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<b>Subject</b>	Peachtree Corners Circle Roundabout	<b>Project Name</b>	Requested Preliminary Assessment
<b>From</b>	Geoffrey Warr, PE, PTOE	<b>Date</b>	January 10, 2022

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## Background

The purpose of this study is to evaluate the potential queuing conflicts along Peachtree Corners Circle if a roundabout were to be constructed at the intersection of Peachtree Corners Circle at The Forum driveway. The study intersections are identified in Figure 1 and the roadway geometry is described below.

Figure 1 : Study Intersections



## Assessment

In order to assess operational feasibility of a new roundabout at The Forum driveway, a queueing analysis was prepared for an assumed roundabout configuration and the adjacent signalized intersection of Peachtree Parkway (SR 141) at Peachtree Corners Circle.

### Synchro Operational Analysis: Peachtree Pkwy (State Route 141) & Peachtree Corners Circle

Operational analysis was performed using Synchro 11 to determine Level of Service (LOS), delays, and 95<sup>th</sup> percentile queues for this intersection. The peak hours for this analysis are 7:30 AM to 8:30 AM and

4:45 PM to 5:45 PM. The results of the existing operational analysis are shown in Table 1. Detailed reports are provided in Appendix A.

Table 1: Synchro Queuing Analysis

Intersection		AM Peak Hour		PM Peak Hour	
		LOS (Delay)	Queue	LOS (Delay)	Queue
1	<b>State Route 141 and Peachtree Corners Circle</b>	<b>D (44.9)</b>		<b>D (49.8)</b>	
	-Eastbound Approach (Peachtree Corners Cir)	<b>F (86.1)</b>	<b>285 ft</b>	<b>E (77.0)</b>	<b>378 ft</b>
	-Westbound Approach (Peachtree Corners Cir)	E (78.1)	190 ft	F (85.7)	275 ft
	-Northbound Approach (State Route 141)	C (35.0)	605 ft	D (49.6)	898 ft
	-Southbound Approach (State Route 141)	D (39.8)	1200 ft	C (29.7)	673 ft

The results of the operational analysis indicate that the intersection is operating at an overall LOS "D" during both the peak hours. The eastbound approach of Peachtree Corners Circle is operating at an unacceptable level-of-service "F" during the AM peak hour with 95<sup>th</sup> percentile queuing estimated to reach 285 feet in the left lanes (against an available left turn storage of 210 feet), and level-of-service "E" during the PM peak hour with 95<sup>th</sup> percentile queuing of 378 feet in the left turn lanes.

**Potential Roundabout Operational Analysis: Peachtree Corners Circle & The Forum Entrance**

An operational analysis was performed using GDOT's Roundabout Analysis tool (v4.2) to determine Level of Service (LOS), delays, and 95<sup>th</sup> percentile queues for this intersection. The peak hours for this analysis are 7:45 AM to 8:45 AM and 4:30 PM to 5:30 PM. The results of the existing operational analysis are shown in Table 2. Detailed reports are provided in Appendix C.

Figure 2 : Evaluated Multi-lane Roundabout Configuration



Table 2: Potential Multi-Lane Roundabout Queuing Analysis

Intersection		AM Peak Hour		PM Peak Hour	
		LOS (Delay)	Queue	LOS (Delay)	Queue
1	<b><u>Peachtree Corners Circle and The Forum Entrance</u></b>	<b>A (6.9)</b>		<b>A (9.9)</b>	
	-Eastbound Approach (Peachtree Corners Cir)	A (6.2)	48 ft	B (11.5)	148 ft
	-Westbound Approach (Peachtree Corners Cir)	<b>A (7.7)</b>	<b>72 ft</b>	<b>A (8.3)</b>	<b>86 ft</b>
	-Northbound Approach (Crème de la Crème Drwy)	A (4.9)	9 ft	A (7.1)	12 ft
	-Southbound Approach (The Forum Entrance Drwy)	A (5.0)	0 ft	A (5.4)	2 ft

The results of the operational analysis indicate that the intersection would be anticipated to operate at an overall level-of-service "A" or better during both the peak hours. The westbound approach of Peachtree Corners Circle is operating at LOS "A" during both the peak hours with queuing estimated to reach 72 feet during the AM peak hour and 86 feet during the PM peak hour.

An alternative of a potential single-lane roundabout was further analyzed. The results of this analysis indicated that the queuing at the westbound approach of Peachtree Corners Circle is operating at LOS "A" during both the peak hours with queuing estimated to reach 78 feet during the AM peak hour and 104 feet during the PM peak hour. The results are shown in Table 3.

Table 3: Potential Single-Lane Roundabout Queuing Analysis

Intersection		AM Peak Hour		PM Peak Hour	
		LOS (Delay)	Queue	LOS (Delay)	Queue
1	<b><u>Peachtree Corners Circle and The Forum Entrance</u></b>	<b>A (7.4)</b>		<b>B (11.1)</b>	
	-Eastbound Approach (Peachtree Corners Cir)	A (6.6)	51 ft	B (12.5)	162 ft
	-Westbound Approach (Peachtree Corners Cir)	<b>A (8.3)</b>	<b>78 ft</b>	<b>A (9.8)</b>	<b>104 ft</b>
	-Northbound Approach (Crème de la Crème Drwy)	A (5.5)	10 ft	A (8.7)	15 ft
	-Southbound Approach (The Forum Entrance Drwy)	A (5.5)	0 ft	A (6.3)	4 ft

According to National Cooperation Highway Research Program (NCHRP) Report 672 – Roundabouts: An Informational Guide, the minimum radius of the inscribed roundabout circle for a two-lane roundabout is 80 feet. Additionally, the recommended minimum length for a splitter island to provide adequate visibility and refuge is 50 feet. Therefore, a minimum of 130 feet from the center of the intersection is required for the installation of the roundabout. On the east leg of the intersection, this distance is approximately close to the estimated queuing of the eastbound left turning traffic at the adjacent intersection of State Route 141 at Peachtree Corners Circle.



