

**TRAFFIC IMPACT STUDY
FOR
PROPOSED RESIDENTIAL & FITNESS CENTER
DEVELOPMENT ON WINDY HILL ROAD, SMYRNA**

COBB COUNTY, GEORGIA



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1.0 INTRODUCTION

The purpose of this study is to determine the traffic impact that will result from the proposed development consisting of residential housing and gym/aquatic center located on Windy Hill Road and Dixie Avenue in Smyrna, Georgia. The traffic analysis includes evaluation of the current operations and future conditions with the traffic generated by the development. The proposed development will consist of 246-units mid-rise apartment housing and 33,000 sf gym/aquatic center.



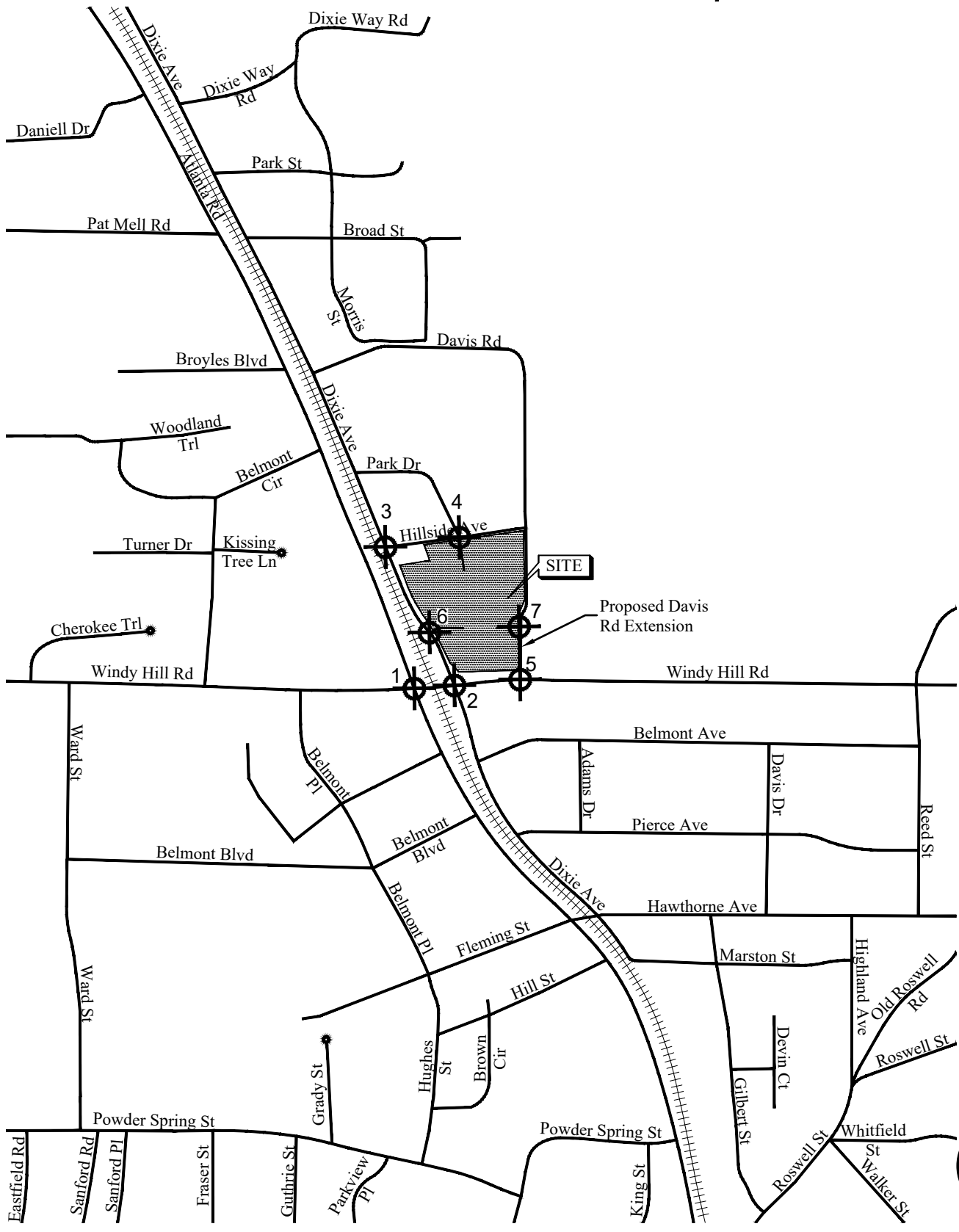
The development proposes to extend Davis Road from its intersection with Hillside Avenue to Windy Hill Road at its existing median break and signalize the Windy Hill Road intersection. The development will have access at the following locations:

- Site Driveway 1: Full-access driveway on Dixie Avenue
- Site Driveway 2: Full-access driveway on Hillside Avenue, aligned with Park Drive
- Site Driveway 3: Full-access driveway on Davis Road extension

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 intersections:

1. Windy Hill Road at Atlanta Road
2. Windy Hill Road at Dixie Avenue
3. Dixie Avenue at Hillside Avenue
4. Hillside Avenue at Park 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.



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 Windy Hill Road

Windy Hill Road is an east-west, four-lane, median-divided roadway with a posted speed limit of 30 mph in the vicinity of the site. Georgia Department of Transportation (GDOT) traffic counts (Station ID's: 067-2112 & 067-2111) indicate that the daily traffic volume on Windy Hill Road in 2023 was 33,900 vehicles per day, west of Parkway Drive and 33,300 vehicles per day, east of Reed Street, respectively. GDOT classifies Windy Hill Road as a minor arterial urban roadway.

2.1.2 Atlanta Road

Atlanta Road is a north-south, four-lane, median-divided roadway to south of Windy Hill Road and two-way left turn lane north of Windy Hill Road and a posted speed limit of 45 mph in the vicinity of the site. Georgia Department of Transportation (GDOT) traffic counts (Station ID: 067-2047) indicate that the daily traffic volume on Atlanta Road in 2023 was 19,000 vehicles per day, north of Powder Springs Street. GDOT classifies Atlanta Road as a minor arterial urban roadway.

2.1.3 Dixie Avenue

Dixie Avenue is a north-south, two-lane, un-divided roadway and posted with a speed limit of 25 mph in the vicinity of the site. Georgia Department of Transportation (GDOT) traffic counts (Station ID: 067-8147) indicate that the daily traffic volume on Dixie Avenue in 2023 was 2,270 vehicles per day, south of Powder Springs Street. GDOT classifies Dixie Avenue as a local urban roadway.

2.1.4 Hillside Avenue

Hillside Avenue is an east-west, two-lane, un-divided roadway and posted with a speed limit of 25 mph in the vicinity of the site.

2.1.5 Park Drive

Park Drive is a north-south, two-lane, un-divided roadway and posted with a speed limit of 25 mph in the vicinity of the site.

2.1.6 Davis Road

Davis Road is a north-south, two-lane, un-divided roadway and posted with a speed limit of 25 mph 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 designated 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 total 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 of 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 intersection.

| TABLE 2 — LEVEL-OF-SERVICE CRITERIA FOR 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.

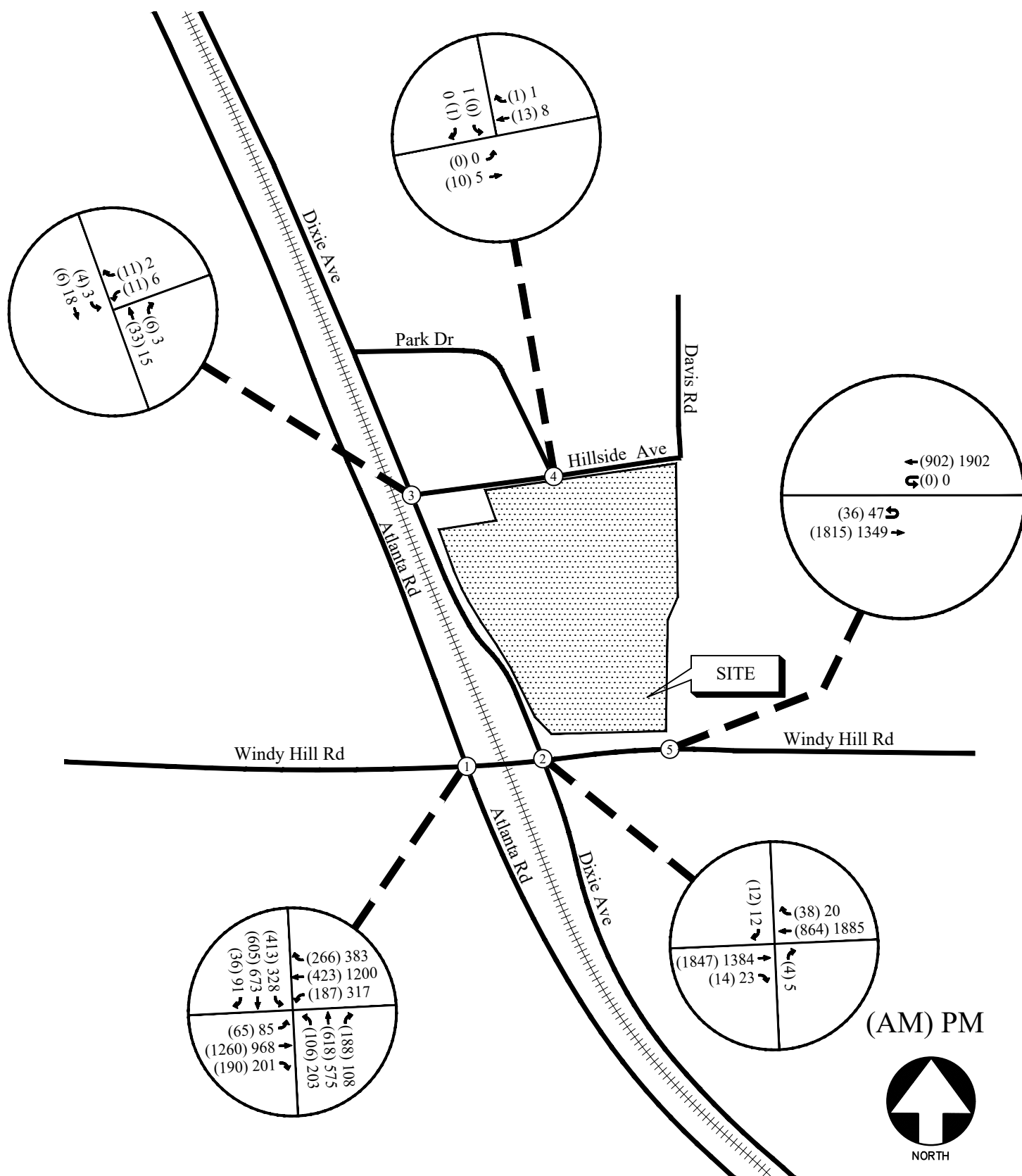
4.0 EXISTING 2024 TRAFFIC ANALYSIS

4.1 Existing Traffic Volumes

Existing traffic counts were obtained at the following study intersections:

1. Windy Hill Road at Atlanta Road
2. Windy Hill Road at Dixie Avenue
3. Dixie Avenue at Hillside Avenue
4. Hillside Avenue at Park Drive




Turning movement counts were collected on Thursday, September 05, 2024, and for the intersection of Hillside Avenue at Park Drive, the counts were collected on Wednesday, September 04, 2024. All turning movement counts were recorded during the AM and PM peak hours between 7:00am to 9:00am and 4:00pm to 6:00pm, respectively. 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. The existing traffic control and lane geometry for the intersections are shown in Figure 3.

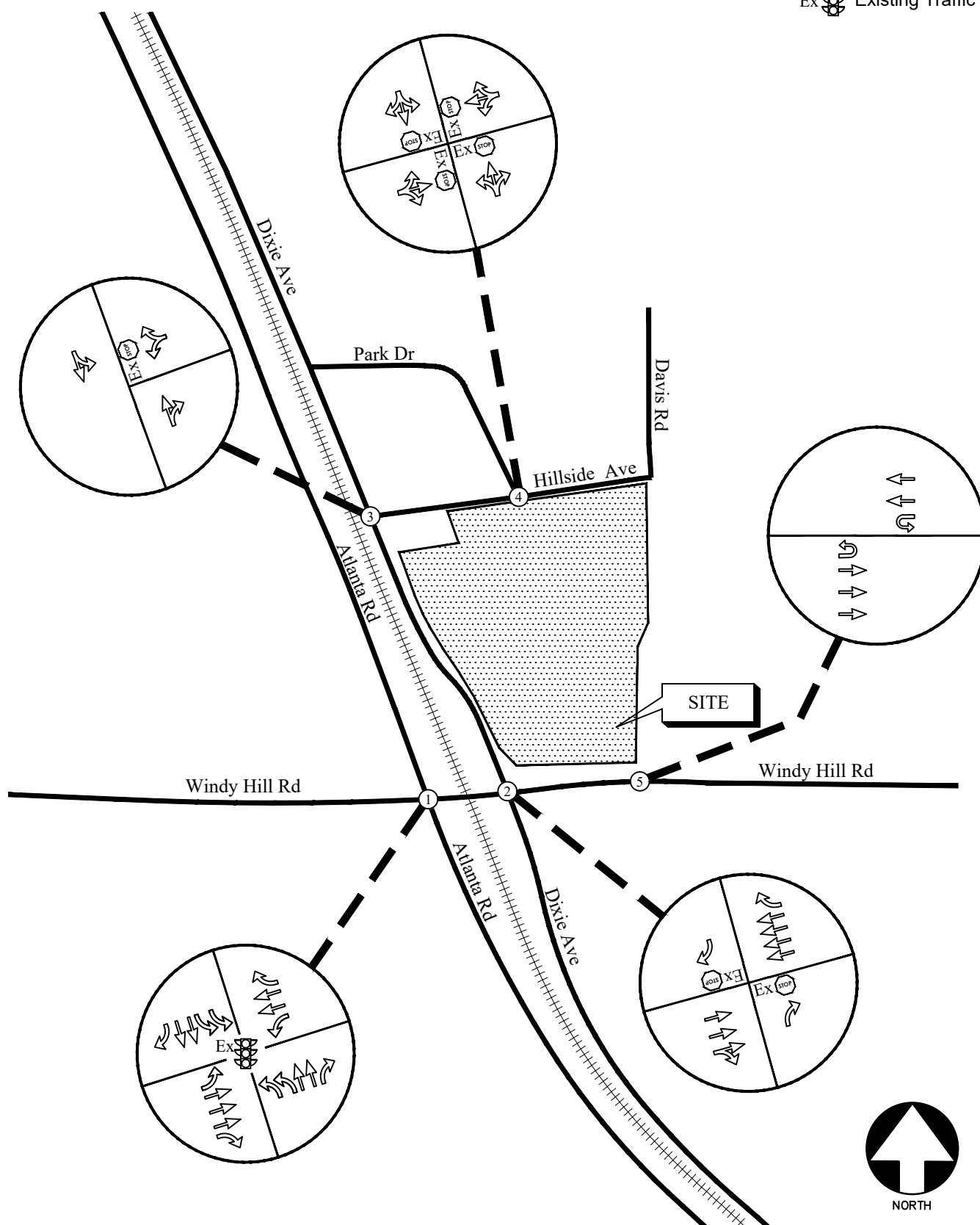


EXISTING WEEKDAY PEAK-HOUR VOLUMES

FIGURE 2
A&R Engineering Inc.

LEGEND

- Ex  Existing Signed Approach
-  Existing Lane Geometry
- Ex  Existing Traffic Signal



EXISTING TRAFFIC CONTROL AND LANE GEOMETRY

FIGURE 3

A&R Engineering Inc.

4.2 Existing 2024 Traffic Operations

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

| TABLE 3 — EXISTING INTERSECTION OPERATIONS | | | | |
|--|---|---------------------------------------|------------------------|------------------------|
| Intersection | | Traffic Control | LOS (Delay) | |
| | | | AM Peak Hour | PM Peak Hour |
| 1 | <u>Windy Hill Road at Atlanta Road</u> | Signalized | <u>D (39.3)</u> | <u>D (40.6)</u> |
| | -Eastbound Approach | | C (32.4) | C (29.9) |
| | -Westbound Approach | | C (27.1) | C (30.2) |
| | -Northbound Approach | | D (49.6) | D (51.6) |
| | -Southbound Approach | | D (50.9) | E (63.8) |
| 2 | <u>Windy Hill Road at Dixie Avenue</u> | Stop Controlled on NB and SB Approach | | |
| | -Northbound Approach | | C (21.7) | C (16.7) |
| 3 | -Southbound Approach | Stop Controlled on WB Approach | B (12.8) | C (23.2) |
| | -Westbound Approach | | A (8.8) | A (8.7) |
| | -Southbound Left | | A (7.3) | A (7.3) |
| 4 | <u>Hillside Avenue at Park Drive</u> | All-Way Stop Controlled | <u>A (7.0)</u> | <u>A (7.0)</u> |
| | -Eastbound Approach | | A (7.0) | A (7.0) |
| | -Westbound Approach | | A (7.0) | A (6.9) |
| | -Southbound Approach | | A (6.4) | A (7.2) |

The results of existing traffic operations analysis indicate that the signalized intersection of Windy Hill Road at Atlanta Road is operating at an overall level of service “D” in both the AM and PM peak hours. The stop-controlled approaches at other un-signalized study intersections are operating at levels-of-service “C” or better in both the AM and PM peak hours.

5.0 PROPOSED DEVELOPMENT

The development will be located on Windy Hill Road and Dixie Avenue in City of Smyrna, GA. The development will consist of 246-units mid-rise apartment housing and 33,000 sf gym/aquatic center.



The development proposes to extend Davis Road from its intersection with Hillside Avenue to Windy Hill Road at its existing median break and signalize the intersection. The development will have access at the following locations:

- Site Driveway 1: Full-access driveway on Dixie Avenue
- Site Driveway 2: Full-access driveway on Hillside Avenue, aligned with Park Drive
- Site Driveway 3: Full-access driveway on Davis Road extension

A site plan is shown in Figure 4.



Worthing Smyrna

Smyrna, Georgia



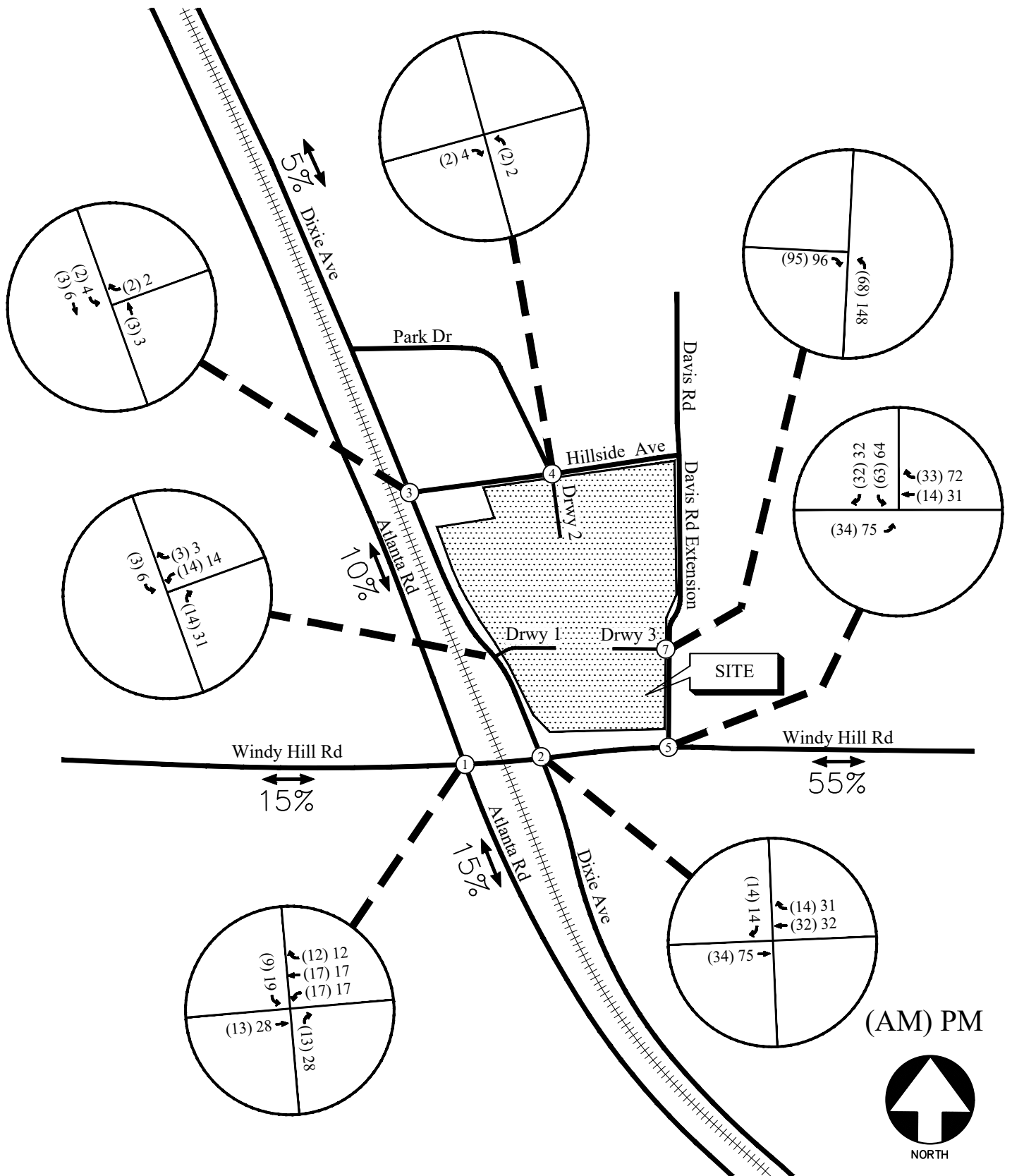
5.1 Trip Generation

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 Uses: 221 – *Multifamily Housing (Mid-Rise)* and 493 - *Athletic Club*. 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) | 246 units | 22 | 75 | 97 | 59 | 37 | 96 | 1,127 |
| ITE 493 - Athletic Club | 33,000 sf | 64 | 40 | 104 | 129 | 79 | 208 | 2,076 |
| New External Trips | | 86 | 115 | 201 | 188 | 116 | 304 | 3,203 |

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 NEW SITE-GENERATED
WEEKDAY PEAK HOUR VOLUMES

FIGURE 5
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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 3) plus increases for annual growth of through traffic.

6.1.1 Annual Traffic Growth

In order 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 (between 2018-2019 & 2021-2023) years revealed growth of approximately 1% in the area was used in the analysis. This growth factor was applied to the existing traffic volumes between collector and arterial roadways in order 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.

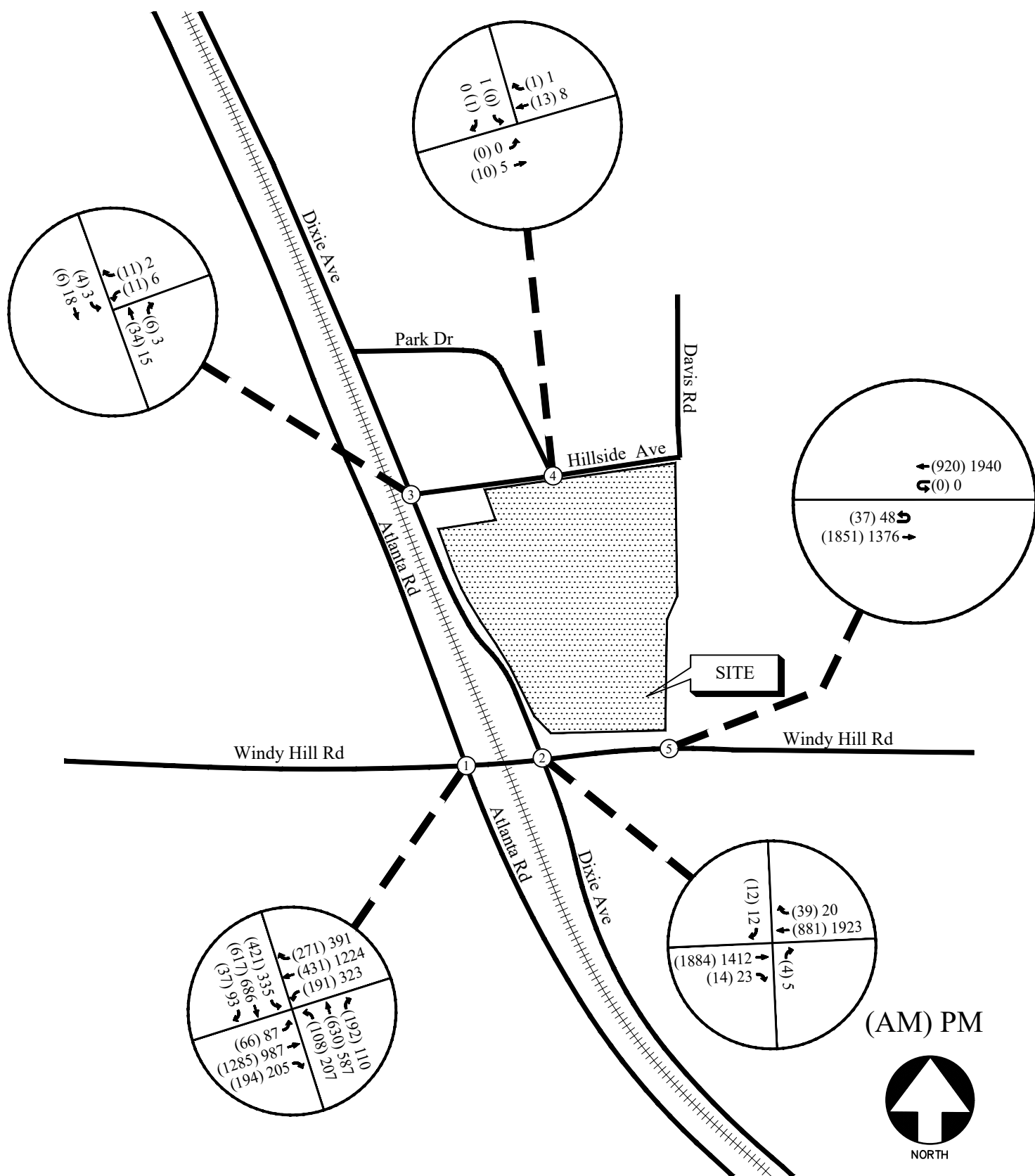
6.1.2 Shifted Trips

The development proposes to extend Davis Road from Hillside Avenue to the existing median opening on Windy Hill Road just east of Atlanta Road. The proposed southbound leg will be a continuation of Davis Road, and the intersection will be signalized by the development. The westbound traffic at the intersection of Hillside Avenue at Park Drive is shifted to the new signalized intersection and assigned 50% to both east and west on Windy Hill Road. The shifted trips are shown in Figure 7.

6.2 Future “Build” Conditions

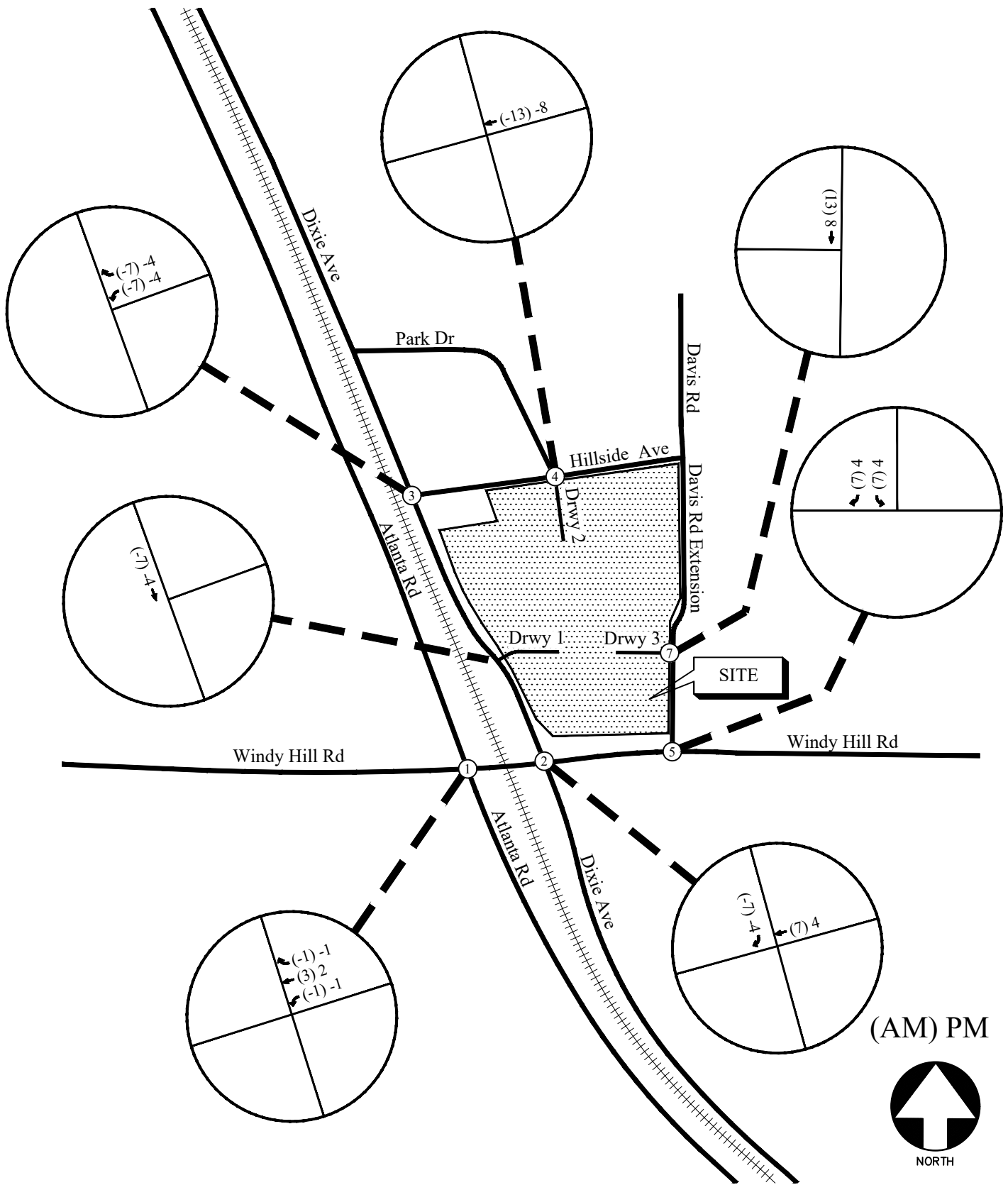
The “Build” or development conditions include the estimated background traffic from the “No-Build” conditions plus the added traffic from the proposed development. In order to evaluate future traffic operations in this area, the additional traffic volumes from the site (Figure 5) and shifted trips (Figure 7) 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 8.

Assuming that the intersection of Davis Road Extension at Windy Hill Road will be signalized in the future “Build” conditions, we have analyzed the intersection with a traffic signal. A detailed signal warrant analysis is prepared and the results of the signal warrant analysis indicate that future traffic volumes at the intersection of Windy Hill Road at Davis Road Extension meet the warrant 3 (using the major street and minor street volumes) and warrants 2 and 3 (using the major street left/U-turn volumes as minor street and the opposing approach major street volumes as major street), for installation of a signal at the study intersection of Windy Hill Road and Davis Road Extension.



