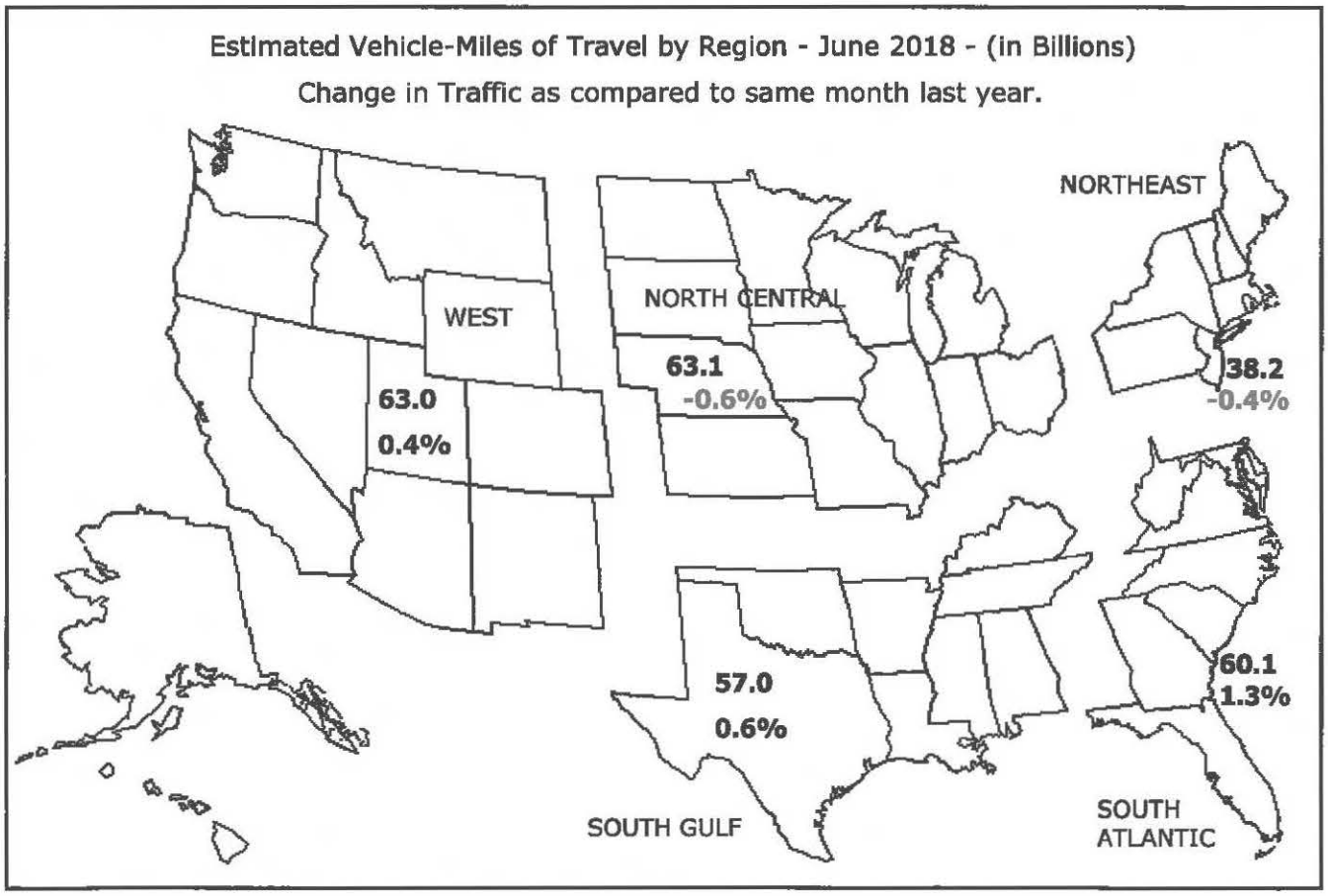
TRAFFIC VOLUME TRENDS

June 2018

Travel on all roads and streets changed by **+0.3%** (+0.9 billion vehicle miles) for June 2018 as compared with June 2017. Travel for the month is estimated to be 281.4 billion vehicle miles.

The seasonally adjusted vehicle miles traveled for June 2018 is 269.2 billion miles, a 0.9% (2.4 billion vehicle miles) increase over June 2017. It also represents 0.01% decline (0.03 billion vehicle miles) compared with May 2018.

Cumulative Travel for 2018 changed by **+0.3%** (+5.2 billion vehicle miles). The Cumulative estimate for the year is 1,581.4 billion vehicle miles of travel.



Note: All data for this month are preliminary. Revised values for the previous month are shown in Tables 1 and 2.
All vehicle-miles of travel computed with Highway Statistics 2016 Table VM-2 as a base.
Compiled with data on hand as of August 02, 2018.

Some historical data were revised based on HPMS and amended TVT data as of December 2015.
For information on total licensed drivers in the U.S. visit http://www.fhwa.dot.gov/policy/ohpi/hss/hsspubs.htm.
Select the year of interest then Section III (Driver Licensing).
For information on total registered motor vehicles in the U.S., visit http://www.fhwa.dot.gov/policy/ohpi/hss/hsspubs.htm
Select the year of interest and Section II (Motor Vehicles).

Traffic Volume Trends - June 2018

Based on preliminary reports from the State Highway Agencies, travel during June 2018 on all roads and streets in the nation changed by **+0.3%** (+0.9 billion vehicle miles) resulting in estimated travel for the month at **281.4**** billion vehicle-miles.

This total includes **87.0** billion vehicle-miles on rural roads and **194.4** billion vehicle-miles on urban roads and streets.

Cumulative Travel changed by **+0.3%** (+5.2 billion vehicle miles).

The larger changes to rural and urban travel are primarily because of the expansion in urban boundaries reflected in the 2000 census. Travel estimates for 2004 and beyond will also reflect this adjustment.

Travel for the current month, the cumulative yearly total, as well as the moving 12-month total on all roads and streets is shown below. Similar totals for each year since 1993 are also included.

Travel in Millions of Vehicle Miles

All Roads and Streets

Year	June	Year to Date	Moving 12-Month
1993	199,414	1,116,525	2,272,018
1994	207,280	1,141,229	2,321,409
1995	211,370	1,188,287	2,404,645
1996	215,551	1,203,679	2,438,167
1997	222,254	1,245,655	2,524,178
1998	228,733	1,272,811	2,587,529
1999	235,970	1,293,581	2,646,133
2000	242,963	1,348,355	2,734,232
2001	243,498	1,364,517	2,763,088
2002	247,868	1,396,362	2,827,457
2003	252,145	1,403,694	2,862,841
2004	257,383	1,453,148	2,939,676
2005	263,816	1,474,580	2,986,220
2006	263,782	1,488,412	3,003,262
2007	265,374	1,498,035	3,023,739
2008	257,484	1,477,638	3,009,425
2009	258,395	1,460,959	2,956,830
2010	260,083	1,456,657	2,952,462
2011	258,350	1,452,389	2,962,998
2012	260,376	1,472,434	2,970,447
2013	259,980	1,473,698	2,969,833
2014	263,459	1,480,218	2,994,800
2015	270,574	1,512,965	3,058,404
2016	276,991	1,552,453	3,134,861
2017	280,537	1,576,286	3,198,240
2018	281,389	1,581,438	3,217,820

Traffic Volume Trends is a monthly report based on hourly traffic count data. These data, collected at approximately 5,000 continuous traffic counting locations nationwide, are used to determine the percent change in traffic for the current month compared to the same month in the previous year. This percent change is applied to the travel for the same month of the previous year to obtain an estimate of travel for the current month.Because of the limited sample sizes, caution should be used with these estimates. The Highway Performance Monitoring System provides more accurate information on an annual basis.

** System entries may not add to give "All Systems" total due to rounding for Page 2 to 8.

Table - 1. Estimated Individual Monthly Motor Vehicle Travel in the United States**

System	Month											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2017 Individual Monthly Vehicle-Miles of Travel in Billions												
Rural Interstate	17.9	16.6	20.1	21.4	22.3	22.6	24.3	23.6	20.8	21.6	20.4	20.5
Rural Other Arterial	26.5	25.4	30.2	30.8	33.0	33.5	35.5	34.5	31.5	32.9	29.8	30.1
Other Rural	24.8	23.0	27.5	29.0	30.6	30.5	31.8	30.8	28.3	29.5	26.4	26.9
Urban Interstate	43.6	40.0	47.1	47.6	50.0	50.4	48.7	49.2	46.2	48.5	46.7	48.2
Urban Other Arterial	89.9	83.5	97.4	98.1	100.5	97.5	99.8	99.2	92.7	101.0	91.7	96.3
Other Urban	41.9	38.6	45.0	45.9	47.5	46.1	47.3	45.9	43.1	45.4	42.8	44.6
All Systems	244.6	226.9	267.4	272.9	284.0	280.5	287.3	283.2	262.7	278.9	257.7	266.5
2018 Individual Monthly Vehicle-Miles of Travel in Billions												
Rural Interstate	18.1	16.6	20.6	21.2	22.6	22.7						
Rural Other Arterial	26.8	25.2	30.5	30.7	33.7	33.8						
Other Rural	24.9	22.7	27.6	28.7	30.9	30.5						
Urban Interstate	44.1	39.9	47.4	47.7	50.5	50.5						
Urban Other Arterial	90.2	83.7	97.3	98.3	101.0	97.5						
Other Urban	41.7	38.6	45.4	45.8	47.4	46.4						
All Systems	245.8	226.9	268.7	272.5	286.2	281.4						
* Percent Change In Individual Monthly Travel 2017 vs. 2018												
Rural Interstate	0.8	0.1	2.7	-1.2	1.4	0.7						
Rural Other Arterial	1.4	-0.6	1.0	-0.1	2.3	1.0						
Other Rural	0.6	-1.1	0.4	-1.1	1.1	-0.1						
Urban Interstate	1.1	0.0	0.6	0.3	0.9	0.1						
Urban Other Arterial	0.3	0.2	-0.2	0.2	0.5	0.0						
Other Urban	-0.5	0.2	0.8	-0.2	-0.3	0.6						
All Systems	0.5	0.0	0.5	-0.2	0.8	0.3						

Table - 2. Estimated Cumulative Monthly Motor Vehicle Travel in the United States**

System	Month											
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2017 Cumulative Monthly Vehicle-Miles of Travel in Billions												
Rural Interstate	17.9	34.6	54.6	76.1	98.4	121.0	145.3	168.9	189.7	211.3	231.7	252.2
Rural Other Arterial	26.5	51.8	82.1	112.8	145.8	179.3	214.8	249.3	280.8	313.7	343.4	373.5
Other Rural	24.8	47.7	75.2	104.2	134.8	165.3	197.1	227.8	256.1	285.6	312.0	338.8
Urban Interstate	43.6	83.5	130.6	178.2	228.2	278.7	327.4	376.6	422.9	471.4	518.1	566.4
Urban Other Arterial	89.9	173.4	270.9	369.0	469.5	567.0	666.8	766.0	858.7	959.6	1051.3	1147.6
Other Urban	41.9	80.5	125.5	171.5	219.0	265.0	312.3	358.2	401.3	446.8	489.6	534.2
All Systems	244.6	471.5	738.9	1011.8	1295.7	1576.3	1863.6	2146.8	2409.5	2688.4	2946.1	3212.7
2018 Cumulative Monthly Vehicle-Miles of Travel in Billions												
Rural Interstate	18.1	34.7	55.4	76.5	99.2	121.9						
Rural Other Arterial	26.8	52.1	82.6	113.3	147.1	180.9						
Other Rural	24.9	47.6	75.2	103.9	134.8	165.3						
Urban Interstate	44.1	84.0	131.4	179.1	229.6	280.1						
Urban Other Arterial	90.2	173.9	271.1	369.4	470.4	568.0						
Other Urban	41.7	80.4	125.7	171.6	219.0	265.3						
All Systems	245.8	472.7	741.4	1013.9	1300.0	1581.4						
* Percent Change In Cumulative Monthly Travel 2017 vs. 2018												
Rural Interstate	0.8	0.5	1.3	0.6	0.8	0.8						
Rural Other Arterial	1.4	0.4	0.7	0.4	0.9	0.9						
Other Rural	0.6	-0.2	0.0	-0.3	0.0	0.0						
Urban Interstate	1.1	0.6	0.6	0.5	0.6	0.5						
Urban Other Arterial	0.3	0.3	0.1	0.1	0.2	0.2						
Other Urban	-0.5	-0.1	0.2	0.1	0.0	0.1						
All Systems	0.5	0.2	0.3	0.2	0.3	0.3						

* Percent change is based on vehicle travel in millions of miles.

Table - 3. Changes on Rural Arterial Roads by Region and State**

Region and State	June				May			
	Number of Stations	Vehicle-Miles (Millions)		Percent Change	Number of Stations	Vehicle-Miles (Millions)		Percent Change
		2018 (Preliminary)	2017			2018 (Revised)	2017	
Northeast								
Connecticut	-	148	148	-0.4	1	150	148	1.8
Maine	48	506	507	-0.2	48	510	503	1.5
Massachusetts	7	207	209	-1.1	-	213	209	1.7
New Hampshire	83	317	313	1.2	83	290	281	3.0
New Jersey	3	240	242	-1.1	3	272	272	-0.1
New York	47	1,291	1,284	0.5	48	1,248	1,223	2.0
Pennsylvania	33	2,044	2,048	-0.2	18	2,150	2,127	1.1
Rhode Island	6	54	53	1.6	3	61	59	2.6
Vermont	22	261	259	0.6	23	249	245	1.4
Subtotal		**5,068**	**5,063**	**0.1**		**5,143**	**5,067**	**1.5**
South Atlantic								
Delaware	22	251	250	0.3	22	152	151	0.4
District of Columbia	-	0	0	0.0	-	0	0	0.0
Florida	97	2,114	2,039	3.7	98	2,098	2,104	-0.3
Georgia	-	1,607	1,565	2.7	46	1,769	1,766	0.1
Maryland	12	591	600	-1.5	13	603	598	0.9
North Carolina	26	1,890	1,840	2.7	27	1,910	1,873	1.9
South Carolina	-	1,598	1,556	2.8	-	1,618	1,602	1.0
Virginia	318	1,943	1,951	-0.4	324	2,023	2,005	0.9
West Virginia	19	492	477	3.0	22	396	380	4.1
Subtotal		**10,486**	**10,278**	**2.0**		**10,569**	**10,479**	**0.9**
North Central								
Illinois	31	1,838	1,835	0.2	27	1,582	1,534	3.1
Indiana	16	1,358	1,361	-0.2	17	1,527	1,513	0.9
Iowa	81	1,292	1,294	-0.2	82	1,295	1,275	1.6
Kansas	67	979	975	0.4	66	972	950	2.3
Michigan	56	1,721	1,713	0.5	42	1,728	1,691	2.2
Minnesota	19	1,493	1,492	0.1	34	1,535	1,476	4.1
Missouri	81	1,695	1,696	0.0	59	1,816	1,778	2.1
Nebraska	32	796	796	0.0	36	841	816	3.1
North Dakota	49	439	427	2.6	47	397	382	3.8
Ohio	41	1,719	1,738	-1.1	41	1,781	1,765	0.9
South Dakota	9	511	500	2.2	42	431	423	2.0
Wisconsin	69	1,745	1,734	0.6	77	1,861	1,825	2.0
Subtotal		**15,586**	**15,561**	**0.2**		**15,766**	**15,428**	**2.2**
South Gulf								
Alabama	36	1,568	1,516	3.5	37	1,533	1,519	0.9
Arkansas	25	1,057	1,060	-0.3	22	994	978	1.7
Kentucky	20	1,677	1,684	-0.4	22	1,645	1,607	2.4
Louisiana	-	1,137	1,145	-0.7	-	1,193	1,181	1.0
Mississippi	43	1,155	1,138	1.6	35	1,175	1,162	1.2
Oklahoma	21	1,211	1,220	-0.7	29	1,179	1,161	1.5
Tennessee	15	1,585	1,576	0.6	18	1,514	1,512	0.1
Texas	104	4,768	4,631	3.0	105	4,721	4,531	4.2
Subtotal		**14,158**	**13,970**	**1.3**		**13,954**	**13,651**	**2.2**
West								
Alaska	36	147	143	3.0	38	140	135	3.1
Arizona	52	1,031	1,021	1.0	58	972	951	2.2
California	72	3,348	3,356	-0.2	75	3,509	3,454	1.6
Colorado	62	1,055	1,044	1.0	63	965	932	3.5
Hawaii	8	83	81	2.7	8	69	68	1.5
Idaho	103	602	587	2.6	109	557	545	2.2
Montana	64	665	664	0.2	66	543	536	1.2
Nevada	41	417	411	1.6	40	401	391	2.6
New Mexico	27	827	833	-0.8	32	854	843	1.3
Oregon	99	971	950	2.2	95	904	882	2.6
Utah	31	583	573	1.7	31	564	550	2.6
Washington	79	1,090	1,076	1.2	77	1,057	1,023	3.4
Wyoming	24	447	441	1.2	22	418	398	4.9
Subtotal		**11,266**	**11,180**	**0.8**		**10,953**	**10,708**	**2.3**
TOTALS	**2,256**	**56,563**	**56,054**	**0.9**	**2,331**	**56,384**	**55,337**	**1.9**

Note: Where Number of Stations are shown as dashes, the values for the Vehicle-Miles and Percent Change are derived from the estimated VMT based on data from surrounding States or the nationwide average VMT.

Table - 4. Changes on Urban Arterial Roads by Region and State**

Region and State	June				May			
	Number of Stations	Vehicle-Miles (Millions)		Percent Change	Number of Stations	Vehicle-Miles (Millions)		Percent Change
		2018 (Preliminary)	2017			2018 (Revised)	2017	
Northeast								
Connecticut	9	2,022	2,030	-0.4	8	2,146	2,128	0.8
Maine	24	283	291	-2.8	22	279	283	-1.3
Massachusetts	40	4,034	4,055	-0.5	36	4,111	4,043	1.7
New Hampshire	76	575	573	0.3	76	589	577	2.0
New Jersey	38	4,700	4,733	-0.7	35	4,903	4,934	-0.6
New York	75	6,600	6,686	-1.3	80	7,256	7,255	0.0
Pennsylvania	28	4,565	4,516	1.1	20	4,643	4,529	2.5
Rhode Island	33	554	532	4.2	32	599	581	3.0
Vermont	12	124	125	-0.7	10	130	130	-0.5
Subtotal		**23,457**	**23,541**	**-0.4**		**24,656**	**24,460**	**0.8**
South Atlantic								
Delaware	9	480	482	-0.3	10	466	460	1.2
District of Columbia	3	237	240	-1.2	3	233	226	3.3
Florida	133	10,125	9,871	2.6	131	10,238	10,268	-0.3
Georgia	-	5,477	5,390	1.6	72	5,682	5,669	0.2
Maryland	24	3,607	3,681	-2.0	24	3,796	3,790	0.2
North Carolina	21	5,016	4,919	2.0	19	5,096	5,126	-0.6
South Carolina	-	2,131	2,084	2.3	-	2,096	2,107	-0.5
Virginia	352	3,970	3,990	-0.5	362	4,215	4,159	1.3
West Virginia	15	664	669	-0.7	15	580	577	0.4
Subtotal		**31,707**	**31,326**	**1.2**		**32,402**	**32,382**	**0.1**
North Central								
Illinois	47	5,731	5,853	-2.1	46	5,553	5,556	-0.1
Indiana	16	2,647	2,689	-1.6	17	2,711	2,704	0.3
Iowa	25	952	952	-0.1	25	983	987	-0.3
Kansas	18	1,024	1,029	-0.5	18	1,044	1,031	1.2
Michigan	48	4,292	4,322	-0.7	39	4,844	4,856	-0.2
Minnesota	24	2,447	2,464	-0.7	27	2,363	2,413	-2.0
Missouri	65	2,682	2,707	-0.9	59	2,905	2,895	0.4
Nebraska	11	614	615	-0.3	12	638	629	1.3
North Dakota	9	179	181	-1.5	9	155	157	-1.3
Ohio	92	5,007	5,041	-0.7	92	5,465	5,419	0.8
South Dakota	-	209	204	2.3	2	206	211	-2.5
Wisconsin	91	2,353	2,297	2.4	92	2,299	2,263	1.6
Subtotal		**28,137**	**28,354**	**-0.8**		**29,166**	**29,121**	**0.2**
South Gulf								
Alabama	45	2,330	2,331	-0.1	46	2,276	2,297	-0.9
Arkansas	8	1,228	1,279	-4.0	8	1,381	1,372	0.6
Kentucky	20	1,531	1,553	-1.5	19	1,441	1,430	0.7
Louisiana	-	2,234	2,250	-0.7	-	2,121	2,100	1.0
Mississippi	21	1,097	1,087	0.9	20	1,072	1,065	0.6
Oklahoma	18	1,640	1,655	-0.9	25	1,703	1,679	1.5
Tennessee	8	3,659	3,678	-0.5	9	3,421	3,490	-2.0
Texas	78	13,229	13,178	0.4	74	14,442	14,164	2.0
Subtotal		**26,948**	**27,011**	**-0.2**		**27,857**	**27,597**	**0.9**
West								
Alaska	43	207	206	0.3	47	229	232	-1.2
Arizona	86	3,564	3,575	-0.3	86	3,939	3,850	2.3
California	107	22,180	22,129	0.2	105	20,625	20,491	0.7
Colorado	34	2,428	2,420	0.3	33	2,681	2,666	0.6
Hawaii	47	465	461	0.8	44	363	359	1.1
Idaho	74	510	509	0.2	75	500	497	0.6
Montana	11	253	255	-1.1	10	209	206	1.6
Nevada	33	1,114	1,116	-0.2	34	1,408	1,376	2.3
New Mexico	28	695	697	-0.3	29	786	775	1.5
Oregon	43	1,487	1,484	0.2	41	1,533	1,504	1.9
Utah	41	1,396	1,378	1.3	40	1,449	1,434	1.0
Washington	71	3,322	3,304	0.5	75	3,506	3,415	2.7
Wyoming	16	144	146	-1.4	16	158	156	0.9
Subtotal		**37,765**	**37,680**	**0.2**		**37,386**	**36,961**	**1.1**
TOTALS	**2,170**	**148,012**	**147,915**	**0.1**	**2,229**	**151,468**	**150,524**	**0.6**

Note: Where Number of Stations are shown as dashes, the values for the Vehicle-Miles and Percent Change are derived from the estimated VMT based on data from surrounding States or the nationwide average VMT.

Table - 5. Changes on ALL* Estimated Roads by Region and State**

Region and State	June				May			
	Number of Stations	Vehicle-Miles (Millions)		Percent Change	Number of Stations	Vehicle-Miles (Millions)		Percent Change
		2018 (Preliminary)	2017			2018 (Revised)	2017	
Northeast								
Connecticut	9	2,784	2,795	-0.4	9	2,942	2,916	0.9
Maine	95	1,337	1,353	-1.2	92	1,350	1,342	0.6
Massachusetts	47	5,419	5,449	-0.5	36	5,524	5,433	1.7
New Hampshire	171	1,223	1,217	0.5	171	1,193	1,168	2.1
New Jersey	43	6,463	6,511	-0.7	42	6,866	6,892	-0.4
New York	137	10,557	10,613	-0.5	144	11,716	11,719	0.0
Pennsylvania	72	9,041	9,084	-0.5	43	9,157	9,018	1.5
Rhode Island	39	714	686	4.0	35	772	750	3.0
Vermont	47	638	636	0.2	46	630	625	0.8
Subtotal		**38,176**	**38,344**	**-0.4**		**40,150**	**39,863**	**0.7**
South Atlantic								
Delaware	45	1,032	1,036	-0.4	48	875	870	0.6
District of Columbia	3	332	336	-1.2	3	329	318	3.3
Florida	235	18,485	17,982	2.8	234	18,985	19,049	-0.3
Georgia	-	10,679	10,489	1.8	133	11,138	11,460	-2.8
Maryland	44	5,267	5,372	-2.0	46	5,525	5,510	0.3
North Carolina	59	10,423	10,271	1.5	59	10,755	10,788	-0.3
South Carolina	-	4,965	4,870	2.0	-	5,052	5,055	-0.1
Virginia	684	7,360	7,405	-0.6	700	7,824	7,717	1.4
West Virginia	47	1,598	1,591	0.4	50	1,386	1,359	1.9
Subtotal		**60,141**	**59,352**	**1.3**		**61,869**	**62,126**	**-0.4**
North Central								
Illinois	85	10,250	10,397	-1.4	80	9,640	9,552	0.9
Indiana	40	6,906	6,988	-1.2	42	7,292	7,261	0.4
Iowa	130	3,068	3,108	-1.3	133	3,100	3,083	0.6
Kansas	95	2,915	2,911	0.1	95	2,934	2,874	2.1
Michigan	104	8,054	8,083	-0.4	81	8,684	8,648	0.4
Minnesota	52	5,403	5,460	-1.0	69	5,323	5,350	-0.5
Missouri	160	6,393	6,425	-0.5	128	6,725	6,715	0.1
Nebraska	53	1,878	1,888	-0.5	58	1,940	1,898	2.2
North Dakota	65	903	891	1.4	62	810	792	2.3
Ohio	148	10,322	10,400	-0.7	146	10,730	10,594	1.3
South Dakota	9	937	917	2.3	47	848	841	0.9
Wisconsin	166	6,038	5,959	1.3	177	5,974	5,909	1.1
Subtotal		**63,067**	**63,427**	**-0.6**		**64,000**	**63,517**	**0.8**
South Gulf								
Alabama	86	6,240	6,189	0.8	89	6,253	6,269	-0.3
Arkansas	39	3,259	3,330	-2.1	36	3,263	3,237	0.8
Kentucky	55	4,443	4,483	-0.9	54	4,506	4,431	1.7
Louisiana	1	4,383	4,414	-0.7	1	4,301	4,258	1.0
Mississippi	75	3,719	3,662	1.5	67	3,653	3,615	1.1
Oklahoma	45	4,254	4,293	-0.9	63	4,385	4,330	1.3
Tennessee	30	7,105	7,123	-0.3	34	6,726	6,824	-1.4
Texas	216	23,616	23,169	1.9	211	24,883	24,178	2.9
Subtotal		**57,019**	**56,663**	**0.6**		**57,970**	**57,142**	**1.4**
West								
Alaska	88	498	491	1.4	95	526	525	0.1
Arizona	159	6,027	6,036	-0.1	166	6,351	6,224	2.0
California	180	30,901	30,838	0.2	181	29,251	29,008	0.8
Colorado	98	4,408	4,387	0.5	98	4,610	4,556	1.2
Hawaii	60	891	881	1.1	58	715	706	1.4
Idaho	185	1,637	1,604	2.0	192	1,571	1,546	1.6
Montana	85	1,310	1,315	-0.3	86	1,098	1,088	0.9
Nevada	83	2,261	2,251	0.4	83	2,647	2,579	2.7
New Mexico	63	2,310	2,317	-0.3	69	2,540	2,510	1.2
Oregon	148	3,371	3,346	0.7	143	3,372	3,297	2.3
Utah	75	2,798	2,752	1.7	74	2,812	2,768	1.6
Washington	154	5,729	5,691	0.7	156	5,871	5,715	2.7
Wyoming	50	844	842	0.3	50	813	787	3.4
Subtotal		**62,985**	**62,751**	**0.4**		**62,177**	**61,309**	**1.4**
TOTALS	**4,859**	**281,389**	**280,537**	**0.3**	**5,015**	**286,167**	**283,956**	**0.8**

Note: Where Number of Stations are shown as dashes, the values for the Vehicle-Miles and Percent Change are derived from the estimated VMT based on data from surrounding States or the nationwide average VMT.
*** All Estimated roads include travel from Table 3 and 4 plus remaining roads.**

Table - 6. Estimated Rural Vehicle Miles (Millions) and Percent Change from Same Period Previous Year**

Year - 2017

	Rural Interstate	%		Rural Other Arter	%		Other Rural	%		Total Rural	%		All Systems	%
Jan	17,946	1.9	Jan	26,470	1.2	Jan	24,767	1.6	Jan	69,183	1.5	Jan	244,587	2.0
Feb	16,624	2.8	Feb	25,356	2.1	Feb	22,952	2.3	Feb	64,932	2.4	Feb	226,947	1.8
Mar	20,077	0.9	Mar	30,228	1.2	Mar	27,491	0.2	Mar	77,796	0.8	Mar	267,355	0.8
Q1	*54,647*	*1.8*	Q1	*82,053*	*1.5*	Q1	*75,210*	*1.3*	Q1	*211,911*	*1.5*	Q1	*738,889*	*1.5*
Apr	21,442	4.1	Apr	30,778	1.6	Apr	28,977	1.2	Apr	81,197	2.1	Apr	272,904	1.2
May	22,332	2.3	May	33,004	2.3	May	30,596	2.1	May	85,933	2.2	May	283,956	2.2
Jun	22,557	2.9	Jun	33,497	2.1	Jun	30,482	1.0	Jun	86,536	1.9	Jun	280,537	1.3
Q2	*66,332*	*3.1*	Q2	*97,279*	*2.0*	Q2	*90,055*	*1.4*	Q2	*253,666*	*2.1*	Q2	*837,397*	*1.5*
1st Half	120,979	2.5	1st Half	179,332	1.8	1st Half	165,265	1.4	1st Half	465,576	1.8	1st Half	1,576,286	1.5
Jul	24,309	0.8	Jul	35,474	1.2	Jul	31,792	0.7	Jul	91,575	0.9	Jul	287,343	0.8
Aug	23,605	3.2	Aug	34,498	2.3	Aug	30,774	1.0	Aug	88,876	2.1	Aug	283,184	1.4
Sep	20,812	1.9	Sep	31,496	0.7	Sep	28,266	0.3	Sep	80,575	0.9	Sep	262,673	0.2
Q3	*68,726*	*1.9*	Q3	***101,468***	*1.4*	Q3	*90,832*	*0.7*	Q3	*261,025*	*1.3*	Q3	***833,199***	***0.8***
Oct	21,619	1.9	Oct	32,878	1.4	Oct	29,499	0.5	Oct	83,996	1.2	Oct	278,937	1.2
Nov	20,394	2.5	Nov	29,769	1.6	Nov	26,364	0.9	Nov	76,526	1.6	Nov	257,712	1.0
Dec	20,455	1.6	Dec	30,056	1.5	Dec	26,854	1.3	Dec	77,365	1.5	Dec	266,535	0.7
Q4	*62,468*	*2.0*	Q4	*92,703*	*1.5*	Q4	*82,716*	***0.9***	Q4	*237,888*	*1.4*	Q4	***803,183***	***1.0***
2nd Half	131,194	2.0	2nd Half	194,171	1.5	2nd Half	173,548	0.8	2nd Half	498,913	1.4	2nd Half	1,636,382	0.9
Year	***252,173***	***2.2***	***Year***	***373,503***	***1.6***	***Year***	***338,813***	***1.1***	***Year***	***964,489***	***1.6***	***Year***	***3,212,668***	***1.2***

