TRAFFIC IMPACT STUDY
FOR
LAKESIDE HIGH SCHOOL

ATLANTA, DEKALB COUNTY, GEORGIA

Prepared for:

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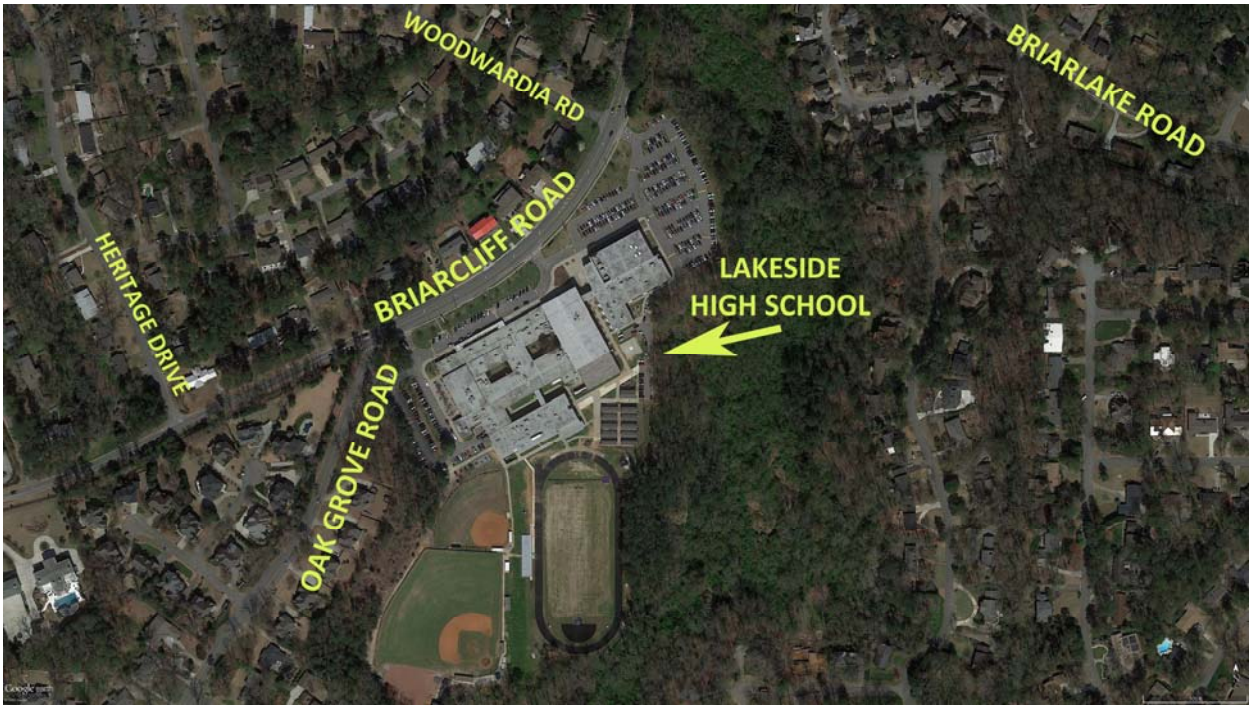
1.0 INTRODUCTION

The purpose of this study is to determine the traffic impact on the surrounding area roadways that has resulted from the increased enrolment in Lakeside High School located in the northeast corner of the intersection of Briarcliff Road at Oak Grove Road in Atlanta, Georgia. The School proposes to construct 38-classrooms to move 750 students from existing portable classrooms to the new building. The traffic analysis evaluates the current operations and recommends any improvements to the study intersections. The current enrollment of the school is 2,111 students which includes 750 students added above the existing capacity of the building and accommodated in portable classrooms.



The school will continue to use existing access at the following locations on Briarcliff Road:

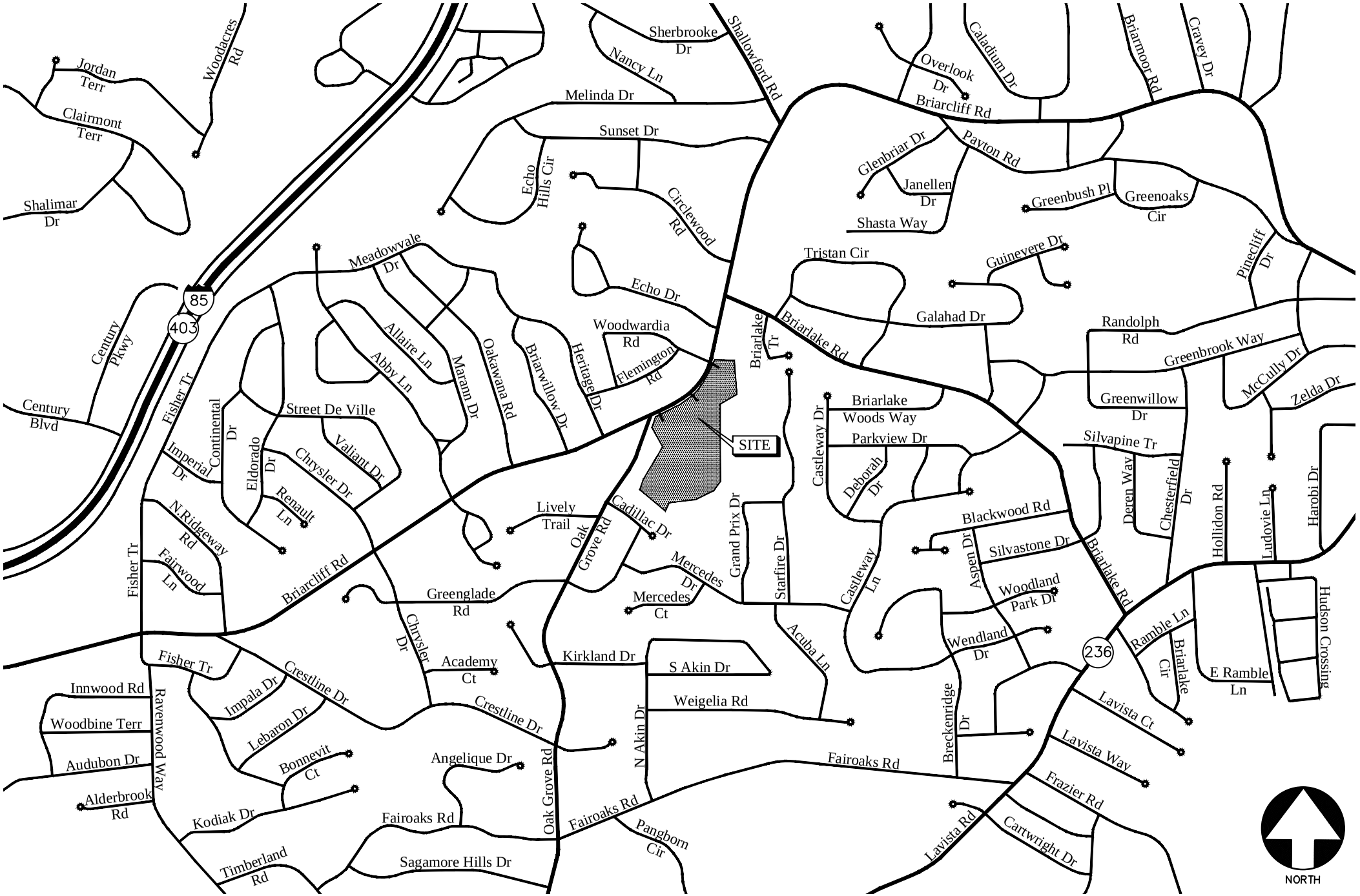
- Site Driveway 1: Full-access driveway (Western), east of Oak Grove Road
- Site Driveway 2: Exit-only driveway (Middle)
- Site Driveway 3: Full-access driveway (Eastern), aligning across from Woodwardia Road

There is one cross-walk for pedestrian traffic at the intersection of Briarcliff Road at Oak Grove Road near the western driveway.

The AM, School Dismissal and PM peak hours have been analyzed in this study. The study includes the evaluation of traffic operations at the intersections of:

1. Briarcliff Road at Chrysler Drive
2. Briarcliff Road at Heritage Drive
3. Briarcliff Road at Oak Grove Road
4. Lakeside High School West Entrance
5. Lakeside High School Central entrance
6. Briarcliff Road at Woodwardia Road/Lakeside HS East Entrance
7. Briarcliff Road at Echo Drive
8. Briarcliff Road at Briarlake Road
9. Briarcliff Road at Shallowford Road
10. Oak Grove Road at Cadillac Drive
11. Oak Grove Road at Fairoaks Road
12. Briarlake Road at Briarlake Trace

Recommendations to improve traffic operations have been identified as appropriate and are discussed in detail in the following sections of the report. The location of the development and the surrounding roadway network is shown in Figure 1.



LOCATION MAP

FIGURE 1

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2.0 EXISTING FACILITIES / CONDITIONS

2.1 Roadway Facilities

The following is a brief description of each of the roadway facilities located in proximity to the site:

2.1.1 Briarcliff Road

Briarcliff Road is a two-lane, undivided roadway with a posted speed limit of 35 mph (25 mph when school zone is in effect) in the vicinity of the site. GDOT traffic counts (Station ID's 0893669, 0893672 & 0893665) indicate that the daily traffic volume on Briarcliff Road is 7,860 vehicles per day west of Chrysler Drive, 13,900 vehicles per day south of Woodwardia Road and 14,100 vehicles per day east of Payton Road. GDOT classifies Briarcliff Road as an Urban Minor Arterial roadway.

2.1.2 Oak Grove Road

Oak Grove Road is a two-lane, undivided roadway with a posted speed limit of 35 mph in the vicinity of the site. GDOT traffic counts (Station ID 0893687) indicate that the daily traffic volume on Oak Grove Road is 5,450 vehicles per day north of Crestline Drive. GDOT classifies Oak Grove Road as an Urban Major Collector roadway.

2.1.3 Shallowford Road

Shallowford Road is a four-lane, undivided roadway with a posted speed limit of 45 mph in the vicinity of the site. GDOT traffic counts (Station ID 0893621) indicate that the daily traffic volume on Shallowford Road is 18,400 vehicles per day south of Sherbrooke Drive. GDOT classifies Shallowford Road as an Urban Minor Arterial roadway.

2.1.4 Briarlake Road

Briarlake Road is a two-lane, undivided roadway with a posted speed limit of 35 mph in the vicinity of the site. GDOT traffic counts (Station ID 0893623) indicate that the daily traffic volume on Briarlake Road is 6,590 vehicles per day east of Ector Court. GDOT classifies Briarlake Road as an Urban Minor Arterial roadway.

2.1.5 Chrysler Drive

Chrysler Drive is a two-lane, undivided roadway with a posted speed limit of 25 mph. GDOT traffic counts (Station ID 0898165) indicate that the daily traffic volume on Chrysler Drive is 530 vehicles per day north of Street De Ville. GDOT classifies Chrysler Drive as an Urban Local roadway.

2.1.6 Heritage Drive

Heritage Drive is a two-lane, undivided, residential roadway with a posted speed limit of 25 mph.

2.1.7 Woodwardia Road

Woodwardia Road is a two-lane, undivided, residential roadway with a posted speed limit of 25 mph.

2.1.8 Echo Drive

Echo Drive is a two-lane, undivided, residential roadway with a posted speed limit of 25 mph.

2.1.9 Cadillac Drive

Cadillac Drive is a two-lane, undivided, residential roadway with a posted speed limit of 25 mph.

2.1.10 Fairoaks Road

Fairoaks Road is a two-lane, undivided roadway with a posted speed limit of 25 mph.

2.1.11 Briarlake Trace

Briarlake Trace is a two-lane, undivided, residential roadway with a posted speed limit of 25 mph.

3.0 STUDY METHODOLOGY

In this study, the methodology used for evaluating traffic operations at each of the subject intersections is based on the criteria set forth in the Transportation Research Board's Highway Capacity Manual, 2000 edition (HCM 2000). Synchro software, which utilizes the HCM methodology, was used for the signalized intersection analysis and HCM 2010 was used for un-signalized intersection analysis. The following is a description of the methodology employed for the analysis of unsignalized and signalized intersections.

3.1 Unsignalized Intersections

For unsignalized intersections at which the side street or minor street is controlled by a stop sign, the criteria for evaluating traffic operations are the level-of-service (LOS) for the turning movements at the intersection and the level-of-service for the overall intersection. Level-of-service is based on the average controlled delay incurred at the intersection. Controlled delay for unsignalized intersections includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Several factors affect the controlled delay for unsignalized intersections, such as the availability and distribution of gaps in the conflicting traffic stream, critical gaps, and follow-up time for a vehicle in the queue.

Level-of-service is assigned a letter designation from "A" through "F". Level-of-service "A" indicates excellent operations with little delay to motorists, while level-of-service "F" exists when there are insufficient gaps of acceptable size to allow vehicles on the side street to cross safely, resulting in extremely long total delays and long queues. The level-of-service criteria for two-way stop-controlled and all-way stop-controlled (unsignalized) intersections are given in Table 1.

TABLE 1 – LEVEL-OF-SERVICE CRITERIA FOR UNSIGNALIZED INTERSECTIONS

Level-of-service	Average Delay (sec)
A	≤ 10
B	> 10 and ≤ 15
C	> 15 and ≤ 25
D	> 25 and ≤ 35
E	> 35 and ≤ 50
F	> 50

Source: 2010 Highway Capacity Manual

3.2 Signalized Intersections

For signalized intersections, it is necessary to evaluate both capacity and level-of-service in order to evaluate the overall operation of the intersection. The capacity analysis of an intersection is performed by comparing the volume of traffic using the various lane groups at the intersection to the capacity of those lane groups. This results in a volume/capacity (v/c) ratio for each lane group. A v/c ratio greater than 1.0 indicates that the volume of traffic has exceeded the capacity available, resulting in a temporary excess of demand. Although the capacity of the entire intersection is not defined, a composite v/c ratio for the sum of the critical lane groups within the intersection is computed. This composite v/c ratio is an indication of the overall intersection sufficiency.

Level-of-service for a signalized intersection is defined in terms of average controlled delay per vehicle, which is composed of initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. The level-of-service criteria for signalized intersections, based on average controlled delay, are shown in Table 2. Level-of-service "A" indicates operations with very low controlled delay, while level-of-service "F" describes operations with extremely high average controlled delay. Level-of-service "E" is typically considered to be the limit of acceptable delay, and level-of-service "F" is considered unacceptable by most drivers.

TABLE 2 – LEVEL-OF-SERVICE CRITERIA FOR SIGNALIZED INTERSECTIONS

Level-of-service	Average Control Delay (sec)
A	≤ 10
B	> 10 and ≤ 20
C	> 20 and ≤ 35
D	> 35 and ≤ 55
E	> 55 and ≤ 80
F	> 80

Source: 2000 Highway Capacity Manual

4.0 EXISTING TRAFFIC ANALYSIS

4.1 Existing Traffic Volumes

Existing traffic counts were obtained at the following study intersections:

1. Briarcliff Road at Chrysler Drive
2. Briarcliff Road at Heritage Drive
3. Briarcliff Road at Oak Grove Road
4. Briarcliff Road at Lakeside HS West Driveway
5. Briarcliff Road at Lakeside HS Middle Driveway
6. Briarcliff Road at Woodwardia Road / Lakeside HS East Driveway
7. Briarcliff Road at Echo Drive
8. Briarcliff Road at Briarlake Road
9. Briarcliff Road at Shallowford Road
10. Oak Grove Road at Cadillac Drive
11. Oak Grove Road at Fairoaks Road
12. Briarlake Road at Briarlake Trace

Turning movement counts were collected on Tuesday, September 25, 2018 at six intersections and on Wednesday, September 26, 2018 at remaining six intersections. All turning movement counts were recorded during the AM peak hours between 7:00am to 9:00am, School Dismissal peak hour between 3:00pm to 4:00pm and PM peak hour between 4:00pm to 6:00pm. The four consecutive 15-minute interval volumes that summed to produce the highest volume at the intersections were then determined. These volumes make up the peak hour traffic volumes for the intersections counted and are shown in Figure 2.

4.2 Existing Traffic Operations

Existing traffic operations were analyzed at the study intersections in accordance with the HCM methodology. An Officer is controlling the traffic operations at the intersection of Briarcliff Road at Woodwardia Road/Lakeside High School's Eastern Driveway in the AM and School Dismissal Peak. In the PM peak hour this intersection is assumed to be stop controlled on side streets and with Briarcliff Road having a free flow. The results of the analysis is shown in Table 3. The existing traffic control and lane geometry for the intersections are shown in Figure 3.

TABLE 3 – EXISTING INTERSECTION OPERATIONS					
Intersection		Traffic Control	LOS (Delay)		
			AM PEAK	Dismissal PEAK	PM PEAK
1	**Briarcliff Rd @ Chrysler Dr** -Eastbound Approach -Westbound Approach -Northbound Approach -Southbound Approach	Signalized	**C (31.2)** C (28.8) D (52.9) B (13.2) C (23.4)	**B (16.3)** D (47.0) E (58.7) A (4.7) A (3.3)	**B (14.7)** D (51.8) E (58.9) A (4.0) A (2.6)
2	**Briarcliff Rd @ Heritage Dr** -Eastbound Approach -Northbound Left	Stop Controlled on EB Approach	D (31.7) A (9.0)	C (21.6) A (8.2)	D (28.2) A (8.5)
3	**Briarcliff Rd @ Oak Grove Rd** -Westbound Approach -Northbound Approach -Southbound Approach	Signalized	**C (31.5)** D (48.6) C (28.3) B (18.9)	**C (20.3)** D (52.7) B (17.7) A (7.7)	**C (24.7)** D (51.9) C (23.5) B (11.1)
4	**Briarcliff Rd @ Lakeside HS West Drwy** -Westbound Approach -Southbound Left	Stop Controlled on WB Approach	D (29.6) B (11.4)	D (25.2) A (9.0)	C (19.1) A (9.0)
5	**Briarcliff Rd @ Lakeside HS Middle Drwy** -Westbound Approach	Stop Controlled on WB Approach	D (28.6)	D (25.2)	C (18.2)
6	**Briarcliff Rd @ Woodwardia Rd/Lakeside HS East Drwy** -Eastbound Approach -Westbound Approach -Northbound Left -Southbound Left	Police Officer Controlled (in AM & School Dismissal peak only)	**F 116.5)** D (35.9) D (38.7) A (8.2) F (210.7)	**C (24.9)** C (26.1) C (31.8) A (16.1) C (31.2)	E (38.2) D (28.2) A (8.7) A (8.8)
7	**Briarcliff Rd @ Echo Dr** -Eastbound Approach -Northbound Left	Stop Controlled on EB Approach	E (39.0) B (10.4)	D (27.3) A (8.8)	D (25.8) A (8.8)
8	**Briarcliff Rd @ Briarlake Rd** -Westbound Approach -Northbound Approach -Southbound Approach	Signalized	**F (93.5)** F (143.3) F (323.5) F (357.4)	**E (60.1)** F (109.6) E (58.4) D (42.8)	**D (37.8)** F (90.2) C (33.9) C (26.2)
9	**Briarcliff Rd @ Shallowford Rd** -Eastbound Approach -Northbound Approach -Southbound Approach	Signalized	**F (264.7)** E (75.9) B (17.1) C (20.5)	**D (44.8)** D (44.3) D (40.9) D (51.4)	**E (63.6)** D (53.3) E (56.0) F (105.7)
10	**Oak Grove Rd @ Cadillac Dr** -Westbound Approach -Southbound Left	Stop Controlled on EB and WB Approaches	B (12.8) A (8.0)	B (11.9) A (7.8)	B (10.8) A (7.9)
11	**Oak Grove Rd @ Fairoaks Rd** -Eastbound Approach -Westbound Approach -Northbound Approach -Southbound Approach	Signalized	**C (26.3)** C (24.1) D (44.8) B (19.7) C (12.1)	**B (14.8)** F (82.7) D (53.5) A (2.9) A (2.6)	**B (18.0)** D (53.8) E (67.2) A (5.1) A (3.8)
12	**Briarlake Rd @ Briarlake Trace** -Westbound Left -Northbound Approach	Stop Controlled on NB Approach	A (7.9) C (18.7)	A (8.8) C (17.3)	A (9.1) C (17.9)

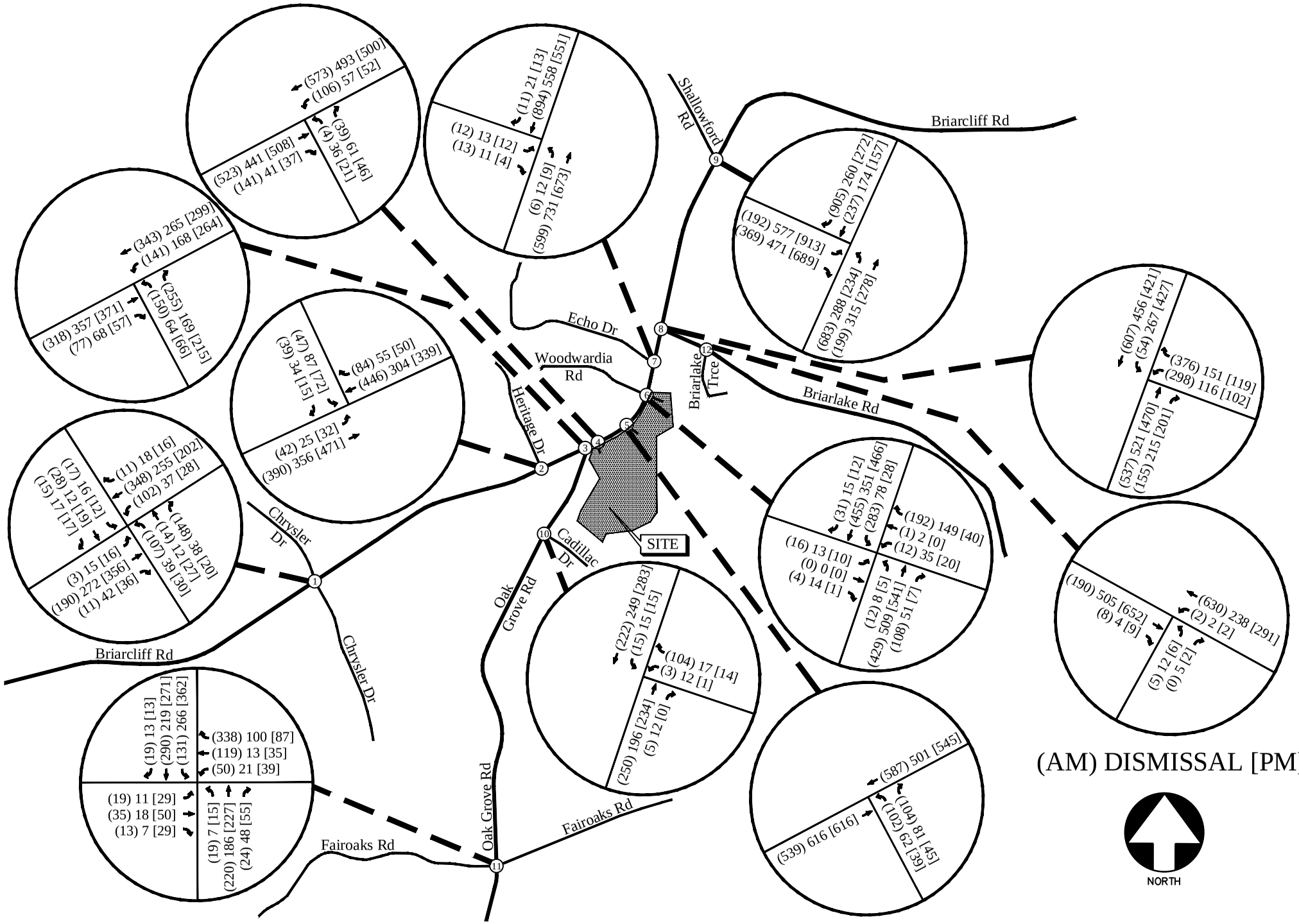
The results of existing traffic operations analysis indicates that all the study intersections are operating at level of service “D” or better during the AM, School Dismissal and PM peak hours except the following three intersections which have a level-of-service “E” or “F” in one or more of the study peak hours.

1. Briarcliff Road at Woodwardia Road / Lakeside HS East Driveway
   The intersection of Briarcliff Road at Woodwardia Road / Lakeside HS East Driveway is currently operating at level-of-service “F” in the AM peak hour. The southbound approach of Briarcliff Road is operating at level-of-service “F”. It has only one southbound shared lane for through and left-turn traffic. With a heavy left-turn movement at the school beginning time, southbound through traffic stops behind the left-turn traffic waiting for the Officer’s signal to turn left into the school and vice versa.

2. Briarcliff Road at Briarlake Road
   The intersection of Briarcliff Road at Briarlake Road is operating at level-of-service “F” in the AM peak, and at an “E” in the school dismissal peak. The westbound approach of Briarlake Road operates at level-of-service “F” in the PM peak hour. The westbound approach of Briarlake Road has only one shared left and right-turn lane. Similarly the northbound approach of Briarcliff Road also has only one shared through and right-turn lane.

3. Briarcliff Road at Shallowford Road
   This intersection is currently operating at level-of-service “F” in the AM peak hour and level-of-service “E” in the PM peak hour. The southbound approach of Briarcliff Road has some extra asphalted width which is not marked as a turn-lane and not wide enough to make it a dedicated right-turn lane. The approach has heavy right-turn traffic and requires a clearly marked, wide enough dedicated right-turn lane to meet the high demand.

These areas are addressed in the Recommended System Improvements section.



EXISTING WEEKDAY PEAK-HOUR VOLUMES

FIGURE 2

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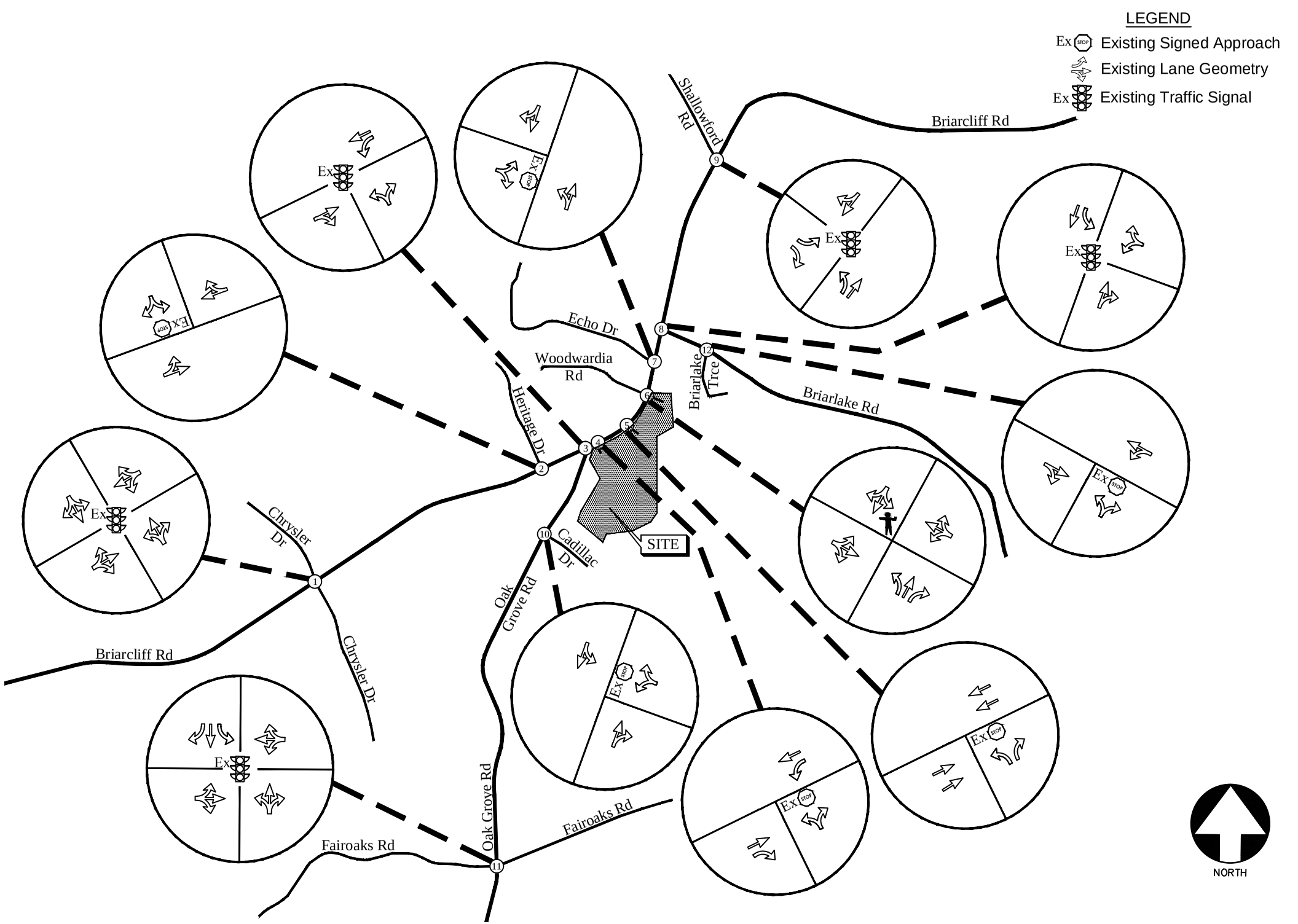

EXISTING TRAFFIC CONTROL AND LANE GEOMETRY

FIGURE 3

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5.0 PROPOSED DEVELOPMENT

Lakeside High School is located in the southeast corner of the intersection of Briarcliff Road at Oak Grove Road in Atlanta, Georgia and has a current enrollment of 2,111 students. The school plans to construct a new building within the school campus to accommodate the 750 students who are currently using portable class-rooms. The proposed addition to the school building will not increase the number of students from its present 2,111 students.

The school will continue to use its existing access driveways at the following three locations on Briarcliff Road:

- Site Driveway 1: Full-access driveway (Western), east of Oak Grove Road
- Site Driveway 2: Exit-only driveway (Middle)
- Site Driveway 3: Full-access driveway (Eastern), aligning across from Woodwardia Road

5.1 Trip Generation

Since the proposed construction does not increase the student enrolment numbers from its present 2111 students, no additional trips will be added. Therefore, existing counts were used for all analysis.

5.2 Trip Distribution

The trip distribution describes how traffic arrives and departs from the site. Since no additional students will be enrolled after construction of the new building and all existing students and their trips are already accounted for in the actual counts collected, no trip distribution needs to be developed for purposes of the traffic impact study. The existing peak hour volumes shown in Figure 2 are used for analyzing the existing and improved conditions.

6.0 FUTURE TRAFFIC ANALYSIS

The future traffic operations are analyzed for the "Build" conditions.

Improvements that are identified as "System Improvements" address deficiencies that are found within the existing road network excluding school driveways, prior to any impacts from the proposed development's added traffic. Note that survey and construction drawings would be needed to verify the feasibility and extent of additional right-of-way required for any recommended improvements.

6.1 Recommendations for System Improvements

A summary of the system improvements, which address deficiencies that are found within the existing road network is provided below. These are recommended for the local municipality to use in planning future transportation projects.

1. Briarcliff Road at Briarlake Road
   It is recommended that a dedicated westbound right-turn lane be constructed which will significantly improve the traffic operations at this intersection.

2. Briarcliff Road at Shallowford Road
   It is recommended that a dedicated right-turn lane be created by putting additional asphalt and striping, which will significantly improve the traffic operations at the intersection.

6.2 Recommendations for Site Improvements

It is recommended that a dedicated 250 feet southbound left-turn lane be constructed on Briarcliff Road which will allow the southbound through traffic to pass while the left-turning traffic stops.

6.3 Future Traffic Operations with 'Recommended System Imp'

The future traffic operations were analyzed using the existing traffic volumes in Figure 2 and assuming that the recommended site and system improvements have been implemented. The results are shown in Table 4 below.

Recommendations on traffic control and lane geometry are shown graphically in Figure 4.

6.4 Accident Data

Existing Accident reports were obtained for the most recent three years (2016-2018) on Briarcliff Road in front of Lakeside High School driveways. The data shows the number and manner of collisions.

TABLE 3 – ACCIDENT DATA			
Briarcliff Road in front of Lakeside High School driveways			
Manner of Collision	**2016**	**2017**	**2018**
Angle	1	0	0
Rear End	0	1	0
Head-on	0	0	0
Sideswipe - Same Direction	0	0	1
Sideswipe - Opposite Direction	0	0	0
Grand Total	**1**	**1**	**1**

The number of accidents during 12-month period does not appear to be higher than what is typically anticipated frequency of accidents at similar locations.

TABLE 4 – FUTURE INTERSECTION OPERATIONS WITH SYSTEM IMPROVEMENTS					
Intersection		Traffic Control	LOS (Delay)		
			AM PEAK	Dismissal PEAK	PM PEAK
1	**Briarcliff Rd @ Chrysler Dr** -Eastbound Approach -Westbound Approach -Northbound Approach -Southbound Approach	Signalized	**C (27.6)** C (28.8) D (52.9) B (13.2) C (14.4)	**B (16.3)** D (47.0) E (58.7) A (4.8) A (3.3)	**B (14.8)** D (51.8) E (58.9) A (4.0) A (2.6)
2	**Briarcliff Rd @ Heritage Dr** -Eastbound Approach -Northbound Left	Stop Controlled on EB Approach	D (31.7) A (9.0)	C (21.2) A (8.2)	D (28.2) A (8.5)
3	**Briarcliff Rd @ Oak Grove Rd** -Westbound Approach -Northbound Approach -Southbound Approach	Signalized	**D (35.4)** D (48.7) D (41.1) B (18.9)	**C (20.3)** D (52.5) B (17.7) A (7.7)	**C (24.9)** D (53.7) C (23.2) B (11.0)
4	**Briarcliff Rd @ Lakeside HS West Drwy** -Westbound Approach -Southbound Left	Stop Controlled on WB Approach	D (29.6) B (11.4)	D (25.2) A (9.0)	C (19.1) A (9.0)
5	**Briarcliff Rd @ Lakeside HS Middle Drwy** -Westbound Approach	Stop Controlled on WB Approach	D (28.6)	D (25.2)	C (18.2)
6	**Briarcliff Rd @ Woodwardia Rd/Lakeside HS East Drwy** -Eastbound Approach -Westbound Approach -Northbound Left -Southbound Left	Police Officer Controlled (in AM & School Dismissal peak only)	**C 32.0)** C (31.5) C (34.1) C (34.8) C (29.5)	**C (26.1)** C (23.5) C (29.1) c (29.6) C (20.1)	E (37.6) D (28.0) A (8.7) A (8.8)
7	**Briarcliff Rd @ Echo Dr** -Eastbound Approach -Northbound Left	Stop Controlled on EB Approach	E (39.0) B (10.4)	D (27.3) A (8.8)	D (25.8) A (8.8)
8	**Briarcliff Rd @ Briarlake Rd** -Westbound Approach -Northbound Approach -Southbound Approach	Signalized	**C (34.0)** E (57.6) C (23.0) B (13.8)	**C (33.9)** E (70.0) C (30.9) C (23.2)	**C (30.2)** D (53.8) D (36.4) B (17.2)
9	**Briarcliff Rd @ Shallowford Rd** -Eastbound Approach -Northbound Approach -Southbound Approach	Signalized	**C (29.3)** E (75.9) B (17.1) C (20.5)	**C (32.6)** D (47.1) B (18.9) C (13.9)	**D (43.4)** D (53.3) E (56.0) F (105.7)
10	**Oak Grove Rd @ Cadillac Dr** -Westbound Approach -Southbound Left	Stop Controlled on EB and WB Approaches	B (12.8) A (8.0)	B (11.9) A (7.8)	B (10.8) A (7.9)
11	**Oak Grove Rd @ Fairoaks Rd** -Eastbound Approach -Westbound Approach -Northbound Approach -Southbound Approach	Signalized	**C (26.3)** C (24.0) D (44.3) B (19.8) C (12.5)	**B (14.8)** F (82.7) D (53.5) A (2.9) A (2.6)	**B (17.9)** D (53.8) E (67.2) A (5.1) A (3.7)
12	**Briarlake Rd @ Briarlake Trace** -Westbound Left -Northbound Approach	Stop Controlled on NB Approach	A (7.9) C (18.7)	A (8.8) C (17.3)	A (9.1) C (17.9)

6.5 Site Access Configuration

The following access configuration was utilized when modeling the site driveway intersections with recommended system improvements assumed implemented:

- Full-access driveway (Western) on Briarcliff Road, east of Oak Grove Road
    - This driveway consists of one entering and one exiting lane. The westbound (school driveway) approach has a shared left / right-turn lane for exiting traffic.
    - The intersection is un-signalized with a STOP sign on the westbound approach.
    - Entering left-turn movements are made from the existing southbound left-turn lane.
    - Entering right-turn movements are made from the northbound through lane.

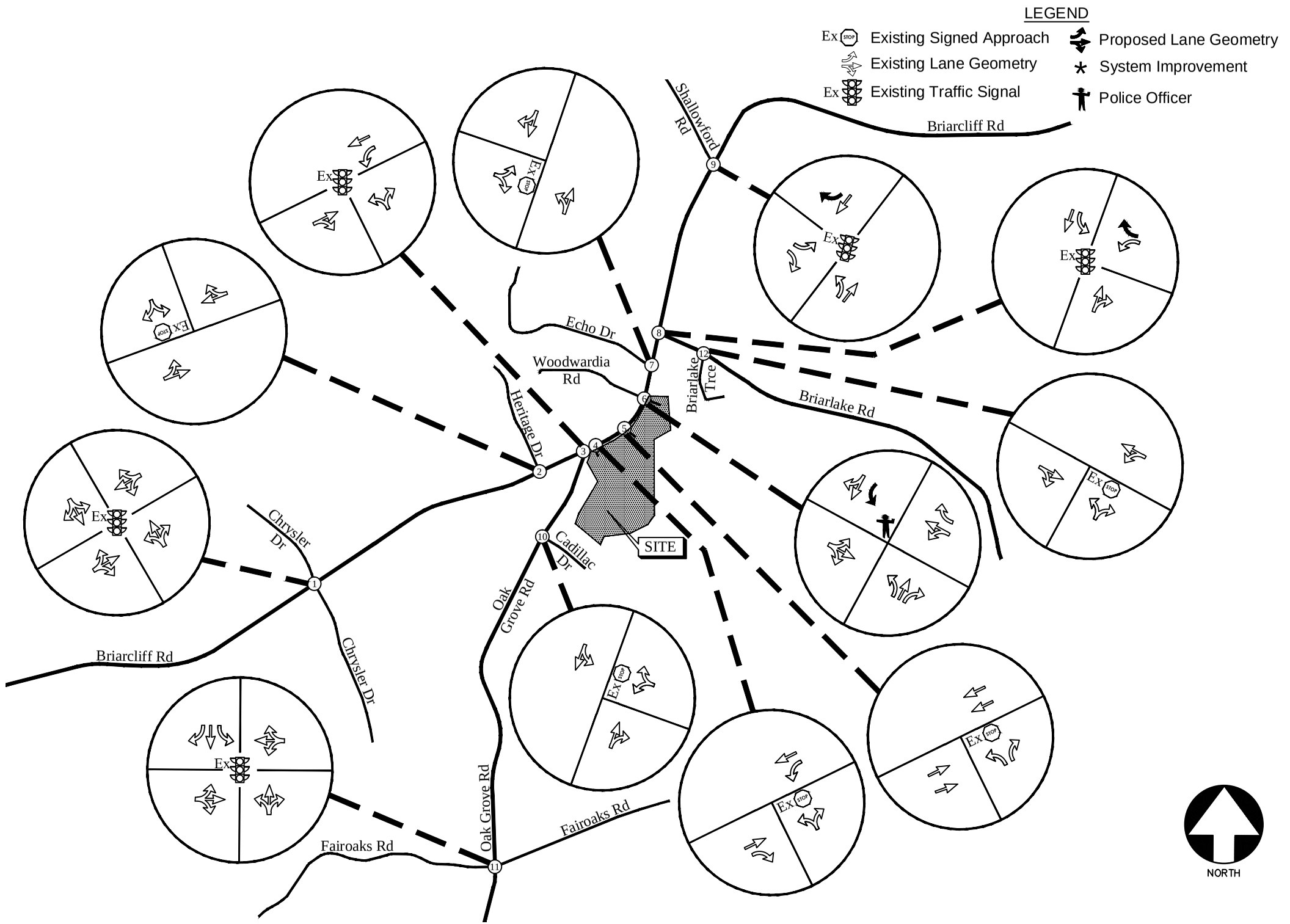
- Site Driveway 2: Exit-only driveway (Middle) on Briarcliff Road
    - This driveway consists of two exiting lanes, a left-turn lane and a right-turn lane for exiting traffic.
    - The intersection is un-signalized with a STOP sign on the westbound approach.
    - All entering traffic is prohibited.

- Site Driveway 3: Full-access driveway (Eastern) on Briarcliff Road, aligning across from Woodwardia Road
    - This driveway consists of one entering and one exiting lane. The westbound (school driveway) approach has a shared left / through / right-turn lane for exiting traffic.
    - The intersection is Officer controlled in AM and School Dismissal peak hours and un-signalized with STOP signs on the eastbound (Woodwardia Road) and westbound (school driveway) approaches during rest of the day.
    - Entering left-turn movements occur from recommended dedicated southbound left-turn lane.
    - Entering right-turn movements are made from the northbound right-turn lane.

6.6 Recommendations for Site Improvements

Briarcliff Road @ Woodwardia Road / Lakeside HS East Driveway

- It is recommended that a dedicated 250 feet southbound left-turn lane be constructed on Briarcliff Road which will allow the southbound through traffic to pass while the left-turning traffic stops.
- The westbound (school driveway) approach currently has only one exiting shared left/through/right-turn lane. If it recommended that possibility of constructing a dedicated right-turn lane should be explored. Installation of a dedicated right-turn lane will further improve operations at the intersections. This site improvement has not been used in our analysis.



FUTURE TRAFFIC CONTROL AND LANE GEOMETRY FIGURE4

A&R Engineering Inc.

7.0 CONCLUSIONS AND RECOMMENDATIONS

The purpose of this study is to determine the traffic impact on the surrounding area roadways that has resulted from the increased enrolment in Lakeside High School located in the northeast corner of the intersection of Briarcliff Road at Oak Grove Road in Atlanta, Georgia. The School proposes to construct 38-classrooms to move 750 students from existing portable classrooms to the new building. The traffic analysis evaluates the current operations and recommends any improvements to the study intersections. The current enrollment of the school is 2,111 students which includes 750 students added above the existing capacity of the building and accommodated in portable classrooms.

The school will continue to use existing access at the following locations on Briarcliff Road:

- Site Driveway 1: Full-access driveway (Western), east of Oak Grove Road
- Site Driveway 2: Exit-only driveway (Middle)
- Site Driveway 3: Full-access driveway (Eastern), aligning across from Woodwardia Road

There is one cross-walk for pedestrian traffic at the intersection of Briarcliff Road at Oak Grove Road near the western driveway.

Existing and future operations after recommended System Improvements have been implemented were analyzed at the intersections of:

1. Briarcliff Road at Chrysler Drive
2. Briarcliff Road at Heritage Drive
3. Briarcliff Road at Oak Grove Road
4. Briarcliff Road at Lakeside HS West Driveway
5. Briarcliff Road at Lakeside HS Middle Driveway
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8. Briarcliff Road at Briarlake Road
9. Briarcliff Road at Shallowford Road
10. Oak Grove Road at Cadillac Drive
11. Oak Grove Road at Fair Oaks Road
12. Briarlake Road at Briarlake Trace

7.1 System Recommendations and Improvements

A summary of the system improvements, which address deficiencies that are found within the existing road network is provided below. These are recommended for the local municipality to use in planning future transportation projects.

1. Briarcliff Road at Briarlake Road
   It is recommended that a dedicated westbound right-turn lane be constructed which will significantly improve the traffic operations at this intersection.

2. Briarcliff Road at Shallowford Road
   It is recommended that a dedicated right-turn lane be created by putting additional asphalt and striping, which will significantly improve the traffic operations at the intersection.

7.2 Recommended Site Access Configuration

The following access configuration was utilized when modeling the site driveway intersections with recommended system improvements assumed implemented:

- Full-access driveway (Western) on Briarcliff Road, east of Oak Grove Road
  - This driveway consists of one entering and one exiting lane. The westbound (school driveway) approach has a shared left / right-turn lane for exiting traffic.
  - The intersection is un-signalized with a STOP sign on the westbound approach.
  - Entering left-turn movements are made from the existing southbound left-turn lane.
  - Entering right-turn movements are made from the northbound through lane.

- Site Driveway 2: Exit-only driveway (Middle) on Briarcliff Road
  - This driveway consists of two exiting lanes, a left-turn lane and a right-turn lane for exiting traffic.
  - The intersection is un-signalized with a STOP sign on the westbound approach.
  - All entering traffic is prohibited.

- Site Driveway 3: Full-access driveway (Eastern) on Briarcliff Road, aligning across from Woodwardia Road
  - This driveway consists of one entering and one exiting lane. The westbound (school driveway) approach has a shared left / through / right-turn lane for exiting traffic. It recommended that the possibility of constructing a dedicated right-turn lane should be explored. Installation of a dedicated right-turn lane will further improve operations at the intersections. This site improvement has not been used in our analysis.
  - The intersection is Officer controlled in AM and School Dismissal peak hours and un-signalized with STOP signs on the eastbound (Woodwardia Road) and westbound (school driveway) approaches during rest of the day.

- Entering left-turn movements occur from recommended dedicated southbound left-turn lane. It is recommended that a dedicated 250 feet southbound left-turn lane be constructed on Briarcliff Road which will allow the southbound through traffic to pass while the left-turning traffic stops
- Entering right-turn movements are made from the northbound right-turn lane.

