

**TRAFFIC IMPACT STUDY
FOR
2380 WISTERIA DRIVE RESIDENTIAL DEVELOPMENT

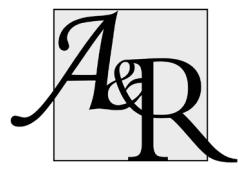
SNELLVILLE, GEORGIA**



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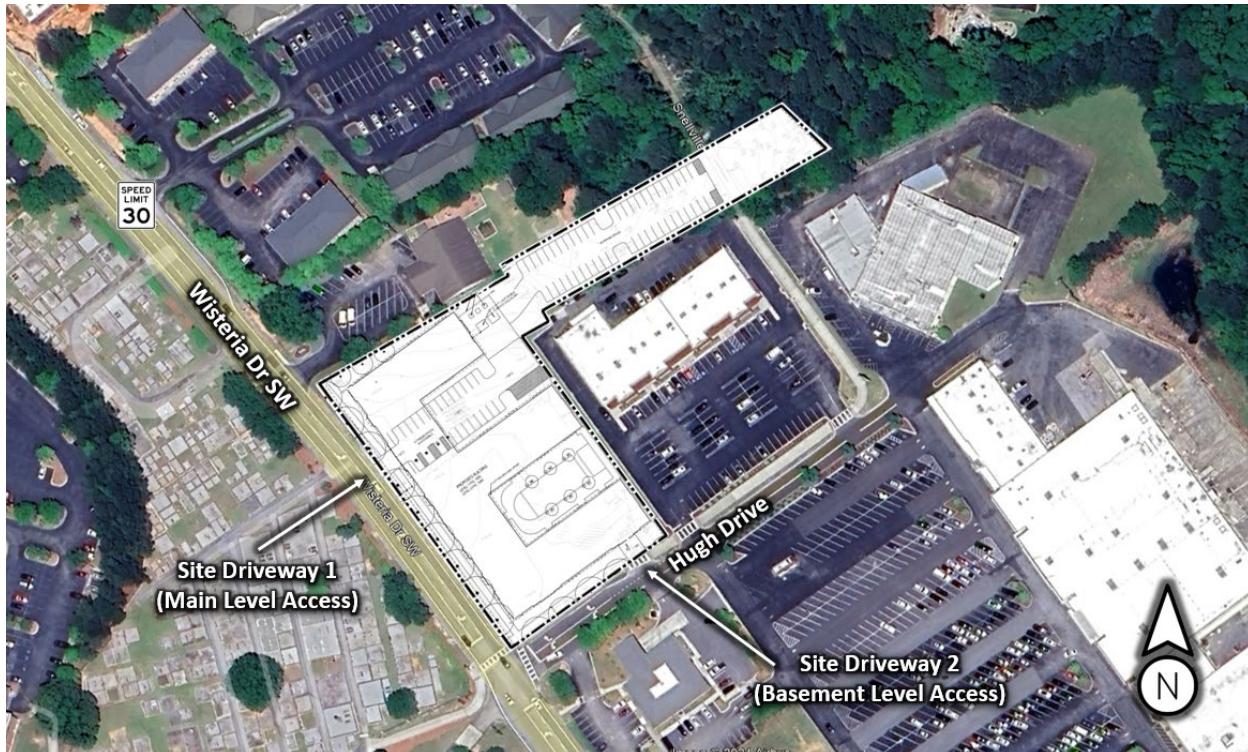
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1.0 INTRODUCTION

The purpose of this study is to determine the traffic impact from the proposed 171 units of mid-rise multi-family residential development that will be located at 2380 Wisteria Drive in Snellville, Georgia. The traffic analysis evaluates the current operations and the future conditions with the traffic generated by the development.



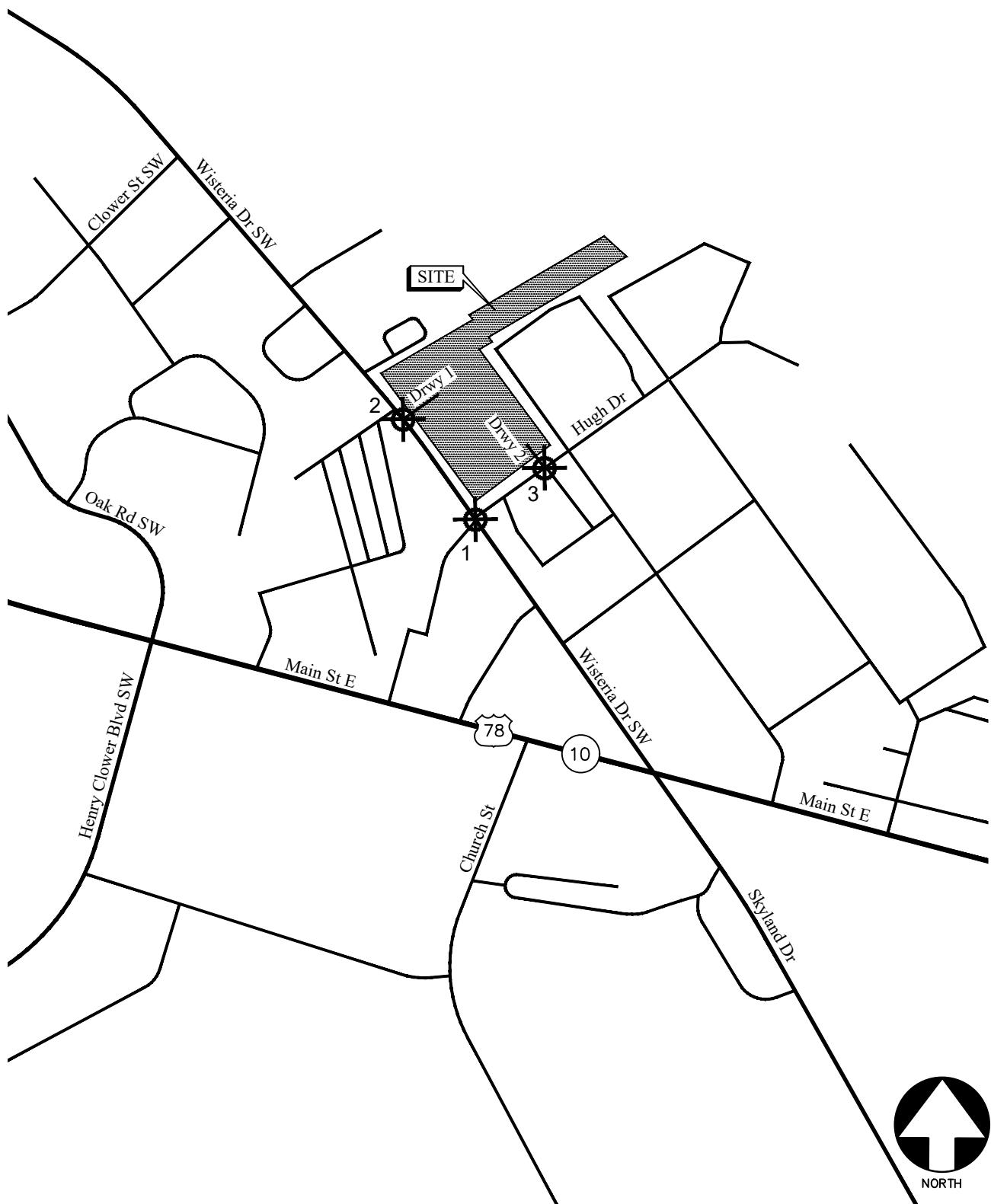
The development proposes access at the following existing driveway locations:

- Site Driveway 1: Full-access driveway on Wisteria Drive
- Site Driveway 2: Full-access driveway on Hugh Drive

The AM and PM peak hours have been analyzed in this study. In addition to the site access points, this study includes the evaluation of traffic operations at the intersection of Wisteria Drive and Hugh Drive.

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.

Study Intersection



LOCATION MAP

FIGURE 1
A&R Engineering Inc.

2.0 EXISTING FACILITIES / CONDITIONS

2.1 Roadway Facilities

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

2.1.1 *Wisteria Drive*

Wisteria Drive is a north-south, two-lane, undivided local roadway with a two-way left-turn lane and a posted speed limit of 30 mph in the vicinity of the site.

2.1.2 *Hugh Drive*

Hugh Drive is an east-west, two-lane, undivided local roadway in the vicinity of the site.

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, 6th edition (HCM 6). Synchro software, which utilizes the HCM methodology, was used for the 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 controlled by a stop sign on minor streets, the level of service (LOS) for motor vehicles with controlled movements is determined by the computed control delay according to the thresholds stated in Table 1 below. LOS is determined for each minor street movement (or shared movement), as well as major street left turns. LOS is not defined for the intersection as a whole or for major street approaches. The LOS of any controlled movement which experiences a volume-to-capacity ratio greater than 1 is designed as "F" regardless of the control delay.

Control delay for unsignalized intersections includes initial deceleration delay, queue move-up time, stopped delay and final acceleration delay. Several factors affect the control 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 the main road without experiencing long delays.

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

Control Delay (sec/vehicle)	LOS by Volume-to-Capacity Ratio*	
	v/c ≤ 1.0	v/c > 1.0
≤ 10	A	F
> 10 and ≤ 15	B	F
> 15 and ≤ 25	C	F
> 25 and ≤ 35	D	F
> 35 and ≤ 50	E	F
> 50	F	F

*The LOS criteria apply to each lane on a given approach and to each approach on the minor street. LOS is not calculated for major-street approaches or for the intersection.

Source: Highway Capacity Manual, 6th edition, Exhibit 20-2 *LOS Criteria: Motorized Vehicle Mode*

3.2 Signalized Intersections

According to HCM procedures, LOS can be calculated for the entire intersection, each intersection approach, and each lane group. HCM uses control delay alone to characterize LOS for the entire intersection or an approach. Control delay per vehicle is composed of initial deceleration delay, queue move-up time, stopped delay and final acceleration delay. Both control delay and volume-to-capacity ratio are used to characterize LOS for a lane group. A volume-to-capacity ratio greater than 1.0 for a lane group indicates failure from capacity perspective. Therefore, such a lane group is assigned LOS F regardless of the amount of control delay.

Table 2 below summarizes the LOS criteria from HCM for motorized vehicles at signalized intersections.