Year - 2018

	Rural Interstate	%		Rural Other Arter	%		Other Rural	%		Total Rural	%		All Systems	%
Jan	18,094	0.8	Jan	26,849	1.4	Jan	24,904	0.6	Jan	69,847	1.0	Jan	245,798	0.5
Feb	16,647	0.1	Feb	25,207	-0.6	Feb	22,702	-1.1	Feb	64,556	-0.6	Feb	226,860	0.0
Mar	20,613	2.7	Mar	30,540	1.0	Mar	27,609	0.4	Mar	78,762	1.2	Mar	268,749	0.5
Q1	*55,355*	*1.3*	Q1	***82,596***	***0.7***	Q1	*75,215*	***0.0***	Q1	*213,166*	*0.6*	Q1	*741,408*	*0.3*
Apr	21,180	-1.2	Apr	30,737	-0.1	Apr	28,667	-1.1	Apr	80,584	-0.8	Apr	272,474	-0.2
May	22,635	1.4	May	33,749	2.3	May	30,934	1.1	May	87,319	1.6	May	286,167	0.8
Jun	22,718	0.7	Jun	33,845	1.0	Jun	30,461	-0.1	Jun	87,024	0.6	Jun	281,389	0.3
Q2	*66,533*	*0.3*	Q2	*98,331*	*1.1*	Q2	*90,062*	*0.0*	Q2	*254,927*	*0.5*	Q2	*840,030*	*0.3*
1st Half	121,888	0.8	1st Half	180,927	0.9	1st Half	165,277	0.0	1st Half	468,092	0.5	1st Half	1,581,438	0.3
Jul			Jul			Jul			Jul			Jul		
Aug			Aug			Aug			Aug			Aug		
Sep			Sep			Sep			Sep			Sep		
Q3		0.0	Q3		0.0	Q3		0.0	Q3		0.0	Q3		0.0
Oct			Oct			Oct			Oct			Oct		
Nov			Nov			Nov			Nov			Nov		
Dec			Dec			Dec			Dec			Dec		
Q4		0.0	Q4		0.0	Q4		0.0	Q4		0.0	Q4		0.0
2nd Half		0.0	2nd Half		0.0	2nd Half		0.0	2nd Half		0.0	2nd Half		0.0
Year	***121,888***	***0.8***	***Year***	***180,927***	***0.9***	***Year***	***165,277***	***0.0***	***Year***	***468,092***	***0.5***	***Year***	***1,581,438***	***0.3***

Table - 7. Estimated Urban Vehicle Miles (Millions) and Percent Change from Same Period Previous Year**

Year - 2017

	Urban Interstate	%		Urban Other Arte	%		Other Urban	%		Total Urban	%		All Systems	%
Jan	43,584	2.4	Jan	89,911	2.2	Jan	41,909	2.2	Jan	175,405	2.3	Jan	244,587	2.0
Feb	39,952	1.9	Feb	83,509	1.4	Feb	38,554	1.4	Feb	162,015	1.5	Feb	226,947	1.8
Mar	47,083	0.8	Mar	97,438	1.0	Mar	45,038	0.5	Mar	189,559	0.9	Mar	267,355	0.8
Q1	*130,619*	*1.7*	Q1	*270,858*	*1.5*	Q1	*125,501*	*1.3*	Q1	*526,979*	*1.5*	Q1	*738,889*	*1.5*
Apr	47,618	1.3	Apr	98,139	0.7	Apr	45,950	0.6	Apr	191,707	0.8	Apr	272,904	1.2
May	49,999	2.4	May	100,525	1.9	May	47,500	2.2	May	198,023	2.1	May	283,956	2.2
Jun	50,431	1.4	Jun	97,484	0.5	Jun	46,086	1.6	Jun	194,001	1.0	Jun	280,537	1.3
Q2	*148,047*	*1.7*	Q2	*296,148*	*1.1*	Q2	*139,535*	*1.5*	Q2	*583,731*	*1.3*	Q2	*837,397*	*1.5*
1st Half	278,666	1.7	1st Half	567,007	1.3	1st Half	265,036	1.4	1st Half	1,110,709	1.4	1st Half	1,576,286	1.5
Jul	48,746	1.1	Jul	99,761	0.5	Jul	47,261	0.7	Jul	195,768	0.7	Jul	287,343	0.8
Aug	49,214	1.5	Aug	99,185	0.8	Aug	45,909	1.4	Aug	194,308	1.1	Aug	283,184	1.4
Sep	46,242	0.4	Sep	92,721	-0.3	Sep	43,135	0.1	Sep	182,098	0.0	Sep	262,673	0.2
Q3	*144,201*	*1.0*	Q3	*291,667*	*0.4*	Q3	*136,305*	*0.7*	Q3	*572,174*	*0.6*	Q3	*833,199*	*0.8*
Oct	48,547	1.5	Oct	100,963	1.1	Oct	45,431	1.2	Oct	194,941	1.2	Oct	278,937	1.2
Nov	46,696	1.6	Nov	91,661	0.4	Nov	42,828	0.5	Nov	181,185	0.7	Nov	257,712	1.0
Dec	48,247	0.8	Dec	96,332	0.1	Dec	44,590	0.3	Dec	189,170	0.3	Dec	266,535	0.7
Q4	*143,490*	*1.3*	Q4	*288,956*	*0.6*	Q4	*132,850*	*0.7*	Q4	*565,296*	*0.8*	Q4	*803,183*	*1.0*
2nd Half	287,691	1.1	2nd Half	580,623	0.5	2nd Half	269,155	0.7	2nd Half	1,137,469	0.7	2nd Half	1,636,382	0.9
Year	***566,358***	***1.4***	***Year***	***1,147,630***	***0.9***	***Year***	***534,191***	***1.1***	***Year***	***2,248,179***	***1.0***	***Year***	***3,212,668***	***1.2***

Year - 2018

	Urban Interstate	%		Urban Other Arte	%		Other Urban	%		Total Urban	%		All Systems	%
Jan	44,077	1.1	Jan	90,165	0.3	Jan	41,709	-0.5	Jan	175,951	0.3	Jan	245,798	0.5
Feb	39,942	0.0	Feb	83,712	0.2	Feb	38,650	0.2	Feb	162,304	0.2	Feb	226,860	0.0
Mar	47,355	0.6	Mar	97,255	-0.2	Mar	45,376	0.8	Mar	189,987	0.2	Mar	268,749	0.5
Q1	*131,374*	*0.6*	Q1	*271,133*	*0.1*	Q1	*125,735*	*0.2*	Q1	*528,242*	*0.2*	Q1	*741,408*	*0.3*
Apr	47,748	0.3	Apr	98,297	0.2	Apr	45,844	-0.2	Apr	191,890	0.1	Apr	272,474	-0.2
May	50,458	0.9	May	101,010	0.5	May	47,380	-0.3	May	198,848	0.4	May	286,167	0.8
Jun	50,484	0.1	Jun	97,527	0.0	Jun	46,353	0.6	Jun	194,365	0.2	Jun	281,389	0.3
Q2	*148,691*	*0.4*	Q2	*296,835*	*0.2*	Q2	*139,577*	*0.0*	Q2	*585,103*	*0.2*	Q2	*840,030*	*0.3*
1st Half	280,065	0.5	1st Half	567,967	0.2	1st Half	265,313	0.1	1st Half	1,113,345	0.2	1st Half	1,581,438	0.3
Jul			Jul			Jul			Jul			Jul		
Aug			Aug			Aug			Aug			Aug		
Sep			Sep			Sep			Sep			Sep		
Q3		0.0	Q3		0.0	Q3		0.0	Q3		0.0	Q3		0.0
Oct			Oct			Oct			Oct			Oct		
Nov			Nov			Nov			Nov			Nov		
Dec			Dec			Dec			Dec			Dec		
Q4		0.0	Q4		0.0	Q4		0.0	Q4		0.0	Q4		0.0
2nd Half		0.0	2nd Half		0.0	2nd Half		0.0	2nd Half		0.0	2nd Half		0.0
Year	***280,065***	***0.5***	***Year***	***567,967***	***0.2***	***Year***	***265,313***	***0.1***	***Year***	***1,113,345***	***0.2***	***Year***	***1,581,438***	***0.3***

Figure - 1. Moving 12-Month Total on ALL Roads

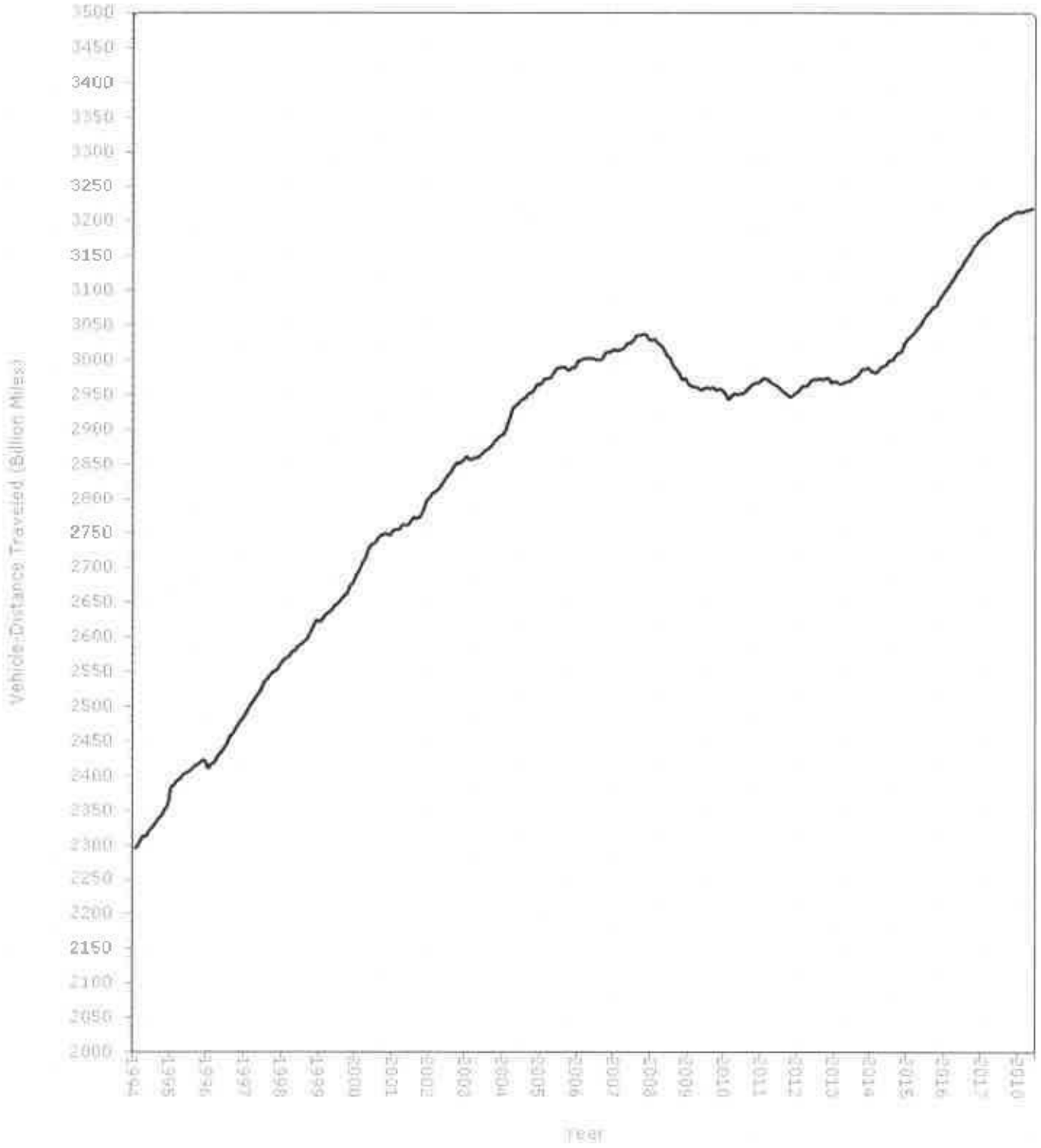
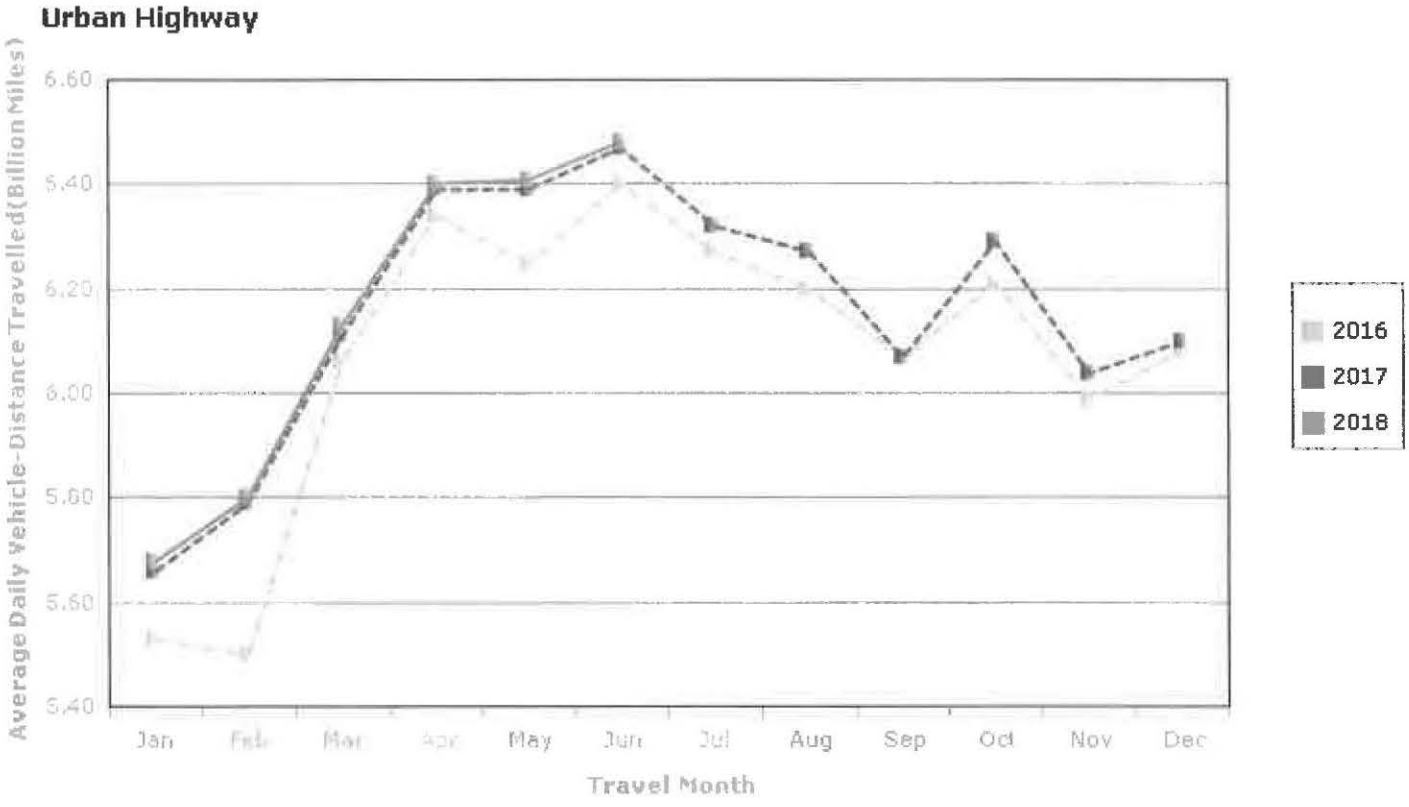


Figure - 2. Travel on U.S. Highways by Month



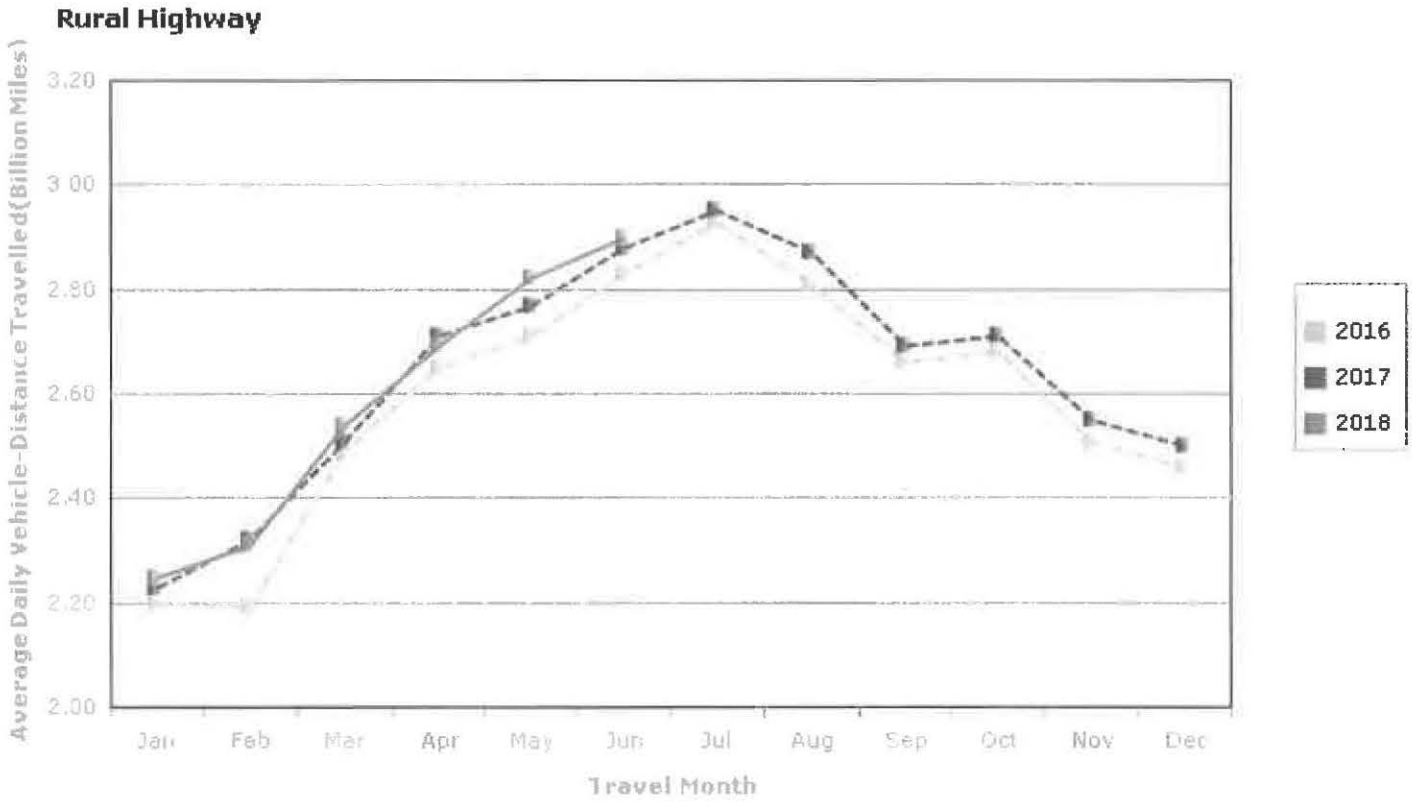
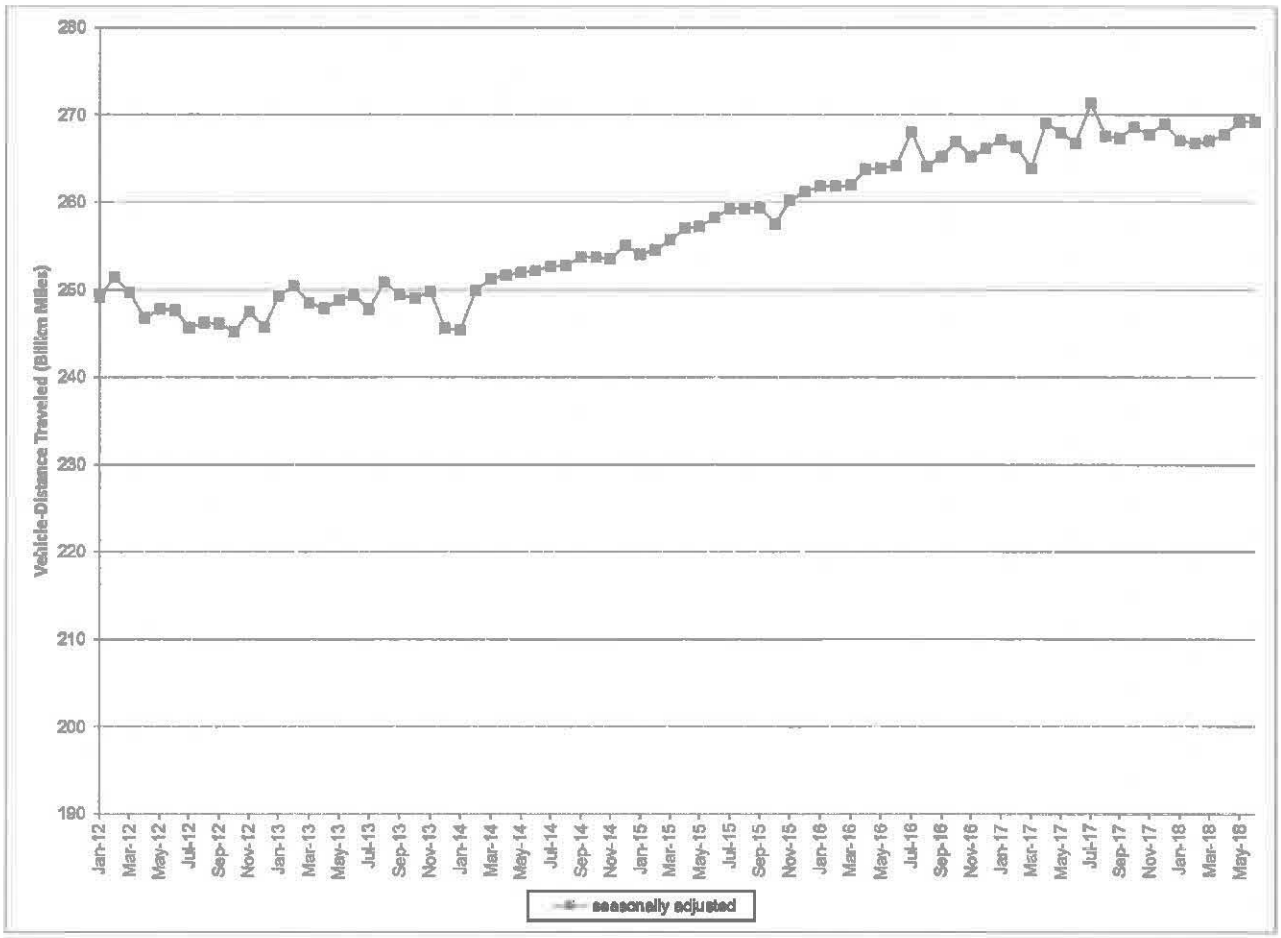


Figure3: Seasonally Adjusted Vehicle Miles Traveled by Month



Seasonally adjusted data are modeled by the Bureau of Transportation Statistics, Office of the Assistant Secretary for Research and Technology, U.S. Department of Transportation. See http://www.transtats.bts.gov/OSEA/SeasonalAdjustment/ for additional seasonally adjusted travel data and information.

SUPPLEMENTARY

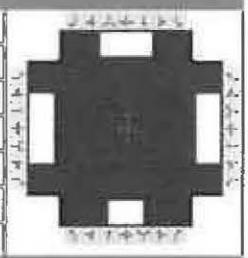
NOT PART OF THE 2018
TRAFFIC MONITORING & EVALUATION REPORT

HCM ANALYSES USED IN THIS REPORT

JUNE 2018

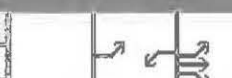
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Town of Hilton Head Island, SC			Duration, h	0.25
Analyst	Darrin Shoemaker	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	Town of Hilton Head Island	Time Period	am peak hour	PHF	0.97
Urban Street	Wm. Hilton Pkwy.	Analysis Year	2018	Analysis Period	1> 8:00
Intersection	Squire Pope Road/Cha...	File Name	18100amex.xus		
Project Description	existing conditions - a.m. peak hour				

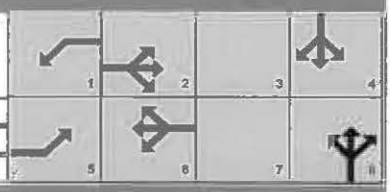


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	169	2612	2	3	1397	34	1	0	6	36	0	195

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	On



Green	0.5	5.5	100.5	16.2	0.0	0.0	
Yellow	3.0	0.0	4.4	4.0	0.0	0.0	
Red	2.6	0.0	1.5	1.8	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	4.0	1.1	3.0		6.0		5.0
Phase Duration, s	11.6	111.9	6.1	106.4		22.0		22.0
Change Period, ($Y+R_c$), s	5.7	5.9	5.6	5.9		5.8		5.8
Max Allow Headway (*MAH*), s	3.1	0.0	2.6	0.0		3.1		3.1
Queue Clearance Time (g_s), s	5.6		2.1			2.5		18.2
Green Extension Time (g_e), s	0.2	0.0	0.0	0.0		0.4		0.0
Phase Call Probability	1.00		0.11			1.00		1.00
Max Out Probability	0.00		0.00			0.00		1.00

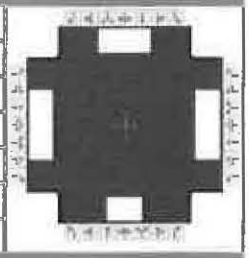
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	174	1614	1081	3	1440	35	1	6		37	0	201
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1704	1363	1826	1464	1661	1735	1689	1547		1376	1820	1690
Queue Service Time (g_s), s	3.6	49.3	49.3	0.1	30.2	0.8	0.1	0.5		3.4	0.0	16.2
Cycle Queue Clearance Time (g_c), s	3.6	49.3	49.3	0.1	30.2	0.8	0.1	0.5		3.9	0.0	16.2
Green Ratio (*g/C*)	0.77	0.76	0.76	0.72	0.72	0.72	0.12	0.12		0.12	0.12	0.12
Capacity (*c*), veh/h	306	2066	1383	93	2385	1246	247	179		206	211	196
Volume-to-Capacity Ratio (*X*)	0.570	0.781	0.782	0.033	0.604	0.028	0.004	0.035		0.180	0.000	1.028
Back of Queue (*Q*), ft/ln (50 th percentile)	47.4	324.5	484.2	0.9	253.7	7.2	0.8	5.1		31.1	0	280
Back of Queue (*Q*), veh/ln (50 th percentile)	1.8	12.5	17.3	0.0	9.8	0.3	0.0	0.2		1.2	0.0	10.8
Queue Storage Ratio (*RQ*) (50 th percentile)	0.30	0.13	0.18	0.01	0.12	0.00	0.01	0.01		0.31	0.00	2.33
Uniform Delay (d_1), s/veh	11.0	10.1	10.1	13.2	9.8	5.7	54.8	55.0		56.7	0.0	61.9
Incremental Delay (d_2), s/veh	0.6	3.0	4.5	0.1	1.1	0.0	0.0	0.0		0.2	0.0	71.9
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Control Delay (*d*), s/veh	11.7	13.1	14.5	13.2	10.9	5.7	54.8	55.0		56.9	0.0	133.8
Level of Service (LOS)	B	B	B	B	B	A	D	D		E		F
Approach Delay, s/veh / LOS	13.6	B		10.8	B		55.0	D		121.8	F	
Intersection Delay, s/veh / LOS	18.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.97	B	2.54	C	3.54	D	3.26	C
Bicycle LOS Score / LOS	3.75	D	3.47	C	2.80	C	3.18	C

$X_c = 0.85$

HCS7 Signalized Intersection Results Summary

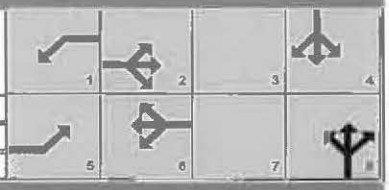
General Information				Intersection Information	
Agency	Town of Hilton Head Island, SC			Duration, h	0.25
Analyst	Darrin Shoemaker	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	Town of Hilton Head Island	Time Period	pm peak hour	PHF	0.99
Urban Street	Wm. Hilton Pkwy.	Analysis Year	2018	Analysis Period	1> 16:30
Intersection	Squire Pope Road/Cha...	File Name	18100pmex.xus		
Project Description	existing conditions - p.m. peak hour				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	141	1775	37	3	2889	78	4	32	1	41	1	260

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	On

Green	0.5	0.3	118.1	8.2	0.0	0.0
Yellow	3.0	3.0	4.4	4.0	0.0	0.0
Red	2.5	2.7	1.5	1.8	0.0	0.0



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	4.0	1.1	3.0		6.0		5.0
Phase Duration, s	12.0	130.0	6.0	124.0		14.0		14.0
Change Period, ($Y+R_c$), s	5.7	5.9	5.5	5.9		5.8		5.8
Max Allow Headway (MAH), s	3.1	0.0	2.6	0.0		3.1		3.1
Queue Clearance Time (g_s), s	8.3		2.1			4.6		10.2
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0		0.3		0.0
Phase Call Probability	1.00		0.12			1.00		1.00
Max Out Probability	1.00		0.00			0.69		1.00

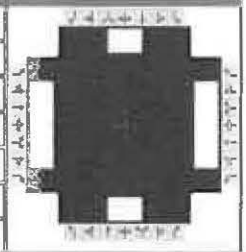
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	142	1078	753	3	2918	79	4	33		41	1	263
Adjusted Saturation Flow Rate (s), veh/h/ln	1704	1302	1818	1464	1782	1737	1394	1830		1343	1820	1717
Queue Service Time (g_s), s	6.3	18.3	18.3	0.1	118.1	0.0	0.4	2.6		4.6	0.1	8.2
Cycle Queue Clearance Time (g_c), s	6.3	18.3	18.3	0.1	118.1	0.0	0.5	2.6		7.2	0.1	8.2
Green Ratio (g/C)	0.84	0.83	0.83	0.79	0.79	0.79	0.05	0.05		0.05	0.05	0.05
Capacity (c), veh/h	120	2154	1504	204	2806	1367	123	100		98	99	94
Volume-to-Capacity Ratio (X)	1.191	0.500	0.500	0.015	1.040	0.058	0.033	0.333		0.423	0.010	2.798
Back of Queue (Q), ft/ln (50 th percentile)	238.9	92.9	144.5	0.4	235.6	0.3	3.9	32.5		41.6	1	661.1
Back of Queue (Q), veh/ln (50 th percentile)	9.3	3.6	5.2	0.0	9.1	0.0	0.1	1.3		1.6	0.0	25.4
Queue Storage Ratio (RQ) (50 th percentile)	1.49	0.04	0.05	0.00	0.11	0.00	0.05	0.05		0.42	0.00	5.51
Uniform Delay (d_1), s/veh	61.1	3.8	3.8	4.0	0.0	0.0	67.3	68.3		71.7	67.1	70.9
Incremental Delay (d_2), s/veh	142.5	0.8	1.2	0.0	23.2	0.0	0.0	0.7		1.1	0.0	837.9
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Control Delay (d), s/veh	203.7	4.6	5.0	4.0	23.2	0.0	67.3	69.0		72.8	67.1	908.8
Level of Service (LOS)	F	A	A	A	F	A	E	E		E	E	F
Approach Delay, s/veh / LOS	19.1	B		22.6	C		68.8	E		792.5	F	
Intersection Delay, s/veh / LOS	65.8						E					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.99	B	2.46	B	3.69	D	3.35	C
Bicycle LOS Score / LOS	3.26	C	4.72	E	2.85	C	3.29	C

$X_c = 1.10$

HCS7 Signalized Intersection Results Summary

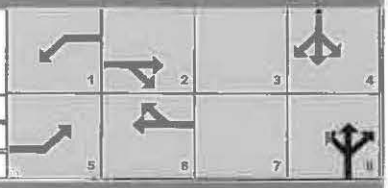
General Information				Intersection Information	
Agency	Town of Hilton Head Island			Duration, h	0.25
Analyst	Darrin Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	a.m. peak hour	PHF	0.98
Urban Street	Wm. Hilton Pkwy.	Analysis Year	2018	Analysis Period	1> 7:30
Intersection	Spanish Wells Road/Wil...	File Name	18101amex.xus		
Project Description	existing conditions - a.m. peak hour				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	46	2507	124	49	1146	29	142	58	113	64	39	7

