2008 ANNUAL TRANSPORTATION CONCURRENCY ANALYSIS

Prepared for:

THE CITY OF DESTIN

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INTRODUCTION

The purpose of this Annual Transportation Concurrency Analysis is to establish the current baseline conditions for traffic volume and roadway capacity and to evaluate the need for transportation mobility solutions to address congested segments of the City's concurrency management system (CMS). With the adoption of the multimodal transportation district (MMTD), the traffic data are no longer used to assess transportation concurrency for development projects. However, the data are still used to keep an account of roadway conditions as development adds new trips to the CMS over the course of the year and for comparison to the baseline traffic condition for US Highway 98 as established during the adoption of the MMTD.

The roadways identified as part of the City's CMS include US Highway 98 along with a system of collector roadways that serve the major mobility needs of Destin as identified in Figure 1.

The analysis used to determine the available roadway capacity for the City is consistent with the methodology described in the Interlocal Settlement Agreement with Okaloosa County. The agreement provides the technical and administrative framework for the City/County Unified Transportation Concurrency Management System (UTCMS). The intent of the UTCMS is to ensure a consistent approach by both agencies when evaluating proposed developments. The UTCMS methodology also provides for the tracking of both City and County project trips to provide a realistic assessment of existing conditions on US Highway 98 and collector roadways.

The five main components of the Annual Capacity Analysis include:

A summarization of current peak hour traffic count volumes;

Development of input data for the SYNCHRO analysis, including percent turns from exclusive turn lanes, peak hour factors, signal cycle length and green time to signal cycle length ratios (g/c);

An operational analysis of the signalized intersections using SYNCHRO;

An analysis to determine maximum allowable trip volumes for each link within an analysis segment; and

A determination of committed and available motor vehicle trips based on approved development orders.

Figure 1 – City of Destin Concurrency Network

Traffic volume counts were collected at mid-block locations for each of 15 US Highway 98 links and for 19 collector street links, and turning movement counts were collected at the 14 signalized intersections on US Highway 98 and the signalized intersection at Main Street and Airport Road. The Synchro model inputs were created based on this information. The Synchro model produces an estimate of the maximum service volumes from which motor vehicle trips generated by projects with approved development orders are subtracted. The remaining number of available trips for each roadway link represents the available motor vehicle capacity at the adopted LOS.

TRAFFIC DATA

Traffic data collected for the evaluation of the City's Annual Transportation Concurrency Analysis included intersection turning movement counts at the City's 15 signalized intersections; 24-hour volume counts on 19 collector roadway links; 72-hour volume counts on 15 links of US Highway 98; and intersection signal timing information including the traffic signal cycle length, green to cycle length ratios (G/C), percentage of cars turning from dedicated turning lanes, and queue storage. This data were collected during the middle of July in 2008.

TURNING MOVEMENT COUNTS

Between July 15-17, 2008, intersection turning movement counts were collected at the 15 signalized intersections in the City of Destin. Data were collected at the following signalized intersections:

- US Hwy 98 and Stahlman Avenue
- US Hwy 98 and Benning Drive
- US Hwy 98 and Beach Drive
- US Hwy 98 and Main Street
- Main Street and Airport Road
- US Hwy 98 and Gulf Shore Drive
- US Hwy 98 and Airport Road
- US Hwy 98 and Scenic Hwy 98
- US Hwy 98 and Henderson Beach Boulevard
- US Hwy 98 and Triumph Drive
- US Hwy 98 and Matthews Boulevard
- US Hwy 98 and SR 293/Hutchinson Street
- US Hwy 98 and Crystal Beach Drive
- US Hwy 98 and Regatta Bay Boulevard
- US Hwy 98 and Tequesta Drive

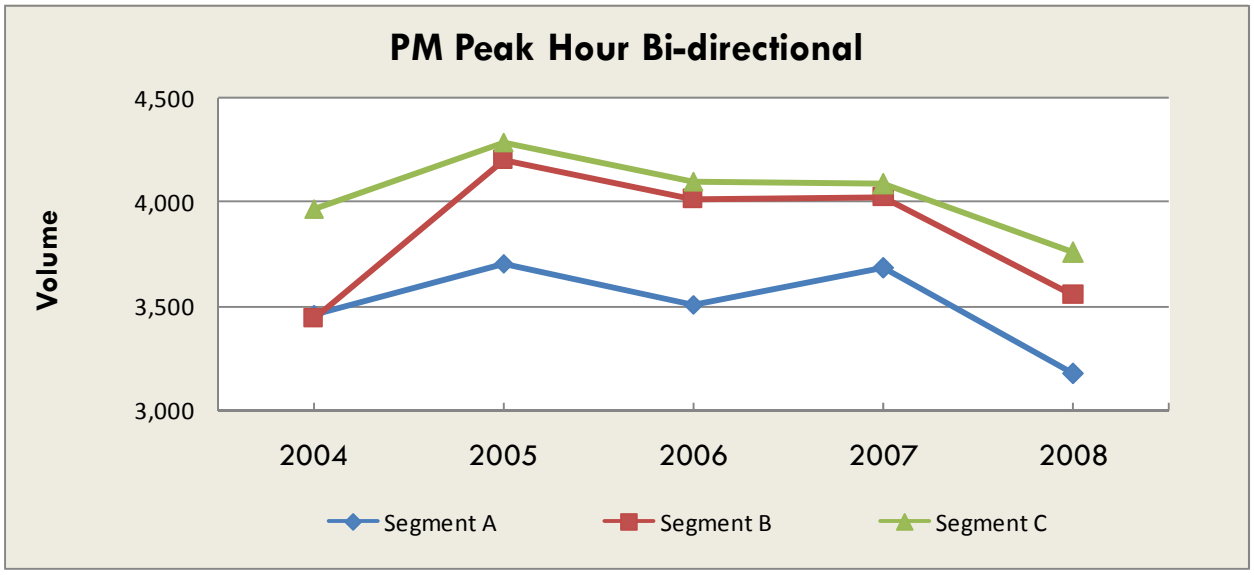
In addition to the intersection data, 72-hour traffic volume counts were collected on each of the 15 links of US Highway 98. These data were used to determine peak-hour, peak direction traffic volumes and for comparison to the adopted US Highway 98 baseline Annual Average Daily Traffic (AADT) condition for monitoring the Multimodal Transportation District (MMTD).

Because the amount of traffic on the road is greatly dependent upon the season, the Florida Department of Transportation (FDOT) develops seasonal adjustment factors that are used to convert counts to average annual conditions. This allows counts collected during any week of the year to be converted and compared with counts from another week. Seasonal adjustment factors are calculated as an average of the past three years' conditions as published on the Florida Traffic Information DVDs. The result of applying the seasonal adjustment factor to the PM peak hour volumes on US Highway 98 is presented in Table 1. Although the predominant PM peak hour peak direction for US Highway 98 is still westbound, one link in Segment B and one link in Segment C demonstrated an eastbound peak direction in 2008.

Table 1 - Comparison of 2007 vs. 2008 Link Volumes (US Highway 98)

Roadway Link	Eastbound		Westbound		Bi-directional		Percent
	2007	2008	2007	2008	2007	2008	Change
US Highway 98 Segment A							
East Pass Bridge to Stahlman Avenue	1,892	1,453	2,137	1,593	4,029	3,046	-24.4%
Stahlman Avenue to Benning Drive	1,967	1,482	1,689	1,578	3,656	3,060	-16.3%
Benning Drive to Beach Drive	1,669	1,565	1,988	1,698	3,657	3,264	-10.8%
Beach Drive to Main Street	1,858	1,551	1,939	1,616	3,797	3,166	-16.6%
Main Street to Gulf Shore Drive	1,563	1,613	1,705	1,718	3,268	3,330	1.9%
US Highway 98 Segment B							
Gulf Shore Drive to Airport Road	2,118	1,674	2,182	1,796	4,300	3,470	-19.3%
Airport Road to Scenic Highway 98	1,726	1,861	2,024	1,776	3,750	3,637	-3.0%
US Highway 98 Segment C							
Scenic Highway 98 to Henderson Bch. Blvd.	2,143	1,822	2,654	1,807	4,797	3,628	-24.4%
Henderson Bch. Blvd. to Triumph Drive	2,509	1,814	1,946	1,901	4,455	3,715	-16.6%
Triumph Drive to Matthew Blvd.	1,683	1,844	1,640	1,864	3,323	3,709	11.6%
Matthew Blvd. to Danny Wuerffel Way	1,615	1,712	1,883	1,906	3,498	3,618	3.4%
Danny Wuerffel Way to Crystal Beach Drive	1,960	1,786	2,232	1,952	4,192	3,738	-10.8%
Crystal Beach Drive to Regatta Bay Blvd	1,885	1,801	2,199	1,980	4,084	3,781	-7.4%
Regatta Bay Blvd to Tequesta Drive	2,019	1,872	2,471	1,983	4,490	3,856	-14.1%
Tequesta Drive to Walton County Line	1,739	1,910	2,104	2,081	3,843	3,991	3.8%

Figure 2 – PM Peak Hour, Bi-directional Peak Hour Trips on US Highway 98



In addition to collecting the total traffic on the roadway during the PM peak hour, turning movement counts provide the percentage of turns from exclusive turning lanes at each intersection. Table 2 presents a comparison of the turn percentages used for the previous update with values used for the current analysis. The 2008 turning percentages are generally consistent with the 2007 data, with the exception of Stahlman

Avenue and intersections in the area of Danny Wuerffel Way. The intersection of Stahlman Avenue at US Highway 98 experienced sharp increases of turning activity which can be attributed to increases in development activity within the area. Turning movements at Matthew Boulevard, Danny Wuerffel Way, and Crystal Beach Drive shifted considerably. This shift likely indicates increased use of the parallel road network as a local alternative to US Highway 98 and Danny Wuerffel Way.

Table 2 - Comparison of 2007 vs. 2008 Percent Turns from Exclusive Lanes

Roadway Intersection	2007 Percent Turns From Exclusive Lanes		2008 Percent Turns From Exclusive Lanes	
	Eastbound	Westbound	Eastbound	Westbound
US Hwy 98 @ Stahlman Avenue	6.2%	2.6%	5.8%	7.0%
US Hwy 98 @ Benning Drive	3.8%	0.4%	3.4%	0.1%
US Hwy 98 @ Beach Drive	8.1%	0.7%	5.2%	0.6%
US Hwy 98 @ Main Street	8.9%	4.8%	7.9%	7.3%
US Hwy 98 @ Gulf Shore Drive	15.0%	8.3%	12.8%	12.1%
US Hwy 98 @ Airport Road	9.4%	2.6%	5.7%	1.6%
US Hwy 98 @ Scenic Highway 98	5.5%	2.3%	7.3%	4.1%
US Hwy 98 @ Henderson Bch. Blvd.	8.0%	7.4%	8.1%	7.1%
US Hwy 98 @ Triumph Drive	2.8%	7.7%	2.3%	2.5%
US Hwy 98 @ Matthew Blvd.	12.5%	7.0%	13.9%	11.8%
US Hwy 98 @ Danny Wuerffel Way	24.9%	26.3%	22.6%	21.2%
US Hwy 98 @ Crystal Beach Drive	9.2%	2.4%	8.5%	9.0%
US Hwy 98 @ Regatta Bay Blvd	3.3%	2.7%	4.3%	3.0%
US Hwy 98 @ Tequesta Drive	n/a	n/a	3.7%	1.7%
Airport Road @ Main Street	n/a	n/a	37.0%	53.1%
Main Street @ Airport Road	n/a	n/a	67.6%	52.0%

24-HOUR VOLUME COUNTS

24-hour mid-block traffic counts were collected at 19 locations in the City of Destin. These counts were used to identify the PM peak hour peak direction and off-peak direction traffic volumes. Traffic data were collected at the following locations:

- Calhoun Avenue south of Forest Street
- Sibert Avenue between Forest Street and Kelly Street
- Azalea Drive between Palmetto Street and Benning Drive
- Mountain Drive between Melvin Street and Egret Court
- Kelly Street between Benning Drive and Beach Drive
- Scenic Hwy 98 between Matthew Boulevard and Walton County Line
- Legion Drive West of Beach Drive

- Legion Drive East of Beach Drive
- Two Trees Road between US Highway 98 and Commons Boulevard
- Two Trees Road between Commons Boulevard and Indian Bayou Trail
- Indian Bayou Trail between Airport Road and Two Trees Road
- Indian Bayou Trail between Two Trees Road and Country Club Drive
- Restaurant Row south of US Hwy 98
- Commons Boulevard between Two Trees Road and Diamond Cove
- Commons Boulevard between Diamond Cove and Henderson Beach Road
- Commons Boulevard between Henderson Beach Road and Triumph Drive
- Commons Boulevard between Triumph Drive and Kelly Plantation Drive
- Commons Boulevard between Kelly Plantation Drive and Matthew Boulevard
- Airport Road between Indian Bayou Trail and Main Street

These counts were collected midweek from July 15-22, 2008. FDOT seasonal adjustment factors were used to factor the data to reflect average annual traffic conditions. The City of Destin began to collect traffic data for collector streets for the 2002 Annual Capacity Report. Table 3 lists 2007 and 2008 PM directional volumes for the system of urban collector roadways.

