

SOMERSET CORAL GABLES UBC Campus (PK-8)

POST OPENING TRAFFIC REVIEW



Prepared for:



CITY OF CORAL GABLES

Prepared by:



November 14, 2012

PROFESSIONAL ENGINEER CERTIFICATE

I hereby certify that I am a registered professional engineer in the State of Florida practicing with Reynolds, Smith and Hills, Inc., authorized under Section 471.023, Florida Statutes, to offer engineering services to the public through a Professional Engineer, duly licensed under Chapter 471, Florida Statutes, Certificate of Authorization (CA) No. 2294, by the State of Florida Department of Professional Regulation, Board of Professional Engineers, and that I prepared or approved the evaluation, findings, opinions, conclusions, or technical advice hereby reported for:

City of Coral Gables

Project: Somerset Coral Gables, UBC Campus (PK-8)
Post Opening Traffic Review

County: Miami-Dade

City of Coral Gables Project Manager: Eric Riel, Planning Director

I acknowledge that the procedures and references used to develop the results contained in this report are standard to the professional practice of transportation engineering as applied through professional judgment and experience.

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Date: 11/14/2012



**SOMERSET CORAL GABLES
UBC CAMPUS (PK-8)
POST OPENING TRAFFIC REVIEW**

EXECUTIVE SUMMARY

This report documents the findings of a traffic review conducted for Somerset Coral Gables University Baptist Church (UBC) campus located at 624 Anastasia Avenue, Coral Gables, Florida. The site currently operates as a private school, day care, religious educational center and church. On January 24, 2012, the City of Coral Gables approved Conditional Use and Site Plan Applications for the operation of a public charter school at the UBC campus with an increase in student enrollment from 110 students to 260 students. The new charter school opened for the fall semester in August 2012. The continued operation of this charter school was contingent on maintaining specific traffic operating conditions as specified in the Declaration of Restrictive Covenants approved on August 14, 2012. This traffic review was prepared in accordance to provisions contained in the Declaration of Restrictive Covenants. The review provides an evaluation of the post opening Traffic Operations Plan at the UBC campus and assesses compliance with traffic stipulations contained in the restrictive covenants.

The results of the analyses conducted for this traffic review indicate that traffic operations at the UBC campus, with current enrollment of 260 students, are in substantial compliance with the stipulations contained in the Declaration of Restrictive Covenants. Specifically, it has been determined that the following conditions are in compliance:

1. No charter school associated vehicles shall backup or accumulate, or park on any surrounding rights-of-way/streets as a result of student arrivals/dismissals and/or any other school related operations, functions or activities.
2. All street intersections analyzed as part of the Applicant's submitted traffic study shall meet the respective levels of service identified in the report.

Based on the findings from the Post Opening Traffic Review, it is our considered opinion that the two (2) shifts for arrivals/dismissals are adequate to accommodate the current enrollment of 260 students at the UBC Campus. It is further concluded that the Traffic Operations Plan that was previously reviewed by RS&H and approved by the City Commission is adequate for the current enrollment of 260 students.

**SOMERSET CORAL GABLES
UBC CAMPUS (PK-8)
POST OPENING TRAFFIC REVIEW**

1.0 INTRODUCTION

This report documents the findings of a traffic review conducted for Somerset Coral Gables University Baptist Church (UBC) campus located at 624 Anastasia Avenue, Coral Gables, Florida (shown in Figure 1). The site currently operates as a private school, day care, religious educational center and church. On January 24, 2012, the City of Coral Gables approved Conditional Use and Site Plan Applications for the operation of a public charter school at the UBC campus with an increase in student enrollment from 110 students to 260 students. The new charter school opened for the fall semester in August 2012. The continued operation of this charter school was contingent on maintaining specific traffic operating conditions as specified in the Declaration of Restrictive Covenants approved on August 14, 2012. This traffic review was prepared in accordance to provisions contained in the Declaration of Restrictive Covenants. The review provides an evaluation of the post opening Traffic Operations Plan at the UBC campus and assesses compliance with traffic stipulations contained in the restrictive covenants.

2.0 METHODOLOGY FOR TRAFFIC REVIEW

The traffic operations review was conducted consistent with the methodology followed for the Applicant's Traffic Impact Study & Accumulation Assessment dated October 5, 2011. The review included the following:

1. Recording all vehicles entering and exiting the campus on two typical school days (Tuesday, September 25, 2012 and Wednesday, October 10, 2012) during arrival and dismissal periods (7:30 AM – 9:30 AM and 1:30 PM – 3:30PM, respectively).
2. On the same days and times as the vehicle counts identified in Item-1, recording vehicle accumulation data consistent with the methodology followed for the surrogate school, Doral Academy, in the Applicant's Traffic Study & Accumulation Assessment dated October 5, 2011. This survey also recorded parked vehicles during this time. This data was used to determine the maximum accumulation for the arrival and dismissal shifts.
3. Recording turning movement volumes at the intersection of Segovia Street and Anastasia Avenue on a typical weekday (September 25, 2012) during school arrival (7:00 AM to 9:00 AM) and dismissal (1:30 PM to 3:30 PM) periods. This data was used to conduct level of service (LOS) analysis for this intersection.
4. Observing and recording the Traffic Operating Plan for the school including the efficiency of the "platooning" for student arrival/dismissal shifts; management of pedestrian activities; and the frequency and operations of the traffic contingency plans.

Figure 1: Project Location Map



3.0 TRAFFIC OPERATIONS PLAN

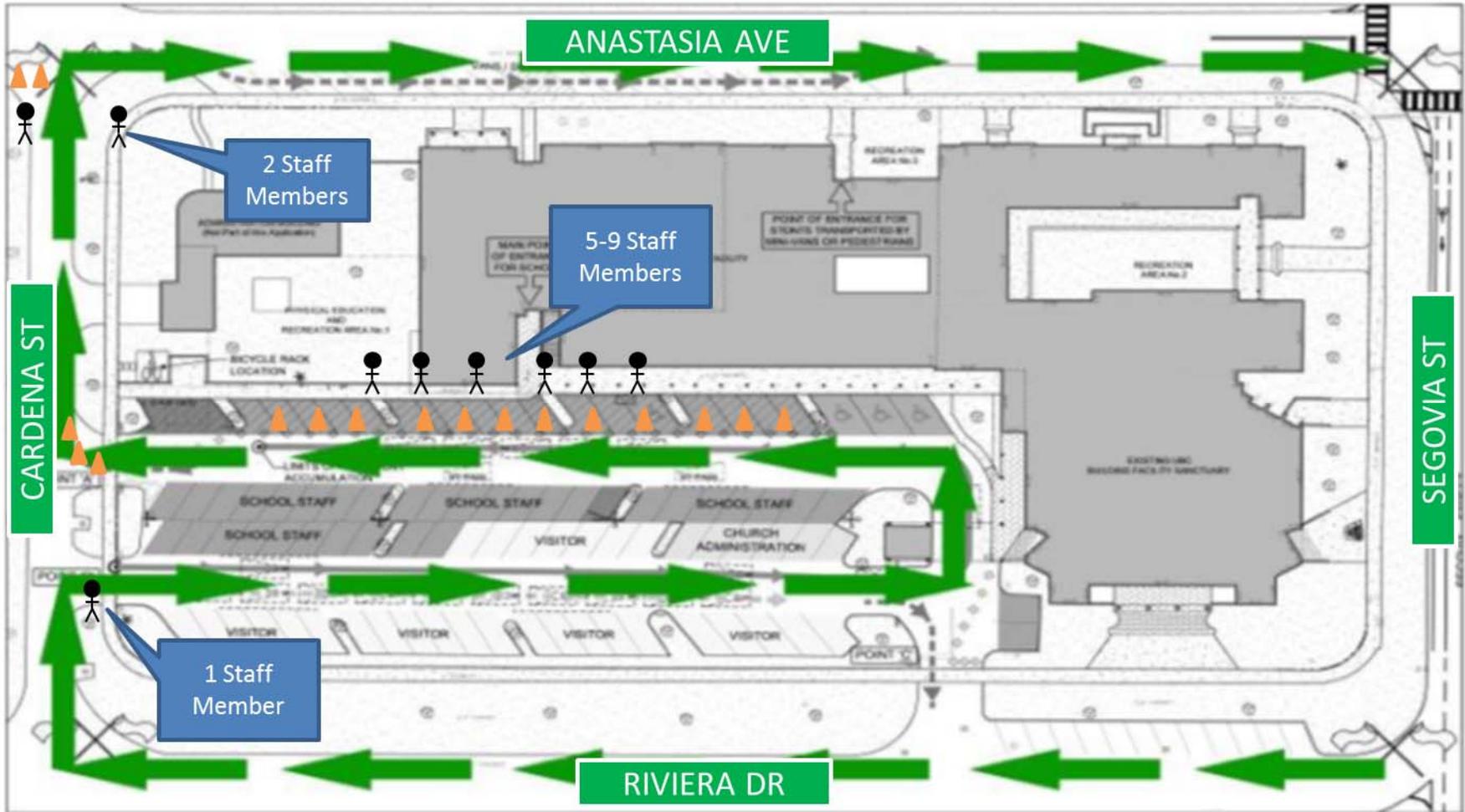
The traffic operations plan applicable at the time of this study were:

- Total school enrolment = 260
- School arrivals: Two arrival shifts at 8:00 AM and 8:30 AM as detailed in Table 1.
- School dismissals: Two dismissal shifts at 2:00 PM and 2:30 PM as detailed in Table 2.
- Traffic Circulation Plan: One-way clockwise traffic circulation as detailed in Figure 2. In addition to the circulation pattern shown in Figure 2, vehicles were prohibited from entering the school campus directly making the following consecutive movements: eastbound left turn from Riviera Drive onto Cardena Street followed by right turn at the school entry. During the two site traffic reviews, this restriction was manually enforced during arrival and dismissal periods.