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	On

Green	5.3	79.1	7.2	23.4	0.0	0.0	
Yellow	3.0	4.4	3.0	4.0	0.0	0.0	
Red	2.8	1.9	3.8	2.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	2.0	4.0	2.0	4.0		6.0		6.0
Phase Duration, s	14.0	99.4	11.1	96.6		29.4		29.4
Change Period, ($Y+R_c$), s	6.8	6.8	5.8	6.3		6.0		6.0
Max Allow Headway (MAH), s	3.6	0.0	3.6	0.0		4.2		4.2
Queue Clearance Time (g_s), s	5.7		6.2			19.7		22.4
Green Extension Time (g_e), s	2.9	0.0	0.0	0.0		0.9		0.6
Phase Call Probability	0.84		0.86			1.00		1.00
Max Out Probability	1.00		0.61			0.40		1.00

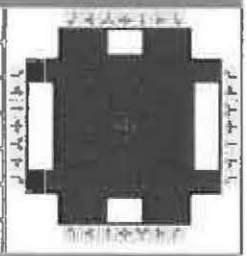
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	47	1821	864	50	841	358	145	174		65	47	
Adjusted Saturation Flow Rate (s), veh/h/ln	1734	1273	1810	1645	1414	1805	1324	1745		1201	1844	
Queue Service Time (g_s), s	3.7	21.6	21.7	4.2	12.3	12.3	14.7	13.0		7.4	3.0	
Cycle Queue Clearance Time (g_c), s	3.7	21.6	21.7	4.2	12.3	12.3	17.7	13.0		20.4	3.0	
Green Ratio (g/C)	0.05	0.66	0.66	0.04	0.64	0.64	0.17	0.17		0.17	0.17	
Capacity (c), veh/h	89	2527	1198	63	2735	1164	244	292		141	308	
Volume-to-Capacity Ratio (X)	0.525	0.721	0.721	0.796	0.307	0.308	0.593	0.598		0.462	0.152	
Back of Queue (Q), ft/ln (50 th percentile)	41.6	69.1	103.8	51.8	95.1	119.8	130.6	148.2		60	36.3	
Back of Queue (Q), veh/ln (50 th percentile)	1.6	2.7	4.2	2.0	3.7	4.8	5.0	5.8		2.3	1.4	
Queue Storage Ratio (RQ) (50 th percentile)	0.28	0.03	0.05	0.24	0.04	0.05	0.65	0.06		0.40	0.04	
Uniform Delay (d_1), s/veh	63.5	4.1	4.1	66.8	11.0	11.0	57.4	53.9		63.3	49.8	
Incremental Delay (d_2), s/veh	1.9	1.0	2.1	14.2	0.3	0.6	2.9	2.5		2.3	0.2	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (d), s/veh	65.5	5.1	6.2	81.0	11.3	11.7	60.3	56.4		65.7	50.0	
Level of Service (LOS)	E	A	A	F	B	B	E	E		E	D	
Approach Delay, s/veh / LOS	6.5	A		14.2	B		58.2	E		59.1	E	
Intersection Delay, s/veh / LOS	13.7						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.14	B	2.08	B	3.60	D	3.73	D
Bicycle LOS Score / LOS	3.90	D	2.76	C	2.97	C	3.49	C

$X_c = 0.64$

HCS7 Signalized Intersection Results Summary

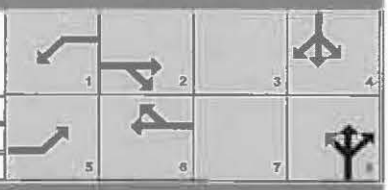
General Information				Intersection Information	
Agency	Town of Hilton Head Island			Duration, h	0.25
Analyst	Darrin Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	p.m. peak hour	PHF	0.98
Urban Street	Wm. Hilton Pkwy.	Analysis Year	2018	Analysis Period	1> 16:45
Intersection	Spanish Wells Road/Wil...	File Name	18101pmex.xus		
Project Description	existing conditions - p.m. peak hour				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	68	1540	157	79	2602	136	184	38	91	50	83	23

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	On

Green	7.5	0.4	90.5	32.4	0.0	0.0	
Yellow	3.0	0.0	4.4	4.0	0.0	0.0	
Red	3.8	0.0	1.9	2.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	2.0	4.0	2.0	4.0		6.0		6.0
Phase Duration, s	14.3	96.8	14.8	97.3		38.4		38.4
Change Period, ($Y+R_c$), s	6.8	6.3	5.8	6.3		6.0		6.0
Max Allow Headway (*MAH*), s	3.6	0.0	3.6	0.0		4.2		4.2
Queue Clearance Time (g_s), s	7.9		9.2			31.3		17.1
Green Extension Time (g_e), s	0.0	0.0	0.1	0.0		1.0		1.7
Phase Call Probability	0.94		0.97			1.00		1.00
Max Out Probability	0.11		0.02			0.38		0.00

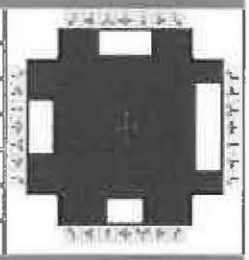
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	69	1169	563	81	1886	907	188	132		51	108	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1734	1242	1795	1645	1240	1781	1255	1732		1247	1831	
Queue Service Time (g_s), s	5.9	27.2	27.2	7.2	45.0	45.6	22.0	9.7		5.4	7.4	
Cycle Queue Clearance Time (g_c), s	5.9	27.2	27.2	7.2	45.0	45.6	29.3	9.7		15.1	7.4	
Green Ratio (*g/C*)	0.05	0.60	0.60	0.06	0.61	0.61	0.22	0.22		0.22	0.22	
Capacity (*c*), veh/h	87	2249	1083	99	2256	1080	257	374		237	395	
Volume-to-Capacity Ratio (*X*)	0.796	0.520	0.520	0.818	0.836	0.840	0.729	0.352		0.215	0.274	
Back of Queue (*Q*), ft/ln (95 th percentile)	131.2	303.7	404.1	120.2	229.1	318.4	308	193.9		79.8	157.4	
Back of Queue (*Q*), veh/ln (95 th percentile)	5.1	11.7	16.2	4.6	8.8	12.7	11.8	7.6		3.1	6.1	
Queue Storage Ratio (*RQ*) (95 th percentile)	0.87	0.14	0.19	0.55	0.09	0.13	1.54	0.08		0.53	0.16	
Uniform Delay (d_1), s/veh	70.5	17.2	17.2	68.2	9.9	10.0	61.2	49.9		56.3	49.0	
Incremental Delay (d_2), s/veh	10.0	0.7	1.5	3.8	1.2	2.5	7.1	0.6		0.4	0.4	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	80.5	17.9	18.7	72.0	11.2	12.5	68.3	50.5		56.7	49.4	
Level of Service (LOS)	F	B	B	E	B	B	E	D		E	D	
Approach Delay, s/veh / LOS	20.6	C		13.3	B		61.0	E		51.7	D	
Intersection Delay, s/veh / LOS	20.0						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.21	B	2.14	B	3.68	D	3.89	D
Bicycle LOS Score / LOS	3.51	D	3.43	C	2.97	C	3.57	D

$X_c = 0.74$

HCS7 Signalized Intersection Results Summary

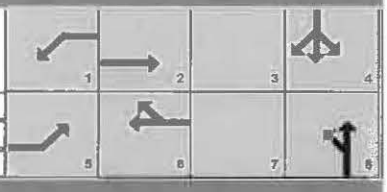
General Information				Intersection Information	
Agency	Town of Hilton Head Island			Duration, h	0.25
Analyst	Darrin Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	a.m. peak hour	PHF	0.97
Urban Street	Wm. Hilton Pkwy.	Analysis Year	2018	Analysis Period	1> 7:15
Intersection	Gum Tree Road	File Name	18102amex.xus		
Project Description	existing conditions - a.m. peak hour				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	108	1788		75	783	111	3	51		225	152	115

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	Off

Green	10.8	62.0	7.8	18.3	7.1	0.0	
Yellow	3.0	4.4	3.0	4.0	3.6	0.0	
Red	4.2	1.5	3.8	3.4	3.1	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	2.0	4.0	2.0	3.0		10.0		9.0
Phase Duration, s	18.0	85.9	14.6	82.5		13.8		25.7
Change Period, ($Y+R_c$), s	7.2	5.9	6.8	6.8		6.7		7.4
Max Allow Headway (*MAH*), s	3.5	0.0	3.5	0.0		3.8		4.1
Queue Clearance Time (g_s), s	10.8		8.2			5.9		17.8
Green Extension Time (g_e), s	0.2	0.0	0.0	0.0		0.0		0.6
Phase Call Probability	0.99		0.95			0.89		1.00
Max Out Probability	0.00		1.00			0.13		1.00

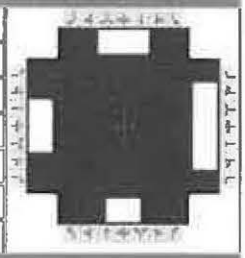
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2		1	6	16	3	8		7	4	14
Adjusted Flow Rate (*v*), veh/h	111	1843		77	807	114	3	53		181	208	119
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1739	1738		1739	1449	1645	1723	1864		1759	1809	1660
Queue Service Time (g_s), s	8.8	60.3		6.2	14.7	4.8	0.2	3.9		13.9	15.8	9.4
Cycle Queue Clearance Time (g_c), s	8.8	60.3		6.2	14.7	4.8	0.2	3.9		13.9	15.8	9.4
Green Ratio (*g/C*)	0.08	0.57		0.06	0.54	0.54	0.05	0.05		0.13	0.13	0.13
Capacity (*c*), veh/h	134	1987		96	2348	889	87	94		231	237	218
Volume-to-Capacity Ratio (*X*)	0.829	0.928		0.802	0.344	0.129	0.035	0.558		0.785	0.876	0.545
Back of Queue (*Q*), ft/ln (50 th percentile)	102.9	413.6		86.9	125.1	47.5	2.8	49.7		182.9	229.1	105.1
Back of Queue (*Q*), veh/ln (50 th percentile)	4.0	15.9		3.3	4.8	1.8	0.1	1.9		7.0	8.8	4.0
Queue Storage Ratio (*RQ*) (50 th percentile)	0.33	0.17		0.31	0.08	0.23	0.02	0.02		0.64	0.09	0.38
Uniform Delay (d_1), s/veh	61.9	14.3		65.4	18.2	15.9	63.2	64.9		58.9	59.7	56.9
Incremental Delay (d_2), s/veh	6.2	6.2		24.6	0.4	0.3	0.2	5.1		13.2	24.4	2.1
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Control Delay (*d*), s/veh	68.0	20.6		90.0	18.5	16.2	63.4	70.0		72.2	84.1	59.0
Level of Service (LOS)	E	C		F	B	B	E	E		E	F	E
Approach Delay, s/veh / LOS	23.3	C		23.8	C		69.6	E		74.0	E	
Intersection Delay, s/veh / LOS	31.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.40	B	2.50	B	3.17	C	3.05	C
Bicycle LOS Score / LOS	3.94	D	3.18	C	3.79	D	4.39	D

$X_c = 0.78$

HCS7 Signalized Intersection Results Summary

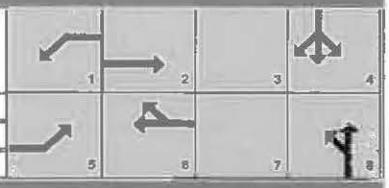
General Information				Intersection Information	
Agency	Town of Hilton Head Island			Duration, h	0.25
Analyst	Darrin Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	p.m. peak hour	PHF	0.98
Urban Street	Wm. Hilton Pkwy.	Analysis Year	2018	Analysis Period	1> 16:45
Intersection	Gum Tree Road	File Name	18102pmex.xus		
Project Description	existing conditions - p.m. peak hour				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	102	1083		99	1948	309	26	160		181	136	130

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	Off

Green	10.8	61.2	10.5	18.5	15.1	0.0	
Yellow	3.0	4.4	3.0	4.0	3.6	0.0	
Red	4.2	1.5	3.8	3.4	3.1	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	2.0	4.0	2.0	3.0		10.0		9.0
Phase Duration, s	18.0	85.0	17.3	84.3		21.8		25.9
Change Period, ($Y+R_c$), s	7.2	5.9	6.8	6.8		6.7		7.4
Max Allow Headway (*MAH*), s	3.5	0.0	3.5	0.0		3.9		4.1
Queue Clearance Time (g_s), s	10.9		10.6			14.9		18.2
Green Extension Time (g_e), s	0.0	0.0	0.1	0.0		0.2		0.3
Phase Call Probability	0.99		0.99			1.00		1.00
Max Out Probability	1.00		0.27			0.67		1.00

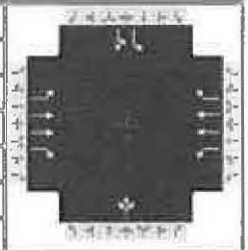
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2		1	6	16	3	8		7	4	14
Adjusted Flow Rate (*v*), veh/h	104	1105		101	1988	315	27	163		126	198	133
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1739	1659		1739	1449	1645	1723	1864		1759	1806	1660
Queue Service Time (g_s), s	8.9	35.4		8.6	54.6	12.0	2.1	12.9		10.1	16.2	11.4
Cycle Queue Clearance Time (g_c), s	8.9	35.4		8.6	54.6	12.0	2.1	12.9		10.1	16.2	11.4
Green Ratio (*g/C*)	0.07	0.53		0.07	0.52	0.52	0.10	0.10		0.12	0.12	0.12
Capacity (*c*), veh/h	125	1750		121	2248	850	174	188		216	222	204
Volume-to-Capacity Ratio (*X*)	0.835	0.631		0.832	0.884	0.371	0.153	0.868		0.580	0.890	0.649
Back of Queue (*Q*), ft/ln (50 th percentile)	122.5	357.1		100.6	371.6	101.8	23.9	186.4		122.7	242	134.3
Back of Queue (*Q*), veh/ln (50 th percentile)	4.7	13.7		3.9	14.3	3.9	0.9	7.2		4.7	9.3	5.2
Queue Storage Ratio (*RQ*) (50 th percentile)	0.40	0.14		0.36	0.24	0.48	0.16	0.09		0.43	0.10	0.49
Uniform Delay (d_1), s/veh	68.7	25.1		67.1	19.7	13.1	61.6	66.4		62.1	64.8	62.7
Incremental Delay (d_2), s/veh	23.7	1.5		5.8	1.8	0.4	0.4	22.7		3.3	30.4	6.1
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Control Delay (*d*), s/veh	92.5	26.6		72.9	21.5	13.5	62.0	89.1		65.4	95.2	68.8
Level of Service (LOS)	F	C		E	C	B	E	F		E	F	E
Approach Delay, s/veh / LOS	32.3	C		22.6	C		85.3	F		79.3	E	
Intersection Delay, s/veh / LOS	34.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.42	B	2.56	C	3.24	C	3.11	C
Bicycle LOS Score / LOS	3.32	C	3.95	D	4.01	D	4.30	D

$X_c = 0.76$

HCS7 Signalized Intersection Results Summary

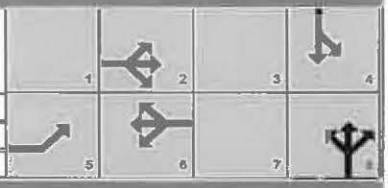
General Information				Intersection Information	
Agency	Town of Hilton Head Island, SC			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	a.m. peak hour	PHF	0.96
Urban Street	Wm. Hilton Parkway	Analysis Year	2018	Analysis Period	1> 7:15
Intersection	Wilborn Road / Jarvis P...	File Name	18103amex.xus		
Project Description	existing conditions - a.m. peak hour				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	81	2012	49	8	905	90	22	5	2	70	11	

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	Off

Green	5.8	98.0	7.7	4.1	0.0	0.0						
Yellow	3.0	4.4	3.3	3.0	0.0	0.0						
Red	2.8	1.7	3.1	3.1	0.0	0.0						



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2		6		8		4
Case Number	1.0	3.0		5.3		12.0		10.0
Phase Duration, s	11.6	115.7		104.1		10.2		14.1
Change Period, ($Y+R_c$), s	5.8	6.1		6.1		6.1		6.4
Max Allow Headway (*MAH*), s	3.6	0.0		0.0		4.3		4.2
Queue Clearance Time (g_s), s	3.9					4.4		5.6
Green Extension Time (g_e), s	0.1	0.0		0.0		0.0		0.2
Phase Call Probability	0.96					0.69		0.96
Max Out Probability	0.00					0.01		0.00

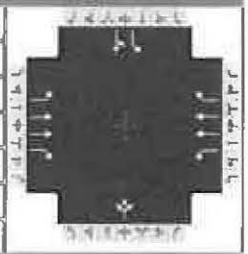
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	
Adjusted Flow Rate (*v*), veh/h	84	2096	51	8	943	94		30		42	43	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1607	1659	1612	196	1659	1480		1715		1573	1621	
Queue Service Time (g_s), s	1.9	0.0	0.0	1.9	16.7	2.8		2.4		3.6	3.6	
Cycle Queue Clearance Time (g_c), s	1.9	0.0	0.0	1.9	16.7	2.8		2.4		3.6	3.6	
Green Ratio (*g/C*)	0.76	0.78	0.78	0.70	0.70	0.70		0.03		0.05	0.05	
Capacity (*c*), veh/h	441	2597	1262	189	2322	1036		51		87	89	
Volume-to-Capacity Ratio (*X*)	0.191	0.807	0.040	0.044	0.406	0.090		0.594		0.480	0.480	
Back of Queue (*Q*), ft/ln (50 th percentile)	14.2	6.2	0.1	2.3	143.2	23.1		31		41.7	42.9	
Back of Queue (*Q*), veh/ln (50 th percentile)	0.5	0.2	0.0	0.1	5.5	0.9		1.2		1.5	1.6	
Queue Storage Ratio (*RQ*) (50 th percentile)	0.07	0.00	0.00	0.01	0.12	0.07		0.06		0.15	0.10	
Uniform Delay (d_1), s/veh	5.8	0.0	0.0	6.6	8.8	6.7		67.1		64.2	64.2	
Incremental Delay (d_2), s/veh	0.0	0.7	0.0	0.4	0.5	0.2		10.6		4.1	4.0	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Control Delay (*d*), s/veh	5.8	0.7	0.0	7.0	9.3	6.9		77.7		68.3	68.2	
Level of Service (LOS)	A	A	A	A	A	A		E		E	E	
Approach Delay, s/veh / LOS	0.8	A		9.1	A		77.7	E		68.2	E	
Intersection Delay, s/veh / LOS	5.7						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.68	B	2.36	B	3.09	C	3.09	C
Bicycle LOS Score / LOS	3.40	C	2.42	B	2.04	B	1.70	B

$X_c = 0.77$

HCS7 Signalized Intersection Results Summary

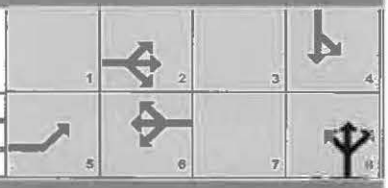
General Information				Intersection Information	
Agency	Town of Hilton Head Island, SC			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	p.m. peak hour	PHF	0.98
Urban Street	Wm. Hilton Parkway	Analysis Year	2018	Analysis Period	1> 16:30
Intersection	Wilbom Road / Jarvis P...	File Name	18103pmex.xus		
Project Description	existing conditions - p.m. peak hour				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	58	1321	45	8	2054	32	63	8	4	28	4	

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	Off

Green	5.5	105.8	5.9	8.3	0.0	0.0	
Yellow	3.0	4.4	3.3	3.0	0.0	0.0	
Red	2.8	1.7	3.1	3.1	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2		6		8		4
Case Number	1.0	3.0		5.3		12.0		10.0
Phase Duration, s	11.3	123.2		111.9		14.4		12.3
Change Period, ($Y+R_c$), s	5.8	6.1		6.1		6.1		6.4
Max Allow Headway (MAH), s	3.6	0.0		0.0		4.3		4.2
Queue Clearance Time (g_s), s	3.4					8.7		3.9
Green Extension Time (g_e), s	0.1	0.0		0.0		0.0		0.1
Phase Call Probability	0.92					0.96		0.74
Max Out Probability	0.00					1.00		0.00

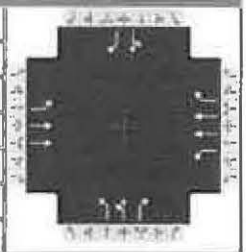
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	
Adjusted Flow Rate (v), veh/h	59	1348	46	8	2096	33		77		20	12	
Adjusted Saturation Flow Rate (s), veh/h/ln	1607	1659	1612	405	1659	1454		1705		1573	1632	
Queue Service Time (g_s), s	1.4	22.5	1.0	0.2	35.6	0.2		6.7		1.9	1.1	
Cycle Queue Clearance Time (g_c), s	1.4	22.5	1.0	11.7	35.6	0.2		6.7		1.9	1.1	
Green Ratio (g/C)	0.76	0.78	0.78	0.71	0.71	0.71		0.06		0.04	0.04	
Capacity (c), veh/h	193	2590	1259	303	2341	1026		95		62	65	
Volume-to-Capacity Ratio (X)	0.307	0.520	0.036	0.027	0.895	0.032		0.807		0.325	0.191	
Back of Queue (Q), ft/ln (50 th percentile)	17	169	7	0.6	74.8	1.7		87.9		22	13.2	
Back of Queue (Q), veh/ln (50 th percentile)	0.6	6.5	0.3	0.0	2.9	0.1		3.5		0.8	0.5	
Queue Storage Ratio (RQ) (50 th percentile)	0.09	0.11	0.00	0.00	0.06	0.00		0.17		0.08	0.03	
Uniform Delay (d_1), s/veh	11.7	6.1	3.7	2.6	2.4	1.3		70.0		70.1	69.7	
Incremental Delay (d_2), s/veh	0.5	0.5	0.0	0.1	2.4	0.0		20.5		3.0	1.4	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0		0.0		0.0	0.0	
Control Delay (d), s/veh	12.1	6.6	3.8	2.6	4.7	1.3		90.5		73.0	71.1	
Level of Service (LOS)	B	A	A	A	A	A		F		E	E	
Approach Delay, s/veh / LOS	6.7	A		4.7	A		90.5	F		72.3	E	
Intersection Delay, s/veh / LOS	7.9						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.70	B	2.36	B	3.13	C	3.15	C
Bicycle LOS Score / LOS	2.76	C	3.32	C	2.11	B	1.61	B

$X_c = 0.77$

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Town of Hilton Head Island, SC			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	a.m. peak hour	PHF	0.98
Urban Street	Wm. Hilton Parkway	Analysis Year	2018	Analysis Period	1> 7:15
Intersection	Pembroke Drive / Muse...	File Name	18104amex.xus		
Project Description	existing conditions - a.m. peak hour				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	79	1761		28	792	25	111	9	44	22	5	33

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	Off

Green	100.8	8.8	11.4	0.0	0.0	0.0	
Yellow	4.4	3.3	3.6	0.0	0.0	0.0	
Red	1.5	2.9	3.3	0.0	0.0	0.0	

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		6.0		5.0		9.0		11.0
Phase Duration, s		106.7		106.7		18.3		15.0
Change Period, ($Y+R_c$), s		5.9		5.9		6.9		6.2
Max Allow Headway (MAH), s		0.0		0.0		4.1		4.3
Queue Clearance Time (g_s), s						7.0		4.9
Green Extension Time (g_e), s		0.0		0.0		0.2		0.0
Phase Call Probability						1.00		1.00
Max Out Probability						0.22		1.00

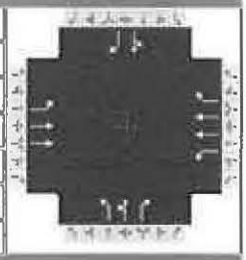
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2		1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	81	1797		29	808	26	59	64	45		28	34
Adjusted Saturation Flow Rate (s), veh/h/ln	658	1659		256	1658	1574	1675	1697	1726		1692	1581
Queue Service Time (g_s), s	1.1	11.0		6.3	12.6	0.6	4.7	5.0	3.4		2.2	2.9
Cycle Queue Clearance Time (g_c), s	15.9	11.0		17.3	12.6	0.6	4.7	5.0	3.4		2.2	2.9
Green Ratio (g/C)	0.72	0.72		0.72	0.72	0.72	0.08	0.08	0.08		0.06	0.06
Capacity (c), veh/h	466	2388		216	2387	1133	137	139	141		106	99
Volume-to-Capacity Ratio (X)	0.173	0.752		0.132	0.339	0.023	0.431	0.459	0.319		0.259	0.339
Back of Queue (Q), ft/ln (50 th percentile)	5	36.3		10.5	104.8	5.2	53.8	58.3	40.4		28.9	36.5
Back of Queue (Q), veh/ln (50 th percentile)	0.2	1.4		0.4	4.0	0.2	2.1	2.2	1.6		1.1	1.4
Queue Storage Ratio (RQ) (50 th percentile)	0.03	0.03		0.05	0.04	0.03	0.27	0.17	0.15		0.08	0.20
Uniform Delay (d_1), s/veh	2.3	1.0		10.1	7.3	5.6	61.2	61.3	60.6		62.5	62.8
Incremental Delay (d_2), s/veh	0.4	1.1		1.1	0.3	0.0	2.1	2.4	1.3		5.8	9.0
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Control Delay (d), s/veh	2.7	2.1		11.3	7.6	5.6	63.3	63.7	61.9		68.3	71.8
Level of Service (LOS)	A	A		B	A	A	E	E	E		E	E
Approach Delay, s/veh / LOS	2.1	A		7.7	A		63.1	E		70.2	E	
Intersection Delay, s/veh / LOS	8.6						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.57	C	2.13	B	3.03	C	2.96	C
Bicycle LOS Score / LOS	4.01	D	2.85	C	3.60	D	3.24	C

$X_c = 0.62$

HCS7 Signalized Intersection Results Summary

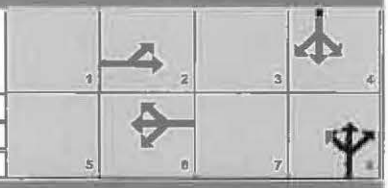
General Information				Intersection Information	
Agency	Town of Hilton Head Island, SC			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	p.m. peak hour	PHF	0.97
Urban Street	Wm. Hilton Parkway	Analysis Year	2018	Analysis Period	1> 16:00
Intersection	Pembroke Drive / Muse...	File Name	18104pmex.xus		
Project Description	existing conditions - p.m. peak hour				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	37	1189		52	1651	17	350	20	47	11	22	64

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	Off

Green	101.5	8.1	21.4	0.0	0.0	0.0	
Yellow	4.4	3.3	3.6	0.0	0.0	0.0	
Red	1.5	2.9	3.3	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		6.0		5.0		9.0		11.0
Phase Duration, s		107.4		107.4		28.3		14.3
Change Period, ($Y+R_c$), s		5.9		5.9		6.9		6.2
Max Allow Headway (*MAH*), s		0.0		0.0		4.1		4.3
Queue Clearance Time (g_s), s						20.4		8.2
Green Extension Time (g_e), s		0.0		0.0		1.0		0.0
Phase Call Probability						1.00		0.98
Max Out Probability						0.21		1.00

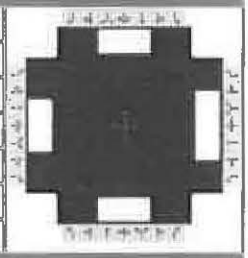
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2		1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	38	1226		54	1702	18	170	212	48		34	66
Adjusted Saturation Flow Rate (*s*), veh/h/ln	281	1660		444	1660	1542	1675	1690	1758		1756	1581
Queue Service Time (g_s), s	11.3	28.4		3.3	23.7	0.2	14.5	18.4	3.6		2.8	6.2
Cycle Queue Clearance Time (g_c), s	35.0	28.4		35.9	23.7	0.2	14.5	18.4	3.6		2.8	6.2
Green Ratio (*g/C*)	0.68	0.68		0.68	0.68	0.68	0.14	0.14	0.14		0.05	0.05
Capacity (*c*), veh/h	194	2247		265	2247	1044	239	241	251		94	85
Volume-to-Capacity Ratio (*X*)	0.197	0.546		0.203	0.757	0.017	0.709	0.879	0.193		0.360	0.776
Back of Queue (*Q*), ft/ln (50 th percentile)	21.6	256.6		17.9	87.7	1.5	168.5	238.8	42.9		34.5	84.3
Back of Queue (*Q*), veh/ln (50 th percentile)	0.8	9.9		0.7	3.4	0.1	6.5	9.2	1.7		1.3	3.2
Queue Storage Ratio (*RQ*) (50 th percentile)	0.11	0.21		0.09	0.04	0.01	0.84	0.68	0.16		0.09	0.47
Uniform Delay (d_1), s/veh	20.1	12.4		10.0	3.5	2.4	61.3	63.0	56.7		68.5	70.1
Incremental Delay (d_2), s/veh	1.9	0.8		0.8	1.2	0.0	5.0	19.2	0.4		2.3	30.7
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Control Delay (*d*), s/veh	22.0	13.2		10.9	4.7	2.4	66.3	82.3	57.1		70.8	100.8
Level of Service (LOS)	C	B		B	A	A	E	F	E		E	F
Approach Delay, s/veh / LOS	13.5	B		4.9	A		73.1	E		90.6	F	
Intersection Delay, s/veh / LOS	18.6						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.59	C	2.07	B	3.07	C	3.05	C
Bicycle LOS Score / LOS	3.51	D	3.60	D	4.03	D	3.30	C

$X_c = 0.70$

HCS7 Signalized Intersection Results Summary

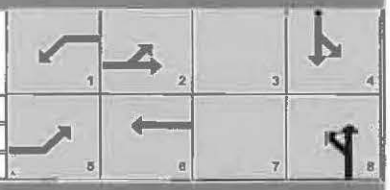
General Information				Intersection Information	
Agency	Town of Hilton Head Island, SC			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	a.m. peak hour	PHF	0.90
Urban Street	Wm. Hilton Parkway	Analysis Year	2018	Analysis Period	1> 8:00
Intersection	Whooping Crane Way / I...	File Name	18105amex.xus		
Project Description	existing conditions - a.m. peak hour				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	152	1553		42	873		54	56		277	84	

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	Off

Green	5.0	2.0	82.1	15.7	7.9	0.0	
Yellow	3.0	0.0	4.4	3.0	3.0	0.0	
Red	3.7	0.0	1.8	4.2	4.1	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	4.0	2.0	4.0		10.0		10.0
Phase Duration, s	13.7	90.4	11.7	88.3		15.0		22.9
Change Period, ($Y+R_c$), s	6.2	6.2	6.7	6.2		7.1		7.2
Max Allow Headway (*MAH*), s	3.5	0.0	3.5	0.0		4.2		4.2
Queue Clearance Time (g_s), s	7.5		4.0			6.7		15.7
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0		0.2		0.0
Phase Call Probability	1.00		0.84			0.99		1.00
Max Out Probability	1.00		0.29			0.37		1.00