Appendix

EXISTING INTERSECTION TRAFFIC COUNTS

A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

TMC Data
Briarcliff Road at Chrysler Drive
07-09am - 03-06pm

File Name : 20180206
Site Code : 20180206
Start Date : 9/25/2018
Page No : 1

Groups Printed- Cars, Buses & Trucks

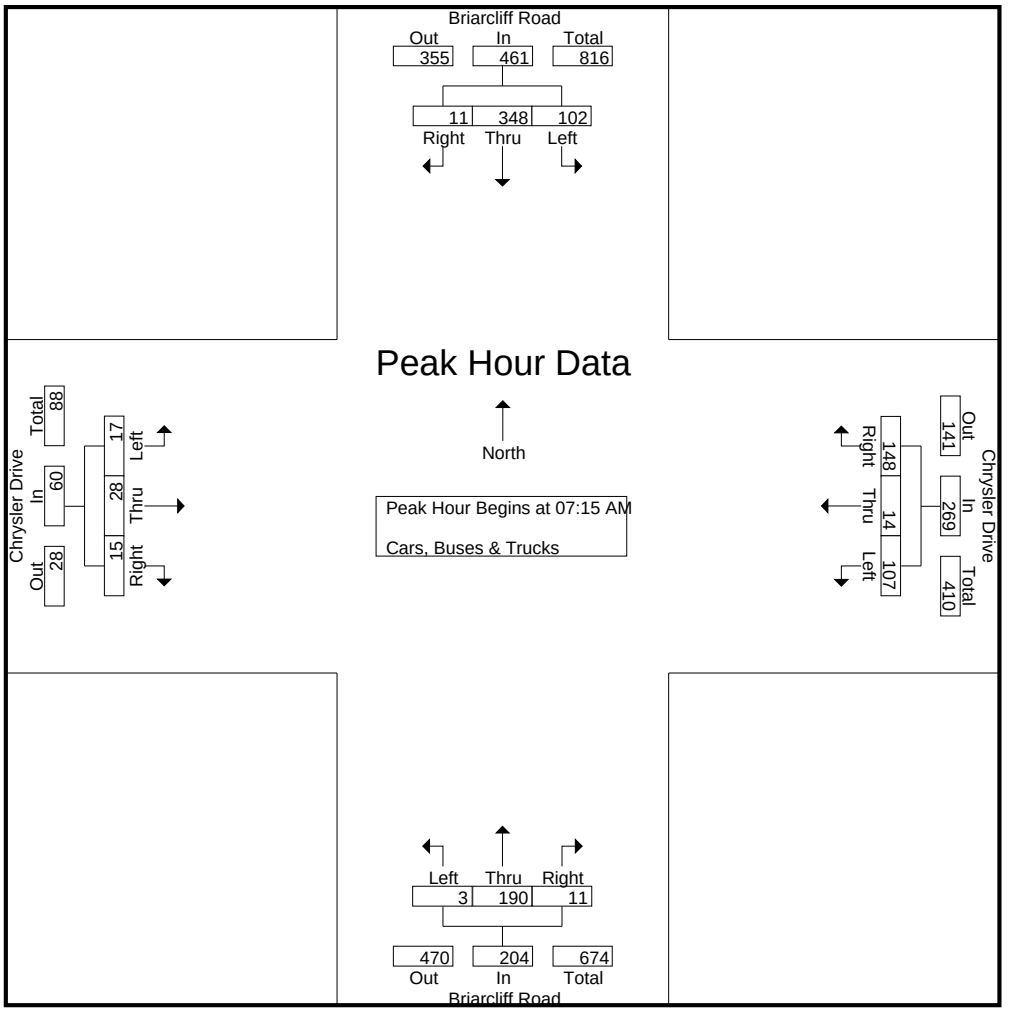
	Briarcliff Road Northbound				Briarcliff Road Southbound				Chrysler Drive Eastbound				Chrysler Drive Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	37	2	39	6	72	4	82	2	3	5	10	10	1	6	17	148
07:15 AM	1	40	1	42	17	108	3	128	4	5	3	12	19	1	14	34	216
07:30 AM	1	61	2	64	25	91	1	117	3	12	4	19	43	2	32	77	277
07:45 AM	1	63	2	66	27	75	2	104	7	7	7	21	23	7	64	94	285
Total	3	201	7	211	75	346	10	431	16	27	19	62	95	11	116	222	926
08:00 AM	0	26	6	32	33	74	5	112	3	4	1	8	22	4	38	64	216
08:15 AM	0	25	3	28	20	68	3	91	2	4	2	8	8	2	10	20	147
08:30 AM	4	30	3	37	4	58	2	64	3	2	4	9	6	1	6	13	123
08:45 AM	3	34	2	39	6	57	3	66	2	8	4	14	6	5	2	13	132
Total	7	115	14	136	63	257	13	333	10	18	11	39	42	12	56	110	618
*** BREAK ***																	
03:00 PM	4	74	9	87	9	59	2	70	3	3	0	6	6	3	12	21	184
03:15 PM	6	56	7	69	14	68	8	90	3	5	5	13	8	6	14	28	200
03:30 PM	1	64	14	79	7	63	4	74	8	2	7	17	20	2	6	28	198
03:45 PM	4	78	12	94	7	65	4	76	2	2	5	9	5	1	6	12	191
Total	15	272	42	329	37	255	18	310	16	12	17	45	39	12	38	89	773
04:00 PM	4	78	8	90	5	61	2	68	3	2	6	11	4	5	7	16	185
04:15 PM	3	87	7	97	8	34	9	51	2	2	5	9	5	4	3	12	169
04:30 PM	7	68	9	84	9	50	9	68	1	5	4	10	6	3	21	30	192
04:45 PM	5	86	13	104	5	56	4	65	1	4	4	9	6	4	10	20	198
Total	19	319	37	375	27	201	24	252	7	13	19	39	21	16	41	78	744
05:00 PM	5	89	13	107	6	52	3	61	3	2	2	7	9	5	0	14	189
05:15 PM	4	79	8	91	11	55	5	71	1	9	7	17	5	8	5	18	197
05:30 PM	3	84	7	94	4	49	3	56	2	4	4	10	6	4	11	21	181
05:45 PM	4	104	8	116	7	46	5	58	6	4	4	14	10	10	4	24	212
Total	16	356	36	408	28	202	16	246	12	19	17	48	30	27	20	77	779
Grand Total	60	1263	136	1459	230	1261	81	1572	61	89	83	233	227	78	271	576	3840
Apprch %	4.1	86.6	9.3		14.6	80.2	5.2		26.2	38.2	35.6		39.4	13.5	47		
Total %	1.6	32.9	3.5	38	6	32.8	2.1	40.9	1.6	2.3	2.2	6.1	5.9	2	7.1	15	

A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

File Name : 20180206
Site Code : 20180206
Start Date : 9/25/2018
Page No : 2

	Briarcliff Road Northbound				Briarcliff Road Southbound				Chrysler Drive Eastbound				Chrysler Drive Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 02:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**1**	40	1	42	17	**108**	3	**128**	4	5	3	12	19	1	14	34	216
07:30 AM	1	61	2	64	25	91	1	117	3	**12**	4	19	**43**	2	32	77	277
07:45 AM	1	**63**	2	**66**	27	75	2	104	**7**	7	**7**	**21**	23	**7**	**64**	**94**	**285**
08:00 AM	0	26	**6**	32	**33**	74	**5**	112	3	4	1	8	22	4	38	64	216
Total Volume	3	190	11	204	102	348	11	461	17	28	15	60	107	14	148	269	994
% App. Total	1.5	93.1	5.4		22.1	75.5	2.4		28.3	46.7	25		39.8	5.2	55		
PHF	.750	.754	.458	.773	.773	.806	.550	.900	.607	.583	.536	.714	.622	.500	.578	.715	.872

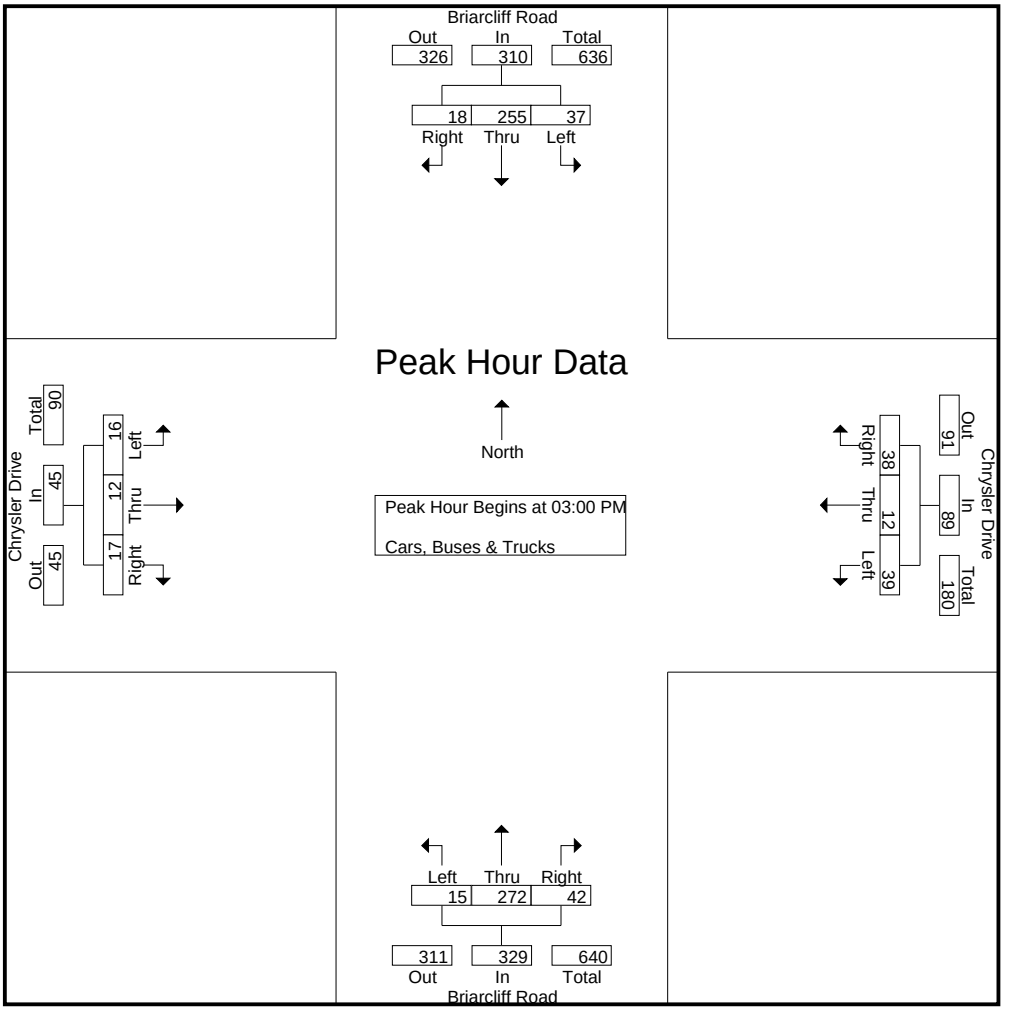


A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

File Name : 20180206
Site Code : 20180206
Start Date : 9/25/2018
Page No : 3

	Briarcliff Road Northbound				Briarcliff Road Southbound				Chrysler Drive Eastbound				Chrysler Drive Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	4	74	9	87	9	59	2	70	3	3	0	6	6	3	12	21	184
03:15 PM	**6**	56	7	69	**14**	**68**	**8**	**90**	3	**5**	5	13	8	**6**	**14**	**28**	**200**
03:30 PM	1	64	**14**	79	7	63	4	74	**8**	2	**7**	**17**	**20**	2	6	28	198
03:45 PM	4	**78**	12	**94**	7	65	4	76	2	2	5	9	5	1	6	12	191
Total Volume	15	272	42	329	37	255	18	310	16	12	17	45	39	12	38	89	773
% App. Total	4.6	82.7	12.8		11.9	82.3	5.8		35.6	26.7	37.8		43.8	13.5	42.7		
PHF	.625	.872	.750	.875	.661	.938	.563	.861	.500	.600	.607	.662	.488	.500	.679	.795	.966

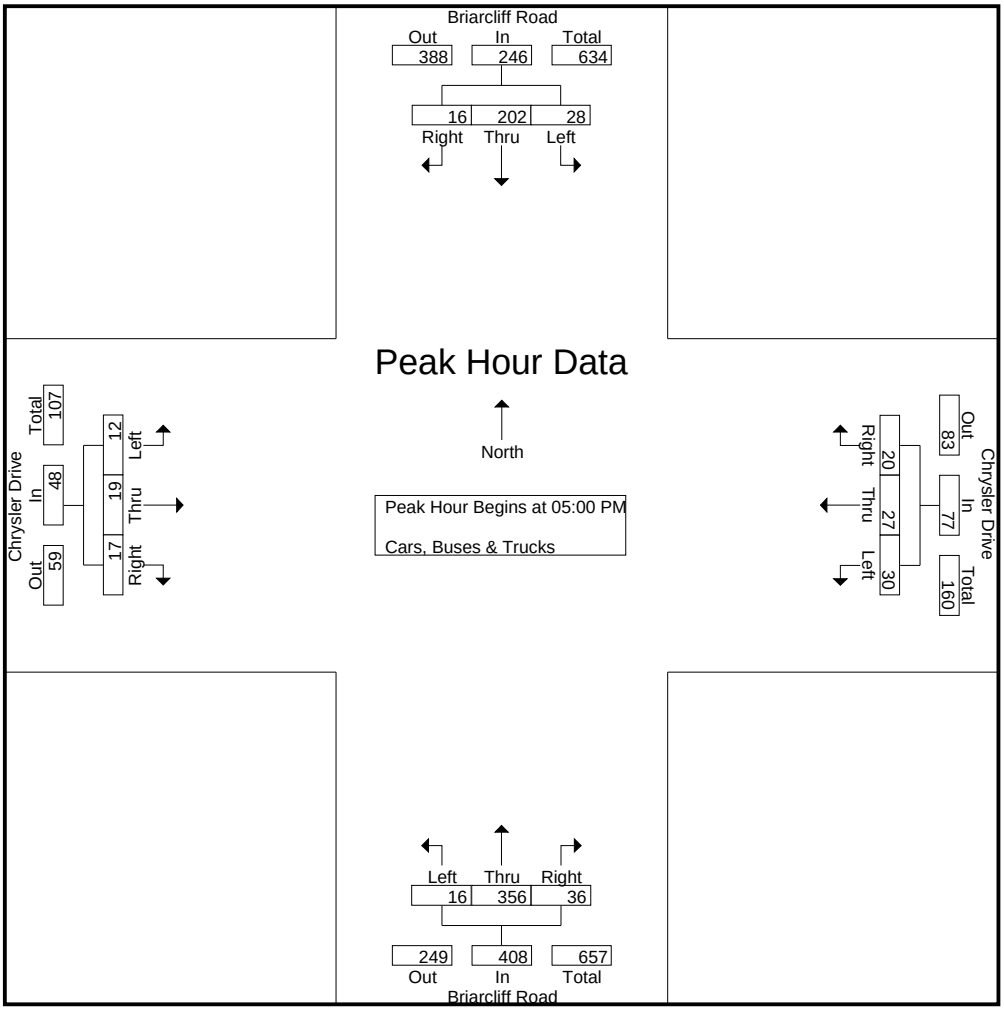


A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

File Name : 20180206
Site Code : 20180206
Start Date : 9/25/2018
Page No : 4

	Briarcliff Road Northbound				Briarcliff Road Southbound				Chrysler Drive Eastbound				Chrysler Drive Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**5**	89	**13**	107	6	52	3	61	3	2	2	7	9	5	0	14	189
05:15 PM	4	79	8	91	**11**	**55**	**5**	**71**	1	**9**	**7**	**17**	5	8	5	18	197
05:30 PM	3	84	7	94	4	49	3	56	2	4	4	10	6	4	**11**	21	181
05:45 PM	4	**104**	8	**116**	7	46	5	58	**6**	4	4	14	**10**	**10**	4	**24**	**212**
Total Volume	16	356	36	408	28	202	16	246	12	19	17	48	30	27	20	77	779
% App. Total	3.9	87.3	8.8		11.4	82.1	6.5		25	39.6	35.4		39	35.1	26		
PHF	.800	.856	.692	.879	.636	.918	.800	.866	.500	.528	.607	.706	.750	.675	.455	.802	.919



A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

TMC Data
Briarcliff Road at Heritage Drive
07-09am - 03-06pm

File Name : 20180207
Site Code : 20180207
Start Date : 9/26/2018
Page No : 1

Groups Printed- Cars, Buses & Trucks

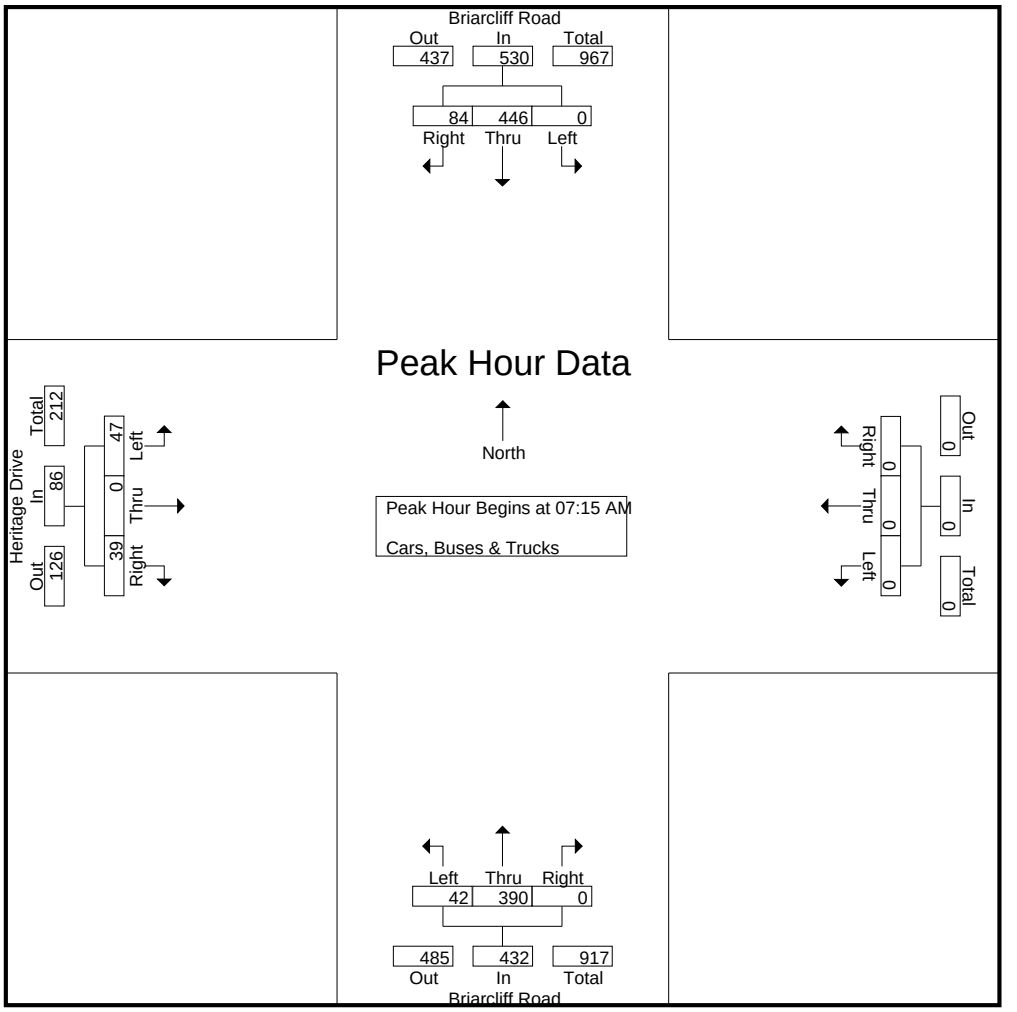
	Briarcliff Road Northbound				Briarcliff Road Southbound				Heritage Drive Eastbound				Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	4	60	0	64	0	81	10	91	11	0	6	17	0	0	0	0	172
07:15 AM	13	60	0	73	0	95	18	113	15	0	12	27	0	0	0	0	213
07:30 AM	7	130	0	137	0	131	19	150	7	0	7	14	0	0	0	0	301
07:45 AM	11	118	0	129	0	124	20	144	7	0	10	17	0	0	0	0	290
Total	35	368	0	403	0	431	67	498	40	0	35	75	0	0	0	0	976
08:00 AM	11	82	0	93	0	96	27	123	18	0	10	28	0	0	0	0	244
08:15 AM	3	48	0	51	0	56	2	58	19	0	2	21	0	0	0	0	130
08:30 AM	0	42	0	42	0	61	5	66	9	0	0	9	0	0	0	0	117
08:45 AM	0	37	0	37	0	78	6	84	4	0	4	8	0	0	0	0	129
Total	14	209	0	223	0	291	40	331	50	0	16	66	0	0	0	0	620
*** BREAK ***																	
03:00 PM	8	107	0	115	0	71	22	93	28	0	10	38	0	0	0	0	246
03:15 PM	6	77	0	83	0	70	6	76	19	0	14	33	0	0	0	0	192
03:30 PM	4	82	0	86	0	81	12	93	15	0	9	24	0	0	0	0	203
03:45 PM	7	90	0	97	0	82	15	97	25	0	1	26	0	0	0	0	220
Total	25	356	0	381	0	304	55	359	87	0	34	121	0	0	0	0	861
04:00 PM	2	75	0	77	0	63	15	78	16	0	7	23	0	0	0	0	178
04:15 PM	6	116	0	122	0	88	13	101	21	0	5	26	0	0	0	0	249
04:30 PM	5	91	0	96	0	76	10	86	16	0	8	24	0	0	0	0	206
04:45 PM	10	83	0	93	0	68	13	81	18	0	1	19	0	0	0	0	193
Total	23	365	0	388	0	295	51	346	71	0	21	92	0	0	0	0	826
05:00 PM	9	108	0	117	0	60	11	71	16	0	3	19	0	0	0	0	207
05:15 PM	9	109	0	118	0	85	20	105	20	0	4	24	0	0	0	0	247
05:30 PM	6	113	0	119	1	85	8	94	16	0	1	17	0	0	0	0	230
05:45 PM	8	141	0	149	0	109	11	120	20	0	7	27	0	0	0	0	296
Total	32	471	0	503	1	339	50	390	72	0	15	87	0	0	0	0	980
Grand Total	129	1769	0	1898	1	1660	263	1924	320	0	121	441	0	0	0	0	4263
Apprch %	6.8	93.2	0		0.1	86.3	13.7		72.6	0	27.4		0	0	0		
Total %	3	41.5	0	44.5	0	38.9	6.2	45.1	7.5	0	2.8	10.3	0	0	0	0	

A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

File Name : 20180207
Site Code : 20180207
Start Date : 9/26/2018
Page No : 2

	Briarcliff Road Northbound				Briarcliff Road Southbound				Heritage Drive Eastbound				Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 02:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	**13**	60	0	73	0	95	18	113	15	0	**12**	27	0	0	0	0	213
07:30 AM	7	**130**	0	**137**	0	**131**	19	**150**	7	0	7	14	0	0	0	0	**301**
07:45 AM	11	118	0	129	0	124	20	144	7	0	10	17	0	0	0	0	290
08:00 AM	11	82	0	93	0	96	**27**	123	**18**	0	10	**28**	0	0	0	0	244
Total Volume	42	390	0	432	0	446	84	530	47	0	39	86	0	0	0	0	1048
% App. Total	9.7	90.3	0		0	84.2	15.8		54.7	0	45.3		0	0	0		
PHF	.808	.750	.000	.788	.000	.851	.778	.883	.653	.000	.813	.768	.000	.000	.000	.000	.870

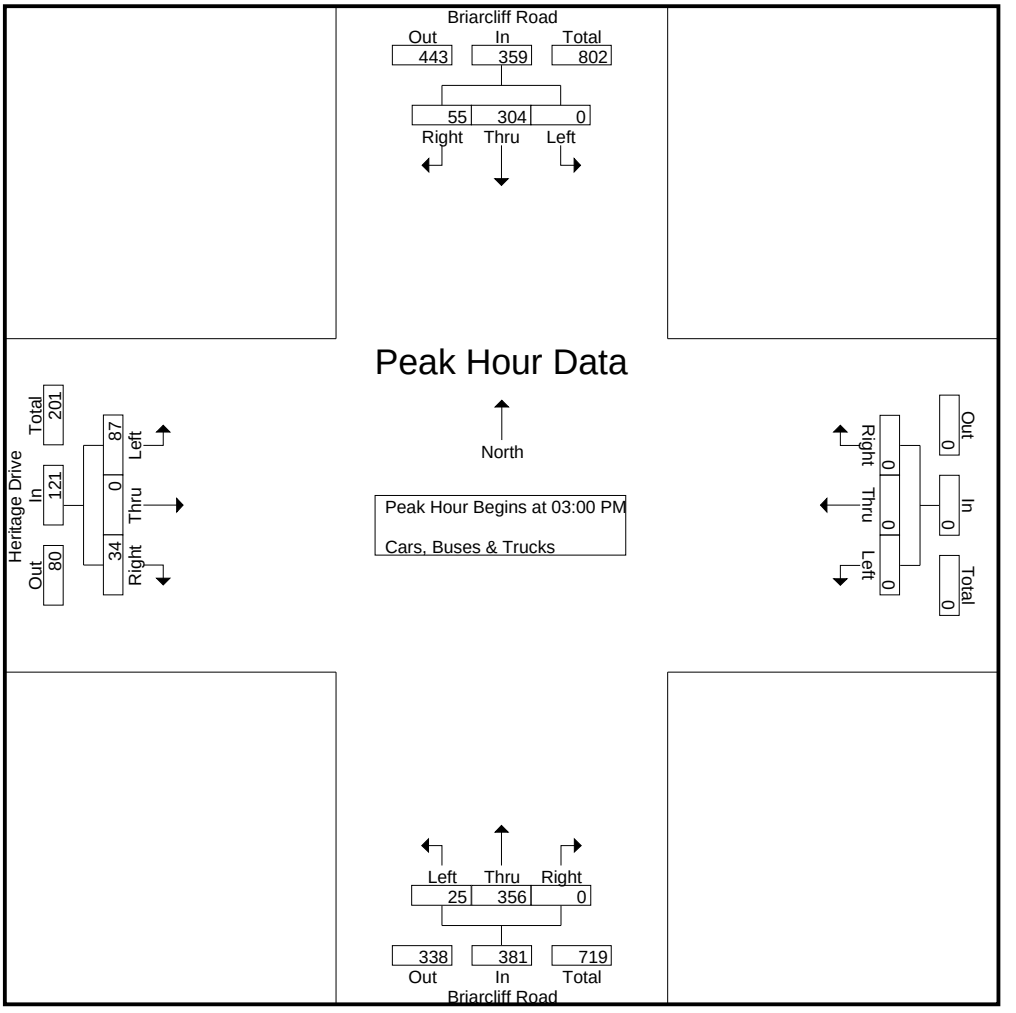


A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

File Name : 20180207
Site Code : 20180207
Start Date : 9/26/2018
Page No : 3

	Briarcliff Road Northbound				Briarcliff Road Southbound				Heritage Drive Eastbound				Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	**8**	**107**	0	**115**	0	71	**22**	93	**28**	0	10	**38**	0	0	0	0	**246**
03:15 PM	6	77	0	83	0	70	6	76	19	0	**14**	33	0	0	0	0	192
03:30 PM	4	82	0	86	0	81	12	93	15	0	9	24	0	0	0	0	203
03:45 PM	7	90	0	97	0	**82**	15	**97**	25	0	1	26	0	0	0	0	220
Total Volume	25	356	0	381	0	304	55	359	87	0	34	121	0	0	0	0	861
% App. Total	6.6	93.4	0		0	84.7	15.3		71.9	0	28.1		0	0	0		
PHF	.781	.832	.000	.828	.000	.927	.625	.925	.777	.000	.607	.796	.000	.000	.000	.000	.875

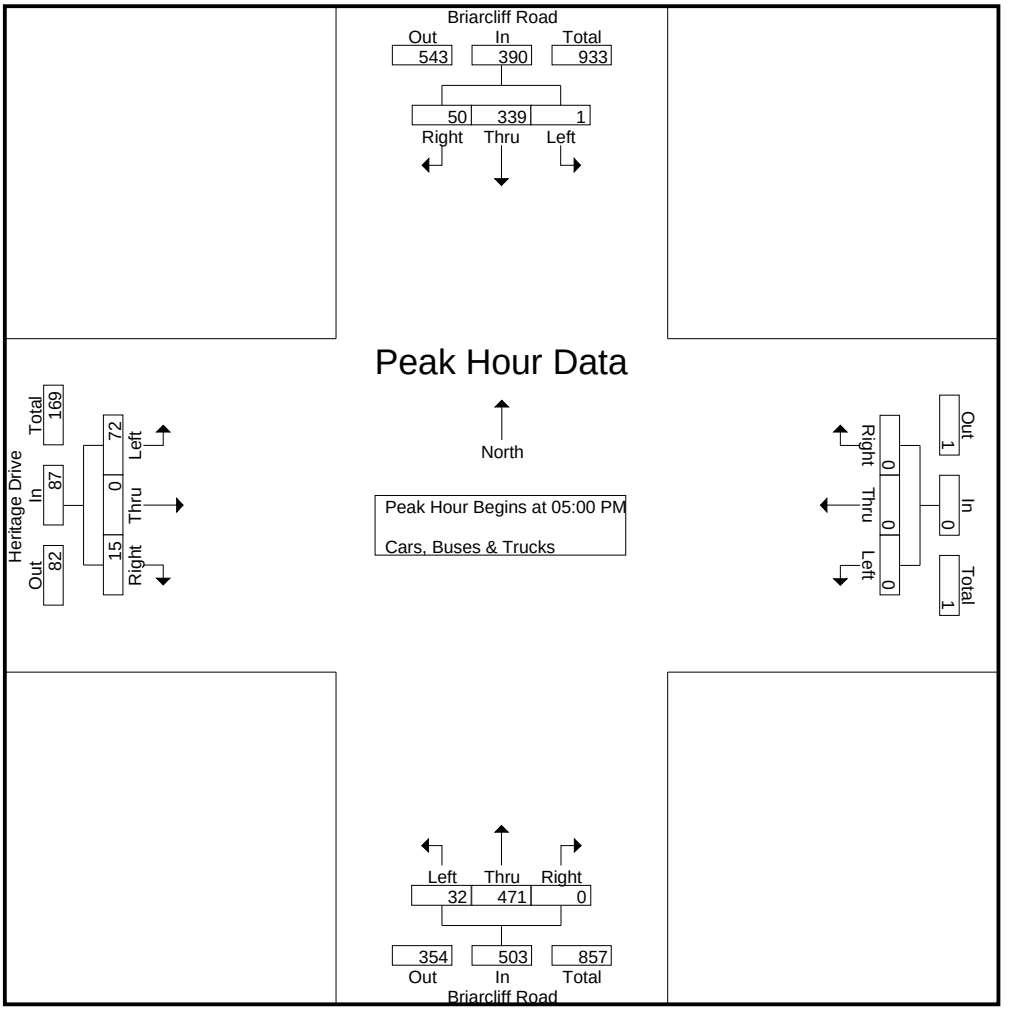


A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

File Name : 20180207
Site Code : 20180207
Start Date : 9/26/2018
Page No : 4

	Briarcliff Road Northbound				Briarcliff Road Southbound				Heritage Drive Eastbound				Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	**9**	108	0	117	0	60	11	71	16	0	3	19	0	0	0	0	207
05:15 PM	9	109	0	118	0	85	**20**	105	**20**	0	4	24	0	0	0	0	247
05:30 PM	6	113	0	119	**1**	85	8	94	16	0	1	17	0	0	0	0	230
05:45 PM	8	**141**	0	**149**	0	**109**	11	**120**	20	0	**7**	**27**	0	0	0	0	**296**
Total Volume	32	471	0	503	1	339	50	390	72	0	15	87	0	0	0	0	980
% App. Total	6.4	93.6	0		0.3	86.9	12.8		82.8	0	17.2		0	0	0		
PHF	.889	.835	.000	.844	.250	.778	.625	.813	.900	.000	.536	.806	.000	.000	.000	.000	.828



A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

TMC Data
Briarcliff Road at Oak Grove Road
07-09am - 03-06pm

File Name : 20180208
Site Code : 20180208
Start Date : 9/26/2018
Page No : 1

Groups Printed- Cars, Buses & Trucks

	Briarcliff Road Northbound				Briarcliff Road Southbound				Eastbound				Oak Grove Road Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	49	6	55	36	68	0	104	0	0	0	0	13	0	46	59	218
07:15 AM	0	53	4	57	54	91	0	145	0	0	0	0	17	0	67	84	286
07:30 AM	0	90	28	118	30	102	0	132	0	0	0	0	56	0	84	140	390
07:45 AM	0	98	20	118	23	84	0	107	0	0	0	0	46	0	66	112	337
Total	0	290	58	348	143	345	0	488	0	0	0	0	132	0	263	395	1231
08:00 AM	0	77	25	102	34	66	0	100	0	0	0	0	31	0	38	69	271
08:15 AM	0	44	6	50	41	45	0	86	0	0	0	0	3	0	24	27	163
08:30 AM	0	47	7	54	43	59	0	102	0	0	0	0	15	0	46	61	217
08:45 AM	0	29	5	34	42	85	0	127	0	0	0	0	7	0	35	42	203
Total	0	197	43	240	160	255	0	415	0	0	0	0	56	0	143	199	854
*** BREAK ***																	
03:00 PM	0	108	20	128	46	86	0	132	0	0	0	0	18	0	43	61	321
03:15 PM	0	99	27	126	24	49	0	73	0	0	0	0	19	0	46	65	264
03:30 PM	0	78	11	89	54	58	0	112	0	0	0	0	18	0	38	56	257
03:45 PM	0	72	10	82	44	72	0	116	0	0	0	0	9	0	42	51	249
Total	0	357	68	425	168	265	0	433	0	0	0	0	64	0	169	233	1091
04:00 PM	0	87	7	94	61	72	0	133	0	0	0	0	8	0	33	41	268
04:15 PM	0	81	7	88	52	75	0	127	0	0	0	0	11	0	40	51	266
04:30 PM	0	63	39	102	70	58	0	128	0	0	0	0	18	0	44	62	292
04:45 PM	0	80	15	95	58	80	0	138	0	0	0	0	9	0	35	44	277
Total	0	311	68	379	241	285	0	526	0	0	0	0	46	0	152	198	1103
05:00 PM	0	83	16	99	49	78	0	127	0	0	0	0	15	0	47	62	288
05:15 PM	0	108	16	124	75	90	0	165	0	0	0	0	20	0	45	65	354
05:30 PM	0	81	11	92	71	59	0	130	0	0	0	0	15	0	56	71	293
05:45 PM	0	99	14	113	69	72	0	141	0	0	0	0	16	0	67	83	337
Total	0	371	57	428	264	299	0	563	0	0	0	0	66	0	215	281	1272
Grand Total	0	1526	294	1820	976	1449	0	2425	0	0	0	0	364	0	942	1306	5551
Apprch %	0	83.8	16.2		40.2	59.8	0		0	0	0		27.9	0	72.1		
Total %	0	27.5	5.3	32.8	17.6	26.1	0	43.7	0	0	0	0	6.6	0	17	23.5	

A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

File Name : 20180208
Site Code : 20180208
Start Date : 9/26/2018
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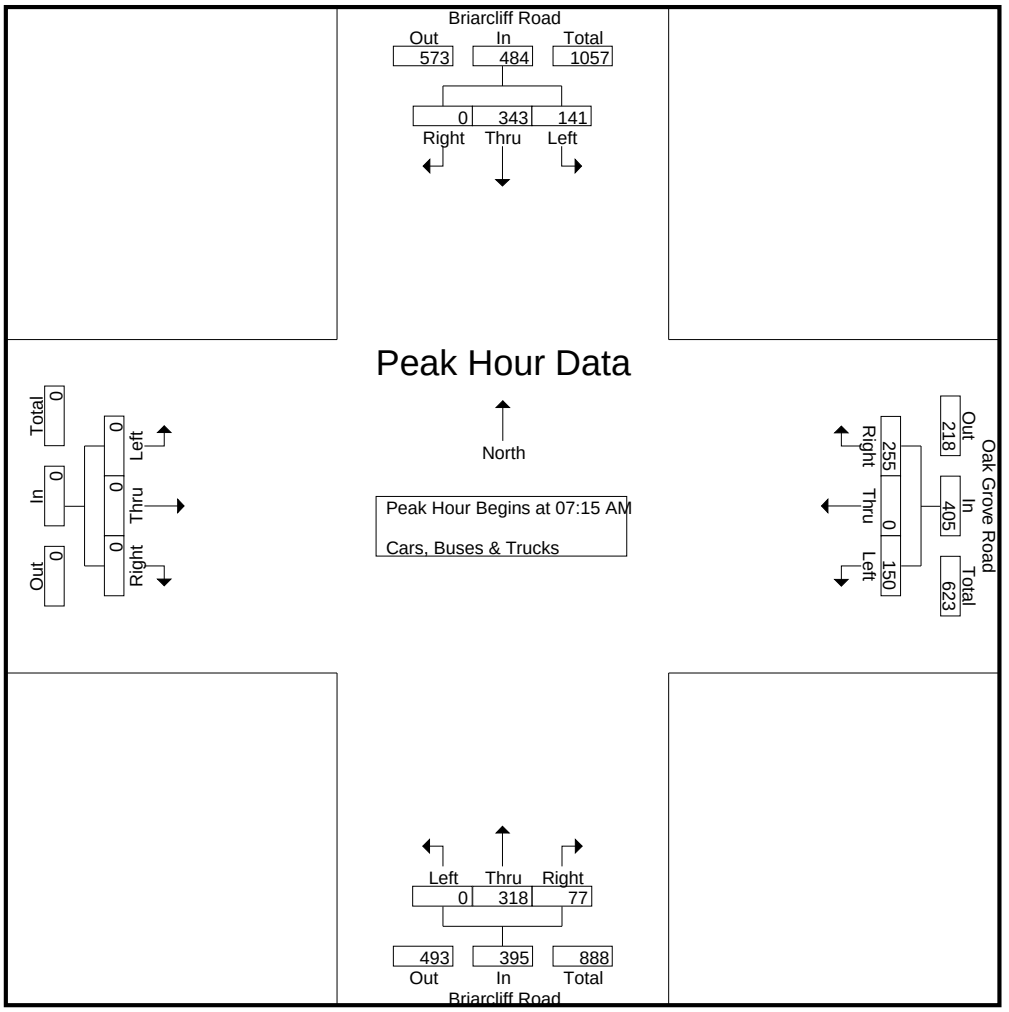
	Briarcliff Road Northbound				Briarcliff Road Southbound				Eastbound				Oak Grove Road Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 02:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	53	4	57	**54**	91	0	**145**	0	0	0	0	17	0	67	84	286
07:30 AM	0	90	**28**	**118**	30	**102**	0	132	0	0	0	0	**56**	0	**84**	**140**	**390**
07:45 AM	0	**98**	20	118	23	84	0	107	0	0	0	0	46	0	66	112	337
08:00 AM	0	77	25	102	34	66	0	100	0	0	0	0	31	0	38	69	271
Total Volume	0	318	77	395	141	343	0	484	0	0	0	0	150	0	255	405	1284
% App. Total	0	80.5	19.5		29.1	70.9	0		0	0	0		37	0	63		
PHF	.000	.811	.688	.837	.653	.841	.000	.834	.000	.000	.000	.000	.670	.000	.759	.723	.823



A&R Engineering, Inc.

2160 Kingston Court, Suite O
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File Name : 20180208
Site Code : 20180208
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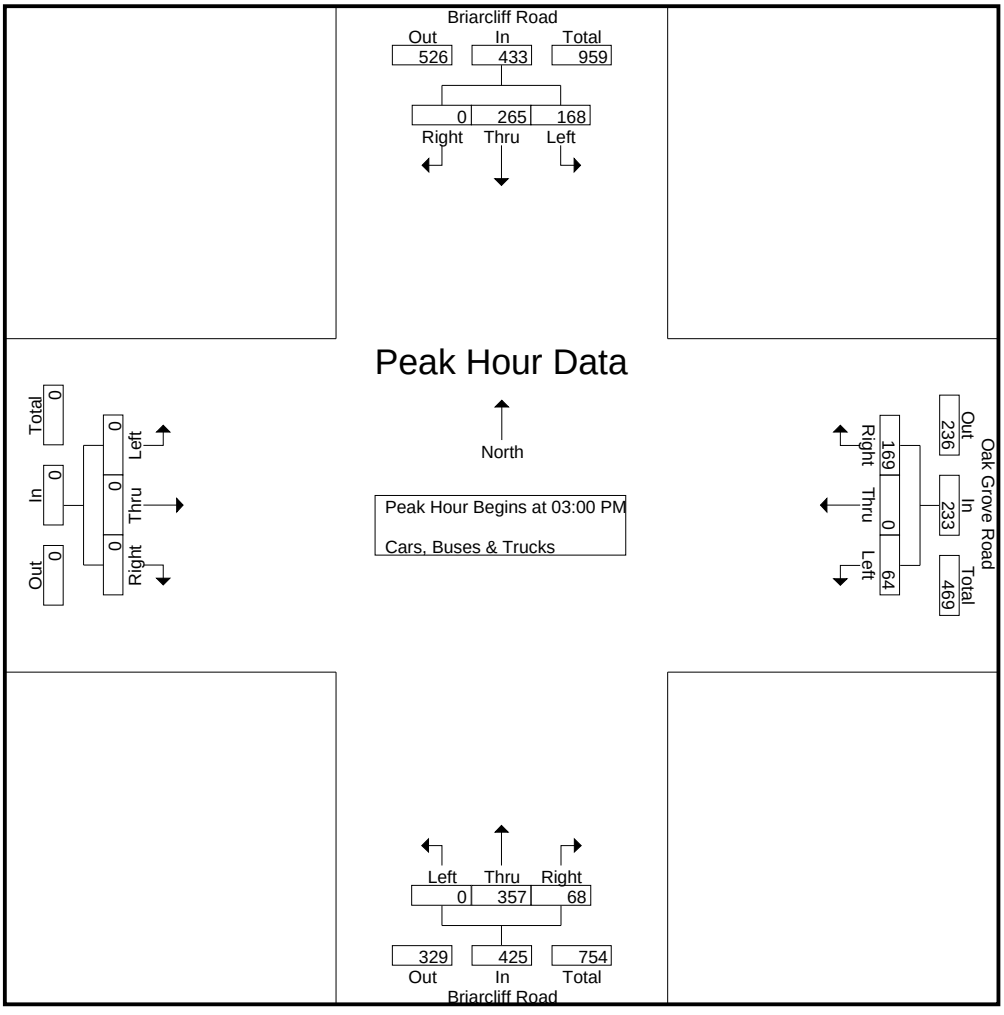
	Briarcliff Road Northbound				Briarcliff Road Southbound				Eastbound				Oak Grove Road Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	0	**108**	20	**128**	46	**86**	0	**132**	0	0	0	0	18	0	43	61	**321**
03:15 PM	0	99	**27**	126	24	49	0	73	0	0	0	0	**19**	0	**46**	**65**	264
03:30 PM	0	78	11	89	**54**	58	0	112	0	0	0	0	18	0	38	56	257
03:45 PM	0	72	10	82	44	72	0	116	0	0	0	0	9	0	42	51	249
Total Volume	0	357	68	425	168	265	0	433	0	0	0	0	64	0	169	233	1091
% App. Total	0	84	16		38.8	61.2	0		0	0	0		27.5	0	72.5		
PHF	.000	.826	.630	.830	.778	.770	.000	.820	.000	.000	.000	.000	.842	.000	.918	.896	.850



A&R Engineering, Inc.

2160 Kingston Court, Suite O
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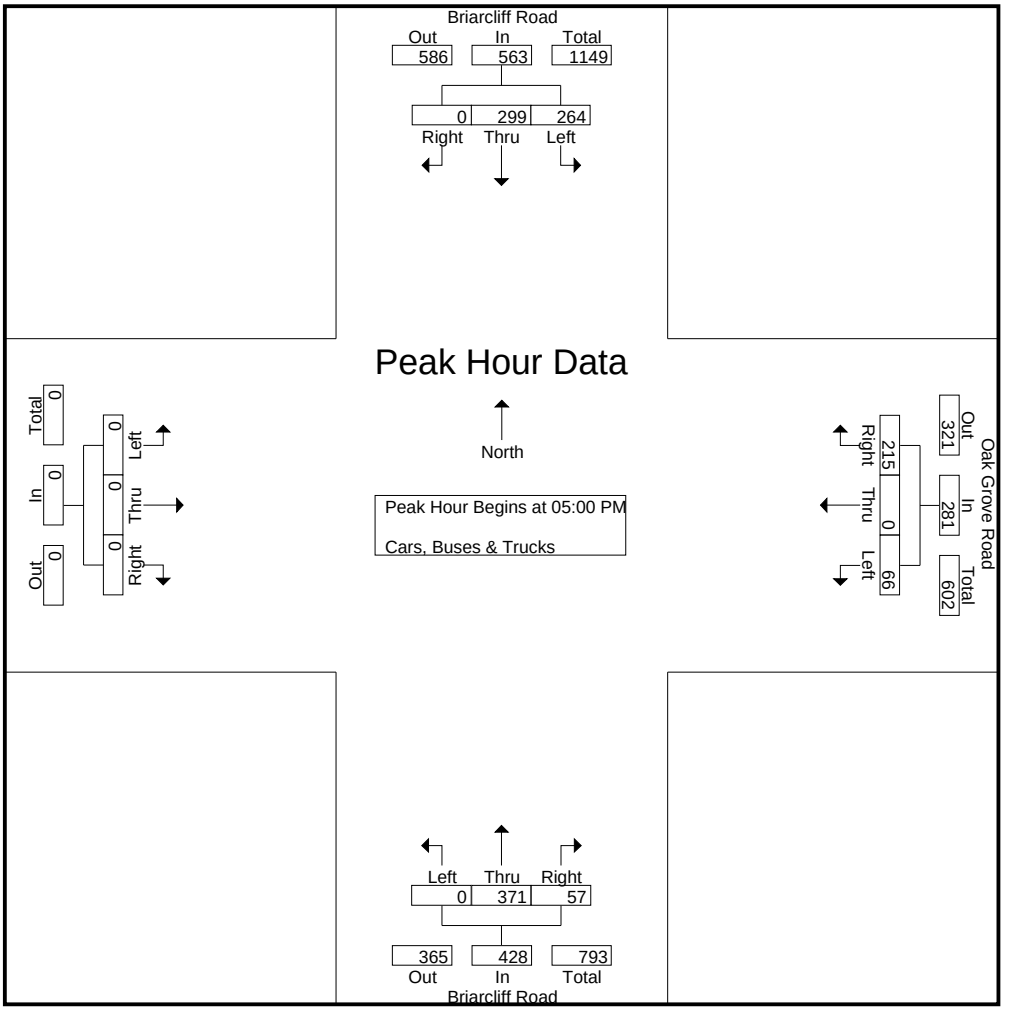
File Name : 20180208
Site Code : 20180208
Start Date : 9/26/2018
Page No : 4

	Briarcliff Road Northbound				Briarcliff Road Southbound				Eastbound				Oak Grove Road Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	83	**16**	99	49	78	0	127	0	0	0	0	15	0	47	62	288
05:15 PM	0	**108**	16	**124**	**75**	**90**	0	**165**	0	0	0	0	**20**	0	45	65	**354**
05:30 PM	0	81	11	92	71	59	0	130	0	0	0	0	15	0	56	71	293
05:45 PM	0	99	14	113	69	72	0	141	0	0	0	0	16	0	**67**	**83**	337
Total Volume	0	371	57	428	264	299	0	563	0	0	0	0	66	0	215	281	1272
% App. Total	0	86.7	13.3		46.9	53.1	0		0	0	0		23.5	0	76.5		
PHF	.000	.859	.891	.863	.880	.831	.000	.853	.000	.000	.000	.000	.825	.000	.802	.846	.898



A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

TMC Data
Briarcliff Rd @ Lakeside HS Western Drwy
07-09am - 03-06pm

File Name : 20180209
Site Code : 20180209
Start Date : 9/26/2018
Page No : 1

Groups Printed- Cars, Buses & Trucks

	Briarcliff Road Northbound				Briarcliff Road Southbound				Eastbound				Lakeside HS Western Drwy Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	102	9	111	28	154	0	182	0	0	0	0	0	0	1	1	294
07:15 AM	0	112	28	140	17	169	0	186	0	0	0	0	3	0	6	9	335
07:30 AM	0	128	57	185	56	134	0	190	0	0	0	0	0	0	15	15	390
07:45 AM	0	155	33	188	18	137	0	155	0	0	0	0	1	0	12	13	356
Total	0	497	127	624	119	594	0	713	0	0	0	0	4	0	34	38	1375
08:00 AM	0	128	23	151	15	133	0	148	0	0	0	0	0	0	6	6	305
08:15 AM	0	80	10	90	11	98	0	109	0	0	0	0	2	0	1	3	202
08:30 AM	0	73	3	76	9	115	0	124	0	0	0	0	1	0	0	1	201
08:45 AM	0	75	3	78	8	116	0	124	0	0	0	0	0	0	0	0	202
Total	0	356	39	395	43	462	0	505	0	0	0	0	3	0	7	10	910
*** BREAK ***																	
03:00 PM	0	131	6	137	19	134	0	153	0	0	0	0	3	0	13	16	306
03:15 PM	0	100	7	107	10	107	0	117	0	0	0	0	7	0	16	23	247
03:30 PM	0	100	20	120	12	136	0	148	0	0	0	0	8	0	14	22	290
03:45 PM	0	110	8	118	16	116	0	132	0	0	0	0	18	0	18	36	286
Total	0	441	41	482	57	493	0	550	0	0	0	0	36	0	61	97	1129
04:00 PM	0	125	9	134	10	117	0	127	0	0	0	0	10	0	14	24	285
04:15 PM	0	133	14	147	18	122	0	140	0	0	0	0	3	0	17	20	307
04:30 PM	0	125	8	133	12	134	0	146	0	0	0	0	6	0	11	17	296
04:45 PM	0	125	6	131	12	127	0	139	0	0	0	0	2	0	4	6	276
Total	0	508	37	545	52	500	0	552	0	0	0	0	21	0	46	67	1164
05:00 PM	0	120	7	127	15	121	0	136	0	0	0	0	3	0	2	5	268
05:15 PM	0	117	12	129	9	128	0	137	0	0	0	0	6	0	4	10	276
05:30 PM	0	144	5	149	6	118	0	124	0	0	0	0	2	0	4	6	279
05:45 PM	0	128	35	163	17	128	0	145	0	0	0	0	4	0	5	9	317
Total	0	509	59	568	47	495	0	542	0	0	0	0	15	0	15	30	1140
Grand Total	0	2311	303	2614	318	2544	0	2862	0	0	0	0	79	0	163	242	5718
Apprch %	0	88.4	11.6		11.1	88.9	0		0	0	0		32.6	0	67.4		
Total %	0	40.4	5.3	45.7	5.6	44.5	0	50.1	0	0	0	0	1.4	0	2.9	4.2	

A&R Engineering, Inc.