Overall, there was a slight decrease in collector traffic volumes between 2007 and 2008. However, there was some fluctuation in peak hour traffic among the individual roadway segments. The largest decreases, Azalea Drive, Calhoun Avenue, Kelly Street, Legion Drive, Mountain Drive, and Two Trees Road indicate decreased use of the parallel road network as a local alternative to US Highway 98. This might indicate reductions in delay on US Highway 98 in this section of the City. Conversely, Commons Boulevard experienced an 18 percent increase volume indicating increased use of the parallel road network along this section of US Highway 98. Increases in beach traffic are illustrated by significant volume increases on both sections of Scenic Hwy 98, Henderson Beach Road, and Matthew Boulevard.

The PM peak hour peak direction varies for each collector roadway as indicated in Table 3. It should be noted that in most cases there are only minor differences between the peak and off-peak direction volumes for collector roadways. Because the peak direction and directional distribution of traffic varies on each urban collector, the data is being analyzed as bi-directional volumes.

Table 3 – Comparison of 2007 vs. 2008 Link Volumes (Collector Roadways)

Roadway Link	Bi-directional		Percent Change
	2007	2008	
Airport Road from US Hwy 98 to Indian Bayou Trail	618	632	2%
Airport Road from Indian Bayou Trail to Main Street	1121	1318	18%
Azalea Drive from Stahlman Avenue to Benning Drive	323	224	-31%
Beach Drive from US Hwy 98 to Kelly Street	426	403	-5%
Benning Drive from US Hwy 98 to Kelly Street	311	322	4%
Calhoun Avenue from US Hwy 98 to Kelly Street	201	161	-20%
Commons Boulevard from Two Trees Road to Diamond Cove	967	1091	13%
Commons Boulevard from Diamond Cove to Henderson Beach Road	935	1146	23%
Commons Boulevard from Henderson Beach Road to Triumph Drive	962	1203	25%
Commons Boulevard from Triumph Drive to Kelly Plantation Drive	1090	1114	2%
Commons Boulevard from Kelly Plantation Drive to Matthew Boulevard	991	1272	28%
Crystal Beach Drive from Scenic Hwy 98 to US Hwy 98	451	462	3%
Gulf Shore Drive from US Hwy 98 to Curve	892	852	-4%
Henderson Beach Road from US Hwy 98 to Commons Boulevard	556	576	4%
Hutchinson Street from US Hwy 98 to Scenic Hwy 98	882	860	-2%
Indian Bayou Trail from Airport Road to Two Trees Road	1290	1164	-10%
Indian Bayou Trail from Two Trees Road to Country Club Drive	258	254	-2%
Kelly Street from Stahlman Avenue to Main Street	722	539	-25%
Legion Drive from Benning Drive to Beach Drive	319	195	-39%
Legion Drive from Beach Drive to Main Street	1189	788	-34%
Main Street from US Hwy 98 to Airport Road	652	683	5%
Main Street from Airport Road to Kelly Street	740	703	-5%
Matthew Boulevard from Scenic Hwy 98 to US Hwy 98	428	637	49%
Mountain Drive from Stahlman Avenue to Benning Drive	732	482	-34%
Regatta Bay Boulevard from Scenic Hwy 98 to US Hwy 98	175	194	11%
Restaurant Row from US Hwy 98 to Emerald Coast Parkway	268	233	-13%
Scenic Hwy 98 from Matthew Boulevard to Walton County Line	695	931	34%
Sibert Avenue from Calhoun Avenue to Kelly Street	188	145	-23%
Stahlman Avenue from US Hwy 98 to Kelly Street	367	364	-1%
Two Trees Road from US Hwy 98 to Commons Boulevard	315	222	-30%
Two Trees Road from Commons Boulevard to Indian Bayou Trail	1260	1045	-17%

SIGNAL TIMING INFORMATION

Signal timing information for this analysis is based on signal timings received from Okaloosa County Traffic Operations in August for the 15 intersections along US Highway 98, and the intersection of Main Street and Airport Road. Table 4 provides a comparison of current signal timing information.

Table 4 - Comparison of 2007 vs. 2008 Signal Timings

Roadway Intersection	2007 Signal Timing			2008 Singal Timing		
	Cycle Length	EB Thru g/c	WB Thru g/c	Cycle Length	EB Thru g/c	WB Thru g/c
US Hwy 98 @ Stahlman Avenue	184	0.54	0.54	184	0.54	0.54
US Hwy 98 @ Benning Drive	184	0.75	0.63	184	0.75	0.63
US Hwy 98 @ Beach Drive	184	0.61	0.61	184	0.61	0.61
US Hwy 98 @ Main Street	184	0.75	0.63	184	0.75	0.63
US Hwy 98 @ Gulf Shore Drive	184	0.56	0.59	184	0.56	0.59
US Hwy 98 @ Airport Road	184	0.71	0.70	184	0.71	0.70
US Hwy 98 @ Scenic Highway 98	184	0.67	0.67	184	0.67	0.67
US Hwy 98 @ Henderson Bch. Blvd.	184	0.56	0.56	184	0.56	0.56
US Hwy 98 @ Triumph Drive	184	0.78	0.66	184	0.78	0.66
US Hwy 98 @ Matthew Blvd.	184	0.56	0.56	184	0.56	0.56
US Hwy 98 @ Danny Wuerffel Way	184	0.52	0.48	184	0.52	0.48
US Hwy 98 @ Crystal Beach Drive	184	0.56	0.56	184	0.56	0.56
US Hwy 98 @ Regatta Bay Blvd	184	0.54	0.54	184	0.54	0.54
US Hwy 98 @ Tequesta Drive	184	n/a	n./a	184	0.59	0.59
Airport Road @ Main Street	165	0.21	0.21	92	0.18	0.32
Main Street @ Airport Road	165	0.30 NB	0.30 SB	92	0.22 NB	0.22 NB

MAXIMUM SERVICE VOLUME ANALYSIS

The maximum service volumes are the maximum number of bi-directional trips in the p.m. peak hour. This is a change in methodology from previous reports which used the maximum number of peak directional trips. This adjustment provides a more accurate assessment of the transportation network by accounting for all trips on the network, not just trips in the peak direction. Maximum service volumes are shown in Table 5 and Table 6.

For US Highway 98, the maximum service volume for each link is determined by an HCM signalized intersection capacity analysis in Synchro. This analysis produces a maximum lane capacity for each movement of an intersection. The maximum service volumes are calculated by combining the bi-directional maximum lane capacities at the end of each link. Printouts of the Synchro analysis results are included in Appendix C. In order to get a realistic result, no optimization routine is run in Synchro.

Table 5 - Link Maximum Bi-directional Peak Hour Service Volumes on US Highway 98 Using Synchro

Roadway Link	Maximum Service Volume
US Highway 98 Segment A	
East Pass Bridge to Stahlman Avenue	4,782
Stahlman Avenue to Benning Drive	4,987
Benning Drive to Beach Drive	4,204
Beach Drive to Main Street	4,570
Main Street to Gulf Shore Drive	4,628
US Highway 98 Segment B	
Gulf Shore Drive to Airport Road	4,776
Airport Road to Scenic Highway 98	4,987
US Highway 98 Segment C	
Scenic Highway 98 to Henderson Bch. Blvd.	4,421
Henderson Bch. Blvd. to Triumph Drive	5,090
Triumph Drive to Matthew Blvd.	4,614
Matthew Blvd. to Danny Wuerffel Way	5,561
Danny Wuerffel Way to Crystal Beach Drive	6,253
Crystal Beach Drive to Regatta Bay Blvd	5,800
Regatta Bay Blvd to Tequesta Drive	4,272
Tequesta Drive to Walton County Line	4,557

This methodology of using Synchro to determine the maximum service volume cannot be used for unsignalized collector roadways. Therefore, the FDOT Generalized Level of Service Tables are used for collector roadways with unsignalized intersections. A Synchro analysis was conducted for the signalized intersections of Main Street/Legion Drive at Airport Road and for Hutchinson Street at US Highway 98 to determine the maximum service volume. The adopted level of service standard is D for all urban collector roadways.

Table 6 - Link Maximum Bi-Directional Peak Hour Service Volume on Collector Roadways Using FDOT Generalized Tables

Roadway Link	Maximum Service Volume
Airport Road from US Hwy 98 to Indian Bayou Trail	*2,950*
Airport Road from Indian Bayou Trail to Main Street*	*3,816*
Azalea Drive from Stahlman Avenue to Benning Drive	*1,390*
Beach Drive from US Hwy 98 to Kelly Street	*950*
Benning Drive from US Hwy 98 to Kelly Street	*950*
Calhoun Avenue from US Hwy 98 to Kelly Street	*950*
Commons Boulevard from Two Trees Road to Diamond Cove	*1,390*
Commons Boulevard from Diamond Cove to Henderson Beach Road	*1,390*
Commons Boulevard from Henderson Beach Road to Triumph Drive	*1,460*
Commons Boulevard from Triumph Drive to Kelly Plantation Drive	*1,460*
Commons Boulevard from Kelly Plantation Drive to Matthew Boulevard	*1,390*
Crystal Beach Drive from Scenic Hwy 98 to US Hwy 98	*1,390*
Gulf Shore Drive from US Hwy 98 to Curve	*2,950*
Henderson Beach Road from US Hwy 98 to Commons Boulevard	*950*
Henderson Beach Road from Park Gate to US Hwy 98	*950*
Hutchinson Street from US Hwy 98 to Scenic Hwy 98*	*1,418*
Indian Bayou Trail from Airport Road to Two Trees Road	*1,390*
Indian Bayou Trail from Two Trees Road to Country Club Drive	*950*
Kelly Street from Stahlman Avenue to Main Street	*1,390*
Legion Drive from Benning Drive to Beach Drive	*950*
Legion Drive from Beach Drive to Main Street	*1,460*
Main Street from US Hwy 98 to Airport Road	*1,975*
Main Street from Airport Road to Kelly Street	*1,390*
Matthew Boulevard from Scenic Hwy 98 to US Hwy 98	*1,390*
Mountain Drive from Stahlman Avenue to Benning Drive	*950*
Regatta Bay Boulevard from Scenic Hwy 98 to US Hwy 98	*950*
Restaurant Row from US Hwy 98 to Emerald Coast Parkway	*950*
East Scenic Hwy 98 from Matthew Boulevard to Walton County Line	*1,390*
Sibert Avenue from Calhoun Avenue to Kelly Street	950
Stahlman Avenue from US Hwy 98 to Kelly Street	1,350
Two Trees Road from US Hwy 98 to Commons Boulevard	1,390
Two Trees Road from Commons Boulevard to Indian Bayou Trail	1,112

*Based on a detailed operational analysis for the intersection using Synchro

DETERMINATION OF COMMITTED TRIPS AND AVAILABLE CAPACITY

The City maintains a database of committed project trips that is updated on a weekly basis to allow an accurate assessment of available capacity. Appendix A lists the committed PM peak hour bi-directional trips for projects with approved traffic concurrency reports and development orders for the links of US Highway 98, at the time of this analysis (February 19, 2009). Appendix B lists the committed trips for the collector roadways. Projects with tentative development approval for which traffic reviews have been completed but no development orders issued, are also included in Appendix A and Appendix B.

The available capacity on each link of US Highway 98 and the collector roads is determined by the difference in the maximum allowable service volume (as calculated in the previous section of this report) and the existing plus committed trip volumes. Available capacity is shown in Table 7 for US Highway 98 and Table 8 for the urban collector roadways. Currently, no links are operating over capacity.

As discussed in subsequent section of this report, traditional concurrency requirements no longer apply to the segments of US Highway 98 with adoption of the MMTD. The segments will be monitored annually through this report to determine if any segment is approaching 115 percent of the baseline condition as established in the 2005 report. At that time, regional solutions to traffic congestion on US Highway 98 will be discussed with FDOT, Department of Community Affairs (DCA), the Okaloosa-Walton Transportation Planning Organization (TPO), and adjacent jurisdictions.