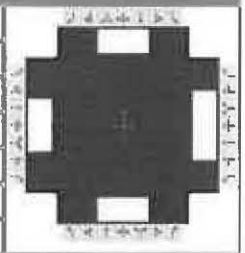
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2		1	6		3	8		7	4	
Adjusted Flow Rate (*v*), veh/h	169	1726		47	970		60	62		308	93	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1739	1660		1573	1660		1536	1826		1555	1820	
Queue Service Time (g_s), s	5.5	47.0		2.0	23.9		2.6	4.7		13.7	6.7	
Cycle Queue Clearance Time (g_c), s	5.5	47.0		2.0	23.9		2.6	4.7		13.7	6.7	
Green Ratio (*g/C*)	0.64	0.60		0.04	0.59		0.06	0.06		0.11	0.11	
Capacity (*c*), veh/h	381	1996		113	1948		174	103		348	204	
Volume-to-Capacity Ratio (*X*)	0.444	0.864		0.414	0.498		0.345	0.602		0.883	0.458	
Back of Queue (*Q*), ft/ln (50 th percentile)	50.4	240.7		21.3	226.9		27.6	60.7		168.5	83.3	
Back of Queue (*Q*), veh/ln (50 th percentile)	1.9	9.3		0.8	8.7		1.1	2.3		6.5	3.2	
Queue Storage Ratio (*RQ*) (50 th percentile)	0.15	0.10		0.09	0.09		0.08	0.11		0.53	0.16	
Uniform Delay (d_1), s/veh	12.7	10.2		66.0	16.9		63.5	64.5		61.3	58.2	
Incremental Delay (d_2), s/veh	0.4	3.3		1.1	0.5		1.2	5.5		22.2	1.6	
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	13.0	13.5		67.1	17.4		64.7	70.0		83.5	59.8	
Level of Service (LOS)	B	B		E	B		E	E		F	E	
Approach Delay, s/veh / LOS	13.4	B		19.7	B		67.4	E		78.0	E	
Intersection Delay, s/veh / LOS	24.8						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.62	C	2.50	C	2.93	C	2.78	C
Bicycle LOS Score / LOS	4.65	E	4.00	D	3.58	D	3.83	D

$X_c = 0.80$

HCS7 Signalized Intersection Results Summary

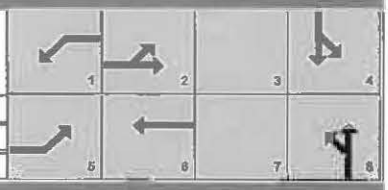
General Information				Intersection Information	
Agency	Town of Hilton Head Island, SC			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	p.m. peak hour	PHF	0.98
Urban Street	Wm. Hilton Parkway	Analysis Year	2018	Analysis Period	1> 16:30
Intersection	Whooping Crane Way / I...	File Name	18105pmex.xus		
Project Description	existing conditions - p.m. peak hour				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	175	1117		77	1643		47	90		235	107	

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	Off

Green	5.8	1.4	94.3	11.8	9.5	0.0	
Yellow	3.0	0.0	4.4	3.0	3.0	0.0	
Red	3.7	0.0	1.8	4.2	4.1	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	4.0	2.0	4.0		10.0		10.0
Phase Duration, s	13.9	101.9	12.5	100.5		16.6		19.0
Change Period, ($Y+R_c$), s	6.2	6.2	6.7	6.2		7.1		7.2
Max Allow Headway (*MAH*), s	3.5	0.0	3.5	0.0		4.1		4.2
Queue Clearance Time (g_s), s	7.5		5.7			9.4		13.6
Green Extension Time (g_e), s	0.2	0.0	0.0	0.0		0.1		0.0
Phase Call Probability	1.00		0.96			1.00		1.00
Max Out Probability	0.03		1.00			1.00		1.00

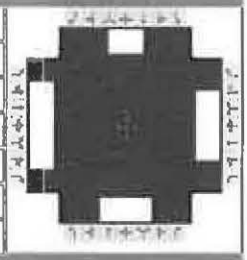
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2		1	6		3	8		7	4	
Adjusted Flow Rate (*v*), veh/h	179	1140		79	1677		48	92		240	109	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1739	1661		1579	1659		1542	1826		1554	1820	
Queue Service Time (g_s), s	5.5	28.4		3.7	37.6		2.2	7.4		11.6	8.8	
Cycle Queue Clearance Time (g_c), s	5.5	28.4		3.7	37.6		2.2	7.4		11.6	8.8	
Green Ratio (*g/C*)	0.68	0.64		0.04	0.63		0.06	0.06		0.08	0.08	
Capacity (*c*), veh/h	246	2120		122	2086		195	116		245	143	
Volume-to-Capacity Ratio (*X*)	0.725	0.538		0.646	0.804		0.245	0.794		0.981	0.763	
Back of Queue (*Q*), ft/ln (50 th percentile)	90.8	265.6		38.8	160.5		23.3	108.2		165.8	129.1	
Back of Queue (*Q*), veh/ln (50 th percentile)	3.5	10.2		1.5	6.2		0.9	4.2		6.4	5.0	
Queue Storage Ratio (*RQ*) (50 th percentile)	0.26	0.11		0.16	0.06		0.07	0.20		0.52	0.24	
Uniform Delay (d_1), s/veh	20.9	15.0		70.2	7.6		66.8	69.3		69.0	67.7	
Incremental Delay (d_2), s/veh	3.6	0.8		2.5	2.0		0.6	20.8		51.9	21.2	
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	24.6	15.8		72.7	9.6		67.5	90.1		120.9	88.9	
Level of Service (LOS)	C	B		E	A		E	F		F	F	
Approach Delay, s/veh / LOS	17.0	B		12.4	B		82.4	F		110.9	F	
Intersection Delay, s/veh / LOS	26.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.61	C	2.49	B	2.94	C	2.78	C
Bicycle LOS Score / LOS	4.18	D	4.61	E	3.61	D	3.74	D

$X_c = 0.78$

HCS7 Signalized Intersection Results Summary

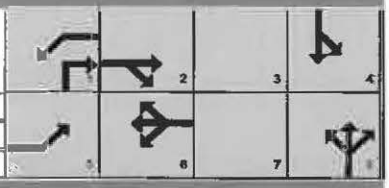
General Information				Intersection Information	
Agency	Town of Hilton Head Island, SC			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	a.m. peak hour	PHF	0.89
Urban Street	Wm. Hilton Parkway	Analysis Year	2018	Analysis Period	1> 8:00
Intersection	Beach City Road / Gard...	File Name	18106amex.xus		
Project Description	a.m. peak hour				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	259	1511	35	23	809	106	9	59	46	87	31	

Signal Information			
Cycle, s	140.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	On

Green	15.6	77.1	3.8	17.5	0.0	0.0	
Yellow	3.0	4.4	3.0	3.6	0.0	0.0	
Red	3.8	1.9	3.3	3.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	2.0	3.0	1.3	3.0		5.0		6.0
Phase Duration, s	22.4	105.8	10.1	93.5		24.1		24.1
Change Period, (*Y+Rc*), s	6.8	6.3	6.3	6.3		6.6		6.6
Max Allow Headway (*MAH*), s	3.6	0.0	3.6	0.0		4.2		4.2
Queue Clearance Time (*gs*), s	15.2		2.0			6.6		17.2
Green Extension Time (*ge*), s	0.3	0.0	2.4	0.0		0.8		0.3
Phase Call Probability	1.00		0.63			1.00		1.00
Max Out Probability	0.74		0.33			0.00		0.98

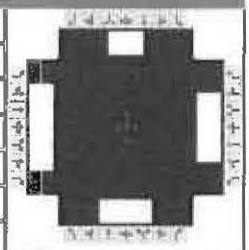
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	
Adjusted Flow Rate (*v*), veh/h	291	1698	39	26	909	119	10	66	52	98	35	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1504	1660	1711	1775	1660	1618	1341	1826	1691	1272	1819	
Queue Service Time (*gs*), s	13.2	11.9	0.2	0.0	19.9	4.2	0.9	4.6	3.7	10.6	2.4	
Cycle Queue Clearance Time (*gc*), s	13.2	11.9	0.2	0.0	19.9	4.2	3.3	4.6	3.7	15.2	2.4	
Green Ratio (*g/C*)	0.11	0.71	0.71	0.56	0.62	0.62	0.13	0.13	0.15	0.13	0.13	
Capacity (*c*), veh/h	335	2358	1215	257	2067	1007	197	229	258	169	228	
Volume-to-Capacity Ratio (*X*)	0.869	0.720	0.032	0.101	0.440	0.118	0.051	0.290	0.200	0.578	0.153	
Back of Queue (*Q*), ft/ln (50 th percentile)	134.4	40.5	1.6	10.1	185.7	39.6	8.5	56.4	42	94.5	29.7	
Back of Queue (*Q*), veh/ln (50 th percentile)	5.1	1.6	0.1	0.4	7.1	1.5	0.3	2.2	1.6	3.6	1.1	
Queue Storage Ratio (*RQ*) (50 th percentile)	0.36	0.02	0.01	0.07	0.07	0.29	0.07	0.02	0.34	0.40	0.04	
Uniform Delay (*d1*), s/veh	58.6	1.4	1.1	14.6	13.7	10.8	56.1	55.6	51.9	62.4	54.6	
Incremental Delay (*d2*), s/veh	6.2	0.7	0.0	0.1	0.6	0.2	0.1	0.7	0.4	3.1	0.3	
Initial Queue Delay (*d3*), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	64.8	2.1	1.1	14.8	14.3	11.0	56.2	56.3	52.2	65.6	54.9	
Level of Service (LOS)	E	A	A	B	B	B	E	E	D	E	D	
Approach Delay, s/veh / LOS	11.1	B		14.0	B		54.6	D		62.8	E	
Intersection Delay, s/veh / LOS	15.7						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.24	B	2.42	B	3.30	C	3.15	C
Bicycle LOS Score / LOS	4.07	D	3.35	C	3.53	D	3.46	C

$X_c = 0.72$

HCS7 Signalized Intersection Results Summary

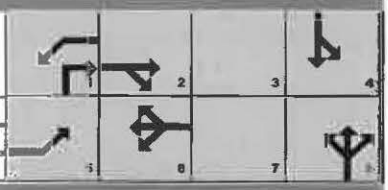
General Information				Intersection Information	
Agency	Town of Hilton Head Island, SC			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	p.m. peak hour	PHF	0.94
Urban Street	Wm. Hilton Parkway	Analysis Year	2018	Analysis Period	1> 16:15
Intersection	Beach City Road / Gard...	File Name	18106pmex.xus		
Project Description	p.m. peak hour				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	161	1256	8	30	1674	68	10	27	37	94	39	

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	On

Green	10.8	92.4	4.9	15.9	0.0	0.0	
Yellow	3.0	4.4	3.0	3.6	0.0	0.0	
Red	3.8	1.9	3.3	3.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	2.0	3.0	1.3	3.0		5.0		6.0
Phase Duration, s	17.6	116.3	11.2	109.9		22.5		22.5
Change Period, ($Y+R_c$), s	6.8	6.3	6.3	6.3		6.6		6.6
Max Allow Headway (*MAH*), s	3.6	0.0	3.6	0.0		4.2		4.2
Queue Clearance Time (g_s), s	10.5		2.0			6.2		15.3
Green Extension Time (g_e), s	0.3	0.0	4.6	0.0		0.7		0.6
Phase Call Probability	1.00		0.74			1.00		1.00
Max Out Probability	0.01		0.65			0.00		0.01

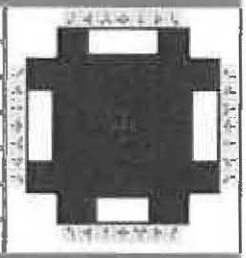
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	
Adjusted Flow Rate (*v*), veh/h	171	1336	9	32	1781	72	11	29	39	100	41	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1492	1659	1711	1775	1659	1595	1333	1826	1691	1316	1819	
Queue Service Time (g_s), s	8.5	27.0	0.2	0.0	53.7	2.2	1.1	2.1	3.1	11.2	3.1	
Cycle Queue Clearance Time (g_c), s	8.5	27.0	0.2	0.0	53.7	2.2	4.2	2.1	3.1	13.3	3.1	
Green Ratio (*g/C*)	0.07	0.73	0.73	0.64	0.69	0.69	0.11	0.11	0.14	0.11	0.11	
Capacity (*c*), veh/h	214	2433	1254	330	2292	1102	162	194	235	169	193	
Volume-to-Capacity Ratio (*X*)	0.799	0.549	0.007	0.097	0.777	0.066	0.066	0.148	0.168	0.591	0.215	
Back of Queue (*Q*), ft/ln (50 th percentile)	88	225.5	1.8	12.9	479.8	19.4	10	26.4	34.9	104	39.3	
Back of Queue (*Q*), veh/ln (50 th percentile)	3.3	8.7	0.1	0.5	18.5	0.7	0.4	1.0	1.3	3.9	1.5	
Queue Storage Ratio (*RQ*) (50 th percentile)	0.23	0.09	0.01	0.09	0.19	0.14	0.08	0.01	0.28	0.44	0.06	
Uniform Delay (d_1), s/veh	68.5	8.9	5.4	14.9	15.5	7.5	63.2	60.9	56.9	66.9	61.3	
Incremental Delay (d_2), s/veh	3.9	0.7	0.0	0.1	1.5	0.1	0.2	0.3	0.3	3.3	0.5	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Control Delay (*d*), s/veh	72.4	9.6	5.4	14.9	17.0	7.6	63.4	61.2	57.3	70.1	61.9	
Level of Service (LOS)	E	A	A	B	B	A	E	E	E	E	E	
Approach Delay, s/veh / LOS	16.7	B		16.6	B		59.5	E		67.7	E	
Intersection Delay, s/veh / LOS	19.6						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.24	B	2.40	B	3.43	C	3.20	C
Bicycle LOS Score / LOS	3.65	D	4.03	D	3.45	C	3.48	C

$X_c = 0.70$

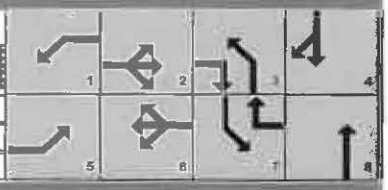
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Town of Hilton Head Island, SC			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	a.m. peak hour	PHF	0.94
Urban Street	Wm. Hilton Pkwy.	Analysis Year	2018	Analysis Period	1> 8:00
Intersection	Mathews Drive (north)	File Name	18201amex.xus		
Project Description	existing conditions - a.m. peak hour				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	86	1030	251	35	793	143	134	78		181	127	54

Signal Information					EB			WB			NB			SB		
Cycle, s	160.0	Reference Phase	2													
Offset, s	0	Reference Point	End	Green	4.9	1.0		103.8	9.6	2.6	12.5					
Uncoordinated	No	Simult. Gap E/W	On	Yellow	3.5	0.0		4.5	3.5	0.0	3.5					
Force Mode	Float	Simult. Gap N/S	On	Red	2.5	0.0		2.5	2.5	0.0	3.0					



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	3.0	2.0	4.0	2.0	3.0
Phase Duration, s	11.9	111.9	10.9	110.8	15.6	19.0	18.2	21.6
Change Period, ($Y+R_c$), s	6.0	7.0	6.0	7.0	6.0	6.5	6.0	6.5
Max Allow Headway (MAH), s	3.6	0.0	3.6	0.0	3.7	4.1	3.7	4.1
Queue Clearance Time (g_s), s	4.9		3.2		9.3	9.0	11.8	13.6
Green Extension Time (g_e), s	0.1	0.0	0.0	0.0	0.3	0.9	0.4	0.9
Phase Call Probability	0.98		0.81		1.00	1.00	1.00	1.00
Max Out Probability	0.00		0.00		0.00	0.00	0.00	0.00

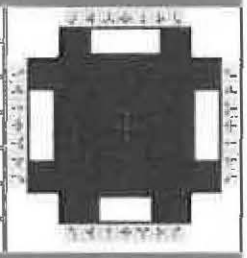
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8		7	4	14
Adjusted Flow Rate (v), veh/h	91	1096	267	37	844	152	143	83		193	135	57
Adjusted Saturation Flow Rate (s), veh/h/ln	1675	1661	1656	1675	1660	1529	1531	1826		1544	1826	1731
Queue Service Time (g_s), s	2.9	11.9	3.4	1.2	19.1	4.9	7.3	7.0		9.8	11.6	5.0
Cycle Queue Clearance Time (g_c), s	2.9	11.9	3.4	1.2	19.1	4.9	7.3	7.0		9.8	11.6	5.0
Green Ratio (g/C)	0.69	0.66	0.72	0.68	0.65	0.73	0.06	0.08		0.08	0.09	0.09
Capacity (c), veh/h	444	2178	1187	382	2155	1113	184	143		236	173	164
Volume-to-Capacity Ratio (X)	0.206	0.503	0.225	0.098	0.391	0.137	0.775	0.580		0.816	0.782	0.351
Back of Queue (Q), ft/ln (50 th percentile)	26.1	73.8	26.8	10.7	180.5	39.8	79	89.9		105.6	150.1	58.8
Back of Queue (Q), veh/ln (50 th percentile)	1.0	2.8	1.0	0.4	6.9	1.5	3.0	3.5		4.1	5.8	2.3
Queue Storage Ratio (RQ) (50 th percentile)	0.15	0.03	0.12	0.06	0.26	0.23	0.30	0.29		0.43	0.06	0.19
Uniform Delay (d_1), s/veh	9.6	4.2	2.5	9.0	13.2	6.7	74.1	71.2		72.8	70.8	67.8
Incremental Delay (d_2), s/veh	0.1	0.5	0.3	0.1	0.5	0.2	5.1	3.7		5.1	7.5	1.3
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Control Delay (d), s/veh	9.7	4.8	2.8	9.0	13.7	6.9	79.3	74.9		77.9	78.3	69.1
Level of Service (LOS)	A	A	A	A	B	A	E	E		E	E	E
Approach Delay, s/veh / LOS	4.7	A		12.5	B		77.7	E		76.7	E	
Intersection Delay, s/veh / LOS	21.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.42	B	2.65	C	2.98	C	3.00	C
Bicycle LOS Score / LOS	3.74	D	3.48	C	3.75	D	4.02	D

$X_c = 0.55$

HCS7 Signalized Intersection Results Summary

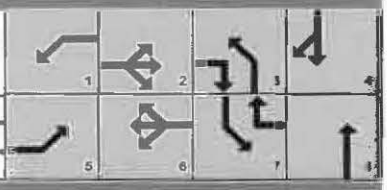
General Information				Intersection Information	
Agency	Town of Hilton Head Island, SC			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	p.m. peak hour	PHF	0.96
Urban Street	Wm. Hilton Pkwy.	Analysis Year	2018	Analysis Period	1> 16:15
Intersection	Mathews Drive (north)	File Name	18201pmex.xus		
Project Description	existing conditions - p.m. peak hour				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	65	1028	252	63	1305	180	277	104		170	162	96

Signal Information			
Cycle, s	160.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	On

Green	5.7	93.8	11.2	5.9	18.0	0.0	
Yellow	3.5	4.5	3.5	0.0	3.5	0.0	
Red	2.5	2.5	2.5	0.0	3.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	3.0	2.0	4.0	2.0	3.0
Phase Duration, s	11.7	100.8	11.7	100.8	23.1	30.3	17.2	24.5
Change Period, ($Y+R_c$), s	6.0	7.0	6.0	7.0	6.0	6.5	6.0	6.5
Max Allow Headway (*MAH*), s	3.6	0.0	3.6	0.0	3.7	4.1	3.7	4.1
Queue Clearance Time (g_s), s	4.5		4.5		16.8	10.6	11.0	16.5
Green Extension Time (g_e), s	0.1	0.0	0.1	0.0	0.3	1.2	0.2	1.0
Phase Call Probability	0.95		0.95		1.00	1.00	1.00	1.00
Max Out Probability	0.01		0.01		1.00	0.00	0.10	0.05

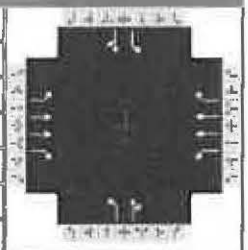
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8		7	4	14
Adjusted Flow Rate (*v*), veh/h	68	1071	263	66	1359	188	289	108		177	169	100
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1675	1661	1656	1675	1659	1531	1540	1826		1560	1826	1709
Queue Service Time (g_s), s	2.5	31.5	9.3	2.5	4.8	0.5	14.8	8.6		9.0	14.5	8.8
Cycle Queue Clearance Time (g_c), s	2.5	31.5	9.3	2.5	4.8	0.5	14.8	8.6		9.0	14.5	8.8
Green Ratio (*g/C*)	0.62	0.59	0.69	0.62	0.59	0.66	0.11	0.15		0.07	0.11	0.11
Capacity (*c*), veh/h	322	1947	1151	298	1945	1008	329	272		218	205	192
Volume-to-Capacity Ratio (*X*)	0.210	0.550	0.228	0.220	0.699	0.186	0.877	0.398		0.811	0.824	0.521
Back of Queue (*Q*), ft/ln (50 th percentile)	24.7	311.6	84.9	23.3	25.2	5.3	172.9	106.5		98.8	192.1	103.4
Back of Queue (*Q*), veh/ln (50 th percentile)	1.0	12.0	3.3	0.9	1.0	0.2	6.7	4.1		3.8	7.4	4.0
Queue Storage Ratio (*RQ*) (50 th percentile)	0.14	0.12	0.37	0.12	0.04	0.03	0.65	0.34		0.40	0.08	0.33
Uniform Delay (d_1), s/veh	12.0	20.2	9.0	15.5	0.8	0.5	70.4	61.6		73.4	69.5	67.0
Incremental Delay (d_2), s/veh	0.2	0.9	0.4	0.2	1.4	0.3	17.3	0.9		7.1	11.1	2.2
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Control Delay (*d*), s/veh	12.2	21.1	9.3	15.7	2.3	0.8	87.7	62.5		80.5	80.5	69.2
Level of Service (LOS)	B	C	A	B	A	A	F	E		F	F	E
Approach Delay, s/veh / LOS	18.5	B		2.7	A		80.8	F		78.0	E	
Intersection Delay, s/veh / LOS	25.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.46	B	2.62	C	3.05	C	3.09	C
Bicycle LOS Score / LOS	3.69	D	3.96	D	4.04	D	4.12	D

$X_c = 0.67$

HCS7 Signalized Intersection Results Summary

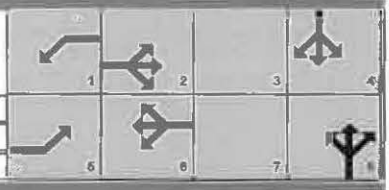
General Information				Intersection Information	
Agency	Town of Hilton Head Island, SC			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	a. m. peak hour	PHF	0.92
Urban Street	Wm. Hilton Pkwy.	Analysis Year	2018	Analysis Period	1> 8:00
Intersection	Dillon Road	File Name	18202amex.xus		
Project Description	existing conditions - a.m. peak				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	123	1037	75	51	817	58	25	17	65	84	17	144

Signal Information			
Cycle, s	160.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	On

Green	5.5	0.5	111.5	23.1	0.0	0.0	
Yellow	3.5	0.0	4.5	4.0	0.0	0.0	
Red	2.5	0.0	2.0	3.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	3.0	1.1	3.0		6.0		6.0
Phase Duration, s	12.0	118.4	11.5	118.0		30.1		30.1
Change Period, ($Y+R_c$), s	6.0	6.5	6.0	6.5		7.0		7.0
Max Allow Headway (*MAH*), s	3.6	0.0	3.6	0.0		4.3		4.3
Queue Clearance Time (g_s), s	5.8		3.5			21.8		20.8
Green Extension Time (g_e), s	0.2	0.0	0.1	0.0		0.9		0.9
Phase Call Probability	1.00		0.91			1.00		1.00
Max Out Probability	0.00		0.00			0.27		0.17

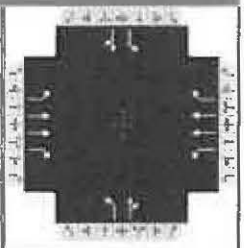
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	134	1127	82	55	888	63	27	89		91	175	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1675	1661	1711	1675	1661	1645	1172	1677		1275	1654	
Queue Service Time (g_s), s	3.8	0.0	0.0	1.5	17.7	1.9	3.6	7.7		11.2	16.2	
Cycle Queue Clearance Time (g_c), s	3.8	0.0	0.0	1.5	17.7	1.9	19.8	7.7		18.8	16.2	
Green Ratio (*g/C*)	0.73	0.70	0.70	0.73	0.70	0.70	0.14	0.14		0.14	0.14	
Capacity (*c*), veh/h	466	2324	1197	438	2314	1146	95	242		168	238	
Volume-to-Capacity Ratio (*X*)	0.287	0.485	0.068	0.127	0.384	0.055	0.285	0.369		0.545	0.734	
Back of Queue (*Q*), ft/ln (50 th percentile)	31	5	0.8	12.8	160.3	17.7	30	88.2		97.5	188.3	
Back of Queue (*Q*), veh/ln (50 th percentile)	1.2	0.2	0.0	0.5	6.2	0.7	1.2	3.4		3.7	7.2	
Queue Storage Ratio (*RQ*) (50 th percentile)	0.17	0.01	0.00	0.06	0.06	0.07	0.43	0.18		0.23	0.08	
Uniform Delay (d_1), s/veh	7.2	0.0	0.0	6.0	10.1	7.7	75.0	61.9		70.4	65.5	
Incremental Delay (d_2), s/veh	0.2	0.6	0.1	0.1	0.5	0.1	1.6	0.9		2.7	6.8	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	7.4	0.6	0.1	6.1	10.5	7.7	76.6	62.8		73.1	72.4	
Level of Service (LOS)	A	A	A	A	B	A	E	E		E	E	
Approach Delay, s/veh / LOS	1.2	A		10.1	B		66.0	E		72.6	E	
Intersection Delay, s/veh / LOS	14.2						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.98	B	2.26	B	3.15	C	3.10	C
Bicycle LOS Score / LOS	3.66	D	3.09	C	3.57	D	3.59	D

$X_c = 0.55$

HCS7 Signalized Intersection Results Summary

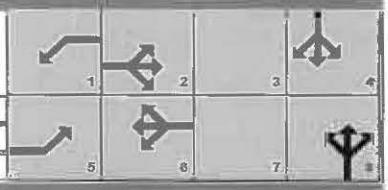
General Information				Intersection Information	
Agency	Town of Hilton Head Island, SC			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	p. m. peak hour	PHF	0.94
Urban Street	Wm. Hilton Pkwy.	Analysis Year	2018	Analysis Period	1> 16:15
Intersection	Dillon Road	File Name	18202pmex.xus		
Project Description	existing conditions - p.m. peak				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	154	1014	87	56	1375	85	34	35	67	72	37	169

Signal Information			
Cycle, s	160.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	On

Green	5.6	1.7	104.9	28.3	0.0	0.0	
Yellow	3.5	0.0	4.5	4.0	0.0	0.0	
Red	2.5	0.0	2.0	3.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	3.0	1.1	3.0		6.0		6.0
Phase Duration, s	13.3	113.1	11.6	111.4		35.3		35.3
Change Period, ($Y+R_c$), s	6.0	6.5	6.0	6.5		7.0		7.0
Max Allow Headway (*MAH*), s	3.6	0.0	3.6	0.0		4.3		4.3
Queue Clearance Time (g_s), s	7.2		3.8			26.8		22.0
Green Extension Time (g_e), s	0.1	0.0	0.0	0.0		1.5		1.6
Phase Call Probability	1.00		0.93			1.00		1.00
Max Out Probability	1.00		0.03			0.01		0.00

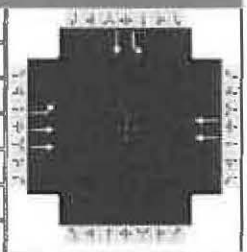
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	164	1079	93	60	1463	90	36	109		77	219	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1675	1659	1675	1675	1660	1601	1133	1703		1254	1663	
Queue Service Time (g_s), s	5.2	25.8	3.1	1.8	0.0	0.0	5.0	9.0		9.1	20.0	
Cycle Queue Clearance Time (g_c), s	5.2	25.8	3.1	1.8	0.0	0.0	24.8	9.0		18.0	20.0	
Green Ratio (*g/C*)	0.70	0.67	0.67	0.69	0.66	0.66	0.18	0.18		0.18	0.18	
Capacity (*c*), veh/h	353	2209	1115	354	2175	1049	106	302		198	295	
Volume-to-Capacity Ratio (*X*)	0.464	0.488	0.083	0.168	0.672	0.086	0.343	0.359		0.386	0.743	
Back of Queue (*Q*), ft/ln (50 th percentile)	47.1	239.3	29.7	16.2	9.1	0.8	39.7	103.8		77.4	226.1	
Back of Queue (*Q*), veh/ln (50 th percentile)	1.8	9.2	1.1	0.6	0.4	0.0	1.5	4.0		3.0	8.7	
Queue Storage Ratio (*RQ*) (50 th percentile)	0.26	0.34	0.05	0.08	0.00	0.00	0.57	0.21		0.18	0.09	
Uniform Delay (d_1), s/veh	7.9	13.2	9.5	10.2	0.0	0.0	74.0	57.8		65.7	62.4	
Incremental Delay (d_2), s/veh	0.6	0.6	0.1	0.1	1.2	0.1	1.9	0.7		1.2	3.7	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	8.5	13.8	9.6	10.3	1.2	0.1	76.0	58.5		66.9	66.1	
Level of Service (LOS)	A	B	A	B	A	A	E	E		E	E	
Approach Delay, s/veh / LOS	12.9	B		1.4	A		62.9	E		66.3	E	
Intersection Delay, s/veh / LOS	14.2						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.02	B	2.29	B	3.26	C	3.26	C
Bicycle LOS Score / LOS	3.66	D	3.59	D	3.62	D	3.64	D

$X_c = 0.70$

HCS7 Signalized Intersection Results Summary

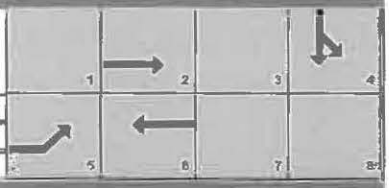
General Information				Intersection Information	
Agency	Town of Hilton Head Island			Duration, h	0.25
Analyst	Darrin A. Shoemaker	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	am peak hour	PHF	0.93
Urban Street	William Hilton Parkway	Analysis Year	2018	Analysis Period	1> 8:00
Intersection	Coggins Point Road	File Name	18203amex.xus		
Project Description	am peak hour - existing conditions				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	215	958			754					87	0	

Signal Information			
Cycle, s	160.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	Off

Green	22.2	110.9	9.8	0.0	0.0	0.0	
Yellow	3.5	4.5	3.5	0.0	0.0	0.0	
Red	2.0	2.0	1.5	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2		6				4
Case Number	2.0	4.0		8.3				10.0
Phase Duration, s	27.7	145.2		117.4				14.8
Change Period, (*Y+R c*), s	5.5	6.5		6.5				5.0
Max Allow Headway (*MAH*), s	3.6	0.0		0.0				4.0
Queue Clearance Time (*g s*), s	21.6							9.8
Green Extension Time (*g e*), s	0.6	0.0		0.0				0.2
Phase Call Probability	1.00							0.98
Max Out Probability	0.00							0.00

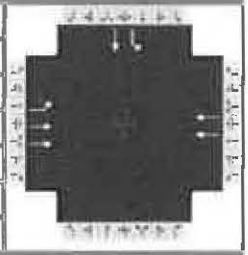
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2			6					7	4	
Adjusted Flow Rate (*v*), veh/h	231	1030			811					94	0	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1832	1727			1653					1903	1900	
Queue Service Time (*g s*), s	19.6	0.0			15.9					7.8	0.0	
Cycle Queue Clearance Time (*g c*), s	19.6	0.0			15.9					7.8	0.0	
Green Ratio (*g/C*)	0.14	0.87			0.69					0.06	0.06	
Capacity (*c*), veh/h	255	2994			2293					117	117	
Volume-to-Capacity Ratio (*X*)	0.908	0.344			0.354					0.801	0.000	
Back of Queue (*Q*), ft/ln (50 th percentile)	222.5	2.9			144					104.3	0	
Back of Queue (*Q*), veh/ln (50 th percentile)	8.8	0.1			5.5					4.1	0.0	
Queue Storage Ratio (*RQ*) (50 th percentile)	0.52	0.00			0.10					0.05	0.00	
Uniform Delay (*d 1*), s/veh	60.5	0.0			10.0					74.1	0.0	
Incremental Delay (*d 2*), s/veh	8.1	0.3			0.4					11.8	0.0	
Initial Queue Delay (*d 3*), s/veh	0.0	0.0			0.0					0.0	0.0	
Control Delay (*d*), s/veh	68.6	0.3			10.4					85.9	0.0	
Level of Service (LOS)	E	A			B					F		
Approach Delay, s/veh / LOS	12.8	B		10.4	B		0.0			85.9	F	
Intersection Delay, s/veh / LOS	15.1						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.29	A	2.11	B	2.87	C	2.86	C
Bicycle LOS Score / LOS	3.59	D	4.14	D			2.62	C

