City of Dunwoody Georgia
Community Development

4800 Ashford Dunwoody Road
Dunwoody, GA 30346
Phone: (678) 382-6800
dunwoodyga.gov

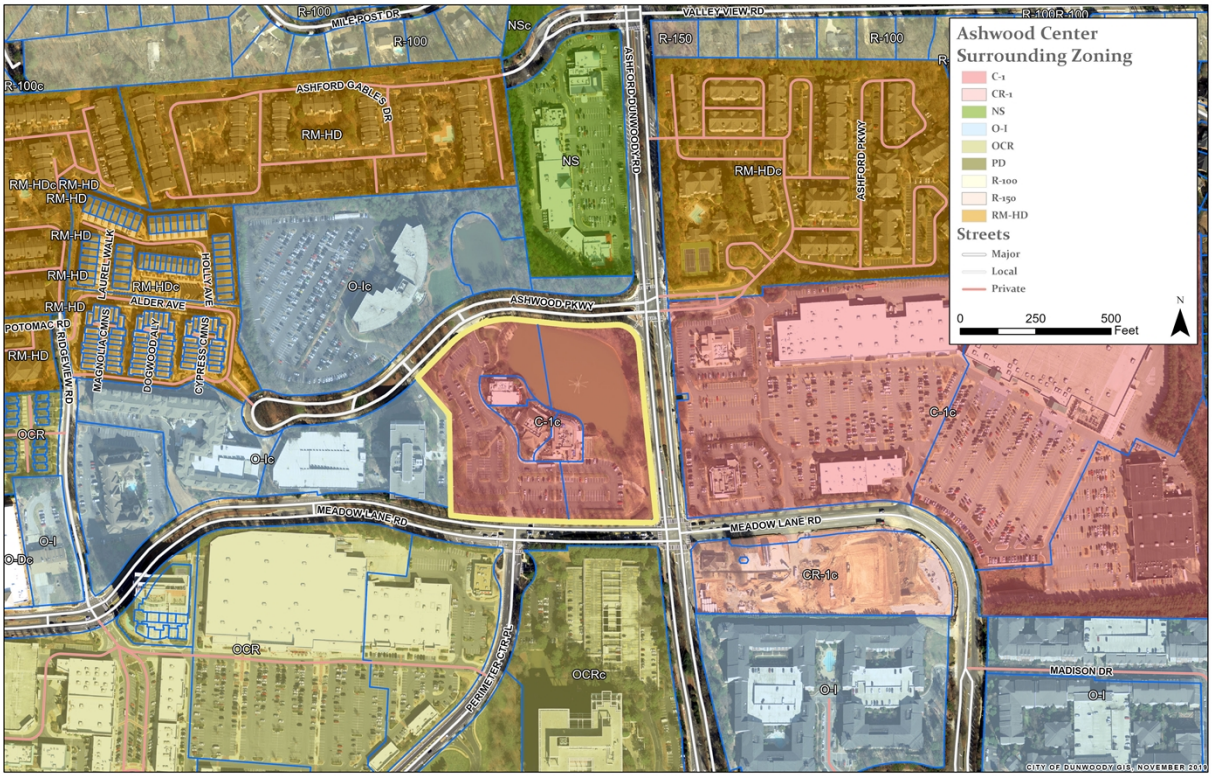
MEMORANDUM

To: City Council

From: John Olson, AICP

Date: February 10, 2020

Subject: Laurel David, attorney for the owner, on behalf of Branch Ashwood Associates, L.P., owner of 1250 Meadow Lane Road, and 500, 600, and 700 Ashwood Parkway, Dunwoody, Georgia seeks a major modification to conditions of zoning. The tax parcel numbers for the site are 18-350-02-001, 18-350-02-003, 18-349-01-037, and 18-349-01-046.



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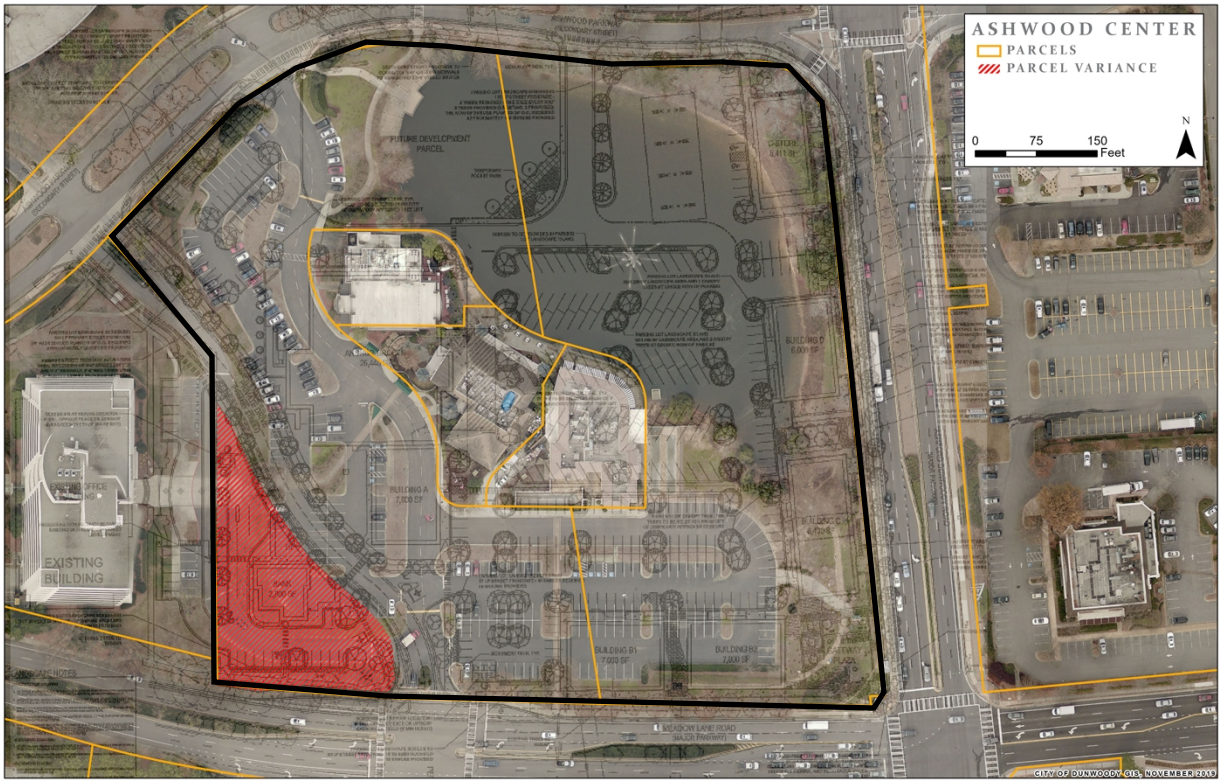

BACKGROUND

The subject site is part of a 10.1 acre master planned site located at 1250 Meadows Lane, 4720 Ashford Dunwoody Road, and 500, 600, and 700 Ashwood Parkway. The area of the site in question is found within the southwestern corner of the property as pictured above in red. The entire property contains three restaurant buildings, surface parking, and a large stormwater detention pond. In regards to topography, the site is relatively flat in and around the parking lot and restaurant buildings; however, steeper topography is found immediately adjacent to the Ashford Dunwoody street frontage, and the back of the site. There is a moderate drop in elevation from the Ashford Dunwoody Road street frontage. In fact, the submitted survey indicates that the elevation of the detention area sits approximately 24 feet below the elevation of the sidewalk, which runs along Ashford Dunwoody Road.

SITE PLAN ANALYSIS

In 1996, the site was rezoned to C-1 ("Commercial") District with conditions allowing up to four (4) restaurants (CZ96-035). In May of 2019, the conditions of the site plan were modified to allow a 25,440 square foot anchor supermarket, an 8-pump (16 fueling positions) gas station/convenience store, a 2,800 square foot bank, and five buildings consisting of 35,400 square feet of restaurant and retail space (MA19-01).

The applicant is submitting a request to modify the conditions of MA19-01 in order to replace the 2,800 square foot bank, located within the southwestern corner of the site, with a 4,700 square foot medical service, office, restaurant, or retail use. While the applicant has noted that they are pursuing a medical service use for the site, they are requesting the additional uses to allow flexibility in the future, should something happen to the medical use. It is important to note that the approval of the modification will remove a free standing bank as an allowed use within the master planned site. Other than the bank building, this request

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does not change any other aspect of the master planned site, including the new street between Meadow Lane and Ashwood Parkway.

In accordance with Section 27.306, the applicant hosted a public information meeting on Tuesday, October 29, 2019. According to the meeting summary report, only one person attended the meeting and they were supportive of the change.

SURROUNDING LAND ANALYSIS

Direction	Zoning	Use	Current Land Use
N	O-I and N-S	Shopping Center and Office Building	Commercial/Office
S	OCR	Shopping Center and Office Building	Commercial/Office
E	C-1	Restaurants and Shopping Center	Commercial
W	O-I	Office Building	Office

ZONING ANALYSIS

Through the process of a Major Modification, the applicant has requested a change of conditions to the original conditions approved in MA19-01. Chapter 27, Section 27-359 identifies the following criteria to be applied by the Department of Planning, the Planning Commission, and the City Council in evaluating applications for major zoning amendments. No application for an amendment shall be granted by the city council unless satisfactory provisions and arrangements have been made concerning each of the following factors, all of which are applicable to each application:

1. Whether the proposed use is consistent with the policies of the comprehensive plan;

   From a land use perspective, a medical service, office, retail, restaurant building would remain compatible with the Comprehensive Plan, as the uses are currently allowed by-right under the existing C-1 zoning and the future intended PC-2 zoning. As well, the project as a whole is consistent with the Perimeter Center Overlay in that it creates new pedestrian and bicycle-oriented amenities along four street frontages, including the development of approximately 700 feet of commuter trail along Ashford Dunwoody Road, and the development of a new street that provides connectivity between the Meadows Lane Road and Ashford Lane Road.

2. Whether the zoning proposal will permit a use that is suitable in view of the use and development of adjacent and nearby properties;

   The development of a 4,700 square foot medical service, office, restaurant, or retail use building, remains suitable in light of the adjoining mix of office, retail, restaurants, and shopping centers nearby.

   Whether the property to be affected by the zoning proposal has a reasonable economic use as currently zoned;

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The area of the site in question only allows for a 2,800 square foot bank use; however, this use did not come to fruition. Allowing changes to conditions that supports medical service/office/restaurant/retail use would grant the property broader economic use, providing more flexibility that meets today's market conditions.

3. Whether the zoning proposal will adversely affect the existing use or usability of adjacent or nearby property;

   The proposed change of use will not create any adverse impacts on adjoining land uses as adjacent and nearby properties have similar commercial and office operational characteristics.

4. Whether the proposed use will create adverse impacts upon any adjoining land use by reason of noise, smoke, odor, dust or vibration generated by the proposed use;

   The proposed uses will not create adverse impacts upon any adjoining land use by reason of noise, smoke, odor, dust or vibration.

5. Whether there are other existing or changing conditions affecting the use and development of the property that provide supporting grounds for either approval or disapproval of the zoning proposal;

   The project supports the Perimeter Center Overlays goal of improving bicycle and pedestrian modes of travel and transportation connectivity, specifically through the construction of a new street connection, commuter trail, and streetscapes.

6. Whether the zoning proposal will adversely affect historic buildings, sites, districts, or archaeological resources; and

   The area on the site in which the applicant proposes to develop consists of surface parking, so the development will not have an impact on any historic buildings, sites, districts, or archaeological resources.

7. Whether the zoning proposal will result in a use that will or could cause an excessive or burdensome use of existing streets, transportation facilities, utilities, or schools.

   The change of the bank to a medical service, office, restaurant, or retail use will not cause an excessive or burdensome use of existing streets, transportation facilities, utilities, or schools. As previously noted, Branch has designed the site to include a new road connection between Meadows Lane and Ashford Dunwoody Road and has consulted an engineer to complete the traffic improvements, listed in conditions 20 to 23. As well, to support bicycle and pedestrian modes, they have agreed to build a 10-foot wide commuter trail fronting Ashford Dunwoody Road.

SUMMARY OF JANUARY 14, 2020 PLANNING COMMISSION

Planning Commission held a public hearing regarding the case on January 14, 2020 and one person from the public spoke, but only asked questions for clarification on the project.

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Following discussions, Commissioner Thomas O'Brien motioned to approve the case incorporating staff conditions with the following additional recommendation:

1. The drive-thru should be limited only to medical office use.

Commissioner Kirk Anders seconded and the motion passed unanimously.

STAFF RECOMMENDATION

Based on the written findings above, staff recommends the request be **approved** subject to an updated site plan (condition 1), which reflects the change in the use from a bank to a medical service, office, restaurant, and retail use; a requirement that the building contain a street facing entrance (condition 2); Planning Commission's recommendation that the drive-thru be limited only to medical office use (condition 3); and all other conditions which carry over from the previous zoning application MA19-01:

EXHIBIT A: Zoning Site Plan, dated November 4, 2019
EXHIBIT B: Streetscaping Sections, completed by Phillips Partnership, dated December 4, 2018 and Streetscape Section for Ashford Dunwoody Road dated January 14, 2019
EXHIBIT C: Rendering of Archway Sign and Grocer Free-standing Letters Sign, dated April 25, 2019
EXHIBIT D: Conceptual Gateway Plaza Plan, completed by AJC Design Group, dated April 24, 2019
EXHIBIT E: Left Turn Lane Concept, completed by A&R Engineering, dated April 17, 2019
EXHIBIT F: Meadow Lane Intersection, completed by Philips Partnership, dated May 13, 2019

1. The owner shall develop the site in general conformity with "Exhibit A" with minor changes allowed as defined by Section 27-337(b) or necessary changes to meet conditions of zoning or land development requirements made necessary by actual field conditions at the time of development;
2. The property shall contain a street facing entrance that stays open during business hours;
3. The drive-thru should be limited only to medical office use;
4. The owner shall construct the streetscaping and commuter trail in general conformity with "Exhibit B". Any minor variations to the streetscapes made necessary by actual field conditions at the time of development shall be subject to approval by the Public Works and Community Development Department. If the width of the commuter trail is reduced by Public Works the location of the footprints of the buildings shall remain in the same vertical and horizontal location as shown on the Schematic Site Plan;
5. The owner shall construct a 12-foot wide pedestrian connection, including a 6-foot pedestrian sidewalk and two 3-foot wide landscape strips, from Ashford Dunwoody Road, between buildings C and D, to Building A as illustrated on Exhibit A. The landscape strips shall include overstory trees planted on each side at no more than 50 and no less than 25 feet;
6. Buildings shall be designed with 360 degree architecture with the exception of the rear of Building A and the anchor grocer, which shall be subject to reasonable landscape screening as approved by the City Arborist;
7. Major façade materials shall include brick, stone, hard coat stucco and glass, with other high quality materials approved by the Community Development Director during the permit review process;
8. Synthetic stucco (EIFS) material shall be limited to accenting material; masonry brick or stone veneer materials are allowed; stamped brick and stone EIFS or imitation masonry veneer materials shall be prohibited;

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9. All loading facilities and trash/recycling enclosure(s) must be screened from view of public rights-of-way by landscaping and a solid brick wall or opaque fence at least six feet in height or the height of the dumpster. The approach to the loading facilities and trash/recycling enclosures for the anchor grocer and Building A does not need to be screened from view of Ashwood Parkway;
10. All mechanical equipment (e.g., air conditioning, heating, cooling, ventilation, exhaust and similar equipment) shall be roof mounted and screened in all directions by walls or parapets or will be enclosed in opaque structures to hide the mechanical equipment from view from public right-of-way within 200 feet;
11. All utilities servicing the site shall be underground with the exception of required above-ground elements, such as transformers and cable boxes;
12. Any stormwater detention facility will be underground;
13. Within sixty days after the issuance of certificates of occupancy, the Owner will convey to the City right-of-way to incorporate the sidewalk and bicycle improvements, located along Ashford Dunwoody Road. The City will maintain the sidewalk and bicycle improvements. Such conveyance shall be via right of way deed. The exact legal description of the property to be conveyed shall be prepared by the Owner and agreed to by the City;
14. Within sixty days after the issuance of certificates of occupancy, the Owner will convey a permanent public access easement to the City for the new roadway and sidewalks to be constructed on the west side of the site. Owner may convey the new roadway and sidewalks via right of way deed at a future date at which point the City shall accept such conveyance. The exact legal description of the property to be conveyed shall be prepared by the Owner and agreed to by the City;
15. The development is entitled to a total of four monument signs, one on each road frontage. The allowed square footage of 144 square feet for the monument sign for Ashford Dunwoody Road may be divided into two structures as follows: 1) an archway connecting Building B and Building C in general conformity with the renderings in Exhibit C and; 2) freestanding letters indicating the name of the anchor grocer mounted on top of the Plaza wall up to a total maximum height of 5 feet in general conformity with the rendering in Exhibit D. In addition, the Archway sign may include a 42 square foot wayfinding sign labeled as "Sign A" as shown in Exhibit C. ;
16. The commuter trail, streetscaping, and new road connection, shall be developed concurrently with the grocery store and retail/restaurant buildings C and D, fronting Ashford Dunwoody Road;
17. The ground story restaurant/retail uses of buildings shall be built within three feet of vertical elevation of the adjacent commuter trail and have entrances that face Ashford Dunwoody Road as follows: buildings containing one tenant shall have a minimum of one entrance; buildings containing two or more tenants shall have a minimum of two entrances;
18. The Gateway Plaza, located on the corner of Meadow Lane Road and Ashford Dunwoody Road will be in general conformity with the Conceptual Gateway Plaza Plan attached as Exhibit C. Within sixty days after the issuance of certificates of occupancy, the Plaza area general public access will be granted to the Plaza through a public access easement to the benefit of the City;
19. The owner shall be responsible for the maintenance of the Plaza;
20. There shall be no minimum parking requirement for the undeveloped northern parcel of the property;
21. In accordance with the recommendation of the traffic study, a westbound left turn lane shall be added on Ashwood Parkway at the easternmost driveway entrance to the development in general conformity with Exhibit E;
22. Based on projected queue length, an eastbound left turn lane shall be installed at Ashwood Parkway and Ashford Dunwoody Road using existing signal phasing and in general conformity with Exhibit E. Applicant will not be responsible for any signal work;

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23. A southbound right turn lane shall be added at the intersection of Perimeter Center Place and Meadow Lane Road using existing signal phasing and in general conformity with Exhibit F. Applicant will not be responsible for any signal work; and
24. The owner will contribute up to thirty-three percent (33%) of the funds needed to extend the northbound left turn lane from Ashford Dunwoody Road on to Meadow Lane Road. In no event shall the total of such contribution exceed $33,000.

Attachments

- EXHIBIT A: Zoning Site Plan, dated November 4, 2019
- EXHIBIT B: Streetscaping Sections, completed by Phillips Partnership, dated December 4, 2018 and Streetscape Section for Ashford Dunwoody Road dated January 14, 2019
- EXHIBIT C: Rendering of Archway Sign and Grocer Free-standing Letters Sign, dated April 25, 2019
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- EXHIBIT F: Meadow Lane Intersection, completed by Philips Partnership, dated May 13, 2019
- Major Amendment Ordinance
- MA 19-03 Application
- MA19-03 Landscape Plan
- MA19-03 Building Elevations
- Previously Approved Site Plan
- Dunwoody Comp Plan Excerpt
- Traffic Study

STATE OF GEORGIA
CITY OF DUNWOODY **ORDINANCE 2020-__-__**

AN ORDINANCE TO AMEND THE ZONING CONDITIONS OF LAND LOTS 352, and 349, District 18 IN CONSIDERATION OF ZONING CASE MA-19-03(1250 MEADOW LANE ROAD, AND 500, 600, AND 700 ASHFORD).

WHEREAS: Branch Ashwood Associates, L.P., owner of 1250 Meadow Lane Road, and 500, 600, and 700 Ashwood Parkway, Dunwoody, Georgia seeks a major modification to conditions of zoning; and

WHEREAS: The properties, consisting of tax parcel numbers 18-350-02-001, 18-350-02-003, 18-349-01-037, and 18-349-01-046, contains 10.1 acres of land located in the northwest corner of Ashford Dunwoody Road and Meadows Lane; and

WHEREAS: The Properties, collectively known as Ashwood Restaurant Park are currently improved with 25,375 square feet of restaurant space; and

WHEREAS: In 1996, the site was rezoned to C-I ("Commercial") District with conditions allowing up to four (4) restaurants (CZ96-035). In May of 2019, the conditions of the site plan were modified to allow a 25,440 square foot anchor supermarket, an 8-pump (16 fueling positions) gas station/convenience store, a 2,800 square foot bank, and five buildings consisting of 35,400 square feet of restaurant and retail space (MA19-01); and

WHEREAS: Branch Ashwood Associates, L.P. requests to modify the conditions of MA19-01 in order to replace the 2,800 square foot bank, located within the southwestern corner of the site, with a 4,700 square foot medical service, office, restaurant, or retail use; and

WHEREAS: Notice to the public regarding said rezoning and modification to conditions of zoning has been duly published in The Dunwoody Crier, the Official News Organ of the City of Dunwoody; and

WHEREAS: A public hearing was held by the Mayor and City Council of the City of Dunwoody as required by the Zoning Procedures Act; and

WHEREAS: The Mayor and City Council find that the proposed use aligns with the Perimeter Center Character Area of the Dunwoody Comprehensive Plan, which calls for, among others, creative building and site design that encourages bikeable and walkable development which furthers the transportation goals of modality (other than by automobile) and connectivity of the Perimeter Center Neighborhood; and

STATE OF GEORGIA
CITY OF DUNWOODY **ORDINANCE 2020-__-__**

NOW THEREFORE, The Mayor and City Council of the City of Dunwoody hereby **ORDAIN AND APPROVE** the modification of zoning conditions on tax parcel numbers 18-350-02-001, 18-350-02-003, 18-349-01-037, and 18-349-01-046 as follows:

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1. The owner shall develop the site in general conformity with "Exhibit A" with minor changes allowed as defined by Section 27-337(b) or necessary changes to meet conditions of zoning or land development requirements made necessary by actual field conditions at the time of development;
2. The property shall contain a street facing entrance that stays open during business hours;
3. The drive-thru should be limited only to medical office use;
4. The owner shall construct the streetscaping and commuter trail in general conformity with "Exhibit B". Any minor variations to the streetscapes made necessary by actual field conditions at the time of development shall be subject to approval by the Public Works and Community Development Department. If the width of the commuter trail is reduced by Public Works the location of the footprints of the buildings shall remain in the same vertical and horizontal location as shown on the Schematic Site Plan;
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10. All mechanical equipment (e.g., air conditioning, heating, cooling, ventilation, exhaust and similar equipment) shall be roof mounted and screened in all directions by walls or parapets or will be enclosed in opaque structures to hide the mechanical equipment from view from public right-of-way within 200 feet;
11. All utilities servicing the site shall be underground with the exception of required above-ground elements, such as transformers and cable boxes;

STATE OF GEORGIA
CITY OF DUNWOODY **ORDINANCE 2020-__-__**

12. Any stormwater detention facility will be underground;
13. Within sixty days after the issuance of certificates of occupancy, the Owner will convey to the City right-of-way to incorporate the sidewalk and bicycle improvements, located along Ashford Dunwoody Road. The City will maintain the sidewalk and bicycle improvements. Such conveyance shall be via right of way deed. The exact legal description of the property to be conveyed shall be prepared by the Owner and agreed to by the City;
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20. There shall be no minimum parking requirement for the undeveloped northern parcel of the property;
21. In accordance with the recommendation of the traffic study, a westbound left turn lane shall be added on Ashwood Parkway at the easternmost driveway entrance to the development in general conformity with Exhibit E;
22. Based on projected queue length, an eastbound left turn lane shall be installed at Ashwood Parkway and Ashford Dunwoody Road using existing signal phasing and in general conformity with Exhibit E. Applicant will not be responsible for any signal work;
23. A southbound right turn lane shall be added at the intersection of Perimeter Center Place and Meadow Lane Road using existing signal phasing and in general conformity with Exhibit F. Applicant will not be responsible for any signal work; and
24. The owner will contribute up to thirty-three percent (33%) of the funds needed to extend the northbound left turn lane from Ashford Dunwoody Road on to Meadow Lane Road. In no event shall the total of such contribution exceed $33,000.

STATE OF GEORGIA
CITY OF DUNWOODY **ORDINANCE 2020-__-__**

SO ORDAINED AND EFFECTIVE, this the ___ day of _____, 2020.

Approved by:

_____
Lynn Deutsch, Mayor

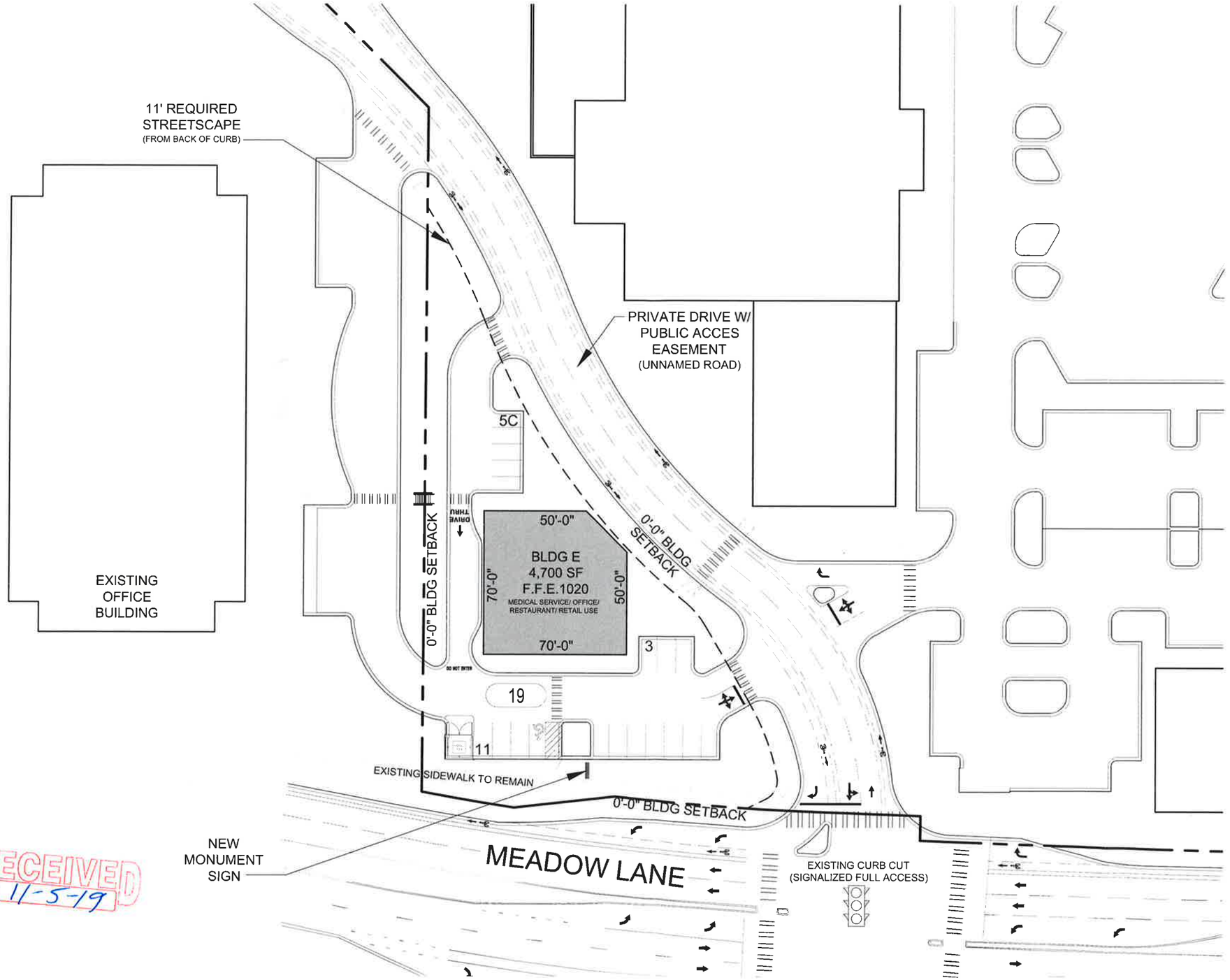
Approved as to Form and Content

_____
City Attorney's Office

Attest:

_____
Sharon Lowery, City Clerk

SEAL



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11-5-19

0 25 50 100

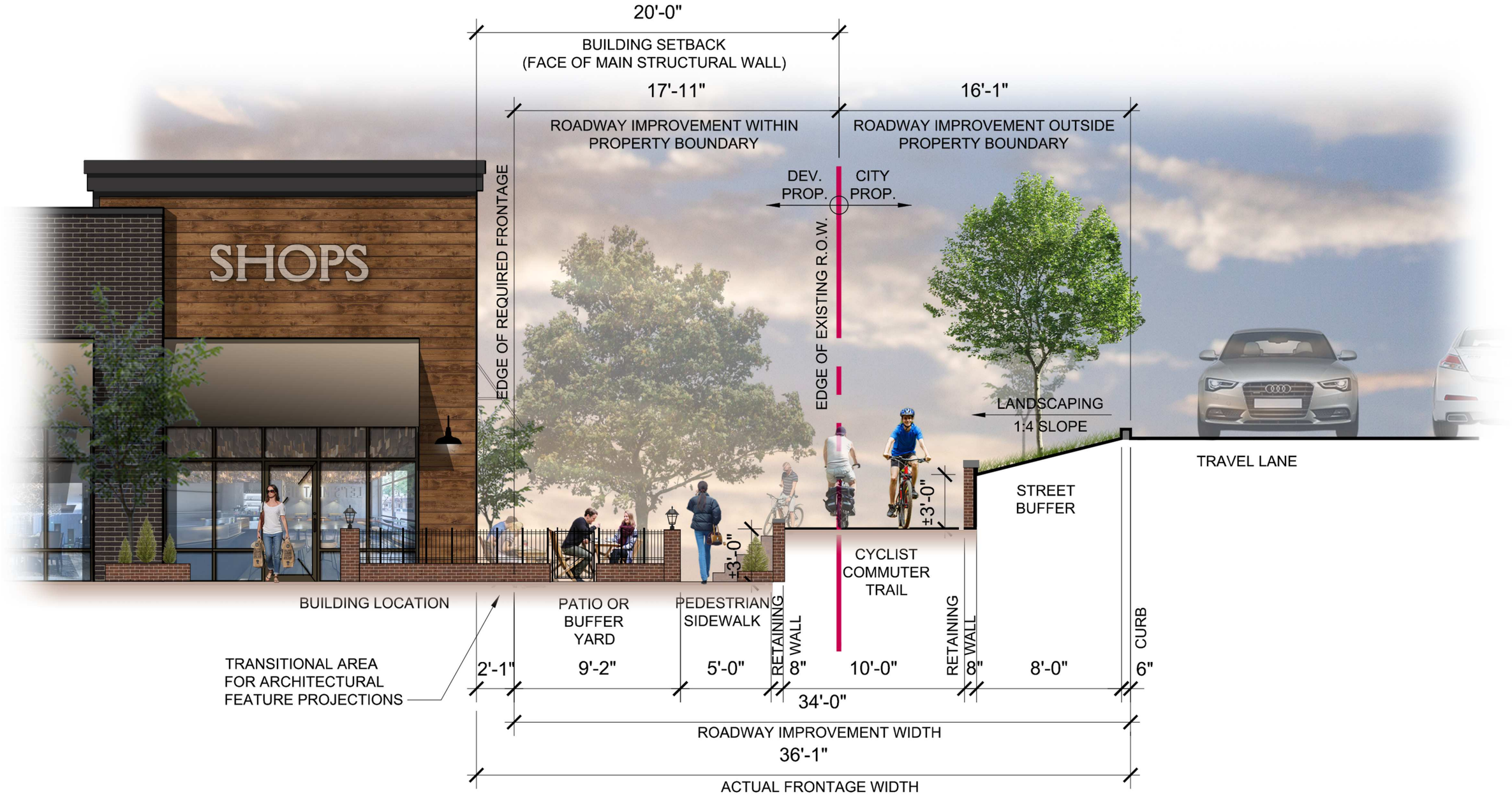
SCALE: 1" = 50'

N

PERIMETER MARKETPLACE
ASHFORD DUNWOODY RD
DUNWOODY, GEORGIA

Z P - 1.1 (OP3)
ZONING SITE PLAN
2019.11.04

BRANCH
3340 PEACHTREE RD NE ▪ SUITE 2775 ▪ ATLANTA, GA 30326
404 ▪ 832 ▪ 8900



BRANCH PROPERTIES, LLC

ASHFORD DUNWOODY ROAD

DUNWOODY, GEORGIA
01-14-2019

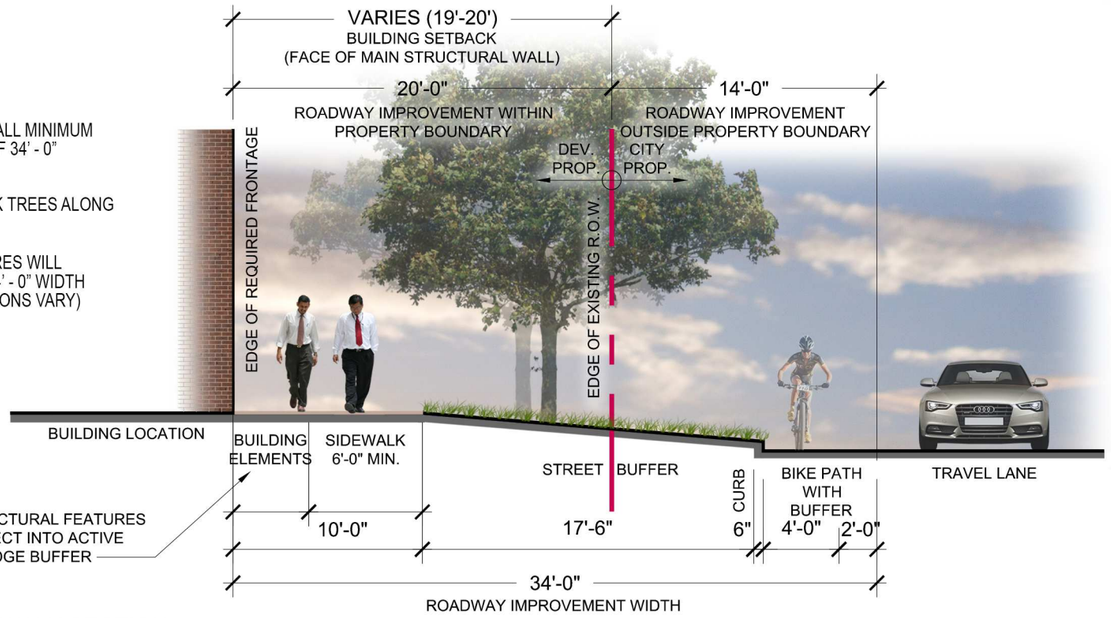
PHILLIPS architecture · consultants

MAJOR PARKWAY FRONTAGE (EXISTING)

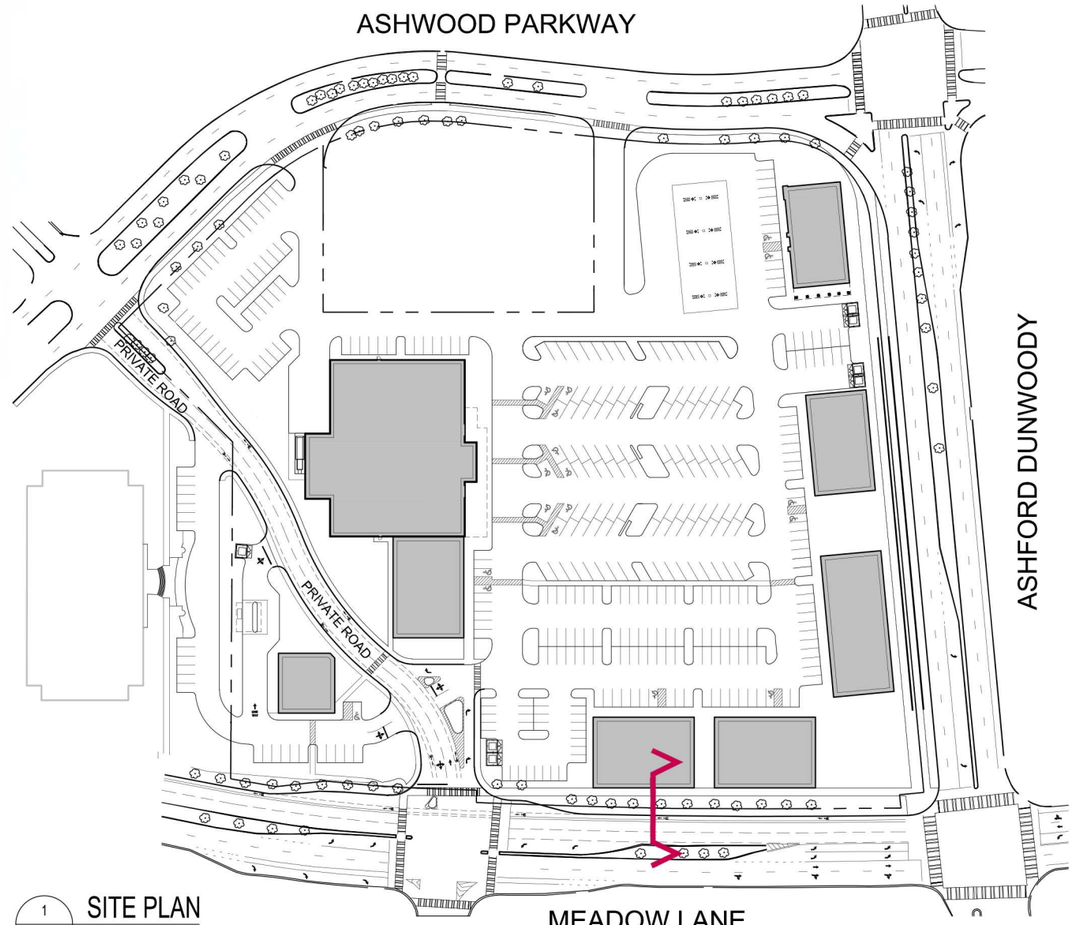
* COMPLIANT WITH OVERALL MINIMUM IMPROVEMENT WIDTH OF 34' - 0" (PER EXHIBIT A)

*PRESERVES MATURE OAK TREES ALONG MEADOW LANE

*ARCHITECTURAL FEATURES WILL ENCROACH INTO 34' - 0" WIDTH REQUIREMENT (DIMENSIONS VARY)



2 / - SIDEWALK SECTION
SCALE: 1/8" = 1'

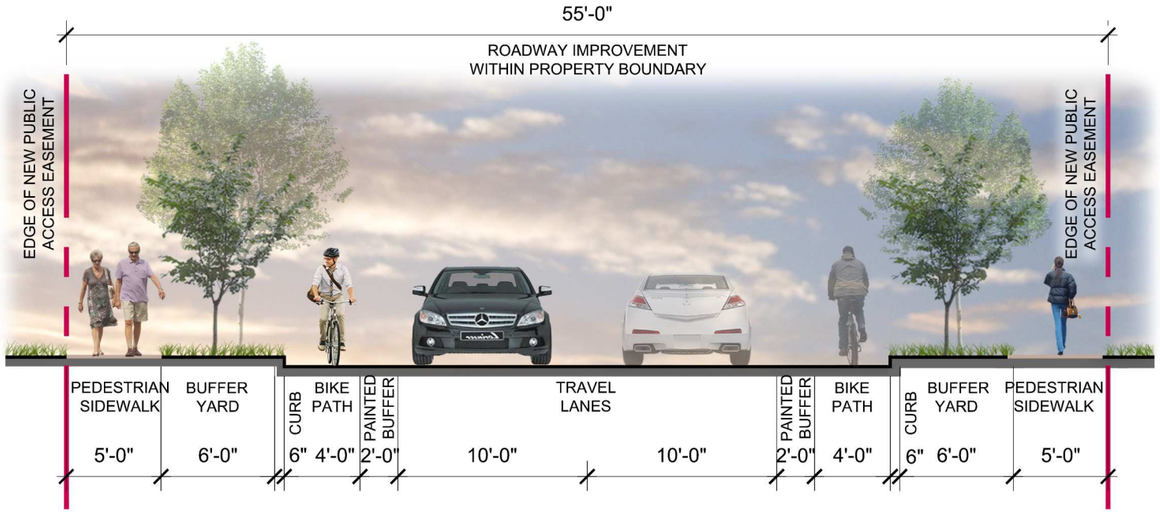


1 / SP-25 SITE PLAN
SCALE: 1" = 150'

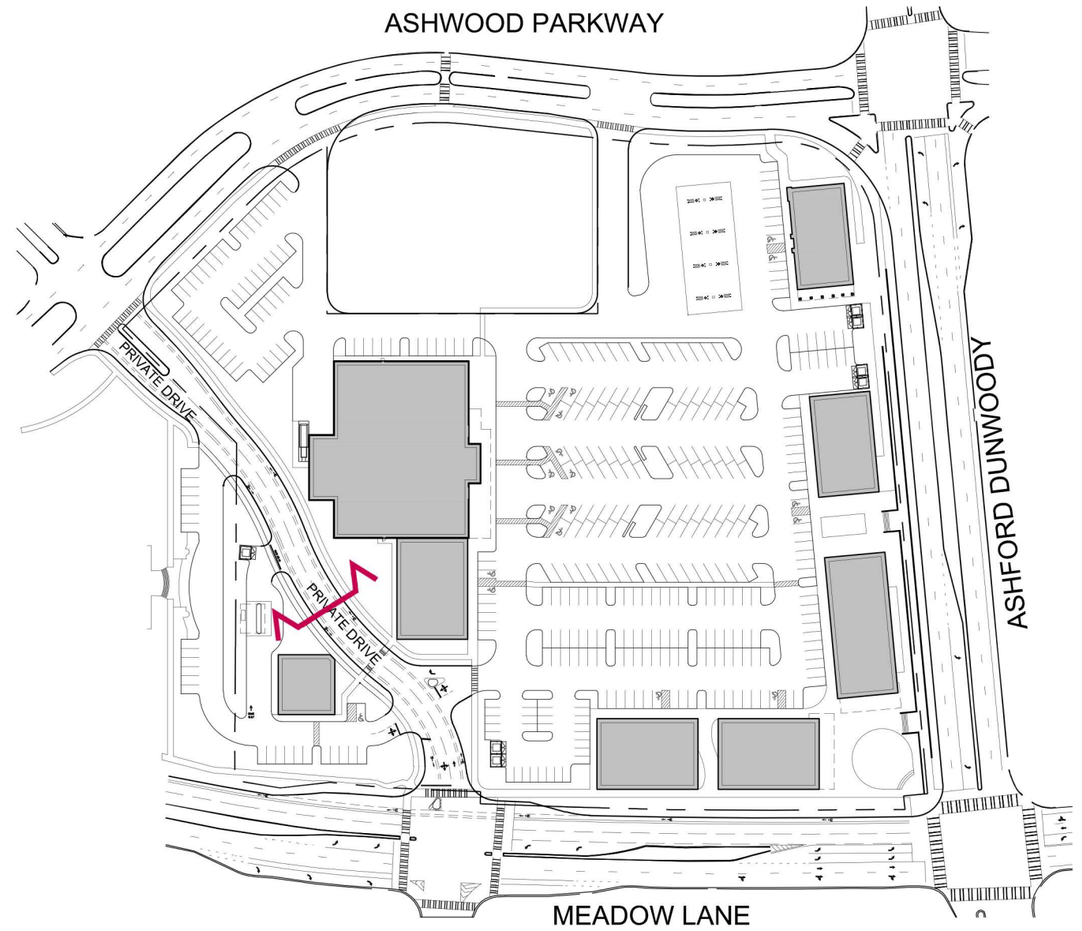
CLIENT BRANCH PROPERTIES, LLC	PROJECT **ASHFORD DUNWOODY RD** **ATLANTA, GA**	JOB NUMBER 1617702	BY AB/KMC
		DATE 2018-12-04	DRAWING ROADWAY IMPROVEMENT STUDY MEADOW LANE

PHILLIPS
THE PALISADES
5901 PEACHTREE DUNWOODY ROAD,
BUILDING A, SUITE 450 ATLANTA, GA 30328
Phone 770.394.1616 Fax 770.394.1314

PRIVATE DRIVE FRONTAGE (NEW)



2 - SIDEWALK SECTION
SCALE: 1/8" = 1'



1 SP-27 SITE PLAN
SCALE: 1" = 150'

CLIENT
BRANCH PROPERTIES, LLC

PROJECT
ASHFORD DUNWOODY RD
ATLANTA, GA

JOB NUMBER
1617702

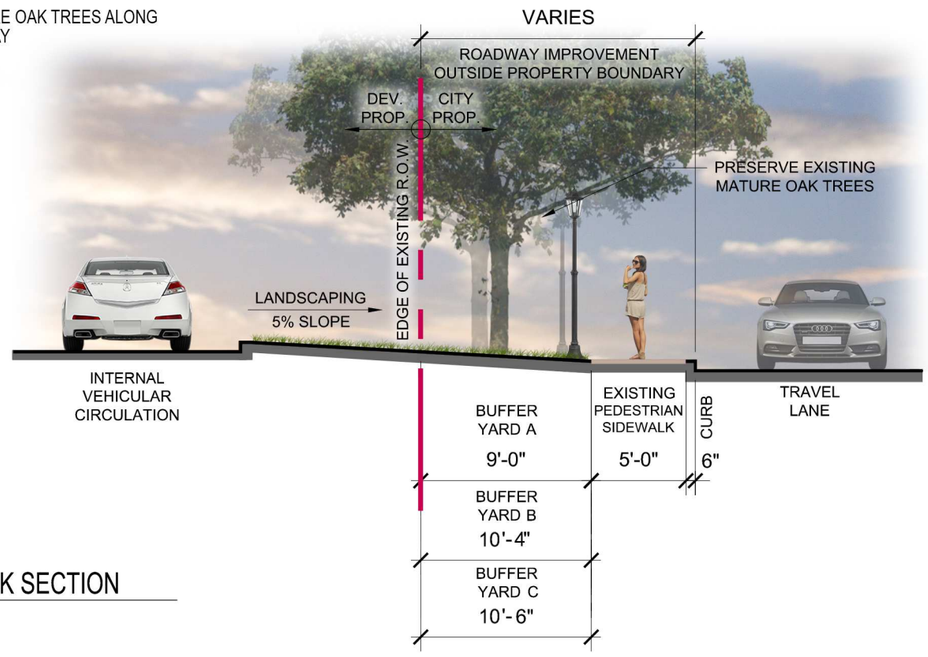
BY
WHH/AB/KMC

DATE
2018-12-13

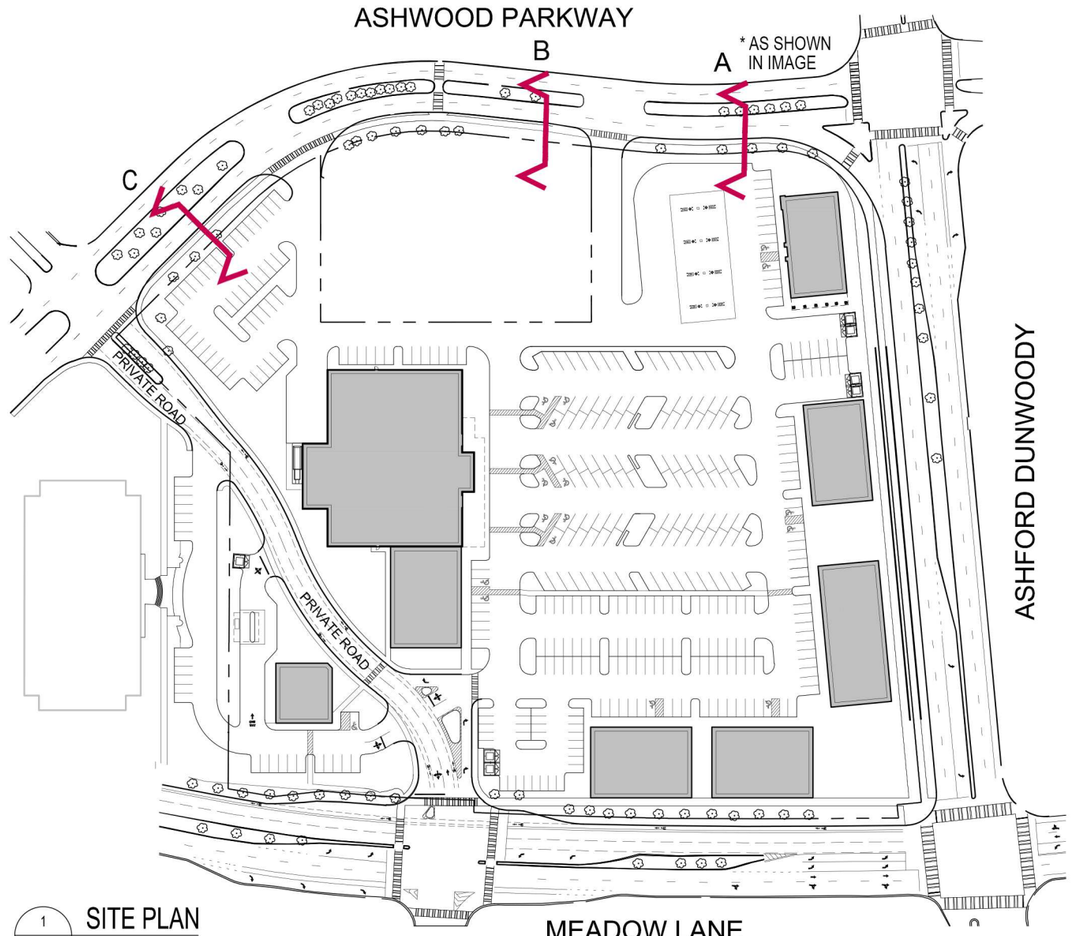
DRAWING
ROADWAY IMPROVEMENT STUDY
PRIVATE DRIVE W/ PUBLIC ACCESS EASEMENT

PHILLIPS
THE PALISADES
5901 PEACHTREE DUNWOODY ROAD,
BUILDING A, SUITE 450 ATLANTA, GA 30328
Phone 770.394.1616 Fax 770.394.1314

SECONDARY STREET FRONTAGE (EXISTING)



2 / - SIDEWALK SECTION
SCALE: 1/8" = 1'



1 / SP-25 SITE PLAN
SCALE: 1" = 150'

CLIENT
BRANCH PROPERTIES, LLC

PROJECT
ASHFORD DUNWOODY RD
ATLANTA, GA

JOB NUMBER
1617702

BY
AB/KMC

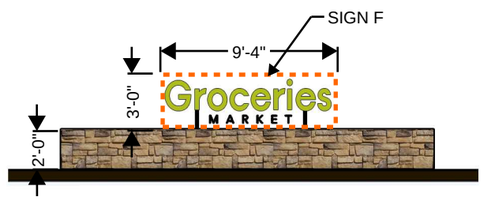
DATE
2018-12-04

DRAWING
ROADWAY IMPROVEMENT STUDY
ASHWOOD PARKWAY

PHILLIPS
THE PALISADES
5901 PEACHTREE DUNWOODY ROAD,
BUILDING A, SUITE 450 ATLANTA, GA 30328
Phone 770.394.1616 Fax 770.394.1314

GROCERY SIGNAGE AREA DATA	
SIGN B	6 SF
SIGN C	33 SF
SIGN D	7 SF
SIGN F	27 SF
TOTAL AREA	73 SF

SIGNAGE AREA DATA	
SIGN A	42 SF
SIGN E	(4x12 SF) 48 SF
TOTAL AREA	90 SF



NOTE: BUILDING DESIGN SUBJECT TO CHANGE AND IS SHOWN FOR TWO-DIMENSIONAL REFERENCE ONLY.