Table 7 – Available Capacity on US Highway 98

Roadway Link	Max Link Volume[1]	Existing Background Traffic[2]	Committed City Trips	Existing Plus Committed Trips	Remaining Capacity	Tentive Trips	Remaining Capacity Less Tentative Trips
US Highway 98 Segment A							
East Pass Bridge to Stahlman Avenue	4,782	3,046	122	3,168	1,614	7	1,607
Stahlman Avenue to Benning Drive	4,987	3,060	217	3,277	1,710	10	1,700
Benning Drive to Beach Drive	4,204	3,264	142	3,406	798	8	790
Beach Drive to Main Street	4,570	3,166	128	3,294	1,276	7	1,269
Main Street to Gulf Shore Drive	4,628	3,330	113	3,443	1,185	4	1,181
US Highway 98 Segment B							
Gulf Shore Drive to Airport Road	4,776	3,470	103	3,573	1,203	3	1,200
Airport Road to Scenic Highway 98	4,987	3,637	104	3,741	1,246	2	1,244
US Highway 98 Segment C							
Scenic Highway 98 to Henderson Bch. Blvd.	4,421	3,628	87	3,715	706	1	705
Henderson Bch. Blvd. to Triumph Drive	5,090	3,715	65	3,780	1,310	0	1,310
Triumph Drive to Matthew Blvd.	4,614	3,709	82	3,791	823	0	823
Matthew Blvd. to Danny Wuerffel Way	5,561	3,618	56	3,674	1,887	0	1,887
Danny Wuerffel Way to Crystal Beach Drive	6,253	3,738	38	3,776	2,477	0	2,477
Crystal Beach Drive to Regatta Bay Blvd	5,800	3,781	24	3,805	1,995	0	1,995
Regatta Bay Blvd to Tequesta Drive	4,272	3,856	10	3,866	406	0	406
Tequesta Drive to Walton County Line	4,557	3,991	8	3,999	558	0	558

[1]Maxium link volume at the adpoted LOS E plus 15 percent

[2]Based on traffic data collected between July 15-17, 2008

Table 8 – Available Capacity on Collector Roadways

Roadway Link	Max Link Volume[1]	Existing Background Traffic[2]	Committed City Trips	Existing Plus Committed Trips	Remaining Capacity	Tentive Trips	Remaining Capacity Less Tentative Trips
Airport Road from US Hwy 98 to Indian Bayou Trail	2,950	632	19	651	2,299	1	2,298
Airport Road from Indian Bayou Trail to Main Street	3,816	1,318	23	1,341	2,475	1	2,474
Azalea Drive from Stahlman Avenue to Benning Drive	1,390	224	11	235	1,155	0	1,155
Beach Drive from US Hwy 98 to Kelly Street	950	403	31	434	516	1	515
Benning Drive from US Hwy 98 to Kelly Street	950	322	16	338	612	1	611
Calhoun Avenue from US Hwy 98 to Kelly Street	950	161	12	173	777	1	776
Commons Boulevard from Two Trees Road to Diamond Cove	1,390	1,091	82	1,173	217	0	217
Commons Boulevard from Diamond Cove to Henderson Beach Road	1,390	1,146	81	1,227	163	0	163
Commons Boulevard from Henderson Beach Road to Triumph Drive	1,460	1,203	68	1,271	189	0	189
Commons Boulevard from Triumph Drive to Kelly Plantation Drive	1,460	1,114	52	1,166	294	0	294
Commons Boulevard from Kelly Plantation Drive to Matthew Boulevard	1,390	1,272	39	1,311	79	0	79
Crystal Beach Drive from Scenic Hwy 98 to US Hwy 98	1,390	462	0	462	928	0	928
Gulf Shore Drive from US Hwy 98 to Curve	2,950	852	49	901	2,049	1	2,048
Henderson Beach Road from US Hwy 98 to Commons Boulevard	950	576	0	576	374	0	374
Hutchinson Street from US Hwy 98 to Scenic Hwy 98	1,418	860	11	871	547	0	547
Indian Bayou Trail from Airport Road to Two Trees Road	1,390	1,164	8	1,172	218	0	218
Indian Bayou Trail from Two Trees Road to Country Club Drive	950	254	5	259	691	0	691

Table 8 – Available Capacity on Collector Roadways (continued)

Roadway Link	Max Link Volume[1]	Existing Background Traffic[2]	Committed City Trips	Existing Plus Committed Trips	Remaining Capacity	Tentive Trips	Remaining Capacity Less Tentative Trips
Kelly Street from Stahlman Avenue to Main Street	1,390	539	6	545	845	0	845
Legion Drive from Benning Drive to Beach Drive	950	195	2	197	753	0	753
Legion Drive from Beach Drive to Main Street	1,460	788	7	795	665	0	665
Main Street from US Hwy 98 to Airport Road	1,975	683	23	706	1,269	3	1,266
Main Street from Airport Road to Kelly Street	1,390	703	4	707	683	1	682
Matthew Boulevard from Scenic Hwy 98 to US Hwy 98	1,390	637	10	647	743	0	743
Mountain Drive from Stahlman Avenue to Benning Drive	950	482	41	523	427	0	427
Regatta Bay Boulevard from Scenic Hwy 98 to US Hwy 98	950	194	0	194	756	0	756
Restaurant Row from US Hwy 98 to Emerald Coast Parkway	950	233	27	260	690	0	690
Scenic Hwy 98 from Matthew Boulevard to Walton County Line	1,390	931	21	952	438	0	438
Sibert Avenue from Calhoun Avenue to Kelly Street	950	145	5	150	800	0	800
Stahlman Avenue from US Hwy 98 to Kelly Street	1,350	364	19	383	967	1	966
Two Trees Road from US Hwy 98 to Commons Boulevard	1,390	222	16	238	1,152	0	1,152
Two Trees Road from Commons Boulevard to Indian Bayou Trail	1,112	1,045	14	1,059	53	0	53

[1]Maxium link volume at the adpoted LOS D

[2]Based on traffic data collected between July 15-17, 2008

[3]Data for Commons Boulevard segments is provided for informational puposes only as these segment are not located in the City

MULTIMODAL TRANSPORTATION DISTRICT

The Comprehensive Plan establishes the Multimodal Transportation District (MMTD) to replaced the traditional concurrency requirements governing available road capacity and automobile tripmaking with a system that assesses concurrency based on pedestrian-oriented site design and multimodal infrastructure development. Developments proposed in the MMTD that satisfy the following two conditions are deemed in compliance with transportation concurrency requirements for automobile traffic:

Follows urban form and multimodal facility design standards as described in Policy 2-1.3.3; and

Contributes towards achieving the adopted multimodal level of service standard designated in Policy 2-1.3.2 through the provision of on-site and off-site improvements necessary to mitigate transportation impacts in the immediate project vicinity. The amount of mitigation required will correspond to the project's impact as calculated through application of the City's transportation impact fee. Eligible capital improvements are outlined in Policies 2-1.3.4 through 2-1.3.9 and included in the Capital Improvements Element of the Comprehensive Plan.

The City has committed to monitor implementation of the MMTD through both the Annual Concurrency Analysis and a biennial MMTD Monitoring Report. The first biennial MMTD Monitoring Report was produced in 2007 and summarizes the City's progress towards completing the actions proposed in the Multimodal Transportation District Implementation Report and achieving the multimodal objectives and policies described herein. The 2005 Annual Concurrency Analysis established the baseline condition for traffic volume on US Highway 98 and the change in volume against the baseline condition is evaluated in this report and will continue to be evaluated on an annual basis. For the purposes of this evaluation, traffic volume on US Highway 98 is measured in terms of the average annual daily traffic volume plus committed trips. If the data demonstrate that the average annual daily traffic volume plus committed trips on US Highway 98 is approaching 115 percent of the baseline condition, the City shall initiate meetings with DCA, FDOT, TPO, and adjacent jurisdictions to evaluate progress and discuss regional solutions to address traffic conditions on US Highway 98. The comparison between the baseline condition and existing conditions is displayed in Table 9 on the following page. The AADT has decreased by about 20 percent on every link of US Highway 98 since 2005.

Table 9 – US Highway 98: 2008 to Baseline Comparison

Roadway Link	2005 AADT + committed	Baseline: 2005 +15%	2008 AADT + committed	Available AADT capacity	Percent change from 2005
US Highway 98 Segment A					
East Pass Bridge to Stahlman Avenue	50,699	58,304	39,285	19,019	-23%
Stahlman Avenue to Benning Drive	51,845	59,621	41,725	17,896	-20%
Benning Drive to Beach Drive	56,236	64,672	46,041	18,631	-18%
Beach Drive to Main Street	57,439	66,055	45,157	20,898	-21%
Main Street to Gulf Shore Drive	59,704	68,660	46,302	22,358	-22%
US Highway 98 Segment B					
Gulf Shore Drive to Airport Road	62,444	71,958	49,169	22,790	-21%
Airport Road to Scenic Highway 98	65,347	75,294	51,289	24,004	-22%
US Highway 98 Segment C					
Scenic Highway 98 to Henderson Bch. Blvd.	62,437	71,827	51,303	20,524	-18%
Henderson Bch. Blvd. to Triumph Drive	64,687	74,390	52,021	22,369	-20%
Triumph Drive to Matthew Blvd.	64,675	74,377	52,056	22,320	-20%
Matthew Blvd. to Danny Wuerffel Way	65,808	75,679	50,247	25,432	-24%
Danny Wuerffel Way to Crystal Beach Drive	66,859	76,983	50,463	26,521	-25%
Crystal Beach Drive to Regatta Bay Blvd	66,859	76,983	49,865	27,119	-25%
Regatta Bay Blvd to Tequesta Drive	66,859	76,983	50,628	26,356	-24%
Tequesta Drive to Walton County Line	66,859	76,983	51,815	25,168	-23%

If the data demonstrate that the average annual daily traffic volume plus committed trips for a given road segment of a major collector road has reached or exceeded level of service D, the City shall initiate steps to create additional capacity, or demonstrate that creation of additional capacity would be contrary to the success of the multimodal transportation district.

SUMMARY OF FINDINGS

The 2008 peak-hour, bi-directional US Highway 98 volumes experienced a considerable decrease from previous years. Volumes on segment A decreased an average of 13 percent from last year. Segment B experienced an 11 percent decrease, while segment C volumes averaged a 7 percent decrease. There are currently no links operating over capacity.

Traffic volumes decreased on a majority of collector road links. However, traffic volumes indicate a significant shift in travel patterns. Volumes on the collector roads parallel to US Highway 98 saw a decrease in West Destin and an increase in East Destin. Azalea Drive, Kelly Street, Legion Drive, and Mountain Drive all experienced a considerable decrease in volumes. However, volumes on Commons Boulevard increased considerably. Airport road also saw an increase in volume. This fluctuation might be attributed to congestion levels on US Highway 98 parallel to these roadways and/or the widening of Airport Road between US Highway 98 and Main Street. There are no links operating over capacity.

With the adoption of the MMTD as part of the comprehensive plan, the focus of the concurrency management system will shift from expanding system capacity to preserving existing capacity, especially with regards to US Highway 98. Improving roadway connectivity and minor roadway improvements at intersections or other strategic locations may be warranted in the future, but any roadway widening projects should be evaluated with strict scrutiny to ensure that they will not conflict with the policies of the MMTD to create a multimodal environment and reduce vehicle tripmaking in the city. This report continues to serve as one of several monitoring tools for the MMTD ensuring that traffic conditions on US Highway 98 do not significantly degrade beyond the existing conditions. If degradation were to approach 115 percent of the 2005 conditions, it would trigger a meeting with DCA, FDOT, TPO, and adjacent jurisdictions to evaluate progress on the MMTD and regional solutions to congestion on US Highway 98. The 2008 Report includes the third comparison of current US Highway 98 traffic to the baseline conditions established in the 2005 Report, indicating a significant decrease in AADT plus committed trips on every link of US Highway 98.