$X_c = 0.44$

HCS7 Signalized Intersection Results Summary

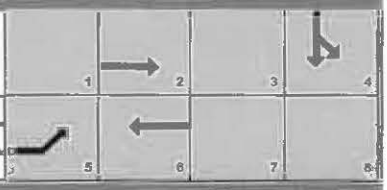
General Information				Intersection Information	
Agency	Town of Hilton Head Island			Duration, h	0.25
Analyst	Darrin A. Shoemaker	Analysis Date	Jun 6, 2017	Area Type	Other
Jurisdiction	SCDOT	Time Period	pm peak hour	PHF	0.89
Urban Street	William Hilton Parkway	Analysis Year	2017	Analysis Period	1> 16:15
Intersection	Coggins Point Road	File Name	17203pmex.xus		
Project Description	pm peak hour - existing conditions				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	180	1080			1367					101	0	

Signal Information			
Cycle, s	160.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	Off
Force Mode	Float	Simult. Gap N/S	Off

Green	19.8	111.6	11.6	0.0	0.0	0.0	
Yellow	3.5	4.5	3.5	0.0	0.0	0.0	
Red	2.0	2.0	1.5	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2		6				4
Case Number	2.0	4.0		8.3				10.0
Phase Duration, s	25.3	143.4		118.1				16.6
Change Period, (*Y+R c*), s	5.5	6.5		6.5				5.0
Max Allow Headway (*MAH*), s	3.6	0.0		0.0				4.0
Queue Clearance Time (*g s*), s	19.4							11.4
Green Extension Time (*g e*), s	0.4	0.0		0.0				0.2
Phase Call Probability	1.00							0.99
Max Out Probability	0.00							0.00

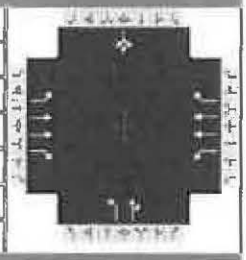
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2			6					7	4	
Adjusted Flow Rate (*v*), veh/h	202	1213			1536					113	0	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1832	1727			1654					1903	1900	
Queue Service Time (*g s*), s	17.4	12.5			0.0					9.4	0.0	
Cycle Queue Clearance Time (*g c*), s	17.4	12.5			0.0					9.4	0.0	
Green Ratio (*g/C*)	0.12	0.86			0.70					0.07	0.07	
Capacity (*c*), veh/h	227	2957			2308					138	137	
Volume-to-Capacity Ratio (*X*)	0.891	0.410			0.666					0.825	0.000	
Back of Queue (*Q*), ft/ln (50 th percentile)	214.9	69.9			10.6					125.8	0	
Back of Queue (*Q*), veh/ln (50 th percentile)	8.5	2.8			0.4					5.0	0.0	
Queue Storage Ratio (*RQ*) (50 th percentile)	0.50	0.00			0.01					0.06	0.00	
Uniform Delay (*d 1*), s/veh	69.0	2.6			0.0					73.2	0.0	
Incremental Delay (*d 2*), s/veh	7.7	0.4			1.3					11.6	0.0	
Initial Queue Delay (*d 3*), s/veh	0.0	0.0			0.0					0.0	0.0	
Control Delay (*d*), s/veh	76.7	2.9			1.3					84.8	0.0	
Level of Service (LOS)	E	A			A					F		
Approach Delay, s/veh / LOS	13.5	B		1.3	A		0.0			84.8	F	
Intersection Delay, s/veh / LOS	10.0						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.30	A	2.10	B	3.21	C	3.00	C
Bicycle LOS Score / LOS	3.72	D	4.74	E			2.65	C

$X_c = 0.66$

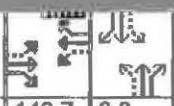
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Town of Hilton Head Island			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	am peak hour	PHF	0.89
Urban Street	William Hilton Parkway	Analysis Year	2018	Analysis Period	1> 8:00
Intersection	Beachwood Drive	File Name	18204amex.xus		
Project Description	am peak hour - existing conditions				

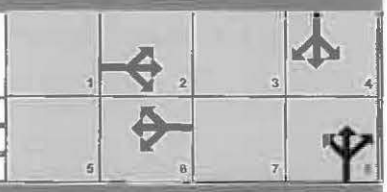


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	11	1131	11	2	868	9	6	0	3	4	0	7

Signal Information			
Cycle, s	160.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	On



Green	143.7	3.8	0.0	0.0	0.0	0.0	
Yellow	4.4	3.0	0.0	0.0	0.0	0.0	
Red	1.6	3.5	0.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		5.0		5.0		6.0		8.0
Phase Duration, s		149.7		149.7		10.3		10.3
Change Period, ($Y+R_c$), s		6.0		6.0		6.5		6.5
Max Allow Headway (*MAH*), s		0.0		0.0		4.4		4.4
Queue Clearance Time (g_s), s						4.0		3.2
Green Extension Time (g_e), s		0.0		0.0		0.1		0.1
Phase Call Probability						0.63		0.63
Max Out Probability						0.00		0.00

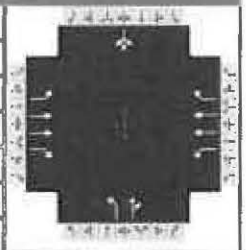
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	12	1271	12	2	975	10	7	3			12	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	580	1660	1436	408	1661	1515	1318	1537			1580	
Queue Service Time (g_s), s	0.0	0.0	0.0	0.1	6.8	0.1	0.8	0.3			0.4	
Cycle Queue Clearance Time (g_c), s	7.0	0.0	0.0	0.1	6.8	0.1	2.0	0.3			1.2	
Green Ratio (*g/C*)	0.90	0.90	0.90	0.90	0.90	0.90	0.02	0.02			0.02	
Capacity (*c*), veh/h	541	2982	1290	412	2984	1361	67	36			68	
Volume-to-Capacity Ratio (*X*)	0.023	0.426	0.010	0.005	0.327	0.007	0.101	0.093			0.181	
Back of Queue (*Q*), ft/ln (50 th percentile)	0.3	4.8	0.1	0.1	20	0.3	7.8	4			13.4	
Back of Queue (*Q*), veh/ln (50 th percentile)	0.0	0.2	0.0	0.0	0.8	0.0	0.3	0.1			0.5	
Queue Storage Ratio (*RQ*) (50 th percentile)	0.00	0.00	0.00	0.00	0.01	0.00	0.06	0.02			0.04	
Uniform Delay (d_1), s/veh	0.2	0.0	0.0	0.8	1.2	0.8	77.8	76.4			76.8	
Incremental Delay (d_2), s/veh	0.1	0.4	0.0	0.0	0.3	0.0	0.7	1.1			1.3	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Control Delay (*d*), s/veh	0.2	0.4	0.0	0.9	1.4	0.8	78.4	77.5			78.1	
Level of Service (LOS)	A	A	A	A	A	A	E	E			E	
Approach Delay, s/veh / LOS	0.4	A		1.4	A		78.1	E		78.1	E	
Intersection Delay, s/veh / LOS	1.6						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.80	B	1.59	B	3.04	C	3.05	C
Bicycle LOS Score / LOS	3.45	C	3.35	C	3.11	C	3.11	C

$X_c = 0.40$

HCS7 Signalized Intersection Results Summary

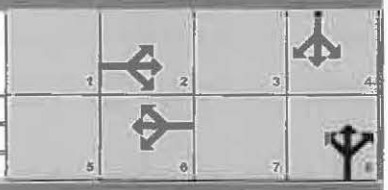
General Information				Intersection Information	
Agency	Town of Hilton Head Island			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	pm peak hour	PHF	0.96
Urban Street	William Hilton Parkway	Analysis Year	2018	Analysis Period	1> 16:30
Intersection	Beachwood Drive	File Name	18204pmex.xus		
Project Description	pm peak hour - existing conditions				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	8	1094	6	2	1378	2	8	0	4	4	0	14

Signal Information			
Cycle, s	160.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	On

Green	143.0	4.5	0.0	0.0	0.0	0.0	
Yellow	4.4	3.0	0.0	0.0	0.0	0.0	
Red	1.6	3.5	0.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6		8		4
Case Number		5.0		5.0		6.0		8.0
Phase Duration, s		149.0		149.0		11.0		11.0
Change Period, ($Y+R_c$), s		6.0		6.0		6.5		6.5
Max Allow Headway (*MAH*), s		0.0		0.0		4.4		4.4
Queue Clearance Time (g_s), s						4.8		3.8
Green Extension Time (g_e), s		0.0		0.0		0.1		0.1
Phase Call Probability						0.75		0.75
Max Out Probability						0.00		0.00

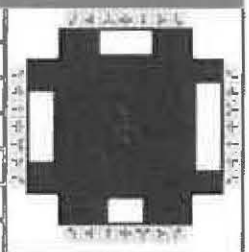
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	8	1140	6	2	1435	2	8	4			19	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	375	1659	1436	462	1660	1535	1310	1537			1606	
Queue Service Time (g_s), s	0.4	8.9	0.1	0.0	0.0	0.0	1.0	0.4			0.4	
Cycle Queue Clearance Time (g_c), s	0.4	8.9	0.1	9.0	0.0	0.0	2.8	0.4			1.8	
Green Ratio (*g/C*)	0.89	0.89	0.89	0.89	0.89	0.89	0.03	0.03			0.03	
Capacity (*c*), veh/h	380	2965	1283	432	2967	1372	67	43			73	
Volume-to-Capacity Ratio (*X*)	0.022	0.384	0.005	0.005	0.484	0.002	0.124	0.096			0.258	
Back of Queue (*Q*), ft/ln (50 th percentile)	0.5	30.8	0.3	0	3.8	0	9.7	4.9			20.3	
Back of Queue (*Q*), veh/ln (50 th percentile)	0.0	1.2	0.0	0.0	0.1	0.0	0.4	0.2			0.8	
Queue Storage Ratio (*RQ*) (50 th percentile)	0.00	0.01	0.00	0.00	0.00	0.00	0.07	0.03			0.05	
Uniform Delay (d_1), s/veh	0.9	1.4	0.9	0.3	0.0	0.0	77.8	75.8			76.4	
Incremental Delay (d_2), s/veh	0.1	0.4	0.0	0.0	0.4	0.0	0.8	1.0			1.8	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	
Control Delay (*d*), s/veh	1.0	1.8	0.9	0.3	0.4	0.0	78.6	76.7			78.3	
Level of Service (LOS)	A	A	A	A	A	A	E	E			E	
Approach Delay, s/veh / LOS	1.7	A		0.4	A		78.0	E		78.3	E	
Intersection Delay, s/veh / LOS	1.9						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.80	B	1.59	B	3.12	C	3.13	C
Bicycle LOS Score / LOS	3.34	C	3.73	D	3.11	C	3.12	C

$X_c = 0.46$

HCS7 Signalized Intersection Results Summary

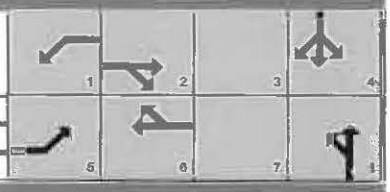
General Information				Intersection Information	
Agency	Town of Hilton Head Island			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	am peak hour	PHF	0.93
Urban Street	William Hilton Parkway	Analysis Year	2018	Analysis Period	1> 8:00
Intersection	Folly Field Road / Mathe...	File Name	18205amex.xus		
Project Description	am peak hour - existing conditions				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	86	1024	24	148	748	74	37	54		88	43	102

Signal Information			
Cycle, s	160.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	On

Green	13.3	3.7	99.6	19.4	0.0	0.0	
Yellow	3.5	3.5	4.4	3.5	0.0	0.0	
Red	2.5	2.5	1.6	2.5	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	2.0	3.0	2.0	3.0		6.0		5.0
Phase Duration, s	29.0	115.3	19.3	105.6		25.4		25.4
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0		6.0		6.0
Max Allow Headway (*MAH*), s	3.6	0.0	3.6	0.0		4.2		4.2
Queue Clearance Time (g_s), s	9.9		13.0			9.9		18.2
Green Extension Time (g_e), s	0.1	0.0	0.4	0.0		1.3		1.2
Phase Call Probability	1.00		1.00			1.00		1.00
Max Out Probability	0.00		0.00			0.00		0.00

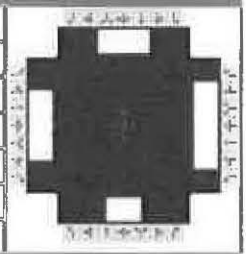
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8		7	4	14
Adjusted Flow Rate (*v*), veh/h	92	1101	26	159	804	80	40	58		95	46	110
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1582	1660	1630	1144	1662	1474	1327	1820		1276	1868	1487
Queue Service Time (g_s), s	7.9	0.0	0.0	11.0	19.3	3.4	4.5	4.6		11.6	3.6	11.2
Cycle Queue Clearance Time (g_c), s	7.9	0.0	0.0	11.0	19.3	3.4	7.9	4.6		16.2	3.6	11.2
Green Ratio (*g/C*)	0.14	0.68	0.68	0.08	0.62	0.62	0.12	0.12		0.12	0.12	0.12
Capacity (*c*), veh/h	227	2267	1113	191	2068	917	177	221		164	227	181
Volume-to-Capacity Ratio (*X*)	0.407	0.486	0.023	0.833	0.389	0.087	0.224	0.262		0.577	0.204	0.607
Back of Queue (*Q*), ft/ln (50 th percentile)	86.9	5.6	0.3	87.5	186.8	30.7	40.2	57		104.2	45.7	116.6
Back of Queue (*Q*), veh/ln (50 th percentile)	3.3	0.2	0.0	3.4	7.2	1.2	1.5	2.2		3.9	1.7	4.4
Queue Storage Ratio (*RQ*) (50 th percentile)	0.43	0.00	0.00	0.33	0.07	0.32	0.03	0.04		1.30	0.03	1.56
Uniform Delay (d_1), s/veh	55.1	0.0	0.0	72.2	15.1	12.1	66.8	63.8		71.1	63.3	66.7
Incremental Delay (d_2), s/veh	4.8	0.7	0.0	6.9	0.6	0.2	0.6	0.6		3.2	0.4	3.3
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Control Delay (*d*), s/veh	59.9	0.7	0.0	79.2	15.6	12.3	67.5	64.4		74.2	63.7	69.9
Level of Service (LOS)	E	A	A	E	B	B	E	E		E	E	E
Approach Delay, s/veh / LOS	5.2	A		25.1	C		65.6	E		70.4	E	
Intersection Delay, s/veh / LOS	21.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.17	B	2.30	B	3.19	C	3.06	C
Bicycle LOS Score / LOS	3.45	C	3.52	D	2.98	C	3.24	C

$X_c = 0.49$

HCS7 Signalized Intersection Results Summary

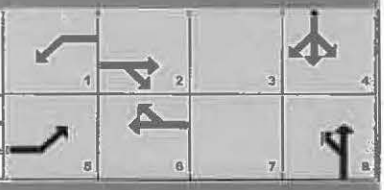
General Information				Intersection Information	
Agency	Town of Hilton Head Island			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	pm peak hour	PHF	0.96
Urban Street	William Hilton Parkway	Analysis Year	2018	Analysis Period	1> 16:30
Intersection	Folly Field Road / Mathe...	File Name	18205pmex.xus		
Project Description	pm peak hour - existing conditions				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	102	968	27	360	1299	122	22	59		150	76	133

Signal Information			
Cycle, s	160.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	On

Green	19.0	3.0	86.9	27.2	0.0	0.0	
Yellow	3.5	3.5	4.4	3.5	0.0	0.0	
Red	2.5	2.5	1.6	2.5	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	2.0	3.0	2.0	3.0		6.0		5.0
Phase Duration, s	25.0	92.9	34.0	101.8		33.2		33.2
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0		6.0		6.0
Max Allow Headway (*MAH*), s	3.6	0.0	3.6	0.0		4.2		4.2
Queue Clearance Time (g_s), s	12.2		27.4			10.3		25.9
Green Extension Time (g_e), s	0.1	0.0	0.5	0.0		1.7		1.3
Phase Call Probability	1.00		1.00			1.00		1.00
Max Out Probability	0.03		0.53			0.00		0.09

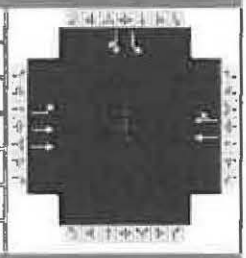
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8		7	4	14
Adjusted Flow Rate (*v*), veh/h	106	1008	28	375	1353	127	23	61		156	79	139
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1582	1661	1629	1149	1661	1510	1288	1820		1269	1868	1487
Queue Service Time (g_s), s	10.2	31.9	1.3	25.4	0.4	0.0	2.5	4.6		19.3	5.9	13.6
Cycle Queue Clearance Time (g_c), s	10.2	31.9	1.3	25.4	0.4	0.0	8.3	4.6		23.9	5.9	13.6
Green Ratio (*g/C*)	0.12	0.54	0.54	0.17	0.60	0.60	0.17	0.17		0.17	0.17	0.17
Capacity (*c*), veh/h	188	1803	884	402	1989	904	217	309		224	317	253
Volume-to-Capacity Ratio (*X*)	0.566	0.559	0.032	0.934	0.680	0.141	0.106	0.199		0.697	0.249	0.548
Back of Queue (*Q*), ft/ln (50 th percentile)	122.1	323	12.8	206.1	14.9	2.4	21.8	56.6		172.8	74.7	139.6
Back of Queue (*Q*), veh/ln (50 th percentile)	4.6	12.4	0.5	7.9	0.6	0.1	0.8	2.2		6.5	2.8	5.3
Queue Storage Ratio (*RQ*) (50 th percentile)	0.61	0.21	0.05	0.78	0.01	0.03	0.01	0.04		2.16	0.05	1.86
Uniform Delay (d_1), s/veh	66.6	24.0	17.0	55.8	0.1	0.1	61.2	57.0		67.3	57.6	60.8
Incremental Delay (d_2), s/veh	11.0	1.2	0.1	24.2	1.9	0.3	0.2	0.3		4.7	0.4	1.9
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Control Delay (*d*), s/veh	77.6	25.2	17.1	79.9	2.0	0.4	61.4	57.4		72.0	58.0	62.6
Level of Service (LOS)	E	C	B	E	A	A	E	E		E	E	E
Approach Delay, s/veh / LOS	29.9	C		17.6	B		58.4	E		65.6	E	
Intersection Delay, s/veh / LOS	27.8						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.26	B	2.35	B	3.37	C	3.15	C
Bicycle LOS Score / LOS	3.39	C	4.19	D	2.95	C	3.45	C

$X_c = 0.72$

HCS7 Signalized Intersection Results Summary

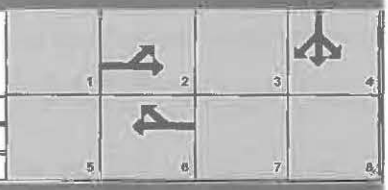
General Information				Intersection Information	
Agency	Town of Hilton Head Island			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	a.m. peak hour	PHF	0.90
Urban Street	William Hilton Parkway	Analysis Year	2018	Analysis Period	1> 8:00
Intersection	Singleton Beach Road	File Name	18206amex.xus		
Project Description	am peak hour - existing conditions				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	24	1507			926	18				26	0	23

Signal Information			
Cycle, s	160.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	Off

Green	143.0	5.5	0.0	0.0	0.0	0.0	
Yellow	4.5	3.2	0.0	0.0	0.0	0.0	
Red	1.5	2.3	0.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6				4
Case Number		6.0		8.0				10.0
Phase Duration, s		149.0		149.0				11.0
Change Period, ($Y+R_c$), s		6.0		6.0				5.5
Max Allow Headway (*MAH*), s		0.0		0.0				4.4
Queue Clearance Time (g_s), s								4.6
Green Extension Time (g_e), s		0.0		0.0				0.1
Phase Call Probability								0.91
Max Out Probability								0.00

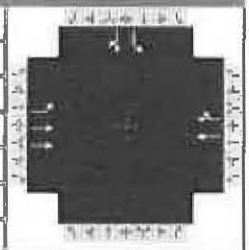
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2			6	16				7	4	14
Adjusted Flow Rate (*v*), veh/h	27	1674			496	553				29	26	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	538	1660			1629	1814				1748	1520	
Queue Service Time (g_s), s	0.0	0.0			12.9	7.4				2.6	2.6	
Cycle Queue Clearance Time (g_c), s	13.7	0.0			12.9	7.4				2.6	2.6	
Green Ratio (*g/C*)	0.89	0.89			0.89	0.89				0.03	0.03	
Capacity (*c*), veh/h	482	2967			1456	1621				60	52	
Volume-to-Capacity Ratio (*X*)	0.055	0.564			0.341	0.341				0.484	0.492	
Back of Queue (*Q*), ft/ln (50 th percentile)	0.8	8.4			28.2	29.5				32.4	28.6	
Back of Queue (*Q*), veh/ln (50 th percentile)	0.0	0.3			1.1	1.2				1.3	1.1	
Queue Storage Ratio (*RQ*) (50 th percentile)	0.00	0.00			0.01	0.01				0.02	0.00	
Uniform Delay (d_1), s/veh	0.6	0.0			1.3	1.3				75.9	75.9	
Incremental Delay (d_2), s/veh	0.2	0.8			0.6	0.6				5.9	7.0	
Initial Queue Delay (d_3), s/veh	0.0	0.0			0.0	0.0				0.0	0.0	
Control Delay (*d*), s/veh	0.8	0.8			1.9	1.9				81.8	82.9	
Level of Service (LOS)	A	A			A	A				F	F	
Approach Delay, s/veh / LOS	0.8	A		1.9	A		0.0			82.3	F	
Intersection Delay, s/veh / LOS	2.8						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.28	A	2.07	B	3.17	C	3.13	C
Bicycle LOS Score / LOS	3.65	D	3.11	C			3.07	C

$X_c = 0.53$

HCS7 Signalized Intersection Results Summary

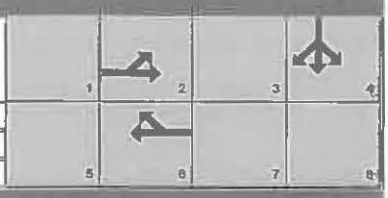
General Information				Intersection Information	
Agency	Town of Hilton Head Island			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	p.m. peak hour	PHF	0.95
Urban Street	William Hilton Parkway	Analysis Year	2018	Analysis Period	1> 16:15
Intersection	Singleton Beach Road	File Name	18206pmex.xus		
Project Description	pm peak hour - existing conditions				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	30	1483			1656	23				36	0	29

Signal Information			
Cycle, s	160.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	Off

Green	142.8	5.7	0.0	0.0	0.0	0.0	
Yellow	4.5	3.2	0.0	0.0	0.0	0.0	
Red	1.5	2.3	0.0	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		2		6				4
Case Number		6.0		8.0				10.0
Phase Duration, s		148.8		148.8				11.2
Change Period, ($Y+R_c$), s		6.0		6.0				5.5
Max Allow Headway (MAH), s		0.0		0.0				4.3
Queue Clearance Time (g_s), s								5.4
Green Extension Time (g_e), s		0.0		0.0				0.1
Phase Call Probability								0.95
Max Out Probability								0.00

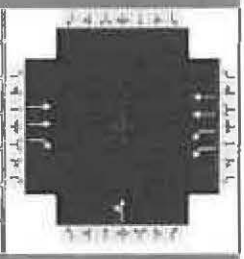
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2			6	16				7	4	14
Adjusted Flow Rate (v), veh/h	32	1561			836	931				38	31	
Adjusted Saturation Flow Rate (s), veh/h/ln	270	1659			1638	1817				1748	1557	
Queue Service Time (g_s), s	5.8	15.3			26.4	0.0				3.4	3.1	
Cycle Queue Clearance Time (g_c), s	32.1	15.3			26.4	0.0				3.4	3.1	
Green Ratio (g/C)	0.89	0.89			0.89	0.89				0.04	0.04	
Capacity (c), veh/h	242	2961			1462	1622				62	56	
Volume-to-Capacity Ratio (X)	0.131	0.527			0.572	0.574				0.607	0.549	
Back of Queue (Q), ft/ln (50 th percentile)	9.6	54			17.2	16.7				43.3	34.3	
Back of Queue (Q), veh/ln (50 th percentile)	0.4	2.1			0.7	0.7				1.7	1.4	
Queue Storage Ratio (RQ) (50 th percentile)	0.05	0.02			0.01	0.01				0.03	0.00	
Uniform Delay (d_1), s/veh	6.7	1.7			0.0	0.0				76.0	75.9	
Incremental Delay (d_2), s/veh	1.1	0.7			1.6	1.5				9.2	8.2	
Initial Queue Delay (d_3), s/veh	0.0	0.0			0.0	0.0				0.0	0.0	
Control Delay (d), s/veh	7.8	2.4			1.6	1.5				85.2	84.1	
Level of Service (LOS)	A	A			A	A				F	F	
Approach Delay, s/veh / LOS	2.5	A		1.6	A		0.0			84.7	F	
Intersection Delay, s/veh / LOS	3.7						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.28	A	2.08	B	3.40	C	3.31	C
Bicycle LOS Score / LOS	3.56	D	3.71	D			3.10	C

$X_c = 0.55$

HCS7 Signalized Intersection Results Summary

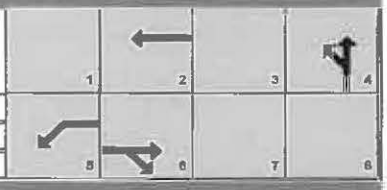
General Information				Intersection Information	
Agency	Town of Hilton Head Island			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	am peak hour	PHF	0.89
Urban Street	William Hilton Parkway	Analysis Year	2018	Analysis Period	1> 8:00
Intersection	Shelter Cove Lane	File Name	18301amex.xus		
Project Description	am peak hour - existing conditions				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		1457	84	50	829		49	0				

Signal Information			
Cycle, s	150.0	Reference Phase	6
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Fixed	Simult. Gap N/S	On

Green	5.4	119.9	7.2	0.0	0.0	0.0	
Yellow	3.5	4.5	3.2	0.0	0.0	0.0	
Red	2.5	1.5	2.3	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6	5	2		4		
Case Number		7.3	2.0	4.0		12.0		
Phase Duration, s		125.9	11.4	137.3		12.7		
Change Period, ($Y+R_c$), s		6.0	6.0	6.0		5.5		
Max Allow Headway (*MAH*), s		0.0	3.6	0.0		4.3		
Queue Clearance Time (g_s), s			4.9			6.6		
Green Extension Time (g_e), s		0.0	0.1	0.0		0.1		
Phase Call Probability			0.90			0.90		
Max Out Probability			0.00			0.00		

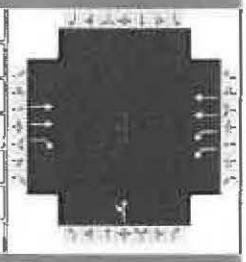
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		6	16	5	2		7	4				
Adjusted Flow Rate (*v*), veh/h		1637	94	56	931			55				
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1661	1665	1443	1660			1748				
Queue Service Time (g_s), s		29.3	1.8	2.9	7.3			4.6				
Cycle Queue Clearance Time (g_c), s		29.3	1.8	2.9	7.3			4.6				
Green Ratio (*g/C*)		0.80	0.80	0.04	0.88			0.05				
Capacity (*c*), veh/h		2654	1331	104	2906			84				
Volume-to-Capacity Ratio (*X*)		0.617	0.071	0.538	0.321			0.657				
Back of Queue (*Q*), ft/ln (50 th percentile)		212.6	13.8	29.1	30.6			61.2				
Back of Queue (*Q*), veh/ln (50 th percentile)		8.2	0.5	1.1	1.2			2.3				
Queue Storage Ratio (*RQ*) (50 th percentile)		0.09	0.08	0.20	0.01			0.35				
Uniform Delay (d_1), s/veh		6.0	3.2	71.1	1.6			70.2				
Incremental Delay (d_2), s/veh		1.1	0.1	3.2	0.3			8.4				
Initial Queue Delay (d_3), s/veh		0.0	0.0	0.0	0.0			0.0				
Control Delay (*d*), s/veh		7.0	3.3	74.2	1.9			78.6				
Level of Service (LOS)		A	A	E	A			E				
Approach Delay, s/veh / LOS	6.8	A		6.0	A		78.6	E		0.0		
Intersection Delay, s/veh / LOS	8.0						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.19	B	1.29	A	3.03	C	3.13	C
Bicycle LOS Score / LOS	4.06	D	3.23	C	3.09	C		

$X_c = 0.57$

HCS7 Signalized Intersection Results Summary

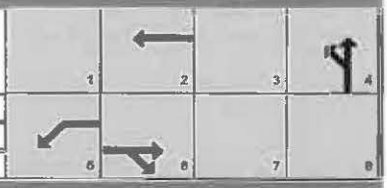
General Information				Intersection Information	
Agency	Town of Hilton Head Island			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	pm peak hour	PHF	0.97
Urban Street	William Hilton Parkway	Analysis Year	2018	Analysis Period	1> 16:15
Intersection	Shelter Cove Lane	File Name	18301pmex.xus		
Project Description	pm peak hour - existing conditions				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h		1309	139	115	1393		218	0				

Signal Information			
Cycle, s	160.0	Reference Phase	6
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	On

Green	8.6	111.3	22.6	0.0	0.0	0.0	
Yellow	3.5	4.5	3.2	0.0	0.0	0.0	
Red	2.5	1.5	2.3	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		6	5	2		4		
Case Number		7.3	2.0	4.0		12.0		
Phase Duration, s		117.3	14.6	131.9		28.1		
Change Period, ($Y+R_c$), s		6.0	6.0	6.0		5.5		
Max Allow Headway (*MAH*), s		0.0	3.6	0.0		4.3		
Queue Clearance Time (g_s), s			8.4			22.3		
Green Extension Time (g_e), s		0.0	0.2	0.0		0.4		
Phase Call Probability			0.99			1.00		
Max Out Probability			0.00			0.55		

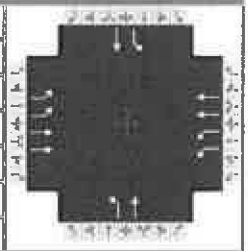
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement		6	16	5	2		7	4				
Adjusted Flow Rate (*v*), veh/h		1349	143	119	1436			225				
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1660	1665	1443	1660			1748				
Queue Service Time (g_s), s		33.4	4.6	6.4	0.0			20.3				
Cycle Queue Clearance Time (g_c), s		33.4	4.6	6.4	0.0			20.3				
Green Ratio (*g/C*)		0.70	0.70	0.05	0.79			0.14				
Capacity (*c*), veh/h		2309	1158	155	2612			247				
Volume-to-Capacity Ratio (*X*)		0.584	0.124	0.766	0.550			0.909				
Back of Queue (*Q*), ft/ln (50 th percentile)		304.4	43.5	64.1	7.9			292.2				
Back of Queue (*Q*), veh/ln (50 th percentile)		11.7	1.6	2.4	0.3			11.0				
Queue Storage Ratio (*RQ*) (50 th percentile)		0.12	0.24	0.44	0.00			1.67				
Uniform Delay (d_1), s/veh		12.5	8.1	71.9	0.0			67.7				
Incremental Delay (d_2), s/veh		1.1	0.2	5.8	0.8			26.7				
Initial Queue Delay (d_3), s/veh		0.0	0.0	0.0	0.0			0.0				
Control Delay (*d*), s/veh		13.6	8.3	77.7	0.8			94.4				
Level of Service (LOS)		B	A	E	A			F				
Approach Delay, s/veh / LOS	13.1	B		6.7	A		94.4	F		0.0		
Intersection Delay, s/veh / LOS	15.6						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.18	B	1.33	A	3.06	C	3.26	C
Bicycle LOS Score / LOS	3.86	D	3.70	D	3.37	C		