BRANCH PROPERTIES, LLC

PERIMETER MARKETPLACE
ASHFORD DUNWOODY ROAD
DUNWOODY, GA

JOB NUMBER: 1617702 | DATE 04/25/19 | BY: WHH/KMC

DRAWING: SIGNAGE EXHIBIT

PHILLIPS
ARCHITECTURE ▪ CONSULTANTS
5901 PEACHTREE DUNWOODY RD. ▪ SUITE A450 ▪ ATLANTA, GA 30328 ▪ 770.394.1616

BRANCH PROPERTIES, LLC

PERIMETER MARKETPLACE
ASHFORD DUNWOODY ROAD
DUNWOODY, GA

JOB NUMBER: 1617702 | DATE: 04/25/19 | BY: APJ/KMC

DRAWING: PERIMETER MARKETPLACE - VIEW #1

PHILLIPS
ARCHITECTURE • CONSULTANTS
5901 PEACHTREE DUNWOODY RD. • SUITE A450 • ATLANTA, GA 30328 • 770.394.1616

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PERIMETER MARKETPLACE
ASHFORD DUNWOODY ROAD
DUNWOODY, GA

JOB NUMBER: 1617702 | DATE: 04/25/19 | BY: APJ/KMC

DRAWING: PERIMETER MARKETPLACE - VIEW #2

PHILLIPS
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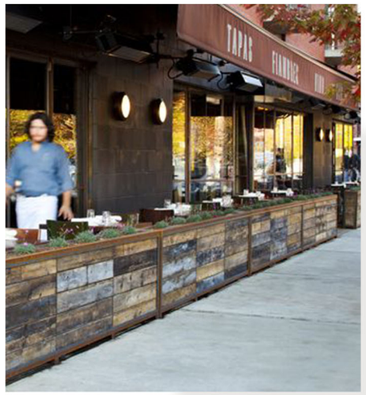
5901 PEACHTREE DUNWOODY RD. ▪ SUITE A450 ▪ ATLANTA, GA 30328 ▪ 770.394.1616

SEATING AREAS



OUTDOOR DINING AREAS

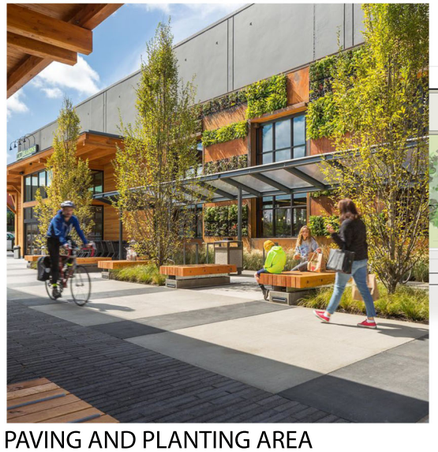
GATHERING SPACE WITHIN CONNECTIVITY

CYCLIST COMMUTER TRAIL

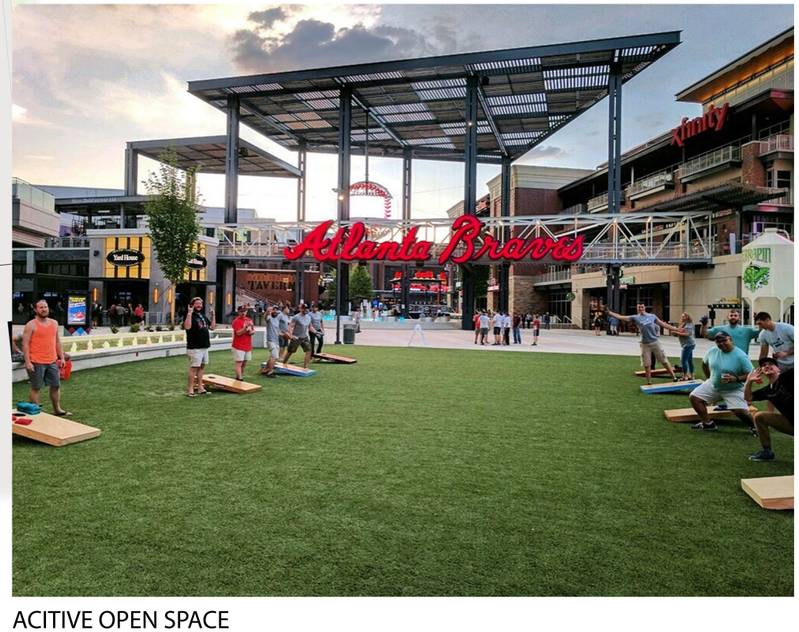
SYNTHETIC TURF

SEATING STEPS

SEATWALLS



PAVING AND PLANTING AREA



ACITIVE OPEN SPACE

PERIMETER MARKETPLACE

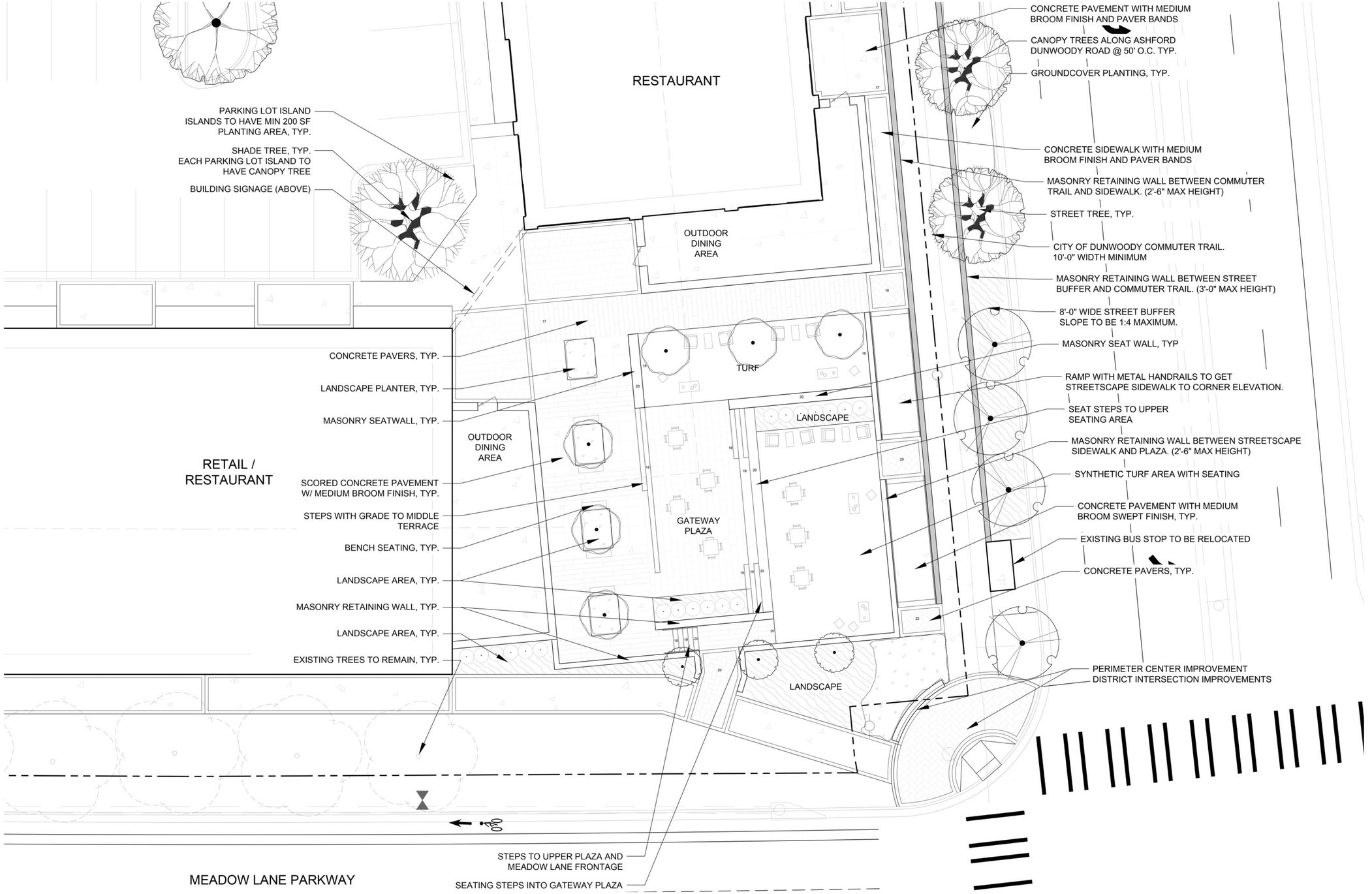
DUNWOODY, GEORGIA

CONCEPTUAL GATEWAY PLAZA

24 APRIL, 2019

BRANCH PROPERTIES, LLC
Capital. Expertise. Execution.

AJC DESIGN GROUP
770.330.0814
1991 WOODLAND WAY
DUNWOODY, GA 30338



PERIMETER MARKETPLACE

DUNWOODY, GEORGIA

CONCEPTUAL GATEWAY PLAZA PLAN

24 APRIL, 2019

BRANCH PROPERTIES, LLC
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DUNWOODY, GA 30338

GEORGIA 811
Utilities Protection Center, Inc.
Know what's below. Call before you dig.

ASHWOOD PARKWAY
25 MPH

APPROXIMATE PROPOSED MEDIAN BREAK

24" CURB AND GUTTER

B YELLOW HATCH

75.0'
11.0'
11.0'
15.4'
19.8'
50.0'
1.0'
11.0'
75.0'
13.9'
50.0'
24" CURB AND GUTTER

NEW CURB CUT

13

50' B.S.L.

C-STORE
5,411 SF

ASHFORD DUNWOODY ROAD
45 MPH

14

15

30

100'

GRAPHIC SCALE
(IN FEET)
1 inch = 20 ft.
20 0 10 20 40 80

NORTH

A&R ENGINEERING, INC
2160 Kingston Court, Suite O
Marietta, GA 30067
Tel: (770) 690-9255
www.areng.com
arengineering@areng.com

SEAL

REVISIONS

No.	DATE	DESCRIPTION
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		
11		
12		

NOT RELEASED FOR CONSTRUCTION

PREPARED FOR
Branch Ashwood Associates, LP
3340 Peachtree Road, NE
Suite 600
Atlanta, GA 30326
404-832-8931

Left Turn Lane Concept

Ashwood Restaurant Park
Left Turn Lane Conept
Ashwood Parkway and Ashford Dunwoody Road

24 HOUR CONTACT
####
####

LL	DIST	PARCEL ID #
#####	#	#########

DWN BY	CKD BY	DATE
WMH	CAO	04-17-2019

A&R PROJECT #
18-189

SHEET IDENTIFICATION
CT- 1101

EXISTING BUILDING

BLDG A
REST. / RETAIL
7,000 SF
100'-0"
70'-0"

BANK
2,800 SF

RACETRAC PREMISES

BLDG B1
RESTAURANT / RETAIL
7,000 SF
70'-0"

BLDG B2
RESTAURANT / RETAIL
7,000 SF
200'-0"

26'

8
17
21
6
43
2
13
11
7C
4
7C
20
6C

MEADOW LANE

1 / SP-34 SITE PLAN
SCALE: 1" = 50'

N

0' 25' 50' 100'

BRANCH PROPERTIES, LLC

PERIMETER MARKETPLACE
ASHFORD DUNWOODY ROAD
DUNWOODY, GA

JOB NUMBER: 1617702 | DATE: 2019-05-13 | BY: KMC

DRAWING: SCHEMATIC SITE PLAN
INTERSECTION RECONFIGURATION
(BASE OF SP-34)

PHILLIPS
ARCHITECTURE ▪ CONSULTANTS
5901 PEACHTREE DUNWOODY RD. ▪ SUITE A450 ▪ ATLANTA, GA 30328 ▪ 770.394.1616

PERIMETER CENTER

Vision/Intent

Perimeter Center will be a visitor friendly "livable" regional center with first-class office, retail, entertainment, hotels, and high-end restaurants in a pedestrian and bicycle-oriented environment. The area will serve as a regional example of high quality design standards. The City of Dunwoody works in partnership with the Perimeter Community Improvement Districts (PCIDs) and adjacent communities to implement and compliment the framework plan and projects identified in the Perimeter Center Livable Centers Initiative study (LCI) and its current and future updates.

In the future, the area should add public gathering space and pocket parks, venues for live music and entertainment and continue to create transportation alternatives, mitigate congestion, and reduce remaining excessive surface parking. The area creates the conditions of possible true "live-work" environment. All future development continues to emphasize high quality design standards and building materials and incorporates the current national best practices on energy efficiency, where possible.

The City of Dunwoody recognizes the value of creating mixed-use, transit-oriented development within walking distance of public transit stations. However, the City has concerns about the impact of such development on the City's infrastructure and schools.

Future Development

The Perimeter Center Character Area will be divided into four subareas (PC-1, PC-2, PC-3, and PC-4) which match the draft proposed overlay district outline that the City is reviewing as part of the Perimeter Center Zoning Code. This area was the subject of a previous LCI Study. The cities of Dunwoody, Sandy Springs, and Brookhaven work in partnership with the Perimeter Community Improvement Districts (PCIDs) to implement and complement the framework plan and projects identified in the Perimeter Center Livable Centers Initiative study (LCI) and its current and future updates.

For specific recommendations on height, density and use refer to the provisions of the Perimeter Center Overlay District and Zoning, available from the Dunwoody Community Development Department.

FIGURE 13: Perimeter Center Character Area Map

PC-1: Intended to apply to the central core area of Perimeter Center, including the area directly surrounding the Dunwoody MARTA train station. This district allows for the highest intensity of buildings, a high level of employment uses, and active ground story uses and design that support pedestrian mobility.

PC-2: Made up primarily of employment uses and limited shop front retail, residential, and services.

PC-3: A smaller scale, less intensive commercial district, permitting both shop front and office buildings.

PC-4: Made up primarily of residential uses at a scale that provides a transition between the intensity of Perimeter Center and the surrounding single-family residential neighborhoods.

Action Items

▲ Perimeter Mall

▲ Housing in Perimeter Center

- New development will include amenities and provide public functional green space.
- New development will be mindful of school capacity issues and applicants will work with Board of Education and City for better resolution of school issues.
- Reduce surface parking and promote livable centers in the immediate areas surrounding MARTA station.
- Encourage hotel and convention development near MARTA in order to foster commerce along the mass transportation route.
- Achieve a lifelong-community for residents who can age in place with safe access to medical, recreational and other necessary services.
- Create bicycle, pedestrian and non-auto related transportation options to connect with the rest of the City of Dunwoody.

COMMUNITY IMPROVEMENT DISTRICT (CID)

A Community Improvement District (CID) is an authorized self-taxing district dedicated to Infrastructure improvements within its boundaries. The PCIDs are governed by two boards – one each for Fulton and DeKalb. The PCIDs spent or leveraged public funds to invest $55 million in Dunwoody alone; over $7 million from ARC's LCI program was directed to the PCIDs. This makes it one of the most, if not the most, successful CIDs in the region. The PCIDs' mission focuses exclusively on transportation improvements:

To work continuously to develop efficient transportation services, with an emphasis on access, mobility, diversification and modernization.

- The 2012 PCID Commuter Trail System Master Plan proposed a network of commuter trails connecting to the MARTA station.
- The 2012 PCID Perimeter Circulator Implementation report recommended circulator transit to provide first/ last mile connectivity for commuters and reduction in CID area congestion.
- The PCIDs have proposed Perimeter Park at the Dunwoody MARTA Station.
- Work with the Perimeter Transportation Management Association (TMA) to actively reduce automobile dependency and emerge as a leader in alternative transportation for the region.
- Work to strengthen Board of Education relationship for creative solutions to school capacity.
- Work with the PCIDs' boards to implement vision.
- Coordinate with the City of Sandy Springs for LCI Updates and implementation.
- Coordinate with the Atlanta Regional Commission (ARC) for implementation of future LCI study updates.
- Coordinate with MARTA regarding Bus Rapid Transit (BRT) (or other regional service) and urban design surrounding all transit stations.
- Look for ways to encourage live entertainment for the benefit of visitors and residents.

TRAFFIC IMPACT STUDY
FOR
ASHWOOD RESTAURANT PARK

DUNWOODY, GEORGIA

Prepared for:

Branch Ashwood Associates, LP
3340 Peachtree Road, Suite 600
Atlanta, Georgia 30326

Prepared By:

A&R Engineering Inc.
2160 Kingston Court, Suite O
Marietta, GA 30067
Tel: (770) 690-9255 Fax: (770) 690-9210
www.areng.com

April 16, 2019
A & R Project # 18-189

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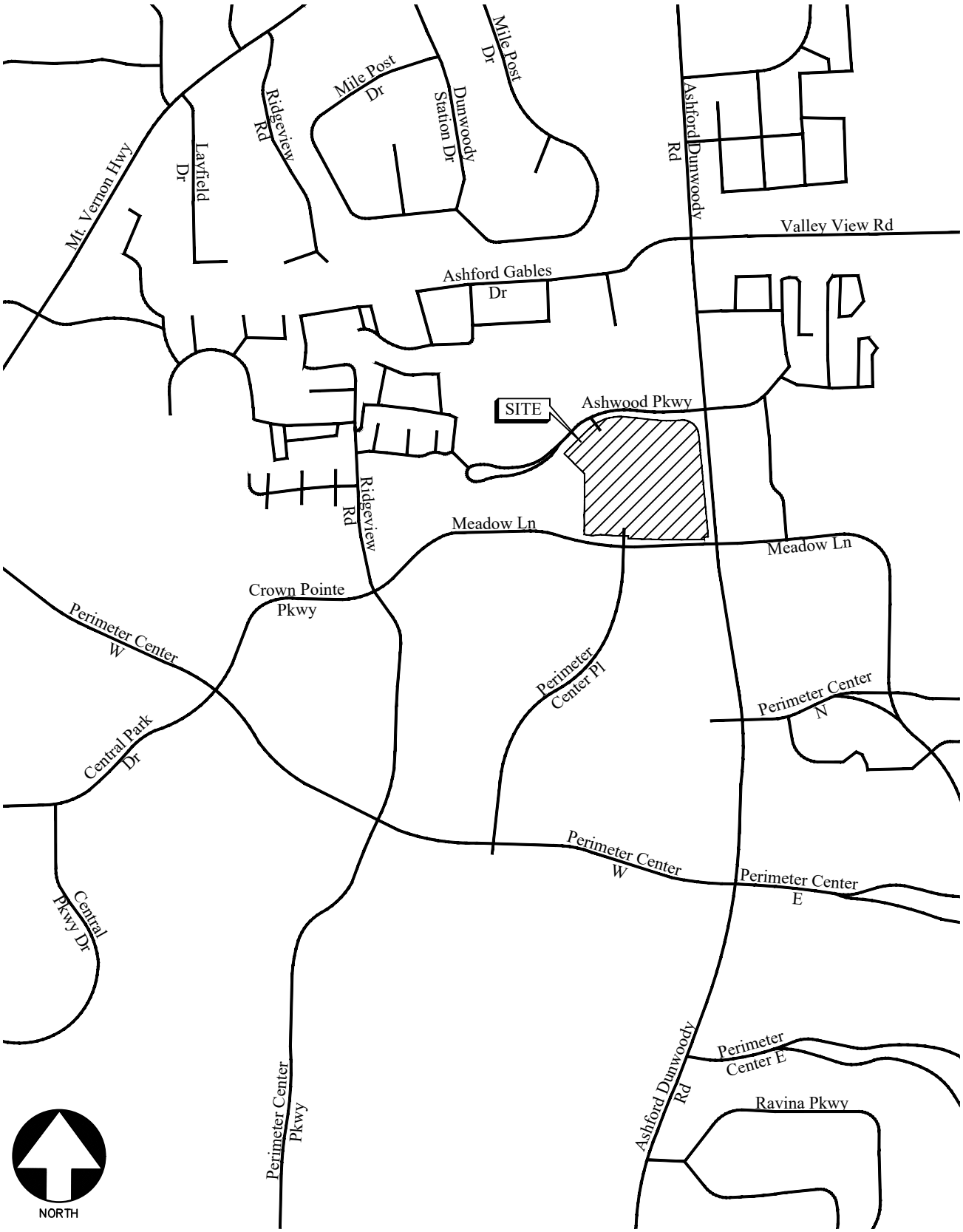
1.0 INTRODUCTION

The purpose of this study is to determine the traffic impact that will result from the proposed Ashwood Restaurant park located in the northwest corner of Ashford Dunwoody Road and Meadow Lane in Dunwoody, Georgia. The traffic analysis evaluates the current operations compared to the future conditions with the traffic generated by the development. The proposed development will consist of a 25,440 square foot supermarket, 35,400 square feet of retail/restaurant space, a 2,800 square foot bank, and an 8-pump (16 fueling positions) gas station/convenience market.

The development will make use of the existing full-access driveways on Ashwood Parkway and Meadow Lane that currently serve the 900 Ashwood building and existing restaurant developments. A new full-access driveway is proposed on Ashwood Parkway west of Ashford Dunwoody Road. In addition to the existing site access points, this study includes the evaluation of traffic operations at the intersections of:

1. Ashford Dunwoody Road at Meadow Lane
2. Ashford Dunwoody Road at Ashwood Parkway/Ashford Parkway
3. Ashwood Parkway at Existing Development Driveway
4. Meadow Lane at Perimeter Center Place

Recommendations to improve traffic operations have been identified 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

A&R Engineering Inc.

2.0 EXISTING FACILITIES / CONDITIONS

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

2.1 Ashford Dunwoody Road

Ashford Dunwoody Road is a north-south, four-lane, median-divided roadway with a posted speed limit of 45 mph in the vicinity of the development. GDOT traffic counts (Station IDs 0893587 & 0893586) indicate that the daily traffic volume on Ashford Dunwoody Road in 2016 was 24,900 vehicles per day north of Ashwood Parkway and 49,400 vehicles per day north of Hammond Drive.

2.2 Meadow Lane

Meadow Lane is an east-west, four-lane, median-divided roadway with a posted speed limit of 25 mph west of Ashford Dunwoody Road in the vicinity of the development.

2.3 Perimeter Center Place

Perimeter Center Place is a north-south, four-lane, undivided roadway with a posted speed limit of 25 mph in the vicinity of the development.

2.4 Ashwood Parkway

Ashwood Parkway is an east-west, two-lane, divided roadway with a posted speed limit of 25 mph in the vicinity of the development.

2.5 Ashford Parkway

Ashford Parkway is a divided multi-lane roadway that serves the Post Crossing apartment community with no posted speed limit.

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, 2010 edition (HCM 2010). 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 at which the side street or minor street is controlled by a stop sign, the criteria for evaluating traffic operations are the level-of-service (LOS) for the turning movements at the intersection and the level-of-service for the overall intersection. Level-of-service is based on the average controlled delay incurred at the intersection. Controlled delay for unsignalized intersections includes initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Several factors affect the controlled delay for unsignalized intersections, such as the availability and distribution of gaps in the conflicting traffic stream, critical gaps, and follow-up time for a vehicle in the queue.

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

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

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

Source: Highway Capacity Manual

3.2 Signalized Intersections

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

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

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

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

Source: Highway Capacity Manual

4.0 EXISTING TRAFFIC ANALYSIS

Existing traffic counts and intersection geometric data were obtained at the following study intersections:

1. Ashford Dunwoody Road at Meadow Lane
2. Ashford Dunwoody Road at Ashwood Parkway/Ashford Parkway
3. Ashwood Parkway at Existing Development Driveway
4. Meadow Lane at Perimeter Center Place

Turning movement counts were collected on Wednesday, January 9, 2019. All turning movement counts were recorded during the AM and PM peak hours between 7:00 a.m. to 9:00 a.m. and 4:00 p.m. to 6:00 p.m., 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.

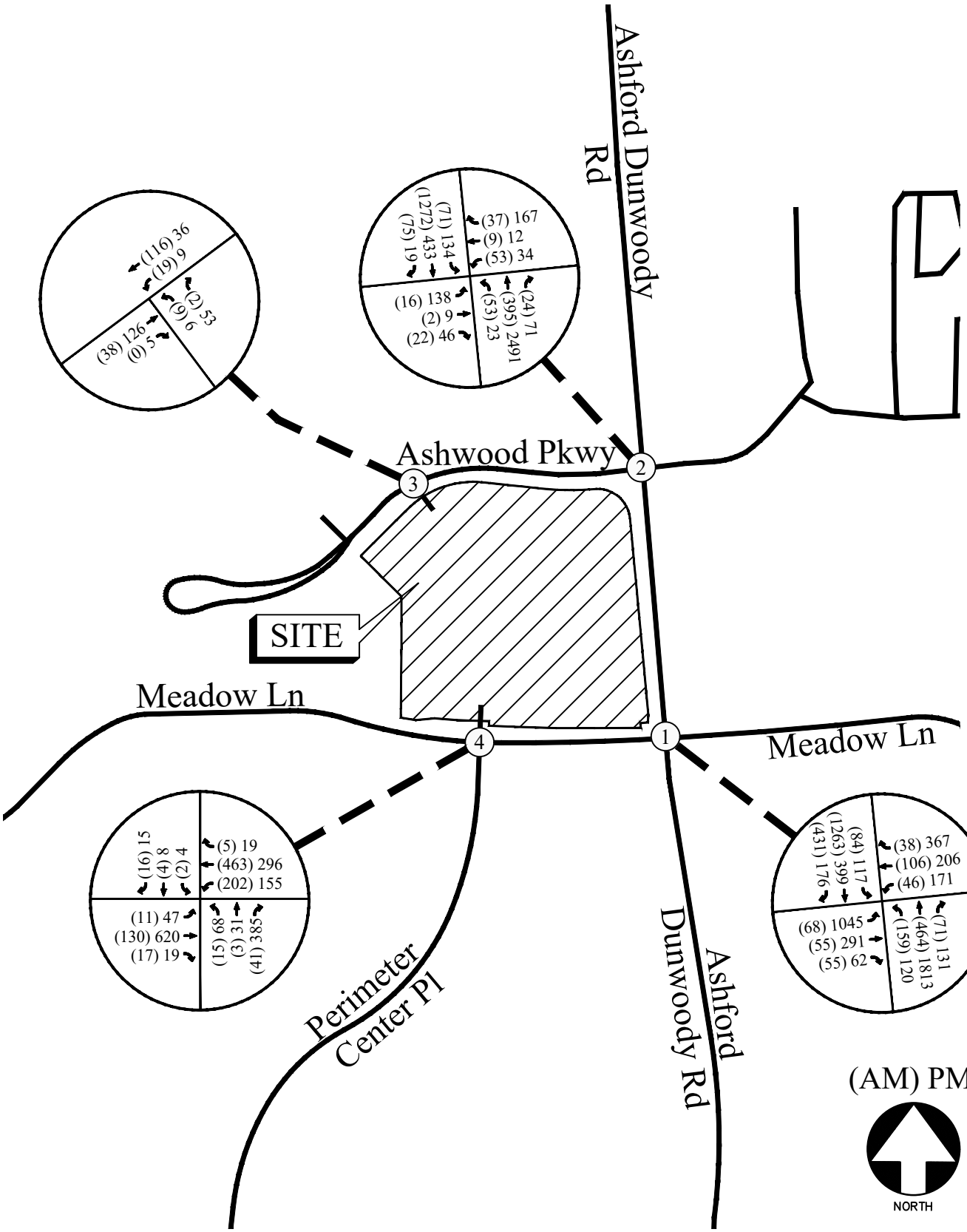
4.1 Existing Traffic Operations

Existing traffic operations were analyzed at the study intersections in accordance with the HCM methodology and the results of the analysis are shown below in Table 3. The existing traffic control and lane geometry for the intersections is shown in Figure 3.

TABLE 3 – EXISTING INTERSECTION OPERATIONS

	Intersection	Traffic Control	AM Peak Hour LOS (Delay)	PM Peak Hour LOS (Delay)
1	**Ashford Dunwoody @ Meadow Ln**	Signalized	**B (14.5)**	**F (236.1)**
	-Eastbound Approach		E (77.2)	F (389.3)
	-Westbound Approach		E (72.8)	F (106.4)
	-Northbound Approach		A (8.0)	F (238.2)
	-Southbound Approach		A (4.6)	E (60.3)
2	**Ashford Dunwoody @ Ashwood Pkwy**	Signalized	**B (13.6)**	**E (56.3)**
	-Eastbound Approach		E (71.3)	F (83.3)
	-Westbound Approach		E (63.6)	E (65.5)
	-Northbound Approach		B (12.0)	D (49.0)
	-Southbound Approach		A (9.9)	E (77.5)
3	**Ashwood Pkwy @ Private Drwy**	Signalized		
	-Westbound Left		A (7.3)	A (7.5)
	-Northbound Approach		A (9.6)	A (9.4)
4	**Meadow Ln @ Perimeter Center Pl**	Signalized	**A (4.4)**	**A (9.5)**
	-Eastbound Approach		A (3.3)	A (5.8)
	-Westbound Approach		A (1.5)	A (2.7)
	-Northbound Approach		E (56.9)	E (56.6)
	-Southbound Approach		E (57.7)	D (51.5)

The results of the existing conditions analysis indicate that the two signalized intersections on Ashford Dunwoody Road are currently operating below an acceptable level-of-service during the PM peak hour. These areas are addressed in the Future Traffic Analysis section of this report.



EXISTING WEEKDAY PEAK HOUR VOLUMES FIGURE 2

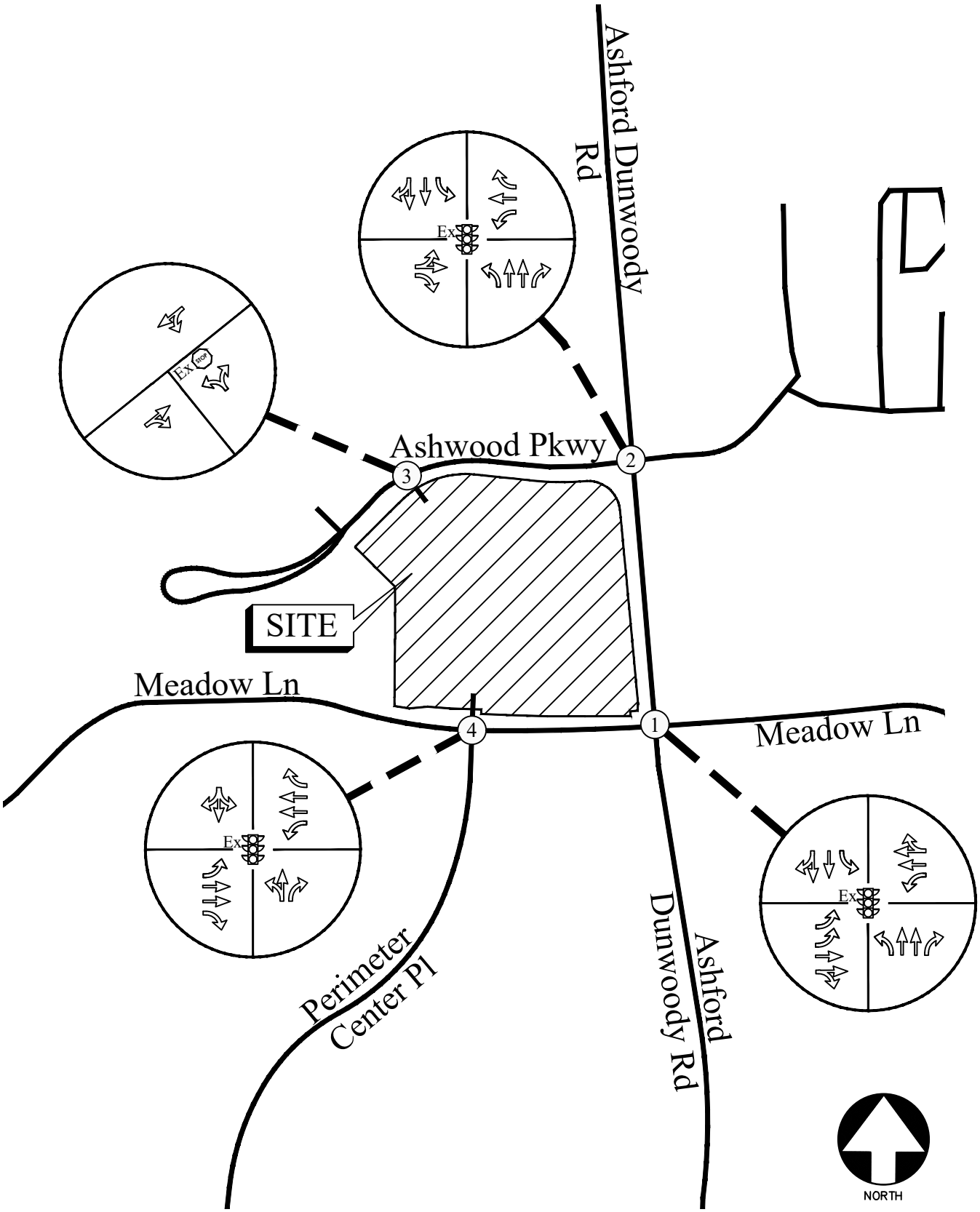
A&R Engineering Inc.

LEGEND

Ex Existing Signed Approach

Existing Lane Geometry

Ex Existing Traffic Signal



EXISTING TRAFFIC CONTROL AND LANE GEOMETRY FIGURE 3

A&R Engineering Inc.

5.0 PROPOSED DEVELOPMENT

The proposed site will be located in the northwest corner of Ashford Dunwoody Road and Meadow Lane in Dunwoody, Georgia. The development will consist of a 25,440 square foot supermarket, 35,400 square feet of retail/restaurant space, a 2,800 square foot bank, and an 8-pump (16 fueling positions) gas station/convenience market. A site plan is shown in Figure 4.

The development proposes access at the following locations:

- Site Driveway 1: New full-access driveway on Ashwood Parkway (Intersection 6)
- Site Driveway 2: Existing full-access driveway on Ashwood Parkway (Intersection 3)
- Site Driveway 3: "Private Road" full-access point, aligned with 1200 Ashwood development (Intersection 5)
- Site Driveway 4: "Private Road" full-access point, aligned with Perimeter Center Place (Intersection 4)

5.1 Trip Generation

Trip generation estimates for the project were based on the rates and equations published in the 10th edition of the Institute of Transportation Engineers (ITE) Trip Generation report. This reference contains traffic volume count data collected at similar facilities nationwide. The trip generation was based on the following ITE Land Use: *820 – Shopping Center*, *850 – Supermarket*, *912 – Drive-In Bank*, and *960 – Super Convenience Market/Gas Station*. Due to the nature of the development, pass-by reductions have been applied per ITE standards. 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
Shopping Center	35,400 sf	21	12	33	65	70	135	1,336
Pass-by reductions (0%) 34%		*0*	*0*	*0*	*-22*	*-24*	*-46*	*-454*
Supermarket	25,440 sf	58	39	97	143	138	281	3,016
Pass-by reductions (0%) 36%		*0*	*0*	*0*	*-51*	*-50*	*-101*	*-1,010*
Drive-In Bank	2,800 sf	15	12	27	29	28	57	232
Pass-by reductions (29%) 35%		*-4*	*-3*	*-7*	*-10*	*-10*	*-20*	*-81*
Super Convenience Market/Gas Station	16 pumps	225	224	449	184	183	367	3,688
Pass-by reductions (62%) 56%		*-140*	*-139*	*-279*	*-103*	*-102*	*-205*	*-2,050*
Total Site Trips (without reductions)		319	287	606	421	419	840	8,272
New External Trips (with reductions)		**175**	**145**	**320**	**235**	**233**	**468**	**4,677**

The proposed development will be replacing the existing restaurant park which consists of a total of 25,375 square feet of restaurant space. None of the restaurants are open for breakfast; therefore, for the purpose of trip generation estimates, the following ITE Land Use was used: *931 – Quality Restaurant*. The trip generation for the existing restaurant park was subtracted from the total site-generated traffic for the development to account for any decreases in traffic after the existing restaurants are closed. The

total new trips added to the road network after removal of the existing restaurants are shown below in Table 5.

TABLE 5 – TOTAL NEW TRAFFIC ADDED TO ROAD NETWORK

Totals	AM Peak Hour			PM Peak Hour			24-Hour
	Enter	Exit	Total	Enter	Exit	Total	Two-way
Total New External Trips (from Table 4)	175	145	320	235	233	468	4,677
Removed Restaurant Park Traffic	-9	-10	-19	-74	-36	-110	-1,247
Total New Traffic Added to Road Network	**+166**	**+135**	**+301**	**+161**	**+197**	**+358**	**+3,430**

5.2 Trip Distribution

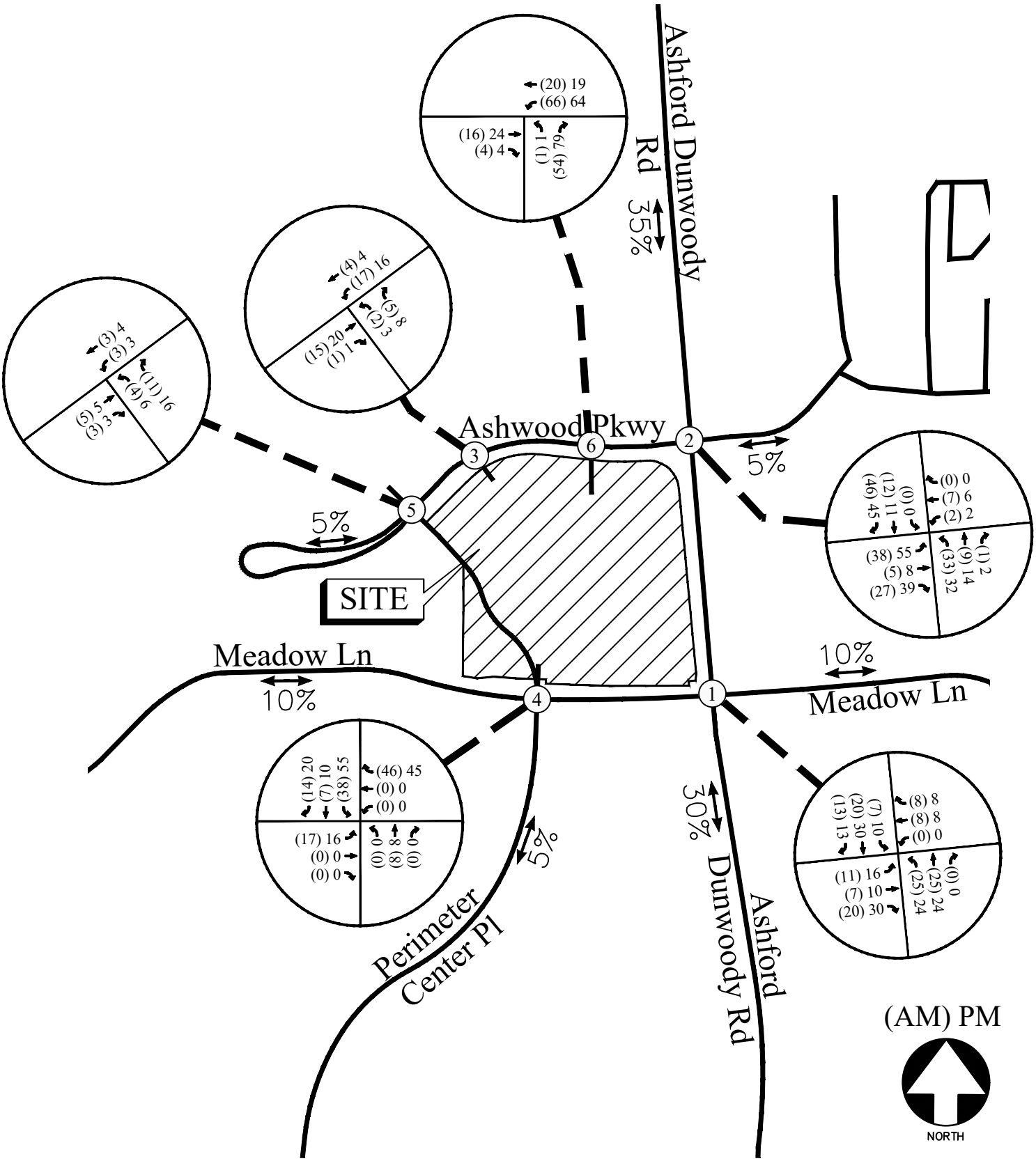
The trip distribution describes how traffic arrives and departs from the site. An overall trip distribution was developed for the site based on a review of the existing travel patterns in the area and the locations of major roadways and highways that will serve the development. The new peak hour traffic volumes added to the road network, shown in Table 5, 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 is shown in Figure 5.

PERIMETER MARKETPLACE

DUNWOODY, GEORGIA
04-09-2019

BRANCH PROPERTIES, LLC

PHILLIPS architecture · consultants



OUTER LEG TRIP DISTRIBUTION AND SITE-GENERATED PEAK HOUR VOLUMES

FIGURE 5

A&R Engineering Inc.

6.0 FUTURE TRAFFIC ANALYSIS (2021)

The future traffic operations are analyzed for the "No-Build" and "Build" conditions. This provides a basis of reference for determining both the contribution of the site to overall traffic conditions and the additional improvements needed to provide sufficient site access and capacity for passing traffic.

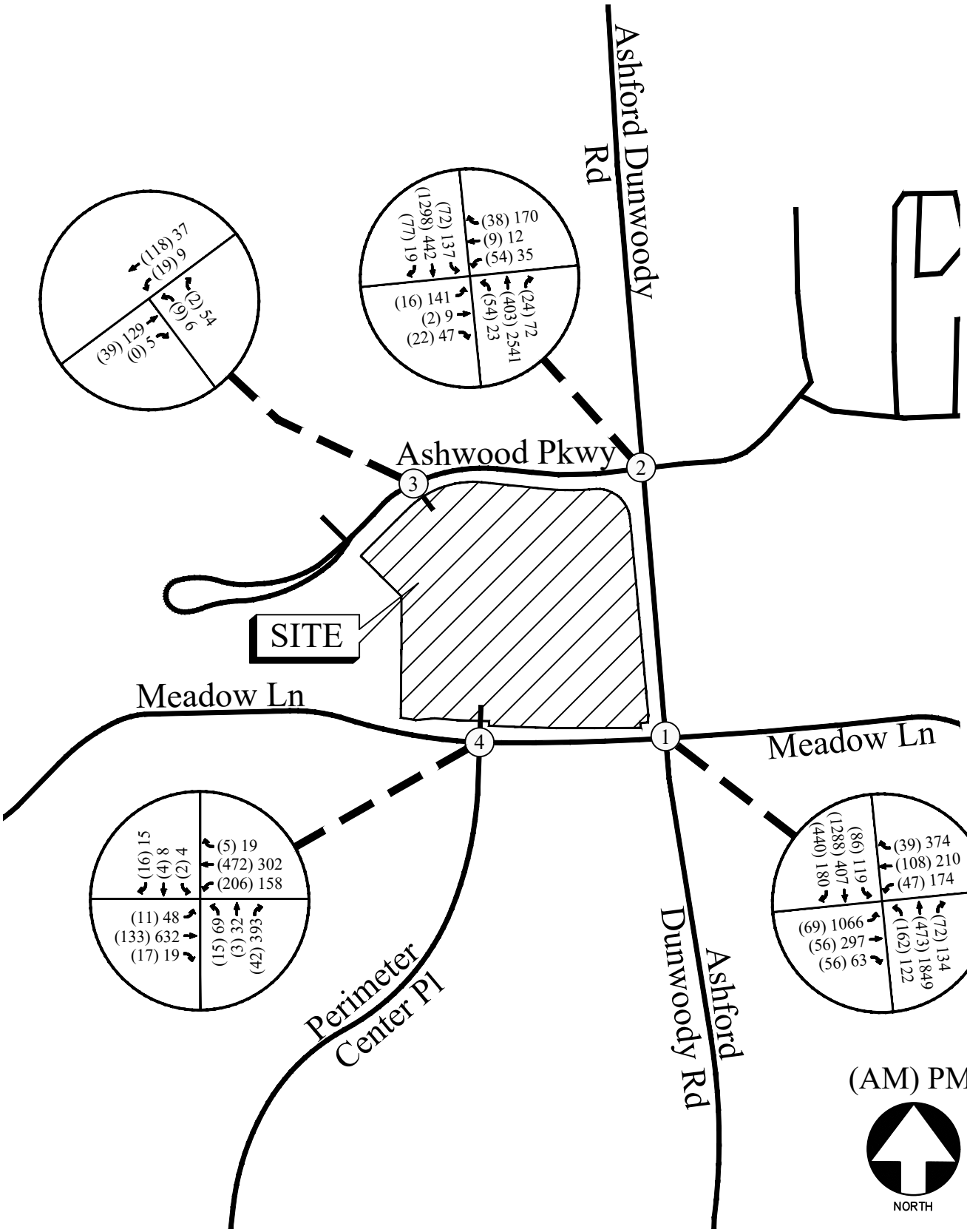
Improvements that are identified as "System Improvements" are recommended to address deficiencies in the roadway network and can be considered as benefitting traffic that may or may not include site-generated traffic and are recommended for the municipality to use in future planning efforts. "Site Mitigation Improvements" are recommended as directly benefitting proposed site-generated traffic.

6.1 Future "No-Build" Conditions

The "No-Build" (or background) conditions provide an assessment of how traffic will operate in the study horizon year without the study site being developed as proposed, with projected increases in through traffic volumes due to normal annual growth. The Future "No-Build" volumes consist of the existing traffic volumes (Figure 2) plus increases for annual growth of 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 several years revealed growth of approximately 1% in the area. 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.



FUTURE (NO-BUILD) PEAK HOUR VOLUMES FIGURE 6

A&R Engineering Inc.

6.1.2 Future "No-Build" Traffic Operations

The future "No-Build" traffic operations were analyzed using the volumes in Figure 6, and the results are shown in Table 6 below. The results of the analysis, including the recommended system improvements, are discussed in detail in Section 6.1.3.

TABLE 6 – FUTURE "NO-BUILD" INTERSECTION OPERATIONS

	Intersection	No-Build Conditions: LOS (Delay)			
		NO IMPROVEMENTS		WITH IMPROVEMENTS	
		AM Peak	PM Peak	AM Peak	PM Peak
1	**Ashford Dunwoody @ Meadow Ln**	**B (14.9)**	**F (243.7)**	**B (15.1)**	**E (73.8)**
	-Eastbound Approach	E (77.4)	F (402.7)	E (75.1)	F (110.5)
	-Westbound Approach	E (72.7)	F (110.3)	E (68.1)	E (78.7)
	-Northbound Approach	A (8.3)	F (241.0)	A (9.3)	E (57.7)
	-Southbound Approach	A (5.1)	E (73.6)	A (6.5)	D (41.8)
2	**Ashford Dunwoody @ Ashwood Pkwy**	**B (13.8)**	**E (55.5)**	**B (15.0)**	**B (16.7)**
	-Eastbound Approach	E (71.3)	F (83.5)	E (71.3)	F (83.5)
	-Westbound Approach	E (63.7)	E (65.1)	E (63.7)	E (65.1)
	-Northbound Approach	B (12.1)	E (61.5)	B (17.4)	A (6.7)
	-Southbound Approach	B (10.1)	B (19.3)	B (10.1)	C (25.4)
3	**Ashwood Pkwy @ Private Drwy**				
	-Westbound Left	A (7.3)	A (7.5)	A (7.3)	A (7.5)
	-Northbound Approach	A (9.6)	A (9.4)	A (9.6)	A (9.4)
4	**Meadow Ln @ Perimeter Center Pl**	**A (4.3)**	**A (9.6)**	**A (4.3)**	**A (9.6)**
	-Eastbound Approach	A (3.3)	A (5.8)	A (3.3)	A (5.8)
	-Westbound Approach	A (1.5)	A (2.8)	A (1.5)	A (2.8)
	-Northbound Approach	E (56.9)	E (56.5)	E (56.9)	E (56.5)
	-Southbound Approach	E (57.7)	D (51.4)	E (57.7)	D (51.4)

6.1.3 Recommendations for System Improvements

One or more of the study intersections are found to have delays that will (or currently) exceed the local level-of-service threshold ("D" or better) without any added traffic from the proposed development. These intersections have been identified below along with potential system improvements for the local municipality to consider in their future planning efforts.

Ashford Dunwoody Road at Meadow Lane

This intersection is currently operating below the acceptable level-of-service "D" during the PM peak hour. Recommendations for system improvements to the intersection have been made and are outlined below.

- Create a third through lane on Ashford Dunwoody Road using the existing dedicated right turn lanes beginning at Perimeter Center E and ending at Mt. Vernon Road.
- Reconfigure the eastbound approach to operate with three dedicated left turn lanes and a shared through/right turn lane.
- Reconfigure the westbound approach to operate with a dedicated left turn lane, a dedicated through lane, and a dedicated right turn lane.

It should be noted that although operations would improve with the above improvements, they will be challenging to implement due to the limited availability of right-of-way and presence of large transmission lines along Ashford Dunwoody Road that would need to be relocated.

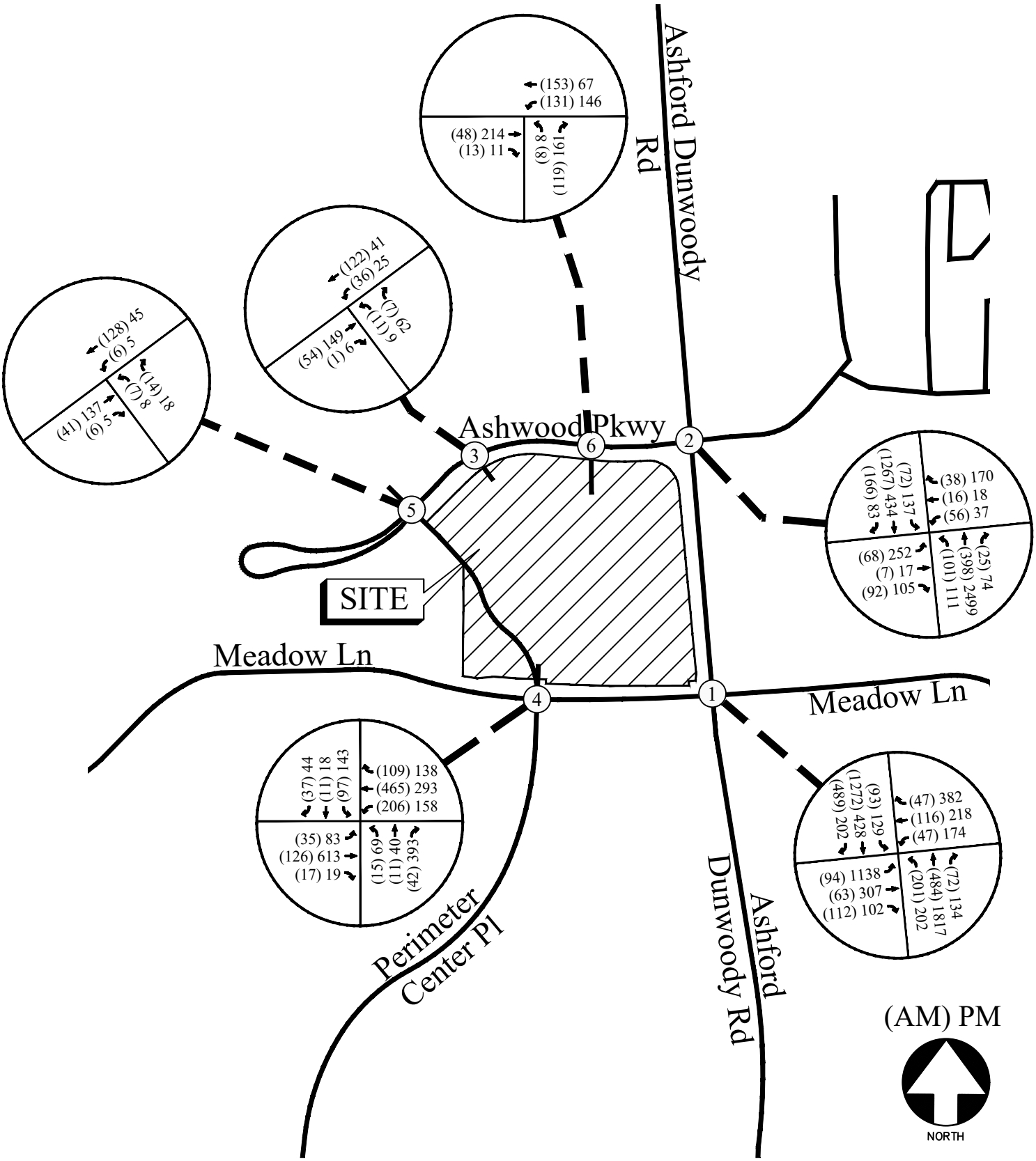
6.2 Future "Build" Conditions

The "Build" or post-development conditions include the estimated background traffic from the "No-Build" conditions plus the added traffic from the proposed development. The "Build" conditions are evaluated to determine effectiveness of the recommended system and site mitigation improvements. The additional traffic volumes from the site (Figure 5) were added to base traffic volumes (Figure 6) to calculate the future traffic volumes after the construction of the development. These total future traffic volumes are shown in Figure 7.

6.2.1 Site Access Configuration

The following access configuration was utilized when modeling the proposed site driveway intersections:

- Site Driveway 1: New full-access driveway on Ashwood Parkway
    - A median break on Ashwood Parkway is proposed for this driveway and will consist of one entering lane and one exiting lane.
    - The intersection is planned to be unsignalized with a STOP sign on the northbound (driveway) approach.
    - Based on GDOT standards, a westbound left turn lane is warranted on Ashwood Parkway for entering traffic. (See Appendix)
    - Based on GDOT standards, an eastbound right turn lane is not warranted on Ashwood Parkway for entering traffic. (See Appendix)
- Site Driveway 2: Existing full-access driveway on Ashwood Parkway
    - This driveway currently serves as the access to the existing restaurant park and will continue to operate with one entering lane and one exiting lane.
    - The intersection will continue to be unsignalized with no recommended change to the existing lane geometry.
- Site Driveway 3: "Private Road" full-access point, aligned with 1200 Ashwood development
    - This driveway currently serves as the access to the existing restaurant park/900 Ashwood development and will continue to operate with one entering lane and one exiting lane.
    - The intersection will continue to be unsignalized with no recommended change to the existing lane geometry.
- Site Driveway 4: "Private Road" full-access point, aligned with Perimeter Center Place
    - This driveway currently serves as the access to the existing restaurant park/900 Ashwood and will continue to operate with one entering lane and one exiting lane.
    - The intersection will continue to be signalized with no recommended change to the existing signal phasing or lane geometry.



FUTURE (BUILD) PEAK HOUR VOLUMES FIGURE 7

A&R Engineering Inc.