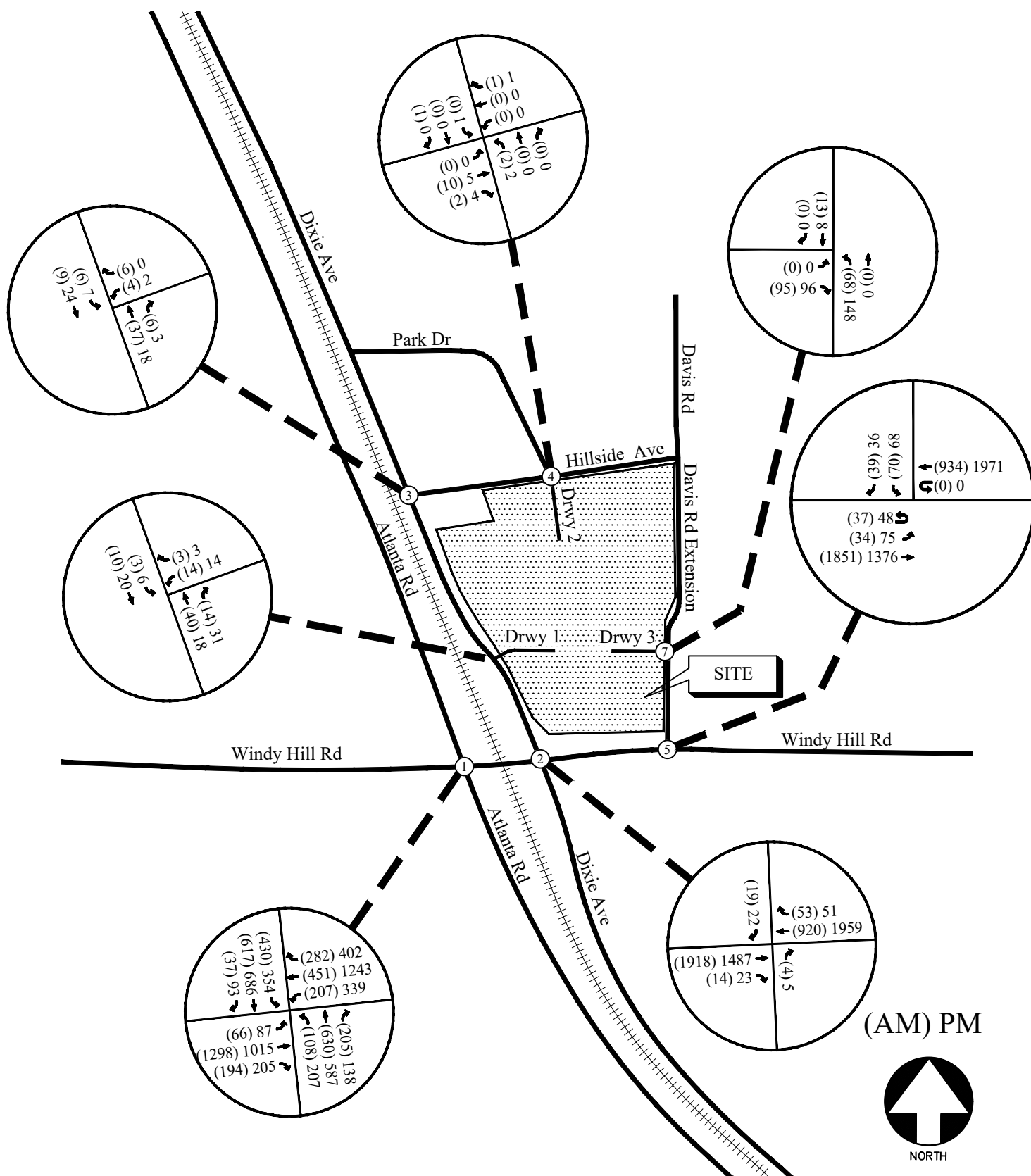
FUTURE (NO-BUILD) WEEKDAY PEAK HOUR VOLUMES

FIGURE 6
A&R Engineering Inc.



SHIFTED TRIPS VOLUMES

FIGURE 7
A&R Engineering Inc.



FUTURE (BUILD) WEEKDAY PEAK HOUR VOLUMES

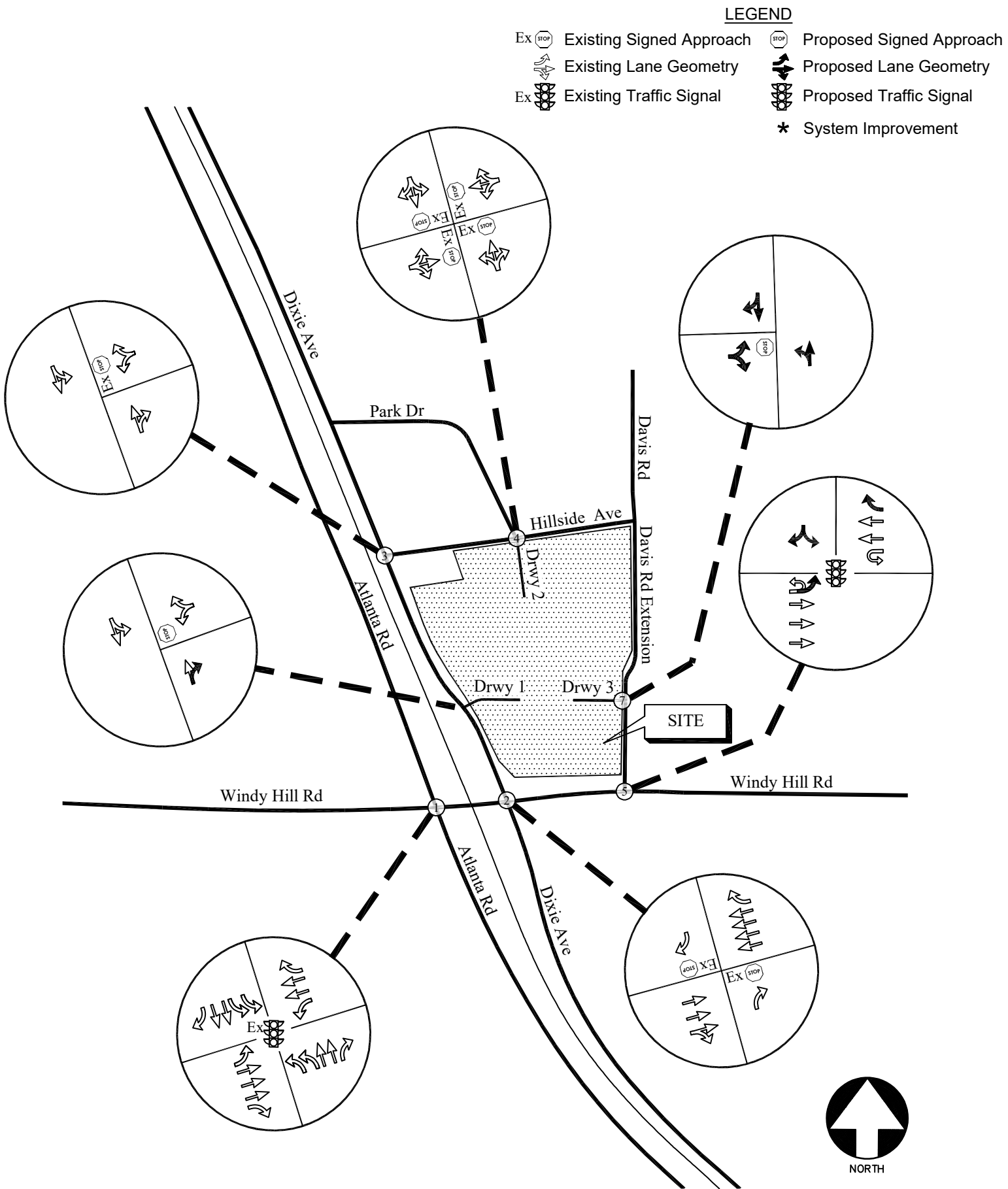
FIGURE 8
A&R Engineering Inc.

6.3 Future Traffic Operations

The future “No-Build” and “Build” traffic operations were analyzed using the volumes in Figure 6 and Figure 8, respectively. We have assumed a traffic signal at the new intersection of Davis Road Extension and Windy Hill Road in our analysis. The results of the future traffic operations analysis are shown below in Table 5. Recommendations on traffic control and lane geometry are shown in Figure 9.

| TABLE 5 — FUTURE INTERSECTION OPERATIONS | | | | | |
|--|--|-------------------------------|------------------------|------------------------|------------------------|
| Intersection | | Future Condition: LOS (Delay) | | | |
| | | NO BUILD | | BUILD | |
| | | AM Peak | PM Peak | AM Peak | PM Peak |
| 1 | <u>Windy Hill Road at Atlanta Road</u> | <u>D (40.1)</u> | <u>D (42.0)</u> | <u>D (41.1)</u> | <u>D (44.0)</u> |
| | -Eastbound Approach | C (33.3) | C (31.3) | C (33.9) | C (32.1) |
| | -Westbound Approach | C (28.1) | C (32.2) | C (30.0) | C (34.3) |
| | -Northbound Approach | D (49.5) | D (52.8) | D (49.5) | D (52.6) |
| | -Southbound Approach | D (52.1) | E (64.3) | D (54.1) | E (70.0) |
| 2 | <u>Windy Hill Road at Dixie Avenue</u> | | | | |
| | -Northbound Approach | C (22.2) | C (16.9) | C (22.7) | C (17.7) |
| | -Southbound Approach | B (12.9) | C (23.8) | B (13.3) | D (25.6) |
| 3 | <u>Dixie Avenue at Hillside Avenue</u> | | | | |
| | -Westbound Approach | A (8.8) | A (8.7) | A (8.7) | A (8.9) |
| | -Southbound Left | A (7.3) | A (7.3) | A (7.3) | A (7.3) |
| 4 | <u>Hillside Avenue at Park Drive/ Site Drwy 2</u> | <u>A (7.0)</u> | <u>A (7.0)</u> | <u>A (6.9)</u> | <u>A (6.8)</u> |
| | -Eastbound Approach | A (7.0) | A (7.0) | A (6.9) | A (6.7) |
| | -Westbound Approach | A (7.0) | A (6.9) | A (6.4) | A (6.4) |
| | -Northbound Approach | - | - | A (7.2) | A (7.2) |
| | -Southbound Approach | A (6.4) | A (7.2) | A (6.4) | A (7.2) |
| 5 | <u>Windy Hill Road at Davis Road Extension</u> | | | <u>A (6.3)</u> | <u>B (10.0)</u> |
| | -Eastbound Approach | - | - | A (3.3) | A (3.5) |
| | -Westbound Approach | - | - | A (5.5) | B (11.9) |
| | -Southbound Approach | - | - | E (64.6) | E (65.2) |
| 6 | <u>Dixie Avenue at Site Drwy 1</u> | | | | |
| | -Westbound Approach | - | - | A (8.8) | A (8.8) |
| | -Southbound Left | - | - | A (7.3) | A (7.3) |
| 7 | <u>Davis Road Extension at Site Drwy 3</u> | | | | |
| | -Eastbound Approach | - | - | A (8.7) | A (8.7) |
| | -Northbound Left | - | - | A (7.4) | A (7.5) |

The results of future “No-Build” and “Build” conditions traffic analysis indicate that the signalized intersection of Windy Hill Road at Atlanta Road will continue to operate at an overall satisfactory level of service “D” in both the AM and PM peak hours. The new signalized intersection of Windy Hill Road at Davis Road Extension will operate at an overall level of service “A” in both AM and PM peak hours. The stop-controlled approaches at other un-signalized study intersections will also be operating at satisfactory levels-of-service “D” or better in both the AM and PM peak hours.



FUTURE TRAFFIC CONTROL AND LANE GEOMETRY

FIGURE 9
A&R Engineering Inc.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Traffic impacts were evaluated for the proposed residential development and gym/aquatic center located on Windy Hill Road and Dixie Avenue in Cobb County, Georgia. The proposed development will consist of 246-units mid-rise apartment housing and 33,000 sf gym/aquatic center.

The development proposes to extend Davis Road from its intersection of Hillside Avenue in the north to Windy Hill Road in the south at its existing median break and proposes to signalize the Windy Hill Road and Davis Road Extension. The development proposes access at the following locations:

- Site Driveway 1: Full-access driveway on Dixie Avenue
- Site Driveway 2: Full-access driveway on Hillside Avenue, aligned with Park Drive
- Site Driveway 3: Full-access driveway on Davis Road extension

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

1. Windy Hill Road at Atlanta Road
2. Windy Hill Road at Dixie Avenue
3. Dixie Avenue at Hillside Avenue
4. Hillside Avenue at Park Drive/ Site Driveway 2
5. Windy Hill Road at Davis Road Extension
6. Dixie Avenue at Site Driveway 1
7. Davis Road Extension at Site Driveway 3

The analysis included the evaluation of future operations for “No-Build” and “Build” conditions, with the differences between “No-Build” and “Build” accounting for an increase in traffic due to the proposed development.

The results of future “No-Build” and “Build” conditions traffic analysis indicate that the signalized intersection of Windy Hill Road at Atlanta Road will continue to operate at an overall satisfactory level of service “D” in both the AM and PM peak hours. The new signalized intersection of Windy Hill Road at Davis Road Extension will operate at an overall level of service “A” in both AM and PM peak hours. The stop-controlled approaches at other un-signalized study intersections will also be operating at satisfactory levels-of-service “D” or better in both the AM and PM peak hours. Based on the analysis, the proposed development will have minimal impact on traffic operations in the study network.

7.1 Recommendation for Site Improvements

The development proposes to extend Davis Road from Hillside Avenue to Windy Hill Road and signalizing the intersection.

- Intersection 5: Windy Hill Road at Davis Road Extension
 - Install a traffic signal with ‘protected-permissive’ phasing for eastbound left-turn movements.
 - Coordinate the signal with the traffic signal at Windy Hill Road and Atlanta Road.
 - Construct a westbound right-turn lane on Windy Hill Road
 - Southbound approach of Davis Road Extension to have a shared left/through lane.

7.2 Recommendations for Site Access Configuration

The following access configuration is recommended for the proposed site driveway intersections:

- Site Driveway 1: Full Access Driveway on Dixie Avenue
 - One entering lane and one exiting lane
 - Stop-sign controlled on the driveway approach with Dixie Avenue remaining free flow
 - Provide/confirm adequate sight distance per AASHTO standards
- Site Driveway 2: Full Access Driveway on Hillside Avenue, aligned with Park Drive
 - One entering lane and one exiting lane
 - Stop-sign controlled on the driveway approach
 - Provide/confirm adequate sight distance per AASHTO standards
- Site Driveway 3: Full Access Driveway on Davis Road Extension
 - One entering lane and one exiting lane
 - Stop-sign controlled on the driveway approach with Davis Road Extension 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

A & R Engineering, Inc.

2160 Kingston Court, Suite 'O'
Marietta, GA 30067

TMC Data
Median Break on Windy Hill Rd East of
Dixie Avenue
7am - 8pm

File Name : 20240348
Site Code : 20240348
Start Date : 09-05-2024
Page No : 1

Groups Printed- Cars, Buses & Trucks

| Start Time | Northbound | | | | Southbound | | | | Windy Hill Road Eastbound | | | | | Windy Hill Road Westbound | | | | Int. Total |
|------------|------------|------|-------|------------|------------|------|-------|------------|---------------------------|------|-------|--------|------------|---------------------------|------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | U-Turn | App. Total | Left | Thru | Right | App. Total | |
| 07:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 343 | 0 | 8 | 351 | 0 | 190 | 0 | 190 | 541 |
| 07:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 429 | 0 | 11 | 440 | 0 | 223 | 0 | 223 | 663 |
| 07:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 454 | 0 | 16 | 470 | 0 | 259 | 0 | 259 | 729 |
| 07:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 392 | 0 | 12 | 404 | 0 | 226 | 0 | 226 | 630 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1618 | 0 | 47 | 1665 | 0 | 898 | 0 | 898 | 2563 |
| 08:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 443 | 0 | 7 | 450 | 0 | 212 | 0 | 212 | 662 |
| 08:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 462 | 0 | 9 | 471 | 0 | 234 | 0 | 234 | 705 |
| 08:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 472 | 0 | 9 | 481 | 0 | 237 | 0 | 237 | 718 |
| 08:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 438 | 0 | 11 | 449 | 0 | 219 | 0 | 219 | 668 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1815 | 0 | 36 | 1851 | 0 | 902 | 0 | 902 | 2753 |
| 09:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 412 | 0 | 8 | 420 | 0 | 207 | 0 | 207 | 627 |
| 09:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 406 | 0 | 4 | 410 | 0 | 213 | 0 | 213 | 623 |
| 09:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 388 | 0 | 9 | 397 | 0 | 206 | 0 | 206 | 603 |
| 09:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 374 | 0 | 7 | 381 | 0 | 198 | 0 | 198 | 579 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1580 | 0 | 28 | 1608 | 0 | 824 | 0 | 824 | 2432 |
| 10:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 367 | 0 | 9 | 376 | 0 | 191 | 0 | 191 | 567 |
| 10:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 341 | 0 | 6 | 347 | 0 | 183 | 0 | 183 | 530 |
| 10:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 349 | 0 | 8 | 357 | 0 | 187 | 0 | 187 | 544 |
| 10:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 340 | 0 | 5 | 345 | 0 | 165 | 0 | 165 | 510 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1397 | 0 | 28 | 1425 | 0 | 726 | 0 | 726 | 2151 |
| 11:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 333 | 0 | 6 | 339 | 0 | 173 | 0 | 173 | 512 |
| 11:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 315 | 0 | 4 | 319 | 0 | 166 | 0 | 166 | 485 |
| 11:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 319 | 0 | 6 | 325 | 0 | 174 | 0 | 174 | 499 |
| 11:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 320 | 0 | 6 | 326 | 0 | 181 | 0 | 181 | 507 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1287 | 0 | 22 | 1309 | 0 | 694 | 0 | 694 | 2003 |
| 12:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 307 | 0 | 8 | 315 | 0 | 189 | 0 | 189 | 504 |
| 12:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 318 | 0 | 7 | 325 | 0 | 193 | 0 | 193 | 518 |
| 12:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 334 | 0 | 7 | 341 | 0 | 195 | 0 | 195 | 536 |
| 12:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 341 | 0 | 5 | 346 | 0 | 205 | 0 | 205 | 551 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1300 | 0 | 27 | 1327 | 0 | 782 | 0 | 782 | 2109 |
| 01:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 327 | 0 | 9 | 336 | 0 | 209 | 0 | 209 | 545 |
| 01:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 319 | 0 | 5 | 324 | 0 | 213 | 0 | 213 | 537 |
| 01:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 307 | 0 | 8 | 315 | 0 | 218 | 0 | 218 | 533 |
| 01:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 297 | 0 | 5 | 302 | 0 | 220 | 0 | 220 | 522 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1250 | 0 | 27 | 1277 | 0 | 860 | 0 | 860 | 2137 |
| 02:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 283 | 0 | 7 | 290 | 0 | 226 | 0 | 226 | 516 |
| 02:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 262 | 0 | 9 | 271 | 0 | 247 | 0 | 247 | 518 |
| 02:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 241 | 0 | 4 | 245 | 0 | 259 | 0 | 259 | 504 |
| 02:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 258 | 0 | 5 | 263 | 0 | 281 | 0 | 281 | 544 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1044 | 0 | 25 | 1069 | 0 | 1013 | 0 | 1013 | 2082 |

A & R Engineering, Inc.

2160 Kingston Court, Suite 'O'
Marietta, GA 30067

TMC Data
Median Break on Windy Hill Rd East of
Dixie Avenue
7am - 8pm

File Name : 20240348
Site Code : 20240348
Start Date : 09-05-2024
Page No : 2

Groups Printed- Cars, Buses & Trucks

| Start Time | Northbound | | | | Southbound | | | | Windy Hill Road Eastbound | | | | | Windy Hill Road Westbound | | | | Int. Total |
|-------------|------------|------|-------|------------|------------|------|-------|------------|---------------------------|-------|-------|--------|------------|---------------------------|-------|-------|------------|------------|
| | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | U-Turn | App. Total | Left | Thru | Right | App. Total | |
| 03:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 254 | 0 | 4 | 258 | 0 | 307 | 0 | 307 | 565 |
| 03:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 266 | 0 | 6 | 272 | 0 | 323 | 0 | 323 | 595 |
| 03:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 271 | 0 | 8 | 279 | 0 | 315 | 0 | 315 | 594 |
| 03:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 278 | 0 | 4 | 282 | 0 | 356 | 0 | 356 | 638 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1069 | 0 | 22 | 1091 | 0 | 1301 | 0 | 1301 | 2392 |
| 04:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 282 | 0 | 6 | 288 | 0 | 392 | 0 | 392 | 680 |
| 04:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 273 | 0 | 9 | 282 | 0 | 389 | 0 | 389 | 671 |
| 04:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 289 | 0 | 5 | 294 | 0 | 410 | 0 | 410 | 704 |
| 04:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 314 | 0 | 8 | 322 | 0 | 445 | 0 | 445 | 767 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1158 | 0 | 28 | 1186 | 0 | 1636 | 0 | 1636 | 2822 |
| 05:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 345 | 0 | 13 | 358 | 0 | 464 | 0 | 464 | 822 |
| 05:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 341 | 0 | 15 | 356 | 0 | 516 | 0 | 516 | 872 |
| 05:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 349 | 0 | 11 | 360 | 0 | 477 | 0 | 477 | 837 |
| 05:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 305 | 0 | 10 | 315 | 0 | 448 | 0 | 448 | 763 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1340 | 0 | 49 | 1389 | 0 | 1905 | 0 | 1905 | 3294 |
| 06:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 299 | 0 | 8 | 307 | 0 | 421 | 0 | 421 | 728 |
| 06:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 285 | 0 | 8 | 293 | 0 | 406 | 0 | 406 | 699 |
| 06:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 273 | 0 | 6 | 279 | 0 | 392 | 0 | 392 | 671 |
| 06:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 260 | 0 | 7 | 267 | 0 | 384 | 0 | 384 | 651 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1117 | 0 | 29 | 1146 | 0 | 1603 | 0 | 1603 | 2749 |
| 07:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 245 | 0 | 8 | 253 | 0 | 339 | 0 | 339 | 592 |
| 07:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 229 | 0 | 7 | 236 | 0 | 314 | 0 | 314 | 550 |
| 07:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 215 | 0 | 6 | 221 | 0 | 296 | 0 | 296 | 517 |
| 07:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 209 | 0 | 8 | 217 | 0 | 269 | 0 | 269 | 486 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 898 | 0 | 29 | 927 | 0 | 1218 | 0 | 1218 | 2145 |
| Grand Total | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16873 | 0 | 397 | 17270 | 0 | 14362 | 0 | 14362 | 31632 |
| Apprch % | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 97.7 | 0 | 2.3 | | 0 | 100 | 0 | | |
| Total % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 53.3 | 0 | 1.3 | 54.6 | 0 | 45.4 | 0 | 45.4 | |

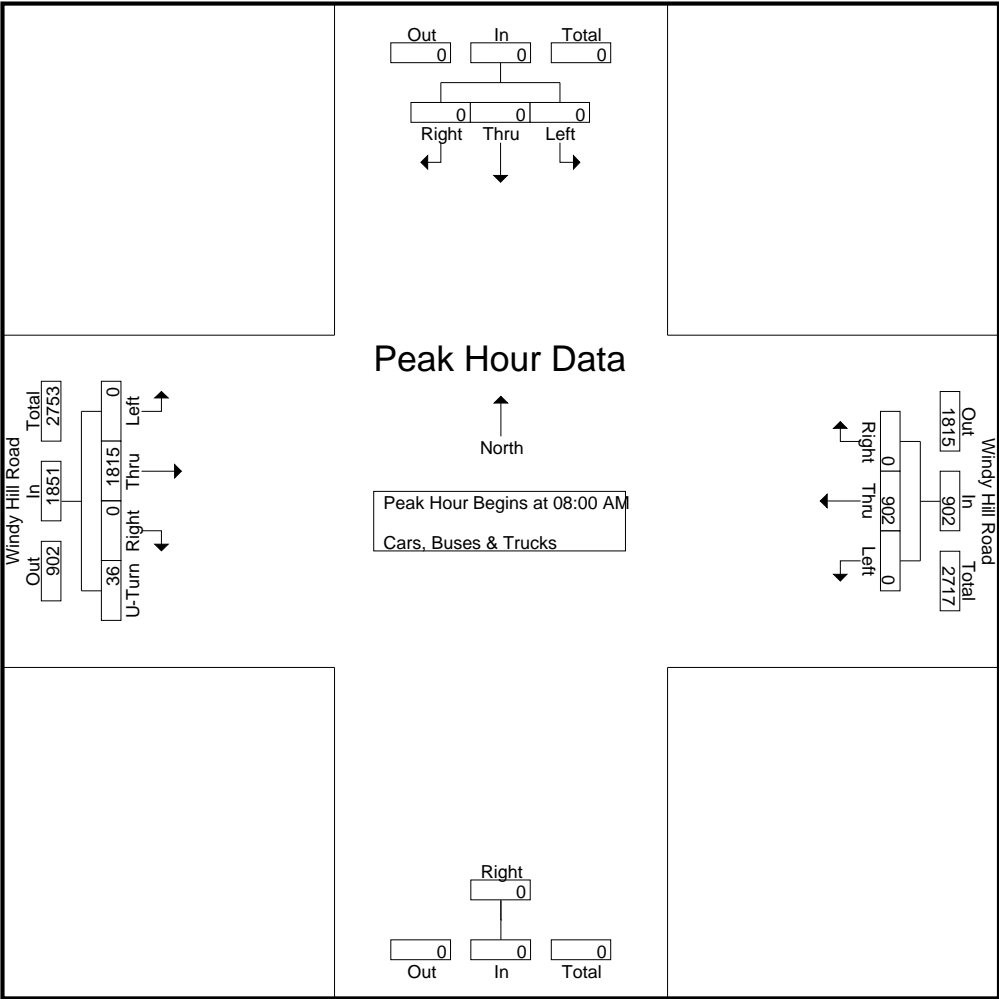
A & R Engineering, Inc.

2160 Kingston Court, Suite 'O'
Marietta, GA 30067

TMC Data
Median Break on Windy Hill Rd East of
Dixie Avenue
7am - 8pm

File Name : 20240348
Site Code : 20240348
Start Date : 09-05-2024
Page No : 3

| | Northbound | | | | Southbound | | | | Windy Hill Road Eastbound | | | | | Windy Hill Road Westbound | | | | |
|--|------------|------|-------|------------|------------|------|-------|------------|---------------------------|------|-------|--------|------------|---------------------------|------|-------|------------|------------|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | U-Turn | 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 08:00 AM | | | | | | | | | | | | | | | | | | |
| 08:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 443 | 0 | 7 | 450 | 0 | 212 | 0 | 212 | 662 |
| 08:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 462 | 0 | 9 | 471 | 0 | 234 | 0 | 234 | 705 |
| 08:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 472 | 0 | 9 | 481 | 0 | 237 | 0 | 237 | 718 |
| 08:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 438 | 0 | 11 | 449 | 0 | 219 | 0 | 219 | 668 |
| Total Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1815 | 0 | 36 | 1851 | 0 | 902 | 0 | 902 | 2753 |
| % App. Total | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 98.1 | 0 | 1.9 | | 0 | 100 | 0 | | |
| PHF | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .961 | .000 | .818 | .962 | .000 | .951 | .000 | .951 | .959 |



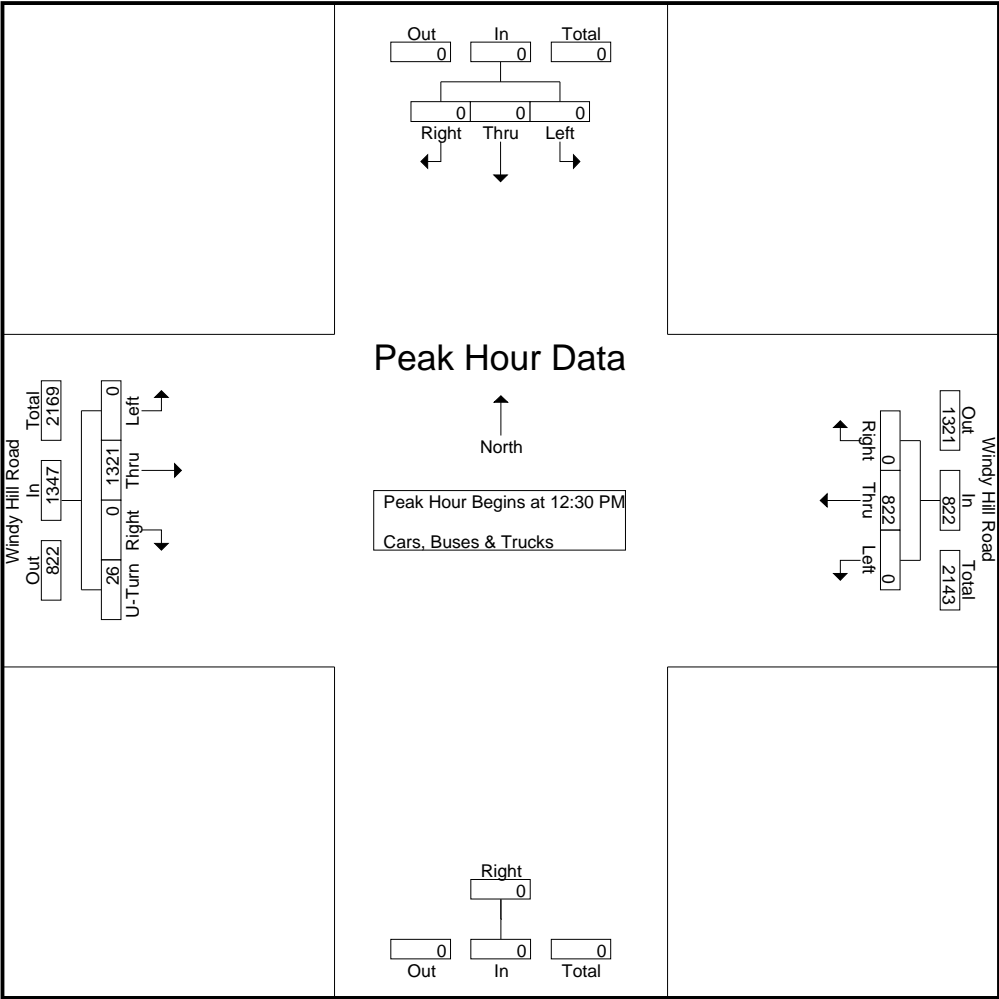
A & R Engineering, Inc.

2160 Kingston Court, Suite 'O'
Marietta, GA 30067

TMC Data
Median Break on Windy Hill Rd East of
Dixie Avenue
7am - 8pm

File Name : 20240348
Site Code : 20240348
Start Date : 09-05-2024
Page No : 4

| | Northbound | | | | Southbound | | | | Windy Hill Road Eastbound | | | | | Windy Hill Road Westbound | | | | |
|--|------------|------|-------|------------|------------|------|-------|------------|---------------------------|------|-------|--------|------------|---------------------------|------|-------|------------|------------|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | U-Turn | App. Total | Left | Thru | Right | App. Total | Int. Total |
| Peak Hour Analysis From 12:00 PM to 01:45 PM - Peak 1 of 1 | | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 12:30 PM | | | | | | | | | | | | | | | | | | |
| 12:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 334 | 0 | 7 | 341 | 0 | 195 | 0 | 195 | 536 |
| 12:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 341 | 0 | 5 | 346 | 0 | 205 | 0 | 205 | 551 |
| 01:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 327 | 0 | 9 | 336 | 0 | 209 | 0 | 209 | 545 |
| 01:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 319 | 0 | 5 | 324 | 0 | 213 | 0 | 213 | 537 |
| Total Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1321 | 0 | 26 | 1347 | 0 | 822 | 0 | 822 | 2169 |
| % App. Total | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 98.1 | 0 | 1.9 | | 0 | 100 | 0 | | |
| PHF | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .968 | .000 | .722 | .973 | .000 | .965 | .000 | .965 | .984 |



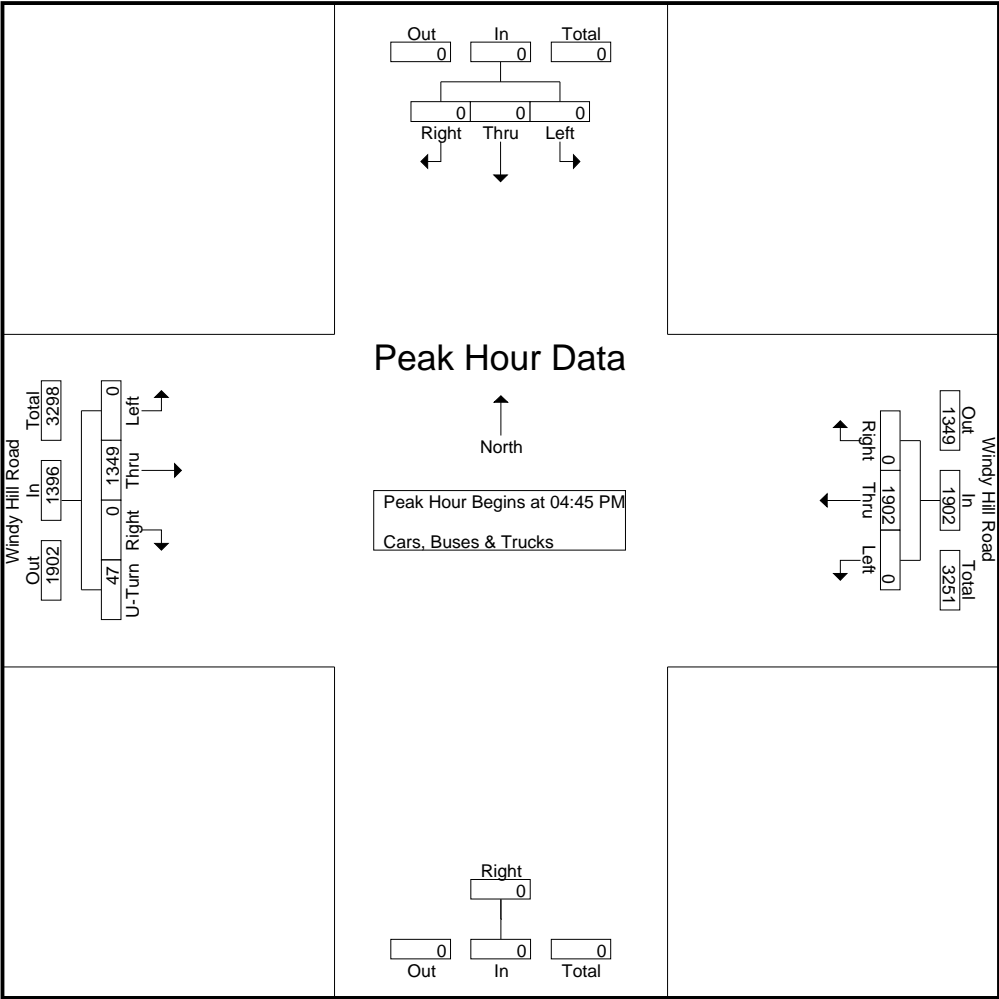
A & R Engineering, Inc.

