

Gulf Coast Consulting, Inc.

Land Development Consulting

Engineering • Planning • Transportation • Permitting

ICOT Center

13825 ICOT Boulevard, Suite 605

Clearwater, FL 33760

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August 6, 2014

Mr. Housh Ghovaei, CEO
Northside Engineering Services, Inc.
300 S. Belcher Road
Clearwater, FL 33765

Re: Bayway Hotel #706, Bayway Blvd. – Traffic Impact Study

Dear Housh:

Please find enclosed twelve (12) signed copies of the Traffic Impact Study for the above-referenced property. This study concludes the surrounding roadways and intersections presently operate at acceptable levels of service and would continue to do so with the proposed redevelopment. Please submit eleven (11) copies with your application/plans package to the City of Clearwater.

Sincerely,

Robert Pergolizzi, AICP/PTP
Principal

Cc: 14-040

**TRAFFIC IMPACT STUDY
FOR
BAYWAY HOTEL
706 BAYWAY BLVD.
CLEARWATER, FLORIDA**

PREPARED FOR:
BAYWAY HOTEL HOLDINGS, LLC

PREPARED BY:
GULFCOAST CONSULTING, INC.
AUGUST 2014
PROJECT # 14-040

Robert Pergolizzi, AICP / PTP
AICP #9023 / PTP #133

I. INTRODUCTION

The applicant is proposing to develop their property on Clearwater Beach into a 32 room hotel. This new hotel will be constructed on vacant property that currently exists at 706 Bayway Boulevard. This new hotel will be located along the north side of Bayway Boulevard between Parkway Drive and the Clearwater Pass Bridge. (See Figure 1) The development of the property is the subject of a Comprehensive Infill Redevelopment in the Tourist "T" zoning district. This application requires an assessment of the traffic impacts of development. A methodology was established with Clearwater traffic Engineering staff prior to completing this report.

II. EXISTING TRAFFIC CONDITIONS

The site has frontage on Bayway Boulevard immediately east of the intersection of Bayway Boulevard/Parkway Drive on south Clearwater Beach. Bayway Boulevard is a two-lane local roadway. South Gulfview Boulevard is a two-lane collector roadway with on-street parking running along Clearwater Beach. Coronado Drive is a three-lane collector roadway with on-street parking except for a short segment between Devon Drive and S. Gulfview Boulevard which is 4-lanes undivided. Hamden Drive intersects with S. Gulfview Boulevard at a signalized intersection. The segment of S. Gulfview Boulevard between Hamden Drive and the Clearwater Pass bridge is three lanes with a small portion being 4-lanes between Hamden Drive and Bayway Boulevard. Per the approved methodology traffic counts that were conducted on June 21, 2012 at the following intersections during the weekday PM peak period of 4-6 PM were used as a basis for this study.

S. Gulfview Blvd. / Hamden Drive (signal)
S. Gulfview Blvd. / Coronado Drive (signal)
Coronado Drive / Hamden Drive

These counts were supplemented by an intersection turning movement count at Bayway Boulevard/Parkway Drive in August 2014. All traffic counts were converted to annual average equivalents using FDOT seasonal adjustment factors. Existing traffic volumes are shown in Figure 2. Existing intersections were analyzed using the HCS+ and SYNCHRO software. The count data, HCS+ and SYNCHRO printouts are included in Appendix A.

Presently the signalized intersection at S. Gulfview Boulevard / Coronado Drive operates at LOS A with average delay being 6.6 seconds per vehicle and an intersection capacity utilization (ICU) of 42.5%.



PROJECT LOCATION – BAYWAY HOTEL

PROJECT NO:
14-040



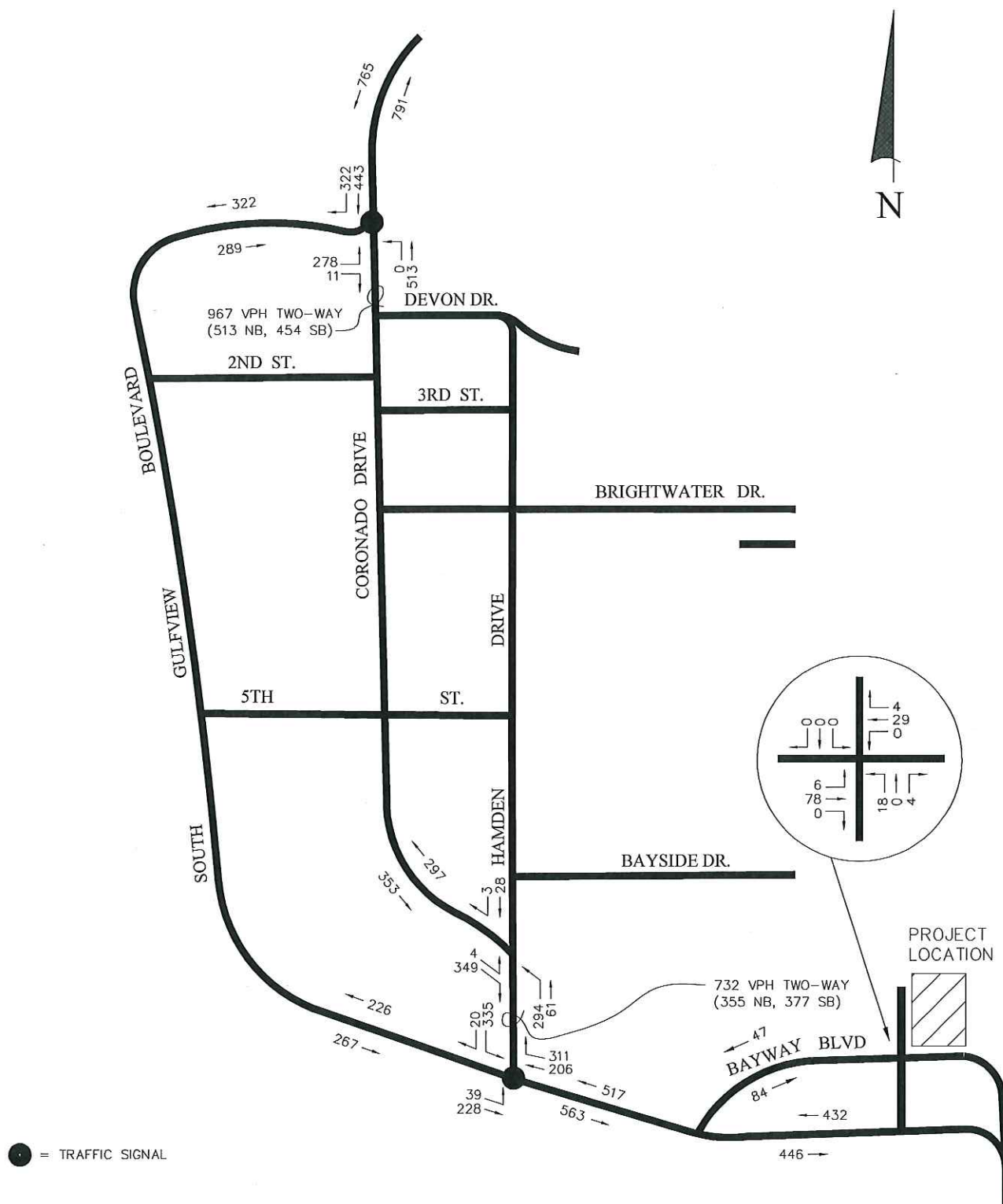
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DATE:
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FIGURE:

1



EXISTING PM PEAK HOUR TRAFFIC

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FIGURE:

2

Presently the signalized intersection at S. Gulfview Boulevard / Hamden Drive operates at LOS A with average delay being 5.7 seconds per vehicle with ICU of 41.8%.

At the intersection of Hamden Drive / Coronado Drive the primary movements are eastbound-to-southbound and northbound-to-westbound, whereas the southbound approach (Hamden Drive) is stop controlled. The HCS+ analysis shows the primary movements operate at LOS A with delay of 8.2 seconds per vehicle and the southbound stop-controlled movements operate at LOS C with delay of 16.6 seconds per vehicle.

At the Bayway Boulevard/ Parkway Drive intersection all movements operate at LOS A with minimal delay.

South Gulfview Boulevard functions as collector roadway and according to FDOT 2009 QLOS Handbook capacity tables has a LOS D capacity of 1,440 vehicles per hour on the undivided segment. The segment of Gulfview Boulevard east of Hamden Drive and Coronado Drive are both three-lane collector roads with a LOS D capacity of 1,520 vehicles per hour and 2,175 vehicles per hour on the 4-lane portions. Hamden Drive north of the Y-intersection with Coronado Drive is a two-lane city roadway with an estimated LOS D capacity of 1,040 vehicles per hour. The existing PM peak hour LOS for areas roadway segments is shown below:

EXISTING ROADWAY CONDITIONS (2014)

Roadway Segment	Lanes	PM Peak Volume	LOS D Capacity	LOS
S. Gulfview (E. of Bayway)	3-lanes	878	1520	B
S. Gulfview (Bywy-Hmdn)	4-lanes	1080	2175	C
S. Gulfview (Hamden -5 th)	2LU	493	1440	B
S. Gulfview (5 th – Coronado)	2LU	611	1440	B
Coronado (Hamden – 5 th)	2LD	650	1520	B
Coronado (Devon Dr - S. Gulfview)	4LU	967	2175	C
Coronado (Gulfview to Roundabout)	4LD	1556	2900	C
Hamden (S. Gulfview-Coronado)	2LD	732	1520	B
Bayway Blvd. (E. of Parkway Dr)	2LU	115	1040	B
Bayway Blvd (W. of Parkway Dr.)	2LU	131	1040	B

Presently all roadway segments operate at LOS C or better which indicates acceptable levels of service and traffic operations.