## Conclusions and Recommendations

Based on the queuing analysis in this report, the eastbound queues along Peachtree Corners Circle (approaching Peachtree Parkway) are estimated to extend 378 feet, the westbound queues are estimated to extend 86 feet in a multi-lane roundabout, and 104 feet in a single-lane roundabout. Based on average dimensions of a typical two-lane roundabout, the eastbound queues along Peachtree Corners Circle are with 50 feet of the estimated 425 feet storage capacity between The Forum driveway and Peachtree Parkway. It is, therefore, recommended that additional analyses be conducted including:

- Determination of feasible configuration for roundabout construction at The Forum driveway (related to topography, right-of-way, and property impacts)
- Microsimulation to analyze:
  - The effect of traffic platoons being released from the signalized intersection into the roundabout intersection.
  - Potential weaving / lane change concerns in the short block between The Forum and Peachtree Parkway

## Appendix A. Traffic Counts

# TRAFFIC DATA SERVICES

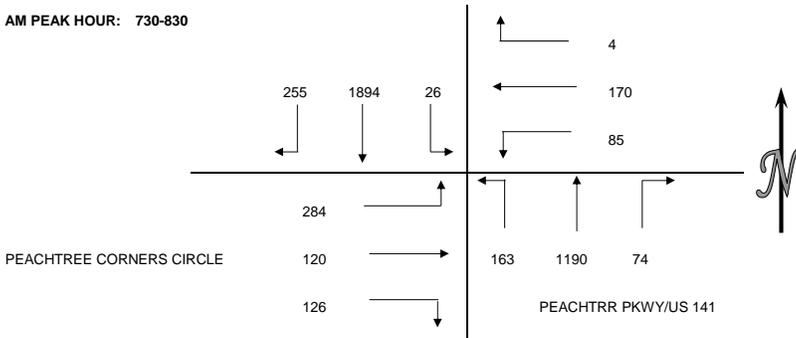
Phone: (678) 687-8266 Fax: (404) 294-6122 info@trafficdataservices.com

## INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT: JACOBS  
 PROJECT: THE FORUM STUDY  
 DATE: THURSDAY DECEMBER 9, 2021  
 PERIOD: 6:00 AM TO 9:00 AM  
 INTERSECTION: N/S PEACHTREE PKWY/US 141  
 E/W PEACHTREE CORNERS CIRCLE  
 CITY: PEACHTREE CORNERS

VEHICLE COUNTS													
15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
600-615	7	136	5	1	8	2	3	104	3	6	11	12	298
615-630	8	184	3	2	6	5	1	117	11	8	6	17	368
630-645	24	244	3	0	7	7	4	167	9	29	7	24	525
645-700	32	314	0	1	19	14	9	170	15	48	15	33	670
700-715	41	376	2	1	11	15	1	159	31	60	24	26	747
715-730	37	417	3	9	35	25	10	239	37	36	20	44	912
730-745	34	495	3	0	28	11	9	312	44	39	25	59	1059
745-800	76	475	6	3	57	17	14	316	39	27	28	70	1128
800-815	88	478	13	0	50	27	31	313	60	29	31	83	1203
815-830	57	446	4	1	35	30	20	249	20	31	36	72	1001
830-845	62	449	17	4	57	19	20	264	25	32	33	48	1030
845-900	56	401	7	4	68	32	45	269	30	33	44	44	1033
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
600-700	71	878	11	4	40	28	17	558	38	91	39	86	1861
615-715	105	1118	8	4	43	41	15	613	66	145	52	100	2310
630-730	134	1351	8	11	72	61	24	735	92	173	66	127	2854
645-745	144	1602	8	11	93	65	29	880	127	183	84	162	3388
700-800	188	1763	14	13	131	68	34	1026	151	162	97	199	3846
715-815	235	1865	25	12	170	80	64	1180	180	131	104	256	4302
730-830	255	1894	26	4	170	85	74	1190	163	126	120	284	4391
745-845	283	1848	40	8	199	93	85	1142	144	119	128	273	4362
800-900	263	1774	41	9	210	108	116	1095	135	125	144	247	4267

AM PEAK HOUR: 730-830



PEDESTRIAN COUNTS					
15 MIN COUNTS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
600-615	0	0	0	0	0
615-630	0	0	0	0	0
630-645	0	0	0	0	0
645-700	0	0	0	0	0
700-715	0	0	0	0	0
715-730	0	0	0	0	0
730-745	0	0	0	0	0
745-800	0	0	0	0	0
800-815	0	0	0	0	0
815-830	0	0	0	0	0
830-845	0	0	0	0	0
845-900	0	0	0	0	0
HOUR TOTALS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
600-700	0	0	0	0	0
615-715	0	0	0	0	0
630-730	0	0	0	0	0
645-745	0	0	0	0	0
700-800	0	0	0	0	0

BICYCLE COUNTS					
15 MIN COUNTS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
600-615	0	0	0	0	0
615-630	0	0	0	0	0
630-645	0	0	0	0	0
645-700	0	0	0	0	0
700-715	0	0	0	0	0
715-730	0	0	0	0	0
730-745	0	0	0	0	0
745-800	0	0	0	0	0
800-815	0	0	0	0	0
815-830	0	0	0	0	0
830-845	0	0	0	0	0
845-900	0	0	0	0	0
HOUR TOTALS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
600-700	0	0	0	0	0
615-715	0	0	0	0	0
630-730	0	0	0	0	0
645-745	0	0	0	0	0
700-800	0	0	0	0	0

# TRAFFIC DATA SERVICES

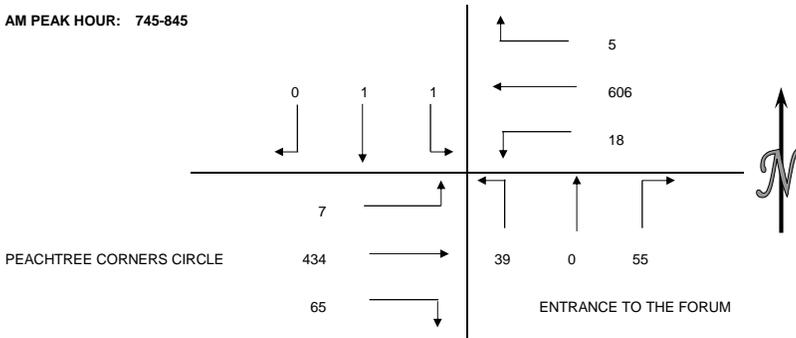
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## INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT: JACOBS  
 PROJECT: THE FORUM STUDY  
 DATE: THURSDAY DECEMBER 9, 2021  
 PERIOD: 6:00 AM TO 9:00 AM  
 INTERSECTION: N/S ENTRANCE TO THE FORUM  
 E/W PEACHTREE CORNERS CIRCLE  
 CITY: PEACHTREE CORNERS