2160 Kingston Court, Suite 'O'
Marietta, GA 30067

TMC Data
Median Break on Windy Hill Rd East of
Dixie Avenue
7am - 8pm

File Name : 20240348
Site Code : 20240348
Start Date : 09-05-2024
Page No : 5

| | Northbound | | | | Southbound | | | | Windy Hill Road Eastbound | | | | | Windy Hill Road Westbound | | | | |
|--|------------|------|-------|------------|------------|------|-------|------------|---------------------------|------|-------|--------|------------|---------------------------|------|-------|------------|------------|
| Start Time | Left | Thru | Right | App. Total | Left | Thru | Right | App. Total | Left | Thru | Right | U-Turn | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 314 | 0 | 8 | 322 | 0 | 445 | 0 | 445 | 767 |
| 05:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 345 | 0 | 13 | 358 | 0 | 464 | 0 | 464 | 822 |
| 05:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 341 | 0 | 15 | 356 | 0 | 516 | 0 | 516 | 872 |
| 05:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 349 | 0 | 11 | 360 | 0 | 477 | 0 | 477 | 837 |
| Total Volume | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1349 | 0 | 47 | 1396 | 0 | 1902 | 0 | 1902 | 3298 |
| % App. Total | 0 | 0 | 0 | | 0 | 0 | 0 | | 0 | 96.6 | 0 | 3.4 | | 0 | 100 | 0 | | |
| PHF | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .000 | .966 | .000 | .783 | .969 | .000 | .922 | .000 | .922 | .946 |



A & R Engineering, Inc.

2160 Kingston Court Suite 'O'

Marietta, GA 30067

TMC Data

Windy Hill Road @ Dixie Avenue

7-9 am | 4-6 pm

File Name : 20240347

Site Code : 20240347

Start Date : 09-05-2024

Page No : 1

Groups Printed- Cars, Buses & Trucks

| | Dixie Ave Northbound | | | | Dixie Ave Southbound | | | | Windy Hill Road Eastbound | | | | Windy Hill 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 | 0 | 2 | 2 | 0 | 0 | 6 | 6 | 0 | 349 | 2 | 351 | 0 | 182 | 8 | 190 | 549 |
| 07:15 AM | 0 | 0 | 6 | 6 | 0 | 0 | 2 | 2 | 0 | 434 | 3 | 437 | 0 | 214 | 9 | 223 | 668 |
| 07:30 AM | 0 | 0 | 4 | 4 | 0 | 0 | 7 | 7 | 0 | 466 | 1 | 467 | 0 | 249 | 10 | 259 | 737 |
| 07:45 AM | 0 | 0 | 2 | 2 | 0 | 0 | 3 | 3 | 0 | 402 | 5 | 407 | 0 | 215 | 11 | 226 | 638 |
| Total | 0 | 0 | 14 | 14 | 0 | 0 | 18 | 18 | 0 | 1651 | 11 | 1662 | 0 | 860 | 38 | 898 | 2592 |
| 08:00 AM | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 2 | 0 | 449 | 5 | 454 | 0 | 204 | 8 | 212 | 669 |
| 08:15 AM | 0 | 0 | 1 | 1 | 0 | 0 | 3 | 3 | 0 | 470 | 5 | 475 | 0 | 223 | 11 | 234 | 713 |
| 08:30 AM | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 480 | 3 | 483 | 0 | 232 | 5 | 237 | 722 |
| 08:45 AM | 0 | 0 | 1 | 1 | 0 | 0 | 6 | 6 | 0 | 448 | 1 | 449 | 0 | 205 | 14 | 219 | 675 |
| Total | 0 | 0 | 4 | 4 | 0 | 0 | 12 | 12 | 0 | 1847 | 14 | 1861 | 0 | 864 | 38 | 902 | 2779 |
| *** BREAK *** | | | | | | | | | | | | | | | | | |
| 04:00 PM | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 2 | 0 | 287 | 0 | 287 | 0 | 387 | 5 | 392 | 682 |
| 04:15 PM | 0 | 0 | 2 | 2 | 0 | 0 | 8 | 8 | 0 | 280 | 8 | 288 | 0 | 385 | 4 | 389 | 687 |
| 04:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 5 | 5 | 0 | 294 | 6 | 300 | 0 | 406 | 4 | 410 | 715 |
| 04:45 PM | 0 | 0 | 1 | 1 | 0 | 0 | 6 | 6 | 0 | 321 | 2 | 323 | 0 | 443 | 2 | 445 | 775 |
| Total | 0 | 0 | 4 | 4 | 0 | 0 | 21 | 21 | 0 | 1182 | 16 | 1198 | 0 | 1621 | 15 | 1636 | 2859 |
| 05:00 PM | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 2 | 0 | 357 | 4 | 361 | 0 | 463 | 1 | 464 | 828 |
| 05:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 356 | 5 | 361 | 0 | 510 | 6 | 516 | 880 |
| 05:30 PM | 0 | 0 | 3 | 3 | 0 | 0 | 5 | 5 | 0 | 357 | 2 | 359 | 0 | 468 | 9 | 477 | 844 |
| 05:45 PM | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 2 | 0 | 314 | 12 | 326 | 0 | 444 | 4 | 448 | 777 |
| Total | 0 | 0 | 5 | 5 | 0 | 0 | 12 | 12 | 0 | 1384 | 23 | 1407 | 0 | 1885 | 20 | 1905 | 3329 |
| Grand Total | 0 | 0 | 27 | 27 | 0 | 0 | 63 | 63 | 0 | 6064 | 64 | 6128 | 0 | 5230 | 111 | 5341 | 11559 |
| Apprch % | 0 | 0 | 100 | | 0 | 0 | 100 | | 0 | 99 | 1 | | 0 | 97.9 | 2.1 | | |
| Total % | 0 | 0 | 0.2 | 0.2 | 0 | 0 | 0.5 | 0.5 | 0 | 52.5 | 0.6 | 53 | 0 | 45.2 | 1 | 46.2 | |

A & R Engineering, Inc.

2160 Kingston Court Suite 'O'

Marietta, GA 30067

TMC Data

Windy Hill Road @ Dixie Avenue

7-9 am | 4-6 pm

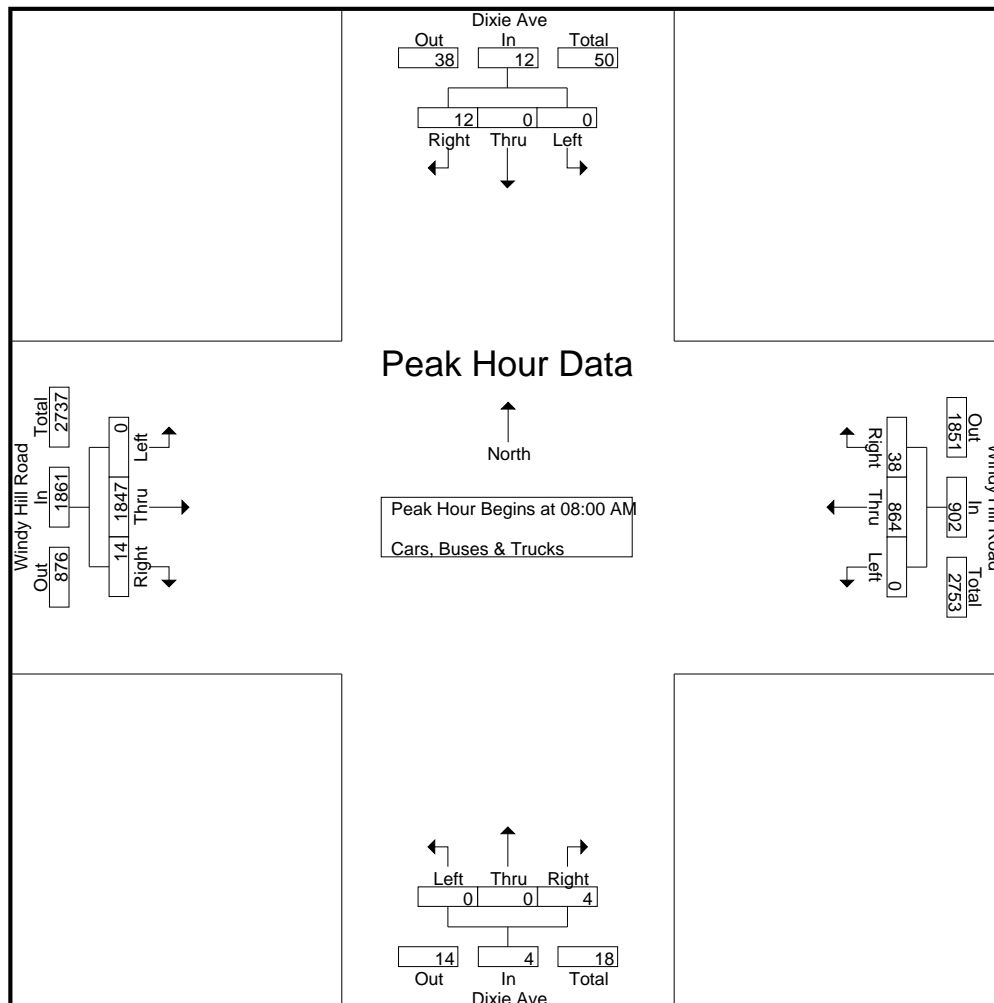
File Name : 20240347

Site Code : 20240347

Start Date : 09-05-2024

Page No : 2

| | Dixie Ave Northbound | | | | Dixie Ave Southbound | | | | Windy Hill Road Eastbound | | | | Windy Hill 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 08:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 08:00 AM | | | | | | | | | | | | | | | | | |
| 08:00 AM | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 2 | 0 | 449 | 5 | 454 | 0 | 204 | 8 | 212 | 669 |
| 08:15 AM | 0 | 0 | 1 | 1 | 0 | 0 | 3 | 3 | 0 | 470 | 5 | 475 | 0 | 223 | 11 | 234 | 713 |
| 08:30 AM | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 1 | 0 | 480 | 3 | 483 | 0 | 232 | 5 | 237 | 722 |
| 08:45 AM | 0 | 0 | 1 | 1 | 0 | 0 | 6 | 6 | 0 | 448 | 1 | 449 | 0 | 205 | 14 | 219 | 675 |
| Total Volume | 0 | 0 | 4 | 4 | 0 | 0 | 12 | 12 | 0 | 1847 | 14 | 1861 | 0 | 864 | 38 | 902 | 2779 |
| % App. Total | 0 | 0 | 100 | | 0 | 0 | 100 | | 0 | 99.2 | 0.8 | | 0 | 95.8 | 4.2 | | |
| PHF | .000 | .000 | 1.00 | 1.00 | .000 | .000 | .500 | .500 | .000 | .962 | .700 | .963 | .000 | .931 | .679 | .951 | .962 |



A & R Engineering, Inc.

2160 Kingston Court Suite 'O'

Marietta, GA 30067

TMC Data

Windy Hill Road @ Dixie Avenue

7-9 am | 4-6 pm

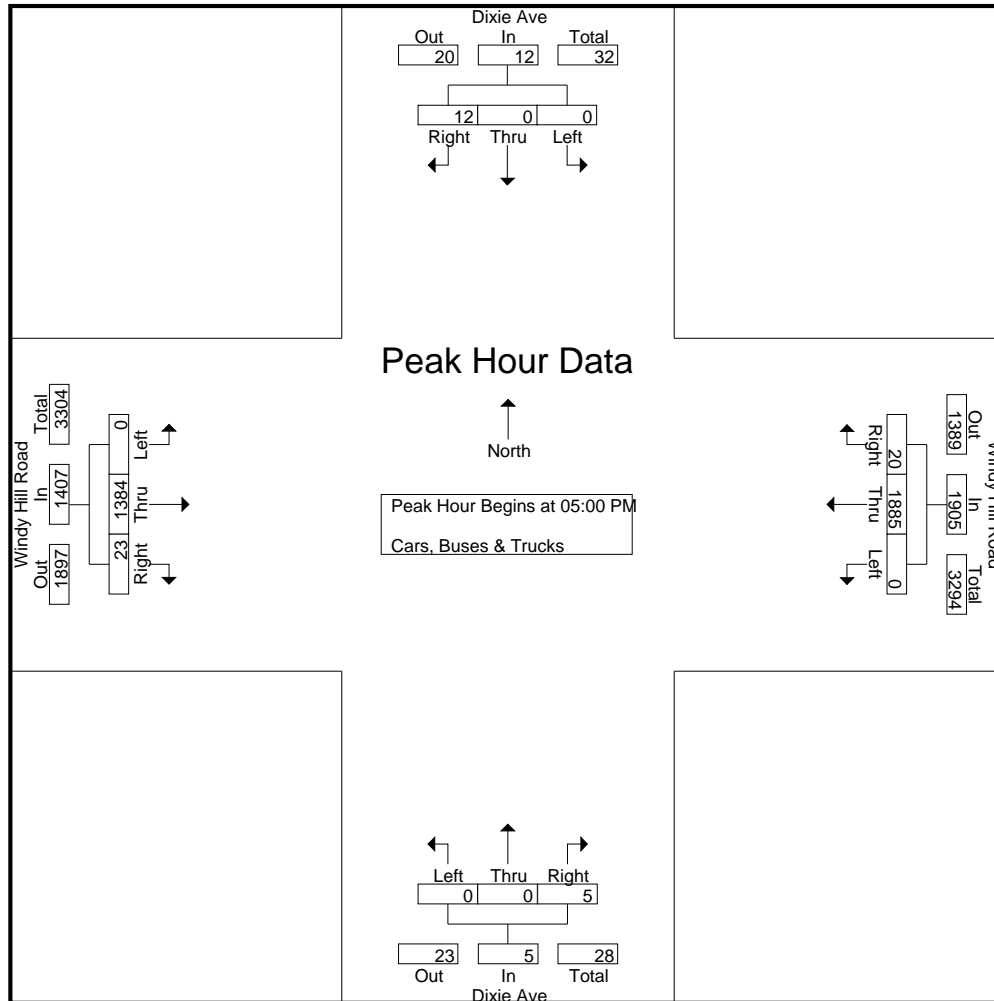
File Name : 20240347

Site Code : 20240347

Start Date : 09-05-2024

Page No : 3

| | Dixie Ave Northbound | | | | Dixie Ave Southbound | | | | Windy Hill Road Eastbound | | | | Windy Hill 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 | 0 | 1 | 1 | 0 | 0 | 2 | 2 | 0 | 357 | 4 | 361 | 0 | 463 | 1 | 464 | 828 |
| 05:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 356 | 5 | 361 | 0 | 510 | 6 | 516 | 880 |
| 05:30 PM | 0 | 0 | 3 | 3 | 0 | 0 | 5 | 5 | 0 | 357 | 2 | 359 | 0 | 468 | 9 | 477 | 844 |
| 05:45 PM | 0 | 0 | 1 | 1 | 0 | 0 | 2 | 2 | 0 | 314 | 12 | 326 | 0 | 444 | 4 | 448 | 777 |
| Total Volume | 0 | 0 | 5 | 5 | 0 | 0 | 12 | 12 | 0 | 1384 | 23 | 1407 | 0 | 1885 | 20 | 1905 | 3329 |
| % App. Total | 0 | 0 | 100 | | 0 | 0 | 100 | | 0 | 98.4 | 1.6 | | 0 | 99 | 1 | | |
| PHF | .000 | .000 | .417 | .417 | .000 | .000 | .600 | .600 | .000 | .969 | .479 | .974 | .000 | .924 | .556 | .923 | .946 |



A & R Engineering, Inc.

2160 Kingston Court Suite 'O'

Marietta, GA 30067

TMC Data

Windy Hill Road @ Atlanta Road

7-9 am | 4-6 pm

File Name : 20240346

Site Code : 20240346

Start Date : 09-05-2024

Page No : 1

Groups Printed- Cars, Buses & Trucks

| | Atlanta Road Northbound | | | | Atlanta Road Southbound | | | | Windy Hill Road Eastbound | | | | Windy Hill 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 | 23 | 95 | 18 | 136 | 56 | 87 | 8 | 151 | 17 | 277 | 43 | 337 | 35 | 106 | 47 | 188 | 812 |
| 07:15 AM | 29 | 128 | 27 | 184 | 88 | 131 | 8 | 227 | 18 | 322 | 51 | 391 | 33 | 122 | 61 | 216 | 1018 |
| 07:30 AM | 22 | 108 | 22 | 152 | 90 | 140 | 9 | 239 | 19 | 355 | 62 | 436 | 44 | 146 | 66 | 256 | 1083 |
| 07:45 AM | 28 | 124 | 27 | 179 | 64 | 159 | 6 | 229 | 18 | 316 | 49 | 383 | 45 | 114 | 59 | 218 | 1009 |
| Total | 102 | 455 | 94 | 651 | 298 | 517 | 31 | 846 | 72 | 1270 | 205 | 1547 | 157 | 488 | 233 | 878 | 3922 |
| 08:00 AM | 24 | 141 | 43 | 208 | 97 | 149 | 8 | 254 | 14 | 314 | 44 | 372 | 44 | 100 | 62 | 206 | 1040 |
| 08:15 AM | 29 | 157 | 49 | 235 | 103 | 153 | 11 | 267 | 19 | 323 | 51 | 393 | 51 | 109 | 66 | 226 | 1121 |
| 08:30 AM | 26 | 169 | 52 | 247 | 115 | 161 | 7 | 283 | 15 | 316 | 53 | 384 | 49 | 111 | 73 | 233 | 1147 |
| 08:45 AM | 27 | 151 | 44 | 222 | 98 | 142 | 10 | 250 | 17 | 307 | 42 | 366 | 43 | 103 | 65 | 211 | 1049 |
| Total | 106 | 618 | 188 | 912 | 413 | 605 | 36 | 1054 | 65 | 1260 | 190 | 1515 | 187 | 423 | 266 | 876 | 4357 |
| *** BREAK *** | | | | | | | | | | | | | | | | | |
| 04:00 PM | 53 | 123 | 14 | 190 | 70 | 166 | 25 | 261 | 17 | 203 | 35 | 255 | 67 | 250 | 72 | 389 | 1095 |
| 04:15 PM | 49 | 131 | 19 | 199 | 73 | 173 | 18 | 264 | 23 | 196 | 31 | 250 | 58 | 256 | 79 | 393 | 1106 |
| 04:30 PM | 56 | 128 | 13 | 197 | 79 | 159 | 21 | 259 | 18 | 208 | 43 | 269 | 61 | 267 | 83 | 411 | 1136 |
| 04:45 PM | 52 | 137 | 23 | 212 | 64 | 166 | 26 | 256 | 20 | 236 | 39 | 295 | 73 | 288 | 88 | 449 | 1212 |
| Total | 210 | 519 | 69 | 798 | 286 | 664 | 90 | 1040 | 78 | 843 | 148 | 1069 | 259 | 1061 | 322 | 1642 | 4549 |
| 05:00 PM | 44 | 140 | 27 | 211 | 82 | 164 | 17 | 263 | 19 | 252 | 52 | 323 | 82 | 291 | 92 | 465 | 1262 |
| 05:15 PM | 49 | 145 | 31 | 225 | 89 | 173 | 22 | 284 | 26 | 241 | 59 | 326 | 88 | 319 | 106 | 513 | 1348 |
| 05:30 PM | 58 | 153 | 27 | 238 | 93 | 170 | 26 | 289 | 20 | 239 | 51 | 310 | 74 | 302 | 97 | 473 | 1310 |
| 05:45 PM | 51 | 131 | 23 | 205 | 81 | 152 | 19 | 252 | 22 | 222 | 49 | 293 | 63 | 292 | 91 | 446 | 1196 |
| Total | 202 | 569 | 108 | 879 | 345 | 659 | 84 | 1088 | 87 | 954 | 211 | 1252 | 307 | 1204 | 386 | 1897 | 5116 |
| Grand Total | 620 | 2161 | 459 | 3240 | 1342 | 2445 | 241 | 4028 | 302 | 4327 | 754 | 5383 | 910 | 3176 | 1207 | 5293 | 17944 |
| Apprch % | 19.1 | 66.7 | 14.2 | | 33.3 | 60.7 | 6 | | 5.6 | 80.4 | 14 | | 17.2 | 60 | 22.8 | | |
| Total % | 3.5 | 12 | 2.6 | 18.1 | 7.5 | 13.6 | 1.3 | 22.4 | 1.7 | 24.1 | 4.2 | 30 | 5.1 | 17.7 | 6.7 | 29.5 | |

A & R Engineering, Inc.

2160 Kingston Court Suite 'O'

Marietta, GA 30067

TMC Data

Windy Hill Road @ Atlanta Road

7-9 am | 4-6 pm

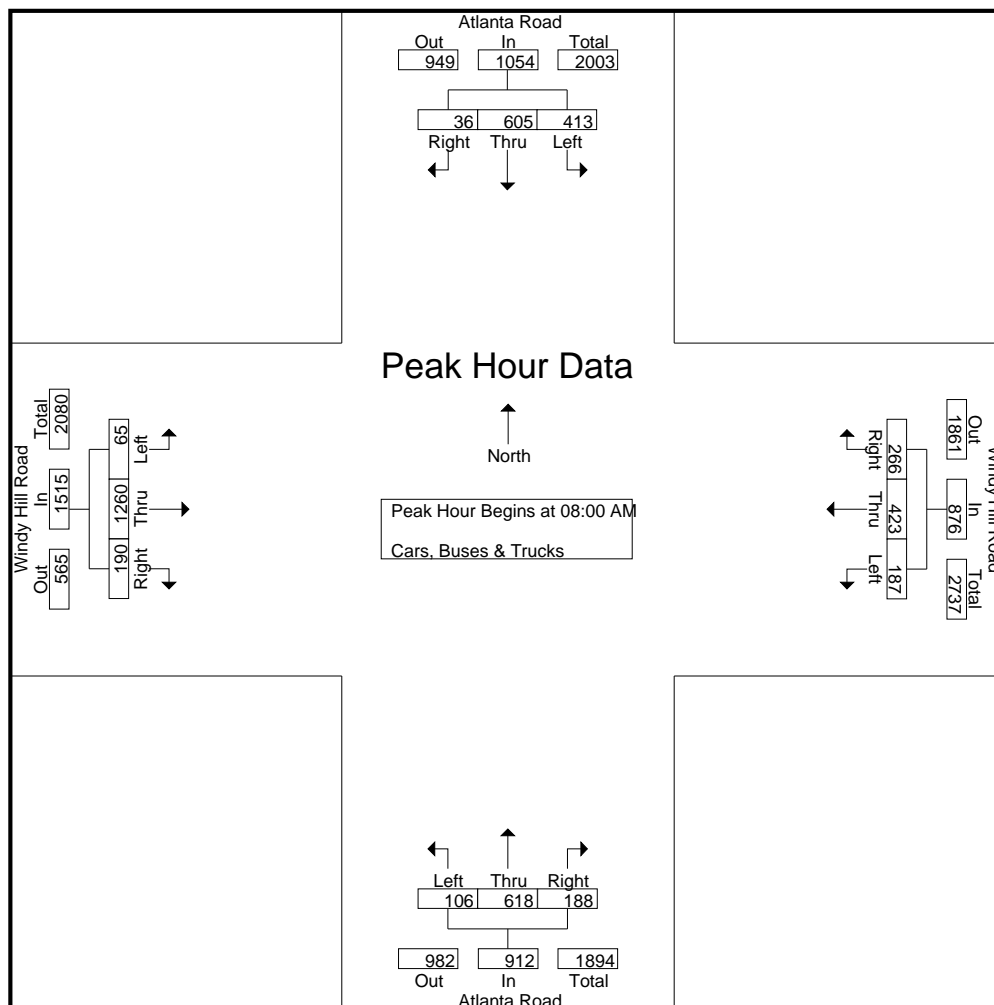
File Name : 20240346

Site Code : 20240346

Start Date : 09-05-2024

Page No : 2

| | Atlanta Road Northbound | | | | Atlanta Road Southbound | | | | Windy Hill Road Eastbound | | | | Windy Hill 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 08:45 AM - Peak 1 of 1 | | | | | | | | | | | | | | | | | |
| Peak Hour for Entire Intersection Begins at 08:00 AM | | | | | | | | | | | | | | | | | |
| 08:00 AM | 24 | 141 | 43 | 208 | 97 | 149 | 8 | 254 | 14 | 314 | 44 | 372 | 44 | 100 | 62 | 206 | 1040 |
| 08:15 AM | 29 | 157 | 49 | 235 | 103 | 153 | 11 | 267 | 19 | 323 | 51 | 393 | 51 | 109 | 66 | 226 | 1121 |
| 08:30 AM | 26 | 169 | 52 | 247 | 115 | 161 | 7 | 283 | 15 | 316 | 53 | 384 | 49 | 111 | 73 | 233 | 1147 |
| 08:45 AM | 27 | 151 | 44 | 222 | 98 | 142 | 10 | 250 | 17 | 307 | 42 | 366 | 43 | 103 | 65 | 211 | 1049 |
| Total Volume | 106 | 618 | 188 | 912 | 413 | 605 | 36 | 1054 | 65 | 1260 | 190 | 1515 | 187 | 423 | 266 | 876 | 4357 |
| % App. Total | 11.6 | 67.8 | 20.6 | | 39.2 | 57.4 | 3.4 | | 4.3 | 83.2 | 12.5 | | 21.3 | 48.3 | 30.4 | | |
| PHF | .914 | .914 | .904 | .923 | .898 | .939 | .818 | .931 | .855 | .975 | .896 | .964 | .917 | .953 | .911 | .940 | .950 |



A & R Engineering, Inc.

2160 Kingston Court Suite 'O'

Marietta, GA 30067

TMC Data

Windy Hill Road @ Atlanta Road

7-9 am | 4-6 pm

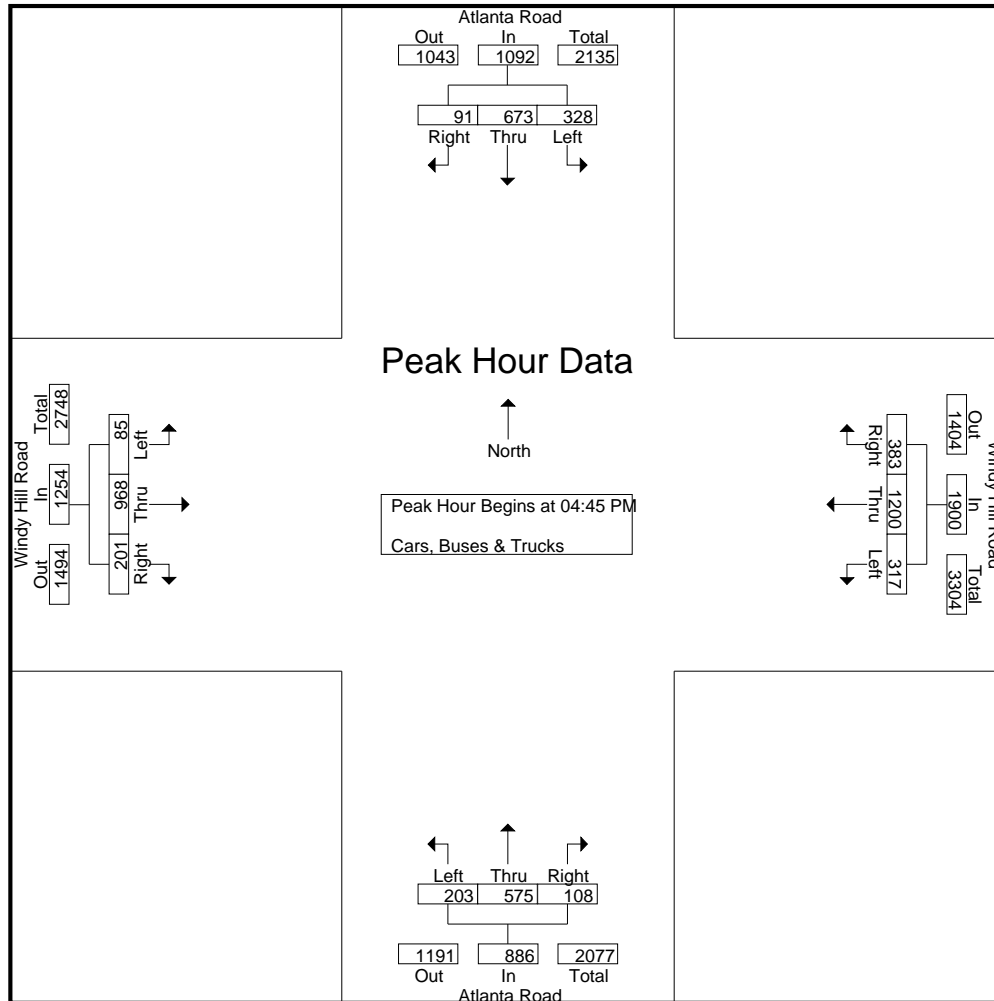
File Name : 20240346

Site Code : 20240346

Start Date : 09-05-2024

Page No : 3

| | Atlanta Road Northbound | | | | Atlanta Road Southbound | | | | Windy Hill Road Eastbound | | | | Windy Hill 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 04:45 PM | | | | | | | | | | | | | | | | | |
| 04:45 PM | 52 | 137 | 23 | 212 | 64 | 166 | 26 | 256 | 20 | 236 | 39 | 295 | 73 | 288 | 88 | 449 | 1212 |
| 05:00 PM | 44 | 140 | 27 | 211 | 82 | 164 | 17 | 263 | 19 | 252 | 52 | 323 | 82 | 291 | 92 | 465 | 1262 |
| 05:15 PM | 49 | 145 | 31 | 225 | 89 | 173 | 22 | 284 | 26 | 241 | 59 | 326 | 88 | 319 | 106 | 513 | 1348 |
| 05:30 PM | 58 | 153 | 27 | 238 | 93 | 170 | 26 | 289 | 20 | 239 | 51 | 310 | 74 | 302 | 97 | 473 | 1310 |
| Total Volume | 203 | 575 | 108 | 886 | 328 | 673 | 91 | 1092 | 85 | 968 | 201 | 1254 | 317 | 1200 | 383 | 1900 | 5132 |
| % App. Total | 22.9 | 64.9 | 12.2 | | 30 | 61.6 | 8.3 | | 6.8 | 77.2 | 16 | | 16.7 | 63.2 | 20.2 | | |
| PHF | .875 | .940 | .871 | .931 | .882 | .973 | .875 | .945 | .817 | .960 | .852 | .962 | .901 | .940 | .903 | .926 | .952 |



A & R Engineering, Inc.