6.2.2 Future "Build" Traffic Operations

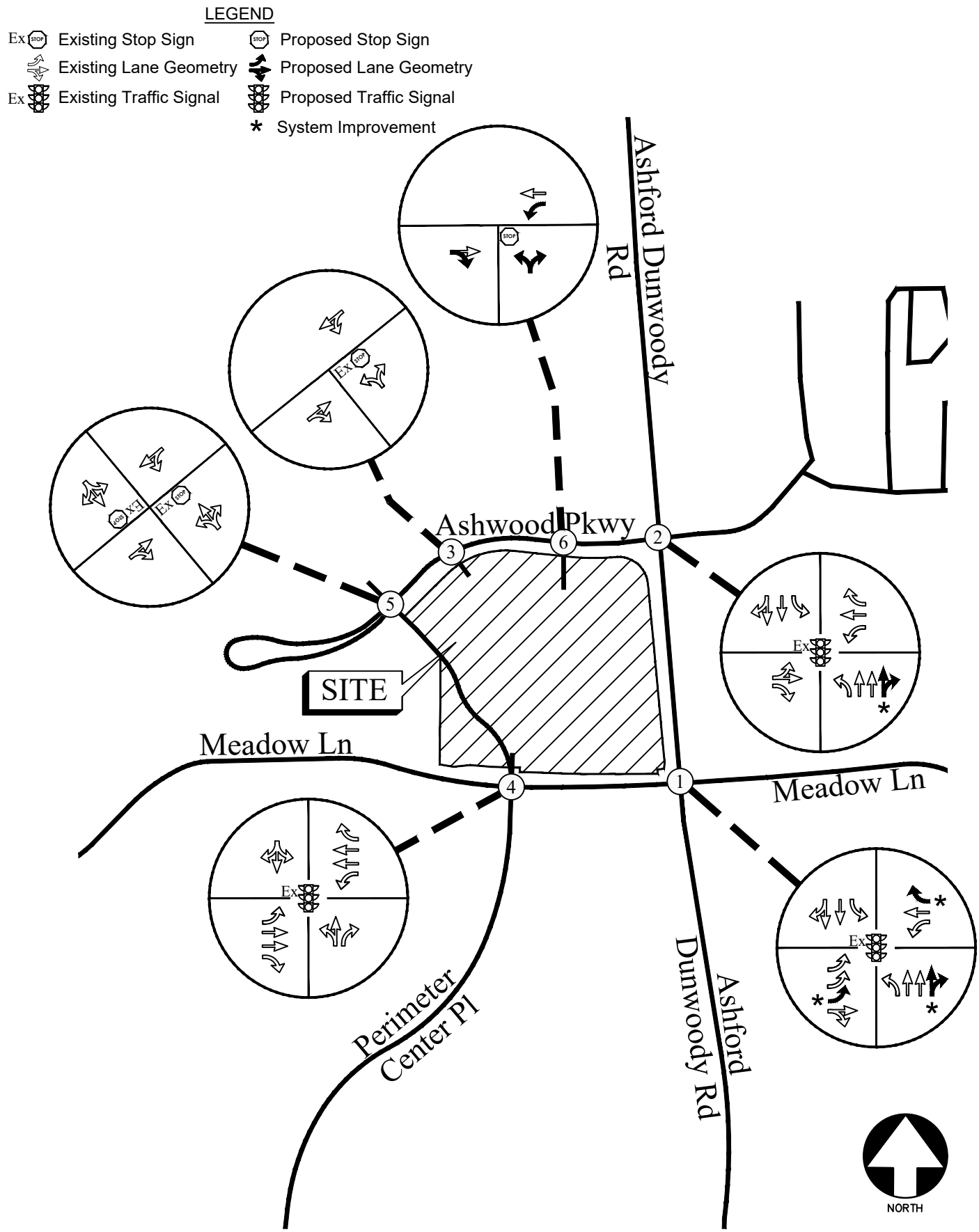
The "Build" conditions are evaluated to determine effectiveness of the recommended system and site mitigation improvements. Recommendations on traffic control and lane geometry are shown graphically in Figure 8. The results of the analysis, including the recommended site improvements, are discussed in detail in Section 6.2.3.

TABLE 7 – FUTURE "BUILD" INTERSECTION OPERATIONS

	Intersection	Build Conditions: LOS (Delay)			
		NO IMPROVEMENTS		WITH IMPROVEMENTS	
		AM Peak	PM Peak	AM Peak	PM Peak
1	**Ashford Dunwoody @ Meadow Ln**	**C (20.9)**	**F (224.3)**	**C (23.1)**	**E (73.4)**
	-Eastbound Approach	F (93.4)	F (382.2)	E (75.0)	F (121.4)
	-Westbound Approach	E (65.1)	F (102.7)	E (60.1)	F (90.2)
	-Northbound Approach	B (13.1)	F (208.7)	B (15.6)	D (48.5)
	-Southbound Approach	A (8.5)	E (71.0)	B (15.0)	C (33.4)
2	**Ashford Dunwoody @ Ashwood Pkwy**	**B (18.2)**	**F (89.0)**	**B (19.3)**	**B (18.0)**
	-Eastbound Approach	E (71.5)	F (147.4)	E (71.5)	F (147.4)
	-Westbound Approach	E (58.3)	E (57.4)	E (58.3)	E (57.4)
	-Northbound Approach	B (14.4)	F (91.4)	B (19.5)	A (0.8)
	-Southbound Approach	B (13.8)	E (66.4)	B (13.8)	C (20.3)
3	**Ashwood Pkwy @ Private Drwy**				
	-Westbound Left	A (7.4)	A (7.6)	A (7.4)	A (7.6)
	-Northbound Approach	A (9.7)	A (9.8)	A (9.7)	A (9.8)
4	**Meadow Ln @ Perimeter Center Pl**	**B (11.6)**	**B (16.1)**	**B (11.6)**	**B (16.2)**
	-Eastbound Approach	A (6.4)	B (10.3)	A (6.4)	B (10.3)
	-Westbound Approach	A (3.6)	A (5.5)	A (3.6)	A (5.5)
	-Northbound Approach	D (47.6)	D (45.2)	D (47.6)	D (45.2)
	-Southbound Approach	D (54.9)	D (51.7)	D (54.9)	D (51.7)
5	**Ashwood Pkwy @ Private Road**				
	-Westbound Left	A (7.3)	A (7.5)	A (7.3)	A (7.5)
	-Northbound Approach	A (9.0)	A (9.4)	A (9.0)	A (9.4)
6	**Ashwood Pkwy @ Site Drwy 1**				
	-Westbound Left	A (7.6)	A (8.1)	A (7.6)	A (8.1)
	-Northbound Approach	A (9.5)	B (11.2)	A (9.5)	B (11.2)

6.2.3 Recommendations for Site Mitigation Improvements

Improvements that are identified as mitigation improvements address deficiencies that are caused by site traffic and can be identified as related to the proposed development. Because operations would not be impacted beyond the projected "No-Build" conditions, site mitigation improvements have not been identified outside of the recommended configuration for the site access points.



FUTURE TRAFFIC CONTROL AND LANE GEOMETRY FIGURE 8

A&R Engineering Inc.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Traffic impacts were evaluated for the added traffic from the proposed Ashwood Restaurant park located in the northwest corner of Ashford Dunwoody Road and Meadow Lane in Dunwoody, Georgia. will consist of a 25,440 square foot supermarket, 35,400 square feet of retail/restaurant space, a 2,800 square foot bank, and an 8-pump (16 fueling positions) gas station/convenience market.

The development proposes access at the following locations:

- Site Driveway 1: New full-access driveway on Ashwood Parkway
- Site Driveway 2: Existing full-access driveway on Ashwood Parkway
- Site Driveway 3: "Private Road" full-access point, aligned with 1200 Ashwood development
- Site Driveway 4: "Private Road" full-access point, aligned with Perimeter Center Place

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

1. Ashford Dunwoody Road at Meadow Lane
2. Ashford Dunwoody Road at Ashwood Parkway/Ashford Parkway
3. Ashwood Parkway at Existing Development Driveway
4. Meadow Lane at Perimeter Center Place

The analysis included the evaluation of Future operations for the "No-Build" and "Build" conditions, both of which account for increases in annual growth of through traffic. The results of the analysis are listed below:

7.1 System Improvements for "No-Build" Conditions

One or more of the study intersections are found to have delays that will (or currently) exceed the local level-of-service threshold ("D" or better) without any added traffic from the proposed development. These intersections have been identified below along with potential system improvements for the local municipality to consider in their future planning efforts.

Ashford Dunwoody Road at Meadow Lane

This intersection is currently operating below the acceptable level-of-service "D" during the PM peak hour. Recommendations for system improvements to the intersection have been made and are outlined below.

- Create a third through lane on Ashford Dunwoody Road using the existing dedicated right turn lanes beginning at Perimeter Center E and ending at Mt. Vernon Road.
- Reconfigure the eastbound approach to operate with three dedicated left turn lanes and a shared through/right turn lane.
- Reconfigure the westbound approach to operate with a dedicated left turn lane, a dedicated through lane, and a dedicated right turn lane.

It should be noted that although operations would improve with the above improvements, they will be challenging to implement due to the limited availability of right-of-way and presence of large transmission lines along Ashford Dunwoody Road that would need to be relocated.

7.2 Site Access Configuration

The following access configuration was utilized when modeling the proposed site driveway intersections:

- Site Driveway 1: New full-access driveway on Ashwood Parkway
    - A median break on Ashwood Parkway is proposed for this driveway and will consist of one entering lane and one exiting lane.
    - The intersection is planned to be unsignalized with a STOP sign on the northbound (driveway) approach.
    - Based on GDOT standards, a westbound left turn lane is warranted on Ashwood Parkway for entering traffic. (See Appendix)
    - Based on GDOT standards, an eastbound right turn lane is not warranted on Ashwood Parkway for entering traffic. (See Appendix)
- Site Driveway 2: Existing full-access driveway on Ashwood Parkway
    - This driveway currently serves as the access to the existing restaurant park and will continue to operate with one entering lane and one exiting lane.
    - The intersection will continue to be unsignalized with no recommended change to the existing lane geometry.
- Site Driveway 3: "Private Road" full-access point, aligned with 1200 Ashwood development
    - This driveway currently serves as the access to the existing restaurant park/900 Ashwood development and will continue to operate with one entering lane and one exiting lane.
    - The intersection will continue to be unsignalized with no recommended change to the existing lane geometry.
- Site Driveway 4: "Private Road" full-access point, aligned with Perimeter Center Place
    - This driveway currently serves as the access to the existing restaurant park/900 Ashwood and will continue to operate with one entering lane and one exiting lane.
    - The intersection will continue to be signalized with no recommended change to the existing signal phasing or lane geometry.

7.3 Site Mitigation Improvements for "Build" Conditions

Improvements that are identified as mitigation improvements address deficiencies that are caused by site traffic and can be identified as related to the proposed development. Because operations would not be impacted beyond the projected "No-Build" conditions, site mitigation improvements have not been identified outside of the recommended configuration for the site access points.

Appendix

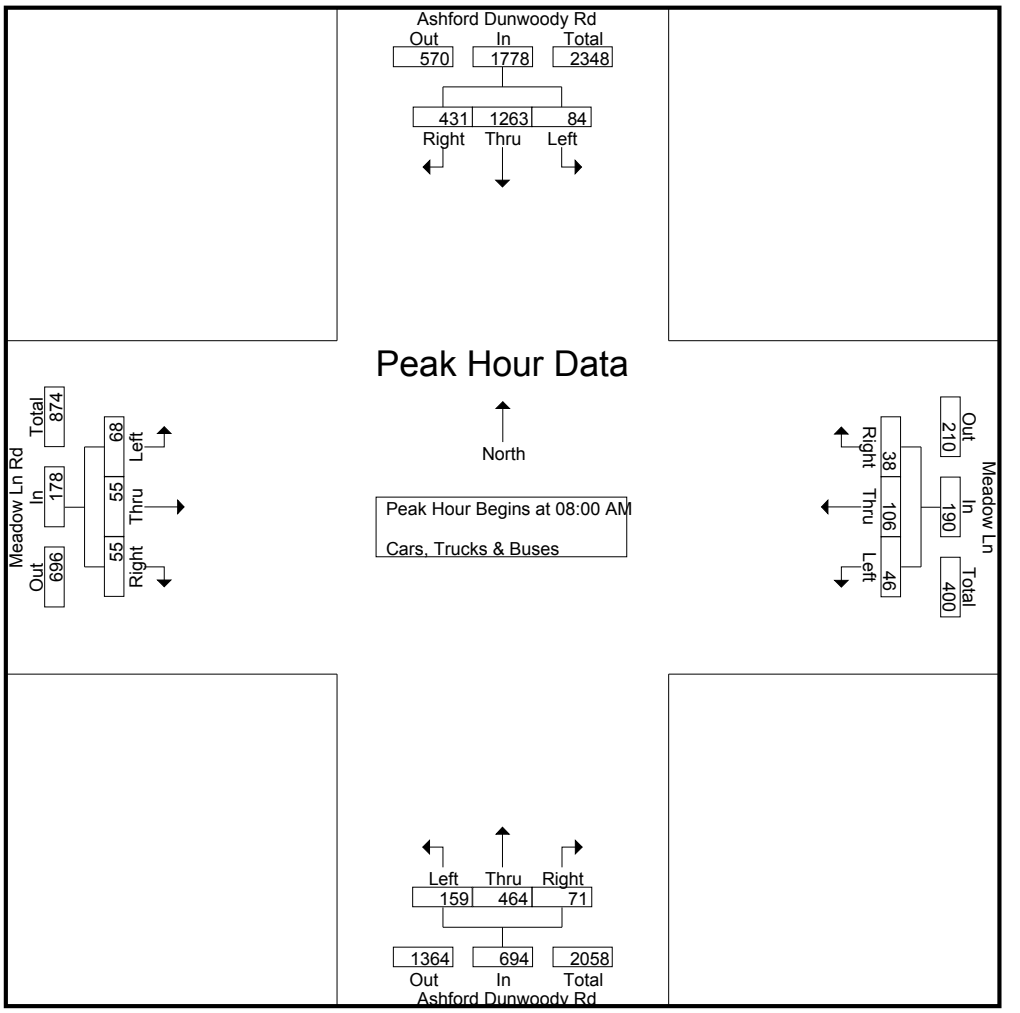
EXISTING INTERSECTION TRAFFIC COUNTS

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

TMC DATA
Ashford Dunwoody Rd @
Meadow Ln Rd
7-9 am | 4-6 pm

File Name : 20190006
Site Code : 20190006
Start Date : 1/9/2019
Page No : 2

	Ashford Dunwoody Rd Northbound				Ashford Dunwoody Rd Southbound				Meadow Ln Rd Eastbound				Meadow Ln 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 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	44	121	20	185	22	268	106	396	17	15	**21**	**53**	**16**	23	**11**	50	684
08:15 AM	31	102	**29**	162	12	261	104	377	13	**18**	5	36	11	32	9	52	627
08:30 AM	**48**	**129**	12	**189**	15	**399**	**112**	**526**	14	7	17	38	9	**33**	11	**53**	**806**
08:45 AM	36	112	10	158	**35**	335	109	479	**24**	15	12	51	10	18	7	35	723
Total Volume	159	464	71	694	84	1263	431	1778	68	55	55	178	46	106	38	190	2840
% App. Total	22.9	66.9	10.2		4.7	71	24.2		38.2	30.9	30.9		24.2	55.8	20		
PHF	.828	.899	.612	.918	.600	.791	.962	.845	.708	.764	.655	.840	.719	.803	.864	.896	.881



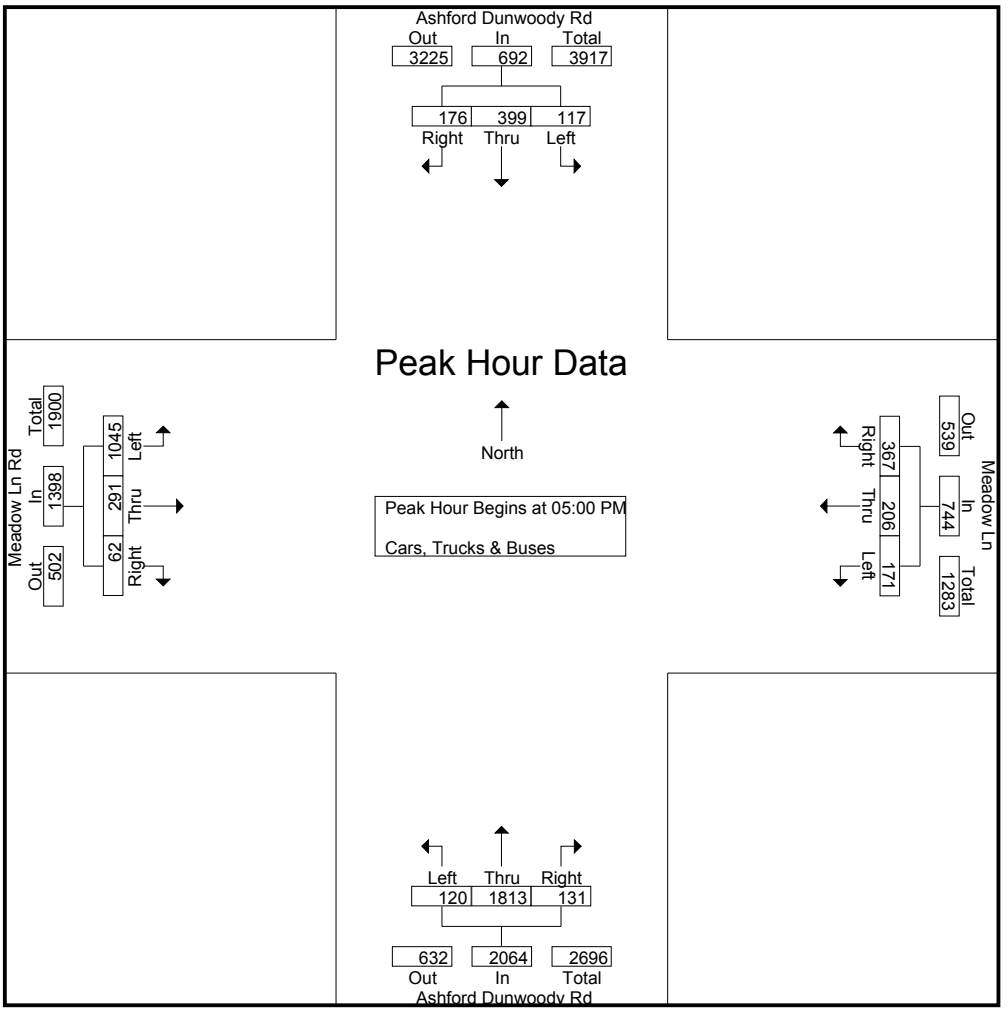
A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

TMC DATA
Ashford Dunwoody Rd @
Meadow Ln Rd
7-9 am | 4-6 pm

File Name : 20190006
Site Code : 20190006
Start Date : 1/9/2019
Page No : 3

	Ashford Dunwoody Rd Northbound				Ashford Dunwoody Rd Southbound				Meadow Ln Rd Eastbound				Meadow Ln 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 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	26	444	28	498	26	92	27	145	235	52	12	299	37	57	98	192	1134
05:15 PM	18	448	24	490	12	87	49	148	282	48	**20**	350	34	42	82	158	1146
05:30 PM	30	428	31	489	28	**110**	44	182	244	81	12	337	45	45	82	172	1180
05:45 PM	**46**	**493**	**48**	**587**	**51**	110	**56**	**217**	**284**	**110**	18	**412**	**55**	**62**	**105**	**222**	**1438**
Total Volume	120	1813	131	2064	117	399	176	692	1045	291	62	1398	171	206	367	744	4898
% App. Total	5.8	87.8	6.3		16.9	57.7	25.4		74.7	20.8	4.4		23	27.7	49.3		
PHF	.652	.919	.682	.879	.574	.907	.786	.797	.920	.661	.775	.848	.777	.831	.874	.838	.852



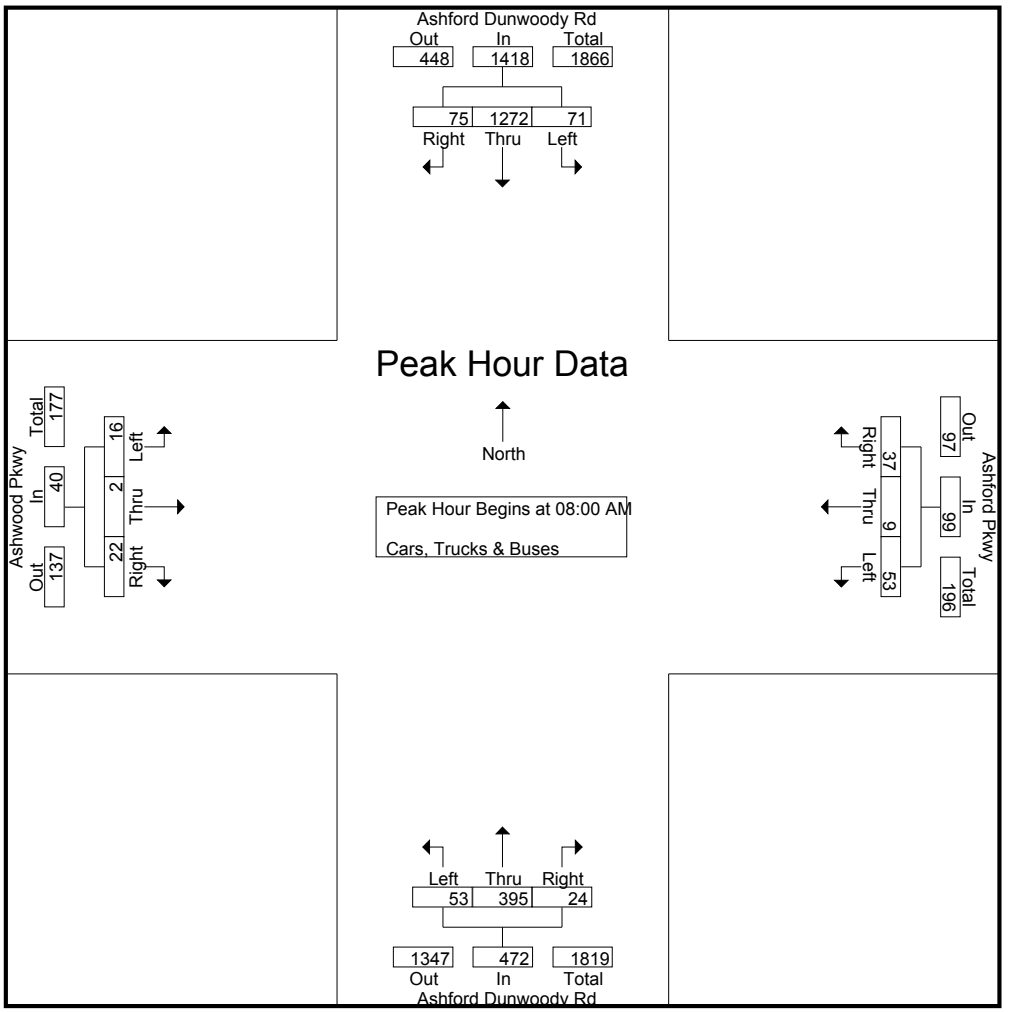
A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

TMC DATA
Ashford Dunwoody Rd @
Ashwood Pkwy / Ashford Pkwy
7-9 am | 4-6 pm

File Name : 20190007
Site Code : 20190007
Start Date : 1/9/2019
Page No : 2

	Ashford Dunwoody Rd Northbound				Ashford Dunwoody Rd Southbound				Ashwood Pkwy Eastbound				Ashford Pkwy 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 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	16	**110**	6	**132**	**21**	315	20	356	4	**1**	5	10	12	1	9	22	520
08:15 AM	9	97	5	111	13	315	13	341	2	0	**7**	9	10	**3**	7	20	481
08:30 AM	11	83	6	100	17	300	17	334	**8**	1	7	**16**	**19**	3	**11**	**33**	483
08:45 AM	**17**	105	**7**	129	20	**342**	**25**	**387**	2	0	3	5	12	2	10	24	**545**
Total Volume	53	395	24	472	71	1272	75	1418	16	2	22	40	53	9	37	99	2029
% App. Total	11.2	83.7	5.1		5	89.7	5.3		40	5	55		53.5	9.1	37.4		
PHF	.779	.898	.857	.894	.845	.930	.750	.916	.500	.500	.786	.625	.697	.750	.841	.750	.931



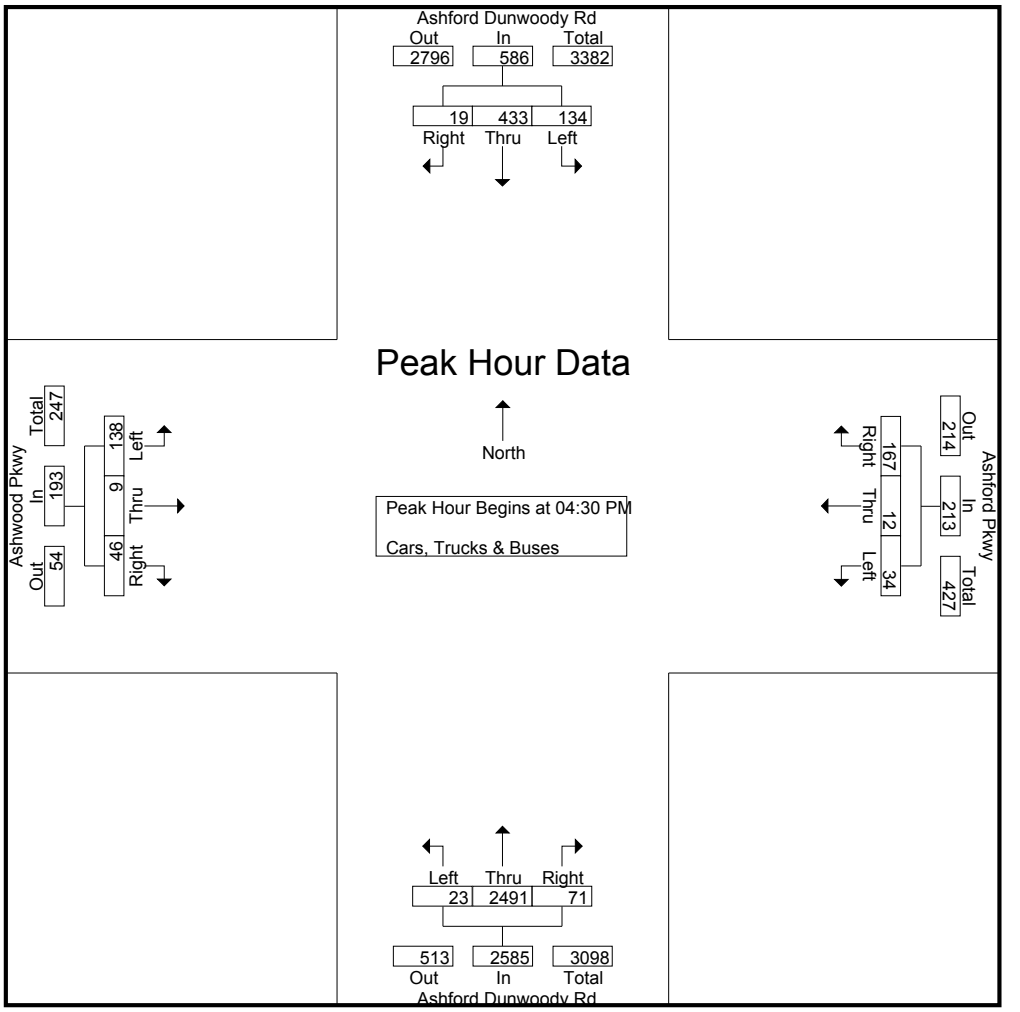
A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

TMC DATA
Ashford Dunwoody Rd @
Ashwood Pkwy / Ashford Pkwy
7-9 am | 4-6 pm

File Name : 20190007
Site Code : 20190007
Start Date : 1/9/2019
Page No : 3

	Ashford Dunwoody Rd Northbound				Ashford Dunwoody Rd Southbound				Ashwood Pkwy Eastbound				Ashford Pkwy 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 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 04:30 PM																	
04:30 PM	2	**675**	**22**	**699**	37	90	6	133	35	**3**	12	50	**10**	**8**	36	54	**936**
04:45 PM	8	627	17	652	27	**117**	4	148	20	3	5	28	10	2	47	**59**	887
05:00 PM	**9**	587	18	614	25	116	2	143	**45**	1	**15**	**61**	9	1	**49**	59	877
05:15 PM	4	602	14	620	**45**	110	**7**	**162**	38	2	14	54	5	1	35	41	877
Total Volume	23	2491	71	2585	134	433	19	586	138	9	46	193	34	12	167	213	3577
% App. Total	0.9	96.4	2.7		22.9	73.9	3.2		71.5	4.7	23.8		16	5.6	78.4		
PHF	.639	.923	.807	.925	.744	.925	.679	.904	.767	.750	.767	.791	.850	.375	.852	.903	.955

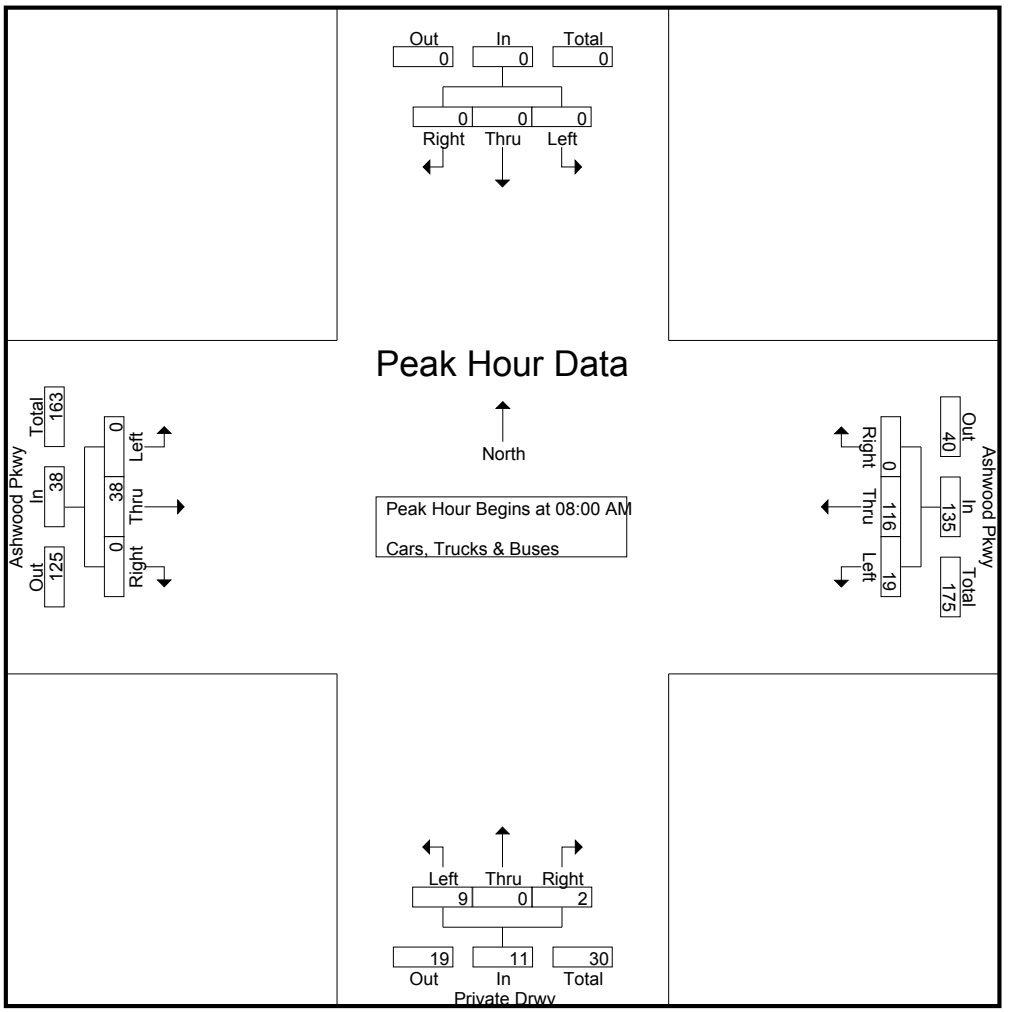


A&R Engineering, Inc.
2160 Kingston Court, Suite O
Marietta, GA 30067

TMC Data
Ashwood Pkwy @ Private Drwy
7-9 am | 4-6 pm

File Name : 20190009
Site Code : 20190009
Start Date : 1/9/2019
Page No : 2

	Private Drwy Northbound				Southbound				Ashwood Pkwy Eastbound				Ashwood Pkwy 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 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	3	0	**1**	4	0	0	0	0	0	10	0	10	**5**	32	0	37	51
08:15 AM	1	0	1	2	0	0	0	0	0	9	0	9	5	21	0	26	37
08:30 AM	0	0	0	0	0	0	0	0	0	**14**	0	**14**	4	25	0	29	43
08:45 AM	**5**	0	0	**5**	0	0	0	0	0	5	0	5	5	**38**	0	**43**	**53**
Total Volume	9	0	2	11	0	0	0	0	0	38	0	38	19	116	0	135	184
% App. Total	81.8	0	18.2		0	0	0		0	100	0		14.1	85.9	0		
PHF	.450	.000	.500	.550	.000	.000	.000	.000	.000	.679	.000	.679	.950	.763	.000	.785	.868

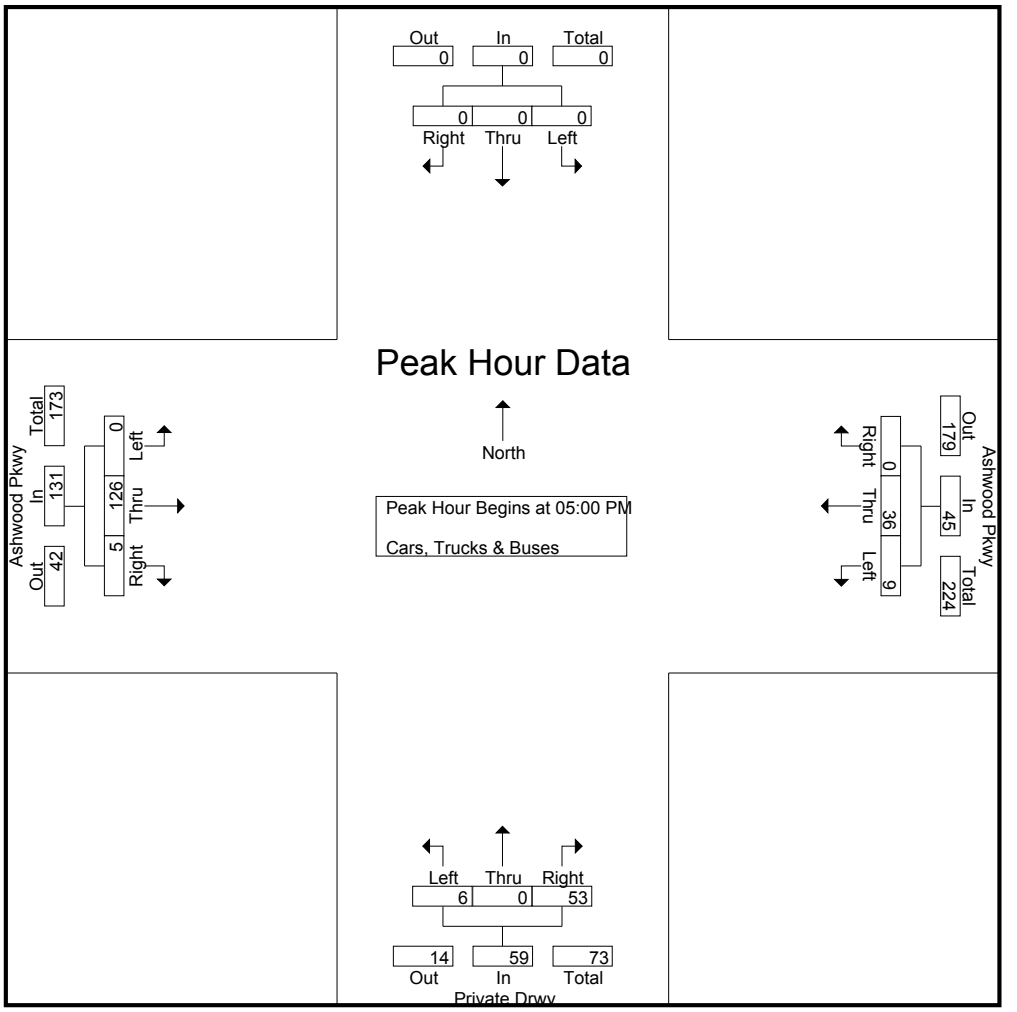


A&R Engineering, Inc.
2160 Kingston Court, Suite O
Marietta, GA 30067

TMC Data
Ashwood Pkwy @ Private Drwy
7-9 am | 4-6 pm

File Name : 20190009
Site Code : 20190009
Start Date : 1/9/2019
Page No : 3

	Private Drwy Northbound				Southbound				Ashwood Pkwy Eastbound				Ashwood Pkwy 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 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	2	0	12	14	0	0	0	0	0	**42**	1	**43**	3	8	0	11	**68**
05:15 PM	1	0	**15**	16	0	0	0	0	0	34	1	35	**4**	7	0	11	62
05:30 PM	0	0	12	12	0	0	0	0	0	26	1	27	1	5	0	6	45
05:45 PM	**3**	0	14	**17**	0	0	0	0	0	24	**2**	26	1	**16**	0	**17**	60
Total Volume	6	0	53	59	0	0	0	0	0	126	5	131	9	36	0	45	235
% App. Total	10.2	0	89.8		0	0	0		0	96.2	3.8		20	80	0		
PHF	.500	.000	.883	.868	.000	.000	.000	.000	.000	.750	.625	.762	.563	.563	.000	.662	.864



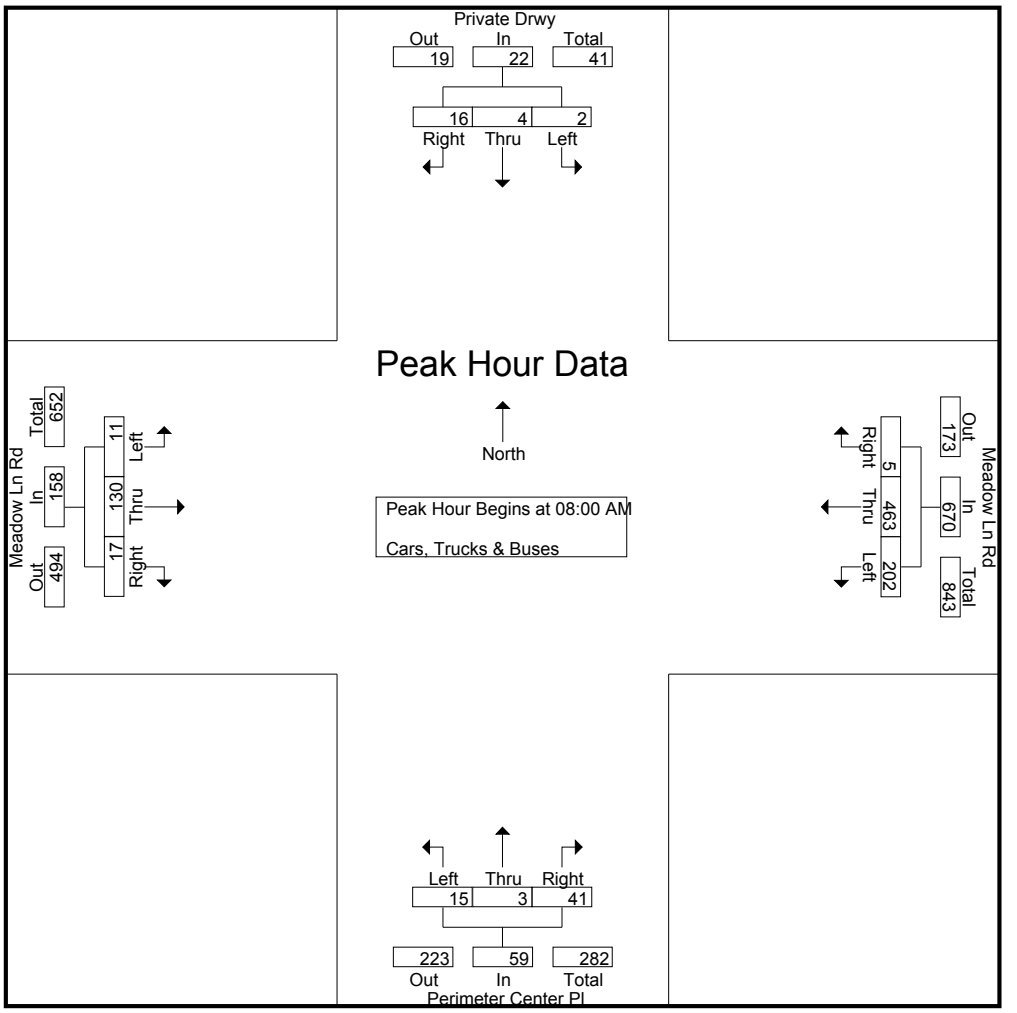
A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

TMC DATA
Meadow Ln Rd @
Perimeter Center Pl
7-9 am | 4-6 pm

File Name : 20190008
Site Code : 20190008
Start Date : 1/9/2019
Page No : 2

	Perimeter Center Pl Northbound				Private Drwy Southbound				Meadow Ln Rd Eastbound				Meadow Ln Rd Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 11:45 AM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 08:00 AM																	
08:00 AM	3	1	9	13	**1**	**1**	4	**6**	3	**42**	4	**49**	48	**118**	1	167	**235**
08:15 AM	**5**	0	**13**	**18**	0	1	**5**	6	2	22	4	28	**59**	117	1	**177**	229
08:30 AM	4	0	7	11	0	1	3	4	1	27	**6**	34	53	112	1	166	215
08:45 AM	3	**2**	12	17	1	1	4	6	**5**	39	3	47	42	116	**2**	160	230
Total Volume	15	3	41	59	2	4	16	22	11	130	17	158	202	463	5	670	909
% App. Total	25.4	5.1	69.5		9.1	18.2	72.7		7	82.3	10.8		30.1	69.1	0.7		
PHF	.750	.375	.788	.819	.500	1.00	.800	.917	.550	.774	.708	.806	.856	.981	.625	.946	.967



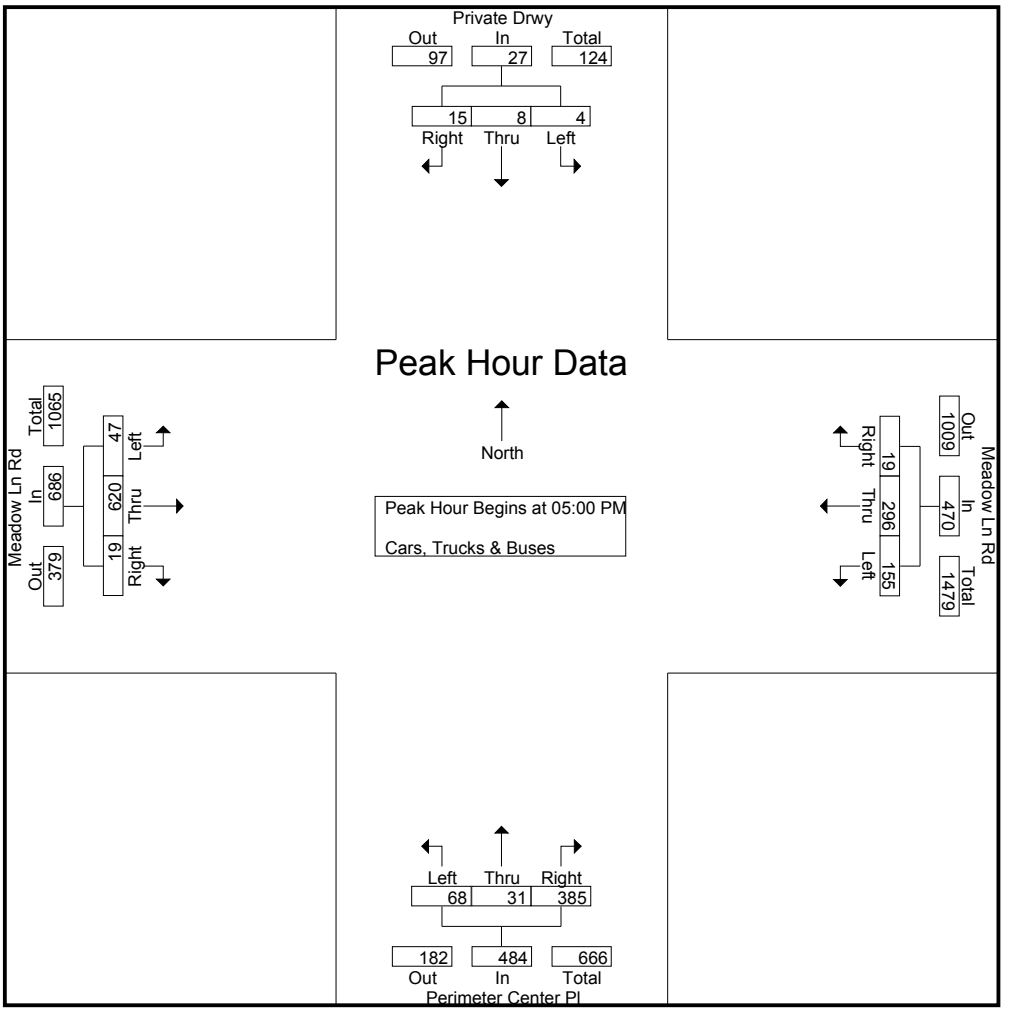
A&R Engineering, Inc.

2160 Kingston Court, Suite O
Marietta, GA 30067

TMC DATA
Meadow Ln Rd @
Perimeter Center Pl
7-9 am | 4-6 pm

File Name : 20190008
Site Code : 20190008
Start Date : 1/9/2019
Page No : 3

	Perimeter Center Pl Northbound				Private Drwy Southbound				Meadow Ln Rd Eastbound				Meadow Ln Rd Westbound				
Start Time	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Left	Thru	Right	App. Total	Int. Total
Peak Hour Analysis From 12:00 PM to 05:45 PM - Peak 1 of 1																	
Peak Hour for Entire Intersection Begins at 05:00 PM																	
05:00 PM	12	3	83	98	1	**3**	2	6	11	138	4	153	**45**	59	4	108	365
05:15 PM	14	8	**120**	**142**	1	3	0	4	10	**180**	3	**193**	34	60	1	95	434
05:30 PM	20	8	77	105	0	1	5	6	**16**	169	4	189	45	**89**	5	**139**	**439**
05:45 PM	**22**	**12**	105	139	**2**	1	**8**	**11**	10	133	**8**	151	31	88	**9**	128	429
Total Volume	68	31	385	484	4	8	15	27	47	620	19	686	155	296	19	470	1667
% App. Total	14	6.4	79.5		14.8	29.6	55.6		6.9	90.4	2.8		33	63	4		
PHF	.773	.646	.802	.852	.500	.667	.469	.614	.734	.861	.594	.889	.861	.831	.528	.845	.949



EXISTING INTERSECTION ANALYSIS

Timings
1: Ashford Dunwoody Rd & Meadow Lane/Asbury Square

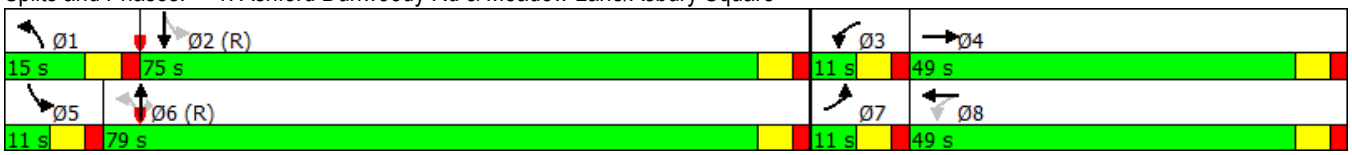
2019 Existing AM Peak
01/30/2019

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	68	55	46	106	159	464	71	84	1263
Future Volume (vph)	68	55	46	106	159	464	71	84	1263
Turn Type	Prot	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	7	4	3	8	1	6		5	2
Permitted Phases			8		6		6	2	
Detector Phase	7	4	3	8	1	6	6	5	2
Switch Phase									
Minimum Initial (s)	5.0	6.0	5.0	6.0	5.0	15.0	15.0	5.0	15.0
Minimum Split (s)	11.0	48.0	11.0	49.0	11.0	47.0	47.0	11.0	43.0
Total Split (s)	11.0	49.0	11.0	49.0	15.0	79.0	79.0	11.0	75.0
Total Split (%)	7.3%	32.7%	7.3%	32.7%	10.0%	52.7%	52.7%	7.3%	50.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 138 (92%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated

Splits and Phases: 1: Ashford Dunwoody Rd & Meadow Lane/Asbury Square



HCM 2010 Signalized Intersection Summary
1: Ashford Dunwoody Rd & Meadow Lane/Asbury Square

2019 Existing AM Peak
01/30/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	55	55	46	106	38	159	464	71	84	1263	431
Future Volume (veh/h)	68	55	55	46	106	38	159	464	71	84	1263	431
Number	7	4	14	3	8	18	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	77	62	62	52	120	43	181	527	81	95	1435	490
Adj No. of Lanes	2	2	0	1	2	0	1	2	1	1	2	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	115	120	107	144	175	60	286	2500	1118	636	1829	592
Arrive On Green	0.03	0.07	0.07	0.03	0.07	0.07	0.04	0.71	0.71	0.07	1.00	1.00
Sat Flow, veh/h	3442	1778	1576	1774	2586	890	1774	3539	1583	1774	2631	852
Grp Volume(v), veh/h	77	62	62	52	81	82	181	527	81	95	940	985
Grp Sat Flow(s),veh/h/ln	1721	1770	1585	1774	1770	1706	1774	1770	1583	1774	1770	1712
Q Serve(g_s), s	3.3	5.1	5.7	4.1	6.7	7.1	4.4	7.7	2.4	2.4	0.0	0.0
Cycle Q Clear(g_c), s	3.3	5.1	5.7	4.1	6.7	7.1	4.4	7.7	2.4	2.4	0.0	0.0
Prop In Lane	1.00		0.99	1.00		0.52	1.00		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	115	120	107	144	120	115	286	2500	1118	636	1230	1191
V/C Ratio(X)	0.67	0.52	0.58	0.36	0.67	0.71	0.63	0.21	0.07	0.15	0.76	0.83
Avail Cap(c_a), veh/h	115	507	454	144	507	489	315	2500	1118	637	1230	1191
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.80	0.80	0.80
Uniform Delay (d), s/veh	71.7	67.6	67.9	62.6	68.3	68.5	5.7	7.6	6.8	5.8	0.0	0.0
Incr Delay (d2), s/veh	14.1	3.4	4.9	1.5	6.4	8.0	3.5	0.2	0.1	0.1	3.7	5.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.3	4.6	4.8	3.7	6.3	6.5	4.3	6.8	1.9	2.0	2.3	3.2
LnGrp Delay(d),s/veh	85.8	71.0	72.8	64.1	74.7	76.5	9.2	7.8	6.9	5.9	3.7	5.4
LnGrp LOS	F	E	E	E	E	E	A	A	A	A	A	A
Approach Vol, veh/h		201			215			789			2020	
Approach Delay, s/veh		77.2			72.8			8.0			4.6	
Approach LOS		E			E			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.6	110.3	11.0	16.1	10.9	111.9	11.0	16.1
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	69.0	5.0	43.0	5.0	73.0	5.0	43.0
Max Q Clear Time (g_c+I1), s	6.4	2.0	6.1	7.7	4.4	9.7	5.3	9.1
Green Ext Time (p_c), s	0.1	66.7	0.0	1.0	0.0	63.1	0.0	1.0

Intersection Summary	
HCM 2010 Ctrl Delay	14.5
HCM 2010 LOS	B

Timings 2019 Existing AM Peak

2: Ashford Dunwoody Rd/Ashford Dunwood Rd & Ashwood Pkwy/Ashford Pkwy

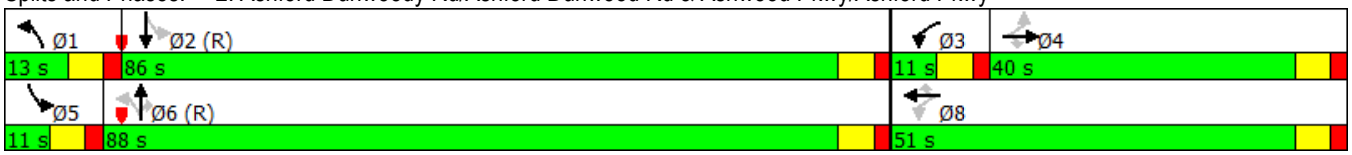
01/30/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	16	2	22	53	9	37	53	395	24	71	1272
Future Volume (vph)	16	2	22	53	9	37	53	395	24	71	1272
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases		4		3	8		1	6		5	2
Permitted Phases	4		4	8		8	6		6	2	
Detector Phase	4	4	4	3	8	8	1	6	6	5	2
Switch Phase											
Minimum Initial (s)	6.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0
Minimum Split (s)	40.0	40.0	40.0	11.0	42.0	42.0	11.0	42.0	42.0	11.0	37.0
Total Split (s)	40.0	40.0	40.0	11.0	51.0	51.0	13.0	88.0	88.0	11.0	86.0
Total Split (%)	26.7%	26.7%	26.7%	7.3%	34.0%	34.0%	8.7%	58.7%	58.7%	7.3%	57.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated

Splits and Phases: 2: Ashford Dunwoody Rd/Ashford Dunwood Rd & Ashwood Pkwy/Ashford Pkwy