Table 1 Arrival Shifts				
School Shifts	Queue Begins	Arrival	Classes Begin	Max Number of Students @ Dismissal
Shift 1 (K-4 th)	8:00am	8:00-8:30am	8:30am	155
Shift 2 (PK)	8:30am	8:30-9:00am	9:00am	105
Total				260

Table 2 Dismissal Shifts			
School Shifts	Queue Begins	Dismissal	Max Number of Students @ Dismissal
Shift 1 (PK &K)	2:00-2:30pm	2:30pm	155
Shift 2 (1 st -4 th)	2:30-3:00pm	3:00pm	105
Total			260

Figure 2: Traffic Circulation Plan



4.0 DATA COLLECTION

The following sections describe information gathered from field reviews at the school campus conducted during school arrival (7:30 AM to 9:30 AM) and dismissal (1:30 PM to 3:30 PM) periods on September 25, 2012 and October 10, 2012.

4.1 Traffic Circulation Plan

On site field observations confirmed that operations at the school campus were organized in accordance with the traffic circulation plan presented in Figure 2. Approximately 5 to 9 school staff members were posted at the designated pick-up/drop-off area to assist in ushering students in and out of vehicles in a safe and efficient manner (see Figure 2). Furthermore, additional staff was posted at strategic points to guide and assist drivers and to enforce compliance with the traffic circulation plan (see Figure 2). One staff member was posted at the campus entry point to manually restrict any direct access to the campus for left turning traffic coming from Riviera Drive. Traffic cones were also placed along Cardena Street at the exit point from the school campus to restrict exiting traffic to right-turns only onto Cardena Street. Additional cones were placed on Cardena Street at its intersection with Anastasia Avenue. These cones were deployed in a manner to prohibit traffic entering Cardena Street from Anastasia Avenue and enforcing the one-way traffic circulation plan. The traffic circulation plan was maintained throughout the school arrival and dismissal periods.

4.2 Accumulation Assessment

An accumulation assessment study was conducted to evaluate queuing activities on the school campus during arrival and dismissal periods. The study was conducted following the Miami-Dade County methodology, consistent with the procedures followed by Richard Garcia and Associates, Inc. in preparing the related Traffic Impact Study and Accumulation Assessment Report, dated October 5, 2011. The data collected for the accumulation assessment was recorded in one-minute time increments. During each one-minute interval, a record was made of the accumulated queue within the stacking area (and beyond, if applicable). The data recorded from the accumulation study is documented under Appendix A. Table 3 provides a summary of the maximum queues recorded during the study. As shown in Table 3, the maximum queues recorded for September 15, 2012 were 17 vehicles during the AM arrival period and 10 vehicles during the PM dismissal period. The maximum queues recorded on October 5, 2012 were 16 vehicles during the AM arrival period and 9 vehicles during the PM dismissal period. These observed maximum queues lengths were well within the available stacking space (approximately 29 vehicles) on the site. As a result, no queue overflows were observed on Cardena Street. At no time was it necessary to exercise any contingency plan to accommodate traffic within the school campus. Further, no vehicles were observed parked on any surrounding streets as a result of any school related activities.

Platooning of vehicles within the traffic area was observed and noted during the arrival and dismissal periods. Throughout the majority of the AM arrival period, reasonable platoons were achieved. On the other hand, during the PM peak period, platoons were rarely achievable. Notwithstanding, the lack of platoons did not result in any traffic queues spilling onto the adjacent streets.

In gathering information for the accumulation assessment study, data was also collected for vehicles approaching the school entry point after making a left-turn maneuver from Riviera Drive onto Cardena Street. These results are reported alongside the accumulation data in Appendix A. The data shows a maximum of 10 vehicles attempting this maneuver during the 2-hour AM arrival period and 14 vehicles during the 2-hour PM dismissal period. These volumes represent approximately 4% of the traffic entering the school during arrival and dismissal periods. These very low volumes suggest that there is good compliance from parents/guardians with regards to the restriction imposed on this movement during arrival and dismissal periods.

Table 3: Summary of Accumulation Assessment Study

Time	September 25, 2012	October 5, 2012
	Maximum Queue (Vehicles)	Maximum Queue (Vehicles)
AM - Arrival	17	16
PM - Dismissal	10	9

Note: On-site stacking capacity = 29 vehicles

4.3 Traffic Counts

Turning movement counts were collected at the intersection of Segovia Street and Anastasia Avenue on Tuesday, September 25, 2012 from 7:00 AM to 9:00 AM and from 1:30 PM to 3:30 PM. The counts were collected in 15 minute increments. Appendix B contains detailed tabulations from the traffic count. Table 4 provides a summary of the traffic counts for the AM and PM peak hours.

Table 4: Summary of Traffic Counts, Segovia Street at Anastasia Avenue

Time	Northbound			Southbound			Eastbound			Westbound		
	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
AM Peak (8:00 AM- 9:00 AM)	10	329	3	4	240	13	106	38	135	14	34	4
PM Peak (2:15 PM - 3:15 PM)	11	214	8	4	217	8	53	18	74	11	75	13

5.0 LEVEL OF SERVICE

The peak hour traffic counts reported in Table 4 were used for conducting intersection level of service (LOS) analyses. The LOS analyses were performed in accordance with the Highway Capacity Manual, 2000 Edition. Computations were executed using Synchro, Version 7 software. Signal timings used for the analyses were per data gathered from Miami-Dade County (see Appendix C). Detailed output sheets from the level of service analyses are contained under Appendix D and results are summarized in Table 5.

Results from the level of service analyses indicate that all movements at the intersection of Segovia Street and Anastasia Avenue operate at LOS C or better during both AM and PM peak periods with the current enrollment of 260 students. The overall intersection operates at LOS B during the AM peak and LOS A during the PM peak. These operating conditions are well within the acceptable LOS D standard. Additionally, no extensive queues are shown on any of the approaches at the intersection. These results are consistent with observations made during field reviews at the site.

Table 5: Summary of LOS Analyses, Segovia Street at Anastasia Avenue

Time	NB	SB	EB	WB	Overall LOS
AM	A	A	C	B	B
PM	A	A	B	B	A

6.0 COMPARATIVE ASSESSMENT: POST OPENING REVIEW vs. APPLICANT'S TRAFFIC STUDY

The accumulation assessment from the UBC Campus post opening review reported a maximum measured queue of 17 vehicles in the AM peak and 10 vehicles in the PM peak. These accumulations resulted from the school's current enrollment of 260 students and utilizing two arrival and dismissal shifts. In comparison, the Accumulation Assessment submitted by the Applicant assumed three arrival and three dismissal shifts. Per the Applicant's Phase I assessment with 260 enrolled students, the projected accumulations were 3.82 passenger vehicles in the AM peak and 16.26 vehicles during the PM peak period.

In the level of service analyses for the post opening review, it was determined that all movements at the intersection of Segovia Street and Anastasia Avenue operate at LOS C or better during both AM and PM peak periods with the current enrollment of 260 students. The overall intersection operates at LOS B during the AM peak and LOS A during the PM peak. In comparison, in the traffic study performed by the Applicant it was estimated that this intersection would operate at LOS D following the opening of the new charter school. This comparative assessment indicates that the LOS determined from the post opening review is better than the LOS estimated from the Applicant's Traffic Study.

7.0 CONCLUSIONS

The analyses conducted for this traffic review indicate that traffic operations at the UBC Somerset campus, with current enrollment of 260 students, are in substantial compliance with the stipulations contained in the Declaration of Restrictive Covenants. Specifically, it has been determined that the following conditions are in compliance:

1. No charter school associated vehicles shall backup or accumulate, or park on any surrounding right-of-way/streets as a result of student arrivals/dismissals and/or any other school related operations, functions or activities.
2. All street intersections analyzed as part of the Applicant's submitted traffic study shall meet the respective levels of service identified in the report.

Based on the findings from the Post Opening Traffic Review, it is our considered opinion that the two (2) shifts for arrivals/dismissals are adequate to accommodate the current enrollment of 260 students at the UBC Campus. It is further concluded that the Traffic Operations Plan that was previously reviewed by RS&H and approved by the City Commission is adequate for the current enrollment of 260 students.

The UBC Traffic Operations Plan currently restricts direct access to the school for vehicles making a left turn from Riviera Drive during assembly and dismissal periods. This restriction is currently manually enforced by school staff. It was observed that the manual enforcement can lead to congestion along Cardena Street as staff members often spend an extended time period talking with the offending drivers while access is blocked for other road users on Cardena Street. To alleviate this issues, it is recommended that drivers violating this turn restriction be allowed to enter the school campus. Thereafter, staff members can have necessary discussions with the offending drivers when their vehicles are safely on Campus and not obstructing other road users along Cardena Street.