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File Name : 20180209
Site Code : 20180209
Start Date : 9/26/2018
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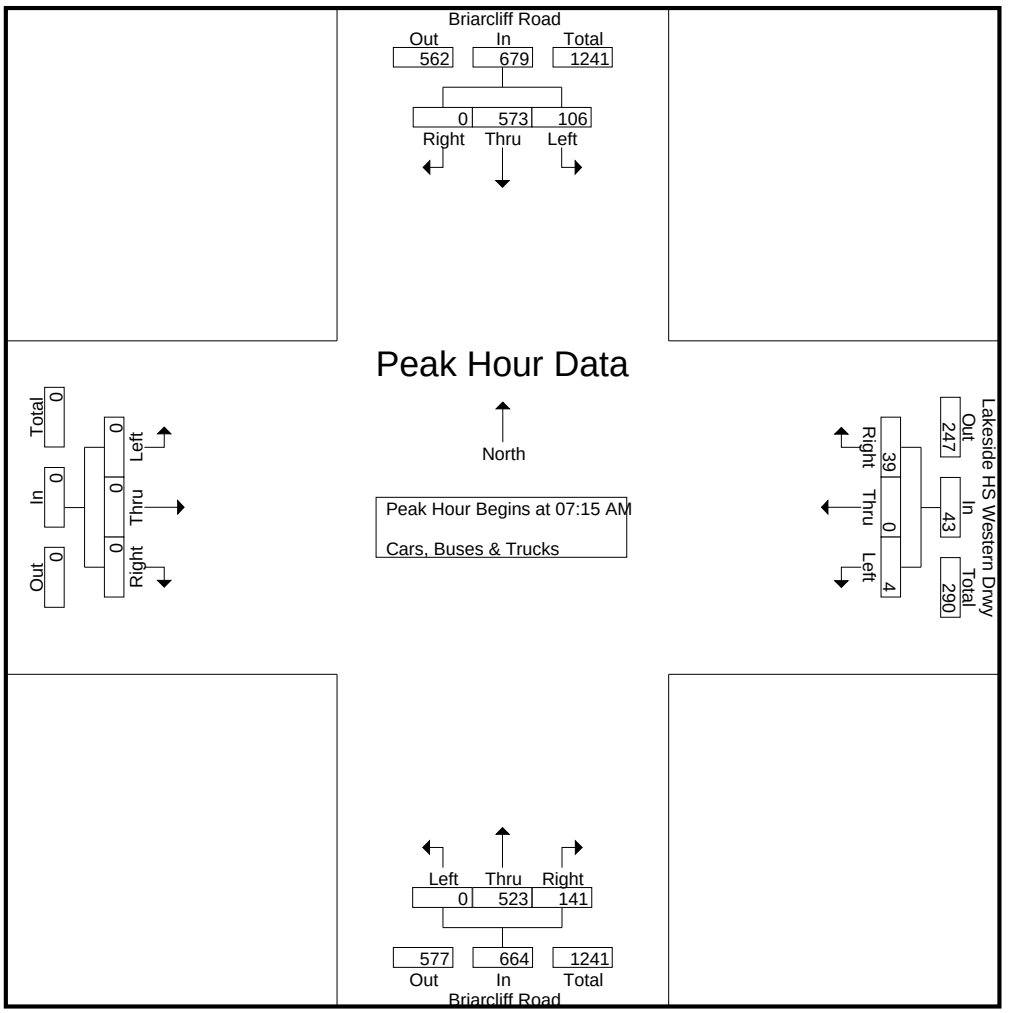
	Briarcliff Road Northbound				Briarcliff Road Southbound				Eastbound				Lakeside HS Western Drwy Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 02:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	112	28	140	17	**169**	0	186	0	0	0	0	**3**	0	6	9	335
07:30 AM	0	128	**57**	185	**56**	134	0	**190**	0	0	0	0	0	0	**15**	**15**	**390**
07:45 AM	0	**155**	33	**188**	18	137	0	155	0	0	0	0	1	0	12	13	356
08:00 AM	0	128	23	151	15	133	0	148	0	0	0	0	0	0	6	6	305
Total Volume	0	523	141	664	106	573	0	679	0	0	0	0	4	0	39	43	1386
% App. Total	0	78.8	21.2		15.6	84.4	0		0	0	0		9.3	0	90.7		
PHF	.000	.844	.618	.883	.473	.848	.000	.893	.000	.000	.000	.000	.333	.000	.650	.717	.888

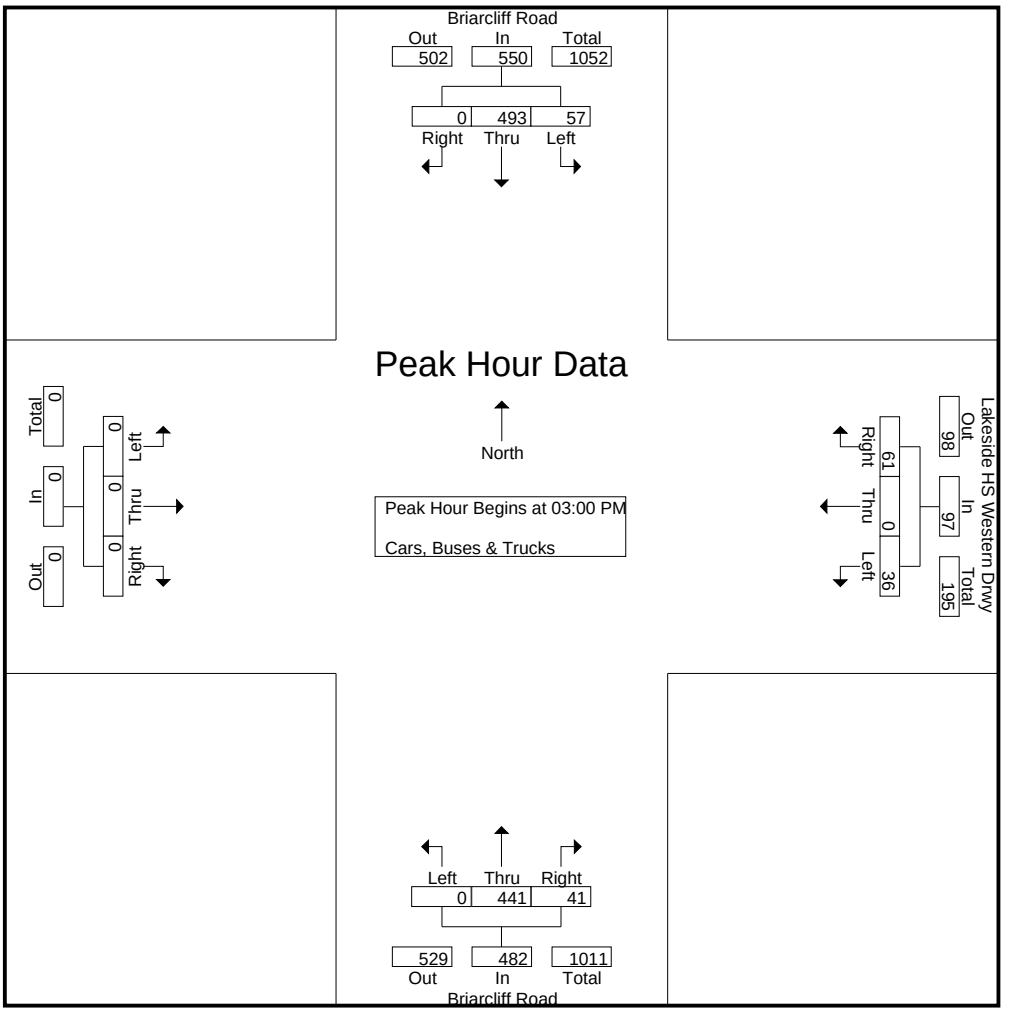


A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

File Name : 20180209
Site Code : 20180209
Start Date : 9/26/2018
Page No : 3

	Briarcliff Road Northbound				Briarcliff Road Southbound				Eastbound				Lakeside HS Western Drwy Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	0	**131**	6	**137**	**19**	134	0	**153**	0	0	0	0	3	0	13	16	**306**
03:15 PM	0	100	7	107	10	107	0	117	0	0	0	0	7	0	16	23	247
03:30 PM	0	100	**20**	120	12	**136**	0	148	0	0	0	0	8	0	14	22	290
03:45 PM	0	110	8	118	16	116	0	132	0	0	0	0	**18**	0	**18**	**36**	286
Total Volume	0	441	41	482	57	493	0	550	0	0	0	0	36	0	61	97	1129
% App. Total	0	91.5	8.5		10.4	89.6	0		0	0	0		37.1	0	62.9		
PHF	.000	.842	.513	.880	.750	.906	.000	.899	.000	.000	.000	.000	.500	.000	.847	.674	.922



A&R Engineering, Inc.

2160 Kingston Court, Suite O
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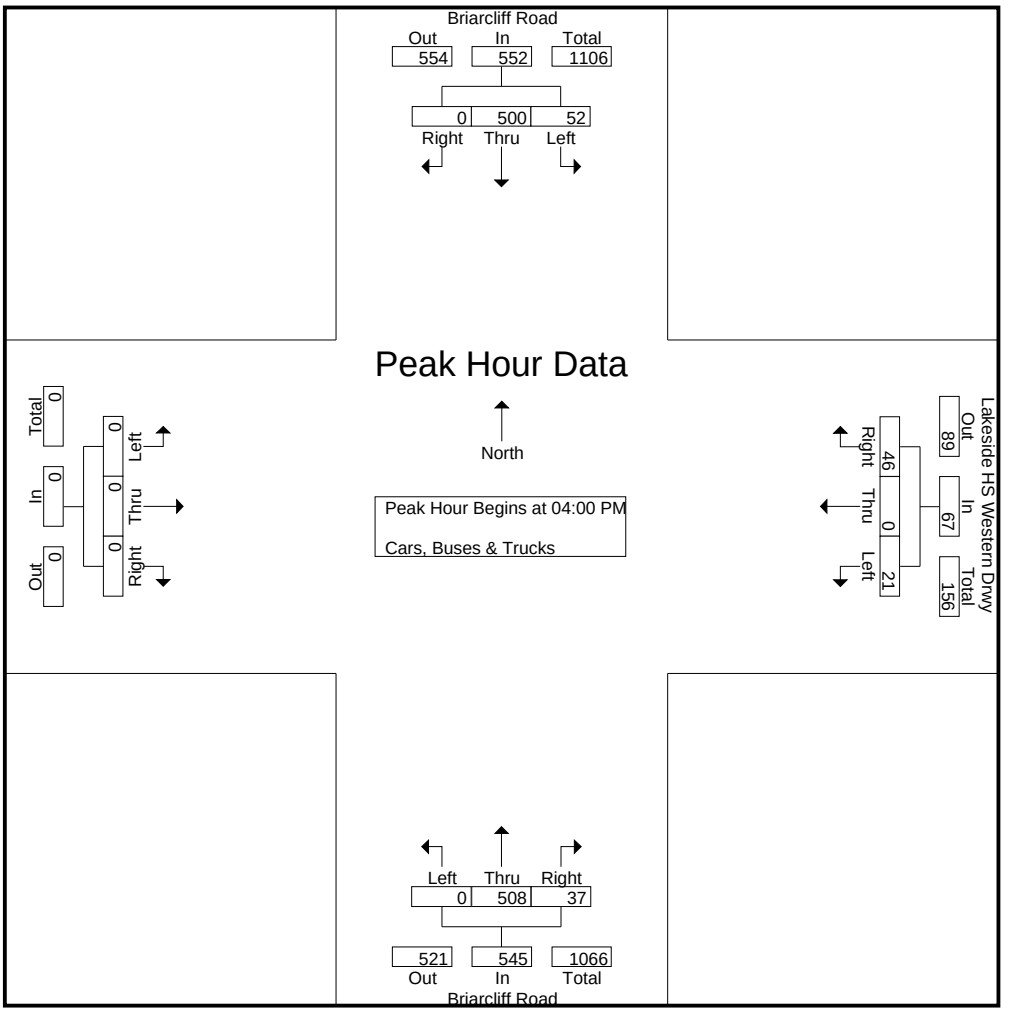
File Name : 20180209
Site Code : 20180209
Start Date : 9/26/2018
Page No : 4

	Briarcliff Road Northbound				Briarcliff Road Southbound				Eastbound				Lakeside HS Western Drwy Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	0	125	9	134	10	117	0	127	0	0	0	0	**10**	0	14	**24**	285
04:15 PM	0	**133**	**14**	**147**	**18**	122	0	140	0	0	0	0	3	0	**17**	20	**307**
04:30 PM	0	125	8	133	12	**134**	0	**146**	0	0	0	0	6	0	11	17	296
04:45 PM	0	125	6	131	12	127	0	139	0	0	0	0	2	0	4	6	276
Total Volume	0	508	37	545	52	500	0	552	0	0	0	0	21	0	46	67	1164
% App. Total	0	93.2	6.8		9.4	90.6	0		0	0	0		31.3	0	68.7		
PHF	.000	.955	.661	.927	.722	.933	.000	.945	.000	.000	.000	.000	.525	.000	.676	.698	.948



A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

TMC Data
Briarcliff Rd at Lakeside HS Central Dr
07-09am - 03-06pm

File Name : 20180210
Site Code : 20180210
Start Date : 9/26/2018
Page No : 1

Groups Printed- Cars, Buses & Trucks

	Briarcliff Road Northbound				Briarcliff Road Southbound				Eastbound				Lakeside High School Central Driveway Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	105	2	107	0	127	0	127	0	0	0	0	7	0	11	18	252
07:15 AM	0	161	0	161	0	166	0	166	0	0	0	0	39	0	22	61	388
07:30 AM	0	152	0	152	0	178	0	178	0	0	0	0	23	0	31	54	384
07:45 AM	0	126	0	126	0	147	0	147	0	0	0	0	12	0	18	30	303
Total	0	544	2	546	0	618	0	618	0	0	0	0	81	0	82	163	1327
08:00 AM	0	100	0	100	0	96	0	96	0	0	0	0	28	0	33	61	257
08:15 AM	0	100	0	100	0	97	0	97	0	0	0	0	3	0	11	14	211
08:30 AM	0	110	0	110	0	164	0	164	0	0	0	0	4	0	7	11	285
08:45 AM	0	77	0	77	0	121	0	121	0	0	0	0	3	0	6	9	207
Total	0	387	0	387	0	478	0	478	0	0	0	0	38	0	57	95	960
*** BREAK ***																	
03:00 PM	0	178	0	178	0	147	0	147	0	0	0	0	3	0	4	7	332
03:15 PM	0	154	0	154	0	100	0	100	0	0	0	0	32	0	37	69	323
03:30 PM	0	131	0	131	0	115	0	115	0	0	0	0	14	0	20	34	280
03:45 PM	0	153	0	153	0	139	0	139	0	0	0	0	13	0	20	33	325
Total	0	616	0	616	0	501	0	501	0	0	0	0	62	0	81	143	1260
04:00 PM	0	135	0	135	0	127	0	127	0	0	0	0	24	0	17	41	303
04:15 PM	0	162	0	162	0	129	0	129	0	0	0	0	9	0	14	23	314
04:30 PM	0	134	0	134	0	143	0	143	0	0	0	0	5	0	13	18	295
04:45 PM	0	129	0	129	0	125	0	125	0	0	0	0	9	0	16	25	279
Total	0	560	0	560	0	524	0	524	0	0	0	0	47	0	60	107	1191
05:00 PM	0	144	0	144	0	141	0	141	0	0	0	0	6	0	16	22	307
05:15 PM	0	158	0	158	0	140	0	140	0	0	0	0	17	0	21	38	336
05:30 PM	0	167	0	167	0	132	0	132	0	0	0	0	8	0	3	11	310
05:45 PM	0	147	0	147	0	132	0	132	0	0	0	0	8	0	5	13	292
Total	0	616	0	616	0	545	0	545	0	0	0	0	39	0	45	84	1245
Grand Total	0	2723	2	2725	0	2666	0	2666	0	0	0	0	267	0	325	592	5983
Apprch %	0	99.9	0.1		0	100	0		0	0	0		45.1	0	54.9		
Total %	0	45.5	0	45.5	0	44.6	0	44.6	0	0	0	0	4.5	0	5.4	9.9	

A&R Engineering, Inc.

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File Name : 20180210
Site Code : 20180210
Start Date : 9/26/2018
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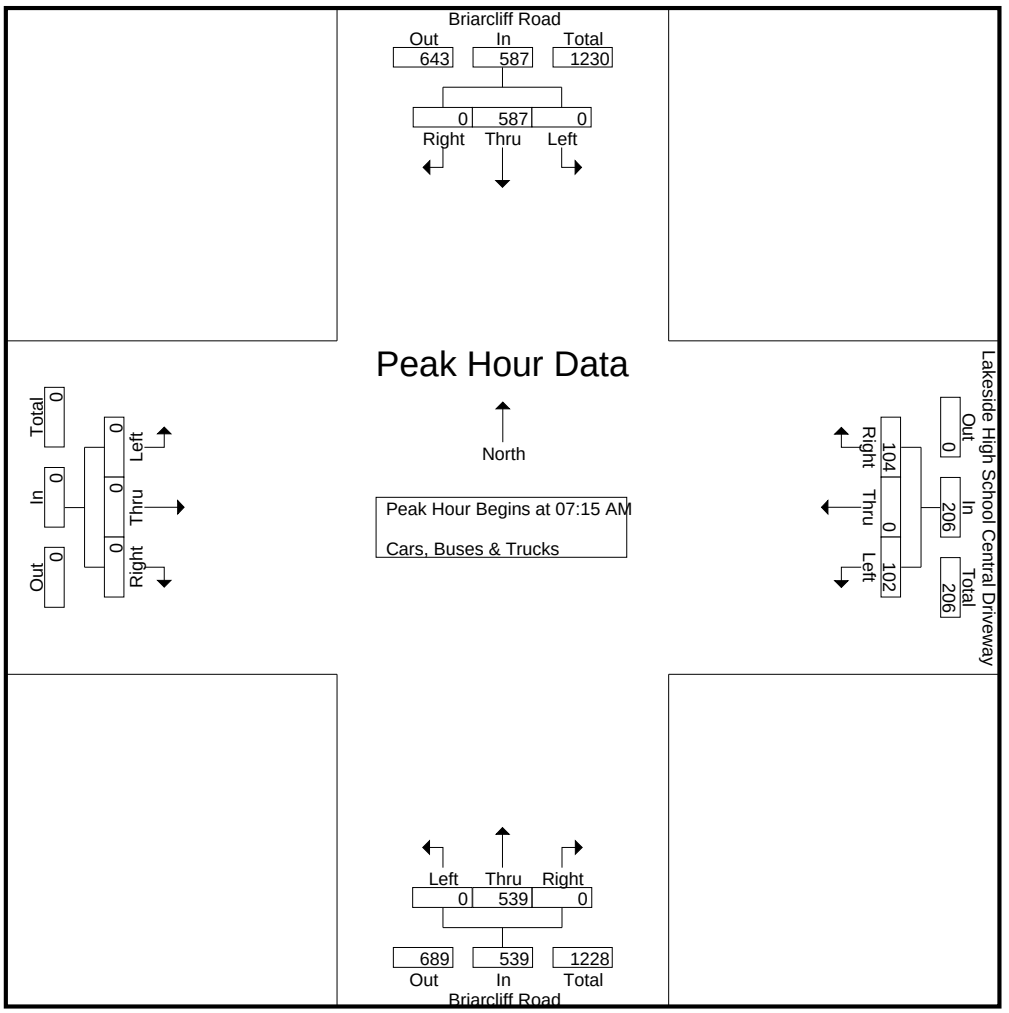
	Briarcliff Road Northbound				Briarcliff Road Southbound				Eastbound				Lakeside High School Central Driveway Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 02:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	**161**	0	**161**	0	166	0	166	0	0	0	0	**39**	0	22	**61**	**388**
07:30 AM	0	152	0	152	0	**178**	0	**178**	0	0	0	0	23	0	31	54	384
07:45 AM	0	126	0	126	0	147	0	147	0	0	0	0	12	0	18	30	303
08:00 AM	0	100	0	100	0	96	0	96	0	0	0	0	28	0	**33**	61	257
Total Volume	0	539	0	539	0	587	0	587	0	0	0	0	102	0	104	206	1332
% App. Total	0	100	0		0	100	0		0	0	0		49.5	0	50.5		
PHF	.000	.837	.000	.837	.000	.824	.000	.824	.000	.000	.000	.000	.654	.000	.788	.844	.858



A&R Engineering, Inc.

2160 Kingston Court, Suite O
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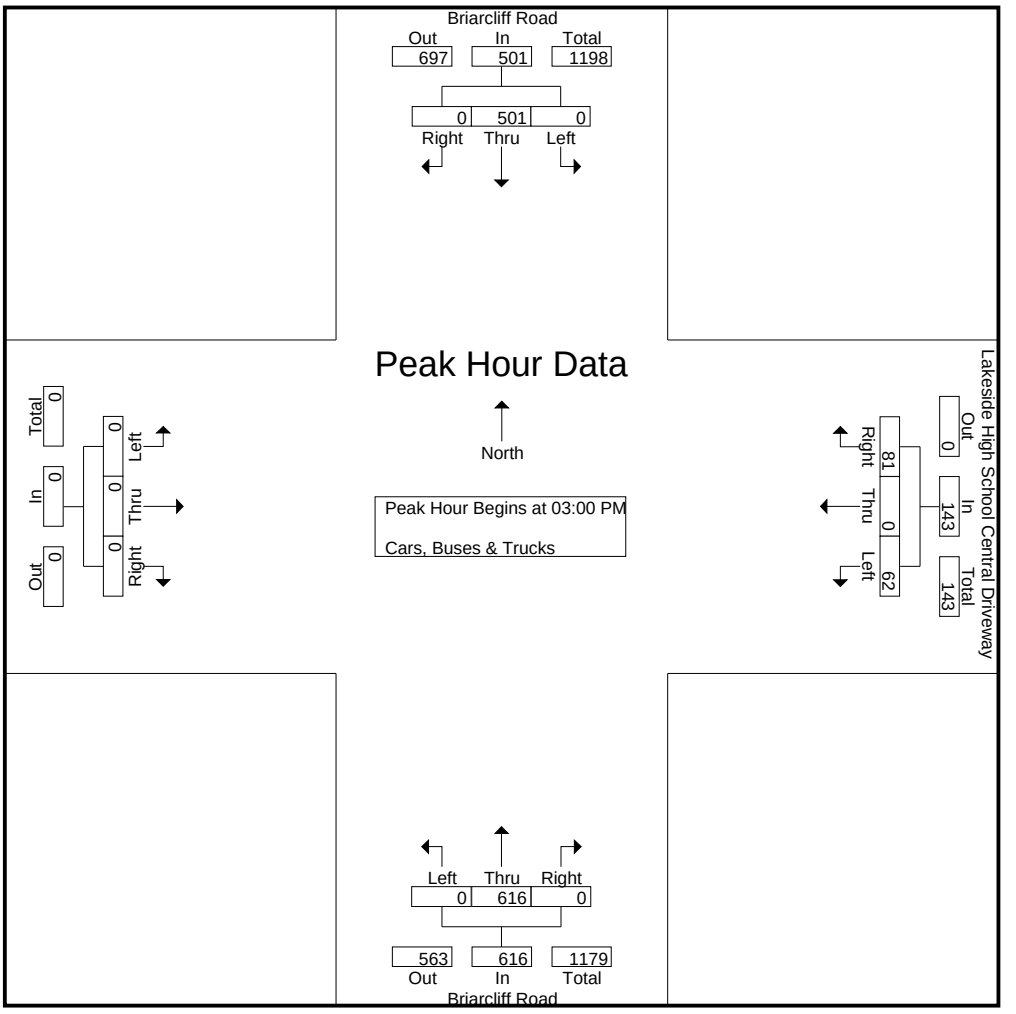
File Name : 20180210
Site Code : 20180210
Start Date : 9/26/2018
Page No : 3

	Briarcliff Road Northbound				Briarcliff Road Southbound				Eastbound				Lakeside High School Central Driveway Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	0	**178**	0	**178**	0	**147**	0	**147**	0	0	0	0	3	0	4	7	**332**
03:15 PM	0	154	0	154	0	100	0	100	0	0	0	0	**32**	0	**37**	**69**	323
03:30 PM	0	131	0	131	0	115	0	115	0	0	0	0	14	0	20	34	280
03:45 PM	0	153	0	153	0	139	0	139	0	0	0	0	13	0	20	33	325
Total Volume	0	616	0	616	0	501	0	501	0	0	0	0	62	0	81	143	1260
% App. Total	0	100	0		0	100	0		0	0	0		43.4	0	56.6		
PHF	.000	.865	.000	.865	.000	.852	.000	.852	.000	.000	.000	.000	.484	.000	.547	.518	.949

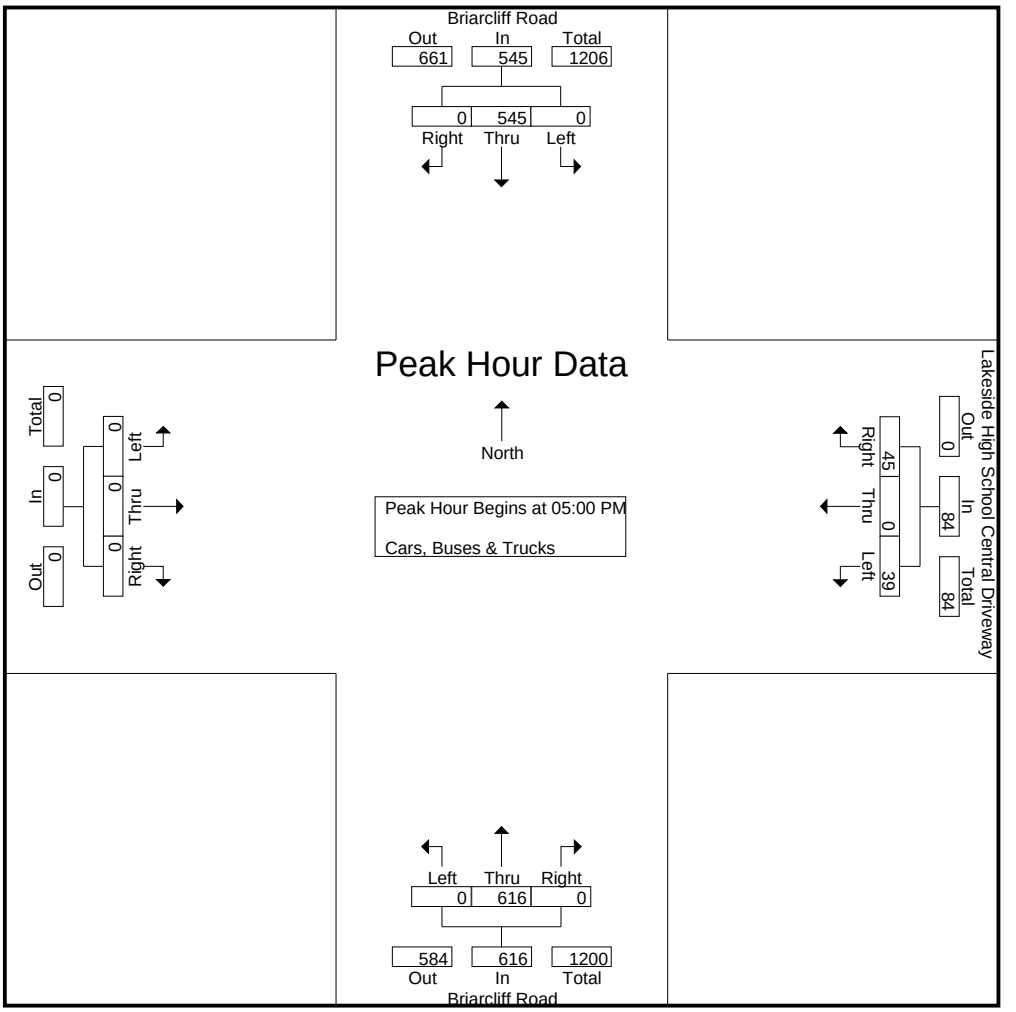


A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

File Name : 20180210
Site Code : 20180210
Start Date : 9/26/2018
Page No : 4

	Briarcliff Road Northbound				Briarcliff Road Southbound				Eastbound				Lakeside High School Central Driveway Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	144	0	144	0	**141**	0	**141**	0	0	0	0	6	0	16	22	307
05:15 PM	0	158	0	158	0	140	0	140	0	0	0	0	**17**	0	**21**	**38**	**336**
05:30 PM	0	**167**	0	**167**	0	132	0	132	0	0	0	0	8	0	3	11	310
05:45 PM	0	147	0	147	0	132	0	132	0	0	0	0	8	0	5	13	292
Total Volume	0	616	0	616	0	545	0	545	0	0	0	0	39	0	45	84	1245
% App. Total	0	100	0		0	100	0		0	0	0		46.4	0	53.6		
PHF	.000	.922	.000	.922	.000	.966	.000	.966	.000	.000	.000	.000	.574	.000	.536	.553	.926



A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

TMC Data
Briarcliff Rd @ Woodwardia Rd /
Lakeside High School Eastern Drwy
7-9 am | 3-6 pm

File Name : Briarcliff @ Woodwardia
Site Code : 20180211
Start Date : 9/26/2018

Groups Printed- Cars - Trucks - Buses

	Briarcliff Rd NE Northbound				Briarcliff Rd NE Southbound				Woodwardia Rd NE Eastbound				Lakeside HS Eastern Drwy Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	72	31	103	35	113	4	152	6	0	2	8	14	0	18	32	295
07:15 AM	3	90	34	127	57	133	5	195	1	0	0	1	8	0	36	44	367
07:30 AM	4	102	32	138	96	145	6	247	4	0	2	6	2	0	58	60	451
07:45 AM	1	111	40	152	100	88	14	202	5	0	1	6	1	0	60	61	421
Total	8	375	137	520	288	479	29	796	16	0	5	21	25	0	172	197	1534
08:00 AM	4	126	2	132	30	89	6	125	6	0	1	7	1	1	38	40	304
08:15 AM	0	68	0	68	0	83	1	84	4	0	1	5	0	0	2	2	159
08:30 AM	0	86	2	88	2	116	2	120	1	0	0	1	0	0	1	1	210
08:45 AM	1	63	1	65	2	103	1	106	3	0	1	4	0	1	1	2	177
Total	5	343	5	353	34	391	10	435	14	0	3	17	1	2	42	45	850
*** BREAK ***																	
03:00 PM	3	138	12	153	11	86	3	100	3	0	0	3	1	0	3	4	260
03:15 PM	3	130	2	135	18	95	6	119	6	0	9	15	19	2	62	83	352
03:30 PM	2	120	17	139	19	87	3	109	2	0	4	6	5	0	35	40	294
03:45 PM	0	121	20	141	30	83	3	116	2	0	1	3	10	0	49	59	319
Total	8	509	51	568	78	351	15	444	13	0	14	27	35	2	149	186	1225
04:00 PM	0	122	4	126	9	86	3	98	0	0	2	2	7	0	26	33	259
04:15 PM	0	134	3	137	10	104	2	116	2	1	0	3	5	0	17	22	278
04:30 PM	0	126	2	128	7	111	4	122	1	0	1	2	4	0	14	18	270
04:45 PM	1	111	2	114	6	107	2	115	1	0	0	1	4	1	10	15	245
Total	1	493	11	505	32	408	11	451	4	1	3	8	20	1	67	88	1052
05:00 PM	0	133	1	134	2	107	1	110	3	0	0	3	3	0	9	12	259
05:15 PM	1	141	3	145	11	120	3	134	2	0	1	3	10	0	18	28	310
05:30 PM	2	125	0	127	4	98	8	110	0	0	0	0	3	0	8	11	248
05:45 PM	2	142	3	147	11	141	0	152	5	0	0	5	4	0	5	9	313
Total	5	541	7	553	28	466	12	506	10	0	1	11	20	0	40	60	1130
Grand Total	27	2261	211	2499	460	2095	77	2632	57	1	26	84	101	5	470	576	5791
Apprch %	1.1	90.5	8.4		17.5	79.6	2.9		67.9	1.2	31		17.5	0.9	81.6		
Total %	0.5	39	3.6	43.2	7.9	36.2	1.3	45.4	1	0	0.4	1.5	1.7	0.1	8.1	9.9	
Cars	26	2172	208	2406	458	2024	76	2558	57	1	26	84	100	4	463	567	5615
% Cars	96.3	96.1	98.6	96.3	99.6	96.6	98.7	97.2	100	100	100	100	99	80	98.5	98.4	97
Trucks	1	5	1	7	1	5	0	6	0	0	0	0	1	1	1	3	16
% Trucks	3.7	0.2	0.5	0.3	0.2	0.2	0	0.2	0	0	0	0	1	20	0.2	0.5	0.3
Buses	0	84	2	86	1	66	1	68	0	0	0	0	0	0	6	6	160
% Buses	0	3.7	0.9	3.4	0.2	3.2	1.3	2.6	0	0	0	0	0	0	1.3	1	2.8

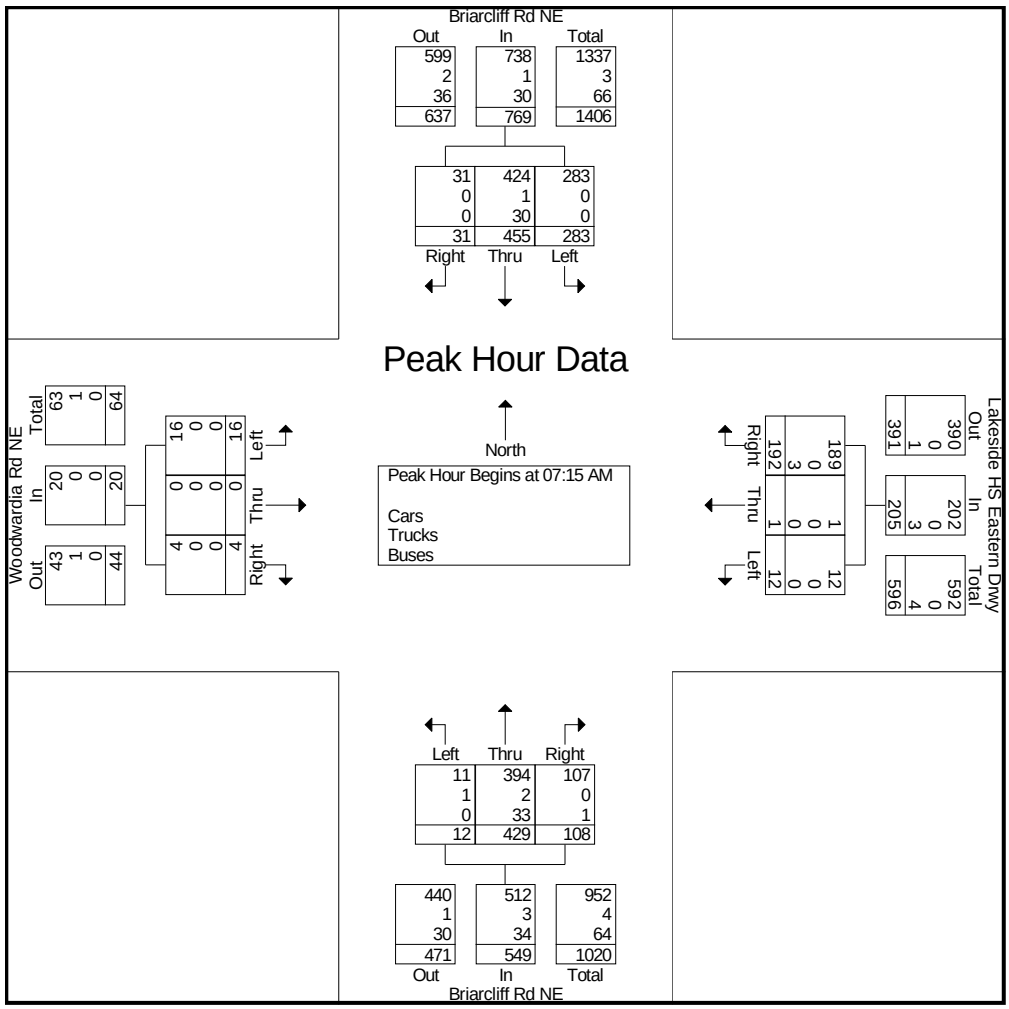
A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

TMC Data
Briarcliff Rd @ Woodwardia Rd /
Lakeside High School Eastern Drwy
7-9 am | 3-6 pm

File Name : Briarcliff @ Woodwardia
Site Code : 20180211
Start Date : 9/26/2018
Page No : 2

	Briarcliff Rd NE Northbound				Briarcliff Rd NE Southbound				Woodwardia Rd NE Eastbound				Lakeside HS Eastern Drwy Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	3	90	34	127	57	133	5	195	1	0	0	1	**8**	0	36	44	367
07:30 AM	**4**	102	32	138	96	**145**	6	**247**	4	0	**2**	6	2	0	58	60	**451**
07:45 AM	1	111	**40**	**152**	**100**	88	**14**	202	5	0	1	6	1	0	**60**	**61**	421
08:00 AM	4	**126**	2	132	30	89	6	125	**6**	0	1	**7**	1	**1**	38	40	304
Total Volume	12	429	108	549	283	455	31	769	16	0	4	20	12	1	192	205	1543
% App. Total	2.2	78.1	19.7		36.8	59.2	4		80	0	20		5.9	0.5	93.7		
PHF	.750	.851	.675	.903	.708	.784	.554	.778	.667	.000	.500	.714	.375	.250	.800	.840	.855
Cars	11	394	107	512	283	424	31	738	16	0	4	20	12	1	189	202	1472
% Cars	91.7	91.8	99.1	93.3	100	93.2	100	96.0	100	0	100	100	100	100	98.4	98.5	95.4
Trucks	1	2	0	3	0	1	0	1	0	0	0	0	0	0	0	0	4
% Trucks	8.3	0.5	0	0.5	0	0.2	0	0.1	0	0	0	0	0	0	0	0	0.3
Buses	0	33	1	34	0	30	0	30	0	0	0	0	0	0	3	3	67
% Buses	0	7.7	0.9	6.2	0	6.6	0	3.9	0	0	0	0	0	0	1.6	1.5	4.3



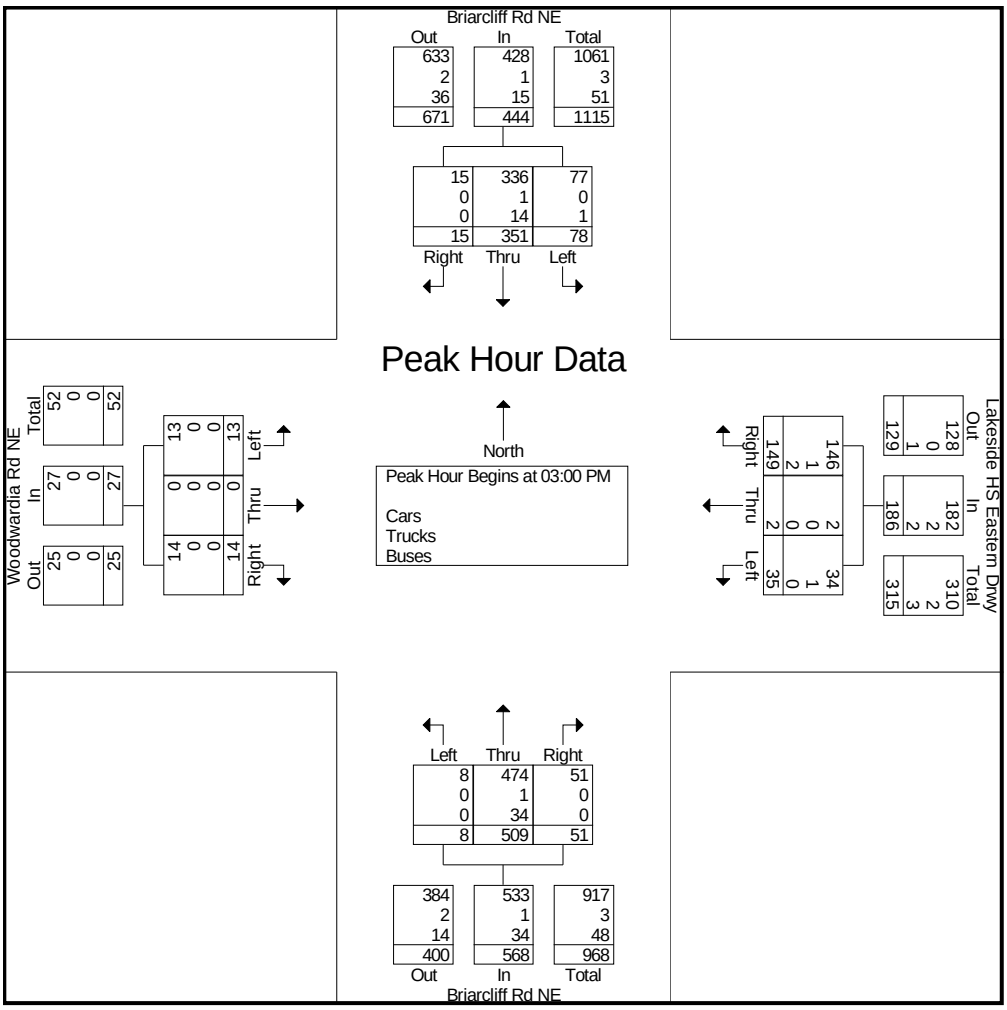
A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

TMC Data
Briarcliff Rd @ Woodwardia Rd /
Lakeside High School Eastern Drwy
7-9 am | 3-6 pm

File Name : Briarcliff @ Woodwardia
Site Code : 20180211
Start Date : 9/26/2018

	Briarcliff Rd NE Northbound				Briarcliff Rd NE Southbound				Woodwardia Rd NE Eastbound				Lakeside HS Eastern Drwy Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	**3**	**138**	12	**153**	11	86	3	100	3	0	0	3	1	0	3	4	260
03:15 PM	3	130	2	135	18	**95**	**6**	**119**	**6**	0	**9**	**15**	**19**	**2**	**62**	**83**	**352**
03:30 PM	2	120	17	139	19	87	3	109	2	0	4	6	5	0	35	40	294
03:45 PM	0	121	**20**	141	**30**	83	3	116	2	0	1	3	10	0	49	59	319
Total Volume	8	509	51	568	78	351	15	444	13	0	14	27	35	2	149	186	1225
% App. Total	1.4	89.6	9		17.6	79.1	3.4		48.1	0	51.9		18.8	1.1	80.1		
PHF	.667	.922	.638	.928	.650	.924	.625	.933	.542	.000	.389	.450	.461	.250	.601	.560	.870
Cars	8	474	51	533	77	336	15	428	13	0	14	27	34	2	146	182	1170
% Cars	100	93.1	100	93.8	98.7	95.7	100	96.4	100	0	100	100	97.1	100	98.0	97.8	95.5
Trucks	0	1	0	1	0	1	0	1	0	0	0	0	1	0	1	2	4
% Trucks	0	0.2	0	0.2	0	0.3	0	0.2	0	0	0	0	2.9	0	0.7	1.1	0.3
Buses	0	34	0	34	1	14	0	15	0	0	0	0	0	0	2	2	51
% Buses	0	6.7	0	6.0	1.3	4.0	0	3.4	0	0	0	0	0	0	1.3	1.1	4.2



A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

TMC Data
Briarcliff Road at Echo Drive
07-09am - 03-06pm

File Name : 20180212
Site Code : 20180212
Start Date : 9/26/2018
Page No : 1

Groups Printed- Cars, Buses & Trucks

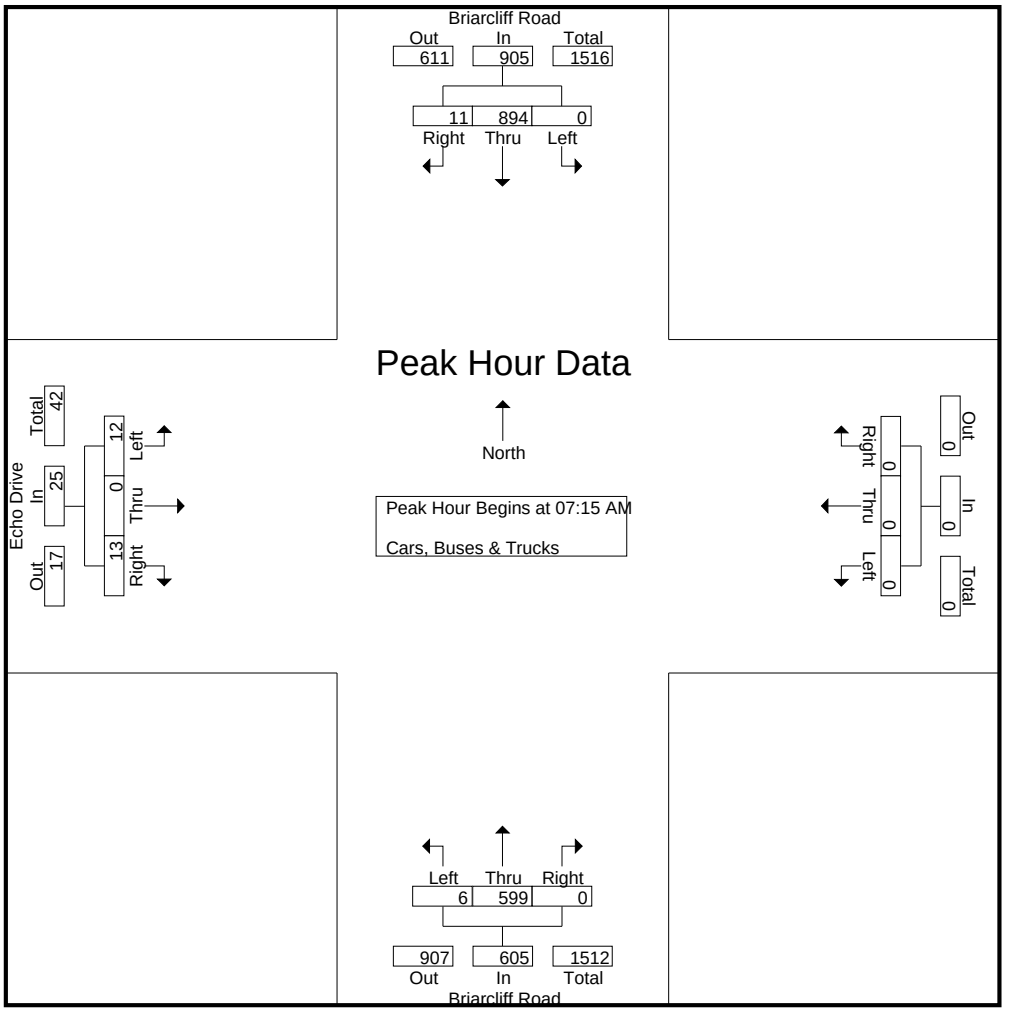
	Briarcliff Road Northbound				Briarcliff Road Southbound				Echo Drive Eastbound				Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	79	0	80	0	165	1	166	3	0	3	6	0	0	0	0	252
07:15 AM	0	126	0	126	0	216	2	218	5	0	2	7	0	0	0	0	351
07:30 AM	1	137	0	138	0	246	2	248	4	0	2	6	0	0	0	0	392
07:45 AM	0	176	0	176	0	245	5	250	3	0	7	10	0	0	0	0	436
Total	2	518	0	520	0	872	10	882	15	0	14	29	0	0	0	0	1431
08:00 AM	5	160	0	165	0	187	2	189	0	0	2	2	0	0	0	0	356
08:15 AM	1	115	0	116	0	131	3	134	3	0	2	5	0	0	0	0	255
08:30 AM	0	88	0	88	0	118	2	120	2	0	0	2	0	0	0	0	210
08:45 AM	2	97	0	99	0	130	4	134	1	0	3	4	0	0	0	0	237
Total	8	460	0	468	0	566	11	577	6	0	7	13	0	0	0	0	1058
*** BREAK ***																	
03:00 PM	5	139	0	144	0	138	4	142	1	0	0	1	0	0	0	0	287
03:15 PM	3	196	0	199	0	123	6	129	3	0	3	6	0	0	0	0	334
03:30 PM	3	208	0	211	0	149	8	157	6	0	6	12	0	0	0	0	380
03:45 PM	1	188	0	189	0	148	3	151	3	0	2	5	0	0	0	0	345
Total	12	731	0	743	0	558	21	579	13	0	11	24	0	0	0	0	1346
04:00 PM	5	190	0	195	0	145	7	152	3	0	3	6	0	0	0	0	353
04:15 PM	1	152	0	153	0	135	6	141	5	0	1	6	0	0	0	0	300
04:30 PM	1	175	0	176	0	134	0	134	3	0	0	3	0	0	0	0	313
04:45 PM	2	156	0	158	0	137	0	137	1	0	0	1	0	0	0	0	296
Total	9	673	0	682	0	551	13	564	12	0	4	16	0	0	0	0	1262
05:00 PM	4	150	0	154	0	140	2	142	3	0	0	3	0	0	0	0	299
05:15 PM	2	146	0	148	0	136	3	139	2	0	1	3	0	0	0	0	290
05:30 PM	2	161	0	163	0	156	2	158	0	0	1	1	0	0	0	0	322
05:45 PM	3	173	0	176	0	151	3	154	3	0	5	8	0	0	0	0	338
Total	11	630	0	641	0	583	10	593	8	0	7	15	0	0	0	0	1249
Grand Total	42	3012	0	3054	0	3130	65	3195	54	0	43	97	0	0	0	0	6346
Apprch %	1.4	98.6	0		0	98	2		55.7	0	44.3		0	0	0		
Total %	0.7	47.5	0	48.1	0	49.3	1	50.3	0.9	0	0.7	1.5	0	0	0	0	

A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

File Name : 20180212
Site Code : 20180212
Start Date : 9/26/2018
Page No : 2

	Briarcliff Road Northbound				Briarcliff Road Southbound				Echo Drive Eastbound				Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 02:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	126	0	126	0	216	2	218	**5**	0	2	7	0	0	0	0	351
07:30 AM	1	137	0	138	0	**246**	2	248	4	0	2	6	0	0	0	0	392
07:45 AM	0	**176**	0	**176**	0	245	**5**	**250**	3	0	**7**	**10**	0	0	0	0	**436**
08:00 AM	**5**	160	0	165	0	187	2	189	0	0	2	2	0	0	0	0	356
Total Volume	6	599	0	605	0	894	11	905	12	0	13	25	0	0	0	0	1535
% App. Total	1	99	0		0	98.8	1.2		48	0	52		0	0	0		
PHF	.300	.851	.000	.859	.000	.909	.550	.905	.600	.000	.464	.625	.000	.000	.000	.000	.880