HCM 2010 Signalized Intersection Summary 2019 Existing AM Peak
2: Ashford Dunwoody Rd/Ashford Dunwood Rd & Ashwood Pkwy/Ashford Pkwy 01/30/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	2	22	53	9	37	53	395	24	71	1272	75
Future Volume (veh/h)	16	2	22	53	9	37	53	395	24	71	1272	75
Number	7	4	14	3	8	18	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	17	2	0	57	10	40	57	425	0	76	1368	81
Adj No. of Lanes	0	1	1	1	1	1	1	2	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	90	8	60	189	207	176	307	2608	1167	748	2509	148
Arrive On Green	0.04	0.04	0.00	0.03	0.11	0.11	0.02	0.49	0.00	0.03	0.74	0.74
Sat Flow, veh/h	1192	218	1583	1774	1863	1583	1774	3539	1583	1774	3396	201
Grp Volume(v), veh/h	19	0	0	57	10	40	57	425	0	76	711	738
Grp Sat Flow(s),veh/h/ln	1409	0	1583	1774	1863	1583	1774	1770	1583	1774	1770	1827
Q Serve(g_s), s	1.7	0.0	0.0	4.6	0.7	3.5	1.2	9.9	0.0	1.6	26.3	26.5
Cycle Q Clear(g_c), s	1.9	0.0	0.0	4.6	0.7	3.5	1.2	9.9	0.0	1.6	26.3	26.5
Prop In Lane	0.89		1.00	1.00		1.00	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	99	0	60	189	207	176	307	2608	1167	748	1307	1350
V/C Ratio(X)	0.19	0.00	0.00	0.30	0.05	0.23	0.19	0.16	0.00	0.10	0.54	0.55
Avail Cap(c_a), veh/h	361	0	359	189	559	475	336	2608	1167	750	1307	1350
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00	0.97	0.97	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.3	0.0	0.0	65.0	59.6	60.8	7.0	12.5	0.0	4.5	8.6	8.6
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.9	0.1	0.6	0.3	0.1	0.0	0.1	1.6	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.4	0.0	0.0	4.1	0.7	2.8	1.0	8.5	0.0	1.4	19.2	20.0
LnGrp Delay(d),s/veh	71.3	0.0	0.0	65.9	59.7	61.4	7.3	12.6	0.0	4.6	10.2	10.2
LnGrp LOS	E			E	E	E	A	B		A	B	B
Approach Vol, veh/h		19			107			482			1525	
Approach Delay, s/veh		71.3			63.6			12.0			9.9	
Approach LOS		E			E			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	10.5	116.8	11.0	11.7	10.8	116.5		22.7
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	7.0	80.0	5.0	34.0	5.0	82.0		45.0
Max Q Clear Time (g_c+I1), s	3.2	28.5	6.6	3.9	3.6	11.9		5.5
Green Ext Time (p_c), s	0.0	49.7	0.0	0.2	0.0	67.0		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	13.6
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	38	0	19	116	9	2
Future Vol, veh/h	38	0	19	116	9	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	44	0	22	133	10	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	44	0	221	44
Stage 1	-	-	-	-	44	-
Stage 2	-	-	-	-	177	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1564	-	767	1026
Stage 1	-	-	-	-	978	-
Stage 2	-	-	-	-	854	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1564	-	755	1026
Mov Cap-2 Maneuver	-	-	-	-	755	-
Stage 1	-	-	-	-	978	-
Stage 2	-	-	-	-	841	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	793	-	-	1564	-
HCM Lane V/C Ratio	0.016	-	-	0.014	-
HCM Control Delay (s)	9.6	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Timings
4: Perimeter Center Pl & Meadow Lane

2019 Existing AM Peak
01/30/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	11	130	17	202	463	5	15	3	41	2	4
Future Volume (vph)	11	130	17	202	463	5	15	3	41	2	4
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	pm+ov	Perm	NA
Protected Phases		2		1	6			8	1		4
Permitted Phases	2		2	6		6	8		8	4	
Detector Phase	2	2	2	1	6	6	8	8	1	4	4
Switch Phase											
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	15.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	73.0	73.0	73.0	11.0	24.0	24.0	50.0	50.0	11.0	49.0	49.0
Total Split (s)	61.0	61.0	61.0	15.0	76.0	76.0	44.0	44.0	15.0	44.0	44.0
Total Split (%)	50.8%	50.8%	50.8%	12.5%	63.3%	63.3%	36.7%	36.7%	12.5%	36.7%	36.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0
Lead/Lag	Lag	Lag	Lag	Lead					Lead		
Lead-Lag Optimize?											
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None

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: 135
Control Type: Actuated-Coordinated

Splits and Phases: 4: Perimeter Center Pl & Meadow Lane

HCM 2010 Signalized Intersection Summary
4: Perimeter Center Pl & Meadow Lane

2019 Existing AM Peak
01/30/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	130	17	202	463	5	15	3	41	2	4	16
Future Volume (veh/h)	11	130	17	202	463	5	15	3	41	2	4	16
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	11	134	18	208	477	5	15	3	0	2	4	16
Adj No. of Lanes	1	2	1	1	2	1	0	1	1	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	762	2731	1222	1072	3055	1367	98	15	124	36	13	44
Arrive On Green	0.77	0.77	0.77	0.04	0.86	0.86	0.04	0.04	0.00	0.04	0.04	0.04
Sat Flow, veh/h	909	3539	1583	1774	3539	1583	1175	400	1583	87	356	1182
Grp Volume(v), veh/h	11	134	18	208	477	5	18	0	0	22	0	0
Grp Sat Flow(s),veh/h/ln	909	1770	1583	1774	1770	1583	1575	0	1583	1626	0	0
Q Serve(g_s), s	0.3	1.1	0.3	2.7	2.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	1.1	0.3	2.7	2.6	0.1	1.2	0.0	0.0	1.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.83		1.00	0.09		0.73
Lane Grp Cap(c), veh/h	762	2731	1222	1072	3055	1367	113	0	124	93	0	0
V/C Ratio(X)	0.01	0.05	0.01	0.19	0.16	0.00	0.16	0.00	0.00	0.24	0.00	0.00
Avail Cap(c_a), veh/h	762	2731	1222	1131	3055	1367	518	0	567	543	0	0
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	0.29	0.29	0.29	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	3.2	3.3	3.2	2.0	1.3	1.1	56.2	0.0	0.0	56.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	1.3	0.0	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(95%),veh/ln	0.2	1.0	0.3	2.3	2.2	0.0	1.1	0.0	0.0	1.3	0.0	0.0
LnGrp Delay(d),s/veh	3.2	3.3	3.2	2.0	1.3	1.1	56.9	0.0	0.0	57.7	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	E			E		
Approach Vol, veh/h		163			690			18			22	
Approach Delay, s/veh		3.3			1.5			56.9			57.7	
Approach LOS		A			A			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	11.0	98.6		10.4		109.6		10.4
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s	9.0	55.0		38.0		70.0		38.0
Max Q Clear Time (g_c+I1), s	4.7	3.1		3.6		4.6		3.2
Green Ext Time (p_c), s	0.3	20.9		0.1		22.8		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	4.4
HCM 2010 LOS	A

Notes

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

Timings
1: Ashford Dunwoody Rd & Meadow Lane/Asbury Square

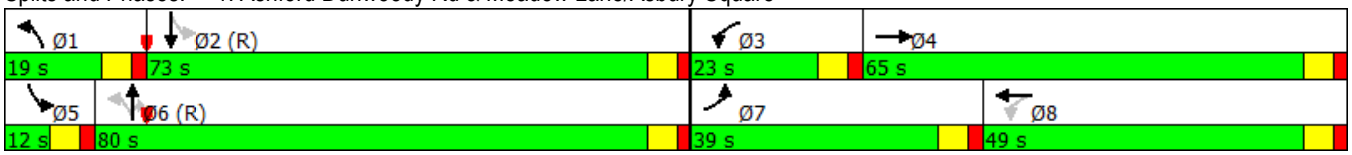
2019 Existing PM Peak
01/30/2019

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	1045	291	171	206	120	1813	131	117	399
Future Volume (vph)	1045	291	171	206	120	1813	131	117	399
Turn Type	Prot	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	7	4	3	8	1	6		5	2
Permitted Phases			8		6		6	2	
Detector Phase	7	4	3	8	1	6	6	5	2
Switch Phase									
Minimum Initial (s)	5.0	6.0	5.0	6.0	5.0	15.0	15.0	5.0	15.0
Minimum Split (s)	11.0	48.0	11.0	49.0	11.0	47.0	47.0	11.0	43.0
Total Split (s)	39.0	65.0	23.0	49.0	19.0	80.0	80.0	12.0	73.0
Total Split (%)	21.7%	36.1%	12.8%	27.2%	10.6%	44.4%	44.4%	6.7%	40.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 170 (94%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated

Splits and Phases: 1: Ashford Dunwoody Rd & Meadow Lane/Asbury Square



HCM 2010 Signalized Intersection Summary
1: Ashford Dunwoody Rd & Meadow Lane/Asbury Square

2019 Existing PM Peak
01/30/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1045	291	62	171	206	367	120	1813	131	117	399	176
Future Volume (veh/h)	1045	291	62	171	206	367	120	1813	131	117	399	176
Number	7	4	14	3	8	18	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	1229	342	73	201	242	432	141	2133	154	138	469	207
Adj No. of Lanes	2	2	0	1	2	0	1	2	1	1	2	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	631	954	201	437	423	378	381	1455	651	99	923	405
Arrive On Green	0.18	0.33	0.33	0.09	0.24	0.24	0.06	0.41	0.41	0.07	0.77	0.77
Sat Flow, veh/h	3442	2910	614	1774	1770	1583	1774	3539	1583	1774	2396	1050
Grp Volume(v), veh/h	1229	206	209	201	242	432	141	2133	154	138	345	331
Grp Sat Flow(s),veh/h/ln	1721	1770	1754	1774	1770	1583	1774	1770	1583	1774	1770	1677
Q Serve(g_s), s	33.0	16.0	16.3	15.3	21.7	43.0	8.6	74.0	11.4	6.0	13.2	13.4
Cycle Q Clear(g_c), s	33.0	16.0	16.3	15.3	21.7	43.0	8.6	74.0	11.4	6.0	13.2	13.4
Prop In Lane	1.00		0.35	1.00		1.00	1.00		1.00	1.00		0.63
Lane Grp Cap(c), veh/h	631	580	575	437	423	378	381	1455	651	99	682	646
V/C Ratio(X)	1.95	0.36	0.36	0.46	0.57	1.14	0.37	1.47	0.24	1.39	0.51	0.51
Avail Cap(c_a), veh/h	631	580	575	437	423	378	404	1455	651	99	682	646
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.86	0.86	0.86	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	73.5	46.0	46.2	45.1	60.4	68.5	30.5	53.0	34.6	46.2	14.2	14.2
Incr Delay (d2), s/veh	431.5	0.3	0.3	0.8	1.9	90.9	0.6	213.5	0.9	226.1	2.6	2.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	96.3	12.1	12.3	12.1	16.2	51.0	7.6	142.8	8.9	14.8	11.1	10.7
LnGrp Delay(d),s/veh	505.0	46.4	46.5	45.9	62.3	159.4	31.1	266.5	35.4	272.3	16.9	17.1
LnGrp LOS	F	D	D	D	E	F	C	F	D	F	B	B
Approach Vol, veh/h		1644			875			2428			814	
Approach Delay, s/veh		389.3			106.4			238.2			60.3	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.7	75.3	23.0	65.0	12.0	80.0	39.0	49.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	13.0	67.0	17.0	59.0	6.0	74.0	33.0	43.0
Max Q Clear Time (g_c+I1), s	10.6	15.4	17.3	18.3	8.0	76.0	35.0	45.0
Green Ext Time (p_c), s	0.1	51.4	0.0	4.9	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	236.1
HCM 2010 LOS	F

Timings 2019 Existing PM Peak

2: Ashford Dunwoody Rd/Ashford Dunwood Rd & Ashwood Pkwy/Ashford Pkwy

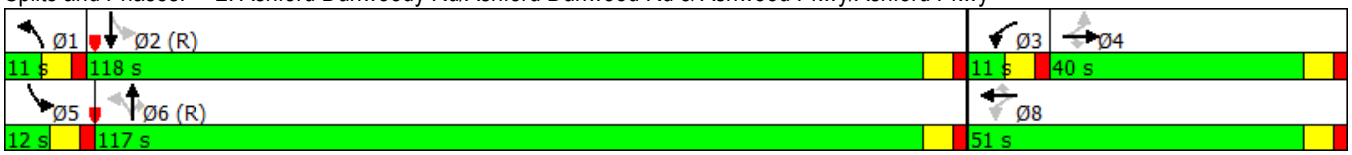
01/30/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	138	9	46	34	12	167	23	2491	71	134	433
Future Volume (vph)	138	9	46	34	12	167	23	2491	71	134	433
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases		4		3	8		1	6		5	2
Permitted Phases	4		4	8		8	6		6	2	
Detector Phase	4	4	4	3	8	8	1	6	6	5	2
Switch Phase											
Minimum Initial (s)	6.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0
Minimum Split (s)	40.0	40.0	40.0	11.0	42.0	42.0	11.0	42.0	42.0	11.0	37.0
Total Split (s)	40.0	40.0	40.0	11.0	51.0	51.0	11.0	117.0	117.0	12.0	118.0
Total Split (%)	22.2%	22.2%	22.2%	6.1%	28.3%	28.3%	6.1%	65.0%	65.0%	6.7%	65.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated

Splits and Phases: 2: Ashford Dunwoody Rd/Ashford Dunwood Rd & Ashwood Pkwy/Ashford Pkwy



HCM 2010 Signalized Intersection Summary 2019 Existing PM Peak
2: Ashford Dunwoody Rd/Ashford Dunwood Rd & Ashwood Pkwy/Ashford Pkwy 01/30/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	9	46	34	12	167	23	2491	71	134	433	19
Future Volume (veh/h)	138	9	46	34	12	167	23	2491	71	134	433	19
Number	7	4	14	3	8	18	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	145	9	0	36	13	176	24	2622	0	141	456	20
Adj No. of Lanes	0	1	1	1	1	1	1	2	1	1	2	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	201	10	224	343	369	314	654	2366	1058	99	2357	103
Arrive On Green	0.14	0.14	0.00	0.02	0.20	0.20	0.04	1.00	0.00	0.03	0.68	0.68
Sat Flow, veh/h	1144	71	1583	1774	1863	1583	1774	3539	1583	1774	3454	151
Grp Volume(v), veh/h	154	0	0	36	13	176	24	2622	0	141	233	243
Grp Sat Flow(s),veh/h/ln	1215	0	1583	1774	1863	1583	1774	1770	1583	1774	1770	1836
Q Serve(g_s), s	22.4	0.0	0.0	3.1	1.0	18.0	0.8	120.3	0.0	6.0	8.7	8.7
Cycle Q Clear(g_c), s	22.4	0.0	0.0	3.1	1.0	18.0	0.8	120.3	0.0	6.0	8.7	8.7
Prop In Lane	0.94		1.00	1.00		1.00	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	211	0	224	343	369	314	654	2366	1058	99	1208	1253
V/C Ratio(X)	0.73	0.00	0.00	0.10	0.04	0.56	0.04	1.11	0.00	1.42	0.19	0.19
Avail Cap(c_a), veh/h	268	0	299	351	466	396	669	2366	1058	99	1208	1253
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00	0.09	0.09	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	76.0	0.0	0.0	62.4	58.3	65.1	8.8	0.0	0.0	64.1	10.5	10.5
Incr Delay (d2), s/veh	7.3	0.0	0.0	0.1	0.0	1.6	0.0	49.4	0.0	238.7	0.4	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.6	0.0	0.0	2.7	0.9	12.7	0.7	29.2	0.0	20.7	7.7	8.0
LnGrp Delay(d),s/veh	83.3	0.0	0.0	62.5	58.3	66.7	8.8	49.4	0.0	302.8	10.8	10.8
LnGrp LOS	F			E	E	E	A	F		F	B	B
Approach Vol, veh/h		154			225			2646			617	
Approach Delay, s/veh		83.3			65.5			49.0			77.5	
Approach LOS		F			E			D			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	9.5	128.8	10.2	31.4	12.0	126.3		41.7
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	5.0	112.0	5.0	34.0	6.0	111.0		45.0
Max Q Clear Time (g_c+I1), s	2.8	10.7	5.1	24.4	8.0	122.3		20.0
Green Ext Time (p_c), s	0.0	100.8	0.0	1.0	0.0	0.0		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	56.3
HCM 2010 LOS	E

Intersection	
Int Delay, s/veh	2.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	126	5	9	36	6	53
Future Vol, veh/h	126	5	9	36	6	53
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	147	6	10	42	7	62

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	153	0	212	150
Stage 1	-	-	-	-	150	-
Stage 2	-	-	-	-	62	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1428	-	776	896
Stage 1	-	-	-	-	878	-
Stage 2	-	-	-	-	961	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1428	-	771	896
Mov Cap-2 Maneuver	-	-	-	-	771	-
Stage 1	-	-	-	-	878	-
Stage 2	-	-	-	-	954	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	881	-	-	1428	-
HCM Lane V/C Ratio	0.078	-	-	0.007	-
HCM Control Delay (s)	9.4	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Timings
4: Perimeter Center Pl & Meadow Lane

2019 Existing PM Peak
01/30/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	47	620	19	155	296	19	68	31	385	4	8
Future Volume (vph)	47	620	19	155	296	19	68	31	385	4	8
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	pm+ov	Perm	NA
Protected Phases		2		1	6			8	1		4
Permitted Phases	2		2	6		6	8		8	4	
Detector Phase	2	2	2	1	6	6	8	8	1	4	4
Switch Phase											
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	15.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	73.0	73.0	73.0	15.0	24.0	24.0	50.0	50.0	15.0	49.0	49.0
Total Split (s)	63.0	63.0	63.0	15.0	78.0	78.0	42.0	42.0	15.0	42.0	42.0
Total Split (%)	52.5%	52.5%	52.5%	12.5%	65.0%	65.0%	35.0%	35.0%	12.5%	35.0%	35.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0
Lead/Lag	Lag	Lag	Lag	Lead					Lead		
Lead-Lag Optimize?											
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None

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: 140
Control Type: Actuated-Coordinated

Splits and Phases: 4: Perimeter Center Pl & Meadow Lane

HCM 2010 Signalized Intersection Summary
4: Perimeter Center Pl & Meadow Lane

2019 Existing PM Peak
01/30/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	47	620	19	155	296	19	68	31	385	4	8	15
Future Volume (veh/h)	47	620	19	155	296	19	68	31	385	4	8	15
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	49	653	20	163	312	20	72	33	0	4	8	16
Adj No. of Lanes	1	2	1	1	2	1	0	1	1	0	1	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	816	2562	1146	638	2886	1291	141	41	200	43	53	82
Arrive On Green	0.72	0.72	0.72	0.04	0.82	0.82	0.08	0.08	0.00	0.08	0.08	0.08
Sat Flow, veh/h	1044	3539	1583	1774	3539	1583	1068	490	1583	101	629	974
Grp Volume(v), veh/h	49	653	20	163	312	20	105	0	0	28	0	0
Grp Sat Flow(s),veh/h/ln	1044	1770	1583	1774	1770	1583	1558	0	1583	1704	0	0
Q Serve(g_s), s	1.6	7.5	0.4	2.6	2.1	0.3	6.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.6	7.5	0.4	2.6	2.1	0.3	7.9	0.0	0.0	1.8	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.69		1.00	0.14		0.57
Lane Grp Cap(c), veh/h	816	2562	1146	638	2886	1291	182	0	200	178	0	0
V/C Ratio(X)	0.06	0.25	0.02	0.26	0.11	0.02	0.58	0.00	0.00	0.16	0.00	0.00
Avail Cap(c_a), veh/h	816	2562	1146	697	2886	1291	506	0	541	527	0	0
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	0.41	0.41	0.41	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.8	5.6	4.6	3.6	2.2	2.1	53.8	0.0	0.0	51.1	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.2	0.0	0.1	0.0	0.0	2.9	0.0	0.0	0.4	0.0	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(95%),veh/ln	0.9	6.7	0.3	2.3	1.9	0.2	6.4	0.0	0.0	1.6	0.0	0.0
LnGrp Delay(d),s/veh	4.9	5.8	4.7	3.7	2.3	2.1	56.6	0.0	0.0	51.5	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	E			D		
Approach Vol, veh/h		722			495			105			28	
Approach Delay, s/veh		5.8			2.7			56.6			51.5	
Approach LOS		A			A			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	11.0	92.9		16.1		103.9		16.1
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s	9.0	57.0		36.0		72.0		36.0
Max Q Clear Time (g_c+I1), s	4.6	9.5		3.8		4.1		9.9
Green Ext Time (p_c), s	0.2	32.5		0.4		41.2		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	9.5
HCM 2010 LOS	A

Notes

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

GDOT LEFT TURN LANE ANALYSIS

LEFT TURN LANE ANALYSIS
per GDOT standards

The following left turn lane analysis was used to determine the need for a dedicated turn lane at the proposed site driveway locations on Ashwood Pkwy. GDOT standards require the installation of a left turn lane when traffic entering the development meets or exceeds the values shown in the following table.

GDOT Requirements For Left Turn Lanes					
Site Driveway	Left Turn Traffic (% Total Entering)	Left Turn Volume (veh/day)	Roadway Speed / # Lanes	GDOT Threshold (veh/day)	Requirement
Ashwood Pkwy @ Site Drwy 1	40%	1,663	25 mph / 2-Lane	300	100' storage 50' taper
Ashwood Pkwy @ Site Drwy 2	10%	203	25 mph / 2-Lane	300	Not Required
Ashwood Pkwy @ Private Rd	2%	42	25 mph / 2-Lane	300	Not Required

Findings

Based on the number of projected daily left turns, Site Driveway 1 on Ashwood Parkway will meet the GDOT requirements for construction of a left turn lane.

GDOT RIGHT TURN LANE ANALYSIS

RIGHT TURN LANE ANALYSIS
per GDOT standards

The following right turn lane analysis was used to determine the need for a dedicated deceleration lane at the proposed site driveway locations on Ashwood Parkway. GDOT standards require the installation of a deceleration lane when traffic entering the development meets or exceeds the values shown in the following table.

GDOT Requirements For Deceleration Lanes					
Site Driveway	Right Turn Traffic (% Total Entering)	Right Turn Volume (veh/day)	Roadway Speed / # Lanes	GDOT Threshold (veh/day)	Requirement
Ashwood Pkwy @ Site Drwy 1	2.5%	52	25 mph / 2-Lane	200	Not Required
Ashwood Pkwy @ Site Drwy 2	0.5%	10	25 mph / 2-Lane	200	Not Required
Ashwood Pkwy @ Private Rd	2%	42	25 mph / 2-Lane	200	Not Required

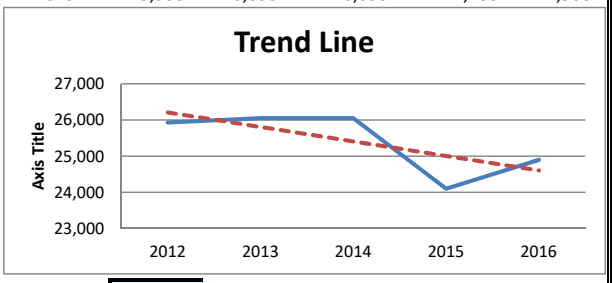
Findings

Based on the number of projected daily right turns, none of the driveways on Ashwood Parkway will require a dedicated right turn lane.

LINEAR REGRESSION OF DAILY TRAFFIC

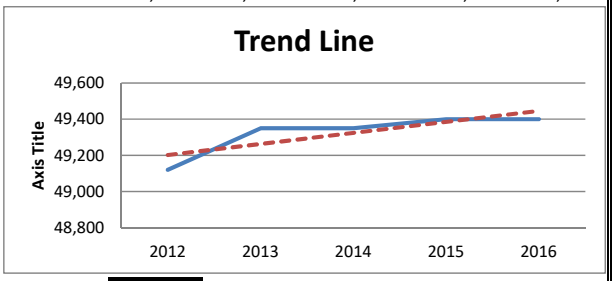
Location	Growth Rate	R Squared	Station ID	Route	2012	2013	2014	2015	2016
Ashford Dunwoody (North)	-1.6%	0.52	0893587	176431	25,930	26,050	26,050	24,100	24,900
Ashford Dunwoody (South)	0.1%	0.68	0893586	176431	49,120	49,350	49,350	49,400	49,400
Perimeter Center (W)	0.1%	0.50	0894069	603631	28,370	28,500	28,500	28,500	28,500
Hammond Drive (West)	-0.1%	0.02	0897170	486131	16,590	16,960	16,960	16,300	16,800
Weighted Average	**-0.3%**	0.25	Sum of Count Stations =		120,010	120,860	120,860	118,300	119,600

Location	Traffic Counter	RCLINK	2012	2013	2014	2015	2016
Ashford Dunwoody (North)	0893587	176431	25,930	26,050	26,050	24,100	24,900



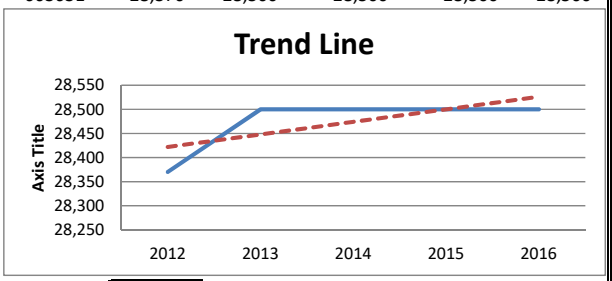
Growth Rate	-1.6%	Intercept	833,020	Slope	-401.00
Trend Line	26,208	25,807	25,406	25,005	24,604

Location	Traffic Counter	RCLINK	2012	2013	2014	2015	2016
Ashford Dunwoody (South)	0893586	176431	49,120	49,350	49,350	49,400	49,400



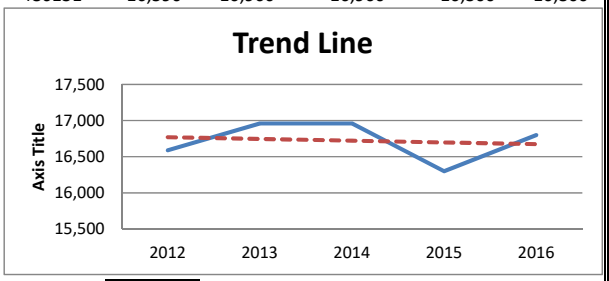
Growth Rate	0.1%	Intercept	-73,530	Slope	61.00
Trend Line	49,202	49,263	49,324	49,385	49,446

Location	Traffic Counter	RCLINK	2012	2013	2014	2015	2016
Perimeter Center (W)	0894069	603631	28,370	28,500	28,500	28,500	28,500



Growth Rate	0.1%	Intercept	-23,890	Slope	26.00
Trend Line	28,422	28,448	28,474	28,500	28,526

Location	Traffic Counter	RCLINK	2012	2013	2014	2015	2016
Hammond Drive (West)	0897170	486131	16,590	16,960	16,960	16,300	16,800



Growth Rate	-0.1%	Intercept	65,058	Slope	-24.00
Trend Line	16,770	16,746	16,722	16,698	16,674

FUTURE "NO-BUILD" INTERSECTION ANALYSIS

Timings
1: Ashford Dunwoody Rd & Meadow Lane/Asbury Square

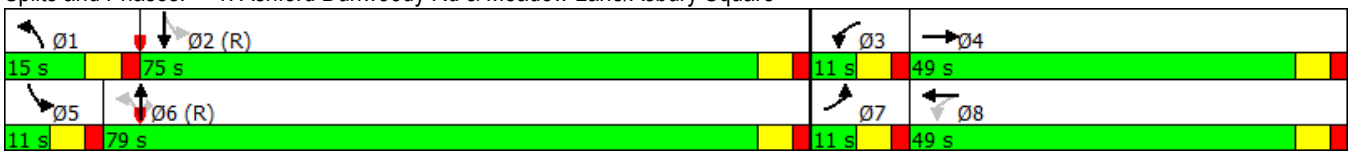
2021 No-Build AM Peak
01/30/2019

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	69	56	47	108	162	473	72	86	1288
Future Volume (vph)	69	56	47	108	162	473	72	86	1288
Turn Type	Prot	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	7	4	3	8	1	6		5	2
Permitted Phases			8		6		6	2	
Detector Phase	7	4	3	8	1	6	6	5	2
Switch Phase									
Minimum Initial (s)	5.0	6.0	5.0	6.0	5.0	15.0	15.0	5.0	15.0
Minimum Split (s)	11.0	48.0	11.0	49.0	11.0	47.0	47.0	11.0	43.0
Total Split (s)	11.0	49.0	11.0	49.0	15.0	79.0	79.0	11.0	75.0
Total Split (%)	7.3%	32.7%	7.3%	32.7%	10.0%	52.7%	52.7%	7.3%	50.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 138 (92%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated

Splits and Phases: 1: Ashford Dunwoody Rd & Meadow Lane/Asbury Square



HCM 2010 Signalized Intersection Summary
1: Ashford Dunwoody Rd & Meadow Lane/Asbury Square

2021 No-Build AM Peak
01/30/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	56	56	47	108	39	162	473	72	86	1288	440
Future Volume (veh/h)	69	56	56	47	108	39	162	473	72	86	1288	440
Number	7	4	14	3	8	18	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	78	64	64	53	123	44	184	538	82	98	1464	500
Adj No. of Lanes	2	2	0	1	2	0	1	2	1	1	2	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	115	123	109	144	178	61	281	2495	1116	628	1824	589
Arrive On Green	0.03	0.07	0.07	0.03	0.07	0.07	0.04	0.70	0.70	0.07	1.00	1.00
Sat Flow, veh/h	3442	1777	1577	1774	2587	889	1774	3539	1583	1774	2632	850
Grp Volume(v), veh/h	78	64	64	53	83	84	184	538	82	98	957	1007
Grp Sat Flow(s),veh/h/ln	1721	1770	1584	1774	1770	1706	1774	1770	1583	1774	1770	1713
Q Serve(g_s), s	3.4	5.2	5.9	4.1	6.8	7.3	4.6	7.9	2.4	2.5	0.0	0.0
Cycle Q Clear(g_c), s	3.4	5.2	5.9	4.1	6.8	7.3	4.6	7.9	2.4	2.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.52	1.00		1.00	1.00		0.50
Lane Grp Cap(c), veh/h	115	122	109	144	122	118	281	2495	1116	628	1227	1187
V/C Ratio(X)	0.68	0.52	0.59	0.37	0.68	0.72	0.65	0.22	0.07	0.16	0.78	0.85
Avail Cap(c_a), veh/h	115	507	454	144	507	489	308	2495	1116	629	1227	1187
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.79	0.79	0.79
Uniform Delay (d), s/veh	71.7	67.4	67.8	62.4	68.2	68.4	5.8	7.7	6.9	5.9	0.0	0.0
Incr Delay (d2), s/veh	15.0	3.4	4.9	1.6	6.4	7.9	4.3	0.2	0.1	0.1	3.9	6.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	3.3	4.8	4.9	3.8	6.4	6.6	4.5	7.1	2.0	2.1	2.4	3.6
LnGrp Delay(d),s/veh	86.7	70.9	72.7	64.0	74.6	76.3	10.1	7.9	7.0	6.0	3.9	6.1
LnGrp LOS	F	E	E	E	E	E	B	A	A	A	A	A
Approach Vol, veh/h		206			220			804			2062	
Approach Delay, s/veh		77.4			72.7			8.3			5.1	
Approach LOS		E			E			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.7	110.0	11.0	16.3	10.9	111.7	11.0	16.3
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	69.0	5.0	43.0	5.0	73.0	5.0	43.0
Max Q Clear Time (g_c+I1), s	6.6	2.0	6.1	7.9	4.5	9.9	5.4	9.3
Green Ext Time (p_c), s	0.1	66.8	0.0	1.1	0.0	62.9	0.0	1.1

Intersection Summary	
HCM 2010 Ctrl Delay	14.9
HCM 2010 LOS	B

Timings 2021 No-Build AM Peak

2: Ashford Dunwoody Rd/Ashford Dunwood Rd & Ashwood Pkwy/Ashford Pkwy

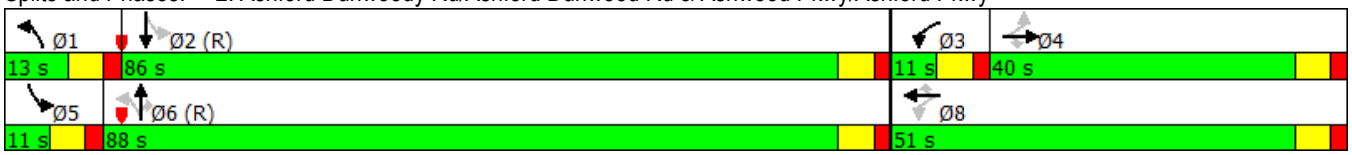
01/30/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	16	2	22	54	9	38	54	403	24	72	1298
Future Volume (vph)	16	2	22	54	9	38	54	403	24	72	1298
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases		4		3	8		1	6		5	2
Permitted Phases	4		4	8		8	6		6	2	
Detector Phase	4	4	4	3	8	8	1	6	6	5	2
Switch Phase											
Minimum Initial (s)	6.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0
Minimum Split (s)	40.0	40.0	40.0	11.0	42.0	42.0	11.0	42.0	42.0	11.0	37.0
Total Split (s)	40.0	40.0	40.0	11.0	51.0	51.0	13.0	88.0	88.0	11.0	86.0
Total Split (%)	26.7%	26.7%	26.7%	7.3%	34.0%	34.0%	8.7%	58.7%	58.7%	7.3%	57.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 115
Control Type: Actuated-Coordinated

Splits and Phases: 2: Ashford Dunwoody Rd/Ashford Dunwood Rd & Ashwood Pkwy/Ashford Pkwy



HCM 2010 Signalized Intersection Summary — 2021 No-Build AM Peak
2: Ashford Dunwoody Rd/Ashford Dunwood Rd & Ashwood Pkwy/Ashford Pkwy — 01/30/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	2	22	54	9	38	54	403	24	72	1298	77
Future Volume (veh/h)	16	2	22	54	9	38	54	403	24	72	1298	77
Number	7	4	14	3	8	18	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	17	2	0	58	10	41	58	433	0	77	1396	83
Adj No. of Lanes	0	1	1	1	1	1	1	2	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	91	8	60	189	207	176	299	2608	1167	742	2507	149
Arrive On Green	0.04	0.04	0.00	0.03	0.11	0.11	0.02	0.49	0.00	0.03	0.74	0.74
Sat Flow, veh/h	1191	217	1583	1774	1863	1583	1774	3539	1583	1774	3395	201
Grp Volume(v), veh/h	19	0	0	58	10	41	58	433	0	77	726	753
Grp Sat Flow(s),veh/h/ln	1408	0	1583	1774	1863	1583	1774	1770	1583	1774	1770	1827
Q Serve(g_s), s	1.7	0.0	0.0	4.6	0.7	3.5	1.2	10.1	0.0	1.6	27.3	27.5
Cycle Q Clear(g_c), s	1.9	0.0	0.0	4.6	0.7	3.5	1.2	10.1	0.0	1.6	27.3	27.5
Prop In Lane	0.89		1.00	1.00		1.00	1.00		1.00	1.00		0.11
Lane Grp Cap(c), veh/h	99	0	60	189	207	176	299	2608	1167	742	1307	1349
V/C Ratio(X)	0.19	0.00	0.00	0.31	0.05	0.23	0.19	0.17	0.00	0.10	0.56	0.56
Avail Cap(c_a), veh/h	361	0	359	189	559	475	328	2608	1167	744	1307	1349
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00	0.96	0.96	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.3	0.0	0.0	65.0	59.6	60.8	7.2	12.6	0.0	4.6	8.7	8.7
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.9	0.1	0.7	0.3	0.1	0.0	0.1	1.7	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.4	0.0	0.0	4.2	0.7	2.9	1.1	8.6	0.0	1.4	19.8	20.7
LnGrp Delay(d),s/veh	71.3	0.0	0.0	65.9	59.7	61.5	7.5	12.7	0.0	4.6	10.4	10.4
LnGrp LOS	E			E	E	E	A	B		A	B	B
Approach Vol, veh/h		19			109			491			1556	
Approach Delay, s/veh		71.3			63.7			12.1			10.1	
Approach LOS		E			E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	10.6	116.8	11.0	11.7	10.8	116.5		22.7
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	7.0	80.0	5.0	34.0	5.0	82.0		45.0
Max Q Clear Time (g_c+I1), s	3.2	29.5	6.6	3.9	3.6	12.1		5.5
Green Ext Time (p_c), s	0.0	49.0	0.0	0.2	0.0	67.2		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	13.8
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	39	0	19	118	9	2
Future Vol, veh/h	39	0	19	118	9	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	0	22	136	10	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	45	0	225	45
Stage 1	-	-	-	-	45	-
Stage 2	-	-	-	-	180	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1563	-	763	1025
Stage 1	-	-	-	-	977	-
Stage 2	-	-	-	-	851	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1563	-	752	1025
Mov Cap-2 Maneuver	-	-	-	-	752	-
Stage 1	-	-	-	-	977	-
Stage 2	-	-	-	-	838	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	790	-	-	1563	-
HCM Lane V/C Ratio	0.016	-	-	0.014	-
HCM Control Delay (s)	9.6	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Timings
4: Perimeter Center Pl & Meadow Lane

2021 No-Build AM Peak
01/30/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	11	133	17	206	472	5	15	3	42	2	4
Future Volume (vph)	11	133	17	206	472	5	15	3	42	2	4
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	pm+ov	Perm	NA
Protected Phases		2		1	6			8	1		4
Permitted Phases	2		2	6		6	8		8	4	
Detector Phase	2	2	2	1	6	6	8	8	1	4	4
Switch Phase											
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	15.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	73.0	73.0	73.0	11.0	24.0	24.0	50.0	50.0	11.0	49.0	49.0
Total Split (s)	61.0	61.0	61.0	15.0	76.0	76.0	44.0	44.0	15.0	44.0	44.0
Total Split (%)	50.8%	50.8%	50.8%	12.5%	63.3%	63.3%	36.7%	36.7%	12.5%	36.7%	36.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0
Lead/Lag	Lag	Lag	Lag	Lead					Lead		
Lead-Lag Optimize?											
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None

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: 135
Control Type: Actuated-Coordinated

Splits and Phases: 4: Perimeter Center Pl & Meadow Lane

HCM 2010 Signalized Intersection Summary
4: Perimeter Center Pl & Meadow Lane

2021 No-Build AM Peak
01/30/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	133	17	206	472	5	15	3	42	2	4	16
Future Volume (veh/h)	11	133	17	206	472	5	15	3	42	2	4	16
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	11	137	18	212	487	5	15	3	0	2	4	16
Adj No. of Lanes	1	2	1	1	2	1	0	1	1	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	755	2729	1221	1069	3055	1367	98	15	125	36	13	44
Arrive On Green	0.77	0.77	0.77	0.04	0.86	0.86	0.04	0.04	0.00	0.04	0.04	0.04
Sat Flow, veh/h	901	3539	1583	1774	3539	1583	1175	400	1583	87	356	1182
Grp Volume(v), veh/h	11	137	18	212	487	5	18	0	0	22	0	0
Grp Sat Flow(s),veh/h/ln	901	1770	1583	1774	1770	1583	1575	0	1583	1626	0	0
Q Serve(g_s), s	0.3	1.1	0.3	2.8	2.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	1.1	0.3	2.8	2.6	0.1	1.2	0.0	0.0	1.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.83		1.00	0.09		0.73
Lane Grp Cap(c), veh/h	755	2729	1221	1069	3055	1367	113	0	125	93	0	0
V/C Ratio(X)	0.01	0.05	0.01	0.20	0.16	0.00	0.16	0.00	0.00	0.24	0.00	0.00
Avail Cap(c_a), veh/h	755	2729	1221	1128	3055	1367	518	0	568	543	0	0
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	0.22	0.22	0.22	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	3.2	3.3	3.2	2.0	1.3	1.1	56.2	0.0	0.0	56.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	1.3	0.0	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(95%),veh/ln	0.2	1.0	0.3	2.2	2.1	0.0	1.1	0.0	0.0	1.3	0.0	0.0
LnGrp Delay(d),s/veh	3.2	3.3	3.2	2.0	1.3	1.1	56.9	0.0	0.0	57.7	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	E			E		
Approach Vol, veh/h		166			704			18			22	
Approach Delay, s/veh		3.3			1.5			56.9			57.7	
Approach LOS		A			A			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	11.0	98.5		10.4		109.6		10.4
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s	9.0	55.0		38.0		70.0		38.0
Max Q Clear Time (g_c+I1), s	4.8	3.1		3.6		4.6		3.2
Green Ext Time (p_c), s	0.3	21.4		0.1		23.4		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	4.3
HCM 2010 LOS	A

Notes

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

Timings
1: Ashford Dunwoody Rd & Meadow Lane/Asbury Square

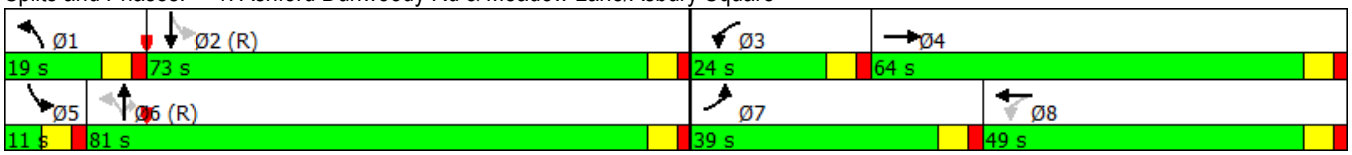
2021 No-Build PM Peak
01/30/2019

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	1066	297	174	210	122	1849	134	119	407
Future Volume (vph)	1066	297	174	210	122	1849	134	119	407
Turn Type	Prot	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	7	4	3	8	1	6		5	2
Permitted Phases			8		6		6	2	
Detector Phase	7	4	3	8	1	6	6	5	2
Switch Phase									
Minimum Initial (s)	5.0	6.0	5.0	6.0	5.0	15.0	15.0	5.0	15.0
Minimum Split (s)	11.0	48.0	11.0	49.0	11.0	47.0	47.0	11.0	43.0
Total Split (s)	39.0	64.0	24.0	49.0	19.0	81.0	81.0	11.0	73.0
Total Split (%)	21.7%	35.6%	13.3%	27.2%	10.6%	45.0%	45.0%	6.1%	40.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 170 (94%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated

Splits and Phases: 1: Ashford Dunwoody Rd & Meadow Lane/Asbury Square



HCM 2010 Signalized Intersection Summary
1: Ashford Dunwoody Rd & Meadow Lane/Asbury Square

2021 No-Build PM Peak
01/30/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1066	297	63	174	210	374	122	1849	134	119	407	180
Future Volume (veh/h)	1066	297	63	174	210	374	122	1849	134	119	407	180
Number	7	4	14	3	8	18	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	1254	349	74	205	247	440	144	2175	158	140	479	212
Adj No. of Lanes	2	2	0	1	2	0	1	2	1	1	2	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	631	945	198	436	423	378	376	1475	660	89	921	405
Arrive On Green	0.18	0.32	0.32	0.10	0.24	0.24	0.06	0.42	0.42	0.06	0.77	0.77
Sat Flow, veh/h	3442	2914	611	1774	1770	1583	1774	3539	1583	1774	2394	1053
Grp Volume(v), veh/h	1254	210	213	205	247	440	144	2175	158	140	353	338
Grp Sat Flow(s),veh/h/ln	1721	1770	1755	1774	1770	1583	1774	1770	1583	1774	1770	1677
Q Serve(g_s), s	33.0	16.4	16.8	15.6	22.2	43.0	8.7	75.0	11.6	5.0	13.8	14.0
Cycle Q Clear(g_c), s	33.0	16.4	16.8	15.6	22.2	43.0	8.7	75.0	11.6	5.0	13.8	14.0
Prop In Lane	1.00		0.35	1.00		1.00	1.00		1.00	1.00		0.63
Lane Grp Cap(c), veh/h	631	574	569	436	423	378	376	1475	660	89	681	645
V/C Ratio(X)	1.99	0.37	0.37	0.47	0.58	1.16	0.38	1.47	0.24	1.57	0.52	0.52
Avail Cap(c_a), veh/h	631	574	569	439	423	378	398	1475	660	89	681	645
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.85	0.85	0.85	1.00	1.00	1.00	1.00	1.00	1.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	73.5	46.6	46.8	44.8	60.6	68.5	30.0	52.5	34.0	49.9	14.4	14.4
Incr Delay (d2), s/veh	449.2	0.3	0.3	0.8	2.1	98.7	0.6	217.4	0.9	302.1	2.8	3.0
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(95%),veh/ln	99.1	12.4	12.5	12.2	16.6	52.5	7.7	146.2	9.0	17.1	11.3	11.2
LnGrp Delay(d),s/veh	522.7	47.0	47.1	45.6	62.7	167.2	30.7	269.9	34.9	352.0	17.1	17.4
LnGrp LOS	F	D	D	D	E	F	C	F	C	F	B	B
Approach Vol, veh/h		1677			892			2477			831	
Approach Delay, s/veh		402.7			110.3			241.0			73.6	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.8	75.2	23.6	64.4	11.0	81.0	39.0	49.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	13.0	67.0	18.0	58.0	5.0	75.0	33.0	43.0
Max Q Clear Time (g_c+I1), s	10.7	16.0	17.6	18.8	7.0	77.0	35.0	45.0
Green Ext Time (p_c), s	0.1	50.9	0.0	5.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	243.7
HCM 2010 LOS	F

Timings 2021 No-Build PM Peak

2: Ashford Dunwoody Rd/Ashford Dunwood Rd & Ashwood Pkwy/Ashford Pkwy

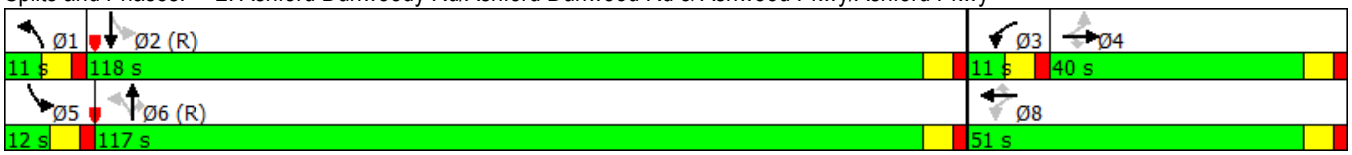
01/30/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	141	9	47	35	12	170	23	2541	72	137	442
Future Volume (vph)	141	9	47	35	12	170	23	2541	72	137	442
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases		4		3	8		1	6		5	2
Permitted Phases	4		4	8		8	6		6	2	
Detector Phase	4	4	4	3	8	8	1	6	6	5	2
Switch Phase											
Minimum Initial (s)	6.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0
Minimum Split (s)	40.0	40.0	40.0	11.0	42.0	42.0	11.0	42.0	42.0	11.0	37.0
Total Split (s)	40.0	40.0	40.0	11.0	51.0	51.0	11.0	117.0	117.0	12.0	118.0
Total Split (%)	22.2%	22.2%	22.2%	6.1%	28.3%	28.3%	6.1%	65.0%	65.0%	6.7%	65.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated

Splits and Phases: 2: Ashford Dunwoody Rd/Ashford Dunwood Rd & Ashwood Pkwy/Ashford Pkwy



HCM 2010 Signalized Intersection Summary — 2021 No-Build PM Peak
2: Ashford Dunwoody Rd/Ashford Dunwood Rd & Ashwood Pkwy/Ashford Pkwy — 01/30/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	141	9	47	35	12	170	23	2541	72	137	442	19
Future Volume (veh/h)	141	9	47	35	12	170	23	2541	72	137	442	19
Number	7	4	14	3	8	18	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	148	9	0	37	13	179	24	2675	0	144	465	20
Adj No. of Lanes	0	1	1	1	1	1	1	2	1	1	2	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	203	10	228	349	375	319	645	2354	1053	172	2348	101
Arrive On Green	0.14	0.14	0.00	0.02	0.20	0.20	0.04	1.00	0.00	0.03	0.68	0.68
Sat Flow, veh/h	1142	69	1583	1774	1863	1583	1774	3539	1583	1774	3458	148
Grp Volume(v), veh/h	157	0	0	37	13	179	24	2675	0	144	238	247
Grp Sat Flow(s),veh/h/ln	1211	0	1583	1774	1863	1583	1774	1770	1583	1774	1770	1837
Q Serve(g_s), s	22.9	0.0	0.0	3.1	1.0	18.3	0.8	0.0	0.0	4.8	9.0	9.0
Cycle Q Clear(g_c), s	22.9	0.0	0.0	3.1	1.0	18.3	0.8	0.0	0.0	4.8	9.0	9.0
Prop In Lane	0.94		1.00	1.00		1.00	1.00		1.00	1.00		0.08
Lane Grp Cap(c), veh/h	213	0	228	349	375	319	645	2354	1053	172	1202	1247
V/C Ratio(X)	0.74	0.00	0.00	0.11	0.03	0.56	0.04	1.14	0.00	0.84	0.20	0.20
Avail Cap(c_a), veh/h	268	0	299	356	466	396	660	2354	1053	172	1202	1247
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00	0.09	0.09	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	75.7	0.0	0.0	61.9	57.8	64.7	9.0	0.0	0.0	18.4	10.7	10.7
Incr Delay (d2), s/veh	7.7	0.0	0.0	0.1	0.0	1.5	0.0	61.9	0.0	28.7	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.8	0.0	0.0	2.8	0.9	12.9	0.7	36.1	0.0	10.0	7.9	8.2
LnGrp Delay(d),s/veh	83.5	0.0	0.0	62.0	57.8	66.2	9.0	61.9	0.0	47.1	11.1	11.1
LnGrp LOS	F			E	E	E	A	F		D	B	B
Approach Vol, veh/h		157			229			2699			629	
Approach Delay, s/veh		83.5			65.1			61.5			19.3	
Approach LOS		F			E			E			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	9.5	128.2	10.3	31.9	12.0	125.7		42.3
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	5.0	112.0	5.0	34.0	6.0	111.0		45.0
Max Q Clear Time (g_c+I1), s	2.8	11.0	5.1	24.9	6.8	2.0		20.3
Green Ext Time (p_c), s	0.0	100.5	0.0	1.0	0.0	108.5		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	55.5
HCM 2010 LOS	E

Intersection	
Int Delay, s/veh	2.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	129	5	9	37	6	54
Future Vol, veh/h	129	5	9	37	6	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	150	6	10	43	7	63

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	156	0	216	153
Stage 1	-	-	-	-	153	-
Stage 2	-	-	-	-	63	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1424	-	772	893
Stage 1	-	-	-	-	875	-
Stage 2	-	-	-	-	960	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1424	-	767	893
Mov Cap-2 Maneuver	-	-	-	-	767	-
Stage 1	-	-	-	-	875	-
Stage 2	-	-	-	-	953	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	879	-	-	1424	-
HCM Lane V/C Ratio	0.079	-	-	0.007	-
HCM Control Delay (s)	9.4	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Timings
4: Perimeter Center Pl & Meadow Lane

2021 No-Build PM Peak
01/30/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	48	632	19	158	302	19	69	32	393	4	8
Future Volume (vph)	48	632	19	158	302	19	69	32	393	4	8
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	pm+ov	Perm	NA
Protected Phases		2		1	6			8	1		4
Permitted Phases	2		2	6		6	8		8	4	
Detector Phase	2	2	2	1	6	6	8	8	1	4	4
Switch Phase											
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	15.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	73.0	73.0	73.0	15.0	24.0	24.0	50.0	50.0	15.0	49.0	49.0
Total Split (s)	63.0	63.0	63.0	15.0	78.0	78.0	42.0	42.0	15.0	42.0	42.0
Total Split (%)	52.5%	52.5%	52.5%	12.5%	65.0%	65.0%	35.0%	35.0%	12.5%	35.0%	35.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0
Lead/Lag	Lag	Lag	Lag	Lead					Lead		
Lead-Lag Optimize?											
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None

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: 140
Control Type: Actuated-Coordinated

Splits and Phases: 4: Perimeter Center Pl & Meadow Lane

HCM 2010 Signalized Intersection Summary
4: Perimeter Center Pl & Meadow Lane

2021 No-Build PM Peak
01/30/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	632	19	158	302	19	69	32	393	4	8	15
Future Volume (veh/h)	48	632	19	158	302	19	69	32	393	4	8	15
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	51	665	20	166	318	20	73	34	0	4	8	16
Adj No. of Lanes	1	2	1	1	2	1	0	1	1	0	1	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	810	2558	1144	630	2881	1289	142	43	202	43	54	84
Arrive On Green	0.72	0.72	0.72	0.04	0.81	0.81	0.09	0.09	0.00	0.09	0.09	0.09
Sat Flow, veh/h	1038	3539	1583	1774	3539	1583	1063	495	1583	101	630	974
Grp Volume(v), veh/h	51	665	20	166	318	20	107	0	0	28	0	0
Grp Sat Flow(s),veh/h/ln	1038	1770	1583	1774	1770	1583	1558	0	1583	1704	0	0
Q Serve(g_s), s	1.7	7.7	0.4	2.7	2.2	0.3	6.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.7	7.7	0.4	2.7	2.2	0.3	8.0	0.0	0.0	1.8	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.68		1.00	0.14		0.57
Lane Grp Cap(c), veh/h	810	2558	1144	630	2881	1289	184	0	202	181	0	0
V/C Ratio(X)	0.06	0.26	0.02	0.26	0.11	0.02	0.58	0.00	0.00	0.15	0.00	0.00
Avail Cap(c_a), veh/h	810	2558	1144	689	2881	1289	507	0	541	527	0	0
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	0.38	0.38	0.38	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.9	5.7	4.7	3.7	2.3	2.1	53.7	0.0	0.0	51.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.2	0.0	0.1	0.0	0.0	2.9	0.0	0.0	0.4	0.0	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(95%),veh/ln	0.9	6.8	0.3	2.4	1.9	0.2	6.5	0.0	0.0	1.6	0.0	0.0
LnGrp Delay(d),s/veh	5.0	5.9	4.7	3.8	2.3	2.1	56.5	0.0	0.0	51.4	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	E			D		
Approach Vol, veh/h		736			504			107			28	
Approach Delay, s/veh		5.8			2.8			56.5			51.4	
Approach LOS		A			A			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	11.0	92.7		16.3		103.7		16.3
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s	9.0	57.0		36.0		72.0		36.0
Max Q Clear Time (g_c+I1), s	4.7	9.7		3.8		4.2		10.0
Green Ext Time (p_c), s	0.2	33.0		0.4		42.0		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	9.6
HCM 2010 LOS	A

Notes

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

FUTURE "NO-BUILD" IMPROVED INTERSECTION ANALYSIS

Timings
1: Ashford Dunwoody Rd & Meadow Lane/Asbury Square

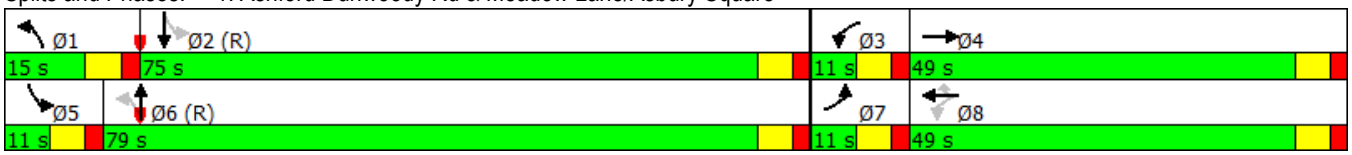
2021 No-Build AM Peak - Improved
01/30/2019