Consideration was also given to the option of installing eastbound left turn restriction signs at the intersection of Rivera Drive and Cardena Street in order to address the issue regarding drivers trying to directly enter the Campus after make a left turn from Rivera Drive. Implementation of the left turn restriction signs is not recommended for the following reasons:

- The turn restriction signs would unduly impact road users that are not affiliated with operations at the UBC Campus.
- The left turn restriction at Cardena Street may encourage additional traffic use along Palmarito Street as it would be a most convenient detour route due it its proximity to the site. Palmarito Street is a narrow alleyway and any potential increase in traffic may result in safety concerns along the alleyway.

APPENDIX A
ACCUMULATION ASSESSMENT DATA

Miami-Dade County Public Charter School
Queuing and Parking Data Collection Sheet

School Name: Somerset Academy
 School Address: 624 Anastasia Avenue, Coral Gables, FL 33134
 Location: Parent & Bus Drop-Off

Weather: Cloudy
 Date: 9/25/2012
 Technician: WH, SD, JK

AM: On-Site Queuing Observations

Time	Car-In	Car-Out	Left Turn attempt from Riviera Dr.	Cars Queued
7:30 AM	0	0	0	0
7:31 AM	0	0	0	0
7:32 AM	0	0	0	0
7:33 AM	0	0	0	0
7:34 AM	0	0	0	0
7:35 AM	2	0	0	0
7:36 AM	1	1	0	1
7:37 AM	2	0	0	0
7:38 AM	0	0	0	0
7:39 AM	3	0	0	0
7:40 AM	0	0	0	0
7:41 AM	0	1	0	1
7:42 AM	0	0	0	0
7:43 AM	2	0	0	0
7:44 AM	0	0	0	0
7:45 AM	1	0	0	0
7:46 AM	2	0	0	0
7:47 AM	1	0	0	0
7:48 AM	0	0	0	0
7:49 AM	0	0	0	0
7:50 AM	0	0	0	0
7:51 AM	2	0	0	0
7:52 AM	1	0	0	0
7:53 AM	1	0	0	0
7:54 AM	0	0	0	0
7:55 AM	0	0	0	0
7:56 AM	2	0	0	0
7:57 AM	0	0	0	0
7:58 AM	1	0	0	0
7:59 AM	0	0	0	0

* 7:30 slot = the minute between 7:30 and 7:31

Miami-Dade County Public Charter School
Queuing and Parking Data Collection Sheet

School Name: Somerset Academy
 School Address: 624 Anastasia Avenue, Coral Gables, FL 33134
 Location: Parent & Bus Drop-Off

Weather: Cloudy
 Date: 9/25/2012
 Technician: WH, SD, JK

AM: On-Site Queuing Observations

Time	Car-In	Car-Out	Left Turn attempt from Riviera Dr.	Cars Queued
8:00 AM	0	0	0	0
8:01 AM	0	0	0	0
8:02 AM	0	0	0	0
8:03 AM	1	1	0	0
8:04 AM	2	1	0	1
8:05 AM	1	1	0	1
8:06 AM	1	1	0	1
8:07 AM	1	1	0	1
8:08 AM	1	0	0	0
8:09 AM	0	2	0	1
8:10 AM	5	0	0	1
8:11 AM	1	2	0	2
8:12 AM	3	4	0	3
8:13 AM	4	2	0	0
8:14 AM	3	6	0	4
8:15 AM	3	3	0	5
8:16 AM	6	0	1	4
8:17 AM	4	6	0	7
8:18 AM	3	6	0	9
8:19 AM	4	4	2	4
8:20 AM	7	3	0	6
8:21 AM	6	5	0	7
8:22 AM	8	5	0	8
8:23 AM	7	7	0	9
8:24 AM	10	8	1	16
8:25 AM	5	2	0	15
8:26 AM	6	6	1	17
8:27 AM	2	8	0	15
8:28 AM	1	5	0	12
8:29 AM	4	3	0	7

Miami-Dade County Public Charter School
Queuing and Parking Data Collection Sheet

School Name: Somerset Academy
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 Location: Parent & Bus Drop-Off

Weather: Cloudy
 Date: 9/25/2012
 Technician: WH, SD, JK

AM: On-Site Queuing Observations

Time	Car-In	Car-Out	Left Turn attempt from Riviera Dr.	Cars Queued
8:30 AM	3	5	0	4
8:31 AM	5	4	0	3
8:32 AM	2	2	0	4
8:33 AM	1	4	0	5
8:34 AM	3	2	0	3
8:35 AM	4	5	0	5
8:36 AM	1	1	0	2
8:37 AM	2	2	0	2
8:38 AM	3	1	0	1
8:39 AM	2	1	0	1
8:40 AM	2	2	0	2
8:41 AM	1	5	0	8
8:42 AM	1	1	0	3
8:43 AM	0	1	0	2
8:44 AM	1	0	0	2
8:45 AM	2	0	0	2
8:46 AM	2	3	0	1
8:47 AM	3	1	1	4
8:48 AM	1	2	0	1
8:49 AM	0	2	1	1
8:50 AM	0	1	0	1
8:51 AM	1	0	0	1
8:52 AM	1	1	0	1
8:53 AM	2	0	0	1
8:54 AM	0	2	0	2
8:55 AM	2	1	0	1
8:56 AM	2	0	0	1
8:57 AM	1	2	0	1
8:58 AM	0	0	0	0
8:59 AM	0	0	0	0

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Queuing and Parking Data Collection Sheet

School Name: Somerset Academy
 School Address: 624 Anastasia Avenue, Coral Gables, FL 33134
 Location: Parent & Bus Drop-Off

Weather: Cloudy
 Date: 9/25/2012
 Technician: WH, SD, JK

AM: On-Site Queuing Observations

Time	Car-In	Car-Out	Left Turn attempt from Riviera Dr.	Cars Queued
9:00 AM	0	0	0	0
9:01 AM	0	0	0	0
9:02 AM	0	0	0	0
9:03 AM	0	0	0	0
9:04 AM	2	0	0	0
9:05 AM	1	0	0	0
9:06 AM	0	0	1 (not parent)	0
9:07 AM	2	1	0	0
9:08 AM	2	0	0	0
9:09 AM	0	0	0	0
9:10 AM	0	0	0	0
9:11 AM	1	1	1 (not parent)	0
9:12 AM	0	0	0	0
9:13 AM	1	1	0	0
9:14 AM	1	0	1 (not parent)	0
9:15 AM	1	0	0	0
9:16 AM	1	0	0	0
9:17 AM	0	0	0	0
9:18 AM	2	0	0	0
9:19 AM	2	0	0	0
9:20 AM	0	0	0	0
9:21 AM	1	0	0	0
9:22 AM	0	0	0	0
9:23 AM	2	0	0	0
9:24 AM	1	0	0	0
9:25 AM	2	0	0	0
9:26 AM	6	1	0	0
9:27 AM	1	0	0	0
9:28 AM	2	3	0	0
9:29 AM	0	0	0	0

Miami-Dade County Public Charter School
Queuing and Parking Data Collection Sheet

School Name: Somerset Academy
 School Address: 624 Anastasia Avenue, Coral Gables, FL 33134
 Location: Parent & Bus Drop-Off

Weather: Cloudy
 Date: 9/25/2012
 Technician: WH, SD, JK

PM: On-Site Queuing Observations

Time	Car-In	Car-Out	Left Turn attempt from Riviera Dr.	Cars Queued
1:30 PM	0	0	0	0
1:31 PM	1	0	0	0
1:32 PM	0	0	0	0
1:33 PM	0	0	0	0
1:34 PM	1	0	0	0
1:35 PM	1	0	0	0
1:36 PM	0	0	0	0
1:37 PM	0	0	0	0
1:38 PM	0	0	0	0
1:39 PM	0	1	0	0
1:40 PM	0	0	0	0
1:41 PM	0	1	1	0
1:42 PM	0	0	0	0
1:43 PM	0	0	0	0
1:44 PM	0	0	0	0
1:45 PM	1	0	0	0
1:46 PM	0	0	0	0
1:47 PM	0	1	0	0
1:48 PM	1	1	0	0
1:49 PM	0	1	0	0
1:50 PM	0	0	0	0
1:51 PM	0	0	0	0
1:52 PM	1	0	0	0
1:53 PM	0	0	0	0
1:54 PM	1	0	0	0
1:55 PM	0	0	0	0
1:56 PM	1	0	0	0
1:57 PM	0	0	0	0
1:58 PM	1	0	0	1
1:59 PM	0	0	0	1

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Queuing and Parking Data Collection Sheet

School Name: Somerset Academy
 School Address: 624 Anastasia Avenue, Coral Gables, FL 33134
 Location: Parent & Bus Drop-Off