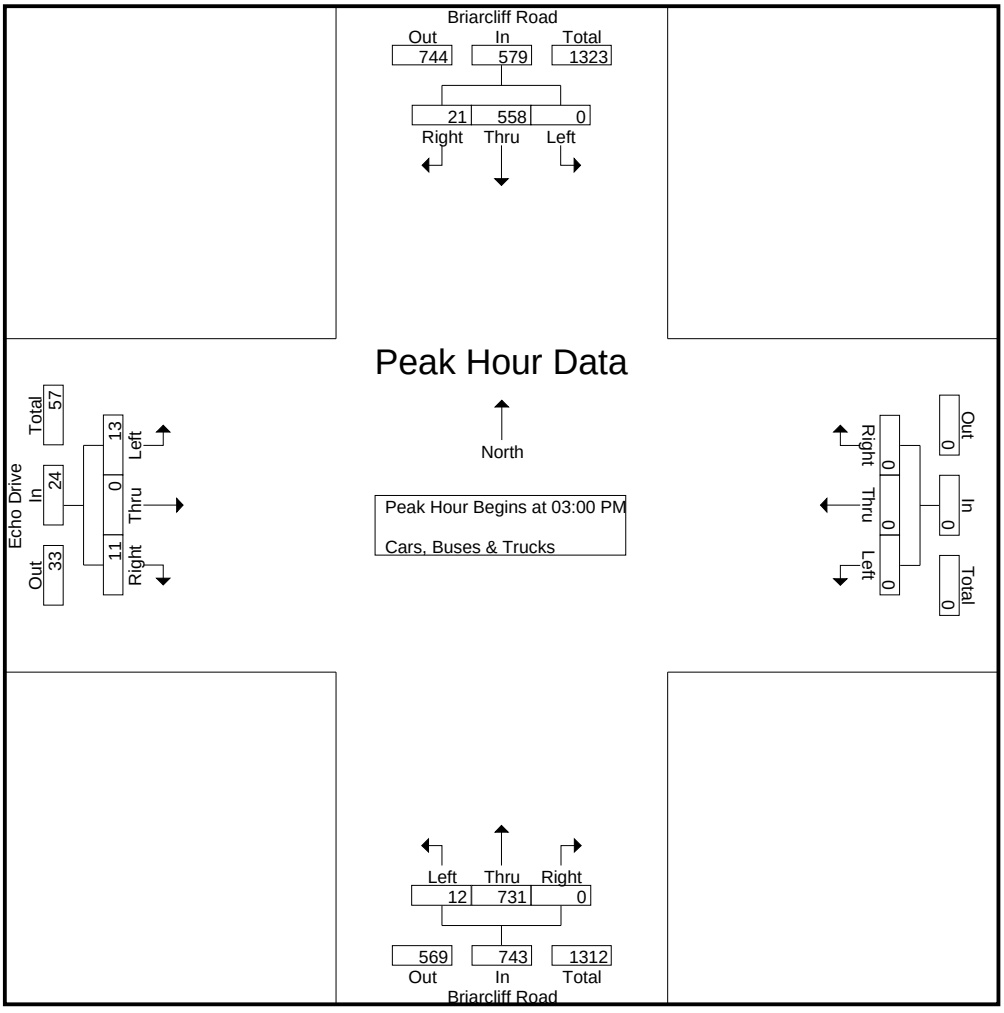


A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

File Name : 20180212
Site Code : 20180212
Start Date : 9/26/2018
Page No : 3

	Briarcliff Road Northbound				Briarcliff Road Southbound				Echo Drive Eastbound				Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	**5**	139	0	144	0	138	4	142	1	0	0	1	0	0	0	0	287
03:15 PM	3	196	0	199	0	123	6	129	3	0	3	6	0	0	0	0	334
03:30 PM	3	**208**	0	**211**	0	**149**	**8**	**157**	**6**	0	**6**	**12**	0	0	0	0	**380**
03:45 PM	1	188	0	189	0	148	3	151	3	0	2	5	0	0	0	0	345
Total Volume	12	731	0	743	0	558	21	579	13	0	11	24	0	0	0	0	1346
% App. Total	1.6	98.4	0		0	96.4	3.6		54.2	0	45.8		0	0	0		
PHF	.600	.879	.000	.880	.000	.936	.656	.922	.542	.000	.458	.500	.000	.000	.000	.000	.886

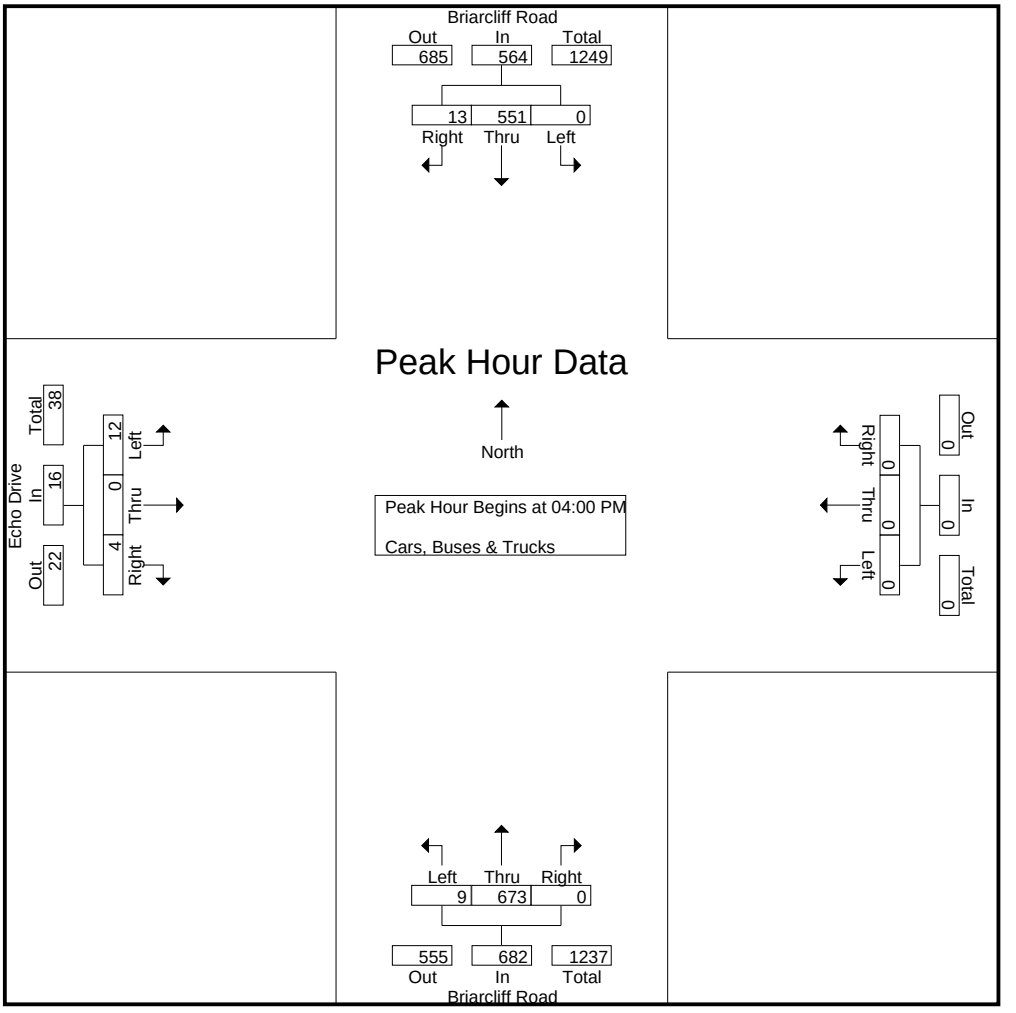


A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

File Name : 20180212
Site Code : 20180212
Start Date : 9/26/2018
Page No : 4

	Briarcliff Road Northbound				Briarcliff Road Southbound				Echo Drive Eastbound				Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:00 PM																	
04:00 PM	**5**	**190**	0	**195**	0	**145**	**7**	**152**	3	0	**3**	**6**	0	0	0	0	**353**
04:15 PM	1	152	0	153	0	135	6	141	**5**	0	1	6	0	0	0	0	300
04:30 PM	1	175	0	176	0	134	0	134	3	0	0	3	0	0	0	0	313
04:45 PM	2	156	0	158	0	137	0	137	1	0	0	1	0	0	0	0	296
Total Volume	9	673	0	682	0	551	13	564	12	0	4	16	0	0	0	0	1262
% App. Total	1.3	98.7	0		0	97.7	2.3		75	0	25		0	0	0		
PHF	.450	.886	.000	.874	.000	.950	.464	.928	.600	.000	.333	.667	.000	.000	.000	.000	.894



A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

TMC Data
Briarcliff Road at Briarlake Road
07-09am - 03-06pm

File Name : 20180213
Site Code : 20180213
Start Date : 9/25/2018
Page No : 1

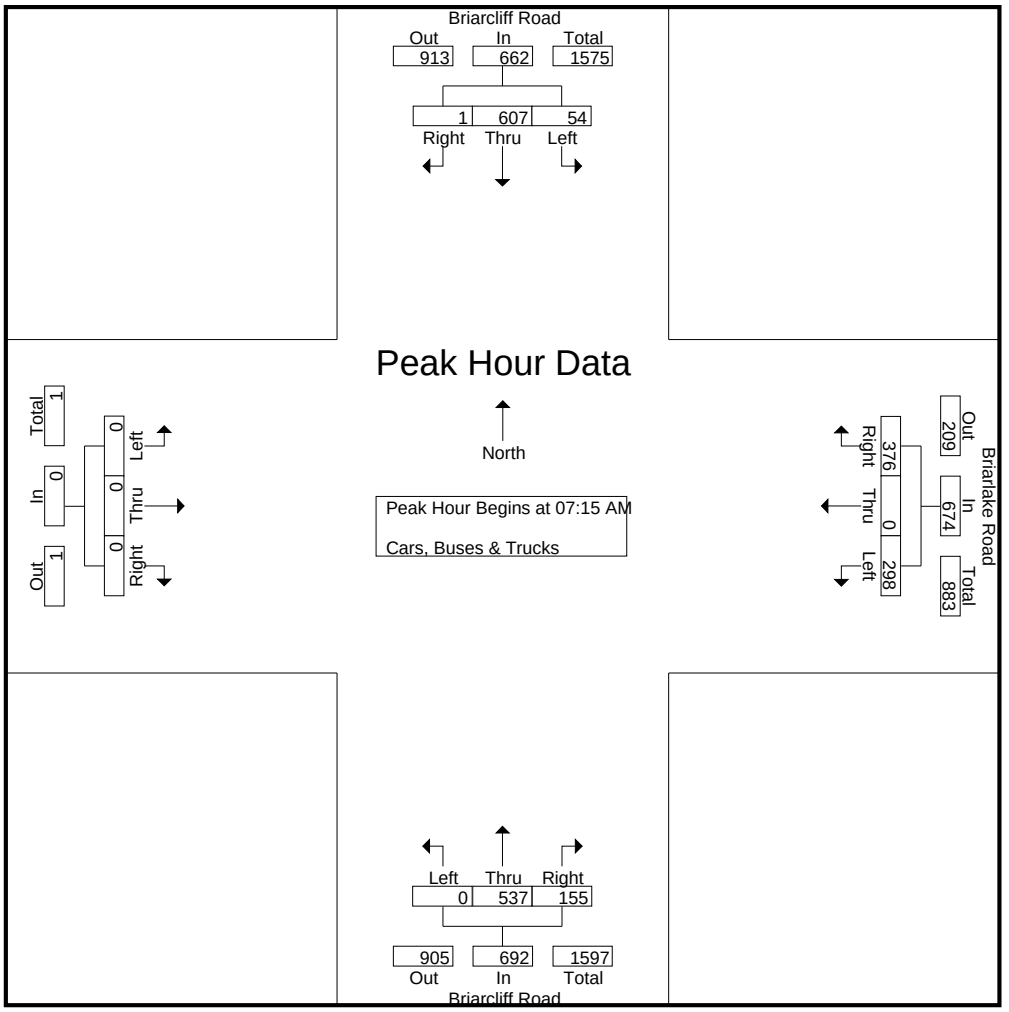
Groups Printed- Cars, Buses & Trucks

	Briarcliff Road Northbound				Briarcliff Road Southbound				Eastbound				Briarlake Road Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	93	29	122	23	122	0	145	0	0	0	0	44	0	97	141	408
07:15 AM	0	105	29	134	9	154	0	163	0	0	0	0	64	0	102	166	463
07:30 AM	0	137	32	169	11	170	1	182	0	0	0	0	76	0	86	162	513
07:45 AM	0	154	41	195	16	148	0	164	0	0	0	0	98	0	74	172	531
Total	0	489	131	620	59	594	1	654	0	0	0	0	282	0	359	641	1915
08:00 AM	0	141	53	194	18	135	0	153	0	0	0	0	60	0	114	174	521
08:15 AM	0	105	19	124	23	97	0	120	0	0	0	0	34	0	114	148	392
08:30 AM	0	65	18	83	16	84	0	100	0	0	0	0	25	0	119	144	327
08:45 AM	0	73	24	97	36	111	0	147	0	0	0	0	28	0	110	138	382
Total	0	384	114	498	93	427	0	520	0	0	0	0	147	0	457	604	1622
*** BREAK ***																	
03:00 PM	0	121	26	147	46	122	0	168	0	0	0	0	24	0	37	61	376
03:15 PM	0	149	49	198	54	97	0	151	0	0	0	0	28	0	41	69	418
03:30 PM	0	126	77	203	93	124	0	217	0	0	0	0	25	0	29	54	474
03:45 PM	0	125	63	188	74	113	0	187	0	0	0	0	39	0	44	83	458
Total	0	521	215	736	267	456	0	723	0	0	0	0	116	0	151	267	1726
04:00 PM	0	123	62	185	101	84	0	185	0	0	0	0	28	0	31	59	429
04:15 PM	0	95	48	143	97	122	0	219	0	0	0	0	26	0	42	68	430
04:30 PM	0	114	40	154	110	99	0	209	0	0	0	0	27	0	22	49	412
04:45 PM	0	121	59	180	111	109	0	220	0	0	0	0	26	0	37	63	463
Total	0	453	209	662	419	414	0	833	0	0	0	0	107	0	132	239	1734
05:00 PM	0	117	48	165	110	96	0	206	0	0	0	0	25	0	27	52	423
05:15 PM	0	118	54	172	96	117	0	213	0	0	0	0	24	0	33	57	442
05:30 PM	0	89	53	142	118	96	0	214	0	0	0	0	25	0	31	56	412
05:45 PM	0	118	45	163	95	130	0	225	0	0	0	0	39	0	36	75	463
Total	0	442	200	642	419	439	0	858	0	0	0	0	113	0	127	240	1740
Grand Total	0	2289	869	3158	1257	2330	1	3588	0	0	0	0	765	0	1226	1991	8737
Apprch %	0	72.5	27.5		35	64.9	0		0	0	0		38.4	0	61.6		
Total %	0	26.2	9.9	36.1	14.4	26.7	0	41.1	0	0	0	0	8.8	0	14	22.8	

A&R Engineering, Inc.
2160 Kingston Court, Suite O
Marietta, GA 30067

File Name : 20180213
Site Code : 20180213
Start Date : 9/25/2018
Page No : 2

	Briarcliff Road Northbound				Briarcliff Road Southbound				Eastbound				Briarlake Road Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 02:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	105	29	134	9	154	0	163	0	0	0	0	64	0	102	166	463
07:30 AM	0	137	32	169	11	**170**	**1**	**182**	0	0	0	0	76	0	86	162	513
07:45 AM	0	**154**	41	**195**	16	148	0	164	0	0	0	0	**98**	0	74	172	**531**
08:00 AM	0	141	**53**	194	**18**	135	0	153	0	0	0	0	60	0	**114**	**174**	521
Total Volume	0	537	155	692	54	607	1	662	0	0	0	0	298	0	376	674	2028
% App. Total	0	77.6	22.4		8.2	91.7	0.2		0	0	0		44.2	0	55.8		
PHF	.000	.872	.731	.887	.750	.893	.250	.909	.000	.000	.000	.000	.760	.000	.825	.968	.955

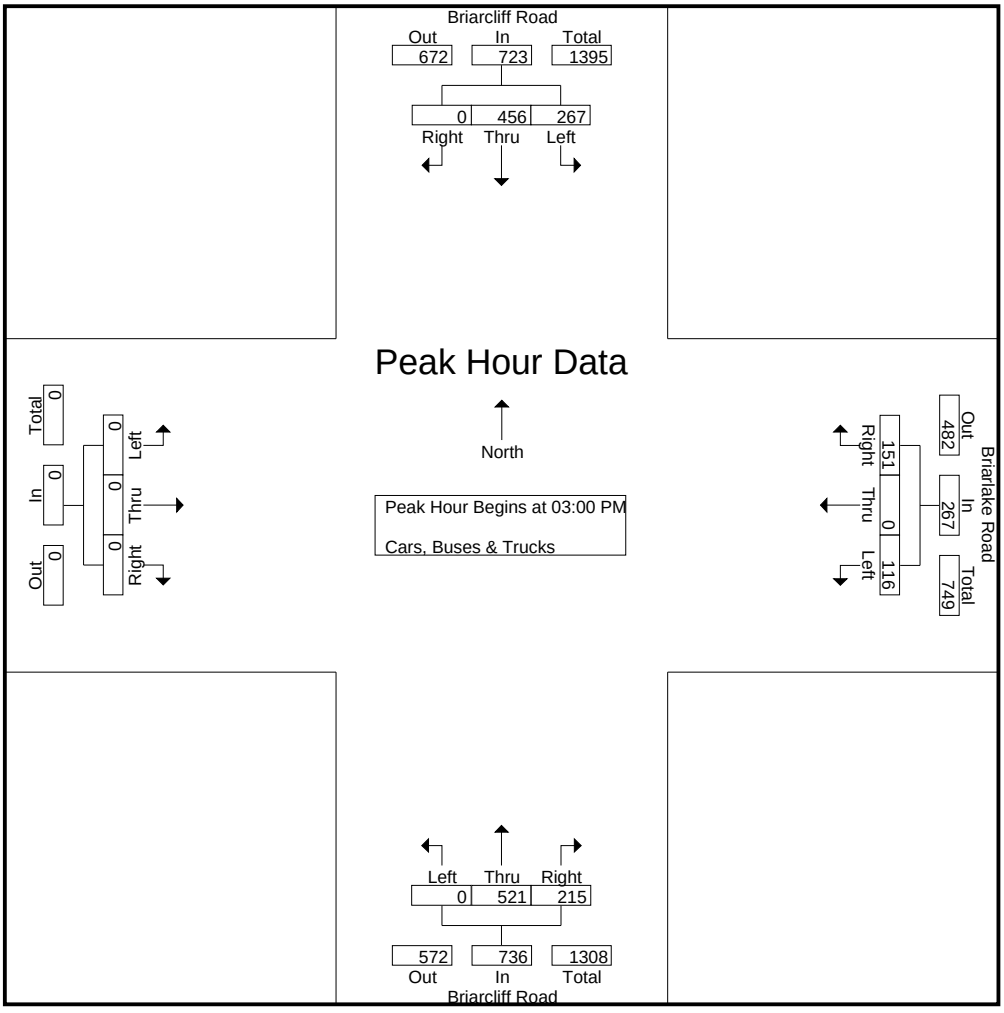


A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

File Name : 20180213
Site Code : 20180213
Start Date : 9/25/2018
Page No : 3

	Briarcliff Road Northbound				Briarcliff Road Southbound				Eastbound				Briarlake Road Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	0	121	26	147	46	122	0	168	0	0	0	0	24	0	37	61	376
03:15 PM	0	**149**	49	198	54	97	0	151	0	0	0	0	28	0	41	69	418
03:30 PM	0	126	**77**	**203**	**93**	**124**	0	**217**	0	0	0	0	25	0	29	54	**474**
03:45 PM	0	125	63	188	74	113	0	187	0	0	0	0	**39**	0	**44**	**83**	458
Total Volume	0	521	215	736	267	456	0	723	0	0	0	0	116	0	151	267	1726
% App. Total	0	70.8	29.2		36.9	63.1	0		0	0	0		43.4	0	56.6		
PHF	.000	.874	.698	.906	.718	.919	.000	.833	.000	.000	.000	.000	.744	.000	.858	.804	.910

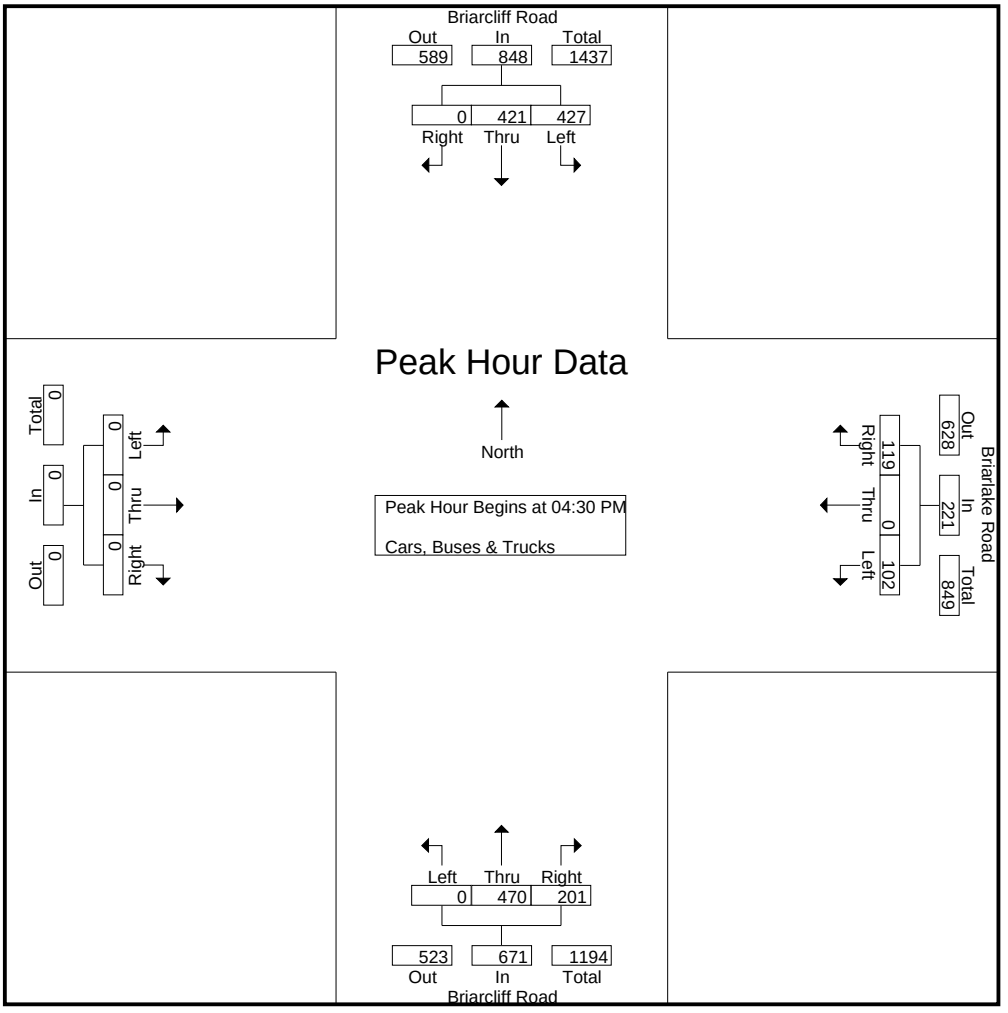


A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

File Name : 20180213
Site Code : 20180213
Start Date : 9/25/2018
Page No : 4

	Briarcliff Road Northbound				Briarcliff Road Southbound				Eastbound				Briarlake Road Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	0	114	40	154	110	99	0	209	0	0	0	0	**27**	0	22	49	412
04:45 PM	0	**121**	**59**	**180**	**111**	109	0	**220**	0	0	0	0	26	0	**37**	**63**	**463**
05:00 PM	0	117	48	165	110	96	0	206	0	0	0	0	25	0	27	52	423
05:15 PM	0	118	54	172	96	**117**	0	213	0	0	0	0	24	0	33	57	442
Total Volume	0	470	201	671	427	421	0	848	0	0	0	0	102	0	119	221	1740
% App. Total	0	70	30		50.4	49.6	0		0	0	0		46.2	0	53.8		
PHF	.000	.971	.852	.932	.962	.900	.000	.964	.000	.000	.000	.000	.944	.000	.804	.877	.940



A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

TMC Data
Briarcliff Rd @ Shallowford Rd

7-9 am | 3-6 pm

File Name : 20180214
Site Code : 20180214
Start Date : 9/25/2018
Page No : 1

Groups Printed- Cars - Trucks - Buses

	Briarcliff Rd NE Northbound				Briarcliff Rd NE Southbound				Shallowford Rd Eastbound				Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	126	29	0	155	0	69	154	223	17	0	53	70	0	0	0	0	448
07:15 AM	149	38	0	187	0	81	174	255	42	0	57	99	0	0	0	0	541
07:30 AM	170	54	0	224	0	84	181	265	43	0	191	234	0	0	0	0	723
07:45 AM	145	41	0	186	0	69	203	272	70	0	92	162	0	0	0	0	620
Total	590	162	0	752	0	303	712	1015	172	0	393	565	0	0	0	0	2332
08:00 AM	180	62	0	242	0	47	231	278	38	0	47	85	0	0	0	0	605
08:15 AM	188	42	0	230	0	37	290	327	41	0	39	80	0	0	0	0	637
08:30 AM	187	18	0	205	0	47	220	267	38	0	41	79	0	0	0	0	551
08:45 AM	176	15	0	191	0	53	230	283	48	0	61	109	0	0	0	0	583
Total	731	137	0	868	0	184	971	1155	165	0	188	353	0	0	0	0	2376
*** BREAK ***																	
03:00 PM	57	68	0	125	0	50	66	116	121	0	89	210	0	0	0	0	451
03:15 PM	80	86	0	166	0	34	73	107	136	0	116	252	0	0	0	0	525
03:30 PM	77	77	0	154	0	52	70	122	148	0	121	269	0	0	0	0	545
03:45 PM	74	84	0	158	0	38	51	89	172	0	145	317	0	0	0	0	564
Total	288	315	0	603	0	174	260	434	577	0	471	1048	0	0	0	0	2085
04:00 PM	63	80	0	143	0	38	64	102	193	0	137	330	0	0	0	0	575
04:15 PM	53	66	0	119	0	44	74	118	212	0	156	368	0	0	0	0	605
04:30 PM	54	55	0	109	0	47	74	121	234	0	170	404	0	0	0	0	634
04:45 PM	62	69	0	131	0	33	62	95	230	0	176	406	0	0	0	0	632
Total	232	270	0	502	0	162	274	436	869	0	639	1508	0	0	0	0	2446
05:00 PM	61	70	0	131	0	39	55	94	234	0	184	418	0	0	0	0	643
05:15 PM	57	84	0	141	0	38	81	119	215	0	159	374	0	0	0	0	634
05:30 PM	56	62	0	118	0	25	49	74	232	0	181	413	0	0	0	0	605
05:45 PM	52	83	0	135	0	47	64	111	241	0	172	413	0	0	0	0	659
Total	226	299	0	525	0	149	249	398	922	0	696	1618	0	0	0	0	2541
Grand Total	2067	1183	0	3250	0	972	2466	3438	2705	0	2387	5092	0	0	0	0	11780
Apprch %	63.6	36.4	0		0	28.3	71.7		53.1	0	46.9		0	0	0		
Total %	17.5	10	0	27.6	0	8.3	20.9	29.2	23	0	20.3	43.2	0	0	0	0	
Cars	1990	1147	0	3137	0	943	2433	3376	2664	0	2309	4973	0	0	0	0	11486
% Cars	96.3	97	0	96.5	0	97	98.7	98.2	98.5	0	96.7	97.7	0	0	0	0	97.5
Trucks	22	13	0	35	0	6	18	24	22	0	22	44	0	0	0	0	103
% Trucks	1.1	1.1	0	1.1	0	0.6	0.7	0.7	0.8	0	0.9	0.9	0	0	0	0	0.9
Buses	55	23	0	78	0	23	15	38	19	0	56	75	0	0	0	0	191
% Buses	2.7	1.9	0	2.4	0	2.4	0.6	1.1	0.7	0	2.3	1.5	0	0	0	0	1.6

A&R Engineering, Inc.

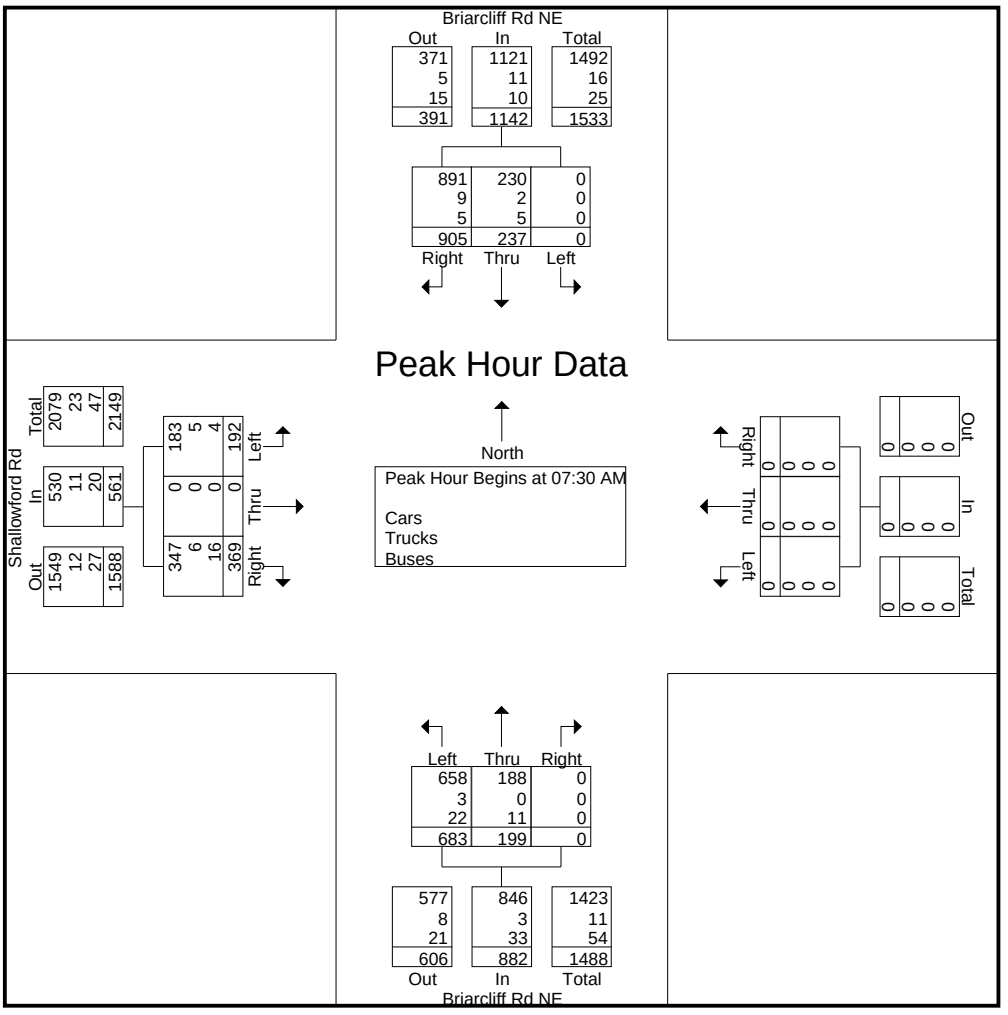
2160 Kingston Court, Suite O
Marietta, GA 30067

TMC Data
Briarcliff Rd @ Shallowford Rd

7-9 am | 3-6 pm

File Name : 20180214
Site Code : 20180214
Start Date : 9/25/2018
Page No : 2

	Briarcliff Rd NE Northbound				Briarcliff Rd NE Southbound				Shallowford Rd Eastbound				Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 02:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:30 AM																	
07:30 AM	170	54	0	224	0	**84**	181	265	43	0	**191**	**234**	0	0	0	0	**723**
07:45 AM	145	41	0	186	0	69	203	272	**70**	0	92	162	0	0	0	0	620
08:00 AM	180	**62**	0	**242**	0	47	231	278	38	0	47	85	0	0	0	0	605
08:15 AM	**188**	42	0	230	0	37	**290**	**327**	41	0	39	80	0	0	0	0	637
Total Volume	683	199	0	882	0	237	905	1142	192	0	369	561	0	0	0	0	2585
% App. Total	77.4	22.6	0		0	20.8	79.2		34.2	0	65.8		0	0	0		
PHF	.908	.802	.000	.911	.000	.705	.780	.873	.686	.000	.483	.599	.000	.000	.000	.000	.894
Cars	658	188	0	846	0	230	891	1121	183	0	347	530	0	0	0	0	2497
% Cars	96.3	94.5	0	95.9	0	97.0	98.5	98.2	95.3	0	94.0	94.5	0	0	0	0	96.6
Trucks	3	0	0	3	0	2	9	11	5	0	6	11	0	0	0	0	25
% Trucks	0.4	0	0	0.3	0	0.8	1.0	1.0	2.6	0	1.6	2.0	0	0	0	0	1.0
Buses	22	11	0	33	0	5	5	10	4	0	16	20	0	0	0	0	63
% Buses	3.2	5.5	0	3.7	0	2.1	0.6	0.9	2.1	0	4.3	3.6	0	0	0	0	2.4



A&R Engineering, Inc.

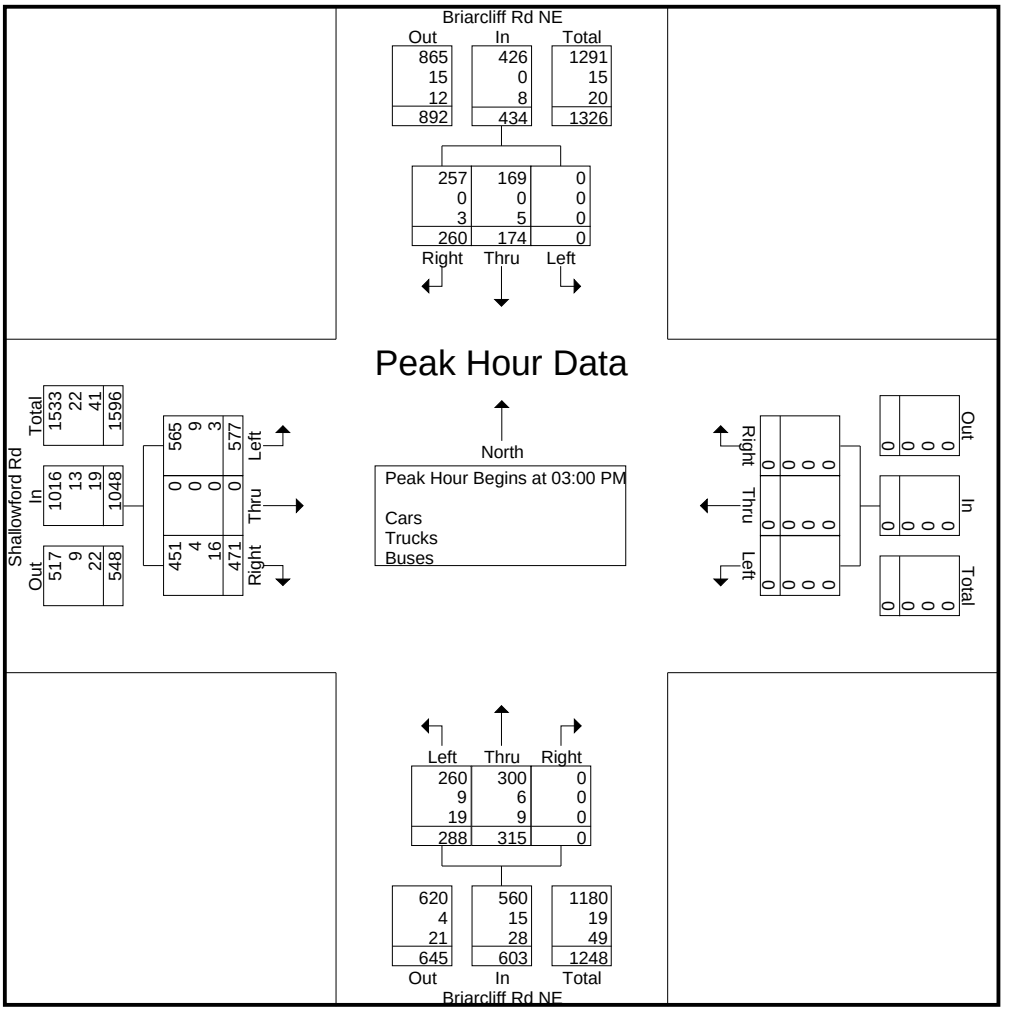
2160 Kingston Court, Suite O
Marietta, GA 30067

TMC Data
Briarcliff Rd @ Shallowford Rd

7-9 am | 3-6 pm

File Name : 20180214
Site Code : 20180214
Start Date : 9/25/2018
Page No : 3

	Briarcliff Rd NE Northbound				Briarcliff Rd NE Southbound				Shallowford Rd Eastbound				Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	57	68	0	125	0	50	66	116	121	0	89	210	0	0	0	0	451
03:15 PM	**80**	**86**	0	**166**	0	34	**73**	107	136	0	116	252	0	0	0	0	525
03:30 PM	77	77	0	154	0	**52**	70	**122**	148	0	121	269	0	0	0	0	545
03:45 PM	74	84	0	158	0	38	51	89	**172**	0	**145**	**317**	0	0	0	0	**564**
Total Volume	288	315	0	603	0	174	260	434	577	0	471	1048	0	0	0	0	2085
% App. Total	47.8	52.2	0		0	40.1	59.9		55.1	0	44.9		0	0	0		
PHF	.900	.916	.000	.908	.000	.837	.890	.889	.839	.000	.812	.826	.000	.000	.000	.000	.924
Cars	260	300	0	560	0	169	257	426	565	0	451	1016	0	0	0	0	2002
% Cars	90.3	95.2	0	92.9	0	97.1	98.8	98.2	97.9	0	95.8	96.9	0	0	0	0	96.0
Trucks	9	6	0	15	0	0	0	0	9	0	4	13	0	0	0	0	28
% Trucks	3.1	1.9	0	2.5	0	0	0	0	1.6	0	0.8	1.2	0	0	0	0	1.3
Buses	19	9	0	28	0	5	3	8	3	0	16	19	0	0	0	0	55
% Buses	6.6	2.9	0	4.6	0	2.9	1.2	1.8	0.5	0	3.4	1.8	0	0	0	0	2.6



A&R Engineering, Inc.

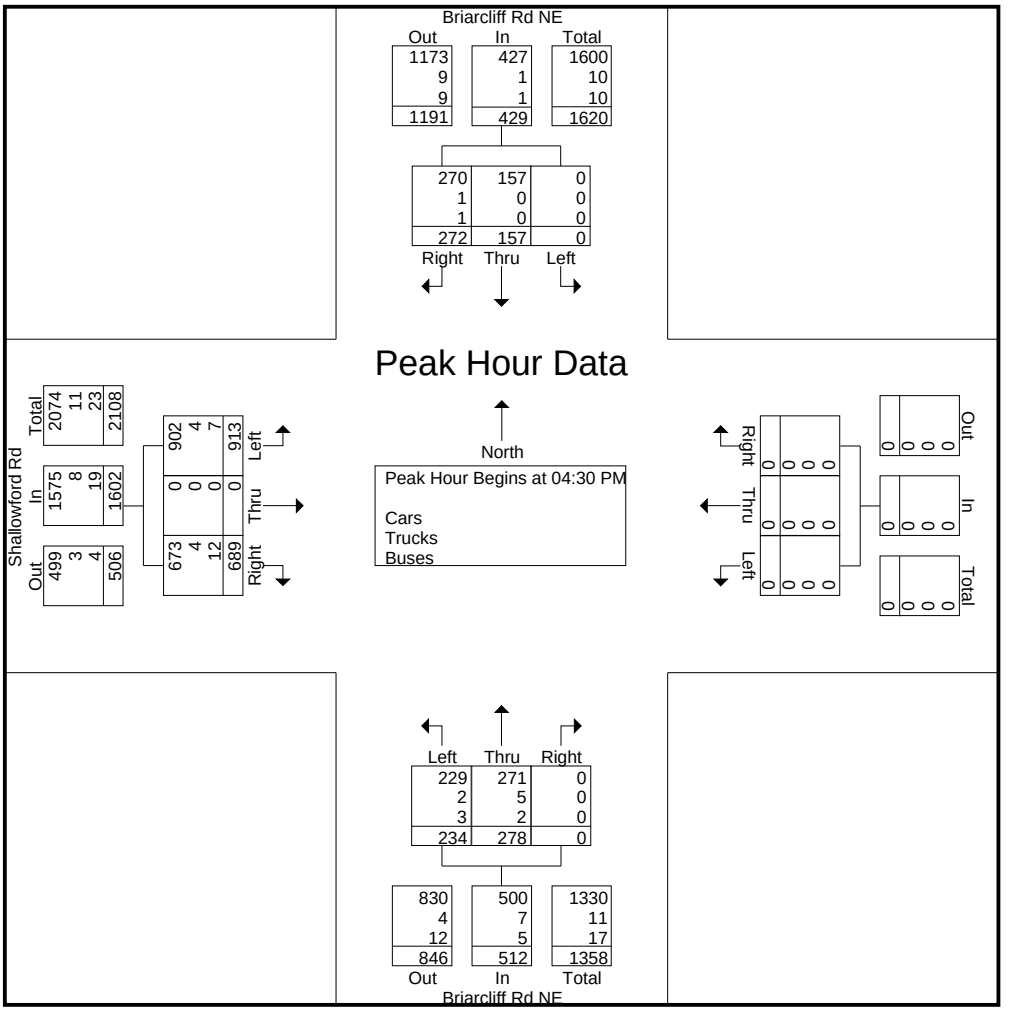
2160 Kingston Court, Suite O
Marietta, GA 30067

TMC Data
Briarcliff Rd @ Shallowford Rd

7-9 am | 3-6 pm

File Name : 20180214
Site Code : 20180214
Start Date : 9/25/2018
Page No : 4

	Briarcliff Rd NE Northbound				Briarcliff Rd NE Southbound				Shallowford Rd Eastbound				Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	54	55	0	109	0	**47**	74	**121**	**234**	0	170	404	0	0	0	0	634
04:45 PM	**62**	69	0	131	0	33	62	95	230	0	176	406	0	0	0	0	632
05:00 PM	61	70	0	131	0	39	55	94	234	0	**184**	**418**	0	0	0	0	**643**
05:15 PM	57	**84**	0	**141**	0	38	**81**	119	215	0	159	374	0	0	0	0	634
Total Volume	234	278	0	512	0	157	272	429	913	0	689	1602	0	0	0	0	2543
% App. Total	45.7	54.3	0		0	36.6	63.4		57	0	43		0	0	0		
PHF	.944	.827	.000	.908	.000	.835	.840	.886	.975	.000	.936	.958	.000	.000	.000	.000	.989
Cars	229	271	0	500	0	157	270	427	902	0	673	1575	0	0	0	0	2502
% Cars	97.9	97.5	0	97.7	0	100	99.3	99.5	98.8	0	97.7	98.3	0	0	0	0	98.4
Trucks	2	5	0	7	0	0	1	1	4	0	4	8	0	0	0	0	16
% Trucks	0.9	1.8	0	1.4	0	0	0.4	0.2	0.4	0	0.6	0.5	0	0	0	0	0.6
Buses	3	2	0	5	0	0	1	1	7	0	12	19	0	0	0	0	25
% Buses	1.3	0.7	0	1.0	0	0	0.4	0.2	0.8	0	1.7	1.2	0	0	0	0	1.0



A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

TMC Data
Oak Grove Road at Cadilac Drive
07-09am - 03-06pm

File Name : 20180215
Site Code : 20180215
Start Date : 9/25/2018
Page No : 1

Groups Printed- Cars, Buses & Trucks

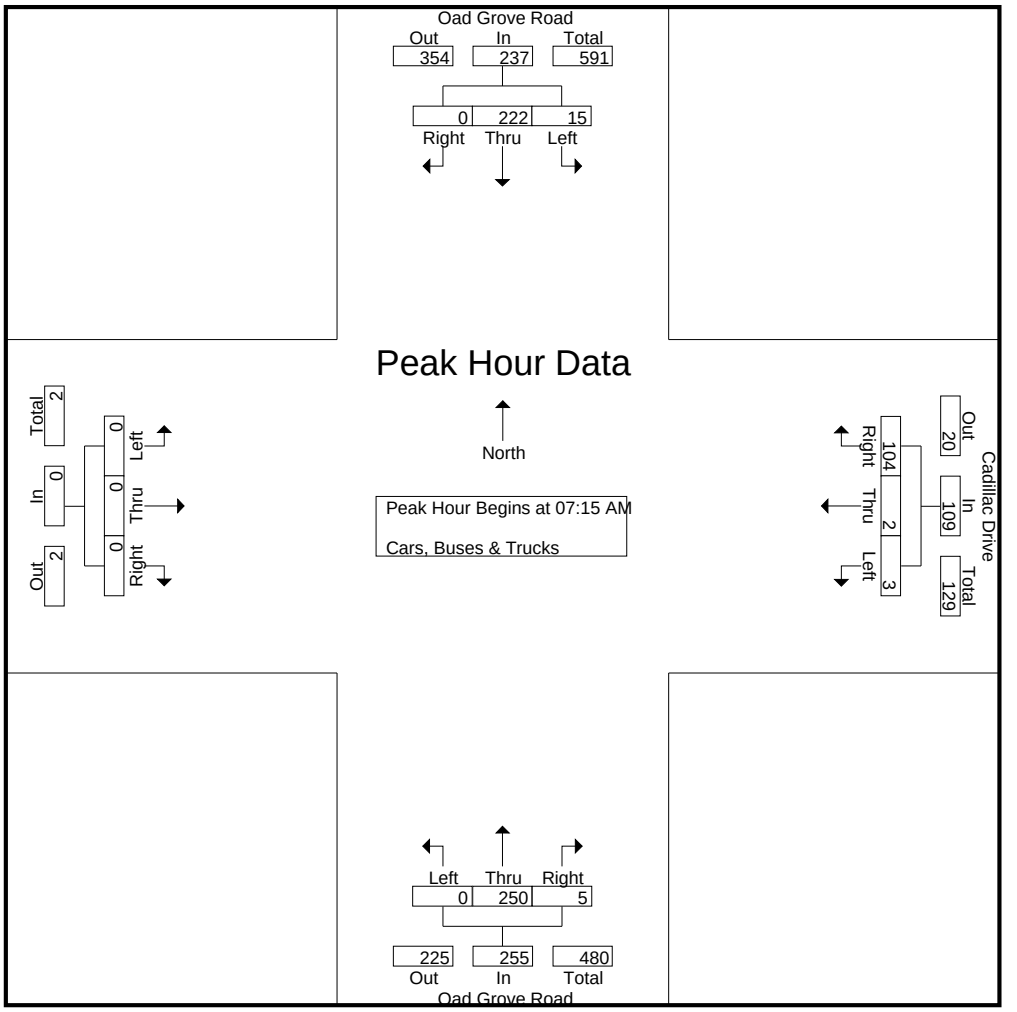
	Oad Grove Road Northbound				Oad Grove Road Southbound				Eastbound				Cadillac Drive Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	0	42	0	42	1	53	0	54	0	0	0	0	0	0	9	9	105
07:15 AM	0	83	1	84	2	65	0	67	0	0	0	0	0	0	38	38	189
07:30 AM	0	82	4	86	6	43	0	49	0	0	0	0	2	2	45	49	184
07:45 AM	0	37	0	37	4	49	0	53	0	0	0	0	0	0	11	11	101
Total	0	244	5	249	13	210	0	223	0	0	0	0	2	2	103	107	579
08:00 AM	0	48	0	48	3	65	0	68	0	0	0	0	1	0	10	11	127
08:15 AM	0	37	0	37	3	56	0	59	0	0	0	0	0	0	6	6	102
08:30 AM	0	50	0	50	3	41	0	44	0	0	0	0	0	0	2	2	96
08:45 AM	0	45	0	45	1	60	0	61	0	0	0	0	0	0	4	4	110
Total	0	180	0	180	10	222	0	232	0	0	0	0	1	0	22	23	435
*** BREAK ***																	
03:00 PM	0	55	2	57	4	41	0	45	0	0	0	0	1	0	3	4	106
03:15 PM	0	40	6	46	2	68	0	70	0	0	0	0	6	0	1	7	123
03:30 PM	0	55	3	58	3	75	0	78	0	0	0	0	4	0	8	12	148
03:45 PM	0	46	1	47	6	65	0	71	0	0	0	0	1	0	5	6	124
Total	0	196	12	208	15	249	0	264	0	0	0	0	12	0	17	29	501
04:00 PM	0	52	1	53	3	64	0	67	0	0	0	0	0	0	4	4	124
04:15 PM	0	39	0	39	6	65	0	71	0	0	0	0	1	0	4	5	115
04:30 PM	0	37	2	39	2	53	0	55	0	0	0	0	0	0	2	2	96
04:45 PM	0	47	0	47	6	78	0	84	0	0	0	0	0	0	4	4	135
Total	0	175	3	178	17	260	0	277	0	0	0	0	1	0	14	15	470
05:00 PM	0	61	0	61	1	75	0	76	0	0	0	0	0	0	2	2	139
05:15 PM	0	56	0	56	2	56	0	58	0	0	0	0	0	0	4	4	118
05:30 PM	0	47	0	47	7	82	0	89	0	0	0	0	0	0	3	3	139
05:45 PM	0	70	0	70	5	70	0	75	0	0	0	0	1	0	5	6	151
Total	0	234	0	234	15	283	0	298	0	0	0	0	1	0	14	15	547
Grand Total	0	1029	20	1049	70	1224	0	1294	0	0	0	0	17	2	170	189	2532
Apprch %	0	98.1	1.9		5.4	94.6	0		0	0	0		9	1.1	89.9		
Total %	0	40.6	0.8	41.4	2.8	48.3	0	51.1	0	0	0	0	0.7	0.1	6.7	7.5	