III. FUTURE TRAFFIC CONDITIONS

Existing traffic was adjusted by a 2% annual growth rate to the expected build-out year of 2017 to account for background traffic from other nearby redevelopment

projects. In addition, traffic from several approved developments was added as background traffic; these include the proposed Hampton Inn #655 S. Gulfview, the proposed Clearwater Beach Resort at the corner of S. Gulfview and Coronado, the Sea Captain redevelopment at #40 Devon Drive, the Gulfview Hotel at #625 S. Gulfview, the Entrada Hotel at #521 S. Gulfview, Marquesas at #715 S. Gulfview, Mainsteam Hotel "A", Hotel "B", and Hotel "C", and the redevelopment for a hotel at 401-421 S. Gulfview Boulevard. Background traffic volumes are shown in Figure 3.

The site will be developed as a 32 room hotel and will not contain any on-site restaurants or amenities. Using Institute of Transportation Engineers (ITE) Trip Generation, 9th Edition rates, the amount of new trips was calculated and estimates are shown below:

TRIP GENERATION ESTIMATES

Land Use	Amount	Daily Trips	PM Peak Trip
Hotel	32 Rooms	261	19 (10/9)

The hotel will generate 261 daily trips and have 19 PM peak hour trips. The vehicular access will be taken from Bayway Boulevard via two separate driveways. The expected distribution is shown in Figure 4 and is as follows:

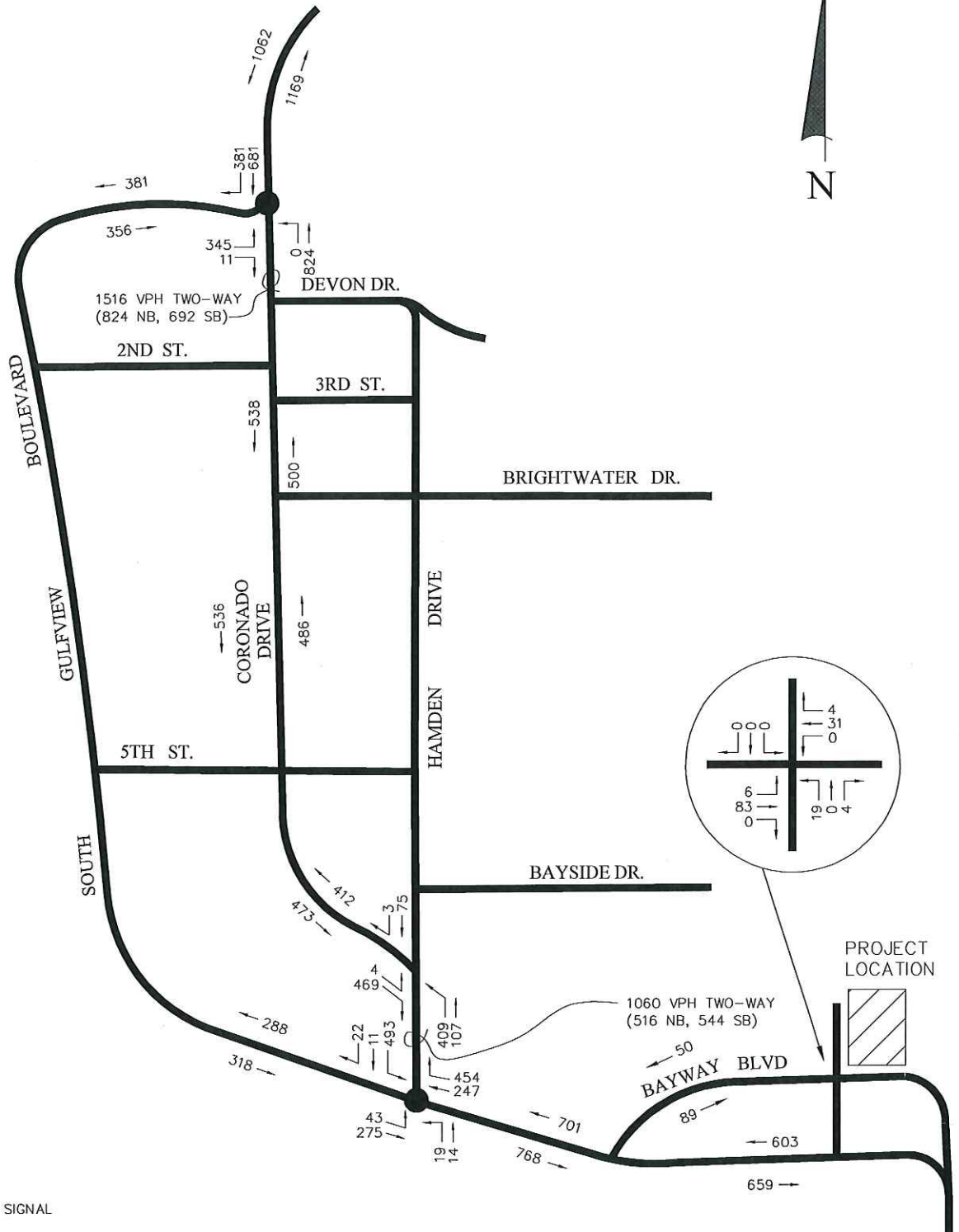
- 60% to / from the west and north (11 PM peak hour trips)
- 40% to / from the east and south (8 PM peak hour trips)

The projects impacts to the surrounding roadway system is shown below:

PROJECT IMPACT CALCULATIONS

Road Segment	Lanes	Project Trips	Capacity	Project Percent
S. Gulfview (E. of Bayway)	3-lanes	0	1520	0.00%
S. Gulfview (Bywy-Hmdn)	4-lanes	11	2175	0.51%
S. Gulfview (Hamden-5 th)	2LU	5	1440	0.35%
S. Gulfview (5 th -Coronado)	2LU	5	1440	0.35%
Coronado (Hamden – Devon)	2LD	6	1520	0.39%
Coronado (Devon - S. Gulfview)	4LU	6	2175	0.27%
Coronado (Gulfview – Roundabout)	4LD	11	2900	0.38%
Hamden (Gulfview – Coronado)	2LD	6	1520	0.39%

Project traffic impacts will be primarily to Bayway Boulevard and South Gulfview Boulevard. Project traffic was added to accumulated background traffic for a build-out of 2017. All intersections, roadway segments and project driveways were analyzed for future conditions. Future traffic volumes are shown in Figure 5, and the SYNCHRO and HCS+ printouts are included in Appendix B.



BACKGROUND PM PEAK HOUR TRAFFIC

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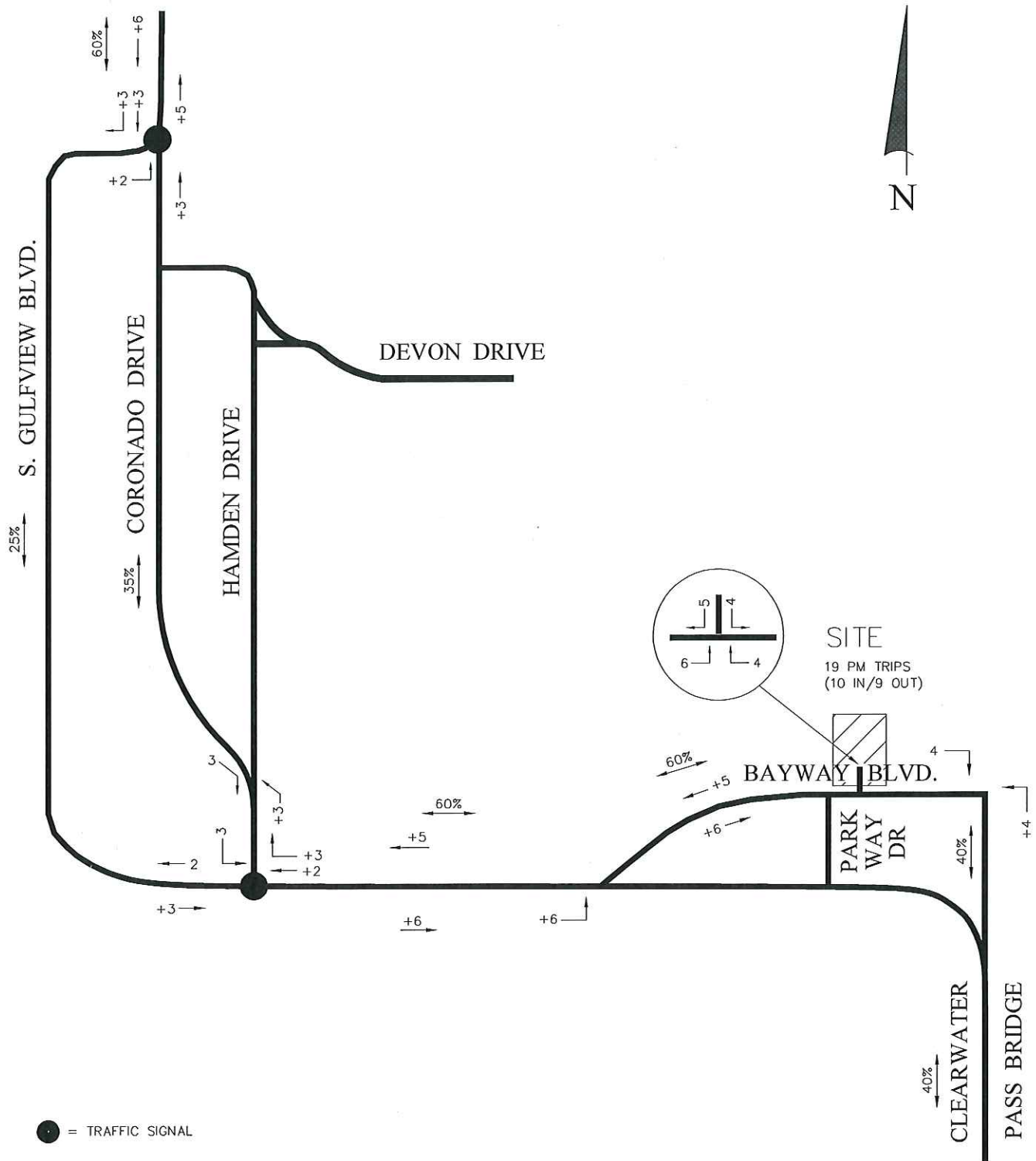
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FIGURE:

3



● = TRAFFIC SIGNAL

PROJECT TRAFFIC DISTRIBUTION

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FIGURE:

4

The signalized intersection at S. Gulfview Boulevard / Coronado Drive would continue to operate at LOS A with average delay of 7.3 seconds per vehicle and an intersection capacity utilization (ICU) of 55.0%.

The signalized intersection at S. Gulfview Boulevard / Hamden Drive would operate at LOS B with average delay being 12.1 seconds per vehicle with ICU of 56.0%. Traffic from the Entrada Hotel at #521 S. Gulfview requires split-phase operation of this traffic signal.

At the intersection of Hamden Drive / Coronado Drive, the HCS+ analysis shows the primary movements operate at LOS A with delay of 8.7 seconds per vehicle and the southbound stop-controlled movements operate at LOS D with delay of 30.1 seconds per vehicle.

At the Bayway Boulevard/ Parkway Drive intersection all movements would continue to operate at LOS A with minimal delay. At the Bayway Boulevard/Drive A intersection all movements would operate at LOS A with minimal delay.

Expected roadway conditions with the project in impacts are shown below:

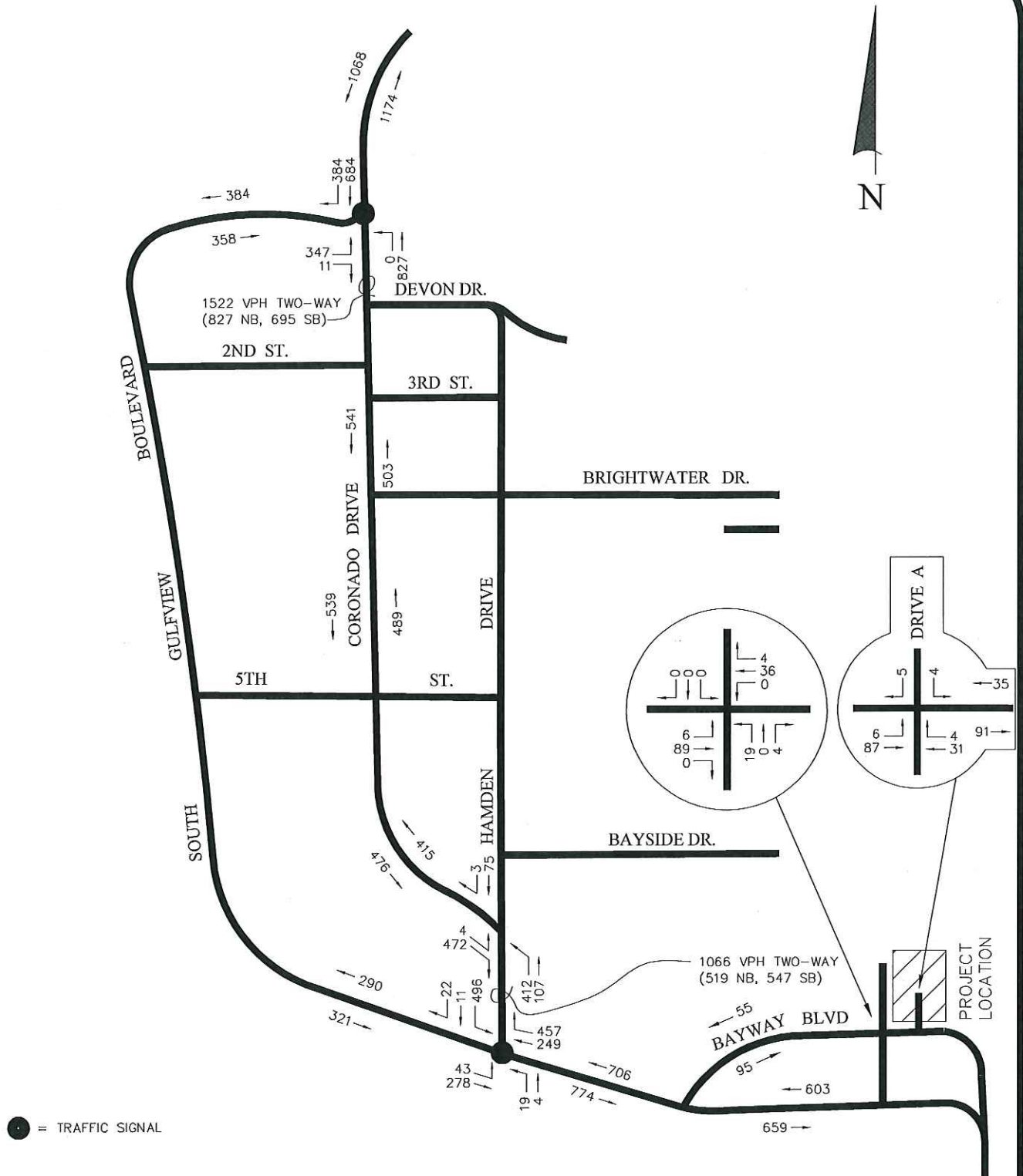
FUTURE ROADWAY CONDITIONS WITH PROJECT (2017)

<u>Roadway Segment</u>	<u>Lanes</u>	<u>PM Peak Volume</u>	<u>LOS D Capacity</u>	<u>LOS</u>
S. Gulfview (E of Bayway)	3-lanes	1262	1520	C
S. Gulfview (Bywy-Hmdn)	4-lanes	1480	2175	C
S. Gulview (Hamden -5 th)	2LU	611	1440	B
S. Gulfview (5th – Coronado)	2LU	742	1440	B
Coronado (Hamden – 5 th)	2LD	891	1520	B
Coronado (Devon. - Gulfview)	4LU	1522	2175	C
Coronado (Gulfview to Roundabout)	4LD	2242	2900	D
Hamden (S. Gulfview-Coronado)	2LD	1066	1520	C
Bayway Blvd. (E. of Parkway Dr.)	2LU	126	1040	B
Bayway Blvd. (W. of Parkway Dr.)	2LU	150	1040	B

All roadway segments would continue to operate at LOS D or better.

IV. CONCLUSION

This analysis was conducted in accordance with a methodology established with City of Clearwater staff. The proposed hotel would generate 261 daily trips of which 19 would occur during the PM peak hour. This analysis demonstrates traffic operations at nearby intersections and on adjacent roadways would continue at acceptable levels of service with or without the project impacts.