VEHICLE COUNTS													
15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
600-615	0	0	0	0	11	3	4	0	1	6	28	0	53
615-630	0	0	0	1	20	5	5	0	2	7	25	1	66
630-645	0	0	0	2	45	2	5	0	1	11	43	0	109
645-700	0	0	0	4	52	4	6	1	10	9	106	0	192
700-715	0	0	0	2	82	3	7	0	4	8	101	0	207
715-730	0	1	1	0	86	9	8	0	11	14	82	2	214
730-745	0	1	1	0	95	4	8	0	15	13	103	0	240
745-800	0	0	0	0	184	2	21	0	14	24	119	1	365
800-815	0	1	0	2	188	7	13	0	5	12	112	3	343
815-830	0	0	0	1	107	2	14	0	6	19	108	1	258
830-845	0	0	1	2	127	7	7	0	14	10	95	2	265
845-900	0	1	0	3	147	6	13	0	9	17	111	1	308
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
600-700	0	0	0	7	128	14	20	1	14	33	202	1	420
615-715	0	0	0	9	199	14	23	1	17	35	275	1	574
630-730	0	1	1	8	265	18	26	1	26	42	332	2	722
645-745	0	2	2	6	315	20	29	1	40	44	392	2	853
700-800	0	2	2	2	447	18	44	0	44	59	405	3	1026
715-815	0	3	2	2	553	22	50	0	45	63	416	6	1162
730-830	0	2	1	3	574	15	56	0	40	68	442	5	1206
745-845	0	1	1	5	606	18	55	0	39	65	434	7	1231
800-900	0	2	1	8	569	22	47	0	34	58	426	7	1174

AM PEAK HOUR: 745-845



PEDESTRIAN COUNTS					
15 MIN COUNTS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
600-615	0	0	0	0	0
615-630	0	0	0	0	0
630-645	0	0	0	0	0
645-700	0	0	0	0	0
700-715	0	0	0	0	0
715-730	0	0	0	0	0
730-745	0	0	0	0	0
745-800	0	0	0	0	0
800-815	0	0	0	0	0
815-830	0	0	0	0	0
830-845	0	0	0	0	0
845-900	0	0	0	0	0
HOUR TOTALS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
600-700	0	0	0	0	0
615-715	0	0	0	0	0
630-730	0	0	0	0	0
645-745	0	0	0	0	0
700-800	0	0	0	0	0

BICYCLE COUNTS					
15 MIN COUNTS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
600-615	0	0	0	0	0
615-630	0	0	0	0	0
630-645	0	0	0	0	0
645-700	0	0	0	0	0
700-715	0	0	0	0	0
715-730	0	0	0	0	0
730-745	0	0	0	0	0
745-800	0	0	0	0	0
800-815	0	0	0	0	0
815-830	0	0	0	0	0
830-845	0	0	0	0	0
845-900	0	0	0	0	0
HOUR TOTALS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
600-700	0	0	0	0	0
615-715	0	0	0	0	0
630-730	0	0	0	0	0
645-745	0	0	0	0	0
700-800	0	0	0	0	0

# TRAFFIC DATA SERVICES

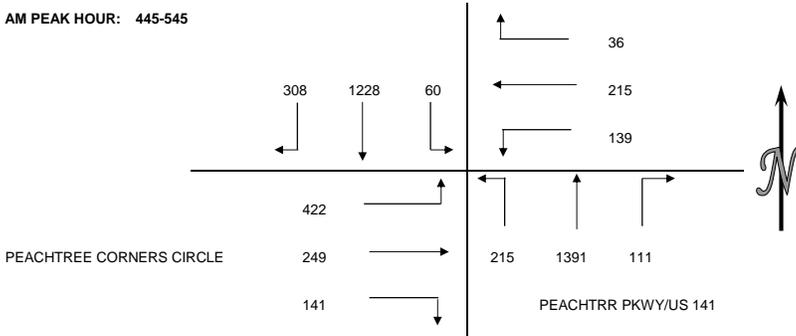
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## INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT: JACOBS  
 PROJECT: THE FORUM STUDY  
 DATE: THURSDAY DECEMBER 9, 2021  
 PERIOD: 3:00 PM TO 6:00 PM  
 INTERSECTION: N/S PEACHTREE PKWY/US 141  
 E/W PEACHTREE CORNERS CIRCLE  
 CITY: PEACHTREE CORNERS

VEHICLE COUNTS													
15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
300-315	62	300	14	14	41	25	19	396	100	35	46	75	1127
315-330	58	303	13	11	27	17	27	361	73	27	38	104	1059
330-345	79	266	20	9	46	18	17	382	75	41	33	74	1060
345-400	57	287	16	10	55	25	21	363	55	27	30	86	1032
400-415	70	322	17	5	49	19	31	359	51	47	66	90	1126
415-430	71	297	15	8	27	15	17	410	46	47	57	106	1116
430-445	70	285	22	13	49	18	35	335	58	41	62	111	1099
445-500	75	270	21	7	45	37	24	380	54	32	52	92	1089
500-515	71	314	10	8	47	33	31	348	47	40	73	125	1147
515-530	89	326	16	11	65	45	30	322	47	39	72	113	1175
530-545	73	318	13	10	58	24	26	341	67	30	52	92	1104
545-600	71	319	12	11	48	31	17	359	41	41	43	96	1089
HOUR TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
300-400	256	1156	63	44	169	85	84	1502	303	130	147	339	4278
315-415	264	1178	66	35	177	79	96	1465	254	142	167	354	4277
330-430	277	1172	68	32	177	77	86	1514	227	162	186	356	4334
345-445	268	1191	70	36	180	77	104	1467	210	162	215	393	4373
400-500	286	1174	75	33	170	89	107	1484	209	167	237	399	4430
415-515	287	1166	68	36	168	103	107	1473	205	160	244	434	4451
430-530	305	1195	69	39	206	133	120	1385	206	152	259	441	4510
445-545	308	1228	60	36	215	139	111	1391	215	141	249	422	4515
500-600	304	1277	51	40	218	133	104	1370	202	150	240	426	4515

AM PEAK HOUR: 445-545



PEDESTRIAN COUNTS					
15 MIN COUNTS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
PERIOD	LEG	LEG	LEG	LEG	TOTAL
300-315	0	0	0	0	0
315-330	0	0	0	0	0
330-345	0	0	0	0	0
345-400	0	0	0	0	0
400-415	0	0	0	0	0
415-430	0	0	0	0	0
430-445	0	0	0	0	0
445-500	0	0	0	0	0
500-515	0	0	0	0	0
515-530	0	0	0	0	0
530-545	0	0	0	0	0
545-600	0	0	0	0	0
HOUR TOTALS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
PERIOD	LEG	LEG	LEG	LEG	TOTAL
300-400	0	0	0	0	0
315-415	0	0	0	0	0
330-430	0	0	0	0	0
345-445	0	0	0	0	0
400-500	0	0	0	0	0