2160 Kingston Court, Suite 'O'
Marietta, GA 30067

TMC Data
Hillside Avenue @ Park Drive
7-9 am | 4-6 pm

File Name : 20240346
Site Code : 20240346
Start Date : 09-04-2024
Page No : 1

| Groups Printed- Cars, Buses & Trucks | | | | | | | | | | | | | | | | | |
|--------------------------------------|-----------------------|------|-------|------------|-----------------------|------|-------|------------|---------------------------|------|-------|------------|---------------------------|------|-------|------------|------------|
| | Park Drive Northbound | | | | Park Drive Southbound | | | | Hillside Avenue Eastbound | | | | Hillside Avenue 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 5 | 0 | 6 | 0 | 2 | 0 | 2 | 8 |
| 07:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 6 | 0 | 6 | 9 |
| 07:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 7 |
| *** BREAK *** | | | | | | | | | | | | | | | | | |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 8 | 0 | 9 | 0 | 14 | 0 | 14 | 24 |
| 08:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 0 | 1 | 1 | 2 | 9 |
| 08:15 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 4 | 0 | 4 | 0 | 1 | 0 | 1 | 6 |
| 08:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 2 |
| 08:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 1 | 2 | 3 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 14 | 0 | 14 | 0 | 3 | 2 | 5 | 20 |
| *** BREAK *** | | | | | | | | | | | | | | | | | |
| 04:00 PM | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 | 0 | 2 | 0 | 2 | 1 | 3 | 6 |
| 04:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 1 | 3 |
| *** BREAK *** | | | | | | | | | | | | | | | | | |
| 04:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 5 | 0 | 5 | 6 |
| Total | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 5 | 0 | 5 | 0 | 8 | 1 | 9 | 15 |
| 05:00 PM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 2 |
| 05:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 |
| 05:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 1 | 0 | 1 | 2 |
| 05:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 1 | 3 |
| Total | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 3 | 0 | 4 | 0 | 3 | 0 | 3 | 8 |
| Grand Total | 0 | 0 | 0 | 0 | 1 | 0 | 3 | 4 | 2 | 30 | 0 | 32 | 0 | 28 | 3 | 31 | 67 |
| Apprch % | 0 | 0 | 0 | | 25 | 0 | 75 | | 6.2 | 93.8 | 0 | | 0 | 90.3 | 9.7 | | |
| Total % | 0 | 0 | 0 | 0 | 1.5 | 0 | 4.5 | 6 | 3 | 44.8 | 0 | 47.8 | 0 | 41.8 | 4.5 | 46.3 | |

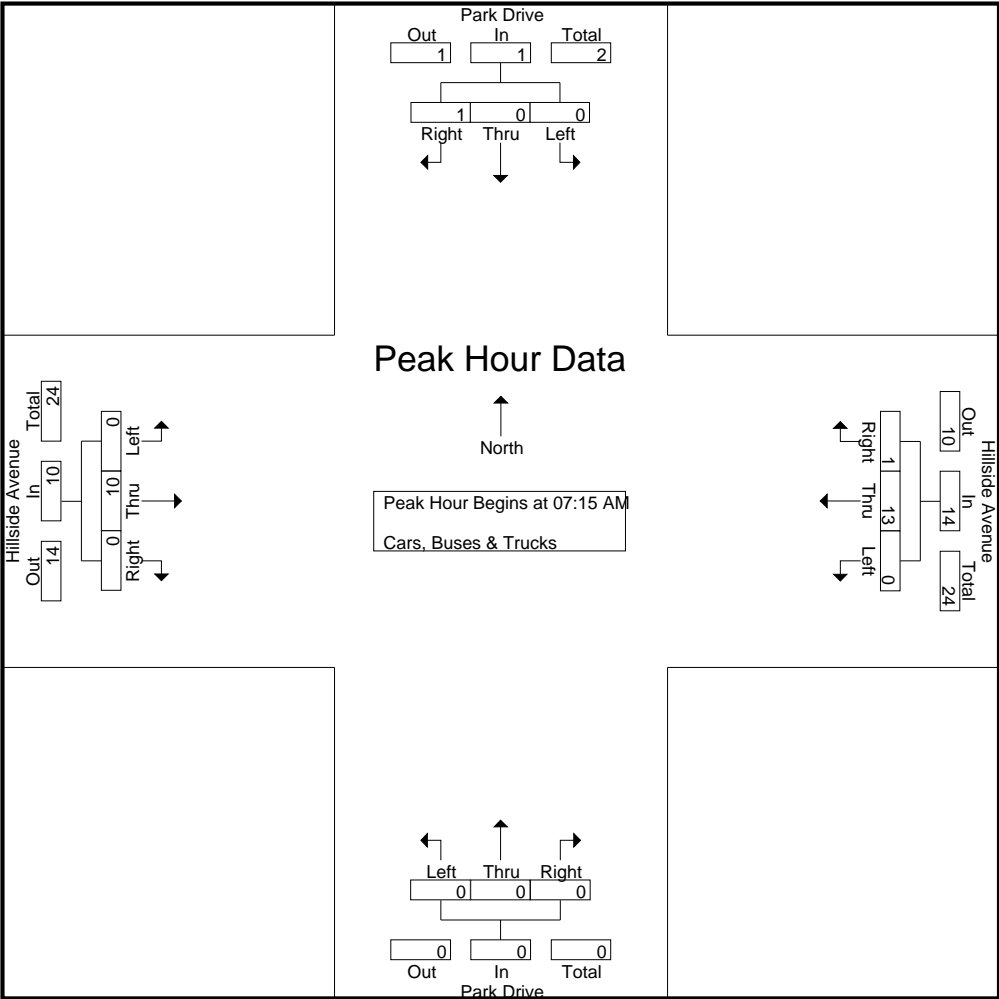
A & R Engineering, Inc.

2160 Kingston Court, Suite 'O'
Marietta, GA 30067

TMC Data
Hillside Avenue @ Park Drive
7-9 am | 4-6 pm

File Name : 20240346
Site Code : 20240346
Start Date : 09-04-2024
Page No : 2

| | Park Drive Northbound | | | | Park Drive Southbound | | | | Hillside Avenue Eastbound | | | | Hillside Avenue 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 0 | 6 | 0 | 6 | 9 |
| 07:30 AM | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 7 |
| 07:45 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 08:00 AM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 0 | 1 | 1 | 2 | 9 |
| Total Volume | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 10 | 0 | 10 | 0 | 13 | 1 | 14 | 25 |
| % App. Total | 0 | 0 | 0 | | 0 | 0 | 100 | | 0 | 100 | 0 | | 0 | 92.9 | 7.1 | | |
| PHF | .000 | .000 | .000 | .000 | .000 | .000 | .250 | .250 | .000 | .357 | .000 | .357 | .000 | .542 | .250 | .583 | .694 |



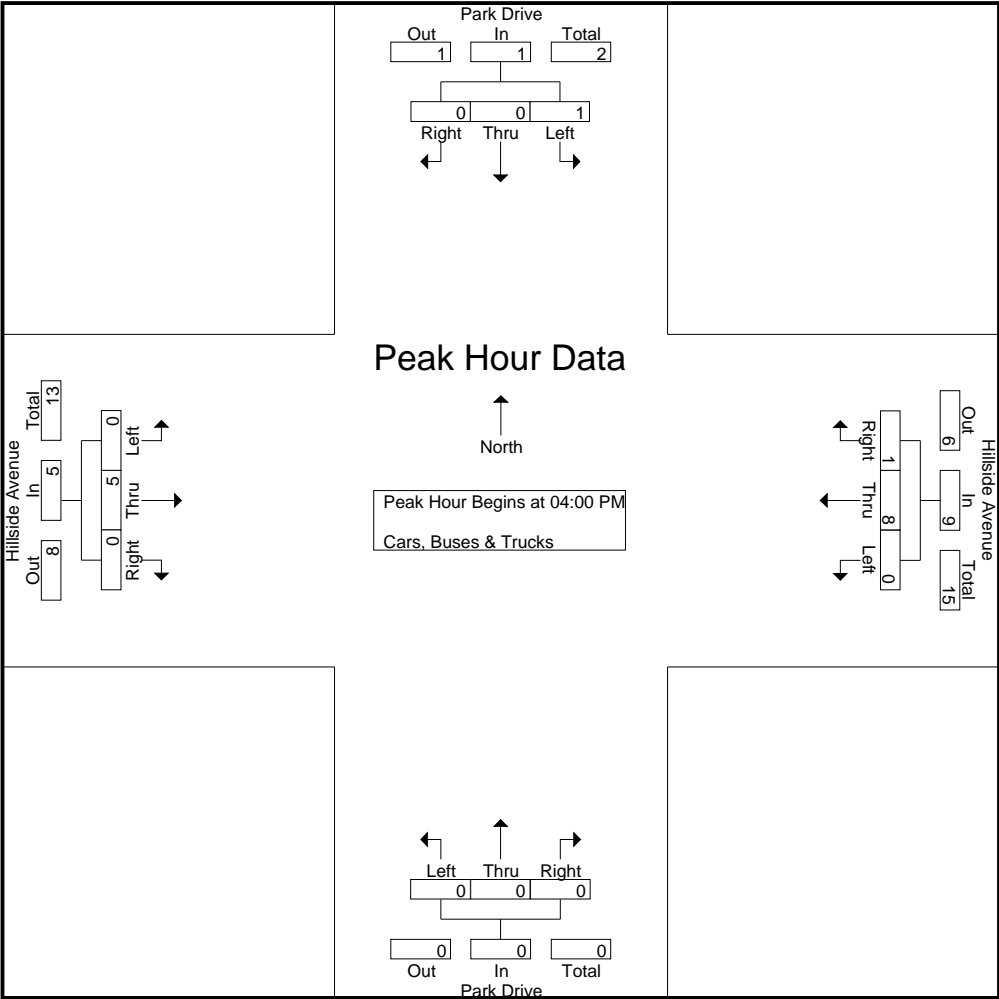
A & R Engineering, Inc.

2160 Kingston Court, Suite 'O'
Marietta, GA 30067

TMC Data
Hillside Avenue @ Park Drive
7-9 am | 4-6 pm

File Name : 20240346
Site Code : 20240346
Start Date : 09-04-2024
Page No : 3

| | Park Drive Northbound | | | | Park Drive Southbound | | | | Hillside Avenue Eastbound | | | | Hillside Avenue 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 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 2 | 0 | 2 | 0 | 2 | 1 | 3 | 6 |
| 04:15 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 1 | 0 | 1 | 3 |
| 04:30 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 04:45 PM | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 1 | 0 | 5 | 0 | 5 | 6 |
| Total Volume | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 5 | 0 | 5 | 0 | 8 | 1 | 9 | 15 |
| % App. Total | 0 | 0 | 0 | | 100 | 0 | 0 | | 0 | 100 | 0 | | 0 | 88.9 | 11.1 | | |
| PHF | .000 | .000 | .000 | .000 | .250 | .000 | .000 | .250 | .000 | .625 | .000 | .625 | .000 | .400 | .250 | .450 | .625 |



A & R Engineering, Inc.

2160 Kingston Court, Suite 'O'
Marietta, GA 30067

TMC Data
Dixie Avenue and Hillside Avenue
7-9 am | 4-6 pm

File Name : 20240345
Site Code : 20240345
Start Date : 09-05-2024
Page No : 1

| Groups Printed- Cars, Buses & Trucks | | | | | | | | | | | | | | | | | |
|--------------------------------------|-------------------------|------|-------|------------|-------------------------|------|-------|------------|-----------|------|-------|------------|---------------------------|------|-------|------------|------------|
| | Dixie Avenue Northbound | | | | Dixie Avenue Southbound | | | | Eastbound | | | | Hillside Avenue 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 | 5 | 4 | 9 | 3 | 2 | 0 | 5 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 5 | 19 |
| 07:15 AM | 0 | 6 | 2 | 8 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 3 | 0 | 8 | 11 | 21 |
| 07:30 AM | 0 | 8 | 0 | 8 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 6 | 15 |
| 07:45 AM | 0 | 14 | 0 | 14 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| Total | 0 | 33 | 6 | 39 | 4 | 6 | 0 | 10 | 0 | 0 | 0 | 0 | 11 | 0 | 11 | 22 | 71 |
| 08:00 AM | 0 | 4 | 3 | 7 | 4 | 1 | 0 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 3 | 15 |
| 08:15 AM | 0 | 7 | 1 | 8 | 3 | 1 | 0 | 4 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 2 | 14 |
| 08:30 AM | 0 | 12 | 1 | 13 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 14 |
| 08:45 AM | 0 | 8 | 1 | 9 | 0 | 4 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 14 |
| Total | 0 | 31 | 6 | 37 | 8 | 6 | 0 | 14 | 0 | 0 | 0 | 0 | 3 | 0 | 3 | 6 | 57 |
| *** BREAK *** | | | | | | | | | | | | | | | | | |
| 04:00 PM | 0 | 2 | 1 | 3 | 1 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 7 |
| 04:15 PM | 0 | 5 | 2 | 7 | 1 | 7 | 0 | 8 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 16 |
| 04:30 PM | 0 | 4 | 0 | 4 | 1 | 6 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 04:45 PM | 0 | 4 | 0 | 4 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 4 | 0 | 2 | 6 | 13 |
| Total | 0 | 15 | 3 | 18 | 3 | 18 | 0 | 21 | 0 | 0 | 0 | 0 | 6 | 0 | 2 | 8 | 47 |
| 05:00 PM | 0 | 1 | 0 | 1 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 | 5 |
| 05:15 PM | 0 | 2 | 1 | 3 | 1 | 3 | 0 | 4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 |
| 05:30 PM | 0 | 3 | 9 | 12 | 1 | 4 | 0 | 5 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 18 |
| 05:45 PM | 0 | 1 | 4 | 5 | 1 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 2 | 0 | 6 | 8 | 16 |
| Total | 0 | 7 | 14 | 21 | 4 | 10 | 0 | 14 | 0 | 0 | 0 | 0 | 3 | 0 | 8 | 11 | 46 |
| Grand Total | 0 | 86 | 29 | 115 | 19 | 40 | 0 | 59 | 0 | 0 | 0 | 0 | 23 | 0 | 24 | 47 | 221 |
| Apprch % | 0 | 74.8 | 25.2 | | 32.2 | 67.8 | 0 | | 0 | 0 | 0 | | 48.9 | 0 | 51.1 | | |
| Total % | 0 | 38.9 | 13.1 | 52 | 8.6 | 18.1 | 0 | 26.7 | 0 | 0 | 0 | 0 | 10.4 | 0 | 10.9 | 21.3 | |

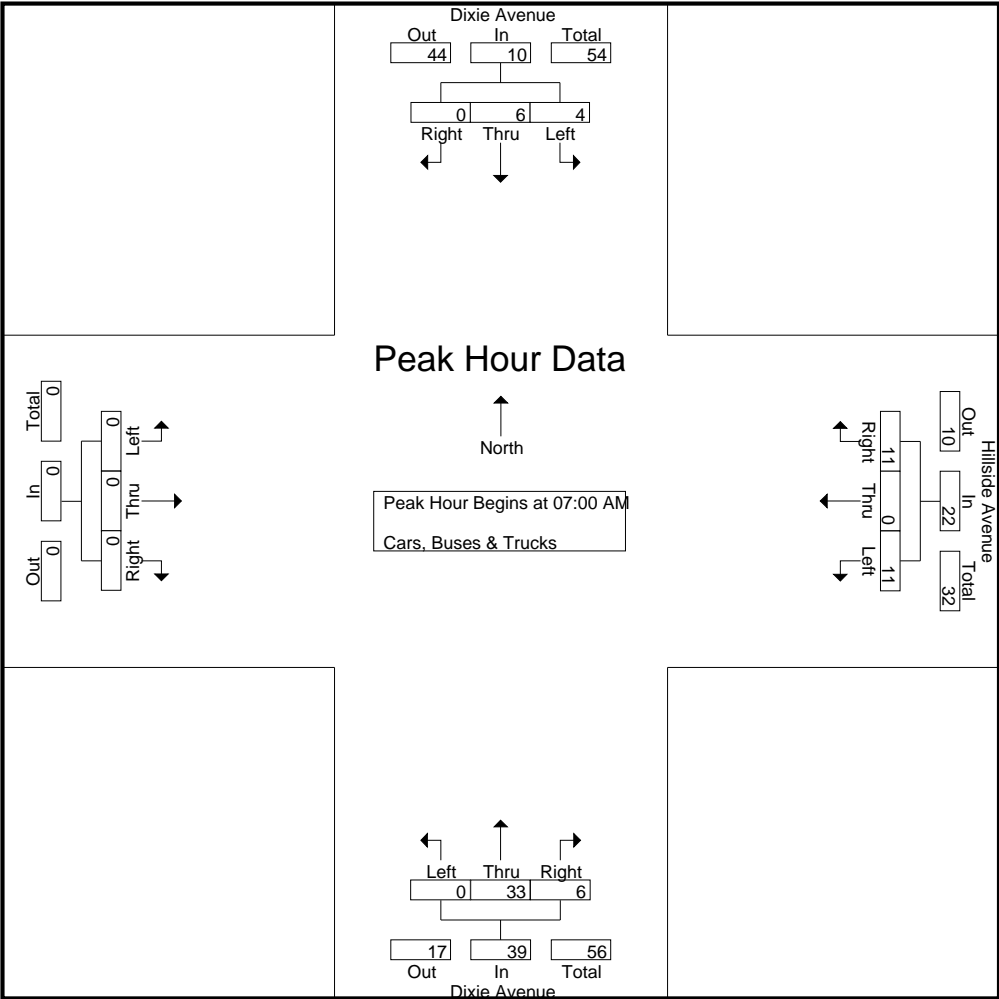
A & R Engineering, Inc.

2160 Kingston Court, Suite 'O'
Marietta, GA 30067

TMC Data
Dixie Avenue and Hillside Avenue
7-9 am | 4-6 pm

File Name : 20240345
Site Code : 20240345
Start Date : 09-05-2024
Page No : 2

| | Dixie Avenue Northbound | | | | Dixie Avenue Southbound | | | | Eastbound | | | | Hillside Avenue 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 07:00 AM | | | | | | | | | | | | | | | | | |
| 07:00 AM | 0 | 5 | 4 | 9 | 3 | 2 | 0 | 5 | 0 | 0 | 0 | 0 | 2 | 0 | 3 | 5 | 19 |
| 07:15 AM | 0 | 6 | 2 | 8 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 3 | 0 | 8 | 11 | 21 |
| 07:30 AM | 0 | 8 | 0 | 8 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 6 | 0 | 0 | 6 | 15 |
| 07:45 AM | 0 | 14 | 0 | 14 | 0 | 2 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16 |
| Total Volume | 0 | 33 | 6 | 39 | 4 | 6 | 0 | 10 | 0 | 0 | 0 | 0 | 11 | 0 | 11 | 22 | 71 |
| % App. Total | 0 | 84.6 | 15.4 | | 40 | 60 | 0 | | 0 | 0 | 0 | | 50 | 0 | 50 | | |
| PHF | .000 | .589 | .375 | .696 | .333 | .750 | .000 | .500 | .000 | .000 | .000 | .000 | .458 | .000 | .344 | .500 | .845 |



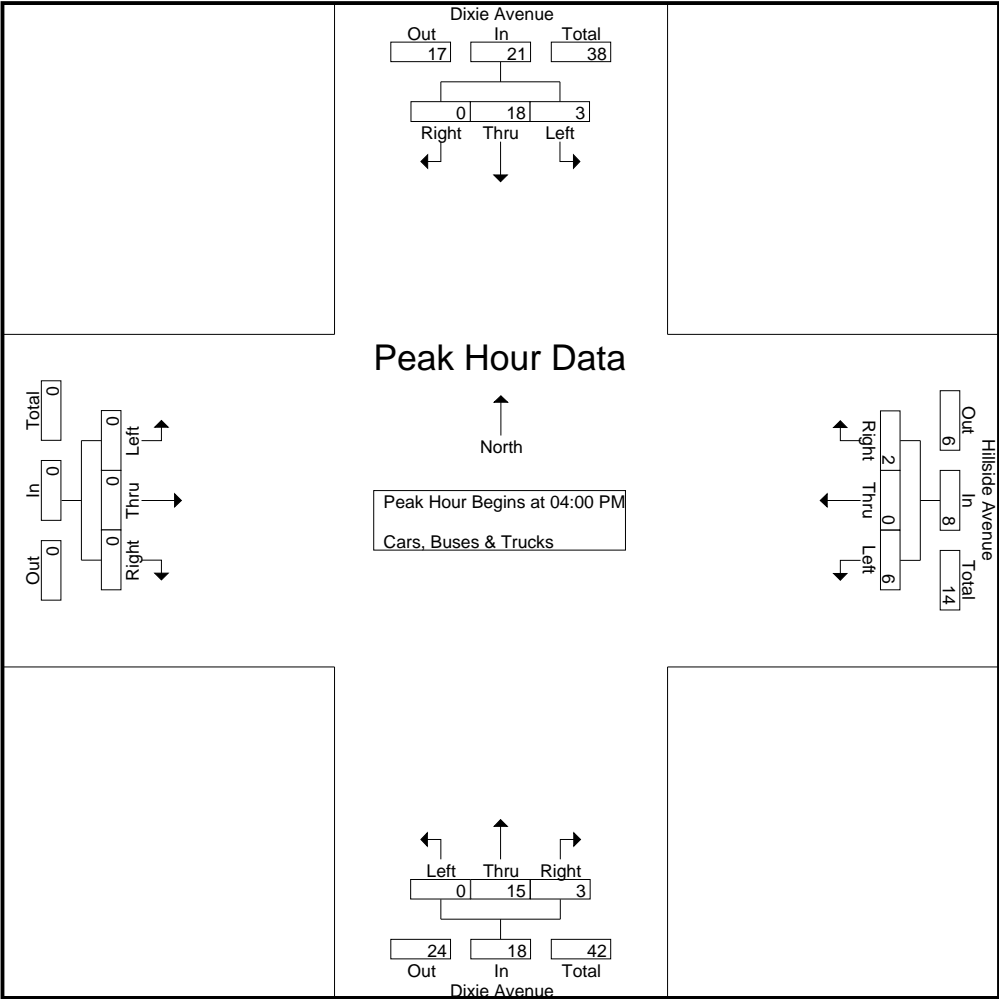
A & R Engineering, Inc.

2160 Kingston Court, Suite 'O'
Marietta, GA 30067

TMC Data
Dixie Avenue and Hillside Avenue
7-9 am | 4-6 pm

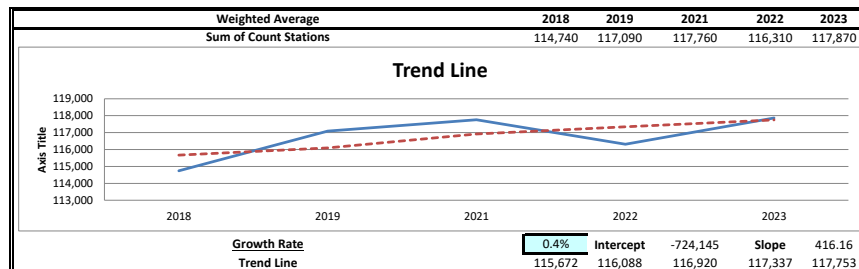
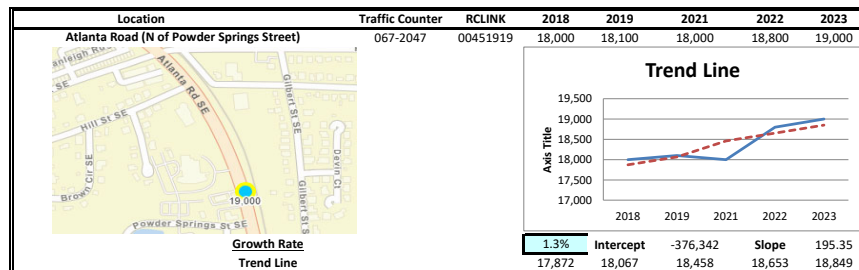
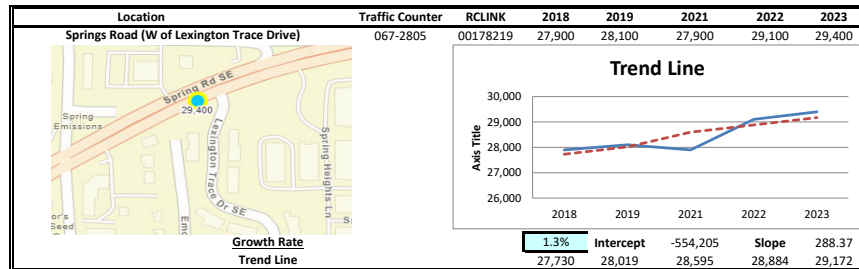
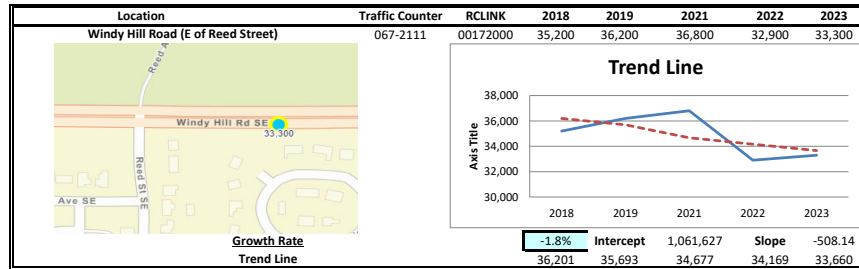
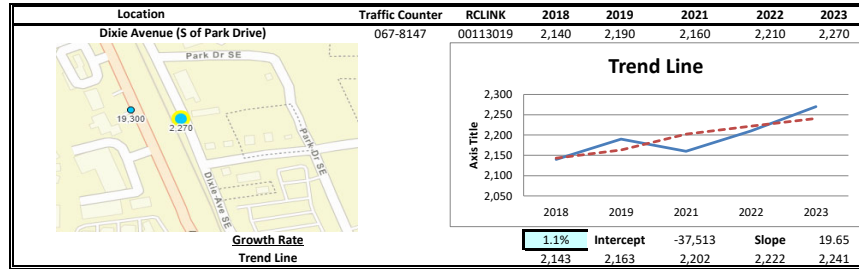
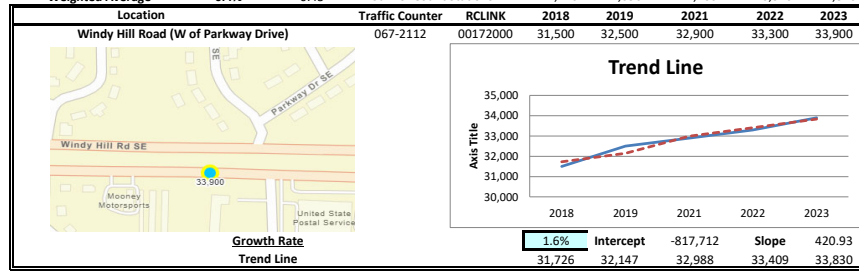
File Name : 20240345
Site Code : 20240345
Start Date : 09-05-2024
Page No : 3

| | Dixie Avenue Northbound | | | | Dixie Avenue Southbound | | | | Eastbound | | | | Hillside Avenue 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 | 2 | 1 | 3 | 1 | 2 | 0 | 3 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 7 |
| 04:15 PM | 0 | 5 | 2 | 7 | 1 | 7 | 0 | 8 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 16 |
| 04:30 PM | 0 | 4 | 0 | 4 | 1 | 6 | 0 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 |
| 04:45 PM | 0 | 4 | 0 | 4 | 0 | 3 | 0 | 3 | 0 | 0 | 0 | 0 | 4 | 0 | 2 | 6 | 13 |
| Total Volume | 0 | 15 | 3 | 18 | 3 | 18 | 0 | 21 | 0 | 0 | 0 | 0 | 6 | 0 | 2 | 8 | 47 |
| % App. Total | 0 | 83.3 | 16.7 | | 14.3 | 85.7 | 0 | | 0 | 0 | 0 | | 75 | 0 | 25 | | |
| PHF | .000 | .750 | .375 | .643 | .750 | .643 | .000 | .656 | .000 | .000 | .000 | .000 | .375 | .000 | .250 | .333 | .734 |



LINEAR REGRESSION OF DAILY TRAFFIC

| Location | Growth Rate | R Squared | Station ID | Route | 2018 | 2019 | 2021 | 2022 | 2023 |
|------------------------------------|-------------|-------------|--------------------------------|----------|----------------|----------------|----------------|----------------|----------------|
| Windy Hill Road (W of Parkway) | 1.6% | 0.94 | 067-2112 | 00172000 | 31,500 | 32,500 | 32,900 | 33,300 | 33,900 |
| Dixie Avenue (S of Park Drive) | 1.1% | 0.66 | 067-8147 | 00113019 | 2,140 | 2,190 | 2,160 | 2,210 | 2,270 |
| Windy Hill Road (E of Reed Street) | -1.8% | 0.37 | 067-2111 | 00172000 | 35,200 | 36,200 | 36,800 | 32,900 | 33,300 |
| Springs Road (W of Lexington Tr | 1.3% | 0.70 | 067-2805 | 00178219 | 27,900 | 28,100 | 27,900 | 29,100 | 29,400 |
| Atlanta Road (N of Powder Sprin | 1.3% | 0.71 | 067-2047 | 00451919 | 18,000 | 18,100 | 18,000 | 18,800 | 19,000 |
| Weighted Average | 0.4% | 0.45 | Sum of Count Stations = | | 114,740 | 117,090 | 117,760 | 116,310 | 117,870 |


































EXISTING INTERSECTION ANALYSIS

Timings

1: Atlanta Rd & Windy Hill Rd

1a. Existing AM 2024
09/17/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |    |  |  |   |  |   |   |  |   |   |  |
| Traffic Volume (vph) | 65 | 1260 | 190 | 187 | 423 | 266 | 106 | 618 | 188 | 413 | 605 | 36 |
| Future Volume (vph) | 65 | 1260 | 190 | 187 | 423 | 266 | 106 | 618 | 188 | 413 | 605 | 36 |
| Lane Group Flow (vph) | 68 | 1326 | 200 | 197 | 445 | 280 | 112 | 651 | 198 | 435 | 637 | 38 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 2 | | 2 | 6 | | 6 | | | 8 | | | 4 |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 15.0 | 15.0 | 5.0 | 15.0 | 15.0 | 5.0 | 6.0 | 6.0 | 5.0 | 6.0 | 6.0 |
| Minimum Split (s) | 15.0 | 32.5 | 32.5 | 15.0 | 32.5 | 32.5 | 15.0 | 38.5 | 38.5 | 15.0 | 36.5 | 36.5 |
| Total Split (s) | 15.0 | 43.0 | 43.0 | 16.0 | 44.0 | 44.0 | 15.0 | 39.0 | 39.0 | 22.0 | 46.0 | 46.0 |
| Total Split (%) | 12.5% | 35.8% | 35.8% | 13.3% | 36.7% | 36.7% | 12.5% | 32.5% | 32.5% | 18.3% | 38.3% | 38.3% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 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 | 2.0 | 2.0 | 2.0 |
| 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 | 0.0 |
| Total Lost Time (s) | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Min | C-Min | None | C-Min | C-Min | None | None | None | None | None | None |
| v/c Ratio | 0.16 | 0.78 | 0.31 | 0.80 | 0.32 | 0.35 | 0.45 | 0.78 | 0.39 | 0.92 | 0.60 | 0.07 |
| Control Delay | 19.2 | 40.2 | 8.0 | 52.0 | 28.3 | 5.2 | 59.3 | 49.4 | 8.5 | 77.3 | 37.8 | 0.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 19.2 | 40.2 | 8.0 | 52.0 | 28.3 | 5.2 | 59.3 | 49.4 | 8.5 | 77.3 | 37.8 | 0.2 |
| Queue Length 50th (ft) | 28 | 349 | 15 | 99 | 129 | 3 | 43 | 248 | 9 | 173 | 221 | 0 |
| Queue Length 95th (ft) | 58 | 409 | 70 | m#260 | 188 | m62 | 73 | 300 | 66 | #270 | 267 | 0 |
| Internal Link Dist (ft) | | 601 | | | 116 | | | 1138 | | | 947 | |
| Turn Bay Length (ft) | 165 | | 175 | | | | 485 | | 245 | 445 | | 235 |
| Base Capacity (vph) | 449 | 1710 | 647 | 247 | 1401 | 795 | 271 | 987 | 573 | 472 | 1194 | 615 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.15 | 0.78 | 0.31 | 0.80 | 0.32 | 0.35 | 0.41 | 0.66 | 0.35 | 0.92 | 0.53 | 0.06 |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 105