FUTURE PM PEAK HOUR TRAFFIC BAYWAY HOTEL

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FIGURE:

5

APPENDIX A

2013 Peak Season Factor Category Report - Report Type: ALL
Category: 1500 PINELLAS COUNTYWIDE

Week	Dates	SF	MOCF: 0.95 PSCF
1	01/01/2013 - 01/05/2013	1.05	1.11
2	01/06/2013 - 01/12/2013	1.04	1.09
3	01/13/2013 - 01/19/2013	1.03	1.08
4	01/20/2013 - 01/26/2013	1.02	1.07
5	01/27/2013 - 02/02/2013	1.00	1.05
6	02/03/2013 - 02/09/2013	0.99	1.04
* 7	02/10/2013 - 02/16/2013	0.97	1.02
* 8	02/17/2013 - 02/23/2013	0.96	1.01
* 9	02/24/2013 - 03/02/2013	0.95	1.00
*10	03/03/2013 - 03/09/2013	0.94	0.99
*11	03/10/2013 - 03/16/2013	0.93	0.98
*12	03/17/2013 - 03/23/2013	0.92	0.97
*13	03/24/2013 - 03/30/2013	0.93	0.98
*14	03/31/2013 - 04/06/2013	0.93	0.98
*15	04/07/2013 - 04/13/2013	0.94	0.99
*16	04/14/2013 - 04/20/2013	0.95	1.00
*17	04/21/2013 - 04/27/2013	0.96	1.01
*18	04/28/2013 - 05/04/2013	0.96	1.01
*19	05/05/2013 - 05/11/2013	0.97	1.02
20	05/12/2013 - 05/18/2013	0.98	1.03
21	05/19/2013 - 05/25/2013	0.99	1.04
22	05/26/2013 - 06/01/2013	0.99	1.04
23	06/02/2013 - 06/08/2013	0.99	1.04
24	06/09/2013 - 06/15/2013	1.00	1.05
25	06/16/2013 - 06/22/2013	1.00	1.05
26	06/23/2013 - 06/29/2013	1.00	1.05
27	06/30/2013 - 07/06/2013	1.01	1.06
28	07/07/2013 - 07/13/2013	1.01	1.06
29	07/14/2013 - 07/20/2013	1.02	1.07
30	07/21/2013 - 07/27/2013	1.02	1.07
31	07/28/2013 - 08/03/2013	1.02	1.07
32	08/04/2013 - 08/10/2013	1.02	1.07
33	08/11/2013 - 08/17/2013	1.03	1.08
34	08/18/2013 - 08/24/2013	1.03	1.08
35	08/25/2013 - 08/31/2013	1.04	1.09
36	09/01/2013 - 09/07/2013	1.05	1.11
37	09/08/2013 - 09/14/2013	1.06	1.12
38	09/15/2013 - 09/21/2013	1.06	1.12
39	09/22/2013 - 09/28/2013	1.05	1.11
40	09/29/2013 - 10/05/2013	1.04	1.09
41	10/06/2013 - 10/12/2013	1.03	1.08
42	10/13/2013 - 10/19/2013	1.02	1.07
43	10/20/2013 - 10/26/2013	1.03	1.08
44	10/27/2013 - 11/02/2013	1.04	1.09
45	11/03/2013 - 11/09/2013	1.04	1.09
46	11/10/2013 - 11/16/2013	1.05	1.11
47	11/17/2013 - 11/23/2013	1.06	1.12
48	11/24/2013 - 11/30/2013	1.06	1.12
49	12/01/2013 - 12/07/2013	1.06	1.12
50	12/08/2013 - 12/14/2013	1.05	1.11
51	12/15/2013 - 12/21/2013	1.05	1.11
52	12/22/2013 - 12/28/2013	1.04	1.09
53	12/29/2013 - 12/31/2013	1.03	1.08

* Peak Season

PEAK HOUR / P.H.F. DATA

PROJECT: BAYWAY HOTEL

PROJECT NO: 14-040

LOCATION: Parkway Dr (NB) & Bayview Blvd (E-W)

DATE: August 4, 2014

SPEED LIMIT:

NB	25
SB	N/A
EB	25
WB	25

SIGNAL TIMING: (SECONDS) (NOT APPLICABLE)

NB	25
SB	N/A
EB	25
WB	25

PM PEAK HOUR COUNTS

TIME	NB L	NB T	NB R	SB L	SB T	SB R	EB L	EB T	EB R	WB L	WB T	WB R	TOTAL VOLUME	HOURLY VOLUMES
4:00-4:15	2	0	1	0	0	0	3	25	0	0	11	2	44	
4:15-4:30	4	0	0	0	0	0	1	23	0	0	7	1	36	
4:30-4:45	5	0	2	0	0	0	1	12	0	0	7	0	27	
4:45-5:00	4	0	0	0	0	0	0	10	0	0	9	0	23	130
5:00-5:15	4	0	1	0	0	0	2	21	0	0	5	3	36	122
5:15-5:30	6	0	3	0	0	0	2	18	0	0	10	1	40	126
5:30-5:45	4	0	0	0	0	0	1	13	0	0	7	0	25	124
5:45-6:00	4	0	0	0	0	0	1	24	0	0	6	0	35	136
	33	0	7	0	0	0	11	146	0	0	62	7	266	

PEAK HOUR

TIME	NB L	NB T	NB R	SB L	SB T	SB R	EB L	EB T	EB R	WB L	WB T	WB R	TOTAL VOLUME
5:00-5:15	4	0	1	0	0	0	2	21	0	0	5	3	36
5:15-5:30	6	0	3	0	0	0	2	18	0	0	10	1	40
5:30-5:45	4	0	0	0	0	0	1	13	0	0	7	0	25
5:45-6:00	4	0	0	0	0	0	1	24	0	0	6	0	35
	18	0	4	0	0	0	6	76	0	0	28	4	136

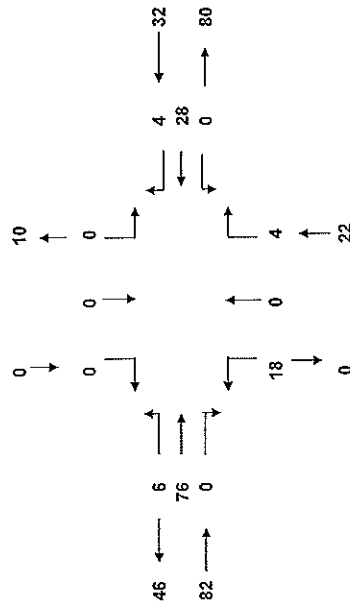
INTERSECTION PEAK HOUR

INTERSECTION PEAK HOUR VOLUME	136
PEAK HOUR VOLUME NB	22
PEAK HOUR VOLUME SB	0
PEAK HOUR VOLUME EB	82
PEAK HOUR VOLUME WB	32

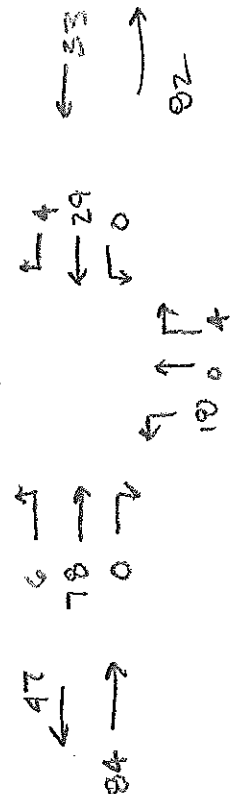
5:00-6:00

INTERSECTION PHF	0.85
PHF NB	0.61
PHF SB	#DIV/0!
PHF EB	0.82
PHF WB	0.73

HOURLY FLOW DIAGRAM



DF=1.02



Lanes, Volumes, Timings

3:

8/1/2014

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	TTT			TT	TT	T
Volume (vph)	278	11	0	513	443	322
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500	500	500			0
Storage Lanes	1	0	0			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	0.95	0.95	0.95	0.95	1.00
Ped Bike Factor	0.97					0.95
Frt	0.994					0.850
Flt Protected	0.954					
Satd. Flow (prot)	3427	0	0	3539	3539	1583
Flt Permitted	0.954					
Satd. Flow (perm)	3322	0	0	3539	3539	1502
Right Turn on Red		No				Yes
Satd. Flow (RTOR)						354
Link Speed (mph)	20			25	25	
Link Distance (ft)	331			260	350	
Travel Time (s)	11.3			7.1	9.5	
Confl. Peds. (#/hr)	17		33			17
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	305	12	0	564	487	354
Shared Lane Traffic (%)						
Lane Group Flow (vph)	317	0	0	564	487	354
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1		1	2	2	1
Detector Template	Left		Left	Thru	Thru	Right
Leading Detector (ft)	20		20	100	100	20
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	20		20	6	6	20
Detector 1 Type	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				CI+Ex	CI+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	NA		Perm	NA	NA	Perm
Protected Phases	4			2	6	

Lanes, Volumes, Timings

3:

8/1/2014

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases			2			6
Detector Phase	4		2	2	6	6
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	20.0		20.0	20.0	20.0	20.0
Total Split (s)	25.0		35.0	35.0	35.0	35.0
Total Split (%)	41.7%		58.3%	58.3%	58.3%	58.3%
Maximum Green (s)	21.0		31.0	31.0	31.0	31.0
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0			0.0	0.0	0.0
Total Lost Time (s)	4.0			4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	None		Max	Max	Max	Max
Walk Time (s)	5.0		5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0		0	0	0	0
Act Effect Green (s)	9.9			32.6	32.6	32.6
Actuated g/C Ratio	0.20			0.65	0.65	0.65
v/c Ratio	0.47			0.25	0.21	0.32
Control Delay	20.0			4.4	4.3	1.5
Queue Delay	0.0			0.0	0.0	0.0
Total Delay	20.0			4.4	4.3	1.5
LOS	B			A	A	A
Approach Delay	20.0			4.4	3.1	
Approach LOS	B			A	A	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 50.5

Natural Cycle: 40

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.47

Intersection Signal Delay: 6.6

Intersection LOS: A

Intersection Capacity Utilization 42.5%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3:

 Ø2	 Ø4
35 s	25 s
 Ø6	
35 s	

Lanes, Volumes, Timings

3:

8/1/2014

						
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations		↔↑	↑	↗	↗↗	
Volume (vph)	39	228	206	311	335	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	1.00	1.00	0.97	0.95
Ped Bike Factor		0.99		0.80	1.00	
Frt				0.850	0.992	
Flt Protected		0.993			0.955	
Satd. Flow (prot)	0	3514	1863	1583	3415	0
Flt Permitted		0.897			0.955	
Satd. Flow (perm)	0	3129	1863	1273	3415	0
Right Turn on Red				Yes		Yes
Satd. Flow (RTOR)				331	86	
Link Speed (mph)		25	25		25	
Link Distance (ft)		300	500		300	
Travel Time (s)		8.2	13.6		8.2	
Confl. Peds. (#/hr)	82			82		11
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94
Adj. Flow (vph)	41	243	219	331	356	21
Shared Lane Traffic (%)						
Lane Group Flow (vph)	0	284	219	331	377	0
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Left	Left	Right	Left	Right
Median Width(ft)		0	0		24	
Link Offset(ft)		0	0		0	
Crosswalk Width(ft)		16	16		16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15			9	15	9
Number of Detectors	1	2	2	1	1	
Detector Template	Left	Thru	Thru	Right	Left	
Leading Detector (ft)	20	100	100	20	20	
Trailing Detector (ft)	0	0	0	0	0	
Detector 1 Position(ft)	0	0	0	0	0	
Detector 1 Size(ft)	20	6	6	20	20	
Detector 1 Type	CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex	
Detector 1 Channel						
Detector 1 Extend (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Queue (s)	0.0	0.0	0.0	0.0	0.0	
Detector 1 Delay (s)	0.0	0.0	0.0	0.0	0.0	
Detector 2 Position(ft)		94	94			
Detector 2 Size(ft)		6	6			
Detector 2 Type		CI+Ex	CI+Ex			
Detector 2 Channel						
Detector 2 Extend (s)		0.0	0.0			
Turn Type	pm+pt	NA	NA	Perm	NA	
Protected Phases	7	4	8		6	
Permitted Phases	4			8		
Detector Phase	7	4	8	8	6	
Switch Phase						

Lanes, Volumes, Timings

3:

8/1/2014

	↗	→	←	↖	↘	↙
Lane Group	EBL	EBT	WBT	WBR	SBL	SBR
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	
Minimum Split (s)	8.5	20.0	20.0	20.0	20.0	
Total Split (s)	15.0	35.0	20.0	20.0	35.0	
Total Split (%)	21.4%	50.0%	28.6%	28.6%	50.0%	
Maximum Green (s)	10.5	31.0	16.0	16.0	31.0	
Yellow Time (s)	3.5	3.0	3.0	3.0	3.0	
All-Red Time (s)	1.0	1.0	1.0	1.0	1.0	
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	
Total Lost Time (s)		4.0	4.0	4.0	4.0	
Lead/Lag	Lead		Lag	Lag		
Lead-Lag Optimize?	Yes		Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	
Recall Mode	None	Min	Min	Min	None	
Walk Time (s)		5.0	5.0	5.0	5.0	
Flash Dont Walk (s)		11.0	11.0	11.0	11.0	
Pedestrian Calls (#/hr)		0	0	0	0	
Act Effct Green (s)		10.4	10.4	10.4	7.9	
Actuated g/C Ratio		0.39	0.39	0.39	0.30	
v/c Ratio		0.23	0.30	0.47	0.35	
Control Delay		6.0	6.9	3.4	6.8	
Queue Delay		0.0	0.0	0.0	0.0	
Total Delay		6.0	6.9	3.4	6.8	
LOS		A	A	A	A	
Approach Delay		6.0	4.8		6.8	
Approach LOS		A	A		A	

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 26.4

Natural Cycle: 50

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.47

Intersection Signal Delay: 5.7

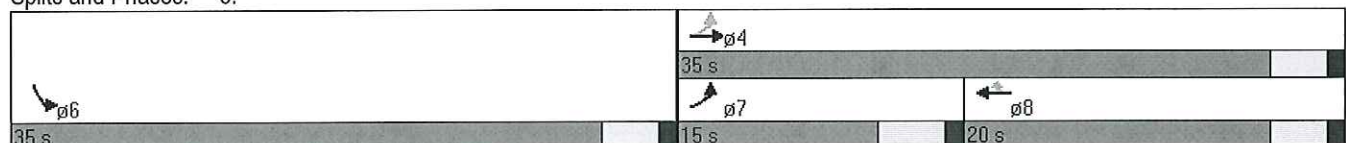
Intersection Capacity Utilization 41.8%

Analysis Period (min) 15

Intersection LOS: A

ICU Level of Service A

Splits and Phases: 3:



TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	RP			Intersection	CORONAD DR / HAMDEN DR			
Agency/Co.	GCC			Jurisdiction	CLEARWATER			
Date Performed	2/14/14			Analysis Year	2014 EXISTING			
Analysis Time Period	PM Peak							
Project Description								
East/West Street: CORONADO DR				North/South Street: HAMDEN DRIVE				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	4	349			294	61		
Peak-Hour Factor, PHF	0.91	0.91	0.91	0.97	0.91	0.91		
Hourly Flow Rate, HFR (veh/h)	4	383	0	0	323	67		
Percent Heavy Vehicles	1	--	--	0	--	--		
Median Type	Two Way Left Turn Lane							
RT Channelized			0			0		
Lanes	0	2	0	0	1	0		
Configuration	LT	T				TR		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)					28	3		
Peak-Hour Factor, PHF	0.91	0.97	0.91	0.97	0.91	0.91		
Hourly Flow Rate, HFR (veh/h)	0	0	0	0	30	3		
Percent Heavy Vehicles	1	0	1	0	1	1		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	1	0		
Configuration						TR		
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT							TR
v (veh/h)	4							33
C (m) (veh/h)	1137							343
v/c	0.00							0.10
95% queue length	0.01							0.32
Control Delay (s/veh)	8.2							16.6
LOS	A							C
Approach Delay (s/veh)	--	--				16.6		
Approach LOS	--	--				C		

TWO-WAY STOP CONTROL SUMMARY									
General Information					Site Information				
Analyst	RP				Intersection	BAYWAY / PARKWAY DR			
Agency/Co.	GCC				Jurisdiction	CLEARWATER			
Date Performed	8/5/2014				Analysis Year	2014 EXISTING			
Analysis Time Period	PM PEAK								
Project Description BAYWAY HOTEL									
East/West Street: BAYWAY BLVD					North/South Street: PARKWAY DRIVE				
Intersection Orientation: East-West					Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments									
Major Street	Eastbound			Westbound					
Movement	1	2	3	4	5	6			
	L	T	R	L	T	R			
Volume (veh/h)	6	78	0	0	29	4			
Peak-Hour Factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85			
Hourly Flow Rate, HFR (veh/h)	7	91	0	0	34	4			
Percent Heavy Vehicles	2	--	--	2	--	--			
Median Type	Undivided								
RT Channelized			0			0			
Lanes	0	1	0	0	1	0			
Configuration	LTR			LTR					
Upstream Signal		0			0				
Minor Street	Northbound			Southbound					
Movement	7	8	9	10	11	12			
	L	T	R	L	T	R			
Volume (veh/h)	18	0	4	0	0	0			
Peak-Hour Factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85			
Hourly Flow Rate, HFR (veh/h)	21	0	4	0	0	0			
Percent Heavy Vehicles	2	2	2	2	2	2			
Percent Grade (%)	0			0					
Flared Approach		N			N				
Storage		0			0				
RT Channelized			0			0			
Lanes	0	1	0	0	1	0			
Configuration		LTR			LTR				
Delay, Queue Length, and Level of Service									
Approach	Eastbound	Westbound	Northbound			Southbound			
Movement	1	4	7	8	9	10	11	12	
Lane Configuration	LTR	LTR	LTR			LTR			
v (veh/h)	7	0	25			0			
C (m) (veh/h)	1572	1504	846						
v/c	0.00	0.00	0.03						
95% queue length	0.01	0.00	0.09						
Control Delay (s/veh)	7.3	7.4	9.4						
LOS	A	A	A						
Approach Delay (s/veh)	--	--	9.4						
Approach LOS	--	--	A						