Control Delay (sec/vehicle)*	LOS for Lane Group by Volume-to-Capacity Ratio*	
	v/c ≤ 1.0	v/c > 1.0
≤ 10	A	F
> 10 and ≤ 20	B	F
> 20 and ≤ 35	C	F
> 35 and ≤ 55	D	F
> 55 and ≤ 80	E	F
> 80	F	F

*For approach-based and intersection wide assessments, LOS is defined solely by control delay

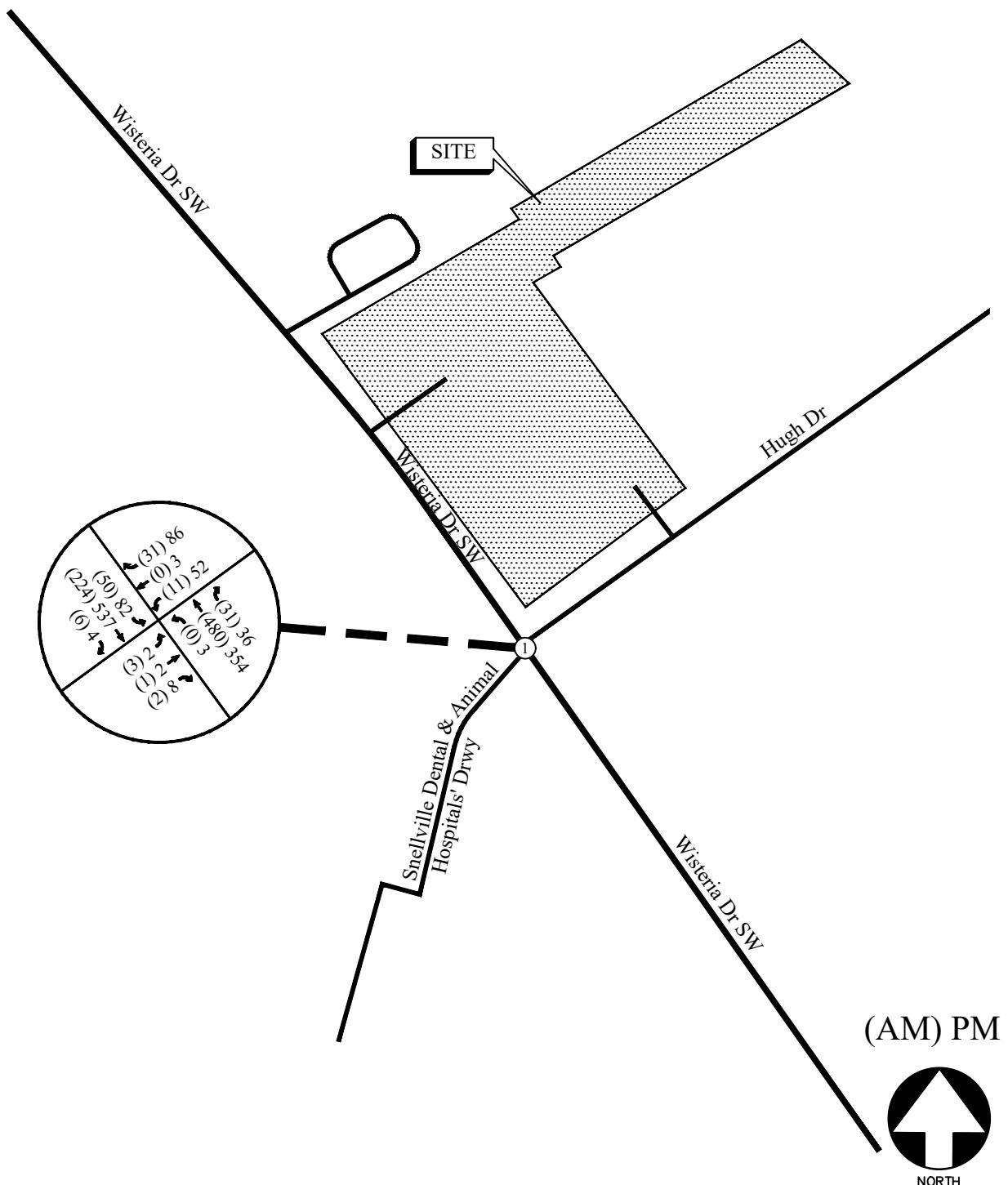
Source: Highway Capacity Manual, 6th edition, Exhibit 19-8 *LOS Criteria: Motorized Vehicle Mode*

LOS A is typically assigned when the volume-to-capacity (v/c) ratio is low and either progression is exceptionally favorable, or the cycle length is very short. LOS B is typically assigned when the v/c ratio is low and either progression is highly favorable, or the cycle length is short. However, more vehicles are stopped than with LOS A. LOS C is typically assigned when progression is favorable, or the cycle length is moderate. Individual cycle failures (one or more queued vehicles are not able to depart because of insufficient capacity during the cycle) may begin to appear at this level. Many vehicles still pass through the intersection without stopping, but the number of vehicles stopping is significant. LOS D is typically assigned when the v/c ratio is high and either progression is ineffective, or the cycle length is long. There are many vehicle-stops and individual cycle failures are noticeable. LOS E is typically assigned when the v/c ratio is high, progression is very poor, the cycle length is long, and individual cycle failures are frequent. LOS F is typically assigned when the v/c ratio is very high, progression is very poor, the cycle length is long, and most cycles fail to clear the queue.

4.0 EXISTING 2024 TRAFFIC ANALYSIS

4.1 Existing Traffic Volumes

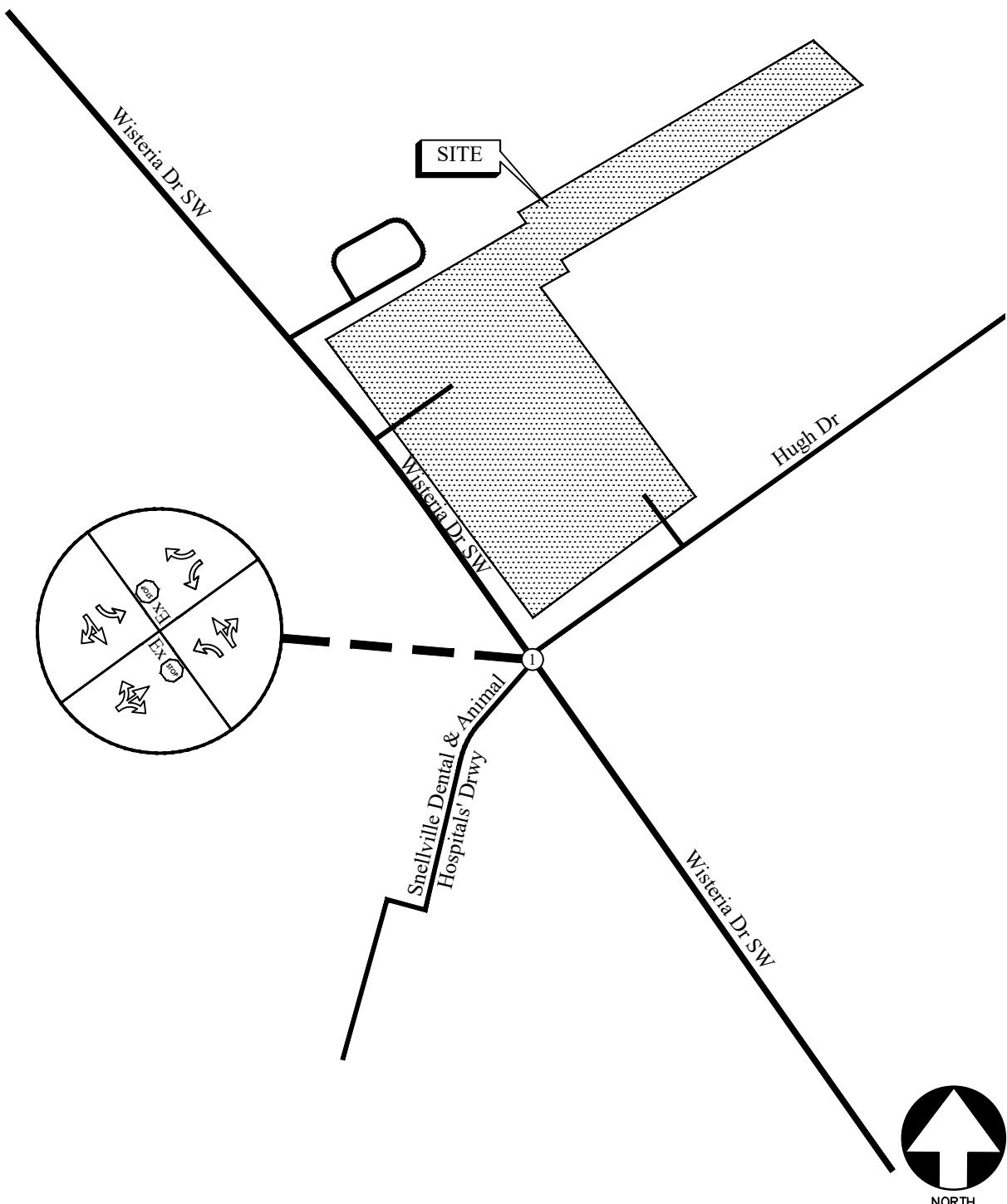
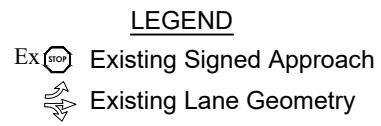
Existing traffic counts were obtained at the study intersection of Wisteria Drive and Hugh Drive. Turning movement counts were collected on Tuesday, March 26, 2024, during the AM and PM peak hours between 7:00 AM to 9:00 AM and 4:00 PM to 6:00 PM, respectively. Truck data was included separately in the counts. The four consecutive 15-minute interval volumes that produced the highest volume at the intersection were then determined. These volumes make up the peak hour traffic volumes for the intersection counted and are shown in Figure 2. The existing traffic control and lane geometry for the intersection are shown in Figure 3.



EXISTING WEEKDAY PEAK-HOUR VOLUMES

FIGURE 2

A&R Engineering Inc.



EXISTING TRAFFIC CONTROL AND LANE GEOMETRY

FIGURE 3
A&R Engineering Inc.

4.2 Existing Traffic Operations

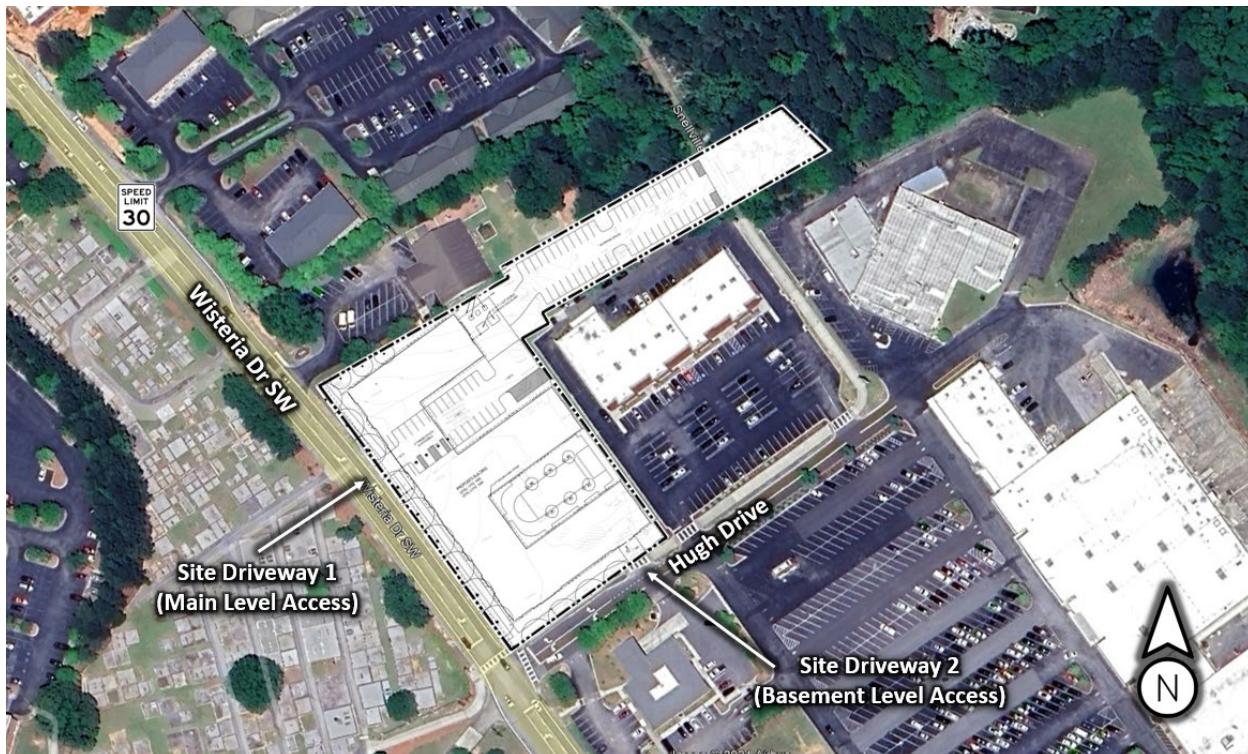
Existing 2024 traffic operations were analyzed at the study intersection in accordance with the HCM methodology. The results of the analyses are shown in Table 3.

Intersection		Traffic Control	LOS (Delay)	
			AM Peak Hour	PM Peak Hour
1	<u>Wisteria Drive @ Hugh Drive</u> <ul style="list-style-type: none"> -Eastbound Approach -Westbound Approach -Northbound Left -Southbound Left 	Stop Controlled on EB and WB Approaches	C (16.5) B (13.9) A (0.0) A (8.7)	C (18.6) C (23.4) A (8.6) A (8.4)

The results of existing traffic operations analysis indicate that the study intersection of Wisteria Drive and Hugh Drive is operating at level of service “C” or better in both the AM and PM peak hours.

