16VAR 00027

Brookhaven GEORGIA

Amendment Application

RECEIVED APR - 6 2016 CITY OF BROOKHAVEN

Applicant Information

Name: SSP Dresden, LLC

Address: 1954 Airport Road, Suite 270, Atlanta, GA 30341

Phone: 404-429-4974 | Fax: 678-298-7171 | Email: bf@connolly.co.com

Owner Information

Owner's Name: SEE ATTACHED LIST

Owner's Address:

Phone: | Fax: | Email:

Property Information

Property Address: SEE ATTACHED LIST | Parcel Size: 3.437 Acres

Parcel ID: SEE ATTACHED

Current Zoning Classification: PC-2 / O-I

Requested Zoning Classification: PC-2

Is this development and/or request seeking any incentives or tax abatement through the City of Brookhaven or any entity that can grant such waivers, incentives, and/or abatements?

☐ Yes ☐ No

Questionnaire

1. Is the zoning proposal in conformity with the policy and intent of the comprehensive plan?

SEE ATTACHED

2. Will the zoning proposal permit a use that is suitable in view of the use and development of adjacent and nearby properties?

SEE ATTACHED

3. Will the affected property of the zoning proposal have a reasonable economic use as currently zoned?

SEE ATTACHED

4. Will the zoning proposal adversely affect the existing use or usability of adjacent or nearby property?

SEE ATTACHED

5. Are other existing or changing conditions affecting the existing use or usability of the development of the property which give supporting grounds for either approval or disapproval of the zoning proposal?

SEE ATTACHED

6. Will the zoning proposal adversely affect historic buildings, sites, districts, or archaeological resources?

SEE ATTACHED

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

SEE ATTACHED

Affidavit

To the best of my knowledge, this zoning 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 Brookhaven Zoning Ordinance.

Applicant's Name: SSP Dresden, LLC | Date:

Applicant's Signature: S/ Manager | Date: 03/01/16

Sworn to and subscribed before me this 1st Day of March, 20 16

Notary

Notary Public: Amy Wells

Signature: Wells

My Commission Expires: 3/14/16

AMY WELLS NOTARY PUBLIC MY COMMISSION EXPIRES MARCH 14, 2016 FULTON COUNTY, GEORGIA

Fees

☒ Application Fee ☒ Sign Fee ($135 x number required)* – ☒ Legal Fee (~~$10~~ 20) $1165

Fee: $ Payment: ☐ Cash ☐ Check ☐ CC Date:

*** One sign is required per street frontage and/or every 500 feet of street frontage**

Tax Parcel List

Property Address	Tax Parcel
1. 1336 Dresden Drive	18 238 01 010
2. 1342 Dresden Drive	18 238 01 011
3. 1350 Dresden Drive	18 238 01 089
4. 1358 Dresden Drive	18 238 01 014
5. 1364 Dresden Drive	18 238 01 015
6. 1370 Dresden Drive	18 238 01 016
7. 2562 Caldwell Road	18 238 01 012
8. 2552 Caldwell Road	18 238 01 022
9. 2544 Caldwell Road	18 238 01 021

Property List with Owners and Contact Information

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Property Owned	**Owner Name/Contact Info**
1. 1336 and 1342 Dresden Drive	866 WP, LLC 1819 Peachtree Road, Site 57 Atlanta, GA 30i309 Phone: 404-314-9404 beau@kimkingassoc.com
2. 1350 Dresden Drive	Dresden Operating, LLC 200 Glenridge Point Parkway #400 Atlanta, GA 30342 Phone: 404-477-0593 gfiore@clrviewgroup.com
3. 1358 Dresden Drive	DeKalb County 1300 Commerce Drive Decatur, GA 30030
4. 1364 Dresden Drive	James M. McKenna Linda Smith POA for James McKenna P.O. Box 1127 Norcross, GA 30091 Phone: 770-662-0370 Linda.smith@chemweldusa.com
5. 1370 Dresden Drive	Woodley Daniel Christopher IRA, Equity Trust Company for Benefit of Dan Woodley 4411 Avalon Boulevard Alpharetta, GA 30009 Phone: 404-456-8313 danwoodley@me.com
6. 2562, 2552 and 2544 Caldwell Road	Brookhaven Property Holdings, LLC 232 Cedar Park Circle Sarasota FL 34242 Phone: 678-776-2617 Daren234@me.com

Brookhaven GEORGIA

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Applicant/Petitioner Notarized Certification

Petitioner states under oath that: (1) he/she is the executor or Attorney-In-Fact under a Power-of- Attorney for the owner (attach a copy of the Power-of-Attorney letter and type name above as "Owner"); (2) he/she has an option to purchase said property (attach a copy of the contract and type name of owner above as "Owner"); (3) he/she has an estate for years which permits the petitioner to apply (attach a copy of lease and type name of owner above as "Owner").

Applicant / Petitioner	Signature:		Date: 03/01/16
	Address: 1954 Airport Road, Suite 270	City, State: Atlanta, GA	Zip: 30341
	Phone: (404) 429-4974		
	Sworn to and subscribed before me this 1st day of March, 20 16		
	Notary Public: Amy Wells		
Attorney / Agent	Signature:		Date:
	Address: 3343 Peachtree Road, Suite 1600	City, State: Atlanta, GA	Zip: 30326
	Phone: (404) 233-7000		
	Sworn to and subscribed before me this _____ day of _____, 20_____		
	Notary Public:		

AMY WELLS NOTARY PUBLIC FULTON COUNTY GEORGIA MY COMMISSION EXPIRES MARCH 14, 2018

Brookhaven GEORGIA

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Property Owner(s) Notarized Certification

The owner and petitioner acknowledge that this Zoning Map Petition application form is correct and complete. By completing this form, all owners of the subject property certify authorization of the filing of the application for zoning amendment, and authorization of an applicant or agent to act on their behalf in the filing of the application, including all subsequent application amendments.

Property Owner (If Applicable)	Signature: 866 WP, LLC D.K. King Manager		Date: 2/22/16
	Address: 1819 Peachtree Road, Suite 575	City, State: Atlanta, GA	Zip: 30309
	Phone: ~~404.314.9404~~ 404-419-9404		
	Sworn to and subscribed before me this 22 day of February, 20 16		
	Notary Public: ADNEISHA R MINTER SMITH NOTARY PUBLIC DEKALB COUNTY, GEORGIA		
	Signature: Adneisha R Minter Smith		Date: 2/22/16
	Address: 2378 Continental Drive	City, State: Atlanta GA	Zip: 30316
	Phone: 404-576-8377		
Property Owner (If Applicable)	Sworn to and subscribed before me this _____ day of _____, 20_____		
	Notary Public:		
	Signature:		Date:
	Address:	City, State:	Zip:
	Phone:		
Property Owner (If Applicable)	Sworn to and subscribed before me this _____ day of _____, 20_____		
	Notary Public:		

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Property Owner (If Applicable)	Signature: Dresden Operating, LLC		Date: 2-23-16
	Address: 200 Glenridge Pointe Pkwy. #400	City, State: Atlanta, GA	Zip: 30342
	Phone: 404-477-0593		
	Sworn to and subscribed before me this 23 day of February, 20 16		
	Notary Public: Meagan Lorraine Reid		
Property Owner (If Applicable)	Signature:		Date:
	Address:	City, State:	Zip:
	Phone:		
	Sworn to and subscribed before me this_____day of_____, 20_____		
	Notary Public:		
Property Owner (If Applicable)	Signature:		Date:
	Address:	City, State:	Zip:
	Phone:		
	Sworn to and subscribed before me this_____day of_____, 20_____		
	Notary Public:		

MEAGAN LORRAINE REID
NOTARY PUBLIC
GEORGIA
March 18, 2018
FULTON COUNTY

Brookhaven
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Property Owner (If Applicable)	Signature: James M. McKenna Linda McKenna attorney in fact		Date: 2-25-16
	Address: P.O. Box 1127	City, State: Norcross, GA	Zip: 30091
	Phone: 770-662-0370		
	Sworn to and subscribed before me this 25th day of February, 20 16		
	Notary Public: A Wells		
Property Owner (If Applicable)	Signature:		Date:
	Address:	City, State:	Zip:
	Phone:		
	Sworn to and subscribed before me this_____day of_____, 20_____		
	Notary Public:		
Property Owner (If Applicable)	Signature:		Date:
	Address:	City, State:	Zip:
	Phone:		
	Sworn to and subscribed before me this_____day of_____, 20_____		
	Notary Public:		

AMY WELLS
MY COMMISSION EXPIRES
NOTARY PUBLIC
MARCH 14, 2018
FULTON COUNTY, GEORGIA

Brookhaven GEORGIA

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Property Owner(s) Notarized Certification

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Property Owner (If Applicable)	Signature: Woodley Daniel Christopher IRA, Equity Trust Company for Benefit of Dan Woodley		Date: 2-22-16
	Address: 4411 Avalon Boulevard	City, State: Alpharetta, GA	Zip: 30009
	Phone: 404-456-8313		2-22-16
	Sworn to and subscribed before me this 22nd day of February, 20 16		
	Notary Public: Cherrell Green	Cherrell Green NOTARY PUBLIC Cobb County, GEORGIA My Comm. Expires 9/1/2019	
Property Owner (If Applicable)	Signature:		Date:
	Address:	City, State:	Zip:
	Phone:		
	Sworn to and subscribed before me this_____day of_____, 20_____		
	Notary Public:		
Property Owner (If Applicable)	Signature:		Date:
	Address:	City, State:	Zip:
	Phone:		
	Sworn to and subscribed before me this_____day of_____, 20_____		
	Notary Public:		

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Property Owner(s) Notarized Certification

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Property Owner (If Applicable)	Signature: Brookhaven Property Holdings, LLC (C Daren Davenport manager)		Date:
	Address: 232 Cedar Park Circle	City, State: Sarasota, FL	Zip: 34242
	Phone: 678-776-2617		
	Sworn to and subscribed before me this 22ND day of FEBRUARY, 20 16		
	Notary Public:		
Property Owner (If Applicable)	Signature:		Date:
	Address:	City, State:	Zip:
	Phone:		
	Sworn to and subscribed before me this _____ day of _____, 20_____		
	Notary Public:		
Property Owner (If Applicable)	Signature:		Date:
	Address:	City, State:	Zip:
	Phone:		
	Sworn to and subscribed before me this _____ day of _____, 20_____		
	Notary Public:		

ERIC C. FLEMING
MY COMMISSION EXPIRES February 12, 2020
#FF 926572
Bonded thru Notary Public Underwriters
NOTARY PUBLIC, STATE OF FLORIDA

Brookhaven GEORGIA

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Property Owner(s) Notarized Certification

The owner and petitioner acknowledge that this Zoning Map Petition application form is correct and complete. By completing this form, all owners of the subject property certify authorization of the filing of the application for zoning amendment, and authorization of an applicant or agent to act on their behalf in the filing of the application including all subsequent application amendments.

Property Owner (If Applicable)

Signature: DeKalb County		Date: 4-5-16
Address: 1300 Commerce Drive	City, State: Decatur, Georgia	Zip: 30030
Phone: 404-371-2174		
Sworn to and subscribed before me this 5th day of April, 20 16		
Notary Public: ALEXIS KIMBALL NOTARY PUBLIC My Commission Expires 06-18-2018 DEKALB COUNTY, GEORGIA		

Property Owner (If Applicable)

Signature:		Date:
Address:	City, State:	Zip:
Phone:		
Sworn to and subscribed before me this_____day of_____, 20_____		
Notary Public:		

Property Owner (If Applicable)

Signature:		Date:
Address:	City, State:	Zip:
Phone:		
Sworn to and subscribed before me this_____day of_____, 20_____		
Notary Public:		

Brookhaven
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Campaign Disclosure Statement

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CITY OF BROOKHAVEN

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 Brookhaven City Council or a member of the City of Brookhaven Planning Commission?

☐ Yes ☒ No

Applicant / Owner	
Signature:	Staff Manager
Address:	1954 Airport Road, Suite 270, Atlanta, GA 30341 (Applicant)
Date:	03/07/16

If you answered yes above, please complete the following section:

Date	Government Official	Official Position	Description	Amount

Brookhaven GEORGIA

Campaign Disclosure Statement

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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 Brookhaven City Council or a member of the City of Brookhaven Planning Commission?

☒ Yes ☐ No

Applicant / Owner	
	Signature: Abby K. Perez 30% owner of 866 WP, LLC
	Address: 1819 Peachtree Road, Suit 575, Atlanta, GA 30309 (1336 and 1342 Dresden Dr.)
	Date: 2/22/14

If you answered yes above, please complete the following section:

Date	Government Official	Official Position	Description	Amount
9/29	John Ernst	Mayor	election	$600

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Campaign Disclosure Statement

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 Brookhaven City Council or a member of the City of Brookhaven Planning Commission?

☒ Yes ☐ No

Applicant / Owner	
Signature:	Angela King 30% owner of 3166 WP, LLC
Address:	1819 Peachtree Road, Suit 575, Atlanta, GA 30309 (1336 and 1342 Dresden Dr.)
Date:	2/22/14

If you answered yes above, please complete the following section:

Date	Government Official	Official Position	Description	Amount
9/29	John Ernst	Mayor	election	$600

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Campaign Disclosure Statement

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 Brookhaven City Council or a member of the City of Brookhaven Planning Commission?

☒ Yes ☐ No

Applicant / Owner	
Signature:	D. K. King 30% owner of 866 WP, LLC
Address:	1819 Peachtree Road, Suit 575, Atlanta, GA 30309 (1336 and 1342 Dresden Dr.)
Date:	2/22/14

If you answered yes above, please complete the following section:

Date	Government Official	Official Position	Description	Amount
9/29	John Ernst	Mayor	election	$600

Brookhaven GEORGIA

Campaign Disclosure Statement

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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 Brookhaven City Council or a member of the City of Brookhaven Planning Commission?

☐ Yes ☑ No

Applicant / Owner	
Signature:	
Address:	200 Glenridge Point Parkway #400, Atlanta, GA 30342 (1350 Dresden Drive)
Date:	2-23-16

If you answered yes above, please complete the following section:

Date	Government Official	Official Position	Description	Amount

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Campaign Disclosure Statement

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 Brookhaven City Council or a member of the City of Brookhaven Planning Commission?

☐ Yes ☒ No

Applicant / Owner	
	Signature: Linda M Smith, Attorney in fact.
	Address: P.O. Box 1127, Norcross, GA 30091 (1364 Dresden Drive)
	Date: 2-25-16

If you answered yes above, please complete the following section:

Date	Government Official	Official Position	Description	Amount

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Campaign Disclosure Statement

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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 Brookhaven City Council or a member of the City of Brookhaven Planning Commission?

☐ Yes ☑ No

Applicant / Owner	
Signature:	
Address:	4411 Avalon Boulevard, Alpharetta, GA 30009 (1370 Dresden Drive)
Date:	2-22-16

If you answered yes above, please complete the following section:

Date	Government Official	Official Position	Description	Amount

Brookhaven
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Campaign Disclosure Statement

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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 Brookhaven City Council or a member of the City of Brookhaven Planning Commission?

☐ Yes ☑ No

Applicant / Owner	
	Signature:
	Address: 232 Cedar Park Circle, Sarasota, FL 34242 (2562, 2552, 2544 Caldwell Road)
	Date: 2/26/16

If you answered yes above, please complete the following section:

Date	Government Official	Official Position	Description	Amount

MORRIS, MANNING & MARTIN, LLP

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CITY OF BROOKHAVEN

April 7, 2016

Jessica L. Hill
404-504-7754
jhill@mmmlaw.com
www.mmmlaw.com

VIA FEDERAL EXPRESSS

Ms. Patrice Ruffin
Deputy Director
City of Brookhaven Community Development Department
4362 Peachtree Road
Brookhaven, GA 30319

Re: Rezoning Application Submitted April 6, 2016 by SSP Dresden, LLC for parcels on Dresden Drive and Caldwell Road

Dear Patrice:

Pursuant to our discussion yesterday, attached is a consolidated overall legal description for the property in the above captioned application. The original application submittal included separate legal descriptions for each of the existing tracts. Please amend the application with the enclosed consolidated overall legal description of the development tract.

Best,

Jessica L. Hill

Phone: 404.233.7000 | www.mmmlaw.com
1600 Atlanta Financial Center | 3343 Peachtree Road, NE | Atlanta, Georgia 30326
Atlanta • Washington, DC • Raleigh-Durham • Savannah
International Marketing Offices: Bejing • Taipei

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Overall Legal Description

All that certain piece, parcel or lot of land lying and being within Land Lot 238 of the 18th District of Dekalb County, Georgia and being more fully shown and designated on a Boundary Survey for Fairfield Residential dated February 10, 2016, by Hardy Surveying Group and having the following metes and bounds to wit:

Commencing at a point where the north right-of-way of Dresden Drive (R/W varies) intersects with the west right-of-way of Caldwell Road (R/W varies) at the Point-of-Commencement (P.O.C.) and continuing along said right-of-way of Dresden Drive South 77 degrees 43 minutes 48 seconds West (S77°43'48"W) a distance of 158.77' to a #4 rebar found; thence continuing along said right-of-way South 80 degrees 05 minutes 43 seconds West (S80°05'43"W) a distance of 69.98' to a #4 rebar found the Point-of-Beginning (P.O.B.);

Thence turning and continuing along said right-of-way the following courses and distances: South 82 degrees 40 minutes 23 seconds West (S82°40'23"W) a distance of 232.20' to a #4 rebar found; thence North 05 degrees 06 minutes 25 seconds East (N05°06'25"E) a distance of 8.55' to a point; thence South 81 degrees 45 minutes 13 seconds West (S81°45'13"W) a distance of 112.41' to a point; thence South 00 degrees 52 minutes 47 seconds West (S00°52'47"W) a distance of 9.19' to a point; thence South 81 degrees 00 minutes 47 seconds West (S81°00'47"W) a distance of 45.00' to a point; thence continuing along to the eastern right-of-way of Parkside Drive North 83 degrees 31 minutes 42 seconds West (N83°31'42"W) a distance of 63.91' to a point; thence continuing along said right-of-way North 33 degrees 26 minutes 32 seconds West (N33°26'32"W) a distance of 107.00' to a 1" open top found; thence turning and leaving said right-of-way and continuing along the line of N/F Brookhaven Township Homeowners North 47 degrees 22 minutes 28 seconds East (N47°22'28"E) a distance of 423.52' to a point on the south right-of-way of Caldwell Road (R/W varies); thence turning and continuing said right-of-way the following courses and distances: South 89 degrees 32 minutes 28 seconds East (S89°32'28"E) a distance of 99.29' to a point; thence North 87 degrees 42 minutes 20 seconds East (N87°42'20"E) a distance of 17.31' to a point; thence North 86 degrees 26 minutes 05 seconds East (N86°26'05"E) a distance of 93.95' to a point; thence continuing along a curve to the right with a radius of 703.06', arc length 75.33', chord bearing North 87 degrees 02 minutes 10 seconds East (N87°02'10"E), chord distance 75.30' to a point; thence turning and leaving said right-of-way and continuing along the line of N/F Caldwell Venture, LLC South 08 degrees 43 minutes 16 seconds West (S08°43'16"W) a distance of 144.19' to an open top found; thence turning and continuing along the line of N/F Dresden Brookhaven, LLC South 75 degrees 52 minutes 47 seconds West (S75°52'47"W) a distance of 34.50' to a #4 rebar found; thence turning and continuing along said line South 10 degrees 11 minutes 41 seconds West (S10°11'41"W) a distance of 191.57' to the Point-of-Beginning (P.O.B.) and containing 3.438 acres (149,750 sq. ft.).

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Legal Description: Tract 1

All that certain piece, parcel or lot of land lying and being within Land Lot 238 of the 18th District of Dekalb County, Georgia and being more fully shown and designated on a Boundary Survey for Fairfield Residential dated February 10, 2016, by Hardy Surveying Group and having the following metes and bounds to wit:

Commencing at a point where the north right-of-way of Dresden Drive (R/W varies) intersects with the west right-of-way of Caldwell Road (R/W varies) at the Point-of-Commencement (P.O.C.) and continuing along said right-of-way of Dresden Drive South 77 degrees 43 minutes 48 seconds West (S77°43'48"W) a distance of 158.77' to a #4 rebar found; thence continuing along said right-of-way South 80 degrees 05 minutes 43 seconds West (S80°05'43"W) a distance of 69.98' to a #4 rebar found; thence turning and continuing along said right-of-way the following courses and distances: South 10 degrees 11 minutes 41 seconds West for (S10°11'41"W) a distance of 6.37' to a point; South 81 degrees 35 minutes 23 seconds West (S81°35'23"W) a distance of 226.27' to a point; thence North 03 degrees 46 minutes 48 seconds East (N03°46'48"E) a distance of 19.09' to a point; thence South 81 degrees 47 minutes 13 seconds West (S81°47'13"W) a distance of 118.40' to a point; thence South 00 degrees 52 minutes 47 seconds West (S00°52'47"W) a distance of 9.19' to a point; thence South 81 degrees 00 minutes 47 seconds West (S81°00'47"W) a distance of 45.00' to a point; thence continuing along to the eastern right-of-way of Parkside Drive North 83 degrees 31 minutes 42 seconds West (N83°31'42"W) a distance of 63.91' to the Point-of-Beginning (P.O.B.);

Thence continuing along the East right-of-way of Parkside Drive North 33 degrees 26 minutes 32 seconds West (N33°26'32"W) a distance of 107.00' to a 1" open top found; thence turning and leaving said right-of-way and continuing along the line of N/F Brookhaven Township Homeowners North 47 degrees 22 minutes 28 seconds East (N47°22'28"E) a distance of 5.52' to a #4 rebar found; thence continuing along said line North 47 degrees 22 minutes 28 seconds East (N47°22'28"E) a distance of 226.48' to a point; thence turning and continuing along the line of Tract 2 South 24 degrees 23 minutes 37 seconds West (S24°23'37"W) a distance of 270.55' to the Point-of-Beginning (P.O.B.) and containing 0.281 acres (12,253 sq. ft.).

Legal Description: Tract 2

All that certain piece, parcel or lot of land lying and being within Land Lot 238 of the 18th District of Dekalb County, Georgia and being more fully shown and designated on a Boundary Survey for Fairfield Residential dated February 10, 2016, by Hardy Surveying Group and having the following metes and bounds to wit:

Commencing at a point where the north right-of-way of Dresden Drive (R/W varies) intersects with the west right-of-way of Caldwell Road (R/W varies) at the Point-of-Commencement (P.O.C.) and continuing along said right-of-way of Dresden Drive South 77 degrees 43 minutes 48 seconds West (S77°43'48"W) a distance of 158.77' to a #4 rebar found; thence continuing along said right-of-way South 80 degrees 05 minutes 43 seconds West (S80°05'43"W) a distance of 69.98' to a #4 rebar found; thence turning and continuing along said right-of-way the following courses and distances: South 10 degrees 11 minutes 41 seconds West for (S10°11'41"W) a distance of 6.37' to a point; South 81 degrees 35 minutes 23 seconds West (S81°35'23"W) a distance of 226.27' to a point; thence North 03 degrees 46 minutes 48 seconds East (N03°46'48"E) a distance of 19.09' to a point; thence South 81 degrees 47 minutes 13 seconds West (S81°47'13"W) a distance of 118.40' to the Point-of-Beginning (P.O.B.);

Thence continuing along said right-of-way South 00 degrees 52 minutes 47 seconds West (S00°52'47"W) a distance of 9.19' to a point; thence continuing along said right-of-way South 81 degrees 00 minutes 47 seconds West (S81°00'47"W) a distance of 45.00' to a point; thence continuing along said right-of-way North 83 degrees 31 minutes 42 seconds West (N83°31'42"W) a distance of 63.91' to a point; thence turning and leaving said right-of-way and continuing along the line of Tract 1 North 24 degrees 23 minutes 37 seconds East (N24°23'37"E) a distance of 270.55' to a point; thence turning and continuing along the line of Tract 3 South 00 degrees 52 minutes 47 seconds West (S00°52'47"W) a distance of 237.41' to the Point-of-Beginning (P.O.B.) and containing 0.314 acres (13,692 sq. ft.).

Legal Description: Tract 3

All that certain piece, parcel or lot of land lying and being within Land Lot 238 of the 18th District of Dekalb County, Georgia and being more fully shown and designated on a Boundary Survey for Fairfield Residential dated February 10, 2016, by Hardy Surveying Group and having the following metes and bounds to wit:

Commencing at a point where the north right-of-way of Dresden Drive (R/W varies) intersects with the west right-of-way of Caldwell Road (R/W varies) at the Point-of-Commencement (P.O.C.) and continuing along said right-of-way of Dresden Drive South 77 degrees 43 minutes 48 seconds West (S77°43'48"W) a distance of 158.77' to a #4 rebar found; thence continuing along said right-of-way South 80 degrees 05 minutes 43 seconds West (S80°05'43"W) a distance of 69.98' to a #4 rebar found; thence turning and continuing along said right-of-way the following courses and distances: South 10 degrees 11 minutes 41 seconds West for (S10°11'41"W) a distance of 6.37' to a point; South 81 degrees 35 minutes 23 seconds West (S81°35'23"W) a distance of 226.27' to a point; thence North 03 degrees 46 minutes 48 seconds East (N03°46'48"E) a distance of 19.09' to the Point-of-Beginning (P.O.B.);

Thence continuing along said right-of-way South 81 degrees 45 minutes 13 seconds West (S81°47'13"W) a distance of 118.40' to a point; thence turning and leaving said right-of-way along the line of Tract 2 North 00 degrees 52 minutes 47 seconds East (N00°52'47"E) a distance of 237.41' to a point; thence turning and continuing along the line of Tract 7 South 67 degrees 26 minutes 54 seconds East (S67°26'54"E) a distance of 132.98' to a #4 rebar found; thence turning and continuing along the line of Tract 4 South 03 degrees 07 minutes 55 seconds West (S03°07'55"W) a distance of 169.72' to the Point-of-Beginning (P.O.B.) and containing 0.563 acres (24,521 sq. ft.).

Legal Description: Tract 4

All that certain piece, parcel or lot of land lying and being within Land Lot 238 of the 18th District of Dekalb County, Georgia and being more fully shown and designated on a Boundary Survey for Fairfield Residential dated February 10, 2016, by Hardy Surveying Group and having the following metes and bounds to wit:

Commencing at a point where the north right-of-way of Dresden Drive (R/W varies) intersects with the west right-of-way of Caldwell Road (R/W varies) at the Point-of-Commencement (P.O.C.) and continuing along said right-of-way of Dresden Drive South 77 degrees 43 minutes 48 seconds West (S77°43'48"W) a distance of 158.77' to a #4 rebar found; thence continuing along said right-of-way South 80 degrees 05 minutes 43 seconds West (S80°05'43"W) a distance of 69.98' to a #4 rebar found; thence turning and continuing along said right-of-way the following courses and distances: South 10 degrees 11 minutes 41 seconds West for (S10°11'41"W) a distance of 6.37' to a point; South 81 degrees 35 minutes 23 seconds West (S81°35'23"W) a distance of 128.65' to a the Point-of-Beginning (P.O.B.);

Thence continuing along said right-of-way South 81 degrees 35 minutes 23 seconds West (S81°35'23"W) a distance of 97.62' to a #4 rebar found; thence turning and continuing along said right-of-way North 03 degrees 46 minutes 48 seconds East (N03°46'48"E) a distance of 19.09' to a point; thence leaving said right-of-way and continuing along the line of Tract 3 North 03 degrees 07 minutes 55 seconds East (N03°07'55"E) a distance of 169.72' to a #4 rebar found; thence turning and continuing along the line of Tract 7 North 52 degrees 40 minutes 47 seconds East (N52°40'47"E) a distance of 154.39' to a point; thence turning and continuing along the line of Tract 8 South 07 degrees 48 minutes 39 seconds West (S07°48'39"W) a distance of 70.91' to a inch and a half open top found; thence continuing along the line Tract 5 South 07 degrees 48 minutes 39 seconds West (S07°48'39"W) a distance of 199.43' to the Point-of-Beginning (P.O.B.) and containing 0.545 acres (23,732 sq. ft.).

Legal Description: Tract 5

All that certain piece, parcel or lot of land lying and being within Land Lot 238 of the 18th District of Dekalb County, Georgia and being more fully shown and designated on a Boundary Survey for Fairfield Residential dated February 10, 2016, by Hardy Surveying Group and having the following metes and bounds to wit:

Commencing at a point where the north right-of-way of Dresden Drive (R/W varies) intersects with the west right-of-way of Caldwell Road (R/W varies) at the Point-of-Commencement (P.O.C.) and continuing along said right-of-way of Dresden Drive South 77 degrees 43 minutes 48 seconds West (S77°43'48"W) a distance of 158.77' to a #4 rebar found; thence continuing along said right-of-way South 80 degrees 05 minutes 43 seconds West (S80°05'43"W) a distance of 69.98' to a #4 rebar found; thence turning and continuing along said right-of-way the following courses and distances: South 10 degrees 11 minutes 41 seconds West for (S10°11'41"W) a distance of 6.37' to a point; South 81 degrees 35 minutes 23 seconds West (S81°35'23"W) a distance of 56.81' to a the Point-of-Beginning (P.O.B.);

Thence continuing along said right-of-way South 81 degrees 35 minutes 23 seconds West (S82°40'23"W) a distance of 71.84' to a point; thence turning and leaving said right-of-way along the line of Tract 4 North 07 degrees 48 minutes 39 seconds East (N07°48'39"E) a distance of 199.43' to a one and a half inch open top found; thence turning and continuing along the line of Tract 8 North 83 degrees 08 minutes 09 seconds East (N83°08'09"E) a distance of 68.15' to a point; thence turning and continuing along the line of Tract 6 South 06 degrees 55 minutes 18 seconds West (S06°55'18"W) a distance of 196.65' to the Point-of-Beginning (P.O.B.) and containing 0.307 acres (13,386 sq. ft.).