TABLE 4

Generalized Peak Hour Two-Way Volumes for Florida's
Urbanized Areas¹

10/4/10

STATE SIGNALIZED ARTERIALS						FREEWAYS							
Class I (>0.00 to 1.99 signalized intersections per mile)						Lanes	B	C	D	E			
Lanes	Median	B	C	D	E	4	4,000	5,500	6,770	7,300			
2	Undivided	930	1,500	1,600	***	6	6,000	8,320	10,150	11,290			
4	Divided	2,840	3,440	3,560	***	8	8,000	11,050	13,480	15,270			
6	Divided	4,370	5,200	5,360	***	10	10,000	13,960	16,930	19,250			
8	Divided	5,900	6,970	7,160	***	12	13,730	18,600	21,950	23,230			
Class II (2.00 to 4.50 signalized intersections per mile)						Freeway Adjustments							
Lanes	Median	B	C	D	E	Auxiliary Lanes	Ramp Metering						
2	Undivided	**	1,020	1,480	1,570	+ 1,800	+ 5%						
4	Divided	**	2,420	3,220	3,400								
6	Divided	**	3,790	4,880	5,150	UNINTERRUPTED FLOW HIGHWAYS							
8	Divided	**	5,150	6,530	6,880	Lanes	Median	B	C	D	E		
Class III/IV (more than 4.50 signalized intersections per mile)						2	Undivided	730	1,460	2,080	2,620		
Lanes	Median	B	C	D	E	4	Divided	3,220	4,660	6,040	6,840		
2	Undivided	**	500	1,150	1,440	6	Divided	4,840	6,990	9,060	10,280		
4	Divided	**	1,220	2,730	3,100	Uninterrupted Flow Highway Adjustments							
6	Divided	**	1,910	4,240	4,680	Lanes	Median	Exclusive left lanes	Adjustment factors				
8	Divided	**	2,620	5,770	6,280	2	Divided	Yes	+5%				
Non-State Signalized Roadway Adjustments						Multi	Undivided	Yes	-5%				
(Alter corresponding state volumes by the indicated percent.)						Multi	Undivided	No	-25%				
Major City/County Roadways -10%						BICYCLE MODE ²							
Other Signalized Roadways -35%						(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)							
State & Non-State Signalized Roadway Adjustments						Paved Shoulder/ Bicycle Lane							
(Alter corresponding state volumes by the indicated percent.)						Coverage	B	C	D	E			
Divided/Undivided & Turn Lane Adjustments						0-49%	**	310	1,180	>1,180			
Lanes	Median	Exclusive Left Lanes	Exclusive Right Lanes	Adjustment Factors		50-84%	240	360	>360	***			
2	Divided	Yes	No	+5%		85-100%	620	>620	***	***			
2	Undivided	No	No	-20%		PEDESTRIAN MODE ²							
Multi	Undivided	Yes	No	-5%		(Multiply motorized vehicle volumes shown below by number of directional roadway lanes to determine two-way maximum service volumes.)							
Multi	Undivided	No	No	-25%		Sidewalk Coverage	B	C	D	E			
			Yes	+ 5%		0-49%	**	**	480	1,390			
One-Way Facility Adjustment						50-84%	**	**	1,100	1,820			
Multiply the corresponding two-directional volumes in this table by 0.6.						85-100%	**	1,100	1,820	>1,820			
						BUS MODE (Scheduled Fixed Route) ³							
						(Buses in peak hour in peak direction)							
						Sidewalk Coverage	B	C	D	E			
						0-84%	>5	≥4	≥3	≥2			
						85-100%	>4	≥3	≥2	≥1			

¹ Values shown are presented as hourly two-way volumes for levels of service and are for the automobile/truck modes unless specifically stated. Although presented as peak hour two-way volumes, they actually represent peak hour peak direction conditions with an applicable D factor applied. This table does not constitute a standard and should be used only for general planning applications. The computer models from which this table is derived should be used for more specific planning applications. The table and deriving computer models should not be used for corridor or intersection design, where more refined techniques exist. Calculations are based on planning applications of the Highway Capacity Manual, Bicycle LOS Model, Pedestrian LOS Model and Transit Capacity and Quality of Service Manual, respectively for the automobile/truck, bicycle, pedestrian and bus modes.

² Level of service for the bicycle and pedestrian modes in this table is based on number of motorized vehicles, not number of bicyclists or pedestrians using the facility.

³ Buses per hour shown are only for the peak hour in the single direction of the higher traffic flow.

** Cannot be achieved using table input value defaults.

*** Not applicable for that level of service letter grade. For the automobile mode, volumes greater than level of service D becomes F because intersection capacities have been reached. For the bicycle mode, the level of service letter grade (including F) is not achievable because there is no maximum vehicle volume threshold using table input value defaults.

Source:

Florida Department of Transportation
Systems Planning Office
605 Suwannee Street, MS 19
Tallahassee, FL 32399-0450

APPENDIX B

Hotel (310)

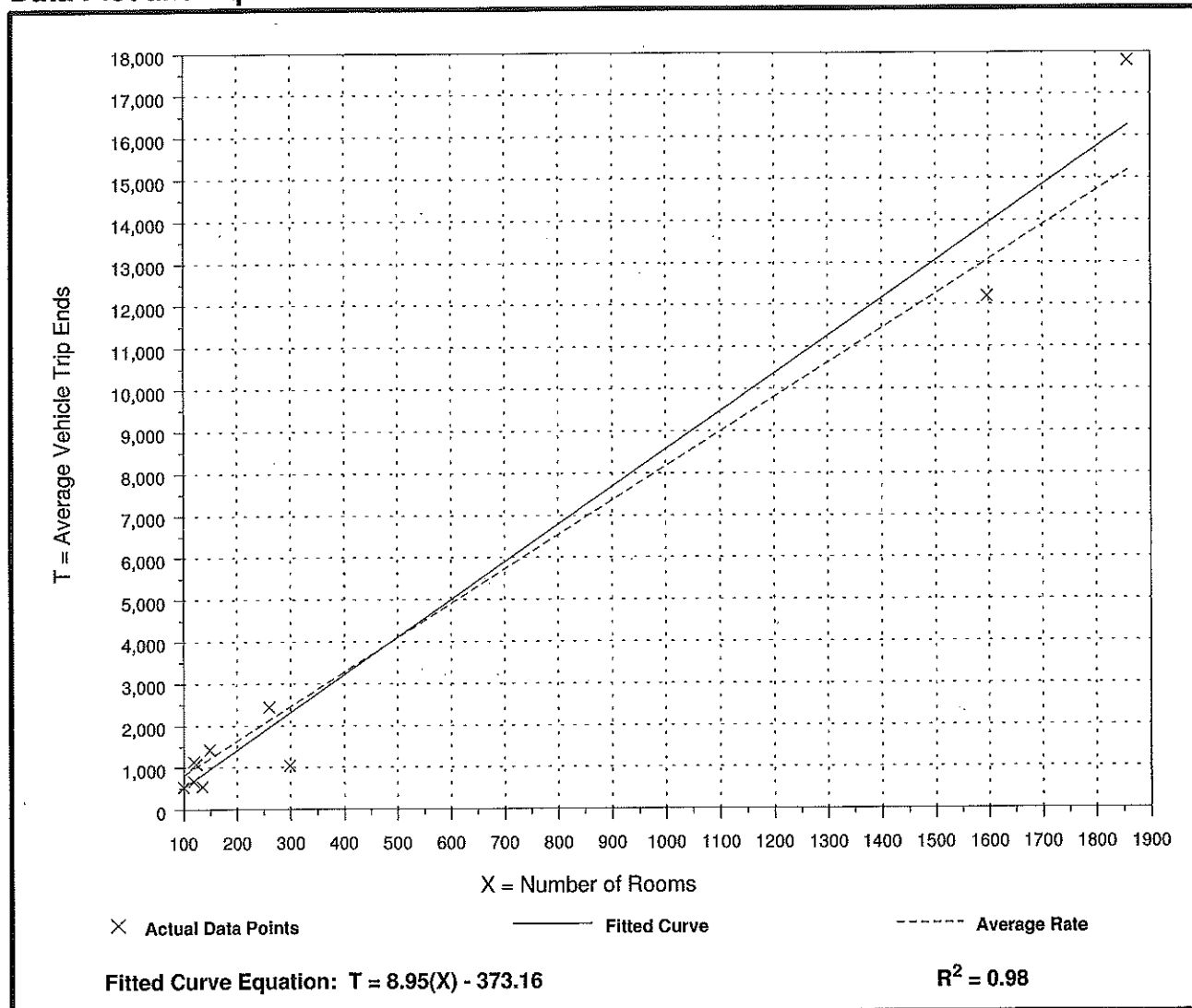
Average Vehicle Trip Ends vs: Rooms On a: Weekday

Number of Studies: 10
Average Number of Rooms: 476
Directional Distribution: 50% entering, 50% exiting

Trip Generation per Room

Average Rate	Range of Rates	Standard Deviation
8.17	3.47 - 9.58	3.38

Data Plot and Equation



Hotel (310)