Weather: Cloudy
 Date: 9/25/2012
 Technician: WH, SD, JK

PM: On-Site Queuing Observations

Time	Car-In	Car-Out	Left Turn attempt from Riviera Dr.	Cars Queued
2:00 PM	0	1	0	1
2:01 PM	1	0	0	1
2:02 PM	0	0	1	1
2:03 PM	0	0	1	1
2:04 PM	0	0	0	2
2:05 PM	0	0	0	2
2:06 PM	1	0	0	2
2:07 PM	1	0	0	2
2:08 PM	0	0	1	3
2:09 PM	1	1	0	3
2:10 PM	2	0	0	4
2:11 PM	4	0	1	5
2:12 PM	1	1	0	6
2:13 PM	1	0	0	7
2:14 PM	3	2	0	6
2:15 PM	2	2	0	7
2:16 PM	2	4	0	9
2:17 PM	3	3	0	9
2:18 PM	0	3	0	10
2:19 PM	1	3	0	7
2:20 PM	0	3	0	3
2:21 PM	1	2	0	1
2:22 PM	3	0	0	1
2:23 PM	2	2	0	2
2:24 PM	2	0	1	5
2:25 PM	3	2	0	5
2:26 PM	3	4	0	5
2:27 PM	1	0	0	4
2:28 PM	1	2	0	1
2:29 PM	1	0	0	3

Miami-Dade County Public Charter School
Queuing and Parking Data Collection Sheet

School Name: Somerset Academy
 School Address: 624 Anastasia Avenue, Coral Gables, FL 33134
 Location: Parent & Bus Drop-Off

Weather: Cloudy
 Date: 9/25/2012
 Technician: WH, SD, JK

PM: On-Site Queuing Observations

Time	Car-In	Car-Out	Left Turn attempt from Riviera Dr.	Cars Queued
2:30 PM	0	3	0	3
2:31 PM	2	1	0	2
2:32 PM	0	2	0	2
2:33 PM	1	2	0	1
2:34 PM	1	0	0	1
2:35 PM	1	1	0	2
2:36 PM	0	0	0	1
2:37 PM	1	0	0	1
2:38 PM	0	0	0	0
2:39 PM	3	1	0	1
2:40 PM	1	0	0	3
2:41 PM	0	0	0	3
2:42 PM	0	0	0	3
2:43 PM	0	0	0	3
2:44 PM	1	0	0	3
2:45 PM	0	0	0	4
2:46 PM	1	0	1	4
2:47 PM	1	0	0	4
2:48 PM	1	0	0	6
2:49 PM	0	1	0	7
2:50 PM	0	0	0	7
2:51 PM	1	1	0	7
2:52 PM	1	1	0	6
2:53 PM	1	1	0	6
2:54 PM	3	2	1	6
2:55 PM	2	4	1	7
2:56 PM	3	2	0	5
2:57 PM	2	6	0	4
2:58 PM	3	1	0	5
2:59 PM	1	2	0	4

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School Name: Somerset Academy
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 Location: Parent & Bus Drop-Off

Weather: Cloudy
 Date: 9/25/2012
 Technician: WH, SD, JK

PM: On-Site Queuing Observations

Time	Car-In	Car-Out	Left Turn attempt from Riviera Dr.	Cars Queued
3:00 PM	3	1	0	4
3:01 PM	1	0	1	5
3:02 PM	2	3	0	4
3:03 PM	1	1	0	5
3:04 PM	4	2	0	4
3:05 PM	1	1	0	4
3:06 PM	2	5	0	5
3:07 PM	1	3	0	3
3:08 PM	0	1	0	1
3:09 PM	0	1	0	1
3:10 PM	0	1	0	1
3:11 PM	1	0	0	0
3:12 PM	2	1	0	0
3:13 PM	1	1	1	1
3:14 PM	0	1	0	0
3:15 PM	2	0	0	0
3:16 PM	1	0	0	0
3:17 PM	1	1	0	0
3:18 PM	1	0	0	0
3:19 PM	0	0	0	0
3:20 PM	2	1	0	0
3:21 PM	0	0	0	0
3:22 PM	1	0	0	0
3:23 PM	0	0	1	0
3:24 PM	3	1	0	0
3:25 PM	1	0	1	0
3:26 PM	0	0	0	0
3:27 PM	1	0	1	0
3:28 PM	1	1	0	0
3:29 PM	3	0	0	0

Miami-Dade County Public Charter School
Queuing and Parking Data Collection Sheet

School Name: Somerset Academy
 School Address: 624 Anastasia Avenue, Coral Gables, FL 33134
 Location: Parent & Bus Drop-Off

Weather: Clear
 Date: 10/10/2012
 Technician: JK, SD

AM: On-Site Queuing Observations

Time	Car-In	Car-Out	Left Turn attempt from Riviera Dr.	Cars Queued
7:30 AM	0	0	0	0
7:31 AM	2	0	0	1
7:32 AM	0	0	0	0
7:33 AM	0	0	0	0
7:34 AM	4	0	0	0
7:35 AM	0	0	0	0
7:36 AM	0	0	0	0
7:37 AM	1	0	0	0
7:38 AM	1	1	1	1
7:39 AM	1	1	0	0
7:40 AM	0	0	0	0
7:41 AM	1	0	0	0
7:42 AM	1	0	0	0
7:43 AM	0	1	0	0
7:44 AM	0	0	0	1
7:45 AM	0	0	0	0
7:46 AM	1	0	0	0
7:47 AM	3	0	0	0
7:48 AM	0	0	0	0
7:49 AM	0	0	0	0
7:50 AM	0	0	0	0
7:51 AM	0	0	0	0
7:52 AM	1	0	1	0
7:53 AM	0	0	0	0
7:54 AM	1	0	0	0
7:55 AM	2	0	0	0
7:56 AM	0	0	0	0
7:57 AM	1	1	0	0
7:58 AM	0	0	0	0
7:59 AM	2	0	0	1

* 7:30 slot = the minute between 7:30 and 7:31

Miami-Dade County Public Charter School
Queuing and Parking Data Collection Sheet

School Name: Somerset Academy
 School Address: 624 Anastasia Avenue, Coral Gables, FL 33134
 Location: Parent & Bus Drop-Off

Weather: Clear
 Date: 10/10/2012
 Technician: JK, SD

AM: On-Site Queuing Observations

Time	Car-In	Car-Out	Left Turn attempt from Riviera Dr.	Cars Queued
8:00 AM	1	1	0	2
8:01 AM	4	1	0	2
8:02 AM	2	1	0	1
8:03 AM	0	1	0	1
8:04 AM	1	0	0	1
8:05 AM	1	1	0	1
8:06 AM	0	1	0	0
8:07 AM	2	0	0	1
8:08 AM	2	2	0	1
8:09 AM	2	2	0	2
8:10 AM	1	1	0	1
8:11 AM	3	2	0	0
8:12 AM	6	1	0	6
8:13 AM	2	4	0	2
8:14 AM	2	3	0	1
8:15 AM	3	3	0	2
8:16 AM	6	1	0	4
8:17 AM	2	4	0	6
8:18 AM	6	2	1	2
8:19 AM	8	3	0	8
8:20 AM	10	5	0	4
8:21 AM	3	6	1	16
8:22 AM	3	6	0	10
8:23 AM	6	8	0	6
8:24 AM	9	4	0	10
8:25 AM	7	8	1	8
8:26 AM	5	6	0	12
8:27 AM	6	1	0	13
8:28 AM	3	10	0	4
8:29 AM	1	6	0	3

Miami-Dade County Public Charter School
Queuing and Parking Data Collection Sheet

School Name: Somerset Academy
 School Address: 624 Anastasia Avenue, Coral Gables, FL 33134
 Location: Parent & Bus Drop-Off

Weather: Clear
 Date: 10/10/2012
 Technician: JK, SD

AM: On-Site Queuing Observations

Time	Car-In	Car-Out	Left Turn attempt from Riviera Dr.	Cars Queued
8:30 AM	3	7	1	3
8:31 AM	2	0	0	5
8:32 AM	0	3	0	0
8:33 AM	4	1	0	3
8:34 AM	2	2	0	3
8:35 AM	2	3	0	1
8:36 AM	2	1	0	1
8:37 AM	2	1	0	2
8:38 AM	1	2	0	1
8:39 AM	3	1	0	2
8:40 AM	3	1	0	4
8:41 AM	1	4	1	1
8:42 AM	3	0	0	2
8:43 AM	4	3	0	1
8:44 AM	0	0	0	2
8:45 AM	0	1	0	0
8:46 AM	2	2	0	3
8:47 AM	3	1	0	2
8:48 AM	0	1	0	2
8:49 AM	1	1	0	3
8:50 AM	3	3	0	2
8:51 AM	1	0	0	2
8:52 AM	1	2	0	1
8:53 AM	4	1	0	1
8:54 AM	1	0	0	2
8:55 AM	1	3	0	0
8:56 AM	0	0	0	1
8:57 AM	0	2	0	2
8:58 AM	0	2	0	1
8:59 AM	0	1	0	0

Miami-Dade County Public Charter School
Queuing and Parking Data Collection Sheet

School Name: Somerset Academy
 School Address: 624 Anastasia Avenue, Coral Gables, FL 33134
 Location: Parent & Bus Drop-Off