5.0 PROPOSED DEVELOPMENT

The proposed residential development will be located at 2380 Wisteria Drive in Snellville, Georgia and will consist of 171 mid-rise multi-family housing units. The site currently consists of a vacant building that will be demolished, and the proposed development will be built.



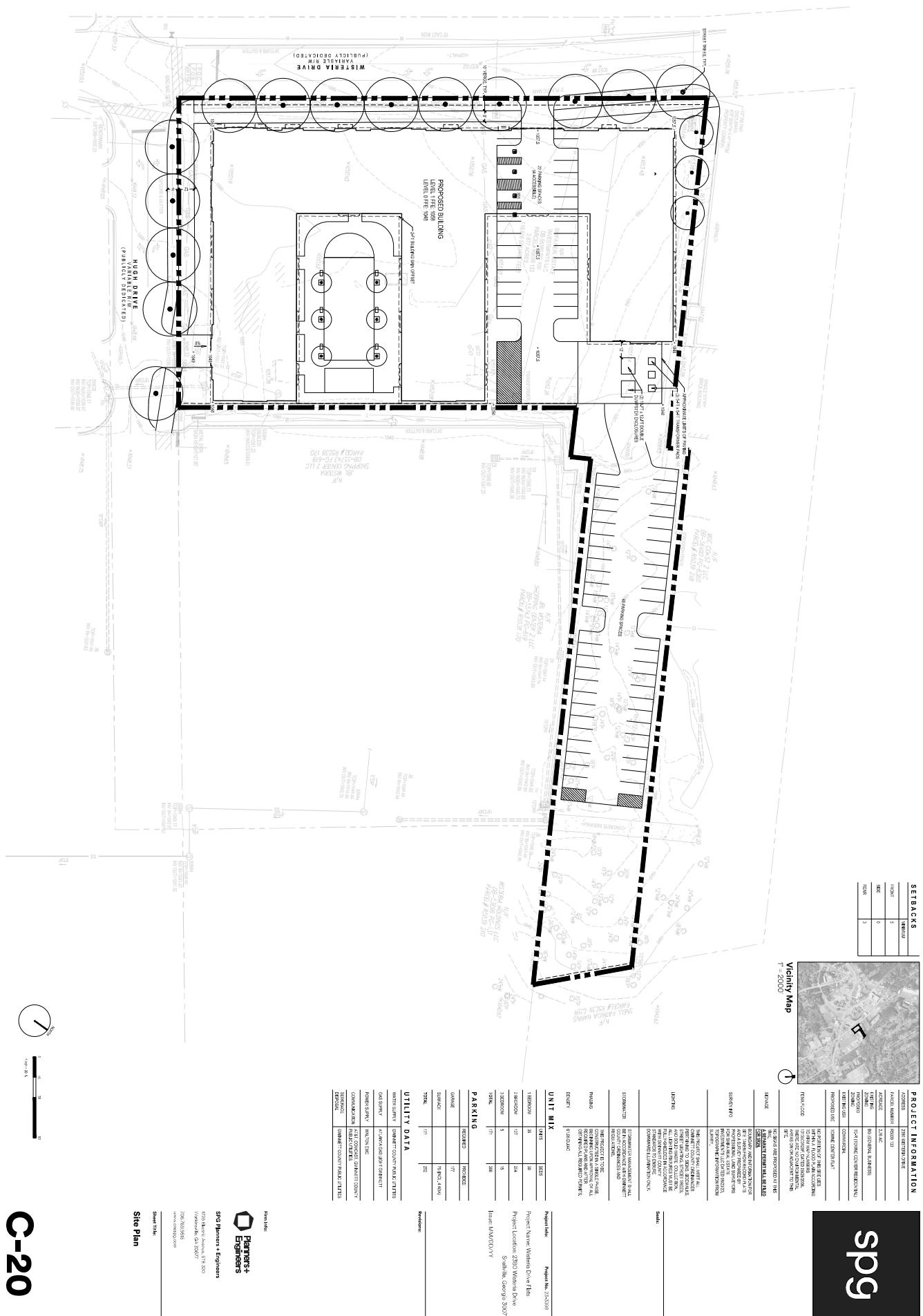
The development proposes access at the following existing driveway locations:

- Site Driveway 1: Full-access driveway on Wisteria Drive
- Site Driveway 2: Full-access driveway on Hugh Drive

A site plan is shown in Figure 4.

SITE PLAN

Location: SAM Projects\Hamriani, Hussein - Wateris Drive Multifamily 2025-3398\04-CD\01>\CD\01>WORKING\20-SITE Creation date: Thursday, Apr 18, 2024 4:26:45 PM
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5.1 Trip Generation

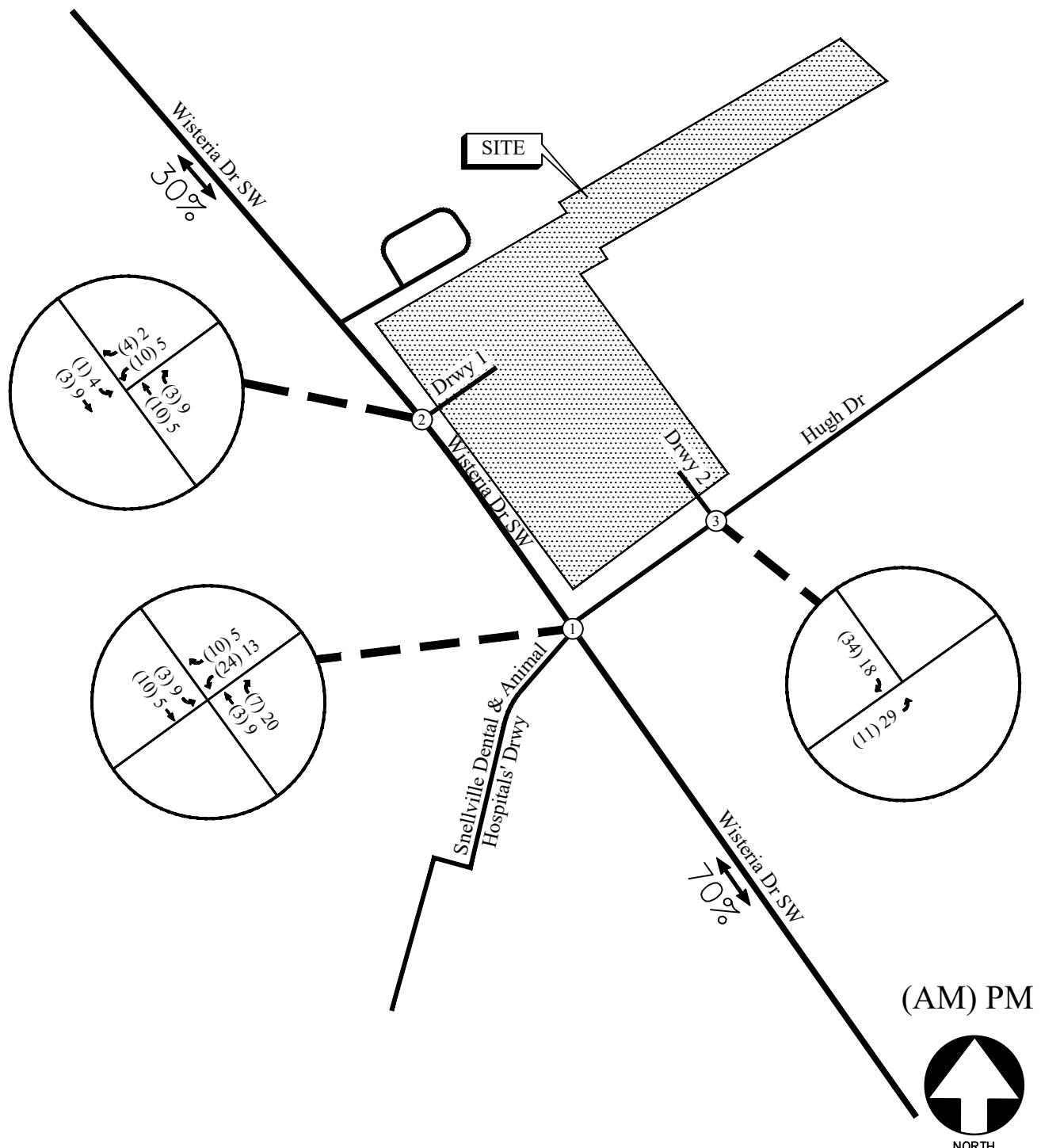
Trip generation estimates for the project were based on the rates and equations published in the 11th edition of the Institute of Transportation Engineers (ITE) Trip Generation report. This reference contains traffic volume count data collected at similar facilities nationwide. The trip generation was based on the following ITE Land Use: 221 – *Multifamily Housing (Mid-Rise)*. The calculated total trip generation for the proposed development is shown in Table 4.

TABLE 4 — TRIP GENERATION

Land Use	Size	AM Peak Hour			PM Peak Hour			24 Hour
		Enter	Exit	Total	Enter	Exit	Total	Two-way
ITE 221 – Multifamily Housing (Mid-Rise)	171 units	15	49	64	41	26	67	769

5.2 Trip Distribution

The trip distribution describes how traffic arrives and departs from the site. An overall trip distribution was developed for the site based on a review of the existing travel patterns in the area and the locations of major roadways and highways that will serve the development. The site-generated peak hour traffic volumes, shown in Table 4, were assigned to the study area intersections based on this distribution. The outer-leg distribution and AM and PM peak hour new traffic generated by the site are shown in Figure 5.



TRIP DISTRIBUTION AND SITE-GENERATED
WEEKDAY PEAK HOUR VOLUMES

FIGURE 5
A&R Engineering Inc.

6.0 FUTURE 2026 TRAFFIC ANALYSIS

The future 2026 traffic operations are analyzed for the “Build” and “No-Build” conditions.