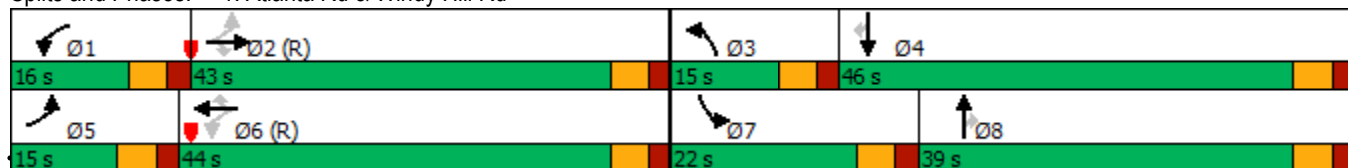
Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Atlanta Rd & Windy Hill Rd


































HCM 6th Signalized Intersection Summary




1: Atlanta Rd & Windy Hill Rd

1a. Existing AM 2024

09/17/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |    |  |  |   |  |   |   |  |   |   |  |
| Traffic Volume (veh/h) | 65 | 1260 | 190 | 187 | 423 | 266 | 106 | 618 | 188 | 413 | 605 | 36 |
| Future Volume (veh/h) | 65 | 1260 | 190 | 187 | 423 | 266 | 106 | 618 | 188 | 413 | 605 | 36 |
| 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 | 68 | 1326 | 200 | 197 | 445 | 280 | 112 | 651 | 198 | 435 | 637 | 0 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 373 | 1923 | 597 | 260 | 1498 | 668 | 166 | 783 | 349 | 475 | 1101 | |
| Arrive On Green | 0.04 | 0.38 | 0.38 | 0.08 | 0.42 | 0.42 | 0.05 | 0.22 | 0.22 | 0.14 | 0.31 | 0.00 |
| Sat Flow, veh/h | 1781 | 5106 | 1585 | 1781 | 3554 | 1585 | 3456 | 3554 | 1585 | 3456 | 3554 | 1585 |
| Grp Volume(v), veh/h | 68 | 1326 | 200 | 197 | 445 | 280 | 112 | 651 | 198 | 435 | 637 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1702 | 1585 | 1781 | 1777 | 1585 | 1728 | 1777 | 1585 | 1728 | 1777 | 1585 |
| Q Serve(g_s), s | 2.8 | 26.2 | 10.8 | 7.8 | 9.9 | 14.9 | 3.8 | 21.0 | 13.4 | 14.9 | 18.1 | 0.0 |
| Cycle Q Clear(g_c), s | 2.8 | 26.2 | 10.8 | 7.8 | 9.9 | 14.9 | 3.8 | 21.0 | 13.4 | 14.9 | 18.1 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 373 | 1923 | 597 | 260 | 1498 | 668 | 166 | 783 | 349 | 475 | 1101 | |
| V/C Ratio(X) | 0.18 | 0.69 | 0.34 | 0.76 | 0.30 | 0.42 | 0.67 | 0.83 | 0.57 | 0.92 | 0.58 | |
| Avail Cap(c_a), veh/h | 448 | 1923 | 597 | 270 | 1498 | 668 | 274 | 992 | 442 | 475 | 1199 | |
| 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 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 21.5 | 31.5 | 26.7 | 25.3 | 23.0 | 24.4 | 56.2 | 44.7 | 41.7 | 51.1 | 34.8 | 0.0 |
| Incr Delay (d2), s/veh | 0.2 | 2.0 | 1.5 | 11.3 | 0.5 | 1.9 | 4.7 | 4.9 | 1.4 | 22.4 | 0.6 | 0.0 |
| 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(50%),veh/ln | 1.2 | 11.1 | 4.2 | 4.0 | 4.3 | 5.7 | 1.7 | 9.5 | 5.2 | 7.7 | 7.6 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 21.8 | 33.5 | 28.2 | 36.5 | 23.5 | 26.3 | 60.9 | 49.6 | 43.1 | 73.5 | 35.4 | 0.0 |
| LnGrp LOS | C | C | C | D | C | C | E | D | D | E | D | |
| Approach Vol, veh/h | 1594 | | | 922 | | | 961 | | | 1072 | | |
| Approach Delay, s/veh | 32.4 | | | 27.1 | | | 49.6 | | | 50.9 | | |
| Approach LOS | C | | | C | | | D | | | D | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 15.4 | 50.7 | 11.3 | 42.7 | 10.0 | 56.1 | 22.0 | 31.9 | | | | |
| Change Period (Y+Rc), s | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | | | | |
| Max Green Setting (Gmax), s | 10.5 | 37.5 | 9.5 | 40.5 | 9.5 | 38.5 | 16.5 | 33.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 9.8 | 28.2 | 5.8 | 20.1 | 4.8 | 16.9 | 16.9 | 23.0 | | | | |
| Green Ext Time (p_c), s | 0.0 | 7.9 | 0.1 | 3.8 | 0.0 | 7.5 | 0.0 | 3.5 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | 39.3 | | | | | | | | | | | |
| HCM 6th LOS | D | | | | | | | | | | | |

| Intersection | | | | | | | | | | | | |
|--------------------------|--------|------|--------|-------|------|--------|------|------|--------|------|------|-------|
| Int Delay, s/veh | 0.1 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↑↑↑↓ | | | ↑↑↑ | | | ↗ | | | ↗ | | |
| Traffic Vol, veh/h | 0 | 1847 | 14 | 0 | 864 | 38 | 0 | 0 | 4 | 0 | 0 | 12 |
| Future Vol, veh/h | 0 | 1847 | 14 | 0 | 864 | 38 | 0 | 0 | 4 | 0 | 0 | 12 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | Free | - | - | Free | - | - | Yield | - | - | Yield |
| Storage Length | - | - | - | - | - | 100 | - | - | 0 | - | - | 0 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 1924 | 15 | 0 | 900 | 40 | 0 | 0 | 4 | 0 | 0 | 13 |
| | | | | | | | | | | | | |
| Major/Minor | Major1 | | Major2 | | | Minor1 | | | Minor2 | | | |
| Conflicting Flow All | - | 0 | - | - | - | 0 | - | - | 962 | - | - | 450 |
| Stage 1 | - | - | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - | - | - | - | - | - | - |
| Critical Hdwy | - | - | - | - | - | - | - | - | 7.14 | - | - | 7.14 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | - | - | - | - | - | - |
| Follow-up Hdwy | - | - | - | - | - | - | - | - | 3.92 | - | - | 3.92 |
| Pot Cap-1 Maneuver | 0 | - | 0 | 0 | - | 0 | 0 | 0 | 220 | 0 | 0 | 476 |
| Stage 1 | 0 | - | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 | - |
| Stage 2 | 0 | - | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 | - |
| Platoon blocked, % | - | | - | | | | | | | | | |
| Mov Cap-1 Maneuver | - | - | - | - | - | - | - | - | 220 | - | - | 476 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | - | - | - | - | - | - |
| Stage 1 | - | - | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Approach | EB | | WB | | | NB | | | SB | | | |
| HCM Control Delay, s | 0 | | 0 | | | 21.7 | | | 12.8 | | | |
| HCM LOS | | | | | | C | | | B | | | |
| | | | | | | | | | | | | |
| Minor Lane/Major Mvmt | NBLn1 | EBT | WBT | SBLn1 | | | | | | | | |
| Capacity (veh/h) | 220 | - | - | 476 | | | | | | | | |
| HCM Lane V/C Ratio | 0.019 | - | - | 0.026 | | | | | | | | |
| HCM Control Delay (s) | 21.7 | - | - | 12.8 | | | | | | | | |
| HCM Lane LOS | C | - | - | B | | | | | | | | |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0.1 | | | | | | | | |

| Intersection | | | | | | |
|--------------------------|---|----------|---|-------|-------|---|
| Int Delay, s/veh | 3.1 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  | | |  |
| Traffic Vol, veh/h | 11 | 11 | 33 | 6 | 4 | 6 |
| Future Vol, veh/h | 11 | 11 | 33 | 6 | 4 | 6 |
| 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 | 84 | 84 | 84 | 84 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 13 | 13 | 39 | 7 | 5 | 7 |
| Major/Minor | Minor1 | Major1 | Major2 | | | |
| Conflicting Flow All | 60 | 43 | 0 | 0 | 46 | 0 |
| Stage 1 | 43 | - | - | - | - | - |
| Stage 2 | 17 | - | - | - | - | - |
| 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 | 947 | 1027 | - | - | 1562 | - |
| Stage 1 | 979 | - | - | - | - | - |
| Stage 2 | 1006 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 944 | 1027 | - | - | 1562 | - |
| Mov Cap-2 Maneuver | 944 | - | - | - | - | - |
| Stage 1 | 979 | - | - | - | - | - |
| Stage 2 | 1003 | - | - | - | - | - |
| Approach | WB | NB | | SB | | |
| HCM Control Delay, s | 8.8 | 0 | | 2.9 | | |
| HCM LOS | A | | | | | |
| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT | | |
| Capacity (veh/h) | - | - | 984 | 1562 | - | |
| HCM Lane V/C Ratio | - | - | 0.027 | 0.003 | - | |
| HCM Control Delay (s) | - | - | 8.8 | 7.3 | 0 | |
| HCM Lane LOS | - | - | A | A | A | |
| HCM 95th %tile Q(veh) | - | - | 0.1 | 0 | - | |

| Intersection | |
|---------------------------|---|
| Intersection Delay, s/veh | 7 |
| Intersection LOS | A |

























| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 10 | 0 | 0 | 13 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Future Vol, veh/h | 0 | 10 | 0 | 0 | 13 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Peak Hour Factor | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 14 | 0 | 0 | 19 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|----------------------------|----|----|----|-----|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 7 | 7 | 0 | 6.4 |
| HCM LOS | A | A | - | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|------------------------|-------|-------|-------|-------|
| Vol Left, % | 0% | 0% | 0% | 0% |
| Vol Thru, % | 100% | 100% | 93% | 0% |
| Vol Right, % | 0% | 0% | 7% | 100% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 0 | 10 | 14 | 1 |
| LT Vol | 0 | 0 | 0 | 0 |
| Through Vol | 0 | 10 | 13 | 0 |
| RT Vol | 0 | 0 | 1 | 1 |
| Lane Flow Rate | 0 | 14 | 20 | 1 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0 | 0.016 | 0.022 | 0.001 |
| Departure Headway (Hd) | 3.995 | 3.951 | 3.904 | 3.394 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 0 | 911 | 922 | 1056 |
| Service Time | 2.009 | 1.954 | 1.906 | 1.408 |
| HCM Lane V/C Ratio | 0 | 0.015 | 0.022 | 0.001 |
| HCM Control Delay | 7 | 7 | 7 | 6.4 |
| HCM Lane LOS | N | A | A | A |
| HCM 95th-tile Q | 0 | 0 | 0.1 | 0 |

Timings
1: Atlanta Rd & Windy Hill Rd

1b. Existing PM 2024
09/17/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 85 | 968 | 201 | 317 | 1200 | 383 | 203 | 575 | 108 | 328 | 673 | 91 |
| Future Volume (vph) | 85 | 968 | 201 | 317 | 1200 | 383 | 203 | 575 | 108 | 328 | 673 | 91 |
| Lane Group Flow (vph) | 89 | 1019 | 212 | 334 | 1263 | 403 | 214 | 605 | 114 | 345 | 708 | 96 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 2 | | 2 | 6 | | 6 | | | 8 | | | 4 |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 15.0 | 15.0 | 5.0 | 15.0 | 15.0 | 5.0 | 6.0 | 6.0 | 5.0 | 6.0 | 6.0 |
| Minimum Split (s) | 15.0 | 32.5 | 32.5 | 15.0 | 32.5 | 32.5 | 15.0 | 38.5 | 38.5 | 15.0 | 36.5 | 36.5 |
| Total Split (s) | 15.0 | 35.0 | 35.0 | 28.0 | 48.0 | 48.0 | 18.0 | 39.0 | 39.0 | 18.0 | 39.0 | 39.0 |
| Total Split (%) | 12.5% | 29.2% | 29.2% | 23.3% | 40.0% | 40.0% | 15.0% | 32.5% | 32.5% | 15.0% | 32.5% | 32.5% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 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 | 2.0 | 2.0 | 2.0 |
| 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 | 0.0 |
| Total Lost Time (s) | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Min | C-Min | None | C-Min | C-Min | None | None | None | None | None | None |
| v/c Ratio | 0.48 | 0.67 | 0.36 | 0.85 | 0.88 | 0.49 | 0.65 | 0.72 | 0.22 | 0.97 | 0.81 | 0.18 |
| Control Delay | 30.1 | 41.2 | 9.9 | 48.7 | 43.3 | 9.8 | 61.6 | 46.5 | 1.9 | 93.6 | 50.4 | 0.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 30.1 | 41.2 | 9.9 | 48.7 | 43.3 | 9.8 | 61.6 | 46.5 | 1.9 | 93.6 | 50.4 | 0.8 |
| Queue Length 50th (ft) | 35 | 271 | 18 | 185 | 488 | 49 | 82 | 222 | 0 | 139 | 269 | 0 |
| Queue Length 95th (ft) | 77 | 328 | 84 | #348 | #680 | 144 | 124 | 277 | 9 | #234 | 330 | 0 |
| Internal Link Dist (ft) | | 601 | | | 116 | | | 1138 | | | 947 | |
| Turn Bay Length (ft) | 165 | | 175 | | | | 485 | | 245 | 445 | | 235 |
| Base Capacity (vph) | 203 | 1511 | 597 | 414 | 1430 | 824 | 357 | 987 | 566 | 357 | 987 | 566 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.44 | 0.67 | 0.36 | 0.81 | 0.88 | 0.49 | 0.60 | 0.61 | 0.20 | 0.97 | 0.72 | 0.17 |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

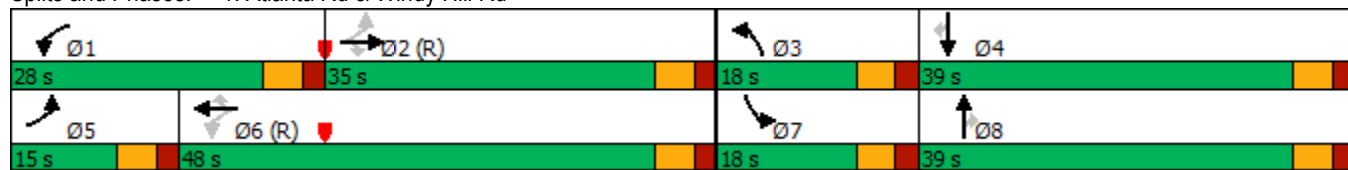
Natural Cycle: 115

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Atlanta Rd & Windy Hill Rd


































HCM 6th Signalized Intersection Summary




1: Atlanta Rd & Windy Hill Rd

1b. Existing PM 2024

09/17/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|--|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |    |  |  |   |  |   |   |  |   |   |  |
| Traffic Volume (veh/h) | 85 | 968 | 201 | 317 | 1200 | 383 | 203 | 575 | 108 | 328 | 673 | 91 |
| Future Volume (veh/h) | 85 | 968 | 201 | 317 | 1200 | 383 | 203 | 575 | 108 | 328 | 673 | 91 |
| 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 | 89 | 1019 | 212 | 334 | 1263 | 403 | 214 | 605 | 114 | 345 | 708 | 0 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 189 | 1911 | 593 | 394 | 1638 | 731 | 273 | 733 | 327 | 360 | 822 | |
| Arrive On Green | 0.05 | 0.37 | 0.37 | 0.13 | 0.46 | 0.46 | 0.08 | 0.21 | 0.21 | 0.10 | 0.23 | 0.00 |
| Sat Flow, veh/h | 1781 | 5106 | 1585 | 1781 | 3554 | 1585 | 3456 | 3554 | 1585 | 3456 | 3554 | 1585 |
| Grp Volume(v), veh/h | 89 | 1019 | 212 | 334 | 1263 | 403 | 214 | 605 | 114 | 345 | 708 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1702 | 1585 | 1781 | 1777 | 1585 | 1728 | 1777 | 1585 | 1728 | 1777 | 1585 |
| Q Serve(g_s), s | 3.7 | 18.7 | 11.6 | 13.2 | 35.7 | 22.1 | 7.3 | 19.5 | 7.4 | 11.9 | 22.9 | 0.0 |
| Cycle Q Clear(g_c), s | 3.7 | 18.7 | 11.6 | 13.2 | 35.7 | 22.1 | 7.3 | 19.5 | 7.4 | 11.9 | 22.9 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 189 | 1911 | 593 | 394 | 1638 | 731 | 273 | 733 | 327 | 360 | 822 | |
| V/C Ratio(X) | 0.47 | 0.53 | 0.36 | 0.85 | 0.77 | 0.55 | 0.78 | 0.83 | 0.35 | 0.96 | 0.86 | |
| Avail Cap(c_a), veh/h | 250 | 1911 | 593 | 493 | 1638 | 731 | 360 | 992 | 442 | 360 | 992 | |
| 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 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 25.1 | 29.4 | 27.1 | 22.1 | 27.0 | 23.4 | 54.2 | 45.6 | 40.7 | 53.5 | 44.3 | 0.0 |
| Incr Delay (d2), s/veh | 1.8 | 1.1 | 1.7 | 10.9 | 3.6 | 3.0 | 8.0 | 4.3 | 0.6 | 36.5 | 6.7 | 0.0 |
| 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(50%),veh/ln | 1.6 | 7.8 | 4.5 | 6.5 | 15.6 | 8.4 | 3.4 | 8.8 | 2.9 | 6.9 | 10.5 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 26.9 | 30.4 | 28.8 | 33.0 | 30.6 | 26.4 | 62.3 | 49.8 | 41.4 | 90.0 | 51.0 | 0.0 |
| LnGrp LOS | C | C | C | C | C | C | E | D | D | F | D | |
| Approach Vol, veh/h | | 1320 | | | 2000 | | | 933 | | | 1053 | |
| Approach Delay, s/veh | | 29.9 | | | 30.2 | | | 51.6 | | | 63.8 | |
| Approach LOS | | C | | | C | | | D | | | E | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 21.3 | 50.4 | 15.0 | 33.3 | 10.9 | 60.8 | 18.0 | 30.3 | | | | |
| Change Period (Y+Rc), s | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | | | | |
| Max Green Setting (Gmax), s | 22.5 | 29.5 | 12.5 | 33.5 | 9.5 | 42.5 | 12.5 | 33.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 15.2 | 20.7 | 9.3 | 24.9 | 5.7 | 37.7 | 13.9 | 21.5 | | | | |
| Green Ext Time (p_c), s | 0.6 | 6.7 | 0.2 | 2.8 | 0.1 | 4.4 | 0.0 | 3.2 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | 40.6 | | | | | | | | | |
| HCM 6th LOS | | | D | | | | | | | | | |
| Notes | | | | | | | | | | | | |
| Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay. | | | | | | | | | | | | |

| Intersection | | | | | | | | | | | | |
|--------------------------|--------|------|--------|-------|------|--------|------|------|--------|------|------|-------|
| Int Delay, s/veh | 0.1 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↑↑↑↱ | | | ↑↑↑↱ | | | ↱ | | | ↱ | | |
| Traffic Vol, veh/h | 0 | 1384 | 23 | 0 | 1885 | 20 | 0 | 0 | 5 | 0 | 0 | 12 |
| Future Vol, veh/h | 0 | 1384 | 23 | 0 | 1885 | 20 | 0 | 0 | 5 | 0 | 0 | 12 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | Free | - | - | Free | - | - | Yield | - | - | Yield |
| Storage Length | - | - | - | - | - | 100 | - | - | 0 | - | - | 0 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 1457 | 24 | 0 | 1984 | 21 | 0 | 0 | 5 | 0 | 0 | 13 |
| | | | | | | | | | | | | |
| Major/Minor | Major1 | | Major2 | | | Minor1 | | | Minor2 | | | |
| Conflicting Flow All | - | 0 | - | - | - | 0 | - | - | 729 | - | - | 992 |
| Stage 1 | - | - | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - | - | - | - | - | - | - |
| Critical Hdwy | - | - | - | - | - | - | - | - | 7.14 | - | - | 7.14 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | - | - | - | - | - | - |
| Follow-up Hdwy | - | - | - | - | - | - | - | - | 3.92 | - | - | 3.92 |
| Pot Cap-1 Maneuver | 0 | - | 0 | 0 | - | 0 | 0 | 0 | 313 | 0 | 0 | 210 |
| Stage 1 | 0 | - | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 | - |
| Stage 2 | 0 | - | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 | - |
| Platoon blocked, % | - | | - | | | | | | | | | |
| Mov Cap-1 Maneuver | - | - | - | - | - | - | - | - | 313 | - | - | 210 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | - | - | - | - | - | - |
| Stage 1 | - | - | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Approach | EB | | WB | | | NB | | | SB | | | |
| HCM Control Delay, s | 0 | | 0 | | | 16.7 | | | 23.2 | | | |
| HCM LOS | | | | | | C | | | C | | | |
| | | | | | | | | | | | | |
| Minor Lane/Major Mvmt | NBLn1 | EBT | WBT | SBLn1 | | | | | | | | |
| Capacity (veh/h) | 313 | | - | - | 210 | | | | | | | |
| HCM Lane V/C Ratio | 0.017 | | - | - | 0.06 | | | | | | | |
| HCM Control Delay (s) | 16.7 | | - | - | 23.2 | | | | | | | |
| HCM Lane LOS | C | | - | - | C | | | | | | | |
| HCM 95th %tile Q(veh) | 0.1 | | - | - | 0.2 | | | | | | | |

| Intersection | | | | | | |
|--------------------------|---|----------|---|-------|-------|---|
| Int Delay, s/veh | 1.9 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  | | |  |
| Traffic Vol, veh/h | 6 | 2 | 15 | 3 | 3 | 18 |
| Future Vol, veh/h | 6 | 2 | 15 | 3 | 3 | 18 |
| 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 | 73 | 73 | 73 | 73 | 73 | 73 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 8 | 3 | 21 | 4 | 4 | 25 |
| Major/Minor | Minor1 | Major1 | Major2 | | | |
| Conflicting Flow All | 56 | 23 | 0 | 0 | 25 | 0 |
| Stage 1 | 23 | - | - | - | - | - |
| Stage 2 | 33 | - | - | - | - | - |
| 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 | 952 | 1054 | - | - | 1589 | - |
| Stage 1 | 1000 | - | - | - | - | - |
| Stage 2 | 989 | - | - | - | - | - |
| Platoon blocked, % | | | - | - | | - |
| Mov Cap-1 Maneuver | 949 | 1054 | - | - | 1589 | - |
| Mov Cap-2 Maneuver | 949 | - | - | - | - | - |
| Stage 1 | 1000 | - | - | - | - | - |
| Stage 2 | 986 | - | - | - | - | - |
| Approach | WB | NB | SB | | | |
| HCM Control Delay, s | 8.7 | 0 | 1 | | | |
| HCM LOS | A | | | | | |
| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT | | |
| Capacity (veh/h) | - | - | 973 | 1589 | - | |
| HCM Lane V/C Ratio | - | - | 0.011 | 0.003 | - | |
| HCM Control Delay (s) | - | - | 8.7 | 7.3 | 0 | |
| HCM Lane LOS | - | - | A | A | A | |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 | - | |

| Intersection | |
|---------------------------|---|
| Intersection Delay, s/veh | 7 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 5 | 0 | 0 | 8 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| Future Vol, veh/h | 0 | 5 | 0 | 0 | 8 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| Peak Hour Factor | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 8 | 0 | 0 | 13 | 2 | 0 | 0 | 0 | 2 | 0 | 0 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|----------------------------|----|-----|----|-----|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 7 | 6.9 | 0 | 7.2 |
| HCM LOS | A | A | - | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|------------------------|-------|-------|-------|-------|
| Vol Left, % | 0% | 0% | 0% | 100% |
| Vol Thru, % | 100% | 100% | 89% | 0% |
| Vol Right, % | 0% | 0% | 11% | 0% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 0 | 5 | 9 | 1 |
| LT Vol | 0 | 0 | 0 | 1 |
| Through Vol | 0 | 5 | 8 | 0 |
| RT Vol | 0 | 0 | 1 | 0 |
| Lane Flow Rate | 0 | 8 | 15 | 2 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0 | 0.009 | 0.016 | 0.002 |
| Departure Headway (Hd) | 3.974 | 3.947 | 3.875 | 4.173 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 0 | 911 | 928 | 861 |
| Service Time | 1.985 | 1.951 | 1.879 | 2.183 |
| HCM Lane V/C Ratio | 0 | 0.009 | 0.016 | 0.002 |
| HCM Control Delay | 7 | 7 | 6.9 | 7.2 |
| HCM Lane LOS | N | A | A | A |
| HCM 95th-tile Q | 0 | 0 | 0 | 0 |

























FUTURE “NO-BUILD” INTERSECTION ANALYSIS

Timings

1: Atlanta Rd & Windy Hill Rd

2a. No Build AM 2026

09/17/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 66 | 1285 | 194 | 191 | 431 | 271 | 108 | 630 | 192 | 421 | 617 | 37 |
| Future Volume (vph) | 66 | 1285 | 194 | 191 | 431 | 271 | 108 | 630 | 192 | 421 | 617 | 37 |
| Lane Group Flow (vph) | 69 | 1353 | 204 | 201 | 454 | 285 | 114 | 663 | 202 | 443 | 649 | 39 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 2 | | 2 | 6 | | 6 | | | 8 | | | 4 |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 15.0 | 15.0 | 5.0 | 15.0 | 15.0 | 5.0 | 6.0 | 6.0 | 5.0 | 6.0 | 6.0 |
| Minimum Split (s) | 15.0 | 32.5 | 32.5 | 15.0 | 32.5 | 32.5 | 15.0 | 38.5 | 38.5 | 15.0 | 36.5 | 36.5 |
| Total Split (s) | 15.0 | 43.0 | 43.0 | 16.0 | 44.0 | 44.0 | 15.0 | 39.0 | 39.0 | 22.0 | 46.0 | 46.0 |
| Total Split (%) | 12.5% | 35.8% | 35.8% | 13.3% | 36.7% | 36.7% | 12.5% | 32.5% | 32.5% | 18.3% | 38.3% | 38.3% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 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 | 2.0 | 2.0 | 2.0 |
| 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 | 0.0 |
| Total Lost Time (s) | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Min | C-Min | None | C-Min | C-Min | None | None | None | None | None | None |
| v/c Ratio | 0.16 | 0.80 | 0.32 | 0.81 | 0.33 | 0.36 | 0.46 | 0.78 | 0.39 | 0.94 | 0.60 | 0.07 |
| Control Delay | 19.3 | 41.3 | 8.3 | 53.2 | 28.7 | 5.2 | 59.4 | 49.5 | 8.9 | 80.2 | 37.8 | 0.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 19.3 | 41.3 | 8.3 | 53.2 | 28.7 | 5.2 | 59.4 | 49.5 | 8.9 | 80.2 | 37.8 | 0.2 |
| Queue Length 50th (ft) | 28 | 358 | 17 | 102 | 133 | 3 | 44 | 252 | 11 | 177 | 225 | 0 |
| Queue Length 95th (ft) | 59 | 420 | 74 | m#267 | m192 | m62 | 74 | 307 | 69 | #277 | 273 | 0 |
| Internal Link Dist (ft) | | 601 | | | 116 | | | 1138 | | | 947 | |
| Turn Bay Length (ft) | 165 | | 175 | | | | 485 | | 245 | 445 | | 235 |
| Base Capacity (vph) | 444 | 1693 | 642 | 249 | 1390 | 795 | 271 | 987 | 573 | 472 | 1194 | 615 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.16 | 0.80 | 0.32 | 0.81 | 0.33 | 0.36 | 0.42 | 0.67 | 0.35 | 0.94 | 0.54 | 0.06 |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 105

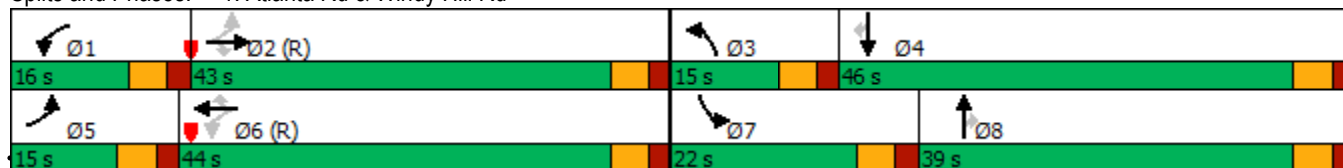
Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Atlanta Rd & Windy Hill Rd



























HCM 6th Signalized Intersection Summary

1: Atlanta Rd & Windy Hill Rd

2a. No Build AM 2026

09/17/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (veh/h) | 66 | 1285 | 194 | 191 | 431 | 271 | 108 | 630 | 192 | 421 | 617 | 37 |
| Future Volume (veh/h) | 66 | 1285 | 194 | 191 | 431 | 271 | 108 | 630 | 192 | 421 | 617 | 37 |
| 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 | 69 | 1353 | 204 | 201 | 454 | 285 | 114 | 663 | 202 | 443 | 649 | 0 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 366 | 1898 | 589 | 258 | 1486 | 663 | 168 | 794 | 354 | 475 | 1110 | |
| Arrive On Green | 0.04 | 0.37 | 0.37 | 0.08 | 0.42 | 0.42 | 0.05 | 0.22 | 0.22 | 0.14 | 0.31 | 0.00 |
| Sat Flow, veh/h | 1781 | 5106 | 1585 | 1781 | 3554 | 1585 | 3456 | 3554 | 1585 | 3456 | 3554 | 1585 |
| Grp Volume(v), veh/h | 69 | 1353 | 204 | 201 | 454 | 285 | 114 | 663 | 202 | 443 | 649 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1702 | 1585 | 1781 | 1777 | 1585 | 1728 | 1777 | 1585 | 1728 | 1777 | 1585 |
| Q Serve(g_s), s | 2.9 | 27.2 | 11.1 | 8.1 | 10.2 | 15.3 | 3.9 | 21.4 | 13.6 | 15.2 | 18.4 | 0.0 |
| Cycle Q Clear(g_c), s | 2.9 | 27.2 | 11.1 | 8.1 | 10.2 | 15.3 | 3.9 | 21.4 | 13.6 | 15.2 | 18.4 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 366 | 1898 | 589 | 258 | 1486 | 663 | 168 | 794 | 354 | 475 | 1110 | |
| V/C Ratio(X) | 0.19 | 0.71 | 0.35 | 0.78 | 0.31 | 0.43 | 0.68 | 0.83 | 0.57 | 0.93 | 0.58 | |
| Avail Cap(c_a), veh/h | 441 | 1898 | 589 | 264 | 1486 | 663 | 274 | 992 | 442 | 475 | 1199 | |
| 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 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 21.9 | 32.2 | 27.2 | 25.8 | 23.3 | 24.8 | 56.1 | 44.5 | 41.5 | 51.2 | 34.7 | 0.0 |
| Incr Delay (d2), s/veh | 0.2 | 2.3 | 1.6 | 13.7 | 0.5 | 2.0 | 4.7 | 5.1 | 1.4 | 25.4 | 0.6 | 0.0 |
| 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(50%),veh/ln | 1.2 | 11.5 | 4.3 | 4.3 | 4.4 | 5.9 | 1.8 | 9.7 | 5.3 | 8.1 | 7.8 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 22.1 | 34.5 | 28.8 | 39.5 | 23.8 | 26.8 | 60.8 | 49.6 | 42.9 | 76.6 | 35.4 | 0.0 |
| LnGrp LOS | C | C | C | D | C | C | E | D | D | E | D | |
| Approach Vol, veh/h | 1626 | | | 940 | | | 979 | | | 1092 | | |
| Approach Delay, s/veh | 33.3 | | | 28.1 | | | 49.5 | | | 52.1 | | |
| Approach LOS | C | | | C | | | D | | | D | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 15.6 | 50.1 | 11.3 | 43.0 | 10.0 | 55.7 | 22.0 | 32.3 | | | | |
| Change Period (Y+Rc), s | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | | | | |
| Max Green Setting (Gmax), s | 10.5 | 37.5 | 9.5 | 40.5 | 9.5 | 38.5 | 16.5 | 33.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 10.1 | 29.2 | 5.9 | 20.4 | 4.9 | 17.3 | 17.2 | 23.4 | | | | |
| Green Ext Time (p_c), s | 0.0 | 7.2 | 0.1 | 3.9 | 0.0 | 7.6 | 0.0 | 3.5 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | 40.1 | | | | | | | | | | | |
| HCM 6th LOS | D | | | | | | | | | | | |