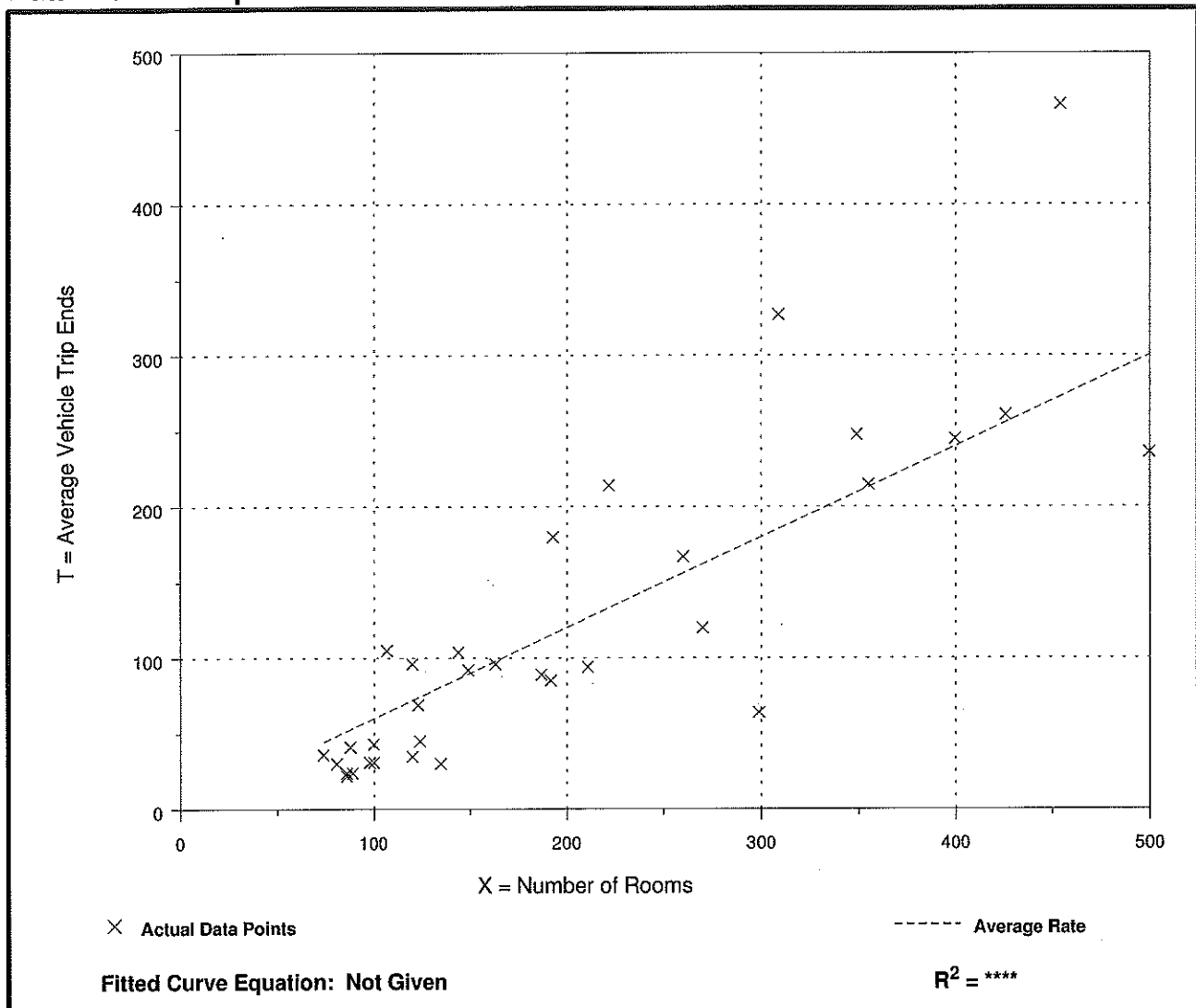
Average Vehicle Trip Ends vs: Rooms
On a: Weekday,
Peak Hour of Adjacent Street Traffic,
One Hour Between 4 and 6 p.m.

Number of Studies: 33
 Average Number of Rooms: 200
 Directional Distribution: 51% entering, 49% exiting

Trip Generation per Room

Average Rate	Range of Rates	Standard Deviation
0.60	0.21 - 1.06	0.81

Data Plot and Equation



Lanes, Volumes, Timings

3:

8/4/2014

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations	  			 	 	
Volume (vph)	347	11	0	827	684	384
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Storage Length (ft)	500	500	500			0
Storage Lanes	1	0	0			1
Taper Length (ft)	25		25			
Lane Util. Factor	0.97	0.95	0.95	0.95	0.95	1.00
Ped Bike Factor	0.97					0.95
Frt	0.995					0.850
Flt Protected	0.954					
Satd. Flow (prot)	3430	0	0	3539	3539	1583
Flt Permitted	0.954					
Satd. Flow (perm)	3324	0	0	3539	3539	1502
Right Turn on Red		No				Yes
Satd. Flow (RTOR)						422
Link Speed (mph)	20			25	25	
Link Distance (ft)	331			260	350	
Travel Time (s)	11.3			7.1	9.5	
Confl. Peds. (#/hr)	17		33			17
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91
Adj. Flow (vph)	381	12	0	909	752	422
Shared Lane Traffic (%)						
Lane Group Flow (vph)	393	0	0	909	752	422
Enter Blocked Intersection	No	No	No	No	No	No
Lane Alignment	Left	Right	Left	Left	Left	Right
Median Width(ft)	24			0	0	
Link Offset(ft)	0			0	0	
Crosswalk Width(ft)	16			16	16	
Two way Left Turn Lane						
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15	9	15			9
Number of Detectors	1		1	2	2	1
Detector Template	Left		Left	Thru	Thru	Right
Leading Detector (ft)	20		20	100	100	20
Trailing Detector (ft)	0		0	0	0	0
Detector 1 Position(ft)	0		0	0	0	0
Detector 1 Size(ft)	20		20	6	6	20
Detector 1 Type	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex
Detector 1 Channel						
Detector 1 Extend (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Queue (s)	0.0		0.0	0.0	0.0	0.0
Detector 1 Delay (s)	0.0		0.0	0.0	0.0	0.0
Detector 2 Position(ft)				94	94	
Detector 2 Size(ft)				6	6	
Detector 2 Type				CI+Ex	CI+Ex	
Detector 2 Channel						
Detector 2 Extend (s)				0.0	0.0	
Turn Type	NA		Perm	NA	NA	Perm
Protected Phases	4			2	6	

Lanes, Volumes, Timings

3:

8/4/2014

						
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Permitted Phases			2			6
Detector Phase	4		2	2	6	6
Switch Phase						
Minimum Initial (s)	4.0		4.0	4.0	4.0	4.0
Minimum Split (s)	20.0		20.0	20.0	20.0	20.0
Total Split (s)	25.0		35.0	35.0	35.0	35.0
Total Split (%)	41.7%		58.3%	58.3%	58.3%	58.3%
Maximum Green (s)	21.0		31.0	31.0	31.0	31.0
Yellow Time (s)	3.0		3.0	3.0	3.0	3.0
All-Red Time (s)	1.0		1.0	1.0	1.0	1.0
Lost Time Adjust (s)	0.0			0.0	0.0	0.0
Total Lost Time (s)	4.0			4.0	4.0	4.0
Lead/Lag						
Lead-Lag Optimize?						
Vehicle Extension (s)	3.0		3.0	3.0	3.0	3.0
Recall Mode	None		Max	Max	Max	Max
Walk Time (s)	5.0		5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0		11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0		0	0	0	0
Act Effct Green (s)	10.9			31.6	31.6	31.6
Actuated g/C Ratio	0.22			0.63	0.63	0.63
v/c Ratio	0.53			0.41	0.34	0.38
Control Delay	20.1			5.8	5.4	1.8
Queue Delay	0.0			0.0	0.0	0.0
Total Delay	20.1			5.8	5.4	1.8
LOS	C			A	A	A
Approach Delay	20.1			5.8	4.1	
Approach LOS	C			A	A	

Intersection Summary

Area Type: Other

Cycle Length: 60

Actuated Cycle Length: 50.5

Natural Cycle: 40

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.53

Intersection Signal Delay: 7.3

Intersection Capacity Utilization 55.0%

Analysis Period (min) 15

Intersection LOS: A

ICU Level of Service A

Splits and Phases: 3:

 Ø2	 Ø4
35 s	25 s
 Ø6	
35 s	

Lanes, Volumes, Timings

3:

8/4/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		4T			4	4		4		4		
Volume (vph)	43	278	0	0	249	457	19	14	0	496	11	22
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Util. Factor	0.95	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	0.95	0.95	1.00
Ped Bike Factor		0.99				0.80					1.00	
Frt						0.850					0.988	
Flt Protected		0.993						0.972		0.950	0.958	
Satd. Flow (prot)	0	3514	0	0	1863	1583	0	1811	0	1681	1669	0
Flt Permitted		0.889						0.972		0.950	0.958	
Satd. Flow (perm)	0	3110	0	0	1863	1273	0	1811	0	1681	1669	0
Right Turn on Red			Yes			Yes			Yes			Yes
Satd. Flow (RTOR)						486					6	
Link Speed (mph)		25			25			30			25	
Link Distance (ft)		300			500			415			300	
Travel Time (s)		8.2			13.6			9.4			8.2	
Confl. Peds. (#/hr)	82					82						11
Peak Hour Factor	0.94	0.94	0.92	0.92	0.94	0.94	0.94	0.94	0.94	0.94	0.92	0.94
Adj. Flow (vph)	46	296	0	0	265	486	20	15	0	528	12	23
Shared Lane Traffic (%)										46%		
Lane Group Flow (vph)	0	342	0	0	265	486	0	35	0	285	278	0
Enter Blocked Intersection	No	No	No	No	No	No	No	No	No	No	No	No
Lane Alignment	Left	Left	Right	Left	Left	Right	Left	Left	Right	Left	Left	Right
Median Width(ft)		0			0			12			12	
Link Offset(ft)		0			0			0			0	
Crosswalk Width(ft)		16			16			16			16	
Two way Left Turn Lane												
Headway Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Turning Speed (mph)	15		9	15		9	15		9	15		9
Number of Detectors	1	2		1	2	1	1	2		1	2	
Detector Template	Left	Thru		Left	Thru	Right	Left	Thru		Left	Thru	
Leading Detector (ft)	20	100		20	100	20	20	100		20	100	
Trailing Detector (ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Position(ft)	0	0		0	0	0	0	0		0	0	
Detector 1 Size(ft)	20	6		20	6	20	20	6		20	6	
Detector 1 Type	CI+Ex	CI+Ex		CI+Ex	CI+Ex	CI+Ex	CI+Ex	CI+Ex		CI+Ex	CI+Ex	
Detector 1 Channel												
Detector 1 Extend (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Queue (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 1 Delay (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Detector 2 Position(ft)		94			94			94			94	
Detector 2 Size(ft)		6			6			6			6	
Detector 2 Type		CI+Ex			CI+Ex			CI+Ex			CI+Ex	
Detector 2 Channel												
Detector 2 Extend (s)		0.0			0.0			0.0			0.0	
Turn Type	pm+pt	NA		Perm	NA	Perm	Split	NA		Split	NA	
Protected Phases	7	4			8		2	2		6	6	
Permitted Phases	4			8		8						
Detector Phase	7	4		8	8	8	2	2		6	6	
Switch Phase												