Legal Description: Tract 6

All that certain piece, parcel or lot of land lying and being within Land Lot 238 of the 18th District of Dekalb County, Georgia and being more fully shown and designated on a Boundary Survey for Fairfield Residential dated February 10, 2016, by Hardy Surveying Group and having the following metes and bounds to wit:

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thence turning and continuing along said right-of-way South 10 degrees 11 minutes 41 seconds West for (S10°11'41"W) a distance of 6.37' to a point; thence South 81 degrees 35 minutes 23 seconds West (S81°35'23"W) a distance of 56.81' to a point; thence turning and leaving said right-of-way along the line of Tract 5 North 06 degrees 55 minutes 18 seconds East (N06°55'18"E) a distance of 196.65' to a point; thence turning and continuing along the line of Tract 8 North 83 degrees 08 minutes 09 seconds East (N83°08'09"E) a distance of 28.07' to a open top found; thence continuing along the line of Tract 9 North 79 degrees 56 minutes 44 seconds East (N79°56'44"E) a distance of 74.26' to a open top found; thence turning and continuing along the line of N/F Dresden Brookhaven LLC South 75 degrees 52 minutes 47 seconds West (S75°52'47"W) a distance of 34.50' to a #4 rebar found; thence turning and continuing along said line South 10 degrees 11 minutes 41 seconds West (S10°11'41"W) a distance of 191.57' to the Point-of-Beginning (P.O.B.) and containing 0.274 acres (11,920 sq. ft.).

Legal Description: Tract 7

All that certain piece, parcel or lot of land lying and being within Land Lot 238 of the 18th District of Dekalb County, Georgia and being more fully shown and designated on a Boundary Survey for Fairfield Residential dated February 10, 2016, by Hardy Surveying Group and having the following metes and bounds to wit:

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Thence continuing along the East right-of-way of Parkside Drive North 33 degrees 26 minutes 32 seconds West (N33°26'32"W) a distance of 107.00' to a 1" open top found; thence turning and leaving said right-of-way and continuing along the line of N/F Brookhaven Township Homeowners North 47 degrees 22 minutes 28 seconds East (N47°22'28"E) a distance of 5.52' to a #4 rebar found; thence continuing along said line North 47 degrees 22 minutes 28 seconds East (N47°22'28"E) a distance of 226.48' to the Point-of-Beginning (P.O.B.);

Thence continuing along said line North 47 degrees 22 minutes 28 seconds East (N47°22'28"E) a distance of 169.81' to a point on the south right-of-way of Caldwell Road (R/W Varies); thence turning and continuing along said right-of-way South 89 degrees 45 minutes 42 seconds East (S89°45'42"E) a distance of 130.50' to a point; thence turning and leaving said right-of-way and continuing along the line of Tract 8 South 07 degrees 48 minutes 39 seconds West (S07°48'39"W) a distance of 72.53' to a point; thence turning and continuing along the line of Tract 4 South 52 degrees 40 minutes 47 seconds West (S52°40'47"W) a distance of 154.39' to a #4 rebar found; thence turning and continuing along the line of Tract 3 North 67 degrees 26 minutes 54 seconds West (N67°26'54"W) a distance of 132.98' to the Point-of-Beginning (P.O.B.) and containing 0.575 acres (25,030 sq. ft.).

Legal Description: Tract 8

All that certain piece, parcel or lot of land lying and being within Land Lot 238 of the 18th District of Dekalb County, Georgia and being more fully shown and designated on a Boundary Survey for Fairfield Residential dated February 10, 2016, by Hardy Surveying Group and having the following metes and bounds to wit:

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Thence continuing along the East right-of-way of Parkside Drive North 33 degrees 26 minutes 32 seconds West (N33°26'32"W) a distance of 107.00' to a 1" open top found; thence turning and leaving said right-of-way and continuing along the line of N/F Brookhaven Township Homeowners North 47 degrees 22 minutes 28 seconds East (N47°22'28"E) a distance of 5.52' to a #4 rebar found; thence continuing along said line North 47 degrees 22 minutes 28 seconds East (N47°22'28"E) a distance of 226.48' to a point; Thence continuing along said line North 47 degrees 22 minutes 28 seconds East (N47°22'28"E) a distance of 169.81' to a point on the south right-of-way of Caldwell Road (R/W Varies); thence turning and continuing along said right-of-way South 89 degrees 45 minutes 42 seconds East (S89°45'42"E) a distance of 130.50' to the Point-of-Beginning (P.O.B.);

Thence turning and continuing along said right-of-way North 07 degrees 48 minutes 39 seconds East (N07°48'39"E) a distance of 15.28' to a point; thence continuing along said right-of-way North 86 degrees 26 minutes 05 seconds East (N86°26'05"E) a distance of 93.93' to a point; thence turning and leaving said right-of-way and continuing along the line of Tract 9 South 07 degrees 26 minutes 06 seconds West (S07°26'06"W) a distance of 152.88' to an open top found; thence turning and continuing along the line of Tract 6 South 83 degrees 08 minutes 09 seconds West (S83°08'09"W) a distance of 28.07' to a point; thence continuing along the line of Tract 5 South 83 degrees 08 minutes 09 seconds West (S83°08'09"W) a distance of 68.15' to a one and a half inch open top found; thence turning and continuing along the line of Tract 4 North 07 degrees 48 minutes 39 seconds East (N07°48'39"E) a distance of 70.91' to a point; thence continuing along the line of Tract 7 North 07 degrees 48 minutes 39 seconds East (N07°48'39"E) a distance of 72.53' to the Point-of-Beginning (P.O.B.) and containing 0.331 acres (14,435 sq. ft.).

Legal Description: Tract 9

All that certain piece, parcel or lot of land lying and being within Land Lot 238 of the 18th District of Dekalb County, Georgia and being more fully shown and designated on a Boundary Survey for Fairfield Residential dated February 10, 2016, by Hardy Surveying Group and having the following metes and bounds to wit:

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Thence continuing along a curve to the right with a radius of 703.06', arc length 75.33', chord bearing North 87 degrees 02 minutes 10 seconds East (N87°02'10"E), chord distance 75.30' to a point; thence turning and leaving said right-of-way and continuing along the line of N/F Caldwell Venture, LLC South 08 degrees 43 minutes 16 seconds West (S08°43'16"W) a distance of 144.19' to an open top found; thence turning and continuing along the line of Tract 6 South 79 degrees 56 minutes 44 seconds West (S79°56'44"W) a distance of 74.26' to a open top found; thence turning and continuing along the line of Tract 8 North 07 degrees 26 minutes 06 seconds East (N07°26'06"E) a distance of 152.88' to the Point-of-Beginning (P.O.B.) and containing 0.247 acres (10,781 sq. ft.).

Environmental Site Analysis-Dresden Drive
2/23/2016

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1. **Conformance to Comprehensive Plan**

   a. **Describe the proposed project and the existing environmental conditions on the site**
   The proposed project provides for a mixed use multi-family and commercial development located along Dresden Drive between Parkside Drive and portions of Caldwell Road in the City of Brookhaven, Georgia. The development includes approximately 206 residential units and 19,980 square feet of commercial space in a 4-5 story building that wraps a proposed 6-story parking deck.

   The subject property consists of 9 tracts which total 3.435 acres. Three of the tracts fronting Parkside Drive and Dresden are currently zoned O-I and the remaining tracts fronting Dresden and Caldwell Road are zoned PC-2 pursuant to Z-05-1760. The proposed zoning is PC-2 for the entire site which is consistent with the Comprehensive Plan and specifically the Peachtree Corridor Overlay District.

   The existing environmental conditions on the site would allow for the proposed use and development. The existing conditions include several undeveloped parcels covered by unmaintained shrubs and grasses and a parcel that includes an office building owned by DeKalb County. There are no sidewalks that exist on either the Dresden Drive or Caldwell Road frontages of the property.

   b. **Describe the adjacent properties**
   The adjacent properties on Caldwell Drive to the east are zoned NS and are a mix of retail, restaurants and multi-family residences. The properties directly to the north, west and east of the subject property are a mix of single family homes, townhomes, and retail/commercial establishments. Two new multi-family residential developments are located across Dresden Drive.

   c. **Describe how the project conforms to the Comprehensive Land Use Plan**
   The subject area falls within the "Peachtree Corridor Overlay District" character area in the Brookhaven Comprehensive Land Use Plan. This character area calls for pedestrian friendly, mixed use development centered around the Brookhaven MARTA Station. The land uses allowed in the Peachtree Corridor Overlay District include multifamily residential, mixed use, retail and neighborhood commercial which is consistent with the proposal. Building heights are limited to 3-8 stories and the recommended number of dwelling units per acre is 12-120. Therefore the project's proposed 4-6 stories and 60 dwelling units per acre is consistent with the Brookhaven Comprehensive Land Use Plan. A significant (+/- 20,000 sf) commercial component is located along the Dresden frontage. Parking for both commercial and residential uses are in a shared parking deck. Streetscapes and sidewalks are proposed to promote pedestrian friendly access.

d. **Include the portion of the Comprehensive Plan Land Use map which supports the project's conformity to the Plan**
Exhibits attached including existing land use, the DeKalb County Comprehensive Plan future development map, and City of Brookhaven Comprehensive Plan Peachtree Corridor Overlay Community Goals.

e. **Evaluate the proposed project with respect to the land use suggestion of the Comprehensive Plan as well as any pertinent Plan policies**
The proposed project is in conformance with the policies of the Comprehensive Plan and consistent with the vision of the Brookhaven-Peachtree LCI Design guidelines which encourage a framework for new multi-family housing along Dresden Drive with an emphasis on a pedestrian friendly, residential development around the Brookhaven MARTA station.

2. **Environmental Impacts of the Proposed Project**

a. **Wetlands-** There are no wetlands on the subject property.
- U.S. Fish and Wildlife Service, National Wetlands Inventory (http://wetlands.fws.gov/downloads.htm)
- Georgia Geologic Survey (404-656-3214)
- Field observation and subsequent wetlands delineation/survey if applicable

b. **Floodplain-** The subject property is not located in a floodplain.
- Federal Emergency Management Agency (http://www.fema.org)
- Field observation and verification

c. **Streams/stream buffers-** No such conditions are known.
- Field observation and verification

d. **Slopes exceeding 25 percent over a 10-foot rise in elevation-** No such conditions exist on the property.
- United States Geologic Survey Topographic Quadrangle Map
- Field observation and verification

e. **Vegetation-** No such conditions are known.
- United States Department of Agriculture, Nature Resource Conservation Service
- Field observation

f. **Wildlife Species-** No such conditions are located near the property.
- United States Fish and Wildlife Services
- Georgia Department of Natural Services, Wildlife Resources Division, Natural Heritage Program
- Field observation

g. **Archeological/Historical Sites-**No such conditions are known.
- Historic Resources Survey
- Georgia Department of Natural Resources, Historic Preservation Division
- Field observation and verification

3. Project Implementation Measures

a. Protection of environmentally sensitive areas-

No such conditions exist on the property.

b. Protection of Water Quality-

We will include appropriate erosion control procedures in the project and comply with local, state, and federal water quality regulations. The existing and past developments have no facilities to treat or detain storm water. The developer will provide for a minimum of 80% TSS removal for the first 1.2 inches of rainfall, in accordance with the requirements established by the City of Brookhaven storm water ordinance, the Georgia Stormwater Management Manual and Georgia Department of Natural Resources to meet city, county and state standards relative to runoff, flow and water quality.

c. Minimization of negative impacts on existing infrastructure-

The proposed use will be limited to the boundaries of the property and will, therefore, not impact any existing nearby structures. Existing infrastructure is sufficient to handle the proposed use. Sanitary sewer service and water service are provided by DeKalb County. The existing sewer and water are located in the right of way of Dresden Drive. We have discussed capacities of both sanitary sewer and water with DeKalb County. There are no restrictions or formal limitations currently imposed by DeKalb County. The sizes of existing mains and pressures are adequate for the proposed uses. A low point in Dresden Drive exists just west of the proposed project entrance. There are structures in the road that currently accept stormwater runoff from the site. The stormwater facilities proposed will tie directly to this utility maintaining existing drainage patterns. Stormwater, by code, will have reduced peak rates of flow. Public utilities are available and adequate at the site boundaries.

d. Minimization on archeological/historically significant areas-

No such conditions are known to exist on the property.

e. Minimization of negative impacts on environmentally stressed communities where environmentally stressed communities are defied as communities exposed to a minimum of two environmentally adverse conditions resulting from public and private municipal (e.g., solid waste and wastewater treatment facilities, utilities, airports and railroads) and industrial (e.g., landfills, quarries and manufacturing facilities) uses-

No such conditions are known to exist.

f. Creation and preservation of green space and open space-

The proposed project will include a preservation of green space and public open space as specified in the requirements of the City of Brookhaven Comprehensive Plan and the Peachtree Corridor Overlay District.

g. Protection of citizens from the negative impacts of noise and lighting-

The Applicant will take reasonable measures to protect citizens from the negative impacts of noise and lighting, if any, resulting from the new use. Lighting on all buildings will be shielded to protect the adjacent properties from any potential light spillage or glare. Special care will be taken on the Caldwell Road frontage and the west property line to protect citizens from negative impacts including utilization of a landscape buffer to soften the visual impact of the project.

h. Protection of parks and recreational green space-

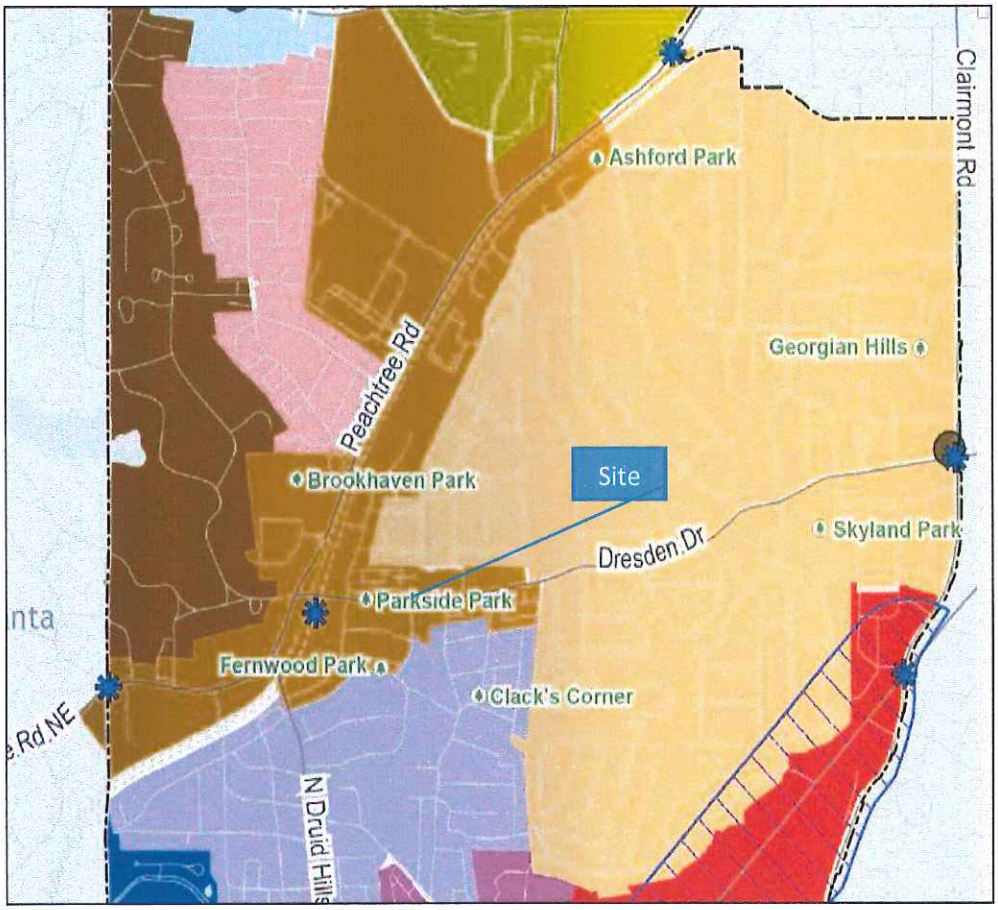
No parks or recreational green space currently exist on the property.

i. Minimization of impacts to wildlife habitats-

No such conditions are known to exist on the property.

Character Area Map

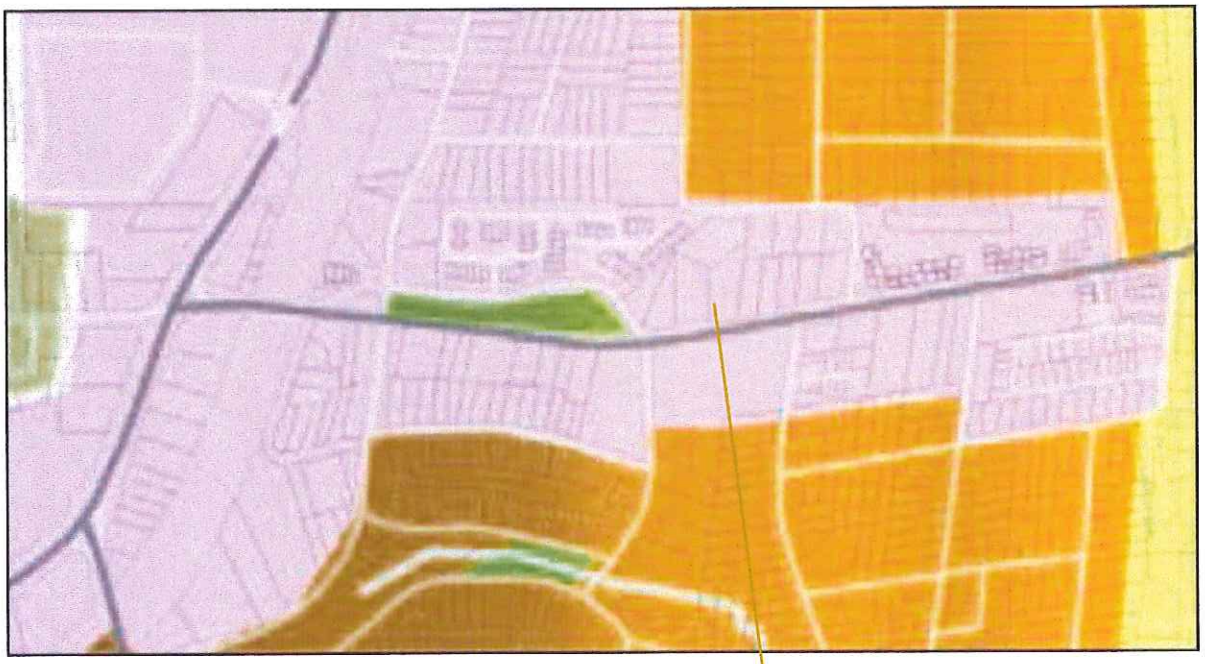
Dresden Drive Site Lies within the Peachtree Corridor Overlay District



Dresden Drive site lies within the Peachtree Corridor Overlay District

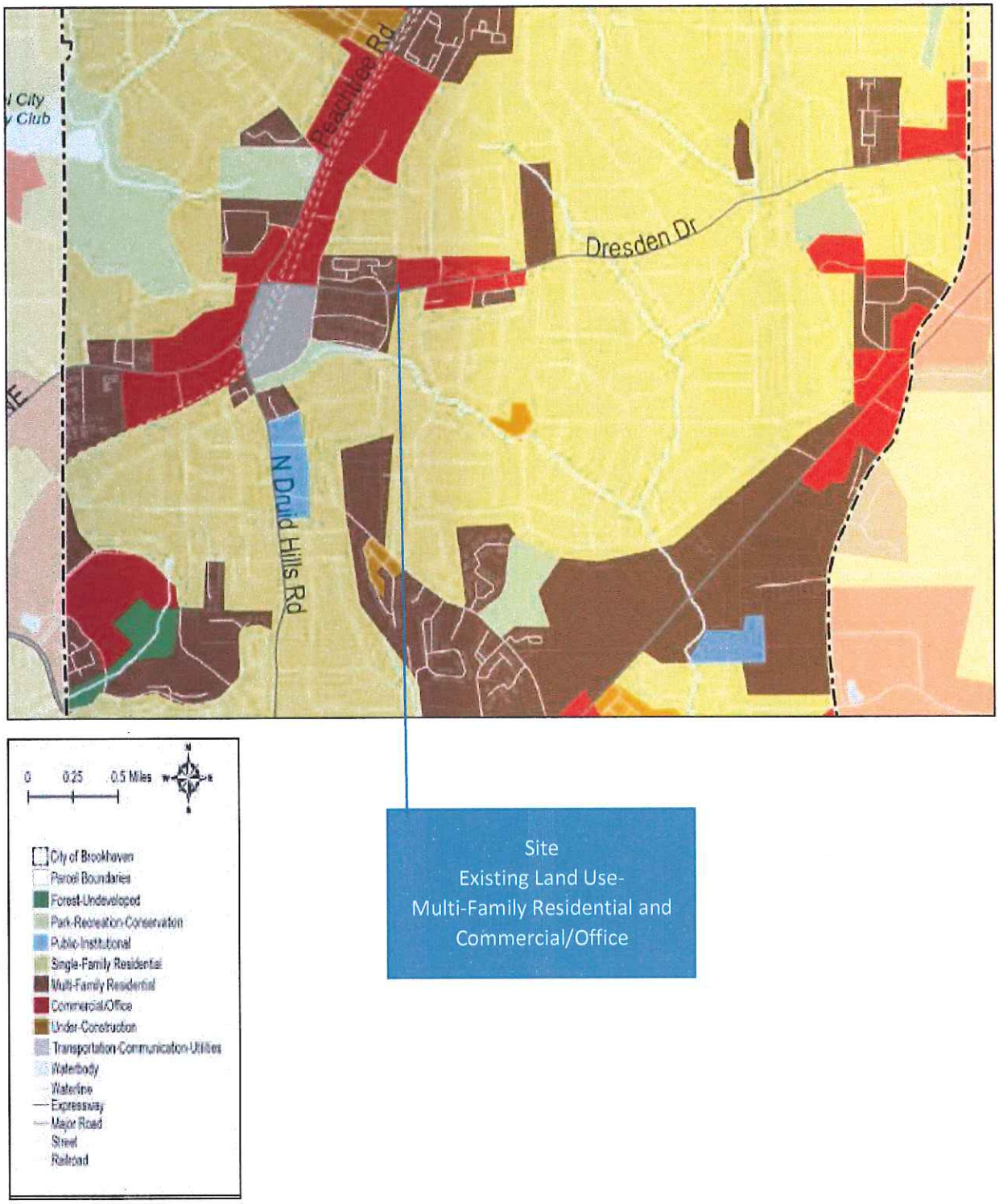
DeKalb County Future Development Map

Town Center Character Area



Site-
Future Development
Map Area-Town Center
Character Area

Existing Land Use



Site
Existing Land Use-
Multi-Family Residential and
Commercial/Office

Brookhaven Peachtree Overlay District

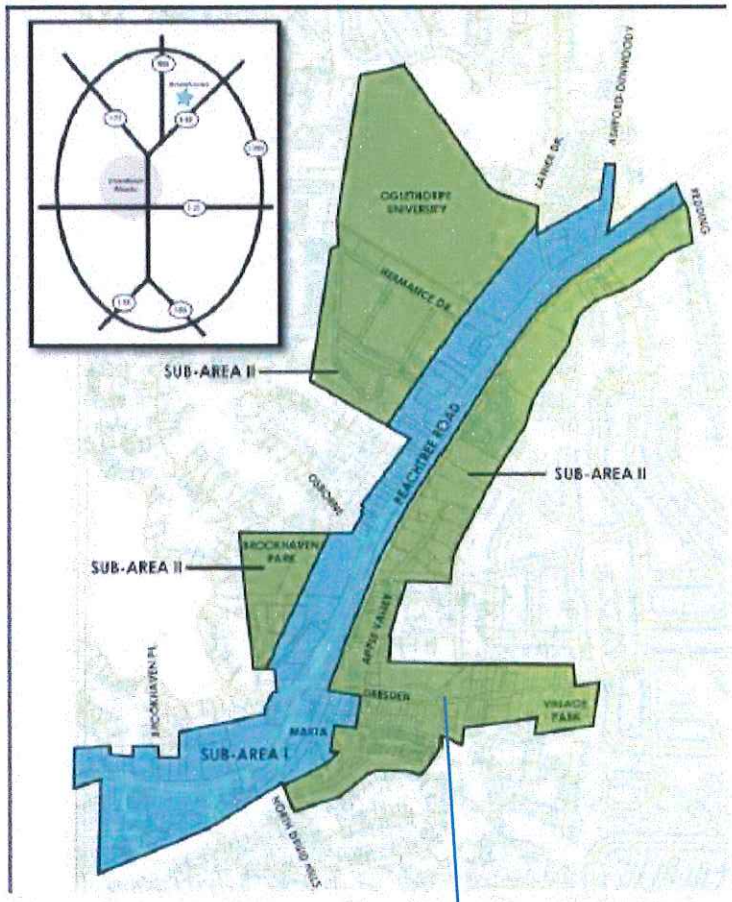


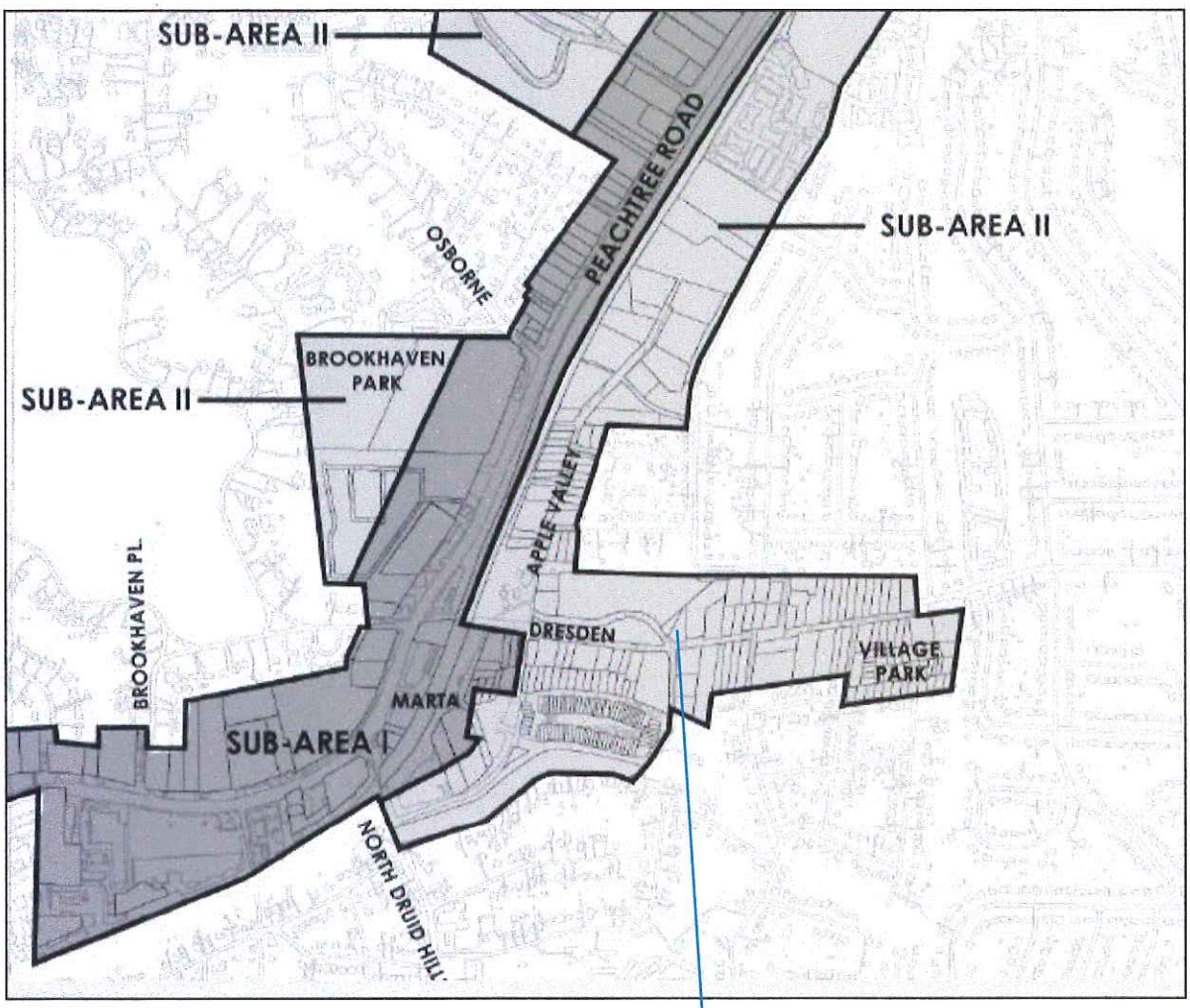
Figure A.2-6: Brookhaven-Peachtree Overlay District

Source: Brookhaven-Peachtree LCI Study

Site-

Located in the Sub-Area II Brookhaven-Peachtree Overlay District

Brookhaven District Overlay District Map



Site-

Located in the Sub-Area II

Of the Brookhaven Peachtree Overlay District

PEACHTREE CORRIDOR OVERLAY DISTRICT

CHARACTER AREA DESCRIPTION

The boundaries for this character area have been defined by the boundaries of the Peachtree-Brookhaven Overlay District. This overlay district promotes mixed-use, pedestrian-friendly development centered around the Brookhaven MARTA station.

The Peachtree Road corridor is a diverse corridor featuring a mixture of multi-story, multi-family, commercial, hotel, public-institutional and industrial land uses. In recent years, this area has experienced large-scale redevelopment in the form of mixed-use development within Town Brookhaven and along the Dresden Drive corridor. This trend is expected to continue, particularly within sites along Peachtree Road where aging and vacant commercial uses exhibit a high potential for redevelopment.