Notes




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

| Intersection | | | | | | | | | | | | |
|--------------------------|------|------|------|------|------|------|------|------|-------|------|------|-------|
| Int Delay, s/veh | 0.1 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | | ↑↑↑ | | | ↑↑↑ | ↑ | | | ↑ | | | ↑ |
| Traffic Vol, veh/h | 0 | 1884 | 14 | 0 | 881 | 39 | 0 | 0 | 4 | 0 | 0 | 12 |
| Future Vol, veh/h | 0 | 1884 | 14 | 0 | 881 | 39 | 0 | 0 | 4 | 0 | 0 | 12 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | Free | - | - | Free | - | - | Yield | - | - | Yield |
| Storage Length | - | - | - | - | - | 100 | - | - | 0 | - | - | 0 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 | 96 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 1963 | 15 | 0 | 918 | 41 | 0 | 0 | 4 | 0 | 0 | 13 |

| Major/Minor | Major1 | | Major2 | | Minor1 | | Minor2 | |
|----------------------|--------|---|--------|---|--------|---|--------|-----|
| Conflicting Flow All | - | 0 | - | - | - | 0 | - | - |
| Stage 1 | - | - | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - | - | - |
| Critical Hdwy | - | - | - | - | - | - | 7.14 | - |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | - | - |
| Follow-up Hdwy | - | - | - | - | - | - | 3.92 | - |
| Pot Cap-1 Maneuver | 0 | - | 0 | 0 | - | 0 | 0 | 213 |
| Stage 1 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| Stage 2 | 0 | - | 0 | 0 | - | 0 | 0 | - |
| Platoon blocked, % | - | - | - | - | - | - | - | - |
| Mov Cap-1 Maneuver | - | - | - | - | - | - | 213 | - |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | - | - |
| Stage 1 | - | - | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - | - | - |

| Approach | EB | WB | NB | SB |
|----------------------|----|----|------|------|
| HCM Control Delay, s | 0 | 0 | 22.2 | 12.9 |
| HCM LOS | | | C | B |

| Minor Lane/Major Mvmt | NBLn1 | EBT | WBT | SBLn1 |
|-----------------------|-------|-----|-----|-------|
| Capacity (veh/h) | 213 | - | - | 470 |
| HCM Lane V/C Ratio | 0.02 | - | - | 0.027 |
| HCM Control Delay (s) | 22.2 | - | - | 12.9 |
| HCM Lane LOS | C | - | - | B |
| HCM 95th %tile Q(veh) | 0.1 | - | - | 0.1 |

| Intersection | | | | | | |
|--------------------------|---|------|---|------|------|---|
| Int Delay, s/veh | 3.1 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  | | |  |
| Traffic Vol, veh/h | 11 | 11 | 34 | 6 | 4 | 6 |
| Future Vol, veh/h | 11 | 11 | 34 | 6 | 4 | 6 |
| 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 | 84 | 84 | 84 | 84 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 13 | 13 | 40 | 7 | 5 | 7 |

| Major/Minor | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 61 | 44 | 0 |
| Stage 1 | 44 | - | - |
| Stage 2 | 17 | - | - |
| Critical Hdwy | 6.42 | 6.22 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - |
| Pot Cap-1 Maneuver | 945 | 1026 | - |
| Stage 1 | 978 | - | - |
| Stage 2 | 1006 | - | - |
| Platoon blocked, % | | - | - |
| Mov Cap-1 Maneuver | 942 | 1026 | - |
| Mov Cap-2 Maneuver | 942 | - | - |
| Stage 1 | 978 | - | - |
| Stage 2 | 1003 | - | - |

| Approach | WB | NB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 8.8 | 0 | 2.9 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 982 | 1560 |
| HCM Lane V/C Ratio | - | - | 0.027 | 0.003 |
| HCM Control Delay (s) | - | - | 8.8 | 7.3 |
| HCM Lane LOS | - | - | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.1 | 0 |

| Intersection | |
|---------------------------|---|
| Intersection Delay, s/veh | 7 |
| Intersection LOS | A |

























| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 10 | 0 | 0 | 13 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Future Vol, veh/h | 0 | 10 | 0 | 0 | 13 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Peak Hour Factor | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 14 | 0 | 0 | 19 | 1 | 0 | 0 | 0 | 0 | 0 | 1 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|----------------------------|----|----|----|-----|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 7 | 7 | 0 | 6.4 |
| HCM LOS | A | A | - | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|------------------------|-------|-------|-------|-------|
| Vol Left, % | 0% | 0% | 0% | 0% |
| Vol Thru, % | 100% | 100% | 93% | 0% |
| Vol Right, % | 0% | 0% | 7% | 100% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 0 | 10 | 14 | 1 |
| LT Vol | 0 | 0 | 0 | 0 |
| Through Vol | 0 | 10 | 13 | 0 |
| RT Vol | 0 | 0 | 1 | 1 |
| Lane Flow Rate | 0 | 14 | 20 | 1 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0 | 0.016 | 0.022 | 0.001 |
| Departure Headway (Hd) | 3.995 | 3.951 | 3.904 | 3.394 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 0 | 911 | 922 | 1056 |
| Service Time | 2.009 | 1.954 | 1.906 | 1.408 |
| HCM Lane V/C Ratio | 0 | 0.015 | 0.022 | 0.001 |
| HCM Control Delay | 7 | 7 | 7 | 6.4 |
| HCM Lane LOS | N | A | A | A |
| HCM 95th-tile Q | 0 | 0 | 0.1 | 0 |

Timings
1: Atlanta Rd & Windy Hill Rd

2b. No Build PM 2026
09/17/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 87 | 987 | 205 | 323 | 1224 | 391 | 207 | 587 | 110 | 335 | 686 | 93 |
| Future Volume (vph) | 87 | 987 | 205 | 323 | 1224 | 391 | 207 | 587 | 110 | 335 | 686 | 93 |
| Lane Group Flow (vph) | 92 | 1039 | 216 | 340 | 1288 | 412 | 218 | 618 | 116 | 353 | 722 | 98 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 2 | | 2 | 6 | | 6 | | | 8 | | | 4 |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 15.0 | 15.0 | 5.0 | 15.0 | 15.0 | 5.0 | 6.0 | 6.0 | 5.0 | 6.0 | 6.0 |
| Minimum Split (s) | 15.0 | 32.5 | 32.5 | 15.0 | 32.5 | 32.5 | 15.0 | 38.5 | 38.5 | 15.0 | 36.5 | 36.5 |
| Total Split (s) | 15.0 | 35.0 | 35.0 | 28.0 | 48.0 | 48.0 | 15.0 | 39.0 | 39.0 | 18.0 | 42.0 | 42.0 |
| Total Split (%) | 12.5% | 29.2% | 29.2% | 23.3% | 40.0% | 40.0% | 12.5% | 32.5% | 32.5% | 15.0% | 35.0% | 35.0% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 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 | 2.0 | 2.0 | 2.0 |
| 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 | 0.0 |
| Total Lost Time (s) | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Min | C-Min | None | C-Min | C-Min | None | None | None | None | None | None |
| v/c Ratio | 0.50 | 0.69 | 0.36 | 0.85 | 0.89 | 0.50 | 0.80 | 0.75 | 0.23 | 0.99 | 0.79 | 0.18 |
| Control Delay | 30.6 | 41.3 | 10.3 | 49.0 | 42.9 | 10.6 | 76.5 | 48.6 | 2.1 | 98.8 | 48.2 | 0.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 30.6 | 41.3 | 10.3 | 49.0 | 42.9 | 10.6 | 76.5 | 48.6 | 2.1 | 98.8 | 48.2 | 0.8 |
| Queue Length 50th (ft) | 35 | 271 | 21 | 189 | 484 | 57 | 87 | 234 | 0 | 142 | 274 | 0 |
| Queue Length 95th (ft) | 80 | 336 | 88 | #361 | #702 | 162 | #149 | 283 | 11 | #241 | 325 | 0 |
| Internal Link Dist (ft) | | 601 | | | 116 | | | 1138 | | | 947 | |
| Turn Bay Length (ft) | 165 | | 175 | | | | 485 | | 245 | 445 | | 235 |
| Base Capacity (vph) | 203 | 1516 | 598 | 418 | 1453 | 826 | 271 | 987 | 566 | 357 | 1076 | 601 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.45 | 0.69 | 0.36 | 0.81 | 0.89 | 0.50 | 0.80 | 0.63 | 0.20 | 0.99 | 0.67 | 0.16 |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

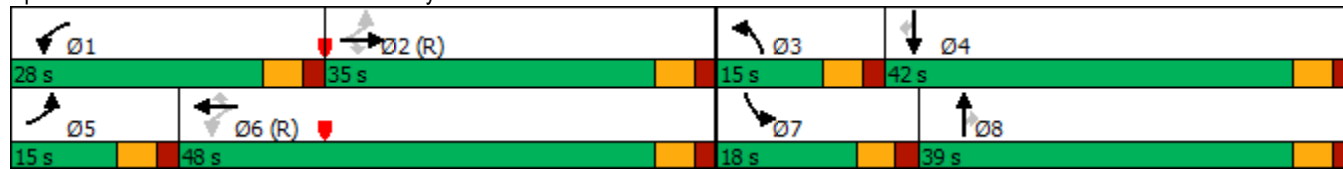
Natural Cycle: 115

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Atlanta Rd & Windy Hill Rd

































HCM 6th Signalized Intersection Summary

1: Atlanta Rd & Windy Hill Rd

2b. No Build PM 2026

09/17/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |    |  |  |   |  |   |   |  |   |   | |
| Traffic Volume (veh/h) | 87 | 987 | 205 | 323 | 1224 | 391 | 207 | 587 | 110 | 335 | 686 | 93 |
| Future Volume (veh/h) | 87 | 987 | 205 | 323 | 1224 | 391 | 207 | 587 | 110 | 335 | 686 | 93 |
| 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 | 92 | 1039 | 216 | 340 | 1288 | 412 | 218 | 618 | 116 | 353 | 722 | 0 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 184 | 1853 | 575 | 391 | 1606 | 716 | 272 | 759 | 339 | 360 | 849 | |
| Arrive On Green | 0.05 | 0.36 | 0.36 | 0.14 | 0.45 | 0.45 | 0.08 | 0.21 | 0.21 | 0.10 | 0.24 | 0.00 |
| Sat Flow, veh/h | 1781 | 5106 | 1585 | 1781 | 3554 | 1585 | 3456 | 3554 | 1585 | 3456 | 3554 | 1585 |
| Grp Volume(v), veh/h | 92 | 1039 | 216 | 340 | 1288 | 412 | 218 | 618 | 116 | 353 | 722 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1702 | 1585 | 1781 | 1777 | 1585 | 1728 | 1777 | 1585 | 1728 | 1777 | 1585 |
| Q Serve(g_s), s | 3.9 | 19.5 | 12.1 | 13.7 | 37.4 | 23.1 | 7.4 | 19.9 | 7.5 | 12.2 | 23.3 | 0.0 |
| Cycle Q Clear(g_c), s | 3.9 | 19.5 | 12.1 | 13.7 | 37.4 | 23.1 | 7.4 | 19.9 | 7.5 | 12.2 | 23.3 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 184 | 1853 | 575 | 391 | 1606 | 716 | 272 | 759 | 339 | 360 | 849 | |
| V/C Ratio(X) | 0.50 | 0.56 | 0.38 | 0.87 | 0.80 | 0.58 | 0.80 | 0.81 | 0.34 | 0.98 | 0.85 | |
| Avail Cap(c_a), veh/h | 242 | 1853 | 575 | 483 | 1606 | 716 | 274 | 992 | 442 | 360 | 1081 | |
| 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 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 26.4 | 30.6 | 28.2 | 22.9 | 28.3 | 24.4 | 54.4 | 44.9 | 40.0 | 53.6 | 43.6 | 0.0 |
| Incr Delay (d2), s/veh | 2.1 | 1.2 | 1.9 | 13.4 | 4.3 | 3.3 | 15.5 | 4.1 | 0.6 | 42.1 | 5.3 | 0.0 |
| 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(50%),veh/ln | 1.7 | 8.2 | 4.7 | 7.0 | 16.5 | 8.9 | 3.7 | 8.9 | 0.1 | 7.3 | 10.5 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 28.5 | 31.8 | 30.1 | 36.4 | 32.6 | 27.7 | 69.9 | 49.0 | 40.6 | 95.7 | 48.9 | 0.0 |
| LnGrp LOS | C | C | C | D | C | C | E | D | D | F | D | |
| Approach Vol, veh/h | 1347 | | | | 2040 | | | | 952 | | 1075 | |
| Approach Delay, s/veh | 31.3 | | | | 32.2 | | | | 52.8 | | 64.3 | |
| Approach LOS | C | | | | C | | | | D | | E | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 21.8 | 49.0 | 14.9 | 34.2 | 11.1 | 59.7 | 18.0 | 31.1 | | | | |
| Change Period (Y+Rc), s | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | | | | |
| Max Green Setting (Gmax), s | 22.5 | 29.5 | 9.5 | 36.5 | 9.5 | 42.5 | 12.5 | 33.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 15.7 | 21.5 | 9.4 | 25.3 | 5.9 | 39.4 | 14.2 | 21.9 | | | | |
| Green Ext Time (p_c), s | 0.6 | 6.2 | 0.0 | 3.4 | 0.1 | 2.9 | 0.0 | 3.2 | | | | |

Intersection Summary




HCM 6th Ctrl Delay 42.0

HCM 6th LOS D

Notes

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

| Intersection | | | | | | | | | | | | |
|--------------------------|--------|------|--------|-------|-------|--------|------|------|--------|------|------|-------|
| Int Delay, s/veh | 0.1 | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | ↑↑↑↱ | | | ↑↑↑↱ | | | ↱ | | | ↱ | | |
| Traffic Vol, veh/h | 0 | 1412 | 23 | 0 | 1923 | 20 | 0 | 0 | 5 | 0 | 0 | 12 |
| Future Vol, veh/h | 0 | 1412 | 23 | 0 | 1923 | 20 | 0 | 0 | 5 | 0 | 0 | 12 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop | Stop | Stop | Stop | Stop |
| RT Channelized | - | - | Free | - | - | Free | - | - | Yield | - | - | Yield |
| Storage Length | - | - | - | - | - | 100 | - | - | 0 | - | - | 0 |
| Veh in Median Storage, # | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Grade, % | - | 0 | - | - | 0 | - | - | 0 | - | - | 0 | - |
| Peak Hour Factor | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 1486 | 24 | 0 | 2024 | 21 | 0 | 0 | 5 | 0 | 0 | 13 |
| | | | | | | | | | | | | |
| Major/Minor | Major1 | | Major2 | | | Minor1 | | | Minor2 | | | |
| Conflicting Flow All | - | 0 | - | - | - | 0 | - | - | 743 | - | - | 1012 |
| Stage 1 | - | - | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - | - | - | - | - | - | - |
| Critical Hdwy | - | - | - | - | - | - | - | - | 7.14 | - | - | 7.14 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | - | - | - | - | - | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | - | - | - | - | - | - |
| Follow-up Hdwy | - | - | - | - | - | - | - | - | 3.92 | - | - | 3.92 |
| Pot Cap-1 Maneuver | 0 | - | 0 | 0 | - | 0 | 0 | 0 | 307 | 0 | 0 | 204 |
| Stage 1 | 0 | - | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 | - |
| Stage 2 | 0 | - | 0 | 0 | - | 0 | 0 | 0 | - | 0 | 0 | - |
| Platoon blocked, % | - | | - | | | | | | | | | |
| Mov Cap-1 Maneuver | - | - | - | - | - | - | - | - | 307 | - | - | 204 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | - | - | - | - | - | - |
| Stage 1 | - | - | - | - | - | - | - | - | - | - | - | - |
| Stage 2 | - | - | - | - | - | - | - | - | - | - | - | - |
| | | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Approach | EB | | WB | | | NB | | | SB | | | |
| HCM Control Delay, s | 0 | | 0 | | | 16.9 | | | 23.8 | | | |
| HCM LOS | | | | | | C | | | C | | | |
| | | | | | | | | | | | | |
| Minor Lane/Major Mvmt | NBLn1 | EBT | WBT | SBLn1 | | | | | | | | |
| Capacity (veh/h) | 307 | | - | - | 204 | | | | | | | |
| HCM Lane V/C Ratio | 0.017 | | - | - | 0.062 | | | | | | | |
| HCM Control Delay (s) | 16.9 | | - | - | 23.8 | | | | | | | |
| HCM Lane LOS | C | | - | - | C | | | | | | | |
| HCM 95th %tile Q(veh) | 0.1 | | - | - | 0.2 | | | | | | | |

| Intersection | | | | | | |
|--------------------------|---|------|---|------|------|---|
| Int Delay, s/veh | 1.9 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  | | |  |
| Traffic Vol, veh/h | 6 | 2 | 15 | 3 | 3 | 18 |
| Future Vol, veh/h | 6 | 2 | 15 | 3 | 3 | 18 |
| 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 | 73 | 73 | 73 | 73 | 73 | 73 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 8 | 3 | 21 | 4 | 4 | 25 |

| Major/Minor | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 56 | 23 | 0 |
| Stage 1 | 23 | - | - |
| Stage 2 | 33 | - | - |
| Critical Hdwy | 6.42 | 6.22 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - |
| Pot Cap-1 Maneuver | 952 | 1054 | - |
| Stage 1 | 1000 | - | - |
| Stage 2 | 989 | - | - |
| Platoon blocked, % | | - | - |
| Mov Cap-1 Maneuver | 949 | 1054 | - |
| Mov Cap-2 Maneuver | 949 | - | - |
| Stage 1 | 1000 | - | - |
| Stage 2 | 986 | - | - |

| Approach | WB | NB | SB |
|----------------------|-----|----|----|
| HCM Control Delay, s | 8.7 | 0 | 1 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 973 | 1589 |
| HCM Lane V/C Ratio | - | - | 0.011 | 0.003 |
| HCM Control Delay (s) | - | - | 8.7 | 7.3 |
| HCM Lane LOS | - | - | A | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 |

| Intersection | |
|---------------------------|---|
| Intersection Delay, s/veh | 7 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 5 | 0 | 0 | 8 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| Future Vol, veh/h | 0 | 5 | 0 | 0 | 8 | 1 | 0 | 0 | 0 | 1 | 0 | 0 |
| Peak Hour Factor | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 8 | 0 | 0 | 13 | 2 | 0 | 0 | 0 | 2 | 0 | 0 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
































| Approach | EB | WB | NB | SB |
|----------------------------|----|-----|----|-----|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 7 | 6.9 | 0 | 7.2 |
| HCM LOS | A | A | - | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|------------------------|-------|-------|-------|-------|
| Vol Left, % | 0% | 0% | 0% | 100% |
| Vol Thru, % | 100% | 100% | 89% | 0% |
| Vol Right, % | 0% | 0% | 11% | 0% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 0 | 5 | 9 | 1 |
| LT Vol | 0 | 0 | 0 | 1 |
| Through Vol | 0 | 5 | 8 | 0 |
| RT Vol | 0 | 0 | 1 | 0 |
| Lane Flow Rate | 0 | 8 | 15 | 2 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0 | 0.009 | 0.016 | 0.002 |
| Departure Headway (Hd) | 3.974 | 3.947 | 3.875 | 4.173 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 0 | 911 | 928 | 861 |
| Service Time | 1.985 | 1.951 | 1.879 | 2.183 |
| HCM Lane V/C Ratio | 0 | 0.009 | 0.016 | 0.002 |
| HCM Control Delay | 7 | 7 | 6.9 | 7.2 |
| HCM Lane LOS | N | A | A | A |
| HCM 95th-tile Q | 0 | 0 | 0 | 0 |

FUTURE “BUILD” INTERSECTION ANALYSIS

Timings
1: Atlanta Rd & Windy Hill Rd

3a. Build AM 2026
10/07/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |    |  |  |   |  |   |   |  |   |   |  |
| Traffic Volume (vph) | 66 | 1298 | 194 | 207 | 451 | 282 | 108 | 630 | 205 | 430 | 617 | 37 |
| Future Volume (vph) | 66 | 1298 | 194 | 207 | 451 | 282 | 108 | 630 | 205 | 430 | 617 | 37 |
| Lane Group Flow (vph) | 69 | 1366 | 204 | 218 | 475 | 297 | 114 | 663 | 216 | 453 | 649 | 39 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 2 | | 2 | 6 | | 6 | | | 8 | | | 4 |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 15.0 | 15.0 | 5.0 | 15.0 | 15.0 | 5.0 | 6.0 | 6.0 | 5.0 | 6.0 | 6.0 |
| Minimum Split (s) | 15.0 | 32.5 | 32.5 | 15.0 | 32.5 | 32.5 | 15.0 | 38.5 | 38.5 | 15.0 | 36.5 | 36.5 |
| Total Split (s) | 15.0 | 43.0 | 43.0 | 16.0 | 44.0 | 44.0 | 15.0 | 39.0 | 39.0 | 22.0 | 46.0 | 46.0 |
| Total Split (%) | 12.5% | 35.8% | 35.8% | 13.3% | 36.7% | 36.7% | 12.5% | 32.5% | 32.5% | 18.3% | 38.3% | 38.3% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 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 | 2.0 | 2.0 | 2.0 |
| 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 | 0.0 |
| Total Lost Time (s) | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Min | C-Min | None | C-Min | C-Min | None | None | None | None | None | None |
| v/c Ratio | 0.17 | 0.84 | 0.33 | 0.81 | 0.34 | 0.37 | 0.46 | 0.78 | 0.42 | 0.96 | 0.60 | 0.07 |
| Control Delay | 19.5 | 43.9 | 8.4 | 67.5 | 23.5 | 2.8 | 59.4 | 49.2 | 10.3 | 84.2 | 37.7 | 0.2 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 19.5 | 43.9 | 8.4 | 67.5 | 23.5 | 2.8 | 59.4 | 49.2 | 10.3 | 84.2 | 37.7 | 0.2 |
| Queue Length 50th (ft) | 28 | 363 | 17 | 126 | 82 | 2 | 44 | 252 | 20 | 181 | 225 | 0 |
| Queue Length 95th (ft) | 59 | 425 | 74 | #307 | 134 | 32 | 74 | 307 | 82 | #286 | 273 | 0 |
| Internal Link Dist (ft) | | 601 | | | 116 | | | 1138 | | | 947 | |
| Turn Bay Length (ft) | 165 | | 175 | | | | 485 | | 245 | 445 | | 235 |
| Base Capacity (vph) | 426 | 1626 | 623 | 270 | 1386 | 800 | 271 | 987 | 573 | 472 | 1194 | 615 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.16 | 0.84 | 0.33 | 0.81 | 0.34 | 0.37 | 0.42 | 0.67 | 0.38 | 0.96 | 0.54 | 0.06 |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

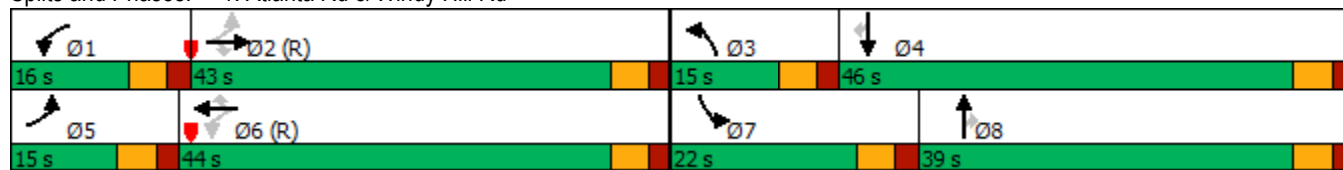
Natural Cycle: 105

Control Type: Actuated-Coordinated

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

Splits and Phases: 1: Atlanta Rd & Windy Hill Rd


































HCM 6th Signalized Intersection Summary

1: Atlanta Rd & Windy Hill Rd

3a. Build AM 2026

10/07/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|------------------------------|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |    |  |  |   |  |   |   |  |   |   |  |
| Traffic Volume (veh/h) | 66 | 1298 | 194 | 207 | 451 | 282 | 108 | 630 | 205 | 430 | 617 | 37 |
| Future Volume (veh/h) | 66 | 1298 | 194 | 207 | 451 | 282 | 108 | 630 | 205 | 430 | 617 | 37 |
| 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 | 69 | 1366 | 204 | 218 | 475 | 297 | 114 | 663 | 216 | 453 | 649 | 0 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 356 | 1878 | 583 | 261 | 1485 | 662 | 168 | 795 | 355 | 475 | 1111 | |
| Arrive On Green | 0.04 | 0.37 | 0.37 | 0.09 | 0.42 | 0.42 | 0.05 | 0.22 | 0.22 | 0.14 | 0.31 | 0.00 |
| Sat Flow, veh/h | 1781 | 5106 | 1585 | 1781 | 3554 | 1585 | 3456 | 3554 | 1585 | 3456 | 3554 | 1585 |
| Grp Volume(v), veh/h | 69 | 1366 | 204 | 218 | 475 | 297 | 114 | 663 | 216 | 453 | 649 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1702 | 1585 | 1781 | 1777 | 1585 | 1728 | 1777 | 1585 | 1728 | 1777 | 1585 |
| Q Serve(g_s), s | 2.9 | 27.7 | 11.2 | 8.8 | 10.8 | 16.1 | 3.9 | 21.4 | 14.7 | 15.6 | 18.4 | 0.0 |
| Cycle Q Clear(g_c), s | 2.9 | 27.7 | 11.2 | 8.8 | 10.8 | 16.1 | 3.9 | 21.4 | 14.7 | 15.6 | 18.4 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 356 | 1878 | 583 | 261 | 1485 | 662 | 168 | 795 | 355 | 475 | 1111 | |
| V/C Ratio(X) | 0.19 | 0.73 | 0.35 | 0.84 | 0.32 | 0.45 | 0.68 | 0.83 | 0.61 | 0.95 | 0.58 | |
| Avail Cap(c_a), veh/h | 430 | 1878 | 583 | 261 | 1485 | 662 | 274 | 992 | 442 | 475 | 1199 | |
| 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 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 22.2 | 32.7 | 27.5 | 26.2 | 23.5 | 25.0 | 56.1 | 44.4 | 41.9 | 51.4 | 34.7 | 0.0 |
| Incr Delay (d2), s/veh | 0.3 | 2.5 | 1.7 | 20.5 | 0.6 | 2.2 | 4.7 | 5.1 | 1.7 | 29.7 | 0.6 | 0.0 |
| 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(50%),veh/ln | 1.2 | 11.7 | 4.4 | 5.1 | 4.6 | 6.2 | 1.8 | 9.7 | 5.7 | 8.5 | 7.8 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 22.4 | 35.2 | 29.2 | 46.7 | 24.0 | 27.2 | 60.8 | 49.5 | 43.5 | 81.1 | 35.3 | 0.0 |
| LnGrp LOS | C | D | C | D | C | C | E | D | D | F | D | |
| Approach Vol, veh/h | 1639 | | | 990 | | | 993 | | | 1102 | | |
| Approach Delay, s/veh | 33.9 | | | 30.0 | | | 49.5 | | | 54.1 | | |
| Approach LOS | C | | | C | | | D | | | D | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 16.0 | 49.6 | 11.3 | 43.0 | 10.0 | 55.6 | 22.0 | 32.4 | | | | |
| Change Period (Y+Rc), s | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | | | | |
| Max Green Setting (Gmax), s | 10.5 | 37.5 | 9.5 | 40.5 | 9.5 | 38.5 | 16.5 | 33.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 10.8 | 29.7 | 5.9 | 20.4 | 4.9 | 18.1 | 17.6 | 23.4 | | | | |
| Green Ext Time (p_c), s | 0.0 | 6.8 | 0.1 | 3.9 | 0.0 | 7.8 | 0.0 | 3.5 | | | | |




Intersection Summary

HCM 6th Ctrl Delay 41.1

HCM 6th LOS D

Notes





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

| Intersection | | | | | | |
|--------------------------|---|------|---|------|------|---|
| Int Delay, s/veh | 1.9 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  | | |  |
| Traffic Vol, veh/h | 4 | 6 | 37 | 6 | 6 | 9 |
| Future Vol, veh/h | 4 | 6 | 37 | 6 | 6 | 9 |
| 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 | 84 | 84 | 84 | 84 | 84 | 84 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 5 | 7 | 44 | 7 | 7 | 11 |

| Major/Minor | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 73 | 48 | 0 |
| Stage 1 | 48 | - | - |
| Stage 2 | 25 | - | - |
| Critical Hdwy | 6.42 | 6.22 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - |
| Pot Cap-1 Maneuver | 931 | 1021 | - |
| Stage 1 | 974 | - | - |
| Stage 2 | 998 | - | - |
| Platoon blocked, % | | - | - |
| Mov Cap-1 Maneuver | 926 | 1021 | - |
| Mov Cap-2 Maneuver | 926 | - | - |
| Stage 1 | 974 | - | - |
| Stage 2 | 993 | - | - |

| Approach | WB | NB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 8.7 | 0 | 2.9 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 981 | 1555 |
| HCM Lane V/C Ratio | - | - | 0.012 | 0.005 |
| HCM Control Delay (s) | - | - | 8.7 | 7.3 |
| HCM Lane LOS | - | - | A | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 |

| Intersection | | | | | | | | | | | | |
|----------------------------|-------|---|-------|-------|---|------|------|---|------|------|---|------|
| Intersection Delay, s/veh | 6.9 | | | | | | | | | | | |
| Intersection LOS | A | | | | | | | | | | | |
| | | | | | | | | | | | | |
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations | |  | | |  | | |  | | |  | |
| Traffic Vol, veh/h | 0 | 10 | 2 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 1 |
| Future Vol, veh/h | 0 | 10 | 2 | 0 | 0 | 1 | 2 | 0 | 0 | 0 | 0 | 1 |
| Peak Hour Factor | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 | 0.69 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 14 | 3 | 0 | 0 | 1 | 3 | 0 | 0 | 0 | 0 | 1 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |
| Approach | EB | | | | WB | | NB | | | | SB | |
| Opposing Approach | WB | | | | EB | | SB | | | | NB | |
| Opposing Lanes | 1 | | | | 1 | | 1 | | | | 1 | |
| Conflicting Approach Left | SB | | | | NB | | EB | | | | WB | |
| Conflicting Lanes Left | 1 | | | | 1 | | 1 | | | | 1 | |
| Conflicting Approach Right | NB | | | | SB | | WB | | | | EB | |
| Conflicting Lanes Right | 1 | | | | 1 | | 1 | | | | 1 | |
| HCM Control Delay | 6.9 | | | | 6.4 | | 7.2 | | | | 6.4 | |
| HCM LOS | A | | | | A | | A | | | | A | |
| | | | | | | | | | | | | |
| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 | | | | | | | | |
| Vol Left, % | 100% | 0% | 0% | 0% | | | | | | | | |
| Vol Thru, % | 0% | 83% | 0% | 0% | | | | | | | | |
| Vol Right, % | 0% | 17% | 100% | 100% | | | | | | | | |
| Sign Control | Stop | Stop | Stop | Stop | | | | | | | | |
| Traffic Vol by Lane | 2 | 12 | 1 | 1 | | | | | | | | |
| LT Vol | 2 | 0 | 0 | 0 | | | | | | | | |
| Through Vol | 0 | 10 | 0 | 0 | | | | | | | | |
| RT Vol | 0 | 2 | 1 | 1 | | | | | | | | |
| Lane Flow Rate | 3 | 17 | 1 | 1 | | | | | | | | |
| Geometry Grp | 1 | 1 | 1 | 1 | | | | | | | | |
| Degree of Util (X) | 0.003 | 0.019 | 0.001 | 0.001 | | | | | | | | |
| Departure Headway (Hd) | 4.166 | 3.843 | 3.354 | 3.368 | | | | | | | | |
| Convergence, Y/N | Yes | Yes | Yes | Yes | | | | | | | | |
| Cap | 863 | 937 | 1072 | 1067 | | | | | | | | |
| Service Time | 2.174 | 1.843 | 1.358 | 1.375 | | | | | | | | |
| HCM Lane V/C Ratio | 0.003 | 0.018 | 0.001 | 0.001 | | | | | | | | |
| HCM Control Delay | 7.2 | 6.9 | 6.4 | 6.4 | | | | | | | | |
| HCM Lane LOS | A | A | A | A | | | | | | | | |
| HCM 95th-tile Q | 0 | 0.1 | 0 | 0 | | | | | | | | |