BICYCLE COUNTS					
15 MIN COUNTS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
PERIOD	LEG	LEG	LEG	LEG	TOTAL
300-315	0	0	0	0	0
315-330	0	0	0	0	0
330-345	0	0	0	0	0
345-400	0	0	0	0	0
400-415	0	0	0	0	0
415-430	0	0	0	0	0
430-445	0	0	0	0	0
445-500	0	0	0	0	0
500-515	0	0	0	0	0
515-530	0	0	0	0	0
530-545	0	0	0	0	0
545-600	0	0	0	0	0
HOUR TOTALS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
PERIOD	LEG	LEG	LEG	LEG	TOTAL
300-400	0	0	0	0	0
315-415	0	0	0	0	0
330-430	0	0	0	0	0
345-445	0	0	0	0	0
400-500	0	0	0	0	0

# TRAFFIC DATA SERVICES

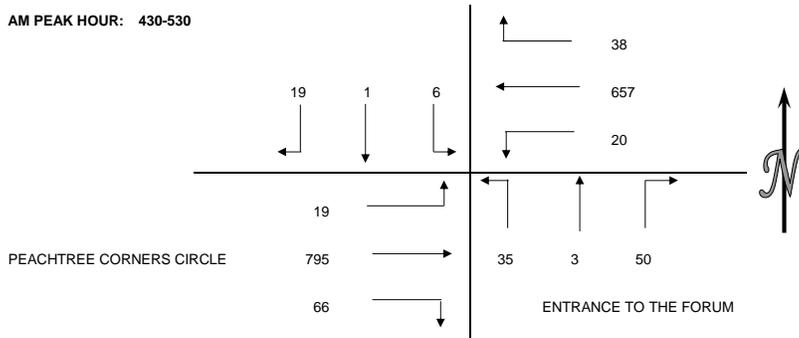
Phone: (678) 687-8266 Fax: (404) 294-6122 info@trafficdataservices.com

## INTERSECTION CAR/PED/BIKE TRAFFIC COUNT RESULTS SUMMARY

CLIENT: JACOBS  
 PROJECT: THE FORUM STUDY  
 DATE: THURSDAY DECEMBER 9, 2021  
 PERIOD: 3:00 PM TO 6:00 PM  
 INTERSECTION: N/S ENTRANCE TO THE FORUM  
 E/W PEACHTREE CORNERS CIRCLE  
 CITY: PEACHTREE CORNERS

VEHICLE COUNTS													
15 MIN COUNTS	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
300-315	13	0	4	13	177	13	15	0	4	11	138	2	390
315-330	6	0	4	6	146	8	14	4	4	12	117	7	328
330-345	8	0	5	6	170	5	11	0	12	7	145	7	376
345-400	9	0	3	17	148	5	13	0	7	23	147	4	376
400-415	2	0	5	10	151	5	8	2	5	12	181	4	385
415-430	0	0	3	7	138	8	15	0	11	15	169	4	370
430-445	8	0	1	10	153	9	6	0	13	18	196	3	417
445-500	4	0	1	12	157	2	14	1	7	15	203	2	418
500-515	3	0	4	7	154	3	14	2	7	11	198	9	412
515-530	4	1	0	9	193	6	16	0	8	22	198	5	462
530-545	5	1	3	20	172	4	9	3	5	14	152	10	398
545-600	3	0	1	15	123	9	17	3	8	23	193	5	400
HOURLY TOTALS	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL
PERIOD	SBRT	SBTH	SBLT	WBRT	WBTH	WBLT	NBRT	NBTH	NBLT	EBRT	EBTH	EBLT	TOTAL
300-400	36	0	16	42	641	31	53	4	27	53	547	20	1470
315-415	25	0	17	39	615	23	46	6	28	54	590	22	1465
330-430	19	0	16	40	607	23	47	2	35	57	642	19	1507
345-445	19	0	12	44	590	27	42	2	36	68	693	15	1548
400-500	14	0	10	39	599	24	43	3	36	60	749	13	1590
415-515	15	0	9	36	602	22	49	3	38	59	766	18	1617
430-530	19	1	6	38	657	20	50	3	35	66	795	19	1709
445-545	16	2	8	48	676	15	53	6	27	62	751	26	1690
500-600	15	2	8	51	642	22	56	8	28	70	741	29	1672

AM PEAK HOUR: 430-530



PEDESTRIAN COUNTS					
15 MIN COUNTS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
PERIOD					
300-315	0	0	0	0	0
315-330	0	0	0	0	0
330-345	0	0	0	0	0
345-400	0	0	0	0	0
400-415	0	0	0	0	0
415-430	0	0	0	0	0
430-445	0	0	0	0	0
445-500	0	0	0	0	0
500-515	0	0	0	0	0
515-530	0	0	0	0	0
530-545	0	0	0	0	0
545-600	0	0	0	0	0
HOURLY TOTALS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
PERIOD					
300-400	0	0	0	0	0
315-415	0	0	0	0	0
330-430	0	0	0	0	0
345-445	0	0	0	0	0
400-500	0	0	0	0	0

BICYCLE COUNTS					
15 MIN COUNTS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
PERIOD					
300-315	0	0	0	0	0
315-330	0	0	0	0	0
330-345	0	0	0	0	0
345-400	0	0	0	0	0
400-415	0	0	0	0	0
415-430	0	0	0	0	0
430-445	0	0	0	0	0
445-500	0	0	0	0	0
500-515	0	0	0	0	0
515-530	0	0	0	0	0
530-545	0	0	0	0	0
545-600	0	0	0	0	0
HOURLY TOTALS	NORTH LEG	EAST LEG	SOUTH LEG	WEST LEG	TOTAL
PERIOD					
300-400	0	0	0	0	0
315-415	0	0	0	0	0
330-430	0	0	0	0	0
345-445	0	0	0	0	0
400-500	0	0	0	0	0