6.1 Future “No-Build” Conditions

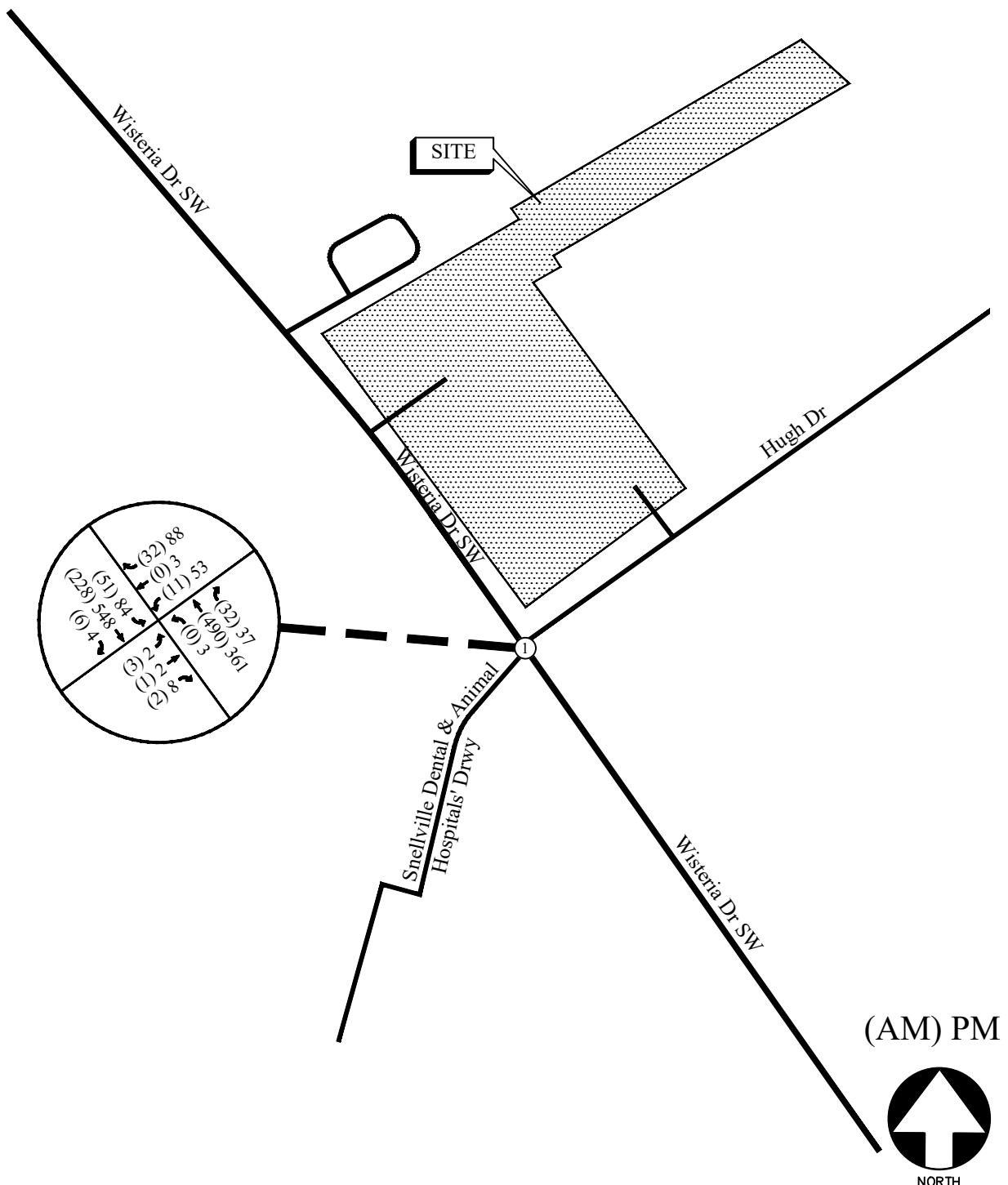
The “No-Build” (or background) conditions provide an assessment of how traffic will operate in the study horizon year without the study site being developed as proposed, with projected increases in through traffic volumes due to normal annual growth. The Future “No-Build” volumes consist of the existing traffic volumes (Figure 2) plus increases for annual growth of traffic.

6.1.1 Annual Traffic Growth

To evaluate future traffic operations in this area, a projection of normal traffic growth was applied to the existing volumes. The Georgia Department of Transportation recorded average daily traffic volumes at several locations in the vicinity of the site. Reviewing the growth over the last five years (2017-2019, 2021-2022) revealed no consistent positive growth of through traffic; therefore, a growth rate of 1% was used in the analysis. This growth factor was applied to the existing traffic volumes to estimate the future year traffic volumes prior to the addition of site-generated traffic. The resulting Future “No-Build” volumes on the roadway are shown in Figure 6.

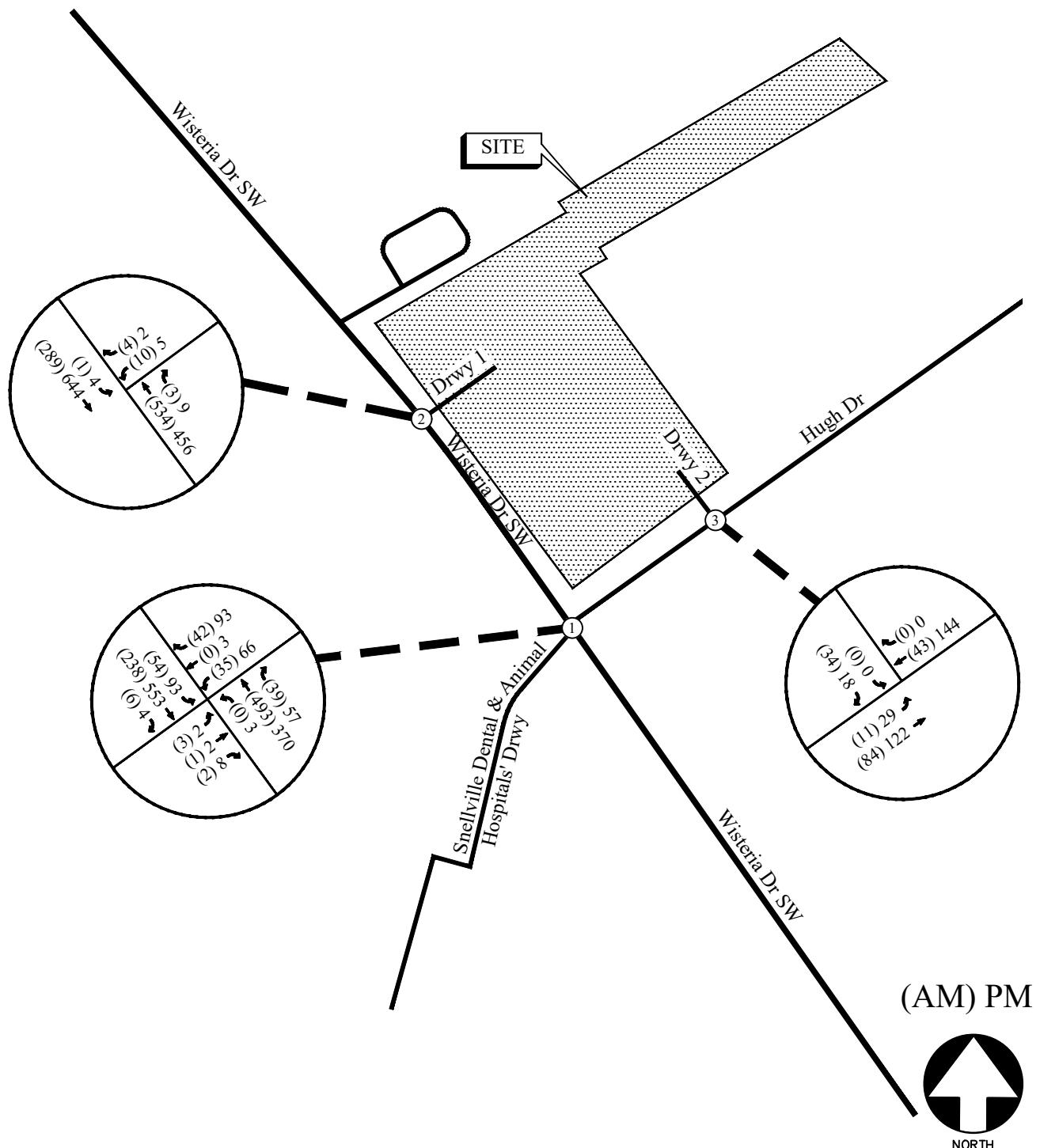
6.2 Future “Build” Conditions

The “Build” or development conditions include the estimated background traffic from the “No-Build” conditions plus the traffic from the proposed development. In order to evaluate future traffic operations in this area, the additional traffic volumes from the site (Figure 5) were added to base traffic volumes (Figure 6) to calculate the future traffic volumes after the construction of the development. These total future “Build” traffic volumes are shown in Figure 7.



FUTURE (NO-BUILD) WEEKDAY PEAK HOUR VOLUMES

FIGURE 6
A&R Engineering Inc.



FUTURE (BUILD) WEEKDAY PEAK HOUR VOLUMES

FIGURE 7
A&R Engineering Inc.

6.3 Auxiliary Lane Analysis

6.3.1 Left Turn Lane Analysis

A two-way left turn lane exists on Wisteria Drive at the site driveway location. Therefore, a left turn lane is not required to be installed on Wisteria Drive. According to Gwinnett County Criteria and Guidelines for Left Turn Lanes, left turn lanes must be provided at each subdivision street that accesses a minor/major collector street or major thoroughfare if the characteristics of the major street and site density exceed certain thresholds. The minimum threshold for a left turn lane on a 30-35-mph road with an ADT less than 6,000 is 175 units. Since Hugh Drive is a local road and not a minor/major collector street/major thoroughfare, and since the proposed development will have 171 units and does not exceed the threshold, a left turn lane is not warranted on Hugh Drive.

6.3.1 Deceleration Turn Lane Analysis

According to Gwinnett County Unified Development Ordinance (UDO) Standards, A deceleration lane shall be provided at each project driveway or subdivision street entrance, as applicable, that is provided street access to a Minor Collector Street or Major Thoroughfare. None of the two site driveways are on minor collector or major thoroughfare. The development has one full access driveway on Wisteria Drive that leads to the surface level parking lot consisting of 76 parking spaces and the other full access driveway on Hugh Road leads to the underground parking area consisting of 177 parking spaces. Both Wisteria Drive and Hugh Drive are local roads. Therefore, deceleration lanes are not warranted at any of the site driveways. Only 81 cars are projected to turn right into the parking lot on Wisteria Drive during a 24-hour period, and only a few cars a day may turn right into the site driveway on Hugh Drive as Hugh Drive almost dead-ends after serving a few developments there.

6.4 Future Traffic Operations

The future “No-Build” and “Build” traffic operations were analyzed using the volumes in Figure 6 and Figure 7, respectively. The results of the future traffic operations analysis are shown below in Table 5. Recommendations for future traffic control and lane geometry are shown in Figure 8.

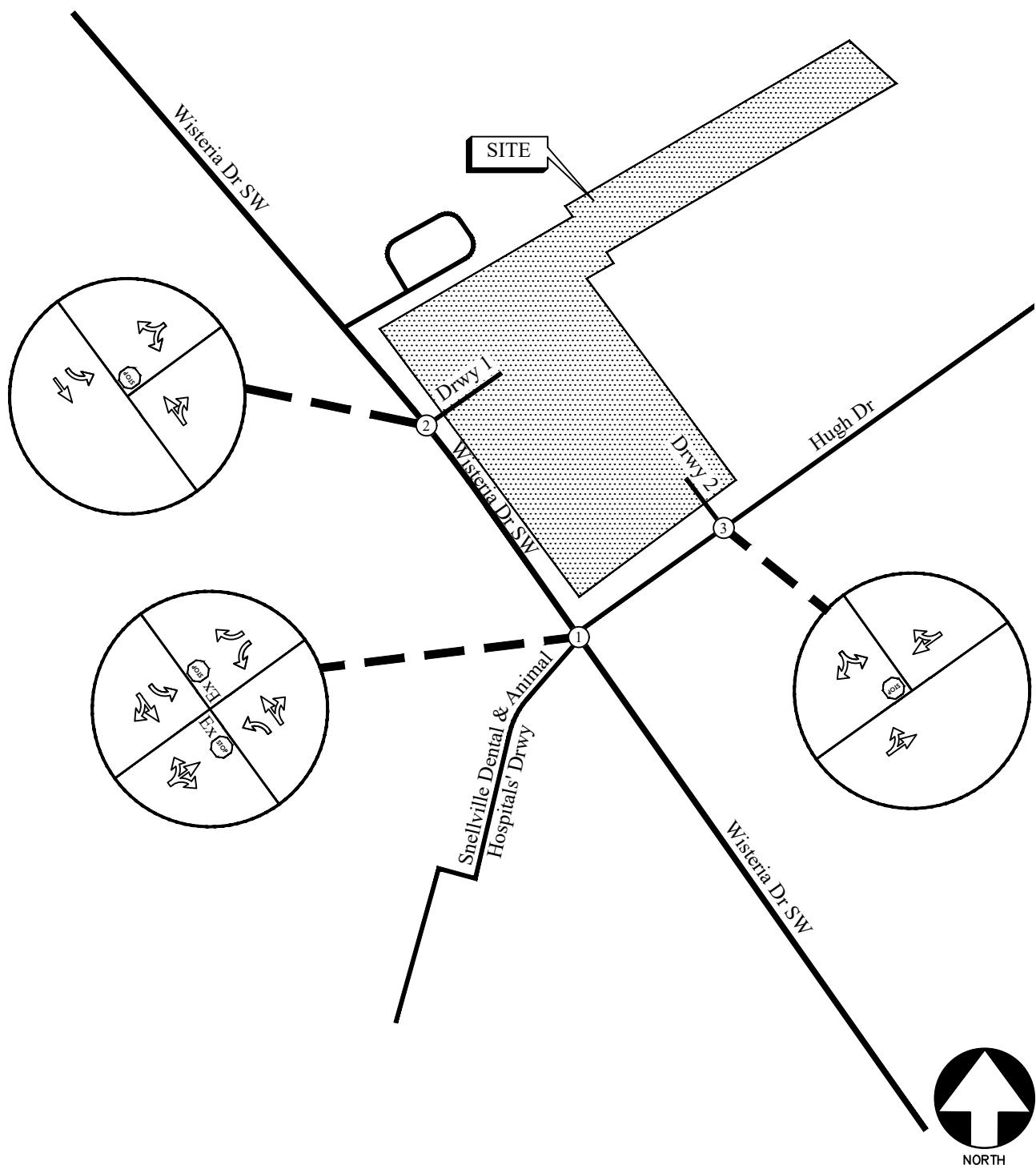
TABLE 5 – FUTURE INTERSECTION OPERATIONS