Timings
5: Windy Hill Rd & Davis Rd Extension

3a. Build AM 2026

10/24/2024



| Lane Group | EBU | EBL | EBT | WBT | WBR | SBL |
|-------------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↩ | ↩↩↩ | ↩↩ | ↩ | ↩↩ |
| Traffic Volume (vph) | 37 | 34 | 1851 | 934 | 33 | 70 |
| Future Volume (vph) | 37 | 34 | 1851 | 934 | 33 | 70 |
| Lane Group Flow (vph) | 0 | 75 | 1928 | 973 | 34 | 114 |
| Turn Type | pm+pt | pm+pt | NA | NA | Perm | Prot |
| Protected Phases | 5 | 5 | 2 | 6 | | 4 |
| Permitted Phases | 2 | 2 | | | 6 | |
| Detector Phase | 5 | 5 | 2 | 6 | 6 | 4 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 15.0 | 15.0 | 15.0 | 6.0 |
| Minimum Split (s) | 15.0 | 15.0 | 23.5 | 23.5 | 23.5 | 23.5 |
| Total Split (s) | 19.0 | 19.0 | 90.0 | 71.0 | 71.0 | 30.0 |
| Total Split (%) | 15.8% | 15.8% | 75.0% | 59.2% | 59.2% | 25.0% |
| Yellow Time (s) | 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 |
| 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 | Lead | | Lag | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | |
| Recall Mode | None | None | C-Min | C-Min | C-Min | None |
| v/c Ratio | | 0.17 | 0.47 | 0.38 | 0.03 | 0.60 |
| Control Delay | | 3.4 | 3.2 | 7.6 | 4.0 | 54.7 |
| Queue Delay | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | | 3.4 | 3.2 | 7.6 | 4.0 | 54.7 |
| Queue Length 50th (ft) | | 9 | 87 | 141 | 3 | 70 |
| Queue Length 95th (ft) | | m13 | m110 | 214 | 15 | 126 |
| Internal Link Dist (ft) | | | 158 | 555 | | 383 |
| Turn Bay Length (ft) | | 145 | | | 75 | |
| Base Capacity (vph) | | 525 | 4114 | 2572 | 1155 | 367 |
| Starvation Cap Reductn | | 0 | 392 | 0 | 0 | 0 |
| Spillback Cap Reductn | | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | | 0.14 | 0.52 | 0.38 | 0.03 | 0.31 |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

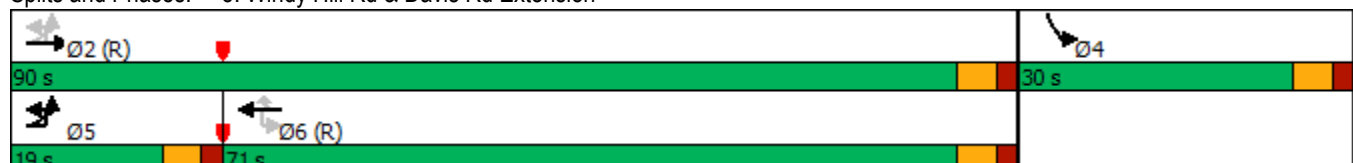
Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTU, Start of Green

Natural Cycle: 65

Control Type: Actuated-Coordinated

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Windy Hill Rd & Davis Rd Extension



HCM 6th Signalized Intersection Summary

5: Windy Hill Rd & Davis Rd Extension

3a. Build AM 2026

10/24/2024



| Movement | EBU | EBL | EBT | WBU | WBT | WBR | SBL | SBR |
|------------------------------|-----|-------|------|------|------|------|------|------|
| Lane Configurations | | ↩ | ↑↑↑ | ↩ | ↑↑ | ↗ | ↘ | |
| Traffic Volume (veh/h) | 37 | 34 | 1851 | 0 | 934 | 33 | 70 | 39 |
| Future Volume (veh/h) | 37 | 34 | 1851 | 0 | 934 | 33 | 70 | 39 |
| Initial Q (Qb), veh | | 0 | 0 | | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | | 1.00 | | | | 1.00 | 1.00 | 1.00 |
| Parking Bus, Adj | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | | No | | No | | No | |
| Adj Sat Flow, veh/h/ln | | 1870 | 1870 | | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | | 35 | 1928 | | 973 | 0 | 73 | 41 |
| Peak Hour Factor | | 0.96 | 0.96 | | 0.96 | 0.96 | 0.96 | 0.96 |
| Percent Heavy Veh, % | | 2 | 2 | | 2 | 2 | 2 | 2 |
| Cap, veh/h | | 491 | 4214 | | 2668 | | 90 | 51 |
| Arrive On Green | | 0.03 | 0.83 | | 0.75 | 0.00 | 0.08 | 0.08 |
| Sat Flow, veh/h | | 1781 | 5274 | | 3647 | 1585 | 1083 | 608 |
| Grp Volume(v), veh/h | | 35 | 1928 | | 973 | 0 | 115 | 0 |
| Grp Sat Flow(s),veh/h/ln | | 1781 | 1702 | | 1777 | 1585 | 1707 | 0 |
| Q Serve(g_s), s | | 0.5 | 12.7 | | 11.3 | 0.0 | 7.9 | 0.0 |
| Cycle Q Clear(g_c), s | | 0.5 | 12.7 | | 11.3 | 0.0 | 7.9 | 0.0 |
| Prop In Lane | | 1.00 | | | | 1.00 | 0.63 | 0.36 |
| Lane Grp Cap(c), veh/h | | 491 | 4214 | | 2668 | | 142 | 0 |
| V/C Ratio(X) | | 0.07 | 0.46 | | 0.36 | | 0.81 | 0.00 |
| Avail Cap(c_a), veh/h | | 640 | 4214 | | 2668 | | 348 | 0 |
| HCM Platoon Ratio | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | | 1.00 | 1.00 | | 1.00 | 0.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | | 3.3 | 2.9 | | 5.1 | 0.0 | 54.1 | 0.0 |
| Incr Delay (d2), s/veh | | 0.1 | 0.4 | | 0.4 | 0.0 | 10.5 | 0.0 |
| Initial Q Delay(d3),s/veh | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | | 0.1 | 3.2 | | 3.8 | 0.0 | 3.9 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | |
| LnGrp Delay(d),s/veh | | 3.4 | 3.3 | | 5.5 | 0.0 | 64.6 | 0.0 |
| LnGrp LOS | | A | A | | A | | E | A |
| Approach Vol, veh/h | | | 1963 | | 973 | | 115 | |
| Approach Delay, s/veh | | | 3.3 | | 5.5 | | 64.6 | |
| Approach LOS | | | A | | A | | E | |
| Timer - Assigned Phs | | 2 | | 4 | 5 | 6 | | |
| Phs Duration (G+Y+Rc), s | | 104.5 | | 15.5 | 8.9 | 95.6 | | |
| Change Period (Y+Rc), s | | 5.5 | | 5.5 | 5.5 | 5.5 | | |
| Max Green Setting (Gmax), s | | 84.5 | | 24.5 | 13.5 | 65.5 | | |
| Max Q Clear Time (g_c+I1), s | | 14.7 | | 9.9 | 2.5 | 13.3 | | |
| Green Ext Time (p_c), s | | 52.0 | | 0.2 | 0.0 | 18.5 | | |

Intersection Summary





| | |
|--------------------|-----|
| HCM 6th Ctrl Delay | 6.3 |
| HCM 6th LOS | A |

Notes

User approved volume balancing among the lanes for turning movement.

User approved ignoring U-Turning movement.






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

| Intersection | | | | | | |
|--------------------------|---|------|---|---|------|---|
| Int Delay, s/veh | 2 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  |  | |  |
| Traffic Vol, veh/h | 14 | 3 | 40 | 14 | 3 | 10 |
| Future Vol, veh/h | 14 | 3 | 40 | 14 | 3 | 10 |
| 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 | - | - | 50 | - | - |
| 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 | 15 | 3 | 43 | 15 | 3 | 11 |

| Major/Minor | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 60 | 43 | 0 |
| Stage 1 | 43 | - | - |
| Stage 2 | 17 | - | - |
| Critical Hdwy | 6.42 | 6.22 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - |
| Pot Cap-1 Maneuver | 947 | 1027 | - |
| Stage 1 | 979 | - | - |
| Stage 2 | 1006 | - | - |
| Platoon blocked, % | | - | - |
| Mov Cap-1 Maneuver | 945 | 1027 | - |
| Mov Cap-2 Maneuver | 945 | - | - |
| Stage 1 | 979 | - | - |
| Stage 2 | 1004 | - | - |

| Approach | WB | NB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 8.8 | 0 | 1.7 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 959 | 1546 |
| HCM Lane V/C Ratio | - | - | 0.019 | 0.002 |
| HCM Control Delay (s) | - | - | 8.8 | 7.3 |
| HCM Lane LOS | - | - | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.1 | 0 |

























| Intersection | | | | | | |
|--------------------------|---|--------|---|---|---|---|
| Int Delay, s/veh | 7.6 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations |  | |  |  |  |  |
| Traffic Vol, veh/h | 0 | 95 | 68 | 0 | 13 | 0 |
| Future Vol, veh/h | 0 | 95 | 68 | 0 | 13 | 0 |
| 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 | - | 85 | - | - | - |
| 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 | 0 | 103 | 74 | 0 | 14 | 0 |
| Major/Minor | Minor2 | Major1 | | Major2 | | |
| Conflicting Flow All | 162 | 14 | 14 | 0 | - | 0 |
| Stage 1 | 14 | - | - | - | - | - |
| Stage 2 | 148 | - | - | - | - | - |
| 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 | 829 | 1066 | 1604 | - | - | - |
| Stage 1 | 1009 | - | - | - | - | - |
| Stage 2 | 880 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 791 | 1066 | 1604 | - | - | - |
| Mov Cap-2 Maneuver | 791 | - | - | - | - | - |
| Stage 1 | 963 | - | - | - | - | - |
| Stage 2 | 880 | - | - | - | - | - |
| Approach | EB | NB | | SB | | |
| HCM Control Delay, s | 8.7 | 7.4 | | 0 | | |
| HCM LOS | A | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR | |
| Capacity (veh/h) | 1604 | - | 1066 | - | - | |
| HCM Lane V/C Ratio | 0.046 | - | 0.097 | - | - | |
| HCM Control Delay (s) | 7.4 | - | 8.7 | - | - | |
| HCM Lane LOS | A | - | A | - | - | |
| HCM 95th %tile Q(veh) | 0.1 | - | 0.3 | - | - | |

Timings

1: Atlanta Rd & Windy Hill Rd

3b. Build PM 2026

10/07/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|-------------------------|---|---|---|---|---|---|--|---|---|---|---|---|
| Lane Group | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |  |  |  |  |  |  |  |  |  |  |  |
| Traffic Volume (vph) | 87 | 1015 | 205 | 339 | 1243 | 402 | 207 | 587 | 138 | 354 | 686 | 93 |
| Future Volume (vph) | 87 | 1015 | 205 | 339 | 1243 | 402 | 207 | 587 | 138 | 354 | 686 | 93 |
| Lane Group Flow (vph) | 92 | 1068 | 216 | 357 | 1308 | 423 | 218 | 618 | 145 | 373 | 722 | 98 |
| Turn Type | pm+pt | NA | Perm | pm+pt | NA | Perm | Prot | NA | Perm | Prot | NA | Perm |
| Protected Phases | 5 | 2 | | 1 | 6 | | 3 | 8 | | 7 | 4 | |
| Permitted Phases | 2 | | 2 | 6 | | 6 | | | 8 | | | 4 |
| Detector Phase | 5 | 2 | 2 | 1 | 6 | 6 | 3 | 8 | 8 | 7 | 4 | 4 |
| Switch Phase | | | | | | | | | | | | |
| Minimum Initial (s) | 5.0 | 15.0 | 15.0 | 5.0 | 15.0 | 15.0 | 5.0 | 6.0 | 6.0 | 5.0 | 6.0 | 6.0 |
| Minimum Split (s) | 15.0 | 32.5 | 32.5 | 15.0 | 32.5 | 32.5 | 15.0 | 38.5 | 38.5 | 15.0 | 36.5 | 36.5 |
| Total Split (s) | 15.0 | 38.0 | 38.0 | 25.0 | 48.0 | 48.0 | 15.0 | 39.0 | 39.0 | 18.0 | 42.0 | 42.0 |
| Total Split (%) | 12.5% | 31.7% | 31.7% | 20.8% | 40.0% | 40.0% | 12.5% | 32.5% | 32.5% | 15.0% | 35.0% | 35.0% |
| Yellow Time (s) | 3.5 | 3.5 | 3.5 | 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 | 2.0 | 2.0 | 2.0 |
| 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 | 0.0 |
| Total Lost Time (s) | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 |
| Lead/Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag | Lead | Lag | Lag |
| Lead-Lag Optimize? | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes | Yes |
| Recall Mode | None | C-Min | C-Min | None | C-Min | C-Min | None | None | None | None | None | None |
| v/c Ratio | 0.50 | 0.75 | 0.38 | 0.86 | 0.90 | 0.51 | 0.80 | 0.75 | 0.29 | 1.04 | 0.79 | 0.18 |
| Control Delay | 28.8 | 43.7 | 9.8 | 56.7 | 44.5 | 16.8 | 76.5 | 48.6 | 4.3 | 111.6 | 48.2 | 0.8 |
| Queue Delay | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | 28.8 | 43.7 | 9.8 | 56.7 | 44.5 | 16.8 | 76.5 | 48.6 | 4.3 | 111.6 | 48.2 | 0.8 |
| Queue Length 50th (ft) | 35 | 280 | 20 | 255 | 367 | 94 | 87 | 234 | 0 | ~161 | 274 | 0 |
| Queue Length 95th (ft) | 72 | 334 | 83 | m#389 | #706 | m204 | #149 | 283 | 32 | #260 | 325 | 0 |
| Internal Link Dist (ft) | | 601 | | | 116 | | | 1138 | | | 947 | |
| Turn Bay Length (ft) | 165 | | 175 | | | | 485 | | 245 | 445 | | 235 |
| Base Capacity (vph) | 203 | 1420 | 573 | 417 | 1453 | 827 | 271 | 987 | 566 | 357 | 1076 | 601 |
| Starvation Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Spillback Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Storage Cap Reductn | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Reduced v/c Ratio | 0.45 | 0.75 | 0.38 | 0.86 | 0.90 | 0.51 | 0.80 | 0.63 | 0.26 | 1.04 | 0.67 | 0.16 |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green

Natural Cycle: 125

Control Type: Actuated-Coordinated

~ Volume exceeds capacity, queue is theoretically infinite.

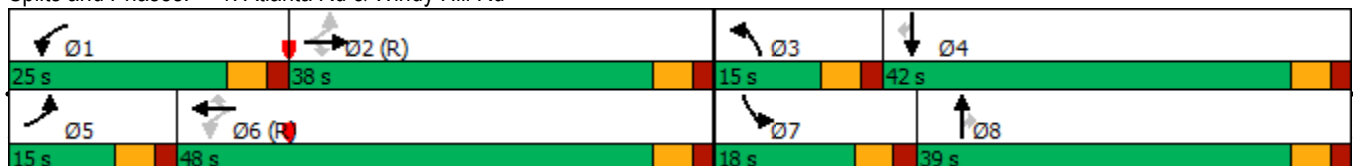
Queue shown is maximum after two cycles.

95th percentile volume exceeds capacity, queue may be longer.

Queue shown is maximum after two cycles.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 1: Atlanta Rd & Windy Hill Rd





































HCM 6th Signalized Intersection Summary

1: Atlanta Rd & Windy Hill Rd

3b. Build PM 2026

10/07/2024

| |  |  |  |  |  |  |  |  |  |  |  |  |
|--|---|---|---|---|---|---|---|---|---|---|---|---|
| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
| Lane Configurations |  |    |  |  |   |  |   |   |  |   |   |  |
| Traffic Volume (veh/h) | 87 | 1015 | 205 | 339 | 1243 | 402 | 207 | 587 | 138 | 354 | 686 | 93 |
| Future Volume (veh/h) | 87 | 1015 | 205 | 339 | 1243 | 402 | 207 | 587 | 138 | 354 | 686 | 93 |
| 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 | 92 | 1068 | 216 | 357 | 1308 | 423 | 218 | 618 | 145 | 373 | 722 | 0 |
| Peak Hour Factor | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Cap, veh/h | 181 | 1828 | 567 | 392 | 1605 | 716 | 272 | 759 | 339 | 360 | 849 | |
| Arrive On Green | 0.05 | 0.36 | 0.36 | 0.14 | 0.45 | 0.45 | 0.08 | 0.21 | 0.21 | 0.10 | 0.24 | 0.00 |
| Sat Flow, veh/h | 1781 | 5106 | 1585 | 1781 | 3554 | 1585 | 3456 | 3554 | 1585 | 3456 | 3554 | 1585 |
| Grp Volume(v), veh/h | 92 | 1068 | 216 | 357 | 1308 | 423 | 218 | 618 | 145 | 373 | 722 | 0 |
| Grp Sat Flow(s),veh/h/ln | 1781 | 1702 | 1585 | 1781 | 1777 | 1585 | 1728 | 1777 | 1585 | 1728 | 1777 | 1585 |
| Q Serve(g_s), s | 3.9 | 20.4 | 12.2 | 14.6 | 38.3 | 23.9 | 7.4 | 19.9 | 9.5 | 12.5 | 23.3 | 0.0 |
| Cycle Q Clear(g_c), s | 3.9 | 20.4 | 12.2 | 14.6 | 38.3 | 23.9 | 7.4 | 19.9 | 9.5 | 12.5 | 23.3 | 0.0 |
| Prop In Lane | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 | 1.00 | | 1.00 |
| Lane Grp Cap(c), veh/h | 181 | 1828 | 567 | 392 | 1605 | 716 | 272 | 759 | 339 | 360 | 849 | |
| V/C Ratio(X) | 0.51 | 0.58 | 0.38 | 0.91 | 0.81 | 0.59 | 0.80 | 0.81 | 0.43 | 1.04 | 0.85 | |
| Avail Cap(c_a), veh/h | 238 | 1828 | 567 | 430 | 1605 | 716 | 274 | 992 | 442 | 360 | 1081 | |
| 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 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | 26.9 | 31.3 | 28.6 | 23.5 | 28.5 | 24.6 | 54.4 | 44.9 | 40.8 | 53.8 | 43.6 | 0.0 |
| Incr Delay (d2), s/veh | 2.2 | 1.4 | 1.9 | 22.1 | 4.7 | 3.6 | 15.5 | 4.1 | 0.9 | 57.1 | 5.3 | 0.0 |
| 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(50%),veh/ln | 1.8 | 8.6 | 4.8 | 8.3 | 17.0 | 9.2 | 3.7 | 8.9 | 3.7 | 8.1 | 10.5 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | | | | | |
| LnGrp Delay(d),s/veh | 29.1 | 32.7 | 30.6 | 45.6 | 33.2 | 28.2 | 69.9 | 49.0 | 41.7 | 110.9 | 48.9 | 0.0 |
| LnGrp LOS | C | C | C | D | C | C | E | D | D | F | D | |
| Approach Vol, veh/h | 1376 | | | 2088 | | | 981 | | | 1095 | | |
| Approach Delay, s/veh | 32.1 | | | 34.3 | | | 52.6 | | | 70.0 | | |
| Approach LOS | C | | | C | | | D | | | E | | |
| Timer - Assigned Phs | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | | | | |
| Phs Duration (G+Y+Rc), s | 22.4 | 48.5 | 14.9 | 34.2 | 11.2 | 59.7 | 18.0 | 31.1 | | | | |
| Change Period (Y+Rc), s | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | 5.5 | | | | |
| Max Green Setting (Gmax), s | 19.5 | 32.5 | 9.5 | 36.5 | 9.5 | 42.5 | 12.5 | 33.5 | | | | |
| Max Q Clear Time (g_c+I1), s | 16.6 | 22.4 | 9.4 | 25.3 | 5.9 | 40.3 | 14.5 | 21.9 | | | | |
| Green Ext Time (p_c), s | 0.3 | 7.7 | 0.0 | 3.4 | 0.1 | 2.0 | 0.0 | 3.3 | | | | |
| Intersection Summary | | | | | | | | | | | | |
| HCM 6th Ctrl Delay | | | | 44.0 | | | | | | | | |
| HCM 6th LOS | | | | D | | | | | | | | |
| Notes | | | | | | | | | | | | |
| User approved pedestrian interval to be less than phase max green. | | | | | | | | | | | | |
| Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay. | | | | | | | | | | | | |

| Intersection | | | | | | |
|--------------------------|---|------|---|------|------|---|
| Int Delay, s/veh | 1.2 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  | | |  |
| Traffic Vol, veh/h | 2 | 0 | 18 | 3 | 7 | 24 |
| Future Vol, veh/h | 2 | 0 | 18 | 3 | 7 | 24 |
| 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 | 73 | 73 | 73 | 73 | 73 | 73 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 3 | 0 | 25 | 4 | 10 | 33 |

| Major/Minor | Minor1 | Major1 | Major2 |
|----------------------|--------|--------|--------|
| Conflicting Flow All | 80 | 27 | 0 |
| Stage 1 | 27 | - | - |
| Stage 2 | 53 | - | - |
| Critical Hdwy | 6.42 | 6.22 | - |
| Critical Hdwy Stg 1 | 5.42 | - | - |
| Critical Hdwy Stg 2 | 5.42 | - | - |
| Follow-up Hdwy | 3.518 | 3.318 | - |
| Pot Cap-1 Maneuver | 922 | 1048 | - |
| Stage 1 | 996 | - | - |
| Stage 2 | 970 | - | - |
| Platoon blocked, % | | - | - |
| Mov Cap-1 Maneuver | 916 | 1048 | - |
| Mov Cap-2 Maneuver | 916 | - | - |
| Stage 1 | 996 | - | - |
| Stage 2 | 964 | - | - |

| Approach | WB | NB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 8.9 | 0 | 1.6 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 916 | 1584 |
| HCM Lane V/C Ratio | - | - | 0.003 | 0.006 |
| HCM Control Delay (s) | - | - | 8.9 | 7.3 |
| HCM Lane LOS | - | - | A | A |
| HCM 95th %tile Q(veh) | - | - | 0 | 0 |

| Intersection | |
|---------------------------|-----|
| Intersection Delay, s/veh | 6.8 |
| Intersection LOS | A |

| Movement | EBL | EBT | EBR | WBL | WBT | WBR | NBL | NBT | NBR | SBL | SBT | SBR |
|---------------------|------|------|------|------|------|------|------|------|------|------|------|------|
| Lane Configurations | | ↕ | | | ↕ | | | ↕ | | | ↕ | |
| Traffic Vol, veh/h | 0 | 5 | 4 | 0 | 0 | 1 | 2 | 0 | 0 | 1 | 0 | 0 |
| Future Vol, veh/h | 0 | 5 | 4 | 0 | 0 | 1 | 2 | 0 | 0 | 1 | 0 | 0 |
| Peak Hour Factor | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 | 0.62 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 0 | 8 | 6 | 0 | 0 | 2 | 3 | 0 | 0 | 2 | 0 | 0 |
| Number of Lanes | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 |

| Approach | EB | WB | NB | SB |
|----------------------------|-----|-----|-----|-----|
| Opposing Approach | WB | EB | SB | NB |
| Opposing Lanes | 1 | 1 | 1 | 1 |
| Conflicting Approach Left | SB | NB | EB | WB |
| Conflicting Lanes Left | 1 | 1 | 1 | 1 |
| Conflicting Approach Right | NB | SB | WB | EB |
| Conflicting Lanes Right | 1 | 1 | 1 | 1 |
| HCM Control Delay | 6.7 | 6.4 | 7.2 | 7.2 |
| HCM LOS | A | A | A | A |

| Lane | NBLn1 | EBLn1 | WBLn1 | SBLn1 |
|------------------------|-------|-------|-------|-------|
| Vol Left, % | 100% | 0% | 0% | 100% |
| Vol Thru, % | 0% | 56% | 0% | 0% |
| Vol Right, % | 0% | 44% | 100% | 0% |
| Sign Control | Stop | Stop | Stop | Stop |
| Traffic Vol by Lane | 2 | 9 | 1 | 1 |
| LT Vol | 2 | 0 | 0 | 1 |
| Through Vol | 0 | 5 | 0 | 0 |
| RT Vol | 0 | 4 | 1 | 0 |
| Lane Flow Rate | 3 | 15 | 2 | 2 |
| Geometry Grp | 1 | 1 | 1 | 1 |
| Degree of Util (X) | 0.004 | 0.015 | 0.002 | 0.002 |
| Departure Headway (Hd) | 4.162 | 3.676 | 3.353 | 4.164 |
| Convergence, Y/N | Yes | Yes | Yes | Yes |
| Cap | 864 | 978 | 1072 | 863 |
| Service Time | 2.169 | 1.681 | 1.358 | 2.171 |
| HCM Lane V/C Ratio | 0.003 | 0.015 | 0.002 | 0.002 |
| HCM Control Delay | 7.2 | 6.7 | 6.4 | 7.2 |
| HCM Lane LOS | A | A | A | A |
| HCM 95th-tile Q | 0 | 0 | 0 | 0 |

Timings 5: Windy Hill Rd & Davis Rd Extension

3b. Build PM 2026
10/24/2024



| Lane Group | EBU | EBL | EBT | WBT | WBR | SBL |
|-------------------------|-------|-------|-------|-------|-------|-------|
| Lane Configurations | | ↔ | ↔↔↔ | ↔↔ | ↔ | ↔ |
| Traffic Volume (vph) | 48 | 75 | 1376 | 1971 | 72 | 68 |
| Future Volume (vph) | 48 | 75 | 1376 | 1971 | 72 | 68 |
| Lane Group Flow (vph) | 0 | 131 | 1448 | 2075 | 76 | 110 |
| Turn Type | pm+pt | pm+pt | NA | NA | Perm | Prot |
| Protected Phases | 5 | 5 | 2 | 6 | | 4 |
| Permitted Phases | 2 | 2 | | | 6 | |
| Detector Phase | 5 | 5 | 2 | 6 | 6 | 4 |
| Switch Phase | | | | | | |
| Minimum Initial (s) | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| Minimum Split (s) | 15.0 | 15.0 | 23.5 | 23.5 | 23.5 | 23.5 |
| Total Split (s) | 15.0 | 15.0 | 95.0 | 80.0 | 80.0 | 25.0 |
| Total Split (%) | 12.5% | 12.5% | 79.2% | 66.7% | 66.7% | 20.8% |
| Yellow Time (s) | 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 |
| 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 | Lead | | Lag | Lag | |
| Lead-Lag Optimize? | Yes | Yes | | Yes | Yes | |
| Recall Mode | None | None | C-Min | C-Min | C-Min | None |
| v/c Ratio | | 0.66 | 0.35 | 0.85 | 0.07 | 0.59 |
| Control Delay | | 55.0 | 0.4 | 20.2 | 5.8 | 55.2 |
| Queue Delay | | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Total Delay | | 55.0 | 0.4 | 20.2 | 5.8 | 55.2 |
| Queue Length 50th (ft) | | 73 | 6 | 582 | 12 | 68 |
| Queue Length 95th (ft) | | m101 | m9 | #965 | 35 | 124 |
| Internal Link Dist (ft) | | | 158 | 555 | | 383 |
| Turn Bay Length (ft) | | 145 | | | 75 | |
| Base Capacity (vph) | | 215 | 4121 | 2430 | 1094 | 295 |
| 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 | | 0.61 | 0.35 | 0.85 | 0.07 | 0.37 |

Intersection Summary

Cycle Length: 120

Actuated Cycle Length: 120

Offset: 0 (0%), Referenced to phase 2:EBTL and 6:WBTU, 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.

m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 5: Windy Hill Rd & Davis Rd Extension



HCM 6th Signalized Intersection Summary

5: Windy Hill Rd & Davis Rd Extension

3b. Build PM 2026

10/24/2024



| Movement | EBU | EBL | EBT | WBU | WBT | WBR | SBL | SBR |
|------------------------------|-----|-------|------|------|------|------|------|------|
| Lane Configurations | | ↩ | ↑↑↑ | ↩ | ↑↑ | ↗ | ↘ | |
| Traffic Volume (veh/h) | 48 | 75 | 1376 | 0 | 1971 | 72 | 68 | 36 |
| Future Volume (veh/h) | 48 | 75 | 1376 | 0 | 1971 | 72 | 68 | 36 |
| Initial Q (Qb), veh | | 0 | 0 | | 0 | 0 | 0 | 0 |
| Ped-Bike Adj(A_pbT) | | 1.00 | | | | 1.00 | 1.00 | 1.00 |
| Parking Bus, Adj | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 |
| Work Zone On Approach | | | No | | No | | No | |
| Adj Sat Flow, veh/h/ln | | 1870 | 1870 | | 1870 | 1870 | 1870 | 1870 |
| Adj Flow Rate, veh/h | | 79 | 1448 | | 2075 | 0 | 72 | 38 |
| Peak Hour Factor | | 0.95 | 0.95 | | 0.95 | 0.95 | 0.95 | 0.95 |
| Percent Heavy Veh, % | | 2 | 2 | | 2 | 2 | 2 | 2 |
| Cap, veh/h | | 206 | 4230 | | 2643 | | 89 | 47 |
| Arrive On Green | | 0.04 | 0.83 | | 0.74 | 0.00 | 0.08 | 0.08 |
| Sat Flow, veh/h | | 1781 | 5274 | | 3647 | 1585 | 1109 | 585 |
| Grp Volume(v), veh/h | | 79 | 1448 | | 2075 | 0 | 111 | 0 |
| Grp Sat Flow(s),veh/h/ln | | 1781 | 1702 | | 1777 | 1585 | 1710 | 0 |
| Q Serve(g_s), s | | 1.1 | 8.2 | | 43.1 | 0.0 | 7.7 | 0.0 |
| Cycle Q Clear(g_c), s | | 1.1 | 8.2 | | 43.1 | 0.0 | 7.7 | 0.0 |
| Prop In Lane | | 1.00 | | | | 1.00 | 0.65 | 0.34 |
| Lane Grp Cap(c), veh/h | | 206 | 4230 | | 2643 | | 137 | 0 |
| V/C Ratio(X) | | 0.38 | 0.34 | | 0.79 | | 0.81 | 0.00 |
| Avail Cap(c_a), veh/h | | 278 | 4230 | | 2643 | | 278 | 0 |
| HCM Platoon Ratio | | 1.00 | 1.00 | | 1.00 | 1.00 | 1.00 | 1.00 |
| Upstream Filter(I) | | 1.00 | 1.00 | | 1.00 | 0.00 | 1.00 | 0.00 |
| Uniform Delay (d), s/veh | | 16.6 | 2.5 | | 9.5 | 0.0 | 54.3 | 0.0 |
| Incr Delay (d2), s/veh | | 1.2 | 0.2 | | 2.4 | 0.0 | 10.9 | 0.0 |
| Initial Q Delay(d3),s/veh | | 0.0 | 0.0 | | 0.0 | 0.0 | 0.0 | 0.0 |
| %ile BackOfQ(50%),veh/ln | | 1.3 | 2.0 | | 15.0 | 0.0 | 3.7 | 0.0 |
| Unsig. Movement Delay, s/veh | | | | | | | | |
| LnGrp Delay(d),s/veh | | 17.7 | 2.7 | | 11.9 | 0.0 | 65.2 | 0.0 |
| LnGrp LOS | | B | A | | B | | E | A |
| Approach Vol, veh/h | | | 1527 | | 2075 | | 111 | |
| Approach Delay, s/veh | | | 3.5 | | 11.9 | | 65.2 | |
| Approach LOS | | | A | | B | | E | |
| Timer - Assigned Phs | | 2 | | 4 | 5 | 6 | | |
| Phs Duration (G+Y+Rc), s | | 104.9 | | 15.1 | 10.1 | 94.8 | | |
| Change Period (Y+Rc), s | | 5.5 | | 5.5 | 5.5 | 5.5 | | |
| Max Green Setting (Gmax), s | | 89.5 | | 19.5 | 9.5 | 74.5 | | |
| Max Q Clear Time (g_c+I1), s | | 10.2 | | 9.7 | 3.1 | 45.1 | | |
| Green Ext Time (p_c), s | | 17.2 | | 0.2 | 0.1 | 21.7 | | |

Intersection Summary





| | |
|--------------------|------|
| HCM 6th Ctrl Delay | 10.0 |
| HCM 6th LOS | B |

Notes

User approved volume balancing among the lanes for turning movement.