A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

File Name : 20180215
Site Code : 20180215
Start Date : 9/25/2018
Page No : 2

	Oad Grove Road Northbound				Oad Grove Road Southbound				Eastbound				Cadillac Drive Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 02:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	0	**83**	1	84	2	**65**	0	67	0	0	0	0	0	0	38	38	**189**
07:30 AM	0	82	**4**	**86**	**6**	43	0	49	0	0	0	0	**2**	**2**	**45**	**49**	184
07:45 AM	0	37	0	37	4	49	0	53	0	0	0	0	0	0	11	11	101
08:00 AM	0	48	0	48	3	65	0	**68**	0	0	0	0	1	0	10	11	127
Total Volume	0	250	5	255	15	222	0	237	0	0	0	0	3	2	104	109	601
% App. Total	0	98	2		6.3	93.7	0		0	0	0		2.8	1.8	95.4		
PHF	.000	.753	.313	.741	.625	.854	.000	.871	.000	.000	.000	.000	.375	.250	.578	.556	.795

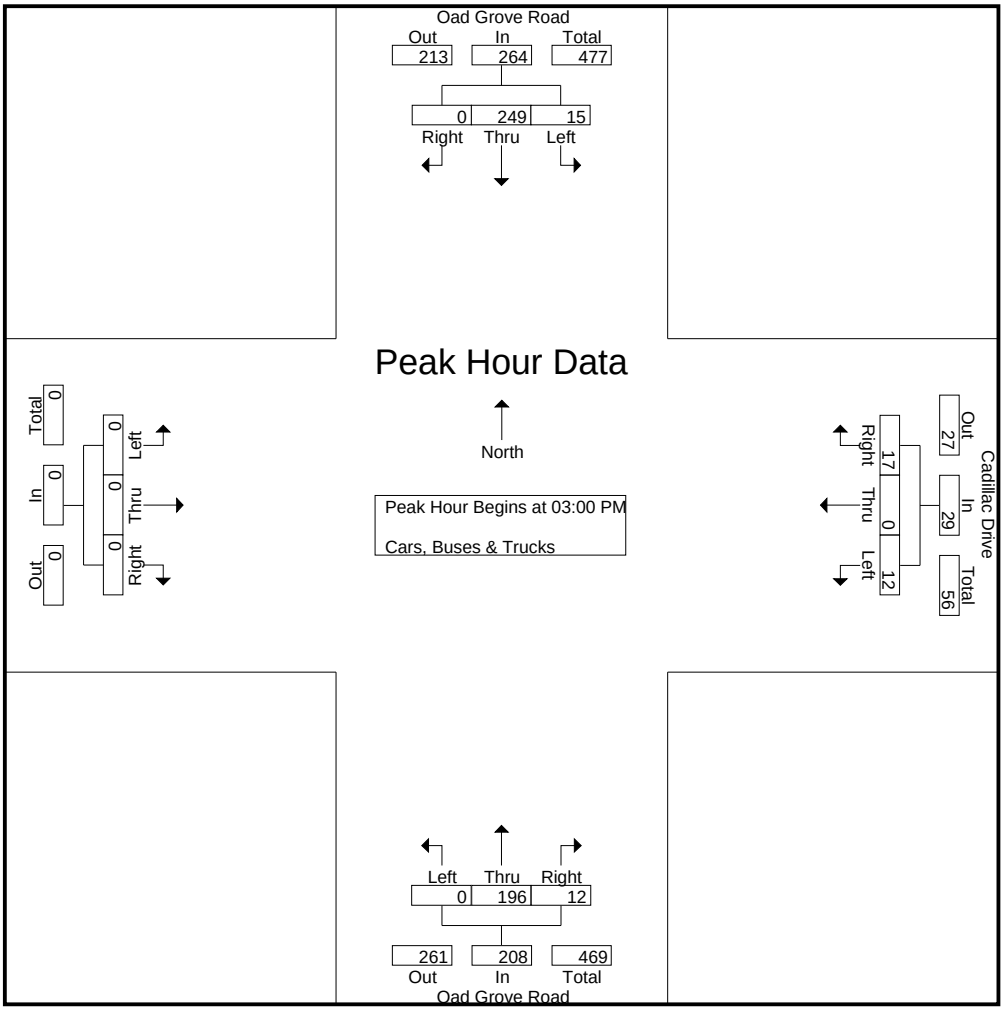


A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

File Name : 20180215
Site Code : 20180215
Start Date : 9/25/2018
Page No : 3

	Oad Grove Road Northbound				Oad Grove Road Southbound				Eastbound				Cadillac Drive Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	0	**55**	2	57	4	41	0	45	0	0	0	0	1	0	3	4	106
03:15 PM	0	40	**6**	46	2	68	0	70	0	0	0	0	**6**	0	1	7	123
03:30 PM	0	55	3	**58**	3	**75**	0	**78**	0	0	0	0	4	0	**8**	**12**	**148**
03:45 PM	0	46	1	47	**6**	65	0	71	0	0	0	0	1	0	5	6	124
Total Volume	0	196	12	208	15	249	0	264	0	0	0	0	12	0	17	29	501
% App. Total	0	94.2	5.8		5.7	94.3	0		0	0	0		41.4	0	58.6		
PHF	.000	.891	.500	.897	.625	.830	.000	.846	.000	.000	.000	.000	.500	.000	.531	.604	.846

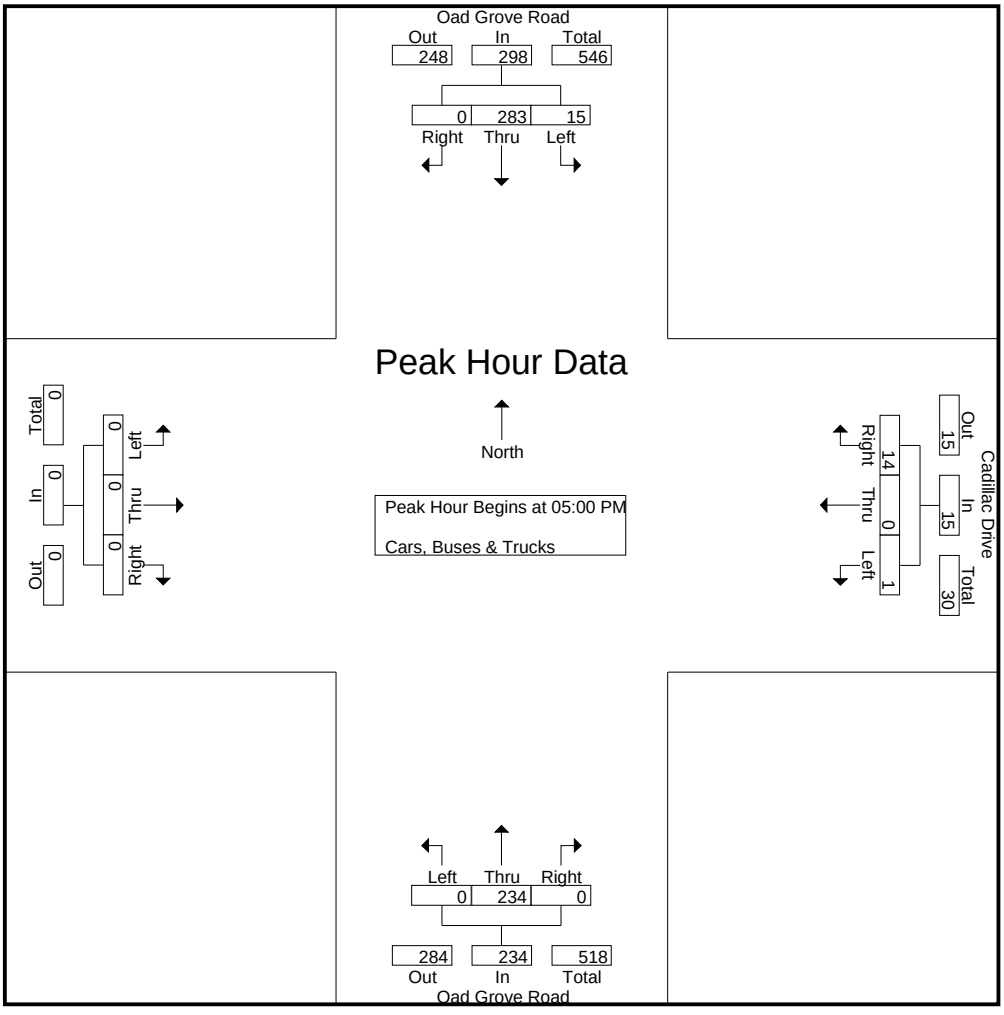


A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

File Name : 20180215
Site Code : 20180215
Start Date : 9/25/2018
Page No : 4

	Oad Grove Road Northbound				Oad Grove Road Southbound				Eastbound				Cadillac Drive Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	0	61	0	61	1	75	0	76	0	0	0	0	0	0	2	2	139
05:15 PM	0	56	0	56	2	56	0	58	0	0	0	0	0	0	4	4	118
05:30 PM	0	47	0	47	**7**	**82**	0	**89**	0	0	0	0	0	0	3	3	139
05:45 PM	0	**70**	0	**70**	5	70	0	75	0	0	0	0	**1**	0	**5**	**6**	**151**
Total Volume	0	234	0	234	15	283	0	298	0	0	0	0	1	0	14	15	547
% App. Total	0	100	0		5	95	0		0	0	0		6.7	0	93.3		
PHF	.000	.836	.000	.836	.536	.863	.000	.837	.000	.000	.000	.000	.250	.000	.700	.625	.906



A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

TMC Data
Oak Grove Rd @ Fairoaks Rd

7-9 am | 3-6 pm

File Name : 20180216
Site Code : 20180216
Start Date : 9/25/2018
Page No : 1

Groups Printed- Cars - Trucks - Buses

	Oak Grove Rd Northbound				Oak Grove Rd Southbound				Fairoaks Rd Eastbound				Fairoaks Rd Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
07:00 AM	1	47	1	49	9	43	5	57	5	3	2	10	9	7	79	95	211
07:15 AM	3	82	4	89	10	73	2	85	5	8	0	13	17	11	84	112	299
07:30 AM	3	53	10	66	29	78	8	115	9	6	5	20	7	30	77	114	315
07:45 AM	6	46	4	56	41	87	6	134	1	9	4	14	13	43	86	142	346
Total	13	228	19	260	89	281	21	391	20	26	11	57	46	91	326	463	1171
08:00 AM	7	39	6	52	51	52	3	106	4	12	4	20	13	35	91	139	317
08:15 AM	3	30	9	42	42	47	5	94	5	7	2	14	7	31	77	115	265
08:30 AM	3	46	6	55	17	45	5	67	1	3	5	9	11	17	77	105	236
08:45 AM	1	39	8	48	12	62	9	83	6	6	8	20	18	13	105	136	287
Total	14	154	29	197	122	206	22	350	16	28	19	63	49	96	350	495	1105
*** BREAK ***																	
03:00 PM	1	52	12	65	39	47	0	86	0	1	0	1	4	4	28	36	188
03:15 PM	1	36	10	47	62	45	3	110	1	0	1	2	6	3	24	33	192
03:30 PM	3	49	8	60	67	70	7	144	3	6	2	11	7	3	23	33	248
03:45 PM	2	49	18	69	98	57	3	158	7	11	4	22	4	3	25	32	281
Total	7	186	48	241	266	219	13	498	11	18	7	36	21	13	100	134	909
04:00 PM	1	38	9	48	67	56	5	128	2	8	3	13	8	7	32	47	236
04:15 PM	3	43	10	56	79	64	2	145	2	8	4	14	7	4	13	24	239
04:30 PM	4	51	23	78	94	74	6	174	3	11	2	16	8	6	21	35	303
04:45 PM	5	52	20	77	93	62	3	158	4	9	4	17	14	12	24	50	302
Total	13	184	62	259	333	256	16	605	11	36	13	60	37	29	90	156	1080
05:00 PM	2	61	11	74	90	72	4	166	10	14	7	31	5	9	16	30	301
05:15 PM	2	67	13	82	86	56	3	145	8	11	9	28	10	4	23	37	292
05:30 PM	6	47	11	64	93	81	3	177	7	16	9	32	10	10	24	44	317
05:45 PM	4	64	16	84	69	60	2	131	9	22	5	36	4	4	26	34	285
Total	14	239	51	304	338	269	12	619	34	63	30	127	29	27	89	145	1195
Grand Total	61	991	209	1261	1148	1231	84	2463	92	171	80	343	182	256	955	1393	5460
Apprch %	4.8	78.6	16.6		46.6	50	3.4		26.8	49.9	23.3		13.1	18.4	68.6		
Total %	1.1	18.2	3.8	23.1	21	22.5	1.5	45.1	1.7	3.1	1.5	6.3	3.3	4.7	17.5	25.5	
Cars	59	980	205	1244	1131	1195	82	2408	86	167	80	333	182	251	947	1380	5365
% Cars	96.7	98.9	98.1	98.7	98.5	97.1	97.6	97.8	93.5	97.7	100	97.1	100	98	99.2	99.1	98.3
Trucks	0	4	2	6	8	2	1	11	5	3	0	8	0	4	5	9	34
% Trucks	0	0.4	1	0.5	0.7	0.2	1.2	0.4	5.4	1.8	0	2.3	0	1.6	0.5	0.6	0.6
Buses	2	7	2	11	9	34	1	44	1	1	0	2	0	1	3	4	61
% Buses	3.3	0.7	1	0.9	0.8	2.8	1.2	1.8	1.1	0.6	0	0.6	0	0.4	0.3	0.3	1.1

A&R Engineering, Inc.

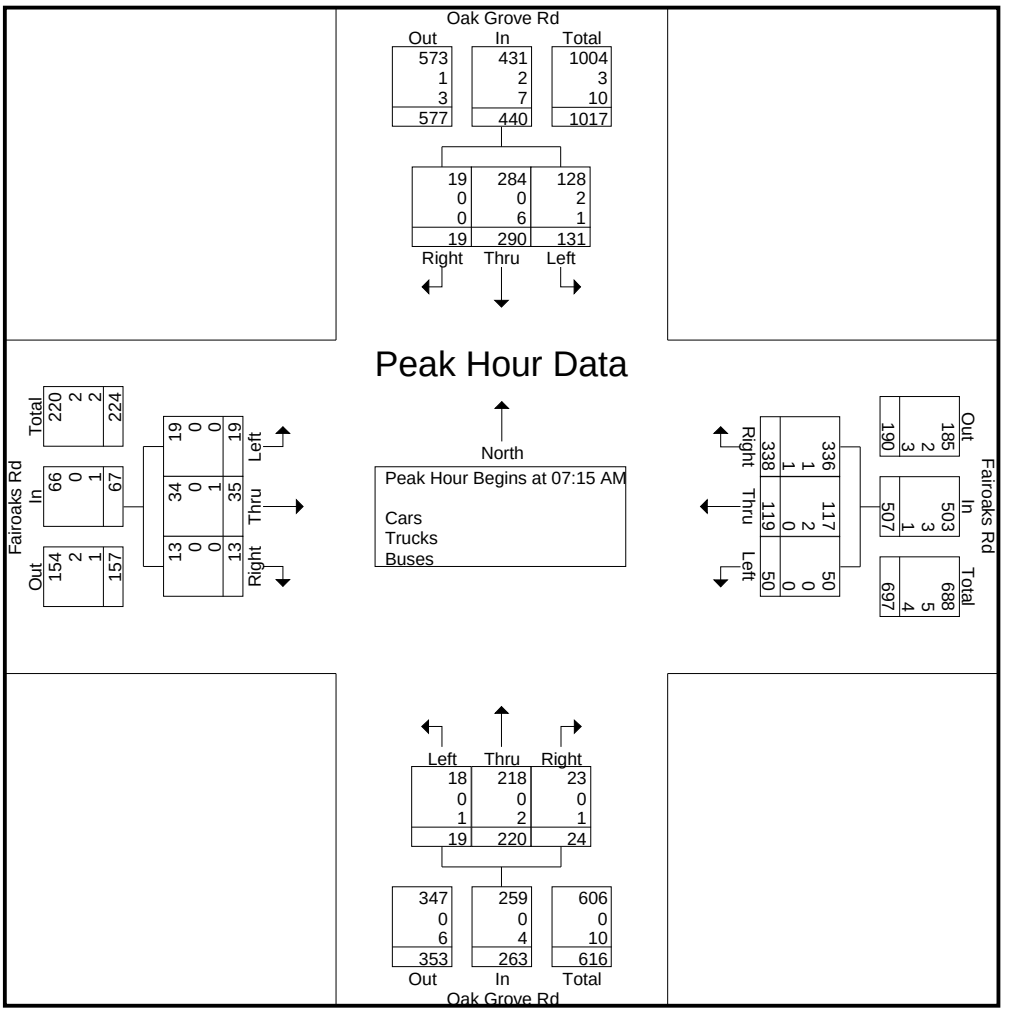
2160 Kingston Court, Suite O
Marietta, GA 30067

TMC Data
Oak Grove Rd @ Fairoaks Rd

7-9 am | 3-6 pm

File Name : 20180216
Site Code : 20180216
Start Date : 9/25/2018
Page No : 2

	Oak Grove Rd Northbound				Oak Grove Rd Southbound				Fairoaks Rd Eastbound				Fairoaks Rd Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 02:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 07:15 AM																	
07:15 AM	3	**82**	4	**89**	10	73	2	85	5	8	0	13	**17**	11	84	112	299
07:30 AM	3	53	**10**	66	29	78	**8**	115	**9**	6	**5**	**20**	7	30	77	114	315
07:45 AM	6	46	4	56	41	**87**	6	**134**	1	9	4	14	13	**43**	86	**142**	**346**
08:00 AM	**7**	39	6	52	**51**	52	3	106	4	**12**	4	20	13	35	**91**	139	317
Total Volume	19	220	24	263	131	290	19	440	19	35	13	67	50	119	338	507	1277
% App. Total	7.2	83.7	9.1		29.8	65.9	4.3		28.4	52.2	19.4		9.9	23.5	66.7		
PHF	.679	.671	.600	.739	.642	.833	.594	.821	.528	.729	.650	.838	.735	.692	.929	.893	.923
Cars	18	218	23	259	128	284	19	431	19	34	13	66	50	117	336	503	1259
% Cars	94.7	99.1	95.8	98.5	97.7	97.9	100	98.0	100	97.1	100	98.5	100	98.3	99.4	99.2	98.6
Trucks	0	0	0	0	2	0	0	2	0	0	0	0	0	2	1	3	5
% Trucks	0	0	0	0	1.5	0	0	0.5	0	0	0	0	0	1.7	0.3	0.6	0.4
Buses	1	2	1	4	1	6	0	7	0	1	0	1	0	0	1	1	13
% Buses	5.3	0.9	4.2	1.5	0.8	2.1	0	1.6	0	2.9	0	1.5	0	0	0.3	0.2	1.0



A&R Engineering, Inc.

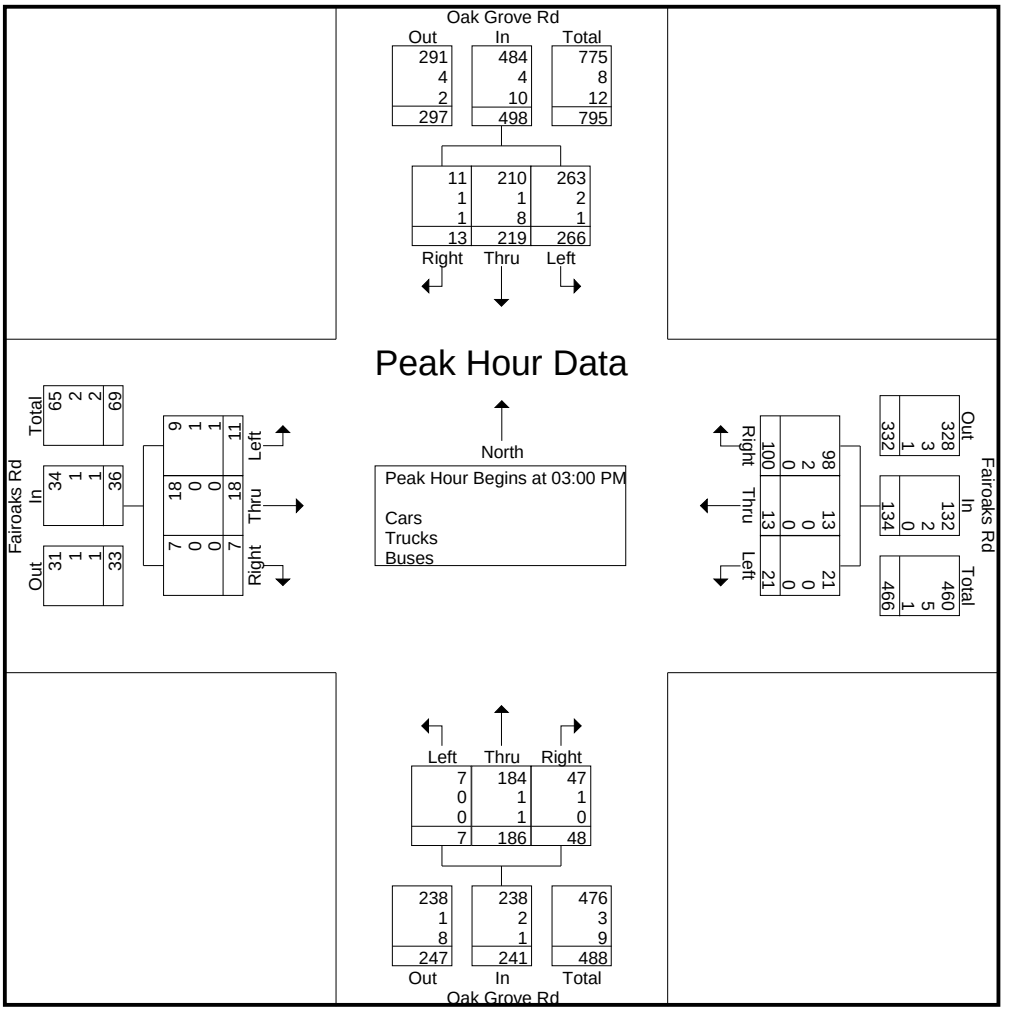
2160 Kingston Court, Suite O
Marietta, GA 30067

TMC Data
Oak Grove Rd @ Fairoaks Rd

7-9 am | 3-6 pm

File Name : 20180216
Site Code : 20180216
Start Date : 9/25/2018
Page No : 3

	Oak Grove Rd Northbound				Oak Grove Rd Southbound				Fairoaks Rd Eastbound				Fairoaks Rd Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 03:00 PM																	
03:00 PM	1	**52**	12	65	39	47	0	86	0	1	0	1	4	**4**	**28**	**36**	188
03:15 PM	1	36	10	47	62	45	3	110	1	0	1	2	6	3	24	33	192
03:30 PM	**3**	49	8	60	67	**70**	**7**	144	3	6	2	11	**7**	3	23	33	248
03:45 PM	2	49	**18**	**69**	**98**	57	3	**158**	**7**	**11**	**4**	**22**	4	3	25	32	**281**
Total Volume	7	186	48	241	266	219	13	498	11	18	7	36	21	13	100	134	909
% App. Total	2.9	77.2	19.9		53.4	44	2.6		30.6	50	19.4		15.7	9.7	74.6		
PHF	.583	.894	.667	.873	.679	.782	.464	.788	.393	.409	.438	.409	.750	.813	.893	.931	.809
Cars	7	184	47	238	263	210	11	484	9	18	7	34	21	13	98	132	888
% Cars	100	98.9	97.9	98.8	98.9	95.9	84.6	97.2	81.8	100	100	94.4	100	100	98.0	98.5	97.7
Trucks	0	1	1	2	2	1	1	4	1	0	0	1	0	0	2	2	9
% Trucks	0	0.5	2.1	0.8	0.8	0.5	7.7	0.8	9.1	0	0	2.8	0	0	2.0	1.5	1.0
Buses	0	1	0	1	1	8	1	10	1	0	0	1	0	0	0	0	12
% Buses	0	0.5	0	0.4	0.4	3.7	7.7	2.0	9.1	0	0	2.8	0	0	0	0	1.3



A&R Engineering, Inc.

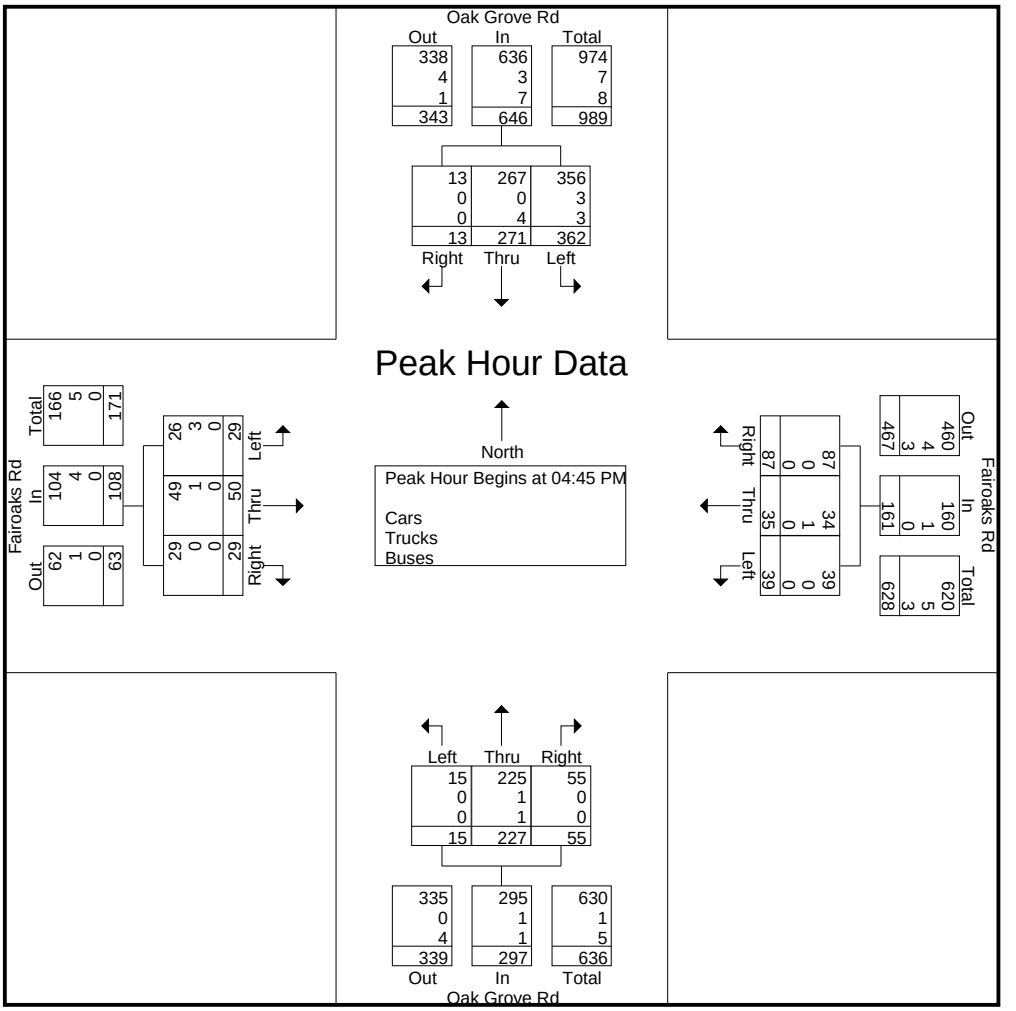
2160 Kingston Court, Suite O
Marietta, GA 30067

TMC Data
Oak Grove Rd @ Fairoaks Rd

7-9 am | 3-6 pm

File Name : 20180216
Site Code : 20180216
Start Date : 9/25/2018
Page No : 4

	Oak Grove Rd Northbound				Oak Grove Rd Southbound				Fairoaks Rd Eastbound				Fairoaks Rd Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:45 PM																	
04:45 PM	5	52	**20**	77	**93**	62	3	158	4	9	4	17	**14**	**12**	**24**	**50**	302
05:00 PM	2	61	11	74	90	72	**4**	166	**10**	14	7	31	5	9	16	30	301
05:15 PM	2	**67**	13	**82**	86	56	3	145	8	11	**9**	28	10	4	23	37	292
05:30 PM	**6**	47	11	64	93	**81**	3	**177**	7	**16**	9	**32**	10	10	24	44	**317**
Total Volume	15	227	55	297	362	271	13	646	29	50	29	108	39	35	87	161	1212
% App. Total	5.1	76.4	18.5		56	42	2		26.9	46.3	26.9		24.2	21.7	54		
PHF	.625	.847	.688	.905	.973	.836	.813	.912	.725	.781	.806	.844	.696	.729	.906	.805	.956
Cars	15	225	55	295	356	267	13	636	26	49	29	104	39	34	87	160	1195
% Cars	100	99.1	100	99.3	98.3	98.5	100	98.5	89.7	98.0	100	96.3	100	97.1	100	99.4	98.6
Trucks	0	1	0	1	3	0	0	3	3	1	0	4	0	1	0	1	9
% Trucks	0	0.4	0	0.3	0.8	0	0	0.5	10.3	2.0	0	3.7	0	2.9	0	0.6	0.7
Buses	0	1	0	1	3	4	0	7	0	0	0	0	0	0	0	0	8
% Buses	0	0.4	0	0.3	0.8	1.5	0	1.1	0	0	0	0	0	0	0	0	0.7



A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

TMC Data
Briarlake Road at Briarlake Trace
07-09am - 03-06pm

File Name : 20180217
Site Code : 20180217
Start Date : 9/25/2018
Page No : 1

Groups Printed- Cars, Buses & Trucks

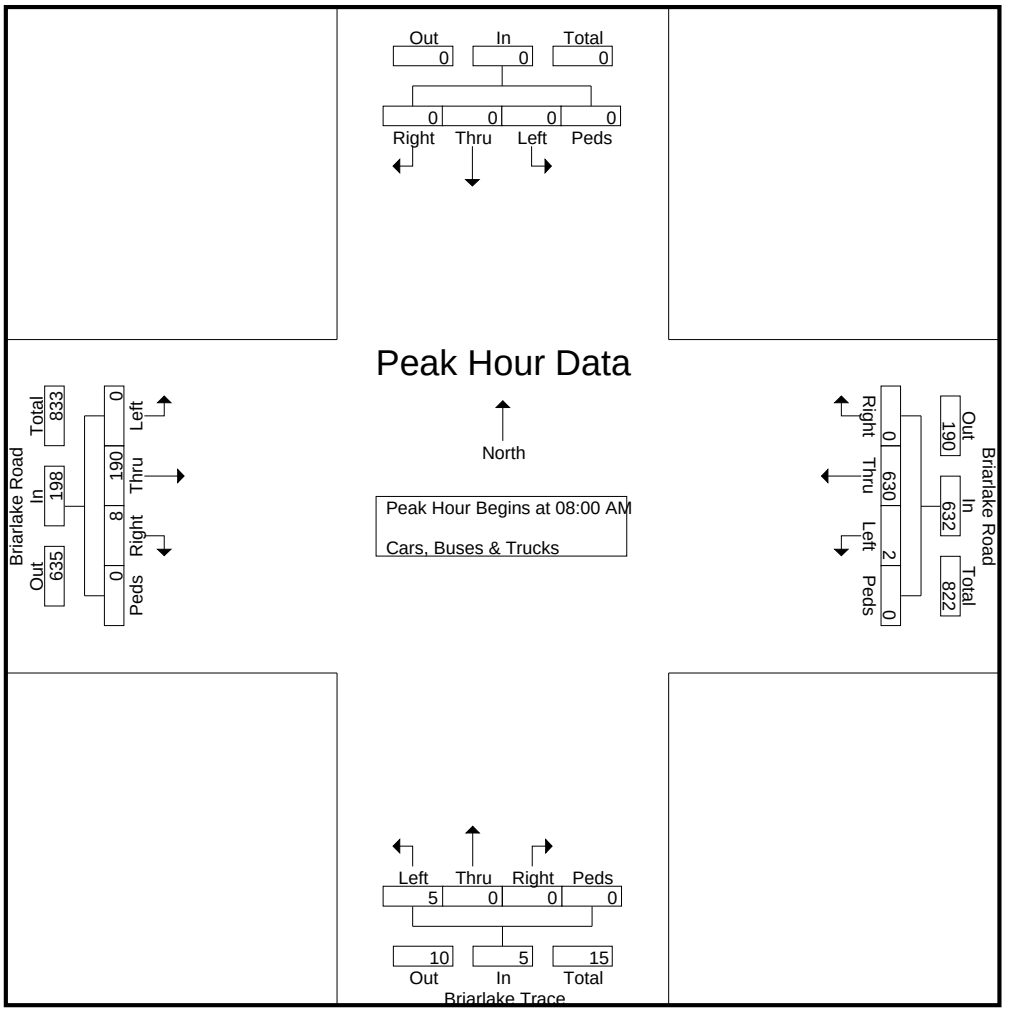
	Briarlake Trace Northbound					Southbound					Briarlake Road Eastbound					Briarlake Road Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	6	0	1	0	7	0	0	0	0	0	0	42	2	0	44	0	131	0	0	131	182
07:15 AM	6	0	1	0	7	0	0	0	0	0	0	37	0	0	37	0	160	0	0	160	204
07:30 AM	0	0	2	0	2	0	0	0	0	0	0	43	1	0	44	1	141	0	0	142	188
07:45 AM	4	0	0	0	4	0	0	0	0	0	0	54	1	0	55	0	145	0	0	145	204
Total	16	0	4	0	20	0	0	0	0	0	0	176	4	0	180	1	577	0	0	578	778
08:00 AM	3	0	0	0	3	0	0	0	0	0	0	76	4	0	80	0	154	0	0	154	237
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	37	0	0	37	0	165	0	0	165	202
08:30 AM	2	0	0	0	2	0	0	0	0	0	0	32	0	0	32	1	146	0	0	147	181
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	45	4	0	49	1	165	0	0	166	215
Total	5	0	0	0	5	0	0	0	0	0	0	190	8	0	198	2	630	0	0	632	835
*** BREAK ***																					
03:00 PM	2	0	2	0	4	0	0	0	0	0	0	74	1	0	75	0	54	0	0	54	133
03:15 PM	7	0	2	0	9	0	0	0	0	0	0	137	2	0	139	0	68	0	0	68	216
03:30 PM	2	0	0	0	2	0	0	0	0	0	0	156	1	0	157	2	63	0	0	65	224
03:45 PM	1	0	1	0	2	0	0	0	0	0	0	138	0	0	138	0	53	0	0	53	193
Total	12	0	5	0	17	0	0	0	0	0	0	505	4	0	509	2	238	0	0	240	766
04:00 PM	1	0	0	0	1	0	0	0	0	0	0	163	1	0	164	0	65	0	0	65	230
04:15 PM	0	0	2	0	2	0	0	0	0	0	0	149	2	0	151	2	78	0	0	80	233
04:30 PM	2	0	0	0	2	0	0	0	0	0	0	162	2	0	164	0	71	0	0	71	237
04:45 PM	3	0	0	0	3	0	0	0	0	0	0	178	4	0	182	0	77	0	0	77	262
Total	6	0	2	0	8	0	0	0	0	0	0	652	9	0	661	2	291	0	0	293	962
05:00 PM	1	0	1	0	2	0	0	0	0	0	0	175	2	0	177	0	46	0	0	46	225
05:15 PM	2	0	1	0	3	0	0	0	0	0	0	141	1	0	142	2	57	0	0	59	204
05:30 PM	0	0	0	0	0	0	0	0	0	0	0	154	4	0	158	2	46	0	0	48	206
05:45 PM	3	0	0	0	3	0	0	0	0	0	0	166	1	0	167	2	86	0	0	88	258
Total	6	0	2	0	8	0	0	0	0	0	0	636	8	0	644	6	235	0	0	241	893
Grand Total	45	0	13	0	58	0	0	0	0	0	0	2159	33	0	2192	13	1971	0	0	1984	4234
Apprch %	77.6	0	22.4	0		0	0	0	0		0	98.5	1.5	0		0.7	99.3	0	0		
Total %	1.1	0	0.3	0	1.4	0	0	0	0	0	0	51	0.8	0	51.8	0.3	46.6	0	0	46.9	

A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

File Name : 20180217
Site Code : 20180217
Start Date : 9/25/2018
Page No : 2

	Briarlake Trace Northbound					Southbound					Briarlake Road Eastbound					Briarlake Road Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 02:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 08:00 AM																					
08:00 AM	**3**	0	0	0	**3**	0	0	0	0	0	0	**76**	**4**	0	**80**	0	154	0	0	154	**237**
08:15 AM	0	0	0	0	0	0	0	0	0	0	0	37	0	0	37	0	**165**	0	0	165	202
08:30 AM	2	0	0	0	2	0	0	0	0	0	0	32	0	0	32	**1**	146	0	0	147	181
08:45 AM	0	0	0	0	0	0	0	0	0	0	0	45	4	0	49	1	165	0	0	**166**	215
Total Volume	5	0	0	0	5	0	0	0	0	0	0	190	8	0	198	2	630	0	0	632	835
% App. Total	100	0	0	0		0	0	0	0		0	96	4	0		0.3	99.7	0	0		
PHF	.417	.000	.000	.000	.417	.000	.000	.000	.000	.000	.000	.625	.500	.000	.619	.500	.955	.000	.000	.952	.881



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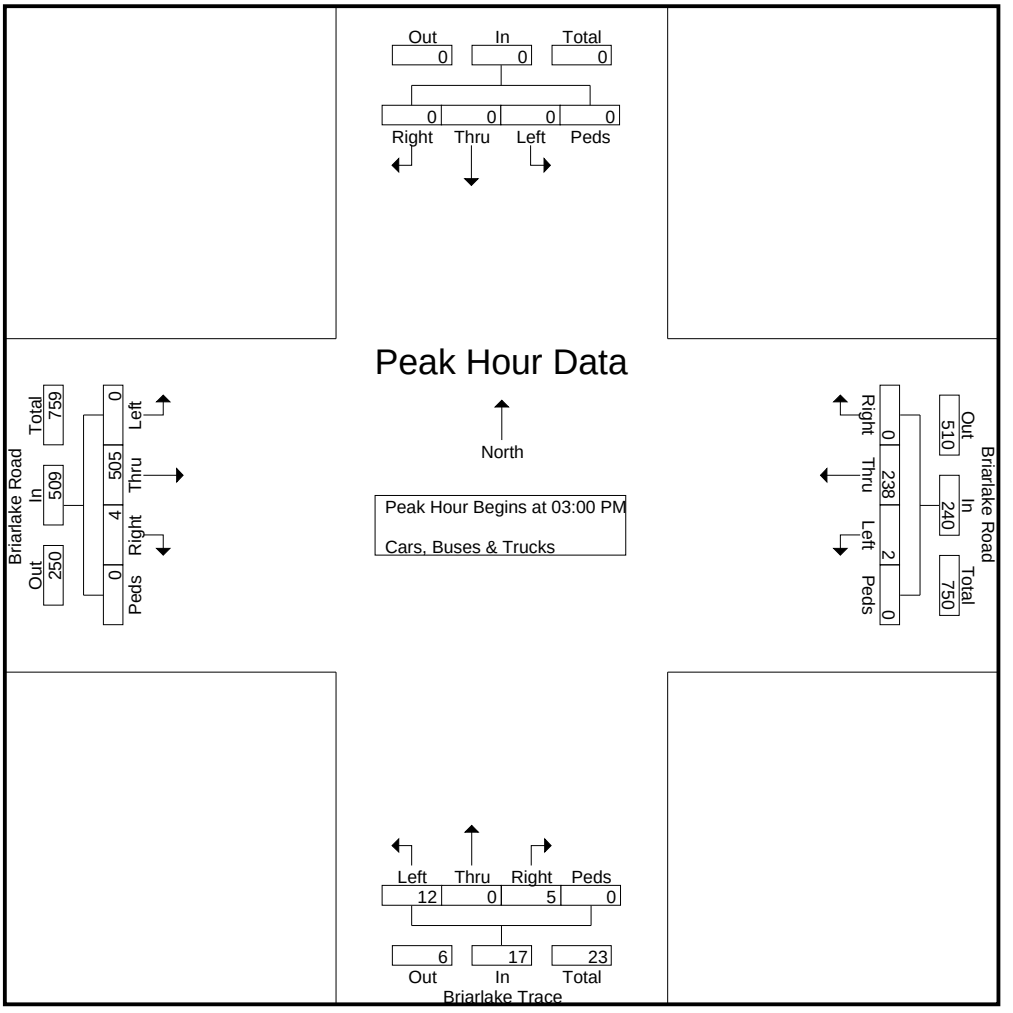
2160 Kingston Court, Suite O
Marietta, GA 30067

File Name : 20180217
Site Code : 20180217
Start Date : 9/25/2018
Page No : 3

	Briarlake Trace Northbound					Southbound					Briarlake Road Eastbound					Briarlake Road Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 03:00 PM to 03:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 03:00 PM																					
03:00 PM	2	0	**2**	0	4	0	0	0	0	0	0	74	1	0	75	0	54	0	0	54	133
03:15 PM	**7**	0	2	0	**9**	0	0	0	0	0	0	137	**2**	0	139	0	**68**	0	0	**68**	216
03:30 PM	2	0	0	0	2	0	0	0	0	0	0	**156**	1	0	**157**	**2**	63	0	0	65	**224**
03:45 PM	1	0	1	0	2	0	0	0	0	0	0	138	0	0	138	0	53	0	0	53	193
Total Volume	12	0	5	0	17	0	0	0	0	0	0	505	4	0	509	2	238	0	0	240	766
% App. Total	70.6	0	29.4	0		0	0	0	0		0	99.2	0.8	0		0.8	99.2	0	0		
PHF	.429	.000	.625	.000	.472	.000	.000	.000	.000	.000	.000	.809	.500	.000	.811	.250	.875	.000	.000	.882	.855



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File Name : 20180217
Site Code : 20180217
Start Date : 9/25/2018
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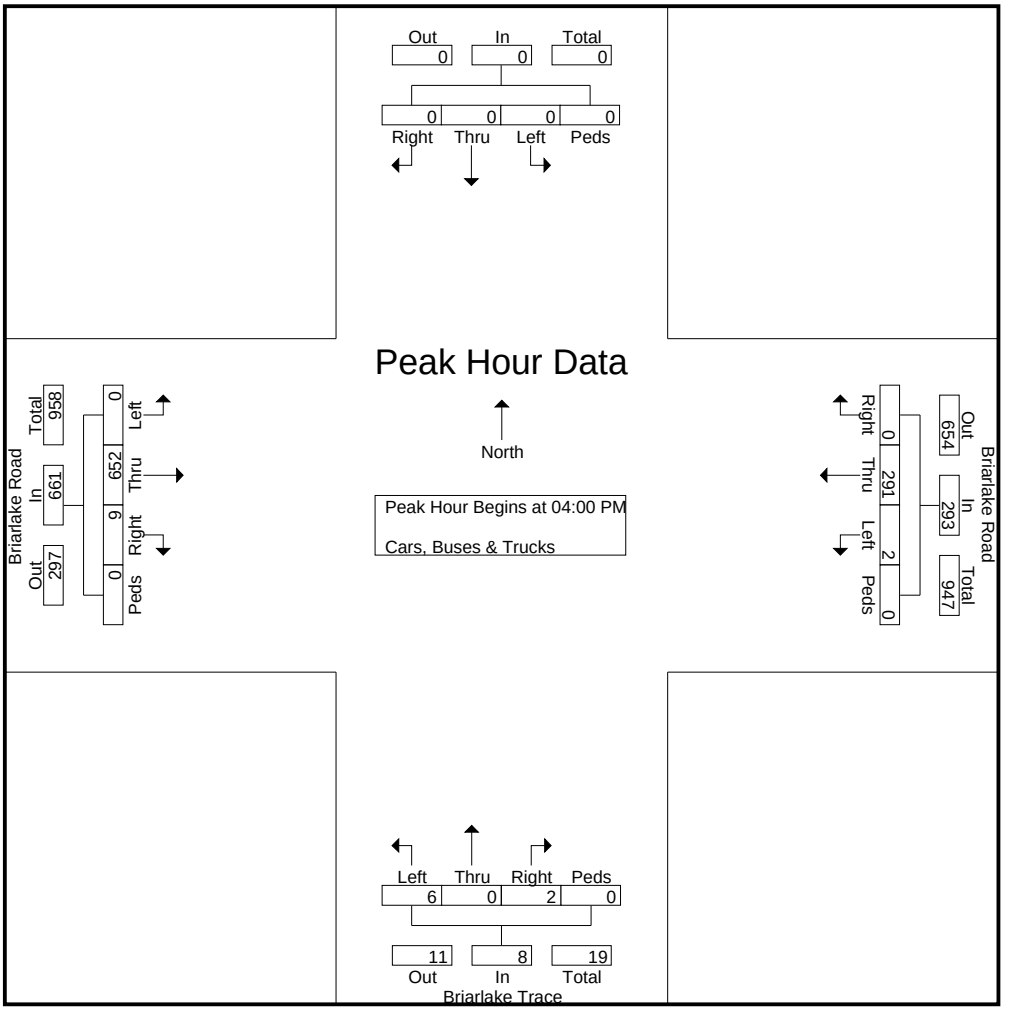
	Briarlake Trace Northbound					Southbound					Briarlake Road Eastbound					Briarlake Road Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:00 PM																					
04:00 PM	1	0	0	0	1	0	0	0	0	0	0	163	1	0	164	0	65	0	0	65	230
04:15 PM	0	0	**2**	0	2	0	0	0	0	0	0	149	2	0	151	**2**	**78**	0	0	**80**	233
04:30 PM	2	0	0	0	2	0	0	0	0	0	0	162	2	0	164	0	71	0	0	71	237
04:45 PM	**3**	0	0	0	**3**	0	0	0	0	0	0	**178**	**4**	0	**182**	0	77	0	0	77	**262**
Total Volume	6	0	2	0	8	0	0	0	0	0	0	652	9	0	661	2	291	0	0	293	962
% App. Total	75	0	25	0		0	0	0	0		0	98.6	1.4	0		0.7	99.3	0	0		
PHF	.500	.000	.250	.000	.667	.000	.000	.000	.000	.000	.000	.916	.563	.000	.908	.250	.933	.000	.000	.916	.918



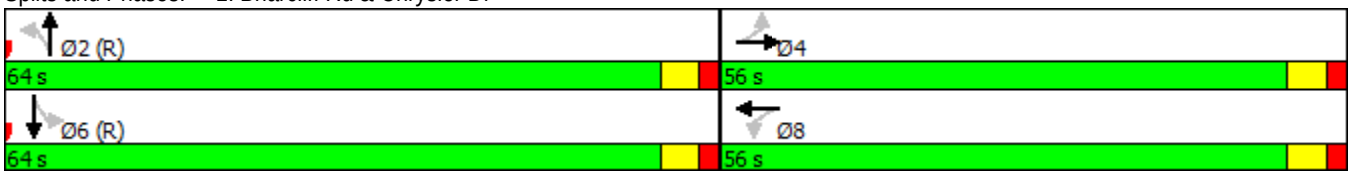
EXISTING INTERSECTION ANALYSIS

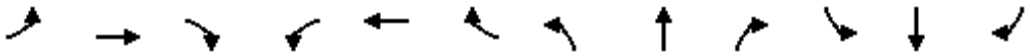
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	17	28	107	14	3	190	102	348
Future Volume (vph)	17	28	107	14	3	190	102	348
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	6.0	6.0	6.0	6.0	15.0	15.0	15.0	15.0
Minimum Split (s)	22.5	22.5	24.5	24.5	25.5	25.5	26.5	26.5
Total Split (s)	56.0	56.0	56.0	56.0	64.0	64.0	64.0	64.0
Total Split (%)	46.7%	46.7%	46.7%	46.7%	53.3%	53.3%	53.3%	53.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		5.5		5.5		5.5		5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 70 (58%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated

Splits and Phases: 1: Briarcliff Rd & Chrysler Dr





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	28	15	107	14	148	3	190	11	102	348	11
Future Volume (vph)	17	28	15	107	14	148	3	190	11	102	348	11
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	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.96			0.92			0.99			1.00	
Flt Protected		0.99			0.98			1.00			0.99	
Satd. Flow (prot)		1771			1690			1840			1833	
Flt Permitted		0.83			0.84			0.99			0.85	
Satd. Flow (perm)		1484			1438			1830			1570	
Peak-hour factor, PHF	0.61	0.58	0.54	0.62	0.50	0.58	0.75	0.75	0.46	0.77	0.81	0.55
Adj. Flow (vph)	28	48	28	173	28	255	4	253	24	132	430	20
RTOR Reduction (vph)	0	13	0	0	44	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	91	0	0	412	0	0	279	0	0	581	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		39.7			39.7			69.3			69.3	
Effective Green, g (s)		39.7			39.7			69.3			69.3	
Actuated g/C Ratio		0.33			0.33			0.58			0.58	
Clearance Time (s)		5.5			5.5			5.5			5.5	
Vehicle Extension (s)		3.0			3.0			5.0			5.0	
Lane Grp Cap (vph)		490			475			1056			906	
v/s Ratio Prot												
v/s Ratio Perm		0.06			c0.29			0.15			c0.37	
v/c Ratio		0.19			0.87			0.26			0.64	
Uniform Delay, d1		28.6			37.7			12.6			17.0	
Progression Factor		1.00			1.00			1.00			1.19	
Incremental Delay, d2		0.2			15.3			0.6			3.1	
Delay (s)		28.8			52.9			13.2			23.4	
Level of Service		C			D			B			C	
Approach Delay (s)		28.8			52.9			13.2			23.4	
Approach LOS		C			D			B			C	