$X_c = 0.60$

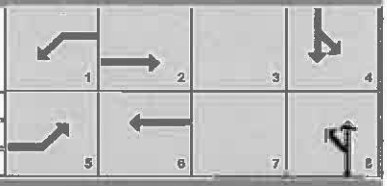
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Town of Hilton Head Island			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	am peak hour	PHF	0.87
Urban Street	William Hilton Parkway	Analysis Year	2018	Analysis Period	1> 8:00
Intersection	Queens Folly Road/King...	File Name	18302amex.xus		
Project Description	am peak hour - existing conditions				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	217	1126		22	694		47	19		169	13	

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	On



	EB			WB			NB			SB		
Green	3.9	6.7		89.4	25.5	0.0	0.0					
Yellow	3.5	3.5		4.5	3.2	0.0	0.0					
Red	2.5	2.5		2.0	2.8	0.0	0.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	2.0	4.0	2.0	4.0		6.0		6.0
Phase Duration, s	22.6	108.6	9.9	95.9		31.5		31.5
Change Period, ($Y+R_c$), s	6.0	6.5	6.0	6.5		6.0		6.0
Max Allow Headway (*MAH*), s	3.5	0.0	3.5	0.0		4.2		4.2
Queue Clearance Time (g_s), s	16.1		3.1			8.0		24.5
Green Extension Time (g_e), s	0.5	0.0	0.0	0.0		1.1		0.9
Phase Call Probability	1.00		0.65			1.00		1.00
Max Out Probability	0.01		0.00			0.00		0.00

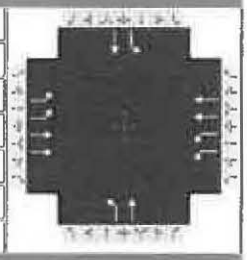
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2		1	6		3	8		7	4	
Adjusted Flow Rate (*v*), veh/h	249	1294		25	798		54	22		194	15	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1291	1661		1674	1659		1420	1826		1357	1826	
Queue Service Time (g_s), s	14.1	0.0		1.1	19.2		5.0	1.5		21.0	1.0	
Cycle Queue Clearance Time (g_c), s	14.1	0.0		1.1	19.2		6.0	1.5		22.5	1.0	
Green Ratio (*g/C*)	0.11	0.68		0.03	0.60		0.17	0.17		0.17	0.17	
Capacity (*c*), veh/h	285	2260		87	1977		280	311		266	311	
Volume-to-Capacity Ratio (*X*)	0.875	0.573		0.290	0.403		0.193	0.070		0.731	0.048	
Back of Queue (*Q*), ft/ln (50 th percentile)	120.5	8.7		12.7	185.6		47.6	18.5		196.7	12.6	
Back of Queue (*Q*), veh/ln (50 th percentile)	4.6	0.3		0.5	7.1		1.8	0.7		7.6	0.5	
Queue Storage Ratio (*RQ*) (50 th percentile)	0.65	0.00		0.06	0.07		0.15	0.06		0.41	0.03	
Uniform Delay (d_1), s/veh	60.2	0.0		71.7	16.1		54.5	52.3		61.7	52.1	
Incremental Delay (d_2), s/veh	10.8	1.1		1.3	0.6		0.3	0.1		3.9	0.1	
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	71.0	1.1		73.0	16.7		54.9	52.4		65.6	52.1	
Level of Service (LOS)	E	A		E	B		D	D		E	D	
Approach Delay, s/veh / LOS	12.4	B		18.5	B		54.2	D		64.6	E	
Intersection Delay, s/veh / LOS	19.6						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.44	B	2.43	B	3.14	C	2.97	C
Bicycle LOS Score / LOS	4.42	D	3.85	D	3.49	C	3.71	D

$X_c = 0.66$

HCS7 Signalized Intersection Results Summary

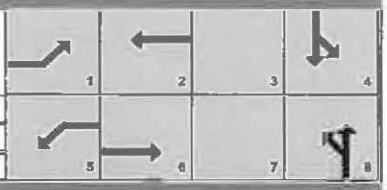
General Information				Intersection Information	
Agency	Town of Hilton Head Island			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	pm peak hour	PHF	0.94
Urban Street	William Hilton Parkway	Analysis Year	2018	Analysis Period	1> 16:30
Intersection	Queens Folly Road/King...	File Name	18302pmex.xus		
Project Description	pm peak hour - existing conditions				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	244	1151		58	1129		95	35		240	61	

Signal Information			
Cycle, s	160.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	On

Green	5.6	5.4	88.7	35.8	0.0	0.0		
Yellow	3.5	3.5	4.5	3.2	0.0	0.0		
Red	2.5	2.5	2.0	2.8	0.0	0.0		



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	1	6	5	2		8		4
Case Number	2.0	4.0	2.0	4.0		6.0		6.0
Phase Duration, s	23.0	106.6	11.6	95.2		41.8		41.8
Change Period, ($Y+R_c$), s	6.0	6.5	6.0	6.5		6.0		6.0
Max Allow Headway (*MAH*), s	3.5	0.0	3.5	0.0		4.2		4.2
Queue Clearance Time (g_s), s	18.0		4.9			16.9		34.4
Green Extension Time (g_e), s	0.0	0.0	0.1	0.0		1.8		1.4
Phase Call Probability	1.00		0.94			1.00		1.00
Max Out Probability	1.00		0.00			0.00		0.05

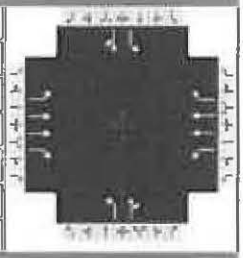
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	1	6		5	2		3	8		7	4	
Adjusted Flow Rate (*v*), veh/h	260	1224		62	1201		101	37		255	65	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1290	1660		1655	1660		1357	1826		1338	1826	
Queue Service Time (g_s), s	16.0	35.0		2.9	11.1		10.4	2.6		29.9	4.6	
Cycle Queue Clearance Time (g_c), s	16.0	35.0		2.9	11.1		14.9	2.6		32.4	4.6	
Green Ratio (*g/C*)	0.11	0.63		0.04	0.55		0.22	0.22		0.22	0.22	
Capacity (*c*), veh/h	274	2076		116	1840		310	409		323	409	
Volume-to-Capacity Ratio (*X*)	0.947	0.590		0.531	0.653		0.326	0.091		0.790	0.159	
Back of Queue (*Q*), ft/ln (50 th percentile)	175.1	339.6		32.5	58.3		95.3	31.7		283.7	55.8	
Back of Queue (*Q*), veh/ln (50 th percentile)	6.7	13.1		1.2	2.2		3.7	1.2		10.9	2.1	
Queue Storage Ratio (*RQ*) (50 th percentile)	0.95	0.14		0.16	0.02		0.30	0.10		0.60	0.12	
Uniform Delay (d_1), s/veh	71.0	17.8		74.0	3.1		55.9	49.2		62.0	50.0	
Incremental Delay (d_2), s/veh	39.9	1.2		2.8	1.8		0.6	0.1		7.9	0.2	
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0		0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	110.9	19.0		76.8	5.0		56.5	49.3		69.9	50.1	
Level of Service (LOS)	F	B		E	A		E	D		E	D	
Approach Delay, s/veh / LOS	35.1	D		8.5	A		54.6	D		65.9	E	
Intersection Delay, s/veh / LOS	28.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.44	B	2.43	B	3.25	C	3.04	C
Bicycle LOS Score / LOS	4.38	D	4.21	D	3.59	D	3.89	D

$X_c = 0.69$

HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Town of Hilton Head Island			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	am peak hour	PHF	0.88
Urban Street	William Hilton Parkway	Analysis Year	2018	Analysis Period	1> 8:00
Intersection	Queens Way	File Name	18303amex.xus		
Project Description	am peak hour - existing conditions				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	16	1097	20	17	806	8	18	0	4	18	0	27

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	On

Green	3.2	0.1	119.3	8.4	0.0	0.0	1	2	3	4		
Yellow	3.5	0.0	4.5	3.5	0.0	0.0	5	6	7	8		
Red	2.5	0.0	2.0	3.0	0.0	0.0						

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	3.0	1.1	3.0		6.0		6.0
Phase Duration, s	9.2	125.8	9.3	125.9		14.9		14.9
Change Period, ($Y+R_c$), s	6.0	6.5	6.0	6.5		6.5		6.5
Max Allow Headway (*MAH*), s	3.6	0.0	3.6	0.0		4.3		4.3
Queue Clearance Time (g_s), s	2.3		2.3			6.8		4.6
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0		0.2		0.2
Phase Call Probability	0.53		0.55			0.96		0.96
Max Out Probability	0.00		0.00			0.00		0.00

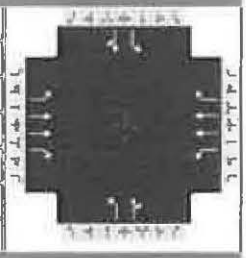
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	18	1247	23	19	916	9	20	5		20	31	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1732	1661	1593	1663	1661	1617	1324	1565		1404	1716	
Queue Service Time (g_s), s	0.3	0.0	0.0	0.3	11.6	0.2	2.3	0.4		2.1	2.6	
Cycle Queue Clearance Time (g_c), s	0.3	0.0	0.0	0.3	11.6	0.2	4.8	0.4		2.5	2.6	
Green Ratio (*g/C*)	0.82	0.80	0.80	0.82	0.80	0.80	0.06	0.06		0.06	0.06	
Capacity (*c*), veh/h	515	2642	1267	425	2645	1287	99	88		123	96	
Volume-to-Capacity Ratio (*X*)	0.035	0.472	0.018	0.045	0.346	0.007	0.206	0.052		0.167	0.319	
Back of Queue (*Q*), ft/ln (50 th percentile)	1.9	5.8	0.2	2.2	84.5	1.2	21.2	4.6		19.9	30.4	
Back of Queue (*Q*), veh/ln (50 th percentile)	0.1	0.2	0.0	0.1	3.2	0.0	0.8	0.2		0.8	1.2	
Queue Storage Ratio (*RQ*) (50 th percentile)	0.01	0.00	0.00	0.01	0.03	0.01	0.21	0.01		0.17	0.12	
Uniform Delay (d_1), s/veh	3.1	0.0	0.0	2.5	4.3	3.1	70.4	67.0		68.2	68.1	
Incremental Delay (d_2), s/veh	0.0	0.6	0.0	0.0	0.4	0.0	1.0	0.2		0.6	1.9	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	3.2	0.6	0.0	2.6	4.7	3.1	71.4	67.3		68.8	69.9	
Level of Service (LOS)	A	A	A	A	A	A	E	E		E	E	
Approach Delay, s/veh / LOS	0.6	A		4.6	A		70.6	E		69.5	E	
Intersection Delay, s/veh / LOS	4.5						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.00	B	2.00	B	3.05	C	3.05	C
Bicycle LOS Score / LOS	3.42	C	3.10	C	3.33	C	3.37	C

$X_c = 0.42$

HCS7 Signalized Intersection Results Summary

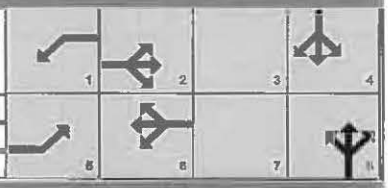
General Information				Intersection Information	
Agency	Town of Hilton Head Island			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	pm peak hour	PHF	0.95
Urban Street	William Hilton Parkway	Analysis Year	2018	Analysis Period	1> 16:30
Intersection	Queens Way	File Name	18303pmex.xus		
Project Description	pm peak hour - existing conditions				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	33	1380	13	15	1278	18	67	5	8	11	1	12

Signal Information			
Cycle, s	160.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	On

Green	3.0	1.7	124.6	11.7	0.0	0.0	
Yellow	3.5	0.0	4.5	3.5	0.0	0.0	
Red	2.5	0.0	2.0	3.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	3.0	1.1	3.0		6.0		6.0
Phase Duration, s	10.7	132.8	9.0	131.1		18.2		18.2
Change Period, ($Y+R_c$), s	6.0	6.5	6.0	6.5		6.5		6.5
Max Allow Headway (*MAH*), s	3.6	0.0	3.6	0.0		4.3		4.3
Queue Clearance Time (g_s), s	2.6		2.3			11.5		4.5
Green Extension Time (g_e), s	0.0	0.0	0.0	0.0		0.3		0.3
Phase Call Probability	0.79		0.50			0.99		0.99
Max Out Probability	0.00		0.00			0.00		0.00

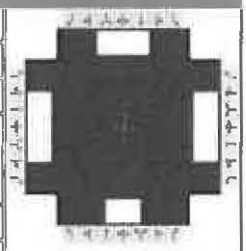
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	35	1453	14	16	1345	19	71	14		12	14	
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1732	1660	1597	1663	1660	1636	1345	1633		1384	1727	
Queue Service Time (g_s), s	0.6	26.2	0.3	0.3	0.0	0.0	8.3	1.3		1.3	1.2	
Cycle Queue Clearance Time (g_c), s	0.6	26.2	0.3	0.3	0.0	0.0	9.5	1.3		2.5	1.2	
Green Ratio (*g/C*)	0.81	0.79	0.79	0.80	0.78	0.78	0.07	0.07		0.07	0.07	
Capacity (*c*), veh/h	412	2620	1260	292	2584	1274	133	119		135	126	
Volume-to-Capacity Ratio (*X*)	0.084	0.554	0.011	0.054	0.521	0.015	0.529	0.115		0.086	0.108	
Back of Queue (*Q*), ft/ln (50 th percentile)	4.6	203.7	2.3	2.4	7	0.2	79.5	14.4		11.8	13.8	
Back of Queue (*Q*), veh/ln (50 th percentile)	0.2	7.8	0.1	0.1	0.3	0.0	3.0	0.5		0.5	0.5	
Queue Storage Ratio (*RQ*) (50 th percentile)	0.02	0.08	0.02	0.01	0.00	0.00	0.79	0.04		0.10	0.06	
Uniform Delay (d_1), s/veh	3.0	6.3	3.6	5.6	0.0	0.0	73.7	69.3		70.5	69.3	
Incremental Delay (d_2), s/veh	0.1	0.9	0.0	0.1	0.8	0.0	3.2	0.4		0.3	0.4	
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Control Delay (*d*), s/veh	3.1	7.2	3.6	5.6	0.8	0.0	76.9	69.7		70.8	69.6	
Level of Service (LOS)	A	A	A	A	A	A	E	E		E	E	
Approach Delay, s/veh / LOS	7.0	A		0.8	A		75.8	E		70.2	E	
Intersection Delay, s/veh / LOS	6.6						A					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.01	B	2.01	B	3.19	C	3.29	C
Bicycle LOS Score / LOS	3.59	D	3.46	C	3.43	C	3.33	C

$X_c = 0.53$

HCS7 Signalized Intersection Results Summary

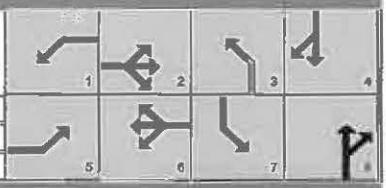
General Information				Intersection Information	
Agency	Town of Hilton Head Island, SC			Duration, h	0.25
Analyst	Darrin Shoemaker	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	am peak hour - existing conditions	PHF	0.92
Urban Street	William Hilton Parkway	Analysis Year	2018	Analysis Period	1> 8:00
Intersection	Shipyard Drive / Wexfor...	File Name	18401amex.xus		
Project Description	am peak hour - existing conditions				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	63	988	97	33	780	37	76	5	19	68	12	80

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	On

Green	4.7	1.0	100.0	8.0	0.8	10.5	
Yellow	3.5	0.0	4.5	3.5	0.0	3.5	
Red	2.5	0.0	1.5	2.5	0.0	3.5	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	3.0	2.0	4.0	2.0	3.0
Phase Duration, s	11.7	107.0	10.7	106.0	14.8	18.3	14.0	17.5
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0	6.0	7.0	6.0	7.0
Max Allow Headway (*MAH*), s	3.5	0.0	5.0	0.0	3.3	4.4	3.3	4.4
Queue Clearance Time (g_s), s	3.8		3.0		9.0	4.2	8.3	10.3
Green Extension Time (g_e), s	0.1	0.0	0.1	0.0	0.1	0.3	0.1	0.2
Phase Call Probability	0.94		0.78		0.97	1.00	0.95	1.00
Max Out Probability	0.00		0.00		0.00	0.01	0.00	0.82

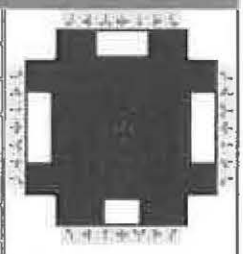
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	68	1074	105	36	848	40	83	26		74	13	87
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1739	1661	1547	1739	1660	1547	1739	1662		1739	1753	1547
Queue Service Time (g_s), s	1.8	8.7	1.1	1.0	17.1	1.3	7.0	2.2		6.3	1.0	8.3
Cycle Queue Clearance Time (g_c), s	1.8	8.7	1.1	1.0	17.1	1.3	7.0	2.2		6.3	1.0	8.3
Green Ratio (*g/C*)	0.70	0.67	0.67	0.70	0.67	0.67	0.06	0.08		0.05	0.07	0.07
Capacity (*c*), veh/h	464	2238	1042	411	2214	1032	103	125		93	122	108
Volume-to-Capacity Ratio (*X*)	0.148	0.480	0.101	0.087	0.383	0.039	0.806	0.208		0.797	0.107	0.806
Back of Queue (*Q*), ft/ln (50 th percentile)	16.3	54.5	10.2	8.9	156.3	11.5	86.5	25.5		77.6	12.7	100.5
Back of Queue (*Q*), veh/ln (50 th percentile)	0.6	2.1	0.4	0.3	6.0	0.4	3.3	1.0		3.0	0.5	3.9
Queue Storage Ratio (*RQ*) (50 th percentile)	0.07	0.02	0.02	0.04	0.29	0.07	0.52	0.07		0.16	0.03	2.51
Uniform Delay (d_1), s/veh	7.8	2.9	2.6	7.3	11.2	8.5	69.7	65.1		70.2	65.4	68.8
Incremental Delay (d_2), s/veh	0.1	0.7	0.2	0.1	0.5	0.1	5.5	0.8		5.7	0.4	18.0
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Control Delay (*d*), s/veh	7.9	3.7	2.7	7.4	11.7	8.6	75.2	66.0		75.9	65.8	86.8
Level of Service (LOS)	A	A	A	A	B	A	E	E		E	E	F
Approach Delay, s/veh / LOS	3.8	A		11.4	B		73.0	E		80.6	F	
Intersection Delay, s/veh / LOS	15.2						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.97	B	2.32	B	3.06	C	3.03	C
Bicycle LOS Score / LOS	4.06	D	4.01	D	3.27	C	4.39	D

 $X_c = 0.49$

HCS7 Signalized Intersection Results Summary

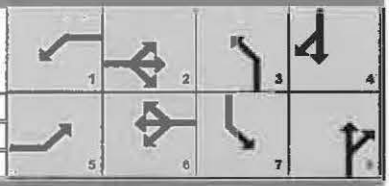
General Information				Intersection Information	
Agency	Town of Hilton Head Island, SC			Duration, h	0.25
Analyst	Darrin Shoemaker	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	pm peak hour - existing conditions	PHF	0.97
Urban Street	William Hilton Parkway	Analysis Year	2018	Analysis Period	1> 16:30
Intersection	Shipyard Drive / Wexfor...	File Name	18401pmex.xus		
Project Description	pm peak hour - existing conditions				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	106	1193	181	36	1188	43	113	9	34	80	13	78

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	On

Green	4.7	1.2	97.0	8.9	3.1	10.0	
Yellow	3.5	0.0	4.5	3.5	0.0	3.5	
Red	2.5	0.0	1.5	2.5	0.0	3.5	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6	3	8	7	4
Case Number	1.1	3.0	1.1	3.0	2.0	4.0	2.0	3.0
Phase Duration, s	11.9	104.2	10.7	103.0	18.0	20.2	14.9	17.0
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0	6.0	7.0	6.0	7.0
Max Allow Headway (*MAH*), s	3.5	0.0	3.5	0.0	3.8	4.5	3.8	4.5
Queue Clearance Time (g_s), s	5.2		3.0		11.9	5.7	9.0	9.9
Green Extension Time (g_e), s	0.1	0.0	0.0	0.0	0.2	0.3	0.1	0.2
Phase Call Probability	0.99		0.79		0.99	1.00	0.97	1.00
Max Out Probability	0.00		0.00		0.00	0.03	0.00	0.60

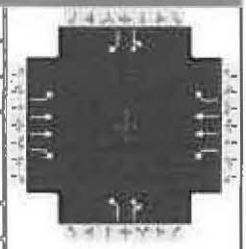
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	109	1230	187	37	1225	44	116	44		82	13	80
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1739	1660	1547	1739	1661	1547	1739	1662		1739	1753	1513
Queue Service Time (g_s), s	3.2	30.4	7.1	1.0	0.0	0.0	9.9	3.7		7.0	1.1	7.9
Cycle Queue Clearance Time (g_c), s	3.2	30.4	7.1	1.0	0.0	0.0	9.9	3.7		7.0	1.1	7.9
Green Ratio (*g/C*)	0.69	0.65	0.65	0.68	0.65	0.65	0.08	0.09		0.06	0.07	0.07
Capacity (*c*), veh/h	404	2175	1013	297	2149	1001	139	146		103	117	101
Volume-to-Capacity Ratio (*X*)	0.270	0.566	0.184	0.125	0.570	0.044	0.838	0.304		0.803	0.114	0.794
Back of Queue (*Q*), ft/ln (50 th percentile)	29.4	282.9	62.5	9.7	6.2	0.4	125.4	43.1		89.9	13.1	91.3
Back of Queue (*Q*), veh/ln (50 th percentile)	1.1	10.9	2.4	0.4	0.2	0.0	4.8	1.7		3.5	0.5	3.5
Queue Storage Ratio (*RQ*) (50 th percentile)	0.13	0.11	0.14	0.04	0.01	0.00	0.76	0.12		0.18	0.03	2.28
Uniform Delay (d_1), s/veh	7.9	14.2	10.2	11.2	0.0	0.0	68.0	64.1		69.7	65.8	69.0
Incremental Delay (d_2), s/veh	0.3	1.1	0.4	0.1	0.8	0.1	9.5	1.2		10.3	0.4	15.5
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Control Delay (*d*), s/veh	8.1	15.3	10.6	11.3	0.8	0.1	77.5	65.3		80.0	66.2	84.5
Level of Service (LOS)	A	B	B	B	A	A	E	E		E	E	F
Approach Delay, s/veh / LOS	14.2	B		1.1	A		74.2	E		81.0	F	
Intersection Delay, s/veh / LOS	15.5						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.01	B	2.36	B	3.17	C	3.20	C
Bicycle LOS Score / LOS	4.29	D	4.32	D	3.35	C	4.39	D

 $X_c = 0.58$

HCS7 Signalized Intersection Results Summary

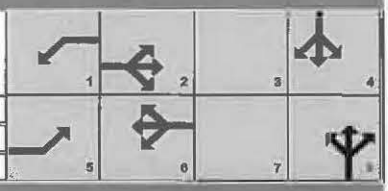
General Information				Intersection Information	
Agency	Town of Hilton Head Island, SC			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	am peak hour - existing conditions	PHF	0.94
Urban Street	William Hilton Parkway	Analysis Year	2018	Analysis Period	1> 8:00
Intersection	New Orleans Road	File Name	18402amex.xus		
Project Description	am peak hour - existing conditions				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	149	838	25	26	701	8	10	0	7	6	1	130

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	On

Green	4.1	2.8		100.1	15.8	4.2	0.0					
Yellow	3.5	0.0		4.5	3.2	3.2	0.0					
Red	2.5	0.0		1.5	2.3	2.3	0.0					



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	3.0	1.1	3.0		10.0		11.0
Phase Duration, s	12.9	108.8	10.1	106.1		9.7		21.3
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0		5.5		5.5
Max Allow Headway (*MAH*), s	3.5	0.0	3.5	0.0		4.5		4.4
Queue Clearance Time (g_s), s	6.6		2.7			2.9		15.4
Green Extension Time (g_e), s	0.3	0.0	0.0	0.0		0.0		0.5
Phase Call Probability	1.00		0.68			0.53		1.00
Max Out Probability	0.00		0.00			0.00		0.00

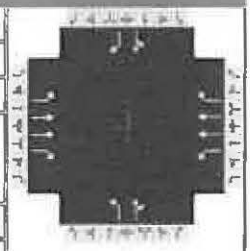
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	159	891	27	28	746	9	11	7			7	138
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1711	1660	1515	1781	1658	1449	1781	1535			1793	1522
Queue Service Time (g_s), s	4.6	0.0	0.0	0.7	14.5	0.3	0.9	0.7			0.6	13.4
Cycle Queue Clearance Time (g_c), s	4.6	0.0	0.0	0.7	14.5	0.3	0.9	0.7			0.6	13.4
Green Ratio (*g/C*)	0.71	0.69	0.69	0.69	0.67	0.67	0.03	0.03			0.11	0.11
Capacity (*c*), veh/h	518	2275	1038	513	2212	967	50	43			189	161
Volume-to-Capacity Ratio (*X*)	0.306	0.392	0.026	0.054	0.337	0.009	0.211	0.172			0.039	0.861
Back of Queue (*Q*), ft/ln (50 th percentile)	38	3.6	0.3	6.6	131.8	2.4	11.1	7.8			6.6	152.8
Back of Queue (*Q*), veh/ln (50 th percentile)	1.4	0.1	0.0	0.3	5.1	0.1	0.4	0.3			0.3	5.8
Queue Storage Ratio (*RQ*) (50 th percentile)	0.16	0.01	0.00	0.03	0.07	0.01	0.16	0.11			0.00	1.70
Uniform Delay (d_1), s/veh	7.5	0.0	0.0	7.1	10.7	8.4	71.2	71.2			60.3	66.0
Incremental Delay (d_2), s/veh	0.2	0.4	0.0	0.0	0.4	0.0	2.1	1.9			0.1	12.5
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Control Delay (*d*), s/veh	7.7	0.4	0.0	7.1	11.1	8.4	73.3	73.0			60.3	78.5
Level of Service (LOS)	A	A	A	A	B	A	E	E			E	E
Approach Delay, s/veh / LOS	1.5	A		10.9	B		73.2	E		77.6	E	
Intersection Delay, s/veh / LOS	11.3						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	1.99	B	2.16	B	2.90	C	2.98	C
Bicycle LOS Score / LOS	3.24	C	2.74	C	3.58	D	3.76	D

$X_c = 0.47$

HCS7 Signalized Intersection Results Summary

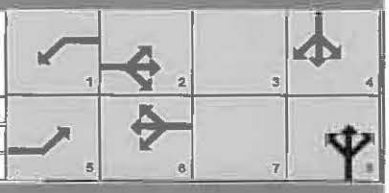
General Information				Intersection Information	
Agency	Town of Hilton Head Island, SC			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	pm peak hour - existing conditions	PHF	0.95
Urban Street	William Hilton Parkway	Analysis Year	2018	Analysis Period	1> 16:30
Intersection	New Orleans Road	File Name	18402pmex.xus		
Project Description	pm peak hour - existing conditions				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	216	1047	57	41	904	16	39	7	23	17	13	295

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	On

Green	5.0	4.9	90.3	32.2	0.0	0.0	
Yellow	3.5	0.0	4.5	3.2	0.0	0.0	
Red	2.5	0.0	1.5	2.3	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	3.0	1.1	3.0		6.0		7.0
Phase Duration, s	15.9	101.2	11.0	96.3		37.7		37.7
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0		5.5		5.5
Max Allow Headway (*MAH*), s	3.5	0.0	3.5	0.0		4.4		4.4
Queue Clearance Time (g_s), s	9.5		3.3			8.6		32.2
Green Extension Time (g_e), s	0.4	0.0	0.0	0.0		1.7		0.1
Phase Call Probability	1.00		0.83			1.00		1.00
Max Out Probability	0.00		0.00			0.00		1.00

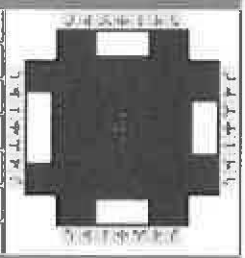
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	227	1102	60	43	952	17	41	32			32	311
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1711	1659	1508	1781	1661	1452	1400	1605			1530	1522
Queue Service Time (g_s), s	7.5	27.2	2.3	1.3	0.0	0.0	3.6	2.4			0.6	30.2
Cycle Queue Clearance Time (g_c), s	7.5	27.2	2.3	1.3	0.0	0.0	6.6	2.4			3.0	30.2
Green Ratio (*g/C*)	0.67	0.63	0.63	0.64	0.60	0.60	0.21	0.21			0.21	0.21
Capacity (*c*), veh/h	502	2108	958	333	2000	874	321	345			366	327
Volume-to-Capacity Ratio (*X*)	0.453	0.523	0.063	0.130	0.476	0.019	0.128	0.092			0.086	0.949
Back of Queue (*Q*), ft/ln (50 th percentile)	70.4	255.2	19.6	13	5.1	0.2	34.1	25.2			24.8	393.8
Back of Queue (*Q*), veh/ln (50 th percentile)	2.7	9.8	0.8	0.5	0.2	0.0	1.3	1.0			1.0	14.9
Queue Storage Ratio (*RQ*) (50 th percentile)	0.30	0.48	0.04	0.06	0.00	0.00	0.49	0.36			0.02	4.37
Uniform Delay (d_1), s/veh	9.2	15.0	10.4	12.1	0.0	0.0	50.1	47.1			47.2	58.1
Incremental Delay (d_2), s/veh	0.4	0.7	0.1	0.1	0.7	0.0	0.2	0.1			0.1	36.1
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0
Control Delay (*d*), s/veh	9.5	15.7	10.5	12.2	0.7	0.0	50.2	47.3			47.3	94.2
Level of Service (LOS)	A	B	B	B	A	A	D	D			D	F
Approach Delay, s/veh / LOS	14.5	B		1.2	A		48.9	D		89.9	F	
Intersection Delay, s/veh / LOS	19.7						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.02	B	2.26	B	3.03	C	3.18	C
Bicycle LOS Score / LOS	3.50	D	2.93	C	3.67	D	4.08	D

 $X_c = 0.70$

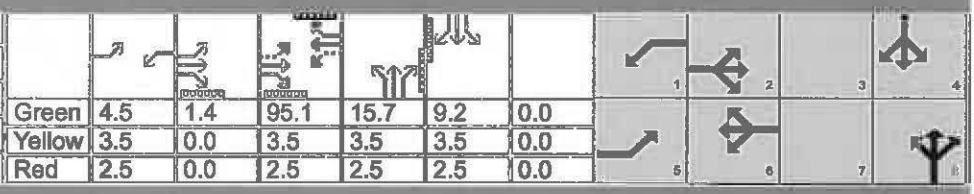
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Town of Hilton Head Island			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	am peak hour	PHF	0.95
Urban Street	William Hilton Parkway	Analysis Year	2018	Analysis Period	1> 8:00
Intersection	Arrow Road	File Name	18403amex.xus		
Project Description	am peak hour - existing conditions				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	93	682	139	31	569	32	153	82	29	20	26	32