Weather: Clear
 Date: 10/10/2012
 Technician: JK, SD

AM: On-Site Queuing Observations

Time	Car-In	Car-Out	Left Turn attempt from Riviera Dr.	Cars Queued
9:00 AM	3	0	0	1
9:01 AM	1	0	0	1
9:02 AM	2	0	0	0
9:03 AM	1	0	0	0
9:04 AM	0	0	0	0
9:05 AM	0	1	0	1
9:06 AM	0	0	0	0
9:07 AM	0	0	0	0
9:08 AM	0	0	0	0
9:09 AM	0	0	0	0
9:10 AM	2	0	0	0
9:11 AM	0	0	1	0
9:12 AM	0	0	0	0
9:13 AM	1	0	0	0
9:14 AM	0	1	0	0
9:15 AM	0	1	0	0
9:16 AM	0	0	0	0
9:17 AM	0	0	0	0
9:18 AM	0	0	0	0
9:19 AM	0	0	0	0
9:20 AM	1	0	0	0
9:21 AM	0	0	0	0
9:22 AM	0	0	0	0
9:23 AM	0	0	0	0
9:24 AM	0	0	0	0
9:25 AM	0	1	0	0
9:26 AM	0	2	0	0
9:27 AM	0	0	0	0
9:28 AM	1	0	0	0
9:29 AM	0	0	0	0

Miami-Dade County Public Charter School
Queuing and Parking Data Collection Sheet

School Name: Somerset Academy
 School Address: 624 Anastasia Avenue, Coral Gables, FL 33134
 Location: Parent & Bus Drop-Off

Weather: Rainy
 Date: 10/10/2012
 Technician: JK, SD, EP

PM: On-Site Queuing Observations

Time	Car-In	Car-Out	Left Turn attempt from Riviera Dr.	Cars Queued
1:30 PM	0	0	0	0
1:31 PM	0	0	0	0
1:32 PM	0	0	0	0
1:33 PM	0	0	0	0
1:34 PM	0	0	0	0
1:35 PM	0	0	0	0
1:36 PM	0	0	0	0
1:37 PM	0	0	0	0
1:38 PM	0	0	0	0
1:39 PM	0	0	0	0
1:40 PM	1	0	0	0
1:41 PM	0	0	0	0
1:42 PM	0	1	0	0
1:43 PM	0	0	0	0
1:44 PM	0	0	0	0
1:45 PM	2	0	0	0
1:46 PM	0	0	0	0
1:47 PM	1	0	0	0
1:48 PM	0	0	0	0
1:49 PM	0	0	0	0
1:50 PM	0	1	0	0
1:51 PM	0	0	0	0
1:52 PM	0	0	0	0
1:53 PM	0	0	0	0
1:54 PM	0	0	0	0
1:55 PM	0	0	0	0
1:56 PM	0	1	0	0
1:57 PM	0	0	0	0
1:58 PM	1	0	0	0
1:59 PM	0	1	0	0

Miami-Dade County Public Charter School
Queuing and Parking Data Collection Sheet

School Name: Somerset Academy
 School Address: 624 Anastasia Avenue, Coral Gables, FL 33134
 Location: Parent & Bus Drop-Off

Weather: Rainy
 Date: 10/10/2012
 Technician: JK, SD, EP

PM: On-Site Queuing Observations

Time	Car-In	Car-Out	Left Turn attempt from Riviera Dr.	Cars Queued
2:00 PM	0	0	0	0
2:01 PM	0	0	0	1
2:02 PM	1	0	0	2
2:03 PM	1	0	0	1
2:04 PM	1	0	0	2
2:05 PM	1	0	0	3
2:06 PM	1	0	0	3
2:07 PM	0	0	0	3
2:08 PM	1	0	0	4
2:09 PM	1	1	0	5
2:10 PM	3	2	0	3
2:11 PM	3	3	0	5
2:12 PM	0	2	0	4
2:13 PM	5	1	0	5
2:14 PM	1	4	0	6
2:15 PM	5	3	0	8
2:16 PM	3	3	0	5
2:17 PM	1	2	0	5
2:18 PM	4	4	0	6
2:19 PM	1	3	0	3
2:20 PM	1	5	0	5
2:21 PM	3	0	0	2
2:22 PM	1	1	0	3
2:23 PM	2	1	0	3
2:24 PM	5	2	0	2
2:25 PM	0	2	0	3
2:26 PM	3	1	0	2
2:27 PM	3	1	0	2
2:28 PM	0	2	0	4
2:29 PM	1	0	0	4

Miami-Dade County Public Charter School
Queuing and Parking Data Collection Sheet

School Name: Somerset Academy
 School Address: 624 Anastasia Avenue, Coral Gables, FL 33134
 Location: Parent & Bus Drop-Off

Weather: Rainy
 Date: 10/10/2012
 Technician: JK, SD, EP

PM: On-Site Queuing Observations

Time	Car-In	Car-Out	Left Turn attempt from Riviera Dr.	Cars Queued
2:30 PM	2	3	0	4
2:31 PM	2	0	0	2
2:32 PM	3	1	0	1
2:33 PM	1	1	0	0
2:34 PM	0	0	0	1
2:35 PM	1	0	0	0
2:36 PM	0	2	0	1
2:37 PM	1	0	0	0
2:38 PM	1	0	0	0
2:39 PM	0	0	0	0
2:40 PM	0	0	0	0
2:41 PM	1	0	0	0
2:42 PM	1	1	0	0
2:43 PM	2	0	0	0
2:44 PM	3	0	0	1
2:45 PM	1	0	0	3
2:46 PM	1	0	0	8
2:47 PM	0	0	0	9
2:48 PM	1	1	0	5
2:49 PM	2	3	0	3
2:50 PM	1	1	0	2
2:51 PM	0	2	0	2
2:52 PM	1	2	0	1
2:53 PM	1	1	0	1
2:54 PM	1	0	0	1
2:55 PM	3	0	0	1
2:56 PM	1	4	0	3
2:57 PM	3	1	0	1
2:58 PM	1	1	0	1
2:59 PM	4	3	0	2

Miami-Dade County Public Charter School
Queuing and Parking Data Collection Sheet

School Name: Somerset Academy
 School Address: 624 Anastasia Avenue, Coral Gables, FL 33134
 Location: Parent & Bus Drop-Off

Weather: Rainy
 Date: 10/10/2012
 Technician: JK, SD, EP

PM: On-Site Queuing Observations

Time	Car-In	Car-Out	Left Turn attempt from Riviera Dr.	Cars Queued
3:00 PM	0	1	0	4
3:01 PM	2	2	0	1
3:02 PM	1	4	0	1
3:03 PM	2	1	0	1
3:04 PM	2	3	0	2
3:05 PM	1	1	0	4
3:06 PM	1	3	0	5
3:07 PM	2	1	0	1
3:08 PM	0	3	0	1
3:09 PM	1	0	0	2
3:10 PM	2	1	0	1
3:11 PM	1	2	0	1
3:12 PM	1	1	0	2
3:13 PM	0	1	0	1
3:14 PM	0	1	0	1
3:15 PM	0	0	0	1
3:16 PM	2	0	0	0
3:17 PM	0	2	0	0
3:18 PM	0	0	0	0
3:19 PM	0	0	0	0
3:20 PM	0	0	0	0
3:21 PM	1	0	0	0
3:22 PM	1	1	0	0
3:23 PM	2	0	0	0
3:24 PM	0	2	0	1
3:25 PM	0	2	0	1
3:26 PM	0	0	0	0
3:27 PM	0	0	0	0
3:28 PM	2	0	0	0
3:29 PM	1	1	0	0

APPENDIX B
TRAFFIC COUNTS

Crosroads Engineering Data, Inc.