Intersection		LOS (Delay)			
		NO-BUILD		BUILD	
		AM Peak	PM Peak	AM Peak	PM Peak
1	<u>Wisteria Drive @ Hugh Drive</u>				
	-Eastbound Approach	C (16.8)	C (19.1)	C (17.5)	C (19.5)
	-Westbound Approach	B (14.0)	C (24.6)	C (16.9)	D (29.8)
	-Northbound Left	A (0.0)	A (8.7)	A (0.0)	A (8.6)
2	<u>Wisteria Drive @ Site Driveway 1</u>				
	-Westbound Approach	-	-	B (13.3)	B (14.6)
	-Southbound Left			A (8.6)	A (8.4)
3	<u>Hugh Drive @ Site Driveway 2</u>				
	-Eastbound Left	-	-	A (7.3)	A (7.6)
	-Southbound Approach			A (8.7)	A (9.1)

The results of the future traffic operations analysis show that all the study intersections will operate at a level-of-service “D” or better in both the AM and PM peak hours.

LEGEND

Ex	Existing Signed Approach		Proposed Signed Approach
	Existing Lane Geometry		Proposed Lane Geometry



FUTURE TRAFFIC CONTROL AND LANE GEOMETRY

FIGURE 8
A&R Engineering Inc.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Traffic impacts were evaluated for the proposed 171 units of mid-rise multi-family residential development that will be located at 2380 Wisteria Drive in Snellville, Georgia.

The development proposes access at the following existing driveway locations:

- Site Driveway 1: Full-access driveway on Wisteria Drive
- Site Driveway 2: Full-access driveway on Hugh Drive

Existing and future operations after completion of the project were analyzed at the intersections of:

- Wisteria Drive @ Hugh Drive
- Wisteria Drive @ Site Driveway 1
- Hugh Drive @ Site Driveway 2

The analysis included the evaluation of Future operations for “No-Build” and “Build” conditions, both of which account for increases in annual growth of through traffic.

The results of the future traffic operations analysis show that all the study intersections will operate at a satisfactory level-of-service “D” or better in both the AM and PM peak hours.

7.1 Recommendations for Site Access Configuration

The following access configuration is recommended for the site driveway intersections.

- Site Driveway 1: Full access driveway on Wisteria Drive
 - One entering and one exiting lane (Existing).
 - Stop-sign controlled on the driveway approach with Wisteria Drive remaining free flow.
 - Provide/confirm adequate sight distance per AASHTO standards.
- Site Driveway 2: Full access driveway on Hugh Drive
 - One entering and one exiting lane (Existing).
 - Stop-sign controlled on the driveway approach with Hugh Drive remaining free flow.
 - Provide/confirm adequate sight distance per AASHTO standards.

Appendix

Existing Intersection Traffic Counts
Linear Regression of Daily Traffic.....
Existing Intersection Analysis.....
Future “No-Build” Intersection Analysis
Future “Build” Intersection Analysis
Traffic Volume Worksheets

EXISTING INTERSECTION TRAFFIC COUNTS

National Data & Surveying Services
Intersection Turning Movement Count

Location: Wisteria Dr SW & Hugh Dr/Snellville Greenway
City: Snellville
Control: 1-Way Stop(WB)

Project ID: 24-180061-001
Date: 3/26/2024

Data - Total

NS/EW Streets:		Wisteria Dr SW				Wisteria Dr SW				Hugh Dr/Snellville Greenway				Hugh Dr/Snellville Greenway			
AM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1 NL	1 NT	0 NR	0 NU	1 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	1 WL	0 WT	1 WR	0 WU	TOTAL
7:00 AM	0	99	3	0	2	41	1	0	0	0	0	0	0	0	5	0	151
7:15 AM	1	116	0	0	6	51	3	0	1	0	1	0	1	0	4	0	184
7:30 AM	0	121	6	0	5	64	0	0	0	0	0	0	3	0	3	0	202
7:45 AM	0	125	7	0	14	47	4	0	1	0	0	0	2	0	10	0	210
8:00 AM	0	127	5	0	7	57	2	0	1	0	0	0	2	0	3	0	204
8:15 AM	0	110	10	0	11	54	0	0	0	1	1	0	2	0	6	0	195
8:30 AM	0	118	10	0	17	54	0	0	1	0	1	0	4	0	13	0	218
8:45 AM	0	125	6	0	15	59	4	0	1	0	0	0	3	0	9	0	222
TOTAL VOLUMES : APPROACH %'s :	NL 1 0.10%	NT 941 95.15%	NR 47 4.75%	NU 0 0.00%	SL 77 14.86%	ST 427 82.43%	SR 14 2.70%	SU 0 0.00%	EL 5 55.56%	ET 1 11.11%	ER 3 33.33%	EU 0 0.00%	WL 17 24.29%	WT 0 0.00%	WR 53 75.71%	WU 0 0.00%	TOTAL 1586
PEAK HR HR:	08:00 AM - 09:00 AM																TOTAL 839
PEAK HR VOL :	0 0.000	480 0.945	31 0.775	0 0.000	50 0.735	224 0.949	6 0.375	0 0.000	3 0.750	1 0.250	2 0.500	0 0.000	11 0.688	0 0.000	31 0.596	0 0.000	0.945
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
PM	1 NL	1 NT	0 NR	0 NU	1 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	1 WL	0 WT	1 WR	0 WU	TOTAL
	1 86	13 11	0 0	0 0	24 21	123 127	0 0	0 0	1 0	0 1	3 0	0 0	15 10	1 0	16 26	0 0	283 300
4:00 PM	1 103	11 3	0 0	0 0	20 17	134 153	0 4	0 0	1 0	1 0	1 4	0 0	13 14	0 2	25 19	0 0	267 319
4:15 PM	0 69	9 9	0 0	0 0	20 17	134 153	0 4	0 0	1 0	1 0	1 4	0 0	13 14	0 2	25 19	0 0	267 319
4:30 PM	1 96	9 7	0 0	0 0	20 17	127 147	2 1	0 0	1 0	0 0	2 3	0 0	11 8	5 1	21 18	0 0	270 258
4:45 PM	1 91	4 7	0 0	0 0	20 15	119 147	1 0	0 0	1 0	0 0	0 0	0 0	15 10	0 0	20 12	0 0	302 253
5:00 PM	1 97	7 2	0 0	0 0	20 11	127 122	2 0	0 0	1 0	0 3	0 0	0 0	11 10	5 0	21 12	0 0	270 253
TOTAL VOLUMES : APPROACH %'s :	NL 5 0.65%	NT 705 91.80%	NR 58 7.55%	NU 0 0.00%	SL 139 11.59%	ST 1052 87.74%	SR 8 0.67%	SU 0 0.00%	EL 5 21.74%	ET 2 8.70%	ER 16 69.57%	EU 0 0.00%	WL 96 36.64%	WT 9 3.44%	WR 157 59.92%	WU 0 0.00%	TOTAL 2252
PEAK HR HR:	04:00 PM - 05:00 PM																TOTAL 1169
PEAK HR VOL :	3 0.750	354 0.859	36 0.692	0 0.000	82 0.854	537 0.877	4 0.250	0 0.000	2 0.500	2 0.500	8 0.500	0 0.000	52 0.867	3 0.375	86 0.827	0 0.000	0.916
PEAK HR FACTOR :																	

National Data & Surveying Services
Intersection Turning Movement Count

Location: Wisteria Dr SW & Hugh Dr/Snellville Greenway
City: Snellville
Control: 1-Way Stop(WB)

Project ID: 24-180061-001
Date: 3/26/2024

Data - Cars

NS/EW Streets:		Wisteria Dr SW				Wisteria Dr SW				Hugh Dr/Snellville Greenway				Hugh Dr/Snellville Greenway			
AM		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND			
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
7:00 AM	0	96	3	0	2	39	1	0	0	0	0	0	0	0	5	0	146
7:15 AM	1	115	0	0	6	48	3	0	1	0	1	0	1	0	4	0	180
7:30 AM	0	120	6	0	5	63	0	0	0	0	0	0	3	0	3	0	200
7:45 AM	0	124	7	0	14	46	3	0	1	0	0	0	2	0	10	0	207
8:00 AM	0	123	5	0	7	56	2	0	1	0	0	0	2	0	3	0	199
8:15 AM	0	110	10	0	10	50	0	0	0	1	1	0	2	0	6	0	190
8:30 AM	0	114	10	0	17	53	0	0	1	0	1	0	4	0	13	0	213
8:45 AM	0	123	6	0	15	57	4	0	1	0	0	0	3	0	9	0	218
TOTAL VOLUMES : APPROACH %'s :	NL 1 0.10%	NT 925 95.07%	NR 47 4.83%	NU 0 0.00%	SL 76 15.17%	ST 412 82.24%	SR 13 2.59%	SU 0 0.00%	EL 5 55.56%	ET 1 11.11%	ER 3 33.33%	EU 0 0.00%	WL 17 24.29%	WT 0 0.00%	WR 53 75.71%	WU 0 0.00%	TOTAL 1553
PEAK HR HR:	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	0	470	31	0	49	216	6	0	3	1	2	0	11	0	31	0	820
PEAK HR FACTOR :	0.000	0.955	0.775	0.000	0.721	0.947	0.375	0.000	0.750	0.250	0.500	0.000	0.688	0.000	0.596	0.000	0.940
PM		NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND			
	NL	NT	NR	NU	SL	ST	SR	SU	EL	ET	ER	EU	WL	WT	WR	WU	TOTAL
4:00 PM	1	84	13	0	24	121	0	0	1	0	3	0	15	1	16	0	279
4:15 PM	1	101	10	0	21	126	0	0	0	1	0	0	10	0	26	0	296
4:30 PM	0	69	3	0	20	128	0	0	1	1	1	0	13	0	25	0	261
4:45 PM	1	94	9	0	16	144	4	0	0	0	4	0	14	2	18	0	306
5:00 PM	1	68	9	0	20	123	2	0	1	0	2	0	10	5	21	0	262
5:15 PM	1	91	4	0	11	117	1	0	1	0	3	0	8	1	18	0	256
5:30 PM	0	96	7	0	15	145	1	0	0	0	0	0	15	0	20	0	299
5:45 PM	0	92	2	0	11	120	0	0	1	0	3	0	10	0	12	0	251
TOTAL VOLUMES : APPROACH %'s :	NL 5 0.66%	NT 695 91.81%	NR 57 7.53%	NU 0 0.00%	SL 138 11.79%	ST 1024 87.52%	SR 8 0.68%	SU 0 0.00%	EL 5 21.74%	ET 2 8.70%	ER 16 69.57%	EU 0 0.00%	WL 95 36.54%	WT 9 3.46%	WR 156 60.00%	WU 0 0.00%	TOTAL 2210
PEAK HR HR:	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	3	348	35	0	81	519	4	0	2	2	8	0	52	3	85	0	1142
PEAK HR FACTOR :	0.750	0.861	0.673	0.000	0.844	0.901	0.250	0.000	0.500	0.500	0.500	0.000	0.867	0.375	0.817	0.000	0.933

National Data & Surveying Services
Intersection Turning Movement Count

Location: Wisteria Dr SW & Hugh Dr/Snellville Greenway
City: Snellville
Control: 1-Way Stop(WB)