COMMUNITY VISION

The vision for the Peachtree Road corridor is for the area to continue to transition into a pedestrian-friendly urban boulevard with medium-density, multi-story mixed-use development centered around the Brookhaven MARTA station. Low-rise commercial uses will be redeveloped into mixed-use developments that incorporate a mixture of office, civic, multi-family residential and retail uses. This character area is an appropriate location for a permanent City Hall/ Government Complex.

The vision also includes a redesigned and improved Brookhaven Park resulting in a more open, accessible, and inviting public space. Given the parks central location it has the ability to serve as Brookhaven's 'Central Park' hosting city-wide events.

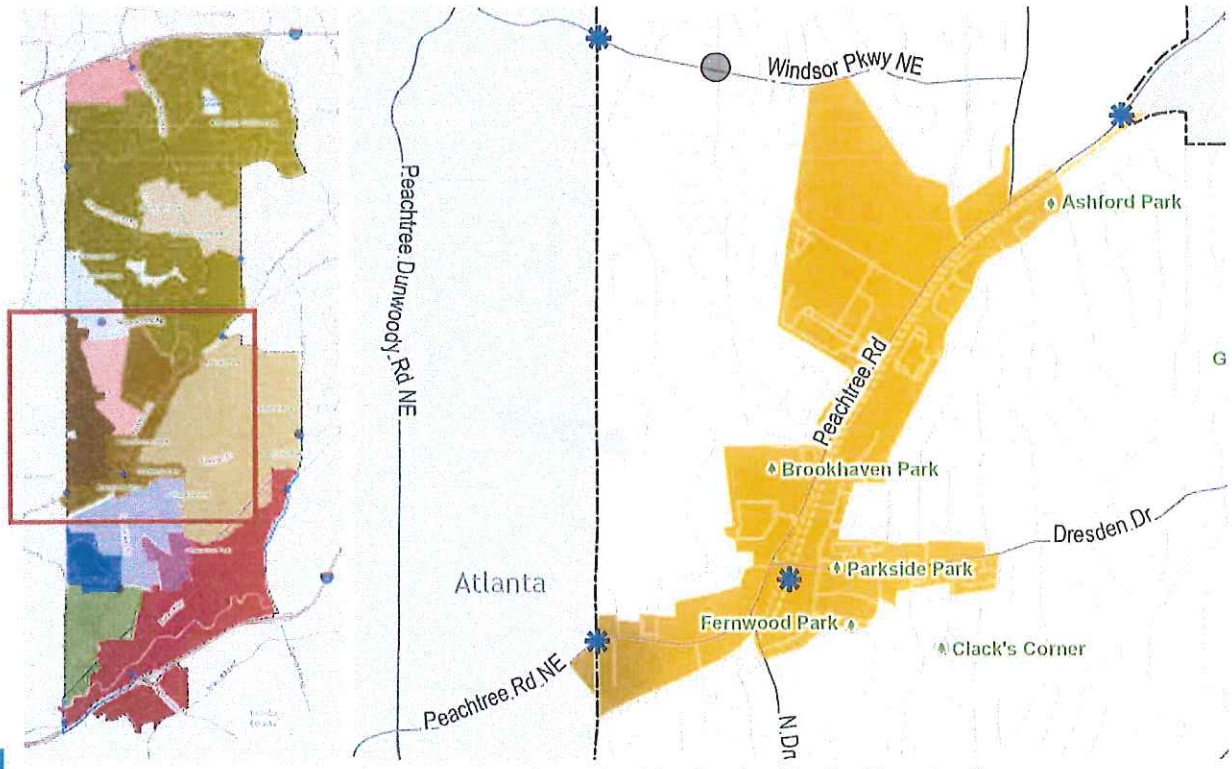


Figure 3-12: Peachtree Corridor Overlay District Character Area

Town Brookhaven is a large-scale mixed-use development along Peachtree Road.

Recent mixed-use development along Dresden Drive is viewed an example of quality development to be emulated in other locations within this character area.

IMPLEMENTATION STRATEGIES

- Complete a strategic plan to identify the location of Brookhaven's permanent City Hall and civic land uses.
- Pursue recommendations of the Parks and Recreation Master Plan to make improvements at Brookhaven Park.
- Update the Peachtree-Brookhaven Overlay District to clarify ambiguous language.
- Establish gateways at entrance and exit points of City along Peachtree Road.
- Develop a more user-friendly mixed-use zoning district to be applied in this area.
- Encourage the redevelopment of key vacant or underutilized parcels to further the vision of the Peachtree Brookhaven LCI study.
- Coordinate with and levarage MARTA Transit Oriented Development initiative at Brookhaven MARTA station to further community's vision for the area.

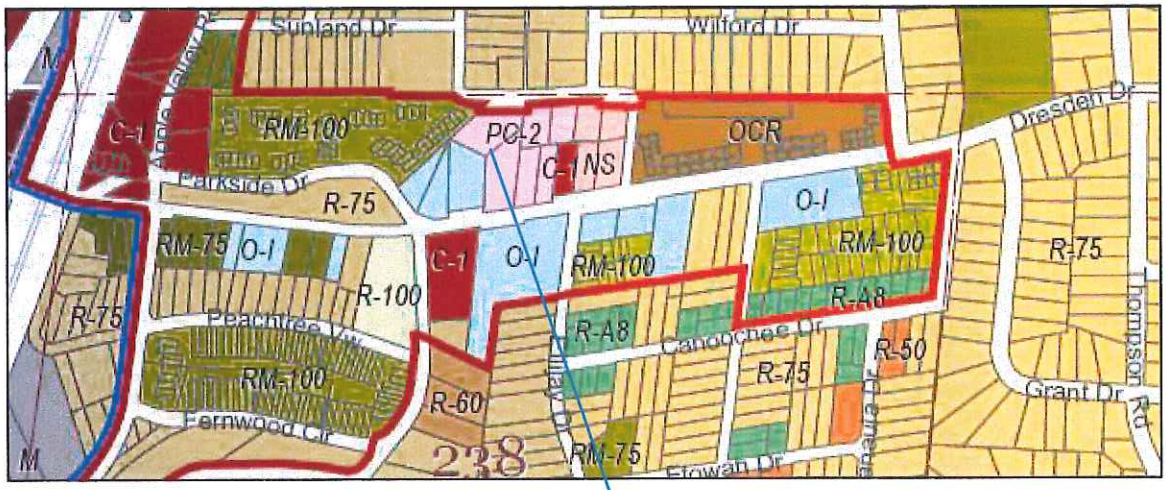
APPROPRIATE LAND USES

- Office
- Multi-family Residential
- Townhomes
- Hotel
- Mixed-Use
- Retail
- Neighborhood Commercial
- Parks and Recreation

RECOMMENDED RESIDENTIAL DENSITIES AND BUILDING HEIGHTS

- Dwelling Units Per Acre: 12-120
- Building Heights: 3-8 stories

Zoning Map



Site

Current Zoning:
O-I, PC-2
Proposed Zoning:
PC-2

Zoning Districts

- R-100 (Single-Family Residential)
- R-85 (Single-Family Residential)
- R-75 (Single-Family Residential)
- R-60 (Single-Family Residential)
- R-50 (Single-Family Residential)
- R-A5 (Single-Family Residential)
- R-A8 (Single-Family Residential)
- R-CH (Single-Family Cluster Residential) Repealed
- R-DT (Two- and Three-Family Residential)
- PC-2 (Pedestrian Community)
- TND (Traditional Neighborhood Development) Repealed
- RM-150 (Multifamily Residential)
- RM-100 (Multifamily Residential)
- RM-85 (Multifamily Residential)
- RM-75 (Multifamily Residential)
- RM-HD (Multifamily Residential)
- O-I (Office-Institution)
- O-D (Office-Distribution)
- OCR (Office-Commercial-Residential)
- NS (Neighborhood Shopping)
- C-1 (Local Commercial)
- C-2 (General Commercial)
- M (Industrial)

The following are Zoning Districts within the City of Brookhaven (Currently no properties contain these Zoning Districts:)

R-200 (Single-Family Residential)
R-30,000 (Single-Family Residential)
R-20,000 (Single-Family Residential)
MHP (Mobile Home Park)
NCD (Neighborhood Conservation)
R-NCD (Neighborhood Conservation)
O-I-T (Office-Institution-Transitional)
M-2 (Industrial)
PC-1 and PC-3 (Pedestrian Community)

Dresden Drive Visual

Multifamily Development across the street

Mixed Use Development down the block

Dresden Drive-Visual Cont.

Dresden Drive Frontage 1

Dresden Drive Frontage 2

Dresden Drive-Visual Cont.

Dresden Drive Frontage 3

Dresden Drive Frontage 4

Dresden Drive-Visual Cont.

Dresden Drive Frontage 5

Dresden Drive Frontage 6

Caldwell Road-Visual

Caldwell Road Frontage 1

Caldwell Road Frontage 2

Caldwell Road-Visual cont.

Caldwell Road Frontage 3

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BROOKHAVEN

Public Participation Plan

Attached hereto is a list of the property owners within 500 feet of the subject property. Also attached is a copy of a form letter that will go to each owner identified, inviting them to a meeting to discuss the rezoning and development proposal. The meeting will be scheduled no later than May 1st. The Friday following the meeting, the applicant will submit a report from the meeting together with a sign in sheet identifying those in attendance.

MORRIS, MANNING & MARTIN, LLP

Carl E. Westmoreland, Jr. Esq.
404-504-7799
cew@mmmlaw.com
www.mmmlaw.com

VIA US MAIL

April ____, 2016

RE: Meeting to Discuss Proposed Rezoning for the Redevelopment of 1336-1370 Dresden Drive and 2544-2562 Caldwell Drive (collectively, the "Property")

Dear Property Owner:

You are receiving this letter because you own property within 500 feet of the above described Property. A rezoning application has been filed to rezone the Property from PC-2 (Pedestrian Community) and O-I (Office Institution) to PC-2. As a part of the rezoning process, the City of Brookhaven requires that the rezoning applicant notify all property owners within 500 feet of the property and schedule a meeting to discuss the proposal. A meeting to discuss the proposed development and the rezoning request has been scheduled by the applicant on Monday, April 25, 2016 at 6 p.m. The meeting will take place at the Briarwood Park & Recreation Center located at 2235 Briarwood Way, Atlanta, Georgia 30319. You are invited to attend this meeting and we hope to see you there.

Sincerely,

Carl E. Westmoreland, Jr.
Attorney for Applicant

9947264 v1

OBJECTID	OWNERNME1	OWNERNME2	PARCELID	PSTLADDRESS	PSTLCITY	PSTLSTATE	PSTLZIP4	PSTLZIP5	SITEADDRESS	Shape_STArea__	Shape_STLength__
1	MURNAHAN W SHAWN	WILHELM KRISTIN B	18 238 26 001	2560 OGLETHORPE CIR NE	ATLANTA	GA	null	30319	2560 OGLETHORPE CIR	1127.552	141.9997
2	ENGELSTAD MARTIN J	ENGELSTAD JENNIFER L	18 238 26 018	2579 OGLETHORPE CIR NE	ATLANTA	GA	6602	30319	2579 OGLETHORPE CIR	1212.117	154.0027
3	ENEPURE LLC	null	18 238 18 047	3720 DAVINCI CT # 250	NORCROSS	GA	7621	30092	1418 DRESDEN DR UNIT 200	989.9958	125.757
4	DANZIG PROPERTIES LLC	null	18 238 18 058	1418 DRESDEN DR NE # 250	ATLANTA	GA	7004	30319	1418 DRESDEN DR UNIT 260	1508.1	156.9319
5	RAB SYED TANVEER	null	18 238 26 028	2584 OGLETHORPE CIR NE	ATLANTA	GA	null	30319	2584 OGLETHORPE CIR	1130.003	154
6	GOLDSTEIN COURTNEY P	GOLDSTEIN JAY D	18 238 25 098	14 SUNDEW RD	SAVANNAH	GA	2955	31411	1403 TOWNE ESTATES DR	7779.349	357.8307
7	HARTZ JULIE M	null	18 238 18 086	1418 DRESDEN DR NE # A385	ATLANTA	GA	null	30319	1418 DRESDEN DR UNIT 385	1294.057	145.8984
8	null	null	18 238 02 026	null	null	null	null	null	0	12857.71	474.4477
9	MYERS CAROLINE E	null	18 238 26 019	2564 OGLETHORPE CIR NE	ATLANTA	GA	null	30319	2564 OGLETHORPE CIR	1127.574	142.0013
10	SOMERSON DAVID	SOMERSON CHERIE	18 241 06 006	1321 SUNLAND DR NE	ATLANTA	GA	3132	30319	1321 SUNLAND DR	9500.602	480.0689
11	BROWN NELL	null	18 241 11 013	1393 WILFORD DR NE	ATLANTA	GA	3243	30319	1393 WILFORD DR	12025.02	500.0004
12	null	null	18 238 02 016	null	null	null	null	null	1300 PEACHTREE VW	7083.192	380.6275
13	CORO VILLAGE PLACE VENTURES LP	null	18 238 18 021	3715 NORTHSIDE PKWY 100	ATLANTA	GA	null	30327	1418 DRESDEN DR UNIT 110	1235.865	145.3964
14	CORO VILLAGE PLACE VENTURES LP	null	18 238 18 004	3715 NORTHSIDE PKWY 100	ATLANTA	GA	null	30327	2523 CALDWELL RD UNIT 1000	1318.745	149.9789
15	FORSTER ROBERT A	null	18 238 15 023	4322 DAVIDSON AVE	ATLANTA	GA	null	30319	2528 APPALACHEE DR	9389.209	488.3024
16	WEBB MURRAY II	null	18 238 18 077	1418 DRESDEN DRIVE NE #A335	ATLANTA	GA	null	30319	1418 DRESDEN DR UNIT 335	933.8706	191.8853
17	DICKENS JAMES P	DICKENS SARA M	18 241 10 011	1548 TRENTWOOD PL NE	ATLANTA	GA	null	30319	2613 GREEN MEADOWS LN	13000.04	530.0005
18	REYNOLDS JAMES T	REYNOLDS JENNIFER H	18 241 09 025	2612 GREEN MEADOWS LN NE	ATLANTA	GA	3108	30319	2612 GREEN MEADOWS LN	12999.99	530.0008

19	HART FAMILY CITY PROPERTIES LP	null	18 241 06 010	2707 BUFORD HWY	ATLANTA	GA	null		30324	1305 SUNLAND DR	9512.547	480.5469
20	BROOKHAVEN TOWNSHIP HOMEOWNERS	null	18 238 26 052	3927 PEACHTREE RD NE	ATLANTA	GA		3373	30319	100 OGLETHORPE CIR	170095.5	6245.429
21	REDDY PRAMOD	null	18 238 25 102	1396 TOWNE ESTATES DR	ATLANTA	GA	null		30319	1396 TOWNE ESTATES DR	2806.689	227.9365
22	DRESDEN OPERATING LLC	null	18 238 01 089	1350 DRESDEN DR NE	ATLANTA	GA		3454	30319	0 DRESDEN DR	24838.3	667.6569
23	VENTURA JOSEPH JAMES	null	18 241 06 019	1029 MABRY OAKS DR	BROOKHAVEN	GA	null		30319	1313 SUNLAND DR	9506.558	480.3074
24	CALDWELL ROAD LLC	null	18 238 01 024	1290 SUNDERLAND CT NE	ATLANTA	GA		1952	30319	2524 CALDWELL RD	10767.61	419.0024
25	LONG SHANE P	null	18 241 08 005	1316 SUNLAND DR NE # 2	ATLANTA	GA		3153	30319	1316 SUNLAND DR	7422.556	421.979
26	ROLLINS GARY W	null	18 241 09 033	329 BLACKLAND RD NW	ATLANTA	GA	null		30342	2607 CALDWELL RD	9280.512	498.145
27	STOKES JR HENRY B	null	18 241 09 019	2555 CALDWELL RD	ATLANTA	GA	null		30319	2588 GREEN MEADOWS LN	12332.26	449.6909
28	WALDROP ROBERT CARL	LEE ERNEST SHAUN	18 238 14 035	2508 ELLIJAY DR NE	ATLANTA	GA	null		30319	2508 ELLIJAY DR	9349.038	489.9729
29	TAYLOR LEAH F	null	18 238 15 016	1396 CANOOCHEE DR NE	ATLANTA	GA		3432	30319	1396 CANOOCHEE DR	9713.856	505.0142
30	TALLMADGE THOMAS F	null	18 238 25 095	1391 TOWNE ESTATES DR NE	ATLANTA	GA		3477	30319	1391 TOWNE ESTATES DR	3377.984	259.6795
31	CORO VILLAGE PLACE VENTURES LP	null	18 238 18 025	3715 NORTHSIDE PKWY 100	ATLANTA	GA	null		30327	1418 DRESDEN DR UNIT 150	1245.102	147.1183
32	BROOKHAVEN AT DRESDEN LLC	null	18 238 02 025	3715 NORTHSIDE PKWY NW 4-600	ATLANTA	GA	null		30327	1313 DRESDEN DR	9855.717	435.4467
33	EPPS THOMAS E JR	null	18 238 14 036	4060 PEACHTREE RD NE STE D-161	ATLANTA	GA	null		30319	2512 ELLIJAY DR	8373.587	479.5274
34	WATSON KEENYA APARNA	null	18 238 25 100	1404 TOWNE ESTATES DR NE	ATLANTA	GA	null		30319	1404 TOWNE ESTATES DR	2024.469	207.7387
35	STOKES HENRY B JR	STOKES DONNA	18 241 09 020	2555 CALDWELL RD NE	ATLANTA	GA		3167	30319	2555 CALDWELL RD	11734.92	441.5845
36	DRESDEN PROPERTIES LLC	null	18 238 15 002	1 NATIONAL DR SW	ATLANTA	GA		1631	30336	1423 DRESDEN DR	13530.23	695.2009
37	ALLEN TALMADGE WHITEHEAD REVOC	WHITEHEAD ALLEN TALMADGE	18 241 06 005	1325 SUNLAND DR NE	ATLANTA	GA		3132	30319	1325 SUNLAND DR	49849.37	903.1261
38	PRYSTAS KATHERINE E	null	18 238 26 042	2618 OGLETHORPE CIR NE	ATLANTA	GA		6601	30319	2618 OGLETHORPE CIR	1009.591	135.731

39	MBG PROPERTIES LLC	null	18 238 18 054	1418 DRESDEN DR NE # 240	ATLANTA	GA		7003	30319	1418 DRESDEN DR UNIT 240	1245.102	147.1183
40	HINDMAN KATHERINE E	null	18 238 26 002	2558 OGLETHORPE CIR NE	ATLANTA	GA		6602	30319	2558 OGLETHORPE CIR	1127.566	142.001
41	UNIVERSITY BAPTIST CHURCH	null	18 238 02 020	1375 FERNWOOD CIR NE	ATLANTA	GA		3408	30319	1375 FERNWOOD CIR	64328.47	1077.373
42	CORO VILLAGE PLACE VENTURES LP	null	18 238 18 022	3715 NORTHSIDE PKWY 100	ATLANTA	GA	null		30327	1418 DRESDEN DR UNIT 120	1235.865	145.3964
43	CORO VILLAGE PLACE VENTURES LP	null	18 238 18 026	3715 NORTHSIDE PKWY 100	ATLANTA	GA	null		30327	1418 DRESDEN DR UNIT 160	1245.102	147.1183
44	DAN WOODLEY COMMUNITIES INC	null	18 238 18 099	1407 DRESDEN DR NE # 100	ATLANTA	GA		3580	30319	2531 CALDWELL RD	24340.68	979.7694
45	MCKENNA JAMES MCGARRY	null	18 238 01 015	4055 BRIXHAM WAY	JOHNS CREEK	GA		1047	30022	1364 DRESDEN DR	13866.67	542.5515
46	ALLGOOD PATRICIA	ALLGOOD JOHN	18 238 26 036	2604 OGLETHORPE CIR NE	ATLANTA	GA		6601	30319	2604 OGLETHORPE CIR	1280.937	171.9966
47	MIMRANI INC	null	18 238 25 105	2024 WRIGHTS MILL CIR NE	ATLANTA	GA		2787	30324	1407 DRESDEN DR	12132.61	454.0229
48	BROWN ANN MARIE	null	18 238 26 025	2578 OGLETHORPE CIR NE	ATLANTA	GA		6602	30319	2578 OGLETHORPE CIR	1154.965	153.9987
49	SAYNE LOUISE STOKES	null	18 241 09 023	2604 GREEN MEADOWS LN NE	ATLANTA	GA		3108	30319	2604 GREEN MEADOWS LN	35922.11	824.5445
50	BDF INVESTMENTS LLC	null	18 238 18 048	1418 DRESDEN DR 205	ATLANTA	GA	null		30319	1418 DRESDEN DR UNIT 205	678.8992	104.3175
51	FORSTER ROBERT A	null	18 238 15 021	4322 DAVIDSON AVE	ATLANTA	GA	null		30319	2530 APPALACHEE DR	2337.321	197.1167
52	GORMAN ABIGAIL	HEARN HAGEN	18 238 25 099	1408 TOWNE ESTATES DR NE	ATLANTA	GA	null		30319	1408 TOWNE ESTATES DR	6144.235	316.8478
53	PRICE STANLEY B	null	18 238 25 068	6000 ISLAND BLVD 807	AVENTURA	FL	null		33160	1323 PEACHTREE VW	1963.651	254.1778
54	SCHWARTZ CHRISTOPHER	null	18 238 18 087	1418 DRESDEN DR # A395	ATLANTA	GA	null		30319	1418 DRESDEN DR UNIT 395	1508.1	156.9319
55	FEENEY ERIN MARIE	SETI BRYAN MICHAEL	18 238 26 013	2533 OGLETHORPE CIR NE	ATLANTA	GA		6602	30319	2533 OGLETHORPE CIR	1439.964	167.9978
56	ATF HOLDINGS LLC	null	18 238 18 050	1418 DRESDEN DR NE # 220	ATLANTA	GA		7000	30319	1418 DRESDEN DR UNIT 220	1235.865	145.3964

57	PREMO DANIEL PATRICK	PREMO JULIE ANNE	18 238 26 030	2590 OGLETHORPE CIR NE	ATLANTA	GA	null		30319	2590 OGLETHORPE CIR	1134.961	154
58	null	null	18 238 02 018	null	null	null	null	null		1308 PEACHTREE VW	6998.135	380.1557
59	MIMRANI INC	null	18 238 25 106	2024 WRIGHTS MILL CIR NE	ATLANTA	GA		2787	30324	1401 DRESDEN DR	11913.72	449.3082
60	CASSAR CAROLINE	null	18 238 26 049	2603 OGLETHORPE CIR	ATLANTA	GA	null		30319	2603 OGLETHORPE CIR	1143.252	154.2736
61	CHRISTJOHN BRIAN K	null	18 238 25 067	1321 PEACHTREE VW NE	ATLANTA	GA		3413	30319	1321 PEACHTREE VW	2726.511	268.1392
62	ELLIOTT MELANIE	null	18 241 06 007	1317 SUNLAND DR NE	ATLANTA	GA		3132	30319	1317 SUNLAND DR	8743.332	472.1913
63	2012 CLEMENTS IRREVOCABLE TRT	CLEMENTS KAREN EILEEN	18 238 15 027	1384 CANOOCHEE DR	ATLANTA	GA	null		30319	1384 CANOOCHEE DR	6004.99	321.1606
64	HART FAMILY CITY PROPERTIES LP	null	18 241 06 018	2707 BUFORD HWY	ATLANTA	GA	null		30324	1309 SUNLAND DR	9509.658	480.4291
65	DRESDEN PROPERTIES LLC	null	18 238 15 005	1 NATIONAL DR SW	ATLANTA	GA		1631	30336	1411 DRESDEN DR	37164.3	859.1335
66	MANUEL SHERRY	null	18 238 15 028	1388 CANOOCHEE DR NE	ATLANTA	GA	null		30319	1388 CANOOCHEE DR	6773.923	399.3207
67	HILLGROVE HOMES LLC	null	18 238 14 039	6006 STILLWATER PL	FLOWERY BRANCH	GA	null		30542	1371 FERNWOOD CIR	14086.32	487.1886
68	FREE DAVID MITCHELL	null	18 238 14 038	1497 VILLAGE PARK CT	ATLANTA	GA	null		30319	2520 ELLIJAY DR	9360.638	489.9902
69	PIGHINI JENNIFER	PIGHINI MARK F	18 241 10 013	1388 WILFORD DR NE	ATLANTA	GA		3244	30319	1388 WILFORD DR	13383.81	477.2756
70	BROOKHAVEN PROPERTY HOLDINGS	null	18 238 01 022	232 CEDAR PARK CIR	SARASOTA	FL		1216	34242	2552 CALDWELL RD	14551.61	502.0252
71	ROGERS KENT	null	18 238 25 096	1395 TOWNE ESTATES DR NE	ATLANTA	GA		3477	30319	1395 TOWNE ESTATES DR	2451.536	240.5941
72	HILL DAVID ALEXANDER	null	18 238 15 024	4817 HIGHPOINT DR NE	MARIETTA	GA		6736	30066	1400 CANOOCHEE DR	9660.239	502.7817
73	SOUTH PEAK CONSTRUCTION	null	18 238 15 012	2517 ELLIJAY DR NE	ATLANTA	GA	null		30319	2517 ELLIJAY DR	7201.072	399.7031
74	GOEPFERT BODO	GOEPFERT MELANIE	18 241 09 016	2591 CALDWELL RD NE	ATLANTA	GA		3167	30319	2591 CALDWELL RD	9088.21	501.8668
75	CIATTO MICHAEL	null	18 238 26 051	2599 OGLETHORPE CIR NE	ATLANTA	GA		6602	30319	2599 OGLETHORPE CIR	1105.645	154.0038
76	DEKALB COUNTY	null	18 238 01 014	1300 COMMERCE DR	DECATUR	GA		3214	30030	1358 DRESDEN DR	24348.99	714.4299
77	RUIZ JUAN M	RUIZ MARTHA K	18 241 09 015	2595 CALDWELL RD NE	ATLANTA	GA		3167	30319	2595 CALDWELL RD	9855.279	494.3282

78	DUFFY KAITLIN C	SNODGRASS WILLIAM BLAKE	18 241 11 008	1417 WILFORD DR	ATLANTA	GA	null		30319	1417 WILFORD DR	12999.9	529.9987
79	QUACKENBUSH QUINTIN L	BOWERS DENNIS L	18 238 26 017	2581 OGLETHORPE CIR NE	ATLANTA	GA		6602	30319	2581 OGLETHORPE CIR	1168.013	154.0027
80	HAMMILL WILLIAM G	HAMMILL KAITLIN N	18 238 14 037	2516 ELLIJAY DR	ATLANTA	GA	null		30319	2516 ELLIJAY DR	10323.74	500.4002
81	BURK JAMES E	null	18 241 08 009	2606 CALDWELL RD NE	ATLANTA	GA		3119	30319	2606 CALDWELL RD	9129.357	466.6141
82	EINSTEIN LANCE	EINSTEIN EMILY	18 241 11 012	1397 WILFORD DR NE	ATLANTA	GA	null		30319	1397 WILFORD DR	12999.99	530.001
83	TYNER WARREN ROBERT	null	18 238 25 072	1331 PEACHTREE VW	ATLANTA	GA	null		30319	1331 PEACHTREE VW	1963.82	254.2008
84	null	null	18 238 02 044	null	null	null	null	null		0	4655.389	317.323
85	TALKING ROCK CREEK LLC	null	18 238 18 083	3034 BAKERS MDWS SE	ATLANTA	GA		4813	30339	1418 DRESDEN DR UNIT 365	1144.451	140.0326
86	COLLIER CONSTRUCTION CO INC	null	18 241 06 012	1194 W NANCY CREEK DR NE	ATLANTA	GA		1644	30319	1299 SUNLAND DR	10492.25	491.5658
87	JOHNSTON STEVE	null	18 241 09 024	1891 ARDMORE RD	ATLANTA	GA	null		30309	2608 GREEN MEADOWS LN	10222.96	443.0117
88	MEURIS RICHARD JOHN	null	18 241 11 011	1401 WILFORD DR	ATLANTA	GA	null		30319	1401 WILFORD DR	13000.02	530.0003
89	PATRICK S PITTARD IRA	PENSCO TRUST COMPANY	18 238 18 071	P O BOX 173859	DENVER	CO	null		80217	1418 DRESDEN DR UNIT 305	678.9624	104.3176
90	WOODLEY DANIEL CHRISTOPHER IRA	EQUITY TRUST COMPANY FBO	18 238 01 016	10090 TRUMPET PARK	JOHNS CREEK	GA	null		30022	1370 DRESDEN DR	11381.24	514.6642
91	JADOW LLC	null	18 238 25 066	4030 CLUB DR NE # D	ATLANTA	GA	null		30319	1319 PEACHTREE VW	2706.493	265.1221
92	BECK AMANDA V	null	18 241 11 014	1389 WILFORD DR NE	ATLANTA	GA		3243	30319	1389 WILFORD DR	9819.404	476.1999
93	MARCH GILLIAN	null	18 238 18 075	1418 DRESDEN DR NE # 325A	ATLANTA	GA		7005	30319	1418 DRESDEN DR UNIT 325	1318.745	149.9789
94	WHITNEY ERICA L	null	18 238 26 046	2626 OGLETHORPE CIR NE	ATLANTA	GA		6601	30319	2626 OGLETHORPE CIR	1017.764	136.1686
95	SIGLER JASON	SIGLER STEPHANIE	18 238 18 080	1418 DRESDEN DR 350	ATLANTA	GA	null		30319	1418 DRESDEN DR UNIT 350	1245.102	147.1183
96	CORO VILLAGE PLACE VENTURES LP	null	18 238 18 029	3715 NORTHSIDE PKWY 100	ATLANTA	GA	null		30327	1418 DRESDEN DR UNIT 190	1243.579	144.1998
97	BROOKHAVEN AT DRESDEN LLC	null	18 238 02 028	3715 NORTHSIDE PKWY NW 4-600	ATLANTA	GA	null		30327	1295 DRESDEN DR	24195.14	624.7323
98	886 WP LLC	null	18 238 01 010	1819 PEACHTREE RD STE 575	ATLANTA	GA	null		30309	1336 DRESDEN DR	12570.89	616.6923