APPENDIX: US HIGHWAY 98 COMMITTED TRIPS

Project Trip Link Level Distribution Worksheet

Committed Project Trips - D.O. Issued - Not Constructed	**SEG. A Links**					**SEG. B Links**		**SEG. C Links**							
	1-2	**2-3**	**3-4**	**4-5**	**5-6**	**1-2**	**2-3**	**1-2**	**2-3**	**3-4**	**4-5**	**5-6**	**6-7**	**7-8**	**8-9**
Alexan-Henderson Beach (SP-07-08) *[DO-08-03 issued on 10-11-07]*	0	0	0	0	0	0	24	18	10	40	27	19	11	0	0
Alexan-Henderson Beach, 1st Amendment (SP-09-02) *[DO-09-04 issued on 12-03-08]*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Beach Crystal (a.k.a. Caretta Dunes Condominium) (SP-05-12) *[DO-05-21 issued on 5-2-05]*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Beach Crystal, 1st Amendment (a.k.a. Caretta Dunes Condominium) (SP-08-04) *[DO-08-13 issued on 3*	0	0	0	0	0	0	0	3	1	1	1	1	0	0	0
Beach Lofts (SP-05-08) *[DO-05-33 issued on 8-12-05]*	0	1	1	2	1	0	0	0	0	0	0	0	0	0	0
Beach Pointe Condominium II (SP-07-06) *[DO-08-22 issued on 8-18-08]*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Denny's Restaurant (SP-08-15) *[DO-09-09 issued on 01-08-09]*	0	0	0	0	7	7	2	1	0	0	0	0	0	0	0
Destin Elementary Restroom (SP-08-17) *[DO-09-06 issued on 12-01-08]*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Destin United Methodist Church (SP-07-09) *[DO-08-02 issued on 10-17-07]*	0	0	3	3	3	3	3	3	3	3	1	0	0	0	0
Destin Water Sports (SP-07-16) *[DO-08-12 issued on 3-28-08]*	1	6	1	0	0	0	0	0	0	0	0	0	0	0	0
Destin Water Users Admin. Bldg., 1st Amendment (SP-07-02) *[DO-07-08 issued on 1-25-07]*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Destin Water Users Admin. Bldg., 2nd Amendment (SP-08-19) *[DO-08-25 issued on 9-10-08]*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Harbor Reflections (SP-07-11) *[DO-08-11 issued on 3-17-08]*	9	25	23	23	21	18	16	15	13	11	7	5	4	2	0
Harborwalk Village (a.k.a. Shopping Center) (SP-00-57) *[DO-02-55 issued on 1-29-03] (revised 11-13*	54	54	40	34	23	10	0	0	0	0	0	0	0	0	0
Henderson Beach State Park, 2nd Amendment (SP-07-01) *[DO-07-07 issued on 12-20-06]*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Henderson Beach State Park, 3rd Amendment (SP-07-22) *[DO-08-01 issued on 10-09-07]*	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0
Henderson Beach State Park, 4th Amendment (SP-08-10) *[DO-09-02 issued on 10-29-08]*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Industrial Park Building Addition (SP-08-16) *[DO-09-03 issued on 11-13-08]*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Le Melange (SP-06-15) *[DO-07-05 issued on 12-04-06]*	0	0	0	0	-1	2	3	-5	-3	-2	-1	-1	-1	-1	-1
Le Melange, 1st Amendment (SP-09-03) *[DO-09-07 issued on 11-26-08]*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mattie Kelly Arts Foundation (SP 05-14) *[DO-05-30 issued on 6-27-05]*	0	0	0	0	2	4	4	8	8	5	5	8	8	8	8
Mattie Kelly Arts Foundation, 1st Amendment (SP-06-16) *[DO-06-11 issued on 6-16-06]*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Mattie Kelly Arts Foundation, 2nd Amendment (SP-07-15) *[DO-07-11 issued on 4-25-07]*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Norriego Pointe Condominium (SP-04-45) *[DO-05-25 issued on 5-17-05]*	1	3	5	6	7	15	14	12	8	7	4	1	1	1	1
Red Door Saloon (SP-08-07) *[DO-09-08 issued on 12-12-08]*	3	6	4	3	2	1	0	0	0	0	0	0	0	0	0
Safe Harbour Estates (SP-08-14) *[DO-09-10 issued on 2-19-09]*	0	1	2	2	0	0	0	1	0	0	0	0	0	0	0
The Shore at Crystal Beach (SP-07-13) *[DO-08-06 issued on 12-11-07]*	0	0	1	1	1	1	2	2	2	2	2	2	1	0	0
The Shore at Crystal Beach, 1st Amendment (SP-08-13) *[DO-08-24 issued on 9-10-08]*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Village Inn Development (SP-07-27) *[DO-08-18 issued on 4-21-08]*	54	121	62	54	47	42	36	28	23	15	10	3	0	0	0
West Harbor (SP-07-25) *[DO-09-05 issued on 11-26-08]*	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	122	**217**	**142**	**128**	**113**	**103**	**104**	**87**	**65**	**82**	**56**	**38**	**24**	**10**	**8**

Tentatively Committed Project Trips - No D.O. Issued	**Segment A**					**Segment B**		**Segment C**							
	1-2	**2-3**	**3-4**	**4-5**	**5-6**	**1-2**	**2-3**	**1-2**	**2-3**	**3-4**	**4-5**	**5-6**	**6-7**	**7-8**	**8-9**
Perry's (SP-08-12)	7	10	8	7	4	3	2	1	0	0	0	0	0	0	0
The Fleet Marina (SP-08-20) [Preliminary Tier III Public Benefit Approval Only]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Henderson Beach Resort (SP-09-04) [Preliminary Tier III Public Benefit Approval Only]	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	**10**	**8**	**7**	**4**	**3**	**2**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

APPENDIX B: COLLECTOR ROADWAY COMMITTED TRIPS

Project Trip Link Level Distribution Worksheet

Committed Project Trips - D.O. Issued - Not Constructed	**Airport Rd. A**	**Airport Rd. B**	**Azalea Dr.**	**Beach Dr.**	**Benning Dr.**	**Calhoun Ave.**	**Commons Blvd. A**	**Commons Blvd. B**	**Commons Blvd. C**	**Commons Blvd. D**	**Commons Blvd. E**
Alexan-Henderson Beach (SP-07-08) *[DO-08-03 issued on 10-11-07]*	0	0	0	0	0	0	66	66	35	32	19
Alexan-Henderson Beach, 1st Amendment (SP-09-02) *[DO-09-04 issued on 12-03-08]*	0	0	0	0	0	0	0	0	0	0	0
Beach Crystal (a.k.a. Caretta Dunes Condominium) (SP-05-12) *[DO-05-21 issued on 5-2-05]*	0	0	0	0	0	0	0	0	0	0	0
Beach Crystal, 1st Amendment (a.k.a. Caretta Dunes Condominium) (SP-08-04) *[DO-08-13 issued on*	0	0	0	0	0	0	0	0	0	0	0
Beach Lofts (SP-05-08) *[DO-05-33 issued on 8-12-05]*	1	0	0	4	0	0	0	0	0	0	0
Beach Pointe Condominium II (SP-07-06) *[DO-08-22 issued on 8-18-08]*	0	0	0	0	0	0	0	0	0	0	0
Denny's Restaurant (SP-08-15) *[DO-09-09 issued on 01-08-09]*	6	5	0	0	0	0	0	0	0	0	0
Destin Elementary Restroom (SP-08-17) *[DO-09-06 issued on 12-01-08]*	0	0	0	0	0	0	0	0	0	0	0
Destin United Methodist Church (SP-07-09) *[DO-08-02 issued on 10-17-07]*	0	4	0	8	0	0	1	1	0	0	0
Destin Water Sports (SP-07-16) *[DO-08-12 issued on 3-28-08]*	0	0	0	0	0	0	0	0	0	0	0
Destin Water Users Admin. Bldg., 1st Amendment (SP-07-02) *[DO-07-08 issued on 1-25-07]*	0	0	0	0	0	0	0	0	0	0	0
Destin Water Users Admin. Bldg., 2nd Amendment (SP-08-19) *[DO-08-25 issued on 9-10-08]*	0	0	0	0	0	0	0	0	0	0	0
Harbor Reflections (SP-07-11) *[DO-08-11 issued on 3-17-08]*	2	2	0	0	2	0	0	0	0	0	0
Harborwalk Village (a.k.a. Shopping Center) (SP-00-57) *[DO-02-55 issued on 1-29-03] (revised 11-13*	0	0	0	6	6	0	0	0	0	0	0
Henderson Beach State Park, 2nd Amendment (SP-07-01) *[DO-07-07 issued on 12-20-06]*	0	0	0	0	0	0	0	0	0	0	0
Henderson Beach State Park, 3rd Amendment (SP-07-22) *[DO-08-01 issued on 10-09-07]*	0	0	0	0	0	0	0	0	0	0	0
Henderson Beach State Park, 4th Amendment (SP-08-10) *[DO-09-02 issued on 10-29-08]*	0	0	0	0	0	0	0	0	0	0	0
Industrial Park Building Addition (SP-08-16) *[DO-09-03 issued on 11-13-08]*	1	1	0	0	0	0	0	0	0	0	0
Le Melange (SP-06-15) *[DO-07-05 issued on 12-04-06]*	1	0	0	0	0	0	0	0	0	0	0
Le Melange, 1st Amendment (SP-09-03) *[DO-09-07 issued on 11-26-08]*	0	0	0	0	0	0	0	0	0	0	0
Mattie Kelly Arts Foundation (SP 05-14) *[DO-05-30 issued on 6-27-05]*	0	4	0	0	0	0	6	6	26	15	14
Mattie Kelly Arts Foundation, 1st Amendment (SP-06-16) *[DO-06-11 issued on 6-16-06]*	0	0	0	0	0	0	0	0	0	0	0
Mattie Kelly Arts Foundation, 2nd Amendment (SP-07-15) *[DO-07-11 issued on 4-25-07]*	0	0	0	0	0	0	0	0	0	0	0
Norriego Pointe Condominium (SP-04-45) *[DO-05-25 issued on 5-17-05]*	0	0	0	0	0	0	0	0	0	0	0
Red Door Saloon (SP-08-07) *[DO-09-08 issued on 12-12-08]*	0	0	0	1	1	1	0	0	0	0	0
Safe Harbour Estates (SP-08-14) *[DO-09-10 issued on 2-19-09]*	0	3	2	4	0	2	2	1	1	0	0
The Shore at Crystal Beach (SP-07-13) *[DO-08-06 issued on 12-11-07]*	1	0	0	0	1	0	0	0	0	0	0
The Shore at Crystal Beach, 1st Amendment (SP-08-13) *[DO-08-24 issued on 9-10-08]*	0	0	0	0	0	0	0	0	0	0	0
Village Inn Development (SP-07-27) *[DO-08-18 issued on 4-21-08]*	7	4	9	8	6	9	7	7	6	5	6
West Harbor (SP-07-25) *[DO-09-05 issued on 11-26-08]*	0	0	0	0	0	0	0	0	0	0	0
	19	**23**	**11**	**31**	**16**	**12**	**82**	**81**	**68**	**52**	**39**

Tentatively Committed Project Trips - No D.O. Issued	**Airport Rd. A**	**Airport Rd. B**	**Azalea Dr.**	**Beach Dr.**	**Benning Dr.**	**Calhoun Ave.**	**Commons Blvd. A**	**Commons Blvd. B**	**Commons Blvd. C**	**Commons Blvd. D**	**Commons Blvd. E**
Perry's (SP-08-12)	1	1	0	1	1	1	0	0	0	0	0
The Fleet Marina (SP-08-20) [Preliminary Tier III Public Benefit Approval Only]	0	0	0	0	0	0	0	0	0	0	0
Henderson Beach Resort (SP-09-04) [Preliminary Tier III Public Benefit Approval Only]	0	0	0	0	0	0	0	0	0	0	0
	1	**1**	**0**	**1**	**1**	**1**	**0**	**0**	**0**	**0**	**0**