Project ID: 24-180061-001
Date: 3/26/2024

Data - HT

NS/EW Streets:	Wisteria Dr SW				Wisteria Dr SW				Hugh Dr/Snellville Greenway				Hugh Dr/Snellville Greenway				
	NORTHBOUND		SOUTHBOUND		EASTBOUND		WESTBOUND										
AM	1 NL	1 NT	0 NR	0 NU	1 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	1 WL	0 WT	1 WR	0 WU	TOTAL
7:00 AM	0	3	0	0	0	2	0	0	0	0	0	0	0	0	0	5	
7:15 AM	0	1	0	0	0	3	0	0	0	0	0	0	0	0	0	4	
7:30 AM	0	1	0	0	0	1	0	0	0	0	0	0	0	0	0	2	
7:45 AM	0	1	0	0	0	1	1	0	0	0	0	0	0	0	0	3	
8:00 AM	0	4	0	0	0	1	0	0	0	0	0	0	0	0	0	5	
8:15 AM	0	0	0	0	1	4	0	0	0	0	0	0	0	0	0	5	
8:30 AM	0	4	0	0	0	0	1	0	0	0	0	0	0	0	0	5	
8:45 AM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	4	
TOTAL VOLUMES : APPROACH %'s :	NL 0.00%	NT 100.00%	NR 0.00%	NU 0.00%	SL 1 5.88%	ST 15 88.24%	SR 1 5.88%	SU 0 0.00%	EL 0	ET 0	ER 0	EU 0	WL 0	WT 0	WR 0	WU 0	TOTAL 33
PEAK HR :	08:00 AM - 09:00 AM																TOTAL
PEAK HR VOL :	0	10	0	0	1	8	0	0	0	0	0	0	0	0	0	0	19
PEAK HR FACTOR :	0.000	0.625	0.000	0.000	0.250	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.950	
PM	NORTHBOUND				SOUTHBOUND				EASTBOUND				WESTBOUND				
	1 NL	1 NT	0 NR	0 NU	1 SL	1 ST	0 SR	0 SU	0 EL	1 ET	0 ER	0 EU	1 WL	0 WT	1 WR	0 WU	TOTAL
4:00 PM	0	2	0	0	0	2	0	0	0	0	0	0	0	0	0	0	4
4:15 PM	0	2	1	0	0	1	0	0	0	0	0	0	0	0	0	0	4
4:30 PM	0	0	0	0	0	6	0	0	0	0	0	0	0	0	0	6	
4:45 PM	0	2	0	0	1	9	0	0	0	0	0	0	0	0	1	0	13
5:00 PM	0	3	0	0	0	4	0	0	0	0	0	0	1	0	0	0	8
5:15 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
5:30 PM	0	1	0	0	0	2	0	0	0	0	0	0	0	0	0	0	3
5:45 PM	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	2
TOTAL VOLUMES : APPROACH %'s :	NL 0.00%	NT 90.91%	NR 1.0%	NU 0.00%	SL 1 3.45%	ST 28 96.55%	SR 0 0.00%	SU 0 0.00%	EL 0	ET 0	ER 0	EU 0	WL 1 50.00%	WT 0 0.00%	WR 1 50.00%	WU 0 0.00%	TOTAL 42
PEAK HR :	04:00 PM - 05:00 PM																TOTAL
PEAK HR VOL :	0	6	1	0	1	18	0	0	0	0	0	0	0	0	1	0	27
PEAK HR FACTOR :	0.000	0.750	0.250	0.000	0.250	0.500	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.250	0.000	0.519

National Data & Surveying Services
Intersection Turning Movement Count

Location: Wisteria Dr SW & Hugh Dr/Snellville Greenway
City: Snellville
Control: 1-Way Stop(WB)

Project ID: 24-180061-001
Date: 3/26/2024

Data - Bikes

National Data & Surveying Services

Intersection Turning Movement Count

Location: Wisteria Dr SW & Hugh Dr/Snellville Greenway
City: Snellville

Project ID: 24-180061-001
Date: 3/26/2024

Data - Pedestrians (Crosswalks)

NS/EW Streets:	Wisteria Dr SW		Wisteria Dr SW		Hugh Dr/Snellville Greenway		Hugh Dr/Snellville Greenway		TOTAL
	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		
	EB	WB	EB	WB	NB	SB	NB	SB	
7:00 AM	0	0	0	0	0	0	0	0	0
7:15 AM	0	0	0	0	0	0	0	0	0
7:30 AM	0	0	0	0	0	0	0	0	0
7:45 AM	0	0	0	0	0	0	0	0	0
8:00 AM	0	0	0	0	0	0	0	0	0
8:15 AM	0	0	0	0	0	0	0	0	0
8:30 AM	0	0	0	0	0	0	0	0	0
8:45 AM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES : APPROACH %'s :	EB 0	WB 0	EB 0	WB 0	NB 0	SB 0	NB 0	SB 0	TOTAL 0
PEAK HR :	08:00 AM - 09:00 AM								TOTAL 0
PEAK HR VOL :	0	0							PEAK HR FACTOR :

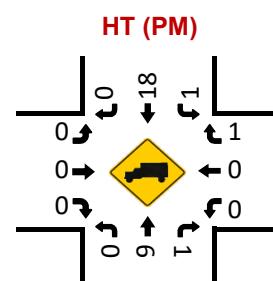
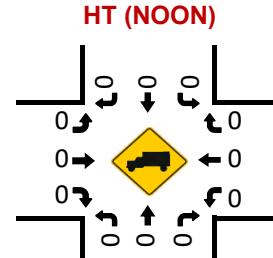
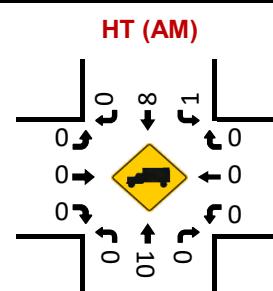
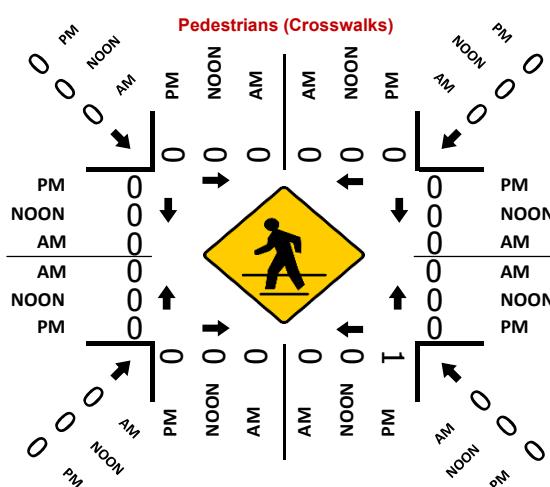
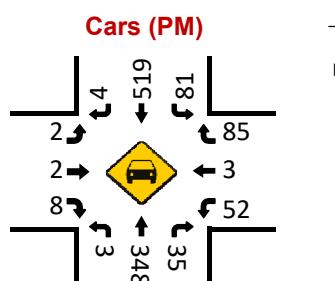
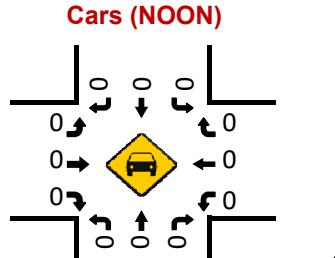
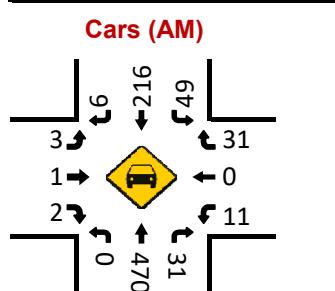
PM	NORTH LEG		SOUTH LEG		EAST LEG		WEST LEG		TOTAL
	EB	WB	EB	WB	NB	SB	NB	SB	
4:00 PM	0	0	0	0	0	0	0	0	0
4:15 PM	0	0	0	0	0	0	0	0	0
4:30 PM	0	0	0	1	0	0	0	0	1
4:45 PM	0	0	0	0	0	0	0	0	0
5:00 PM	0	0	0	0	0	0	0	0	0
5:15 PM	0	0	0	0	0	0	0	0	0
5:30 PM	0	0	0	0	0	0	0	0	0
5:45 PM	0	0	0	0	0	0	0	0	0
TOTAL VOLUMES : APPROACH %'s :	EB 0	WB 0	EB 0	WB 1 0.00% 100.00%	NB 0	SB 0	NB 0	SB 0	TOTAL 1
PEAK HR :	04:00 PM - 05:00 PM								TOTAL 1
PEAK HR VOL :	0	0							PEAK HR FACTOR : 0.250

Wisteria Dr SW & Hugh Dr/Snellville Greenway

Peak Hour Turning Movement Count

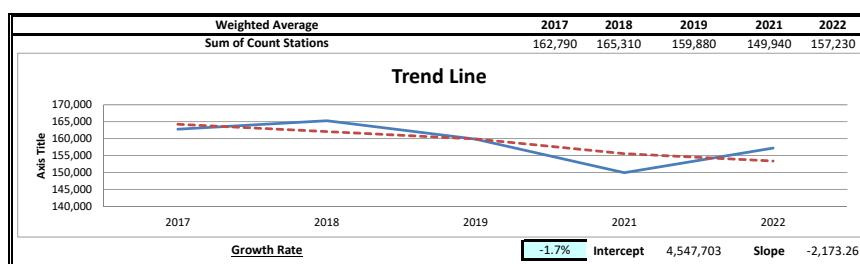
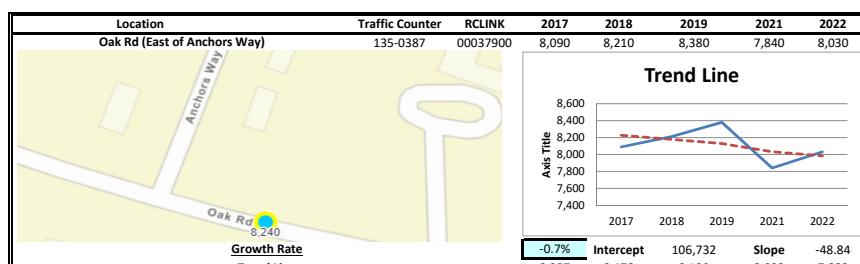
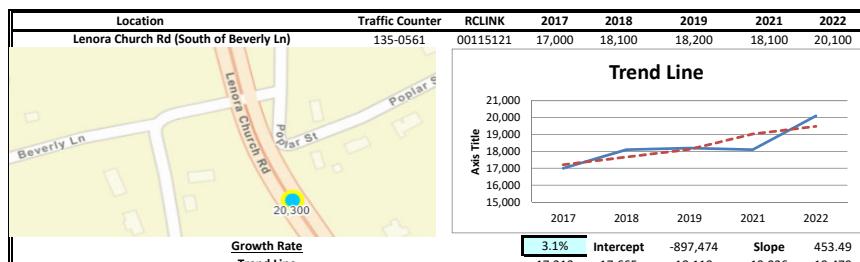
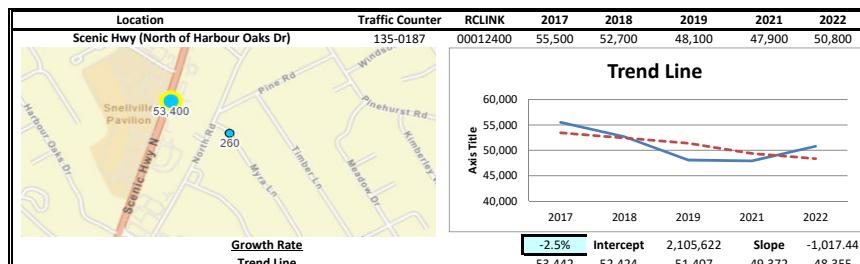
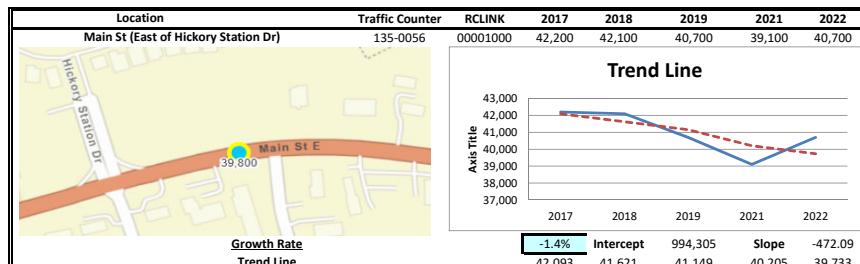
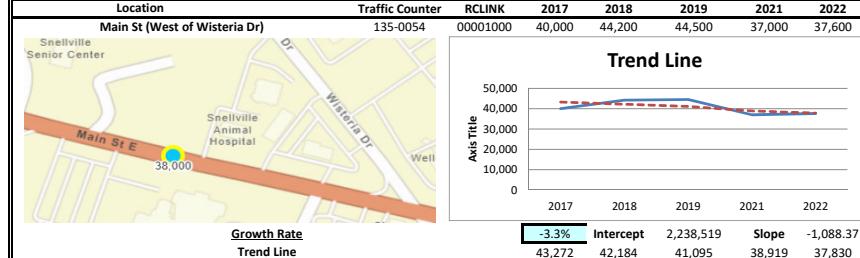
ID: 24-180061-001
City: Snellville