99	null	null	18 238 02 019	null	null	null	null	null		1312 PEACHTREE VW	5931.509	361.031
100	EINSTEIN LANCE	EINSTEIN EMILY	18 241 10 018	2612 DOGWOOD TER NE	ATLANTA	GA	null		30319	2612 DOGWOOD TER	13000.04	530.0017
101	BYRON CHRISTOPHER J	null	18 238 18 078	1418 DRESDEN DR NE # 340	ATLANTA	GA		7005	30319	1418 DRESDEN DR UNIT 340	1098.635	150.4721
102	PHELPS JAN S	null	18 241 08 018	1320 SUNLAND DR NE	ATLANTA	GA		3153	30319	1320 SUNLAND DR	7528.955	410.7185
103	SIMS B GRIFF	null	18 238 26 020	2566 OGLETHORPE CIR NE	ATLANTA	GA		6602	30319	2566 OGLETHORPE CIR	1127.562	142.0004
104	CORO VILLAGE PLACE VENTURES LP	null	18 238 18 020	3715 NORTHSIDE PKWY 100	ATLANTA	GA	null		30327	1410 DRESDEN DR UNIT 100	678.9624	104.3176
105	RICE JAMES	GIL CECILIA	18 238 26 037	2606 OGLETHORPE CIR NE	ATLANTA	GA		6601	30319	2606 OGLETHORPE CIR	1274.62	170.2144
106	VASWANI THAKUR	VASWANI NEETA	18 241 09 018	P O BOX 13585	ATLANTA	GA	null		30324	2583 CALDWELL RD	9546.731	391.9306
107	RITAS CLEANERS INC	null	18 238 01 018	1382 DRESDEN DR NE	ATLANTA	GA		3454	30319	1382 DRESDEN DR	12023.21	482.7022
108	ORTIZ POMALES YAN TOMAS	ORITZ POMALES ALEXANDRA KRI	18 238 25 094	2529 ELLIJAY DR NE	ATLANTA	GA	null		30319	2529 ELLIJAY DR	3695.072	253.3799
109	DAVNIC REAL PROPERTIES LLC	null	18 241 09 013	58 & JUDITHS FANCY	CHRISTIANSTED	VI	null		820	2601 CALDWELL RD	9882.808	495.5213
110	CORO VILLAGE PLACE VENTURES LP	null	18 238 18 028	3715 NORTHSIDE PKWY 100	ATLANTA	GA	null		30327	1418 DRESDEN DR UNIT 180	1243.579	144.1998
111	JC INVESTMENTS LLC	null	18 238 18 057	1418 DRESDEN DR NE STE 255	ATLANTA	GA	null		30319	1418 DRESDEN DR UNIT 255	1294.057	145.8984
112	ROBINSON E GORDON	HAYS MARY ELLEN STELLING	18 238 18 084	1418 DRESDEN DR # 370	ATLANTA	GA	null		30319	1418 DRESDEN DR UNIT 370	1095.211	142.9414
113	STIEGLITZ GRAHAM HOWARD	null	18 238 26 026	1227 DUNWOODY LN NE	ATLANTA	GA	null		30319	2580 OGLETHORPE CIR	1168.002	153.9974
114	LEWANDOWSKI WILLIAM S	LEWANDOWSKI LORI A	18 238 18 085	1418 DRESDEN DR NE # 375	ATLANTA	GA		7007	30319	1418 DRESDEN DR UNIT 375	1354.319	153.2416
115	EUBANKS BENJAMIN A	null	18 238 25 073	1333 PEACHTREE VW NE	ATLANTA	GA		3413	30319	1333 PEACHTREE VW	1963.754	254.1989
116	SAYMAN ERSAN	SAYMAN OZLEM B	18 238 25 069	1325 PEACHTREE VW NE	ATLANTA	GA		3413	30319	1325 PEACHTREE VW	1963.785	254.1987
117	MAJID SHUHAN	THARIN BINDU	18 238 26 038	2608 OGLETHORPE CIR	ATLANTA	GA	null		30319	2608 OGLETHORPE CIR	1358.075	173.0254

118	ELLIOTT STEPHANIE	ELLIOTT TRACY	18 238 15 026	1380 CANOOCHEE DR NE	ATLANTA	GA		3432	30319	1380 CANOOCHEE DR	5479.536	302.7912
119	DAN WOODLEY COMMUNITIES INC	null	18 238 18 002	1407 DRESDEN DR NE # 100	ATLANTA	GA		3580	30319	1394 DRESDEN DR	131766.5	6636.726
120	LEATHERS ERICA NICOLE	null	18 238 18 072	1418 DRESDEN DR NE # 310	ATLANTA	GA		7001	30319	1418 DRESDEN DR UNIT 310	947.2739	138.0606
121	ESOLA JEFFERY LAWRENCE	null	18 238 26 024	2576 OGLETHORPE CIR NE	ATLANTA	GA	null		30319	2576 OGLETHORPE CIR	1440.039	168.0002
122	SHERRELL ROBERT L	SHERRELL KRISTI L	18 241 11 009	1411 WILFORD DR NE	ATLANTA	GA	null		30319	1411 WILFORD DR	13000	529.9997
123	null	null	18 238 02 022	null	null	null	null	null		0	14622.4	532.1286
124	GRECO LEIGHANN R	TURNER TRACI L	18 238 18 052	4415 E BROOKHAVEN DR NE	ATLANTA	GA	null		30319	1418 DRESDEN DR UNIT 230	1098.635	150.4721
125	FOX DARYL R	null	18 238 25 097	1399 TOWNE ESTATES DR NE	ATLANTA	GA		3477	30319	1399 TOWNE ESTATES DR	2461.523	241.3605
126	RANDOLPH JASON S	RANDOLPH KATHERINE E	18 241 09 009	2615 CALDWELL RD NE	ATLANTA	GA		3118	30319	2615 CALDWELL RD	9263.217	493.0325
127	HEALY MICHAEL S	SANTA MARIA KRISTEN L	18 241 11 006	1427 WILFORD DR NE	ATLANTA	GA		3245	30319	1427 WILFORD DR	13000	529.9997
128	MCVAY RYAN MICHAEL	null	18 238 18 081	1418 DRESDEN DR NE # 355A	ATLANTA	GA	null		30319	1418 DRESDEN DR UNIT 355	1283.824	148.9373
129	CEPHAS CHARLES II	null	18 238 25 093	2525 ELLIJAY DR NE	ATLANTA	GA	null		30319	2525 ELLIJAY DR	4246.893	277.9421
130	null	null	18 238 02 015	null	null	null	null	null		1296 PEACHTREE VW	7613.053	389.7983
131	MCCALL JAMES GERALD	MCCALL STEPHANIE	18 241 10 012	655 BRANDENBURGH WAY	ROSWELL	GA		2820	30075	2607 GREEN MEADOWS LN	10415.42	446.8388
132	SETI BRYAN M	null	18 238 26 032	2533 OGLETHORPE CIR NE	ATLANTA	GA		6602	30319	2594 OGLETHORPE CIR	932.2751	133.5748
133	null	null	18 238 02 017	null	null	null	null	null		1304 PEACHTREE VW	7008.32	381.2936
134	DE OLIVEIRA PAULO CEZAR S	DE OLIVEIRA IEDA M S	18 238 26 050	2601 OGLETHORPE CIR NE	ATLANTA	GA		6601	30319	2601 OGLETHORPE CIR	1107.302	154.8219
135	LAPSLEY HEATHER A	null	18 241 08 007	1324 SUNLAND DR NE	ATLANTA	GA		3153	30319	1324 SUNLAND DR	8216.588	415.3909
136	null	null	18 238 02 024	null	null	null	null	null		0	7686.648	413.6215
137	KHATOR PARUL	COHEN GREGORY	18 241 09 012	2603 CALDWELL RD	ATLANTA	GA	null		30319	2603 CALDWELL RD	9114.77	488.4605
138	SAYNE LOUISE STOKES	null	18 241 09 021	2604 GREEN MEADOWS LN NE	ATLANTA	GA		3108	30319	2549 CALDWELL RD	13144.87	522.858

139	WADE DAVID R	null	18 238 18 049	4850 SUGARLOAF PKWY 209	LAWRENCEVILLE	GA	null		30044	1418 DRESDEN DR UNIT 215	933.8706	191.8853
140	CORO VILLAGE PLACE VENTURES LP	null	18 238 18 023	3715 NORTHSIDE PKWY 100	ATLANTA	GA	null		30327	1418 DRESDEN DR UNIT 130	1248.43	147.5362
141	MCKOWN SANDRA F	null	18 238 26 012	2535 OGLETHORPE CIR NE	ATLANTA	GA		6602	30319	2535 OGLETHORPE CIR	1439.974	167.9982
142	OWOADE OLUFUNMILOLA	OWOADE ERIN	18 238 26 047	2628 OGLETHORPE CIR NE	ATLANTA	GA		6601	30319	2628 OGLETHORPE CIR	1013.166	135.9436
143	STEINER ESTHER	null	18 238 26 040	2614 OGLETHORPE CIR NE	ATLANTA	GA		6601	30319	2614 OGLETHORPE CIR	1013.969	136.0607
144	TREVENA ERIC	CRAWFORD GRADY J JR	18 238 26 035	2602 OGLETHORPE CIR NE	ATLANTA	GA		6601	30319	2602 OGLETHORPE CIR	1488	176.0019
145	ORGANIC REALTY LLC	null	18 238 01 019	1388 DRESDEN DR NE	ATLANTA	GA		3454	30319	1388 DRESDEN DR	14257.11	507.183
146	SEITZ RONALD A	null	18 238 25 071	1329 PEACHTREE VW NE	ATLANTA	GA		3413	30319	1329 PEACHTREE VW	1963.755	254.2001
147	OTTMANN N E DAISY	null	18 238 25 104	2539 ELLIJAY DR NE	ATLANTA	GA		3474	30319	2539 ELLIJAY DR	2443.214	224.5019
148	CORO VILLAGE PLACE VENTURES LP	null	18 238 18 030	3715 NORTHSIDE PKWY 100	ATLANTA	GA	null		30327	1426 DRESDEN DR	1508.1	156.9319
149	886 WP LLC	null	18 238 01 011	1819 PEACHTREE RD STE 575	ATLANTA	GA	null		30309	1342 DRESDEN DR	15086.86	650.568
150	MILLIKIN KATHERINE L	null	18 238 26 039	2610 OGLETHORPE CIR NE	ATLANTA	GA		6601	30319	2610 OGLETHORPE CIR	1354.236	172.9818
151	D'AGOSTINO LISA A	null	18 238 26 048	2605 OGLETHORPE CIR NE	ATLANTA	GA		6601	30319	2605 OGLETHORPE CIR	1140.012	154.2723
152	WOLVERTON ASHLEY M	null	18 238 18 082	1418 DRESDEN DR NE # 360	ATLANTA	GA		7006	30319	1418 DRESDEN DR UNIT 360	1243.579	144.1998
153	CORO VILLAGE PLACE VENTURES LP	null	18 238 18 027	3715 NORTHSIDE PKWY 100	ATLANTA	GA	null		30327	1418 DRESDEN DR UNIT 170	1243.579	144.1998
154	PEPMILLER STEVEN WILLIAM	null	18 241 09 017	7431 BEACH DR	PANAMA CITY	FL		5351	32408	2587 CALDWELL RD	9618.982	394.4796
155	DRESDEN PROPERTIES LLC	null	18 238 15 001	1 NATIONAL DR SW	ATLANTA	GA		1631	30336	1427 DRESDEN DR	13798.83	695.2571
156	HOWE SUSANNE	null	18 238 26 022	2570 OGLETHORPE CIR NE # 3	ATLANTA	GA		6602	30319	2570 OGLETHORPE CIR	844.1228	126.4593
157	STEKEN LLC	null	18 238 18 055	5214 W STRONG ST	CHICAGO	IL	null		60630	1418 DRESDEN DR UNIT 245	1354.319	153.2416

158	MEGGITT MALLORY K	null	18 238 26 021	2568 OGLETHORPE CIR	ATLANTA	GA	null		30319	2568 OGLETHORPE CIR	1054.021	148.0008
159	null	null	18 238 02 045	null	null	null	null	null		0	4774.087	319.2768
160	BREWER CASSADY	SPIEGEL CATHY	18 238 26 044	2622 OGLETHORPE CIR	ATLANTA	GA	null		30319	2622 OGLETHORPE CIR	1017.739	136.1685
161	MERMAN BRIAN	MERMAN CHRISTINA	18 241 11 007	1421 WILFORD DR	ATLANTA	GA	null		30319	1421 WILFORD DR	13000.03	530.0007
162	FERNWOOD PARK HOMEOWNERS ASSO	null	18 238 25 092	1408 TUGALOO DR NE	ATLANTA	GA		3950	30319	1324 FERNWOOD CIR	21859.69	1221.971
163	HUGHES FLORENE WHITMIRE	null	18 241 10 014	1396 WILFORD DR NE	ATLANTA	GA	null		30319	1396 WILFORD DR	12811.39	514.8311
164	WOMBLE TRACEY	LOVE JONATHAN D	18 238 26 016	2583 OGLETHORPE CIR NE # 5	ATLANTA	GA		6602	30319	2583 OGLETHORPE CIR	1167.971	153.9988
165	DRESDEN PROPERTIES LLC	null	18 238 15 003	1 NATIONAL DR SW	ATLANTA	GA		1631	30336	1417 DRESDEN DR	27986.19	797.5465
166	HOLTZMAN DOUGLAS	HOLTZMAN CHRISTINA	18 241 09 010	2611 CALDWELL RD	ATLANTA	GA	null		30319	2611 CALDWELL RD	11046.37	503.787
167	RUNCIBLE ENTERPRISES LLC	null	18 238 15 017	3344 PEACHTREE RD NE # 1900	ATLANTA	GA		4804	30326	1404 CANOOCHEE DR	7064.422	397.5181
168	HOFFER STEVEN DANIEL	HOFFER KAREN RAE	18 241 10 017	2608 DOGWOOD TER NE	ATLANTA	GA		3242	30319	2608 DOGWOOD TER	10202.39	442.6341
169	FOSHEE BRIAN L	null	18 238 26 015	2585 OGLETHORPE CIR NE	ATLANTA	GA		6602	30319	2585 OGLETHORPE CIR	1212.026	153.9984
170	KEIM JARRETT S	SKARDASIS ALEXIA L	18 238 15 029	1392 CANOOCHEE DR NE	ATLANTA	GA		3432	30319	1392 CANOOCHEE DR	7835.473	402.4555
171	YOUNG LINDA S	null	18 238 26 029	2588 OGLETHORPE CIR NE	ATLANTA	GA		6602	30319	2588 OGLETHORPE CIR	1108.013	154.0013
172	SCHICKEL COURTNEY NUSS	SCHICKEL J MATTHEW	18 241 09 014	2597 CALDWELL RD NE	ATLANTA	GA	null		30319	2597 CALDWELL RD	9868.546	494.859
173	GREENFIELD LORNE A	null	18 238 26 027	2582 OGLETHORPE CIR NE	ATLANTA	GA	null		30319	2582 OGLETHORPE CIR	1168.001	154.0004
174	SHAW MARVIN	SHAW DEBORAH	18 238 26 033	2596 OGLETHORPE CIR	ATLANTA	GA	null		30319	2596 OGLETHORPE CIR	1047.83	138.9972
175	BROOKHAVEN MEDICAL PROP LLC	null	18 238 18 051	1418 DRESDEN DR NE # 225	ATLANTA	GA		7003	30319	1418 DRESDEN DR UNIT 225	1368.322	154.6139
176	BERRIAN BRENDA F	null	18 238 26 045	2624 OGLETHORPE CIR NE	BROOKHAVEN	GA	null		30319	2624 OGLETHORPE CIR	1013.178	135.9457
177	BUTIN JUDITH I	BUTIN ELIOT	18 238 18 076	980 PROSPECT AVE SE	ATLANTA	GA		2557	30316	1418 DRESDEN DR UNIT 330	1248.43	147.5362

178	SMITH MILETA S	null	18 238 26 041	2616 OGLETHORPE CIR NE	ATLANTA	GA		6601	30319	2616 OGLETHORPE CIR	1013.191	135.9457
179	FLAIR CHRISTIAN S	FLAIR JENNIFER K	18 241 10 015	1402 WILFORD DR NE	ATLANTA	GA		3246	30319	1402 WILFORD DR	12527.76	508.9395
180	HART FAMILY CITY PROPERTIES LP	null	18 241 06 011	2707 BUFORD HWY	ATLANTA	GA	null		30324	1303 SUNLAND DR	9519.006	480.8718
181	BROOKHAVEN PROPERTY HOLDING	null	18 238 01 021	232 CEDAR PARK CIR	SARASOTA	FL		1216	34242	2544 CALDWELL RD	12157.3	465.4329
182	ASHFORD AT BROOKHAVEN LLC	null	18 238 14 044	5 RAVINIA DR	ATLANTA	GA	null		30346	1377 DRESDEN DR	146642.1	1874.423
183	DRESDEN BROOKHAVEN LLC	null	18 238 01 017	1290 SUNDERLAND CT NE	ATLANTA	GA	null		30319	1376 DRESDEN DR	11229.5	483.6818
184	TUVE ROBERT F	null	18 238 25 075	3755 PEACHTREE RD NE APT 1605	ATLANTA	GA	null		30319	1337 PEACHTREE VW	2727.508	268.1999
185	CASEY RICHARD T	CASEY ANDREA K	18 238 25 070	1327 PEACHTREE VW NE	ATLANTA	GA		3413	30319	1327 PEACHTREE VW	1963.762	254.1987
186	VIETRI ZACHARY M	VIETRI AMELIA E	18 241 11 010	1407 WILFORD DR	ATLANTA	GA	null		30319	1407 WILFORD DR	12999.91	529.999
187	RICCI DOUGLAS G	null	18 238 26 043	2620 OGLETHORPE CIR NE	ATLANTA	GA		6601	30319	2620 OGLETHORPE CIR	1013.197	135.9467
188	THOMAS LAW GROUP LLC	null	18 238 18 053	1418 DRESDEN DR NE # 235	ATLANTA	GA		7003	30319	1418 DRESDEN DR UNIT 235	1144.451	140.0326
189	BACH MICHAEL	null	18 238 18 074	1418 DRESDEN DR 320	ATLANTA	GA	null		30319	1418 DRESDEN DR UNIT 320	1235.865	145.3964
190	MIMS HUGH T	MIMS JUDY	18 238 15 011	2521 ELLIJAY DR NE	ATLANTA	GA		3472	30319	2521 ELLIJAY DR	12924.68	596.557
191	HODGES SUSANNE E	null	18 238 26 031	2592 OGLETHORPE CIR NE	ATLANTA	GA		6602	30319	2592 OGLETHORPE CIR	1134.978	154.002
192	CORO VILLAGE PLACE VENTURES LP	null	18 238 18 024	3715 NORTHSIDE PKWY 100	ATLANTA	GA	null		30327	1418 DRESDEN DR UNIT 140	1248.43	147.5362
193	DAVENPORT DARIEN	DAVENPORT KEN	18 238 01 012	232 CEDAR PARK CIR	SARASOTA	FL		1216	34242	2562 CALDWELL RD	24608.36	650.7788
194	MCDANIEL OTHELLA	null	18 241 08 008	971 ABACO CT	MARCO ISLAND	FL		4404	34145	2602 CALDWELL RD	19066.22	582.5958
195	PULLEY BRENDA	null	18 238 25 074	1202 PINECREST CIR	SILVER SPRING	MD	null		20910	1335 PEACHTREE VW	1963.781	254.1995
196	null	null	18 238 14 009	null	null	null	null		null	1363 FERNWOOD CIR	20264.3	637.8342
197	DRAGICH JULIE A	null	18 241 08 010	2610 CALDWELL RD NE	ATLANTA	GA		3119	30319	2610 CALDWELL RD	8331.884	450.0445
198	DEKALB COUNTY	null	18 238 20 001	1300 COMMERCE DR	DECATUR	GA	null		30030	1316 DRESDEN DR	76341.55	1818.028

199	JACKSON KIM D	null	18 238 25 103	2535 ELLIJAY DR NE	ATLANTA	GA		3474	30319	2535 ELLIJAY DR	4470.785	283.9155
200	SCHEIDT CHARISTOPHER L	null	18 238 25 101	1400 TOWNE ESTATES DR	ATLANTA	GA	null		30319	1400 TOWNE ESTATES DR	2025.636	207.8291
201	KOPF FLOYD N	null	18 238 18 070	1418 DRESDEN DR NE # A300	ATLANTA	GA	null		30319	1418 DRESDEN DR UNIT 300	989.9958	125.757
202	JEYABALAN DHANASEKAR	null	18 238 18 079	1418 DRESDEN DR # 345	ATLANTA	GA	null		30319	1418 DRESDEN DR UNIT 345	1368.322	154.6139
203	RODRIGUEZ KATHLEEN M	null	18 238 26 034	2600 OGLETHORPE CIR NE	ATLANTA	GA		6601	30319	2600 OGLETHORPE CIR	1371.988	174.0007
204	MCAULIFFE SCOTT D	null	18 238 18 073	1418 DRESDEN DR # A315	ATLANTA	GA	null		30319	1418 DRESDEN DR UNIT 315	678.8992	104.3175
205	DANZIG PROPERTIES LLC	null	18 238 18 056	1418 DRESDEN DR NE # 250	ATLANTA	GA		7004	30319	1418 DRESDEN DR UNIT 250	1243.579	144.1998
206	DAVIS ZACHARY M	null	18 238 26 023	2574 OGLETHORPE CIR	ATLANTA	GA	null		30319	2574 OGLETHORPE CIR	1440.002	167.9995
207	TUCKER PHILLIP M SR	null	18 241 10 016	4826 HIGH FOREST DR	DULUTH	GA	null		30096	2602 DOGWOOD TER	13106.7	470.1776
208	CALDWELL VENTURE LLC	null	18 238 01 020	5775 GLENRIDGE DR NE E160	ATLANTA	GA	null		30328	2536 CALDWELL RD	12764.15	471.2392
209	ZERKLE ANN	ZERKLE JOSH	18 238 26 014	2531 OGLETHORPE CIR NE	ATLANTA	GA	null		30319	2531 OGLETHORPE CIR	1296.001	156.0001

FEE: REZ $750
SIGN $405
AD $10
$1165

Brookhaven GEORGIA

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PRE-APPLICATION FORM
LAND USE PETITIONS AND VARIANCE PETITIONS

Purpose & Process

A Pre-Application Meeting provides you the opportunity to present a conceptual plan and letter of intent to a representative of the Community Development Department. This meeting benefits you, the applicant, by receiving general comments on the feasibility of the plan, the process(es)/procedure(s) and fees required to process and review the application(s). To schedule a meeting contact a member of the Planning and Zoning Department by calling (404) 637 – 0500. This form will be completed during the pre-application meeting, and must be submitted at the same time you submit your application in order for your submittal to be deemed complete.

Applicant Name: SSP Dilsdin, LLC Phone: (404) 429-4974

Applicant E-mail: bf@connolly.co.com Fax: (678) 298-7171

Representative Name: JESSICA HILL Phone: (404) 504-7754

Representative E-mail: jhill@mmmlaw.com Fax:

Site Address: 1336-1370 Dilsdin Dr. 2544-2562 Caldwell Parcel Size: 3.43 AC

Tax Parcel #: 18 238 01- 010, 011, 089, 015, 016, 022 021, + tag office City Council District: 2 - PARK

Existing Zoning and Case Number: PC-2 CZ05-1760 Proposed Zoning: PC-2

Comprehensive Plan Character Area Map Designation: BROOKHAVEN - PEACHTREE OVERLAY

Application Type: ☒ Rezoning ☐ Special Land Use Permit ☐ Variance ☐ Special Exception

Variance Type: ☐ Administrative ☐ Zoning Board of Appeals ☐ Stream Buffer

Overlay District: ☐ Brookhaven-Peachtree Subarea I ☒ Brookhaven-Peachtree Subarea II

Additional Studies: ☐ Trip Generation Report ☒ Traffic Impact Study
☐ Development of Regional Impact Review ☐ Environmental Impact Review

Proposal Description: 206 UNITS, 20,000 ft RETAIL/RESTAURANT

Applicant Signature: [signature] Date: 2/24/16

Planner Signature: P. Rudd Date: 02/24/16

TRAFFIC IMPACT STUDY
FOR
DRESDEN VILLAGE
MIXED-USE DEVELOPMENT

BROOKHAVEN, GEORGIA

RECEIVED
JUN 30 2016
CITY OF
BROOKHAVEN

GEORGIA
REGISTERED
NO. 22518
PROFESSIONAL
ENGINEER
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June 28, 2016
A & R Project # 16-006

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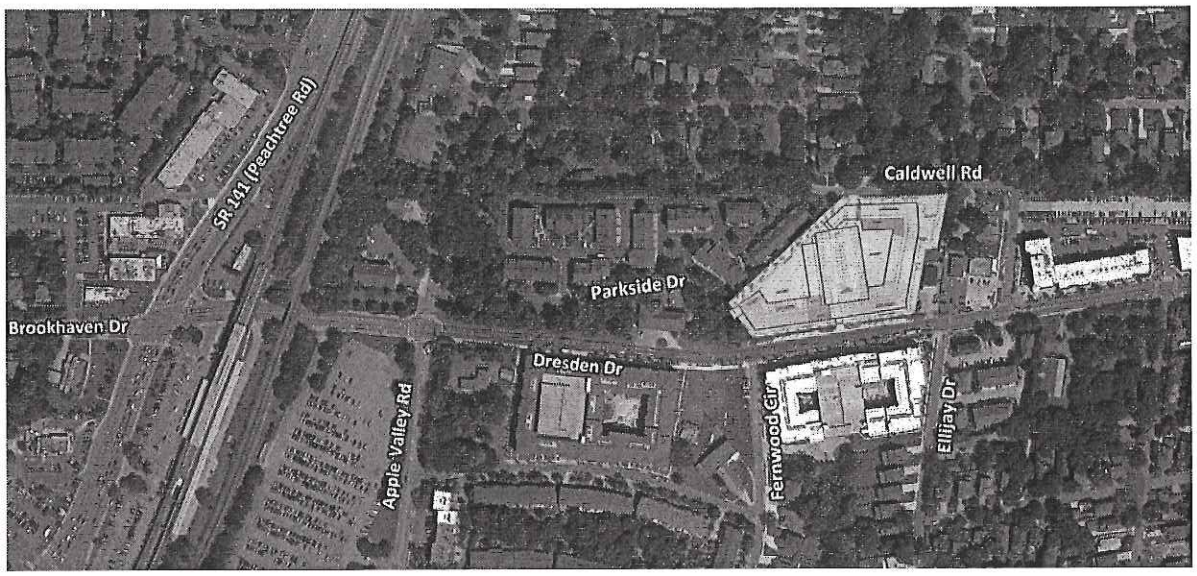
1.0 INTRODUCTION

The purpose of this study is to determine the traffic impact that will result from the proposed Dresden Village mixed-use development located in the northeast corner of the intersection of Dresden Drive at Parkside Drive/Fernwood Circle in Brookhaven, 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:

- Apartments: 194 units
- Retail Space: 20,000 sf



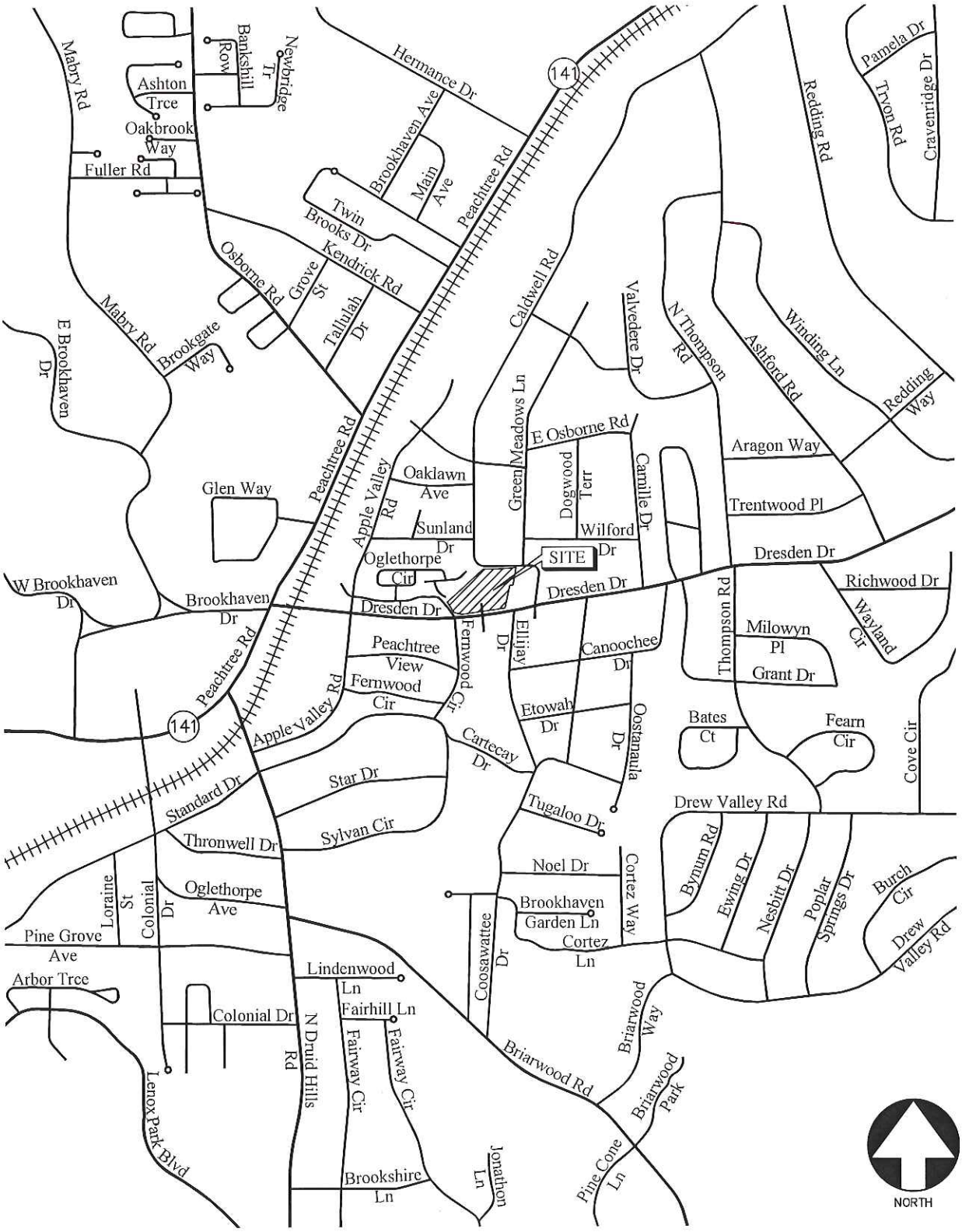
The development proposes the following access:

- Site Driveway #1: Full-access driveway on Dresden Drive
- Site Driveway #2: Right-out only driveway on Caldwell Road, access only for residential traffic
- Site Driveway #3: Full-access driveway on Parkside Drive, used only for loading and deliveries

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

1. Dresden Drive at Parkside Drive/Fernwood Circle
2. Dresden Drive at Ellijay Drive
3. Dresden Drive at Caldwell Road
4. Caldwell Road at Green Meadows Lane
5. Dresden Drive at 1660 Apartments Driveway
6. SR 141 (Peachtree Road) at Brookhaven Drive/Dresden Drive
7. Dresden Drive at Apple Valley Road

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



LOCATION MAP

FIGURE 1

A&R Engineering Inc.