Project Trip Link Level Distribution Worksheet

Committed Project Trips - D.O. Issued - Not Constructed	**Crystal Beach Dr.**	**Gulf Shore Dr.**	**Henderson Bch. Rd**	**Hutchinson St.**	**Indian Bayou Tr. A**	**Indian Bayou Tr. B**	**Kelly St.**	**Legion Dr. A**	**Legion Dr. B**	**Main St. A**	**Main St. B**	**Matthew Blvd.**	**Mountain Dr.**
Alexan-Henderson Beach (SP-07-08) *[DO-08-03 issued on 10-11-07]*	0	0	0	0	0	0	0	0	0	0	0	0	0
Alexan-Henderson Beach, 1st Amendment (SP-09-02) *[DO-09-04 issued on 12-03-08]*	0	0	0	0	0	0	0	0	0	0	0	0	0
Beach Crystal (a.k.a. Caretta Dunes Condominium) (SP-05-12) *[DO-05-21 issued on 5-2-05]*	0	0	0	0	0	0	0	0	0	0	0	0	0
Beach Crystal, 1st Amendment (a.k.a. Caretta Dunes Condominium) (SP-08-04) *[DO-08-13 issued on 3*	0	0	0	2	0	0	0	0	0	0	0	0	0
Beach Lofts (SP-05-08) *[DO-05-33 issued on 8-12-05]*	0	0	0	0	0	0	0	0	1	0	0	0	1
Beach Pointe Condominium II (SP-07-06) *[DO-08-22 issued on 8-18-08]*	0	0	0	0	0	0	0	0	0	0	0	0	0
Denny's Restaurant (SP-08-15) *[DO-09-09 issued on 01-08-09]*	0	2	0	0	1	0	0	0	0	0	0	0	0
Destin Elementary Restroom (SP-08-17) *[DO-09-06 issued on 12-01-08]*	0	0	0	0	0	0	0	0	0	0	0	0	0
Destin United Methodist Church (SP-07-09) *[DO-08-02 issued on 10-17-07]*	0	0	0	1	4	3	2	0	4	0	0	0	0
Destin Water Sports (SP-07-16) *[DO-08-12 issued on 3-28-08]*	0	0	0	0	0	0	0	0	0	0	0	0	0
Destin Water Users Admin. Bldg., 1st Amendment (SP-07-02) *[DO-07-08 issued on 1-25-07]*	0	0	0	0	0	0	0	0	0	0	0	0	0
Destin Water Users Admin. Bldg., 2nd Amendment (SP-08-19) *[DO-08-25 issued on 9-10-08]*	0	0	0	0	0	0	0	0	0	0	0	0	0
Harbor Reflections (SP-07-11) *[DO-08-11 issued on 3-17-08]*	0	2	0	0	0	0	0	0	0	2	0	2	0
Harborwalk Village (a.k.a. Shopping Center) (SP-00-57) *[DO-02-55 issued on 1-29-03] (revised 11-13*	0	11	0	0	0	0	0	0	0	11	0	0	6
Henderson Beach State Park, 2nd Amendment (SP-07-01) *[DO-07-07 issued on 12-20-06]*	0	0	0	0	0	0	0	0	0	0	0	0	0
Henderson Beach State Park, 3rd Amendment (SP-07-22) *[DO-08-01 issued on 10-09-07]*	0	0	0	0	0	0	0	0	0	0	0	0	0
Henderson Beach State Park, 4th Amendment (SP-08-10) *[DO-09-02 issued on 10-29-08]*	0	0	0	0	0	0	0	0	0	0	0	0	0
Industrial Park Building Addition (SP-08-16) *[DO-09-03 issued on 11-13-08]*	0	0	0	0	0	0	0	0	0	0	0	0	0
Le Melange (SP-06-15) *[DO-07-05 issued on 12-04-06]*	0	0	0	0	0	0	0	0	0	0	0	0	0
Le Melange, 1st Amendment (SP-09-03) *[DO-09-07 issued on 11-26-08]*	0	0	0	0	0	0	0	0	0	0	0	0	0
Mattie Kelly Arts Foundation (SP 05-14) *[DO-05-30 issued on 6-27-05]*	0	2	0	1	3	2	0	0	0	2	0	4	0
Mattie Kelly Arts Foundation, 1st Amendment (SP-06-16) *[DO-06-11 issued on 6-16-06]*	0	0	0	0	0	0	0	0	0	0	0	0	0
Mattie Kelly Arts Foundation, 2nd Amendment (SP-07-15) *[DO-07-11 issued on 4-25-07]*	0	0	0	0	0	0	0	0	0	0	0	0	0
Norriego Pointe Condominium (SP-04-45) *[DO-05-25 issued on 5-17-05]*	0	27	0	0	0	0	0	0	0	0	0	0	0
Red Door Saloon (SP-08-07) *[DO-09-08 issued on 12-12-08]*	0	1	0	0	0	0	0	0	0	1	0	0	0
Safe Harbour Estates (SP-08-14) *[DO-09-10 issued on 2-19-09]*	0	0	0	0	0	0	0	0	0	0	0	0	0
The Shore at Crystal Beach (SP-07-13) *[DO-08-06 issued on 12-11-07]*	0	0	0	5	0	0	0	0	0	0	0	0	0
The Shore at Crystal Beach, 1st Amendment (SP-08-13) *[DO-08-24 issued on 9-10-08]*	0	0	0	0	0	0	0	0	0	0	0	0	0
Village Inn Development (SP-07-27) *[DO-08-18 issued on 4-21-08]*	0	4	0	2	0	0	4	2	2	7	4	4	34
West Harbor (SP-07-25) *[DO-09-05 issued on 11-26-08]*	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	**49**	**0**	**11**	**8**	**5**	**6**	**2**	**7**	**23**	**4**	**10**	**41**

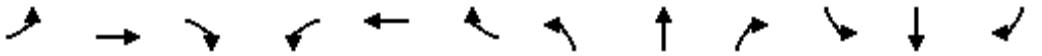
Tentatively Committed Project Trips - No D.O. Issued	**Crystal Beach Dr.**	**Gulf Shore Dr.**	**Henderson Bch. Rd**	**Hutchinson St.**	**Indian Bayou Tr. A**	**Indian Bayou Tr. B**	**Kelly St.**	**Legion Dr. A**	**Legion Dr. B**	**Main St. A**	**Main St. B**	**Matthew Blvd.**	**Mountain Dr.**
Perry's (SP-08-12)	0	1	0	0	0	0	0	0	0	3	1	0	0
The Fleet Marina (SP-08-20) [Preliminary Tier III Public Benefit Approval Only]	0	0	0	0	0	0	0	0	0	0	0	0	0
Henderson Beach Resort (SP-09-04) [Preliminary Tier III Public Benefit Approval Only]	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**3**	**1**	**0**	**0**

Project Trip Link Level Distribution Worksheet

Committed Project Trips - D.O. Issued - Not Constructed	**Regatta Bay Blvd.**	**Scenic Hwy 98 West**	**Scenic Hwy 98 East**	**Sibert Ave.**	**Stalhman Ave.**	**Two Trees Rd. A**	**Two Trees Rd. B**
Alexan-Henderson Beach (SP-07-08) *[DO-08-03 issued on 10-11-07]*	0	10	0	0	0	10	7
Alexan-Henderson Beach, 1st Amendment (SP-09-02) *[DO-09-04 issued on 12-03-08]*	0	0	0	0	0	0	0
Beach Crystal (a.k.a. Caretta Dunes Condominium) (SP-05-12) *[DO-05-21 issued on 5-2-05]*	0	0	-2	0	0	0	0
Beach Crystal, 1st Amendment (a.k.a. Caretta Dunes Condominium) (SP-08-04) *[DO-08-13 issued on 3*	0	0	7	0	0	1	0
Beach Lofts (SP-05-08) *[DO-05-33 issued on 8-12-05]*	0	0	0	0	0	0	0
Beach Pointe Condominium II (SP-07-06) *[DO-08-22 issued on 8-18-08]*	0	0	3	0	0	0	0
Denny's Restaurant (SP-08-15) *[DO-09-09 issued on 01-08-09]*	0	2	0	0	0	0	0
Destin Elementary Restroom (SP-08-17) *[DO-09-06 issued on 12-01-08]*	0	0	0	0	0	0	0
Destin United Methodist Church (SP-07-09) *[DO-08-02 issued on 10-17-07]*	0	0	0	0	0	0	1
Destin Water Sports (SP-07-16) *[DO-08-12 issued on 3-28-08]*	0	0	0	0	0	0	0
Destin Water Users Admin. Bldg., 1st Amendment (SP-07-02) *[DO-07-08 issued on 1-25-07]*	0	0	0	0	0	0	0
Destin Water Users Admin. Bldg., 2nd Amendment (SP-08-19) *[DO-08-25 issued on 9-10-08]*	0	0	0	0	0	0	0
Harbor Reflections (SP-07-11) *[DO-08-11 issued on 3-17-08]*	0	0	2	0	2	0	0
Harborwalk Village (a.k.a. Shopping Center) (SP-00-57) *[DO-02-55 issued on 1-29-03] (revised 11-13*	0	0	0	0	11	0	0
Henderson Beach State Park, 2nd Amendment (SP-07-01) *[DO-07-07 issued on 12-20-06]*	0	0	0	0	0	0	0
Henderson Beach State Park, 3rd Amendment (SP-07-22) *[DO-08-01 issued on 10-09-07]*	0	0	0	0	0	0	0
Henderson Beach State Park, 4th Amendment (SP-08-10) *[DO-09-02 issued on 10-29-08]*	0	0	0	0	0	0	0
Industrial Park Building Addition (SP-08-16) *[DO-09-03 issued on 11-13-08]*	0	0	0	0	0	0	0
Le Melange (SP-06-15) *[DO-07-05 issued on 12-04-06]*	0	5	0	0	0	0	0
Le Melange, 1st Amendment (SP-09-03) *[DO-09-07 issued on 11-26-08]*	0	0	0	0	0	0	0
Mattie Kelly Arts Foundation (SP 05-14) *[DO-05-30 issued on 6-27-05]*	0	0	5	0	0	0	6
Mattie Kelly Arts Foundation, 1st Amendment (SP-06-16) *[DO-06-11 issued on 6-16-06]*	0	0	0	0	0	0	0
Mattie Kelly Arts Foundation, 2nd Amendment (SP-07-15) *[DO-07-11 issued on 4-25-07]*	0	0	0	0	0	0	0
Norriego Pointe Condominium (SP-04-45) *[DO-05-25 issued on 5-17-05]*	0	0	0	0	1	0	0
Red Door Saloon (SP-08-07) *[DO-09-08 issued on 12-12-08]*	0	0	0	0	1	0	0
Safe Harbour Estates (SP-08-14) *[DO-09-10 issued on 2-19-09]*	0	0	0	0	0	0	0
The Shore at Crystal Beach (SP-07-13) *[DO-08-06 issued on 12-11-07]*	0	2	0	0	0	0	0
The Shore at Crystal Beach, 1st Amendment (SP-08-13) *[DO-08-24 issued on 9-10-08]*	0	0	0	0	0	0	0
Village Inn Development (SP-07-27) *[DO-08-18 issued on 4-21-08]*	0	8	6	4	4	5	0
West Harbor (SP-07-25) *[DO-09-05 issued on 11-26-08]*	0	0	0	1	0	0	0
	0	**27**	**21**	**5**	**19**	**16**	**14**

Tentatively Committed Project Trips - No D.O. Issued	**Regatta Bay Blvd.**	**Scenic Hwy 98 West**	**Scenic Hwy 98 East**	**Sibert Ave.**	**Stalhman Ave.**	**Two Trees Rd. A**	**Two Trees Rd. B**
Perry's (SP-08-12)	0	0	0	0	1	0	0
The Fleet Marina (SP-08-20) [Preliminary Tier III Public Benefit Approval Only]	0	0	0	0	0	0	0
Henderson Beach Resort (SP-09-04) [Preliminary Tier III Public Benefit Approval Only]	0	0	0	0	0	0	0
	0	**0**	**0**	**0**	**1**	**0**	**0**

APPENDIX C: US HIGHWAY 98 MAXIMUM SERVICE VOLUME SYNCHRO RESULTS



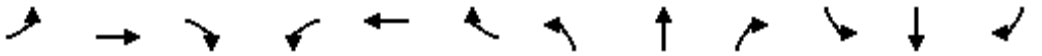
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	62	1753	0	2	1927	68	0	0	0	138	0	53
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	13	11	14	12	12	12	10	12	10	10	12	10
Total Lost time (s)	5.5	5.5		5.5	5.5					5.5		5.5
Lane Util. Factor	1.00	0.95		1.00	0.95					1.00		1.00
Frt	1.00	1.00		1.00	0.99					1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00					0.95		1.00
Satd. Flow (prot)	1829	3421		1770	3521					1652		1478
Flt Permitted	0.03	1.00		0.08	1.00					0.95		1.00
Satd. Flow (perm)	53	3421		153	3521					1652		1478
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	67	1905	0	2	2095	74	0	0	0	150	0	58
RTOR Reduction (vph)	0	0	0	0	1	0	0	0	0	0	0	40
Lane Group Flow (vph)	67	1905	0	2	2168	0	0	0	0	150	0	18
Turn Type	pm+pt			pm+pt						custom		custom
Protected Phases	7	4		3	8							
Permitted Phases	4			8						6		6
Actuated Green, G (s)	174.5	164.5		144.0	139.5					34.5		34.5
Effective Green, g (s)	174.5	164.5		144.0	139.5					34.5		34.5
Actuated g/C Ratio	0.79	0.75		0.65	0.63					0.16		0.16
Clearance Time (s)	5.5	5.5		5.5	5.5					5.5		5.5
Lane Grp Cap (vph)	280	2558		133	2233					259		232
v/s Ratio Prot	c0.03	c0.56		0.00	c0.62							
v/s Ratio Perm	0.16			0.01						c0.09		0.01
v/c Ratio	0.24	0.74		0.02	0.97					0.58		0.08
Uniform Delay, d1	57.8	15.8		16.7	38.3					86.0		79.2
Progression Factor	1.00	1.00		1.00	1.00					1.00		1.00
Incremental Delay, d2	2.0	2.0		0.2	13.3					9.1		0.7
Delay (s)	59.8	17.8		16.9	51.6					95.1		79.9
Level of Service	E	B		B	D					F		E
Approach Delay (s)		19.2			51.6			0.0			90.9	
Approach LOS		B			D			A			F	