ID: 24-180061-001		Wisteria Dr SW						Day: Tuesday										
City: Snellville		SOUTHBOUND						Date: 3/26/2024										
PEAK HOURS	08:00 AM - 09:00 AM			AM	6	224	50	0	514	AM	COUNT PERIODS							
	NONE			NOON	0	0	0	0	0	NOON								
	04:00 PM - 05:00 PM			PM	4	537	82	0	442	PM								
Hugh Dr/Snellville Greenway	AM NOON PM																	
	6	0	10															
	0	0	0		0													
	3	0	2		0													
	1	0	2		1													
	2	0	8		0													
EASTBOUND	AM	NOON	PM							WESTBOUND								
CONTROL 1-Way Stop(WB) <table border="1"> <tr> <td>TEV</td> <td>839</td> <td>0</td> <td>1169</td> </tr> <tr> <td>PHF</td> <td>AM 0.94</td> <td>NOON</td> <td>PM 0.92</td> </tr> </table>						TEV	839	0	1169	PHF	AM 0.94	NOON	PM 0.92	PM	NOON	AM		Hugh Dr/Snellville Greenway
TEV	839	0	1169															
PHF	AM 0.94	NOON	PM 0.92															



LINEAR REGRESSION OF DAILY TRAFFIC

Location	Growth Rate	R Squared	Station ID	Route	2017	2018	2019	2021	2022
Main St (West of Wisteria Dr)	-3.3%	0.40	135-0054	00001000	40,000	44,200	44,500	37,000	37,600
Main St (East of Hickory Station	-1.4%	0.60	135-0056	00001000	42,200	42,100	40,700	39,100	40,700
Scenic Hwy (North of Harbour C	-2.5%	0.43	135-0187	00012400	55,500	52,700	48,100	47,900	50,800
Lenora Church Rd (South of Bev	3.1%	0.70	135-0561	00115121	17,000	18,100	18,200	18,100	20,100
Oak Rd (East of Anchors Way)	-0.7%	0.25	135-0387	00037900	8,090	8,210	8,380	7,840	8,030
Weighted Average	-1.7%	0.58	Sum of Count Stations =		162,790	165,310	159,880	149,940	157,230



EXISTING INTERSECTION ANALYSIS

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	1	2	11	0	31	0	480	31	50	224	6
Future Vol, veh/h	3	1	2	11	0	31	0	480	31	50	224	6
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	-	-	-	-	-	110	25	-	-	25	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	2	0	2	4	0
Mvmt Flow	3	1	2	12	0	33	0	511	33	53	238	6
Major/Minor												
Minor2		Minor1			Major1			Major2				
Conflicting Flow All	891	891	241	877	878	528	244	0	0	544	0	0
Stage 1	347	347	-	528	528	-	-	-	-	-	-	-
Stage 2	544	544	-	349	350	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.12	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.218	-	-
Pot Cap-1 Maneuver	265	284	803	271	289	554	1334	-	-	1025	-	-
Stage 1	673	638	-	538	531	-	-	-	-	-	-	-
Stage 2	527	522	-	671	636	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	239	269	803	259	274	554	1334	-	-	1025	-	-
Mov Cap-2 Maneuver	239	269	-	259	274	-	-	-	-	-	-	-
Stage 1	673	605	-	538	531	-	-	-	-	-	-	-
Stage 2	496	522	-	634	603	-	-	-	-	-	-	-
Approach												
EB			WB			NB			SB			
HCM Control Delay, s	16.5		13.9			0			1.6			
HCM LOS	C		B									
Minor Lane/Major Mvmt		NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1334		-	-	320	259	554	1025	-	-		
HCM Lane V/C Ratio	-		-	-	0.02	0.045	0.06	0.052	-	-		
HCM Control Delay (s)	0		-	-	16.5	19.6	11.9	8.7	-	-		
HCM Lane LOS	A		-	-	C	C	B	A	-	-		
HCM 95th %tile Q(veh)	0		-	-	0.1	0.1	0.2	0.2	-	-		

Intersection												
Int Delay, s/veh	3.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔			↔	↑	↑	↑	↑		↑	↑	
Traffic Vol, veh/h	2	2	8	52	3	86	3	354	36	82	537	4
Future Vol, veh/h	2	2	8	52	3	86	3	354	36	82	537	4
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	-	-	-	-	-	110	25	-	-	25	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	1	0	2	3	1	3	0
Mvmt Flow	2	2	9	57	3	93	3	385	39	89	584	4
Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	1223	1194	586	1181	1177	405	588	0	0	424	0	0
Stage 1	764	764	-	411	411	-	-	-	-	-	-	-
Stage 2	459	430	-	770	766	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.21	4.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.309	2.2	-	-	2.209	-	-
Pot Cap-1 Maneuver	158	188	514	168	193	648	997	-	-	1141	-	-
Stage 1	399	416	-	622	598	-	-	-	-	-	-	-
Stage 2	586	587	-	396	415	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	125	173	514	154	177	648	997	-	-	1141	-	-
Mov Cap-2 Maneuver	125	173	-	154	177	-	-	-	-	-	-	-
Stage 1	398	384	-	620	596	-	-	-	-	-	-	-
Stage 2	497	585	-	357	383	-	-	-	-	-	-	-
Approach	EB			WB			NB		SB			
HCM Control Delay, s	18.6			23.4			0.1		1.1			
HCM LOS	C			C								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR			
Capacity (veh/h)	997	-	-	278	155	648	1141	-	-			
HCM Lane V/C Ratio	0.003	-	-	0.047	0.386	0.144	0.078	-	-			
HCM Control Delay (s)	8.6	-	-	18.6	42.1	11.5	8.4	-	-			
HCM Lane LOS	A	-	-	C	E	B	A	-	-			
HCM 95th %tile Q(veh)	0	-	-	0.1	1.7	0.5	0.3	-	-			

**FUTURE “NO-BUILD” INTERSECTION
ANALYSIS**

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	3	1	2	11	0	32	0	490	32	51	228	6
Future Vol, veh/h	3	1	2	11	0	32	0	490	32	51	228	6
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	-	-	-	-	-	110	25	-	-	25	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	2	0	2	4	0
Mvmt Flow	3	1	2	12	0	34	0	521	34	54	243	6
Major/Minor												
Minor2		Minor1			Major1			Major2				
Conflicting Flow All	909	909	246	894	895	538	249	0	0	555	0	0
Stage 1	354	354	-	538	538	-	-	-	-	-	-	-
Stage 2	555	555	-	356	357	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.12	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.218	-	-
Pot Cap-1 Maneuver	258	277	798	264	282	547	1328	-	-	1015	-	-
Stage 1	667	634	-	531	526	-	-	-	-	-	-	-
Stage 2	520	516	-	666	632	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	232	262	798	252	267	547	1328	-	-	1015	-	-
Mov Cap-2 Maneuver	232	262	-	252	267	-	-	-	-	-	-	-
Stage 1	667	600	-	531	526	-	-	-	-	-	-	-
Stage 2	488	516	-	628	599	-	-	-	-	-	-	-
Approach												
EB			WB			NB			SB			
HCM Control Delay, s	16.8		14			0			1.6			
HCM LOS	C		B									
Minor Lane/Major Mvmt		NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1328		-	-	312	252	547	1015	-	-		
HCM Lane V/C Ratio	-		-	-	0.02	0.046	0.062	0.053	-	-		
HCM Control Delay (s)	0		-	-	16.8	20	12	8.7	-	-		
HCM Lane LOS	A		-	-	C	C	B	A	-	-		
HCM 95th %tile Q(veh)	0		-	-	0.1	0.1	0.2	0.2	-	-		

Intersection												
Int Delay, s/veh	3.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔			↔	↑	↑	↑	↑		↑	↑	
Traffic Vol, veh/h	2	2	8	53	3	88	3	361	37	84	548	4
Future Vol, veh/h	2	2	8	53	3	88	3	361	37	84	548	4
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	-	-	-	-	-	110	25	-	-	25	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	92	92	92	92	92	92	92	92	92	92	92	92
Heavy Vehicles, %	0	0	0	0	0	1	0	2	3	1	3	0
Mvmt Flow	2	2	9	58	3	96	3	392	40	91	596	4
Major/Minor	Minor2	Minor1			Major1			Major2				
Conflicting Flow All	1248	1218	598	1204	1200	412	600	0	0	432	0	0
Stage 1	780	780	-	418	418	-	-	-	-	-	-	-
Stage 2	468	438	-	786	782	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.21	4.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.309	2.2	-	-	2.209	-	-
Pot Cap-1 Maneuver	152	182	506	162	187	642	987	-	-	1133	-	-
Stage 1	391	409	-	616	594	-	-	-	-	-	-	-
Stage 2	579	582	-	388	408	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	119	167	506	148	171	642	987	-	-	1133	-	-
Mov Cap-2 Maneuver	119	167	-	148	171	-	-	-	-	-	-	-
Stage 1	390	376	-	614	592	-	-	-	-	-	-	-
Stage 2	489	580	-	349	375	-	-	-	-	-	-	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	19.1			24.6			0.1			1.1		
HCM LOS	C			C								
Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR			
Capacity (veh/h)	987	-	-	269	149	642	1133	-	-			
HCM Lane V/C Ratio	0.003	-	-	0.048	0.409	0.149	0.081	-	-			
HCM Control Delay (s)	8.7	-	-	19.1	44.9	11.6	8.5	-	-			
HCM Lane LOS	A	-	-	C	E	B	A	-	-			
HCM 95th %tile Q(veh)	0	-	-	0.2	1.8	0.5	0.3	-	-			

FUTURE “BUILD” INTERSECTION ANALYSIS

Intersection												
Int Delay, s/veh	2.1											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	3	1	2	35	0	42	0	493	39	54	238	6
Future Vol, veh/h	3	1	2	35	0	42	0	493	39	54	238	6
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	-	-	-	-	-	110	25	-	-	25	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	0	0	2	0	2	4	0
Mvmt Flow	3	1	2	37	0	45	0	524	41	57	253	6
Major/Minor												
Minor2		Minor1			Major1			Major2				
Conflicting Flow All	937	935	256	917	918	545	259	0	0	565	0	0
Stage 1	370	370	-	545	545	-	-	-	-	-	-	-
Stage 2	567	565	-	372	373	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.2	4.1	-	-	4.12	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.3	2.2	-	-	2.218	-	-
Pot Cap-1 Maneuver	247	267	788	255	274	542	1317	-	-	1007	-	-
Stage 1	654	624	-	526	522	-	-	-	-	-	-	-
Stage 2	512	511	-	653	622	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	217	252	788	243	258	542	1317	-	-	1007	-	-
Mov Cap-2 Maneuver	217	252	-	243	258	-	-	-	-	-	-	-
Stage 1	654	588	-	526	522	-	-	-	-	-	-	-
Stage 2	470	511	-	613	587	-	-	-	-	-	-	-
Approach												
EB			WB			NB			SB			
HCM Control Delay, s	17.5		16.9			0			1.6			
HCM LOS	C		C									
Minor Lane/Major Mvmt		NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	1317		-	-	295	243	542	1007	-	-		
HCM Lane V/C Ratio	-		-	-	0.022	0.153	0.082	0.057	-	-		
HCM Control Delay (s)	0		-	-	17.5	22.5	12.2	8.8	-	-		
HCM Lane LOS	A		-	-	C	C	B	A	-	-		
HCM 95th %tile Q(veh)	0		-	-	0.1	0.5	0.3	0.2	-	-		