Intersection Summary			
HCM 2000 Control Delay	31.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	47	39	42	390	446	84
Future Vol, veh/h	47	39	42	390	446	84
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	65	81	81	75	85	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	72	48	52	520	525	108

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1203	579	632	0	-	0
Stage 1	579	-	-	-	-	-
Stage 2	624	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	204	515	951	-	-	-
Stage 1	560	-	-	-	-	-
Stage 2	534	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	188	515	951	-	-	-
Mov Cap-2 Maneuver	188	-	-	-	-	-
Stage 1	560	-	-	-	-	-
Stage 2	493	-	-	-	-	-

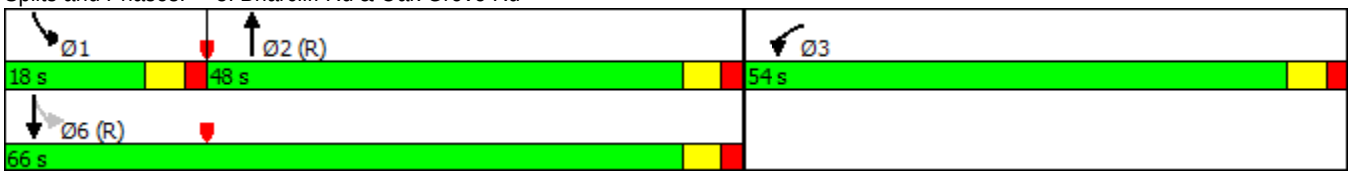
Approach	EB	NB	SB
HCM Control Delay, s	31.7	0.8	0
HCM LOS	D		

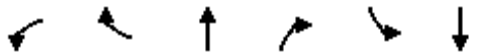
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	951	-	252	-	-
HCM Lane V/C Ratio	0.055	-	0.478	-	-
HCM Control Delay (s)	9	0	31.7	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.2	-	2.4	-	-

Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	150	318	141	343
Future Volume (vph)	150	318	141	343
Turn Type	Prot	NA	pm+pt	NA
Protected Phases	3	2	1	6
Permitted Phases			6	
Detector Phase	3	2	1	6
Switch Phase				
Minimum Initial (s)	5.0	15.0	5.0	15.0
Minimum Split (s)	15.0	34.5	15.0	22.5
Total Split (s)	54.0	48.0	18.0	66.0
Total Split (%)	45.0%	40.0%	15.0%	55.0%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5
Lead/Lag		Lag	Lead	
Lead-Lag Optimize?				
Recall Mode	None	C-Min	None	C-Min

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 3: Briarcliff Rd & Oak Grove Rd





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	150	255	318	77	141	343
Future Volume (vph)	150	255	318	77	141	343
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5		5.5		5.5	5.5
Lane Util. Factor	1.00		1.00		1.00	1.00
Frt	0.92		0.97		1.00	1.00
Flt Protected	0.98		1.00		0.95	1.00
Satd. Flow (prot)	1678		1807		1770	1863
Flt Permitted	0.98		1.00		0.22	1.00
Satd. Flow (perm)	1678		1807		414	1863
Peak-hour factor, PHF	0.67	0.76	0.81	0.69	0.65	0.84
Adj. Flow (vph)	224	336	393	112	217	408
RTOR Reduction (vph)	0	0	8	0	0	0
Lane Group Flow (vph)	560	0	497	0	217	408
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	3		2		1	6
Permitted Phases					6	
Actuated Green, G (s)	44.1		47.4		64.9	64.9
Effective Green, g (s)	44.1		47.4		64.9	64.9
Actuated g/C Ratio	0.37		0.39		0.54	0.54
Clearance Time (s)	5.5		5.5		5.5	5.5
Vehicle Extension (s)	3.0		5.0		3.0	5.0
Lane Grp Cap (vph)	616		713		359	1007
v/s Ratio Prot	c0.33		c0.28		c0.06	0.22
v/s Ratio Perm					0.27	
v/c Ratio	0.91		0.70		0.60	0.41
Uniform Delay, d1	36.0		30.3		18.8	16.2
Progression Factor	0.88		0.76		1.00	1.00
Incremental Delay, d2	16.7		5.3		2.9	1.2
Delay (s)	48.6		28.3		21.7	17.4
Level of Service	D		C		C	B
Approach Delay (s)	48.6		28.3			18.9
Approach LOS	D		C			B

Intersection Summary			
HCM 2000 Control Delay	31.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	3.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	39	523	141	106	573
Future Vol, veh/h	4	39	523	141	106	573
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	33	65	84	62	47	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	60	623	227	226	674

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1524	736	0	0	850	0
Stage 1	736	-	-	-	-	-
Stage 2	788	-	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	119	418	-	-	786	-
Stage 1	473	-	-	-	-	-
Stage 2	409	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	64	418	-	-	786	-
Mov Cap-2 Maneuver	64	-	-	-	-	-
Stage 1	473	-	-	-	-	-
Stage 2	221	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	29.6	0	4.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	217	786	-
HCM Lane V/C Ratio	-	-	0.332	0.287	-
HCM Control Delay (s)	-	-	29.6	11.4	1.6
HCM Lane LOS	-	-	D	B	A
HCM 95th %tile Q(veh)	-	-	1.4	1.2	-

Intersection	
Int Delay, s/veh	5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	102	104	539	0	0	587
Future Vol, veh/h	102	104	539	0	0	587
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	60	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	65	79	84	92	92	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	157	132	642	0	0	716

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1000	642	0	-	-	-
Stage 1	642	-	-	-	-	-
Stage 2	358	-	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	-	-
Pot Cap-1 Maneuver	254	473	-	0	0	-
Stage 1	523	-	-	0	0	-
Stage 2	679	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	254	473	-	-	-	-
Mov Cap-2 Maneuver	254	-	-	-	-	-
Stage 1	523	-	-	-	-	-
Stage 2	679	-	-	-	-	-

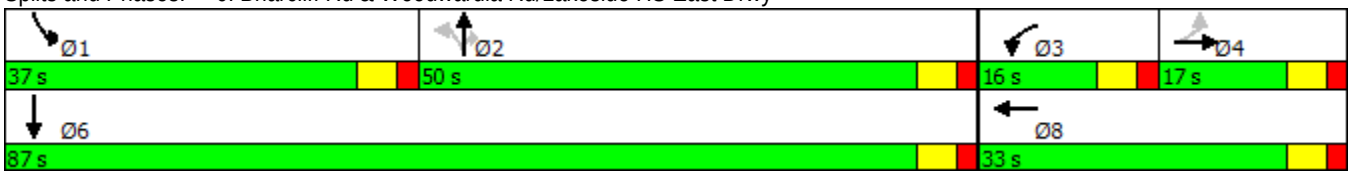
Approach	WB	NB	SB
HCM Control Delay, s	28.6	0	0
HCM LOS	D		

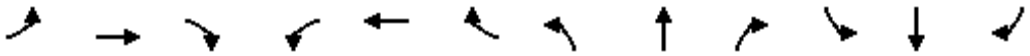
Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBT
Capacity (veh/h)	-	254	473	-
HCM Lane V/C Ratio	-	0.618	0.278	-
HCM Control Delay (s)	-	39.6	15.5	-
HCM Lane LOS	-	E	C	-
HCM 95th %tile Q(veh)	-	3.7	1.1	-

Lane Group	EBL	EBT	WBT	NBL	NBT	NBR	SBT	Ø1	Ø3
Lane Configurations									
Traffic Volume (vph)	16	0	1	12	429	108	455		
Future Volume (vph)	16	0	1	12	429	108	455		
Turn Type	Perm	NA	NA	Perm	NA	Perm	NA		
Protected Phases		4	8		2		6	1	3
Permitted Phases	4			2		2			
Detector Phase	4	4	8	2	2	2	6		
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.5	23.5	23.5	23.5	23.5	23.5	23.5	15.0	15.0
Total Split (s)	17.0	17.0	33.0	50.0	50.0	50.0	87.0	37.0	16.0
Total Split (%)	14.2%	14.2%	27.5%	41.7%	41.7%	41.7%	72.5%	31%	13%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)		5.5	5.5	5.5	5.5	5.5	5.5		
Lead/Lag	Lag	Lag		Lag	Lag	Lag		Lead	Lead
Lead-Lag Optimize?									
Recall Mode	None	None	None	Min	Min	Min	Min	None	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Natural Cycle: 80
Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Briarcliff Rd & Woodwardia Rd/Lakeside HS East Drwy





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	0	4	12	1	192	12	429	108	283	455	31
Future Volume (vph)	16	0	4	12	1	192	12	429	108	283	455	31
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	
Lane Util. Factor		1.00			1.00		1.00	1.00	1.00		1.00	
Frt		0.97			0.88		1.00	1.00	0.85		0.99	
Flt Protected		0.96			0.99		0.95	1.00	1.00		0.98	
Satd. Flow (prot)		1735			1635		1770	1863	1583		1814	
Flt Permitted		0.66			0.96		0.31	1.00	1.00		0.59	
Satd. Flow (perm)		1186			1583		579	1863	1583		1086	
Peak-hour factor, PHF	0.67	0.92	0.50	0.38	0.25	0.80	0.75	0.85	0.68	0.71	0.78	0.55
Adj. Flow (vph)	24	0	8	32	4	240	16	505	159	399	583	56
RTOR Reduction (vph)	0	25	0	0	169	0	0	0	51	0	1	0
Lane Group Flow (vph)	0	7	0	0	107	0	16	505	108	0	1037	0
Turn Type	Perm	NA		Prot	NA		Perm	NA	Perm	Prot	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4						2		2			
Actuated Green, G (s)		27.5			27.5		81.5	81.5	81.5		81.5	
Effective Green, g (s)		27.5			27.5		81.5	81.5	81.5		81.5	
Actuated g/C Ratio		0.23			0.23		0.68	0.68	0.68		0.68	
Clearance Time (s)		5.5			5.5		5.5	5.5	5.5		5.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		271			362		393	1265	1075		737	
v/s Ratio Prot								0.27				
v/s Ratio Perm		0.01			c0.07		0.03		0.07		c0.96	
v/c Ratio		0.03			0.30		0.04	0.40	0.10		1.41	
Uniform Delay, d1		35.9			38.2		6.4	8.5	6.6		19.2	
Progression Factor		1.00			1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2		0.0			0.5		0.0	0.2	0.0		191.5	
Delay (s)		35.9			38.7		6.4	8.7	6.7		210.7	
Level of Service		D			D		A	A	A		F	
Approach Delay (s)		35.9			38.7			8.2			210.7	
Approach LOS		D			D			A			F	

Intersection Summary			
HCM 2000 Control Delay	116.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.25		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	90.1%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	13	6	599	894	11
Future Vol, veh/h	12	13	6	599	894	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	60	46	30	85	91	55
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	28	20	705	982	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1737	992	1002	0	-	0
Stage 1	992	-	-	-	-	-
Stage 2	745	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	96	298	691	-	-	-
Stage 1	359	-	-	-	-	-
Stage 2	469	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	91	298	691	-	-	-
Mov Cap-2 Maneuver	91	-	-	-	-	-
Stage 1	359	-	-	-	-	-
Stage 2	446	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	39	0.3	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	691	-	153	-	-
HCM Lane V/C Ratio	0.029	-	0.315	-	-
HCM Control Delay (s)	10.4	0	39	-	-
HCM Lane LOS	B	A	E	-	-
HCM 95th %tile Q(veh)	0.1	-	1.3	-	-

Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	298	537	54	607
Future Volume (vph)	298	537	54	607
Turn Type	Prot	NA	pm+pt	NA
Protected Phases	3	2	1	6
Permitted Phases			6	
Detector Phase	3	2	1	6
Switch Phase				
Minimum Initial (s)	5.0	15.0	5.0	15.0
Minimum Split (s)	15.0	23.5	15.0	23.5
Total Split (s)	67.0	68.0	15.0	83.0
Total Split (%)	44.7%	45.3%	10.0%	55.3%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5
Lead/Lag		Lag	Lead	
Lead-Lag Optimize?				
Recall Mode	None	C-Min	None	C-Min

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated

Splits and Phases: 8: Briarcliff Rd & Briarlake Rd

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	298	376	537	155	54	607
Future Volume (vph)	298	376	537	155	54	607
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5		5.5		5.5	5.5
Lane Util. Factor	1.00		1.00		1.00	1.00
Frt	0.93		0.97		1.00	1.00
Flt Protected	0.98		1.00		0.95	1.00
Satd. Flow (prot)	1688		1798		1770	1863
Flt Permitted	0.98		1.00		0.06	1.00
Satd. Flow (perm)	1688		1798		108	1863
Peak-hour factor, PHF	0.76	0.82	0.87	0.73	0.75	0.89
Adj. Flow (vph)	392	459	617	212	72	682
RTOR Reduction (vph)	28	0	8	0	0	0
Lane Group Flow (vph)	823	0	821	0	72	682
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	3		2		1	6
Permitted Phases					6	
Actuated Green, G (s)	61.5		63.7		77.5	77.5
Effective Green, g (s)	61.5		63.7		77.5	77.5
Actuated g/C Ratio	0.41		0.42		0.52	0.52
Clearance Time (s)	5.5		5.5		5.5	5.5
Vehicle Extension (s)	3.0		5.0		3.0	5.0
Lane Grp Cap (vph)	692		763		147	962
v/s Ratio Prot	c0.49		c0.46		0.03	c0.37
v/s Ratio Perm					0.23	
v/c Ratio	1.19		1.08		0.49	0.71
Uniform Delay, d1	44.2		43.1		33.0	27.6
Progression Factor	1.00		1.00		1.00	1.00
Incremental Delay, d2	99.0		55.0		2.6	4.4
Delay (s)	143.3		98.1		35.6	32.1
Level of Service	F		F		D	C
Approach Delay (s)	143.3		98.1			32.4
Approach LOS	F		F			C

Intersection Summary			
HCM 2000 Control Delay	93.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.12		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	93.6%	ICU Level of Service	F
Analysis Period (min)	15		

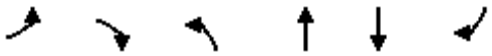
c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	192	369	683	199	237
Future Volume (vph)	192	369	683	199	237
Turn Type	Prot	Perm	pm+pt	NA	NA
Protected Phases	4		5	2	6
Permitted Phases		4	2		
Detector Phase	4	4	5	2	6
Switch Phase					
Minimum Initial (s)	6.0	6.0	5.0	15.0	15.0
Minimum Split (s)	27.5	27.5	23.5	22.5	33.5
Total Split (s)	27.5	27.5	29.0	92.5	63.5
Total Split (%)	22.9%	22.9%	24.2%	77.1%	52.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5
Lead/Lag			Lead		Lag
Lead-Lag Optimize?					
Recall Mode	None	None	None	C-Min	C-Min

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated

Splits and Phases: 9: Briarcliff Rd & Shallowford Rd



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	192	369	683	199	237	905
Future Volume (vph)	192	369	683	199	237	905
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	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.90	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	1863	1668	
Flt Permitted	0.95	1.00	0.06	1.00	1.00	
Satd. Flow (perm)	1770	1583	116	1863	1668	
Peak-hour factor, PHF	0.69	0.48	0.91	0.80	0.70	0.78
Adj. Flow (vph)	278	769	751	249	339	1160
RTOR Reduction (vph)	0	517	0	0	102	0
Lane Group Flow (vph)	278	252	751	249	1397	0
Turn Type	Prot	Perm	pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	21.3	21.3	87.7	87.7	58.7	
Effective Green, g (s)	21.3	21.3	87.7	87.7	58.7	
Actuated g/C Ratio	0.18	0.18	0.73	0.73	0.49	
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5	
Vehicle Extension (s)	3.0	3.0	3.0	5.0	5.0	
Lane Grp Cap (vph)	314	280	408	1361	815	
v/s Ratio Prot	0.16		c0.36	0.13	0.84	
v/s Ratio Perm		c0.16	c0.98			
v/c Ratio	0.89	0.90	1.84	0.18	1.71	
Uniform Delay, d1	48.2	48.3	41.2	5.0	30.6	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	24.3	28.8	387.7	0.3	326.8	
Delay (s)	72.5	77.1	429.0	5.3	357.4	
Level of Service	E	E	F	A	F	
Approach Delay (s)	75.9			323.5	357.4	
Approach LOS	E			F	F	

Intersection Summary			
HCM 2000 Control Delay	264.7	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.69		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	130.4%	ICU Level of Service	H
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	3	2	104	0	250	5	15	222	0
Future Vol, veh/h	0	0	0	3	2	104	0	250	5	15	222	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	38	25	58	92	75	31	62	85	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	8	8	179	0	333	16	24	261	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	745	659	261	651	651	341	261	0	0	349	0	0
Stage 1	310	310	-	341	341	-	-	-	-	-	-	-
Stage 2	435	349	-	310	310	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	330	384	778	382	388	701	1303	-	-	1210	-	-
Stage 1	700	659	-	674	639	-	-	-	-	-	-	-
Stage 2	600	633	-	700	659	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	237	375	778	375	379	701	1303	-	-	1210	-	-
Mov Cap-2 Maneuver	237	375	-	375	379	-	-	-	-	-	-	-
Stage 1	700	644	-	674	639	-	-	-	-	-	-	-
Stage 2	441	633	-	684	644	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	12.8	0	0.7
HCM LOS	A	B		

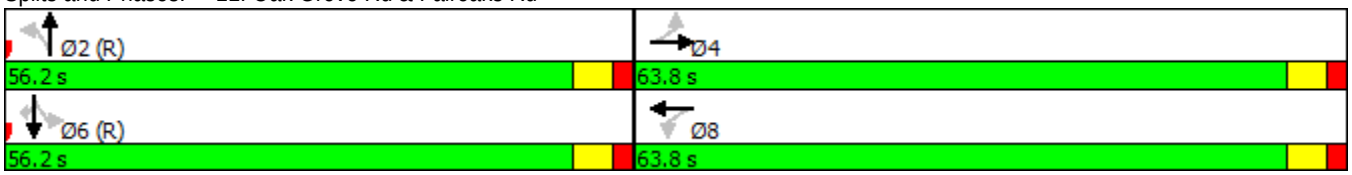
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1303	-	-	-	655	1210	-	-
HCM Lane V/C Ratio	-	-	-	-	0.298	0.02	-	-
HCM Control Delay (s)	0	-	-	0	12.8	8	0	-
HCM Lane LOS	A	-	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	1.2	0.1	-	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	19	35	50	119	19	220	131	290	19
Future Volume (vph)	19	35	50	119	19	220	131	290	19
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases		4		8		2		6	
Permitted Phases	4		8		2		6		6
Detector Phase	4	4	8	8	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	6.0	6.0	6.0	6.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	26.5	26.5	27.5	27.5	26.5	26.5	23.5	23.5	23.5
Total Split (s)	63.8	63.8	63.8	63.8	56.2	56.2	56.2	56.2	56.2
Total Split (%)	53.2%	53.2%	53.2%	53.2%	46.8%	46.8%	46.8%	46.8%	46.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5		5.5		5.5	5.5	5.5	5.5
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 96 (80%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated

Splits and Phases: 11: Oak Grove Rd & Fairoaks Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	35	13	50	119	338	19	220	24	131	290	19
Future Volume (vph)	19	35	13	50	119	338	19	220	24	131	290	19
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
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	1.00
Frt		0.97			0.92			0.99		1.00	1.00	0.85
Flt Protected		0.98			0.99			1.00		0.95	1.00	1.00
Satd. Flow (prot)		1784			1702			1831		1770	1863	1583
Flt Permitted		0.70			0.95			0.96		0.47	1.00	1.00
Satd. Flow (perm)		1278			1626			1760		881	1863	1583
Peak-hour factor, PHF	0.53	0.73	0.65	0.73	0.69	0.93	0.68	0.67	0.60	0.64	0.83	0.59
Adj. Flow (vph)	36	48	20	68	172	363	28	328	40	205	349	32
RTOR Reduction (vph)	0	8	0	0	53	0	0	3	0	0	0	11
Lane Group Flow (vph)	0	96	0	0	550	0	0	393	0	205	349	21
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		47.2			47.2			61.8		61.8	61.8	61.8
Effective Green, g (s)		47.2			47.2			61.8		61.8	61.8	61.8
Actuated g/C Ratio		0.39			0.39			0.51		0.51	0.51	0.51
Clearance Time (s)		5.5			5.5			5.5		5.5	5.5	5.5
Vehicle Extension (s)		3.0			3.0			5.0		5.0	5.0	5.0
Lane Grp Cap (vph)		502			639			906		453	959	815
v/s Ratio Prot											0.19	
v/s Ratio Perm		0.07			c0.34			0.22		c0.23		0.01
v/c Ratio		0.19			0.86			0.43		0.45	0.36	0.03
Uniform Delay, d1		23.9			33.4			18.2		18.4	17.4	14.3
Progression Factor		1.00			1.00			1.00		0.61	0.59	0.32
Incremental Delay, d2		0.2			11.4			1.5		3.2	1.0	0.1
Delay (s)		24.1			44.8			19.7		14.5	11.4	4.6
Level of Service		C			D			B		B	B	A
Approach Delay (s)		24.1			44.8			19.7			12.1	
Approach LOS		C			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	26.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	190	8	2	630	5	0
Future Vol, veh/h	190	8	2	630	5	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	62	50	50	95	42	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	306	16	4	663	12	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	322	0	985	314
Stage 1	-	-	-	-	314	-
Stage 2	-	-	-	-	671	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1238	-	275	726
Stage 1	-	-	-	-	741	-
Stage 2	-	-	-	-	508	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1238	-	274	726
Mov Cap-2 Maneuver	-	-	-	-	274	-
Stage 1	-	-	-	-	741	-
Stage 2	-	-	-	-	505	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	18.7
HCM LOS			C

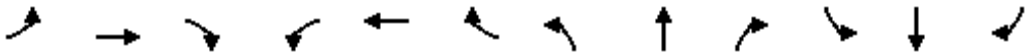
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	274	-	-	1238	-
HCM Lane V/C Ratio	0.043	-	-	0.003	-
HCM Control Delay (s)	18.7	-	-	7.9	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	16	12	39	12	15	272	37	255
Future Volume (vph)	16	12	39	12	15	272	37	255
Lane Group Flow (vph)	0	80	0	160	0	393	0	359
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	6.0	6.0	6.0	6.0	15.0	15.0	15.0	15.0
Minimum Split (s)	22.5	22.5	24.5	24.5	25.5	25.5	26.5	26.5
Total Split (s)	44.0	44.0	44.0	44.0	76.0	76.0	76.0	76.0
Total Split (%)	36.7%	36.7%	36.7%	36.7%	63.3%	63.3%	63.3%	63.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		5.5		5.5		5.5		5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min	C-Min
v/c Ratio		0.37		0.72		0.29		0.29
Control Delay		36.1		58.7		5.3		3.8
Queue Delay		0.0		0.0		0.0		0.0
Total Delay		36.1		58.7		5.3		3.8
Queue Length 50th (ft)		39		102		74		54
Queue Length 95th (ft)		48		77		139		78
Internal Link Dist (ft)		718		855		653		1026
Turn Bay Length (ft)								
Base Capacity (vph)		465		474		1355		1255
Starvation Cap Reductn		0		0		0		0
Spillback Cap Reductn		0		0		0		0
Storage Cap Reductn		0		0		0		0
Reduced v/c Ratio		0.17		0.34		0.29		0.29

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 38 (32%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated

Splits and Phases: 1: Briarcliff Rd & Chrysler Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	12	17	39	12	38	15	272	42	37	255	18
Future Volume (vph)	16	12	17	39	12	38	15	272	42	37	255	18
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	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.95			0.95			0.98			0.99	
Flt Protected		0.98			0.98			1.00			0.99	
Satd. Flow (prot)		1740			1731			1821			1826	
Flt Permitted		0.79			0.80			0.97			0.89	
Satd. Flow (perm)		1398			1427			1765			1636	
Peak-hour factor, PHF	0.50	0.60	0.61	0.49	0.50	0.68	0.62	0.87	0.75	0.66	0.94	0.56
Adj. Flow (vph)	32	20	28	80	24	56	24	313	56	56	271	32
RTOR Reduction (vph)	0	21	0	0	21	0	0	3	0	0	2	0
Lane Group Flow (vph)	0	59	0	0	139	0	0	390	0	0	357	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		17.0			17.0			92.0			92.0	
Effective Green, g (s)		17.0			17.0			92.0			92.0	
Actuated g/C Ratio		0.14			0.14			0.77			0.77	
Clearance Time (s)		5.5			5.5			5.5			5.5	
Vehicle Extension (s)		3.0			3.0			5.0			5.0	
Lane Grp Cap (vph)		198			202			1353			1254	
v/s Ratio Prot												
v/s Ratio Perm		0.04			c0.10			c0.22			0.22	
v/c Ratio		0.30			0.69			0.29			0.28	
Uniform Delay, d1		46.2			49.0			4.2			4.2	
Progression Factor		1.00			1.00			1.00			0.66	
Incremental Delay, d2		0.9			9.7			0.5			0.6	
Delay (s)		47.0			58.7			4.7			3.3	
Level of Service		D			E			A			A	
Approach Delay (s)		47.0			58.7			4.7			3.3	
Approach LOS		D			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	16.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	87	34	25	356	304	55
Future Vol, veh/h	87	34	25	356	304	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	61	78	83	93	62
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	112	56	32	429	327	89

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	864	371	416	0	-	0
Stage 1	371	-	-	-	-	-
Stage 2	493	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	325	675	1143	-	-	-
Stage 1	698	-	-	-	-	-
Stage 2	614	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	313	675	1143	-	-	-
Mov Cap-2 Maneuver	313	-	-	-	-	-
Stage 1	698	-	-	-	-	-
Stage 2	591	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	21.6	0.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1143	-	381	-	-
HCM Lane V/C Ratio	0.028	-	0.439	-	-
HCM Control Delay (s)	8.2	0	21.6	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	2.2	-	-

Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	64	357	168	265
Future Volume (vph)	64	357	168	265
Lane Group Flow (vph)	260	538	215	344
Turn Type	Prot	NA	pm+pt	NA
Protected Phases	3	2	1	6
Permitted Phases			6	
Detector Phase	3	2	1	6
Switch Phase				
Minimum Initial (s)	5.0	15.0	5.0	15.0
Minimum Split (s)	15.0	34.5	15.0	22.5
Total Split (s)	37.0	62.0	21.0	83.0
Total Split (%)	30.8%	51.7%	17.5%	69.2%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5
Lead/Lag		Lag	Lead	
Lead-Lag Optimize?				
Recall Mode	None	C-Min	None	C-Min
v/c Ratio	0.79	0.53	0.40	0.26
Control Delay	57.4	19.3	8.8	7.6
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	57.4	19.3	8.8	7.6
Queue Length 50th (ft)	197	278	50	85
Queue Length 95th (ft)	254	392	81	126
Internal Link Dist (ft)	792	545		22
Turn Bay Length (ft)				
Base Capacity (vph)	435	1015	571	1320
Starvation Cap Reductn	0	0	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.60	0.53	0.38	0.26

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 100 (83%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated

Splits and Phases: 3: Briarcliff Rd & Oak Grove Rd

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	64	169	357	68	168	265
Future Volume (vph)	64	169	357	68	168	265
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5		5.5		5.5	5.5
Lane Util. Factor	1.00		1.00		1.00	1.00
Frt	0.90		0.97		1.00	1.00
Flt Protected	0.99		1.00		0.95	1.00
Satd. Flow (prot)	1661		1812		1770	1863
Flt Permitted	0.99		1.00		0.32	1.00
Satd. Flow (perm)	1661		1812		593	1863
Peak-hour factor, PHF	0.84	0.92	0.83	0.63	0.78	0.77
Adj. Flow (vph)	76	184	430	108	215	344
RTOR Reduction (vph)	0	0	6	0	0	0
Lane Group Flow (vph)	260	0	532	0	215	344
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	3		2		1	6
Permitted Phases					6	
Actuated Green, G (s)	24.0		66.8		85.0	85.0
Effective Green, g (s)	24.0		66.8		85.0	85.0
Actuated g/C Ratio	0.20		0.56		0.71	0.71
Clearance Time (s)	5.5		5.5		5.5	5.5
Vehicle Extension (s)	3.0		5.0		3.0	5.0
Lane Grp Cap (vph)	332		1008		544	1319
v/s Ratio Prot	c0.16		c0.29		c0.04	0.18
v/s Ratio Perm					0.24	
v/c Ratio	0.78		0.53		0.40	0.26
Uniform Delay, d1	45.5		16.7		8.7	6.3
Progression Factor	0.91		0.95		1.00	1.00
Incremental Delay, d2	11.3		2.0		0.5	0.5
Delay (s)	52.7		17.8		9.1	6.7
Level of Service	D		B		A	A
Approach Delay (s)	52.7		17.8			7.7
Approach LOS	D		B			A

Intersection Summary			
HCM 2000 Control Delay	20.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	3.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	36	61	441	41	57	493
Future Vol, veh/h	36	61	441	41	57	493
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	85	84	51	75	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	72	72	525	80	76	542

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	988	565	0	0	605	0
Stage 1	565	-	-	-	-	-
Stage 2	423	-	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	259	523	-	-	971	-
Stage 1	568	-	-	-	-	-
Stage 2	630	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	230	523	-	-	971	-
Mov Cap-2 Maneuver	230	-	-	-	-	-
Stage 1	568	-	-	-	-	-
Stage 2	559	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	25.2	0	1.5
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	319	971	-
HCM Lane V/C Ratio	-	-	0.451	0.078	-
HCM Control Delay (s)	-	-	25.2	9	0.4
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	2.2	0.3	-

Intersection	
Int Delay, s/veh	4.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	62	81	616	0	0	501
Future Vol, veh/h	62	81	616	0	0	501
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	60	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	48	55	86	92	92	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	129	147	716	0	0	589

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1011	716	0	-	-	-
Stage 1	716	-	-	-	-	-
Stage 2	295	-	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	-	-
Pot Cap-1 Maneuver	250	429	-	0	0	-
Stage 1	483	-	-	0	0	-
Stage 2	730	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	250	429	-	-	-	-
Mov Cap-2 Maneuver	250	-	-	-	-	-
Stage 1	483	-	-	-	-	-
Stage 2	730	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	25.2	0	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBT
Capacity (veh/h)	-	250	429	-
HCM Lane V/C Ratio	-	0.517	0.343	-
HCM Control Delay (s)	-	33.8	17.7	-
HCM Lane LOS	-	D	C	-
HCM 95th %tile Q(veh)	-	2.7	1.5	-

Lane Group	EBL	EBT	WBT	NBL	NBT	NBR	SBT	Ø1	Ø3
Lane Configurations									
Traffic Volume (vph)	13	0	2	8	509	51	351		
Future Volume (vph)	13	0	2	8	509	51	351		
Lane Group Flow (vph)	0	60	332	12	553	80	526		
Turn Type	Perm	NA	NA	Perm	NA	Perm	NA		
Protected Phases		4	8		2		6	1	3
Permitted Phases	4			2		2			
Detector Phase	4	4	8	2	2	2	6		
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.5	23.5	23.5	23.5	23.5	23.5	23.5	15.0	15.0
Total Split (s)	23.5	23.5	47.0	49.5	49.5	49.5	73.0	23.5	23.5
Total Split (%)	19.6%	19.6%	39.2%	41.3%	41.3%	41.3%	60.8%	20%	20%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0		
Total Lost Time (s)		5.5	5.5	5.5	5.5	5.5	5.5		
Lead/Lag	Lag	Lag		Lag	Lag	Lag		Lead	Lead
Lead-Lag Optimize?									
Recall Mode	None	None	None	Min	Min	Min	Min	None	None
v/c Ratio		0.11	3.19	0.03	0.53	0.08	263.00		
Control Delay		0.4	1024.0	12.0	18.6	0.8	118796.8		
Queue Delay		0.0	0.0	0.0	0.0	0.0	0.0		
Total Delay		0.4	1024.0	12.0	18.6	0.8	118796.8		
Queue Length 50th (ft)		0	~368	4	254	0	~845		
Queue Length 95th (ft)		0	#32	10	353	0	#1061		
Internal Link Dist (ft)		501	49		348		328		
Turn Bay Length (ft)				135					
Base Capacity (vph)		566	104	454	1047	944	6		
Starvation Cap Reductn		0	0	0	0	0	0		
Spillback Cap Reductn		0	0	0	0	0	0		
Storage Cap Reductn		0	0	0	0	0	0		
Reduced v/c Ratio		0.11	3.19	0.03	0.53	0.08	87.67		

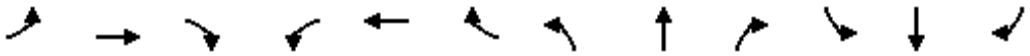
Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Natural Cycle: 80
Control Type: Actuated-Uncoordinated

~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: Briarcliff Rd & Woodwardia Rd/Lakeside HS East Drwy



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	0	14	35	2	149	8	509	51	78	351	15
Future Volume (vph)	13	0	14	35	2	149	8	509	51	78	351	15
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	
Lane Util. Factor		1.00			1.00		1.00	1.00	1.00		1.00	
Frt		0.92			0.90		1.00	1.00	0.85		0.99	
Flt Protected		0.98			0.99		0.95	1.00	1.00		0.99	
Satd. Flow (prot)		1678			1656		1770	1863	1583		1830	
Flt Permitted		0.82			0.91		0.43	1.00	1.00		0.60	
Satd. Flow (perm)		1404			1526		808	1863	1583		1115	
Peak-hour factor, PHF	0.54	0.92	0.39	0.46	0.25	0.60	0.67	0.92	0.64	0.65	0.92	0.62
Adj. Flow (vph)	24	0	36	76	8	248	12	553	80	120	382	24
RTOR Reduction (vph)	0	39	0	0	68	0	0	0	35	0	1	0
Lane Group Flow (vph)	0	21	0	0	264	0	12	553	45	0	525	0
Turn Type	Perm	NA		Prot	NA		Perm	NA	Perm	Prot	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4						2		2			
Actuated Green, G (s)		41.5			41.5		67.5	67.5	67.5		67.5	
Effective Green, g (s)		41.5			41.5		67.5	67.5	67.5		67.5	
Actuated g/C Ratio		0.35			0.35		0.56	0.56	0.56		0.56	
Clearance Time (s)		5.5			5.5		5.5	5.5	5.5		5.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0		3.0	
Lane Grp Cap (vph)		485			527		454	1047	890		627	
v/s Ratio Prot								0.30				
v/s Ratio Perm		0.01			c0.17		0.01		0.03		c0.47	
v/c Ratio		0.04			0.50		0.03	0.53	0.05		0.84	
Uniform Delay, d1		26.1			31.1		11.7	16.3	11.8		21.7	
Progression Factor		1.00			1.00		1.00	1.00	1.00		1.00	
Incremental Delay, d2		0.0			0.8		0.0	0.5	0.0		9.5	
Delay (s)		26.1			31.8		11.7	16.8	11.8		31.2	
Level of Service		C			C		B	B	B		C	
Approach Delay (s)		26.1			31.8			16.1			31.2	
Approach LOS		C			C			B			C	

Intersection Summary			
HCM 2000 Control Delay	24.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.79		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	22.0
Intersection Capacity Utilization	75.9%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	11	12	731	558	21
Future Vol, veh/h	13	11	12	731	558	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	54	46	60	88	94	66
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	24	20	831	594	32

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1481	610	625	0	-	0
Stage 1	610	-	-	-	-	-
Stage 2	871	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	138	494	956	-	-	-
Stage 1	542	-	-	-	-	-
Stage 2	410	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	133	494	956	-	-	-
Mov Cap-2 Maneuver	133	-	-	-	-	-
Stage 1	542	-	-	-	-	-
Stage 2	394	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	27.3	0.2	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	956	-	209	-	-
HCM Lane V/C Ratio	0.021	-	0.23	-	-
HCM Control Delay (s)	8.8	0	27.3	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.1	-	0.9	-	-

Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	116	521	267	456
Future Volume (vph)	116	521	267	456
Lane Group Flow (vph)	333	906	371	496
Turn Type	Prot	NA	pm+pt	NA
Protected Phases	3	2	1	6
Permitted Phases			6	
Detector Phase	3	2	1	6
Switch Phase				
Minimum Initial (s)	5.0	15.0	5.0	15.0
Minimum Split (s)	15.0	23.5	15.0	23.5
Total Split (s)	33.0	83.0	34.0	117.0
Total Split (%)	22.0%	55.3%	22.7%	78.0%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5
Lead/Lag		Lag	Lead	
Lead-Lag Optimize?				
Recall Mode	None	C-Min	None	C-Min
v/c Ratio	0.99	0.97	0.97	0.36
Control Delay	101.0	57.7	86.1	7.6
Queue Delay	0.0	36.0	0.0	0.0
Total Delay	101.0	93.7	86.1	7.6
Queue Length 50th (ft)	301	828	312	153
Queue Length 95th (ft)	#351	#1074	322	204
Internal Link Dist (ft)	477	333		207
Turn Bay Length (ft)			55	
Base Capacity (vph)	336	932	385	1384
Starvation Cap Reductn	0	100	0	0
Spillback Cap Reductn	0	0	0	0
Storage Cap Reductn	0	0	0	0
Reduced v/c Ratio	0.99	1.09	0.96	0.36

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 72 (48%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 100
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 8: Briarcliff Rd & Briarlake Rd

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	116	151	521	215	267	456
Future Volume (vph)	116	151	521	215	267	456
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5		5.5		5.5	5.5
Lane Util. Factor	1.00		1.00		1.00	1.00
Frt	0.93		0.95		1.00	1.00
Flt Protected	0.98		1.00		0.95	1.00
Satd. Flow (prot)	1690		1778		1770	1863
Flt Permitted	0.98		1.00		0.05	1.00
Satd. Flow (perm)	1690		1778		90	1863
Peak-hour factor, PHF	0.74	0.86	0.87	0.70	0.72	0.92
Adj. Flow (vph)	157	176	599	307	371	496
RTOR Reduction (vph)	27	0	12	0	0	0
Lane Group Flow (vph)	306	0	894	0	371	496
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	3		2		1	6
Permitted Phases					6	
Actuated Green, G (s)	27.5		77.7		111.5	111.5
Effective Green, g (s)	27.5		77.7		111.5	111.5
Actuated g/C Ratio	0.18		0.52		0.74	0.74
Clearance Time (s)	5.5		5.5		5.5	5.5
Vehicle Extension (s)	3.0		5.0		3.0	5.0
Lane Grp Cap (vph)	309		921		383	1384
v/s Ratio Prot	c0.18		0.50		c0.18	0.27
v/s Ratio Perm					c0.54	
v/c Ratio	0.99		0.97		0.97	0.36
Uniform Delay, d1	61.1		35.0		52.7	6.7
Progression Factor	1.00		1.00		1.00	1.00
Incremental Delay, d2	48.4		23.3		37.3	0.7
Delay (s)	109.6		58.4		90.0	7.5
Level of Service	F		E		F	A
Approach Delay (s)	109.6		58.4			42.8
Approach LOS	F		E			D

Intersection Summary			
HCM 2000 Control Delay	60.1	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	84.8%	ICU Level of Service	E
Analysis Period (min)	15		

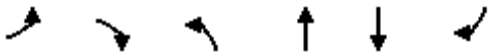
c Critical Lane Group

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	577	471	288	315	174
Future Volume (vph)	577	471	288	315	174
Lane Group Flow (vph)	687	581	320	342	499
Turn Type	Prot	Perm	pm+pt	NA	NA
Protected Phases	4		5	2	6
Permitted Phases		4	2		
Detector Phase	4	4	5	2	6
Switch Phase					
Minimum Initial (s)	6.0	6.0	5.0	15.0	15.0
Minimum Split (s)	27.5	27.5	15.0	22.5	33.5
Total Split (s)	55.0	55.0	22.0	65.0	43.0
Total Split (%)	45.8%	45.8%	18.3%	54.2%	35.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5
Lead/Lag			Lead		Lag
Lead-Lag Optimize?					
Recall Mode	None	None	None	C-Min	C-Min
v/c Ratio	0.96	0.63	0.95	0.36	0.84
Control Delay	60.3	8.4	63.8	19.8	47.9
Queue Delay	0.0	0.0	0.0	0.0	0.0
Total Delay	60.3	8.4	63.8	19.8	47.9
Queue Length 50th (ft)	503	51	170	159	324
Queue Length 95th (ft)	#661	96	#352	230	#433
Internal Link Dist (ft)	806			292	282
Turn Bay Length (ft)					
Base Capacity (vph)	730	932	338	938	591
Starvation Cap Reductn	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0
Reduced v/c Ratio	0.94	0.62	0.95	0.36	0.84

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 9: Briarcliff Rd & Shallowford Rd



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	577	471	288	315	174	260
Future Volume (vph)	577	471	288	315	174	260
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	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.92	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	1863	1716	
Flt Permitted	0.95	1.00	0.14	1.00	1.00	
Satd. Flow (perm)	1770	1583	259	1863	1716	
Peak-hour factor, PHF	0.84	0.81	0.90	0.92	0.84	0.89
Adj. Flow (vph)	687	581	320	342	207	292
RTOR Reduction (vph)	0	283	0	0	42	0
Lane Group Flow (vph)	687	298	320	342	457	0
Turn Type	Prot	Perm	pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	48.5	48.5	60.5	60.5	38.5	
Effective Green, g (s)	48.5	48.5	60.5	60.5	38.5	
Actuated g/C Ratio	0.40	0.40	0.50	0.50	0.32	
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5	
Vehicle Extension (s)	3.0	3.0	3.0	5.0	5.0	
Lane Grp Cap (vph)	715	639	338	939	550	
v/s Ratio Prot	c0.39		c0.13	0.18	0.27	
v/s Ratio Perm		0.19	c0.35			
v/c Ratio	0.96	0.47	0.95	0.36	0.83	
Uniform Delay, d1	34.8	26.2	29.3	18.1	37.7	
Progression Factor	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	24.3	0.5	34.9	1.1	13.6	
Delay (s)	59.1	26.8	64.2	19.2	51.4	
Level of Service	E	C	E	B	D	
Approach Delay (s)	44.3			40.9	51.4	
Approach LOS	D			D	D	

Intersection Summary			
HCM 2000 Control Delay	44.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.98		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	86.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	12	0	17	0	196	12	15	249	0
Future Vol, veh/h	0	0	0	12	0	17	0	196	12	15	249	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	50	25	53	92	89	50	62	83	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	24	0	32	0	220	24	24	300	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	596	592	300	580	580	232	300	0	0	244	0	0
Stage 1	348	348	-	232	232	-	-	-	-	-	-	-
Stage 2	248	244	-	348	348	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	415	419	740	426	426	807	1261	-	-	1322	-	-
Stage 1	668	634	-	771	713	-	-	-	-	-	-	-
Stage 2	756	704	-	668	634	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	392	410	740	419	417	807	1261	-	-	1322	-	-
Mov Cap-2 Maneuver	392	410	-	419	417	-	-	-	-	-	-	-
Stage 1	668	620	-	771	713	-	-	-	-	-	-	-
Stage 2	726	704	-	653	620	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	11.9	0	0.6
HCM LOS	A	B		

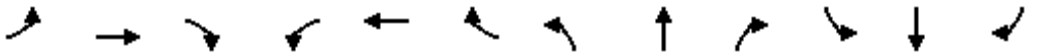
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1261	-	-	-	578	1322	-	-
HCM Lane V/C Ratio	-	-	-	-	0.097	0.018	-	-
HCM Control Delay (s)	0	-	-	0	11.9	7.8	0	-
HCM Lane LOS	A	-	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0.3	0.1	-	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	11	18	21	13	7	186	266	219	13
Future Volume (vph)	11	18	21	13	7	186	266	219	13
Lane Group Flow (vph)	0	88	0	156	0	293	391	281	28
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases		4		8		2		6	
Permitted Phases	4		8		2		6		6
Detector Phase	4	4	8	8	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	6.0	6.0	6.0	6.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	26.5	26.5	27.5	27.5	26.5	26.5	23.5	23.5	23.5
Total Split (s)	33.0	33.0	33.0	33.0	87.0	87.0	87.0	87.0	87.0
Total Split (%)	27.5%	27.5%	27.5%	27.5%	72.5%	72.5%	72.5%	72.5%	72.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5		5.5		5.5	5.5	5.5	5.5
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min
v/c Ratio		0.79		0.66		0.20	0.45	0.19	0.02
Control Delay		88.9		34.2		2.9	3.9	1.8	0.2
Queue Delay		0.0		0.0		0.0	0.0	0.0	0.0
Total Delay		88.9		34.2		2.9	3.9	1.8	0.2
Queue Length 50th (ft)		61		42		35	32	20	0
Queue Length 95th (ft)		44		89		72	43	33	0
Internal Link Dist (ft)		589		806		691		1033	
Turn Bay Length (ft)							70		80
Base Capacity (vph)		253		422		1445	878	1512	1290
Starvation Cap Reductn		0		0		0	0	0	0
Spillback Cap Reductn		0		0		0	0	0	0
Storage Cap Reductn		0		0		0	0	0	0
Reduced v/c Ratio		0.35		0.37		0.20	0.45	0.19	0.02

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 70 (58%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 11: Oak Grove Rd & Fairoaks Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	18	7	21	13	100	7	186	48	266	219	13
Future Volume (vph)	11	18	7	21	13	100	7	186	48	266	219	13
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
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	1.00
Frt		0.98			0.90			0.97		1.00	1.00	0.85
Flt Protected		0.98			0.99			1.00		0.95	1.00	1.00
Satd. Flow (prot)		1789			1667			1797		1770	1863	1583
Flt Permitted		0.59			0.90			0.99		0.58	1.00	1.00
Satd. Flow (perm)		1075			1510			1774		1082	1863	1583
Peak-hour factor, PHF	0.39	0.41	0.44	0.75	0.81	0.89	0.58	0.89	0.67	0.68	0.78	0.46
Adj. Flow (vph)	28	44	16	28	16	112	12	209	72	391	281	28
RTOR Reduction (vph)	0	8	0	0	89	0	0	6	0	0	0	5
Lane Group Flow (vph)	0	80	0	0	67	0	0	287	0	391	281	23
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		11.6			11.6			97.4		97.4	97.4	97.4
Effective Green, g (s)		11.6			11.6			97.4		97.4	97.4	97.4
Actuated g/C Ratio		0.10			0.10			0.81		0.81	0.81	0.81
Clearance Time (s)		5.5			5.5			5.5		5.5	5.5	5.5
Vehicle Extension (s)		3.0			3.0			5.0		5.0	5.0	5.0
Lane Grp Cap (vph)		103			145			1439		878	1512	1284
v/s Ratio Prot											0.15	
v/s Ratio Perm		c0.07			0.04			0.16		c0.36		0.01
v/c Ratio		0.78			0.46			0.20		0.45	0.19	0.02
Uniform Delay, d1		52.9			51.2			2.5		3.3	2.5	2.2
Progression Factor		1.00			1.00			1.00		0.58	0.53	0.19
Incremental Delay, d2		29.7			2.3			0.3		1.6	0.3	0.0
Delay (s)		82.7			53.5			2.9		3.5	1.6	0.4
Level of Service		F			D			A		A	A	A
Approach Delay (s)		82.7			53.5			2.9			2.6	
Approach LOS		F			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	505	4	2	238	12	5
Future Vol, veh/h	505	4	2	238	12	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	50	25	88	43	62
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	623	8	8	270	28	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	631	0	913	627
Stage 1	-	-	-	-	627	-
Stage 2	-	-	-	-	286	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	951	-	304	484
Stage 1	-	-	-	-	532	-
Stage 2	-	-	-	-	763	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	951	-	301	484
Mov Cap-2 Maneuver	-	-	-	-	301	-
Stage 1	-	-	-	-	532	-
Stage 2	-	-	-	-	755	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	17.3
HCM LOS			C

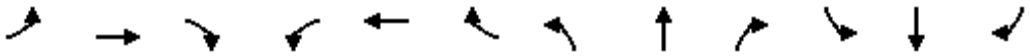
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	329	-	-	951	-
HCM Lane V/C Ratio	0.109	-	-	0.008	-
HCM Control Delay (s)	17.3	-	-	8.8	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	12	19	30	27	16	356	28	202
Future Volume (vph)	12	19	30	27	16	356	28	202
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	6.0	6.0	6.0	6.0	15.0	15.0	15.0	15.0
Minimum Split (s)	22.5	22.5	24.5	24.5	25.5	25.5	26.5	26.5
Total Split (s)	37.0	37.0	37.0	37.0	83.0	83.0	83.0	83.0
Total Split (%)	30.8%	30.8%	30.8%	30.8%	69.2%	69.2%	69.2%	69.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		5.5		5.5		5.5		5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 46 (38%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated

Splits and Phases: 1: Briarcliff Rd & Chrysler Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	19	17	30	27	20	16	356	36	28	202	16
Future Volume (vph)	12	19	17	30	27	20	16	356	36	28	202	16
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	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.96			0.95			0.99			0.99	
Flt Protected		0.99			0.98			1.00			0.99	
Satd. Flow (prot)		1759			1746			1832			1831	
Flt Permitted		0.82			0.83			0.98			0.88	
Satd. Flow (perm)		1458			1479			1802			1626	
Peak-hour factor, PHF	0.50	0.53	0.61	0.75	0.68	0.46	0.80	0.86	0.69	0.64	0.92	0.80
Adj. Flow (vph)	24	36	28	40	40	43	20	414	52	44	220	20
RTOR Reduction (vph)	0	17	0	0	20	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	71	0	0	103	0	0	484	0	0	283	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		13.3			13.3			95.7			95.7	
Effective Green, g (s)		13.3			13.3			95.7			95.7	
Actuated g/C Ratio		0.11			0.11			0.80			0.80	
Clearance Time (s)		5.5			5.5			5.5			5.5	
Vehicle Extension (s)		3.0			3.0			5.0			5.0	
Lane Grp Cap (vph)		161			163			1437			1296	
v/s Ratio Prot												
v/s Ratio Perm		0.05			c0.07			c0.27			0.17	
v/c Ratio		0.44			0.63			0.34			0.22	
Uniform Delay, d1		49.9			51.0			3.4			3.0	
Progression Factor		1.00			1.00			1.00			0.73	
Incremental Delay, d2		1.9			7.8			0.6			0.4	
Delay (s)		51.8			58.9			4.0			2.6	
Level of Service		D			E			A			A	
Approach Delay (s)		51.8			58.9			4.0			2.6	
Approach LOS		D			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	14.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	40.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	72	15	32	471	339	50
Future Vol, veh/h	72	15	32	471	339	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	54	89	83	78	62
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	80	28	36	567	435	81

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1114	475	515	0	-	0
Stage 1	475	-	-	-	-	-
Stage 2	639	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	230	590	1051	-	-	-
Stage 1	626	-	-	-	-	-
Stage 2	526	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	219	590	1051	-	-	-
Mov Cap-2 Maneuver	219	-	-	-	-	-
Stage 1	626	-	-	-	-	-
Stage 2	500	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	28.2	0.5	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1051	-	261	-	-
HCM Lane V/C Ratio	0.034	-	0.413	-	-
HCM Control Delay (s)	8.5	0	28.2	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.1	-	1.9	-	-

Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	66	371	264	299
Future Volume (vph)	66	371	264	299
Turn Type	Prot	NA	pm+pt	NA
Protected Phases	3	2	1	6
Permitted Phases			6	
Detector Phase	3	2	1	6
Switch Phase				
Minimum Initial (s)	5.0	15.0	5.0	15.0
Minimum Split (s)	15.0	34.5	15.0	22.5
Total Split (s)	42.0	52.0	26.0	78.0
Total Split (%)	35.0%	43.3%	21.7%	65.0%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5
Lead/Lag		Lag	Lead	
Lead-Lag Optimize?				
Recall Mode	None	C-Min	None	C-Min

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 108 (90%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 3: Briarcliff Rd & Oak Grove Rd

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	66	215	371	57	264	299
Future Volume (vph)	66	215	371	57	264	299
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5		5.5		5.5	5.5
Lane Util. Factor	1.00		1.00		1.00	1.00
Frt	0.90		0.98		1.00	1.00
Flt Protected	0.99		1.00		0.95	1.00
Satd. Flow (prot)	1650		1830		1770	1863
Flt Permitted	0.99		1.00		0.30	1.00
Satd. Flow (perm)	1650		1830		556	1863
Peak-hour factor, PHF	0.82	0.80	0.86	0.89	0.88	0.83
Adj. Flow (vph)	80	269	431	64	300	360
RTOR Reduction (vph)	0	0	4	0	0	0
Lane Group Flow (vph)	349	0	491	0	300	360
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	3		2		1	6
Permitted Phases					6	
Actuated Green, G (s)	30.0		57.1		79.0	79.0
Effective Green, g (s)	30.0		57.1		79.0	79.0
Actuated g/C Ratio	0.25		0.48		0.66	0.66
Clearance Time (s)	5.5		5.5		5.5	5.5
Vehicle Extension (s)	3.0		5.0		3.0	5.0
Lane Grp Cap (vph)	412		870		531	1226
v/s Ratio Prot	c0.21		0.27		c0.08	0.19
v/s Ratio Perm					c0.29	
v/c Ratio	0.85		0.56		0.56	0.29
Uniform Delay, d1	42.8		22.5		12.0	8.7
Progression Factor	0.88		0.93		1.00	1.00
Incremental Delay, d2	14.5		2.6		1.4	0.6
Delay (s)	51.9		23.5		13.4	9.3
Level of Service	D		C		B	A
Approach Delay (s)	51.9		23.5			11.1
Approach LOS	D		C			B

Intersection Summary			
HCM 2000 Control Delay	24.7	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	2.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	21	46	508	37	52	500
Future Vol, veh/h	21	46	508	37	52	500
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	53	68	95	66	72	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	68	535	56	72	538

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	976	563	0	0	591	0
Stage 1	563	-	-	-	-	-
Stage 2	413	-	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	263	525	-	-	983	-
Stage 1	569	-	-	-	-	-
Stage 2	637	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	236	525	-	-	983	-
Mov Cap-2 Maneuver	236	-	-	-	-	-
Stage 1	569	-	-	-	-	-
Stage 2	571	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.1	0	1.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	361	983	-
HCM Lane V/C Ratio	-	-	0.297	0.073	-
HCM Control Delay (s)	-	-	19.1	9	0.4
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	1.2	0.2	-

Intersection	
Int Delay, s/veh	2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	39	45	616	0	0	545
Future Vol, veh/h	39	45	616	0	0	545
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	60	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	57	54	92	92	92	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	68	83	670	0	0	562

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	951	670	0	-	-	-
Stage 1	670	-	-	-	-	-
Stage 2	281	-	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	-	-
Pot Cap-1 Maneuver	273	456	-	0	0	-
Stage 1	508	-	-	0	0	-
Stage 2	742	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	273	456	-	-	-	-
Mov Cap-2 Maneuver	273	-	-	-	-	-
Stage 1	508	-	-	-	-	-
Stage 2	742	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.2	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBT
Capacity (veh/h)	-	273	456	-
HCM Lane V/C Ratio	-	0.251	0.183	-
HCM Control Delay (s)	-	22.5	14.7	-
HCM Lane LOS	-	C	B	-
HCM 95th %tile Q(veh)	-	1	0.7	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↰	↑	↱		↕	
Traffic Vol, veh/h	10	0	1	20	0	40	5	541	7	28	466	12
Future Vol, veh/h	10	0	1	20	0	40	5	541	7	28	466	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	135	-	0	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	92	25	50	25	56	62	95	58	64	83	38
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	0	4	40	0	71	8	569	12	44	561	32

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1286	1251	577	1253	1267	569	593	0	0	569	0	0
Stage 1	665	665	-	586	586	-	-	-	-	-	-	-
Stage 2	621	586	-	667	681	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	141	172	516	149	169	522	983	-	-	1003	-	-
Stage 1	449	458	-	496	497	-	-	-	-	-	-	-
Stage 2	475	497	-	448	450	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	115	159	516	140	157	522	983	-	-	1003	-	-
Mov Cap-2 Maneuver	115	159	-	140	157	-	-	-	-	-	-	-
Stage 1	445	428	-	492	493	-	-	-	-	-	-	-
Stage 2	407	493	-	415	420	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	38.2	28.2	0.1	0.6
HCM LOS	E	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	983	-	-	132	264	1003	-	-
HCM Lane V/C Ratio	0.008	-	-	0.182	0.422	0.044	-	-
HCM Control Delay (s)	8.7	-	-	38.2	28.2	8.8	0	-
HCM Lane LOS	A	-	-	E	D	A	A	-
HCM 95th %tile Q(veh)	0	-	-	0.6	2	0.1	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	4	9	673	551	13
Future Vol, veh/h	12	4	9	673	551	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	60	33	45	89	95	46
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	12	20	756	580	28

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1390	594	608	0	-	0
Stage 1	594	-	-	-	-	-
Stage 2	796	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	157	505	970	-	-	-
Stage 1	552	-	-	-	-	-
Stage 2	444	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	151	505	970	-	-	-
Mov Cap-2 Maneuver	151	-	-	-	-	-
Stage 1	552	-	-	-	-	-
Stage 2	428	-	-	-	-	-

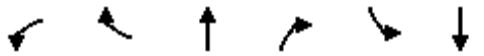
Approach	EB	NB	SB
HCM Control Delay, s	25.8	0.2	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	970	-	205	-	-
HCM Lane V/C Ratio	0.021	-	0.157	-	-
HCM Control Delay (s)	8.8	0	25.8	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	102	470	427	421
Future Volume (vph)	102	470	427	421
Turn Type	Prot	NA	pm+pt	NA
Protected Phases	3	2	1	6
Permitted Phases			6	
Detector Phase	3	2	1	6
Switch Phase				
Minimum Initial (s)	5.0	15.0	5.0	15.0
Minimum Split (s)	15.0	23.5	15.0	23.5
Total Split (s)	30.0	77.0	43.0	120.0
Total Split (%)	20.0%	51.3%	28.7%	80.0%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5
Lead/Lag		Lag	Lead	
Lead-Lag Optimize?				
Recall Mode	None	C-Min	None	C-Min

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 4 (3%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 8: Briarcliff Rd & Briarlake Rd



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	102	119	470	201	427	421
Future Volume (vph)	102	119	470	201	427	421
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5		5.5		5.5	5.5
Lane Util. Factor	1.00		1.00		1.00	1.00
Frt	0.92		0.96		1.00	1.00
Flt Protected	0.98		1.00		0.95	1.00
Satd. Flow (prot)	1682		1780		1770	1863
Flt Permitted	0.98		1.00		0.17	1.00
Satd. Flow (perm)	1682		1780		317	1863
Peak-hour factor, PHF	0.94	0.80	0.97	0.85	0.96	0.90
Adj. Flow (vph)	109	149	485	236	445	468
RTOR Reduction (vph)	33	0	10	0	0	0
Lane Group Flow (vph)	225	0	711	0	445	468
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	3		2		1	6
Permitted Phases					6	
Actuated Green, G (s)	22.8		78.8		116.2	116.2
Effective Green, g (s)	22.8		78.8		116.2	116.2
Actuated g/C Ratio	0.15		0.53		0.77	0.77
Clearance Time (s)	5.5		5.5		5.5	5.5
Vehicle Extension (s)	3.0		5.0		3.0	5.0
Lane Grp Cap (vph)	255		935		554	1443
v/s Ratio Prot	c0.13		0.40		c0.17	0.25
v/s Ratio Perm					c0.45	
v/c Ratio	0.88		0.76		0.80	0.32
Uniform Delay, d1	62.3		28.1		29.3	5.1
Progression Factor	1.00		1.00		1.48	0.86
Incremental Delay, d2	27.9		5.8		5.1	0.4
Delay (s)	90.2		33.9		48.7	4.7
Level of Service	F		C		D	A
Approach Delay (s)	90.2		33.9			26.2
Approach LOS	F		C			C

Intersection Summary			
HCM 2000 Control Delay	37.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.83		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	87.3%	ICU Level of Service	E
Analysis Period (min)	15		

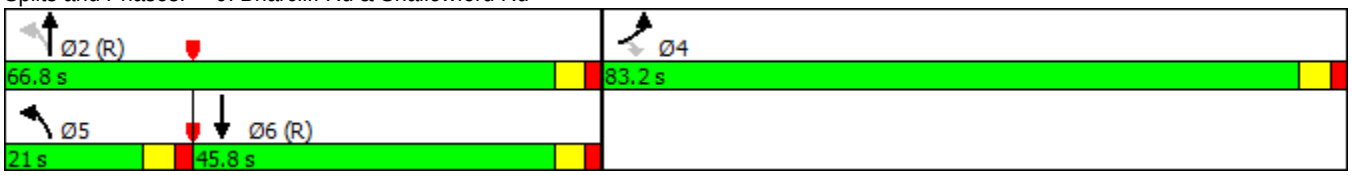
c Critical Lane Group

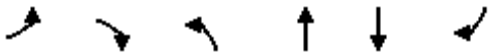
Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	913	689	234	278	157
Future Volume (vph)	913	689	234	278	157
Turn Type	Prot	Perm	pm+pt	NA	NA
Protected Phases	4		5	2	6
Permitted Phases		4	2		
Detector Phase	4	4	5	2	6
Switch Phase					
Minimum Initial (s)	6.0	6.0	5.0	15.0	15.0
Minimum Split (s)	27.5	27.5	15.0	22.5	33.5
Total Split (s)	83.2	83.2	21.0	66.8	45.8
Total Split (%)	55.5%	55.5%	14.0%	44.5%	30.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5
Lead/Lag			Lead		Lag
Lead-Lag Optimize?					
Recall Mode	None	None	None	C-Min	C-Min

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 100 (67%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated

Splits and Phases: 9: Briarcliff Rd & Shallowford Rd





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	913	689	234	278	157	272
Future Volume (vph)	913	689	234	278	157	272
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	1.00	1.00	1.00	1.00	1.00	
Frt	1.00	0.85	1.00	1.00	0.91	
Flt Protected	0.95	1.00	0.95	1.00	1.00	
Satd. Flow (prot)	1770	1583	1770	1863	1704	
Flt Permitted	0.95	1.00	0.09	1.00	1.00	
Satd. Flow (perm)	1770	1583	163	1863	1704	
Peak-hour factor, PHF	0.97	0.94	0.94	0.83	0.83	0.84
Adj. Flow (vph)	941	733	249	335	189	324
RTOR Reduction (vph)	0	206	0	0	41	0
Lane Group Flow (vph)	941	527	249	335	472	0
Turn Type	Prot	Perm	pm+pt	NA	NA	
Protected Phases	4		5	2	6	
Permitted Phases		4	2			
Actuated Green, G (s)	77.7	77.7	61.3	61.3	40.3	
Effective Green, g (s)	77.7	77.7	61.3	61.3	40.3	
Actuated g/C Ratio	0.52	0.52	0.41	0.41	0.27	
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5	
Vehicle Extension (s)	3.0	3.0	3.0	5.0	5.0	
Lane Grp Cap (vph)	916	819	232	761	457	
v/s Ratio Prot	c0.53		c0.11	0.18	0.28	
v/s Ratio Perm		0.33	c0.33			
v/c Ratio	1.03	0.64	1.07	0.44	1.03	
Uniform Delay, d1	36.1	26.1	46.2	32.0	54.9	
Progression Factor	1.00	1.00	0.82	0.59	1.00	
Incremental Delay, d2	36.9	1.7	66.7	1.1	50.8	
Delay (s)	73.0	27.9	104.5	20.0	105.7	
Level of Service	E	C	F	B	F	
Approach Delay (s)	53.3			56.0	105.7	
Approach LOS	D			E	F	

Intersection Summary			
HCM 2000 Control Delay	63.6	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	1.07		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	102.2%	ICU Level of Service	G
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	1	0	14	0	234	0	15	283	0
Future Vol, veh/h	0	0	0	1	0	14	0	234	0	15	283	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	25	25	70	92	84	31	54	86	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	4	0	20	0	279	0	28	329	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	674	664	329	664	664	279	329	0	0	279	0	0
Stage 1	385	385	-	279	279	-	-	-	-	-	-	-
Stage 2	289	279	-	385	385	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	368	381	712	374	381	760	1231	-	-	1284	-	-
Stage 1	638	611	-	728	680	-	-	-	-	-	-	-
Stage 2	719	680	-	638	611	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	351	371	712	366	371	760	1231	-	-	1284	-	-
Mov Cap-2 Maneuver	351	371	-	366	371	-	-	-	-	-	-	-
Stage 1	638	595	-	728	680	-	-	-	-	-	-	-
Stage 2	700	680	-	621	595	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	10.8	0	0.6
HCM LOS	A	B		

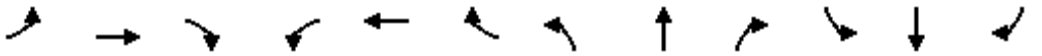
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1231	-	-	-	644	1284	-	-
HCM Lane V/C Ratio	-	-	-	-	0.037	0.022	-	-
HCM Control Delay (s)	0	-	-	0	10.8	7.9	0	-
HCM Lane LOS	A	-	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0.1	-	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	29	50	39	35	15	227	362	271	13
Future Volume (vph)	29	50	39	35	15	227	362	271	13
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases		4		8		2		6	
Permitted Phases	4		8		2		6		6
Detector Phase	4	4	8	8	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	6.0	6.0	6.0	6.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	26.5	26.5	27.5	27.5	26.5	26.5	23.5	23.5	23.5
Total Split (s)	35.0	35.0	35.0	35.0	85.0	85.0	85.0	85.0	85.0
Total Split (%)	29.2%	29.2%	29.2%	29.2%	70.8%	70.8%	70.8%	70.8%	70.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5		5.5		5.5	5.5	5.5	5.5
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 66 (55%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 11: Oak Grove Rd & Fairoaks Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	50	29	39	35	87	15	227	55	362	271	13
Future Volume (vph)	29	50	29	39	35	87	15	227	55	362	271	13
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
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	1.00
Frt		0.97			0.94			0.97		1.00	1.00	0.85
Flt Protected		0.99			0.99			1.00		0.95	1.00	1.00
Satd. Flow (prot)		1773			1718			1803		1770	1863	1583
Flt Permitted		0.73			0.79			0.97		0.55	1.00	1.00
Satd. Flow (perm)		1312			1373			1748		1025	1863	1583
Peak-hour factor, PHF	0.72	0.78	0.81	0.70	0.73	0.91	0.62	0.85	0.69	0.97	0.84	0.81
Adj. Flow (vph)	40	64	36	56	48	96	24	267	80	373	323	16
RTOR Reduction (vph)	0	12	0	0	31	0	0	6	0	0	0	4
Lane Group Flow (vph)	0	128	0	0	169	0	0	365	0	373	323	12
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		18.6			18.6			90.4		90.4	90.4	90.4
Effective Green, g (s)		18.6			18.6			90.4		90.4	90.4	90.4
Actuated g/C Ratio		0.16			0.16			0.75		0.75	0.75	0.75
Clearance Time (s)		5.5			5.5			5.5		5.5	5.5	5.5
Vehicle Extension (s)		3.0			3.0			5.0		5.0	5.0	5.0
Lane Grp Cap (vph)		203			212			1316		772	1403	1192
v/s Ratio Prot											0.17	
v/s Ratio Perm		0.10			c0.12			0.21		c0.36		0.01
v/c Ratio		0.63			0.80			0.28		0.48	0.23	0.01
Uniform Delay, d1		47.5			48.9			4.6		5.7	4.4	3.7
Progression Factor		1.00			1.00			1.00		0.52	0.49	0.04
Incremental Delay, d2		6.3			18.4			0.5		2.1	0.4	0.0
Delay (s)		53.8			67.2			5.1		5.1	2.5	0.2
Level of Service		D			E			A		A	A	A
Approach Delay (s)		53.8			67.2			5.1			3.8	
Approach LOS		D			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	18.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	652	9	2	291	6	2
Future Vol, veh/h	652	9	2	291	6	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	56	25	93	50	25
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	709	16	8	313	12	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	725	0	1046	717
Stage 1	-	-	-	-	717	-
Stage 2	-	-	-	-	329	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	878	-	253	430
Stage 1	-	-	-	-	484	-
Stage 2	-	-	-	-	729	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	878	-	250	430
Mov Cap-2 Maneuver	-	-	-	-	250	-
Stage 1	-	-	-	-	484	-
Stage 2	-	-	-	-	721	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	17.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	300	-	-	878	-
HCM Lane V/C Ratio	0.067	-	-	0.009	-
HCM Control Delay (s)	17.9	-	-	9.1	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-

AASHTO Left Turn Lane Analysis

LEFT TURN LANE ANALYSIS
per AASHTO standards

The following left turn lane analyses were used to determine the need for dedicated turn bays at the proposed site driveway locations that are not located on State Routes.

7.3 Methodology

M.D. Harmelink utilized a probabilistic model to establish left turn lane warrants for two-lane and four-lane highways at unsignalized T-intersections. These warrants are the basis for AASHTO guidelines for justifying a left-turn lane at an unsignalized intersection. The warrants developed are in the form of sets of different volume combinations, specifically, the advancing volume, the percentage of left-turns in the advancing volume, and the opposing volume. These warrants are based on maximum allowable probabilities that one or more through vehicles are present in the queue formed by the left-turning vehicles that is waiting for a suitable gap. The warrants, as summarized by AASHTO, were developed for the approach speeds of 40, 50 and 60 mph and left turn volumes that are 5%, 10%, 20%, and 30% of the advancing stream.

AASHTO Thresholds (Exhibit 9-75, pg 685), 40 MPH				
Opposing Volumes	Advancing Volumes (by left turn %)			
	5%	10.0%	20.0%	30.0%
100	720	515	390	340
200	640	470	350	305
400	510	380	275	245
600	410	305	225	200
800	330	240	180	160

An interpolation of the thresholds is needed for other volumes and percentages that are not in the AASHTO table for left turn percentages that are not represented in the table.

7.4 Results

A graphic of the peak hour turning movements for the site, as they relate to the AASHTO criteria are provided in the following figures.

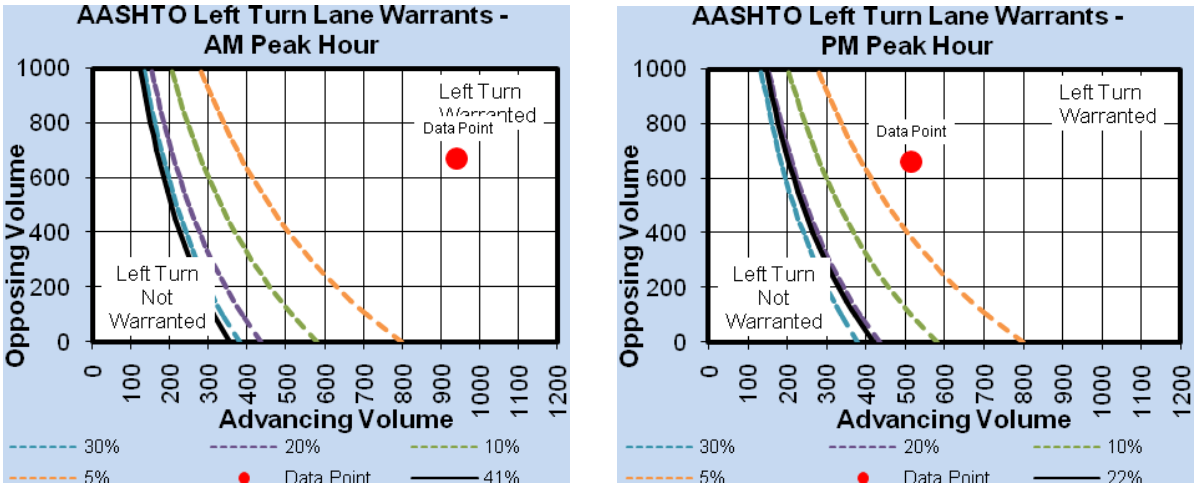


Figure 2 – AASHTO Left Turn Lane Guidelines: School East Drwy

7.5 Findings

The results of the analysis show that a left turn lane is warranted per AASHTO criteria at the eastern school driveway.

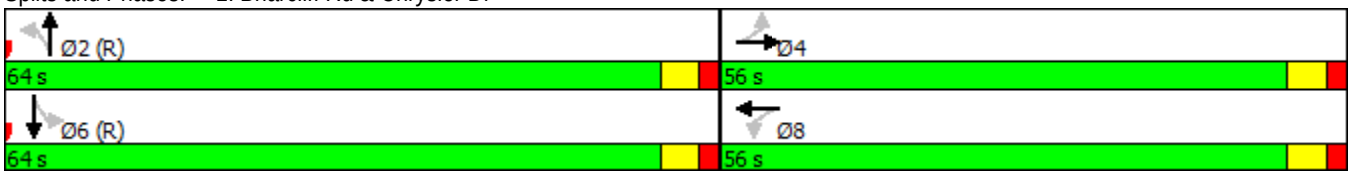
FUTURE INTERSECTION ANALYSIS (WITH IMPROVEMENTS)

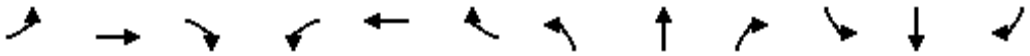
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	17	28	107	14	3	190	102	348
Future Volume (vph)	17	28	107	14	3	190	102	348
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	6.0	6.0	6.0	6.0	15.0	15.0	15.0	15.0
Minimum Split (s)	22.5	22.5	24.5	24.5	25.5	25.5	26.5	26.5
Total Split (s)	56.0	56.0	56.0	56.0	64.0	64.0	64.0	64.0
Total Split (%)	46.7%	46.7%	46.7%	46.7%	53.3%	53.3%	53.3%	53.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		5.5		5.5		5.5		5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 36 (30%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated

Splits and Phases: 1: Briarcliff Rd & Chrysler Dr





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	17	28	15	107	14	148	3	190	11	102	348	11
Future Volume (vph)	17	28	15	107	14	148	3	190	11	102	348	11
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	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.96			0.92			0.99			1.00	
Flt Protected		0.99			0.98			1.00			0.99	
Satd. Flow (prot)		1771			1690			1840			1833	
Flt Permitted		0.83			0.84			0.99			0.85	
Satd. Flow (perm)		1484			1438			1830			1570	
Peak-hour factor, PHF	0.61	0.58	0.54	0.62	0.50	0.58	0.75	0.75	0.46	0.77	0.81	0.55
Adj. Flow (vph)	28	48	28	173	28	255	4	253	24	132	430	20
RTOR Reduction (vph)	0	13	0	0	44	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	91	0	0	412	0	0	279	0	0	581	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		39.7			39.7			69.3			69.3	
Effective Green, g (s)		39.7			39.7			69.3			69.3	
Actuated g/C Ratio		0.33			0.33			0.58			0.58	
Clearance Time (s)		5.5			5.5			5.5			5.5	
Vehicle Extension (s)		3.0			3.0			5.0			5.0	
Lane Grp Cap (vph)		490			475			1056			906	
v/s Ratio Prot												
v/s Ratio Perm		0.06			c0.29			0.15			c0.37	
v/c Ratio		0.19			0.87			0.26			0.64	
Uniform Delay, d1		28.6			37.7			12.6			17.0	
Progression Factor		1.00			1.00			1.00			0.67	
Incremental Delay, d2		0.2			15.3			0.6			3.1	
Delay (s)		28.8			52.9			13.2			14.4	
Level of Service		C			D			B			B	
Approach Delay (s)		28.8			52.9			13.2			14.4	
Approach LOS		C			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	27.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.72		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	73.3%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	3.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	47	39	42	390	446	84
Future Vol, veh/h	47	39	42	390	446	84
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	65	81	81	75	85	78
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	72	48	52	520	525	108

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1203	579	632	0	-	0
Stage 1	579	-	-	-	-	-
Stage 2	624	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	204	515	951	-	-	-
Stage 1	560	-	-	-	-	-
Stage 2	534	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	188	515	951	-	-	-
Mov Cap-2 Maneuver	188	-	-	-	-	-
Stage 1	560	-	-	-	-	-
Stage 2	493	-	-	-	-	-

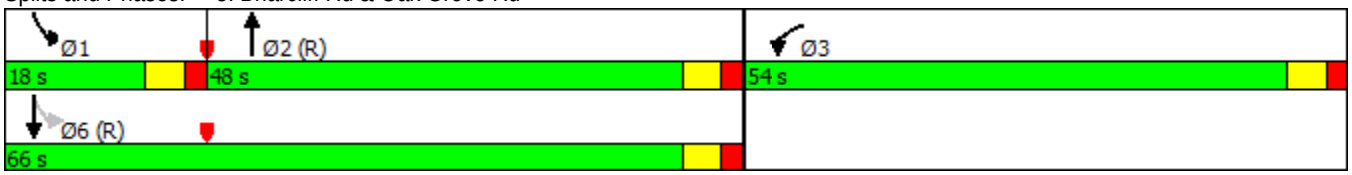
Approach	EB	NB	SB
HCM Control Delay, s	31.7	0.8	0
HCM LOS	D		

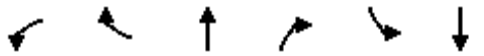
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	951	-	252	-	-
HCM Lane V/C Ratio	0.055	-	0.478	-	-
HCM Control Delay (s)	9	0	31.7	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.2	-	2.4	-	-

Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	150	318	141	343
Future Volume (vph)	150	318	141	343
Turn Type	Prot	NA	pm+pt	NA
Protected Phases	3	2	1	6
Permitted Phases			6	
Detector Phase	3	2	1	6
Switch Phase				
Minimum Initial (s)	5.0	15.0	5.0	15.0
Minimum Split (s)	15.0	34.5	15.0	22.5
Total Split (s)	54.0	48.0	18.0	66.0
Total Split (%)	45.0%	40.0%	15.0%	55.0%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5
Lead/Lag		Lag	Lead	
Lead-Lag Optimize?				
Recall Mode	None	C-Min	None	C-Min

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 3 (3%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 3: Briarcliff Rd & Oak Grove Rd





Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	150	255	318	77	141	343
Future Volume (vph)	150	255	318	77	141	343
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5		5.5		5.5	5.5
Lane Util. Factor	1.00		1.00		1.00	1.00
Frt	0.92		0.97		1.00	1.00
Flt Protected	0.98		1.00		0.95	1.00
Satd. Flow (prot)	1678		1807		1770	1863
Flt Permitted	0.98		1.00		0.22	1.00
Satd. Flow (perm)	1678		1807		414	1863
Peak-hour factor, PHF	0.67	0.76	0.81	0.69	0.65	0.84
Adj. Flow (vph)	224	336	393	112	217	408
RTOR Reduction (vph)	0	0	8	0	0	0
Lane Group Flow (vph)	560	0	497	0	217	408
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	3		2		1	6
Permitted Phases					6	
Actuated Green, G (s)	44.1		47.4		64.9	64.9
Effective Green, g (s)	44.1		47.4		64.9	64.9
Actuated g/C Ratio	0.37		0.39		0.54	0.54
Clearance Time (s)	5.5		5.5		5.5	5.5
Vehicle Extension (s)	3.0		5.0		3.0	5.0
Lane Grp Cap (vph)	616		713		359	1007
v/s Ratio Prot	c0.33		c0.28		c0.06	0.22
v/s Ratio Perm					0.27	
v/c Ratio	0.91		0.70		0.60	0.41
Uniform Delay, d1	36.0		30.3		18.8	16.2
Progression Factor	0.89		1.18		1.00	1.00
Incremental Delay, d2	16.7		5.3		2.9	1.2
Delay (s)	48.7		41.1		21.7	17.4
Level of Service	D		D		C	B
Approach Delay (s)	48.7		41.1			18.9
Approach LOS	D		D			B

Intersection Summary			
HCM 2000 Control Delay	35.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.78		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	67.0%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	3.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	4	39	523	141	106	573
Future Vol, veh/h	4	39	523	141	106	573
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	33	65	84	62	47	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	60	623	227	226	674

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1524	736	0	0	850	0
Stage 1	736	-	-	-	-	-
Stage 2	788	-	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	119	418	-	-	786	-
Stage 1	473	-	-	-	-	-
Stage 2	409	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	64	418	-	-	786	-
Mov Cap-2 Maneuver	64	-	-	-	-	-
Stage 1	473	-	-	-	-	-
Stage 2	221	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	29.6	0	4.1
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	217	786	-
HCM Lane V/C Ratio	-	-	0.332	0.287	-
HCM Control Delay (s)	-	-	29.6	11.4	1.6
HCM Lane LOS	-	-	D	B	A
HCM 95th %tile Q(veh)	-	-	1.4	1.2	-

Intersection	
Int Delay, s/veh	5

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	102	104	539	0	0	587
Future Vol, veh/h	102	104	539	0	0	587
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	60	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	65	79	84	92	92	82
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	157	132	642	0	0	716

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1000	642	0	-	-	-
Stage 1	642	-	-	-	-	-
Stage 2	358	-	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	-	-
Pot Cap-1 Maneuver	254	473	-	0	0	-
Stage 1	523	-	-	0	0	-
Stage 2	679	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	254	473	-	-	-	-
Mov Cap-2 Maneuver	254	-	-	-	-	-
Stage 1	523	-	-	-	-	-
Stage 2	679	-	-	-	-	-

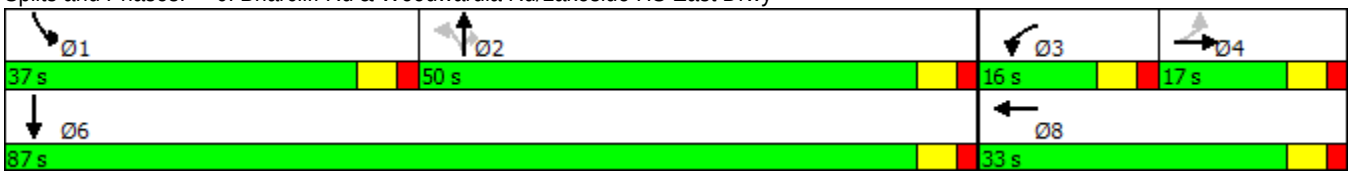
Approach	WB	NB	SB
HCM Control Delay, s	28.6	0	0
HCM LOS	D		

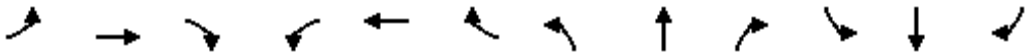
Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBT
Capacity (veh/h)	-	254	473	-
HCM Lane V/C Ratio	-	0.618	0.278	-
HCM Control Delay (s)	-	39.6	15.5	-
HCM Lane LOS	-	E	C	-
HCM 95th %tile Q(veh)	-	3.7	1.1	-

Lane Group	EBL	EBT	WBT	NBL	NBT	NBR	SBL	SBT	Ø3
Lane Configurations									
Traffic Volume (vph)	16	0	1	12	429	108	283	455	
Future Volume (vph)	16	0	1	12	429	108	283	455	
Turn Type	Perm	NA	NA	Perm	NA	Perm	Prot	NA	
Protected Phases		4	8		2		1	6	3
Permitted Phases	4			2		2			
Detector Phase	4	4	8	2	2	2	1	6	
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.5	23.5	23.5	23.5	23.5	23.5	15.0	23.5	15.0
Total Split (s)	17.0	17.0	33.0	50.0	50.0	50.0	37.0	87.0	16.0
Total Split (%)	14.2%	14.2%	27.5%	41.7%	41.7%	41.7%	30.8%	72.5%	13%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5	5.5	5.5	5.5	
Lead/Lag	Lag	Lag		Lag	Lag	Lag	Lead		Lead
Lead-Lag Optimize?									
Recall Mode	None	None	None	Min	Min	Min	None	Min	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 111.5
Natural Cycle: 100
Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Briarcliff Rd & Woodwardia Rd/Lakeside HS East Drwy





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	0	4	12	1	192	12	429	108	283	455	31
Future Volume (vph)	16	0	4	12	1	192	12	429	108	283	455	31
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	
Lane Util. Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	
Frt		0.97			0.88		1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.96			0.99		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1735			1635		1770	1863	1583	1770	1838	
Flt Permitted		0.71			0.96		0.42	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1276			1585		786	1863	1583	1770	1838	
Peak-hour factor, PHF	0.67	0.92	0.50	0.38	0.25	0.80	0.75	0.85	0.68	0.71	0.78	0.55
Adj. Flow (vph)	24	0	8	32	4	240	16	505	159	399	583	56
RTOR Reduction (vph)	0	24	0	0	164	0	0	0	104	0	3	0
Lane Group Flow (vph)	0	8	0	0	112	0	16	505	55	399	636	0
Turn Type	Perm	NA		Prot	NA		Perm	NA	Perm	Prot	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4						2		2			
Actuated Green, G (s)		27.9			27.9		38.8	38.8	38.8	28.2	72.5	
Effective Green, g (s)		27.9			27.9		38.8	38.8	38.8	28.2	72.5	
Actuated g/C Ratio		0.25			0.25		0.35	0.35	0.35	0.25	0.65	
Clearance Time (s)		5.5			5.5		5.5	5.5	5.5	5.5	5.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		319			396		273	648	551	448	1196	
v/s Ratio Prot								c0.27		c0.23	0.35	
v/s Ratio Perm		0.01			c0.07		0.02		0.03			
v/c Ratio		0.03			0.28		0.06	0.78	0.10	0.89	0.53	
Uniform Delay, d1		31.5			33.7		24.1	32.5	24.5	40.1	10.4	
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.0			0.4		0.1	5.9	0.1	19.4	0.5	
Delay (s)		31.5			34.1		24.2	38.4	24.6	59.5	10.8	
Level of Service		C			C		C	D	C	E	B	
Approach Delay (s)		31.5			34.1			34.8			29.5	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	32.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	111.4	Sum of lost time (s)	22.0
Intersection Capacity Utilization	64.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	1.2

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	13	6	599	894	11
Future Vol, veh/h	12	13	6	599	894	11
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	60	46	30	85	91	55
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	28	20	705	982	20

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1737	992	1002	0	-	0
Stage 1	992	-	-	-	-	-
Stage 2	745	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	96	298	691	-	-	-
Stage 1	359	-	-	-	-	-
Stage 2	469	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	91	298	691	-	-	-
Mov Cap-2 Maneuver	91	-	-	-	-	-
Stage 1	359	-	-	-	-	-
Stage 2	446	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	39	0.3	0
HCM LOS	E		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	691	-	153	-	-
HCM Lane V/C Ratio	0.029	-	0.315	-	-
HCM Control Delay (s)	10.4	0	39	-	-
HCM Lane LOS	B	A	E	-	-
HCM 95th %tile Q(veh)	0.1	-	1.3	-	-

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	298	376	537	54	607
Future Volume (vph)	298	376	537	54	607
Turn Type	Prot	Perm	NA	pm+pt	NA
Protected Phases	3		2	1	6
Permitted Phases		3		6	
Detector Phase	3	3	2	1	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	15.0	5.0	15.0
Minimum Split (s)	15.0	15.0	23.5	15.0	23.5
Total Split (s)	56.0	56.0	79.0	15.0	94.0
Total Split (%)	37.3%	37.3%	52.7%	10.0%	62.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?					
Recall Mode	None	None	C-Min	None	C-Min

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 8: Briarcliff Rd & Briarlake Rd

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	298	376	537	155	54	607
Future Volume (vph)	298	376	537	155	54	607
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	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.97		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	1798		1770	1863
Flt Permitted	0.95	1.00	1.00		0.14	1.00
Satd. Flow (perm)	1770	1583	1798		263	1863
Peak-hour factor, PHF	0.76	0.82	0.87	0.73	0.75	0.89
Adj. Flow (vph)	392	459	617	212	72	682
RTOR Reduction (vph)	0	228	7	0	0	0
Lane Group Flow (vph)	392	231	822	0	72	682
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	3		2		1	6
Permitted Phases		3			6	
Actuated Green, G (s)	39.8	39.8	85.8		99.2	99.2
Effective Green, g (s)	39.8	39.8	85.8		99.2	99.2
Actuated g/C Ratio	0.27	0.27	0.57		0.66	0.66
Clearance Time (s)	5.5	5.5	5.5		5.5	5.5
Vehicle Extension (s)	3.0	3.0	5.0		3.0	5.0
Lane Grp Cap (vph)	469	420	1028		253	1232
v/s Ratio Prot	c0.22		c0.46		0.01	c0.37
v/s Ratio Perm		0.15			0.17	
v/c Ratio	0.84	0.55	0.80		0.28	0.55
Uniform Delay, d1	52.0	47.4	25.3		20.2	13.6
Progression Factor	1.00	1.00	1.00		0.88	0.72
Incremental Delay, d2	12.2	1.5	6.5		0.4	1.2
Delay (s)	64.2	48.9	31.8		18.2	11.0
Level of Service	E	D	C		B	B
Approach Delay (s)	55.9		31.8			11.7
Approach LOS	E		C			B

Intersection Summary			
HCM 2000 Control Delay	34.0	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.81		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	70.6%	ICU Level of Service	C
Analysis Period (min)	15		

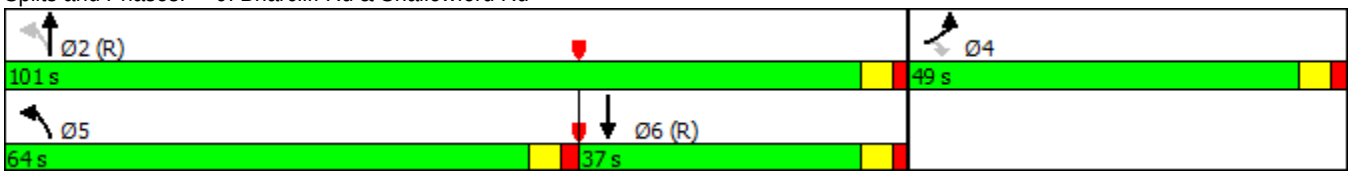
c Critical Lane Group

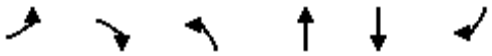
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	192	369	683	199	237	905
Future Volume (vph)	192	369	683	199	237	905
Turn Type	Prot	Perm	pm+pt	NA	NA	Free
Protected Phases	4		5	2	6	
Permitted Phases		4	2			Free
Detector Phase	4	4	5	2	6	
Switch Phase						
Minimum Initial (s)	6.0	6.0	5.0	15.0	15.0	
Minimum Split (s)	27.5	27.5	15.0	22.5	33.5	
Total Split (s)	49.0	49.0	64.0	101.0	37.0	
Total Split (%)	32.7%	32.7%	42.7%	67.3%	24.7%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?						
Recall Mode	None	None	None	C-Min	C-Min	

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 148 (99%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 9: Briarcliff Rd & Shallowford Rd





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	192	369	683	199	237	905
Future Volume (vph)	192	369	683	199	237	905
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5	5.5	5.5	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.95	1.00	0.28	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	529	1863	1863	1583
Peak-hour factor, PHF	0.69	0.48	0.91	0.80	0.70	0.78
Adj. Flow (vph)	278	769	751	249	339	1160
RTOR Reduction (vph)	0	600	0	0	0	0
Lane Group Flow (vph)	278	169	751	249	339	1160
Turn Type	Prot	Perm	pm+pt	NA	NA	Free
Protected Phases	4		5	2	6	
Permitted Phases		4	2			Free
Actuated Green, G (s)	30.7	30.7	108.3	108.3	44.5	150.0
Effective Green, g (s)	30.7	30.7	108.3	108.3	44.5	150.0
Actuated g/C Ratio	0.20	0.20	0.72	0.72	0.30	1.00
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5	
Vehicle Extension (s)	3.0	3.0	3.0	5.0	5.0	
Lane Grp Cap (vph)	362	323	864	1345	552	1583
v/s Ratio Prot	0.16		c0.34	0.13	0.18	
v/s Ratio Perm		0.11	c0.29			c0.73
v/c Ratio	0.77	0.52	0.87	0.19	0.61	0.73
Uniform Delay, d1	56.3	53.1	23.1	6.7	45.4	0.0
Progression Factor	1.00	1.00	0.92	1.23	1.00	1.00
Incremental Delay, d2	9.4	1.5	6.5	0.2	5.0	3.0
Delay (s)	65.7	54.7	27.8	8.5	50.4	3.0
Level of Service	E	D	C	A	D	A
Approach Delay (s)	57.6			23.0	13.8	
Approach LOS	E			C	B	

Intersection Summary			
HCM 2000 Control Delay	29.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	74.7%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	0	0	0	3	2	104	0	250	5	15	222	0
Future Vol, veh/h	0	0	0	3	2	104	0	250	5	15	222	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	38	25	58	92	75	31	62	85	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	8	8	179	0	333	16	24	261	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	745	659	261	651	651	341	261	0	0	349	0	0
Stage 1	310	310	-	341	341	-	-	-	-	-	-	-
Stage 2	435	349	-	310	310	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	330	384	778	382	388	701	1303	-	-	1210	-	-
Stage 1	700	659	-	674	639	-	-	-	-	-	-	-
Stage 2	600	633	-	700	659	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	237	375	778	375	379	701	1303	-	-	1210	-	-
Mov Cap-2 Maneuver	237	375	-	375	379	-	-	-	-	-	-	-
Stage 1	700	644	-	674	639	-	-	-	-	-	-	-
Stage 2	441	633	-	684	644	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	12.8	0	0.7
HCM LOS	A	B		

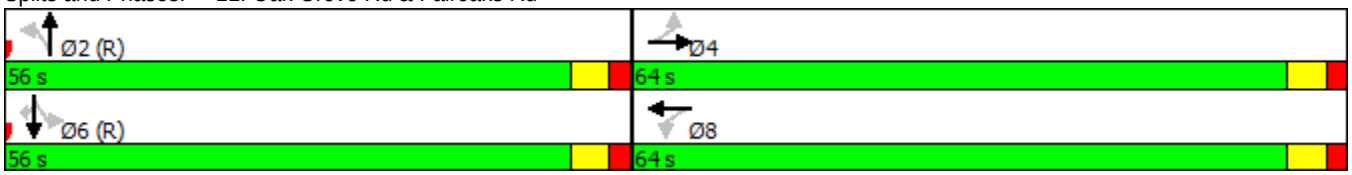
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1303	-	-	-	655	1210	-	-
HCM Lane V/C Ratio	-	-	-	-	0.298	0.02	-	-
HCM Control Delay (s)	0	-	-	0	12.8	8	0	-
HCM Lane LOS	A	-	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	1.2	0.1	-	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	19	35	50	119	19	220	131	290	19
Future Volume (vph)	19	35	50	119	19	220	131	290	19
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases		4		8		2		6	
Permitted Phases	4		8		2		6		6
Detector Phase	4	4	8	8	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	6.0	6.0	6.0	6.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	26.5	26.5	27.5	27.5	26.5	26.5	23.5	23.5	23.5
Total Split (s)	64.0	64.0	64.0	64.0	56.0	56.0	56.0	56.0	56.0
Total Split (%)	53.3%	53.3%	53.3%	53.3%	46.7%	46.7%	46.7%	46.7%	46.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5		5.5		5.5	5.5	5.5	5.5
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 96 (80%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated

Splits and Phases: 11: Oak Grove Rd & Fairoaks Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	19	35	13	50	119	338	19	220	24	131	290	19
Future Volume (vph)	19	35	13	50	119	338	19	220	24	131	290	19
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
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	1.00
Frt		0.97			0.92			0.99		1.00	1.00	0.85
Flt Protected		0.98			0.99			1.00		0.95	1.00	1.00
Satd. Flow (prot)		1784			1702			1831		1770	1863	1583
Flt Permitted		0.71			0.95			0.96		0.47	1.00	1.00
Satd. Flow (perm)		1280			1626			1760		881	1863	1583
Peak-hour factor, PHF	0.53	0.73	0.65	0.73	0.69	0.93	0.68	0.67	0.60	0.64	0.83	0.59
Adj. Flow (vph)	36	48	20	68	172	363	28	328	40	205	349	32
RTOR Reduction (vph)	0	8	0	0	54	0	0	3	0	0	0	11
Lane Group Flow (vph)	0	96	0	0	549	0	0	393	0	205	349	21
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		47.3			47.3			61.7		61.7	61.7	61.7
Effective Green, g (s)		47.3			47.3			61.7		61.7	61.7	61.7
Actuated g/C Ratio		0.39			0.39			0.51		0.51	0.51	0.51
Clearance Time (s)		5.5			5.5			5.5		5.5	5.5	5.5
Vehicle Extension (s)		3.0			3.0			5.0		5.0	5.0	5.0
Lane Grp Cap (vph)		504			640			904		452	957	813
v/s Ratio Prot											0.19	
v/s Ratio Perm		0.07			c0.34			0.22		c0.23		0.01
v/c Ratio		0.19			0.86			0.43		0.45	0.36	0.03
Uniform Delay, d1		23.8			33.3			18.2		18.5	17.4	14.4
Progression Factor		1.00			1.00			1.00		0.63	0.62	0.37
Incremental Delay, d2		0.2			11.0			1.5		3.2	1.0	0.1
Delay (s)		24.0			44.3			19.8		14.9	11.8	5.4
Level of Service		C			D			B		B	B	A
Approach Delay (s)		24.0			44.3			19.8			12.5	
Approach LOS		C			D			B			B	

Intersection Summary			
HCM 2000 Control Delay	26.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	75.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.2

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	190	8	2	630	5	0
Future Vol, veh/h	190	8	2	630	5	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	62	50	50	95	42	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	306	16	4	663	12	0

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	322	0	985	314
Stage 1	-	-	-	-	314	-
Stage 2	-	-	-	-	671	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1238	-	275	726
Stage 1	-	-	-	-	741	-
Stage 2	-	-	-	-	508	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1238	-	274	726
Mov Cap-2 Maneuver	-	-	-	-	274	-
Stage 1	-	-	-	-	741	-
Stage 2	-	-	-	-	505	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0	18.7
HCM LOS			C

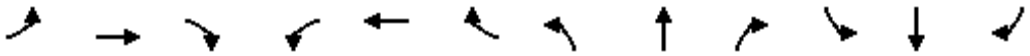
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	274	-	-	1238	-
HCM Lane V/C Ratio	0.043	-	-	0.003	-
HCM Control Delay (s)	18.7	-	-	7.9	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	16	12	39	12	15	272	37	255
Future Volume (vph)	16	12	39	12	15	272	37	255
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	6.0	6.0	6.0	6.0	15.0	15.0	15.0	15.0
Minimum Split (s)	22.5	22.5	24.5	24.5	25.5	25.5	26.5	26.5
Total Split (s)	43.0	43.0	43.0	43.0	77.0	77.0	77.0	77.0
Total Split (%)	35.8%	35.8%	35.8%	35.8%	64.2%	64.2%	64.2%	64.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		5.5		5.5		5.5		5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 38 (32%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated

Splits and Phases: 1: Briarcliff Rd & Chrysler Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	16	12	17	39	12	38	15	272	42	37	255	18
Future Volume (vph)	16	12	17	39	12	38	15	272	42	37	255	18
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	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.95			0.95			0.98			0.99	
Flt Protected		0.98			0.98			1.00			0.99	
Satd. Flow (prot)		1740			1731			1821			1826	
Flt Permitted		0.79			0.80			0.97			0.89	
Satd. Flow (perm)		1400			1427			1765			1636	
Peak-hour factor, PHF	0.50	0.60	0.61	0.49	0.50	0.68	0.62	0.87	0.75	0.66	0.94	0.56
Adj. Flow (vph)	32	20	28	80	24	56	24	313	56	56	271	32
RTOR Reduction (vph)	0	20	0	0	20	0	0	3	0	0	2	0
Lane Group Flow (vph)	0	60	0	0	140	0	0	390	0	0	357	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		17.1			17.1			91.9			91.9	
Effective Green, g (s)		17.1			17.1			91.9			91.9	
Actuated g/C Ratio		0.14			0.14			0.77			0.77	
Clearance Time (s)		5.5			5.5			5.5			5.5	
Vehicle Extension (s)		3.0			3.0			5.0			5.0	
Lane Grp Cap (vph)		199			203			1351			1252	
v/s Ratio Prot												
v/s Ratio Perm		0.04			c0.10			c0.22			0.22	
v/c Ratio		0.30			0.69			0.29			0.29	
Uniform Delay, d1		46.1			48.9			4.2			4.2	
Progression Factor		1.00			1.00			1.00			0.66	
Incremental Delay, d2		0.9			9.7			0.5			0.6	
Delay (s)		47.0			58.7			4.8			3.3	
Level of Service		D			E			A			A	
Approach Delay (s)		47.0			58.7			4.8			3.3	
Approach LOS		D			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	16.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.35		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	45.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	3.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	87	34	25	356	304	55
Future Vol, veh/h	87	34	25	356	304	55
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	78	61	78	83	93	62
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	112	56	32	429	327	89

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	864	371	416	0	-	0
Stage 1	371	-	-	-	-	-
Stage 2	493	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	325	675	1143	-	-	-
Stage 1	698	-	-	-	-	-
Stage 2	614	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	313	675	1143	-	-	-
Mov Cap-2 Maneuver	313	-	-	-	-	-
Stage 1	698	-	-	-	-	-
Stage 2	591	-	-	-	-	-

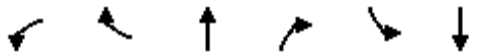
Approach	EB	NB	SB
HCM Control Delay, s	21.6	0.6	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1143	-	381	-	-
HCM Lane V/C Ratio	0.028	-	0.439	-	-
HCM Control Delay (s)	8.2	0	21.6	-	-
HCM Lane LOS	A	A	C	-	-
HCM 95th %tile Q(veh)	0.1	-	2.2	-	-

Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	64	357	168	265
Future Volume (vph)	64	357	168	265
Turn Type	Prot	NA	pm+pt	NA
Protected Phases	3	2	1	6
Permitted Phases			6	
Detector Phase	3	2	1	6
Switch Phase				
Minimum Initial (s)	5.0	15.0	5.0	15.0
Minimum Split (s)	15.0	34.5	15.0	22.5
Total Split (s)	38.0	59.0	23.0	82.0
Total Split (%)	31.7%	49.2%	19.2%	68.3%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5
Lead/Lag		Lag	Lead	
Lead-Lag Optimize?				
Recall Mode	None	C-Min	None	C-Min

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 104 (87%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 65
Control Type: Actuated-Coordinated

Splits and Phases: 3: Briarcliff Rd & Oak Grove Rd



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	64	169	357	68	168	265
Future Volume (vph)	64	169	357	68	168	265
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5		5.5		5.5	5.5
Lane Util. Factor	1.00		1.00		1.00	1.00
Frt	0.90		0.97		1.00	1.00
Flt Protected	0.99		1.00		0.95	1.00
Satd. Flow (prot)	1661		1812		1770	1863
Flt Permitted	0.99		1.00		0.32	1.00
Satd. Flow (perm)	1661		1812		594	1863
Peak-hour factor, PHF	0.84	0.92	0.83	0.63	0.78	0.77
Adj. Flow (vph)	76	184	430	108	215	344
RTOR Reduction (vph)	0	0	6	0	0	0
Lane Group Flow (vph)	260	0	532	0	215	344
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	3		2		1	6
Permitted Phases					6	
Actuated Green, G (s)	24.1		67.0		84.9	84.9
Effective Green, g (s)	24.1		67.0		84.9	84.9
Actuated g/C Ratio	0.20		0.56		0.71	0.71
Clearance Time (s)	5.5		5.5		5.5	5.5
Vehicle Extension (s)	3.0		5.0		3.0	5.0
Lane Grp Cap (vph)	333		1011		541	1318
v/s Ratio Prot	c0.16		c0.29		c0.04	0.18
v/s Ratio Perm					0.24	
v/c Ratio	0.78		0.53		0.40	0.26
Uniform Delay, d1	45.4		16.6		8.7	6.3
Progression Factor	0.91		0.95		1.00	1.00
Incremental Delay, d2	11.1		1.9		0.5	0.5
Delay (s)	52.5		17.7		9.2	6.8
Level of Service	D		B		A	A
Approach Delay (s)	52.5		17.7			7.7
Approach LOS	D		B			A

Intersection Summary			
HCM 2000 Control Delay	20.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	59.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	3.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	36	61	441	41	57	493
Future Vol, veh/h	36	61	441	41	57	493
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	50	85	84	51	75	91
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	72	72	525	80	76	542

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	988	565	0	0	605	0
Stage 1	565	-	-	-	-	-
Stage 2	423	-	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	259	523	-	-	971	-
Stage 1	568	-	-	-	-	-
Stage 2	630	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	230	523	-	-	971	-
Mov Cap-2 Maneuver	230	-	-	-	-	-
Stage 1	568	-	-	-	-	-
Stage 2	559	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	25.2	0	1.5
HCM LOS	D		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	319	971	-
HCM Lane V/C Ratio	-	-	0.451	0.078	-
HCM Control Delay (s)	-	-	25.2	9	0.4
HCM Lane LOS	-	-	D	A	A
HCM 95th %tile Q(veh)	-	-	2.2	0.3	-

Intersection	
Int Delay, s/veh	4.4

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	62	81	616	0	0	501
Future Vol, veh/h	62	81	616	0	0	501
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	60	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	48	55	86	92	92	85
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	129	147	716	0	0	589

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	1011	716	0	-	-	-
Stage 1	716	-	-	-	-	-
Stage 2	295	-	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	-	-
Pot Cap-1 Maneuver	250	429	-	0	0	-
Stage 1	483	-	-	0	0	-
Stage 2	730	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	250	429	-	-	-	-
Mov Cap-2 Maneuver	250	-	-	-	-	-
Stage 1	483	-	-	-	-	-
Stage 2	730	-	-	-	-	-

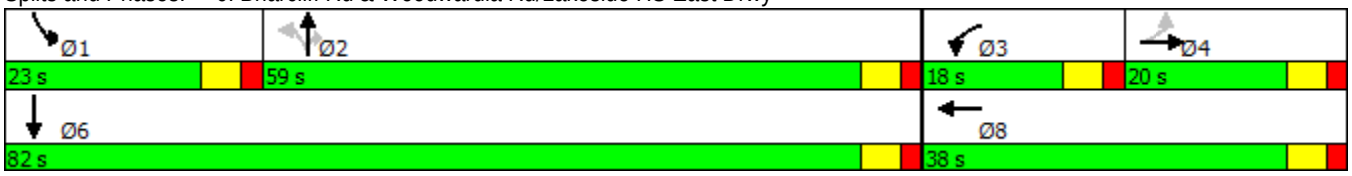
Approach	WB	NB	SB
HCM Control Delay, s	25.2	0	0
HCM LOS	D		

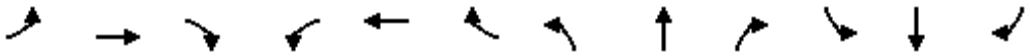
Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBT
Capacity (veh/h)	-	250	429	-
HCM Lane V/C Ratio	-	0.517	0.343	-
HCM Control Delay (s)	-	33.8	17.7	-
HCM Lane LOS	-	D	C	-
HCM 95th %tile Q(veh)	-	2.7	1.5	-

Lane Group	EBL	EBT	WBT	NBL	NBT	NBR	SBL	SBT	Ø3
Lane Configurations									
Traffic Volume (vph)	13	0	2	8	509	51	78	351	
Future Volume (vph)	13	0	2	8	509	51	78	351	
Turn Type	Perm	NA	NA	Perm	NA	Perm	Prot	NA	
Protected Phases		4	8		2		1	6	3
Permitted Phases	4			2		2			
Detector Phase	4	4	8	2	2	2	1	6	
Switch Phase									
Minimum Initial (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Minimum Split (s)	23.5	23.5	23.5	23.5	23.5	23.5	15.0	23.5	15.0
Total Split (s)	20.0	20.0	38.0	59.0	59.0	59.0	23.0	82.0	18.0
Total Split (%)	16.7%	16.7%	31.7%	49.2%	49.2%	49.2%	19.2%	68.3%	15%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)		5.5	5.5	5.5	5.5	5.5	5.5	5.5	
Lead/Lag	Lag	Lag		Lag	Lag	Lag	Lead		Lead
Lead-Lag Optimize?									
Recall Mode	None	None	None	Min	Min	Min	None	Min	None

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 102.1
Natural Cycle: 90
Control Type: Actuated-Uncoordinated

Splits and Phases: 6: Briarcliff Rd & Woodwardia Rd/Lakeside HS East Drwy





Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	13	0	14	35	2	149	8	509	51	78	351	15
Future Volume (vph)	13	0	14	35	2	149	8	509	51	78	351	15
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	
Lane Util. Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	
Frt		0.92			0.90		1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.98			0.99		0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1678			1656		1770	1863	1583	1770	1846	
Flt Permitted		0.84			0.91		0.52	1.00	1.00	0.95	1.00	
Satd. Flow (perm)		1430			1527		975	1863	1583	1770	1846	
Peak-hour factor, PHF	0.54	0.92	0.39	0.46	0.25	0.60	0.67	0.92	0.64	0.65	0.92	0.62
Adj. Flow (vph)	24	0	36	76	8	248	12	553	80	120	382	24
RTOR Reduction (vph)	0	40	0	0	67	0	0	0	49	0	2	0
Lane Group Flow (vph)	0	20	0	0	265	0	12	553	31	120	404	0
Turn Type	Perm	NA		Prot	NA		Perm	NA	Perm	Prot	NA	
Protected Phases		4		3	8			2		1	6	
Permitted Phases	4						2		2			
Actuated Green, G (s)		33.2			33.2		39.9	39.9	39.9	12.3	57.7	
Effective Green, g (s)		33.2			33.2		39.9	39.9	39.9	12.3	57.7	
Actuated g/C Ratio		0.33			0.33		0.39	0.39	0.39	0.12	0.57	
Clearance Time (s)		5.5			5.5		5.5	5.5	5.5	5.5	5.5	
Vehicle Extension (s)		3.0			3.0		3.0	3.0	3.0	3.0	3.0	
Lane Grp Cap (vph)		465			497		381	729	619	213	1045	
v/s Ratio Prot								c0.30		c0.07	0.22	
v/s Ratio Perm		0.01			c0.17		0.01		0.02			
v/c Ratio		0.04			0.53		0.03	0.76	0.05	0.56	0.39	
Uniform Delay, d1		23.5			28.0		19.1	26.8	19.2	42.3	12.3	
Progression Factor		1.00			1.00		1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		0.0			1.1		0.0	4.5	0.0	3.4	0.2	
Delay (s)		23.5			29.1		19.1	31.4	19.3	45.7	12.5	
Level of Service		C			C		B	C	B	D	B	
Approach Delay (s)		23.5			29.1			29.6			20.1	
Approach LOS		C			C			C			C	

Intersection Summary			
HCM 2000 Control Delay	26.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.69		
Actuated Cycle Length (s)	101.9	Sum of lost time (s)	22.0
Intersection Capacity Utilization	56.6%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	1

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	13	11	12	731	558	21
Future Vol, veh/h	13	11	12	731	558	21
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	54	46	60	88	94	66
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	24	24	20	831	594	32

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1481	610	625	0	-	0
Stage 1	610	-	-	-	-	-
Stage 2	871	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	138	494	956	-	-	-
Stage 1	542	-	-	-	-	-
Stage 2	410	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	133	494	956	-	-	-
Mov Cap-2 Maneuver	133	-	-	-	-	-
Stage 1	542	-	-	-	-	-
Stage 2	394	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	27.3	0.2	0
HCM LOS	D		

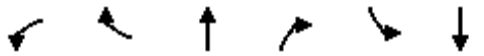
Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	956	-	209	-	-
HCM Lane V/C Ratio	0.021	-	0.23	-	-
HCM Control Delay (s)	8.8	0	27.3	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.1	-	0.9	-	-

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	116	151	521	267	456
Future Volume (vph)	116	151	521	267	456
Turn Type	Prot	Perm	NA	pm+pt	NA
Protected Phases	3		2	1	6
Permitted Phases		3		6	
Detector Phase	3	3	2	1	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	15.0	5.0	15.0
Minimum Split (s)	15.0	15.0	23.5	15.0	23.5
Total Split (s)	25.0	25.0	92.0	33.0	125.0
Total Split (%)	16.7%	16.7%	61.3%	22.0%	83.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?					
Recall Mode	None	None	C-Min	None	C-Min

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 65 (43%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 8: Briarcliff Rd & Briarlake Rd



Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	116	151	521	215	267	456
Future Volume (vph)	116	151	521	215	267	456
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	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.95		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	1778		1770	1863
Flt Permitted	0.95	1.00	1.00		0.12	1.00
Satd. Flow (perm)	1770	1583	1778		232	1863
Peak-hour factor, PHF	0.74	0.86	0.87	0.70	0.72	0.92
Adj. Flow (vph)	157	176	599	307	371	496
RTOR Reduction (vph)	0	156	11	0	0	0
Lane Group Flow (vph)	157	20	895	0	371	496
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	3		2		1	6
Permitted Phases		3			6	
Actuated Green, G (s)	17.2	17.2	90.9		121.8	121.8
Effective Green, g (s)	17.2	17.2	90.9		121.8	121.8
Actuated g/C Ratio	0.11	0.11	0.61		0.81	0.81
Clearance Time (s)	5.5	5.5	5.5		5.5	5.5
Vehicle Extension (s)	3.0	3.0	5.0		3.0	5.0
Lane Grp Cap (vph)	202	181	1077		448	1512
v/s Ratio Prot	c0.09		0.50		c0.14	0.27
v/s Ratio Perm		0.01			c0.53	
v/c Ratio	0.78	0.11	0.83		0.83	0.33
Uniform Delay, d1	64.5	59.5	23.4		36.7	3.6
Progression Factor	1.00	1.00	1.00		1.00	1.00
Incremental Delay, d2	17.0	0.3	7.5		11.9	0.6
Delay (s)	81.5	59.8	30.9		48.7	4.2
Level of Service	F	E	C		D	A
Approach Delay (s)	70.0		30.9			23.2
Approach LOS	E		C			C

Intersection Summary			
HCM 2000 Control Delay	33.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.84		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	75.5%	ICU Level of Service	D
Analysis Period (min)	15		

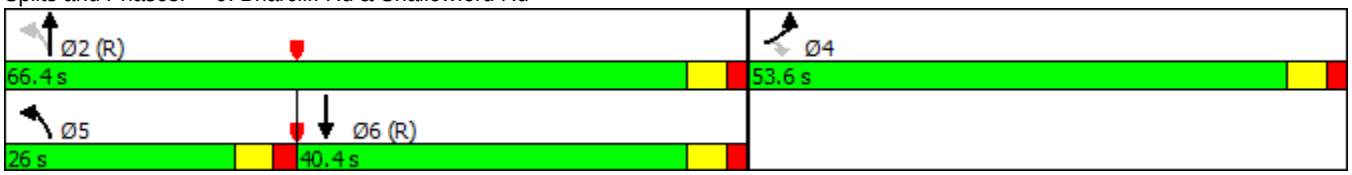
c Critical Lane Group

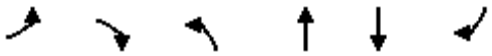
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	577	471	288	315	174	260
Future Volume (vph)	577	471	288	315	174	260
Turn Type	Prot	Perm	pm+pt	NA	NA	Free
Protected Phases	4		5	2	6	
Permitted Phases		4	2			Free
Detector Phase	4	4	5	2	6	
Switch Phase						
Minimum Initial (s)	6.0	6.0	5.0	15.0	15.0	
Minimum Split (s)	27.5	27.5	15.0	22.5	33.5	
Total Split (s)	53.6	53.6	26.0	66.4	40.4	
Total Split (%)	44.7%	44.7%	21.7%	55.3%	33.7%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?						
Recall Mode	None	None	None	C-Min	C-Min	

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 0 (0%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 9: Briarcliff Rd & Shallowford Rd





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	577	471	288	315	174	260
Future Volume (vph)	577	471	288	315	174	260
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5	5.5	5.5	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.95	1.00	0.47	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	885	1863	1863	1583
Peak-hour factor, PHF	0.84	0.81	0.90	0.92	0.84	0.89
Adj. Flow (vph)	687	581	320	342	207	292
RTOR Reduction (vph)	0	281	0	0	0	0
Lane Group Flow (vph)	687	300	320	342	207	292
Turn Type	Prot	Perm	pm+pt	NA	NA	Free
Protected Phases	4		5	2	6	
Permitted Phases		4	2			Free
Actuated Green, G (s)	47.7	47.7	61.3	61.3	38.1	120.0
Effective Green, g (s)	47.7	47.7	61.3	61.3	38.1	120.0
Actuated g/C Ratio	0.40	0.40	0.51	0.51	0.32	1.00
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5	
Vehicle Extension (s)	3.0	3.0	3.0	5.0	5.0	
Lane Grp Cap (vph)	703	629	582	951	591	1583
v/s Ratio Prot	c0.39		c0.08	0.18	0.11	
v/s Ratio Perm		0.19	c0.20			0.18
v/c Ratio	0.98	0.48	0.55	0.36	0.35	0.18
Uniform Delay, d1	35.6	26.9	18.2	17.6	31.4	0.0
Progression Factor	1.00	1.00	1.00	1.00	1.00	1.00
Incremental Delay, d2	28.0	0.6	1.1	1.1	1.6	0.3
Delay (s)	63.6	27.5	19.2	18.6	33.1	0.3
Level of Service	E	C	B	B	C	A
Approach Delay (s)	47.1			18.9	13.9	
Approach LOS	D			B	B	

Intersection Summary			
HCM 2000 Control Delay	32.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.77		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	74.2%	ICU Level of Service	D
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	1.4

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	12	0	17	0	196	12	15	249	0
Future Vol, veh/h	0	0	0	12	0	17	0	196	12	15	249	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	50	25	53	92	89	50	62	83	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	24	0	32	0	220	24	24	300	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	596	592	300	580	580	232	300	0	0	244	0	0
Stage 1	348	348	-	232	232	-	-	-	-	-	-	-
Stage 2	248	244	-	348	348	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	415	419	740	426	426	807	1261	-	-	1322	-	-
Stage 1	668	634	-	771	713	-	-	-	-	-	-	-
Stage 2	756	704	-	668	634	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	392	410	740	419	417	807	1261	-	-	1322	-	-
Mov Cap-2 Maneuver	392	410	-	419	417	-	-	-	-	-	-	-
Stage 1	668	620	-	771	713	-	-	-	-	-	-	-
Stage 2	726	704	-	653	620	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	11.9	0	0.6
HCM LOS	A	B		

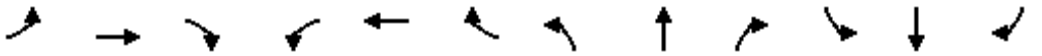
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1261	-	-	-	578	1322	-	-
HCM Lane V/C Ratio	-	-	-	-	0.097	0.018	-	-
HCM Control Delay (s)	0	-	-	0	11.9	7.8	0	-
HCM Lane LOS	A	-	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0.3	0.1	-	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	11	18	21	13	7	186	266	219	13
Future Volume (vph)	11	18	21	13	7	186	266	219	13
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases		4		8		2		6	
Permitted Phases	4		8		2		6		6
Detector Phase	4	4	8	8	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	6.0	6.0	6.0	6.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	26.5	26.5	27.5	27.5	26.5	26.5	23.5	23.5	23.5
Total Split (s)	32.0	32.0	32.0	32.0	88.0	88.0	88.0	88.0	88.0
Total Split (%)	26.7%	26.7%	26.7%	26.7%	73.3%	73.3%	73.3%	73.3%	73.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5		5.5		5.5	5.5	5.5	5.5
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 70 (58%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 11: Oak Grove Rd & Fairoaks Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	11	18	7	21	13	100	7	186	48	266	219	13
Future Volume (vph)	11	18	7	21	13	100	7	186	48	266	219	13
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
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	1.00
Frt		0.98			0.90			0.97		1.00	1.00	0.85
Flt Protected		0.98			0.99			1.00		0.95	1.00	1.00
Satd. Flow (prot)		1789			1667			1797		1770	1863	1583
Flt Permitted		0.59			0.90			0.99		0.58	1.00	1.00
Satd. Flow (perm)		1075			1510			1774		1082	1863	1583
Peak-hour factor, PHF	0.39	0.41	0.44	0.75	0.81	0.89	0.58	0.89	0.67	0.68	0.78	0.46
Adj. Flow (vph)	28	44	16	28	16	112	12	209	72	391	281	28
RTOR Reduction (vph)	0	8	0	0	89	0	0	6	0	0	0	5
Lane Group Flow (vph)	0	80	0	0	67	0	0	287	0	391	281	23
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		11.6			11.6			97.4		97.4	97.4	97.4
Effective Green, g (s)		11.6			11.6			97.4		97.4	97.4	97.4
Actuated g/C Ratio		0.10			0.10			0.81		0.81	0.81	0.81
Clearance Time (s)		5.5			5.5			5.5		5.5	5.5	5.5
Vehicle Extension (s)		3.0			3.0			5.0		5.0	5.0	5.0
Lane Grp Cap (vph)		103			145			1439		878	1512	1284
v/s Ratio Prot											0.15	
v/s Ratio Perm		c0.07			0.04			0.16		c0.36		0.01
v/c Ratio		0.78			0.47			0.20		0.45	0.19	0.02
Uniform Delay, d1		52.9			51.3			2.5		3.3	2.5	2.2
Progression Factor		1.00			1.00			1.00		0.57	0.53	0.19
Incremental Delay, d2		29.7			2.4			0.3		1.6	0.3	0.0
Delay (s)		82.7			53.6			2.9		3.5	1.6	0.4
Level of Service		F			D			A		A	A	A
Approach Delay (s)		82.7			53.6			2.9			2.6	
Approach LOS		F			D			A			A	

Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	505	4	2	238	12	5
Future Vol, veh/h	505	4	2	238	12	5
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	81	50	25	88	43	62
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	623	8	8	270	28	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	631	0	913	627
Stage 1	-	-	-	-	627	-
Stage 2	-	-	-	-	286	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	951	-	304	484
Stage 1	-	-	-	-	532	-
Stage 2	-	-	-	-	763	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	951	-	301	484
Mov Cap-2 Maneuver	-	-	-	-	301	-
Stage 1	-	-	-	-	532	-
Stage 2	-	-	-	-	755	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	17.3
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	329	-	-	951	-
HCM Lane V/C Ratio	0.109	-	-	0.008	-
HCM Control Delay (s)	17.3	-	-	8.8	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.4	-	-	0	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	12	19	30	27	16	356	28	202
Future Volume (vph)	12	19	30	27	16	356	28	202
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA
Protected Phases		4		8		2		6
Permitted Phases	4		8		2		6	
Detector Phase	4	4	8	8	2	2	6	6
Switch Phase								
Minimum Initial (s)	6.0	6.0	6.0	6.0	15.0	15.0	15.0	15.0
Minimum Split (s)	22.5	22.5	24.5	24.5	25.5	25.5	26.5	26.5
Total Split (s)	36.0	36.0	36.0	36.0	84.0	84.0	84.0	84.0
Total Split (%)	30.0%	30.0%	30.0%	30.0%	70.0%	70.0%	70.0%	70.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0		0.0		0.0
Total Lost Time (s)		5.5		5.5		5.5		5.5
Lead/Lag								
Lead-Lag Optimize?								
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min	C-Min

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 45 (38%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 55
Control Type: Actuated-Coordinated

Splits and Phases: 1: Briarcliff Rd & Chrysler Dr

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	12	19	17	30	27	20	16	356	36	28	202	16
Future Volume (vph)	12	19	17	30	27	20	16	356	36	28	202	16
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	
Lane Util. Factor		1.00			1.00			1.00			1.00	
Frt		0.96			0.95			0.99			0.99	
Flt Protected		0.99			0.98			1.00			0.99	
Satd. Flow (prot)		1759			1746			1832			1831	
Flt Permitted		0.82			0.83			0.98			0.88	
Satd. Flow (perm)		1458			1479			1802			1626	
Peak-hour factor, PHF	0.50	0.53	0.61	0.75	0.68	0.46	0.80	0.86	0.69	0.64	0.92	0.80
Adj. Flow (vph)	24	36	28	40	40	43	20	414	52	44	220	20
RTOR Reduction (vph)	0	17	0	0	20	0	0	2	0	0	1	0
Lane Group Flow (vph)	0	71	0	0	103	0	0	484	0	0	283	0
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		
Actuated Green, G (s)		13.3			13.3			95.7			95.7	
Effective Green, g (s)		13.3			13.3			95.7			95.7	
Actuated g/C Ratio		0.11			0.11			0.80			0.80	
Clearance Time (s)		5.5			5.5			5.5			5.5	
Vehicle Extension (s)		3.0			3.0			5.0			5.0	
Lane Grp Cap (vph)		161			163			1437			1296	
v/s Ratio Prot												
v/s Ratio Perm		0.05			c0.07			c0.27			0.17	
v/c Ratio		0.44			0.63			0.34			0.22	
Uniform Delay, d1		49.9			51.0			3.4			3.0	
Progression Factor		1.00			1.00			1.00			0.76	
Incremental Delay, d2		1.9			7.8			0.6			0.4	
Delay (s)		51.8			58.9			4.0			2.6	
Level of Service		D			E			A			A	
Approach Delay (s)		51.8			58.9			4.0			2.6	
Approach LOS		D			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	14.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	40.1%	ICU Level of Service	A
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	2.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	72	15	32	471	339	50
Future Vol, veh/h	72	15	32	471	339	50
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	90	54	89	83	78	62
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	80	28	36	567	435	81

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1114	475	515	0	-	0
Stage 1	475	-	-	-	-	-
Stage 2	639	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	230	590	1051	-	-	-
Stage 1	626	-	-	-	-	-
Stage 2	526	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	219	590	1051	-	-	-
Mov Cap-2 Maneuver	219	-	-	-	-	-
Stage 1	626	-	-	-	-	-
Stage 2	500	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	28.2	0.5	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	1051	-	261	-	-
HCM Lane V/C Ratio	0.034	-	0.413	-	-
HCM Control Delay (s)	8.5	0	28.2	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.1	-	1.9	-	-

Lane Group	WBL	NBT	SBL	SBT
Lane Configurations				
Traffic Volume (vph)	66	371	264	299
Future Volume (vph)	66	371	264	299
Turn Type	Prot	NA	pm+pt	NA
Protected Phases	3	2	1	6
Permitted Phases			6	
Detector Phase	3	2	1	6
Switch Phase				
Minimum Initial (s)	5.0	15.0	5.0	15.0
Minimum Split (s)	15.0	34.5	15.0	22.5
Total Split (s)	41.0	52.0	27.0	79.0
Total Split (%)	34.2%	43.3%	22.5%	65.8%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5
Lead/Lag		Lag	Lead	
Lead-Lag Optimize?				
Recall Mode	None	C-Min	None	C-Min

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Offset: 108 (90%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated

Splits and Phases: 3: Briarcliff Rd & Oak Grove Rd

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	66	215	371	57	264	299
Future Volume (vph)	66	215	371	57	264	299
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5		5.5		5.5	5.5
Lane Util. Factor	1.00		1.00		1.00	1.00
Frt	0.90		0.98		1.00	1.00
Flt Protected	0.99		1.00		0.95	1.00
Satd. Flow (prot)	1650		1830		1770	1863
Flt Permitted	0.99		1.00		0.30	1.00
Satd. Flow (perm)	1650		1830		560	1863
Peak-hour factor, PHF	0.82	0.80	0.86	0.89	0.88	0.83
Adj. Flow (vph)	80	269	431	64	300	360
RTOR Reduction (vph)	0	0	4	0	0	0
Lane Group Flow (vph)	349	0	491	0	300	360
Turn Type	Prot		NA		pm+pt	NA
Protected Phases	3		2		1	6
Permitted Phases					6	
Actuated Green, G (s)	29.7		57.5		79.3	79.3
Effective Green, g (s)	29.7		57.5		79.3	79.3
Actuated g/C Ratio	0.25		0.48		0.66	0.66
Clearance Time (s)	5.5		5.5		5.5	5.5
Vehicle Extension (s)	3.0		5.0		3.0	5.0
Lane Grp Cap (vph)	408		876		534	1231
v/s Ratio Prot	c0.21		0.27		c0.08	0.19
v/s Ratio Perm					c0.29	
v/c Ratio	0.86		0.56		0.56	0.29
Uniform Delay, d1	43.1		22.3		11.8	8.6
Progression Factor	0.89		0.93		1.00	1.00
Incremental Delay, d2	15.6		2.6		1.4	0.6
Delay (s)	53.7		23.2		13.2	9.2
Level of Service	D		C		B	A
Approach Delay (s)	53.7		23.2			11.0
Approach LOS	D		C			B

Intersection Summary			
HCM 2000 Control Delay	24.9	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	68.3%	ICU Level of Service	C
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	2.2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	21	46	508	37	52	500
Future Vol, veh/h	21	46	508	37	52	500
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	53	68	95	66	72	93
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	40	68	535	56	72	538

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	976	563	0	0	591	0
Stage 1	563	-	-	-	-	-
Stage 2	413	-	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	4.13	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	2.219	-
Pot Cap-1 Maneuver	263	525	-	-	983	-
Stage 1	569	-	-	-	-	-
Stage 2	637	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	236	525	-	-	983	-
Mov Cap-2 Maneuver	236	-	-	-	-	-
Stage 1	569	-	-	-	-	-
Stage 2	571	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	19.1	0	1.4
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	361	983	-
HCM Lane V/C Ratio	-	-	0.297	0.073	-
HCM Control Delay (s)	-	-	19.1	9	0.4
HCM Lane LOS	-	-	C	A	A
HCM 95th %tile Q(veh)	-	-	1.2	0.2	-

Intersection	
Int Delay, s/veh	2

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	39	45	616	0	0	545
Future Vol, veh/h	39	45	616	0	0	545
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	0	-	-	60	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	57	54	92	92	92	97
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	68	83	670	0	0	562

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	951	670	0	-	-	-
Stage 1	670	-	-	-	-	-
Stage 2	281	-	-	-	-	-
Critical Hdwy	6.63	6.23	-	-	-	-
Critical Hdwy Stg 1	5.43	-	-	-	-	-
Critical Hdwy Stg 2	5.83	-	-	-	-	-
Follow-up Hdwy	3.519	3.319	-	-	-	-
Pot Cap-1 Maneuver	273	456	-	0	0	-
Stage 1	508	-	-	0	0	-
Stage 2	742	-	-	0	0	-
Platoon blocked, %			-			-
Mov Cap-1 Maneuver	273	456	-	-	-	-
Mov Cap-2 Maneuver	273	-	-	-	-	-
Stage 1	508	-	-	-	-	-
Stage 2	742	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	18.2	0	0
HCM LOS	C		

Minor Lane/Major Mvmt	NBT	WBLn1	WBLn2	SBT
Capacity (veh/h)	-	273	456	-
HCM Lane V/C Ratio	-	0.251	0.183	-
HCM Control Delay (s)	-	22.5	14.7	-
HCM Lane LOS	-	C	B	-
HCM 95th %tile Q(veh)	-	1	0.7	-

Intersection	
Int Delay, s/veh	3.3

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	10	0	1	20	0	40	5	541	7	28	466	12
Future Vol, veh/h	10	0	1	20	0	40	5	541	7	28	466	12
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	135	-	0	250	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	50	92	25	50	25	56	62	95	58	64	83	38
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	20	0	4	40	0	71	8	569	12	44	561	32

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	1286	1251	577	1253	1267	569	593	0	0	569	0	0
Stage 1	665	665	-	586	586	-	-	-	-	-	-	-
Stage 2	621	586	-	667	681	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	141	172	516	149	169	522	983	-	-	1003	-	-
Stage 1	449	458	-	496	497	-	-	-	-	-	-	-
Stage 2	475	497	-	448	450	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	117	163	516	142	160	522	983	-	-	1003	-	-
Mov Cap-2 Maneuver	117	163	-	142	160	-	-	-	-	-	-	-
Stage 1	445	438	-	492	493	-	-	-	-	-	-	-
Stage 2	407	493	-	425	430	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	37.6	28	0.1	0.6
HCM LOS	E	D		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	983	-	-	134	266	1003	-	-
HCM Lane V/C Ratio	0.008	-	-	0.179	0.419	0.044	-	-
HCM Control Delay (s)	8.7	-	-	37.6	28	8.8	-	-
HCM Lane LOS	A	-	-	E	D	A	-	-
HCM 95th %tile Q(veh)	0	-	-	0.6	2	0.1	-	-

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Vol, veh/h	12	4	9	673	551	13
Future Vol, veh/h	12	4	9	673	551	13
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	60	33	45	89	95	46
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	20	12	20	756	580	28

Major/Minor	Minor2		Major1		Major2	
Conflicting Flow All	1390	594	608	0	-	0
Stage 1	594	-	-	-	-	-
Stage 2	796	-	-	-	-	-
Critical Hdwy	6.42	6.22	4.12	-	-	-
Critical Hdwy Stg 1	5.42	-	-	-	-	-
Critical Hdwy Stg 2	5.42	-	-	-	-	-
Follow-up Hdwy	3.518	3.318	2.218	-	-	-
Pot Cap-1 Maneuver	157	505	970	-	-	-
Stage 1	552	-	-	-	-	-
Stage 2	444	-	-	-	-	-
Platoon blocked, %				-	-	-
Mov Cap-1 Maneuver	151	505	970	-	-	-
Mov Cap-2 Maneuver	151	-	-	-	-	-
Stage 1	552	-	-	-	-	-
Stage 2	428	-	-	-	-	-

Approach	EB	NB	SB
HCM Control Delay, s	25.8	0.2	0
HCM LOS	D		

Minor Lane/Major Mvmt	NBL	NBT	EBLn1	SBT	SBR
Capacity (veh/h)	970	-	205	-	-
HCM Lane V/C Ratio	0.021	-	0.157	-	-
HCM Control Delay (s)	8.8	0	25.8	-	-
HCM Lane LOS	A	A	D	-	-
HCM 95th %tile Q(veh)	0.1	-	0.5	-	-

Lane Group	WBL	WBR	NBT	SBL	SBT
Lane Configurations					
Traffic Volume (vph)	102	119	470	427	421
Future Volume (vph)	102	119	470	427	421
Turn Type	Prot	Perm	NA	pm+pt	NA
Protected Phases	3		2	1	6
Permitted Phases		3		6	
Detector Phase	3	3	2	1	6
Switch Phase					
Minimum Initial (s)	5.0	5.0	15.0	5.0	15.0
Minimum Split (s)	15.0	15.0	23.5	15.0	23.5
Total Split (s)	40.0	40.0	67.0	43.0	110.0
Total Split (%)	26.7%	26.7%	44.7%	28.7%	73.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5
Lead/Lag			Lag	Lead	
Lead-Lag Optimize?					
Recall Mode	None	None	C-Min	None	C-Min

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 3 (2%), Referenced to phase 2:NBT and 6:SBTL, Start of Green
Natural Cycle: 90
Control Type: Actuated-Coordinated

Splits and Phases: 8: Briarcliff Rd & Briarlake Rd

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Volume (vph)	102	119	470	201	427	421
Future Volume (vph)	102	119	470	201	427	421
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	1.00	1.00	1.00		1.00	1.00
Frt	1.00	0.85	0.96		1.00	1.00
Flt Protected	0.95	1.00	1.00		0.95	1.00
Satd. Flow (prot)	1770	1583	1780		1770	1863
Flt Permitted	0.95	1.00	1.00		0.20	1.00
Satd. Flow (perm)	1770	1583	1780		366	1863
Peak-hour factor, PHF	0.94	0.80	0.97	0.85	0.96	0.90
Adj. Flow (vph)	109	149	485	236	445	468
RTOR Reduction (vph)	0	134	9	0	0	0
Lane Group Flow (vph)	109	15	712	0	445	468
Turn Type	Prot	Perm	NA		pm+pt	NA
Protected Phases	3		2		1	6
Permitted Phases		3			6	
Actuated Green, G (s)	14.7	14.7	83.6		124.3	124.3
Effective Green, g (s)	14.7	14.7	83.6		124.3	124.3
Actuated g/C Ratio	0.10	0.10	0.56		0.83	0.83
Clearance Time (s)	5.5	5.5	5.5		5.5	5.5
Vehicle Extension (s)	3.0	3.0	5.0		3.0	5.0
Lane Grp Cap (vph)	173	155	992		632	1543
v/s Ratio Prot	c0.06		0.40		c0.17	0.25
v/s Ratio Perm		0.01			c0.42	
v/c Ratio	0.63	0.09	0.72		0.70	0.30
Uniform Delay, d1	65.0	61.6	24.5		22.4	2.9
Progression Factor	1.00	1.00	1.00		1.62	1.18
Incremental Delay, d2	7.3	0.3	4.5		2.7	0.4
Delay (s)	72.3	61.9	29.0		39.0	3.8
Level of Service	E	E	C		D	A
Approach Delay (s)	66.3		29.0			21.0
Approach LOS	E		C			C

Intersection Summary			
HCM 2000 Control Delay	30.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.71		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	80.0%	ICU Level of Service	D
Analysis Period (min)	15		

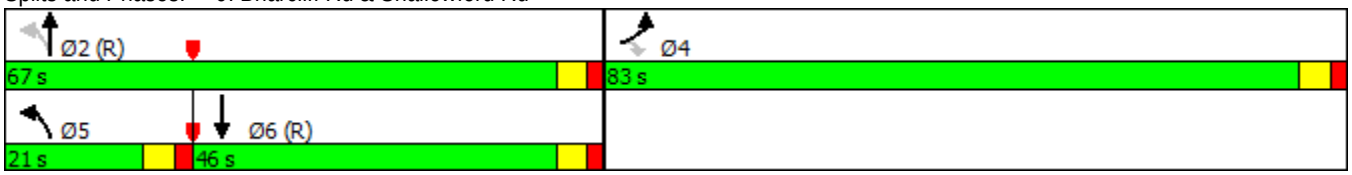
c Critical Lane Group

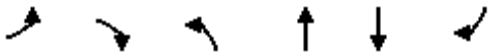
Lane Group	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	913	689	234	278	157	272
Future Volume (vph)	913	689	234	278	157	272
Turn Type	Prot	Perm	pm+pt	NA	NA	Free
Protected Phases	4		5	2	6	
Permitted Phases		4	2			Free
Detector Phase	4	4	5	2	6	
Switch Phase						
Minimum Initial (s)	6.0	6.0	5.0	15.0	15.0	
Minimum Split (s)	27.5	27.5	15.0	22.5	33.5	
Total Split (s)	83.0	83.0	21.0	67.0	46.0	
Total Split (%)	55.3%	55.3%	14.0%	44.7%	30.7%	
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	
Total Lost Time (s)	5.5	5.5	5.5	5.5	5.5	
Lead/Lag			Lead		Lag	
Lead-Lag Optimize?						
Recall Mode	None	None	None	C-Min	C-Min	

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 104 (69%), Referenced to phase 2:NBTL and 6:SBT, Start of Green
Natural Cycle: 110
Control Type: Actuated-Coordinated

Splits and Phases: 9: Briarcliff Rd & Shallowford Rd





Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (vph)	913	689	234	278	157	272
Future Volume (vph)	913	689	234	278	157	272
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5	5.5	5.5	4.0
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00	1.00
Frt	1.00	0.85	1.00	1.00	1.00	0.85
Flt Protected	0.95	1.00	0.95	1.00	1.00	1.00
Satd. Flow (prot)	1770	1583	1770	1863	1863	1583
Flt Permitted	0.95	1.00	0.46	1.00	1.00	1.00
Satd. Flow (perm)	1770	1583	861	1863	1863	1583
Peak-hour factor, PHF	0.97	0.94	0.94	0.83	0.83	0.84
Adj. Flow (vph)	941	733	249	335	189	324
RTOR Reduction (vph)	0	205	0	0	0	0
Lane Group Flow (vph)	941	528	249	335	189	324
Turn Type	Prot	Perm	pm+pt	NA	NA	Free
Protected Phases	4		5	2	6	
Permitted Phases		4	2			Free
Actuated Green, G (s)	77.5	77.5	61.5	61.5	40.9	150.0
Effective Green, g (s)	77.5	77.5	61.5	61.5	40.9	150.0
Actuated g/C Ratio	0.52	0.52	0.41	0.41	0.27	1.00
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5	
Vehicle Extension (s)	3.0	3.0	3.0	5.0	5.0	
Lane Grp Cap (vph)	914	817	444	763	507	1583
v/s Ratio Prot	c0.53		c0.06	0.18	0.10	
v/s Ratio Perm		0.33	c0.17			0.20
v/c Ratio	1.03	0.65	0.56	0.44	0.37	0.20
Uniform Delay, d1	36.2	26.3	31.1	31.8	44.2	0.0
Progression Factor	1.00	1.00	1.11	1.12	1.00	1.00
Incremental Delay, d2	37.6	1.8	1.3	1.4	2.1	0.3
Delay (s)	73.8	28.1	35.7	36.9	46.3	0.3
Level of Service	E	C	D	D	D	A
Approach Delay (s)	53.8			36.4	17.2	
Approach LOS	D			D	B	

Intersection Summary			
HCM 2000 Control Delay	43.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	150.0	Sum of lost time (s)	16.5
Intersection Capacity Utilization	89.8%	ICU Level of Service	E
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕			↕			↕	
Traffic Vol, veh/h	0	0	0	1	0	14	0	234	0	15	283	0
Future Vol, veh/h	0	0	0	1	0	14	0	234	0	15	283	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	25	25	70	92	84	31	54	86	92
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	0	0	0	4	0	20	0	279	0	28	329	0

Major/Minor	Minor2			Minor1			Major1			Major2		
Conflicting Flow All	674	664	329	664	664	279	329	0	0	279	0	0
Stage 1	385	385	-	279	279	-	-	-	-	-	-	-
Stage 2	289	279	-	385	385	-	-	-	-	-	-	-
Critical Hdwy	7.12	6.52	6.22	7.12	6.52	6.22	4.12	-	-	4.12	-	-
Critical Hdwy Stg 1	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.12	5.52	-	6.12	5.52	-	-	-	-	-	-	-
Follow-up Hdwy	3.518	4.018	3.318	3.518	4.018	3.318	2.218	-	-	2.218	-	-
Pot Cap-1 Maneuver	368	381	712	374	381	760	1231	-	-	1284	-	-
Stage 1	638	611	-	728	680	-	-	-	-	-	-	-
Stage 2	719	680	-	638	611	-	-	-	-	-	-	-
Platoon blocked, %								-	-		-	-
Mov Cap-1 Maneuver	351	371	712	366	371	760	1231	-	-	1284	-	-
Mov Cap-2 Maneuver	351	371	-	366	371	-	-	-	-	-	-	-
Stage 1	638	595	-	728	680	-	-	-	-	-	-	-
Stage 2	700	680	-	621	595	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	10.8	0	0.6
HCM LOS	A	B		

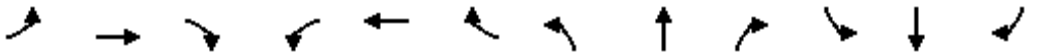
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1231	-	-	-	644	1284	-	-
HCM Lane V/C Ratio	-	-	-	-	0.037	0.022	-	-
HCM Control Delay (s)	0	-	-	0	10.8	7.9	0	-
HCM Lane LOS	A	-	-	A	B	A	A	-
HCM 95th %tile Q(veh)	0	-	-	-	0.1	0.1	-	-

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations									
Traffic Volume (vph)	29	50	39	35	15	227	362	271	13
Future Volume (vph)	29	50	39	35	15	227	362	271	13
Turn Type	Perm	NA	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases		4		8		2		6	
Permitted Phases	4		8		2		6		6
Detector Phase	4	4	8	8	2	2	6	6	6
Switch Phase									
Minimum Initial (s)	6.0	6.0	6.0	6.0	15.0	15.0	15.0	15.0	15.0
Minimum Split (s)	26.5	26.5	27.5	27.5	26.5	26.5	23.5	23.5	23.5
Total Split (s)	35.0	35.0	35.0	35.0	85.0	85.0	85.0	85.0	85.0
Total Split (%)	29.2%	29.2%	29.2%	29.2%	70.8%	70.8%	70.8%	70.8%	70.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)		0.0		0.0		0.0	0.0	0.0	0.0
Total Lost Time (s)		5.5		5.5		5.5	5.5	5.5	5.5
Lead/Lag									
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	C-Min	C-Min	C-Min	C-Min	C-Min

Intersection Summary

Cycle Length: 120
Actuated Cycle Length: 120
Offset: 64 (53%), Referenced to phase 2:NBTL and 6:SBTL, Start of Green
Natural Cycle: 60
Control Type: Actuated-Coordinated

Splits and Phases: 11: Oak Grove Rd & Fairoaks Rd



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	50	29	39	35	87	15	227	55	362	271	13
Future Volume (vph)	29	50	29	39	35	87	15	227	55	362	271	13
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
Lane Util. Factor		1.00			1.00			1.00		1.00	1.00	1.00
Frt		0.97			0.94			0.97		1.00	1.00	0.85
Flt Protected		0.99			0.99			1.00		0.95	1.00	1.00
Satd. Flow (prot)		1773			1718			1803		1770	1863	1583
Flt Permitted		0.73			0.79			0.97		0.55	1.00	1.00
Satd. Flow (perm)		1312			1373			1748		1025	1863	1583
Peak-hour factor, PHF	0.72	0.78	0.81	0.70	0.73	0.91	0.62	0.85	0.69	0.97	0.84	0.81
Adj. Flow (vph)	40	64	36	56	48	96	24	267	80	373	323	16
RTOR Reduction (vph)	0	12	0	0	31	0	0	6	0	0	0	4
Lane Group Flow (vph)	0	128	0	0	169	0	0	365	0	373	323	12
Turn Type	Perm	NA		Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		4			8			2			6	
Permitted Phases	4			8			2			6		6
Actuated Green, G (s)		18.6			18.6			90.4		90.4	90.4	90.4
Effective Green, g (s)		18.6			18.6			90.4		90.4	90.4	90.4
Actuated g/C Ratio		0.16			0.16			0.75		0.75	0.75	0.75
Clearance Time (s)		5.5			5.5			5.5		5.5	5.5	5.5
Vehicle Extension (s)		3.0			3.0			5.0		5.0	5.0	5.0
Lane Grp Cap (vph)		203			212			1316		772	1403	1192
v/s Ratio Prot											0.17	
v/s Ratio Perm		0.10			c0.12			0.21		c0.36		0.01
v/c Ratio		0.63			0.80			0.28		0.48	0.23	0.01
Uniform Delay, d1		47.5			48.9			4.6		5.7	4.4	3.7
Progression Factor		1.00			1.00			1.00		0.49	0.48	0.04
Incremental Delay, d2		6.3			18.4			0.5		2.1	0.4	0.0
Delay (s)		53.8			67.2			5.1		4.9	2.5	0.2
Level of Service		D			E			A		A	A	A
Approach Delay (s)		53.8			67.2			5.1			3.7	
Approach LOS		D			E			A			A	

Intersection Summary			
HCM 2000 Control Delay	17.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	120.0	Sum of lost time (s)	11.0
Intersection Capacity Utilization	61.9%	ICU Level of Service	B
Analysis Period (min)	15		

c Critical Lane Group

Intersection	
Int Delay, s/veh	0.4

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	652	9	2	291	6	2
Future Vol, veh/h	652	9	2	291	6	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	56	25	93	50	25
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	709	16	8	313	12	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	725	0	1046	717
Stage 1	-	-	-	-	717	-
Stage 2	-	-	-	-	329	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	878	-	253	430
Stage 1	-	-	-	-	484	-
Stage 2	-	-	-	-	729	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	878	-	250	430
Mov Cap-2 Maneuver	-	-	-	-	250	-
Stage 1	-	-	-	-	484	-
Stage 2	-	-	-	-	721	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.2	17.9
HCM LOS			C

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	300	-	-	878	-
HCM Lane V/C Ratio	0.067	-	-	0.009	-
HCM Control Delay (s)	17.9	-	-	9.1	0
HCM Lane LOS	C	-	-	A	A
HCM 95th %tile Q(veh)	0.2	-	-	0	-