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	69	56	47	108	39	162	473	86	1288
Future Volume (vph)	69	56	47	108	39	162	473	86	1288
Turn Type	Prot	NA	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8		1	6	5	2
Permitted Phases			8		8	6		2	
Detector Phase	7	4	3	8	8	1	6	5	2
Switch Phase									
Minimum Initial (s)	5.0	6.0	5.0	6.0	6.0	5.0	15.0	5.0	15.0
Minimum Split (s)	11.0	48.0	11.0	49.0	49.0	11.0	47.0	11.0	43.0
Total Split (s)	11.0	49.0	11.0	49.0	49.0	15.0	79.0	11.0	75.0
Total Split (%)	7.3%	32.7%	7.3%	32.7%	32.7%	10.0%	52.7%	7.3%	50.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 138 (92%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated

Splits and Phases: 1: Ashford Dunwoody Rd & Meadow Lane/Asbury Square



HCM 2010 Signalized Intersection Summary — 2021 No-Build AM Peak - Improved
1: Ashford Dunwoody Rd & Meadow Lane/Asbury Square — 01/30/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	69	56	56	47	108	39	162	473	72	86	1288	440
Future Volume (veh/h)	69	56	56	47	108	39	162	473	72	86	1288	440
Number	7	4	14	3	8	18	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	78	64	64	53	123	0	184	538	0	98	1464	500
Adj No. of Lanes	3	1	0	1	1	1	1	3	0	1	2	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	160	79	79	131	175	149	280	3465	0	662	1755	567
Arrive On Green	0.03	0.09	0.09	0.03	0.09	0.00	0.05	0.68	0.00	0.07	1.00	1.00
Sat Flow, veh/h	5003	856	856	1774	1863	1583	1774	5253	0	1774	2632	850
Grp Volume(v), veh/h	78	0	128	53	123	0	184	538	0	98	957	1007
Grp Sat Flow(s),veh/h/ln	1668	0	1712	1774	1863	1583	1774	1695	0	1774	1770	1713
Q Serve(g_s), s	2.3	0.0	11.0	4.0	9.6	0.0	5.0	5.7	0.0	2.7	0.0	0.0
Cycle Q Clear(g_c), s	2.3	0.0	11.0	4.0	9.6	0.0	5.0	5.7	0.0	2.7	0.0	0.0
Prop In Lane	1.00		0.50	1.00		1.00	1.00		0.00	1.00		0.50
Lane Grp Cap(c), veh/h	160	0	159	131	175	149	280	3465	0	662	1180	1142
V/C Ratio(X)	0.49	0.00	0.81	0.40	0.70	0.00	0.66	0.16	0.00	0.15	0.81	0.88
Avail Cap(c_a), veh/h	167	0	491	131	534	454	303	3465	0	663	1180	1142
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.79	0.79	0.79
Uniform Delay (d), s/veh	71.4	0.0	66.7	59.5	65.9	0.0	6.8	8.5	0.0	7.0	0.0	0.0
Incr Delay (d2), s/veh	2.3	0.0	9.3	2.0	5.1	0.0	4.6	0.1	0.0	0.1	4.9	8.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.0	0.0	9.5	3.7	8.9	0.0	4.9	4.8	0.0	2.3	2.9	4.6
LnGrp Delay(d),s/veh	73.7	0.0	76.0	61.5	71.0	0.0	11.5	8.6	0.0	7.1	4.9	8.1
LnGrp LOS	E		E	E	E		B	A		A	A	A
Approach Vol, veh/h		206			176			722			2062	
Approach Delay, s/veh		75.1			68.1			9.3			6.5	
Approach LOS		E			E			A			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	13.1	106.0	11.0	19.9	10.9	108.2	10.8	20.1
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	69.0	5.0	43.0	5.0	73.0	5.0	43.0
Max Q Clear Time (g_c+I1), s	7.0	2.0	6.0	13.0	4.7	7.7	4.3	11.6
Green Ext Time (p_c), s	0.1	66.8	0.0	0.9	0.0	65.1	0.0	0.9

Intersection Summary	
HCM 2010 Ctrl Delay	15.1
HCM 2010 LOS	B

Timings 2021 No-Build AM Peak - Improved

2: Ashford Dunwoody Rd/Ashford Dunwood Rd & Ashwood Pkwy/Ashford Pkwy 01/30/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	16	2	22	54	9	38	54	403	72	1298
Future Volume (vph)	16	2	22	54	9	38	54	403	72	1298
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases		4		3	8		1	6	5	2
Permitted Phases	4		4	8		8	6		2	
Detector Phase	4	4	4	3	8	8	1	6	5	2
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	5.0	15.0
Minimum Split (s)	40.0	40.0	40.0	11.0	42.0	42.0	11.0	42.0	11.0	37.0
Total Split (s)	40.0	40.0	40.0	11.0	51.0	51.0	13.0	88.0	11.0	86.0
Total Split (%)	26.7%	26.7%	26.7%	7.3%	34.0%	34.0%	8.7%	58.7%	7.3%	57.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	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
Total Lost Time (s)		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lead	Lag
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	None	C-Min	None	C-Min

Intersection Summary

Cycle Length: 150

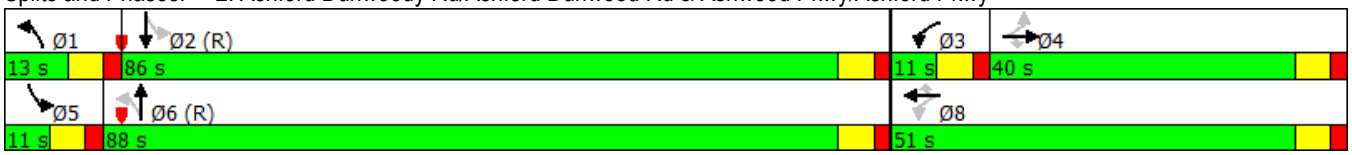
Actuated Cycle Length: 150

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

Natural Cycle: 115

Control Type: Actuated-Coordinated

Splits and Phases: 2: Ashford Dunwoody Rd/Ashford Dunwood Rd & Ashwood Pkwy/Ashford Pkwy



HCM 2010 Signalized Intersection Summary 2021 No-Build AM Peak - Improved
2: Ashford Dunwoody Rd/Ashford Dunwood Rd & Ashwood Pkwy/Ashford Pkwy 01/30/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	16	2	22	54	9	38	54	403	24	72	1298	77
Future Volume (veh/h)	16	2	22	54	9	38	54	403	24	72	1298	77
Number	7	4	14	3	8	18	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	17	2	0	58	10	41	58	433	0	77	1396	83
Adj No. of Lanes	0	1	1	1	1	1	1	3	0	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	91	8	60	189	207	176	299	3747	0	743	2507	149
Arrive On Green	0.04	0.04	0.00	0.03	0.11	0.11	0.01	0.24	0.00	0.03	0.74	0.74
Sat Flow, veh/h	1191	217	1583	1774	1863	1583	1774	5253	0	1774	3395	201
Grp Volume(v), veh/h	19	0	0	58	10	41	58	433	0	77	726	753
Grp Sat Flow(s),veh/h/ln	1408	0	1583	1774	1863	1583	1774	1695	0	1774	1770	1827
Q Serve(g_s), s	1.7	0.0	0.0	4.6	0.7	3.5	1.2	9.9	0.0	1.6	27.3	27.5
Cycle Q Clear(g_c), s	1.9	0.0	0.0	4.6	0.7	3.5	1.2	9.9	0.0	1.6	27.3	27.5
Prop In Lane	0.89		1.00	1.00		1.00	1.00		0.00	1.00		0.11
Lane Grp Cap(c), veh/h	99	0	60	189	207	176	299	3747	0	743	1307	1349
V/C Ratio(X)	0.19	0.00	0.00	0.31	0.05	0.23	0.19	0.12	0.00	0.10	0.56	0.56
Avail Cap(c_a), veh/h	361	0	359	189	559	475	328	3747	0	745	1307	1349
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00	0.98	0.98	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.3	0.0	0.0	65.0	59.6	60.8	7.3	18.7	0.0	4.5	8.7	8.7
Incr Delay (d2), s/veh	0.9	0.0	0.0	0.9	0.1	0.7	0.3	0.1	0.0	0.1	1.7	1.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	1.4	0.0	0.0	4.2	0.7	2.9	1.1	8.2	0.0	1.4	19.8	20.7
LnGrp Delay(d),s/veh	71.3	0.0	0.0	65.9	59.7	61.5	7.6	18.8	0.0	4.6	10.4	10.4
LnGrp LOS	E			E	E	E	A	B		A	B	B
Approach Vol, veh/h		19			109			491			1556	
Approach Delay, s/veh		71.3			63.7			17.4			10.1	
Approach LOS		E			E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	10.6	116.8	11.0	11.7	10.8	116.5		22.7
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	7.0	80.0	5.0	34.0	5.0	82.0		45.0
Max Q Clear Time (g_c+I1), s	3.2	29.5	6.6	3.9	3.6	11.9		5.5
Green Ext Time (p_c), s	0.0	49.0	0.0	0.2	0.0	67.3		0.2

Intersection Summary	
HCM 2010 Ctrl Delay	15.0
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	39	0	19	118	9	2
Future Vol, veh/h	39	0	19	118	9	2
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	0	22	136	10	2

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	45	0	225	45
Stage 1	-	-	-	-	45	-
Stage 2	-	-	-	-	180	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1563	-	763	1025
Stage 1	-	-	-	-	977	-
Stage 2	-	-	-	-	851	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1563	-	752	1025
Mov Cap-2 Maneuver	-	-	-	-	752	-
Stage 1	-	-	-	-	977	-
Stage 2	-	-	-	-	838	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1	9.6
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	790	-	-	1563	-
HCM Lane V/C Ratio	0.016	-	-	0.014	-
HCM Control Delay (s)	9.6	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0	-	-	0	-

Timings
4: Perimeter Center Pl & Meadow Lane

2021 No-Build AM Peak - Improved
01/30/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	11	133	17	206	472	5	15	3	42	2	4
Future Volume (vph)	11	133	17	206	472	5	15	3	42	2	4
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	pm+ov	Perm	NA
Protected Phases		2		1	6			8	1		4
Permitted Phases	2		2	6		6	8		8	4	
Detector Phase	2	2	2	1	6	6	8	8	1	4	4
Switch Phase											
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	15.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	73.0	73.0	73.0	11.0	24.0	24.0	50.0	50.0	11.0	49.0	49.0
Total Split (s)	61.0	61.0	61.0	15.0	76.0	76.0	44.0	44.0	15.0	44.0	44.0
Total Split (%)	50.8%	50.8%	50.8%	12.5%	63.3%	63.3%	36.7%	36.7%	12.5%	36.7%	36.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0
Lead/Lag	Lag	Lag	Lag	Lead					Lead		
Lead-Lag Optimize?											
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None

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: 135
Control Type: Actuated-Coordinated

Splits and Phases: 4: Perimeter Center Pl & Meadow Lane

HCM 2010 Signalized Intersection Summary
4: Perimeter Center Pl & Meadow Lane

2021 No-Build AM Peak - Improved
01/30/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	11	133	17	206	472	5	15	3	42	2	4	16
Future Volume (veh/h)	11	133	17	206	472	5	15	3	42	2	4	16
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	11	137	18	212	487	5	15	3	0	2	4	16
Adj No. of Lanes	1	2	1	1	2	1	0	1	1	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	755	2729	1221	1069	3055	1367	98	15	125	36	13	44
Arrive On Green	0.77	0.77	0.77	0.04	0.86	0.86	0.04	0.04	0.00	0.04	0.04	0.04
Sat Flow, veh/h	901	3539	1583	1774	3539	1583	1175	400	1583	87	356	1182
Grp Volume(v), veh/h	11	137	18	212	487	5	18	0	0	22	0	0
Grp Sat Flow(s),veh/h/ln	901	1770	1583	1774	1770	1583	1575	0	1583	1626	0	0
Q Serve(g_s), s	0.3	1.1	0.3	2.8	2.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.3	1.1	0.3	2.8	2.6	0.1	1.2	0.0	0.0	1.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.83		1.00	0.09		0.73
Lane Grp Cap(c), veh/h	755	2729	1221	1069	3055	1367	113	0	125	93	0	0
V/C Ratio(X)	0.01	0.05	0.01	0.20	0.16	0.00	0.16	0.00	0.00	0.24	0.00	0.00
Avail Cap(c_a), veh/h	755	2729	1221	1128	3055	1367	518	0	568	543	0	0
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	0.09	0.09	0.09	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	3.2	3.3	3.2	2.0	1.3	1.1	56.2	0.0	0.0	56.4	0.0	0.0
Incr Delay (d2), s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.7	0.0	0.0	1.3	0.0	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(95%),veh/ln	0.2	1.0	0.3	1.9	1.8	0.0	1.1	0.0	0.0	1.3	0.0	0.0
LnGrp Delay(d),s/veh	3.2	3.3	3.2	2.0	1.3	1.1	56.9	0.0	0.0	57.7	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	E			E		
Approach Vol, veh/h		166			704			18			22	
Approach Delay, s/veh		3.3			1.5			56.9			57.7	
Approach LOS		A			A			E			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	11.0	98.5		10.4		109.6		10.4
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s	9.0	55.0		38.0		70.0		38.0
Max Q Clear Time (g_c+I1), s	4.8	3.1		3.6		4.6		3.2
Green Ext Time (p_c), s	0.3	21.4		0.1		23.4		0.1

Intersection Summary	
HCM 2010 Ctrl Delay	4.3
HCM 2010 LOS	A

Notes

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

Timings
1: Ashford Dunwoody Rd & Meadow Lane/Asbury Square

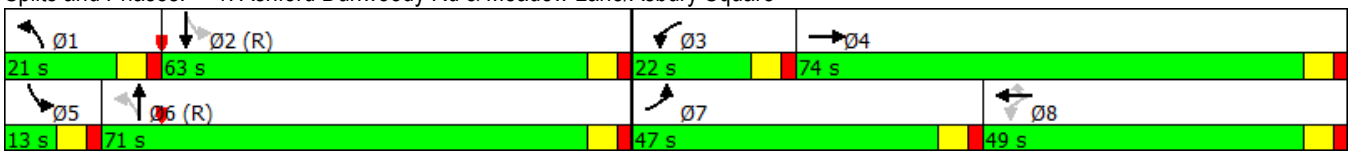
2021 No-Build PM Peak - Improved
01/30/2019

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	1066	297	174	210	374	122	1849	119	407
Future Volume (vph)	1066	297	174	210	374	122	1849	119	407
Turn Type	Prot	NA	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8		1	6	5	2
Permitted Phases			8		8	6		2	
Detector Phase	7	4	3	8	8	1	6	5	2
Switch Phase									
Minimum Initial (s)	5.0	6.0	5.0	6.0	6.0	5.0	15.0	5.0	15.0
Minimum Split (s)	11.0	48.0	11.0	49.0	49.0	11.0	47.0	11.0	43.0
Total Split (s)	47.0	74.0	22.0	49.0	49.0	21.0	71.0	13.0	63.0
Total Split (%)	26.1%	41.1%	12.2%	27.2%	27.2%	11.7%	39.4%	7.2%	35.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 170 (94%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated

Splits and Phases: 1: Ashford Dunwoody Rd & Meadow Lane/Asbury Square



HCM 2010 Signalized Intersection Summary — 2021 No-Build PM Peak - Improved
1: Ashford Dunwoody Rd & Meadow Lane/Asbury Square — 01/30/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1066	297	63	174	210	374	122	1849	134	119	407	180
Future Volume (veh/h)	1066	297	63	174	210	374	122	1849	134	119	407	180
Number	7	4	14	3	8	18	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	1254	349	74	205	247	0	144	2175	0	140	479	212
Adj No. of Lanes	3	1	0	1	1	1	1	3	0	1	2	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1140	437	93	271	287	244	425	2268	0	115	1023	450
Arrive On Green	0.23	0.29	0.29	0.09	0.15	0.00	0.06	0.45	0.00	0.08	0.85	0.85
Sat Flow, veh/h	5003	1491	316	1774	1863	1583	1774	5253	0	1774	2394	1053
Grp Volume(v), veh/h	1254	0	423	205	247	0	144	2175	0	140	353	338
Grp Sat Flow(s),veh/h/ln	1668	0	1807	1774	1863	1583	1774	1695	0	1774	1770	1677
Q Serve(g_s), s	41.0	0.0	38.9	16.0	23.3	0.0	8.2	74.5	0.0	7.0	8.7	8.8
Cycle Q Clear(g_c), s	41.0	0.0	38.9	16.0	23.3	0.0	8.2	74.5	0.0	7.0	8.7	8.8
Prop In Lane	1.00		0.17	1.00		1.00	1.00		0.00	1.00		0.63
Lane Grp Cap(c), veh/h	1140	0	529	271	287	244	425	2268	0	115	756	717
V/C Ratio(X)	1.10	0.00	0.80	0.76	0.86	0.00	0.34	0.96	0.00	1.22	0.47	0.47
Avail Cap(c_a), veh/h	1140	0	683	271	445	378	471	2268	0	115	756	717
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.85	0.00	0.85	1.00	1.00	0.00	1.00	1.00	0.00	0.99	0.99	0.99
Uniform Delay (d), s/veh	69.5	0.0	58.7	60.4	74.3	0.0	26.3	48.3	0.0	43.2	8.1	8.1
Incr Delay (d2), s/veh	56.9	0.0	4.4	11.4	10.1	0.0	0.5	11.5	0.0	154.2	2.0	2.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	44.8	0.0	26.8	5.1	18.7	0.0	7.2	47.3	0.0	19.1	8.0	7.8
LnGrp Delay(d),s/veh	126.4	0.0	63.2	71.9	84.4	0.0	26.7	59.7	0.0	197.3	10.2	10.3
LnGrp LOS	F		E	E	F		C	E		F	B	B
Approach Vol, veh/h		1677			452			2319			831	
Approach Delay, s/veh		110.5			78.7			57.7			41.8	
Approach LOS		F			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.3	82.9	22.0	58.7	13.0	86.3	47.0	33.7
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	15.0	57.0	16.0	68.0	7.0	65.0	41.0	43.0
Max Q Clear Time (g_c+I1), s	10.2	10.8	18.0	40.9	9.0	76.5	43.0	25.3
Green Ext Time (p_c), s	0.2	46.1	0.0	2.6	0.0	0.0	0.0	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	73.8
HCM 2010 LOS	E

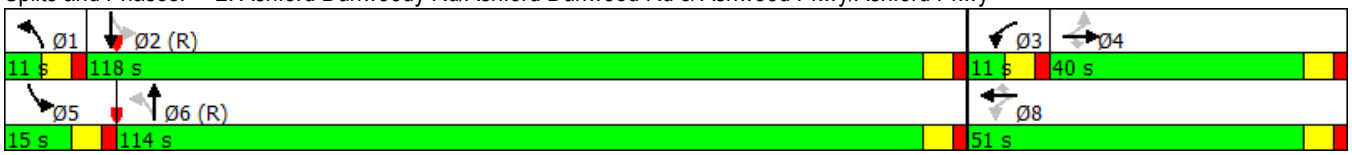
Timings 2021 No-Build PM Peak - Improved
2: Ashford Dunwoody Rd/Ashford Dunwood Rd & Ashwood Pkwy/Ashford Pkwy 01/30/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	141	9	47	35	12	170	23	2541	137	442
Future Volume (vph)	141	9	47	35	12	170	23	2541	137	442
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases		4		3	8		1	6	5	2
Permitted Phases	4		4	8		8	6		2	
Detector Phase	4	4	4	3	8	8	1	6	5	2
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	5.0	15.0
Minimum Split (s)	40.0	40.0	40.0	11.0	42.0	42.0	11.0	42.0	11.0	37.0
Total Split (s)	40.0	40.0	40.0	11.0	51.0	51.0	11.0	114.0	15.0	118.0
Total Split (%)	22.2%	22.2%	22.2%	6.1%	28.3%	28.3%	6.1%	63.3%	8.3%	65.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	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
Total Lost Time (s)		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lead	Lag
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	None	C-Min	None	C-Min

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated

Splits and Phases: 2: Ashford Dunwoody Rd/Ashford Dunwood Rd & Ashwood Pkwy/Ashford Pkwy



HCM 2010 Signalized Intersection Summary — 2021 No-Build PM Peak - Improved
2: Ashford Dunwoody Rd/Ashford Dunwood Rd & Ashwood Pkwy/Ashford Pkwy — 01/30/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	141	9	47	35	12	170	23	2541	72	137	442	19
Future Volume (veh/h)	141	9	47	35	12	170	23	2541	72	137	442	19
Number	7	4	14	3	8	18	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	148	9	0	37	13	179	24	2675	0	144	465	20
Adj No. of Lanes	0	1	1	1	1	1	1	3	0	1	2	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	203	10	228	349	375	319	645	3337	0	163	2348	101
Arrive On Green	0.14	0.14	0.00	0.02	0.20	0.20	0.03	0.87	0.00	0.04	0.68	0.68
Sat Flow, veh/h	1142	69	1583	1774	1863	1583	1774	5253	0	1774	3458	148
Grp Volume(v), veh/h	157	0	0	37	13	179	24	2675	0	144	238	247
Grp Sat Flow(s),veh/h/ln	1211	0	1583	1774	1863	1583	1774	1695	0	1774	1770	1837
Q Serve(g_s), s	22.9	0.0	0.0	3.1	1.0	18.3	0.8	40.1	0.0	5.6	9.0	9.0
Cycle Q Clear(g_c), s	22.9	0.0	0.0	3.1	1.0	18.3	0.8	40.1	0.0	5.6	9.0	9.0
Prop In Lane	0.94		1.00	1.00		1.00	1.00		0.00	1.00		0.08
Lane Grp Cap(c), veh/h	213	0	228	349	375	319	645	3337	0	163	1202	1247
V/C Ratio(X)	0.74	0.00	0.00	0.11	0.03	0.56	0.04	0.80	0.00	0.89	0.20	0.20
Avail Cap(c_a), veh/h	268	0	299	356	466	396	660	3337	0	176	1202	1247
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.33	1.33	1.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00	0.09	0.09	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	75.7	0.0	0.0	61.9	57.8	64.7	9.6	6.5	0.0	37.7	10.7	10.7
Incr Delay (d2), s/veh	7.7	0.0	0.0	0.1	0.0	1.5	0.0	0.2	0.0	36.0	0.4	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	12.8	0.0	0.0	2.8	0.9	12.9	0.7	20.0	0.0	13.5	7.9	8.2
LnGrp Delay(d),s/veh	83.5	0.0	0.0	62.0	57.8	66.2	9.6	6.7	0.0	73.8	11.1	11.1
LnGrp LOS	F			E	E	E	A	A		E	B	B
Approach Vol, veh/h		157			229			2699			629	
Approach Delay, s/veh		83.5			65.1			6.7			25.4	
Approach LOS		F			E			A			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	9.5	128.2	10.3	31.9	13.6	124.1		42.3
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	5.0	112.0	5.0	34.0	9.0	108.0		45.0
Max Q Clear Time (g_c+I1), s	2.8	11.0	5.1	24.9	7.6	42.1		20.3
Green Ext Time (p_c), s	0.0	100.5	0.0	1.0	0.1	65.7		1.5

Intersection Summary	
HCM 2010 Ctrl Delay	16.7
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	2.6

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	129	5	9	37	6	54
Future Vol, veh/h	129	5	9	37	6	54
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	150	6	10	43	7	63

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	156	0	216	153
Stage 1	-	-	-	-	153	-
Stage 2	-	-	-	-	63	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1424	-	772	893
Stage 1	-	-	-	-	875	-
Stage 2	-	-	-	-	960	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1424	-	767	893
Mov Cap-2 Maneuver	-	-	-	-	767	-
Stage 1	-	-	-	-	875	-
Stage 2	-	-	-	-	953	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.5	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	879	-	-	1424	-
HCM Lane V/C Ratio	0.079	-	-	0.007	-
HCM Control Delay (s)	9.4	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0	-

Timings
4: Perimeter Center Pl & Meadow Lane

2021 No-Build PM Peak - Improved
01/30/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	48	632	19	158	302	19	69	32	393	4	8
Future Volume (vph)	48	632	19	158	302	19	69	32	393	4	8
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	pm+ov	Perm	NA
Protected Phases		2		1	6			8	1		4
Permitted Phases	2		2	6		6	8		8	4	
Detector Phase	2	2	2	1	6	6	8	8	1	4	4
Switch Phase											
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	15.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	73.0	73.0	73.0	15.0	24.0	24.0	50.0	50.0	15.0	49.0	49.0
Total Split (s)	63.0	63.0	63.0	15.0	78.0	78.0	42.0	42.0	15.0	42.0	42.0
Total Split (%)	52.5%	52.5%	52.5%	12.5%	65.0%	65.0%	35.0%	35.0%	12.5%	35.0%	35.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0
Lead/Lag	Lag	Lag	Lag	Lead					Lead		
Lead-Lag Optimize?											
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None

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: 140
Control Type: Actuated-Coordinated

Splits and Phases: 4: Perimeter Center Pl & Meadow Lane

HCM 2010 Signalized Intersection Summary
4: Perimeter Center Pl & Meadow Lane

2021 No-Build PM Peak - Improved
01/30/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	632	19	158	302	19	69	32	393	4	8	15
Future Volume (veh/h)	48	632	19	158	302	19	69	32	393	4	8	15
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	51	665	20	166	318	20	73	34	0	4	8	16
Adj No. of Lanes	1	2	1	1	2	1	0	1	1	0	1	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	810	2558	1144	630	2881	1289	142	43	202	43	54	84
Arrive On Green	0.72	0.72	0.72	0.04	0.81	0.81	0.09	0.09	0.00	0.09	0.09	0.09
Sat Flow, veh/h	1038	3539	1583	1774	3539	1583	1063	495	1583	101	630	974
Grp Volume(v), veh/h	51	665	20	166	318	20	107	0	0	28	0	0
Grp Sat Flow(s),veh/h/ln	1038	1770	1583	1774	1770	1583	1558	0	1583	1704	0	0
Q Serve(g_s), s	1.7	7.7	0.4	2.7	2.2	0.3	6.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.7	7.7	0.4	2.7	2.2	0.3	8.0	0.0	0.0	1.8	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.68		1.00	0.14		0.57
Lane Grp Cap(c), veh/h	810	2558	1144	630	2881	1289	184	0	202	181	0	0
V/C Ratio(X)	0.06	0.26	0.02	0.26	0.11	0.02	0.58	0.00	0.00	0.15	0.00	0.00
Avail Cap(c_a), veh/h	810	2558	1144	689	2881	1289	507	0	541	527	0	0
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	0.75	0.75	0.75	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	4.9	5.7	4.7	3.7	2.3	2.1	53.7	0.0	0.0	51.0	0.0	0.0
Incr Delay (d2), s/veh	0.1	0.2	0.0	0.2	0.1	0.0	2.9	0.0	0.0	0.4	0.0	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(95%),veh/ln	0.9	6.8	0.3	2.4	1.9	0.2	6.5	0.0	0.0	1.6	0.0	0.0
LnGrp Delay(d),s/veh	5.0	5.9	4.7	3.8	2.3	2.1	56.5	0.0	0.0	51.4	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	E			D		
Approach Vol, veh/h		736			504			107			28	
Approach Delay, s/veh		5.8			2.8			56.5			51.4	
Approach LOS		A			A			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	11.0	92.7		16.3		103.7		16.3
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s	9.0	57.0		36.0		72.0		36.0
Max Q Clear Time (g_c+I1), s	4.7	9.7		3.8		4.2		10.0
Green Ext Time (p_c), s	0.2	33.0		0.4		42.0		0.4

Intersection Summary	
HCM 2010 Ctrl Delay	9.6
HCM 2010 LOS	A

Notes

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

FUTURE "BUILD" INTERSECTION ANALYSIS

Timings
1: Ashford Dunwoody Rd & Meadow Lane/Asbury Square

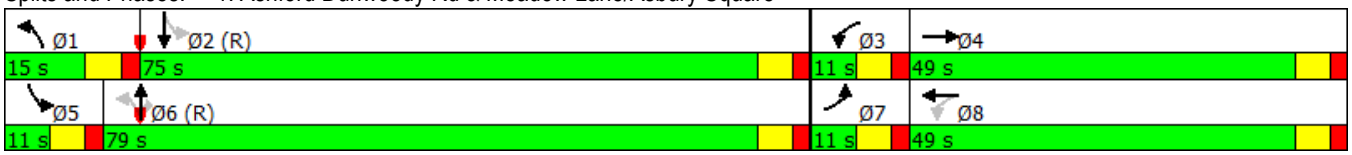
2021 Build AM Peak
04/16/2019

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	94	63	47	116	201	484	72	93	1272
Future Volume (vph)	94	63	47	116	201	484	72	93	1272
Turn Type	Prot	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	7	4	3	8	1	6		5	2
Permitted Phases			8		6		6	2	
Detector Phase	7	4	3	8	1	6	6	5	2
Switch Phase									
Minimum Initial (s)	5.0	6.0	5.0	6.0	5.0	15.0	15.0	5.0	15.0
Minimum Split (s)	11.0	48.0	11.0	49.0	11.0	47.0	47.0	11.0	43.0
Total Split (s)	11.0	49.0	11.0	49.0	15.0	79.0	79.0	11.0	75.0
Total Split (%)	7.3%	32.7%	7.3%	32.7%	10.0%	52.7%	52.7%	7.3%	50.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 138 (92%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated

Splits and Phases: 1: Ashford Dunwoody Rd & Meadow Lane/Asbury Square



HCM 2010 Signalized Intersection Summary
1: Ashford Dunwoody Rd & Meadow Lane/Asbury Square

2021 Build AM Peak
04/16/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	63	112	47	116	47	201	484	72	93	1272	489
Future Volume (veh/h)	94	63	112	47	116	47	201	484	72	93	1272	489
Number	7	4	14	3	8	18	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	107	72	127	53	132	53	228	550	82	106	1445	556
Adj No. of Lanes	2	2	0	1	2	0	1	2	1	1	2	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	115	179	160	134	253	97	288	2378	1064	591	1652	597
Arrive On Green	0.03	0.10	0.10	0.03	0.10	0.10	0.06	0.67	0.67	0.07	1.00	1.00
Sat Flow, veh/h	3442	1770	1583	1774	2501	962	1774	3539	1583	1774	2549	921
Grp Volume(v), veh/h	107	72	127	53	92	93	228	550	82	106	975	1026
Grp Sat Flow(s),veh/h/ln	1721	1770	1583	1774	1770	1693	1774	1770	1583	1774	1770	1700
Q Serve(g_s), s	4.7	5.7	11.8	4.0	7.4	7.9	6.5	9.1	2.7	3.1	0.0	0.0
Cycle Q Clear(g_c), s	4.7	5.7	11.8	4.0	7.4	7.9	6.5	9.1	2.7	3.1	0.0	0.0
Prop In Lane	1.00		1.00	1.00		0.57	1.00		1.00	1.00		0.54
Lane Grp Cap(c), veh/h	115	179	160	134	179	172	288	2378	1064	591	1147	1102
V/C Ratio(X)	0.93	0.40	0.79	0.40	0.51	0.54	0.79	0.23	0.08	0.18	0.85	0.93
Avail Cap(c_a), veh/h	115	507	454	134	507	485	293	2378	1064	591	1147	1102
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.69	0.69	0.69
Uniform Delay (d), s/veh	72.3	63.1	65.9	58.4	63.9	64.1	9.4	9.6	8.5	7.9	0.0	0.0
Incr Delay (d2), s/veh	63.1	1.4	8.4	1.9	2.2	2.7	13.5	0.2	0.1	0.1	5.7	11.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.8	5.2	9.4	3.6	6.7	6.9	10.5	8.0	2.2	2.6	3.2	6.0
LnGrp Delay(d),s/veh	135.4	64.6	74.3	60.3	66.1	66.8	22.9	9.8	8.6	8.0	5.7	11.2
LnGrp LOS	F	E	E	E	E	E	C	A	A	A	A	B
Approach Vol, veh/h		306			238			860			2107	
Approach Delay, s/veh		93.4			65.1			13.1			8.5	
Approach LOS		F			E			B			A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	14.6	103.2	11.0	21.2	11.0	106.8	11.0	21.2
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	69.0	5.0	43.0	5.0	73.0	5.0	43.0
Max Q Clear Time (g_c+I1), s	8.5	2.0	6.0	13.8	5.1	11.1	6.7	9.9
Green Ext Time (p_c), s	0.0	66.8	0.0	1.4	0.0	61.8	0.0	1.5

Intersection Summary	
HCM 2010 Ctrl Delay	20.9
HCM 2010 LOS	C

Timings 2021 Build AM Peak

2: Ashford Dunwoody Rd/Ashford Dunwood Rd & Ashwood Pkwy/Ashford Pkwy

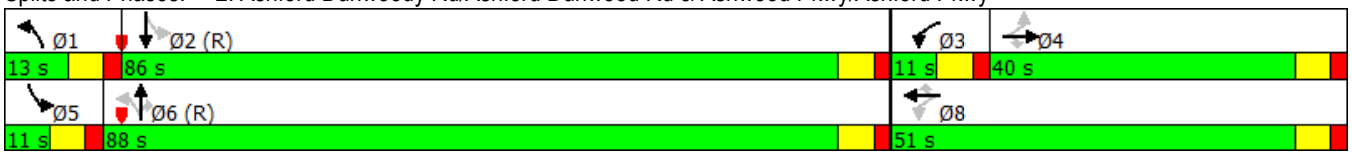
04/16/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	68	7	92	56	16	38	101	398	25	72	1267
Future Volume (vph)	68	7	92	56	16	38	101	398	25	72	1267
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases		4		3	8		1	6		5	2
Permitted Phases	4		4	8		8	6		6	2	
Detector Phase	4	4	4	3	8	8	1	6	6	5	2
Switch Phase											
Minimum Initial (s)	6.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0
Minimum Split (s)	40.0	40.0	40.0	11.0	42.0	42.0	11.0	42.0	42.0	11.0	37.0
Total Split (s)	40.0	40.0	40.0	11.0	51.0	51.0	13.0	88.0	88.0	11.0	86.0
Total Split (%)	26.7%	26.7%	26.7%	7.3%	34.0%	34.0%	8.7%	58.7%	58.7%	7.3%	57.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 125
Control Type: Actuated-Coordinated

Splits and Phases: 2: Ashford Dunwoody Rd/Ashford Dunwood Rd & Ashwood Pkwy/Ashford Pkwy



HCM 2010 Signalized Intersection Summary — 2021 Build AM Peak
2: Ashford Dunwoody Rd/Ashford Dunwood Rd & Ashwood Pkwy/Ashford Pkwy — 04/16/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	7	92	56	16	38	101	398	25	72	1267	166
Future Volume (veh/h)	68	7	92	56	16	38	101	398	25	72	1267	166
Number	7	4	14	3	8	18	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	73	8	0	60	17	41	109	428	0	77	1362	178
Adj No. of Lanes	0	1	1	1	1	1	1	2	1	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	138	10	117	249	274	233	263	2480	1109	708	2205	286
Arrive On Green	0.07	0.07	0.00	0.03	0.15	0.15	0.02	0.47	0.00	0.03	0.70	0.70
Sat Flow, veh/h	1242	136	1583	1774	1863	1583	1774	3539	1583	1774	3151	409
Grp Volume(v), veh/h	81	0	0	60	17	41	109	428	0	77	760	780
Grp Sat Flow(s),veh/h/ln	1378	0	1583	1774	1863	1583	1774	1770	1583	1774	1770	1791
Q Serve(g_s), s	8.7	0.0	0.0	4.6	1.2	3.4	2.6	10.5	0.0	1.8	33.9	34.7
Cycle Q Clear(g_c), s	8.7	0.0	0.0	4.6	1.2	3.4	2.6	10.5	0.0	1.8	33.9	34.7
Prop In Lane	0.90		1.00	1.00		1.00	1.00		1.00	1.00		0.23
Lane Grp Cap(c), veh/h	148	0	117	249	274	233	263	2480	1109	708	1238	1253
V/C Ratio(X)	0.55	0.00	0.00	0.24	0.06	0.18	0.41	0.17	0.00	0.11	0.61	0.62
Avail Cap(c_a), veh/h	358	0	359	249	559	475	288	2480	1109	710	1238	1253
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.67	0.67	0.67	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00	0.94	0.94	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.3	0.0	0.0	60.0	55.0	56.0	11.8	14.7	0.0	6.0	11.9	12.0
Incr Delay (d2), s/veh	3.2	0.0	0.0	0.5	0.1	0.4	1.0	0.1	0.0	0.1	2.3	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.2	0.0	0.0	4.1	1.1	2.7	2.9	8.8	0.0	1.6	24.1	24.9
LnGrp Delay(d),s/veh	71.5	0.0	0.0	60.5	55.1	56.3	12.8	14.8	0.0	6.1	14.1	14.3
LnGrp LOS	E			E	E	E	B	B		A	B	B
Approach Vol, veh/h		81			118			537			1617	
Approach Delay, s/veh		71.5			58.3			14.4			13.8	
Approach LOS		E			E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	10.9	111.0	11.0	17.1	10.8	111.1		28.1
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	7.0	80.0	5.0	34.0	5.0	82.0		45.0
Max Q Clear Time (g_c+I1), s	4.6	36.7	6.6	10.7	3.8	12.5		5.4
Green Ext Time (p_c), s	0.1	42.4	0.0	0.5	0.0	67.4		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	18.2
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	1.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	54	1	36	122	11	7
Future Vol, veh/h	54	1	36	122	11	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	62	1	41	140	13	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	63	0	285	63
Stage 1	-	-	-	-	63	-
Stage 2	-	-	-	-	222	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1540	-	705	1002
Stage 1	-	-	-	-	960	-
Stage 2	-	-	-	-	815	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1540	-	685	1002
Mov Cap-2 Maneuver	-	-	-	-	685	-
Stage 1	-	-	-	-	960	-
Stage 2	-	-	-	-	791	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.7	9.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	781	-	-	1540	-
HCM Lane V/C Ratio	0.026	-	-	0.027	-
HCM Control Delay (s)	9.7	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Timings
4: Perimeter Center Pl & Meadow Lane

2021 Build AM Peak
04/16/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	35	126	17	206	465	109	15	11	42	97	11
Future Volume (vph)	35	126	17	206	465	109	15	11	42	97	11
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	pm+ov	Perm	NA
Protected Phases		2		1	6			8	1		4
Permitted Phases	2		2	6		6	8		8	4	
Detector Phase	2	2	2	1	6	6	8	8	1	4	4
Switch Phase											
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	15.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	73.0	73.0	73.0	11.0	24.0	24.0	50.0	50.0	11.0	49.0	49.0
Total Split (s)	61.0	61.0	61.0	15.0	76.0	76.0	44.0	44.0	15.0	44.0	44.0
Total Split (%)	50.8%	50.8%	50.8%	12.5%	63.3%	63.3%	36.7%	36.7%	12.5%	36.7%	36.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0
Lead/Lag	Lag	Lag	Lag	Lead					Lead		
Lead-Lag Optimize?											
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None

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: 135
Control Type: Actuated-Coordinated

Splits and Phases: 4: Perimeter Center Pl & Meadow Lane

HCM 2010 Signalized Intersection Summary
4: Perimeter Center Pl & Meadow Lane

2021 Build AM Peak
04/16/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	126	17	206	465	109	15	11	42	97	11	37
Future Volume (veh/h)	35	126	17	206	465	109	15	11	42	97	11	37
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	36	130	18	212	479	112	15	11	0	100	11	38
Adj No. of Lanes	1	2	1	1	2	1	0	1	1	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	619	2406	1077	977	2769	1239	139	90	269	166	16	45
Arrive On Green	0.68	0.68	0.68	0.05	0.78	0.78	0.12	0.12	0.00	0.12	0.12	0.12
Sat Flow, veh/h	822	3539	1583	1774	3539	1583	777	763	1583	988	133	384
Grp Volume(v), veh/h	36	130	18	212	479	112	26	0	0	149	0	0
Grp Sat Flow(s),veh/h/ln	822	1770	1583	1774	1770	1583	1540	0	1583	1504	0	0
Q Serve(g_s), s	1.8	1.5	0.4	4.1	4.1	2.0	0.0	0.0	0.0	10.1	0.0	0.0
Cycle Q Clear(g_c), s	1.8	1.5	0.4	4.1	4.1	2.0	1.5	0.0	0.0	11.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.58		1.00	0.67		0.26
Lane Grp Cap(c), veh/h	619	2406	1077	977	2769	1239	229	0	269	227	0	0
V/C Ratio(X)	0.06	0.05	0.02	0.22	0.17	0.09	0.11	0.00	0.00	0.66	0.00	0.00
Avail Cap(c_a), veh/h	619	2406	1077	1017	2769	1239	533	0	584	519	0	0
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	0.09	0.09	0.09	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.4	6.4	6.2	4.4	3.3	3.1	47.4	0.0	0.0	51.7	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	3.2	0.0	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(95%),veh/ln	0.8	1.3	0.4	2.6	2.7	1.3	1.4	0.0	0.0	8.7	0.0	0.0
LnGrp Delay(d),s/veh	6.6	6.4	6.2	4.4	3.3	3.1	47.6	0.0	0.0	54.9	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D			D		
Approach Vol, veh/h		184			803			26			149	
Approach Delay, s/veh		6.4			3.6			47.6			54.9	
Approach LOS		A			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	12.3	87.6		20.1		99.9		20.1
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s	9.0	55.0		38.0		70.0		38.0
Max Q Clear Time (g_c+I1), s	6.1	3.8		13.6		6.1		3.5
Green Ext Time (p_c), s	0.2	22.7		0.6		24.8		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	11.6
HCM 2010 LOS	B

Notes

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

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	41	6	6	128	7	14
Future Vol, veh/h	41	6	6	128	7	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	7	7	139	8	15

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	52	0	202	49
Stage 1	-	-	-	-	49	-
Stage 2	-	-	-	-	153	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1554	-	787	1020
Stage 1	-	-	-	-	973	-
Stage 2	-	-	-	-	875	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1554	-	783	1020
Mov Cap-2 Maneuver	-	-	-	-	783	-
Stage 1	-	-	-	-	973	-
Stage 2	-	-	-	-	871	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	927	-	-	1554	-
HCM Lane V/C Ratio	0.025	-	-	0.004	-
HCM Control Delay (s)	9	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	4.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	48	13	131	153	8	119
Future Vol, veh/h	48	13	131	153	8	119
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	52	14	142	166	9	129

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	66	0	509	59
Stage 1	-	-	-	-	59	-
Stage 2	-	-	-	-	450	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1536	-	524	1007
Stage 1	-	-	-	-	964	-
Stage 2	-	-	-	-	642	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1536	-	476	1007
Mov Cap-2 Maneuver	-	-	-	-	476	-
Stage 1	-	-	-	-	964	-
Stage 2	-	-	-	-	583	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.5	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	941	-	-	1536	-
HCM Lane V/C Ratio	0.147	-	-	0.093	-
HCM Control Delay (s)	9.5	-	-	7.6	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.5	-	-	0.3	-

Timings
1: Ashford Dunwoody Rd & Meadow Lane/Asbury Square

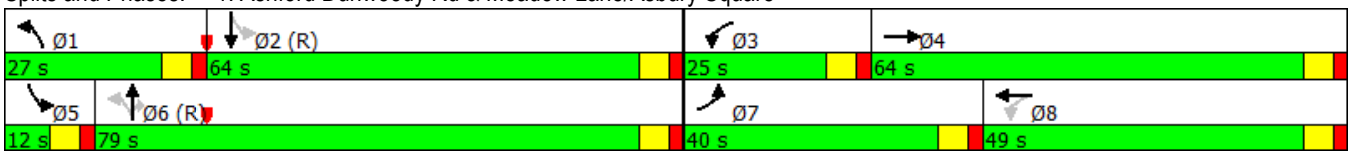
2021 Build PM Peak
04/16/2019

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	NBR	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	1138	307	174	218	202	1817	134	129	428
Future Volume (vph)	1138	307	174	218	202	1817	134	129	428
Turn Type	Prot	NA	pm+pt	NA	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	7	4	3	8	1	6		5	2
Permitted Phases			8		6		6	2	
Detector Phase	7	4	3	8	1	6	6	5	2
Switch Phase									
Minimum Initial (s)	5.0	6.0	5.0	6.0	5.0	15.0	15.0	5.0	15.0
Minimum Split (s)	11.0	48.0	11.0	49.0	11.0	47.0	47.0	11.0	43.0
Total Split (s)	40.0	64.0	25.0	49.0	27.0	79.0	79.0	12.0	64.0
Total Split (%)	22.2%	35.6%	13.9%	27.2%	15.0%	43.9%	43.9%	6.7%	35.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	C-Min	C-Min	None	C-Min

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 170 (94%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated

Splits and Phases: 1: Ashford Dunwoody Rd & Meadow Lane/Asbury Square



HCM 2010 Signalized Intersection Summary
1: Ashford Dunwoody Rd & Meadow Lane/Asbury Square

2021 Build PM Peak
04/16/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1138	307	102	174	218	382	202	1817	134	129	428	202
Future Volume (veh/h)	1138	307	102	174	218	382	202	1817	134	129	428	202
Number	7	4	14	3	8	18	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1900	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	1264	341	113	193	242	424	224	2019	149	143	476	224
Adj No. of Lanes	2	2	0	1	2	0	1	2	1	1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	650	878	286	423	423	378	382	1435	642	99	812	380
Arrive On Green	0.19	0.33	0.33	0.09	0.24	0.24	0.09	0.41	0.41	0.07	0.69	0.69
Sat Flow, veh/h	3442	2625	856	1774	1770	1583	1774	3539	1583	1774	2343	1096
Grp Volume(v), veh/h	1264	228	226	193	242	424	224	2019	149	143	359	341
Grp Sat Flow(s),veh/h/ln	1721	1770	1712	1774	1770	1583	1774	1770	1583	1774	1770	1669
Q Serve(g_s), s	34.0	17.7	18.2	14.7	21.7	43.0	14.3	73.0	11.1	6.0	18.8	19.1
Cycle Q Clear(g_c), s	34.0	17.7	18.2	14.7	21.7	43.0	14.3	73.0	11.1	6.0	18.8	19.1
Prop In Lane	1.00		0.50	1.00		1.00	1.00		1.00	1.00		0.66
Lane Grp Cap(c), veh/h	650	592	572	423	423	378	382	1435	642	99	613	579
V/C Ratio(X)	1.94	0.39	0.39	0.46	0.57	1.12	0.59	1.41	0.23	1.44	0.58	0.59
Avail Cap(c_a), veh/h	650	592	572	445	423	378	426	1435	642	99	613	579
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.88	0.88	0.88	1.00	1.00	1.00	1.00	1.00	1.00	0.97	0.97	0.97
Uniform Delay (d), s/veh	73.0	45.8	45.9	45.0	60.4	68.5	32.9	53.5	35.1	50.1	20.9	21.0
Incr Delay (d2), s/veh	429.9	0.4	0.4	0.8	1.9	83.3	1.7	187.2	0.8	245.7	3.9	4.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	99.0	13.3	13.2	11.6	16.2	49.6	11.5	131.4	8.7	15.8	14.6	14.3
LnGrp Delay(d),s/veh	502.9	46.1	46.3	45.8	62.3	151.8	34.6	240.7	36.0	295.8	24.9	25.2
LnGrp LOS	F	D	D	D	E	F	C	F	D	F	C	C
Approach Vol, veh/h		1718			859			2392			843	
Approach Delay, s/veh		382.2			102.7			208.7			71.0	
Approach LOS		F			F			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	22.6	68.4	22.8	66.2	12.0	79.0	40.0	49.0
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	21.0	58.0	19.0	58.0	6.0	73.0	34.0	43.0
Max Q Clear Time (g_c+I1), s	16.3	21.1	16.7	20.2	8.0	75.0	36.0	45.0
Green Ext Time (p_c), s	0.3	36.9	0.1	5.0	0.0	0.0	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	224.3
HCM 2010 LOS	F

Timings 2021 Build PM Peak

2: Ashford Dunwoody Rd/Ashford Dunwood Rd & Ashwood Pkwy/Ashford Pkwy

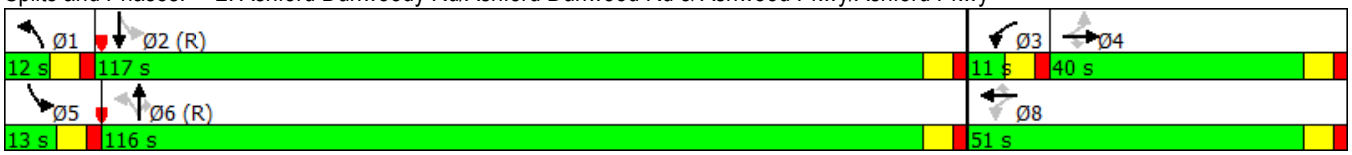
04/16/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	252	17	105	37	18	170	111	2499	74	137	434
Future Volume (vph)	252	17	105	37	18	170	111	2499	74	137	434
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases		4		3	8		1	6		5	2
Permitted Phases	4		4	8		8	6		6	2	
Detector Phase	4	4	4	3	8	8	1	6	6	5	2
Switch Phase											
Minimum Initial (s)	6.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	15.0	5.0	15.0
Minimum Split (s)	40.0	40.0	40.0	11.0	42.0	42.0	11.0	42.0	42.0	11.0	37.0
Total Split (s)	40.0	40.0	40.0	11.0	51.0	51.0	12.0	116.0	116.0	13.0	117.0
Total Split (%)	22.2%	22.2%	22.2%	6.1%	28.3%	28.3%	6.7%	64.4%	64.4%	7.2%	65.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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
Lost Time Adjust (s)		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?											
Recall Mode	None	None	None	None	None	None	None	C-Min	C-Min	None	C-Min

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated

Splits and Phases: 2: Ashford Dunwoody Rd/Ashford Dunwood Rd & Ashwood Pkwy/Ashford Pkwy



HCM 2010 Signalized Intersection Summary 2021 Build PM Peak
2: Ashford Dunwoody Rd/Ashford Dunwood Rd & Ashwood Pkwy/Ashford Pkwy 04/16/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	252	17	105	37	18	170	111	2499	74	137	434	83
Future Volume (veh/h)	252	17	105	37	18	170	111	2499	74	137	434	83
Number	7	4	14	3	8	18	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1863	1863	1863	1863	1863	1863	1900
Adj Flow Rate, veh/h	265	18	0	39	19	179	117	2631	0	144	457	87
Adj No. of Lanes	0	1	1	1	1	1	1	2	1	1	2	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	252	15	299	432	460	391	572	2175	973	109	1842	348
Arrive On Green	0.19	0.19	0.00	0.02	0.25	0.25	0.07	1.00	0.00	0.04	0.62	0.62
Sat Flow, veh/h	1131	77	1583	1774	1863	1583	1774	3539	1583	1774	2971	562
Grp Volume(v), veh/h	283	0	0	39	19	179	117	2631	0	144	271	273
Grp Sat Flow(s),veh/h/ln	1208	0	1583	1774	1863	1583	1774	1770	1583	1774	1770	1764
Q Serve(g_s), s	34.0	0.0	0.0	3.1	1.4	17.3	4.7	110.6	0.0	7.0	12.4	12.5
Cycle Q Clear(g_c), s	34.0	0.0	0.0	3.1	1.4	17.3	4.7	110.6	0.0	7.0	12.4	12.5
Prop In Lane	0.94		1.00	1.00		1.00	1.00		1.00	1.00		0.32
Lane Grp Cap(c), veh/h	267	0	299	432	460	391	572	2175	973	109	1097	1093
V/C Ratio(X)	1.06	0.00	0.00	0.09	0.04	0.46	0.20	1.21	0.00	1.32	0.25	0.25
Avail Cap(c_a), veh/h	267	0	299	438	466	396	572	2175	973	109	1097	1093
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00	0.09	0.09	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	75.5	0.0	0.0	55.3	51.6	57.6	12.0	0.0	0.0	62.3	15.3	15.4
Incr Delay (d2), s/veh	71.9	0.0	0.0	0.1	0.0	0.8	0.0	94.9	0.0	194.9	0.5	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	33.5	0.0	0.0	2.8	1.3	12.2	3.0	50.5	0.0	20.4	10.3	10.3
LnGrp Delay(d),s/veh	147.4	0.0	0.0	55.4	51.6	58.4	12.0	94.9	0.0	257.2	15.9	15.9
LnGrp LOS	F			E	D	E	B	F		F	B	B
Approach Vol, veh/h		283			237			2748			688	
Approach Delay, s/veh		147.4			57.4			91.4			66.4	
Approach LOS		F			E			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	12.0	117.6	10.4	40.0	13.0	116.6		50.4
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	6.0	111.0	5.0	34.0	7.0	110.0		45.0
Max Q Clear Time (g_c+I1), s	6.7	14.5	5.1	36.0	9.0	112.6		19.3
Green Ext Time (p_c), s	0.0	96.1	0.0	0.0	0.0	0.0		2.2

Intersection Summary	
HCM 2010 Ctrl Delay	89.0
HCM 2010 LOS	F

Intersection	
Int Delay, s/veh	3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	149	6	25	41	9	62
Future Vol, veh/h	149	6	25	41	9	62
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	173	7	29	48	10	72

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	180	0	283	177
Stage 1	-	-	-	-	177	-
Stage 2	-	-	-	-	106	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1396	-	707	866
Stage 1	-	-	-	-	854	-
Stage 2	-	-	-	-	918	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1396	-	692	866
Mov Cap-2 Maneuver	-	-	-	-	692	-
Stage 1	-	-	-	-	854	-
Stage 2	-	-	-	-	899	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.9	9.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	839	-	-	1396	-
HCM Lane V/C Ratio	0.098	-	-	0.021	-
HCM Control Delay (s)	9.8	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Timings
4: Perimeter Center Pl & Meadow Lane