Appendix B. Synchro Reports

Timings  
2: SR 141 & Peachtree Corners Cir



Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	284	120	126	85	170	163	1190	74	26	1894	255
Future Volume (vph)	284	120	126	85	170	163	1190	74	26	1894	255
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	1	6		5	2	
Permitted Phases			4					6			2
Detector Phase	7	4	4	3	8	1	6	6	5	2	2
Switch Phase											
Minimum Initial (s)	4.0	6.0	6.0	4.0	6.0	4.0	12.0	12.0	4.0	12.0	12.0
Minimum Split (s)	10.8	47.9	47.9	10.8	51.9	10.4	40.1	40.1	10.7	37.1	37.1
Total Split (s)	25.0	25.0	25.0	25.0	25.0	17.0	93.0	93.0	17.0	93.0	93.0
Total Split (%)	15.6%	15.6%	15.6%	15.6%	15.6%	10.6%	58.1%	58.1%	10.6%	58.1%	58.1%
Yellow Time (s)	3.8	4.0	4.0	3.8	4.0	3.4	5.4	5.4	3.7	5.4	5.4
All-Red Time (s)	3.0	2.9	2.9	3.0	2.9	3.0	1.7	1.7	3.0	1.7	1.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.9	6.9	6.8	6.9	6.4	7.1	7.1	6.7	7.1	7.1
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes										
Recall Mode	None	None	None	None	None	None	Max	Max	None	C-Max	C-Max

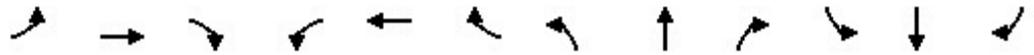
Intersection Summary

Cycle Length: 160  
 Actuated Cycle Length: 160  
 Offset: 47 (29%), Referenced to phase 2:SBT, Start of Green  
 Natural Cycle: 145  
 Control Type: Actuated-Coordinated

Splits and Phases: 2: SR 141 & Peachtree Corners Cir



HCM 6th Signalized Intersection Summary  
2: SR 141 & Peachtree Corners Cir



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑	↗	↖	↕		↖↖	↑↑	↗	↖↖	↑↑	↗
Traffic Volume (veh/h)	284	120	126	85	170	4	163	1190	74	26	1894	255
Future Volume (veh/h)	284	120	126	85	170	4	163	1190	74	26	1894	255
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	309	130	0	92	185	4	177	1293	80	28	2059	277
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	352	182		209	238	5	218	1908	851	414	2125	948
Arrive On Green	0.10	0.05	0.00	0.12	0.07	0.07	0.06	0.54	0.54	0.12	0.60	0.60
Sat Flow, veh/h	3456	3554	1585	1781	3557	77	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	309	130	0	92	92	97	177	1293	80	28	2059	277
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1857	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	14.1	5.8	0.0	7.7	8.2	8.2	8.1	42.4	2.3	1.2	88.6	6.7
Cycle Q Clear(g_c), s	14.1	5.8	0.0	7.7	8.2	8.2	8.1	42.4	2.3	1.2	88.6	6.7
Prop In Lane	1.00		1.00	1.00		0.04	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	352	182		209	119	124	218	1908	851	414	2125	948
V/C Ratio(X)	0.88	0.72		0.44	0.77	0.78	0.81	0.68	0.09	0.07	0.97	0.29
Avail Cap(c_a), veh/h	393	402		209	201	210	229	1908	851	414	2125	948
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.9	74.8	0.0	65.8	73.5	73.5	74.0	27.0	6.3	62.5	30.7	3.8
Incr Delay (d2), s/veh	17.8	5.2	0.0	1.1	10.2	10.0	18.0	2.0	0.2	0.1	13.5	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.4	5.0	0.0	6.4	7.3	7.6	7.3	24.2	2.6	0.9	48.0	8.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	88.7	79.9	0.0	66.8	83.7	83.5	92.0	28.9	6.6	62.5	44.2	4.6
LnGrp LOS	F	E		E	F	F	F	C	A	E	D	A
Approach Vol, veh/h		439	A		281			1550			2364	
Approach Delay, s/veh		86.1			78.1			35.0			39.8	
Approach LOS		F			E			C			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	16.5	102.8	25.6	15.1	26.3	93.0	23.1	17.6				
Change Period (Y+Rc), s	6.4	* 7.1	6.9	* 6.9	* 7.1	* 7.1	* 6.8	6.9				
Max Green Setting (Gmax), s	10.6	* 86	18.2	* 18	* 10	* 86	* 18	18.1				
Max Q Clear Time (g_c+I1), s	10.1	90.6	9.7	7.8	3.2	44.4	16.1	10.2				
Green Ext Time (p_c), s	0.0	0.0	0.1	0.4	0.0	27.8	0.2	0.5				

Intersection Summary

HCM 6th Ctrl Delay	44.9
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.

Timings  
2: SR 141 & Peachtree Corners Cir

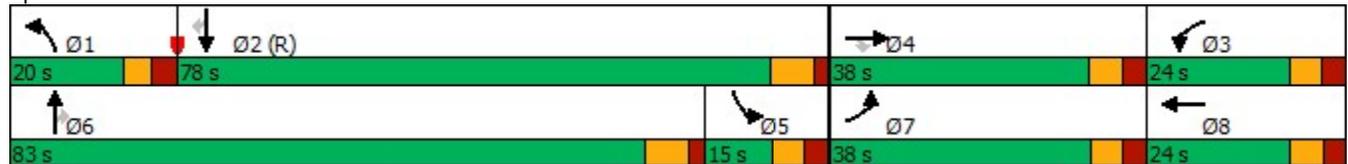


Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑	↗	↖	↑↑	↔↔	↑↑	↗	↔↔	↑↑	↗
Traffic Volume (vph)	422	249	141	139	215	215	1391	111	60	1228	308
Future Volume (vph)	422	249	141	139	215	215	1391	111	60	1228	308
Turn Type	Prot	NA	Perm	Prot	NA	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	7	4		3	8	1	6		5	2	
Permitted Phases			4					6			2
Detector Phase	7	4	4	3	8	1	6	6	5	2	2
Switch Phase											
Minimum Initial (s)	4.0	6.0	6.0	4.0	6.0	4.0	12.0	12.0	4.0	12.0	12.0
Minimum Split (s)	10.8	47.9	47.9	10.8	51.9	10.4	40.1	40.1	10.7	37.1	37.1
Total Split (s)	38.0	38.0	38.0	24.0	24.0	20.0	83.0	83.0	15.0	78.0	78.0
Total Split (%)	23.8%	23.8%	23.8%	15.0%	15.0%	12.5%	51.9%	51.9%	9.4%	48.8%	48.8%
Yellow Time (s)	3.8	4.0	4.0	3.8	4.0	3.4	5.4	5.4	3.7	5.4	5.4
All-Red Time (s)	3.0	2.9	2.9	3.0	2.9	3.0	1.7	1.7	3.0	1.7	1.7
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.8	6.9	6.9	6.8	6.9	6.4	7.1	7.1	6.7	7.1	7.1
Lead/Lag	Lead	Lead	Lead	Lag	Lag	Lead	Lead	Lead	Lag	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes							
Recall Mode	None	None	None	None	None	None	Max	Max	None	C-Max	C-Max