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	Off



	EB		WB			NB			SB		
Green	4.5	1.4	95.1	15.7	9.2	0.0					
Yellow	3.5	0.0	3.5	3.5	3.5	0.0					
Red	2.5	0.0	2.5	2.5	2.5	0.0					

Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	3.0	1.1	4.0		10.0		9.0
Phase Duration, s	11.9	102.6	10.5	101.1		21.7		15.2
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0		6.0		6.0
Max Allow Headway (MAH), s	3.6	0.0	3.6	0.0		4.2		4.4
Queue Clearance Time (g_s), s	5.0		3.0			11.6		5.4
Green Extension Time (g_e), s	0.1	0.0	0.0	0.0		0.6		0.1
Phase Call Probability	0.98		0.74			1.00		0.97
Max Out Probability	0.00		0.00			0.26		0.00

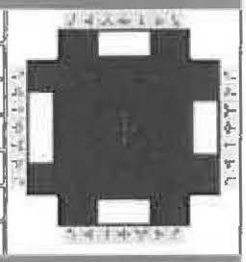
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (v), veh/h	98	718	146	33	296	337	161	117		21	27	34
Adjusted Saturation Flow Rate (s), veh/h/ln	1739	1660	1522	1739	1569	1785	1558	1754		1669	1719	1431
Queue Service Time (g_s), s	3.0	0.0	0.0	1.0	12.7	12.8	7.3	9.6		1.8	2.3	3.4
Cycle Queue Clearance Time (g_c), s	3.0	0.0	0.0	1.0	12.7	12.8	7.3	9.6		1.8	2.3	3.4
Green Ratio (g/C)	0.67	0.64	0.64	0.66	0.63	0.63	0.10	0.10		0.06	0.06	0.06
Capacity (c), veh/h	542	2138	980	551	995	1132	326	184		103	106	88
Volume-to-Capacity Ratio (X)	0.181	0.336	0.149	0.059	0.297	0.298	0.493	0.636		0.205	0.258	0.382
Back of Queue (Q), ft/ln (50 th percentile)	27.8	3.1	2.2	9.5	120.3	131.2	78.5	120.5		20.9	27.7	34.4
Back of Queue (Q), veh/ln (50 th percentile)	1.1	0.1	0.1	0.4	4.6	5.2	3.0	4.6		0.8	1.1	1.3
Queue Storage Ratio (RQ) (50 th percentile)	0.21	0.00	0.01	0.04	0.14	0.16	0.54	0.62		0.08	0.10	0.27
Uniform Delay (d_1), s/veh	8.8	0.0	0.0	8.6	12.4	12.4	63.4	64.4		66.9	67.1	67.6
Incremental Delay (d_2), s/veh	0.1	0.4	0.3	0.0	0.8	0.7	1.2	5.0		1.0	1.3	2.7
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Control Delay (d), s/veh	9.0	0.4	0.3	8.7	13.1	13.0	64.5	69.4		67.9	68.4	70.3
Level of Service (LOS)	A	A	A	A	B	B	E	E		E	E	E
Approach Delay, s/veh / LOS	1.3	A		12.9	B		66.6	E		69.0	E	
Intersection Delay, s/veh / LOS	17.1						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.30	B	2.27	B	2.65	C	2.81	C
Bicycle LOS Score / LOS	3.35	C	3.27	C	2.81	C	2.38	B

$X_c = 0.42$

HCS7 Signalized Intersection Results Summary

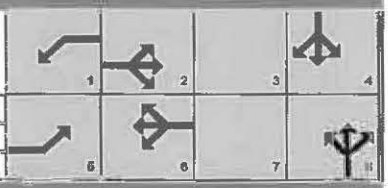
General Information				Intersection Information	
Agency	Town of Hilton Head Island			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	pm peak hour	PHF	0.98
Urban Street	William Hilton Parkway	Analysis Year	2018	Analysis Period	1> 16:30
Intersection	Arrow Road	File Name	18403pmex.xus		
Project Description	pm peak hour - existing conditions				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	147	703	221	79	736	26	184	73	23	84	135	70

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	Off

Green	5.8	1.3	90.8	13.3	14.7	0.0	
Yellow	3.5	0.0	3.5	3.5	3.5	0.0	
Red	2.5	0.0	2.5	2.5	2.5	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	5	2	1	6		8		4
Case Number	1.1	3.0	1.1	4.0		10.0		9.0
Phase Duration, s	13.1	98.1	11.8	96.8		19.3		20.7
Change Period, ($Y+R_c$), s	6.0	6.0	6.0	6.0		6.0		6.0
Max Allow Headway (*MAH*), s	3.6	0.0	3.6	0.0		4.2		4.3
Queue Clearance Time (g_s), s	6.9		4.6			10.8		13.8
Green Extension Time (g_e), s	0.2	0.0	0.1	0.0		0.7		0.2
Phase Call Probability	1.00		0.97			1.00		1.00
Max Out Probability	0.01		0.11			0.05		1.00

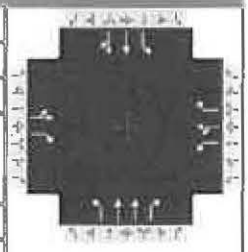
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	5	2	12	1	6	16	3	8	18	7	4	14
Adjusted Flow Rate (*v*), veh/h	150	717	226	81	366	411	188	98		86	138	71
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1739	1658	1487	1739	1604	1800	1558	1754		1669	1719	1431
Queue Service Time (g_s), s	4.9	16.0	10.3	2.6	17.5	17.5	8.8	8.1		7.3	11.8	7.1
Cycle Queue Clearance Time (g_c), s	4.9	16.0	10.3	2.6	17.5	17.5	8.8	8.1		7.3	11.8	7.1
Green Ratio (*g/C*)	0.65	0.61	0.61	0.64	0.61	0.61	0.09	0.09		0.10	0.10	0.10
Capacity (*c*), veh/h	461	2038	913	470	971	1090	277	156		164	169	140
Volume-to-Capacity Ratio (*X*)	0.325	0.352	0.247	0.172	0.377	0.377	0.677	0.628		0.523	0.817	0.509
Back of Queue (*Q*), ft/ln (50 th percentile)	49.1	157.1	94.6	26.1	172.4	185.2	95.4	100.7		85.1	166.1	71.1
Back of Queue (*Q*), veh/ln (50 th percentile)	1.9	6.0	3.6	1.0	6.6	7.4	3.6	3.8		3.3	6.3	2.7
Queue Storage Ratio (*RQ*) (50 th percentile)	0.38	0.08	0.59	0.10	0.20	0.22	0.66	0.52		0.31	0.60	0.57
Uniform Delay (d_1), s/veh	11.2	14.2	13.2	11.0	15.1	15.1	66.2	65.9		64.3	66.3	64.2
Incremental Delay (d_2), s/veh	0.3	0.4	0.5	0.1	1.1	1.0	2.9	4.1		2.6	22.8	2.8
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Control Delay (*d*), s/veh	11.5	14.6	13.7	11.1	16.2	16.1	69.1	70.0		66.9	89.1	67.0
Level of Service (LOS)	B	B	B	B	B	B	E	E		E	F	E
Approach Delay, s/veh / LOS	14.0	B		15.7	B		69.4	E		77.3	E	
Intersection Delay, s/veh / LOS	28.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.38	B	2.34	B	2.71	C	2.88	C
Bicycle LOS Score / LOS	3.46	C	3.43	C	2.83	C	2.73	C

$X_c = 0.53$

HCS7 Signalized Intersection Results Summary

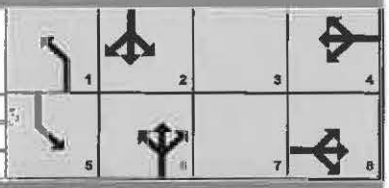
General Information				Intersection Information	
Agency	Town of Hilton Head Island, SC			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	am peak hour - existing conditions	PHF	0.90
Urban Street	Pope Avenue	Analysis Year	2018	Analysis Period	1> 8:00
Intersection	New Orleans Road / Offi...	File Name	18501amex.xus		
Project Description	am peak hour - existing conditions				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	11	26	53	177	27	23	74	609	143	49	798	21

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	Off
Force Mode	Float	Simult. Gap N/S	On

Green	5.4	0.4	91.0	17.8	9.1	0.0	
Yellow	3.5	0.0	3.5	3.5	3.5	0.0	
Red	2.5	0.0	2.8	3.5	3.5	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4	1	6	5	2
Case Number		11.0		9.0	1.1	3.0	1.1	4.0
Phase Duration, s		16.1		24.8	11.8	97.7	11.4	97.3
Change Period, ($Y+R_c$), s		7.0		7.0	6.0	6.3	6.0	6.3
Max Allow Headway (*MAH*), s		4.3		4.2	3.6	0.0	3.6	0.0
Queue Clearance Time (g_s), s		7.7		12.4	4.6		3.8	
Green Extension Time (g_e), s		0.2		0.8	0.1	0.0	0.1	0.0
Phase Call Probability		0.98		1.00	0.97		0.90	
Max Out Probability		0.03		0.00	0.01		0.00	

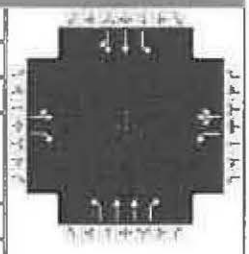
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h		41	59	102	124	26	82	677	159	54	430	480
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1799	1503	1669	1707	1501	1739	1660	1609	1669	1619	1810
Queue Service Time (g_s), s		3.3	5.7	8.6	10.4	2.3	2.6	15.0	6.4	1.8	21.3	21.3
Cycle Queue Clearance Time (g_c), s		3.3	5.7	8.6	10.4	2.3	2.6	15.0	6.4	1.8	21.3	21.3
Green Ratio (*g/C*)		0.06	0.06	0.12	0.12	0.12	0.65	0.61	0.61	0.64	0.61	0.61
Capacity (*c*), veh/h		109	91	198	203	178	393	2022	980	462	982	1098
Volume-to-Capacity Ratio (*X*)		0.377	0.646	0.515	0.613	0.143	0.209	0.335	0.162	0.118	0.438	0.438
Back of Queue (*Q*), ft/ln (50 th percentile)		41.4	62.7	98.8	122.3	23.3	26.5	148	62.3	17.5	212.4	227.2
Back of Queue (*Q*), veh/ln (50 th percentile)		1.6	2.4	3.8	4.7	0.9	1.0	5.7	2.4	0.7	8.2	9.1
Queue Storage Ratio (*RQ*) (50 th percentile)		0.03	0.70	0.45	0.10	0.10	0.14	0.06	0.31	0.15	0.33	0.37
Uniform Delay (d_1), s/veh		67.7	68.9	62.0	62.8	59.2	11.7	14.4	12.7	10.9	15.8	15.8
Incremental Delay (d_2), s/veh		2.1	7.5	2.1	3.0	0.4	0.1	0.3	0.3	0.1	1.4	1.3
Initial Queue Delay (d_3), s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh		69.9	76.3	64.1	65.8	59.6	11.8	14.7	13.0	11.0	17.2	17.1
Level of Service (LOS)		E	E	E	E	E	B	B	B	B	B	B
Approach Delay, s/veh / LOS	73.7	E		64.5	E		14.1	B		16.8	B	
Intersection Delay, s/veh / LOS	23.6						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.87	C	2.71	C	2.46	B	2.08	B
Bicycle LOS Score / LOS	3.39	C	3.44	C	3.39	C	3.21	C

 $X_c = 0.44$

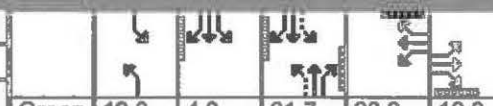
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Town of Hilton Head Island, SC			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	am peak hour - June Conditions U/C	PHF	0.90
Urban Street	Pope Avenue	Analysis Year	2018	Analysis Period	1> 8:00
Intersection	New Orleans Road / Offi...	File Name	18501amJune.xus		
Project Description	am peak hour - June Conditions U/C				

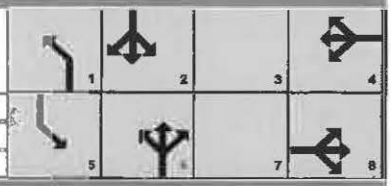


Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	11	26	53	177	27	23	74	609	143	49	798	21

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	Off
Force Mode	Float	Simult. Gap N/S	On



Green	12.0	4.0	61.7	28.0	18.0	0.0	
Yellow	3.5	0.0	3.5	3.5	3.5	0.0	
Red	2.5	0.0	2.8	3.5	3.5	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4	1	6	5	2
Case Number		11.0		10.0	1.1	3.0	1.1	4.0
Phase Duration, s		25.0		35.0	18.0	68.0	22.0	72.0
Change Period, ($Y+R_c$), s		7.0		7.0	6.0	6.3	6.0	6.3
Max Allow Headway (*MAH*), s		4.5		4.3	3.6	0.0	3.6	0.0
Queue Clearance Time (g_s), s		9.3		15.6	5.8		4.5	
Green Extension Time (g_e), s		0.2		0.7	0.1	0.0	0.1	0.0
Phase Call Probability		1.00		1.00	1.00		1.00	
Max Out Probability		0.03		0.01	0.05		0.00	

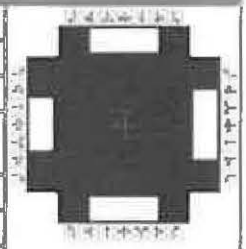
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h		41	59	102	150		82	677	159	54	435	475
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1544	1120	1538	1495		1728	1650	1685	1659	1650	1798
Queue Service Time (g_s), s		3.6	7.3	8.7	13.6		3.8	22.8	9.2	2.5	30.2	30.2
Cycle Queue Clearance Time (g_c), s		3.6	7.3	8.7	13.6		3.8	22.8	9.2	2.5	30.2	30.2
Green Ratio (*g/C*)		0.12	0.12	0.19	0.19		0.49	0.41	0.41	0.52	0.44	0.44
Capacity (*c*), veh/h		185	134	287	279		319	1357	693	409	722	788
Volume-to-Capacity Ratio (*X*)		0.222	0.438	0.356	0.537		0.258	0.499	0.229	0.133	0.603	0.603
Back of Queue (*Q*), ft/ln (50 th percentile)		40.8	64.3	95.4	148.9		43.7	241.5	100.5	26.7	331.6	345.9
Back of Queue (*Q*), veh/ln (50 th percentile)		1.6	2.5	3.7	5.7		1.7	9.3	3.9	1.0	12.8	13.8
Queue Storage Ratio (*RQ*) (50 th percentile)		0.03	0.71	0.43	0.12		0.23	0.10	0.50	0.22	0.52	0.56
Uniform Delay (d_1), s/veh		59.7	61.3	53.1	55.1		23.5	32.7	28.7	19.9	32.2	32.2
Incremental Delay (d_2), s/veh		2.8	10.0	3.4	7.2		1.4	1.0	0.6	0.7	3.7	3.4
Initial Queue Delay (d_3), s/veh		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh		62.4	71.3	56.6	62.4		24.9	33.7	29.3	20.6	35.9	35.6
Level of Service (LOS)		E	E	E	E		C	C	C	C	D	D
Approach Delay, s/veh / LOS	67.7	E		60.0	E		32.1	C		34.9	C	
Intersection Delay, s/veh / LOS	38.0						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.91	C	2.71	C	2.16	B	2.08	B
Bicycle LOS Score / LOS	3.39	C	3.44	C	3.39	C	3.21	C

 $X_c = 0.47$

HCS7 Signalized Intersection Results Summary

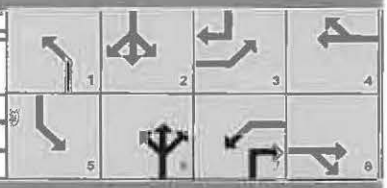
General Information				Intersection Information	
Agency	Town of Hilton Head Island, SC			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	am peak hour - Post Construction	PHF	0.90
Urban Street	Pope Avenue	Analysis Year	2018	Analysis Period	1> 8:00
Intersection	New Orleans Road / Offi...	File Name	18501amnew.xus		
Project Description	am peak hour - Post-Construction				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (v), veh/h	11	26	53	177	27	23	74	609	143	49	798	21

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	On

Green	5.4	0.4	92.4	2.4	3.5	15.5	
Yellow	3.5	0.0	3.5	3.5	3.5	3.2	
Red	2.5	0.0	2.5	2.5	2.5	3.3	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	3.0	2.0	3.0	1.1	3.0	1.1	3.0
Phase Duration, s	8.4	22.0	17.9	31.4	11.8	98.8	11.4	98.4
Change Period, ($Y+R_c$), s	6.0	6.5	6.0	6.5	6.0	6.0	6.0	6.0
Max Allow Headway (MAH), s	3.7	4.2	3.7	4.2	3.7	0.0	3.7	0.0
Queue Clearance Time (g_s), s	3.1	7.2	11.3	4.1	4.6		3.7	
Green Extension Time (g_e), s	0.0	0.2	0.6	0.3	0.1	0.0	0.1	0.0
Phase Call Probability	0.40	1.00	1.00	1.00	0.97		0.90	
Max Out Probability	0.00	0.02	0.00	0.00	0.01		0.00	

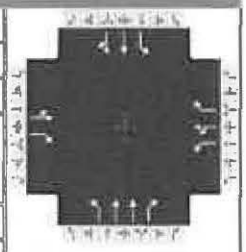
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (v), veh/h	12	29	59	197	30	26	82	677	159	54	887	23
Adjusted Saturation Flow Rate (s), veh/h/ln	1706	1826	1594	1557	1826	1595	1691	1660	1630	1691	1660	1630
Queue Service Time (g_s), s	1.1	2.2	5.2	9.3	2.1	2.0	2.6	14.7	4.9	1.7	21.0	0.8
Cycle Queue Clearance Time (g_c), s	1.1	2.2	5.2	9.3	2.1	2.0	2.6	14.7	4.9	1.7	21.0	0.8
Green Ratio (g/C)	0.02	0.10	0.10	0.08	0.17	0.17	0.65	0.62	0.70	0.65	0.62	0.63
Capacity (c), veh/h	27	188	164	247	304	265	404	2053	1138	486	2044	1030
Volume-to-Capacity Ratio (X)	0.448	0.154	0.358	0.797	0.099	0.096	0.203	0.330	0.140	0.112	0.434	0.023
Back of Queue (Q), ft/ln (50 th percentile)	13.8	26.8	56.3	100.8	25.6	21.8	25.6	143.8	44.8	16.9	208	7.8
Back of Queue (Q), veh/ln (50 th percentile)	0.5	1.0	2.2	3.9	1.0	0.8	1.0	5.5	1.7	0.6	8.0	0.3
Queue Storage Ratio (RQ) (50 th percentile)	0.06	0.02	0.27	0.56	0.02	0.11	0.12	0.06	0.17	0.08	0.32	0.04
Uniform Delay (d_1), s/veh	73.1	61.3	62.7	67.9	53.0	53.0	11.1	13.7	7.6	10.4	15.1	10.3
Incremental Delay (d_2), s/veh	8.3	0.4	1.3	4.4	0.1	0.2	0.1	0.3	0.2	0.1	0.7	0.0
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (d), s/veh	81.5	61.7	64.0	72.3	53.1	53.1	11.3	14.0	7.8	10.4	15.8	10.4
Level of Service (LOS)	F	E	E	E	D	D	B	B	A	B	B	B
Approach Delay, s/veh / LOS	65.4	E		68.1	E		12.7	B		15.4	B	
Intersection Delay, s/veh / LOS	22.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.87	C	2.80	C	2.47	B	2.27	B
Bicycle LOS Score / LOS	2.89	C	2.83	C	3.66	D	3.26	C

 $X_c = 0.43$

HCS7 Signalized Intersection Results Summary

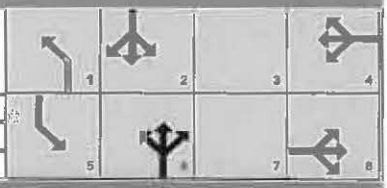
General Information				Intersection Information	
Agency	Town of Hilton Head Island, SC			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	pm peak hour - existing conditions	PHF	0.95
Urban Street	Pope Avenue	Analysis Year	2018	Analysis Period	1> 16:00
Intersection	New Orleans Road / Offi...	File Name	18501pmex.xus		
Project Description	pm peak hour - existing conditions				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	50	55	118	262	75	49	110	960	288	110	747	15

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	On

Green	6.9	0.2	77.2	22.3	17.2	0.0	
Yellow	3.5	0.0	3.5	3.5	3.5	0.0	
Red	2.5	0.0	2.8	3.5	3.5	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4	1	6	5	2
Case Number		11.0		9.0	1.1	3.0	1.1	4.0
Phase Duration, s		24.2		29.3	12.9	83.5	13.0	83.6
Change Period, ($Y+R_c$), s		7.0		7.0	6.0	6.3	6.0	6.3
Max Allow Headway (*MAH*), s		4.3		4.2	3.6	0.0	3.6	0.0
Queue Clearance Time (g_s), s		14.2		18.7	6.8		6.9	
Green Extension Time (g_e), s		0.6		1.1	0.2	0.0	0.2	0.0
Phase Call Probability		1.00		1.00	0.99		0.99	
Max Out Probability		0.02		0.04	0.00		0.00	

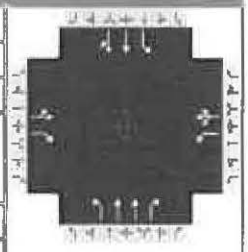
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h		111	124	154	200	52	116	1011	303	116	380	423
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1783	1482	1669	1731	1516	1739	1660	1587	1669	1628	1812
Queue Service Time (g_s), s		8.8	12.2	13.0	16.7	4.5	4.8	13.2	6.0	4.9	22.1	22.1
Cycle Queue Clearance Time (g_c), s		8.8	12.2	13.0	16.7	4.5	4.8	13.2	6.0	4.9	22.1	22.1
Green Ratio (*g/C*)		0.11	0.11	0.15	0.15	0.15	0.56	0.51	0.51	0.56	0.52	0.52
Capacity (*c*), veh/h		205	170	248	257	225	363	1708	816	349	839	934
Volume-to-Capacity Ratio (*X*)		0.540	0.731	0.623	0.780	0.229	0.319	0.592	0.371	0.331	0.452	0.452
Back of Queue (*Q*), ft/ln (50 th percentile)		107.4	127.5	148.8	206.4	46.1	47.8	78	46.4	50	230.5	245.6
Back of Queue (*Q*), veh/ln (50 th percentile)		4.1	4.9	5.7	7.9	1.8	1.8	3.0	1.8	1.9	8.9	9.8
Queue Storage Ratio (*RQ*) (50 th percentile)		0.07	1.42	0.68	0.17	0.20	0.25	0.03	0.23	0.42	0.36	0.40
Uniform Delay (d_1), s/veh		62.7	64.2	59.9	61.5	56.3	17.3	6.1	5.6	16.2	22.9	22.9
Incremental Delay (d_2), s/veh		2.2	6.3	2.6	7.8	0.5	0.2	0.9	0.8	0.4	1.8	1.6
Initial Queue Delay (d_3), s/veh		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh		64.9	70.4	62.5	69.3	56.8	17.5	7.0	6.4	16.6	24.7	24.5
Level of Service (LOS)		E	E	E	E	E	B	A	A	B	C	C
Approach Delay, s/veh / LOS	67.8	E		65.1	E		7.7	A		23.6	C	
Intersection Delay, s/veh / LOS	25.1						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.97	C	2.79	C	2.56	C	2.17	B
Bicycle LOS Score / LOS	3.61	D	3.70	D	3.81	D	3.17	C

 $X_c = 0.59$

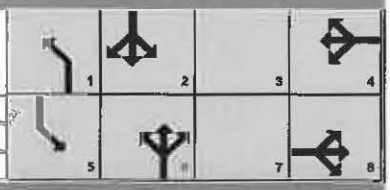
HCS7 Signalized Intersection Results Summary

General Information				Intersection Information	
Agency	Town of Hilton Head Island, SC			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	pm peak hour - June Conditions U/C	PHF	0.95
Urban Street	Pope Avenue	Analysis Year	2018	Analysis Period	1> 16:00
Intersection	New Orleans Road / Offi...	File Name	18501pmJune.xus		
Project Description	pm peak hour - June Conditions U/C				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	50	55	118	262	75	49	110	960	288	110	747	15

Signal Information					EB			WB			NB			SB		
Cycle, s	150.0	Reference Phase	2													
Offset, s	0	Reference Point	End	Green	12.0	1.0		59.7	28.0	17.0	0.0					
Uncoordinated	No	Simult. Gap E/W	Off	Yellow	3.5	3.5		3.5	3.5	3.5	0.0					
Force Mode	Float	Simult. Gap N/S	On	Red	2.5	2.5		2.8	3.5	3.5	0.0					



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4	1	6	5	2
Case Number		11.0		10.0	1.1	3.0	1.1	4.0
Phase Duration, s		24.0		35.0	18.0	66.0	25.0	73.0
Change Period, ($Y+R_c$), s		7.0		7.0	6.0	6.3	6.0	6.3
Max Allow Headway (*MAH*), s		4.5		4.3	3.6	0.0	3.6	0.0
Queue Clearance Time (g_s), s		19.0		26.7	7.6		7.2	
Green Extension Time (g_e), s		0.0		0.2	0.1	0.0	0.2	0.0
Phase Call Probability		1.00		1.00	1.00		1.00	
Max Out Probability		1.00		1.00	0.42		0.00	

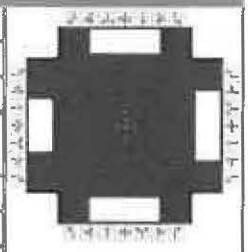
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h		111	124	154	252		116	1011	303	116	380	422
Adjusted Saturation Flow Rate (*s*), veh/h/ln		1530	1095	1538	1495		1728	1638	1644	1659	1618	1800
Queue Service Time (g_s), s		10.4	17.0	13.6	24.7		5.6	32.1	13.4	5.2	25.5	25.5
Cycle Queue Clearance Time (g_c), s		10.4	17.0	13.6	24.7		5.6	32.1	13.4	5.2	25.5	25.5
Green Ratio (*g/C*)		0.11	0.11	0.19	0.19		0.48	0.40	0.40	0.54	0.44	0.44
Capacity (*c*), veh/h		173	124	287	279		358	1303	654	354	719	800
Volume-to-Capacity Ratio (*X*)		0.637	1.001	0.538	0.902		0.323	0.775	0.463	0.327	0.528	0.528
Back of Queue (*Q*), ft/ln (50 th percentile)		126.2	196.5	153	312.1		59.9	251.9	114.5	58.3	272.6	290.2
Back of Queue (*Q*), veh/ln (50 th percentile)		4.9	7.6	5.9	12.0		2.3	9.7	4.4	2.2	10.5	11.6
Queue Storage Ratio (*RQ*) (50 th percentile)		0.08	2.18	0.70	0.26		0.32	0.10	0.57	0.49	0.43	0.47
Uniform Delay (d_1), s/veh		63.6	66.5	55.2	59.7		22.2	20.6	17.5	22.2	30.2	30.2
Incremental Delay (d_2), s/veh		16.6	81.2	7.1	33.7		1.4	2.7	1.4	2.5	2.8	2.5
Initial Queue Delay (d_3), s/veh		0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh		80.1	147.7	62.2	93.4		23.6	23.3	18.9	24.6	33.0	32.7
Level of Service (LOS)		F	F	E	F		C	C	B	C	C	C
Approach Delay, s/veh / LOS	115.9	F		81.5	F		22.4	C		31.8	C	
Intersection Delay, s/veh / LOS	40.7						D					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.02	C	2.79	C	2.31	B	2.16	B
Bicycle LOS Score / LOS	3.61	D	3.70	D	3.81	D	3.17	C

 $X_c = 0.66$

HCS7 Signalized Intersection Results Summary

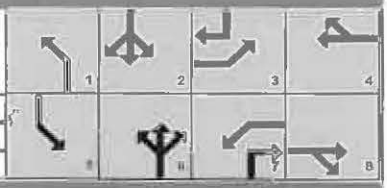
General Information				Intersection Information	
Agency	Town of Hilton Head Island, SC			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	pm peak hour - Post Construction	PHF	0.95
Urban Street	Pope Avenue	Analysis Year	2018	Analysis Period	1> 16:00
Intersection	New Orleans Road / Offi...	File Name	18501pmnew.xus		
Project Description	pm peak hour - Post Constuction				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	50	55	118	262	75	49	110	960	288	110	747	15

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	On

Green	6.4	86.2	5.9	4.6	16.4	0.0	
Yellow	3.5	3.5	3.5	3.5	3.2	0.0	
Red	2.5	2.5	2.5	2.5	3.3	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase	3	8	7	4	1	6	5	2
Case Number	2.0	3.0	2.0	3.0	1.1	3.0	1.1	3.0
Phase Duration, s	11.9	22.9	22.6	33.5	12.4	92.2	12.3	92.2
Change Period, ($Y+R_c$), s	6.0	6.5	6.0	6.5	6.0	6.0	6.0	6.0
Max Allow Headway (*MAH*), s	3.7	4.3	3.7	4.3	3.7	0.0	3.7	0.0
Queue Clearance Time (g_s), s	6.6	13.6	15.8	7.6	6.3		6.2	
Green Extension Time (g_e), s	0.1	0.2	0.8	0.8	0.1	0.0	0.2	0.0
Phase Call Probability	0.89	1.00	1.00	1.00	0.99		0.99	
Max Out Probability	0.00	1.00	0.00	0.09	0.12		0.00	

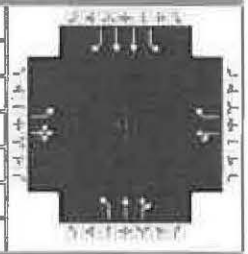
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h	53	58	124	276	79	52	116	1011	303	116	786	16
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1706	1826	1558	1471	1826	1603	1691	1647	1592	1691	1659	1589
Queue Service Time (g_s), s	4.6	4.4	11.6	13.8	5.6	4.1	4.3	4.0	1.3	4.2	19.8	0.6
Cycle Queue Clearance Time (g_c), s	4.6	4.4	11.6	13.8	5.6	4.1	4.3	4.0	1.3	4.2	19.8	0.6
Green Ratio (*g/C*)	0.04	0.11	0.11	0.11	0.18	0.18	0.62	0.57	0.69	0.62	0.57	0.61
Capacity (*c*), veh/h	68	199	170	325	329	289	417	1894	1096	411	1907	977
Volume-to-Capacity Ratio (*X*)	0.779	0.291	0.731	0.848	0.240	0.179	0.278	0.534	0.277	0.282	0.412	0.016
Back of Queue (*Q*), ft/ln (50 th percentile)	58.9	54.4	138	140.7	67.9	43.9	40.6	23.9	10.9	42.2	200.5	5.6
Back of Queue (*Q*), veh/ln (50 th percentile)	2.3	2.1	5.3	5.4	2.6	1.7	1.6	0.9	0.4	1.6	7.7	0.2
Queue Storage Ratio (*RQ*) (50 th percentile)	0.26	0.04	0.66	0.78	0.05	0.23	0.19	0.01	0.04	0.19	0.31	0.03
Uniform Delay (d_1), s/veh	71.4	61.5	64.7	65.5	52.7	52.1	13.0	1.4	0.8	12.0	17.8	11.3
Incremental Delay (d_2), s/veh	13.3	0.8	14.6	4.6	0.4	0.3	0.2	0.6	0.4	0.3	0.7	0.0
Initial Queue Delay (d_3), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	84.7	62.3	79.3	70.1	53.1	52.4	13.2	2.1	1.1	12.2	18.5	11.3
Level of Service (LOS)	F	E	E	E	D	D	B	A	A	B	B	B
Approach Delay, s/veh / LOS	76.3	E		64.5	E		2.8	A		17.5	B	
Intersection Delay, s/veh / LOS	21.5						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.97	C	2.86	C	2.55	C	2.32	B
Bicycle LOS Score / LOS	3.11	C	3.09	C	4.09	D	3.22	C