2021 Build PM Peak
04/16/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	83	613	19	158	293	138	69	40	393	143	18
Future Volume (vph)	83	613	19	158	293	138	69	40	393	143	18
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	pm+ov	Perm	NA
Protected Phases		2		1	6			8	1		4
Permitted Phases	2		2	6		6	8		8	4	
Detector Phase	2	2	2	1	6	6	8	8	1	4	4
Switch Phase											
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	15.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	73.0	73.0	73.0	15.0	24.0	24.0	50.0	50.0	15.0	49.0	49.0
Total Split (s)	63.0	63.0	63.0	15.0	78.0	78.0	42.0	42.0	15.0	42.0	42.0
Total Split (%)	52.5%	52.5%	52.5%	12.5%	65.0%	65.0%	35.0%	35.0%	12.5%	35.0%	35.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0
Lead/Lag	Lag	Lag	Lag	Lead					Lead		
Lead-Lag Optimize?											
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None

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: 140
Control Type: Actuated-Coordinated

Splits and Phases: 4: Perimeter Center Pl & Meadow Lane

HCM 2010 Signalized Intersection Summary
4: Perimeter Center Pl & Meadow Lane

2021 Build PM Peak
04/16/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	613	19	158	293	138	69	40	393	143	18	44
Future Volume (veh/h)	83	613	19	158	293	138	69	40	393	143	18	44
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	87	645	20	166	308	145	73	42	0	151	19	46
Adj No. of Lanes	1	2	1	1	2	1	0	1	1	0	1	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	647	2226	996	567	2577	1153	200	105	350	224	22	53
Arrive On Green	0.63	0.63	0.63	0.05	0.73	0.73	0.17	0.17	0.00	0.17	0.17	0.17
Sat Flow, veh/h	934	3539	1583	1774	3539	1583	881	611	1583	1007	127	307
Grp Volume(v), veh/h	87	645	20	166	308	145	115	0	0	216	0	0
Grp Sat Flow(s),veh/h/ln	934	1770	1583	1774	1770	1583	1492	0	1583	1440	0	0
Q Serve(g_s), s	4.6	9.9	0.6	3.8	3.1	3.3	0.0	0.0	0.0	9.4	0.0	0.0
Cycle Q Clear(g_c), s	4.6	9.9	0.6	3.8	3.1	3.3	8.1	0.0	0.0	17.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.63		1.00	0.70		0.21
Lane Grp Cap(c), veh/h	647	2226	996	567	2577	1153	305	0	350	298	0	0
V/C Ratio(X)	0.13	0.29	0.02	0.29	0.12	0.13	0.38	0.00	0.00	0.72	0.00	0.00
Avail Cap(c_a), veh/h	647	2226	996	612	2577	1153	496	0	553	483	0	0
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	0.37	0.37	0.37	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.1	10.1	8.4	6.9	4.9	4.9	44.4	0.0	0.0	48.4	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.3	0.0	0.1	0.0	0.1	0.8	0.0	0.0	3.3	0.0	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(95%),veh/ln	2.3	8.6	0.5	3.2	2.7	2.6	6.3	0.0	0.0	11.6	0.0	0.0
LnGrp Delay(d),s/veh	9.5	10.4	8.4	7.0	4.9	5.0	45.2	0.0	0.0	51.7	0.0	0.0
LnGrp LOS	A	B	A	A	A	A	D			D		
Approach Vol, veh/h		752			619			115			216	
Approach Delay, s/veh		10.3			5.5			45.2			51.7	
Approach LOS		B			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	11.9	81.5		26.6		93.4		26.6
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s	9.0	57.0		36.0		72.0		36.0
Max Q Clear Time (g_c+I1), s	5.8	11.9		19.5		5.3		10.1
Green Ext Time (p_c), s	0.2	32.9		1.1		43.3		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	16.1
HCM 2010 LOS	B

Notes

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

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	137	5	5	45	8	18
Future Vol, veh/h	137	5	5	45	8	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	149	5	5	49	9	20

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	154	0	211	152
Stage 1	-	-	-	-	152	-
Stage 2	-	-	-	-	59	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1426	-	777	894
Stage 1	-	-	-	-	876	-
Stage 2	-	-	-	-	964	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1426	-	774	894
Mov Cap-2 Maneuver	-	-	-	-	774	-
Stage 1	-	-	-	-	876	-
Stage 2	-	-	-	-	960	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	853	-	-	1426	-
HCM Lane V/C Ratio	0.033	-	-	0.004	-
HCM Control Delay (s)	9.4	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	5.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	214	11	146	67	8	161
Future Vol, veh/h	214	11	146	67	8	161
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	233	12	159	73	9	175

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	245	0	630	239
Stage 1	-	-	-	-	239	-
Stage 2	-	-	-	-	391	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1321	-	446	800
Stage 1	-	-	-	-	801	-
Stage 2	-	-	-	-	683	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1321	-	392	800
Mov Cap-2 Maneuver	-	-	-	-	392	-
Stage 1	-	-	-	-	801	-
Stage 2	-	-	-	-	601	-

Approach	EB	WB	NB
HCM Control Delay, s	0	5.6	11.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	762	-	-	1321	-
HCM Lane V/C Ratio	0.241	-	-	0.12	-
HCM Control Delay (s)	11.2	-	-	8.1	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.9	-	-	0.4	-

FUTURE "BUILD" IMPROVED INTERSECTION ANALYSIS

Timings
1: Ashford Dunwoody Rd & Meadow Lane/Asbury Square

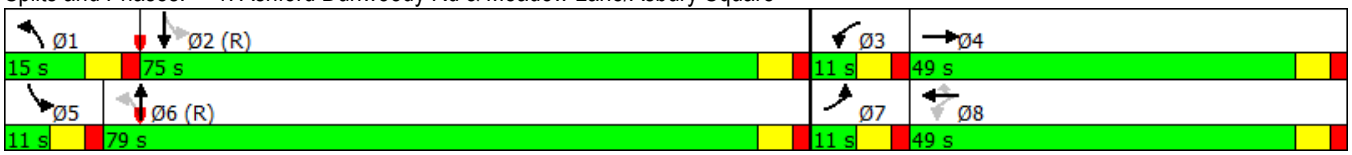
2021 Build AM Peak - Improved
04/16/2019

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	94	63	47	116	47	201	484	93	1272
Future Volume (vph)	94	63	47	116	47	201	484	93	1272
Turn Type	Prot	NA	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8		1	6	5	2
Permitted Phases			8		8	6		2	
Detector Phase	7	4	3	8	8	1	6	5	2
Switch Phase									
Minimum Initial (s)	5.0	6.0	5.0	6.0	6.0	5.0	15.0	5.0	15.0
Minimum Split (s)	11.0	48.0	11.0	49.0	49.0	11.0	47.0	11.0	43.0
Total Split (s)	11.0	49.0	11.0	49.0	49.0	15.0	79.0	11.0	75.0
Total Split (%)	7.3%	32.7%	7.3%	32.7%	32.7%	10.0%	52.7%	7.3%	50.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 138 (92%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated

Splits and Phases: 1: Ashford Dunwoody Rd & Meadow Lane/Asbury Square



HCM 2010 Signalized Intersection Summary
1: Ashford Dunwoody Rd & Meadow Lane/Asbury Square

2021 Build AM Peak - Improved
04/16/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	94	63	112	47	116	47	201	484	72	93	1272	489
Future Volume (veh/h)	94	63	112	47	116	47	201	484	72	93	1272	489
Number	7	4	14	3	8	18	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	107	72	127	53	132	0	228	550	0	106	1445	556
Adj No. of Lanes	3	1	0	1	1	1	1	3	0	1	2	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	167	83	147	132	256	218	285	3232	0	612	1552	561
Arrive On Green	0.03	0.14	0.14	0.03	0.14	0.00	0.06	0.64	0.00	0.07	1.00	1.00
Sat Flow, veh/h	5003	606	1068	1774	1863	1583	1774	5253	0	1774	2549	921
Grp Volume(v), veh/h	107	0	199	53	132	0	228	550	0	106	975	1026
Grp Sat Flow(s),veh/h/ln	1668	0	1674	1774	1863	1583	1774	1695	0	1774	1770	1700
Q Serve(g_s), s	3.2	0.0	17.4	3.8	9.9	0.0	7.3	6.6	0.0	3.5	0.0	0.0
Cycle Q Clear(g_c), s	3.2	0.0	17.4	3.8	9.9	0.0	7.3	6.6	0.0	3.5	0.0	0.0
Prop In Lane	1.00		0.64	1.00		1.00	1.00		0.00	1.00		0.54
Lane Grp Cap(c), veh/h	167	0	230	132	256	218	285	3232	0	612	1078	1035
V/C Ratio(X)	0.64	0.00	0.86	0.40	0.51	0.00	0.80	0.17	0.00	0.17	0.90	0.99
Avail Cap(c_a), veh/h	167	0	480	132	534	454	285	3232	0	612	1078	1035
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	0.00	0.69	0.69	0.69
Uniform Delay (d), s/veh	71.6	0.0	63.3	54.2	60.0	0.0	11.1	11.2	0.0	9.9	0.0	0.0
Incr Delay (d2), s/veh	8.1	0.0	9.3	2.0	1.6	0.0	14.9	0.1	0.0	0.1	9.1	21.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	2.9	0.0	13.5	3.5	9.0	0.0	10.1	5.7	0.0	3.1	4.9	9.5
LnGrp Delay(d),s/veh	79.7	0.0	72.6	56.1	61.6	0.0	26.0	11.3	0.0	10.0	9.1	21.2
LnGrp LOS	E		E	E	E		C	B		A	A	C
Approach Vol, veh/h		306			185			778			2107	
Approach Delay, s/veh		75.0			60.1			15.6			15.0	
Approach LOS		E			E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	15.0	97.3	11.0	26.7	11.0	101.3	11.0	26.7
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	9.0	69.0	5.0	43.0	5.0	73.0	5.0	43.0
Max Q Clear Time (g_c+I1), s	9.3	2.0	5.8	19.4	5.5	8.6	5.2	11.9
Green Ext Time (p_c), s	0.0	66.8	0.0	1.2	0.0	64.2	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	23.1
HCM 2010 LOS	C

Notes

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

Timings 2021 Build AM Peak - Improved

2: Ashford Dunwoody Rd/Ashford Dunwood Rd & Ashwood Pkwy/Ashford Pkwy

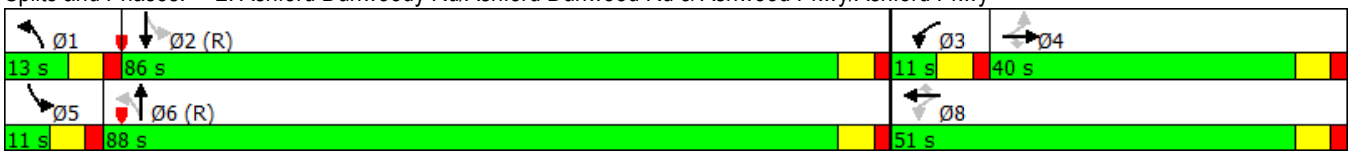
04/16/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	68	7	92	56	16	38	101	398	72	1267
Future Volume (vph)	68	7	92	56	16	38	101	398	72	1267
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases		4		3	8		1	6	5	2
Permitted Phases	4		4	8		8	6		2	
Detector Phase	4	4	4	3	8	8	1	6	5	2
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	5.0	15.0
Minimum Split (s)	40.0	40.0	40.0	11.0	42.0	42.0	11.0	42.0	11.0	37.0
Total Split (s)	40.0	40.0	40.0	11.0	51.0	51.0	13.0	88.0	11.0	86.0
Total Split (%)	26.7%	26.7%	26.7%	7.3%	34.0%	34.0%	8.7%	58.7%	7.3%	57.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	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
Total Lost Time (s)		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lead	Lag
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	None	C-Min	None	C-Min

Intersection Summary

Cycle Length: 150
Actuated Cycle Length: 150
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 125
Control Type: Actuated-Coordinated

Splits and Phases: 2: Ashford Dunwoody Rd/Ashford Dunwood Rd & Ashwood Pkwy/Ashford Pkwy



HCM 2010 Signalized Intersection Summary — 2021 Build AM Peak - Improved
2: Ashford Dunwoody Rd/Ashford Dunwood Rd & Ashwood Pkwy/Ashford Pkwy — 04/16/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	68	7	92	56	16	38	101	398	25	72	1267	166
Future Volume (veh/h)	68	7	92	56	16	38	101	398	25	72	1267	166
Number	7	4	14	3	8	18	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	73	8	0	60	17	41	109	428	0	77	1362	178
Adj No. of Lanes	0	1	1	1	1	1	1	3	0	1	2	0
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	138	10	117	249	274	233	263	3563	0	711	2205	286
Arrive On Green	0.07	0.07	0.00	0.03	0.15	0.15	0.01	0.23	0.00	0.03	0.70	0.70
Sat Flow, veh/h	1242	136	1583	1774	1863	1583	1774	5253	0	1774	3151	409
Grp Volume(v), veh/h	81	0	0	60	17	41	109	428	0	77	760	780
Grp Sat Flow(s),veh/h/ln	1378	0	1583	1774	1863	1583	1774	1695	0	1774	1770	1791
Q Serve(g_s), s	8.7	0.0	0.0	4.6	1.2	3.4	2.6	10.0	0.0	1.8	33.9	34.7
Cycle Q Clear(g_c), s	8.7	0.0	0.0	4.6	1.2	3.4	2.6	10.0	0.0	1.8	33.9	34.7
Prop In Lane	0.90		1.00	1.00		1.00	1.00		0.00	1.00		0.23
Lane Grp Cap(c), veh/h	148	0	117	249	274	233	263	3563	0	711	1238	1253
V/C Ratio(X)	0.55	0.00	0.00	0.24	0.06	0.18	0.41	0.12	0.00	0.11	0.61	0.62
Avail Cap(c_a), veh/h	358	0	359	249	559	475	288	3563	0	713	1238	1253
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	0.33	0.33	0.33	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00	0.97	0.97	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	68.3	0.0	0.0	60.0	55.0	56.0	12.0	21.1	0.0	6.0	11.9	12.0
Incr Delay (d2), s/veh	3.2	0.0	0.0	0.5	0.1	0.4	1.0	0.1	0.0	0.1	2.3	2.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	6.2	0.0	0.0	4.1	1.1	2.7	3.0	8.2	0.0	1.6	24.1	24.9
LnGrp Delay(d),s/veh	71.5	0.0	0.0	60.5	55.1	56.3	13.0	21.2	0.0	6.1	14.1	14.3
LnGrp LOS	E			E	E	E	B	C		A	B	B
Approach Vol, veh/h		81			118			537			1617	
Approach Delay, s/veh		71.5			58.3			19.5			13.8	
Approach LOS		E			E			B			B	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	10.9	111.0	11.0	17.1	10.8	111.1		28.1
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	7.0	80.0	5.0	34.0	5.0	82.0		45.0
Max Q Clear Time (g_c+I1), s	4.6	36.7	6.6	10.7	3.8	12.0		5.4
Green Ext Time (p_c), s	0.1	42.4	0.0	0.5	0.0	67.8		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	19.3
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	1.9

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	54	1	36	122	11	7
Future Vol, veh/h	54	1	36	122	11	7
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	87	87	87	87	87	87
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	62	1	41	140	13	8

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	63	0	285	63
Stage 1	-	-	-	-	63	-
Stage 2	-	-	-	-	222	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1540	-	705	1002
Stage 1	-	-	-	-	960	-
Stage 2	-	-	-	-	815	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1540	-	685	1002
Mov Cap-2 Maneuver	-	-	-	-	685	-
Stage 1	-	-	-	-	960	-
Stage 2	-	-	-	-	791	-

Approach	EB	WB	NB
HCM Control Delay, s	0	1.7	9.7
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	781	-	-	1540	-
HCM Lane V/C Ratio	0.026	-	-	0.027	-
HCM Control Delay (s)	9.7	-	-	7.4	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-

Timings
4: Perimeter Center Pl & Meadow Lane

2021 Build AM Peak - Improved
04/16/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	35	126	17	206	465	109	15	11	42	97	11
Future Volume (vph)	35	126	17	206	465	109	15	11	42	97	11
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	pm+ov	Perm	NA
Protected Phases		2		1	6			8	1		4
Permitted Phases	2		2	6		6	8		8	4	
Detector Phase	2	2	2	1	6	6	8	8	1	4	4
Switch Phase											
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	15.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	73.0	73.0	73.0	11.0	24.0	24.0	50.0	50.0	11.0	49.0	49.0
Total Split (s)	61.0	61.0	61.0	15.0	76.0	76.0	44.0	44.0	15.0	44.0	44.0
Total Split (%)	50.8%	50.8%	50.8%	12.5%	63.3%	63.3%	36.7%	36.7%	12.5%	36.7%	36.7%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0
Lead/Lag	Lag	Lag	Lag	Lead					Lead		
Lead-Lag Optimize?											
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None

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: 135
Control Type: Actuated-Coordinated

Splits and Phases: 4: Perimeter Center Pl & Meadow Lane

HCM 2010 Signalized Intersection Summary
4: Perimeter Center Pl & Meadow Lane

2021 Build AM Peak - Improved
04/16/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	35	126	17	206	465	109	15	11	42	97	11	37
Future Volume (veh/h)	35	126	17	206	465	109	15	11	42	97	11	37
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	36	130	18	212	479	112	15	11	0	100	11	38
Adj No. of Lanes	1	2	1	1	2	1	0	1	1	0	1	0
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	619	2406	1077	977	2769	1239	139	90	269	166	16	45
Arrive On Green	0.68	0.68	0.68	0.05	0.78	0.78	0.12	0.12	0.00	0.12	0.12	0.12
Sat Flow, veh/h	822	3539	1583	1774	3539	1583	777	763	1583	988	133	384
Grp Volume(v), veh/h	36	130	18	212	479	112	26	0	0	149	0	0
Grp Sat Flow(s),veh/h/ln	822	1770	1583	1774	1770	1583	1540	0	1583	1504	0	0
Q Serve(g_s), s	1.8	1.5	0.4	4.1	4.1	2.0	0.0	0.0	0.0	10.1	0.0	0.0
Cycle Q Clear(g_c), s	1.8	1.5	0.4	4.1	4.1	2.0	1.5	0.0	0.0	11.6	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.58		1.00	0.67		0.26
Lane Grp Cap(c), veh/h	619	2406	1077	977	2769	1239	229	0	269	227	0	0
V/C Ratio(X)	0.06	0.05	0.02	0.22	0.17	0.09	0.11	0.00	0.00	0.66	0.00	0.00
Avail Cap(c_a), veh/h	619	2406	1077	1017	2769	1239	533	0	584	519	0	0
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	0.09	0.09	0.09	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	6.4	6.4	6.2	4.4	3.3	3.1	47.4	0.0	0.0	51.7	0.0	0.0
Incr Delay (d2), s/veh	0.2	0.0	0.0	0.0	0.0	0.0	0.2	0.0	0.0	3.2	0.0	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(95%),veh/ln	0.8	1.3	0.4	2.6	2.7	1.3	1.4	0.0	0.0	8.7	0.0	0.0
LnGrp Delay(d),s/veh	6.6	6.4	6.2	4.4	3.3	3.1	47.6	0.0	0.0	54.9	0.0	0.0
LnGrp LOS	A	A	A	A	A	A	D			D		
Approach Vol, veh/h		184			803			26			149	
Approach Delay, s/veh		6.4			3.6			47.6			54.9	
Approach LOS		A			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	12.3	87.6		20.1		99.9		20.1
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s	9.0	55.0		38.0		70.0		38.0
Max Q Clear Time (g_c+I1), s	6.1	3.8		13.6		6.1		3.5
Green Ext Time (p_c), s	0.2	22.7		0.6		24.8		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	11.6
HCM 2010 LOS	B

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

Intersection	
Int Delay, s/veh	1.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	41	6	6	128	7	14
Future Vol, veh/h	41	6	6	128	7	14
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	45	7	7	139	8	15

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	52	0	202	49
Stage 1	-	-	-	-	49	-
Stage 2	-	-	-	-	153	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1554	-	787	1020
Stage 1	-	-	-	-	973	-
Stage 2	-	-	-	-	875	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1554	-	783	1020
Mov Cap-2 Maneuver	-	-	-	-	783	-
Stage 1	-	-	-	-	973	-
Stage 2	-	-	-	-	871	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.3	9
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	927	-	-	1554	-
HCM Lane V/C Ratio	0.025	-	-	0.004	-
HCM Control Delay (s)	9	-	-	7.3	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	4.7

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	48	13	131	153	8	119
Future Vol, veh/h	48	13	131	153	8	119
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	52	14	142	166	9	129

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	66	0	509	59
Stage 1	-	-	-	-	59	-
Stage 2	-	-	-	-	450	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1536	-	524	1007
Stage 1	-	-	-	-	964	-
Stage 2	-	-	-	-	642	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1536	-	476	1007
Mov Cap-2 Maneuver	-	-	-	-	476	-
Stage 1	-	-	-	-	964	-
Stage 2	-	-	-	-	583	-

Approach	EB	WB	NB
HCM Control Delay, s	0	3.5	9.5
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	941	-	-	1536	-
HCM Lane V/C Ratio	0.147	-	-	0.093	-
HCM Control Delay (s)	9.5	-	-	7.6	-
HCM Lane LOS	A	-	-	A	-
HCM 95th %tile Q(veh)	0.5	-	-	0.3	-

Timings
1: Ashford Dunwoody Rd & Meadow Lane/Asbury Square

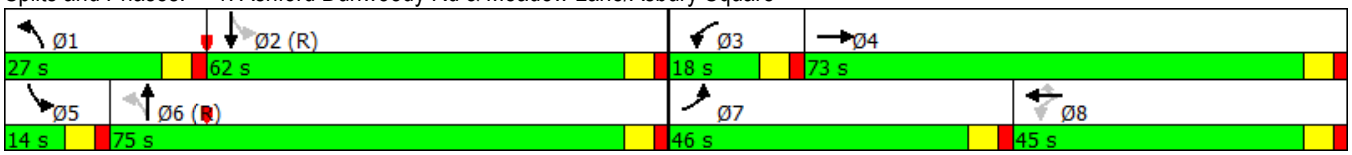
2021 Build PM Peak - Improved
04/16/2019

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations									
Traffic Volume (vph)	1138	307	174	218	382	202	1817	129	428
Future Volume (vph)	1138	307	174	218	382	202	1817	129	428
Turn Type	Prot	NA	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases	7	4	3	8		1	6	5	2
Permitted Phases			8		8	6		2	
Detector Phase	7	4	3	8	8	1	6	5	2
Switch Phase									
Minimum Initial (s)	5.0	6.0	5.0	6.0	6.0	5.0	15.0	5.0	15.0
Minimum Split (s)	11.0	48.0	11.0	49.0	49.0	11.0	47.0	11.0	43.0
Total Split (s)	46.0	73.0	18.0	45.0	45.0	27.0	75.0	14.0	62.0
Total Split (%)	25.6%	40.6%	10.0%	25.0%	25.0%	15.0%	41.7%	7.8%	34.4%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lead	Lag
Lead-Lag Optimize?									
Recall Mode	None	None	None	None	None	None	C-Min	None	C-Min

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 170 (94%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 150
Control Type: Actuated-Coordinated

Splits and Phases: 1: Ashford Dunwoody Rd & Meadow Lane/Asbury Square



HCM 2010 Signalized Intersection Summary
1: Ashford Dunwoody Rd & Meadow Lane/Asbury Square

2021 Build PM Peak - Improved
04/16/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1138	307	102	174	218	382	202	1817	134	129	428	202
Future Volume (veh/h)	1138	307	102	174	218	382	202	1817	134	129	428	202
Number	7	4	14	3	8	18	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1863	1863	1900	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	1264	341	113	193	242	0	224	2019	0	143	476	224
Adj No. of Lanes	3	1	0	1	1	1	1	3	0	1	2	0
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	1112	411	136	224	282	240	447	2282	0	137	957	448
Arrive On Green	0.22	0.31	0.31	0.07	0.15	0.00	0.08	0.45	0.00	0.09	0.82	0.82
Sat Flow, veh/h	5003	1340	444	1774	1863	1583	1774	5253	0	1774	2343	1096
Grp Volume(v), veh/h	1264	0	454	193	242	0	224	2019	0	143	359	341
Grp Sat Flow(s),veh/h/ln	1668	0	1784	1774	1863	1583	1774	1695	0	1774	1770	1669
Q Serve(g_s), s	40.0	0.0	42.6	12.0	22.8	0.0	12.9	65.3	0.0	8.0	11.2	11.4
Cycle Q Clear(g_c), s	40.0	0.0	42.6	12.0	22.8	0.0	12.9	65.3	0.0	8.0	11.2	11.4
Prop In Lane	1.00		0.25	1.00		1.00	1.00		0.00	1.00		0.66
Lane Grp Cap(c), veh/h	1112	0	548	224	282	240	447	2282	0	137	723	682
V/C Ratio(X)	1.14	0.00	0.83	0.86	0.86	0.00	0.50	0.88	0.00	1.04	0.50	0.50
Avail Cap(c_a), veh/h	1112	0	664	224	404	343	503	2282	0	137	723	682
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00
Upstream Filter(I)	0.88	0.00	0.88	1.00	1.00	0.00	1.00	1.00	0.00	0.97	0.97	0.97
Uniform Delay (d), s/veh	70.0	0.0	58.0	67.5	74.5	0.0	26.0	45.4	0.0	43.8	10.8	10.8
Incr Delay (d2), s/veh	71.8	0.0	6.5	27.3	12.1	0.0	0.9	5.5	0.0	88.1	2.4	2.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	0.0	0.0
%ile BackOfQ(95%),veh/ln	46.5	0.0	29.3	9.2	18.6	0.0	10.5	41.1	0.0	11.2	9.8	9.4
LnGrp Delay(d),s/veh	141.8	0.0	64.5	94.8	86.6	0.0	26.9	50.9	0.0	132.2	13.1	13.3
LnGrp LOS	F		E	F	F		C	D		F	B	B
Approach Vol, veh/h		1718			435			2243			843	
Approach Delay, s/veh		121.4			90.2			48.5			33.4	
Approach LOS		F			F			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	21.3	79.5	18.0	61.2	14.0	86.8	46.0	33.2
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Max Green Setting (Gmax), s	21.0	56.0	12.0	67.0	8.0	69.0	40.0	39.0
Max Q Clear Time (g_c+I1), s	14.9	13.4	14.0	44.6	10.0	67.3	42.0	24.8
Green Ext Time (p_c), s	0.4	42.5	0.0	2.7	0.0	1.7	0.0	2.4

Intersection Summary	
HCM 2010 Ctrl Delay	73.4
HCM 2010 LOS	E

Notes

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

Timings 2021 Build PM Peak - Improved

2: Ashford Dunwoody Rd/Ashford Dunwood Rd & Ashwood Pkwy/Ashford Pkwy

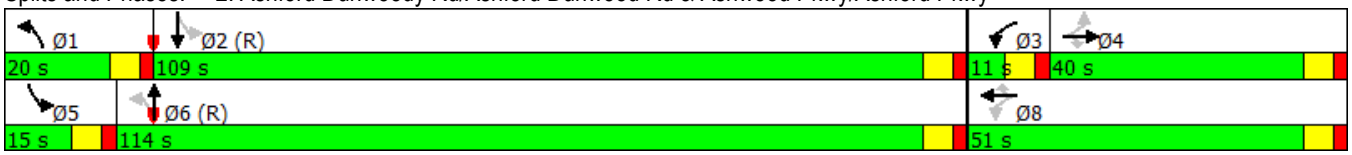
04/16/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	252	17	105	37	18	170	111	2499	137	434
Future Volume (vph)	252	17	105	37	18	170	111	2499	137	434
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	pm+pt	NA
Protected Phases		4		3	8		1	6	5	2
Permitted Phases	4		4	8		8	6		2	
Detector Phase	4	4	4	3	8	8	1	6	5	2
Switch Phase										
Minimum Initial (s)	6.0	6.0	6.0	5.0	6.0	6.0	5.0	15.0	5.0	15.0
Minimum Split (s)	40.0	40.0	40.0	11.0	42.0	42.0	11.0	42.0	11.0	37.0
Total Split (s)	40.0	40.0	40.0	11.0	51.0	51.0	20.0	114.0	15.0	109.0
Total Split (%)	22.2%	22.2%	22.2%	6.1%	28.3%	28.3%	11.1%	63.3%	8.3%	60.6%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
All-Red Time (s)	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
Total Lost Time (s)		6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0
Lead/Lag	Lag	Lag	Lag	Lead			Lead	Lag	Lead	Lag
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	None	C-Min	None	C-Min

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 0 (0%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated

Splits and Phases: 2: Ashford Dunwoody Rd/Ashford Dunwood Rd & Ashwood Pkwy/Ashford Pkwy



HCM 2010 Signalized Intersection Summary — 2021 Build PM Peak - Improved
2: Ashford Dunwoody Rd/Ashford Dunwood Rd & Ashwood Pkwy/Ashford Pkwy — 04/16/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	252	17	105	37	18	170	111	2499	74	137	434	83
Future Volume (veh/h)	252	17	105	37	18	170	111	2499	74	137	434	83
Number	7	4	14	3	8	18	1	6	16	5	2	12
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
Adj Sat Flow, veh/h/ln	1900	1863	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900
Adj Flow Rate, veh/h	265	18	0	39	19	179	117	2631	0	144	457	87
Adj No. of Lanes	0	1	1	1	1	1	1	3	0	1	2	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	252	15	299	432	460	391	575	3109	0	185	1829	346
Arrive On Green	0.19	0.19	0.00	0.02	0.25	0.25	0.08	1.00	0.00	0.04	0.62	0.62
Sat Flow, veh/h	1131	77	1583	1774	1863	1583	1774	5253	0	1774	2971	562
Grp Volume(v), veh/h	283	0	0	39	19	179	117	2631	0	144	271	273
Grp Sat Flow(s),veh/h/ln	1208	0	1583	1774	1863	1583	1774	1695	0	1774	1770	1764
Q Serve(g_s), s	34.0	0.0	0.0	3.1	1.4	17.3	4.6	0.0	0.0	5.5	12.5	12.7
Cycle Q Clear(g_c), s	34.0	0.0	0.0	3.1	1.4	17.3	4.6	0.0	0.0	5.5	12.5	12.7
Prop In Lane	0.94		1.00	1.00		1.00	1.00		0.00	1.00		0.32
Lane Grp Cap(c), veh/h	267	0	299	432	460	391	575	3109	0	185	1090	1086
V/C Ratio(X)	1.06	0.00	0.00	0.09	0.04	0.46	0.20	0.85	0.00	0.78	0.25	0.25
Avail Cap(c_a), veh/h	267	0	299	438	466	396	646	3109	0	199	1090	1086
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	2.00	2.00	2.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	0.00	1.00	1.00	1.00	0.09	0.09	0.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	75.5	0.0	0.0	55.3	51.6	57.6	11.9	0.0	0.0	18.6	15.7	15.7
Incr Delay (d2), s/veh	71.9	0.0	0.0	0.1	0.0	0.8	0.0	0.3	0.0	16.8	0.5	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	33.5	0.0	0.0	2.8	1.3	12.2	2.9	0.1	0.0	8.8	10.4	10.4
LnGrp Delay(d),s/veh	147.4	0.0	0.0	55.4	51.6	58.4	11.9	0.3	0.0	35.4	16.2	16.3
LnGrp LOS	F			E	D	E	B	A		D	B	B
Approach Vol, veh/h		283			237			2748			688	
Approach Delay, s/veh		147.4			57.4			0.8			20.3	
Approach LOS		F			E			A			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6		8
Phs Duration (G+Y+Rc), s	12.8	116.8	10.4	40.0	13.6	116.0		50.4
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0		6.0
Max Green Setting (Gmax), s	14.0	103.0	5.0	34.0	9.0	108.0		45.0
Max Q Clear Time (g_c+I1), s	6.6	14.7	5.1	36.0	7.5	2.0		19.3
Green Ext Time (p_c), s	0.2	88.0	0.0	0.0	0.1	105.5		2.2

Intersection Summary	
HCM 2010 Ctrl Delay	18.0
HCM 2010 LOS	B

Intersection	
Int Delay, s/veh	3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	149	6	25	41	9	62
Future Vol, veh/h	149	6	25	41	9	62
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	86	86	86	86	86	86
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	173	7	29	48	10	72

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	180	0	283	177
Stage 1	-	-	-	-	177	-
Stage 2	-	-	-	-	106	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1396	-	707	866
Stage 1	-	-	-	-	854	-
Stage 2	-	-	-	-	918	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1396	-	692	866
Mov Cap-2 Maneuver	-	-	-	-	692	-
Stage 1	-	-	-	-	854	-
Stage 2	-	-	-	-	899	-

Approach	EB	WB	NB
HCM Control Delay, s	0	2.9	9.8
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	839	-	-	1396	-
HCM Lane V/C Ratio	0.098	-	-	0.021	-
HCM Control Delay (s)	9.8	-	-	7.6	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.3	-	-	0.1	-

Timings
4: Perimeter Center Pl & Meadow Lane

2021 Build PM Peak - Improved
04/16/2019

Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations											
Traffic Volume (vph)	83	613	19	158	293	138	69	40	393	143	18
Future Volume (vph)	83	613	19	158	293	138	69	40	393	143	18
Turn Type	Perm	NA	Perm	pm+pt	NA	Perm	Perm	NA	pm+ov	Perm	NA
Protected Phases		2		1	6			8	1		4
Permitted Phases	2		2	6		6	8		8	4	
Detector Phase	2	2	2	1	6	6	8	8	1	4	4
Switch Phase											
Minimum Initial (s)	15.0	15.0	15.0	5.0	15.0	15.0	6.0	6.0	5.0	6.0	6.0
Minimum Split (s)	73.0	73.0	73.0	15.0	24.0	24.0	50.0	50.0	15.0	49.0	49.0
Total Split (s)	63.0	63.0	63.0	15.0	78.0	78.0	42.0	42.0	15.0	42.0	42.0
Total Split (%)	52.5%	52.5%	52.5%	12.5%	65.0%	65.0%	35.0%	35.0%	12.5%	35.0%	35.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
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
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0		0.0
Total Lost Time (s)	6.0	6.0	6.0	6.0	6.0	6.0		6.0	6.0		6.0
Lead/Lag	Lag	Lag	Lag	Lead					Lead		
Lead-Lag Optimize?											
Recall Mode	C-Min	C-Min	C-Min	None	C-Min	C-Min	None	None	None	None	None

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: 140
Control Type: Actuated-Coordinated

Splits and Phases: 4: Perimeter Center Pl & Meadow Lane

HCM 2010 Signalized Intersection Summary
4: Perimeter Center Pl & Meadow Lane

2021 Build PM Peak - Improved
04/16/2019

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	83	613	19	158	293	138	69	40	393	143	18	44
Future Volume (veh/h)	83	613	19	158	293	138	69	40	393	143	18	44
Number	5	2	12	1	6	16	3	8	18	7	4	14
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
Adj Sat Flow, veh/h/ln	1863	1863	1863	1863	1863	1863	1900	1863	1863	1900	1863	1900
Adj Flow Rate, veh/h	87	645	20	166	308	145	73	42	0	151	19	46
Adj No. of Lanes	1	2	1	1	2	1	0	1	1	0	1	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	647	2226	996	567	2577	1153	200	105	350	224	22	53
Arrive On Green	0.63	0.63	0.63	0.05	0.73	0.73	0.17	0.17	0.00	0.17	0.17	0.17
Sat Flow, veh/h	934	3539	1583	1774	3539	1583	881	611	1583	1007	127	307
Grp Volume(v), veh/h	87	645	20	166	308	145	115	0	0	216	0	0
Grp Sat Flow(s),veh/h/ln	934	1770	1583	1774	1770	1583	1492	0	1583	1440	0	0
Q Serve(g_s), s	4.6	9.9	0.6	3.8	3.1	3.3	0.0	0.0	0.0	9.4	0.0	0.0
Cycle Q Clear(g_c), s	4.6	9.9	0.6	3.8	3.1	3.3	8.1	0.0	0.0	17.5	0.0	0.0
Prop In Lane	1.00		1.00	1.00		1.00	0.63		1.00	0.70		0.21
Lane Grp Cap(c), veh/h	647	2226	996	567	2577	1153	305	0	350	298	0	0
V/C Ratio(X)	0.13	0.29	0.02	0.29	0.12	0.13	0.38	0.00	0.00	0.72	0.00	0.00
Avail Cap(c_a), veh/h	647	2226	996	612	2577	1153	496	0	553	483	0	0
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	0.63	0.63	0.63	1.00	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	9.1	10.1	8.4	6.9	4.9	4.9	44.4	0.0	0.0	48.4	0.0	0.0
Incr Delay (d2), s/veh	0.4	0.3	0.0	0.2	0.1	0.1	0.8	0.0	0.0	3.3	0.0	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(95%),veh/ln	2.3	8.6	0.5	3.3	2.7	2.6	6.3	0.0	0.0	11.6	0.0	0.0
LnGrp Delay(d),s/veh	9.5	10.4	8.4	7.1	4.9	5.0	45.2	0.0	0.0	51.7	0.0	0.0
LnGrp LOS	A	B	A	A	A	A	D			D		
Approach Vol, veh/h		752			619			115			216	
Approach Delay, s/veh		10.3			5.5			45.2			51.7	
Approach LOS		B			A			D			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4		6		8
Phs Duration (G+Y+Rc), s	11.9	81.5		26.6		93.4		26.6
Change Period (Y+Rc), s	6.0	6.0		6.0		6.0		6.0
Max Green Setting (Gmax), s	9.0	57.0		36.0		72.0		36.0
Max Q Clear Time (g_c+I1), s	5.8	11.9		19.5		5.3		10.1
Green Ext Time (p_c), s	0.2	32.9		1.1		43.3		1.2

Intersection Summary	
HCM 2010 Ctrl Delay	16.2
HCM 2010 LOS	B

Notes

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

Intersection	
Int Delay, s/veh	1.3

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	137	5	5	45	8	18
Future Vol, veh/h	137	5	5	45	8	18
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	149	5	5	49	9	20

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	154	0	211	152
Stage 1	-	-	-	-	152	-
Stage 2	-	-	-	-	59	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1426	-	777	894
Stage 1	-	-	-	-	876	-
Stage 2	-	-	-	-	964	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1426	-	774	894
Mov Cap-2 Maneuver	-	-	-	-	774	-
Stage 1	-	-	-	-	876	-
Stage 2	-	-	-	-	960	-

Approach	EB	WB	NB
HCM Control Delay, s	0	0.8	9.4
HCM LOS			A

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	853	-	-	1426	-
HCM Lane V/C Ratio	0.033	-	-	0.004	-
HCM Control Delay (s)	9.4	-	-	7.5	0
HCM Lane LOS	A	-	-	A	A
HCM 95th %tile Q(veh)	0.1	-	-	0	-

Intersection	
Int Delay, s/veh	5.1

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	214	11	146	67	8	161
Future Vol, veh/h	214	11	146	67	8	161
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	0	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	2	2	2	2	2	2
Mvmt Flow	233	12	159	73	9	175

Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	245	0	630	239
Stage 1	-	-	-	-	239	-
Stage 2	-	-	-	-	391	-
Critical Hdwy	-	-	4.12	-	6.42	6.22
Critical Hdwy Stg 1	-	-	-	-	5.42	-
Critical Hdwy Stg 2	-	-	-	-	5.42	-
Follow-up Hdwy	-	-	2.218	-	3.518	3.318
Pot Cap-1 Maneuver	-	-	1321	-	446	800
Stage 1	-	-	-	-	801	-
Stage 2	-	-	-	-	683	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1321	-	392	800
Mov Cap-2 Maneuver	-	-	-	-	392	-
Stage 1	-	-	-	-	801	-
Stage 2	-	-	-	-	601	-

Approach	EB	WB	NB
HCM Control Delay, s	0	5.6	11.2
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT
Capacity (veh/h)	762	-	-	1321	-
HCM Lane V/C Ratio	0.241	-	-	0.12	-
HCM Control Delay (s)	11.2	-	-	8.1	-
HCM Lane LOS	B	-	-	A	-
HCM 95th %tile Q(veh)	0.9	-	-	0.4	-

TRAFFIC VOLUME WORKSHEETS

18-189 Ashwood Restaurant Park, Ashford Dunwoody, Georgia

Traffic Volumes

A&R Engineering
April 2019

1. Ashford Dunwoody @ Meadow Ln

A.M. Peak Hour

Condition	Ashford Dunwoody Road **Northbound**				Ashford Dunwoody Road **Southbound**				Meadow Lane **Eastbound**				Meadow Lane **Westbound**			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2018 Volumes:	159	464	71	694	84	1263	431	1778	68	55	55	178	46	106	38	190
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
No-Build 2020 Volumes:	162	473	72	707	86	1288	440	1814	69	56	56	181	47	108	39	194
Total New Trips:	25	25	0	50	7	20	13	40	11	7	20	38	0	8	8	16
Pass-by Trips:	14	-14	0	0	0	-36	36	0	14	0	36	50	0	0	0	0
Future 2020 Traffic Volumes:	201	484	72	757	93	1272	489	1854	94	63	112	269	47	116	47	210

P.M. Peak Hour

Condition	Ashford Dunwoody Road **Northbound**				Ashford Dunwoody Road **Southbound**				Meadow Lane **Eastbound**				Meadow Lane **Westbound**			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2018 Volumes:	120	1813	131	2064	117	399	176	692	1045	291	62	1398	171	206	367	744
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
No-Build 2020 Volumes:	122	1849	134	2105	119	407	180	706	1066	297	63	1426	174	210	374	758
Total New Trips:	24	24	0	48	10	30	13	53	16	10	30	56	0	8	8	16
Pass-by Trips:	56	-56	0	0	0	-9	9	0	56	0	9	65	0	0	0	0
Future 2020 Traffic Volumes:	202	1817	134	2153	129	428	202	759	1138	307	102	1547	174	218	382	774

18-189 Ashwood Restaurant Park, Ashford Dunwoody, Georgia

Traffic Volumes

A&R Engineering
April 2019

2. Ashford Dunwoody @ Ashwood

A.M. Peak Hour

	Ashford Dunwoody Road **Northbound**				Ashford Dunwoody Road **Southbound**				Ashwood Parkway **Eastbound**				Ashford Parkway **Westbound**			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2018 Volumes:	53	395	24	472	71	1272	75	1418	16	2	22	40	53	9	37	99
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
No-Build 2020 Volumes:	54	403	24	481	72	1298	77	1447	16	2	22	40	54	9	38	101
Total New Trips:	33	9	1	43	0	12	46	58	38	5	27	70	2	7	0	9
Pass-by Trips:	14	-14	0	0	0	-43	43	0	14	0	43	57	0	0	0	0
Future 2020 Traffic Volumes:	101	398	25	524	72	1267	166	1505	68	7	92	167	56	16	38	110

P.M. Peak Hour

	Ashford Dunwoody Road **Northbound**				Ashford Dunwoody Road **Southbound**				Ashwood Parkway **Eastbound**				Ashford Parkway **Westbound**			
Condition	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2018 Volumes:	23	2491	71	2585	134	433	19	586	138	9	46	193	34	12	167	213
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
No-Build 2020 Volumes:	23	2541	72	2636	137	442	19	598	141	9	47	197	35	12	170	217
Total New Trips:	32	14	2	48	0	11	45	56	55	8	39	102	2	6	0	8
Pass-by Trips:	56	-56	0	0	0	-19	19	0	56	0	19	75	0	0	0	0
Future 2020 Traffic Volumes:	111	2499	74	2684	137	434	83	654	252	17	105	374	37	18	170	225

18-189 Ashwood Restaurant Park, Ashford Dunwoody, Georgia

Traffic Volumes

A&R Engineering
April 2019

3. Ashwood @ Site Drwy 2

A.M. Peak Hour

Condition	Site Driveway 2 Northbound				- Southbound				Ashwood Parkway Eastbound				Ashwood Parkway Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2018 Volumes:	9	0	2	11	0	0	0	0	0	38	0	38	19	116	0	135
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
No-Build 2020 Volumes:	9	0	2	11	0	0	0	0	0	39	0	39	19	118	0	137
Total New Trips:	2	0	5	7	0	0	0	0	0	15	1	16	17	4	0	21
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2020 Traffic Volumes:	11	0	7	18	0	0	0	0	0	54	1	55	36	122	0	158

P.M. Peak Hour

Condition	Site Driveway 2 Northbound				- Southbound				Ashwood Parkway Eastbound				Ashwood Parkway Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2018 Volumes:	6	0	53	59	0	0	0	0	0	126	5	131	9	36	0	45
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
No-Build 2020 Volumes:	6	0	54	60	0	0	0	0	0	129	5	134	9	37	0	46
Total New Trips:	3	0	8	11	0	0	0	0	0	20	1	21	16	4	0	20
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future 2020 Traffic Volumes:	9	0	62	71	0	0	0	0	0	149	6	155	25	41	0	66

18-189 Ashwood Restaurant Park, Ashford Dunwoody, Georgia

Traffic Volumes

A&R Engineering
April 2019

4. Meadow Ln @ Private Rd

A.M. Peak Hour

	Perimeter Center Place **Northbound**					Private Road **Southbound**					Meadow Lane **Eastbound**					Meadow Lane **Westbound**			
Condition	L	T	R	Tot		L	T	R	Tot		L	T	R	Tot		L	T	R	Tot
Existing 2018 Volumes:	15	3	41	59		2	4	16	22		11	130	17	158		202	463	5	670
Growth Factor (%):	1	1	1			1	1	1			1	1	1			1	1	1	
No-Build 2020 Volumes:	15	3	42	60		2	4	16	22		11	133	17	161		206	472	5	683
Total New Trips:	0	8	0	8		38	7	14	59		17	0	0	17		0	0	46	46
Pass-by Trips:	0	0	0	0		57	0	7	64		7	-7	0	0		0	-7	58	51
Future 2020 Traffic Volumes:	15	11	42	68		97	11	37	145		35	126	17	178		206	465	109	780

P.M. Peak Hour

	Perimeter Center Place **Northbound**					Private Road **Southbound**					Meadow Lane **Eastbound**					Meadow Lane **Westbound**			
Condition	L	T	R	Tot		L	T	R	Tot		L	T	R	Tot		L	T	R	Tot
Existing 2018 Volumes:	68	31	385	484		4	8	15	27		47	620	19	686		155	296	19	470
Growth Factor (%):	1	1	1			1	1	1			1	1	1			1	1	1	
No-Build 2020 Volumes:	69	32	393	494		4	8	15	27		48	632	19	699		158	302	19	479
Total New Trips:	0	8	0	8		55	10	20	85		16	0	0	16		0	0	45	45
Pass-by Trips:	0	0	0	0		84	0	9	93		19	-19	0	0		0	-9	74	65
Future 2020 Traffic Volumes:	69	40	393	502		143	18	44	205		83	613	19	715		158	293	138	589

18-189 Ashwood Restaurant Park, Ashford Dunwoody, Georgia

Traffic Volumes

A&R Engineering
April 2019

5. Ashwood @ Private Rd

A.M. Peak Hour

	Private Road Northbound					Private Driveway Southbound					Ashwood Parkway Eastbound					Ashwood Parkway Westbound			
Condition	L	T	R	Tot		L	T	R	Tot		L	T	R	Tot		L	T	R	Tot
Existing 2018 Volumes:	0	0	0	0		0	0	0	0		0	38	0	38		0	125	0	125
Growth Factor (%):	1	1	1			1	1	1			1	1	1			1	1	1	
No-Build 2020 Volumes:	0	0	0	0		0	0	0	0		0	39	0	39		0	128	0	128
Total New Trips:	4	0	11	15		0	0	0	0		0	5	3	8		3	3	0	6
Pass-by Trips:	3	0	3	6		0	0	0	0		0	-3	3	0		3	-3	0	0
Future 2020 Traffic Volumes:	7	0	14	21		0	0	0	0		0	41	6	47		6	128	0	134

P.M. Peak Hour

	Private Road Northbound					Private Driveway Southbound					Ashwood Parkway Eastbound					Ashwood Parkway Westbound			
Condition	L	T	R	Tot		L	T	R	Tot		L	T	R	Tot		L	T	R	Tot
Existing 2018 Volumes:	0	0	0	0		0	0	0	0		0	131	0	131		0	42	0	42
Growth Factor (%):	1	1	1			1	1	1			1	1	1			1	1	1	
No-Build 2020 Volumes:	0	0	0	0		0	0	0	0		0	134	0	134		0	43	0	43
Total New Trips:	6	0	16	22		0	0	0	0		0	5	3	8		3	4	0	7
Pass-by Trips:	2	0	2	4		0	0	0	0		0	-2	2	0		2	-2	0	0
Future 2020 Traffic Volumes:	8	0	18	26		0	0	0	0		0	137	5	142		5	45	0	50

18-189 Ashwood Restaurant Park, Ashford Dunwoody, Georgia

Traffic Volumes

A&R Engineering
April 2019

6. Ashwood @ Site Drwy 1

A.M. Peak Hour

Condition	Site Driveway 1 Northbound				- Southbound				Ashwood Parkway Eastbound				Ashwood Parkway Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2018 Volumes:	0	0	0	0	0	0	0	0	0	40	0	40	0	137	0	137
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
No-Build 2020 Volumes:	0	0	0	0	0	0	0	0	0	41	0	41	0	140	0	140
Total New Trips:	1	0	54	55	0	0	0	0	0	16	4	20	66	20	0	86
Pass-by Trips:	7	0	65	72	0	0	0	0	0	-9	9	0	65	-7	0	58
Future 2020 Traffic Volumes:	8	0	119	127	0	0	0	0	0	48	13	61	131	153	0	284

P.M. Peak Hour

Condition	Site Driveway 1 Northbound				- Southbound				Ashwood Parkway Eastbound				Ashwood Parkway Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing 2018 Volumes:	0	0	0	0	0	0	0	0	0	193	0	193	0	54	0	54
Growth Factor (%):	1	1	1		1	1	1		1	1	1		1	1	1	
No-Build 2020 Volumes:	0	0	0	0	0	0	0	0	0	197	0	197	0	55	0	55
Total New Trips:	1	0	79	80	0	0	0	0	0	24	4	28	64	19	0	83
Pass-by Trips:	7	0	82	89	0	0	0	0	0	-7	7	0	82	-7	0	75
Future 2020 Traffic Volumes:	8	0	161	169	0	0	0	0	0	214	11	225	146	67	0	213

COPY

AMENDMENT APPLICATION

City of Dunwoody Georgia

Community Development
4800 Ashford Dunwoody Road | Dunwoody, GA 30338
Phone: (678) 382-6800 | Fax: (770) 396-4828

*** Applicant Information:**

Company Name: Branch Ashwood Associates, L.P.
Contact Name: c/o Laurel David, The Galloway Law Group, LLC,
Address: 3500 Lenox Road NE, Suite 760, Atlanta, 30326
Phone: 404-965-3680 Fax: _____ Email: laurel@glawgp.com
Pre-application conference date (required): September 11

*** Owner Information:** ☒ Check here if same as applicant

Owner's Name: _____
Owner's Address: _____
Phone: _____ Fax: _____ Email: _____

*** Property Information:**

Property Address: various - see list attached Parcel ID: _____
Current Zoning Classification: C-1c
Requested Zoning Classification: C-1c with a modification of conditions to replace a bank with a medical service/office/restaurant/retail use

*** Applicant Affidavit:**

I hereby certify that to the best of my knowledge, this amendment application form is correct and complete. If additional materials are determined to be necessary, I understand that I am responsible for filing additional materials as specified by the City of Dunwoody Zoning Ordinance. I certify that I, the applicant (if different), am authorized to act on the owner's behalf, pursuant to this application and associated actions.

Applicant's Name: Jack T Hayloft
Applicant's Signature: _____ Date: 11/4/19

*** Notary:**

Sworn to and subscribed before me this 4th Day of November, 2019
Notary Public: Marianne Boggs
Signature: Marianne Boggs
My Commission Expires: 5-22-22

MARIANNE BOGGS NOTARY PUBLIC FORSYTH COUNTY, GEORGIA My Commission Expires 05-22-2022

RECEIVED 11-5-19

Additional Property Owner(s) Notarized Certification

City of Dunwoody Georgia

Community Development
4800 Ashford Dunwoody Road | Dunwoody, GA 30338
Phone: (678) 382-6800 | Fax: (770) 396-4828

I hereby certify that to the best of my knowledge, this amendment form is correct and complete. If additional materials are determined to be necessary, I understand that I am responsible for filing additional materials as specified by the City of Dunwoody Zoning Ordinance. I certify that the applicant(s) (if different) are authorized to act on my behalf, pursuant to this application and associated actions.

✱ **Property Owner (If Applicable):**

Owner Name: Branch Ashwood Associates, L.P.
Signature: _____ Date: _____
Address: c/o Laurel David, The Galloway Law Group, LLC, 3500 Lenox Rd., Suite 760, Atlanta 30326
Phone: 404-965-3680 Fax: _____ Email: laurel@glawgp.com
Sworn to and subscribed before me this 4th Day of November, 20 19
Notary Public: MARIANNE BOGGS
Marianne Boggs

MARIANNE BOGGS NOTARY PUBLIC Forsyth County, Georgia My Commission Expires 05-22-2022

✱ **Property Owner (If Applicable):**

Owner Name: _____
Signature: _____ Date: _____
Address: _____
Phone: _____ Fax: _____ Email: _____
Sworn to and subscribed before me this _____ Day of _____, 20_____
Notary Public:

✱ **Property Owner (If Applicable):**

Owner Name: _____
Signature: _____ Date: _____
Address: _____
Phone: _____ Fax: _____ Email: _____
Sworn to and subscribed before me this _____ Day of _____, 20_____
Notary Public:

Campaign Disclosure Statement

City of Dunwoody Georgia

Community Development

4800 Ashford Dunwoody Road | Dunwoody, GA 30338
Phone: (678) 382-6800 | Fax: (770) 396-4828

Have you, within the two years immediately preceding the filing of this application, made campaign contributions aggregating $250.00 or more to a member of the City of Dunwoody City Council or a member of the City of Dunwoody Planning Commission?