User approved ignoring U-Turning movement.





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







| Intersection | | | | | | |
|--------------------------|---|------|---|---|------|---|
| Int Delay, s/veh | 2.1 | | | | | |
| Movement | WBL | WBR | NBT | NBR | SBL | SBT |
| Lane Configurations |  | |  |  | |  |
| Traffic Vol, veh/h | 14 | 3 | 18 | 31 | 6 | 20 |
| Future Vol, veh/h | 14 | 3 | 18 | 31 | 6 | 20 |
| 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 | - | - | 50 | - | - |
| 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 | 15 | 3 | 20 | 34 | 7 | 22 |








| Major/Minor | Minor1 | Major1 | Major2 | | |
|----------------------|--------|--------|--------|---|-------|
| Conflicting Flow All | 56 | 20 | 0 | 0 | 54 |
| Stage 1 | 20 | - | - | - | - |
| Stage 2 | 36 | - | - | - | - |
| 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 | 952 | 1058 | - | - | 1551 |
| Stage 1 | 1003 | - | - | - | - |
| Stage 2 | 986 | - | - | - | - |
| Platoon blocked, % | | | - | - | - |
| Mov Cap-1 Maneuver | 947 | 1058 | - | - | 1551 |
| Mov Cap-2 Maneuver | 947 | - | - | - | - |
| Stage 1 | 1003 | - | - | - | - |
| Stage 2 | 981 | - | - | - | - |

| Approach | WB | NB | SB |
|----------------------|-----|----|-----|
| HCM Control Delay, s | 8.8 | 0 | 1.7 |
| HCM LOS | A | | |

| Minor Lane/Major Mvmt | NBT | NBRWBLn1 | SBL | SBT |
|-----------------------|-----|----------|-------|-------|
| Capacity (veh/h) | - | - | 965 | 1551 |
| HCM Lane V/C Ratio | - | - | 0.019 | 0.004 |
| HCM Control Delay (s) | - | - | 8.8 | 7.3 |
| HCM Lane LOS | - | - | A | A |
| HCM 95th %tile Q(veh) | - | - | 0.1 | 0 |

| Intersection | | | | | | |
|--------------------------|---|--------|---|---|---|------|
| Int Delay, s/veh | 7.7 | | | | | |
| Movement | EBL | EBR | NBL | NBT | SBT | SBR |
| Lane Configurations |  | |  |  |  | |
| Traffic Vol, veh/h | 0 | 96 | 148 | 0 | 8 | 0 |
| Future Vol, veh/h | 0 | 96 | 148 | 0 | 8 | 0 |
| 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 | - | 85 | - | - | - |
| 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 | 0 | 104 | 161 | 0 | 9 | 0 |
| Major/Minor | Minor2 | Major1 | | Major2 | | |
| Conflicting Flow All | 331 | 9 | 9 | 0 | - | 0 |
| Stage 1 | 9 | - | - | - | - | - |
| Stage 2 | 322 | - | - | - | - | - |
| 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 | 664 | 1073 | 1611 | - | - | - |
| Stage 1 | 1014 | - | - | - | - | - |
| Stage 2 | 735 | - | - | - | - | - |
| Platoon blocked, % | | | | - | - | - |
| Mov Cap-1 Maneuver | 598 | 1073 | 1611 | - | - | - |
| Mov Cap-2 Maneuver | 598 | - | - | - | - | - |
| Stage 1 | 913 | - | - | - | - | - |
| Stage 2 | 735 | - | - | - | - | - |
| Approach | EB | NB | | SB | | |
| HCM Control Delay, s | 8.7 | 7.5 | | 0 | | |
| HCM LOS | A | | | | | |
| Minor Lane/Major Mvmt | NBL | NBT | EBLn1 | SBT | SBR | |
| Capacity (veh/h) | 1611 | - | 1073 | - | - | |
| HCM Lane V/C Ratio | 0.1 | - | 0.097 | - | - | |
| HCM Control Delay (s) | 7.5 | - | 8.7 | - | - | |
| HCM Lane LOS | A | - | A | - | - | |
| HCM 95th %tile Q(veh) | 0.3 | - | 0.3 | - | - | |

| Intersection | | | | | | | | |
|----------------------------|--------|---|---|---|---|---|---|---|
| Int Delay, s/veh | 6.2 | | | | | | | |
| Movement | EBU | EBL | EBT | WBU | WBT | WBR | SBL | SBR |
| Lane Configurations | |  |  |  |  |  |  | |
| Traffic Vol, veh/h | 37 | 34 | 1851 | 0 | 934 | 33 | 70 | 39 |
| Future Vol, veh/h | 37 | 34 | 1851 | 0 | 934 | 33 | 70 | 39 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | - | None | - | - | Yield | - | None |
| Storage Length | - | 145 | - | 165 | - | 75 | 0 | 150 |
| Veh in Median Storage, # | - | - | 0 | - | 0 | - | 0 | - |
| Grade, % | - | - | 0 | - | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 96 | 96 | 92 | 96 | 96 | 96 | 96 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 40 | 35 | 1928 | 0 | 973 | 34 | 73 | 41 |
| | | | | | | | | |
| Major/Minor | Major1 | | Major2 | | Minor2 | | | |
| Conflicting Flow All | 973 | 973 | 0 | 1408 | - | 0 | 1894 | 487 |
| Stage 1 | - | - | - | - | - | - | 973 | - |
| Stage 2 | - | - | - | - | - | - | 921 | - |
| Critical Hdwy | 6.44 | 4.14 | - | 5.64 | - | - | 6.29 | 6.94 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 5.84 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.04 | - |
| Follow-up Hdwy | 2.52 | 2.22 | - | 2.32 | - | - | 3.67 | 3.32 |
| Pot Cap-1 Maneuver | 346 | 704 | - | 260 | - | - | 81 | 526 |
| Stage 1 | - | - | - | - | - | - | 319 | - |
| Stage 2 | - | - | - | - | - | - | 323 | - |
| Platoon blocked, % | | | - | | - | - | | |
| Mov Cap-1 Maneuver | 430 | 430 | - | 260 | - | - | ~ 67 | 526 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | ~ 67 | - |
| Stage 1 | - | - | - | - | - | - | 263 | - |
| Stage 2 | - | - | - | - | - | - | 323 | - |
| | | | | | | | | |
| | | | | | | | | |
| Approach | EB | | WB | | SB | | | |
| HCM Control Delay, s | 0.6 | | 0 | | 159.8 | | | |
| HCM LOS | F | | | | | | | |
| | | | | | | | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBU | WBT | WBR | SBLn1 | SBLn2 | |
| Capacity (veh/h) | 430 | - | 260 | - | - | 67 | 526 | |
| HCM Lane V/C Ratio | 0.176 | - | - | - | - | 1.088 | 0.077 | |
| HCM Control Delay (s) | 15.2 | - | 0 | - | - | 242 | 12.4 | |
| HCM Lane LOS | C | - | A | - | - | F | B | |
| HCM 95th %tile Q(veh) | 0.6 | - | 0 | - | - | 5.6 | 0.2 | |
| Notes | | | | | | | | |
| ~: Volume exceeds capacity | | \$: Delay exceeds 300s | | +: Computation Not Defined | | *: All major volume in platoon | | |

| Intersection | | | | | | | | |
|--|--------|---|---|---|---|---|---|---|
| Int Delay, s/veh | 8.1 | | | | | | | |
| Movement | EBU | EBL | EBT | WBU | WBT | WBR | SBL | SBR |
| Lane Configurations | |  |  |  |  |  |  |  |
| Traffic Vol, veh/h | 48 | 75 | 1376 | 0 | 1971 | 72 | 68 | 36 |
| Future Vol, veh/h | 48 | 75 | 1376 | 0 | 1971 | 72 | 68 | 36 |
| Conflicting Peds, #/hr | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sign Control | Free | Free | Free | Free | Free | Free | Stop | Stop |
| RT Channelized | - | - | None | - | - | Yield | - | None |
| Storage Length | - | 145 | - | 165 | - | 75 | 0 | 150 |
| Veh in Median Storage, # | - | - | 0 | - | 0 | - | 0 | - |
| Grade, % | - | - | 0 | - | 0 | - | 0 | - |
| Peak Hour Factor | 92 | 95 | 95 | 92 | 95 | 95 | 95 | 95 |
| Heavy Vehicles, % | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |
| Mvmt Flow | 52 | 79 | 1448 | 0 | 2075 | 76 | 72 | 38 |
| Major/Minor | Major1 | | Major2 | | Minor2 | | | |
| Conflicting Flow All | 2075 | 2075 | 0 | 1057 | - | 0 | 2916 | 1038 |
| Stage 1 | - | - | - | - | - | - | 2075 | - |
| Stage 2 | - | - | - | - | - | - | 841 | - |
| Critical Hdwy | 6.44 | 4.14 | - | 5.64 | - | - | 6.29 | 6.94 |
| Critical Hdwy Stg 1 | - | - | - | - | - | - | 5.84 | - |
| Critical Hdwy Stg 2 | - | - | - | - | - | - | 6.04 | - |
| Follow-up Hdwy | 2.52 | 2.22 | - | 2.32 | - | - | 3.67 | 3.32 |
| Pot Cap-1 Maneuver | 66 | 264 | - | 408 | - | - | ~ 19 | 228 |
| Stage 1 | - | - | - | - | - | - | 81 | - |
| Stage 2 | - | - | - | - | - | - | 356 | - |
| Platoon blocked, % | | | - | | - | - | | |
| Mov Cap-1 Maneuver | 107 | 107 | - | 408 | - | - | 0 | 228 |
| Mov Cap-2 Maneuver | - | - | - | - | - | - | 0 | - |
| Stage 1 | - | - | - | - | - | - | 0 | - |
| Stage 2 | - | - | - | - | - | - | 356 | - |
| Approach | EB | | WB | | SB | | | |
| HCM Control Delay, s | 19.7 | | 0 | | | | | |
| HCM LOS | | | | | - | | | |
| Minor Lane/Major Mvmt | EBL | EBT | WBU | WBT | WBR | SBLn1 | SBLn2 | |
| Capacity (veh/h) | 107 | - | 408 | - | - | - | 228 | |
| HCM Lane V/C Ratio | 1.225 | - | - | - | - | - | 0.166 | |
| HCM Control Delay (s) | 237 | - | 0 | - | - | - | 23.9 | |
| HCM Lane LOS | F | - | A | - | - | - | C | |
| HCM 95th %tile Q(veh) | 8.7 | - | 0 | - | - | - | 0.6 | |
| Notes | | | | | | | | |
| ~: Volume exceeds capacity \$: Delay exceeds 300s +: Computation Not Defined *: All major volume in platoon | | | | | | | | |

TRAFFIC VOLUME WORKSHEETS

24-164 - Residential & Fitness Center Development on Windy Hill Road, Smyrna, GA
Traffic Volumes

A&R Engineering
October 2024

1. Windy Hill Rd @ Atlanta Rd
A.M. Peak Hour

| Condition | Atlanta Road Northbound | | | | | Atlanta Road Southbound | | | | | Windy Hill Road Eastbound | | | | | Windy Hill Road Westbound | | | | |
|-------------------------------|----------------------------|-----|-----|-----|-----|----------------------------|-----|-----|----|------|------------------------------|----|------|-----|------|------------------------------|-----|-----|-----|-----|
| | U | L | T | R | Tot | U | L | T | R | Tot | U | L | T | R | Tot | U | L | T | R | Tot |
| Existing 2024 Traffic Counts: | 0 | 106 | 618 | 188 | 912 | 0 | 413 | 605 | 36 | 1054 | 0 | 65 | 1260 | 190 | 1515 | 0 | 187 | 423 | 266 | 876 |
| Growth Factor (%): | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| No-Build 2026 Volumes: | 0 | 108 | 630 | 192 | 930 | 0 | 421 | 617 | 37 | 1075 | 0 | 66 | 1285 | 194 | 1545 | 0 | 191 | 431 | 271 | 893 |
| Shifted Trips: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 3 | -1 | 1 |
| Total New Trips: | 0 | 0 | 0 | 13 | 13 | 0 | 9 | 0 | 0 | 9 | 0 | 0 | 13 | 0 | 13 | 0 | 17 | 17 | 12 | 46 |
| Future 2026 Traffic Volumes: | 0 | 108 | 630 | 205 | 943 | 0 | 430 | 617 | 37 | 1084 | 0 | 66 | 1298 | 194 | 1558 | 0 | 207 | 451 | 282 | 940 |

P.M. Peak Hour

| Condition | Atlanta Road Northbound | | | | | Atlanta Road Southbound | | | | | Windy Hill Road Eastbound | | | | | Windy Hill Road Westbound | | | | |
|-------------------------------|----------------------------|-----|-----|-----|-----|----------------------------|-----|-----|----|------|------------------------------|----|------|-----|------|------------------------------|-----|------|-----|------|
| | U | L | T | R | Tot | U | L | T | R | Tot | U | L | T | R | Tot | U | L | T | R | Tot |
| Existing 2024 Traffic Counts: | 0 | 203 | 575 | 108 | 886 | 0 | 328 | 673 | 91 | 1092 | 0 | 85 | 968 | 201 | 1254 | 0 | 317 | 1200 | 383 | 1900 |
| Growth Factor (%): | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| No-Build 2026 Volumes: | 0 | 207 | 587 | 110 | 904 | 0 | 335 | 686 | 93 | 1114 | 0 | 87 | 987 | 205 | 1279 | 0 | 323 | 1224 | 391 | 1938 |
| Shifted Trips: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -1 | 2 | -1 | 0 |
| Total New Trips: | 0 | 0 | 0 | 28 | 28 | 0 | 19 | 0 | 0 | 19 | 0 | 0 | 28 | 0 | 28 | 0 | 17 | 17 | 12 | 46 |
| Future 2026 Traffic Volumes: | 0 | 207 | 587 | 138 | 932 | 0 | 354 | 686 | 93 | 1133 | 0 | 87 | 1015 | 205 | 1307 | 0 | 339 | 1243 | 402 | 1984 |

24-164 - Residential & Fitness Center Development on Windy Hill Road, Smyrna, GA
Traffic Volumes

A&R Engineering
October 2024

2. Windy Hill Rd @ Dixie Ave
A.M. Peak Hour

| Condition | Dixie Avenue Northbound | | | | | | Dixie Avenue Southbound | | | | | | Windy Hill Road Eastbound | | | | | | Windy Hill Road Westbound | | | | | |
|-------------------------------|-------------------------|---|---|---|-----|--|-------------------------|---|---|----|-----|--|---------------------------|---|------|----|------|--|---------------------------|---|-----|----|-----|--|
| | U | L | T | R | Tot | | U | L | T | R | Tot | | U | L | T | R | Tot | | U | L | T | R | Tot | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| Existing 2024 Traffic Counts: | 0 | 0 | 0 | 4 | 4 | | 0 | 0 | 0 | 12 | 12 | | 0 | 0 | 1847 | 14 | 1861 | | 0 | 0 | 864 | 38 | 902 | |
| Growth Factor (%): | 1 | 1 | 1 | 1 | | | 1 | 1 | 1 | 1 | | | 1 | 1 | 1 | 1 | | | 1 | 1 | 1 | 1 | | |
| No-Build 2026 Volumes: | 0 | 0 | 0 | 4 | 4 | | 0 | 0 | 0 | 12 | 12 | | 0 | 0 | 1884 | 14 | 1898 | | 0 | 0 | 881 | 39 | 920 | |
| Shifted Trips: | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | -7 | -7 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 7 | 0 | 7 | |
| Total New Trips: | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 14 | 14 | | 0 | 0 | 34 | 0 | 34 | | 0 | 0 | 32 | 14 | 46 | |
| Future 2026 Traffic Volumes: | 0 | 0 | 0 | 4 | 4 | | 0 | 0 | 0 | 19 | 19 | | 0 | 0 | 1918 | 14 | 1932 | | 0 | 0 | 920 | 53 | 973 | |

P.M. Peak Hour

| Condition | Dixie Avenue Northbound | | | | | | Dixie Avenue Southbound | | | | | | Windy Hill Road Eastbound | | | | | | Windy Hill Road Westbound | | | | | |
|-------------------------------|-------------------------|---|---|---|-----|--|-------------------------|---|---|----|-----|--|---------------------------|---|------|----|------|--|---------------------------|---|------|----|------|--|
| | U | L | T | R | Tot | | U | L | T | R | Tot | | U | L | T | R | Tot | | U | L | T | R | Tot | |
| | | | | | | | | | | | | | | | | | | | | | | | | |
| Existing 2024 Traffic Counts: | 0 | 0 | 0 | 5 | 5 | | 0 | 0 | 0 | 12 | 12 | | 0 | 0 | 1384 | 23 | 1407 | | 0 | 0 | 1885 | 20 | 1905 | |
| Growth Factor (%): | 1 | 1 | 1 | 1 | | | 1 | 1 | 1 | 1 | | | 1 | 1 | 1 | 1 | | | 1 | 1 | 1 | 1 | | |
| No-Build 2026 Volumes: | 0 | 0 | 0 | 5 | 5 | | 0 | 0 | 0 | 12 | 12 | | 0 | 0 | 1412 | 23 | 1435 | | 0 | 0 | 1923 | 20 | 1943 | |
| Shifted Trips: | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | -4 | -4 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 4 | 0 | 4 | |
| Total New Trips: | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 14 | 14 | | 0 | 0 | 75 | 0 | 75 | | 0 | 0 | 32 | 31 | 63 | |
| Future 2026 Traffic Volumes: | 0 | 0 | 0 | 5 | 5 | | 0 | 0 | 0 | 22 | 22 | | 0 | 0 | 1487 | 23 | 1510 | | 0 | 0 | 1959 | 51 | 2010 | |

24-164 - Residential & Fitness Center Development on Windy Hill Road, Smyrna, GA
Traffic Volumes

A&R Engineering
October 2024

3. Dixie Ave @ Hillside Ave
A.M. Peak Hour

| Condition | Dixie Avenue Northbound | | | | | | Dixie Avenue Southbound | | | | | | Eastbound - | | | | | | Hillside Avenue Westbound | | | | | |
|-------------------------------|-------------------------|---|----|---|----|---|-------------------------|---|---|----|---|---|-------------|---|---|---|---|---|---------------------------|---|----|---|-----|-----|
| | U | | | L | | | T | | | R | | | Tot | | | U | | | L | | | T | | |
| | Tot | | | R | | | T | | | L | | | Tot | | | U | | | L | | | T | | |
| Existing 2024 Traffic Counts: | 0 | 0 | 33 | 6 | 39 | 0 | 4 | 6 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 11 | 0 | 11 | 22 |
| Growth Factor (%): | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| No-Build 2026 Volumes: | 0 | 0 | 34 | 6 | 40 | 0 | 4 | 6 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11 | 0 | 11 | 0 | 11 | 22 |
| Shifted Trips: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -7 | 0 | -7 | 0 | -14 | -14 |
| Total New Trips: | 0 | 0 | 3 | 0 | 3 | 0 | 2 | 3 | 0 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Future 2026 Traffic Volumes: | 0 | 0 | 37 | 6 | 43 | 0 | 6 | 9 | 0 | 15 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 0 | 6 | 10 |

P.M. Peak Hour

| Condition | Dixie Avenue Northbound | | | | | | Dixie Avenue Southbound | | | | | | Eastbound - | | | | | | Hillside Avenue Westbound | | | | | |
|-------------------------------|-------------------------|---|----|---|----|---|-------------------------|----|---|----|---|---|-------------|---|---|---|---|---|---------------------------|---|----|---|----|----|
| | U | | | L | | | T | | | R | | | Tot | | | U | | | L | | | T | | |
| | Tot | | | R | | | T | | | L | | | Tot | | | U | | | L | | | T | | |
| Existing 2024 Traffic Counts: | 0 | 0 | 15 | 3 | 18 | 0 | 3 | 18 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 0 | 2 | 8 |
| Growth Factor (%): | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| No-Build 2026 Volumes: | 0 | 0 | 15 | 3 | 18 | 0 | 3 | 18 | 0 | 21 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 6 | 0 | 6 | 0 | 2 | 8 |
| Shifted Trips: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 0 | -4 | 0 | -4 | -8 |
| Total New Trips: | 0 | 0 | 3 | 0 | 3 | 0 | 4 | 6 | 0 | 10 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 2 |
| Future 2026 Traffic Volumes: | 0 | 0 | 18 | 3 | 21 | 0 | 7 | 24 | 0 | 31 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 2 | 0 | 0 | 2 |

24-164 - Residential & Fitness Center Development on Windy Hill Road, Smyrna, GA
Traffic Volumes

A&R Engineering
October 2024

4. Hillside Ave @ Park Dr
A.M. Peak Hour

| Condition | Site Driveway 2 | | | | | Park Drive | | | | | Hillside Avenue | | | | | Hillside Avenue | | | | |
|-------------------------------|-----------------|---|---|---|-----|------------|---|---|---|-----|-----------------|---|----|---|-----|-----------------|---|-----|---|-----|
| | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
| | U | L | T | R | Tot | U | L | T | R | Tot | U | L | T | R | Tot | U | L | T | R | Tot |
| Existing 2024 Traffic Counts: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 10 | 0 | 10 | 0 | 0 | 13 | 1 | 14 |
| Growth Factor (%): | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | |
| No-Build 2026 Volumes: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 10 | 0 | 10 | 0 | 0 | 13 | 1 | 14 |
| Shifted Trips: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -13 | 0 | -13 |
| Total New Trips: | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 |
| Future 2026 Traffic Volumes: | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 10 | 2 | 12 | 0 | 0 | 0 | 1 | 1 |

P.M. Peak Hour

| Condition | Site Driveway 2 | | | | | Park Drive | | | | | Hillside Avenue | | | | | Hillside Avenue | | | | |
|-------------------------------|-----------------|---|---|---|-----|------------|---|---|---|-----|-----------------|---|---|---|-----|-----------------|---|----|---|-----|
| | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
| | U | L | T | R | Tot | U | L | T | R | Tot | U | L | T | R | Tot | U | L | T | R | Tot |
| Existing 2024 Traffic Counts: | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 5 | 0 | 0 | 8 | 1 | 9 |
| Growth Factor (%): | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | |
| No-Build 2026 Volumes: | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 5 | 0 | 5 | 0 | 0 | 8 | 1 | 9 |
| Shifted Trips: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -8 | 0 | -8 |
| Total New Trips: | 0 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 4 | 0 | 0 | 0 | 0 | 0 |
| Future 2026 Traffic Volumes: | 0 | 2 | 0 | 0 | 2 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 5 | 4 | 9 | 0 | 0 | 0 | 1 | 1 |

24-164 - Residential & Fitness Center Development on Windy Hill Road, Smyrna, GA
Traffic Volumes

A&R Engineering
 October 2024

5. Windy Hill Rd @ Davis Rd Ext

A.M. Peak Hour

| Condition | - | | | | | Davis Road Extension | | | | | Windy Hill Road | | | | | Windy Hill Road | | | | |
|-------------------------------|------------|---|---|---|-----|----------------------|----|---|----|-----|-----------------|----|------|---|------|-----------------|---|-----|----|-----|
| | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
| | U | L | T | R | Tot | U | L | T | R | Tot | U | L | T | R | Tot | U | L | T | R | Tot |
| Existing 2024 Traffic Counts: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 36 | 0 | 1815 | 0 | 1851 | 0 | 0 | 902 | 0 | 902 |
| Growth Factor (%): | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 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 | 0 | 37 | 0 | 1851 | 0 | 1888 | 0 | 0 | 920 | 0 | 920 |
| Shifted Trips: | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 0 | 7 | 14 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total New Trips: | 0 | 0 | 0 | 0 | 0 | 0 | 63 | 0 | 32 | 95 | 0 | 34 | 0 | 0 | 34 | 0 | 0 | 14 | 33 | 47 |
| Future 2026 Traffic Volumes: | 0 | 0 | 0 | 0 | 0 | 0 | 70 | 0 | 39 | 109 | 37 | 34 | 1851 | 0 | 1922 | 0 | 0 | 934 | 33 | 967 |

P.M. Peak Hour

| Condition | - | | | | | Davis Road Extension | | | | | Windy Hill Road | | | | | Windy Hill Road | | | | |
|-------------------------------|------------|---|---|---|-----|----------------------|----|---|----|-----|-----------------|----|------|---|------|-----------------|---|------|----|------|
| | Northbound | | | | | Southbound | | | | | Eastbound | | | | | Westbound | | | | |
| | U | L | T | R | Tot | U | L | T | R | Tot | U | L | T | R | Tot | U | L | T | R | Tot |
| Existing 2024 Traffic Counts: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 47 | 0 | 1349 | 0 | 1396 | 0 | 0 | 1902 | 0 | 1902 |
| Growth Factor (%): | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 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 | 0 | 48 | 0 | 1376 | 0 | 1424 | 0 | 0 | 1940 | 0 | 1940 |
| Shifted Trips: | 0 | 0 | 0 | 0 | 0 | 0 | 4 | 0 | 4 | 8 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total New Trips: | 0 | 0 | 0 | 0 | 0 | 0 | 64 | 0 | 32 | 96 | 0 | 75 | 0 | 0 | 75 | 0 | 0 | 31 | 72 | 103 |
| Future 2026 Traffic Volumes: | 0 | 0 | 0 | 0 | 0 | 0 | 68 | 0 | 36 | 104 | 48 | 75 | 1376 | 0 | 1499 | 0 | 0 | 1971 | 72 | 2043 |

24-164 - Residential & Fitness Center Development on Windy Hill Road, Smyrna, GA
Traffic Volumes

A&R Engineering
October 2024

6. Dixie Ave @ Site Drwy 1
A.M. Peak Hour

| Condition | Dixie Avenue Northbound | | | | | Dixie Avenue Southbound | | | | | Eastbound - | | | | | Site Driveway 1 Westbound | | | | |
|-------------------------------|-------------------------|---|----|----|-----|-------------------------|---|----|---|-----|-------------|---|---|---|-----|---------------------------|----|---|---|-----|
| | U | L | T | R | Tot | U | L | T | R | Tot | U | L | T | R | Tot | U | L | T | R | Tot |
| | | | | | | | | | | | | | | | | | | | | |
| Existing 2024 Traffic Counts: | 0 | 0 | 39 | 0 | 39 | 0 | 0 | 17 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Growth Factor (%): | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| No-Build 2026 Volumes: | 0 | 0 | 40 | 0 | 40 | 0 | 0 | 17 | 0 | 17 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Shifted Trips: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -7 | 0 | -7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total New Trips: | 0 | 0 | 0 | 14 | 14 | 0 | 3 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 3 | 17 |
| Future 2026 Traffic Volumes: | 0 | 0 | 40 | 14 | 54 | 0 | 3 | 10 | 0 | 13 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 3 | 17 |

P.M. Peak Hour

| Condition | Dixie Avenue Northbound | | | | | Dixie Avenue Southbound | | | | | Eastbound - | | | | | Site Driveway 1 Westbound | | | | |
|-------------------------------|-------------------------|---|----|----|-----|-------------------------|---|----|---|-----|-------------|---|---|---|-----|---------------------------|----|---|---|-----|
| | U | L | T | R | Tot | U | L | T | R | Tot | U | L | T | R | Tot | U | L | T | R | Tot |
| | | | | | | | | | | | | | | | | | | | | |
| Existing 2024 Traffic Counts: | 0 | 0 | 18 | 0 | 18 | 0 | 0 | 24 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Growth Factor (%): | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| No-Build 2026 Volumes: | 0 | 0 | 18 | 0 | 18 | 0 | 0 | 24 | 0 | 24 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Shifted Trips: | 0 | 0 | 0 | 0 | 0 | 0 | 0 | -4 | 0 | -4 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total New Trips: | 0 | 0 | 0 | 31 | 31 | 0 | 6 | 0 | 0 | 6 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 3 | 17 |
| Future 2026 Traffic Volumes: | 0 | 0 | 18 | 31 | 49 | 0 | 6 | 20 | 0 | 26 | 0 | 0 | 0 | 0 | 0 | 0 | 14 | 0 | 3 | 17 |

24-164 - Residential & Fitness Center Development on Windy Hill Road, Smyrna, GA
Traffic Volumes

A&R Engineering
October 2024

7. Davis Rd Ext @ Site Drwy 3

A.M. Peak Hour

| Condition | Davis Road Extension | | | | | | Davis Road Extension | | | | | | Site Driveway 3 | | | | | | Westbound | | | | | |
|-------------------------------|----------------------|----|---|---|-----|--|----------------------|---|----|---|-----|--|-----------------|---|---|----|-----|--|-----------|---|---|---|-----|--|
| | Northbound | | | | | | Southbound | | | | | | Eastbound | | | | | | Westbound | | | | | |
| | U | L | T | R | Tot | | U | L | T | R | Tot | | U | L | T | R | Tot | | U | L | T | R | Tot | |
| Existing 2024 Traffic Counts: | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Growth Factor (%): | 1 | 1 | 1 | 1 | | | 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 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Shifted Trips: | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 13 | 0 | 13 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Total New Trips: | 0 | 68 | 0 | 0 | 68 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 95 | 95 | | 0 | 0 | 0 | 0 | 0 | |
| Future 2026 Traffic Volumes: | 0 | 68 | 0 | 0 | 68 | | 0 | 0 | 13 | 0 | 13 | | 0 | 0 | 0 | 95 | 95 | | 0 | 0 | 0 | 0 | 0 | |

P.M. Peak Hour

| Condition | Davis Road Extension | | | | | | Davis Road Extension | | | | | | Site Driveway 3 | | | | | | Westbound | | | | | |
|-------------------------------|----------------------|-----|---|---|-----|--|----------------------|---|---|---|-----|--|-----------------|---|---|----|-----|--|-----------|---|---|---|-----|--|
| | Northbound | | | | | | Southbound | | | | | | Eastbound | | | | | | Westbound | | | | | |
| | U | L | T | R | Tot | | U | L | T | R | Tot | | U | L | T | R | Tot | | U | L | T | R | Tot | |
| Existing 2024 Traffic Counts: | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Growth Factor (%): | 1 | 1 | 1 | 1 | | | 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 | 0 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Shifted Trips: | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 8 | 0 | 8 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 0 | 0 | |
| Total New Trips: | 0 | 148 | 0 | 0 | 148 | | 0 | 0 | 0 | 0 | 0 | | 0 | 0 | 0 | 96 | 96 | | 0 | 0 | 0 | 0 | 0 | |
| Future 2026 Traffic Volumes: | 0 | 148 | 0 | 0 | 148 | | 0 | 0 | 8 | 0 | 8 | | 0 | 0 | 0 | 96 | 96 | | 0 | 0 | 0 | 0 | 0 | |