Lanes, Volumes, Timings

3:

8/4/2014

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Minimum Initial (s)	4.0	4.0		4.0	4.0	4.0	4.0	4.0		4.0	4.0	
Minimum Split (s)	8.5	20.0		20.0	20.0	20.0	10.0	10.0		20.0	20.0	
Total Split (s)	15.0	35.0		20.0	20.0	20.0	15.0	15.0		20.0	20.0	
Total Split (%)	21.4%	50.0%		28.6%	28.6%	28.6%	21.4%	21.4%		28.6%	28.6%	
Maximum Green (s)	10.5	31.0		16.0	16.0	16.0	11.0	11.0		16.0	16.0	
Yellow Time (s)	3.5	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
All-Red Time (s)	1.0	1.0		1.0	1.0	1.0	1.0	1.0		1.0	1.0	
Lost Time Adjust (s)		0.0			0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)		4.0			4.0	4.0		4.0		4.0	4.0	
Lead/Lag	Lead			Lag			Lag					
Lead-Lag Optimize?	Yes			Yes			Yes					
Vehicle Extension (s)	3.0	3.0		3.0	3.0	3.0	3.0	3.0		3.0	3.0	
Recall Mode	None			Min			None			None		
Walk Time (s)		5.0		5.0	5.0	5.0	5.0	5.0		5.0	5.0	
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0		11.0	11.0	
Pedestrian Calls (#/hr)		0		0	0	0	0	0		0	0	
Act Effct Green (s)		12.6		12.6	12.6	12.6		6.9		12.9	12.9	
Actuated g/C Ratio		0.33		0.33	0.33	0.33		0.18		0.34	0.34	
v/c Ratio		0.33		0.42	0.65	0.65		0.11		0.50	0.49	
Control Delay		12.0		14.2	6.6	6.6		18.5		15.6	15.2	
Queue Delay		0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay		12.0		14.2	6.6	6.6		18.5		15.6	15.2	
LOS		B		B	A	A		B		B	B	
Approach Delay		12.0		9.3				18.5			15.4	
Approach LOS		B		A				B			B	

Intersection Summary

Area Type: Other

Cycle Length: 70

Actuated Cycle Length: 37.7

Natural Cycle: 60

Control Type: Semi Act-Uncoord

Maximum v/c Ratio: 0.65

Intersection Signal Delay: 12.1

Intersection LOS: B

Intersection Capacity Utilization 56.0%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 3:

 ø2	 ø6	 ø4
15 s	20 s	35 s
		 ø7
		15 s
		 ø8
		20 s

TWO-WAY STOP CONTROL SUMMARY								
General Information				Site Information				
Analyst	RP			Intersection	CORONAD DR / HAMDEN DR			
Agency/Co.	GCC			Jurisdiction	CLEARWATER			
Date Performed	8/4/14			Analysis Year	Future with Bayway Hotel			
Analysis Time Period	PM Peak							
Project Description								
East/West Street: CORONADO DR				North/South Street: HAMDEN DRIVE				
Intersection Orientation: East-West				Study Period (hrs): 0.25				
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	4	472			412	107		
Peak-Hour Factor, PHF	0.91	0.91	0.91	0.97	0.91	0.91		
Hourly Flow Rate, HFR (veh/h)	4	518	0	0	452	117		
Percent Heavy Vehicles	1	--	--	0	--	--		
Median Type	Two Way Left Turn Lane							
RT Channelized			0			0		
Lanes	0	2	0	0	1	0		
Configuration	LT	T				TR		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)					75	3		
Peak-Hour Factor, PHF	0.91	0.97	0.91	0.97	0.91	0.91		
Hourly Flow Rate, HFR (veh/h)	0	0	0	0	82	3		
Percent Heavy Vehicles	1	0	1	0	1	1		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	1	0		
Configuration						TR		
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT							TR
v (veh/h)	4							85
C (m) (veh/h)	976							227
v/c	0.00							0.37
95% queue length	0.01							1.64
Control Delay (s/veh)	8.7							30.1
LOS	A							D
Approach Delay (s/veh)	--	--				30.1		
Approach LOS	--	--				D		

TWO-WAY STOP CONTROL SUMMARY							
General Information				Site Information			
Analyst	RP			Intersection	BAYWAY / PARKWAY DR		
Agency/Co.	GCC			Jurisdiction	CLEARWATER		
Date Performed	8/5/2014			Analysis Year	FUTURE WITH PROJECT		
Analysis Time Period	PM PEAK						
Project Description BAYWAY HOTEL							
East/West Street: BAYWAY BLVD				North/South Street: PARKWAY DRIVE			
Intersection Orientation: East-West				Study Period (hrs): 0.25			
Vehicle Volumes and Adjustments							
Major Street	Eastbound			Westbound			
Movement	1	2	3	4	5	6	
	L	T	R	L	T	R	
Volume (veh/h)	6	89	0	0	29	4	
Peak-Hour Factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	
Hourly Flow Rate, HFR (veh/h)	7	104	0	0	34	4	
Percent Heavy Vehicles	2	--	--	2	--	--	
Median Type	Undivided						
RT Channelized			0			0	
Lanes	0	1	0	0	1	0	
Configuration	LTR			LTR			
Upstream Signal		0			0		
Minor Street	Northbound			Southbound			
Movement	7	8	9	10	11	12	
	L	T	R	L	T	R	
Volume (veh/h)	19	0	4	0	0	0	
Peak-Hour Factor, PHF	0.85	0.85	0.85	0.85	0.85	0.85	
Hourly Flow Rate, HFR (veh/h)	22	0	4	0	0	0	
Percent Heavy Vehicles	2	2	2	2	2	2	
Percent Grade (%)	0			0			
Flared Approach		N			N		
Storage		0			0		
RT Channelized			0			0	
Lanes	0	1	0	0	1	0	
Configuration		LTR			LTR		
Delay, Queue Length, and Level of Service							
Approach	Eastbound	Westbound	Northbound			Southbound	
Movement	1	4	7	8	9	10	11
Lane Configuration	LTR	LTR		LTR			LTR
v (veh/h)	7	0		26			0
C (m) (veh/h)	1572	1488		829			
v/c	0.00	0.00		0.03			
95% queue length	0.01	0.00		0.10			
Control Delay (s/veh)	7.3	7.4		9.5			
LOS	A	A		A			
Approach Delay (s/veh)	--	--	9.5				
Approach LOS	--	--	A				

TWO-WAY STOP CONTROL SUMMARY								
General Information					Site Information			
Analyst	RP				Intersection	BAYWAY / DRIVE A		
Agency/Co.	GCC				Jurisdiction	CLEARWATER		
Date Performed	8/5/2014				Analysis Year	FUTURE WITH PROJECT		
Analysis Time Period	PM PEAK							
Project Description BAYWAY HOTEL								
East/West Street: BAYWAY BLVD					North/South Street: DRIVE A			
Intersection Orientation: East-West					Study Period (hrs): 0.25			
Vehicle Volumes and Adjustments								
Major Street	Eastbound			Westbound				
Movement	1	2	3	4	5	6		
	L	T	R	L	T	R		
Volume (veh/h)	6	87			31	4		
Peak-Hour Factor, PHF	0.85	0.85	1.00	1.00	0.85	0.85		
Hourly Flow Rate, HFR (veh/h)	7	102	0	0	36	4		
Percent Heavy Vehicles	2	--	--	0	--	--		
Median Type	Undivided							
RT Channelized			0			0		
Lanes	0	1	0	0	1	0		
Configuration	LT					TR		
Upstream Signal		0			0			
Minor Street	Northbound			Southbound				
Movement	7	8	9	10	11	12		
	L	T	R	L	T	R		
Volume (veh/h)				4		5		
Peak-Hour Factor, PHF	1.00	1.00	1.00	0.85	1.00	0.85		
Hourly Flow Rate, HFR (veh/h)	0	0	0	4	0	5		
Percent Heavy Vehicles	0	0	0	2	0	2		
Percent Grade (%)	0			0				
Flared Approach		N			N			
Storage		0			0			
RT Channelized			0			0		
Lanes	0	0	0	0	0	0		
Configuration					LR			
Delay, Queue Length, and Level of Service								
Approach	Eastbound	Westbound	Northbound			Southbound		
Movement	1	4	7	8	9	10	11	12
Lane Configuration	LT						LR	
v (veh/h)	7						9	
C (m) (veh/h)	1570						934	
v/c	0.00						0.01	
95% queue length	0.01						0.03	
Control Delay (s/veh)	7.3						8.9	
LOS	A						A	
Approach Delay (s/veh)	--	--				8.9		
Approach LOS	--	--				A		