☐ YES ☒ NO

✱ **Applicant / Owner:** Branch Ashwood Associates, L.P.

Signature: _____ Date: 11/4/19

Address: c/o Laurel David, The Galloway Law Group, LLC, 3500 Lenox Rd., Suite 760, Atlanta 30326

If the answer above is yes, please complete the following section:

Date	Government Official	Official Position	Description	Amount

Campaign Disclosure Statement

City of Dunwoody Georgia

Community Development

4800 Ashford Dunwoody Road | Dunwoody, GA 30338
Phone: (678) 382-6800 | Fax: (770) 396-4828

Have you, within the two years immediately preceding the filing of this application, made campaign contributions aggregating $250.00 or more to a member of the City of Dunwoody City Council or a member of the City of Dunwoody Planning Commission?

☐ YES ☑ NO

✱ **Applicant / Owner:** Branch Ashwood Associates, L.P.

Signature: _____ Date: 11/4/19

Address: Branch Laurel David, The Galloway Law Group, LLC, 3500 Lenox Rd., Suite 760, Atlanta 30326

If the answer above is yes, please complete the following section:

Date	Government Official	Official Position	Description	Amount

Campaign Disclosure Statement

City of Dunwoody Georgia

Community Development

4800 Ashford Dunwoody Road | Dunwoody, GA 30338
Phone: (678) 382-6800 | Fax: (770) 396-4828

Have you, within the two years immediately preceding the filing of this application, made campaign contributions aggregating $250.00 or more to a member of the City of Dunwoody City Council or a member of the City of Dunwoody Planning Commission? ☐ YES ☒ NO

* **Applicant / Owner:** Branch Ashwood Associates, L.P. (as attorney for Applicant / Owner)

Signature: Laurel David Date: 11/4/19

Address: Laurel David, The Galloway Law Group, LLC, 3500 Lenox Rd., Suite 760, Atlanta 30326

If the answer above is yes, please complete the following section:

Date	Government Official	Official Position	Description	Amount

PROPERTY LIST

APPLICATION FOR ZONING MODIFICATION

CITY OF DUNWOODY, GEORGIA

The Property that is the subject of Application for Zoning Modification submitted by Branch Ashwood Associates, L.P., consists of the following properties:

Tax Parcel: 18 350 02 001
Site Address: 4720 ASHFORD DUNWOODY RD

Tax Parcel: 18 350 02 003
Site Address: 700 ASHWOOD PKWY

Tax Parcel: 18 349 01 048
Site Address: 600 ASHWOOD PKWY

Tax Parcel: 18 349 01 046
Site Address: 500 ASHWOOD PKWY

Tax Parcel: 18 349 01 037
Site Address: 1250 MEADOW LANE RD

The combined area of these five (5) lots is approximately 10.0574 acres.

"Ashwood Parkway"

PROPERTY DESCRIPTIONS

Overall Property

All that tract or parcel of land lying and being in Land Lots 349 & 350, 18th District, DeKalb County, Georgia and being more particularly described as follows:

Beginning at the east end of a cornered intersection of the Westerly Right-of-Way Line of Ashford Dunwoody Road, (apparent 107' width), and the Northerly Right-of-Way Line of Meadow Lane Road (apparent variable width); thence, leaving said Point of Beginning and running with the said cornered intersection between the said roads

1. South 84° 39' 44" West, 24.00 feet; thence,
2. South 05° 20' 16" East, 10.00 feet; thence,
3. South 10° 06' 16" East, 3.47 feet to the said line of Meadow Lane Road; thence, running with the said line of Meadow Lane Road
4. South 89° 40' 43" West, 133.62 feet; thence,
5. 196.33 feet along the arc of a curve deflecting to the right, having a radius of 4634.13 feet and a chord bearing and distance of North 89° 06' 28" West, 196.31 feet; thence,
6. North 87° 53' 39" West, 90.57 feet; thence,
7. North 00° 20' 08" East, 12.01 feet to a nail found; thence,
8. North 87° 53' 39" West, 51.89 feet; thence,
9. 97.53 feet along the arc of a curve deflecting to the right, having a radius of 1275.56 feet and a chord bearing and distance of North 85° 42' 13" West, 97.51 feet; thence,
10. South 83° 34' 25" West, 49.63 feet; thence,
11. 45.62 feet along the arc of a curve deflecting to the right, having a radius of 1287.56 feet and a chord bearing and distance of North 80° 20' 41" West, 45.62 feet to a capped ½" rebar found; thence, leaving the said line of Meadow Lane Road
12. North 00° 20' 08" East, 333.47 feet; thence,
13. North 44° 53' 53" West, 160.13 feet to the South line of Ashford Parkway (apparent variable width); thence, running with the said line of Ashford Parkway
14. North 45° 06' 07" East, 182.92 feet; thence,
15. 229.49 feet along the arc of a curve deflecting to the right, having a radius of 257.82 feet and a chord bearing and distance of North 70° 36' 07" East, 221.99 feet; thence,

16. South 83° 53' 53" East, 163.98 feet; thence,

17. 135.02 feet along the arc of a curve deflecting to the left, having a radius of 726.08 feet and a chord bearing and distance of South 89° 13' 32" East, 134.83 feet to a capped ½" rebar found; thence,

18. North 85° 26' 50" East, 10.95 feet to a curved intersection of the said Ashford Parkway and the said Ashford Dunwoody Road; thence, running along the said curved intersection

19. 140.18 feet along the arc of a curve deflecting to the right, having a radius of 90.03 feet and a chord bearing and distance of South 49° 56' 44" East, 126.44 feet to the said West line of Ashford Dunwoody Parkway; thence, running with the said West line of Ashford Dunwoody Parkway

20. South 05° 20' 16" East, 565.79 feet to the Point of Beginning, containing 438,099 square feet or 10.0574 acres of land, more or less.

Property is subject to all easements and rights of way recorded and unrecorded.

LETTER OF INTENT
APPLICATION FOR MODIFICATION OF ZONING CONDITIONS
CITY OF DUNWOODY, GEORGIA

The Owner and Applicant, Branch Ashwood Associates, L.P. ("Branch"), requests a Modification of Zoning Conditions for approximately 10.1 acres of land located at 4720 Ashford Dunwoody Road, 1250 Meadow Lane Road, and 500, 600, and 700 Ashwood Parkway, Dunwoody, Georgia (Parcel Identification Numbers 18 350 02 001 & -003, 18 349 01 037, -046, & -048) (the "Property"). The Property was zoned C-1 with conditions June 10, 2019 (MA 19-01), which included a master plan depicting a 2,800 square foot bank use in the southwest corner of the Property. The Zoning Board of Appeals approved several variances for the Property on July 11, 2019 (ZBA 19-11).

Branch is submitting this application requesting the C-1 conditions be modified to replace a bank use shown on the site plan in the southwest corner of the site with 4,700 square foot medical service/office/restaurant/retail use. This request for a change of use for the one building is the only change being requested.

The proposed change will not affect the proposed private drive connection between Meadow Lane and Ashwood Parkway or any other aspect of the overall Master Plan for the Property. Branch is proceeding to redevelop and revitalize the Property with additional retail, commercial and restaurant uses, introduce patio seating, pedestrian walkways and gathering areas, improve and add streetscape elements to its entire length of both Meadow Lane and Ashford Dunwoody Road, including a portion of the new Perimeter Commuter Trail, and construct a new drive to be open for use by the general public to connect Meadow Lane and Ashwood Parkway.

The Applicant responds to the following criteria for the granting of zoning modifications:

a. **Whether the zoning proposal is in conformity with the policy and intent of the comprehensive plan;**

The requested zoning modification is consistent with the spirit and text of the City's 2015-2035 Comprehensive Plan, which assigns the Property to the Perimeter Center Character Area (Comprehensive Plan at Page 15) and the Perimeter Center Future Land Use classification (Comprehensive Plan at Page 31). Like other properties within these categories, the proposed development will contain thriving businesses that will provide jobs and tax revenue to the City. The proposed use is appropriate in relation to both the size of the Property and to the size, scale and massing of adjacent and nearby lots in the area, which contain approved commercial, retail, multi-

family and other residential uses.

b. Whether the zoning proposal will permit a use that is suitable in view of the use and development of adjacent and nearby properties;

Granting the zoning modification requested by Branch will permit a use that is suitable in view of the uses and development of adjacent and nearby properties. Support of the zoning modification request will allow Branch to respond to current market demand for medical service, office, restaurant and retail uses. The proposed development will contain thriving businesses that will complement existing nearby commercial uses, be beneficial to the economy of the surrounding area, provide dining and retail options to nearby and adjacent office buildings, and provide employment opportunities.

c. Whether the property to be affected by the zoning proposal has a reasonable economic use as currently zoned;

The existing zoning of the Property only allows for a bank use. While such a use had expressed a credible intent during the previous rezoning of the property, it did not come to fruition. Support of the zoning modification request will allow Branch to respond to current market demand for medical service, office, restaurant and retail uses.

The factors affecting the economic use of the Property still apply. The existing buildings are in need of repair and the water body/stormwater detention is in need of water quality upgrades consistent with current code requirements. The Property is an unusual shape with multiple road frontages. In addition, Branch will install road improvements on approximately 1.5 acres of the Property, thereby losing the value of that land as developable property. A further complication is that the topography on the Property varies from the intersection of Ashwood Parkway and Ashford Dunwoody Road south to the intersection of Meadow Lane Road and Ashford Dunwoody Road. In other words, if the Property grade is balanced near one intersection, it will increase the imbalance of the grade at the other intersection. This severely limits the economic value of the Property.

d. Whether the zoning proposal will adversely affect the existing use or usability of adjacent or nearby property;

The proposed uses are allowed uses in the C-1 district and are appropriate in relation to the uses and usability of adjacent and nearby lots in the area. The proposed development will contain thriving businesses that will complement existing nearby commercial retail, multi-family and other residential uses, be beneficial to the economy of the surrounding area, provide dining and retail options to nearby and adjacent office buildings, and provide employment opportunities. The Applicant's proposal only

seeks to modify zoning conditions limiting the development of a small portion of the Property to a specific use (bank). However, because the Applicant's proposal otherwise the same as that included in the original zoning, it will not affect the existing use or usability of adjacent or nearby property.

e. Whether there are other existing or changing conditions affecting the use and development of the property that provide supporting grounds for either approval or disapproval of the zoning proposal;

As mentioned above, the Applicant proposes uses that are currently allowed, but wishes to change zoning conditions that tie the development of a small portion of the Property to a specific use (bank).

f. Whether the zoning proposal will adversely affect historic buildings, sites, districts, or archaeological resources; and

The Applicant is not aware of any historic buildings, sites, districts, or archaeological resources on the site.

g. Whether the zoning proposal will result in a use that will or could cause an excessive or burdensome use of existing streets, transportation facilities, utilities, or schools.

The overall design of the redevelopment of the Property emphasizes pedestrian and cycling access. In addition, Branch has made significant contributions to ameliorating traffic congestion, including the construction of a private drive connecting Meadow Lane and Ashwood Parkway. Branch has coordinated sewer access with DeKalb County. Beyond sewers, adequate public services, facilities and utilities exist to serve the Property.

Because this zoning modification request is consistent with the foregoing standards established at Section 27-335 of the Zoning Ordinance, Branch respectfully asks that the Mayor and City Council of the City of Dunwoody grant this zoning modification as requested.

THE GALLOWAY LAW GROUP

By: _____

Laurel A. David
Attorney for Applicant

3500 Lenox Road NE, Suite 760
Atlanta, Georgia 30326
(404) 965-3680

ALTA/NSPS LAND TITLE SURVEY
FOR
BRANCH ASHWOOD ASSOCIATES, LLC &
CHICAGO TITLE INSURANCE COMPANY
(600 ASHWOOD PARKWAY)
LOCATED IN
LAND LOTS 349 & 350, 18TH DISTRICT
DEKALB COUNTY, GEORGIA

AREA TABLE

PARCEL 1	193,561 SQ.FT.	OR 4.4435	AC.
PARCEL 2	186,579 SQ.FT.	OR 4.2833	AC.
PARCEL 3	18,880 SQ.FT.	OR 0.4334	AC.
PARCEL 4	22,889 SQ.FT.	OR 0.5255	AC.
PARCEL 5	16,190 SQ.FT.	OR 0.3717	AC.

TOTAL AREA 438,099 SQ.FT. OR 10.0574 AC.

SITE INFORMATION

CURRENT OWNER: BRANCH ASHWOOD ASSOCIATES LLC
DB. 20527 PG. 224 - 236

TAX PARCEL ID #
TRACT 1: 18 350 02 001
TRACT 2: 18 349 01 037
TRACT 3: 18 350 02 003
TRACT 4: 18 349 01 048
TRACT 5: 18 349 01 046

ADDRESS: 600 ASHWOOD PARKWAY, ATLANTA, GA 30338

ZONING: C-1
JURISDICTION: CITY OF DUNWOODY

SETBACKS:
FRONT -50 FEET
SIDE -20 FEET
REAR -30 FEET

PARKING COUNT:
REGULAR PARKING - 238
HANDICAPPED PARKING - 10
TOTAL PARKING COUNT - 248

REFERENCE MATERIAL

1. ALTA/ACSM LAND TITLE SURVEY OF ASHWOOD RESTAURANT PARK FOR BRANCH ASHWOOD ASSOCIATES, LLC PREPARED BY HDR ENGINEERING, INC. DATED DECEMBER 18, 2007.
2. LIMITED WARRANTY DEED RECORDED IN DB. 20527 PG. 224 AMONG THE LAND RECORDS OF DEKALB COUNTY, GEORGIA
3. LIMITED WARRANTY DEED RECORDED IN DB. 25847 PG. 293 AFORESAID RECORDS

TITLE NOTES

ACCORDING TO THE "FIRM" (FLOOD INSURANCE RATE MAP) OF DEKALB COUNTY, GEORGIA (PANEL NUMBERS 13089C0012J), DATED MAY 16, 2013; NO PORTION OF THIS PROPERTY LIES WITHIN A SPECIAL FLOOD HAZARD AREA.

SUBJECT PROPERTY HAS DIRECT VEHICULAR ACCESS TO THE PUBLIC RIGHT OF WAY OF ASHWOOD PARKWAY & MEADOW LANE ROAD.

AS OF THE DATE OF THIS SURVEY, TITLE TO SUBJECT PROPERTY APPPEARS TO LIE VESTED IN BRANCH ASHWOOD ASSOCIATES, LLC, A GEORGIA LIMITED LIABILITY COMPANY, PER DEED RECORDED AMONG THE LAND RECORDS OF DEKALB COUNTY, GEORGIA IN DEED BOOK 20527 PAGE 224

THIS SURVEY WAS PREPARED WITH THE BENEFIT OF A TITLE REPORT, PROVIDED BY CHICAGO TITLE INSURANCE COMPANY, COMMITMENT NO. 7230610-75412608, WITH AN EFFECTIVE DATE OF DECEMBER 26, 2007 AT 10:42 A.M. WHICH REVEALS THE FOLLOWING ENCUMBRANCES:

3. RIGHTS OF TENANTS IN POSSESSION, AS TENANTS ONLY, UNDER RECORDED AND UNRECORDED LEASES, INCLUDING BUT NOT LIMITED TO:
(A)SHORT FORM OF LEASE BETWEEN MONY LIFE INSURANCE COMPANY AND MCCORMICK & SCHMICK OPERATING CORP., DATED AS OF FEBRUARY 21, 2000, FILED FOR RECORD APRIL 4, 2000 AT 2:18 P.M., RECORDED IN DEED BOOK 11289, PAGE 575, RECORDS OF DEKALB COUNTY, GEORGIA;
(B)SHORT FORM OF LEASE BY AND BETWEEN MONY LIFE INSURANCE COMPANY AND BRAVO DEVELOPMENT, INC., DATED AS OF MAY 29, 2002, FILED FOR RECORD AUGUST 27, 2002 AT 3:40 P.M., RECORDED IN DEED BOOK 13546, PAGE 53, AFORESAID RECORDS; AND
(C)UNRECORDED LEASE BY AND BETWEEN THE MUTUAL LIFE INSURANCE COMPANY OF NEW YORK, AS LANDLORD, AND P.F. CHANG'S CHINA BISTRO, INC., AS TENANT, DATED JULY 18, 1997.
(AFFECTS SUBJECT PROPERTY, CONDITIONS BLANKET IN NATURE.)

4. EASEMENT FROM H.J. WILSON TO GEORGIA POWER COMPANY, DATED OCTOBER 12, 1934, FILED FOR RECORD FEBRUARY 4, 1935 AT 10:00 A.M., RECORDED IN DEED BOOK 408, PAGE 407, AFORESAID RECORDS.
(MAY AFFECT SUBJECT PROPERTY, TOO VAGUE TO PLOT.)

5. EASEMENT FROM S.T. SPRUILL TO GEORGIA POWER COMPANY DATED FEBRUARY 1, 1946, FILED FOR RECORD APRIL 1, 1946 AT 12:00 P.M., RECORDED IN DEED BOOK 646, PAGE 271, AFORESAID RECORDS.
(MAY AFFECT SUBJECT PROPERTY, TOO VAGUE TO PLOT.)

6. EASEMENT FROM C.C. TATE TO GEORGIA POWER COMPANY DATED MAY 5, 1948, FILED FOR RECORD OCTOBER 13, 1948 AT 5:00 P.M., RECORDED IN DEED BOOK 743, PAGE 366, AFORESAID RECORDS.
(MAY AFFECT SUBJECT PROPERTY, TOO VAGUE TO PLOT.)

7. EASEMENT FROM H.J. WILSON TO GEORGIA POWER COMPANY, FILED FOR RECORD JANUARY 20, 1950 AT 4:00 P.M., RECORDED IN DEED BOOK 800, PAGE 134, AFORESAID RECORDS.
(MAY AFFECT SUBJECT PROPERTY, TOO VAGUE TO PLOT.)

8. RIGHT OF WAY EASEMENT FROM E.N. O'BEIRNE TO GEORGIA POWER COMPANY, DATED JULY 17, 1961, FILED FOR RECORD AUGUST 28, 1961 AT 12:02 P.M., RECORDED IN DEED BOOK 1600, PAGE 330, AFORESAID RECORDS.
(MAY AFFECT SUBJECT PROPERTY, TOO VAGUE TO PLOT.)

9. SANITARY SEWER EASEMENT FROM JIM COWART & ASSOC., INC. TO DEKALB COUNTY, GEORGIA, ITS SUCCESSORS AND ASSIGNS, DATED JANUARY 10, 1979, FILED FOR RECORD JANUARY 18, 1979 AT 3:38 P.M., RECORDED IN DEED BOOK 3971, PAGE 82, AFORESAID RECORDS, AS SHOWN ON PLAT OF SURVEY ENTITLED "ALTA/ACSM LAND TITLE SURVEY OF ASHWOOD RESTAURANT PARK FOR BRANCH ASHWOOD ASSOCIATES, LLC, AND CHICAGO TITLE INSURANCE COMPANY", PREPARED BY HDR ENGINEERING, INC., BEARING THE SEAL AND CERTIFICATION OF AIDAN P. DEEGAN, GEORGIA REGISTERED LAND SURVEYOR NUMBER 2929, DATED DECEMBER 18, 2007 (THE "SURVEY").
(AFFECTS SUBJECT PROPERTY, DEED TOO VAGUE TO PLOT, SHOWN PER ABOVE REFERENCED SURVEY.)

10. DRAINAGE RIGHTS CONTAINED IN THAT CERTAIN RIGHT OF WAY DEED FROM ONNIE MAE SPRUILL TO DEKALB COUNTY, A POLITICAL SUBDIVISION OF THE STATE OF GEORGIA, DATED OCTOBER 28, 1980, FILED FOR RECORD OCTOBER 30, 1980 AT 4:34 P.M., RECORDED IN DEED BOOK 4366, PAGE 4, AFORESAID RECORDS.
(AFFECTS SUBJECT PROPERTY, DRAINAGE RIGHT CONDITIONS BLANKET IN NATURE, ALSO ESTABLISHES CURRENT RIGHT OF WAY LINE OF ASHFORD DUNWOODY ROAD.)

11. AMENDED AND RESTATED DECLARATION OF PROTECTIVE COVENANTS FOR ASHWOOD-DEKALB COUNTY, BY AND AMONG MONY LIFE INSURANCE COMPANY, A NEW YORK CORPORATION F/K/A THE MUTUAL LIFE INSURANCE COMPANY OF NEW YORK, HPT IHG PROPERTIES TRUST, A MARYLAND REAL ESTATE INVESTMENT TRUST, MARYLAND CASUALTY COMPANY, A MARYLAND CORPORATION, TEAGUE ASHWOOD, LLC, A GEORGIA LIMITED LIABILITY COMPANY, TRANSWESTERN/MONY ASHWOOD 900, L.L.C., A DELAWARE LIMITED LIABILITY COMPANY AND TRANSWESTERN/MONY ASHWOOD 1200, L.L.C., A DELAWARE LIMITED LIABILITY COMPANY, DATED AS OF FEBRUARY 17, 2004, FILED FOR RECORD FEBRUARY 18, 2004 AT 3:32 P.M., RECORDED IN DEED BOOK 15821, PAGE 733, AFORESAID RECORDS. **(AFFECTS SUBJECT PROPERTY, CONDITIONS BLANKET IN NATURE.)**

12. DECLARATION OF EASEMENTS BY LAING PROPERTIES, INC., A DELAWARE CORPORATION, DATED MARCH 1, 1983, FILED FOR RECORD MARCH 2, 1983 AT 2:24 P.M., RECORDED IN DEED BOOK 4723, PAGE 361, AFORESAID RECORDS; AS AMENDED BY AMENDED AND RESTATED DECLARATION OF PROTECTIVE COVENANTS FOR ASHWOOD-DEKALB COUNTY, BY AND AMONG MONY LIFE INSURANCE COMPANY, A NEW YORK CORPORATION F/K/A THE MUTUAL LIFE INSURANCE COMPANY OF NEW YORK, HPT IHG PROPERTIES TRUST, A MARYLAND REAL ESTATE INVESTMENT TRUST, MARYLAND CASUALTY COMPANY, A MARYLAND CORPORATION, TEAGUE ASHWOOD, LLC, A GEORGIA LIMITED LIABILITY COMPANY, TRANSWESTERN/MONY ASHWOOD 900, L.L.C., A DELAWARE LIMITED LIABILITY COMPANY AND TRANSWESTERN/MONY ASHWOOD 1200, L.L.C., A DELAWARE LIMITED LIABILITY COMPANY, DATED AS OF FEBRUARY 17, 2004, FILED FOR RECORD FEBRUARY 18, 2004 AT 3:32 P.M., RECORDED IN DEED BOOK 15821, PAGE 733, AFORESAID RECORDS.
NOTE:THE DRAINAGE EASEMENT AREA AND THE ROAD EASEMENT PROPERTY AS CONTAINED IN THIS DECLARATION HAVE BEEN DEDICATED TO DEKALB COUNTY BY VIRTUE OF THAT CERTAIN RIGHT OF WAY DEED FROM THE MUTUAL LIFE INSURANCE COMPANY OF NEW YORK, A NEW YORK CORPORATION TO DEKALB COUNTY, A POLITICAL SUBDIVISION OF THE STATE OF GEORGIA, DATED AUGUST 24, 1987, FILED FOR RECORD AUGUST 28, 1987 AT 10:35 A.M., RECORDED IN DEED BOOK 5931, PAGE 402, AFORESAID RECORDS.
(AFFECTS SUBJECT PROPERTY, CONDITIONS BLANKET IN NATURE.)

13. EASEMENT AS CONTAINED IN RIGHT OF WAY DEED FROM LAING PROPERTIES, INC. TO DEKALB COUNTY, A POLITICAL SUBDIVISION OF THE STATE OF GEORGIA, DATED APRIL 1, 1983, FILED FOR RECORD APRIL 1, 1983 AT 3:16 P.M., RECORDED IN DEED BOOK 4737, PAGE 304, AFORESAID RECORDS (AFFECTS APPURTENANT EASEMENTS ONLY). **(MAY AFFECT SUBJECT PROPERTY, TOO VAGUE TO PLOT.)**

14. EASEMENT AS CONTAINED IN RIGHT OF WAY DEED FROM LAING PROPERTIES, INC. TO DEKALB COUNTY, A POLITICAL SUBDIVISION OF THE STATE OF GEORGIA, DATED APRIL 1, 1983, FILED FOR RECORD APRIL 1, 1983 AT 3:16 P.M., RECORDED IN DEED BOOK 4737, PAGE 305, AFORESAID RECORDS.
(MAY AFFECT SUBJECT PROPERTY, TOO VAGUE TO PLOT.)

15. EASEMENT FROM LAING PROPERTIES, INC. TO GEORGIA POWER COMPANY, DATED AUGUST 15, 1983, FILED FOR RECORD DECEMBER 7, 1983 AT 9:33 A.M., RECORDED IN DEED BOOK 4882, PAGE 125, AFORESAID RECORDS (AFFECTS APPURTENANT EASEMENTS ONLY). **(MAY AFFECT SUBJECT PROPERTY, TOO VAGUE TO PLOT.)**

16. SEWER EASEMENT FROM LAING PROPERTIES, INC. TO DEKALB COUNTY, GEORGIA, DATED MARCH 7, 1984, FILED FOR RECORD MARCH 9, 1984 AT 10:29 A.M., RECORDED IN DEED BOOK 4935, PAGE 329, AFORESAID RECORDS, AS SHOWN ON THE SURVEY. **(AFFECTS SUBJECT PROPERTY, SHOWN ON SURVEY.)**

17. DECLARATION OF DRIVEWAY EASEMENT BY THE MUTUAL LIFE INSURANCE COMPANY OF NEW YORK, A NEW YORK CORPORATION, DATED JULY 25, 1986, FILED FOR RECORD JULY 28, 1986 AT 10:35 A.M., RECORDED IN DEED BOOK 5536, PAGE 235, AFORESAID RECORDS, AS SHOWN ON THE SURVEY.
(AFFECTS SUBJECT PROPERTY, SHOWN ON SURVEY.)

18. EASEMENT FROM THE MUTUAL LIFE INSURANCE COMPANY OF NEW YORK TO GEORGIA POWER COMPANY, DATED APRIL 3, 1989, FILED FOR RECORD APRIL 18, 1997 AT 8:09 A.M., RECORDED IN DEED BOOK 6410, PAGE 592, AFORESAID RECORDS, AS SHOWN ON THE SURVEY. **(AFFECTS SUBJECT PROPERTY, SHOWN ON SURVEY.)**

19. EASEMENT FROM THE MUTUAL LIFE INSURANCE CO. OF NEW YORK, TO GEORGIA POWER COMPANY, DATED DECEMBER 12, 1997, FILED FOR RECORD MAY 1, 1998 AT 2:34 P.M., RECORDED IN DEED BOOK 9974, PAGE 351, AFORESAID RECORDS.
(AFFECTS SUBJECT PROPERTY, CONDITIONS BLANKET IN NATURE.)

20. DECLARATION OF EASEMENTS, COVENANTS, CONDITIONS AND RESTRICTIONS FOR ASHWOOD RESTAURANT COMPLEX BY THE MUTUAL LIFE INSURANCE COMPANY OF NEW YORK, DATED JULY 14, 1997, FILED FOR RECORD AUGUST 8, 1997 AT 8:30 A.M., RECORDED IN DEED BOOK 9562, PAGE 251, AFORESAID RECORDS; AS ASSIGNED BY ASSIGNMENT OF DECLARANT'S RIGHTS BY AND BETWEEN MONY LIFE INSURANCE COMPANY, A NEW YORK CORPORATION, AND BRANCH ASHWOOD ASSOCIATES, LLC, A GEORGIA LIMITED LIABILITY COMPANY, DATED AS OF DECEMBER 21, 2007, FILED FOR RECORD DECEMBER 26, 2007 AT 10:42 A.M., RECORDED IN DEED BOOK 20527, PAGE 237, AFORESAID RECORDS, BUT OMITTING ANY RESTRICTION BASED ON RACE, COLOR, RELIGION, SEX, HANDICAP, FAMILIAL STATUS, OR NATIONAL ORIGIN UNLESS AND ONLY TO THE EXTENT THAT SAID COVENANT (A) IS EXEMPT UNDER CHAPTER 42, SECTION 3607 OF THE UNITED STATES CODE OR (B) RELATES TO HANDICAP BUT DOES NOT DISCRIMINATE AGAINST HANDICAPPED PERSONS.
NOTE: THIS DECLARATION CONTAINS EASEMENTS, COVENANTS, CONDITIONS AND RESTRICTIONS BETWEEN THE LEASEHOLD INTERESTS AND THE UNDERLYING REVERSIONARY FEE INTEREST OF THE REMAINDER DEFINED THEREIN.
(AFFECTS SUBJECT PROPERTY, CONDITIONS BLANKET IN NATURE, ESTABLISHES TRACTS 3 TO 5.)

21. SIGN EASEMENT AGREEMENT BY AND BETWEEN THE MUTUAL LIFE INSURANCE COMPANY OF NEW YORK AND CENTRE ACQUISITIONS, LLC, DATED NOVEMBER 12, 1998, FILED FOR RECORD NOVEMBER 17, 1998 AT 2:39 P.M., RECORDED IN DEED BOOK 10309, PAGE 46, AFORESAID RECORDS; AS AMENDED BY FIRST AMENDMENT TO SIGN EASEMENT AGREEMENT BY AND BETWEEN MONY LIFE INSURANCE COMPANY, A NEW YORK CORPORATION F/K/A THE MUTUAL LIFE INSURANCE COMPANY OF NEW YORK AND HPT IHG PROPERTIES TRUST, A MARYLAND REAL ESTATE INVESTMENT TRUST, SUCCESSOR-IN-INTEREST TO CENTRE ACQUISITIONS, LLC, DATED AS OF SEPTEMBER 16, 2003, FILED FOR RECORD SEPTEMBER 17, 2003 AT 12:54 P.M., RECORDED IN DEED BOOK 15034, PAGE 288, AFORESAID RECORDS.
(AFFECTS SUBJECT PROPERTY, EASEMENT NOT PLOTTABLE.)

22. EASEMENT AS SET FORTH IN QUIT CLAIM DEED FROM MONY ASSETS CORP., A NEW YORK CORPORATION, TO ASHWOOD TWO JOINT VENTURE, A GEORGIA JOINT VENTURE, DATED JUNE 30, 1999, FILED FOR RECORD JULY 1, 1999 AT 12:23 P.M., RECORDED IN DEED BOOK 10714, PAGE 622, AFORESAID RECORDS, AS SHOWN ON THE SURVEY.
(AFFECTS SUBJECT PROPERTY, SHOWN ON SURVEY.)

23. SIGNAGE EASEMENT BY AND AMONG TRANSWESTERN/MONY ASHWOOD 900, L.L.C., A DELAWARE LIMITED LIABILITY COMPANY, AND MONY LIFE INSURANCE COMPANY, A NEW YORK CORPORATION F/K/A THE MUTUAL LIFE INSURANCE COMPANY OF NEW YORK, IN FAVOR OF TEAGUE ASHWOOD, LLC, A GEORGIA LIMITED LIABILITY COMPANY, DATED AS OF SEPTEMBER 16, 2003, FILED FOR RECORD SEPTEMBER 17, 2003 AT 12:54 P.M., RECORDED IN DEED BOOK 15034, PAGE 308, AFORESAID RECORDS.
(AFFECTS SUBJECT PROPERTY, CONDITIONS BLANKET IN NATURE.)

24. EMBANKMENTS OR CUTS WHICH SUPPORT OR ACCOMMODATE THE IMPROVEMENTS CONSTRUCTED IN CONNECTION WITH THAT CERTAIN TEMPORARY CONSTRUCTION EASEMENT FOR CONSTRUCTION OF DRIVEWAY, FROM MONY LIFE INSURANCE COMPANY TO DEKALB COUNTY, GEORGIA, AND THE GEORGIA DEPARTMENT OF TRANSPORTATION, DATED JUNE 10, 2005, FILED FOR RECORD DECEMBER 1, 2005 AT 8:43 A.M., RECORDED IN DEED BOOK 18169, PAGE 364, AFORESAID RECORDS.
(DOES NOT AFFECT SUBJECT PROPERTY DUE TO EXPIRATION.)

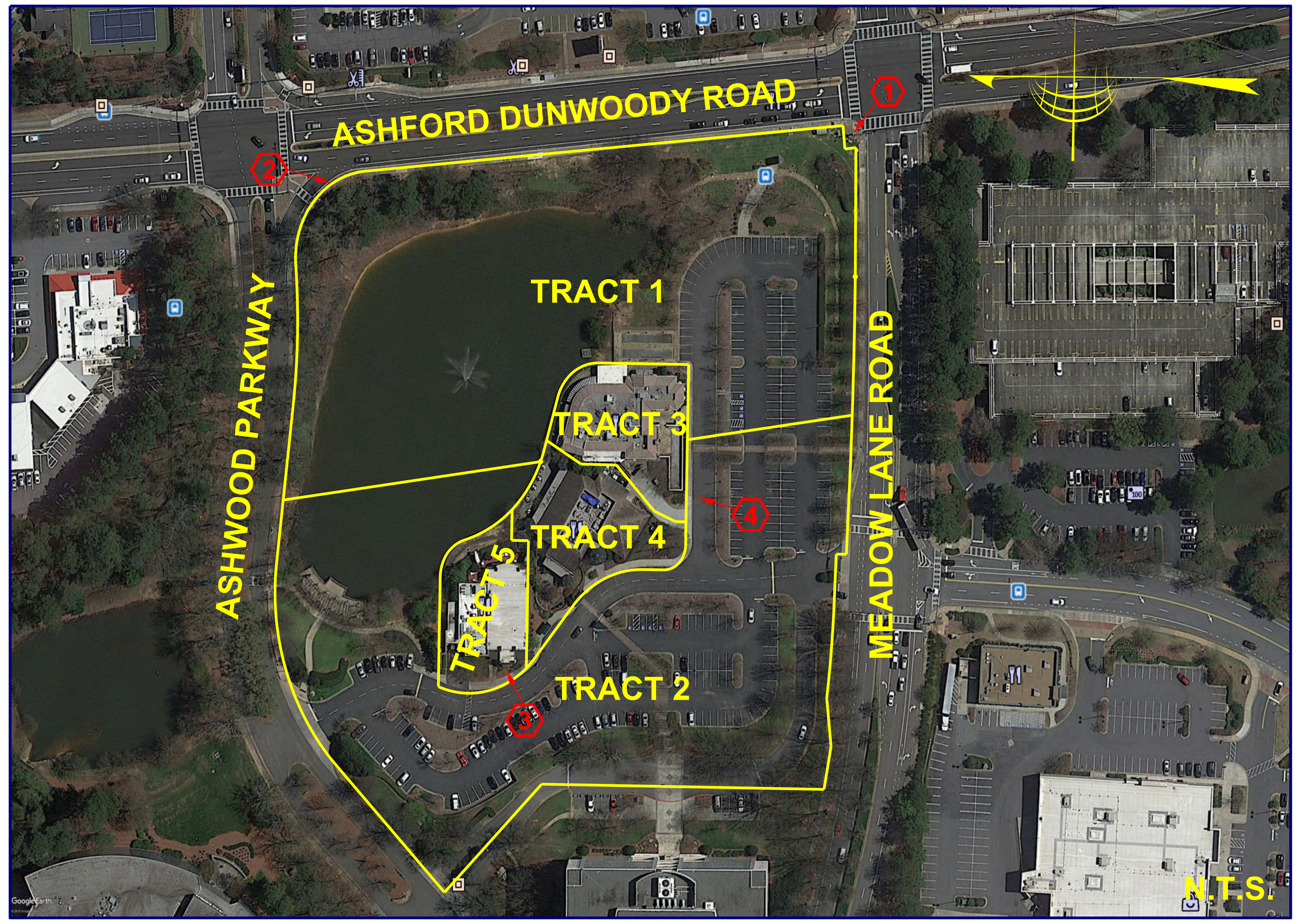
26. EASEMENT FROM THE MUTUAL LIFE INSURANCE COMPANY OF NEW YORK, TO GEORGIA POWER COMPANY, DATED MAY 15, 1989, FILED FOR RECORD JUNE 6, 1989 AT 9:40 A.M., RECORDED IN DEED BOOK 6446, PAGE 606, AFORESAID RECORDS, AS SHOWN ON THE SURVEY. **(AFFECTS SUBJECT PROPERTY, CONDITIONS BLANKET IN NATURE.)**

THIS SURVEY WAS PREPARED WITH THE BENEFIT OF A CERTIFICATE OF TITLE REPORT, PROVIDED BY TRINITY TITLE INSURANCE AGENCY, INC. FILE NO. 65754, WITH AN EFFECTIVE DATE OF JULY 16, 2018 AT 5:00 P.M. WHICH REVEALS THE FOLLOWING ENCUMBRANCES:

1. ACKNOWLEDGMENT REGARDING DECLARATION OF PROTECTIVE COVENANTS FOR ASHWOOD-DEKALB COUNTY, BY AND AMONG APG 1200, LLC, HPT TRS IHG-2, INC., JPMCC 2005 LDP2 OFFICE 900, LP, THE GRAMERCY CONDOMINIUMS, INC. (SUCCESSOR IN INTEREST TO ASHTON ATLANTA RESIDENTIAL, LLC), BRANCH ASHWOOD ASSOCIATES, LLC, AND WALTON ASHWOOD, LLC, DATED APRIL 30, 2015, FILED JUNE 23, 2015, RECORDED IN DEED BOOK 25009, PAGE 53, AFORESAID RECORDS. **(AFFECTS SUBJECT PROPERTY, CONDITIONS BLANKET IN NATURE.)**

2. ACKNOWLEDGMENT REGARDING DECLARATION OF PROTECTIVE COVENANTS FOR ASHWOOD-DEKALB COUNTY, BY AND AMONG ALBANY ROAD-ASHWOOD LLC,. HPT TRS IHG-2, INC., 900 ATLANTA OFFICE, LLC, THE GRAMERCY CONDOMINIUM ASSOCIATION, INC. (SUCCESSOR IN INTEREST TO ASHTON ATLANTA RESIDENTIAL, LLC), BRANCH ASHWOOD ASSOCIATES, LLC, AND WALTON ASHWOOD, LLC, DATED JUNE 5, 2017, FILED JUNE 8, 2017, RECORDED IN DEED BOOK 26303, PAGE 621, AFORESAID RECORDS. **(AFFECTS SUBJECT PROPERTY, CONDITIONS BLANKET IN NATURE.)**

SITE MAP



AERIAL IMAGE PROVIDED BY GOOGLE EARTH
IMAGERY DATED MARCH 14, 2018

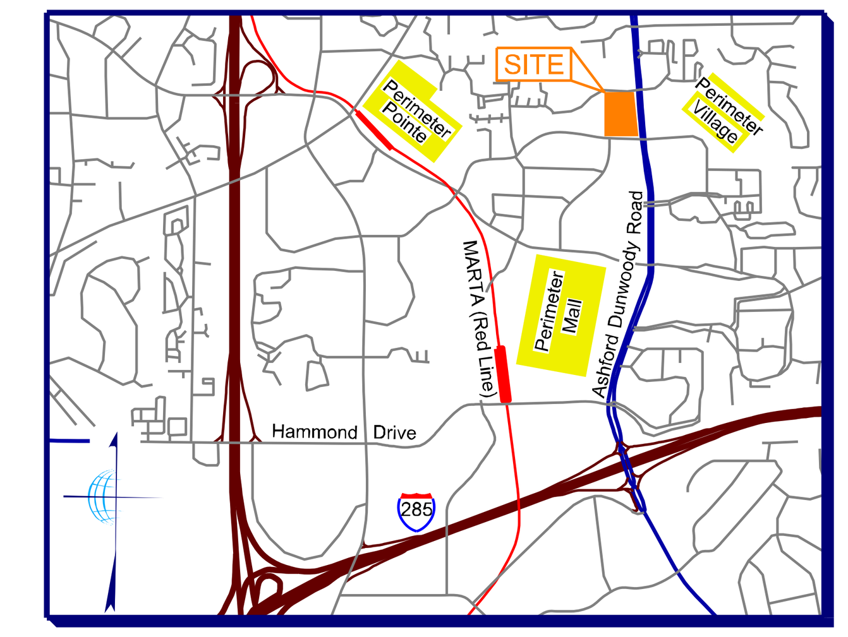
PHOTO #1

PHOTO #2

PHOTO #3

PHOTO #4

LOCATION MAP



NOT TO SCALE
LAT - 33°55'22.96" N
LONG - 84°20'48.26" W

SURVEY NOTES

EQUIPMENT USED:
A TRIMBLE "S" SERIES TOTAL STATION WAS USED TO OBTAIN ANGULAR MEASUREMENTS AND DISTANCE MEASUREMENTS.

A TRIMBLE R-10 DUAL FREQUENCY GPS UNIT WAS USED FOR ESTABLISHING CONTROL. A NETWORK ADJUSTED RTK SURVEY WAS PERFORMED AND ADJUSTED BY RELATIVE POSITIONAL ACCURACY.

CLOSURE STATEMENT:
THIS OVERALL SURVEY HAS BEEN CALCULATED FOR CLOSURE AND IS ACCURATE WITHIN ONE FOOT IN 186,400 FEET.

THE FIELD DATA UPON WHICH THIS SURVEY IS BASED, ARE WITHIN THE POSITIONAL TOLERANCES ALLOWED FOR ALTA/NSPS LAND TITLE SURVEYS PER THE 2016 MINIMUM TECHNICAL STANDARDS ESTABLISHED BY ALTA AND NSPS AND WAS ADJUSTED USING THE LEAST SQUARES METHOD.

THE BEARINGS SHOWN ON THIS SURVEY ARE COMPUTED ANGLES BASED ON A GRID BEARING BASE (GA WEST ZONE) NAD83.

DUE TO VARIANCES IN GPS EQUIPMENT, TECHNIQUES, FEDERAL ADJUSTMENTS TO STATE PLANE MODELS AND DAILY CONDITIONS IMPACTING GPS RECEPTIVITY, GPS SOLUTIONS MAY VARY FROM THOSE PROVIDED ON THIS SURVEY BOTH HORIZONTALLY AND VERTICALLY. ANY AND ALL CONTRACTORS, CONSULTANTS, INDIVIDUALS OR ENTITIES RELYING ON STATE PLANE COORDINATES TO RELATE TO DATA PROVIDED ON THIS SURVEY MUST LOCALIZE TO THE SURVEY CONTROL, BENCHMARKS OR PROPERTY MONUMENTATION, ESTABLISHED BY THIS SURVEY IN ORDER TO ENSURE ACCURACY OF DATA. THE OWNER, HIS EMPLOYEES, HIS CONSULTANTS, HIS CONTRACTORS, AND/OR HIS AGENTS SHALL HEREBY DISTINCTLY UNDERSTAND THAT THE SURVEYOR IS NOT RESPONSIBLE FOR ISSUES ENCOUNTERED DUE TO FAILURE TO LOCALIZE DIRECTLY TO THIS SURVEY DATUM.

ALL HORIZONTAL DISTANCES SHOWN ARE GROUND DISTANCES. MEASURING UNITS OF THIS SURVEY ARE IN U.S. SURVEY FEET.

CONTOURS ARE SHOWN AT TWO FOOT INTERVALS. ELEVATIONS ARE BASED ON RTK GLOBAL POSITIONING SYSTEMS OBSERVATION AND ARE RELATIVE TO NAVD 88 DATUM.

FIELD WORK FOR THIS PROPERTY WAS COMPLETED ON AUGUST 8, 2018.

INFORMATION REGARDING SIZE, LOCATION, AND SPECIES OF EXISTING TREES IS SHOWN HEREON. THERE IS NO CERTAINTY OF THE SIZE AND SPECIES OF THE SAID TREES WITHOUT VERIFICATION FROM THE DESIGNATED ARBORIST BY THE LOCAL REGULATORY AUTHORITY. THE OWNER, HIS EMPLOYEES, HIS CONSULTANTS, HIS CONTRACTORS, AND/OR HIS AGENTS SHALL HEREBY DISTINCTLY UNDERSTAND THAT THE SURVEYOR IS NOT RESPONSIBLE FOR THE CORRECTNESS OR SUFFICIENCY OF THIS INFORMATION SHOWN HEREON EXCEPT BY APPROVAL OF SAID AUTHORITY.

THIS SURVEY MAY NOT REPRESENT OFFSITE PAINT STRIPING TO THE ACCURACY REQUIRED FOR LANE DESIGN. TERRAMARK LOCATES THE EDGE OF PAVING AND CRITICAL POINTS TO REFLECT ACCURATE TOPOGRAPHIC DATA ONLY. ACCURACY OF PAINT LOCATIONS SHOULD BE VERIFIED WITH SURVEYOR PRIOR TO USING THIS SURVEY FOR DESIGN.

INFORMATION REGARDING THE REPUTED PRESENCE, SIZE, CHARACTER, AND LOCATION OF EXISTING UNDERGROUND UTILITIES AND STRUCTURES IS SHOWN HEREON. THERE IS NO CERTAINTY TO THE ACCURACY OF THIS INFORMATION AND IT SHALL BE CONSIDERED IN THAT LIGHT BY THOSE USING THIS DRAWING. THE LOCATION AND ARRANGEMENT OF UNDERGROUND UTILITIES AND STRUCTURES SHOWN HEREON MAY BE INACCURATE AND UTILITIES AND STRUCTURES NOT SHOWN MAY BE ENCOUNTERED. THE OWNER, HIS EMPLOYEES, HIS CONSULTANTS, HIS CONTRACTORS, AND/OR HIS AGENTS SHALL HEREBY DISTINCTLY UNDERSTAND THAT THE SURVEYOR IS NOT RESPONSIBLE FOR THE CORRECTNESS OR SUFFICIENCY OF THIS INFORMATION SHOWN HEREON AS TO SUCH UNDERGROUND INFORMATION.

INFORMATION REGARDING STORM SEWER AND SANITARY SEWER AS SHOWN HEREON, IS BASED ON OBSERVATIONS TAKEN BY TERRAMARK EMPLOYEES AT THE GROUND ELEVATION OF THE EXISTING STRUCTURE. TERRAMARK EMPLOYEES ARE NOT AUTHORIZED TO ENTER A CONFINED SPACE SUCH AS A STRUCTURE. THEREFORE, THERE IS NO CERTAINTY OF THE PIPE SIZES AND PIPE MATERIAL THAT ARE SHOWN ON THIS SURVEY. EXCAVATION BY A CERTIFIED CONTRACTOR IS THE ONLY WAY TO VERIFY PIPE SIZE AND MATERIAL. THE OWNER, HIS EMPLOYEES, HIS CONSULTANTS, HIS CONTRACTORS, AND/OR HIS AGENTS SHALL HEREBY DISTINCTLY UNDERSTAND THAT THE SURVEYOR IS NOT RESPONSIBLE FOR THE CORRECTNESS OR SUFFICIENCY OF THE PIPE INFORMATION SHOWN HEREON.

TERRAMARK LAND SURVEYING, INC. WAS UNABLE TO DETERMINE THE EXTENT OF PIPES MARKED AS APPROXIMATE DIRECTION ONLY. AFORESAID PIPE IS DRAWN ON THE SURVEY TO REFLECT THE OBSERVED DIRECTION BASED UPON A VISUAL INSPECTION OF THE STRUCTURE ONLY AND IS SHOWN FOR INFORMATIONAL PURPOSES.

STATE WATERS AND BUFFERS AS SHOWN OR NOT SHOWN HEREON ARE SUBJECT TO REVIEW BY LOCAL JURISDICTION OFFICIALS. IT IS THE RESPONSIBILITY OF THE LOCAL AUTHORITY TO DETERMINE SPECIFIC WATER CLASSIFICATION. THEREFORE TERRAMARK LAND SURVEYING ACCEPTS NO RESPONSIBILITY IN THE IDENTIFICATION OF SAID WATERS OR BUFFERS IDENTIFIED OR NOT IDENTIFIED HEREON.

PROPERTY IS SUBJECT TO RIGHTS OF UPPER AND LOWER RIPARIAN OWNERS IN AND TO THE WATER OF CREEKS AND BRANCHES CROSSING OR ADJOINING SUBJECT PROPERTY AND THE NATURAL FLOW THEREOF, FREE FROM DIMINUTION OR POLLUTION.

THIS SURVEY WAS PREPARED FOR THE EXCLUSIVE USE OF THE PERSON, PERSONS OR ENTITY NAMED HEREON. THIS SURVEY DOES NOT EXTEND TO ANY UNNAMED PERSON, PERSONS OR ENTITY WITHOUT THE EXPRESS CERTIFICATION BY THE SURVEYOR NAMING SAID PERSON, PERSONS OR ENTITY.

TERRAMARK LAND SURVEYING, INC. DOES NOT WARRANT THE EXISTENCE OR NON-EXISTENCE OF ANY WETLANDS OR HAZARDOUS WASTE IN THE SURVEY AREA.

SPECIAL NOTES

1. CERTIFICATION AND DECLARATION IS MADE TO THE ENTITIES AS LISTED IN THE TITLE BLOCK AND/OR CERTIFICATIONS. THE CERTIFICATIONS AND DECLARATIONS ON THIS PLAT ARE NOT TRANSFERABLE TO ADDITIONAL INSTITUTIONS OR SUBSEQUENT OWNERS.
2. SUBSURFACE AND ENVIRONMENTAL CONDITIONS WERE NOT EXAMINED OR CONSIDERED AS A PART OF THIS SURVEY. NO STATEMENT IS MADE CONCERNING THE EXISTENCE OF UNDERGROUND OR OVERHEAD CONTAINERS OR FACILITIES THAT MAY AFFECT THE USE OR DEVELOPMENT OF THIS PROPERTY.
3. PURSUANT TO RULE 180-6.09 OF THE GEORGIA STATE BOARD OF REGISTRATION FOR PROFESSIONAL ENGINEERS AND SURVEYORS, THE TERM "CERTIFICATION" RELATING TO PROFESSIONAL ENGINEERING AND LAND SURVEYING SERVICES SHALL MEAN A SIGNED STATEMENT BASED UPON FACTS AND KNOWLEDGE KNOWN TO THE REGISTRANT AND IS NOT A GUARANTEE OR WARRANTY, EITHER EXPRESSED OR IMPLIED.
4. THIS SURVEY IS NOT PREPARED IN ACCORDANCE TO HB 76 AND SHALL NOT BE RECORDED WITHIN THE APPLICABLE LAND RECORDS.

SURVEYOR'S CERTIFICATE

TO: BRANCH ASHWOOD ASSOCIATES, LLC & CHICAGO TITLE INSURANCE COMPANY

THIS IS TO CERTIFY THAT THIS MAP OR SURVEY AND THE SURVEY ON WHICH IT IS BASED WERE MADE IN ACCORDANCE WITH THE 2016 MINIMUM STANDARD DETAIL REQUIREMENTS FOR ALTA / NSPS LAND TITLE SURVEYS, JOINTLY ESTABLISHED AND ADOPTED BY ALTA AND NSPS, AND INCLUDES ITEMS 1,2,3,4,5,6(b),7(a),7(b1),7(c),8,9,10,11,13,14 & 16 OF TABLE A THEREOF. THE FIELD WORK WAS COMPLETED ON AUGUST 8, 2018. THE DATE OF THE SURVEY OR MAP AUGUST 13, 2018.

PRELIMINARY
PENDING REVIEW AND COMMENT

SCOTT E. BURSON, RLS
REGISTERED NUMBER: 3037

TerraMark
Professional Land Surveying
TerraMark Land Surveying, Inc.
1396 Bells Ferry Road
Marietta, Georgia 30066
Phone No. (770) 421-1927
Fax. No. (770) 421-0552
www.TerraMark.com
C.O.A. # LSF000810

Project No.	2018-121	No	Revision	Date
Survey Crew:	JH	#1	ADDED ADDITIONAL TOPO AND STORM INFORMATION	12/27/18
		#2		
Drawn By:	RFS	#3		
		#4		
Approved By:	SEB	#5		
		#6		
Date:	08/13/18	#7		
		#8		
Scale:	1"=30'	PATH:	S: SURVEY\ 2018\ 2018-121\ DGN\ TOPO.DGN	

ALTA/NSPS LAND TITLE SURVEY
FOR
BRANCH ASHWOOD ASSOCIATES, LLC &
CHICAGO TITLE INSURANCE COMPANY
(600 ASHWOOD PARKWAY)
LOCATED IN
LAND LOTS 349 & 350, 18TH DISTRICT
DEKALB COUNTY, GEORGIA

SHEET NO.
1/4
DRAWING# TM 18-121

JOB NUMBER T2018-121 PLOT SIZE 24 X 36

PROPERTY DESCRIPTIONS AND BUILDING INFORMATION

UTILITY PROVIDERS

GAS

SOUTHERN COMPANY GAS
10 PEACHTREE STREET NE
ATLANTA, GA 30309
AMANDA FLAKE
(404) 584-4338

POWER

GEORGIA POWER COMPANY
823 JEFFERSON STREET
ATLANTA, GA 30318
(404) 506-4569
IKE COLLINS

WATER

DEKALB COUNTY WATER & SEWER DEP.
4572 MEMORIAL DRIVE
DECATUR, GA 30032
(770) 612-7222
JEFFEREY WOODS
(770) 724-1404

OTHER
DEKALB COUNTY TRAFFIC & SAFETY
VINCE COOPER
(404) 297-3946

COMMUNICATION

AT&T
208 S. AKARD STREET
DALLAS, TX 75202
(210) 821-4105
ANGELO HINES
(770) 784-3972

COMCAST
(770) 559-6879
SANDRA ANDREWS

COMMUNICATION (CONT.)