2.0 EXISTING FACILITIES / CONDITIONS

2.1 Roadway Facilities

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

2.1.1 SR 141 (Peachtree Road)

SR 141 (Peachtree Road) is a north-south, five-lane roadway with a center two-way left turn lane and posted speed limit of 45 mph in the vicinity of the site. GDOT traffic counts (Station ID 0893165) indicate that the daily traffic volume on SR 141 (Peachtree Road) is 34,700 vehicles per day south of North Druid Hills Road. GDOT classifies SR 141 (Peachtree Road) as a Principal Arterial roadway.

2.1.2 Dresden Drive

Dresden Drive is an east-west, three-lane roadway with a center two-way left turn lane and posted speed limit of 35 mph in the vicinity of the site. GDOT traffic counts (Station ID 0893625) indicate that the daily traffic volume on Dresden Drive is 10,300 vehicles per day east of Thompson Road. GDOT classifies Dresden Drive as a Minor Arterial roadway. The proposed development will be adding a 5-foot bike lane on the north side of Dresden Drive along the frontage of the site.

2.1.3 Brookhaven Drive

Brookhaven Drive is an east-west, two-lane roadway with a posted speed limit of 25 mph.

2.1.4 Parkside Drive

Parkside Drive is a north-south, two-lane roadway with a posted speed limit of 25 mph in the vicinity of the site. GDOT traffic counts (Station ID 0898189) indicate that the daily traffic volume on Parkside Drive is 220 vehicles per day. GDOT classifies Parkside Drive as a Local roadway.

2.1.5 Fernwood Circle

Fernwood Circle is a north-south, two-lane roadway with a posted speed limit of 25 mph in the vicinity of the site.

2.1.6 Ellijay Drive

Ellijay Drive is a north-south, two-lane roadway with a posted speed limit of 25 mph.

2.1.7 Caldwell Road

Caldwell Road is a north-south, two-lane roadway with a posted speed limit of 15 mph in the vicinity of the site.

2.1.8 Green Meadows Lane

Green Meadows Lane is a north-south, two-lane residential roadway with a posted speed limit of 15 mph.

2.2 Transit and Pedestrian Facilities

The Brookhaven-Oglethorpe MARTA Rail Station is located at the intersection of Dresden Drive at SR 141 (Peachtree Road), 0.25 miles west of the proposed development. There are connected sidewalks along the south side of Dresden Drive between the site and the MARTA station, with an eight foot section between Ellijay Drive and Apple Valley Road. Brookhaven is currently engaged in completing a bicycle, pedestrian, and trail plan. The study process is slated to conclude in early 2016, and has Dresden Drive labeled as one of its Target Corridors.

3.0 STUDY METHODOLOGY

In this study, the methodology used for evaluating traffic operations at each of the subject intersections is based on the criteria set forth in the Transportation Research Board's Highway Capacity Manual, 2000 edition (HCM 2000). Synchro software, which utilizes the HCM 2000 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: 2000 Highway Capacity Manual

3.2 Signalized Intersections

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

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

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

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

Source: 2000 Highway Capacity Manual

4.0 EXISTING TRAFFIC ANALYSIS

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

1. Dresden Drive at Parkside Drive/Fernwood Circle
2. Dresden Drive at Ellijay Drive
3. Dresden Drive at Caldwell Road
4. Caldwell Road at Green Meadows Lane
5. Dresden Drive at 1660 Apartments Driveway
6. SR 141 (Peachtree Road) at Brookhaven Drive/Dresden Drive
7. Dresden Drive at Apple Valley Road

Turning movement counts were collected on January 20 (Wednesday), February 25 (Thursday), and March 8 (Tuesday), 2016. 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 for a 60-minute period in accordance with the HCM methodology. A queue length analysis was also performed. The results of the analyses are shown below in Tables 3 and 4. 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		PM Peak Hour	
			LOS (Delay)	v/c ratio	LOS (Delay)	v/c ratio
1	**Dresden Dr @ Parkside Dr/Fernwood Cir**	Stop Controlled on NB/SB				
	-Eastbound Left		A (0.0)	-	A (0.0)	-
	-Westbound Left		A (7.9)	-	A (9.4)	-
	-Northbound Approach		C (15.4)	-	C (17.3)	-
	-Southbound Approach		C (23.5)	-	C (22.1)	-
2	**Dresden Dr @ Ellijay Dr**	Signalized	**B (13.1)**	**0.49**	**D (36.6)**	**0.60**
	-Eastbound Approach		C (24.5)	-	E (55.8)	-
	-Westbound Approach		A (5.2)	-	A (5.8)	-
	-Northbound Approach		D (40.2)	-	D (40.1)	-
3	**Dresden Dr @ Caldwell Rd**	Signalized	**C (32.6)**	**0.52**	**B (16.7)**	**0.46**
	-Eastbound Approach		A (5.4)	-	A (7.2)	-
	-Westbound Approach		D (43.8)	-	C (27.3)	-
	-Southbound Approach		D (38.9)	-	D (40.1)	-
4	**Caldwell Rd @ Green Meadows Ln**	Stop Controlled on SB				
	-Eastbound Left		A (0.1)	-	A (2.7)	-
	-Southbound Approach		A (9.2)	-	A (9.6)	-

Table Continued on Next Page...

	Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
			LOS (Delay)	v/c ratio	LOS (Delay)	v/c ratio
5	**Dresden Dr @ Apartment Drwy**	Stop Controlled on NB/SB				
	-Eastbound Approach		A (0.0)	-	A (0.0)	-
	-Westbound Left		A (7.9)	-	A (9.6)	-
	-Northbound Approach		C (16.2)	-	B (14.8)	-
	-Southbound Approach		B (14.9)	-	B (12.6)	-
6	**SR 141 @ Brookhaven Dr/Dresden Dr**	Signalized	**D (46.8)**	**0.85**	**F (97.0)**	**0.97**
	-Eastbound Approach		E (74.1)	-	F (98.1)	-
	-Westbound Approach		E (71.0)	-	F (88.4)	-
	-Northbound Approach		D (36.4)	-	F (130.6)	-
	-Southbound Approach		D (37.6)	-	E (58.1)	-
7	**Dresden Dr @ Apple Valley Rd**	Signalized	**B (11.3)**	**0.51**	**C (22.4)**	**0.61**
	-Eastbound Approach		A (4.0)	-	B (12.6)	-
	-Westbound Approach		A (6.3)	-	A (9.0)	-
	-Northbound Approach		C (31.6)	-	D (46.5)	-
	-Southbound Approach		C (30.3)	-	C (25.1)	-

**v/c ratio is not calculated for unsignalized intersections*

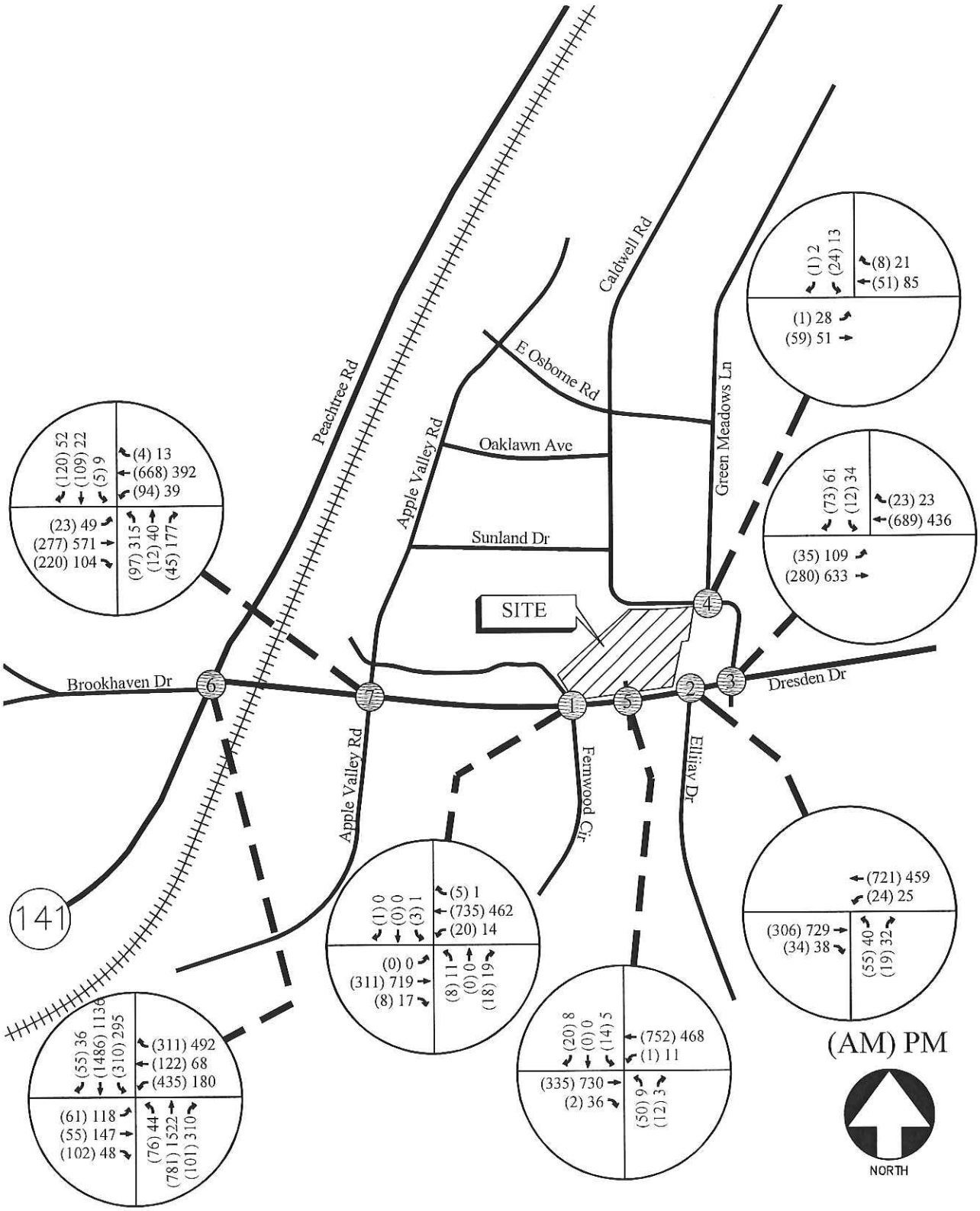
TABLE 4 – EXISTING INTERSECTION 95TH PERCENTILE QUEUES

	Intersection	Available Storage	AM Peak: feet	PM Peak: feet
1	**Dresden Dr @ Parkside Dr/Fernwood Cir**			
	-Eastbound Left	50'	0	0
	-Westbound Left	50'	21	1
	-Northbound Approach	-	6	8
	-Southbound Approach	-	2	0
2	**Dresden Dr @ Ellijay Dr**			
	-Eastbound Through/Right	-	289	984
	-Westbound Left	50'	25	37
	-Westbound Through	-	47	20
	-Northbound Approach	-	93	78
3	**Dresden Dr @ Caldwell Rd**			
	-Eastbound Left	50'	70	103
	-Eastbound Through	-	4	6
	-Westbound Through/Right	-	878	424
	-Southbound Approach	-	63	82
4	**Caldwell Rd @ Green Meadows Ln**			
	-Eastbound Left/Through	-	0	1
	-Southbound Approach	-	2	1
5	**Dresden Dr @ Apartment Drwy**			
	-Eastbound Through/Right	-	0	0
	-Westbound Left	50'	0	1
	-Westbound Through	-	0	0
	-Northbound Approach	-	14	2
	-Southbound Approach	-	7	2

Table Continued on Next Page...

	Intersection	Available Storage	AM Peak: feet	PM Peak: feet
6	**SR 141 @ Brookhaven Dr/Dresden Dr**			
	-Eastbound Through/Left	-	208	510
	-Eastbound Right	50'	34	0
	-Westbound Left	350'	470	187
	-Westbound Through/Left	-	487	192
	-Westbound Right	200'	119	410
	-Northbound Left	125'	137	58
	-Northbound Through	-	540	1,627
	-Northbound Right	300'	23	328
	-Southbound Left	-	312	634
	-Southbound Through/Right	-	1,259	877
7	**Dresden Dr @ Apple Valley Rd**			
	-Eastbound Left	100'	7	19
	-Eastbound Through	-	69	486
	-Eastbound Right	-	13	12
	-Westbound Left	100'	37	25
	-Westbound Through/Right	-	296	188
	-Northbound Left	100'	98	373
	-Northbound Through/Right	-	40	93
	-Southbound Through/Left	-	106	39
	-Southbound Right	25'	52	33

The results of existing traffic operations analysis indicate that the intersection of SR 141 (Peachtree Road) at Brookhaven Drive/Dresden Drive is currently operating at a level-of-service "F" during the PM peak hour. All other intersections are currently operating at an acceptable level-of-service ("D" or better by local standards) during the AM and PM peak hours.



EXISTING WEEKDAY PEAK HOUR VOLUMES

FIGURE 2

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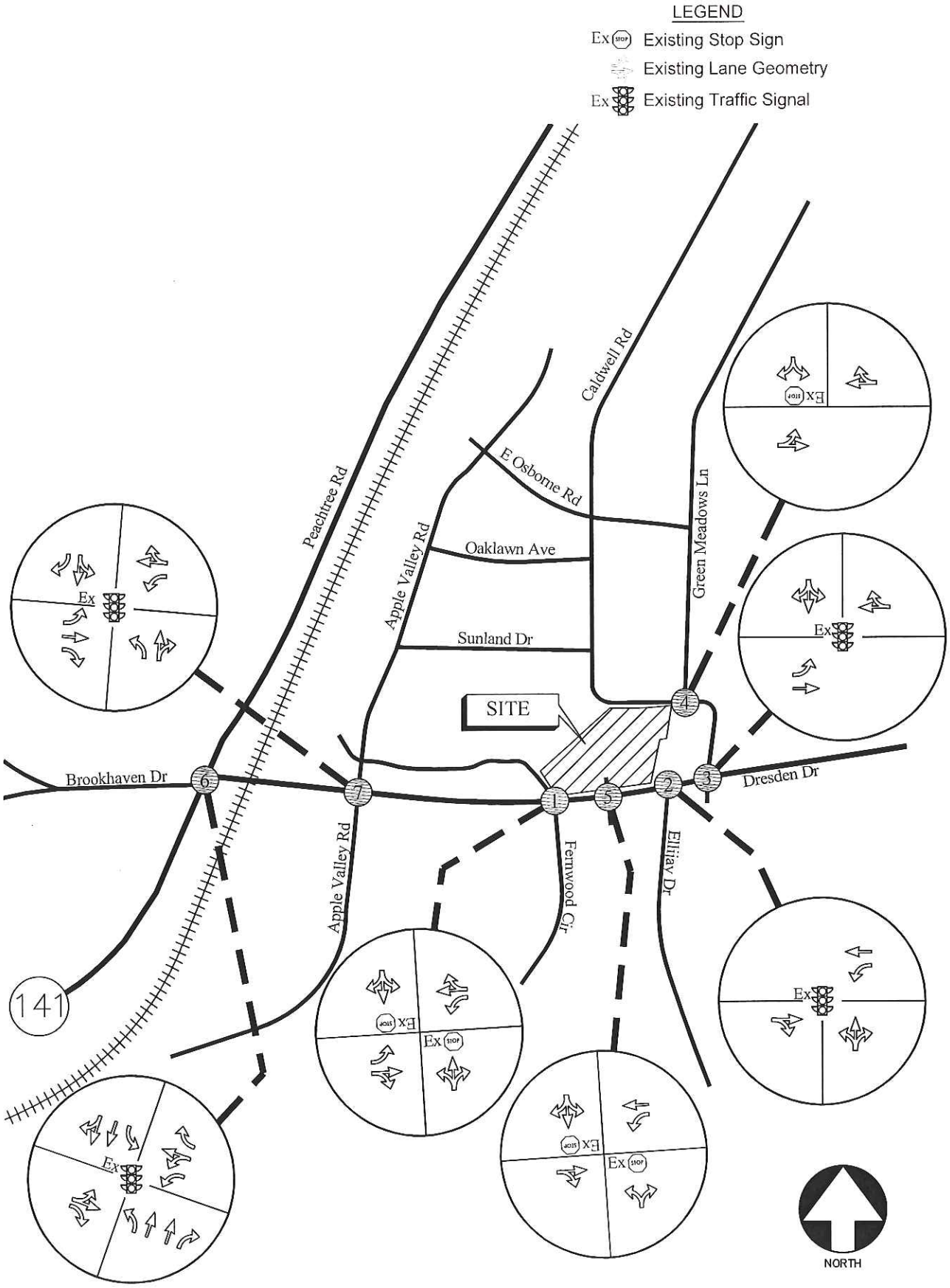


EXISTING TRAFFIC CONTROL AND LANE GEOMETRY FIGURE 3

A&R Engineering Inc.

5.0 PROPOSED DEVELOPMENT

The proposed Dresden Village will be located in the northeast corner of the intersection of Dresden Drive at Parkside Drive/Fernwood Circle in Brookhaven, Georgia. The proposed development will consist of:

- Apartments: 194 units
- Retail Space: 20,000 sf

The development proposes the following access:

- Site Driveway #1: Full-access driveway on Dresden Drive
- Site Driveway #2: Right-out only driveway on Caldwell Road, access only for residential traffic
- Site Driveway #3: Full-access driveway on Parkside Drive, used only for loading and deliveries

A site plan is shown in Figure 4.

5.1 Trip Generation

Trip generation estimates for the project were based on the rates and equations published in the 9th edition of the Institute of Transportation Engineers (ITE) Trip Generation report. This reference contains traffic volume count data collected at similar facilities nationwide. The trip generation was based on the following ITE Land Uses: *220 – Apartment* and *820 – Shopping Center*. Due to the nature of the development, pass-by and mixed-use reductions have been applied per ITE standards. For the purpose of this study, the traffic from the existing tag office has been subtracted from the total site-generated traffic to account for the any decreases in traffic after the tag office is closed. The calculated total trip generation for the proposed development is shown in Table 5, and the total trips added to the road network after the removal of existing tag office traffic is shown in Table 6.

TABLE 5 – TRIP GENERATION

Land Use	Size	AM Peak Hour			PM Peak Hour			24-Hour
		Enter	Exit	Total	Enter	Exit	Total	Two-way
ITE 820 – Shopping Center	20,000 sf	36	22	58	98	106	204	2,386
ITE 220 – Apartment	194 units	20	79	99	81	43	124	1,299
Total Site Demand (without reductions)		**56**	**101**	**157**	**179**	**149**	**328**	**3,685**
Internal Capture for Shopping Center		*-2*	*-1*	*-3*	*-9*	*-13*	*-22*	*-238*
Internal Capture for Apartment		*-1*	*-2*	*-3*	*-13*	*-9*	*-22*	*-238*
Total Internal (Mixed-Use) Trip Reduction		***-3***	***-3***	***-6***	***-22***	***-22***	***-44***	***-492***
Pass-by for Shopping Center (0%) 34%		*0*	*0*	*0*	*-30*	*-32*	*-62*	*-620*
Total Pass-by Trip Reduction		***0***	***0***	***0***	***-30***	***-32***	***-62***	***-620***
Total New External Trips (with Reductions)		**53**	**98**	**151**	**127**	**95**	**222**	**2,589**

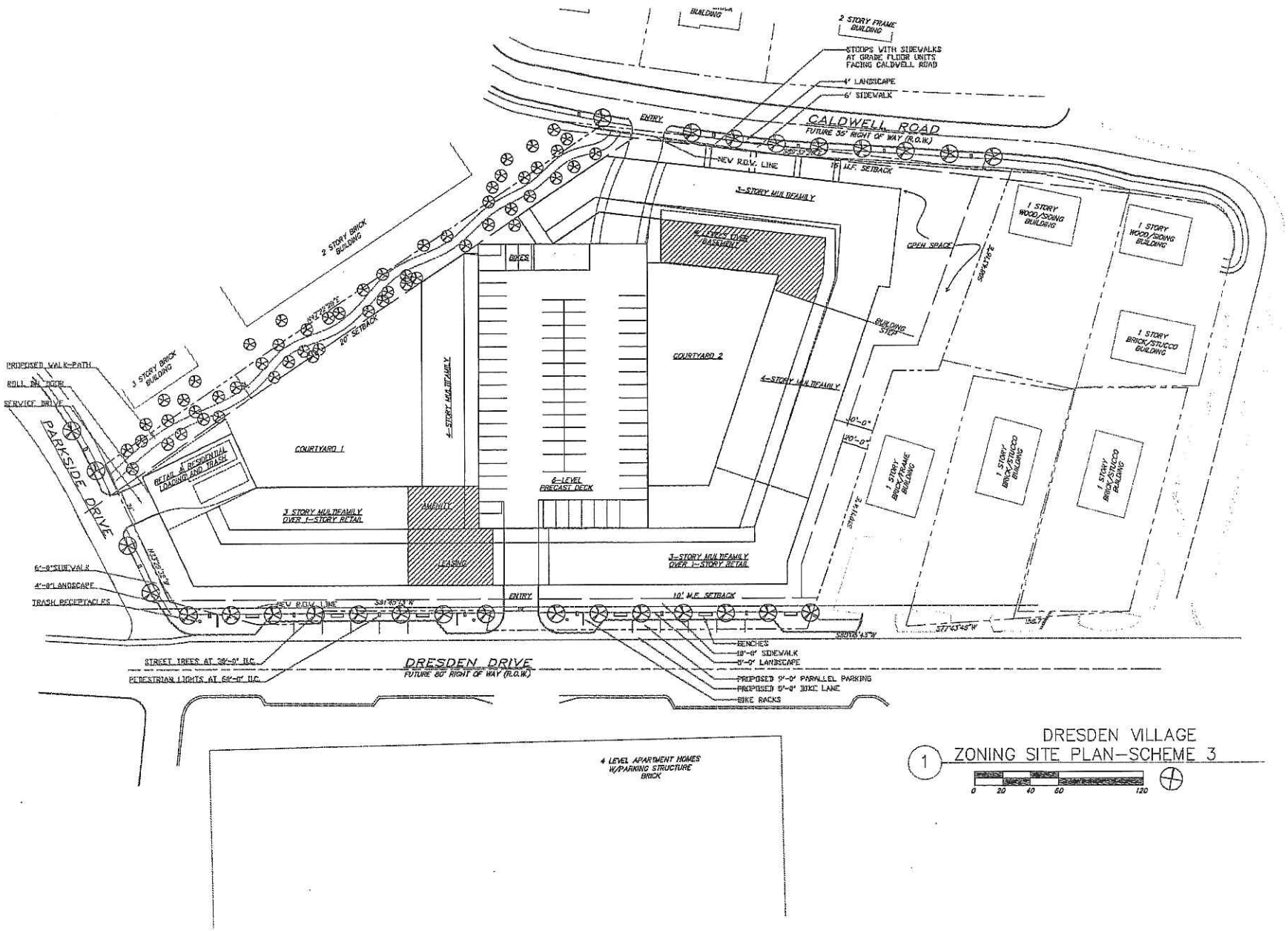
**Pass-by trips (AM) PM; 24-Hour pass-by trips estimated by considering PM pass-by as 10% of daily*

TABLE 6 – TOTAL TRAFFIC ADDED TO ROAD NETWORK								
Land Use	Size	AM Peak Hour			PM Peak Hour			24-Hour
		Enter	Exit	Total	Enter	Exit	Total	Two-way
Total New External Trips (with Reductions)		53	98	151	127	95	222	2,589
Removed Tag Office Traffic		-45	-34	-79	-13	-13	-26	-
Total Traffic Added to Road Network		**8**	**64**	**72**	**114**	**82**	**196**	**2,589**

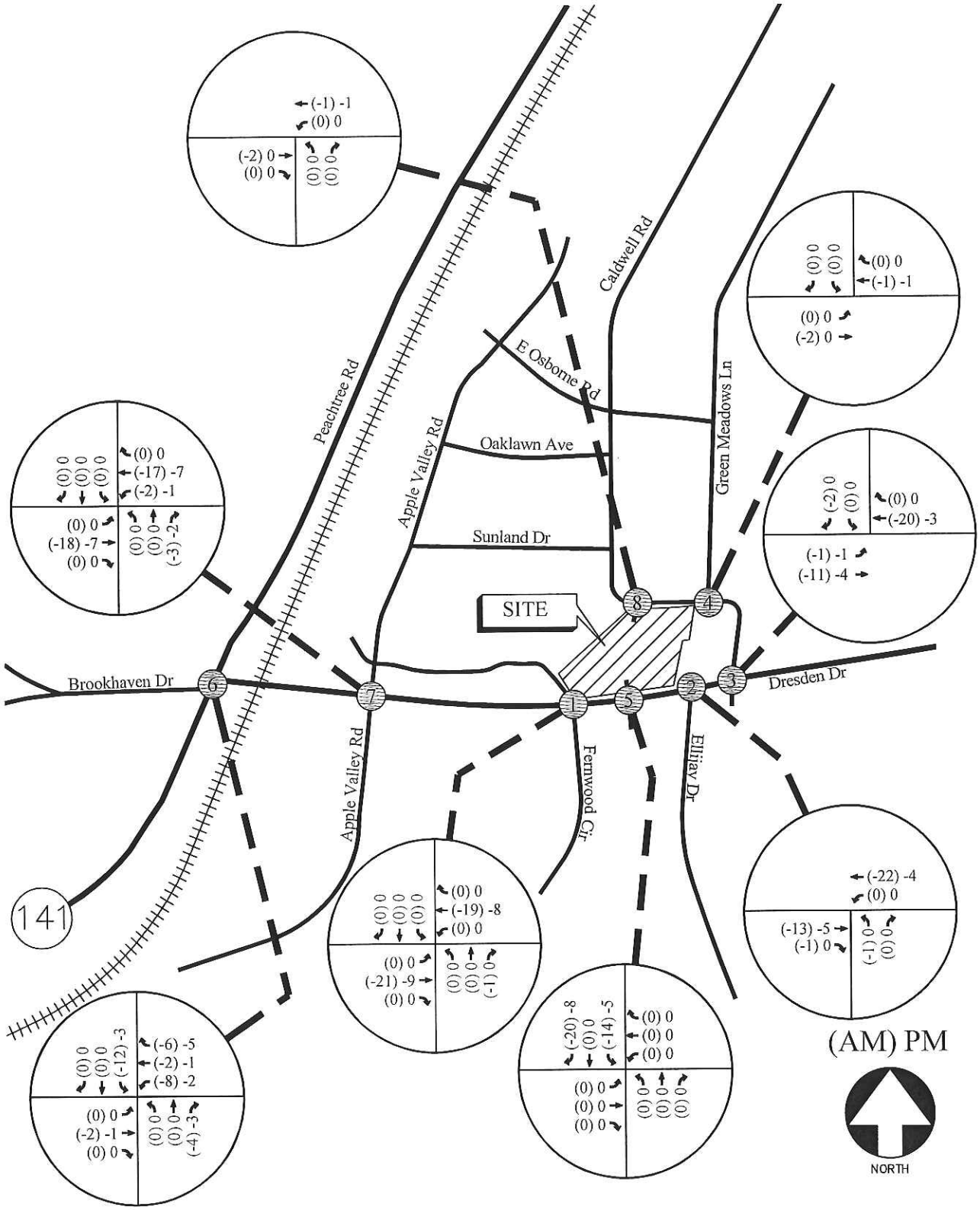
It should be noted that these trip estimates may be high, due to the close proximity to public transit (see Section 2.2). Census data for this area (Census Tract #13089021411, 2013) indicates that over 5% of the population walks or uses public transit to travel to/from work and more than 6% of the population work from home.