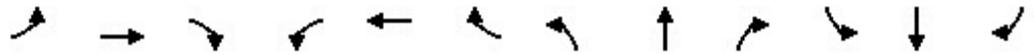
Intersection Summary

Cycle Length: 160  
 Actuated Cycle Length: 160  
 Offset: 61 (38%), Referenced to phase 2:SBT, Start of Green  
 Natural Cycle: 145  
 Control Type: Actuated-Coordinated

Splits and Phases: 2: SR 141 & Peachtree Corners Cir



HCM 6th Signalized Intersection Summary  
 2: SR 141 & Peachtree Corners Cir



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗↘	↑↑	↗	↘	↑↑		↗↘	↑↑	↗	↗↘	↑↑	↗
Traffic Volume (veh/h)	422	249	141	139	215	36	215	1391	111	60	1228	308
Future Volume (veh/h)	422	249	141	139	215	36	215	1391	111	60	1228	308
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	459	271	0	151	234	39	234	1512	121	65	1335	335
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	512	341		255	279	46	275	1686	752	386	1815	809
Arrive On Green	0.15	0.10	0.00	0.14	0.09	0.09	0.08	0.47	0.47	0.11	0.51	0.51
Sat Flow, veh/h	3456	3554	1585	1781	3055	502	3456	3554	1585	3456	3554	1585
Grp Volume(v), veh/h	459	271	0	151	135	138	234	1512	121	65	1335	335
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1780	1728	1777	1585	1728	1777	1585
Q Serve(g_s), s	20.9	11.9	0.0	12.7	11.9	12.3	10.7	62.3	3.8	2.7	47.1	11.1
Cycle Q Clear(g_c), s	20.9	11.9	0.0	12.7	11.9	12.3	10.7	62.3	3.8	2.7	47.1	11.1
Prop In Lane	1.00		1.00	1.00		0.28	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	512	341		255	162	163	275	1686	752	386	1815	809
V/C Ratio(X)	0.90	0.80		0.59	0.83	0.85	0.85	0.90	0.16	0.17	0.74	0.41
Avail Cap(c_a), veh/h	674	691		255	190	190	294	1686	752	386	1815	809
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	66.9	70.8	0.0	64.2	71.5	71.6	72.7	38.5	7.3	64.4	30.7	6.8
Incr Delay (d2), s/veh	11.3	4.2	0.0	3.2	22.6	26.0	19.0	7.9	0.5	0.2	2.7	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	15.1	9.5	0.0	10.0	10.6	11.0	9.1	35.9	4.7	2.1	26.9	6.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	78.2	75.0	0.0	67.3	94.1	97.6	91.7	46.4	7.8	64.5	33.4	8.3
LnGrp LOS	E	E		E	F	F	F	D	A	E	C	A
Approach Vol, veh/h		730	A		424			1867			1735	
Approach Delay, s/veh		77.0			85.7			49.6			29.7	
Approach LOS		E			F			D			C	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	19.1	88.8	29.8	22.2	25.0	83.0	30.5	21.5				
Change Period (Y+Rc), s	6.4	* 7.1	6.9	* 6.9	* 7.1	* 7.1	* 6.8	6.9				
Max Green Setting (Gmax), s	13.6	* 71	17.2	* 31	* 8.3	* 76	* 31	17.1				
Max Q Clear Time (g_c+I1), s	12.7	49.1	14.7	13.9	4.7	64.3	22.9	14.3				
Green Ext Time (p_c), s	0.1	18.6	0.1	1.4	0.0	10.6	0.9	0.4				

Intersection Summary

HCM 6th Ctrl Delay	49.8
HCM 6th LOS	D

Notes

- User approved pedestrian interval to be less than phase max green.
- \* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.
- Unsignalized Delay for [EBR] is excluded from calculations of the approach delay and intersection delay.