13284 SW 120th Street

Miami, Florida, 33186

Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : RSH

JOB NO : 2012-073

PROJECT: SOMERSET ACADEMY

COUNTY : MIAMI-DADE

File Name : SEGOVIA ST @ ANASTASIA AVE

Site Code : 00001212

Start Date : 9/25/2012

Page No : 1

Groups Printed- AUTO - HEAVY VEHICLES

Start Time	SEGOVIA ST From North				ANASTASIA AVE From East				SEGOVIA ST From South				ANASTASIA AVE From West				Int. Total
	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	Right	Thru	Left	Peds	
07:00 AM	4	61	0	1	1	8	1	0	1	72	4	1	10	1	7	1	173
07:15 AM	2	42	0	2	2	14	3	1	0	81	2	3	8	10	8	1	179
07:30 AM	5	36	4	0	2	6	4	6	3	64	3	2	6	5	5	1	152
07:45 AM	0	54	0	0	4	15	2	4	1	75	1	1	9	5	7	2	180
Total	11	193	4	3	9	43	10	11	5	292	10	7	33	21	27	5	684
08:00 AM	5	53	0	2	1	5	2	6	0	84	6	1	26	3	15	3	212
08:15 AM	2	77	1	1	2	9	6	3	2	64	1	3	47	11	46	2	277
08:30 AM	4	53	1	2	0	7	5	1	1	101	1	0	36	9	27	3	251
08:45 AM	2	57	2	2	1	13	1	2	0	80	2	1	26	15	18	1	223
Total	13	240	4	7	4	34	14	12	3	329	10	5	135	38	106	9	963
*** BREAK ***																	
01:30 PM	2	40	1	0	2	5	3	1	0	43	2	0	4	5	9	0	117
01:45 PM	1	27	1	0	1	5	1	1	0	39	2	0	5	5	6	0	94
Total	3	67	2	0	3	10	4	2	0	82	4	0	9	10	15	0	211
02:00 PM	2	45	1	0	2	10	4	1	2	29	7	1	6	1	10	1	122
02:15 PM	2	63	1	2	2	13	3	1	2	53	3	0	23	2	18	2	190
02:30 PM	3	46	1	0	2	20	5	3	4	68	4	0	11	6	8	0	181
02:45 PM	1	58	1	0	4	21	2	1	1	49	3	0	20	7	14	0	182
Total	8	212	4	2	10	64	14	6	9	199	17	1	60	16	50	3	675
03:00 PM	2	50	1	0	5	21	1	0	1	44	1	1	20	3	13	0	163
03:15 PM	4	51	0	0	2	11	2	3	0	54	2	1	11	2	8	2	153
Grand Total	41	813	15	12	33	183	45	34	18	1000	44	15	268	90	219	19	2849
Apprch %	4.7	92.3	1.7	1.4	11.2	62	15.3	11.5	1.7	92.9	4.1	1.4	45	15.1	36.7	3.2	
Total %	1.4	28.5	0.5	0.4	1.2	6.4	1.6	1.2	0.6	35.1	1.5	0.5	9.4	3.2	7.7	0.7	
AUTO	35	802	15	12	29	179	44	34	17	990	43	15	264	90	209	19	2797
% AUTO	85.4	98.6	100	100	87.9	97.8	97.8	100	94.4	99	97.7	100	98.5	100	95.4	100	98.2
HEAVY VEHICLES	6	11	0	0	4	4	1	0	1	10	1	0	4	0	10	0	52
% HEAVY VEHICLES	14.6	1.4	0	0	12.1	2.2	2.2	0	5.6	1	2.3	0	1.5	0	4.6	0	1.8

Crosroads Engineering Data, Inc.

13284 SW 120th Street

Miami, Florida, 33186

Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : RSH
 JOB NO : 2012-073
 PROJECT: SOMERSET ACADEMY
 COUNTY : MIAMI-DADE

File Name : SEGOVIA ST @ ANASTASIA AVE
 Site Code : 00001212
 Start Date : 9/25/2012
 Page No : 2

Start Time	SEGOVIA ST From North					ANASTASIA AVE From East					SEGOVIA ST From South					ANASTASIA AVE From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	5	53	0	2	60	1	5	2	6	14	0	84	6	1	91	26	3	15	3	47	212
08:15 AM	2	77	1	1	81	2	9	6	3	20	2	64	1	3	70	47	11	46	2	106	277
08:30 AM	4	53	1	2	60	0	7	5	1	13	1	101	1	0	103	36	9	27	3	75	251
08:45 AM	2	57	2	2	63	1	13	1	2	17	0	80	2	1	83	26	15	18	1	60	223
Total Volume	13	240	4	7	264	4	34	14	12	64	3	329	10	5	347	135	38	106	9	288	963
% App. Total	4.9	90.9	1.5	2.7		6.2	53.1	21.9	18.8		0.9	94.8	2.9	1.4		46.9	13.2	36.8	3.1		
PHF	.650	.779	.500	.875	.815	.500	.654	.583	.500	.800	.375	.814	.417	.417	.842	.718	.633	.576	.750	.679	.869

Crosroads Engineering Data, Inc.

13284 SW 120th Street

Miami, Florida, 33186

Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : RSH

JOB NO : 2012-073

PROJECT: SOMERSET ACADEMY

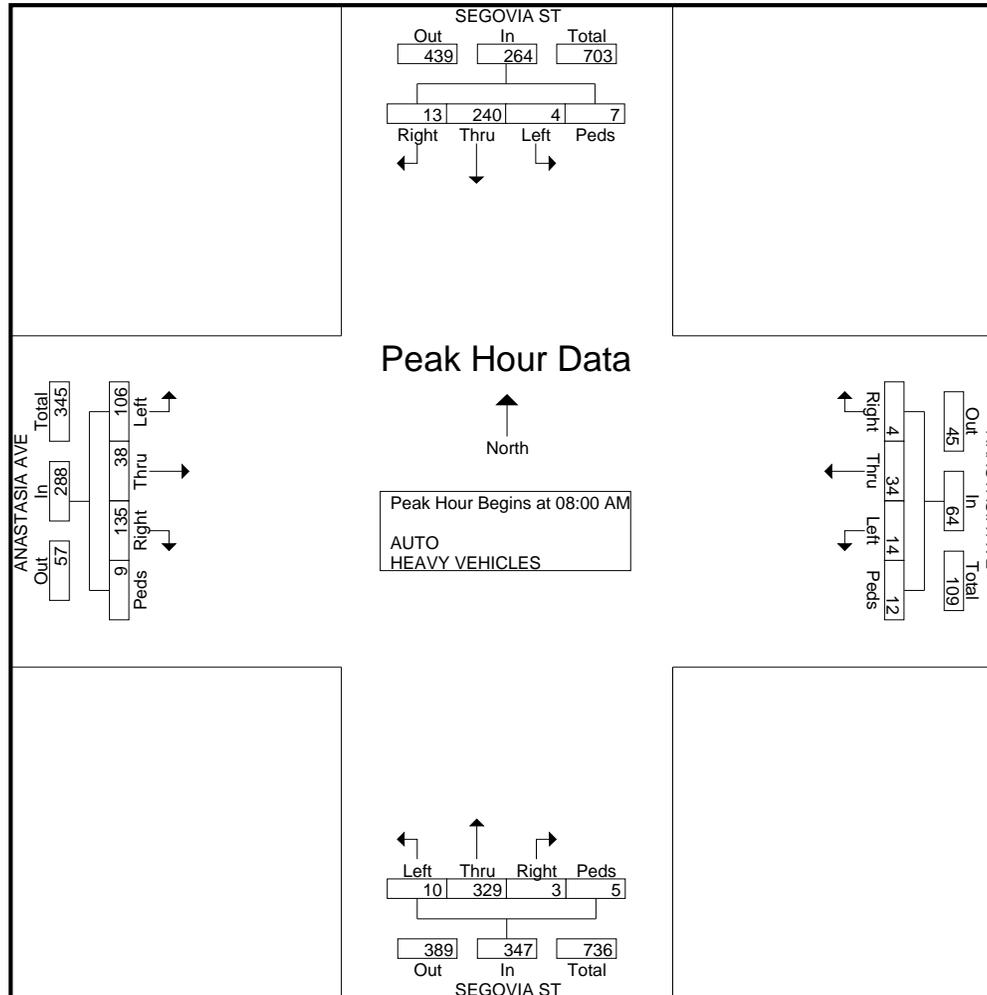
COUNTY : MIAMI-DADE

File Name : SEGOVIA ST @ ANASTASIA AVE

Site Code : 00001212

Start Date : 9/25/2012

Page No : 3



Crosroads Engineering Data, Inc.

13284 SW 120th Street

Miami, Florida, 33186

Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : RSH
 JOB NO : 2012-073
 PROJECT: SOMERSET ACADEMY
 COUNTY : MIAMI-DADE

File Name : SEGOVIA ST @ ANASTASIA AVE
 Site Code : 00001212
 Start Date : 9/25/2012
 Page No : 4

Start Time	SEGOVIA ST From North					ANASTASIA AVE From East					SEGOVIA ST From South					ANASTASIA AVE From West					Int. Total
	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	Right	Thru	Left	Peds	App. Total	
Peak Hour Analysis From 01:30 PM to 03:15 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 02:15 PM																					
02:15 PM	2	63	1	2	68	2	13	3	1	19	2	53	3	0	58	23	2	18	2	45	190
02:30 PM	3	46	1	0	50	2	20	5	3	30	4	68	4	0	76	11	6	8	0	25	181
02:45 PM	1	58	1	0	60	4	21	2	1	28	1	49	3	0	53	20	7	14	0	41	182
03:00 PM	2	50	1	0	53	5	21	1	0	27	1	44	1	1	47	20	3	13	0	36	163
Total Volume	8	217	4	2	231	13	75	11	5	104	8	214	11	1	234	74	18	53	2	147	716
% App. Total	3.5	93.9	1.7	0.9		12.5	72.1	10.6	4.8		3.4	91.5	4.7	0.4		50.3	12.2	36.1	1.4		
PHF	.667	.861	1.000	.250	.849	.650	.893	.550	.417	.867	.500	.787	.688	.250	.770	.804	.643	.736	.250	.817	.942

Crosroads Engineering Data, Inc.