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. Figure 5 shows the removed tag office trips as a result of the site's development. For the purpose of this analysis, separate trip distributions were developed for the new retail and residential portions of the site. The site-generated peak hour traffic volumes, shown in Table 5, were assigned to the study area intersections based on these distributions. The outer-leg distribution and AM and PM peak hour new traffic generated by the site are shown in Figure 6 (retail) and Figure 7 (residential). Pass-by volumes have also been distributed based on existing travel patterns and are shown in Figure 8.



DRESDEN VILLAGE
1 ZONING SITE PLAN—SCHEME 3



REMOVED TAG OFFICE PEAK HOUR VOLUMES

FIGURE 5

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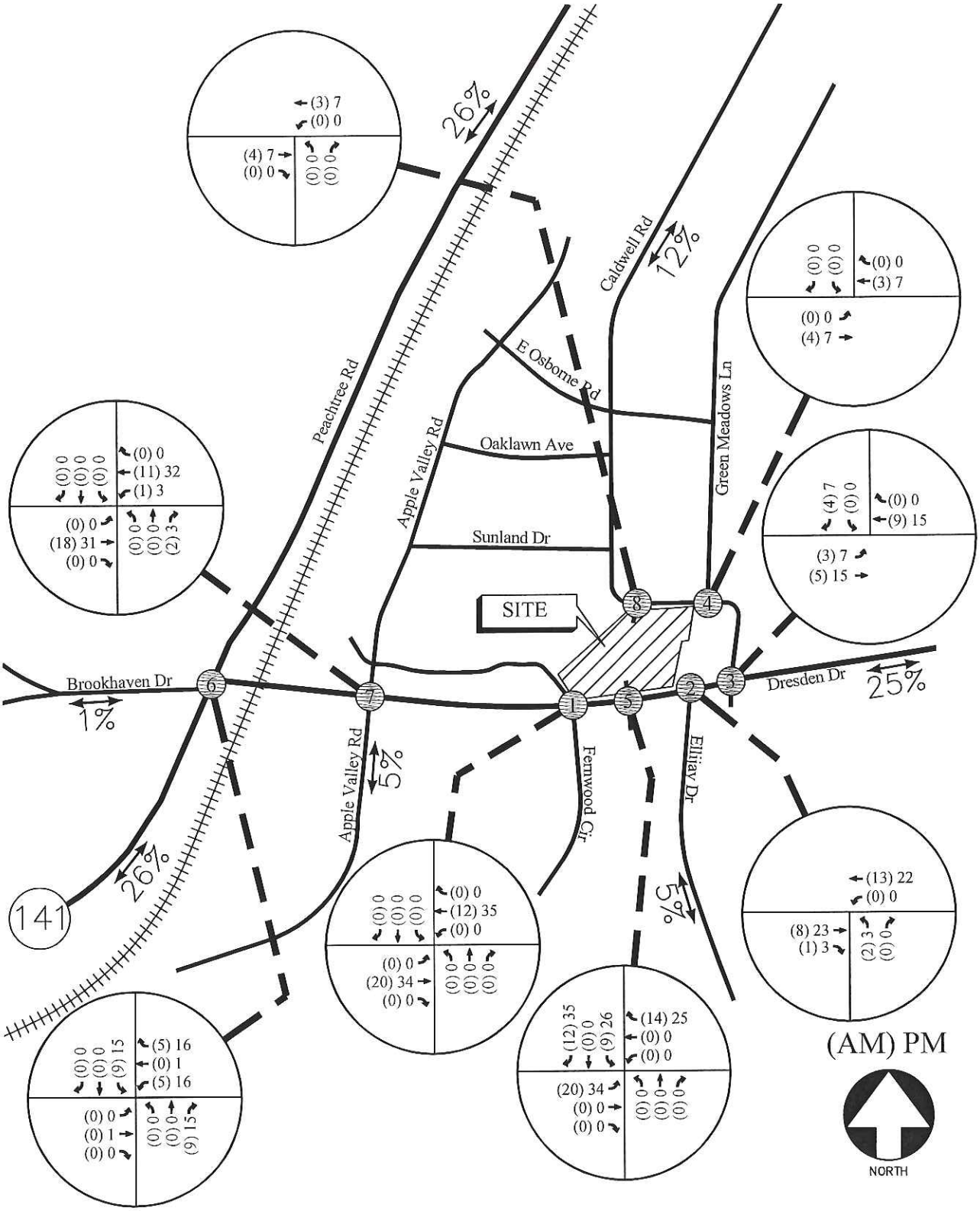

RETAIL OUTER LEG TRIP DISTRIBUTION AND SITE-GENERATED PEAK HOUR VOLUMES

FIGURE 6

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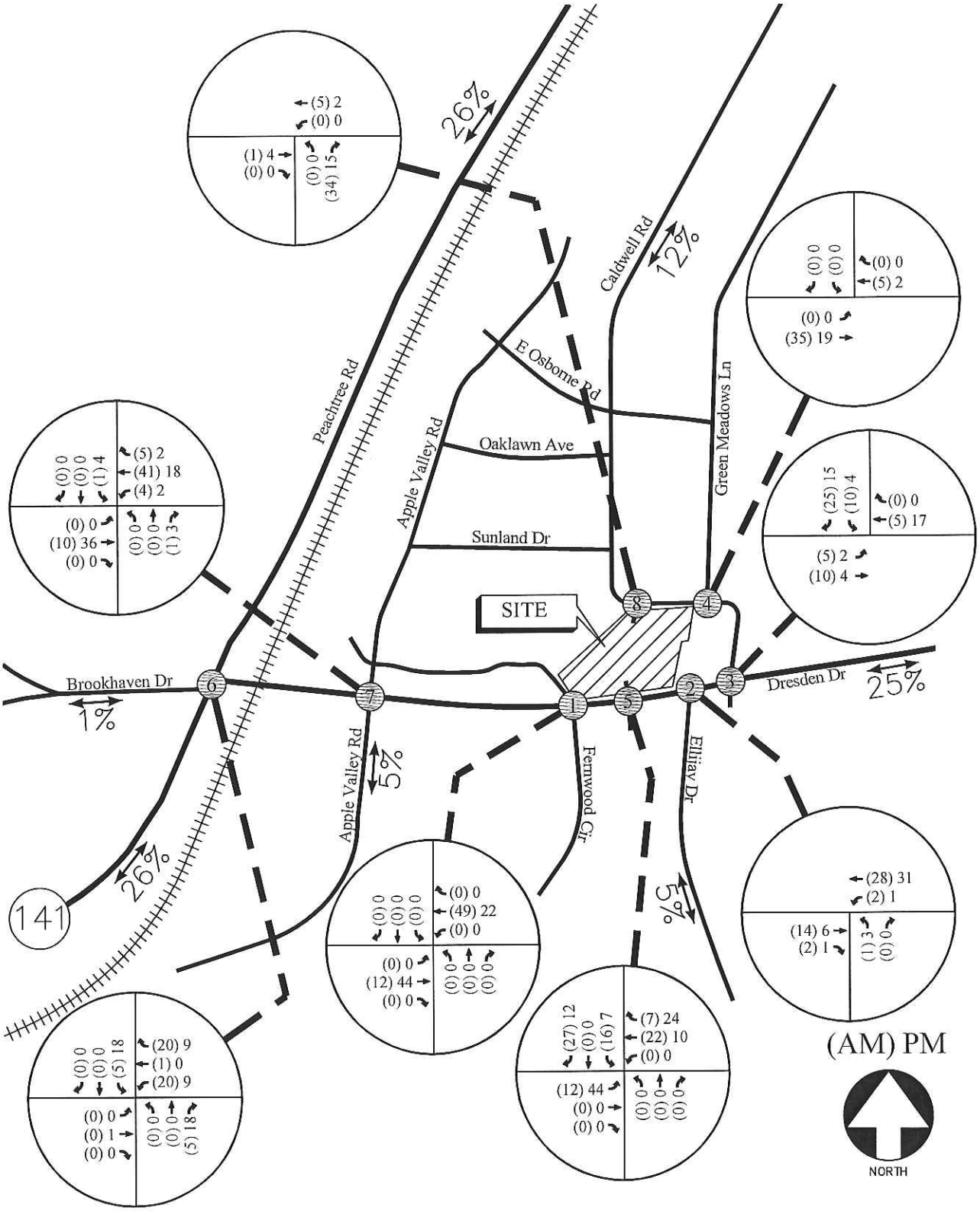
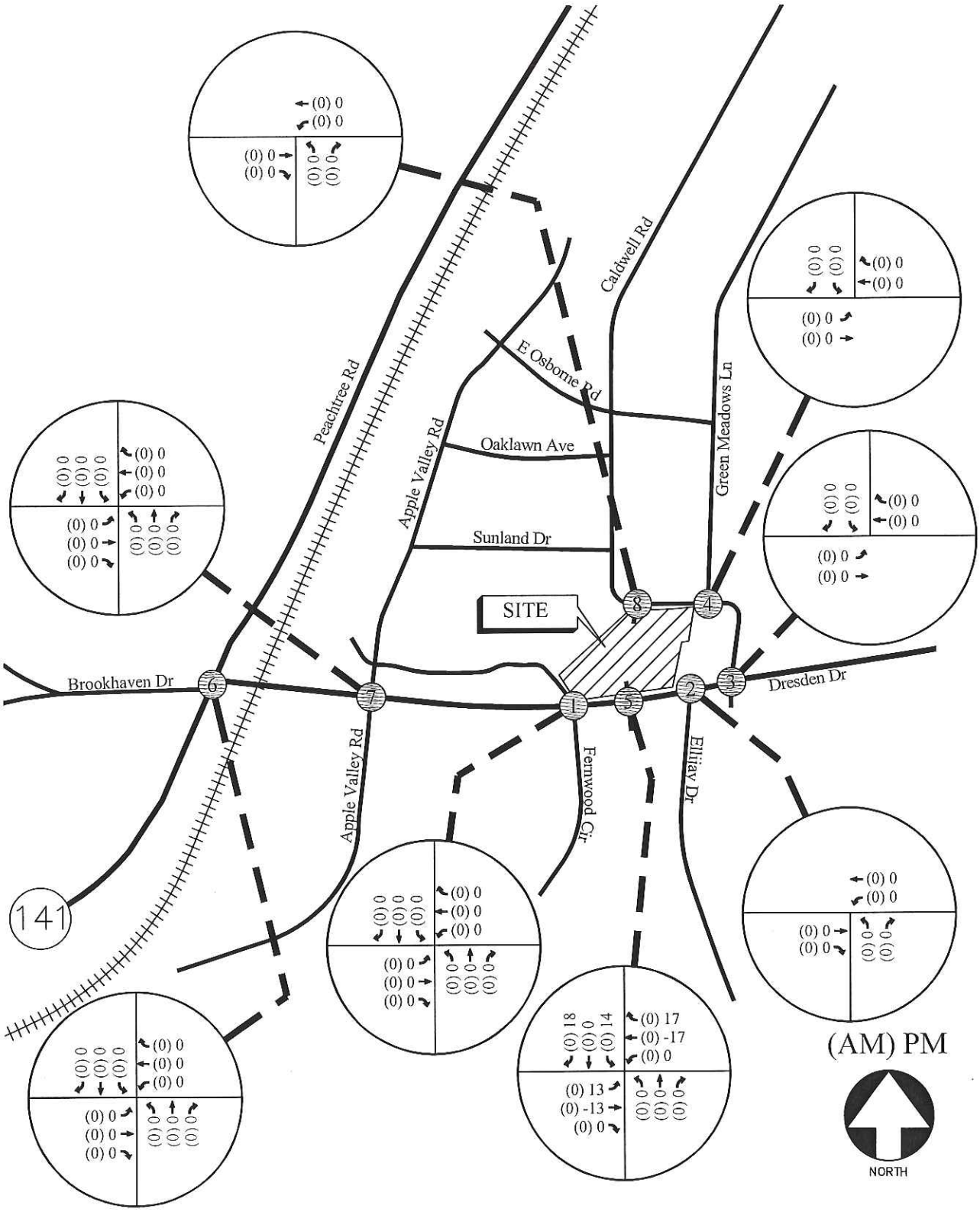


RESIDENTIAL OUTER LEG TRIP DISTRIBUTION AND SITE-GENERATED PEAK HOUR VOLUMES

FIGURE 7

A&R Engineering Inc.



SITE PEAK HOUR PASS-BY VOLUMES

FIGURE 8

A&R Engineering Inc.

6.0 FUTURE TRAFFIC ANALYSIS

The future traffic operations are analyzed for the "Build" and "No-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" address deficiencies that are found within the existing road network prior to any impacts from the proposed development's added traffic. Improvements that are identified as "Site Mitigation Improvements" address further impacts that are a result of the proposed development's added traffic. Note that survey and construction drawings would be needed to verify the feasibility and extent of additional right-of-way required for any recommended improvements.

6.1 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 2% 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 9.

6.1.2 Recommendations for System Improvements

Improvements that are identified as "System Improvements" address deficiencies that are found within the existing road network prior to any impacts from the proposed development's added traffic. These are recommended for the local municipality to use in planning future transportation projects. A summary of the system improvements is provided below with more detailed information on each intersection in the following narratives.

<u>Summary of Recommended System Improvements</u>

- Install a third northbound through lane as well as a dedicated northbound right turn lane on SR 141 (Peachtree Road) at Dresden Drive. This can be done by restriping all lanes to 10 feet wide without additional widening.
- Install a second westbound left turn lane using the existing eastbound through lane on Dresden Drive at SR 141 (Peachtree Road) and operate with protected signal phasing (removing split phasing).

- Install permissive + overlap signal phasing on the northbound and westbound right turn movements at SR 141 (Peachtree Road) at Dresden Drive.
- Create a dedicated eastbound left turn and shared through/right turn lane using the existing pavement on Brookhaven Drive and operate with permissive signal phasing.
- Update the signal timing at the intersection of Dresden Drive at Ellijay Drive.
- Update the signal timing at the intersection of Dresden Drive at Caldwell Road.

SR 141 (Peachtree Road) at Brookhaven Drive/Dresden Drive

After accounting for the growth in background traffic, the intersection of SR 141 (Peachtree Road) at Brookhaven Drive/Dresden Drive will continue to operate at a level-of-service "F" in the PM peak hour. The signal timing at the intersection is such that side street movements have been split phased (served sequentially) to avoid conflicts for left turn movements. This reduces the capacity of the intersection as a whole. A recommendation to reduce the overall delays at the intersection is to remove the split phasing for the side streets by reconfiguring the westbound approach to have dual left turn lanes as well as a dedicated through and dedicated right turn lane. This will remove the conflict for the side street left turns by separating the turn paths that currently overlap. The recommended system improvements can be implemented by restriping and milling/overlaying the existing pavement at the intersection. The northbound approach will operate with five 10-foot wide lanes, and the under-utilized second eastbound receiving lane will be removed by creating a second westbound left turn lane.

6.1.3 Future "No-Build" Traffic Operations

The future "No-Build" traffic operations were analyzed using the volumes in Figure 9 and the results are shown in Tables 7 and 8 below.

TABLE 7 – FUTURE "NO-BUILD" INTERSECTION OPERATIONS

	Intersection	Future Condition: LOS (Delay)			
		NO IMPROVEMENTS		SYSTEM IMPROVEMENTS	
		AM Peak	PM Peak	AM Peak	PM Peak
1	**Dresden Dr @ Parkside Dr/Fernwood Cir**				
	-Eastbound Left	A (0.0)	A (0.0)	A (0.0)	A (0.0)
	-Westbound Left	A (8.0)	A (9.6)	A (8.0)	A (9.6)
	-Northbound Approach	C (16.0)	C (17.9)	C (16.1)	C (17.5)
	-Southbound Approach	D (25.4)	C (23.4)	D (25.4)	C (22.3)
2	**Dresden Dr @ Ellijay Dr**	**B (13.7)**	**D (45.5)**	**B (11.3)**	**C (24.2)**
	-Eastbound Approach	C (24.5)	E (71.1)	B (17.9)	C (34.7)
	-Westbound Approach	A (6.1)	A (5.8)	A (6.0)	A (6.1)
	-Northbound Approach	D (40.8)	D (40.2)	C (33.6)	C (33.5)
3	**Dresden Dr @ Caldwell Rd**	**D (35.5)**	**B (16.9)**	**C (23.8)**	**B (14.3)**
	-Eastbound Approach	A (5.5)	A (7.1)	A (5.1)	A (6.9)
	-Westbound Approach	D (48.3)	C (27.9)	C (29.7)	C (20.1)
	-Southbound Approach	D (39.4)	D (40.2)	D (43.2)	D (44.3)
4	**Caldwell Rd @ Green Meadows Ln**				
	-Eastbound Left	A (0.1)	A (2.7)	A (0.1)	A (2.7)
	-Southbound Approach	A (9.2)	A (9.7)	A (9.2)	A (9.7)

Table Continued on Next Page...

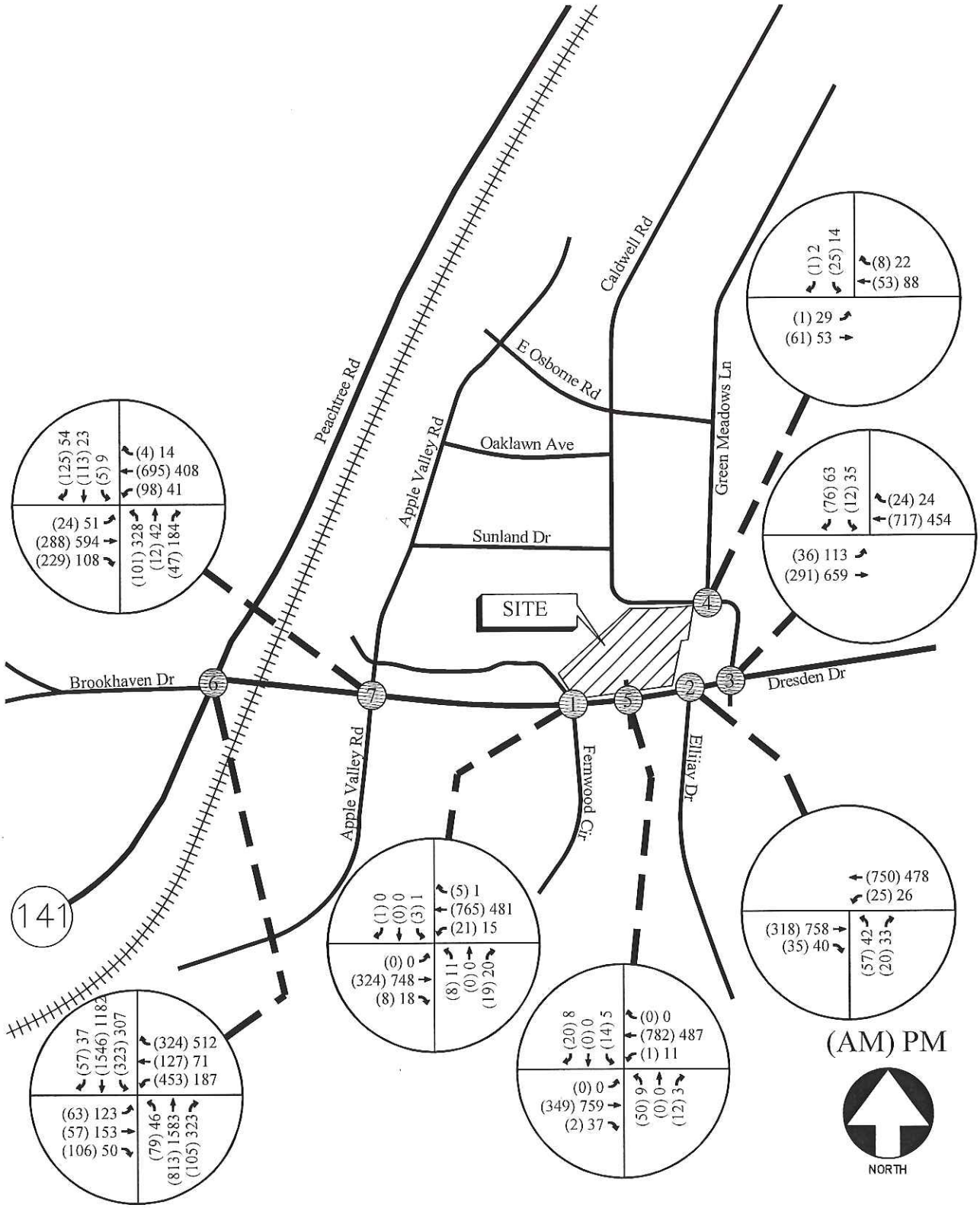
	Intersection	Future Condition: LOS (Delay)			
		NO IMPROVEMENTS		SYSTEM IMPROVEMENTS	
		AM Peak	PM Peak	AM Peak	PM Peak
5	**Dresden Dr @ Apartment Drwy**				
	-Eastbound Approach	A (0.0)	A (0.0)	A (0.0)	A (0.0)
	-Westbound Left	A (8.0)	A (9.7)	A (8.0)	A (9.7)
	-Northbound Approach	C (16.8)	C (15.3)	C (16.7)	C (15.2)
	-Southbound Approach	C (15.4)	B (12.9)	C (15.3)	B (12.8)
6	**SR 141 @ Brookhaven Dr/Dresden Dr**	**D (50.3)**	**F (161.0)**	**D (40.7)**	**D (41.7)**
	-Eastbound Approach	E (74.0)	F (99.6)	F (80.1)	F (91.8)
	-Westbound Approach	E (72.1)	F (88.6)	E (59.3)	E (58.8)
	-Northbound Approach	D (39.2)	F (274.8)	C (29.2)	C (32.8)
	-Southbound Approach	D (43.1)	E (65.1)	C (33.4)	C (33.9)
7	**Dresden Dr @ Apple Valley Rd**	**B (11.2)**	**C (23.5)**	**B (11.1)**	**C (22.6)**
	-Eastbound Approach	A (3.4)	B (12.5)	A (3.1)	A (9.2)
	-Westbound Approach	A (6.8)	A (9.4)	A (6.7)	A (9.3)
	-Northbound Approach	C (31.3)	D (50.0)	C (31.4)	D (51.1)
	-Southbound Approach	C (30.0)	C (24.8)	C (30.1)	C (24.9)

TABLE 8 – FUTURE "NO-BUILD" INTERSECTION 95TH PERCENTILE QUEUES

	Intersection	Available Storage	Future: queue length (feet)			
			NO IMPROVEMENTS		SYSTEM IMPROVEMENTS	
			AM Peak	PM Peak	AM Peak	PM Peak
1	**Dresden Dr @ Parkside Dr/Fernwood Cir**					
	-Eastbound Left	50'	0	0	0	0
	-Westbound Left	50'	1	1	1	1
	-Northbound Approach	-	6	8	6	8
	-Southbound Approach	-	2	0	2	0
2	**Dresden Dr @ Ellijay Dr**					
	-Eastbound Through/Right	-	303	1,043	243	872
	-Westbound Left	50'	26	37	26	36
	-Westbound Through	-	48	21	48	21
	-Northbound Approach	-	97	81	85	72
3	**Dresden Dr @ Caldwell Rd**					
	-Eastbound Left	50'	69	103	68	102
	-Eastbound Through	-	4	6	2	4
	-Westbound Through/Right	-	934	448	775	360
	-Southbound Approach	-	64	85	68	88
4	**Caldwell Rd @ Green Meadows Ln**					
	-Eastbound Left/Through	-	0	1	0	1
	-Southbound Approach	-	2	2	2	2
5	**Dresden Dr @ Apartment Drwy**					
	-Eastbound Through/Right	-	0	0	0	0
	-Westbound Left	50'	0	1	0	1
	-Westbound Through	-	0	0	0	0
	-Northbound Approach	-	15	3	15	3
	-Southbound Approach	-	7	2	7	2

Table Continued on Next Page...

Intersection		Available Storage	Future: queue length (feet)			
			NO IMPROVEMENTS		SYSTEM IMPROVEMENTS	
			AM Peak	PM Peak	AM Peak	PM Peak
6	**SR 141 @ Brookhaven Dr/Dresden Dr**					
	-Eastbound Through/Left	-	213	541	-	-
	-Eastbound Left	-	-	-	*126*	*239*
	-Eastbound Right	50'	39	0	-	-
	-Eastbound Through/Right	-	-	-	*225*	*357*
	-Westbound Left	350'	505	192	340	161
	-Westbound Through/Left	-	525	198	-	-
	-Westbound Through	-	-	-	*165*	*101*
	-Westbound Right	200'	132	457	247	500
	-Northbound Left	125'	143	60	173	44
	-Northbound Through	-	570	1,713	345	762
	-Northbound Right	300'	28	349	39	127
	-Southbound Left	-	388	666	296	582
	-Southbound Through/Right	-	1,344	974	1,292	717
7	**Dresden Dr @ Apple Valley Rd**					
	-Eastbound Left	100'	7	18	9	17
	-Eastbound Through	-	74	477	91	229
	-Eastbound Right	-	13	11	26	7
	-Westbound Left	100'	40	27	39	27
	-Westbound Through/Right	-	328	197	324	197
	-Northbound Left	100'	100	393	101	393
	-Northbound Through/Right	-	41	97	41	97
	-Southbound Through/Left	-	107	40	108	40
	-Southbound Right	25'	52	33	53	33



FUTURE (NO-BUILD) PEAK HOUR VOLUMES

FIGURE 9

A&R Engineering Inc.

6.2 Future "Build" Conditions

The "Build" or development conditions include the estimated background traffic from the "No-Build" conditions plus the added traffic from the proposed development. The "Build" conditions are evaluated to determine effectiveness of the recommended system and site mitigation improvements. The removed tag office trips (Figure 5), the additional traffic volumes from the site (Figure 6 and Figure 7), and pass-by volumes (Figure 8) were added to base traffic volumes (Figure 9) to calculate the future traffic volumes after the construction of the development. These total future traffic volumes are shown in Figure 10.

6.2.1 Site Access Configuration

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

- Site Driveway #1: Full-access driveway on Dresden Drive (retail and residential access)
    - This driveway will consist of one entering lane and two exiting lanes.
    - The intersection will be unsignalized with a STOP sign on the southbound approach.
    - Entering left turn movements will be made from the existing eastbound two-way left turn lane on Dresden Drive.
    - Entering right turn movements will be made from the existing westbound through lane on Dresden Drive. No deceleration lane is planned.
- Site Driveway #2: Right-out only driveway on Caldwell Road (residential only access)
    - This driveway will only provide access to the residential portion of the development and will consist of one exiting lane.
    - The intersection will be unsignalized with a STOP sign on the northbound approach.
- Site Driveway #3: Full-access driveway on Parkside Drive (loading and deliveries only)
    - This driveway will only be used for deliveries and loading/unloading purposes and was not utilized when modeling the proposed site driveway intersections.

6.2.2 Recommendations for Site Mitigation Improvements

Improvements that are identified as "Site Mitigation Improvements" address further impacts that are a result of the proposed development's added traffic. Because operations would not be impacted beyond the projected "No-Build" conditions, mitigation improvements have not been identified outside of the recommended configuration for the site access points

6.3 Future Traffic Operations

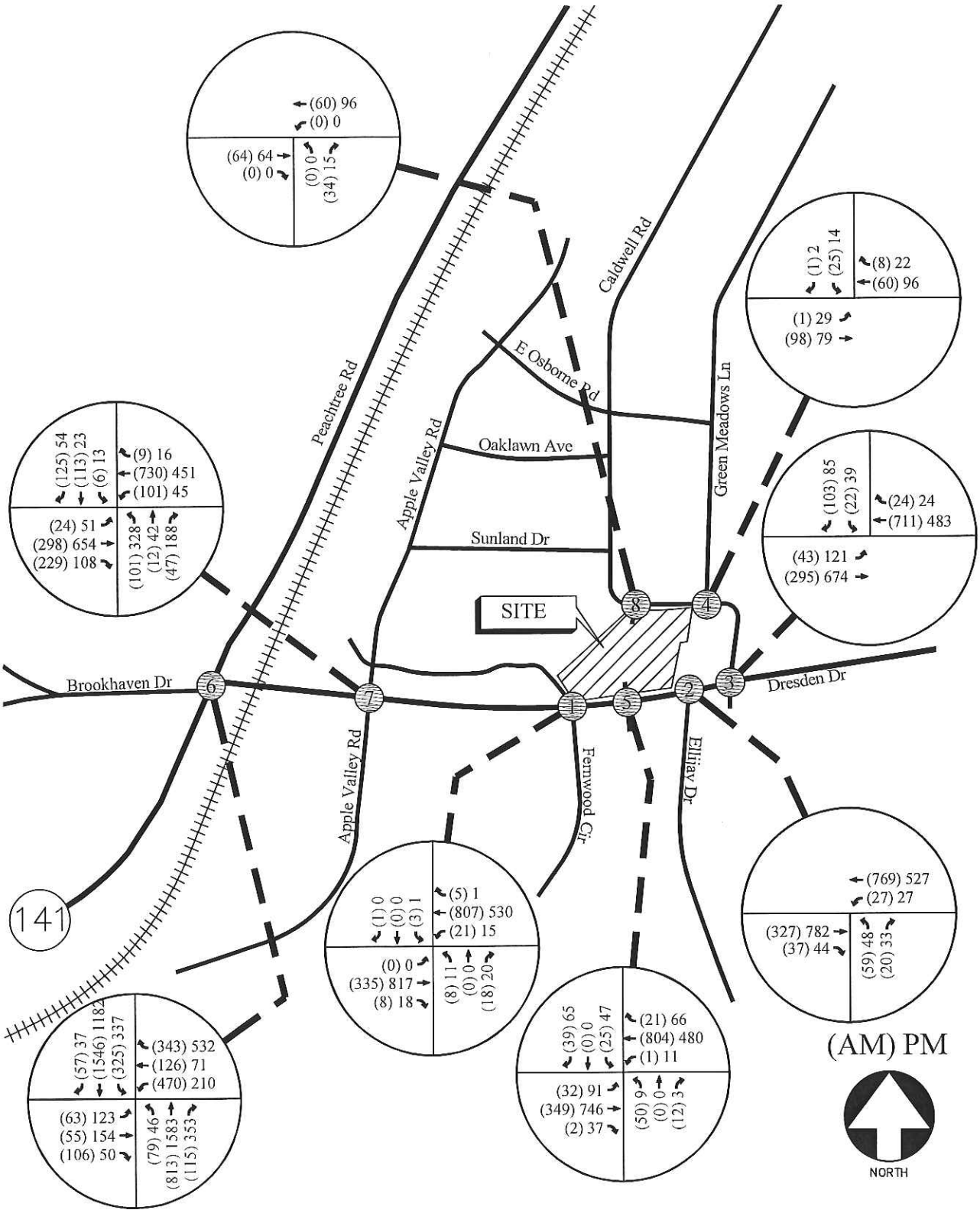
The future "Build" traffic operations were analyzed using the volumes in Figure 10. The results of the future "Build" traffic operations analyses are shown in Tables 9 and 10 below. Recommendations on traffic control and lane geometry are shown graphically in Figure 11.