Appendix C. Roundabout Analysis Reports

General & Site Information v 4.2								
Analyst:	VRG							
Agency/Co:	Jacobs							
Date:	1/6/2022							
Project or PI#:								
Year, Peak Hour:	2021, AM							
County/District:	Gwinnett							
Intersection:	Peachtree Corners Cir @ The Forum							
Volumes								
Entry Legs (FROM)								
Lane Designation	N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)
N (1), vph						5		
Exit NE (2), vph								
Legs E (3), vph	1							
(TO) SE (4), vph								
S (5), vph					18			
SW (6), vph								
W (7), vph		1			606			
NW (8), vph								
Entry Volume, vph	1	1	0	0	624	5	0	0
	S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
Lane Designation	Lf-Th-Rt	SELECT	SELECT	SELECT	Lf-Th-Rt	SELECT	SELECT	SELECT
N (1), vph					7			
NE (2), vph								
E (3), vph	55				434			
SE (4), vph								
S (5), vph					65			
SW (6), vph								
W (7), vph	39							
NW (8), vph								
Entry Volume, vph	94	0	0	0	506	0	0	0
	N	NE	E	SE	S	SW	W	NW
# of Entry Flow Lanes	2	0	2	0	1	0	1	0
# of Conflict Flow Lanes	1	2	1	2	2	2	2	2
Volume Characteristics								
	N	NE	E	SE	S	SW	W	NW
% Cars	98.0%	100.0%	98.0%	100.0%	98.0%	100.0%	98.0%	100.0%
% Heavy Vehicles	2.0%	0.0%	2.0%	0.0%	2.0%	0.0%	2.0%	0.0%
% Bicycles	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians (ped/hr)	0	0	0	0	0	0	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
F <sub>hv</sub>	0.980	1.000	0.980	1.000	0.980	1.000	0.980	1.000
F <sub>ped</sub>	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Entry/Conflicting Flows								
	N	NE	E	SE	S	SW	W	NW
Flow to N (1), pcu/h	0	0	5	0	0	0	8	0
Leg # NE (2), pcu/h	0	0	0	0	0	0	0	0
E (3), pcu/h	1	0	0	0	59	0	456	0
SE (4), pcu/h	0	0	0	0	0	0	0	0
S (5), pcu/h	0	0	19	0	0	0	70	0
SW (6), pcu/h	0	0	0	0	0	0	0	0
W (7), pcu/h	1	0	651	0	42	0	0	0
NW (8), pcu/h	0	0	0	0	0	0	0	0
Entry flow, pcu/h	2	0	675	0	101	0	543	0
Entry flow Lane 1, pcu/h	1	0	670	0	101	0	543	0
Entry flow Lane 2, pcu/h	1	0	5	0	0	0	0	0
Conflicting flow, pcu/h	712	0	49	0	475	0	20	0
Results: Approach Measures of Effectiveness								
HCM 6th Edition								
	N		E		S		W	
Lane Designations	Left-Thru	Right-Thru	Left-Thru	Right only	Left-Thru	Lane 2	Left-Thru	Lane 2
Entry Capacity, veh/h	728	728	1331	1331	930	NA	1368	NA
Entry Flow Rates, veh/h	1	1	657	5	99	0	533	0
V/C ratio	0.00	0.00	0.49	0.00	0.11	0.00	0.39	
Control Delay, s/veh	5.0	5.0	7.8	2.7	4.9	0.0	6.2	
LOS	A	A	A	A	A	PN/A	A	
Average Queue (ft)			35		3	0	23	
95th % Queue (ft)	0	0	72	0	9	VALUE	48	
Approach Delay, LOS	5 sec, LOS A		7.7 sec, LOS A		4.9 sec, LOS A		6.2 sec, LOS A	
	NE		SE		SW		NW	
Lane Designations	Lane 1	Lane 2	Lane 1	Lane 2	Lane 1	Lane 2	Lane 1	Lane 2
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	0	0	0	0	0	0	0	0
V/C ratio			0.00	0.00			0.00	0.00
Control Delay, sec/pcu			0.0	0.0			0.0	0.0
LOS			PN/A	PN/A			PN/A	PN/A
Average Queue (ft)			0	0			0	0
95th % Queue (ft)			VALUE	VALUE			VALUE	VALUE
Approach Delay, LOS			PN/A	PN/A			PN/A	PN/A
Overall Intersection Measures of Effectiveness								
Int Control Delay (sec)	6.9		Int LOS	A		Max Approach V/C	0.49	

Notes: v 4.2

General & Site Information v 4.2								
Analyst:	VRG							
Agency/Co:	Jacobs							
Date:	1/6/2022							
Project or PI#:								
Year, Peak Hour:	2021, PM							
County/District:	Gwinnett							
Intersection:	Peachtree Corners Cir @ The Forum							
Volumes Entry Legs (FROM)								
Lane Designation	N1 (1)	N2 (1)	NE1 (2)	NE2 (2)	E1 (3)	E2 (3)	SE1 (4)	SE2 (4)
Exit								
Legs (TO)								
N (1), vph						38		
NE (2), vph								
E (3), vph	6							
SE (4), vph								
S (5), vph	1				20			
SW (6), vph								
W (7), vph		19			657			
NW (8), vph								
Entry Volume, vph	7	19	0	0	677	38	0	0
	S1 (5)	S2 (5)	SW1 (6)	SW2 (6)	W1 (7)	W2 (7)	NW1 (8)	NW2 (8)
Lane Designation	Lf-Th-Rt	SELECT	SELECT	SELECT	Lf-Th-Rt	SELECT	SELECT	SELECT
N (1), vph	3				19			
NE (2), vph								
E (3), vph	50				795			
SE (4), vph								
S (5), vph					66			
SW (6), vph								
W (7), vph	35							
NW (8), vph								
Entry Volume, vph	88	0	0	0	880	0	0	0
	N	NE	E	SE	S	SW	W	NW
# of Entry Flow Lanes	2	0	2	0	1	0	1	0
# of Conflict Flow Lanes	1	2	1	2	2	2	2	2
Volume Characteristics								
	N	NE	E	SE	S	SW	W	NW
% Cars	98.0%	100.0%	98.0%	100.0%	98.0%	100.0%	98.0%	100.0%
% Heavy Vehicles	2.0%	0.0%	2.0%	0.0%	2.0%	0.0%	2.0%	0.0%
% Bicycles	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians (ped/hr)	0	0	0	0	0	0	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
F <sub>hv</sub>	0.980	1.000	0.980	1.000	0.980	1.000	0.980	1.000
F <sub>ped</sub>	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000
Entry/Conflicting Flows								
	N	NE	E	SE	S	SW	W	NW
Flow to	N (1), pcu/h	0	0	41	0	3	0	20
Leg #	NE (2), pcu/h	0	0	0	0	0	0	0
	E (3), pcu/h	6	0	0	0	54	0	854
	SE (4), pcu/h	0	0	0	0	0	0	0
	S (5), pcu/h	1	0	21	0	0	0	71
	SW (6), pcu/h	0	0	0	0	0	0	0
	W (7), pcu/h	20	0	705	0	38	0	0
	NW (8), pcu/h	0	0	0	0	0	0	0
	Entry flow, pcu/h	28	0	768	0	94	0	945
	Entry flow Lane 1, pcu/h	8	0	727	0	94	0	945
	Entry flow Lane 2, pcu/h	20	0	41	0	0	0	0
	Conflicting flow, pcu/h	764	0	61	0	880	0	29
Results: Approach Measures of Effectiveness								
HCM 6th Edition								
	N		E		S		W	
	Left Only	Right-Thru	Left-Thru	Right only	Lf-Th-Rt	Lane 2	Lf-Th-Rt	Lane 2
Entry Capacity, veh/h	694	694	1317	1317	659	NA	1358	NA
Entry Flow Rates, veh/h	7	20	713	40	93	0	926	0
V/C ratio	0.01	0.03	0.54	0.03	0.14	0.00	0.68	
Control Delay, s/veh	5.3	5.5	8.6	3.0	7.1	0.0	11.5	
LOS	A	A	A	A	A	RV/A	B	
Average Queue (ft)	0	1	43	1	5	0	74	
95th % Queue (ft)	1	2	86	2	12	I/VALUE	148	
Approach Delay, LOS	5.4 sec, LOS A		8.3 sec, LOS A		7.1 sec, LOS A		11.5 sec, LOS B	
	NE		SE		SW		NW	
	Lane 1	Lane 2	Lane 1	Lane 2	Lane 1	Lane 2	Lane 1	Lane 2
Entry Capacity, veh/h	NA	NA	NA	NA	NA	NA	NA	NA
Entry Flow Rates, veh/h	0	0	0	0	0	0	0	0
V/C ratio			0.00	0.00			0.00	0.00
Control Delay, sec/pcu			0.0	0.0			0.0	0.0
LOS			RV/A	RV/A			RV/A	RV/A
Average Queue (ft)			0	0			0	0
95th % Queue (ft)			I/VALUE	I/VALUE			I/VALUE	I/VALUE
Approach Delay, LOS			RV/D	RV/D			RV/D	RV/D
Overall Intersection Measures of Effectiveness								
Int Control Delay (sec)	9.9		Int LOS	A		Max Approach V/C	0.68	