Intersection Summary			
HCM Average Control Delay	38.8	HCM Level of Service	D
HCM Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	220.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	71.0%	ICU Level of Service	C
Analysis Period (min)	15		
c Critical Lane Group			

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Volume (vph)	2011	137	82	1931	64	38
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5	5.5	5.5	
Lane Util. Factor	0.95	1.00	1.00	0.95	0.97	
Frt	1.00	0.85	1.00	1.00	0.94	
Flt Protected	1.00	1.00	0.95	1.00	0.97	
Satd. Flow (prot)	3539	1583	1770	3539	3309	
Flt Permitted	1.00	1.00	0.03	1.00	0.97	
Satd. Flow (perm)	3539	1583	60	3539	3309	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	2186	149	89	2099	70	41
RTOR Reduction (vph)	0	39	0	0	9	0
Lane Group Flow (vph)	2186	110	89	2099	102	0
Turn Type		Perm	Perm			
Protected Phases	4			8		
Permitted Phases		4	8		2	
Actuated Green, G (s)	123.5	123.5	123.5	123.5	50.5	
Effective Green, g (s)	123.5	123.5	123.5	123.5	50.5	
Actuated g/C Ratio	0.67	0.67	0.67	0.67	0.27	
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5	
Lane Grp Cap (vph)	2363	1057	40	2363	903	
v/s Ratio Prot	0.62			0.59		
v/s Ratio Perm		0.07	c1.48		c0.03	
v/c Ratio	0.93	0.10	2.23	0.89	0.11	
Uniform Delay, d1	26.7	11.0	30.8	25.1	50.5	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	7.7	0.2	623.5	5.5	0.3	
Delay (s)	34.4	11.2	654.3	30.6	50.7	
Level of Service	C	B	F	C	D	
Approach Delay (s)	32.9			55.9	50.7	
Approach LOS	C			E	D	

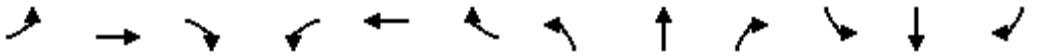
Intersection Summary			
HCM Average Control Delay	44.2	HCM Level of Service	D
HCM Volume to Capacity ratio	1.61		
Actuated Cycle Length (s)	185.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	78.0%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group



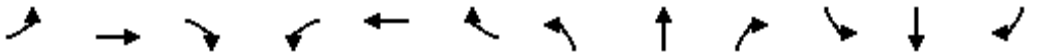
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	331	1563	125	130	1867	373	226	163	32	530	164	232
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	11	12	12	12
Total Lost time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lane Util. Factor	0.97	0.91	1.00	0.97	0.91	1.00	0.97	1.00	1.00	0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (prot)	3433	5085	1583	3433	5085	1583	3433	1863	1531	3433	1863	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00
Satd. Flow (perm)	3433	5085	1583	3433	5085	1583	3433	1863	1531	3433	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	360	1699	136	141	2029	405	246	177	35	576	178	252
RTOR Reduction (vph)	0	0	59	0	0	117	0	0	31	0	0	178
Lane Group Flow (vph)	360	1699	77	141	2029	288	246	177	4	576	178	74
Turn Type	Prot		Perm	Prot		Perm	Prot		Perm	Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8			2			6
Actuated Green, G (s)	27.5	96.5	96.5	19.5	88.5	88.5	26.5	19.5	19.5	26.5	19.5	19.5
Effective Green, g (s)	27.5	96.5	96.5	19.5	88.5	88.5	26.5	19.5	19.5	26.5	19.5	19.5
Actuated g/C Ratio	0.15	0.52	0.52	0.11	0.48	0.48	0.14	0.11	0.11	0.14	0.11	0.11
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Lane Grp Cap (vph)	513	2667	830	364	2446	761	494	197	162	494	197	168
v/s Ratio Prot	c0.10	0.33		0.04	c0.40		0.07	0.10		c0.17	c0.10	
v/s Ratio Perm			0.05			0.18			0.00			0.05
v/c Ratio	0.70	0.64	0.09	0.39	0.83	0.38	0.50	0.90	0.02	1.17	0.90	0.44
Uniform Delay, d1	74.4	31.2	21.9	76.7	41.2	30.3	72.6	81.3	73.7	78.8	81.3	77.1
Progression Factor	1.39	0.37	0.22	1.09	0.61	0.60	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	3.2	0.5	0.1	2.2	2.5	1.0	3.6	42.1	0.3	94.9	43.0	8.2
Delay (s)	106.6	12.1	5.0	85.5	27.6	19.3	76.2	123.4	74.0	173.6	124.3	85.3
Level of Service	F	B	A	F	C	B	E	F	E	F	F	F
Approach Delay (s)		27.2			29.5			94.2			142.8	
Approach LOS		C			C			F			F	

Intersection Summary			
HCM Average Control Delay	51.7	HCM Level of Service	D
HCM Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	184.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	87.5%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



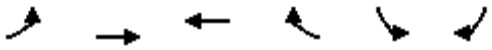
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	92	1428	63	124	1619	24	60	14	89	51	18	156
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	14	11	11	13	12	12	12	12	11	12	11	11
Total Lost time (s)	5.5	5.5		5.5	5.5			5.5	5.5		5.5	5.5
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00	1.00		1.00	1.00
Frt	1.00	0.99		1.00	1.00			1.00	0.85		1.00	0.85
Flt Protected	0.95	1.00		0.95	1.00			0.96	1.00		0.96	1.00
Satd. Flow (prot)	1888	3400		1829	3531			1790	1531		1736	1531
Flt Permitted	0.04	1.00		0.04	1.00			0.96	1.00		0.96	1.00
Satd. Flow (perm)	80	3400		86	3531			1790	1531		1736	1531
Peak-hour factor, PHF	0.92	0.92	0.92	0.93	0.93	0.93	0.68	0.68	0.68	0.81	0.81	0.81
Adj. Flow (vph)	100	1552	68	133	1741	26	88	21	131	63	22	193
RTOR Reduction (vph)	0	2	0	0	0	0	0	0	78	0	0	171
Lane Group Flow (vph)	100	1618	0	133	1767	0	0	109	53	0	85	22
Turn Type	pm+pt			pm+pt			Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4			8					2			6
Actuated Green, G (s)	119.0	99.5		119.0	99.5			22.5	22.5		20.5	20.5
Effective Green, g (s)	119.0	99.5		119.0	99.5			22.5	22.5		20.5	20.5
Actuated g/C Ratio	0.65	0.54		0.65	0.54			0.12	0.12		0.11	0.11
Clearance Time (s)	5.5	5.5		5.5	5.5			5.5	5.5		5.5	5.5
Lane Grp Cap (vph)	243	1839		240	1909			219	187		193	171
v/s Ratio Prot	0.04	0.48		c0.06	c0.50			c0.06			c0.05	
v/s Ratio Perm	0.22			0.30					0.03			0.01
v/c Ratio	0.41	0.88		0.55	0.93			0.50	0.28		0.44	0.13
Uniform Delay, d1	43.4	37.0		47.9	38.8			75.5	73.4		76.4	73.7
Progression Factor	1.00	1.00		1.00	1.00			1.00	1.00		1.00	1.00
Incremental Delay, d2	5.1	6.4		8.9	9.2			7.9	3.8		7.1	1.5
Delay (s)	48.5	43.4		56.8	48.0			83.3	77.2		83.5	75.2
Level of Service	D	D		E	D			F	E		F	E
Approach Delay (s)		43.7			48.6			80.0			77.7	
Approach LOS		D			D			E			E	

Intersection Summary			
HCM Average Control Delay	50.4	HCM Level of Service	D
HCM Volume to Capacity ratio	0.76		
Actuated Cycle Length (s)	184.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	75.1%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



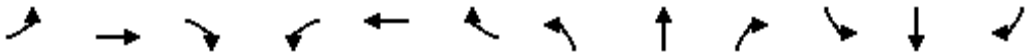
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	98	1787	2	13	1960	105	1	5	5	96	0	95
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	11	14	13	11	12	12	12	12	12	12	12
Total Lost time (s)	5.5	5.5		5.5	5.5			5.5		5.5		5.5
Lane Util. Factor	1.00	0.95		1.00	0.95			1.00		1.00		1.00
Frt	1.00	1.00		1.00	0.99			0.94		1.00		0.85
Flt Protected	0.95	1.00		0.95	1.00			1.00		0.95		1.00
Satd. Flow (prot)	1711	3421		1829	3395			1741		1770		1583
Flt Permitted	0.05	1.00		0.05	1.00			1.00		0.75		1.00
Satd. Flow (perm)	86	3421		92	3395			1741		1398		1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	107	1942	2	14	2130	114	1	5	5	104	0	103
RTOR Reduction (vph)	0	0	0	0	2	0	0	5	0	0	0	48
Lane Group Flow (vph)	107	1944	0	14	2242	0	0	6	0	104	0	55
Turn Type	pm+pt			pm+pt			Split			custom		custom
Protected Phases	7	4		3	8		2	2				
Permitted Phases	4			8						6		6
Actuated Green, G (s)	92.5	92.5		92.5	92.5			16.5		44.5		44.5
Effective Green, g (s)	92.5	92.5		92.5	92.5			16.5		44.5		44.5
Actuated g/C Ratio	0.50	0.50		0.50	0.50			0.09		0.24		0.24
Clearance Time (s)	5.5	5.5		5.5	5.5			5.5		5.5		5.5
Lane Grp Cap (vph)	118	1720		126	1707			156		338		383
v/s Ratio Prot	0.04	c0.57		0.01	c0.66			c0.00				
v/s Ratio Perm	0.41			0.05						c0.07		0.03
v/c Ratio	0.91	1.13		0.11	1.31			0.04		0.31		0.14
Uniform Delay, d1	51.6	45.8		79.3	45.8			76.5		57.1		54.8
Progression Factor	1.00	1.00		1.13	0.91			1.00		1.00		1.00
Incremental Delay, d2	60.7	66.6		1.1	143.6			0.5		2.3		0.8
Delay (s)	112.3	112.3		90.4	185.1			77.0		59.5		55.6
Level of Service	F	F		F	F			E		E		E
Approach Delay (s)		112.3			184.5			77.0			57.5	
Approach LOS		F			F			E			E	

Intersection Summary			
HCM Average Control Delay	145.7	HCM Level of Service	F
HCM Volume to Capacity ratio	0.92		
Actuated Cycle Length (s)	184.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	87.4%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



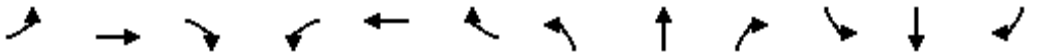
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	144	1680	1767	140	165	180
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Width	12	11	12	10	11	11
Total Lost time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3421	3539	1478	3319	1531
Flt Permitted	0.03	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	62	3421	3539	1478	3319	1531
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	157	1826	1921	152	179	196
RTOR Reduction (vph)	0	0	0	11	0	121
Lane Group Flow (vph)	157	1826	1921	141	179	75
Turn Type	pm+pt			Perm		custom
Protected Phases	7	4	8			
Permitted Phases	4			8	6	6
Actuated Green, G (s)	136.5	136.5	114.5	114.5	36.5	36.5
Effective Green, g (s)	136.5	136.5	114.5	114.5	36.5	36.5
Actuated g/C Ratio	0.74	0.74	0.62	0.62	0.20	0.20
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lane Grp Cap (vph)	199	2538	2202	920	658	304
v/s Ratio Prot	0.07	c0.53	c0.54			
v/s Ratio Perm	0.51			0.10	c0.05	0.05
v/c Ratio	0.79	0.72	0.87	0.15	0.27	0.25
Uniform Delay, d1	63.8	13.1	28.7	14.5	62.5	62.2
Progression Factor	1.28	0.77	0.41	0.41	1.12	1.48
Incremental Delay, d2	3.0	0.2	3.1	0.2	1.0	1.9
Delay (s)	84.8	10.2	14.9	6.1	71.3	94.2
Level of Service	F	B	B	A	E	F
Approach Delay (s)		16.1	14.3		83.3	
Approach LOS		B	B		F	