TABLE 9 – FUTURE "BUILD" INTERSECTION OPERATIONS					
	Intersection	Future Condition: LOS (Delay)			
		NO IMPROVEMENTS		WITH SYSTEM IMPROVEMENTS	
		AM Peak	PM Peak	AM Peak	PM Peak
1	**Dresden Dr @ Parkside Dr/Fernwood Cir**				
	-Eastbound Left	A (0.0)	A (0.0)	A (0.0)	A (0.0)
	-Westbound Left	A (8.0)	B (10.0)	A (8.0)	B (10.1)
	-Northbound Approach	C (17.2)	C (20.4)	C (17.3)	C (19.8)
	-Southbound Approach	D (27.6)	D (27.6)	D (27.9)	D (26.2)
2	**Dresden Dr @ Ellijay Dr**	**B (14.0)**	**E (58.7)**	**B (11.6)**	**C (26.3)**
	-Eastbound Approach	C (24.8)	F (96.0)	B (18.1)	D (39.1)
	-Westbound Approach	A (6.4)	A (5.8)	A (6.5)	A (6.1)
	-Northbound Approach	D (40.9)	D (40.5)	C (33.7)	C (33.8)
3	**Dresden Dr @ Caldwell Rd**	**C (34.8)**	**B (17.8)**	**C (24.3)**	**B (15.3)**
	-Eastbound Approach	A (6.4)	A (7.2)	A (6.0)	A (7.2)
	-Westbound Approach	D (47.0)	C (28.9)	C (29.4)	C (20.7)
	-Southbound Approach	D (40.0)	D (40.6)	D (43.6)	D (44.5)
4	**Caldwell Rd @ Green Meadows Ln**				
	-Eastbound Left	A (0.1)	A (2.1)	A (0.1)	A (2.1)
	-Southbound Approach	A (9.5)	A (9.9)	A (9.5)	A (9.9)
5	**Dresden Dr @ Apartment Drwy/Site Drwy 1**				
	-Eastbound Left	B (10.1)	A (8.9)	B (10.2)	A (8.9)
	-Westbound Left	A (8.0)	A (9.7)	A (8.0)	A (9.7)
	-Northbound Approach	C (20.2)	C (19.1)	C (20.1)	C (18.9)
	-Southbound Approach	C (16.1)	C (16.3)	C (16.0)	C (16.2)
6	**SR 141 @ Brookhaven Dr/Dresden Dr**	**D (50.6)**	**F (191.5)**	**D (41.1)**	**D (46.4)**
	-Eastbound Approach	E (74.2)	F (99.6)	E (79.9)	F (92.5)
	-Westbound Approach	E (70.0)	F (91.2)	E (58.7)	E (58.9)
	-Northbound Approach	D (39.7)	F (320.7)	C (29.7)	C (34.5)
	-Southbound Approach	D (44.1)	F (98.7)	C (33.9)	D (45.3)
7	**Dresden Dr @ Apple Valley Rd**	**B (11.4)**	**C (24.3)**	**B (11.3)**	**B (18.6)**
	-Eastbound Approach	A (3.7)	B (14.5)	A (3.5)	B (10.9)
	-Westbound Approach	A (7.1)	A (9.7)	A (7.1)	B (11.3)
	-Northbound Approach	C (31.4)	D (51.9)	C (31.4)	D (35.8)
	-Southbound Approach	C (30.1)	C (24.9)	C (30.1)	C (22.9)
8	**Caldwell Rd @ Site Drwy 2**				
	-Northbound Approach	A (8.7)	A (8.7)	A (8.7)	A (8.7)

TABLE 10 – FUTURE "BUILD" INTERSECTION 95TH PERCENTILE QUEUES						
	Intersection	Available Storage	Future: queue length (feet)			
			NO IMPROVEMENTS		WITH SYSTEM IMPROVEMENTS	
			AM Peak	PM Peak	AM Peak	PM Peak
1	**Dresden Dr @ Parkside Dr/Fernwood Cir**					
	-Eastbound Left	50'	0	0	0	0
	-Westbound Left	50'	1	2	1	2
	-Northbound Approach	-	7	10	7	10
	-Southbound Approach	-	2	0	2	0
2	**Dresden Dr @ Ellijay Dr**					
	-Eastbound Through/Right	-	314	1,097	253	920
	-Westbound Left	50'	28	36	26	34
	-Westbound Through	-	51	25	52	25
	-Northbound Approach	-	99	90	87	79
3	**Dresden Dr @ Caldwell Rd**					
	-Eastbound Left	50'	82	105	78	104
	-Eastbound Through	-	3	3	2	2
	-Westbound Through/Right	-	922	485	763	390
	-Southbound Approach	-	84	97	88	102
4	**Caldwell Rd @ Green Meadows Ln**					
	-Eastbound Left/Through	-	0	2	0	2
	-Southbound Approach	-	2	2	2	2
5	**Dresden Dr @ Apartments Drwy/Site Drwy #1**					
	-Eastbound Left	50'	3	7	3	7
	-Eastbound Through/Right	-	0	0	0	0
	-Westbound Left	50'	0	1	0	1
	-Westbound Through/Right	-	0	0	0	0
	-Northbound Approach	-	19	4	19	3
	-Southbound Left	-	6	17	6	17
	-Southbound Through/Right	-	8	9	8	9
6	**SR 141 @ Brookhaven Dr/Dresden Dr**					
	-Eastbound Through/Left	-	212	544	127	239
	-Eastbound Right	50'	39	0	220	358
	-Westbound Left	350'	525	214	350	200
	-Westbound Through/Left	-	526	220	163	115
	-Westbound Right	200'	137	488	262	593
	-Northbound Left	125'	143	60	175	45
	-Northbound Through	-	568	1,713	348	783
	-Northbound Right	300'	39	387	41	172
	-Southbound Left	-	398	753	304	670
	-Southbound Through/Right	-	1,340	974	1,298	732

Table Continued on Next Page...

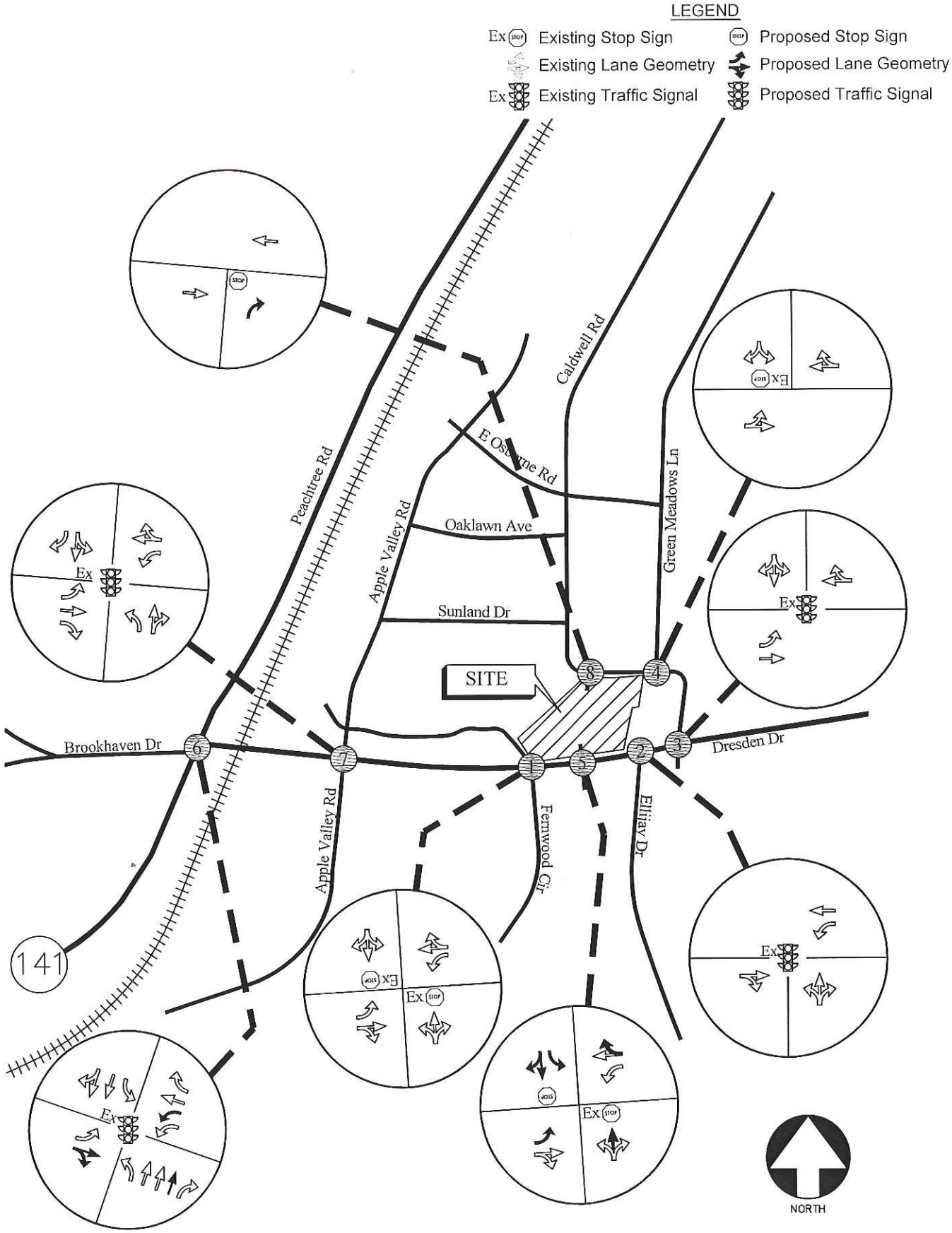
	Intersection	Available Storage	Future: queue length (feet)			
			NO IMPROVEMENTS		WITH SYSTEM IMPROVEMENTS	
			AM Peak	PM Peak	AM Peak	PM Peak
7	**Dresden Dr @ Apple Valley Rd**					
	-Eastbound Left	100'	6	17	10	26
	-Eastbound Through	-	66	546	104	321
	-Eastbound Right	-	12	8	33	16
	-Westbound Left	100'	41	29	40	38
	-Westbound Through/Right	-	362	225	360	286
	-Northbound Left	100'	100	393	101	321
	-Northbound Through/Right	-	41	98	41	84
	-Southbound Through/Left	-	109	43	109	37
	-Southbound Right	25'	53	33	53	29
8	**Caldwell Rd @ Site Driveway #2**					
	-Northbound Approach	-	3	1	3	1



FUTURE (BUILD) PEAK HOUR VOLUMES

FIGURE 10

A&R Engineering Inc.



FUTURE TRAFFIC CONTROL AND LANE GEOMETRY FIGURE 11

A&R Engineering Inc.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Traffic impacts were evaluated for the added traffic from the proposed Dresden Village mixed-use development located in the northeast corner of the intersection of Dresden Drive at Parkside Drive/Fernwood Circle in Brookhaven, Georgia. The proposed development will consist of:

- Apartments: 194 units
- Retail Space: 20,000 sf

The development proposes the following access:

- Site Driveway #1: Full-access driveway on Dresden Drive
- Site Driveway #2: Right-out only driveway on Caldwell Road, access only for residential traffic
- Site Driveway #3: Full-access driveway on Parkside Drive, used only for loading and deliveries

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

1. Dresden Drive at Parkside Drive/Fernwood Circle
2. Dresden Drive at Ellijay Drive
3. Dresden Drive at Caldwell Road
4. Caldwell Road at Green Meadows Lane
5. Dresden Drive at 1660 Apartments Driveway
6. SR 141 (Peachtree Road) at Brookhaven Drive/Dresden Drive
7. Dresden Drive at Apple Valley Road

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

7.1 System Recommendations and Improvements

Improvements that are identified as "System Improvements" address deficiencies that are found within the existing road network prior to any impacts from the proposed development's added traffic. These are recommended for the local municipality to use in planning future transportation projects. A summary of the system improvements is provided below with more detailed information in Section 6.1.2.

Summary of Recommended System Improvements

- Install a third northbound through lane as well as a dedicated northbound right turn lane on SR 141 (Peachtree Road) at Dresden Drive. This can be done by restriping all lanes to 10 feet wide without additional widening.
- Install a second westbound left turn lane using the existing eastbound through lane on Dresden Drive at SR 141 (Peachtree Road) and operate with protected signal phasing (removing split phasing).
- Install permissive + overlap signal phasing on the northbound and westbound right turn movements at SR 141 (Peachtree Road) at Dresden Drive.

- Create a dedicated eastbound left turn and shared through/right turn lane using the existing pavement on Brookhaven Drive and operate with permissive signal phasing.
- Update the signal timing at the intersection of Dresden Drive at Ellijay Drive.
- Update the signal timing at the intersection of Dresden Drive at Caldwell Road.

7.2 Site Access Configuration

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

- Site Driveway #1: Full-access driveway on Dresden Drive (retail and residential access)
    - This driveway will consist of one entering lane and two exiting lanes.
    - The intersection will be unsignalized with a STOP sign on the southbound approach.
    - Entering left turn movements will be made from the existing eastbound two-way left turn lane on Dresden Drive.
    - Entering right turn movements will be made from the existing westbound through lane on Dresden Drive. No deceleration lane is planned.
- Site Driveway #2: Right-out only driveway on Caldwell Road (residential only access)
    - This driveway will only provide access to the residential portion of the development and will consist of one exiting lane.
    - The intersection will be unsignalized with a STOP sign on the northbound approach.
- Site Driveway #3: Full-access driveway on Parkside Drive (loading and deliveries only)
    - This driveway will only be used for deliveries and loading/unloading purposes and was not utilized when modeling the proposed site driveway intersections.

7.3 Site Mitigation Improvements

Improvements that are identified as "Site Mitigation Improvements" address further impacts that are a result of the proposed development's added traffic. Because operations would not be impacted beyond the projected "No-Build" conditions, mitigation improvements have not been identified outside of the recommended configuration for the site access points.

Appendix

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

Existing Intersection Traffic Counts

Reliable Traffic Data Services, LLC
Tel: (770) 578-8158 | Fax: (770) 578-8159
info@reliabletraffic.org | www.reliabletraffic.org

TMC Data
Dresden Dr @ Fernwood Circle/
Parkside Dr
7-9am I 4-6pm

File Name : 37880001
Site Code : 37880001
Start Date : 1/20/2016
Page No : 1

Groups Printed- Cars, Trucks, Buses

	Fernwood Circle Northbound					Parkside Dr Southbound					Dresden Dr Eastbound					Dresden Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	4	0	1	0	5	1	0	0	0	1	0	43	3	0	46	1	131	0	0	132	184
07:15 AM	7	0	7	0	14	0	0	0	0	0	0	62	3	0	65	5	155	0	0	160	239
07:30 AM	3	0	7	0	10	0	0	0	0	0	0	60	2	0	62	4	184	0	0	188	260
07:45 AM	2	0	2	0	4	1	0	0	0	1	0	91	2	0	93	5	183	2	0	190	288
Total	16	0	17	0	33	2	0	0	0	2	0	256	10	0	266	15	653	2	0	670	971
08:00 AM	3	0	4	0	7	1	0	0	0	1	0	84	2	0	86	5	176	2	0	183	277
08:15 AM	0	0	5	0	5	1	0	1	0	2	0	76	2	0	78	6	192	1	0	199	284
08:30 AM	3	0	2	0	5	0	0	0	0	0	0	54	3	0	57	3	186	2	0	191	253
08:45 AM	1	1	3	0	5	0	0	0	0	0	0	68	6	0	74	5	174	0	0	179	258
Total	7	1	14	0	22	2	0	1	0	3	0	282	13	0	295	19	728	5	0	752	1072
*** BREAK ***																					
04:00 PM	2	0	0	0	2	1	0	0	0	1	0	173	4	0	177	4	102	1	0	107	287
04:15 PM	1	0	4	0	5	0	0	0	0	0	0	166	2	0	168	4	107	0	0	111	284
04:30 PM	7	0	4	0	11	1	0	0	0	1	0	171	6	0	177	5	112	0	0	117	306
04:45 PM	2	0	8	0	10	0	0	0	0	0	0	185	6	0	191	4	117	0	0	121	322
Total	12	0	16	0	28	2	0	0	0	2	0	695	18	0	713	17	438	1	0	456	1199
05:00 PM	0	0	2	0	2	0	0	0	0	0	0	174	3	0	177	3	120	1	0	124	303
05:15 PM	2	0	5	0	7	0	0	0	0	0	0	189	2	0	191	2	113	0	0	115	313
05:30 PM	4	0	8	0	12	1	0	0	0	1	0	176	3	0	179	1	111	1	0	113	305
05:45 PM	4	0	11	0	15	0	0	0	0	0	0	182	2	0	184	8	107	2	0	117	316
Total	10	0	26	0	36	1	0	0	0	1	0	721	10	0	731	14	451	4	0	469	1237
Grand Total	45	1	73	0	119	7	0	1	0	8	0	1954	51	0	2005	65	2270	12	0	2347	4479
Apprch %	37.8	0.8	61.3	0		87.5	0	12.5	0		0	97.5	2.5	0		2.8	96.7	0.5	0		
Total %	1	0	1.6	0	2.7	0.2	0	0	0	0.2	0	43.6	1.1	0	44.8	1.5	50.7	0.3	0	52.4	

Reliable Traffic Data Services, LLC
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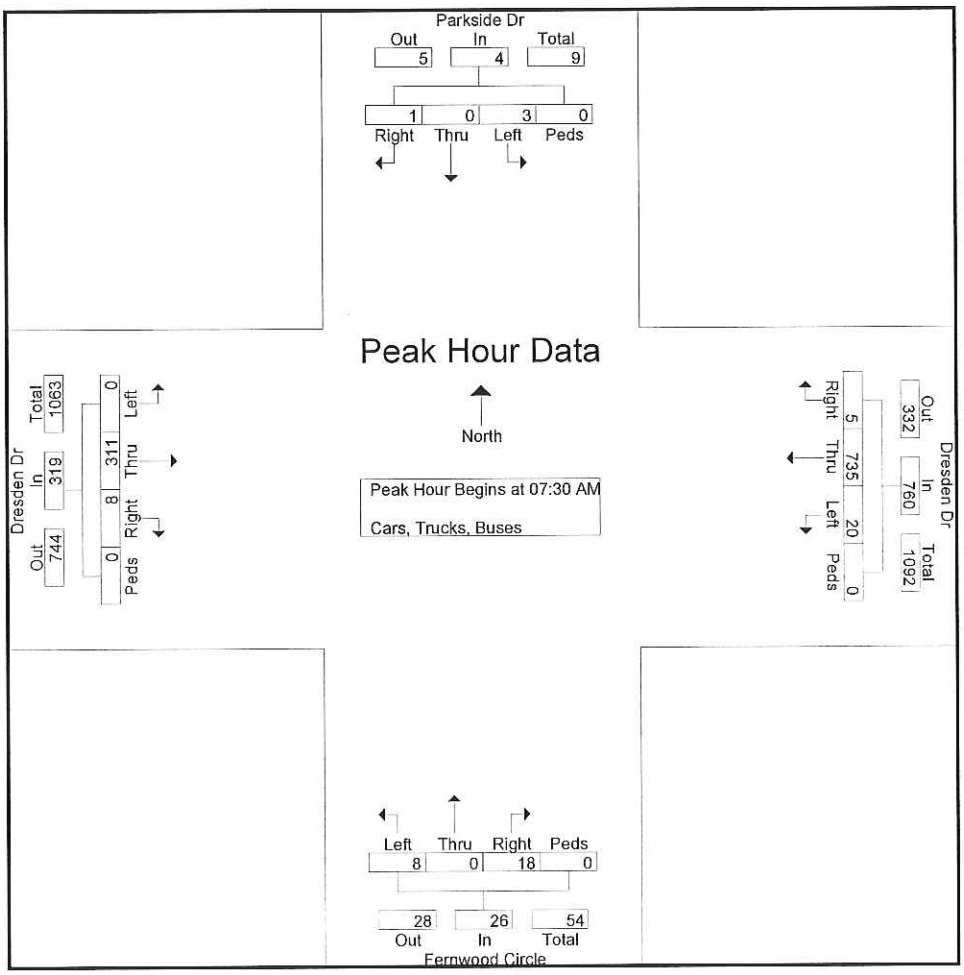
TMC Data
Dresden Dr @ Fernwood Circle/
Parkside Dr
7-9am I 4-6pm

File Name : 37880001
Site Code : 37880001
Start Date : 1/20/2016
Page No : 2

	Fernwood Circle Northbound					Parkside Dr Southbound					Dresden Dr Eastbound					Dresden Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	**3**	0	**7**	0	**10**	0	0	0	0	0	0	60	**2**	0	62	4	184	0	0	188	260
07:45 AM	2	0	2	0	4	**1**	0	0	0	1	0	**91**	2	0	**93**	5	183	**2**	0	190	**288**
08:00 AM	3	0	4	0	7	1	0	0	0	1	0	84	2	0	86	5	176	2	0	183	277
08:15 AM	0	0	5	0	5	1	0	**1**	0	**2**	0	76	2	0	78	**6**	**192**	1	0	**199**	284
Total Volume	8	0	18	0	26	3	0	1	0	4	0	311	8	0	319	20	735	5	0	760	1109
% App. Total	30.8	0	69.2	0		75	0	25	0		0	97.5	2.5	0		2.6	96.7	0.7	0		
PHF	.667	.000	.643	.000	.650	.750	.000	.250	.000	.500	.000	.854	1.00	.000	.858	.833	.957	.625	.000	.955	.963



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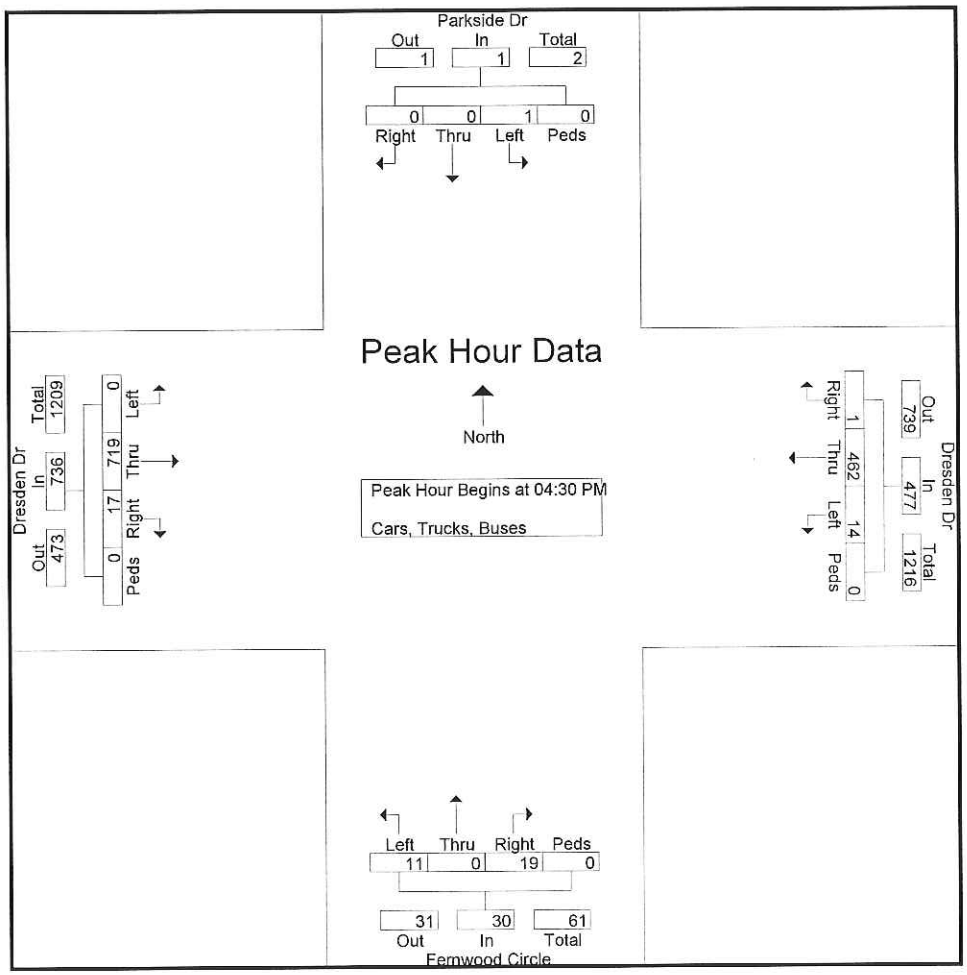
TMC Data
Dresden Dr @ Fernwood Circle/
Parkside Dr
7-9am I 4-6pm

File Name : 37880001
Site Code : 37880001
Start Date : 1/20/2016
Page No : 3

	Fernwood Circle Northbound					Parkside Dr Southbound					Dresden Dr Eastbound					Dresden Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:30 PM																					
04:30 PM	7	0	4	0	11	1	0	0	0	1	0	171	6	0	177	5	112	0	0	117	306
04:45 PM	2	0	8	0	10	0	0	0	0	0	0	185	6	0	191	4	117	0	0	121	322
05:00 PM	0	0	2	0	2	0	0	0	0	0	0	174	3	0	177	3	120	1	0	124	303
05:15 PM	2	0	5	0	7	0	0	0	0	0	0	189	2	0	191	2	113	0	0	115	313
Total Volume	11	0	19	0	30	1	0	0	0	1	0	719	17	0	736	14	462	1	0	477	1244
% App. Total	36.7	0	63.3	0		100	0	0	0		0	97.7	2.3	0		2.9	96.9	0.2	0		
PHF	.393	.000	.594	.000	.682	.250	.000	.000	.000	.250	.000	.951	.708	.000	.963	.700	.963	.250	.000	.962	.966



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TMC Data
Dresden Dr @ Ellijay Dr

7-9am I 4-6pm

File Name : 37880002
Site Code : 37880002
Start Date : 1/20/2016
Page No : 1

Groups Printed- Cars, Trucks, Buses

	Ellijay Dr Northbound					Southbound					Dresden Dr Eastbound					Dresden Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	5	0	2	0	7	0	0	0	0	0	0	49	5	0	54	1	123	0	0	124	185
07:15 AM	7	0	4	0	11	0	0	0	0	0	0	52	6	0	58	2	134	0	0	136	205
07:30 AM	19	0	7	0	26	0	0	0	0	0	0	63	4	0	67	9	174	0	0	183	276
07:45 AM	12	0	5	0	17	0	0	0	0	0	0	80	8	0	88	9	191	0	0	200	305
Total	43	0	18	0	61	0	0	0	0	0	0	244	23	0	267	21	622	0	0	643	971
08:00 AM	16	0	7	0	23	0	0	0	0	0	0	77	12	0	89	4	158	0	0	162	274
08:15 AM	8	0	3	0	11	0	0	0	0	0	0	76	5	0	81	7	188	0	0	195	287
08:30 AM	19	0	4	0	23	0	0	0	0	0	0	73	9	0	82	4	184	0	0	188	293
08:45 AM	14	0	3	0	17	0	0	0	0	0	0	67	5	0	72	6	184	0	0	190	279
Total	57	0	17	0	74	0	0	0	0	0	0	293	31	0	324	21	714	0	0	735	1133
*** BREAK ***																					
04:00 PM	10	0	7	0	17	0	0	0	0	0	0	159	5	0	164	4	88	0	0	92	273
04:15 PM	14	0	4	0	18	0	0	0	0	0	0	163	9	0	172	3	105	0	0	108	298
04:30 PM	9	0	3	0	12	0	0	0	0	0	0	159	6	0	165	1	95	0	0	96	273
04:45 PM	12	0	6	0	18	0	0	0	0	0	0	185	10	0	195	2	110	0	0	112	325
Total	45	0	20	0	65	0	0	0	0	0	0	666	30	0	696	10	398	0	0	408	1169
05:00 PM	11	0	5	0	16	0	0	0	0	0	0	182	7	0	189	8	112	0	0	120	325
05:15 PM	8	0	7	0	15	0	0	0	0	0	0	178	14	0	192	5	125	0	0	130	337
05:30 PM	9	0	14	0	23	0	0	0	0	0	0	184	7	0	191	10	112	0	0	122	336
05:45 PM	11	0	10	0	21	0	0	0	0	0	0	157	6	0	163	7	116	0	0	123	307
Total	39	0	36	0	75	0	0	0	0	0	0	701	34	0	735	30	465	0	0	495	1305
Grand Total	184	0	91	0	275	0	0	0	0	0	0	1904	118	0	2022	82	2199	0	0	2281	4578
Apprch %	66.9	0	33.1	0		0	0	0	0		0	94.2	5.8	0		3.6	96.4	0	0		
Total %	4	0	2	0	6	0	0	0	0	0	0	41.6	2.6	0	44.2	1.8	48	0	0	49.8	