WINDSTREAM COMMUNICATION
750 N. JEFFERSON STREET NE
MILLEDGEVILLE, GA 31061
(888) 599-3166

LEVEL 3 COMMUNICATIONS, INC
1025 ELDORADO BOULEVARD
BROOMFIELD, CO 80021
(877) 366-8344 EXT. 3

VERIZON / MCI
2400 N GLENVILLE
RICHARDSON, TX 75082
(478) 471-1042
DENNIS RAINEY

TW TELECOM
10475 PARK MEADOWS DRIVE
LITTLETON, CO 80124
(678) 526-3767

CHARTER COMMUNICATIONS
(866) 447-4188

XO / AGLN
10 PEACHTREE PLACE NE
ATLANTA, GA 30309
(770) 901-9160
STEVE GAINES
(404) 473-0750

FIBERLIGHT, LLC
11700 GREAT OAKS WAY, STE. 100
ALPHARETTA, GA 30022
DELL MILLER

ZAYO FIBER SOLUTIONS
400 CENTENNIAL PKWY. STE. 200
LOUISVILLE, CO 80027
(678) 666-2493
NIC FLORES

UTILITY NOTES

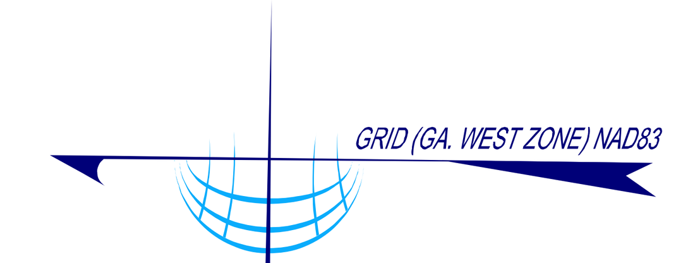
THE UNDERGROUND UTILITIES SHOWN HEREON ARE BASED ON LOCATION OF MARKINGS PROVIDED BY:

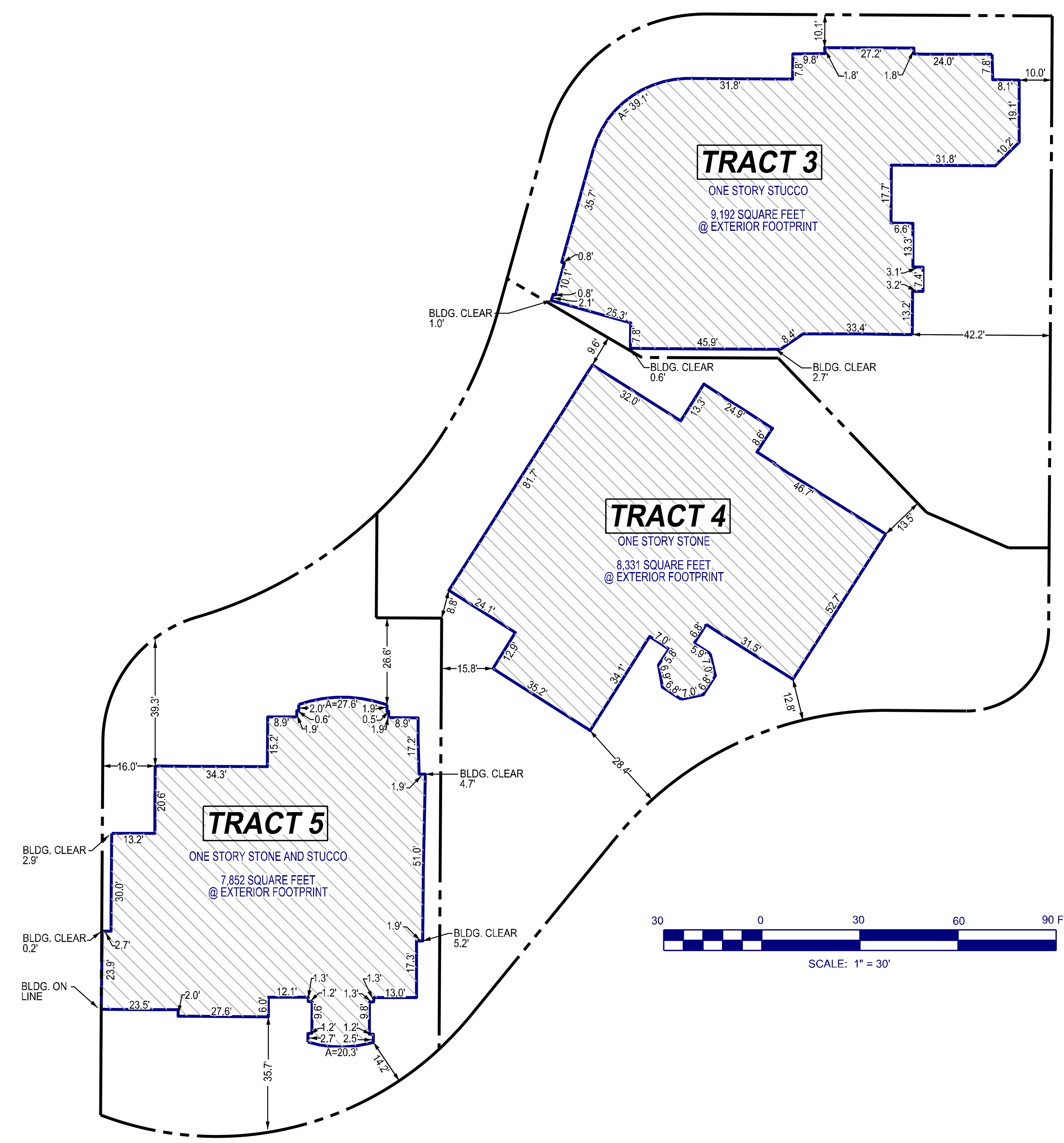
UTILISURVEY, LLC.
154 GRANT ROAD
FAYETTEVILLE, GA. 30215
PHONE: 404-312-6912
ATTENTION: HANS WONNEBERGER

THE UNDERGROUND UTILITIES (EXCEPT THE LOCATION OF EXISTING DRAINAGE, SEWER, AND IRRIGATION UTILITIES AS WELL AS UNDERGROUND STORAGE TANKS) WERE LOCATED BY UTILISURVEY, LLC. UTILIZING RADIO FREQUENCY TECHNIQUE AND IN ACCORDANCE TO LEVEL "B" UTILITY LOCATION CRITERIA. THIS TECHNIQUE IS CAPABLE OF LOCATING METALLIC UTILITIES AND TRACER WIRES. ANY NON- METALLIC UTILITIES (WITHOUT TRACER WIRE) ARE NOT LOCATED.

THE SURVEYOR MAKES NO GUARANTEES THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN- SERVICE OR ABANDONED. UNDERGROUND UTILITIES NOT OBSERVED OR LOCATED UTILIZING THIS TECHNIQUE MAY EXIST ON THIS SITE BUT ARE NOT SHOWN, AND MAY BE FOUND UPON EXCAVATION. THE SURVEYOR FURTHER DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED ALTHOUGH THE SURVEYOR DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE FROM INFORMATION AVAILABLE.

INFORMATION REGARDING MATERIAL AND SIZE OF UTILITIES IS BASED ON RECORDS ACQUIRED FROM THE UTILITY OWNERS.





PROPERTY DESCRIPTION (OVERALL)

All that tract or parcel of land lying and being in Land Lots 349 & 350, 18th District, DeKalb County, Georgia and being more particularly described as follows:

Beginning at the east end of a cornered intersection of the Westerly Right-of-Way Line of Ashford Dunwoody Road, (apparent 107' width), and the Northerly Right-of-Way Line of Meadow Lane Road (apparent variable width); thence, leaving said Point of Beginning and running with the said cornered intersection between the said roads

1. South 84° 39' 44" West, 24.00 feet; thence,
2. South 05° 20' 16" East, 10.00 feet; thence,
3. South 10° 06' 16" East, 3.47 feet to the said line of Meadow Lane Road; thence, running with the said line of Meadow Lane Road
4. South 89° 40' 43" West, 133.62 feet; thence,
5. 196.33 feet along the arc of a curve deflecting to the right, having a radius of 4634.13 feet and a chord bearing and distance of North 89° 06' 28" West, 196.31 feet; thence,
6. North 87° 53' 39" West, 90.57 feet; thence,
7. North 00° 20' 08" East, 12.01 feet to a nail found; thence,
8. North 87° 53' 39" West, 51.89 feet; thence,
9. 97.53 feet along the arc of a curve deflecting to the right, having a radius of 1275.56 feet and a chord bearing and distance of North 85° 42' 13" West, 97.51 feet; thence,
10. South 83° 34' 25" West, 49.63 feet; thence,
11. 45.62 feet along the arc of a curve deflecting to the right, having a radius of 1287.56 feet and a chord bearing and distance of North 80° 20' 41" West, 45.62 feet to a capped 1/2" rebar found; thence, leaving the said line of Meadow Lane Road
12. North 00° 20' 08" East, 333.47 feet; thence,
13. North 44° 53' 53" West, 160.13 feet to the South line of Ashford Parkway (apparent variable width); thence, running with the said line of Ashford Parkway
14. North 45° 06' 07" East, 182.92 feet; thence,
15. 229.49 feet along the arc of a curve deflecting to the right, having a radius of 257.82 feet and a chord bearing and distance of North 70° 36' 07" East, 221.99 feet; thence,
16. South 83° 53' 53" East, 163.98 feet; thence,
17. 135.02 feet along the arc of a curve deflecting to the left, having a radius of 726.08 feet and a chord bearing and distance of South 89° 13' 32" East, 134.83 feet to a capped 1/2" rebar found; thence,
18. North 85° 26' 50" East, 10.95 feet to a curved intersection of the said Ashford Parkway and the said Ashford Dunwoody Road; thence, running along the said curved intersection
19. 140.18 feet along the arc of a curve deflecting to the right, having a radius of 90.03 feet and a chord bearing and distance of South 49° 56' 44" East, 126.44 feet to the said West line of Ashford Dunwoody Parkway; thence, running with the said West line of Ashford Dunwoody Parkway
20. South 05° 20' 16" East, 565.79 feet to the Point of Beginning, containing 438,099 square feet or 10.0574 acres of land, more or less.

Property is subject to all easements and rights of way recorded and unrecorded.

PROPERTY DESCRIPTION (TRACT 1)

All that tract or parcel of land lying and being in Land Lots 349 & 350, 18th District, DeKalb County, Georgia and being more particularly described as follows:

Beginning at the east end of a cornered intersection of the Westerly Right-of-Way Line of Ashford Dunwoody Road, (apparent 107' width), and the Northerly Right-of-Way Line of Meadow Lane Road (apparent variable width); thence, leaving said Point of Beginning and running with the said cornered intersection between the said roads

1. South 84° 39' 44" West, 24.00 feet; thence,
2. South 05° 20' 16" East, 10.00 feet; thence,
3. South 10° 06' 16" East, 3.47 feet to the said line of Meadow Lane Road; thence, running with the said line of Meadow Lane Road
4. South 89° 40' 43" West, 133.62 feet; thence,
5. 143.00 feet along the arc of a curve deflecting to the right, having a radius of 4634.13 feet and a chord bearing and distance of North 89° 26' 15" West, 142.99 feet to a point found on the West line of the said Land Lot 350; thence, leaving the said line of Meadow Lane Road and running with the said West line of Land Lot 350
6. North 08° 01' 31" West, 196.58 feet; thence, leaving the said West line of Land Lot 350
7. South 89° 39' 52" East, 77.72 feet; thence,
8. North 00° 20' 08" East, 105.79 feet; thence,
9. 65.16 feet along the arc of a curve deflecting to the left, having a radius of 50.00 feet and a chord bearing and distance of North 36° 59' 55" West, 60.65 feet; thence,
10. North 74° 19' 58" West, 56.20 feet; thence,
11. 12.74 feet along the arc of a curve deflecting to the right, having a radius of 135.00 feet and a chord bearing and distance of North 71° 55' 18" West, 12.73 feet to the said West line of Land Lot 350; thence, running with the said West line of Land Lot 350
12. North 08° 01' 31" West, 306.58 feet to the South line of Ashwood Parkway (apparent variable width); thence, leaving the said West line of Land Lot 350 and running with the said South line of Ashwood Parkway
13. South 83° 53' 53" East, 99.00 feet; thence,
14. 135.02 feet along the arc of a curve deflecting to the left, having a radius of 726.08 feet and a chord bearing and distance of South 89° 13' 32" East, 134.83 feet to a capped 1/2" rebar found; thence,
15. North 85° 26' 50" East, 10.95 feet to a curved intersection of the said Ashwood Parkway and the said Ashford Dunwoody Road; thence, running along the said curved intersection
16. 140.18 feet along the arc of a curve deflecting to the right, having a radius of 90.03 feet and a chord bearing and distance of South 49° 56' 44" East, 126.44 feet to the said West line of Ashford Dunwoody Parkway; thence, running with the said West line of Ashford Dunwoody Parkway

17. South 05° 20' 16" East, 565.79 feet to the Point of Beginning, containing 193,561 square feet or 4.4435 acres of land, more or less.

Property is subject to all easements and rights of way recorded and unrecorded.

PROPERTY DESCRIPTION (TRACT 2)

All that tract or parcel of land lying and being in Land Lots 349 & 350, 18th District, DeKalb County, Georgia and being more particularly described as follows:

To Find the Point of Beginning, commence at the east end of a cornered intersection of the Westerly Right-of-Way Line of Ashford Dunwoody Road, (apparent 107' width), and the Northerly Right-of-Way Line of Meadow Lane Road (apparent variable width); thence, running with the said cornered intersection between the said roads South 84° 39' 44" West, 24.00 feet; thence, South 05° 20' 16" East, 10.00 feet; thence, South 10° 06' 16" East, 3.47 feet to the said line of Meadow Lane Road; thence, running with the said line of Meadow Lane Road South 89° 40' 43" West, 133.62 feet; thence, 143.00 feet along the arc of a curve deflecting to the right, having a radius of 4634.13 feet and a chord bearing and distance of North 89° 26' 15" West, 142.99 feet to a point found on the West line of the said Land Lot 350 and being the Point of Beginning; thence, running with the said line of Meadow Lane Road and leaving the said West line of Land Lot 350

1. 53.33 feet along the arc of a curve deflecting to the right, having a radius of 4634.13 feet and a chord bearing and distance of North 88° 13' 26" West, 53.33 feet; thence,
2. North 87° 53' 39" West, 90.57 feet; thence,
3. North 00° 20' 08" East, 12.01 feet to a nail found; thence,
4. North 87° 53' 39" West, 51.89 feet; thence,
5. 97.53 feet along the arc of a curve deflecting to the right, having a radius of 1275.56 feet and a chord bearing and distance of North 85° 42' 13" West, 97.51 feet; thence,
6. South 83° 34' 25" West, 49.63 feet; thence,
7. 45.62 feet along the arc of a curve deflecting to the right, having a radius of 1287.56 feet and a chord bearing and distance of North 80° 20' 41" West, 45.62 feet to a capped 1/2" rebar found; thence, leaving the said line of Meadow Lane Road
8. North 00° 20' 08" East, 333.47 feet; thence,
9. North 44° 53' 53" West, 160.13 feet to the South line of Ashwood Parkway (apparent variable width); thence, running with the said line of Ashwood Parkway
10. North 45° 06' 07" East, 182.92 feet; thence,
11. 229.49 feet along the arc of a curve deflecting to the right, having a radius of 257.82 feet and a chord bearing and distance of North 70° 36' 07" East, 221.99 feet; thence,
12. South 83° 53' 53" East, 64.98 feet to the West line of the said Land Lot 350; thence, leaving the said line of Ashwood Parkway and running with the said West line of Land Lot 350
13. South 08° 01' 31" East, 306.58 feet; thence, leaving the said West line of Land Lot 350
14. 124.55 feet along the arc of a curve deflecting to the right, having a radius of 135.00 feet and a chord bearing and distance of North 42° 47' 17" West, 120.18 feet; thence,
15. 51.18 feet along the arc of a curve deflecting to the left, having a radius of 40.00 feet and a chord bearing and distance of North 53° 00' 18" West, 47.76 feet; thence,
16. North 89° 39' 52" West, 114.11 feet; thence,
17. 124.90 feet along the arc of a curve deflecting to the left, having a radius of 100.00 feet and a chord bearing and distance of South 14° 59' 31" East, 116.94 feet; thence,
18. South 50° 43' 01" East, 70.49 feet; thence,
19. 94.46 feet along the arc of a curve deflecting to the right, having a radius of 106.00 feet and a chord bearing and distance of South 25° 11' 26" East, 91.37 feet; thence,
20. South 00° 20' 08" West, 24.44 feet; thence,
21. 39.28 feet along the arc of a curve deflecting to the left, having a radius of 25.00 feet and a chord bearing and distance of South 44° 39' 52" East, 35.36 feet; thence,
22. South 89° 39' 52" East, 109.86 feet to the said West line of Land Lot 350; thence, running with the said West line of Land Lot 350
23. South 08° 01' 31" East, 196.58 feet to the Point of Beginning, containing 186,579 square feet or 4.2833 acres of land, more or less.

Property is subject to all easements and rights of way recorded and unrecorded.

PROPERTY DESCRIPTION (TRACT 3)

All that tract or parcel of land lying and being in Land Lots 349 & 350, 18th District, DeKalb County, Georgia and being more particularly described as follows:

To Find the Point of Beginning, commence at the east end of a cornered intersection of the Westerly Right-of-Way Line of Ashford Dunwoody Road, (apparent 107' width), and the Northerly Right-of-Way Line of Meadow Lane Road (apparent variable width); thence, running with the said cornered intersection between the said roads South 84° 39' 44" West, 24.00 feet; thence, South 05° 20' 16" East, 10.00 feet; thence, South 10° 06' 16" East, 3.47 feet to the said line of Meadow Lane Road; thence, running with the said line of Meadow Lane Road South 89° 40' 43" West, 133.62 feet; thence, 143.00 feet along the arc of a curve deflecting to the right, having a radius of 4634.13 feet and a chord bearing and distance of North 89° 26' 15" West, 142.99 feet to a point found on the West line of the said Land Lot 350; thence, leaving the said line of Meadow Lane Road and running with the said West line of Land Lot 350 North 08° 01' 31" West, 196.58 feet to the Point of Beginning; thence, leaving the said West line of Land Lot 350 and running

1. North 89° 39' 52" West, 84.86 feet; thence,
2. North 00° 20' 08" East, 12.37 feet; thence,
3. North 23° 12' 12" East, 27.20 feet; thence,
4. North 46° 04' 16" East, 65.55 feet; thence,
5. North 00° 20' 08" East, 41.63 feet; thence,
6. North 30° 20' 08" East, 47.78 feet; thence,
7. South 74° 19' 58" East, 46.04 feet; thence,
8. 65.16 feet along the arc of a curve deflecting to the right, having a radius of 50.00 feet and a chord bearing and distance of South 36° 59' 55" East, 60.65 feet; thence,
9. South 00° 20' 08" West, 105.79 feet; thence,
10. North 89° 39' 52" West, 77.72 feet to the Point of Beginning, containing 18,880 square feet or 0.4334 acres of land, more or less.

Property is subject to all easements and rights of way recorded and unrecorded.

PROPERTY DESCRIPTION (TRACT 4)

All that tract or parcel of land lying and being in Land Lots 349 & 350, 18th District, DeKalb County, Georgia and being more particularly described as follows:

To Find the Point of Beginning, commence at the east end of a cornered intersection of the Westerly Right-of-Way Line of Ashford Dunwoody Road, (apparent 107' width), and the Northerly Right-of-Way Line of Meadow Lane Road (apparent variable width); thence, running with the said cornered intersection between the said roads South 84° 39' 44" West, 24.00 feet; thence, South 05° 20' 16" East, 10.00 feet; thence, South 10° 06' 16" East, 3.47 feet to the said line of Meadow Lane Road; thence, running with the said line of Meadow Lane Road South 89° 40' 43" West, 133.62 feet; thence, 143.00 feet along the arc of a curve deflecting to the right, having a radius of 4634.13 feet and a chord bearing and distance of North 89° 26' 15" West, 142.99 feet to a point found on the West line of the said Land Lot 350; thence, leaving the said line of Meadow Lane Road and running with the said West line of Land Lot 350 North 08° 01' 31" West, 196.58 feet; thence, leaving the said West line of Land Lot 350 and running North 89° 39' 52" West, 84.86 feet to the Point of Beginning; thence, running

1. North 89° 39' 52" West, 24.99 feet; thence,
2. 39.28 feet along the arc of a curve deflecting to the right, having a radius of 25.00 feet and a chord bearing and distance of North 44° 39' 52" West, 35.36 feet; thence,
3. North 00° 20' 08" East, 24.44 feet; thence,
4. 94.46 feet along the arc of a curve deflecting to the left, having a radius of 106.00 feet and a chord bearing and distance of North 25° 11' 26" West, 91.37 feet; thence,
5. North 50° 43' 01" West, 70.49 feet; thence,
6. 13.82 feet along the arc of a curve deflecting to the right, having a radius of 100.00 feet and a chord bearing and distance of North 46° 48' 52" West, 13.81 feet; thence,
7. South 89° 39' 52" East, 131.72 feet; thence,
8. North 00° 20' 08" East, 19.98 feet; thence,
9. South 89° 39' 44" East, 32.02 feet; thence,
10. 73.10 feet along the arc of a curve deflecting to the left, having a radius of 135.00 feet and a chord bearing and distance of South 59° 06' 45" East, 72.21 feet; thence,
11. South 74° 19' 58" East, 10.16 feet; thence,
12. South 30° 20' 08" West, 47.78 feet; thence,
13. South 00° 20' 08" West, 41.63 feet; thence,
14. South 46° 04' 16" West, 65.55 feet; thence,
15. South 23° 12' 12" West, 27.20 feet; thence,
16. South 00° 20' 08" West, 12.37 feet to the Point of Beginning, containing 22,889 square feet or 0.5255 acres of land, more or less.

Property is subject to all easements and rights of way recorded and unrecorded.

PROPERTY DESCRIPTION (TRACT 5)

All that tract or parcel of land lying and being in Land Lot 349, 18th District, DeKalb County, Georgia and being more particularly described as follows:

To Find the Point of Beginning, commence at the east end of a cornered intersection of the Westerly Right-of-Way Line of Ashford Dunwoody Road, (apparent 107' width), and the Northerly Right-of-Way Line of Meadow Lane Road (apparent variable width); thence, running with the said cornered intersection between the said roads South 84° 39' 44" West, 24.00 feet; thence, South 05° 20' 16" East, 10.00 feet; thence, South 10° 06' 16" East, 3.47 feet to the said line of Meadow Lane Road; thence, running with the said line of Meadow Lane Road South 89° 40' 43" West, 133.62 feet; thence, 143.00 feet along the arc of a curve deflecting to the right, having a radius of 4634.13 feet and a chord bearing and distance of North 89° 26' 15" West, 142.99 feet to a point found on the West line of the said Land Lot 350; thence, leaving the said line of Meadow Lane Road and running with the said West line of Land Lot 350 North 08° 01' 31" West, 196.58 feet; thence, leaving the said West line of Land Lot 350 and running North 89° 39' 52" West, 109.86 feet; thence, 39.28 feet along the arc of a curve deflecting to the right, having a radius of 25.00 feet and a chord bearing and distance of North 44° 39' 52" West, 35.36 feet; thence, North 00° 20' 08" East, 24.44 feet; thence, 94.46 feet along the arc of a curve deflecting to the left, having a radius of 106.00 feet and a chord bearing and distance of North 25° 11' 26" West, 91.37 feet; thence, North 50° 43' 01" West, 70.49 feet; thence, 13.82 feet along the arc of a curve deflecting to the right, having a radius of 100.00 feet and a chord bearing and distance of North 46° 48' 52" West, 13.81 feet to the Point of Beginning; thence, running

1. 111.08 feet along the arc of a curve deflecting to the right, having a radius of 100.00 feet and a chord bearing and distance of North 11° 01' 58" West, 105.46 feet; thence,
2. South 89° 39' 52" East, 114.11 feet; thence,
3. 51.18 feet along the arc of a curve deflecting to the right, having a radius of 40.00 feet and a chord bearing and distance of South 53° 00' 18" East, 47.76 feet; thence,
4. 64.19 feet along the arc of a curve deflecting to the left, having a radius of 135.00 feet and a chord bearing and distance of South 29° 58' 43" East, 63.59 feet; thence,
5. North 89° 39' 44" West, 32.02 feet; thence,
6. South 00° 20' 08" West, 19.98 feet; thence,
7. North 89° 39' 52" West, 131.72 feet to the Point of Beginning, containing 16,190 square feet or 0.3717 acres of land, more or less.

Property is subject to all easements and rights of way recorded and unrecorded.

TerraMark
Professional Land Surveying
TerraMark Land Surveying, Inc.
1396 Bells Ferry Road
Marietta, Georgia 30066
Phone No. (770) 421-1927
Fax. No. (770) 421-0552
www.TerraMark.com
C. O. A.# LSF000810

Project No.	2018-121	No	Revision	Date
Survey Crew:	JH	#1	ADDED ADDITIONAL TOPO AND STORM INFORMATION	12/27/18
Drawn By:	RFS	#2		
		#3		
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		#5		
Date:	08-13-18	#6		
		#7		
Scale:	1"=30'	#8		
		PATH:	S: SURVEY\ 2018\ 2018-121\ DGN\ TOPO.DGN	

ALTA/NSPS LAND TITLE SURVEY
FOR
BRANCH ASHWOOD ASSOCIATES, LLC &
CHICAGO TITLE INSURANCE COMPANY
(600 ASHWOOD PARKWAY)
LOCATED IN
LAND LOTS 349 & 350, 18TH DISTRICT
DEKALB COUNTY, GEORGIA

SHEET NO. 2/4
DRAWING# TM 18-121

JOB NUMBER 2018-121 PLOT SIZE 24 X 36

LINE TABLE

LINE	BEARING	DISTANCE
L1	N 89°39'52" W	84.86'
L2	N 00°20'08" E	12.37'
L3	N 23°12'12" E	27.20'
L4	N 46°04'16" E	65.55'
L5	N 00°20'08" E	41.63'
L6	N 30°20'08" E	47.78'
L7	S 74°19'58" E	46.04'
L8	S 00°20'08" W	105.79'
L9	N 89°39'52" W	77.72'
L10	N 89°39'52" W	24.99'
L11	N 00°20'08" E	24.44'
L12	N 50°43'01" W	70.49'
L13	S 89°39'52" E	131.72'
L14	N 00°20'08" E	19.98'
L15	S 89°39'59" E	32.02'
L16	S 74°19'58" E	10.16'
L17	S 89°39'52" E	114.11'

CURVE TABLE

CURVE	ARC	RADIUS	CHORD	BEARING
C1	65.16'	50.00'	60.65'	S 36°59'55" E
C2	39.28'	25.00'	35.36'	N 44°39'52" W
C3	94.46'	106.00'	91.37'	N 25°11'26" W
C4	13.82'	100.00'	13.81'	S 46°49'19" E
C5	73.10'	135.00'	72.21'	S 59°06'35" E
C6	111.08'	100.00'	105.46'	N 11°01'53" E
C7	51.18'	40.00'	47.76'	S 53°00'18" E
C8	64.19'	135.00'	63.59'	S 29°58'54" E
C9	12.74'	135.00'	12.73'	S 71°55'18" E

ABBREVIATIONS

A	ARC LENGTH	IPS	IRON PIN SET (CAPPED)
AC.	ACRE	N/F	NOW OR FORMERLY
AE	ACCESS EASEMENT	OTP	OPEN TOP PIPE
BSL	BUILDING SETBACK LINE	PB.	PLAT BOOK
BW	BARBWIRE	PG.	PAGE
CH	CHORD LENGTH	POB	POINT OF BEGINNING
CLF	CHAIN LINK FENCE	POC	POINT OF COMMENCEMENT
CMF	CONCRETE MONUMENT FOUND	R	RADIUS LENGTH
CMP	CORRUGATED METAL PIPE	R/W	RIGHT OF WAY
CONC.	CONCRETE	R/W MON	RIGHT OF WAY MONUMENT
CTP	CRIMP TOP PIPE	RB	REBAR
DB.	DEED BOOK	RCP	REINFORCED CONCRETE PIPE
DIP	DUCTILE IRON PIPE	SDE	STORM DRAINAGE EASEMENT
FDC	FIRE DEPARTMENT CONNECTION	SQ. FT.	SQUARE FEET
FND	FOUND	SSE	SANITARY SEWER EASEMENT
HDPE	HIGH DENSITY POLYETHYLENE PIPE	WPF	WOOD PRIVACY FENCE
IPF	IRON PIN FOUND		

SEE SHEET 2 OF 4 FOR ADDITIONAL BUILDING INFORMATION.

TREE LEGEND (ABBREVIATIONS)

DECIDUOUS (TREE)	BIR	BIRCH	HLY	HOLLY
	BCH	BEECH	HW	HARDWOOD
	CM	CRAPE MYRTLE	MAG	MAGNOLIA
	CHY	CHERRY	MAP	MAPLE
	CYP	CYPRESS	OAK	OAK
CONIFEROUS (TREE)	FIR	FIR	ORN	ORNAMENTAL
	GINGKO	GINGKO	PEAR	PEAR
	GUM	SWEET GUM	POP	POPLAR
	HIC	HICKORY	SYC	SYCAMORE

ENCROACHMENT TABLE

(#) AREA OF ENCROACHMENT

1. BUS STOP SHELTER ENCROACHES THE PROPERTY LINE AND UNDERGROUND COMMUNICATION LINE CROSSES PROPERTY LINE.
2. GUY WIRES ENCROACH THE PROPERTY LINE.
3. 10' X 6' BOX CULVERT CROSSES PROPERTY LINE.
4. 12" PVC STORM DRAINAGE PIPE CROSSES PROPERTY LINE.
5. DRAIN TRENCH STRUCTURE ENCROACHES THE PROPERTY LINE.
6. 10" PVC SANITARY SEWER PIPE CROSSES PROPERTY LINE.
7. 24" RCP STORM DRAINAGE PIPE AND 8" DIP SANITARY SEWER PIPE CROSSES PROPERTY LINE.
8. UNDERGROUND ELECTRIC LINES CROSS PROPERTY LINE.
9. CONCRETE SIDEWALK CROSSES PROPERTY LINE.
10. 18" RCP STORM DRAINAGE PIPE, CONCRETE SIDEWALK, AND BRICK SIDEWALK CROSS PROPERTY LINE.
11. UNDERGROUND WATER UTILITY LINE CROSSES PROPERTY LINE.
12. 10' X 7' BOX CULVERT CROSSES PROPERTY LINE.
13. UNDERGROUND COMMUNICATION LINES CROSS PROPERTY LINE.
14. STORM DRAINAGE LINE POSSIBLY CROSSES PROPERTY LINE.

LEGEND

- CURB AND GUTTER (C&G)
- FENCE
- HANDRAIL
- STORM DRAIN LINE
- SANITARY SEWER
- WATER LINE
- GAS LINE
- UGE — UNDERGROUND POWER LINE
- OVERHEAD POWER LINE
- COM — UNDERGROUND COMMUNICATION
- 100 — TOPOGRAPHIC CONTOUR
- PROPERTY LINE
- CATCH BASIN (DWCB)
- CATCH BASIN (SWCB)
- DROP INLET (DI)
- JUNCTION BOX (JB)
- HEAD WALL (HW)
- CURB INLET (CI)
- FLARED END SECTION (FES)
- OUTLET CONTROL STRUCTURE
- YARD DRAIN INLET
- SS MANHOLE (MH)
- CLEAN OUT (CO)
- IRRIGATION CONTROL VALVE (ICV)
- FIRE HYDRANT (FH)
- WATER VALVE (WV)
- WATER METER (WM)
- FIRE DEPT. CONNECTION (FDC)
- WATER VALVE MARKER
- TRANSFORMER BOX (TX)
- AIR CONDITIONER (AC)
- ELECTRIC METER (EM)
- ELECTRIC UTILITY
- GREASE TRAP (GT)
- LIGHT POLE (LP)
- POWER POLE WITH LIGHT
- POWER POLE (PP)
- UTILITY MANHOLE (UM)
- SPOTLIGHT
- GAS METER (GM)
- GAS VALVE (GV)
- TELEPHONE PEDESTAL
- COMMUNICATION BOX
- TRAFFIC SIGNAL
- BOLLARD (BO)
- MAIL BOX
- SIGN
- CROSSWALK SIGNAL
- X 1000.00 SPOT ELEVATION
- CONCRETE AREA
- OVERHANG AREA
- RIP-RAP AREA
- BRICK AREA
- STONE PAVER AREA

BENCHMARK #1 DETAIL

GRID (GA. WEST ZONE) NAD83

SCALE: 1" = 30'

ASHFORD DUNWOODY ROAD
(APPARENT 107' R/W)

ASHWOOD PARKWAY
(APPARENT VARIABLE RIGHT OF WAY)

MEADOW LANE ROAD
(VARIABLE RIGHT OF WAY)

TRACT 1

TRACT 3

POND

ONE STORY STUCCO
9,192 SQUARE FEET
@ EXTERIOR FOOTPRINT
BUILDING HEIGHT: 24'

P.O.B OVERALL
P.O.B. TRACT 1
P.O.C. TRACTS 2-5
N: 1430248.11
E: 2244728.34

P.O.B. TRACT 2

P.O.B TRACT 3

BENCHMARK #1 (SEE DETAIL)

N: 1430891.98
E: 2244568.04

MATCHLINE

SHEET 3
SHEET 4

GEORGIA POWER EASEMENT PER DB. 8419 PG. 592 AND PER REF# 1

GEORGIA POWER EASEMENT CUBICAL EASEMENT PER DB. 6410 PG. 592 AND DB. 10714 PG. 622

DUNWOODY STATION OUTFALL SEWER 15' WIDE SANITARY SEWER EASEMENT PER DB. 4935 PG. 329 AND DB. 5971 PG. 82 AND PER REF# 1

TerraMark Land Surveying, Inc.
1396 Bells Ferry Road
Marietta, Georgia 30066
Phone No. (770) 421-1937
Fax No. (770) 421-0552
www.TerraMark.com
C. O. A.# LSF000810

TerraMark
Professional Land Surveying

No	Revision	Date
#1	ADDED ADDITIONAL TOPO AND STORM INFORMATION	12/27/18
#2		
#3		
#4		
#5		
#6		
#7		
#8		

Project No.	2016-121
Survey Crew:	JH
Drawn By:	RFS
Approved By:	SEB
Date:	08-15-16
Scale:	1"=30'
PATH:	S: SURVEY\ 2016\ 2016-121\ DGN\ TOPO.DGN

ALTA/NSPS LAND TITLE SURVEY
FOR
BRANCH ASHWOOD ASSOCIATES, LLC &
CHICAGO TITLE INSURANCE COMPANY
(600 ASHWOOD PARKWAY)
LOCATED IN
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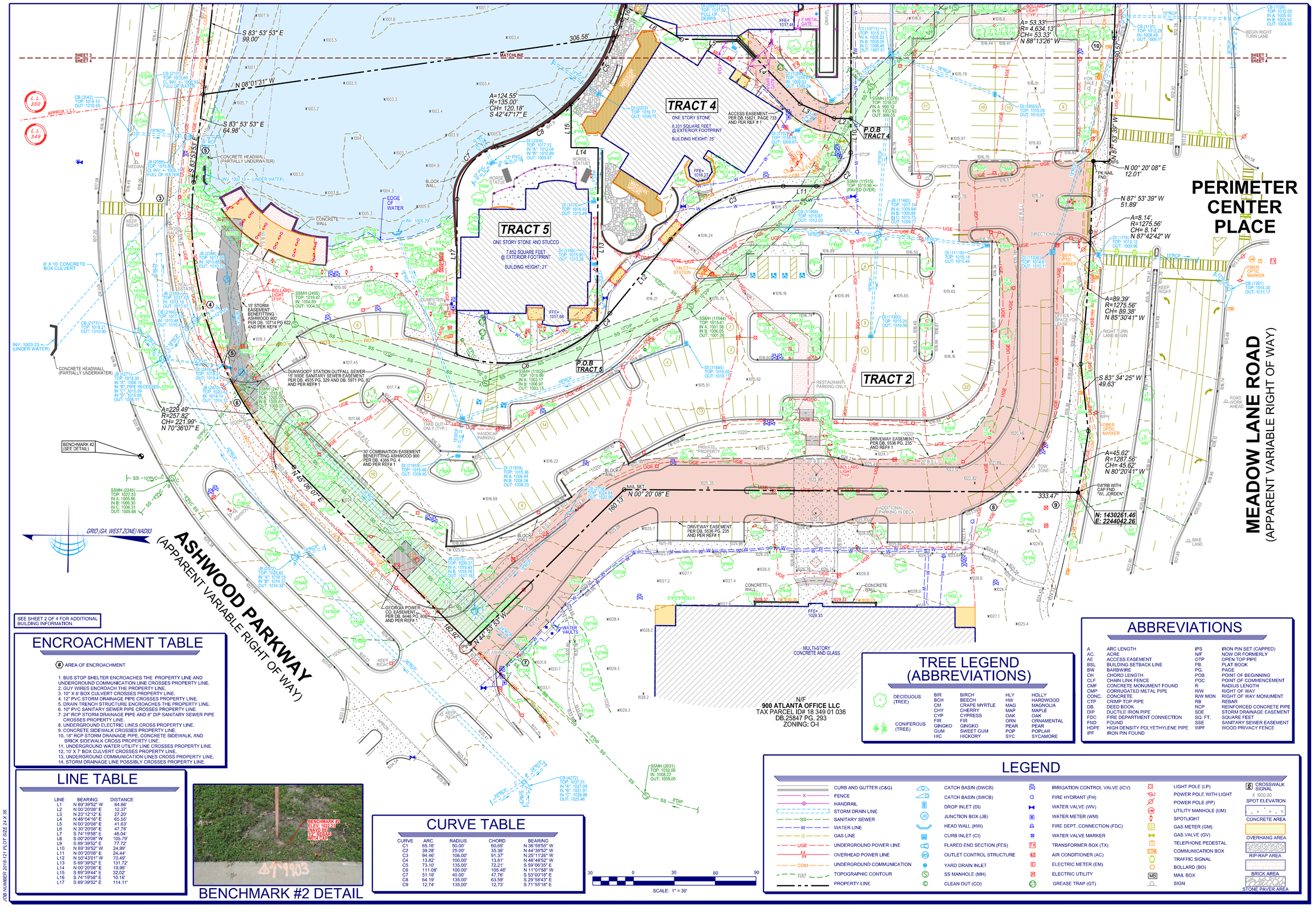

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BENCHMARK #2 DETAIL

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LEGEND

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SANITARY SEWER	HEAD WALL (HW)	FIRE DEPT. CONNECTION (FDC)	SPOTLIGHT
WATER LINE	CURB INLET (CI)	WATER VALVE MARKER	GAS METER (GM)
GAS LINE	FLARED END SECTION (FES)	TRANSFORMER BOX (TX)	GAS VALVE (GV)
UNDERGROUND POWER LINE	OUTLET CONTROL STRUCTURE	AIR CONDITIONER (AC)	TELEPHONE PEDESTAL
OVERHEAD POWER LINE	YARD DRAIN INLET	ELECTRIC METER (EM)	COMMUNICATION BOX
UNDERGROUND COMMUNICATION	SS MANHOLE (MH)	ELECTRIC UTILITY	TRAFFIC SIGNAL
TOPOGRAPHIC CONTOUR	CLEAN OUT (CO)	GREASE TRAP (GT)	BOLLARD (BO)
PROPERTY LINE			MAIL BOX
			SIGN
			CROSSWALK SIGNAL
			SPOT ELEVATION (X 1000.00)
			CONCRETE AREA
			OVERHANG AREA
			RIP-RAP AREA
			BRICK AREA
			STONE PAVER AREA

TerraMark Land Surveying, Inc.
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Professional Land Surveying C. O. A.# LSF000810

No	Revision	Date
#1	ADDED ADDITIONAL TOPO AND STORM INFORMATION	12/27/18
#2		
#3		
#4		
#5		
#6		
#7		
#8		
PATH:	S: SURVEY\ 2018\ 2018-121\DGN\ DGN	

Project No:	2018-121
Survey Crew:	JH
Drawn By:	RFS
Approved By:	SEB
Date:	06-13-18
Scale:	1"=30'

ALTA/NSPS LAND TITLE SURVEY
FOR
BRANCH ASHWOOD ASSOCIATES, LLC &
CHICAGO TITLE INSURANCE COMPANY
(600 ASHWOOD PARKWAY)
LOCATED IN
LAND LOTS 349 & 350, 18TH DISTRICT
DEKALB COUNTY, GEORGIA

SHEET NO.
4/4
DRAWING# TM 18-121

JOB NUMBER 2018-121 PLOT SIZE 24 X 36

ANCHOR GROCER
25,440 SF

EXISTING OFFICE
BUILDING

PEDESTRIAN CONNECTIVITY BETWEEN
EXISTING OFFICE AND PROPOSED
DEVELOPMENT

EXISTING
BUILDING

BUILDING A
7,000 SF

BLDG E
4,700 SF

DRIVE THRU

BLDG SETBACK

0'-0" BLDG SETBACK

DO NOT ENTER

PARKING LOT LANDSCAPE SCREENING
123 LF STREET FRONTAGE - 37 SHRUBS REQUIRED
37 SHRUBS PROVIDED

SCREENING AT REFUSE LOCATION -
6' TALL OPAQUE FENCE OR UPRIGHT
EVERGREEN TREES (6' MIN HEIGHT)

EXISTING TREES TO
REMAIN

RECEIVED
11-5-19

MEADOW LANE ROAD
(MAJOR PARKWAY)

SCREENING AT REFUSE LOCATION -
6' TALL OPAQUE FENCE OR UPRIGHT
EVERGREEN TREES (6' MIN HEIGHT)

PARKING LOT LANDSCAPE SCREENING
63 LF STREET FRONTAGE - 19 SHRUBS REQUIRED
19 SHRUBS PROVIDED

PERIMETER
CENTER
PLACE

LANDSCAPE LEGEND

- EXISTING TREE TO REMAIN
- CANOPY TREES
  PARKING LOT AND STREET TREES
  EXAMPLE : OAK, MAPLE, ELM, BALD CYPRESS
- UNDERSTORY CANOPY TREES
  UNDERSTORY STREET TREES
  EXAMPLE : FRINGE TREE, HORNBEAM, REDBUD, SERVICEBERRY, DOGWOOD
- ORNAMENTAL TREES
  UNDERSTORY / FLOWERING ORNAMENTAL TREES
  EXAMPLE : CHERRY, CRAPE MYRTLE, CRAB APPLE JAPANESE MAGNOLIA, KOUSA DOGWOOD
- EVERGREEN TREES
  EVERGREEN / SCREENING TREES
  EXAMPLE : AMERICAN HOLLY, MAGNOLIA, RED CEDAR, PINE, CYPRESS
- SHRUBS / GROUNDCOVER

LANDSCAPE NOTES

PARKING LOT LANDSCAPING

1. ALL PARKING LOT LANDSCAPE ISLANDS TO HAVE A MINIMUM PERVIOUS AREA OF 120 SQUARE FEET (10' WITH THE EXCEPTION OF A SINGLE ROW OF PARKING SPACES WHICH SHALL PROVIDE A MINIMUM OF 270 SF
2. LANDSCAPE ISLANDS ADJUTING A SINGLE ROW OF PARKING MUST INCLUDE AT LEAST ONE CANOPY TREE. LANDSCAPE ISLANDS ADJUTING A DOUBLE ROW OF PARKING MUST INCLUDE AT LEAST TWO CANOPY TREES.
3. SHRUBS SHALL BE PROVIDED IN LANDSCAPE ISLANDS AND DIVERTER MEDIANS AT A RATE OF FOUR SHRUBS PER REQUIRED TREE. PARKING LOT SHRUBS MAY FACTULIZED THREE FEET IN HEIGHT
4. GROUND COVER MUST BE USED IN AREAS NOT COVERED BY TREES AND SHRUBS. SURF GRASS MAY NOT BE USED IN ISLANDS AND DIVERTER MEDIANS
5. PARKING LOT PERIMETER SHALL BE SCREENED FROM THE ADJACENT RIGHTS OF WAY WITH LANDSCAPING, WALL OR COMBINATION THEREOF THAT RESULTS IN A CONTINUOUS VISUAL SCREEN, AT LEAST THREE FEET ABOVE GRADE ALONG THE LENGTH OF THE FRONTAGE. SHRUBS USED TO SATISFY THIS REQUIREMENT SHALL BE PROVIDED AT A RATE OF 3/4 SHRUBS PER 10 LINEAR FEET OF.

LANDSCAPING SCREENING

6. GROUND MOUNTED MECHANICAL EQUIPMENT OVER 30" IN HEIGHT SHALL BE SCREENED FROM VIEW WITH A FENCE OR HEDGE TALL ENOUGH TO CONCEAL THE EQUIPMENT.
7. REFUSE / RECYCLING CONTAINERS MUST BE SCREENED FROM VIEW OF STREETS AND ADJOINING LOTS WITH A SOLID OPAQUE FENCE AT LEAST SIX FEET IN HEIGHT.

LANDSCAPING PLANTING

8. DECIDUOUS TREES USED TO SATISFY CODE REQUIREMENTS SHALL BE A MINIMUM OF THREE INCHES CALIPER AND A MINIMUM OF TEN FEET TALL
9. EVERGREEN TREES USED TO SATISFY CODE REQUIREMENTS SHALL BE A MINIMUM OF SIX FEET TALL AT TIME OF PLANTING
10. SHRUBS AND ORNAMENTAL GRASSES USED TO SATISFY CODE REQUIREMENTS SHALL BE A MINIMUM OF ONE GALLON SIZE AT TIME OF INSTALLATION
11. ALL REQUIRED LANDSCAPED AREAS SHALL BE COVERED WITH A BIODEGRADABLE MULCH OR GROUNDCOVER PLANTS. ALL REQUIRED TREES AND SHRUBS TO BE LOCATED IN MULCHED PLANTING BEDS.
12. LANDSCAPE AREAS IN OR ABUTTING PARKING LOTS SHALL BE PROTECTED BY CONCRETE CURBING. ANCHORED WHEEL STOPS SHALL BE AVAILABLE SHRUBS, APPROVED BY THE CITY ARBORIST.

LANDSCAPE NOTE

LANDSCAPE PLAN PREPARED TO DEMONSTRATE PRELIMINARY DESIGN INTENT. PLANT SELECTION & MATERIALS, QUANTITY AND LAYOUT SUBJECT TO REVISIONS. ALL SUBSTITUTIONS MUST BE APPROVED BY OWNER AND LANDSCAPE ARCHITECT PRIOR TO INSTALLATION

AJC DESIGN GROUP
770 330 0814
1991 WOODLAND WAY
DUNWOODY, GA 30338

STAMP

OWNER
BRANCH PROPERTIES, LLC
3340 PEACHTREE RD. NE, SUITE 840
ATLANTA, GA 30326
(404) 812-8800

PROJECT
ASHWOOD CENTER
CITY OF DUNWOODY, GA
500 ASHWOOD PARKWAY
DUNWOODY, GEORGIA 30338

REVISION SCHEDULE		
NO	DATE	REVISION DESCRIPTION

ISSUE SCHEDULE		
NO	DATE	ISSUE DESCRIPTION
1	11/05/2019	SITE PLAN REVISION - SUBMIT

SHEET NAME:
ZONING LANDSCAPE
SITE PLAN

PROJECT NUMBER: 1900201

DATE: 11/05/2019

SHEET NO
L1.3

SIGNAGE LOCATION SHOWN FOR REFERENCE ONLY AND MAY NOT INDICATE ACTUAL ALLOWABLE SIZE BY JURISDICTION - TENANT TO VERIFY ALL SIGNAGE REQUIREMENTS

PARAPET HEIGHTS ARE APPROXIMATE AND WILL BE FURTHER DEVELOPED PER FINAL DESIGN, TENANT LAYOUT, AND SCREENING REQUIREMENTS

RECEIVED
11-5-19

PERIMETER MARKETPLACE

DUNWOODY, GEORGIA
10-28-2019

BRANCH
3340 PEACHTREE RD NE • SUITE 2775 • ATLANTA, GA 30326
404•832•8900

BUILDING SUMMARY

ANCHOR (GROCER)	25,440	SF
RETAIL	15,400	SF
RESTAURANT	20,000	SF
CONVENIENCE STORE	5,411	SF
BANK	2,800	SF
TOTAL RETAIL AREA	69,051	SF

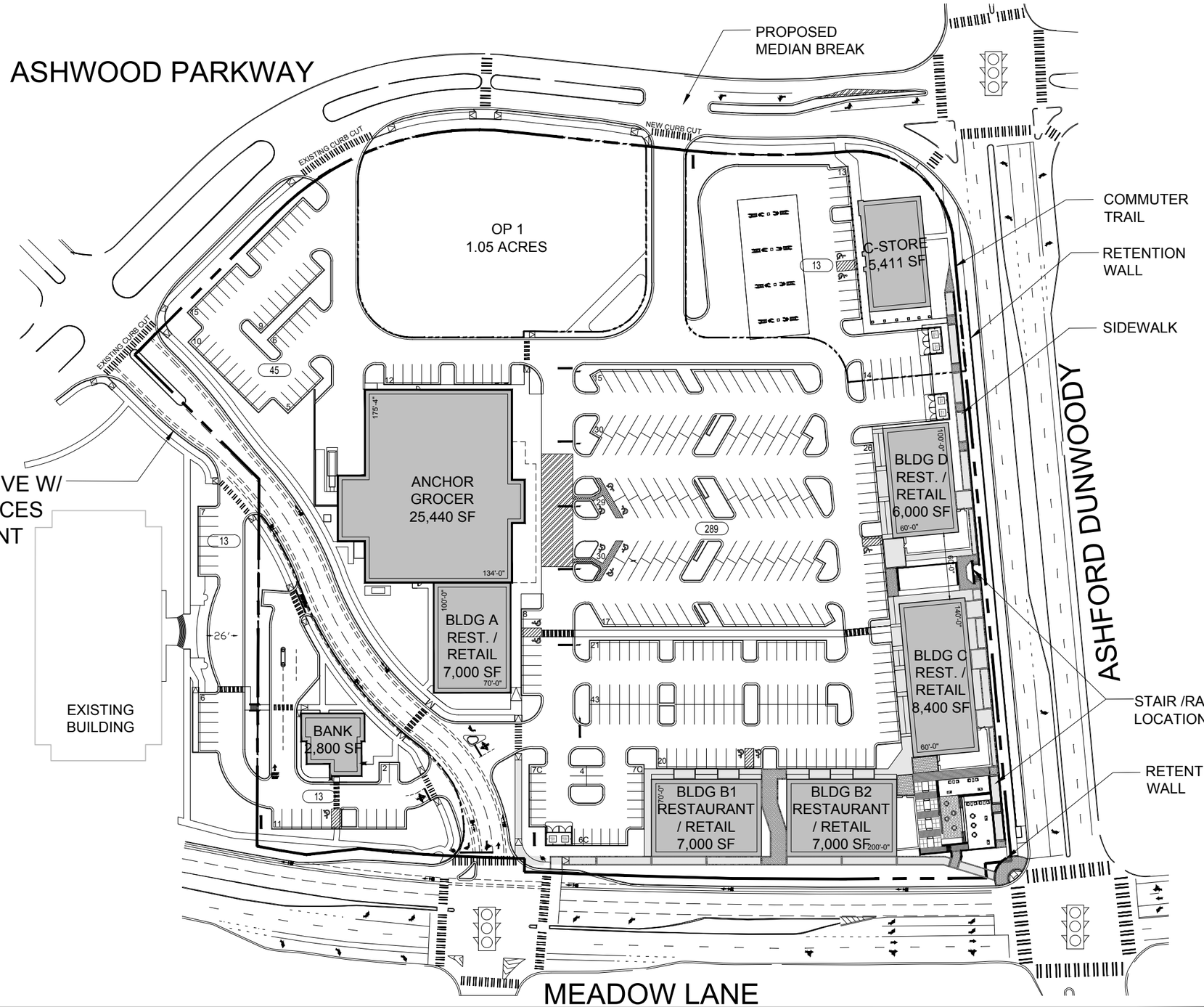
PARKING SUMMARY

ANCHOR PARKING REQ'D (4.0 / 1000 SF)	102	SPACES
RETAIL PARKING REQ'D (4.0 / 1000 SF)	62	SPACES
RESTAURANT PARKING REQ'D (6.67 / 1000 SF)	134	SPACES
C-STORE PARKING REQ'D (4.0 / 1000 SF + 3 PER SERVICE BAY)	34	SPACES
BANK PARKING REQ'D (3.3 / 1000 SF)	10	SPACES
TOTAL PARKING REQUIRED	342	SPACES
TOTAL PARKING PROVIDED	360	SPACES
TOTAL PARKING RATIO PROVIDED	5.21	/1000

SITE DATA

TOTAL SITE ACREAGE	+/- 10.06 AC.
SITE ACREAGE (MINUS PRIVATE DRIVE AND PERIMETER STREETSCAPE IMPROVEMENTS)	+/- 8.98 AC.
TOTAL IMPERVIOUS ACREAGE*	+/- 7.54 AC.
	83.9%
IMPERVIOUS SIDEWALK/PATIOS/AMENITY AREAS*	+/- 0.69 AC.
	7.7%

* PERCENTAGES BASED OFF OF SITE ACREAGE MINUS PRIVATE DRIVE AND PERIMETER STREETSCAPE IMPROVEMENTS



1 / SP-35 SITE PLAN
SCALE: 1" = 100'

N

0' 50' 100' 200'

BRANCH PROPERTIES, LLC

PERIMETER MARKETPLACE
ASHFORD DUNWOODY ROAD
DUNWOODY, GA

JOB NUMBER: 1617702 | DATE: 2019-05-29 | BY: WHH / KMC

DRAWING: SCHEMATIC SITE PLAN

(SP-35)

PHILLIPS
ARCHITECTURE ▪ CONSULTANTS
5901 PEACHTREE DUNWOODY RD. ▪ SUITE A450 ▪ ATLANTA, GA 30328 ▪ 770.394.1616