Intersection						
Int Delay, s/veh	0.2					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	B	T	R	U	↑
Traffic Vol, veh/h	10	4	534	3	1	289
Future Vol, veh/h	10	4	534	3	1	289
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	-	-	-	25	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	4
Mvmt Flow	11	4	580	3	1	314
Major/Minor	Minor1	Major1		Major2		
Conflicting Flow All	898	582	0	0	583	0
Stage 1	582	-	-	-	-	-
Stage 2	316	-	-	-	-	-
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	310	513	-	-	991	-
Stage 1	559	-	-	-	-	-
Stage 2	739	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	310	513	-	-	991	-
Mov Cap-2 Maneuver	427	-	-	-	-	-
Stage 1	559	-	-	-	-	-
Stage 2	738	-	-	-	-	-
Approach	WB	NB		SB		
HCM Control Delay, s	13.3	0		0		
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	448	991	-	
HCM Lane V/C Ratio	-	-	0.034	0.001	-	
HCM Control Delay (s)	-	-	13.3	8.6	-	
HCM Lane LOS	-	-	B	A	-	
HCM 95th %tile Q(veh)	-	-	0.1	0	-	

Intersection						
Int Delay, s/veh	2.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	11	84	43	0	0	34
Future Vol, veh/h	11	84	43	0	0	34
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	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	12	91	47	0	0	37
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	47	0	-	0	162	47
Stage 1	-	-	-	-	47	-
Stage 2	-	-	-	-	115	-
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	1560	-	-	-	829	1022
Stage 1	-	-	-	-	975	-
Stage 2	-	-	-	-	910	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1560	-	-	-	822	1022
Mov Cap-2 Maneuver	-	-	-	-	822	-
Stage 1	-	-	-	-	967	-
Stage 2	-	-	-	-	910	-
Approach	EB	WB	SB			
HCM Control Delay, s	0.8	0	8.7			
HCM LOS			A			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1560	-	-	-	1022	
HCM Lane V/C Ratio	0.008	-	-	-	0.036	
HCM Control Delay (s)	7.3	0	-	-	8.7	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0	-	-	-	0.1	

Intersection												
Int Delay, s/veh	4.7											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	2	2	8	66	3	93	3	370	57	93	553	4
Future Vol, veh/h	2	2	8	66	3	93	3	370	57	93	553	4
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	-	-	-	-	-	110	25	-	-	25	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	94	94	94	94	94	94	94	94	94	94	94	94
Heavy Vehicles, %	0	0	0	0	0	1	0	2	3	1	3	0
Mvmt Flow	2	2	9	70	3	99	3	394	61	99	588	4
Major/Minor												
Minor2		Minor1			Major1			Major2				
Conflicting Flow All	1270	1249	590	1225	1221	425	592	0	0	455	0	0
Stage 1	788	788	-	431	431	-	-	-	-	-	-	-
Stage 2	482	461	-	794	790	-	-	-	-	-	-	-
Critical Hdwy	7.1	6.5	6.2	7.1	6.5	6.21	4.1	-	-	4.11	-	-
Critical Hdwy Stg 1	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.1	5.5	-	6.1	5.5	-	-	-	-	-	-	-
Follow-up Hdwy	3.5	4	3.3	3.5	4	3.309	2.2	-	-	2.209	-	-
Pot Cap-1 Maneuver	146	175	511	157	181	631	994	-	-	1111	-	-
Stage 1	387	405	-	607	586	-	-	-	-	-	-	-
Stage 2	569	569	-	384	404	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	113	159	511	142	164	631	994	-	-	1111	-	-
Mov Cap-2 Maneuver	113	159	-	142	164	-	-	-	-	-	-	-
Stage 1	386	369	-	605	584	-	-	-	-	-	-	-
Stage 2	476	567	-	342	368	-	-	-	-	-	-	-
Approach												
EB			WB			NB			SB			
HCM Control Delay, s	19.5		29.8			0.1			1.2			
HCM LOS	C		D									
Minor Lane/Major Mvmt		NBL	NBT	NBR	EBLn1	WBLn1	WBLn2	SBL	SBT	SBR		
Capacity (veh/h)	994		-	-	261	143	631	1111	-	-		
HCM Lane V/C Ratio	0.003		-	-	0.049	0.513	0.157	0.089	-	-		
HCM Control Delay (s)	8.6		-	-	19.5	54.1	11.8	8.6	-	-		
HCM Lane LOS	A		-	-	C	F	B	A	-	-		
HCM 95th %tile Q(veh)	0		-	-	0.2	2.5	0.6	0.3	-	-		

Intersection						
Int Delay, s/veh	0.1					
Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations	W	B	T	R	U	↑
Traffic Vol, veh/h	5	2	456	9	4	644
Future Vol, veh/h	5	2	456	9	4	644
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	-	-	-	25	-
Veh in Median Storage, #	1	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	3
Mvmt Flow	5	2	496	10	4	700
Major/Minor	Minor1	Major1	Major2			
Conflicting Flow All	1209	501	0	0	506	0
Stage 1	501	-	-	-	-	-
Stage 2	708	-	-	-	-	-
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	202	570	-	-	1059	-
Stage 1	609	-	-	-	-	-
Stage 2	488	-	-	-	-	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	201	570	-	-	1059	-
Mov Cap-2 Maneuver	337	-	-	-	-	-
Stage 1	609	-	-	-	-	-
Stage 2	486	-	-	-	-	-
Approach	WB	NB	SB			
HCM Control Delay, s	14.6	0	0.1			
HCM LOS	B					
Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT	
Capacity (veh/h)	-	-	382	1059	-	
HCM Lane V/C Ratio	-	-	0.02	0.004	-	
HCM Control Delay (s)	-	-	14.6	8.4	-	
HCM Lane LOS	-	-	B	A	-	
HCM 95th %tile Q(veh)	-	-	0.1	0	-	

Intersection						
Int Delay, s/veh	1.2					
Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Vol, veh/h	29	122	144	0	0	18
Future Vol, veh/h	29	122	144	0	0	18
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	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	32	133	157	0	0	20
Major/Minor	Major1	Major2	Minor2			
Conflicting Flow All	157	0	-	0	354	157
Stage 1	-	-	-	-	157	-
Stage 2	-	-	-	-	197	-
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	1423	-	-	-	644	889
Stage 1	-	-	-	-	871	-
Stage 2	-	-	-	-	836	-
Platoon blocked, %	-	-	-	-	-	-
Mov Cap-1 Maneuver	1423	-	-	-	629	889
Mov Cap-2 Maneuver	-	-	-	-	629	-
Stage 1	-	-	-	-	850	-
Stage 2	-	-	-	-	836	-
Approach	EB	WB	SB			
HCM Control Delay, s	1.5	0	9.1			
HCM LOS			A			
Minor Lane/Major Mvmt	EBL	EBT	WBT	WBR	SBLn1	
Capacity (veh/h)	1423	-	-	-	889	
HCM Lane V/C Ratio	0.022	-	-	-	0.022	
HCM Control Delay (s)	7.6	0	-	-	9.1	
HCM Lane LOS	A	A	-	-	A	
HCM 95th %tile Q(veh)	0.1	-	-	-	0.1	

TRAFFIC VOLUME WORKSHEETS

24-036 - 2380 Wisteria Drive Residential Development - Snellville, GA
Traffic Volumes

A&R Engineering
April 2024

1. Wisteria Dr @ Hugh Dr

A.M. Peak Hour

Condition	Wisteria Drive				Wisteria Drive				Snellville Dental & Animal Hospitals' Driveway				Hugh Drive			
	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2024 Traffic Counts:	0	480	31	511	50	224	6	280	3	1	2	6	11	0	31	42
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
No-Build 2026 Volumes:	0	490	32	522	51	228	6	285	3	1	2	6	11	0	32	43
Total New Trips:	0	3	7	10	3	10	0	13	0	0	0	0	24	0	10	34
Future 2026 Traffic Volumes:	0	493	39	532	54	238	6	298	3	1	2	6	35	0	42	77

P.M. Peak Hour

Condition	Wisteria Drive				Wisteria Drive				Snellville Dental & Animal Hospitals' Driveway				Hugh Drive			
	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2024 Traffic Counts:	3	354	36	393	82	537	4	623	2	2	8	12	52	3	86	141
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
No-Build 2026 Volumes:	3	361	37	401	84	548	4	636	2	2	8	12	53	3	88	144
Total New Trips:	0	9	20	29	9	5	0	14	0	0	0	0	13	0	5	18
Future 2026 Traffic Volumes:	3	370	57	430	93	553	4	650	2	2	8	12	66	3	93	162

24-036 - 2380 Wisteria Drive Residential Development - Snellville, GA
Traffic Volumes

A&R Engineering
April 2024

2. Wisteria Dr @ Site Drwy 1

A.M. Peak Hour

Condition	Wisteria Drive				Wisteria Drive				-				Site Driveway 1			
	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2024 Traffic Counts:	0	514	0	514	0	280	0	280	0	0	0	0	0	0	0	0
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
No-Build 2026 Volumes:	0	524	0	524	0	286	0	286	0	0	0	0	0	0	0	0
Total New Trips:	0	10	3	13	1	3	0	4	0	0	0	0	10	0	4	14
Future 2026 Traffic Volumes:	0	534	3	537	1	289	0	290	0	0	0	0	10	0	4	14

P.M. Peak Hour

Condition	Wisteria Drive				Wisteria Drive				-				Site Driveway 1			
	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2024 Traffic Counts:	0	442	0	442	0	623	0	623	0	0	0	0	0	0	0	0
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
No-Build 2026 Volumes:	0	451	0	451	0	635	0	635	0	0	0	0	0	0	0	0
Total New Trips:	0	5	9	14	4	9	0	13	0	0	0	0	5	0	2	7
Future 2026 Traffic Volumes:	0	456	9	465	4	644	0	648	0	0	0	0	5	0	2	7

24-036 - 2380 Wisteria Drive Residential Development - Snellville, GA
Traffic Volumes

A&R Engineering
April 2024

3. Hugh Dr @ Site Drwy 2

A.M. Peak Hour

Condition	-				Site Driveway 2				Hugh Drive				Hugh Drive			
	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2024 Traffic Counts:	0	0	0	0	0	0	0	0	0	82	0	82	0	42	0	42
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
No-Build 2026 Volumes:	0	0	0	0	0	0	0	0	0	84	0	84	0	43	0	43
Total New Trips:	0	0	0	0	0	0	34	34	11	0	0	11	0	0	0	0
Future 2026 Traffic Volumes:	0	0	0	0	0	0	34	34	11	84	0	95	0	43	0	43

P.M. Peak Hour

Condition	-				Site Driveway 2				Hugh Drive				Hugh Drive			
	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2024 Traffic Counts:	0	0	0	0	0	0	0	0	0	120	0	120	0	141	0	141
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
No-Build 2026 Volumes:	0	0	0	0	0	0	0	0	0	122	0	122	0	144	0	144
Total New Trips:	0	0	0	0	0	0	18	18	29	0	0	29	0	0	0	0
Future 2026 Traffic Volumes:	0	0	0	0	0	0	18	18	29	122	0	151	0	144	0	144