$X_c = 0.58$

HCS7 Signalized Intersection Results Summary

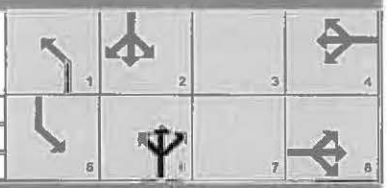
General Information				Intersection Information	
Agency	Town of Hilton Head Island			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	am peak hour	PHF	0.90
Urban Street	Pope Avenue	Analysis Year	2018	Analysis Period	1> 8:00
Intersection	Cordillo Parkway	File Name	18502amex.xus		
Project Description	am peak hour - existing conditions				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	340	16	35	32	18	58	19	393	35	33	472	386

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	On

Green	3.5	1.2	86.6	23.5	11.7	0.0	
Yellow	3.5	0.0	3.5	3.5	3.5	0.0	
Red	2.5	0.0	2.0	2.5	2.5	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4	1	6	5	2
Case Number		10.0		11.0	1.1	4.0	1.1	3.0
Phase Duration, s		29.5		17.7	9.5	92.1	10.7	93.3
Change Period, ($Y+R_c$), s		6.0		6.0	6.0	5.5	6.0	5.5
Max Allow Headway (*MAH*), s		4.2		4.5	3.6	0.0	3.6	0.0
Queue Clearance Time (g_s), s		22.1		8.8	2.7		3.3	
Green Extension Time (g_e), s		1.2		0.3	0.0	0.0	0.1	0.0
Phase Call Probability		1.00		0.99	0.59		0.78	
Max Out Probability		0.09		0.00	0.00		0.00	

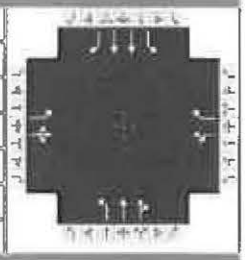
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h	238	196			56	64	21	220	256	37	524	429
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1739	1705			1699	1381	1739	1527	1760	1739	1657	1466
Queue Service Time (g_s), s	20.1	16.5			4.7	6.8	0.7	10.7	10.8	1.3	0.8	2.1
Cycle Queue Clearance Time (g_c), s	20.1	16.5			4.7	6.8	0.7	10.7	10.8	1.3	0.8	2.1
Green Ratio (*g/C*)	0.16	0.16			0.08	0.08	0.60	0.58	0.58	0.61	0.59	0.59
Capacity (*c*), veh/h	272	267			133	108	574	882	1016	556	1940	858
Volume-to-Capacity Ratio (*X*)	0.875	0.737			0.418	0.596	0.037	0.249	0.252	0.066	0.270	0.500
Back of Queue (*Q*), ft/ln (50 th percentile)	260.8	194.7			55.4	66.8	7.6	101	112.6	12.6	7.6	19.3
Back of Queue (*Q*), veh/ln (50 th percentile)	10.0	7.5			2.1	2.6	0.3	3.9	4.5	0.5	0.3	0.7
Queue Storage Ratio (*RQ*) (50 th percentile)	1.80	0.13			0.11	0.13	0.05	0.06	0.07	0.08	0.00	0.10
Uniform Delay (d_1), s/veh	61.8	60.3			65.9	66.8	12.1	15.6	15.7	11.9	0.8	0.8
Incremental Delay (d_2), s/veh	15.9	5.0			2.1	5.2	0.0	0.7	0.6	0.0	0.3	1.6
Initial Queue Delay (d_3), s/veh	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	77.7	65.4			68.0	72.0	12.1	16.3	16.3	11.9	1.0	2.4
Level of Service (LOS)	E	E			E	E	B	B	B	B	A	A
Approach Delay, s/veh / LOS	72.1	E		70.1	E		16.1	B		2.0	A	
Intersection Delay, s/veh / LOS	24.4						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.57	C	2.83	C	2.23	B	2.32	B
Bicycle LOS Score / LOS	3.93	D	3.84	D	3.51	D	3.23	C

$X_c = 0.51$

HCS7 Signalized Intersection Results Summary

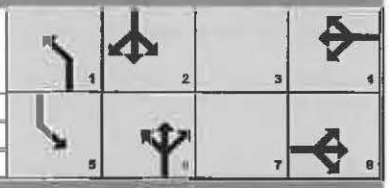
General Information				Intersection Information	
Agency	Town of Hilton Head Island			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	pm peak hour	PHF	0.92
Urban Street	Pope Avenue	Analysis Year	2018	Analysis Period	1> 16:00
Intersection	Cordillo Parkway	File Name	18502pmex.xus		
Project Description	pm peak hour - existing conditions				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	375	18	45	32	16	44	49	893	48	73	681	306

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	Off
Force Mode	Fixed	Simult. Gap N/S	On

Green	5.3	0.4	77.1	31.0	12.7	0.0	
Yellow	3.5	0.0	3.5	3.5	3.5	0.0	
Red	2.5	0.0	2.0	2.5	2.5	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4	1	6	5	2
Case Number		10.0		11.0	1.1	4.0	1.1	3.0
Phase Duration, s		37.0		18.7	11.3	82.6	11.8	83.0
Change Period, ($Y+R_c$), s		6.0		6.0	6.0	5.5	6.0	5.5
Max Allow Headway (*MAH*), s		4.2		4.5	3.6	0.0	3.6	0.0
Queue Clearance Time (g_s), s		24.6		7.2	4.1		5.2	
Green Extension Time (g_e), s		1.1		0.2	0.1	0.0	0.1	0.0
Phase Call Probability		1.00		0.98	0.89		0.96	
Max Out Probability		0.28		0.01	0.00		0.00	

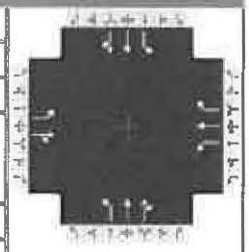
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h	277	199			52	48	53	479	544	79	740	333
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1739	1690			1696	1310	1739	1574	1786	1739	1658	1477
Queue Service Time (g_s), s	22.6	15.9			4.4	5.2	2.1	31.9	31.9	3.2	20.8	21.1
Cycle Queue Clearance Time (g_c), s	22.6	15.9			4.4	5.2	2.1	31.9	31.9	3.2	20.8	21.1
Green Ratio (*g/C*)	0.21	0.21			0.08	0.08	0.55	0.51	0.51	0.55	0.52	0.52
Capacity (*c*), veh/h	359	349			143	111	366	809	918	277	1713	763
Volume-to-Capacity Ratio (*X*)	0.771	0.569			0.364	0.432	0.146	0.593	0.593	0.287	0.432	0.436
Back of Queue (*Q*), ft/ln (50 th percentile)	280.9	180.5			51.3	2.1	22.7	325.9	353.2	34.1	214.5	197.1
Back of Queue (*Q*), veh/ln (50 th percentile)	10.8	6.9			2.0	0.1	0.9	12.5	14.1	1.3	8.3	7.6
Queue Storage Ratio (*RQ*) (50 th percentile)	1.94	0.12			0.10	0.00	0.14	0.19	0.22	0.22	0.09	1.01
Uniform Delay (d_1), s/veh	56.2	53.5			64.9	65.3	17.5	25.5	25.5	19.7	22.6	22.6
Incremental Delay (d_2), s/veh	9.3	2.0			1.5	2.7	0.1	3.2	2.8	0.3	0.5	1.2
Initial Queue Delay (d_3), s/veh	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	65.5	55.5			66.4	67.9	17.7	28.7	28.3	20.0	23.1	23.9
Level of Service (LOS)	E	E			E	E	B	C	C	C	C	C
Approach Delay, s/veh / LOS	61.3	E		67.1	E		27.9	C		23.1	C	
Intersection Delay, s/veh / LOS	33.0						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.76	C	2.97	C	2.25	B	2.33	B
Bicycle LOS Score / LOS	4.00	D	3.81	D	3.99	D	3.37	C

$X_c = 0.55$

HCS7 Signalized Intersection Results Summary

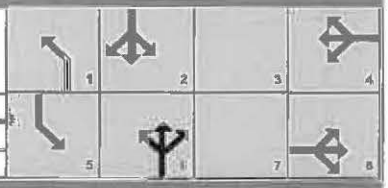
General Information				Intersection Information	
Agency	Town of Hilton Head Island			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	am peak hour - existing conditions	PHF	0.95
Urban Street	Palmetto Bay Road	Analysis Year	2018	Analysis Period	1> 8:00
Intersection	Target Road	File Name	18161amex.xus		
Project Description	am peak hour - existing conditions				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	67	33	45	67	30	54	89	578	36	76	1080	47

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	On

Green	5.9	108.5	18.1	0.0	0.0	0.0	
Yellow	3.5	3.5	3.2	0.0	0.0	0.0	
Red	2.5	2.0	2.8	0.0	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4	1	6	5	2
Case Number		6.0		5.0	1.1	4.0	1.1	4.0
Phase Duration, s		24.1		24.1	11.9	114.1	11.8	114.0
Change Period, ($Y+R_c$), s		6.0		6.0	6.0	5.5	6.0	5.5
Max Allow Headway (*MAH*), s		4.4		4.4	3.6	0.0	3.6	0.0
Queue Clearance Time (g_s), s		11.8		17.1	4.1		3.8	
Green Extension Time (g_e), s		1.1		0.9	0.1	0.0	0.1	0.0
Phase Call Probability		1.00		1.00	0.98		0.96	
Max Out Probability		0.00		0.02	0.00		0.00	

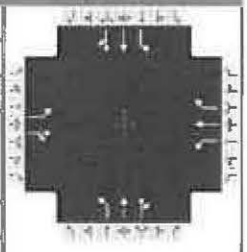
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h	71	82		71	32	57	94	301	345	80	556	630
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1323	1632		1262	1796	1522	1711	1561	1786	1711	1590	1800
Queue Service Time (g_s), s	7.6	7.0		8.2	2.4	5.1	2.1	9.9	9.9	1.8	3.5	3.5
Cycle Queue Clearance Time (g_c), s	9.8	7.0		15.1	2.4	5.1	2.1	9.9	9.9	1.8	3.5	3.5
Green Ratio (*g/C*)	0.12	0.12		0.12	0.12	0.12	0.76	0.72	0.72	0.76	0.72	0.72
Capacity (*c*), veh/h	188	197		142	217	184	432	1130	1293	599	1150	1302
Volume-to-Capacity Ratio (*X*)	0.376	0.416		0.495	0.145	0.309	0.217	0.266	0.267	0.134	0.484	0.484
Back of Queue (*Q*), ft/ln (50 th percentile)	70.2	80.1		73.1	29.1	53.8	18.3	86.3	94.5	15.1	28.6	29.6
Back of Queue (*Q*), veh/ln (50 th percentile)	2.7	3.0		2.8	1.1	2.0	0.7	3.3	3.8	0.6	1.1	1.2
Queue Storage Ratio (*RQ*) (50 th percentile)	0.70	0.25		0.46	0.04	0.36	0.20	0.13	0.15	0.07	0.01	0.01
Uniform Delay (d_1), s/veh	63.4	61.0		68.0	59.0	60.2	4.5	7.1	7.1	4.9	0.8	0.8
Incremental Delay (d_2), s/veh	1.2	1.4		2.6	0.3	0.9	0.2	0.6	0.5	0.1	1.5	1.3
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	64.6	62.4		70.6	59.3	61.2	4.7	7.7	7.6	5.0	2.3	2.1
Level of Service (LOS)	E	E		E	E	E	A	A	A	A	A	A
Approach Delay, s/veh / LOS	63.4	E		65.0	E		7.3	A		2.3	A	
Intersection Delay, s/veh / LOS	12.2						B					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.87	C	2.87	C	2.29	B	1.99	B
Bicycle LOS Score / LOS	3.13	C	3.23	C	3.03	C	3.28	C

 $X_c = 0.48$

HCS7 Signalized Intersection Results Summary

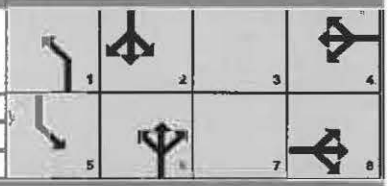
General Information				Intersection Information	
Agency	Town of Hilton Head Island			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	pm peak hour - existing conditions	PHF	0.99
Urban Street	Palmetto Bay Road	Analysis Year	2018	Analysis Period	1> 16:00
Intersection	Target Road	File Name	18161pmex.xus		
Project Description	pm peak hour - existing conditions				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	168	69	83	68	54	93	135	1054	45	46	881	49

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	On

	EB			WB			NB			SB		
Green	5.1	0.9		99.8	26.7	0.0	0.0					
Yellow	3.5	0.0		3.5	3.2	0.0	0.0					
Red	2.5	0.0		2.0	2.8	0.0	0.0					



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4	1	6	5	2
Case Number		6.0		5.0	1.1	4.0	1.1	4.0
Phase Duration, s		32.7		32.7	12.0	106.2	11.1	105.3
Change Period, ($Y+R_c$), s		6.0		6.0	6.0	5.5	6.0	5.5
Max Allow Headway (*MAH*), s		4.5		4.5	3.6	0.0	3.6	0.0
Queue Clearance Time (g_s), s		25.0		23.0	5.8		3.3	
Green Extension Time (g_e), s		1.7		1.8	0.2	0.0	0.0	0.0
Phase Call Probability		1.00		1.00	1.00		0.86	
Max Out Probability		0.16		0.09	0.00		0.00	

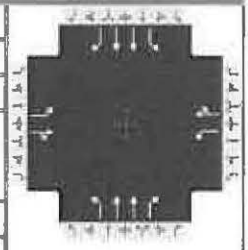
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h	170	154		69	55	94	136	522	588	46	439	500
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1296	1645		1182	1796	1522	1711	1593	1796	1711	1574	1794
Queue Service Time (g_s), s	19.2	12.7		8.4	3.9	8.1	3.8	24.0	24.0	1.3	19.4	19.4
Cycle Queue Clearance Time (g_c), s	23.0	12.7		21.0	3.9	8.1	3.8	24.0	24.0	1.3	19.4	19.4
Green Ratio (*g/C*)	0.18	0.18		0.18	0.18	0.18	0.71	0.67	0.67	0.70	0.67	0.67
Capacity (*c*), veh/h	246	293		159	320	271	423	1069	1205	349	1047	1193
Volume-to-Capacity Ratio (*X*)	0.691	0.524		0.433	0.171	0.347	0.322	0.488	0.488	0.133	0.419	0.419
Back of Queue (*Q*), ft/ln (50 th percentile)	177.2	145.3		69.3	47.2	84.4	36.7	226.3	243.9	12.1	181.2	197.3
Back of Queue (*Q*), veh/ln (50 th percentile)	6.7	5.5		2.6	1.8	3.2	1.4	8.7	9.8	0.5	7.0	7.9
Queue Storage Ratio (*RQ*) (50 th percentile)	1.77	0.45		0.43	0.06	0.56	0.41	0.34	0.38	0.06	0.07	0.08
Uniform Delay (d_1), s/veh	62.0	55.9		65.4	52.3	54.0	8.7	12.1	12.1	9.3	11.7	11.7
Incremental Delay (d_2), s/veh	4.3	1.5		1.9	0.3	0.8	0.3	1.6	1.4	0.1	1.2	1.1
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	66.3	57.4		67.3	52.5	54.8	9.1	13.7	13.5	9.4	12.9	12.7
Level of Service (LOS)	E	E		E	D	D	A	B	B	A	B	B
Approach Delay, s/veh / LOS	62.1	E		58.2	E		13.1	B		12.7	B	
Intersection Delay, s/veh / LOS	22.2						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	2.94	C	3.08	C	2.28	B	2.08	B
Bicycle LOS Score / LOS	3.41	C	3.33	C	3.44	C	3.05	C

 $X_c = 0.56$ HCS™ Streets Version 7.6 Generated: 11/13/2018 12:24:57 PM

HCS7 Signalized Intersection Results Summary

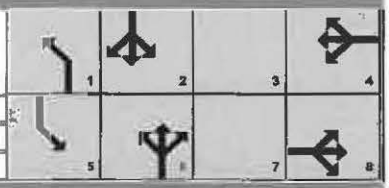
General Information				Intersection Information	
Agency	Town of Hilton Head Island			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	am peak hour - existing conditions	PHF	0.96
Urban Street	Palmetto Bay Road	Analysis Year	2018	Analysis Period	1> 7:45
Intersection	Arrow Road / Point Com...	File Name	18162amex.xus		
Project Description	am peak hour - existing conditions				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	83	29	143	31	15	87	49	453	58	169	1185	42

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	On

Green	5.3	1.8	101.5	23.4	0.0	0.0	
Yellow	3.5	0.0	4.5	3.5	0.0	0.0	
Red	2.5	0.0	1.7	2.3	0.0	0.0	



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4	1	6	5	2
Case Number		6.0		6.0	1.1	3.0	1.1	3.0
Phase Duration, s		29.2		29.2	11.3	107.7	13.0	109.5
Change Period, ($Y+R_c$), s		5.8		5.8	6.0	6.2	6.0	6.2
Max Allow Headway (*MAH*), s		4.4		4.4	3.5	0.0	3.5	0.0
Queue Clearance Time (g_s), s		21.1		22.5	3.3		6.8	
Green Extension Time (g_e), s		1.0		0.9	0.0	0.0	0.3	0.0
Phase Call Probability		1.00		1.00	0.88		1.00	
Max Out Probability		0.20		0.37	0.00		0.00	

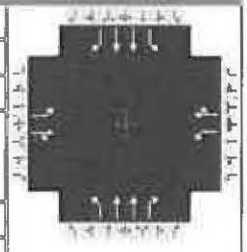
Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h	86	179		32	106		51	472	60	176	1234	44
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1267	1557		1157	1571		1753	1661	1522	1711	1659	1560
Queue Service Time (g_s), s	9.9	16.5		4.1	9.2		1.3	8.0	2.0	4.8	27.7	1.3
Cycle Queue Clearance Time (g_c), s	19.1	16.5		20.5	9.2		1.3	8.0	2.0	4.8	27.7	1.3
Green Ratio (*g/C*)	0.16	0.16		0.16	0.16		0.71	0.68	0.68	0.72	0.69	0.69
Capacity (*c*), veh/h	169	243		102	245		327	2248	1030	680	2285	1074
Volume-to-Capacity Ratio (*X*)	0.512	0.736		0.316	0.433		0.156	0.210	0.059	0.259	0.540	0.041
Back of Queue (*Q*), ft/ln (50 th percentile)	85.7	183.8		33.4	98.5		11.8	72.4	17.3	41.7	248.3	11.5
Back of Queue (*Q*), veh/ln (50 th percentile)	3.3	7.0		1.3	3.7		0.5	2.8	0.7	1.6	9.6	0.4
Queue Storage Ratio (*RQ*) (50 th percentile)	0.44	0.12		0.14	0.07		0.05	0.03	0.08	0.23	0.10	0.07
Uniform Delay (d_1), s/veh	65.9	60.3		70.1	57.3		9.4	9.1	8.2	6.7	11.6	7.5
Incremental Delay (d_2), s/veh	2.4	7.0		1.7	1.2		0.2	0.2	0.1	0.1	0.9	0.1
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	68.3	67.3		71.8	58.5		9.5	9.3	8.3	6.8	12.5	7.6
Level of Service (LOS)	E	E		E	E		A	A	A	A	B	A
Approach Delay, s/veh / LOS	67.6	E		61.6	E		9.2	A		11.7	B	
Intersection Delay, s/veh / LOS	20.0						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.00	C	3.11	C	2.39	B	2.05	B
Bicycle LOS Score / LOS	3.39	C	3.10	C	2.96	C	3.49	C

$X_c = 0.61$

HCS7 Signalized Intersection Results Summary

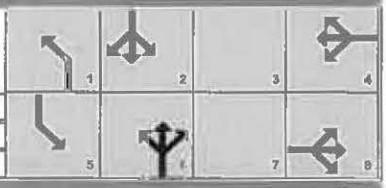
General Information				Intersection Information	
Agency	Town of Hilton Head Island			Duration, h	0.25
Analyst	Darrin A. Shoemaker, P.E.	Analysis Date	Jun 5, 2018	Area Type	Other
Jurisdiction	SCDOT	Time Period	pm peak hour - existing conditions	PHF	0.94
Urban Street	Palmetto Bay Road	Analysis Year	2018	Analysis Period	1> 16:45
Intersection	Arrow Road / Point Com...	File Name	18162pmex.xus		
Project Description	pm peak hour - existing conditions				



Demand Information	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Demand (*v*), veh/h	63	36	76	42	39	260	107	1128	54	116	779	66

Signal Information			
Cycle, s	150.0	Reference Phase	2
Offset, s	0	Reference Point	End
Uncoordinated	No	Simult. Gap E/W	On
Force Mode	Float	Simult. Gap N/S	On

Green	5.9	0.3		90.5	35.2	0.0	0.0					
Yellow	3.5	0.0		4.5	3.5	0.0	0.0					
Red	2.5	0.0		1.7	2.3	0.0	0.0					



Timer Results	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Assigned Phase		8		4	1	6	5	2
Case Number		6.0		6.0	1.1	3.0	1.1	3.0
Phase Duration, s		41.0		41.0	11.9	96.7	12.3	97.1
Change Period, ($Y+R_c$), s		5.8		5.8	6.0	6.2	6.0	6.2
Max Allow Headway (*MAH*), s		4.4		4.4	3.5	0.0	3.5	0.0
Queue Clearance Time (g_s), s		37.2		31.6	5.8		6.1	
Green Extension Time (g_e), s		0.0		0.9	0.1	0.0	0.2	0.0
Phase Call Probability		1.00		1.00	0.99		0.99	
Max Out Probability		1.00		1.00	0.01		0.00	

Movement Group Results	EB			WB			NB			SB		
Approach Movement	L	T	R	L	T	R	L	T	R	L	T	R
Assigned Movement	3	8	18	7	4	14	1	6	16	5	2	12
Adjusted Flow Rate (*v*), veh/h	67	119		45	318		114	1200	57	123	829	70
Adjusted Saturation Flow Rate (*s*), veh/h/ln	1043	1595		1222	1553		1753	1627	1499	1711	1826	1560
Queue Service Time (g_s), s	5.6	9.3		4.7	29.6		3.8	21.3	1.2	4.1	17.4	2.8
Cycle Queue Clearance Time (g_c), s	35.2	9.3		14.0	29.6		3.8	21.3	1.2	4.1	17.4	2.8
Green Ratio (*g/C*)	0.23	0.23		0.23	0.23		0.64	0.60	0.60	0.65	0.61	0.61
Capacity (*c*), veh/h	87	374		259	364		428	1963	904	326	2212	945
Volume-to-Capacity Ratio (*X*)	0.769	0.318		0.172	0.873		0.266	0.611	0.064	0.378	0.375	0.074
Back of Queue (*Q*), ft/ln (50 th percentile)	87.5	99.1		39	357.4		35.6	131.6	10.7	40.6	183.1	25.4
Back of Queue (*Q*), veh/ln (50 th percentile)	3.4	3.8		1.5	13.5		1.4	5.1	0.4	1.5	7.0	1.0
Queue Storage Ratio (*RQ*) (50 th percentile)	0.45	0.07		0.17	0.24		0.17	0.05	0.05	0.23	0.07	0.16
Uniform Delay (d_1), s/veh	73.4	47.5		53.3	55.2		11.5	7.9	5.9	12.3	15.1	12.2
Incremental Delay (d_2), s/veh	33.3	0.5		0.3	20.1		0.2	1.4	0.1	0.5	0.5	0.2
Initial Queue Delay (d_3), s/veh	0.0	0.0		0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0
Control Delay (*d*), s/veh	106.7	48.0		53.6	75.4		11.8	9.3	6.1	12.8	15.6	12.4
Level of Service (LOS)	F	D		D	E		B	A	A	B	B	B
Approach Delay, s/veh / LOS	69.1	E		72.7	E		9.4	A		15.0	B	
Intersection Delay, s/veh / LOS	22.9						C					

Multimodal Results	EB		WB		NB		SB	
Pedestrian LOS Score / LOS	3.09	C	3.20	C	2.39	B	2.11	B
Bicycle LOS Score / LOS	3.26	C	3.47	C	3.61	D	3.14	C

 $X_c = 0.67$

HCS7 Roundabouts Report

General Information

Analyst	Darrin A. Shoemaker, P.E.
Agency or Co.	Town of Hilton Head Island
Date Performed	06/06/2018
Analysis Year	2018
Time Analyzed	am peak hour - existing conditions
Project Description	2018 TM&E Report

Site Information

Intersection	Sea Pines Circle
E/W Street Name	Greenwood Dr./Wm. Hilton Pkwy.
N/S Street Name	Palmetto Bay Rd./Pope Ave.
Analysis Time Period (hrs)	0.25
Peak Hour Factor	0.90
Jurisdiction	SCDOT

Volume Adjustments and Site Characteristics

Approach	EB				WB				NB				SB			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment			LTR				LTR				LTR				LTR	
Volume (V), veh/h	19	252	108	81	22	302	230	184	8	99	331	264	19	318	378	413
Percent Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Flow Rate (v_{PCE}), pc/h	22	294	126	94	26	352	268	215	9	116	386	308	22	371	441	482
Right-Turn Bypass	Non-Yielding				Non-Yielding				Non-Yielding				Non-Yielding			
Conflicting Lanes	1				1				1				1			
Pedestrians Crossing, p/h	0				0				0				0			

Critical and Follow-Up Headway Adjustment

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (s)		4.9763			4.9763			4.9763			4.9763	
Follow-Up Headway (s)		2.6087			2.6087			2.6087			2.6087	

Flow Computations, Capacity and v/c Ratios

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v_e), pc/h		442.00	94.00		646.00	215.00		511.00	308.00		834.00	482.00
Entry Volume veh/h		420.95	89.52		615.24	204.76		486.67	293.33		794.29	459.05
Circulating Flow (v_c), pc/h	1221			849			861			793		
Exiting Flow (v_{ex}), pc/h	523			406			702			802		
Capacity (c_{pce}), pc/h		397.20			580.49			573.43			614.61	
Capacity (c), veh/h		378.28			552.85			546.12			585.34	
v/c Ratio (x)		1.11			1.11			0.89			1.36	

Delay and Level of Service

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh		113.4			99.4			43.5			192.5	
Lane LOS		F	A		F	A		E	A		F	A
95% Queue, veh		15.5			19.6			10.3			34.7	
Approach Delay, s/veh	93.6			74.6			27.1			122.0		
Approach LOS	F			F			D			F		
Intersection Delay, s/veh | LOS	84.1						F					

HCS7 Roundabouts Report

General Information		Site Information	
Analyst	Darrin A. Shoemaker, P.E.	Intersection	Sea Pines Circle
Agency or Co.	Town of Hilton Head Island	E/W Street Name	Greenwood Dr./Wm. Hilton Pkwy.
Date Performed	06/06/2018	N/S Street Name	Palmetto Bay Rd./Pope Ave.
Analysis Year	2018	Analysis Time Period (hrs)	0.25
Time Analyzed	midday peak hour	Peak Hour Factor	0.99
Project Description	2018 TM&E Report	Jurisdiction	SCDOT

Volume Adjustments and Site Characteristics

Approach	EB				WB				NB				SB			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment			LTR				LTR				LTR				LTR	
Volume (V), veh/h	15	241	217	202	12	307	283	290	7	153	387	416	15	220	354	391
Percent Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Flow Rate (v_{PCE}), pc/h	16	256	230	214	13	326	300	308	7	162	410	441	16	233	375	415
Right-Turn Bypass	Non-Yielding				Non-Yielding				Non-Yielding				Non-Yielding			
Conflicting Lanes	1				1				1				1			
Pedestrians Crossing, p/h	0				0				0				0			

Critical and Follow-Up Headway Adjustment

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (s)		4.9763			4.9763			4.9763			4.9763	
Follow-Up Headway (s)		2.6087			2.6087			2.6087			2.6087	

Flow Computations, Capacity and v/c Ratios

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v_e), pc/h		502.00	214.00		639.00	308.00		579.00	441.00		624.00	415.00
Entry Volume veh/h		478.10	203.81		608.57	293.33		551.43	420.00		594.29	395.24
Circulating Flow (v_c), pc/h	970			867			764			824		
Exiting Flow (v_{ex}), pc/h	476			478			682			708		
Capacity (c_{pce}), pc/h		513.09			569.93			633.06			595.48	
Capacity (c), veh/h		488.66			542.79			602.92			567.12	
v/c Ratio (x)		0.98			1.12			0.91			1.05	

Delay and Level of Service

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh		64.6			102.9			44.5			77.9	
Lane LOS		F	A		F	A		E	A		F	A
95% Queue, veh		12.7			19.8			11.5			16.7	
Approach Delay, s/veh	45.3			69.4			25.3			46.8		
Approach LOS	E			F			D			E		
Intersection Delay, s/veh | LOS	46.3						E					

HCS7 Roundabouts Report

General Information

Analyst	Darrin A. Shoemaker, P.E.
Agency or Co.	Town of Hilton Head Island
Date Performed	06/06/2018
Analysis Year	2018
Time Analyzed	pm peak hour - existing
Project Description	2018 TM&E Report

Site Information

Intersection	Sea Pines Circle
E/W Street Name	Greenwood Dr./Wm. Hilton Pkwy.
N/S Street Name	Palmetto Bay Rd./Pope Ave.
Analysis Time Period (hrs)	0.25
Peak Hour Factor	0.99
Jurisdiction	SCDOT

Volume Adjustments and Site Characteristics

Approach	EB				WB				NB				SB			
Movement	U	L	T	R	U	L	T	R	U	L	T	R	U	L	T	R
Number of Lanes (N)	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0
Lane Assignment			LTR				LTR				LTR				LTR	
Volume (V), veh/h	27	333	174	147	23	247	251	350	8	149	466	377	32	213	364	398
Percent Heavy Vehicles, %	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
Flow Rate (v_{PCE}), pc/h	29	353	185	156	24	262	266	371	8	158	494	400	34	226	386	422
Right-Turn Bypass	Non-Yielding				Non-Yielding				Non-Yielding				Non-Yielding			
Conflicting Lanes	1				1				1				1			
Pedestrians Crossing, p/h	0				0				0				0			

Critical and Follow-Up Headway Adjustment

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Critical Headway (s)		4.9763			4.9763			4.9763			4.9763	
Follow-Up Headway (s)		2.6087			2.6087			2.6087			2.6087	

Flow Computations, Capacity and v/c Ratios

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Entry Flow (v_e), pc/h		567.00	156.00		552.00	371.00		660.00	400.00		646.00	422.00
Entry Volume veh/h		540.00	148.57		525.71	353.33		628.57	380.95		615.24	401.90
Circulating Flow (v_c), pc/h	940			1076			851			747		
Exiting Flow (v_{ex}), pc/h	435			453			881			656		
Capacity (c_{pce}), pc/h		529.03			460.51			579.30			644.13	
Capacity (c), veh/h		503.84			438.58			551.72			613.46	
v/c Ratio (x)		1.07			1.20			1.14			1.00	

Delay and Level of Service

Approach	EB			WB			NB			SB		
Lane	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass	Left	Right	Bypass
Lane Control Delay (d), s/veh		89.2			138.1			108.7			63.0	
Lane LOS		F	A		F	A		F	A		F	A
95% Queue, veh		16.7			20.5			20.9			15.3	
Approach Delay, s/veh	69.9			82.6			67.7			38.1		
Approach LOS	F			F			F			E		
Intersection Delay, s/veh | LOS	63.4						F					