Intersection Summary			
HCM Average Control Delay	20.9	HCM Level of Service	C
HCM Volume to Capacity ratio	0.74		
Actuated Cycle Length (s)	184.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	75.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



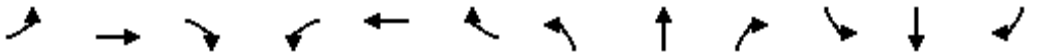
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	41	1567	189	157	1613	65	201	48	190	119	48	66
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	11	12	12	11	12	12	12	12	12	12	12	12
Total Lost time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00	0.95	0.95	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.91	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	0.97	1.00	0.95	1.00	
Satd. Flow (prot)	1711	3539	1583	1711	3539	1583	1681	1716	1583	1770	3231	
Flt Permitted	0.04	1.00	1.00	0.04	1.00	1.00	0.95	0.97	1.00	0.95	1.00	
Satd. Flow (perm)	80	3539	1583	73	3539	1583	1681	1716	1583	1770	3231	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	45	1703	205	171	1753	71	218	52	207	129	52	72
RTOR Reduction (vph)	0	0	87	0	0	11	0	0	103	0	60	0
Lane Group Flow (vph)	45	1703	118	171	1753	60	133	137	104	129	64	0
Turn Type	pm+pt		Perm	pm+pt		Perm	Split		Perm	Split		
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4		4	8		8			2			
Actuated Green, G (s)	109.0	104.5	104.5	117.0	108.5	108.5	22.5	22.5	22.5	26.5	26.5	
Effective Green, g (s)	109.0	104.5	104.5	117.0	108.5	108.5	22.5	22.5	22.5	26.5	26.5	
Actuated g/C Ratio	0.59	0.57	0.57	0.64	0.59	0.59	0.12	0.12	0.12	0.14	0.14	
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	
Lane Grp Cap (vph)	87	2010	899	122	2087	933	206	210	194	255	465	
v/s Ratio Prot	0.01	0.48		c0.06	0.50		0.08	c0.08		c0.07	0.02	
v/s Ratio Perm	0.29		0.07	c0.83		0.04			0.07			
v/c Ratio	0.52	0.85	0.13	1.40	0.84	0.06	0.65	0.65	0.54	0.51	0.14	
Uniform Delay, d1	32.0	33.1	18.6	57.2	30.7	16.1	77.0	77.0	75.9	72.7	68.8	
Progression Factor	1.43	1.22	3.67	1.42	0.69	1.10	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	15.0	3.4	0.2	201.6	2.0	0.1	14.6	14.7	10.3	7.0	0.6	
Delay (s)	60.7	43.7	68.3	282.5	23.1	17.8	91.5	91.7	86.1	79.7	69.4	
Level of Service	E	D	E	F	C	B	F	F	F	E	E	
Approach Delay (s)		46.7			45.2			89.3			74.7	
Approach LOS		D			D			F			E	

Intersection Summary			
HCM Average Control Delay	51.9	HCM Level of Service	D
HCM Volume to Capacity ratio	1.17		
Actuated Cycle Length (s)	184.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	79.3%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



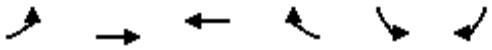
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	107	2037	17	33	1890	127	20	6	18	164	4	105
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	15	12	12	12	12	11	11	12	12	12
Total Lost time (s)	5.1	5.1	5.1	5.1	5.1			5.1	5.1	9.0	9.0	9.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95			1.00	1.00	0.95	0.91	0.95
Frt	1.00	1.00	0.85	1.00	0.99			1.00	0.85	1.00	0.97	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.96	1.00	0.95	0.96	1.00
Satd. Flow (prot)	1770	3421	1742	1770	3506			1735	1531	1681	1581	1504
Flt Permitted	0.03	1.00	1.00	0.03	1.00			0.96	1.00	0.95	0.96	1.00
Satd. Flow (perm)	58	3421	1742	59	3506			1735	1531	1681	1581	1504
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	116	2214	18	36	2054	138	22	7	20	178	4	114
RTOR Reduction (vph)	0	0	4	0	3	0	0	0	18	0	6	86
Lane Group Flow (vph)	116	2214	14	36	2189	0	0	29	2	103	95	7
Turn Type	pm+pt		Perm	pm+pt			Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4		4	8					2			6
Actuated Green, G (s)	133.8	128.9	128.9	129.8	126.9			14.9	14.9	13.0	13.0	13.0
Effective Green, g (s)	133.8	128.9	128.9	129.8	126.9			14.9	14.9	13.0	13.0	13.0
Actuated g/C Ratio	0.73	0.70	0.70	0.71	0.69			0.08	0.08	0.07	0.07	0.07
Clearance Time (s)	5.1	5.1	5.1	5.1	5.1			5.1	5.1	9.0	9.0	9.0
Lane Grp Cap (vph)	88	2397	1220	69	2418			140	124	119	112	106
v/s Ratio Prot	c0.04	0.65		0.01	0.62			c0.02		c0.06	0.06	
v/s Ratio Perm	c0.93		0.01	0.36					0.00			0.00
v/c Ratio	1.32	0.92	0.01	0.52	0.91			0.21	0.01	0.87	0.85	0.06
Uniform Delay, d1	58.4	23.4	8.3	36.7	23.6			79.0	77.8	84.6	84.5	79.8
Progression Factor	1.06	1.72	1.23	1.00	1.00			1.00	1.00	0.91	0.90	1.38
Incremental Delay, d2	188.1	5.5	0.0	25.4	6.2			3.3	0.2	50.2	49.9	1.0
Delay (s)	250.0	45.6	10.3	62.2	29.8			82.4	78.0	127.2	126.2	111.1
Level of Service	F	D	B	E	C			F	E	F	F	F
Approach Delay (s)		55.4			30.3			80.6			121.9	
Approach LOS		E			C			F			F	

Intersection Summary			
HCM Average Control Delay	48.3	HCM Level of Service	D
HCM Volume to Capacity ratio	1.16		
Actuated Cycle Length (s)	184.0	Sum of lost time (s)	19.2
Intersection Capacity Utilization	90.6%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	146	1953	26	19	1941	129	22	4	33	232	12	40
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	12	12	12	12	11
Total Lost time (s)	5.5	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00	0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.96	1.00	0.95	0.96	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1786	1583	1681	1693	1531
Flt Permitted	0.04	1.00	1.00	0.04	1.00	1.00		0.76	1.00	0.74	0.73	1.00
Satd. Flow (perm)	73	3539	1583	73	3539	1583		1421	1583	1308	1285	1531
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	159	2123	28	21	2110	140	24	4	36	252	13	43
RTOR Reduction (vph)	0	0	4	0	0	35	0	0	3	0	0	3
Lane Group Flow (vph)	159	2123	24	21	2110	105	0	28	33	131	134	40
Turn Type	Perm		Perm	Perm		Perm	Perm		Perm	Perm		Perm
Protected Phases		4			8			2			6	
Permitted Phases	4		4	8		8	2		2	6		6
Actuated Green, G (s)	101.5	101.5	101.5	101.5	101.5	101.5		71.5	71.5	71.5	71.5	71.5
Effective Green, g (s)	101.5	101.5	101.5	101.5	101.5	101.5		71.5	71.5	71.5	71.5	71.5
Actuated g/C Ratio	0.55	0.55	0.55	0.55	0.55	0.55		0.39	0.39	0.39	0.39	0.39
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5
Lane Grp Cap (vph)	40	1952	873	40	1952	873		552	615	508	499	595
v/s Ratio Prot		0.60			0.60							
v/s Ratio Perm	c2.17		0.01	0.29		0.07		0.02	0.02	0.10	c0.10	0.03
v/c Ratio	3.98	1.09	0.03	0.53	1.08	0.12		0.05	0.05	0.26	0.27	0.07
Uniform Delay, d1	41.2	41.2	18.8	26.0	41.2	19.8		35.1	35.1	38.2	38.4	35.3
Progression Factor	1.00	1.00	1.00	1.44	1.32	2.33		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	1396.4	48.7	0.1	17.2	40.6	0.1		0.2	0.2	1.2	1.3	0.2
Delay (s)	1437.6	89.9	18.8	54.8	95.1	46.2		35.3	35.3	39.4	39.7	35.5
Level of Service	F	F	B	D	F	D		D	D	D	D	D
Approach Delay (s)		181.8			91.7			35.3			39.0	
Approach LOS		F			F			D			D	

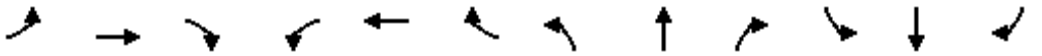
Intersection Summary			
HCM Average Control Delay	129.8	HCM Level of Service	F
HCM Volume to Capacity ratio	2.43		
Actuated Cycle Length (s)	184.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	88.9%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Volume (vph)	50	2127	2026	49	107	30
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lane Util. Factor	1.00	0.95	0.95	1.00	0.97	1.00
Frt	1.00	1.00	1.00	0.85	1.00	0.85
Flt Protected	0.95	1.00	1.00	1.00	0.95	1.00
Satd. Flow (prot)	1770	3539	3539	1583	3433	1583
Flt Permitted	0.03	1.00	1.00	1.00	0.95	1.00
Satd. Flow (perm)	59	3539	3539	1583	3433	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	54	2312	2202	53	116	33
RTOR Reduction (vph)	0	0	0	10	0	28
Lane Group Flow (vph)	54	2312	2202	43	116	5
Turn Type	pm+pt			Perm		Perm
Protected Phases	7	4	8		6	
Permitted Phases	4			8		6
Actuated Green, G (s)	143.5	143.5	120.5	120.5	29.5	29.5
Effective Green, g (s)	143.5	143.5	120.5	120.5	29.5	29.5
Actuated g/C Ratio	0.78	0.78	0.65	0.65	0.16	0.16
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5	5.5
Lane Grp Cap (vph)	209	2760	2318	1037	550	254
v/s Ratio Prot	0.02	c0.65	c0.62		c0.03	
v/s Ratio Perm	0.18			0.03		0.00
v/c Ratio	0.26	0.84	0.95	0.04	0.21	0.02
Uniform Delay, d1	43.6	12.9	29.0	11.3	67.1	65.1
Progression Factor	2.03	0.28	0.68	0.22	1.00	1.00
Incremental Delay, d2	0.8	0.8	1.3	0.0	0.9	0.2
Delay (s)	89.0	4.4	21.0	2.5	68.0	65.2
Level of Service	F	A	C	A	E	E
Approach Delay (s)		6.4	20.6		67.4	
Approach LOS		A	C		E	