13284 SW 120th Street

Miami, Florida, 33186

Tel: 305-233-3997 Fax: 305-233-7720

CLIENT : RSH

JOB NO : 2012-073

PROJECT: SOMERSET ACADEMY

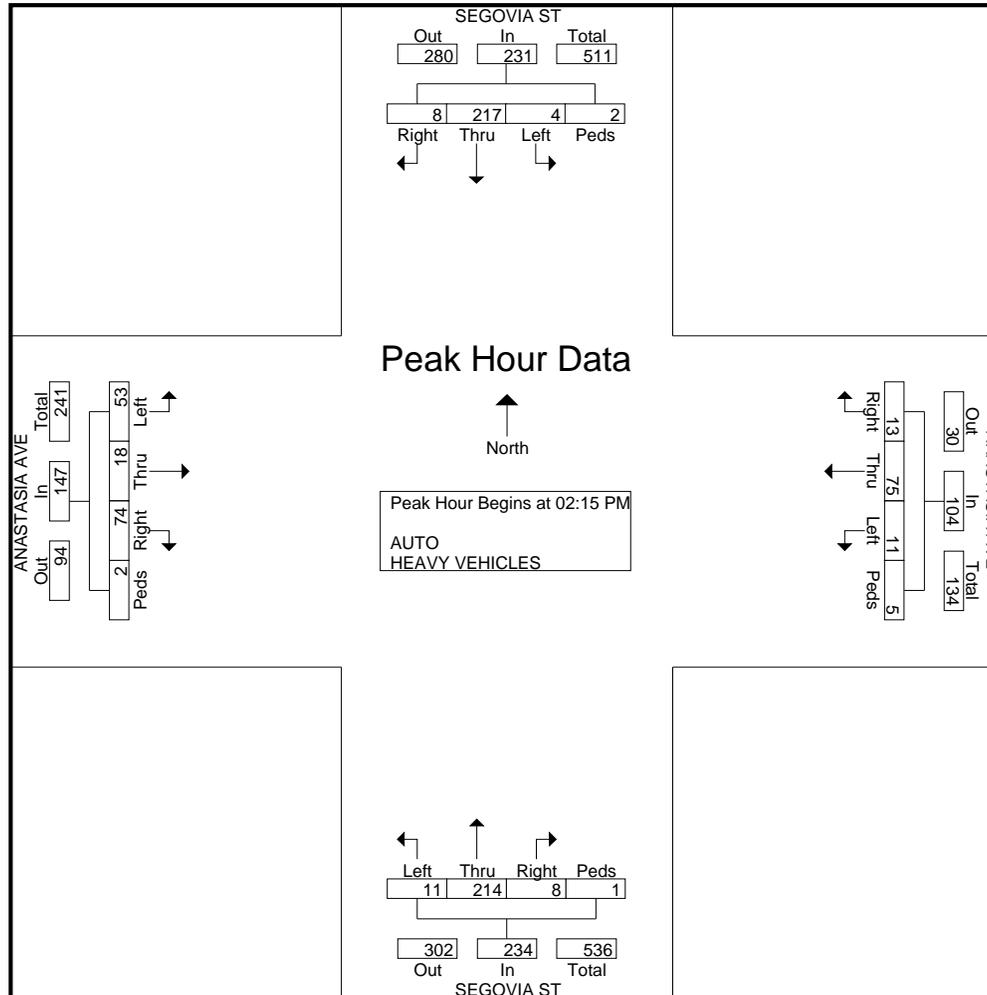
COUNTY : MIAMI-DADE

File Name : SEGOVIA ST @ ANASTASIA AVE

Site Code : 00001212

Start Date : 9/25/2012

Page No : 5



Miami-Dade County Public Charter School
 15-Minute Interval Turning Movement Counts
 Segovia St. at Anastasia Ave.

AM: Turning Movement Counts

Time	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
7:00	4	72	1	0	61	3	6	1	10	1	8	1
7:15	2	81	0	0	42	2	8	10	8	3	13	2
7:30	3	64	2	4	35	4	5	5	6	4	6	2
7:45	1	75	1	0	53	0	6	5	9	2	15	4
8:00	6	84	0	0	52	4	15	3	26	2	4	1
8:15	1	62	2	1	76	2	45	11	47	6	9	2
8:30	1	100	1	1	52	4	27	9	35	4	7	0
8:45	2	79	0	2	56	1	17	15	24	1	12	0
TOTAL	20	617	7	8	427	20	129	59	165	23	74	12

PM: Turning Movement Counts

Time	NBL	NBT	NBR	SBL	SBT	SBR	EBL	EBT	EBR	WBL	WBT	WBR
1:30	2	43	0	1	39	1	8	5	4	3	5	1
1:45	2	39	0	1	27	1	6	5	5	1	5	1
2:00	6	26	2	1	45	2	9	1	6	4	10	2
2:15	3	52	2	1	61	2	17	2	23	3	13	2
2:30	4	68	4	1	46	2	8	6	11	5	20	2
2:45	3	48	1	1	56	1	13	7	19	2	21	2
3:00	1	43	1	1	50	2	13	3	20	1	20	5
3:15	2	54	0	0	51	4	6	2	11	2	11	2
TOTAL	23	373	10	7	375	15	80	31	99	21	105	17

Miami-Dade County Public Charter School
 5-Minute Interval Counts - 9/25/12
 Somerset Academy
 624 Anastasia Avenue, Coral Gables, FL 33134
 Parent & Bus Drop-Off

AM: On-Site Queuing Observations

Time	Car-In	Car-Out	Left Turn attempt from Riviera Dr.
7:30	0	0	0
7:35	8	1	0
7:40	2	1	0
7:45	4	0	0
7:50	4	0	0
7:55	3	0	0
8:00	3	2	0
8:05	4	5	0
8:10	16	14	0
8:15	20	19	3
8:20	38	28	1
8:25	18	24	1
8:30	14	17	0
8:35	12	10	0
8:40	5	9	0
8:45	8	8	2
8:50	4	4	0
8:55	5	3	0
9:00	2	0	0
9:05	5	1	1
9:10	3	2	2
9:15	6	0	0
9:20	4	0	0
9:25	11	4	0
TOTAL	199	152	10

PM: On-Site Queuing Observations

Time	Car-In	Car-Out	Left Turn attempt from Riviera Dr.
1:30	2	0	0
1:35	1	1	0
1:40	1	1	1
1:45	1	3	0
1:50	2	0	0
1:55	2	0	0
2:00	1	1	2
2:05	3	1	1
2:10	11	3	1
2:15	8	15	0
2:20	8	7	1
2:25	9	8	0
2:30	4	8	0
2:35	5	2	0
2:40	2	0	0
2:45	3	1	1
2:50	6	5	1
2:55	11	15	1
3:00	11	7	1
3:05	4	11	0
3:10	4	4	1
3:15	5	1	0
3:20	6	2	1
3:25	6	1	2
TOTAL	116	97	14

Miami-Dade County Public Charter School
 5-Minute Interval Counts - 10/10/12
 Somerset Academy
 624 Anastasia Avenue, Coral Gables, FL 33134
 Parent & Bus Drop-Off

AM: On-Site Queuing Observations

Time	Car-In	Car-Out	Left Turn attempt from Riviera Dr.
7:30	6	0	0
7:35	3	2	1
7:40	2	1	0
7:45	4	0	0
7:50	2	0	1
7:55	5	1	0
8:00	8	4	0
8:05	7	6	0
8:10	14	11	0
8:15	25	13	1
8:20	31	29	1
8:25	22	31	1
8:30	11	13	1
8:35	10	8	0
8:40	11	8	1
8:45	6	6	0
8:50	10	6	0
8:55	1	8	0
9:00	7	0	0
9:05	0	1	0
9:10	3	1	1
9:15	0	1	0
9:20	1	0	0
9:25	1	3	0
TOTAL	190	153	8

PM: On-Site Queuing Observations

Time	Car-In	Car-Out	Left Turn attempt from Riviera Dr.
1:30	0	0	0
1:35	0	0	0
1:40	1	0	0
1:45	3	1	0
1:50	0	1	0
1:55	1	2	0
2:00	3	0	0
2:05	4	1	0
2:10	12	12	0
2:15	14	15	0
2:20	12	9	0
2:25	7	6	0
2:30	8	5	0
2:35	3	2	0
2:40	7	1	0
2:45	5	4	0
2:50	4	6	0
2:55	12	9	0
3:00	7	11	0
3:05	5	8	0
3:10	4	6	0
3:15	2	2	0
3:20	4	3	0
3:25	3	3	0
TOTAL	121	107	0

Miami-Dade County Public Charter School
 15-Minute Interval Counts - 9/25/12
 Somerset Academy
 624 Anastasia Avenue, Coral Gables, FL 33134
 Parent & Bus Drop-Off

AM: On-Site Queuing Observations

Time	Car-In	Car-Out	Left Turn attempt from Riviera Dr.
7:30	10	2	0
7:45	11	0	0
8:00	23	21	0
8:15	76	71	5
8:30	31	36	0
8:45	17	15	2
9:00	11	3	0
9:15	20	4	3
TOTAL	199	152	10

PM: On-Site Queuing Observations

Time	Car-In	Car-Out	Left Turn attempt from Riviera Dr.
1:30	3	2	1
1:45	6	3	0
2:00	15	5	4
2:15	25	30	1
2:30	11	10	0
2:45	20	21	3
3:00	19	22	2
3:15	17	4	3
TOTAL	116	97	14

Miami-Dade County Public Charter School
 15-Minute Interval Counts - 10/10/12
 Somerset Academy
 624 Anastasia Avenue, Coral Gables, FL 33134
 Parent & Bus Drop-Off