Notes:

v 4.2

General & Site Information <span style="float: right;">v 4.2</span>								
Analyst:	VRG							
Agency/Co:	Jacobs							
Date:	1/6/2022							
Project or PI#:								
Year, Peak Hour:	2021, AM							
County/District:	Gwinnett							
Intersection Name:	Peachtree Corners Cir @ The Forum							

Volumes		Entry Legs (FROM)							
		N (1)	NE (2)	E (3)	SE (4)	S (5)	SW (6)	W (7)	NW (8)
<b>Exit Legs (TO)</b>	N (1), vph			5		0		7	
	NE (2), vph								
	E (3), vph	1				55		434	
	SE (4), vph								
	S (5), vph	1		18				65	
	SW (6), vph								
	W (7), vph	0		606		39			
	NW (8), vph								
Output	Total Vehicles	2	0	629	0	94	0	506	0

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	98.0%	100.0%	98.0%	100.0%	98.0%	100.0%	98.0%	100.0%
% Heavy Vehicles	2.0%	0.0%	2.0%	0.0%	2.0%	0.0%	2.0%	0.0%
% Bicycle	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians (ped/hr)	0	0	0	0	0	0	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
F <sub>HV</sub>	0.980	1.000	0.980	1.000	0.980	1.000	0.980	1.000
F <sub>ped</sub>	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows	N	NE	E	SE	S	SW	W	NW
Flow to Leg # N (1), pcu/h	0	0	5	0	0	0	8	0
NE (2), pcu/h	0	0	0	0	0	0	0	0
E (3), pcu/h	1	0	0	0	59	0	466	0
SE (4), pcu/h	0	0	0	0	0	0	0	0
S (5), pcu/h	1	0	19	0	0	0	70	0
SW (6), pcu/h	0	0	0	0	0	0	0	0
W (7), pcu/h	0	0	651	0	42	0	0	0
NW (8), pcu/h	0	0	0	0	0	0	0	0
Entry flow, pcu/h	2	0	675	0	101	0	543	0
Conflicting flow, pcu/h	712	0	49	0	475	0	21	0

Results: Approach Measures of Effectiveness								
HCM 6th Edition	N	NE	E	SE	S	SW	W	NW
Entry Capacity, vph	655	NA	1286	NA	834	NA	1324	NA
Entry Flow Rates, vph	2	0	662	0	99	0	533	0
V/C ratio	0.00		0.51		0.12		0.40	
Control Delay, sec/pcu	5.5		8.3		5.5		6.6	
LOS	A		A		A		A	
Average Queue (ft)			38		4		24	
95th % Queue (ft)	0		78		10		51	

Overall Intersection Measures of Effectiveness				
Int Control Delay (sec)	7.4	Int LOS	A	Max Approach V/C
				0.51

Notes:

v 4.2

General & Site Information <span style="float: right;">v 4.2</span>								
Analyst:	VRG							
Agency/Co:	Jacobs							
Date:	1/6/2022							
Project or PI#:								
Year, Peak Hour:	2021, PM							
County/District:	Gwinnett							
Intersection Name:	Peachtree Corners Cir @ The Forum							

Volumes		Entry Legs (FROM)							
		N (1)	NE (2)	E (3)	SE (4)	S (5)	SW (6)	W (7)	NW (8)
<b>Exit Legs (TO)</b>	N (1), vph			38		3		19	
	NE (2), vph								
	E (3), vph	6				50		795	
	SE (4), vph								
	S (5), vph	1		20				66	
	SW (6), vph								
	W (7), vph	19		657		35			
	NW (8), vph								
Output	Total Vehicles	26	0	715	0	88	0	880	0

Volume Characteristics	N	NE	E	SE	S	SW	W	NW
% Cars	98.0%	100.0%	98.0%	100.0%	98.0%	100.0%	98.0%	100.0%
% Heavy Vehicles	2.0%	0.0%	2.0%	0.0%	2.0%	0.0%	2.0%	0.0%
% Bicycle	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
# of Pedestrians (ped/hr)	0	0	0	0	0	0	0	0
PHF	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
F <sub>HV</sub>	0.980	1.000	0.980	1.000	0.980	1.000	0.980	1.000
F <sub>ped</sub>	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000

Entry/Conflicting Flows	N	NE	E	SE	S	SW	W	NW
Flow to Leg # N (1), pcu/h	0	0	41	0	3	0	20	0
NE (2), pcu/h	0	0	0	0	0	0	0	0
E (3), pcu/h	6	0	0	0	54	0	854	0
SE (4), pcu/h	0	0	0	0	0	0	0	0
S (5), pcu/h	1	0	21	0	0	0	71	0
SW (6), pcu/h	0	0	0	0	0	0	0	0
W (7), pcu/h	20	0	705	0	38	0	0	0
NW (8), pcu/h	0	0	0	0	0	0	0	0
Entry flow, pcu/h	28	0	768	0	94	0	945	0
Conflicting flow, pcu/h	764	0	61	0	880	0	29	0

Results: Approach Measures of Effectiveness								
HCM 6th Edition	N	NE	E	SE	S	SW	W	NW
Entry Capacity, vph	620	NA	1271	NA	551	NA	1314	NA
Entry Flow Rates, vph	27	0	753	0	93	0	926	0
V/C ratio	0.04		0.59		0.17		0.71	
Control Delay, sec/pcu	6.3		9.8		8.7		12.5	
LOS	A		A		A		B	
Average Queue (ft)	1		51		6		81	
95th % Queue (ft)	4		104		15		162	

Overall Intersection Measures of Effectiveness					
Int Control Delay (sec)	11.1	Int LOS	B	Max Approach V/C	0.71

Notes:

v 4.2