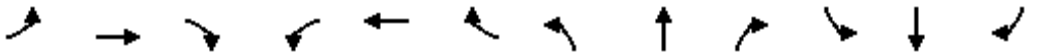
Intersection Summary			
HCM Average Control Delay	15.0	HCM Level of Service	B
HCM Volume to Capacity ratio	0.82		
Actuated Cycle Length (s)	184.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	71.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	80	1798	211	48	2002	220	211	48	59	133	46	62
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	11	11	11	12	12	12
Total Lost time (s)	5.5	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00	1.00	0.95	0.95	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		1.00	0.85	1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.96	1.00	0.95	0.98	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1730	1531	1681	1727	1583
Flt Permitted	0.04	1.00	1.00	0.04	1.00	1.00		0.96	1.00	0.95	0.98	1.00
Satd. Flow (perm)	73	3539	1583	73	3539	1583		1730	1531	1681	1727	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	87	1954	229	52	2176	239	229	52	64	145	50	67
RTOR Reduction (vph)	0	0	25	0	0	36	0	0	23	0	0	43
Lane Group Flow (vph)	87	1954	204	52	2176	203	0	281	41	96	99	24
Turn Type	pm+pt		Perm	pm+pt		Perm	Split		Perm	Split		Perm
Protected Phases	7	4		3	8		2	2		6	6	
Permitted Phases	4		4	8		8			2			6
Actuated Green, G (s)	105.0	102.5	102.5	105.0	102.5	102.5		26.5	26.5	30.5	30.5	30.5
Effective Green, g (s)	105.0	102.5	102.5	105.0	102.5	102.5		26.5	26.5	30.5	30.5	30.5
Actuated g/C Ratio	0.57	0.56	0.56	0.57	0.56	0.56		0.14	0.14	0.17	0.17	0.17
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5	5.5		5.5	5.5	5.5	5.5	5.5
Lane Grp Cap (vph)	65	1971	882	65	1971	882		249	220	279	286	262
v/s Ratio Prot	c0.02	0.55		0.01	0.61			c0.16		0.06	c0.06	
v/s Ratio Perm	c0.75		0.13	0.45		0.13			0.03			0.02
v/c Ratio	1.34	0.99	0.23	0.80	1.10	0.23		1.13	0.19	0.34	0.35	0.09
Uniform Delay, d1	52.4	40.3	20.7	44.6	40.8	20.7		78.8	69.3	67.9	67.9	65.0
Progression Factor	1.97	1.53	1.45	2.36	1.01	1.39		1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	199.3	13.3	0.3	44.0	52.0	0.4		96.1	1.9	3.3	3.3	0.7
Delay (s)	302.3	74.9	30.4	149.0	93.1	29.2		174.8	71.1	71.2	71.2	65.7
Level of Service	F	E	C	F	F	C		F	E	E	E	E
Approach Delay (s)		79.1			88.1			155.6			69.8	
Approach LOS		E			F			F			E	

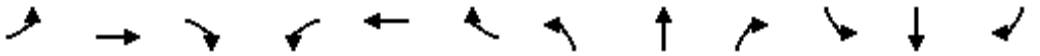
Intersection Summary			
HCM Average Control Delay	87.7	HCM Level of Service	F
HCM Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	184.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	94.4%	ICU Level of Service	F
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	111	1908	66	71	2133	141	188	25	64	146	38	82
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5	5.5	5.5			5.5		5.5	5.5	5.5
Lane Util. Factor	1.00	0.91	1.00	1.00	0.86			1.00		0.97	1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99			0.97		1.00	1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00			0.97		0.95	1.00	1.00
Satd. Flow (prot)	1770	5085	1583	1770	6348			1745		3433	1863	1583
Flt Permitted	0.04	1.00	1.00	0.04	1.00			0.77		0.62	1.00	1.00
Satd. Flow (perm)	73	5085	1583	77	6348			1392		2243	1863	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	121	2074	72	77	2318	153	204	27	70	159	41	89
RTOR Reduction (vph)	0	0	20	0	5	0	0	6	0	0	0	64
Lane Group Flow (vph)	121	2074	52	77	2466	0	0	295	0	159	41	25
Turn Type	pm+pt		Perm	pm+pt			Perm			Perm		Perm
Protected Phases	7	4		3	8			2			6	
Permitted Phases	4		4	8			2			6		6
Actuated Green, G (s)	116.0	102.5	102.5	116.0	102.5			51.5		51.5	51.5	51.5
Effective Green, g (s)	116.0	102.5	102.5	116.0	102.5			51.5		51.5	51.5	51.5
Actuated g/C Ratio	0.63	0.56	0.56	0.63	0.56			0.28		0.28	0.28	0.28
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5			5.5		5.5	5.5	5.5
Lane Grp Cap (vph)	171	2833	882	173	3536			390		628	521	443
v/s Ratio Prot	c0.05	c0.41		0.03	0.39						0.02	
v/s Ratio Perm	0.40		0.03	0.25				c0.21		0.07		0.02
v/c Ratio	0.71	0.73	0.06	0.45	0.70			0.76		0.25	0.08	0.06
Uniform Delay, d1	49.6	30.5	18.7	28.2	29.5			60.5		51.3	48.8	48.5
Progression Factor	1.40	0.77	0.97	2.05	0.13			1.00		1.00	1.00	1.00
Incremental Delay, d2	14.4	1.1	0.1	0.7	0.1			12.9		1.0	0.3	0.2
Delay (s)	83.7	24.6	18.1	58.6	3.9			73.4		52.3	49.1	48.7
Level of Service	F	C	B	E	A			E		D	D	D
Approach Delay (s)		27.6			5.5			73.4			50.7	
Approach LOS		C			A			E			D	

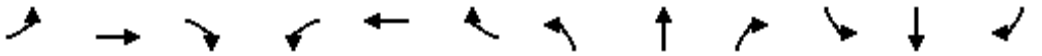
Intersection Summary					
HCM Average Control Delay	21.0	HCM Level of Service		C	
HCM Volume to Capacity ratio	0.74				
Actuated Cycle Length (s)	184.0	Sum of lost time (s)		16.5	
Intersection Capacity Utilization	76.8%	ICU Level of Service		D	
Analysis Period (min)	15				

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	57	2087	37	25	2269	45	79	8	38	60	3	31
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	12	16	12	10	10	12
Total Lost time (s)	5.5	5.5	5.5	5.5	5.5	5.5		5.5		5.5	5.5	
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00		1.00	1.00	
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.96		1.00	0.86	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.97		0.95	1.00	
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1963		1652	1499	
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		0.79		0.95	1.00	
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583		1592		1652	1499	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	62	2268	40	27	2466	49	86	9	41	65	3	34
RTOR Reduction (vph)	0	0	7	0	0	7	0	8	0	0	28	0
Lane Group Flow (vph)	62	2268	33	27	2466	42	0	128	0	65	9	0
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						
Actuated Green, G (s)	16.5	98.5	98.5	16.5	98.5	98.5		47.0		16.5	30.5	
Effective Green, g (s)	16.5	98.5	98.5	16.5	98.5	98.5		47.0		16.5	30.5	
Actuated g/C Ratio	0.09	0.54	0.54	0.09	0.54	0.54		0.26		0.09	0.17	
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5	5.5		5.5		5.5	5.5	
Lane Grp Cap (vph)	159	1895	847	159	1895	847		440		148	248	
v/s Ratio Prot	c0.04	0.64		0.02	c0.70			0.03		c0.04	0.01	
v/s Ratio Perm			0.02			0.03		c0.05				
v/c Ratio	0.39	1.20	0.04	0.17	1.30	0.05		0.29		0.44	0.03	
Uniform Delay, d1	79.0	42.8	20.3	77.4	42.8	20.4		55.1		79.4	64.4	
Progression Factor	0.76	1.72	1.99	1.39	0.29	0.07		1.00		1.00	1.00	
Incremental Delay, d2	5.1	92.6	0.1	0.2	136.0	0.0		1.7		9.2	0.3	
Delay (s)	65.6	166.2	40.3	107.5	148.4	1.5		56.8		88.6	64.7	
Level of Service	E	F	D	F	F	A		E		F	E	
Approach Delay (s)		161.5			145.2			56.8			79.9	
Approach LOS		F			F			E			E	

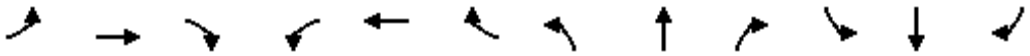
Intersection Summary			
HCM Average Control Delay	149.0	HCM Level of Service	F
HCM Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	184.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	85.7%	ICU Level of Service	E
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	68	2116	12	22	2314	18	3	0	10	36	0	56
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0			6.0	6.0
Lane Util. Factor	1.00	0.95	1.00	1.00	0.95	1.00		1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00	0.85		0.89			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00		0.99			0.95	1.00
Satd. Flow (prot)	1770	3539	1583	1770	3539	1583		1648			1770	1583
Flt Permitted	0.95	1.00	1.00	0.95	1.00	1.00		1.00			0.75	1.00
Satd. Flow (perm)	1770	3539	1583	1770	3539	1583		1665			1394	1583
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	74	2300	13	24	2515	20	3	0	11	39	0	61
RTOR Reduction (vph)	0	0	2	0	0	2	0	9	0	0	0	54
Lane Group Flow (vph)	74	2300	11	24	2515	18	0	5	0	0	39	7
Turn Type	Prot		Perm	Prot		Perm	Prot			Prot		Perm
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases			4			8						6
Actuated Green, G (s)	16.0	108.0	108.0	16.0	108.0	108.0		36.0			36.0	20.0
Effective Green, g (s)	16.0	108.0	108.0	16.0	108.0	108.0		36.0			36.0	20.0
Actuated g/C Ratio	0.09	0.59	0.59	0.09	0.59	0.59		0.20			0.20	0.11
Clearance Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0			6.0	6.0
Lane Grp Cap (vph)	154	2077	929	154	2077	929		324			305	172
v/s Ratio Prot	c0.04	0.65		0.01	c0.71			0.00			c0.01	
v/s Ratio Perm			0.01			0.01		0.00			c0.01	0.00
v/c Ratio	0.48	1.11	0.01	0.16	1.21	0.02		0.02			0.13	0.04
Uniform Delay, d1	80.0	38.0	15.8	77.7	38.0	15.9		59.7			61.0	73.4
Progression Factor	1.33	0.66	0.18	1.00	1.00	1.00		1.00			1.00	1.00
Incremental Delay, d2	1.0	49.1	0.0	2.1	99.6	0.0		0.1			0.9	0.4
Delay (s)	107.5	74.3	2.8	79.9	137.6	15.9		59.8			61.9	73.8
Level of Service	F	E	A	E	F	B		E			E	E
Approach Delay (s)		74.9			136.1			59.8			69.2	
Approach LOS		E			F			E			E	

Intersection Summary					
HCM Average Control Delay	105.7	HCM Level of Service		F	
HCM Volume to Capacity ratio	0.89				
Actuated Cycle Length (s)	184.0	Sum of lost time (s)		24.0	
Intersection Capacity Utilization	85.8%	ICU Level of Service		E	
Analysis Period (min)	15				

c Critical Lane Group



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Volume (vph)	16	204	104	162	345	229	131	160	203	146	113	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	11	10	11	11	11	10	11	10	11	11	11
Total Lost time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	
Lane Util. Factor	1.00	0.95	1.00	0.97	0.95	1.00	1.00	1.00	1.00	1.00	0.95	
Frt	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.98	
Flt Protected	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	3421	1478	3319	3421	1531	1652	1801	1478	1711	3337	
Flt Permitted	0.53	1.00	1.00	0.46	1.00	1.00	0.66	1.00	1.00	0.58	1.00	
Satd. Flow (perm)	985	3421	1478	1606	3421	1531	1145	1801	1478	1043	3337	
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	17	222	113	176	375	249	142	174	221	159	123	24
RTOR Reduction (vph)	0	0	93	0	0	169	0	0	172	0	18	0
Lane Group Flow (vph)	17	222	20	176	375	80	142	174	49	159	129	0
Turn Type	pm+pt		Perm	pm+pt		Perm	pm+pt		Perm	pm+pt		
Protected Phases	7	4		3	8		5	2		1	6	
Permitted Phases	4		4	8		8	2		2	6		
Actuated Green, G (s)	21.0	16.5	16.5	39.5	29.5	29.5	36.0	20.5	20.5	36.0	20.5	
Effective Green, g (s)	21.0	16.5	16.5	39.5	29.5	29.5	36.0	20.5	20.5	36.0	20.5	
Actuated g/C Ratio	0.23	0.18	0.18	0.43	0.32	0.32	0.39	0.22	0.22	0.39	0.22	
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	
Lane Grp Cap (vph)	263	614	265	1015	1097	491	533	401	329	521	744	
v/s Ratio Prot	0.00	0.06		c0.03	c0.11		0.04	c0.10		c0.05	0.04	
v/s Ratio Perm	0.01		0.01	0.04		0.05	0.06		0.03	0.07		
v/c Ratio	0.06	0.36	0.08	0.17	0.34	0.16	0.27	0.43	0.15	0.31	0.17	
Uniform Delay, d1	27.7	33.1	31.4	16.0	23.8	22.4	18.6	30.8	28.7	18.8	28.9	
Progression Factor	1.00	1.00	1.00	0.93	0.93	0.77	0.71	0.85	1.34	1.00	1.00	
Incremental Delay, d2	0.5	1.7	0.6	0.4	0.8	0.7	1.2	3.3	0.9	1.5	0.5	
Delay (s)	28.1	34.8	32.0	15.3	23.1	17.9	14.4	29.4	39.6	20.3	29.4	
Level of Service	C	C	C	B	C	B	B	C	D	C	C	
Approach Delay (s)		33.6			19.7			29.6			24.7	
Approach LOS		C			B			C			C	

Intersection Summary			
HCM Average Control Delay	25.6	HCM Level of Service	C
HCM Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	92.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	47.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			