AM: On-Site Queuing Observations

Time	Car-In	Car-Out	Left Turn attempt from Riviera Dr.
7:30	11	3	1
7:45	11	1	1
8:00	29	21	0
8:15	78	73	3
8:30	32	29	2
8:45	17	20	0
9:00	10	2	1
9:15	2	4	0
TOTAL	190	153	8

PM: On-Site Queuing Observations

Time	Car-In	Car-Out	Left Turn attempt from Riviera Dr.
1:30	1	1	0
1:45	4	3	0
2:00	19	13	0
2:15	33	30	0
2:30	18	8	0
2:45	21	19	0
3:00	16	25	0
3:15	9	8	0
TOTAL	121	107	0

Miami-Dade County Public Charter School

60-Minute Interval Counts - 9/25/12

Somerset Academy

624 Anastasia Avenue, Coral Gables, FL 33134

Parent & Bus Drop-Off

AM: On-Site Queing Observations

Time	Car-In	Car-Out	Left Turn attempt from Riviera Dr.
7:30	120	94	5
8:30	79	58	5
TOTAL	199	152	10

PM: On-Site Queing Observations

Time	Car-In	Car-Out	Left Turn attempt from Riviera Dr.
1:30	49	40	6
2:30	67	57	8
TOTAL	116	97	14

Miami-Dade County Public Charter School

60-Minute Interval Counts - 10/10/12

Somerset Academy

624 Anastasia Avenue, Coral Gables, FL 33134

Parent & Bus Drop-Off

AM: On-Site Queing Observations

Time	Car-In	Car-Out	Left Turn attempt from Riviera Dr.
7:30	129	98	5
8:30	61	55	3
TOTAL	190	153	8

PM: On-Site Queing Observations

Time	Car-In	Car-Out	Left Turn attempt from Riviera Dr.
1:30	57	47	0
2:30	64	60	0
TOTAL	121	107	0

APPENDIX C
SIGNAL TIMING DATA

TOD Schedule Report

for 6033: Anastasia Av&Segovia St

Print Date:
8/27/2012

Print Time:
7:55 PM

<u>Asset</u>	<u>Intersection</u>	<u>TOD Schedule</u>	<u>Op Mode</u>	<u>Plan #</u>	<u>Cycle</u>	<u>Offset</u>	<u>TOD Setting</u>	<u>Active PhaseBank</u>	<u>Active Maximum</u>
6033	Anastasia Av&Segovia St	DOW-2		N/A	0	0	N/A	0	Max 0

Splits

<u>PH 1</u>	<u>PH 2</u>	<u>PH 3</u>	<u>PH 4</u>	<u>PH 5</u>	<u>PH 6</u>	<u>PH 7</u>	<u>PH 8</u>
-	SBT	-	WBT	-	NBT	-	EBT
0	0	0	0	0	0	0	0



Active Phase Bank: Phase Bank 1

<u>Phase</u>	<u>Walk</u>			<u>Don't Walk</u>			<u>Min Initial</u>			<u>Veh Ext</u>			<u>Max Limit</u>			<u>Max 2</u>			<u>Yellow</u>	<u>Red</u>
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3		
1 -	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2 SBT	7	7	7	10	10	10	23	23	23	2.5	2.5	2.5	35	35	35	0	0	0	4	0.3
3 -	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
4 WBT	7	7	7	10	10	10	7	7	7	2.5	2.5	2.5	15	15	15	0	0	0	4	0.9
5 -	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
6 NBT	7	7	7	10	10	10	23	23	23	2.5	2.5	2.5	35	35	35	0	0	0	4	0.3
7 -	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
8 EBT	7	7	7	10	10	10	7	7	7	2.5	2.5	2.5	15	15	15	0	0	0	4	0.9

Last In Service Date: unknown

<u>Permitted Phases</u>	
	<u>12345678</u>
Default	-2-4-6-8
External Permit 0	-----
External Permit 1	-----
External Permit 2	-----

<u>Current</u>	<u>Plan</u>	<u>Cycle</u>	1	2	3	4	5	6	7	8	<u>Ring Offset</u>	<u>Offset</u>
TOD Schedule			-	SBT	-	WBT	-	NBT	-	EBT		

<u>Local TOD Schedule</u>		
<u>Time</u>	<u>Plan</u>	<u>DOW</u>
0000	Free	Su M T W Th F S

Current Time of Day Function			
<u>Time</u>	<u>Function</u>	<u>Settings *</u>	<u>Day of Week</u>
0000	TOD OUTPUTS	-----	SuM T W ThF S

Local Time of Day Function			
<u>Time</u>	<u>Function</u>	<u>Settings *</u>	<u>Day of Week</u>
0000	TOD OUTPUTS	-----	SuM T W ThF S

* Settings
Blank - FREE - Phase Bank 1, Max 1
Blank - Plan - Phase Bank 1, Max 2
1 - Phase Bank 2, Max 1
2 - Phase Bank 2, Max 2
3 - Phase Bank 3, Max 1
4 - Phase Bank 3, Max 2
5 - EXTERNAL PERMIT 1
6 - EXTERNAL PERMIT 2
7 - X-PED OMIT
8 - TBA

No Calendar Defined/Enabled

APPENDIX D
LEVEL OF SERVICE ANALYSES OUTPUT SHEETS

HCM Signalized Intersection Capacity Analysis

3: ANASTASIA AVE. & SEGOVIA ST.

10/17/2012



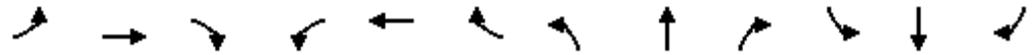
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	106	38	135	14	34	4	10	329	3	4	240	13
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.93			0.99			1.00			0.99	
Flt Protected		0.98			0.99			1.00			1.00	
Satd. Flow (prot)		1708			1820			3530			3510	
Flt Permitted		0.85			0.89			0.95			0.95	
Satd. Flow (perm)		1482			1634			3341			3338	
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)	115	41	147	15	37	4	11	358	3	4	261	14
RTOR Reduction (vph)	0	66	0	0	3	0	0	1	0	0	6	0
Lane Group Flow (vph)	0	237	0	0	53	0	0	371	0	0	273	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		9.5			9.5			23.0			23.0	
Effective Green, g (s)		9.5			9.5			23.0			23.0	
Actuated g/C Ratio		0.22			0.22			0.54			0.54	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		2.5			2.5			2.5			2.5	
Lane Grp Cap (vph)		331			365			1808			1806	
v/s Ratio Prot												
v/s Ratio Perm		c0.16			0.03			c0.11			0.08	
v/c Ratio		0.72			0.14			0.20			0.15	
Uniform Delay, d1		15.3			13.2			5.0			4.9	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		6.7			0.1			0.0			0.0	
Delay (s)		22.0			13.4			5.1			4.9	
Level of Service		C			B			A			A	
Approach Delay (s)		22.0			13.4			5.1			4.9	
Approach LOS		C			B			A			A	

Intersection Summary

HCM Average Control Delay	10.6	HCM Level of Service	B
HCM Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	42.5	Sum of lost time (s)	10.0
Intersection Capacity Utilization	50.3%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			

HCM Signalized Intersection Capacity Analysis
 3: ANASTASIA AVE. & SEGOVIA ST.

10/17/2012



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Volume (vph)	53	18	74	11	75	13	11	214	8	4	217	8
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		5.0			5.0			5.0			5.0	
Lane Util. Factor		1.00			1.00			0.95			0.95	
Frt		0.93			0.98			0.99			0.99	
Flt Protected		0.98			0.99			1.00			1.00	
Satd. Flow (prot)		1704			1820			3512			3517	
Flt Permitted		0.83			0.94			0.94			0.95	
Satd. Flow (perm)		1447			1720			3304			3345	
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)	58	20	80	12	82	14	12	233	9	4	236	9
RTOR Reduction (vph)	0	66	0	0	11	0	0	4	0	0	4	0
Lane Group Flow (vph)	0	92	0	0	97	0	0	250	0	0	245	0
Turn Type	Perm			Perm			Perm			Perm		
Protected Phases		8			4			6			2	
Permitted Phases	8			4			6			2		
Actuated Green, G (s)		5.7			5.7			16.0			16.0	
Effective Green, g (s)		5.7			5.7			16.0			16.0	
Actuated g/C Ratio		0.18			0.18			0.50			0.50	
Clearance Time (s)		5.0			5.0			5.0			5.0	
Vehicle Extension (s)		2.5			2.5			2.5			2.5	
Lane Grp Cap (vph)		260			309			1668			1688	
v/s Ratio Prot												
v/s Ratio Perm		c0.06			0.06			c0.08			0.07	
v/c Ratio		0.36			0.32			0.15			0.14	
Uniform Delay, d1		11.4			11.3			4.2			4.2	
Progression Factor		1.00			1.00			1.00			1.00	
Incremental Delay, d2		0.6			0.4			0.0			0.0	
Delay (s)		12.0			11.7			4.2			4.2	
Level of Service		B			B			A			A	
Approach Delay (s)		12.0			11.7			4.2			4.2	
Approach LOS		B			B			A			A	

Intersection Summary

HCM Average Control Delay	6.9	HCM Level of Service	A
HCM Volume to Capacity ratio	0.20		
Actuated Cycle Length (s)	31.7	Sum of lost time (s)	10.0
Intersection Capacity Utilization	42.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			