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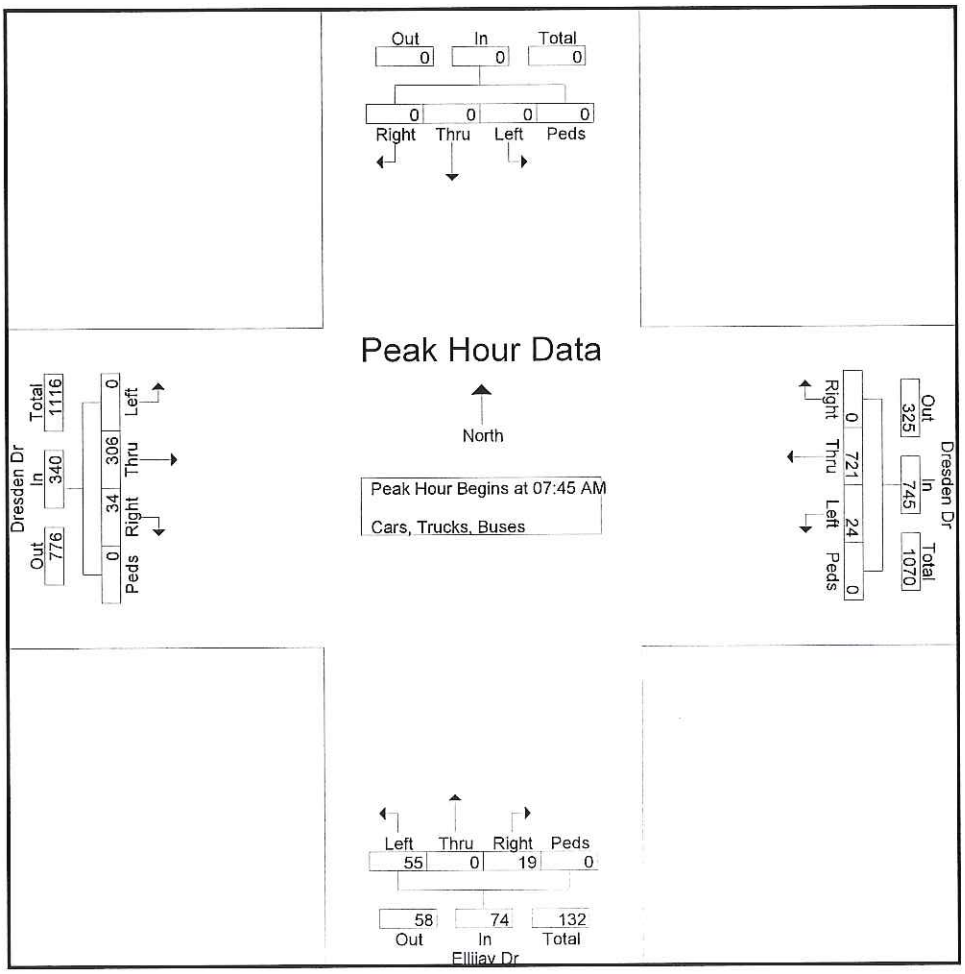
TMC Data
Dresden Dr @ Ellijay Dr

7-9am I 4-6pm

File Name : 37880002
Site Code : 37880002
Start Date : 1/20/2016
Page No : 2

	Ellijay Dr Northbound					Southbound					Dresden Dr Eastbound					Dresden Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	12	0	5	0	17	0	0	0	0	0	0	**80**	8	0	88	**9**	**191**	0	0	**200**	**305**
08:00 AM	16	0	**7**	0	**23**	0	0	0	0	0	0	77	**12**	0	**89**	4	158	0	0	162	274
08:15 AM	8	0	3	0	11	0	0	0	0	0	0	76	5	0	81	7	188	0	0	195	287
08:30 AM	**19**	0	4	0	23	0	0	0	0	0	0	73	9	0	82	4	184	0	0	188	293
Total Volume	55	0	19	0	74	0	0	0	0	0	0	306	34	0	340	24	721	0	0	745	1159
% App. Total	74.3	0	25.7	0		0	0	0	0		0	90	10	0		3.2	96.8	0	0		
PHF	.724	.000	.679	.000	.804	.000	.000	.000	.000	.000	.000	.956	.708	.000	.955	.667	.944	.000	.000	.931	.950



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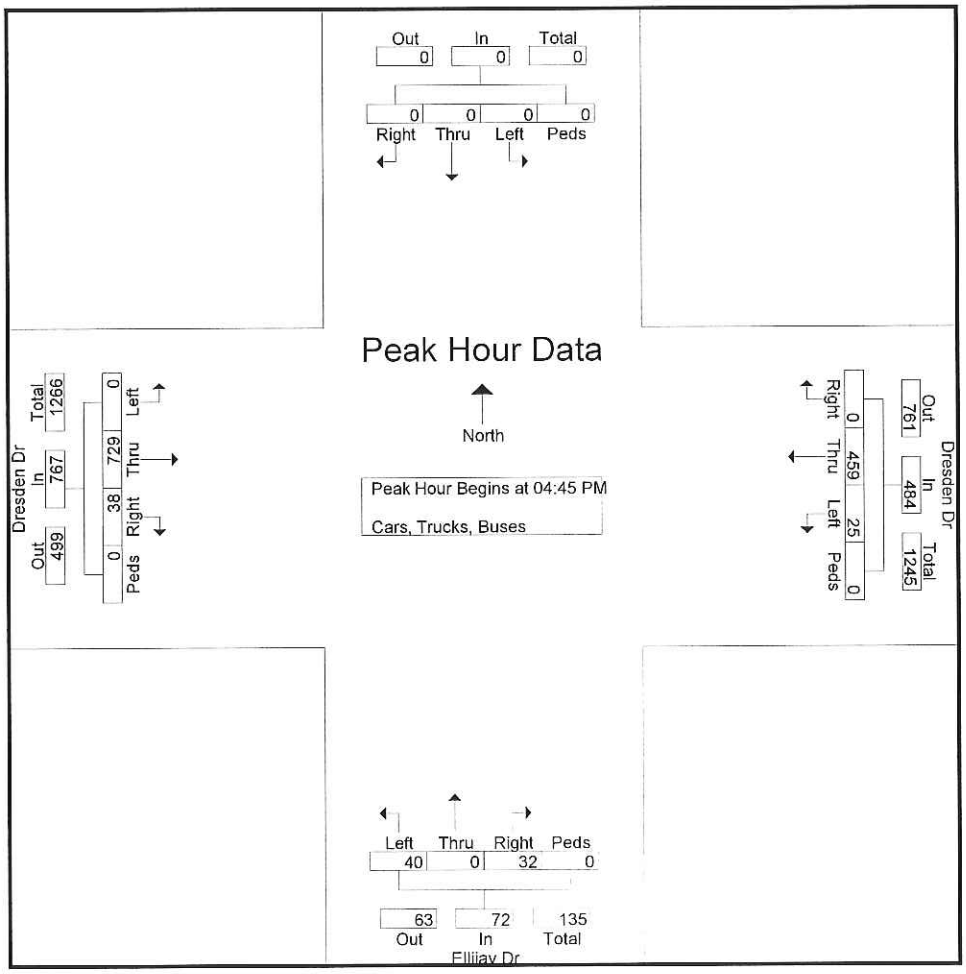
TMC Data
Dresden Dr @ Ellijay Dr

7-9am I 4-6pm

File Name : 37880002
Site Code : 37880002
Start Date : 1/20/2016
Page No : 3

	Ellijay Dr Northbound					Southbound					Dresden Dr Eastbound					Dresden Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 04:45 PM																					
04:45 PM	**12**	0	6	0	18	0	0	0	0	0	0	**185**	10	0	**195**	2	110	0	0	112	325
05:00 PM	11	0	5	0	16	0	0	0	0	0	0	182	7	0	189	8	112	0	0	120	325
05:15 PM	8	0	7	0	15	0	0	0	0	0	0	178	**14**	0	192	5	**125**	0	0	**130**	**337**
05:30 PM	9	0	**14**	0	**23**	0	0	0	0	0	0	184	7	0	191	**10**	112	0	0	122	336
Total Volume	40	0	32	0	72	0	0	0	0	0	0	729	38	0	767	25	459	0	0	484	1323
% App. Total	55.6	0	44.4	0		0	0	0	0		0	95	5	0		5.2	94.8	0	0		
PHF	.833	.000	.571	.000	.783	.000	.000	.000	.000	.000	.000	.985	.679	.000	.983	.625	.918	.000	.000	.931	.981



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TMC Data
Dresden Dr @ Caldwell Rd

7-9am I 4-6pm

File Name : 37880003
Site Code : 37880003
Start Date : 1/20/2016
Page No : 1

Groups Printed- Cars, Trucks, Buses

	Brookhaven Dentistry Comm Drwy Northbound					Caldwell Rd Southbound					Dresden Dr Eastbound					Dresden Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	3	0	5	0	8	4	45	1	0	50	0	110	2	0	112	170
07:15 AM	0	0	0	0	0	0	0	17	0	17	11	48	0	0	59	0	121	2	0	123	199
07:30 AM	2	0	0	0	2	3	0	16	0	19	13	58	4	0	75	0	159	3	0	162	258
07:45 AM	0	0	0	0	0	4	0	22	0	26	5	73	4	0	82	0	184	7	0	191	299
Total	2	0	0	0	2	10	0	60	0	70	33	224	9	0	266	0	574	14	0	588	926
08:00 AM	2	1	1	0	4	5	0	15	0	20	9	71	0	0	80	0	145	4	0	149	253
08:15 AM	0	0	0	0	0	1	0	19	0	20	10	75	1	0	86	1	178	9	0	188	294
08:30 AM	0	0	0	0	0	2	0	17	0	19	11	61	3	0	75	0	182	3	0	185	279
08:45 AM	1	0	1	0	2	5	0	14	0	19	9	74	2	0	85	3	172	2	0	177	283
Total	3	1	2	0	6	13	0	65	0	78	39	281	6	0	326	4	677	18	0	699	1109
*** BREAK ***																					
04:00 PM	0	0	2	0	2	5	0	8	0	13	21	139	1	0	161	1	82	2	0	85	261
04:15 PM	0	0	1	0	1	11	0	12	0	23	27	142	3	0	172	0	98	5	0	103	299
04:30 PM	0	0	0	0	0	3	0	12	0	15	19	139	2	0	160	0	89	2	0	91	266
04:45 PM	0	0	0	0	0	4	0	9	0	13	27	161	0	0	188	0	103	6	0	109	310
Total	0	0	3	0	3	23	0	41	0	64	94	581	6	0	681	1	372	15	0	388	1136
05:00 PM	0	0	0	0	0	8	0	15	0	23	30	148	0	0	178	0	105	6	0	111	312
05:15 PM	1	0	2	0	3	9	0	13	0	22	27	144	1	0	172	0	118	6	0	124	321
05:30 PM	0	0	1	0	1	8	0	15	0	23	22	173	1	0	196	0	105	8	0	113	333
05:45 PM	1	0	0	0	1	9	0	18	0	27	30	168	1	0	199	0	108	3	0	111	338
Total	2	0	3	0	5	34	0	61	0	95	109	633	3	0	745	0	436	23	0	459	1304
Grand Total	7	1	8	0	16	80	0	227	0	307	275	1719	24	0	2018	5	2059	70	0	2134	4475
Apprch %	43.8	6.2	50	0		26.1	0	73.9	0		13.6	85.2	1.2	0		0.2	96.5	3.3	0		
Total %	0.2	0	0.2	0	0.4	1.8	0	5.1	0	6.9	6.1	38.4	0.5	0	45.1	0.1	46	1.6	0	47.7	

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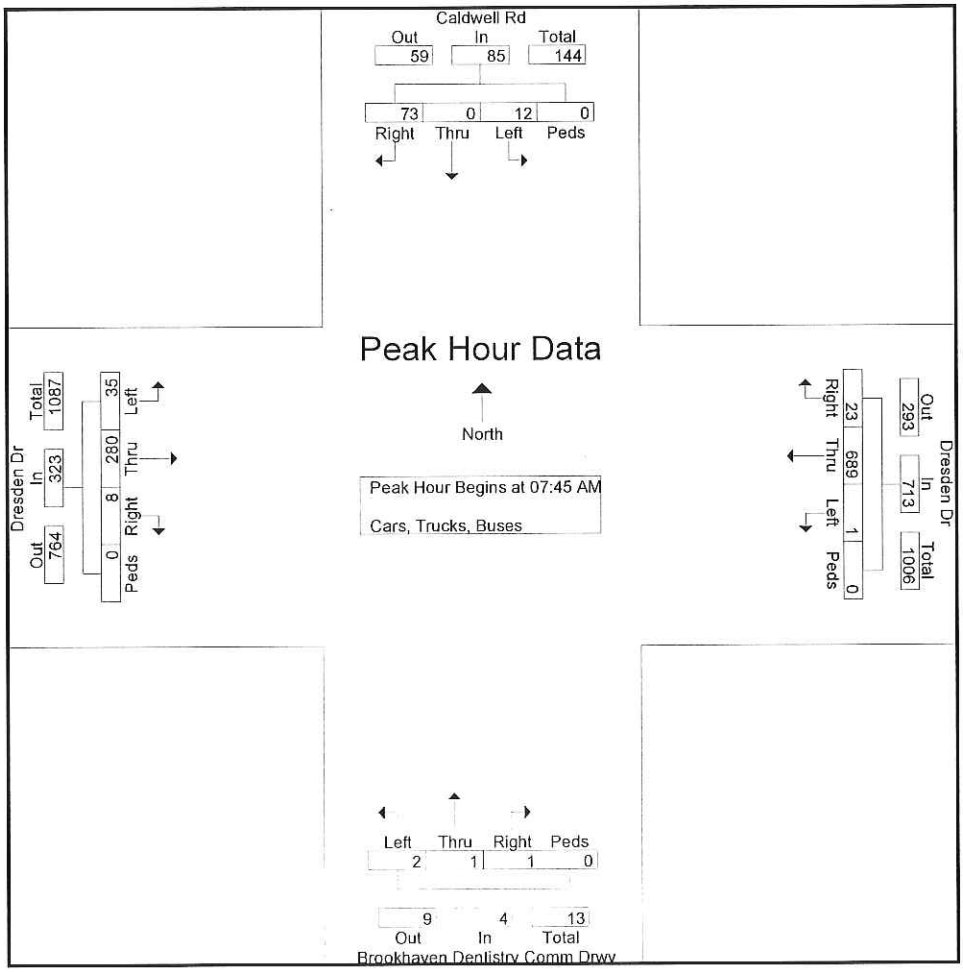
TMC Data
Dresden Dr @ Caldwell Rd

7-9am I 4-6pm

File Name : 37880003
Site Code : 37880003
Start Date : 1/20/2016
Page No : 2

	Brookhaven Dentistry Comm Drwy Northbound					Caldwell Rd Southbound					Dresden Dr Eastbound					Dresden Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	0	0	0	0	0	4	0	22	0	26	5	73	4	0	82	0	184	7	0	191	299
08:00 AM	2	1	1	0	4	5	0	15	0	20	9	71	0	0	80	0	145	4	0	149	253
08:15 AM	0	0	0	0	0	1	0	19	0	20	10	75	1	0	86	1	178	9	0	188	294
08:30 AM	0	0	0	0	0	2	0	17	0	19	11	61	3	0	75	0	182	3	0	185	279
Total Volume	2	1	1	0	4	12	0	73	0	85	35	280	8	0	323	1	689	23	0	713	1125
% App. Total	50	25	25	0		14.1	0	85.9	0		10.8	86.7	2.5	0		0.1	96.6	3.2	0		
PHF	.250	.250	.250	.000	.250	.600	.000	.830	.000	.817	.795	.933	.500	.000	.939	.250	.936	.639	.000	.933	.941



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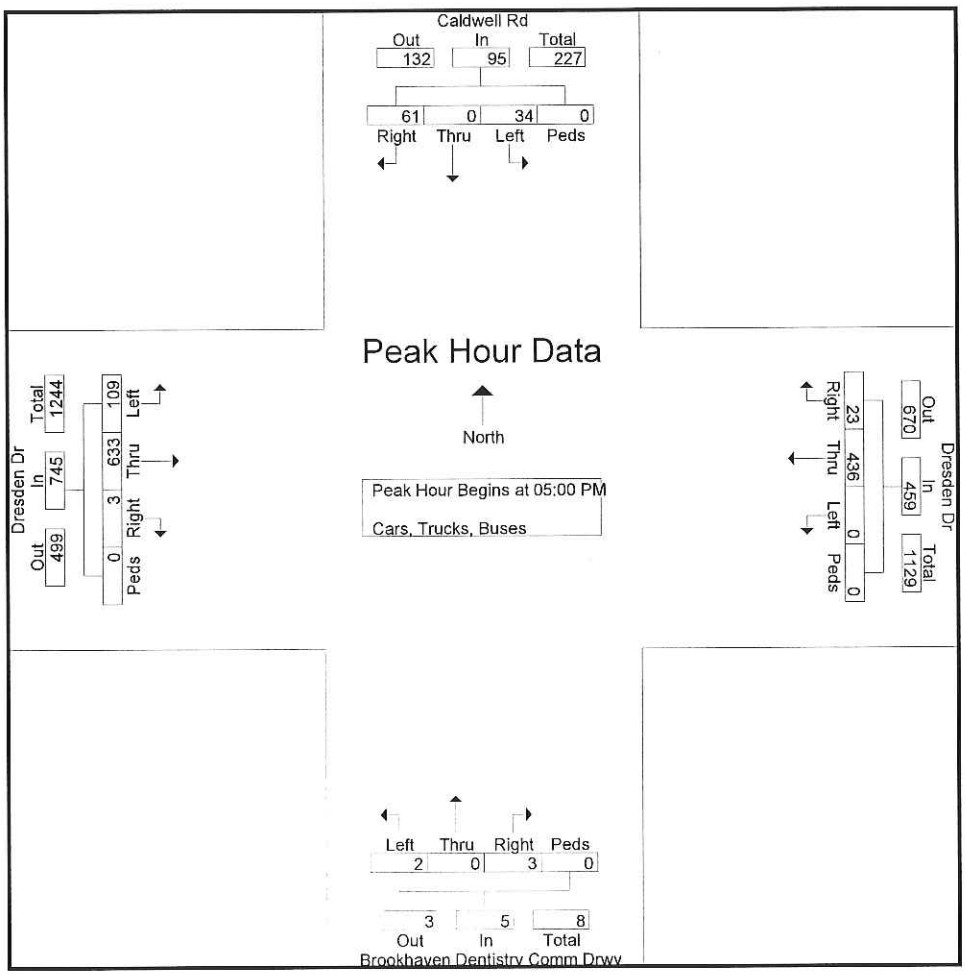
TMC Data
Dresden Dr @ Caldwell Rd

7-9am I 4-6pm

File Name : 37880003
Site Code : 37880003
Start Date : 1/20/2016
Page No : 3

	Brookhaven Dentistry Comm Drwy Northbound					Caldwell Rd Southbound					Dresden Dr Eastbound					Dresden Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	0	0	0	0	8	0	15	0	23	**30**	148	0	0	178	0	105	6	0	111	312
05:15 PM	**1**	0	**2**	0	**3**	**9**	0	13	0	22	27	144	**1**	0	172	0	**118**	6	0	**124**	321
05:30 PM	0	0	1	0	1	8	0	15	0	23	22	**173**	1	0	196	0	105	**8**	0	113	333
05:45 PM	1	0	0	0	1	9	0	**18**	0	**27**	30	168	1	0	**199**	0	108	3	0	111	**338**
Total Volume	2	0	3	0	5	34	0	61	0	95	109	633	3	0	745	0	436	23	0	459	1304
% App. Total	40	0	60	0		35.8	0	64.2	0		14.6	85	0.4	0		0	95	5	0		
PHF	.500	.000	.375	.000	.417	.944	.000	.847	.000	.880	.908	.915	.750	.000	.936	.000	.924	.719	.000	.925	.964



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TMC Data
Caldwell Rd @ Green Meadows Lane

7-9am I 4-6pm

File Name : 37880004
Site Code : 37880004
Start Date : 1/20/2016
Page No : 1

Groups Printed- Cars, Trucks, Buses

	Northbound					Green Meadows Lane Southbound					Caldwell Rd Eastbound					Caldwell Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	0	0	0	0	0	3	0	0	0	3	0	5	0	0	5	0	4	1	0	5	13
07:15 AM	0	0	0	0	0	7	0	0	0	7	1	11	0	0	12	0	7	2	0	9	28
07:30 AM	0	0	0	0	0	5	0	1	0	6	0	13	0	0	13	0	11	3	0	14	33
07:45 AM	0	0	0	0	0	7	0	0	0	7	1	18	0	0	19	0	9	2	0	11	37
Total	0	0	0	0	0	22	0	1	0	23	2	47	0	0	49	0	31	8	0	39	111
08:00 AM	0	0	0	0	0	7	0	0	0	7	0	16	0	0	16	0	12	3	0	15	38
08:15 AM	0	0	0	0	0	5	0	0	0	5	0	12	0	0	12	0	19	0	0	19	36
08:30 AM	0	0	0	0	0	9	0	0	0	9	1	6	0	0	7	0	6	2	0	8	24
08:45 AM	0	0	0	0	0	5	0	0	0	5	0	12	0	0	12	0	2	1	0	3	20
Total	0	0	0	0	0	26	0	0	0	26	1	46	0	0	47	0	39	6	0	45	118
*** BREAK ***																					
04:00 PM	0	0	0	0	0	3	0	0	0	3	1	7	0	0	8	0	14	8	0	22	33
04:15 PM	0	0	0	0	0	3	0	1	0	4	1	11	0	0	12	0	20	8	0	28	44
04:30 PM	0	0	0	0	0	2	0	0	0	2	1	8	0	0	9	0	15	4	0	19	30
04:45 PM	0	0	0	0	0	3	0	0	0	3	7	7	0	0	14	0	17	6	0	23	40
Total	0	0	0	0	0	11	0	1	0	12	10	33	0	0	43	0	66	26	0	92	147
05:00 PM	0	0	0	0	0	4	0	0	0	4	5	10	0	0	15	0	21	7	0	28	47
05:15 PM	0	0	0	0	0	4	0	1	0	5	8	11	0	0	19	0	27	6	0	33	57
05:30 PM	0	0	0	0	0	4	0	1	0	5	8	12	0	0	20	0	24	2	0	26	51
05:45 PM	0	0	0	0	0	1	0	0	0	1	7	18	0	0	25	0	13	6	0	19	45
Total	0	0	0	0	0	13	0	2	0	15	28	51	0	0	79	0	85	21	0	106	200
Grand Total	0	0	0	0	0	72	0	4	0	76	41	177	0	0	218	0	221	61	0	282	576
Apprch %	0	0	0	0		94.7	0	5.3	0		18.8	81.2	0	0		0	78.4	21.6	0		
Total %	0	0	0	0	0	12.5	0	0.7	0	13.2	7.1	30.7	0	0	37.8	0	38.4	10.6	0	49	

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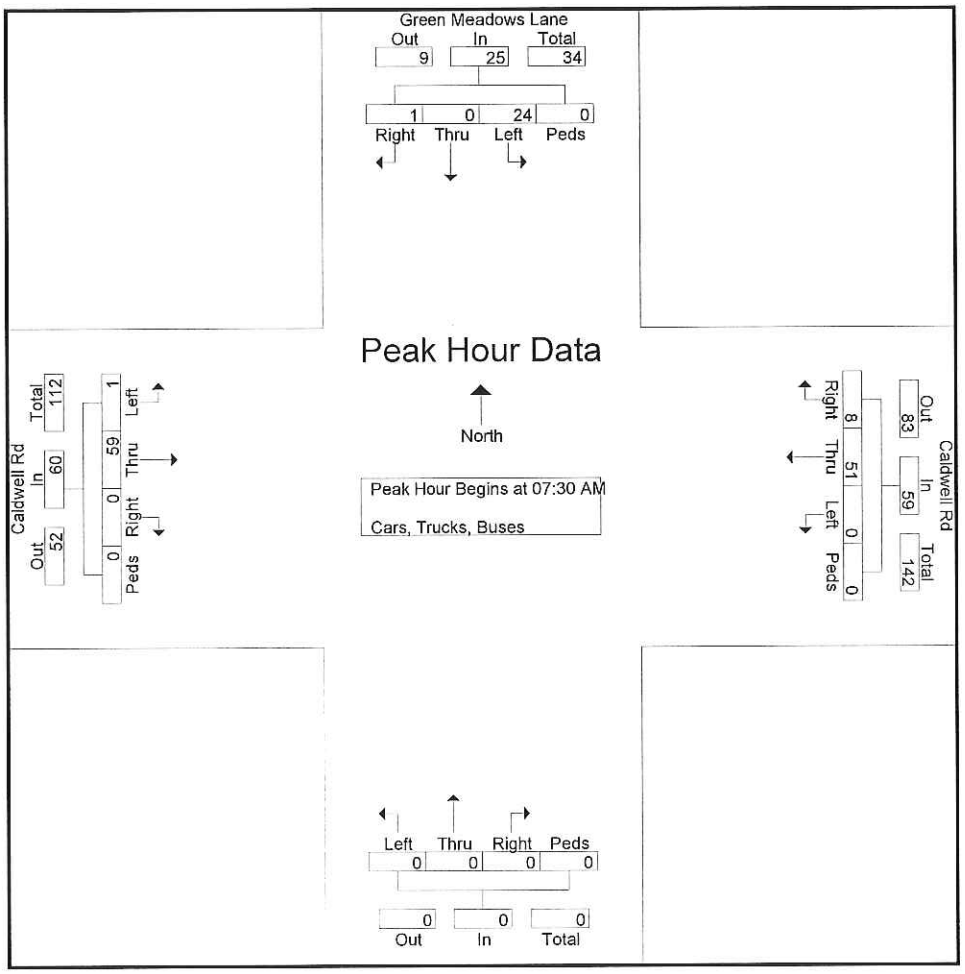
TMC Data
Caldwell Rd @ Green Meadows Lane

7-9am I 4-6pm

File Name : 37880004
Site Code : 37880004
Start Date : 1/20/2016
Page No : 2

	Northbound					Green Meadows Lane Southbound					Caldwell Rd Eastbound					Caldwell Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	0	0	0	0	0	5	0	1	0	6	0	13	0	0	13	0	11	3	0	14	33
07:45 AM	0	0	0	0	0	7	0	0	0	7	1	18	0	0	19	0	9	2	0	11	37
08:00 AM	0	0	0	0	0	7	0	0	0	7	0	16	0	0	16	0	12	3	0	15	38
08:15 AM	0	0	0	0	0	5	0	0	0	5	0	12	0	0	12	0	19	0	0	19	36
Total Volume	0	0	0	0	0	24	0	1	0	25	1	59	0	0	60	0	51	8	0	59	144
% App. Total	0	0	0	0		96	0	4	0		1.7	98.3	0	0		0	86.4	13.6	0		
PHF	.000	.000	.000	.000	.000	.857	.000	.250	.000	.893	.250	.819	.000	.000	.789	.000	.671	.667	.000	.776	.947



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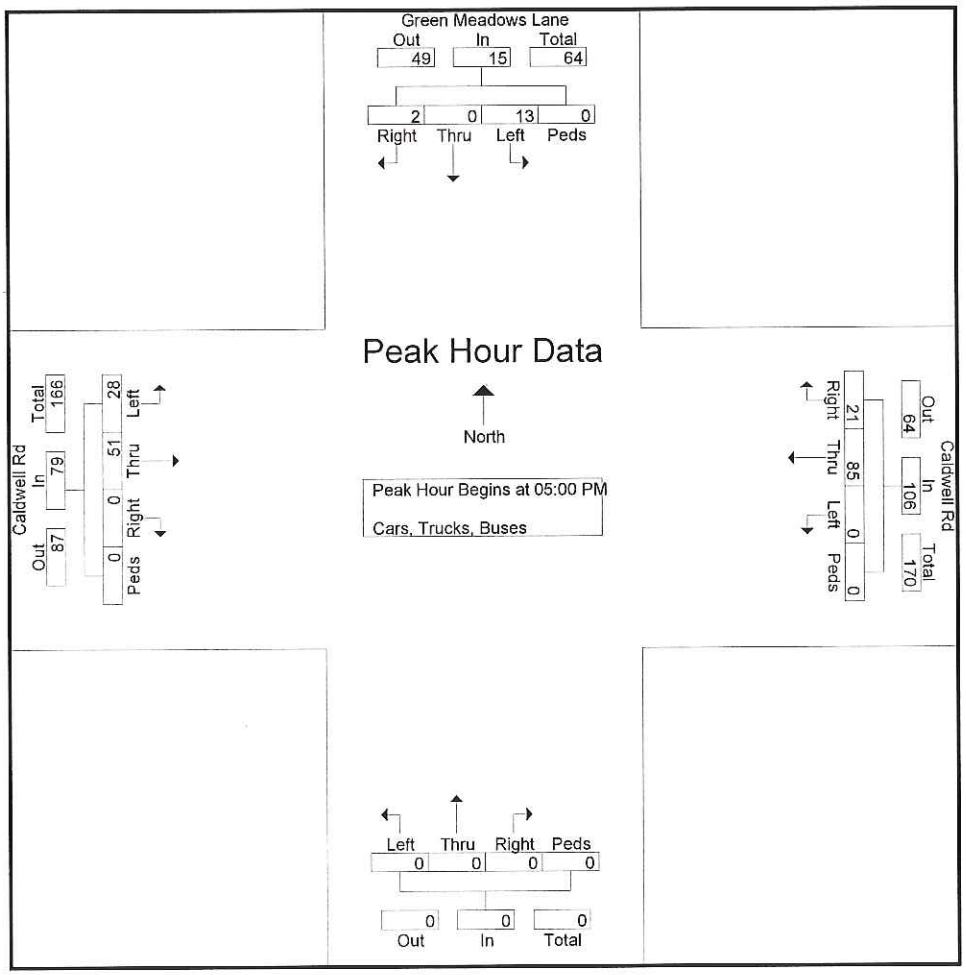
TMC Data
Caldwell Rd @ Green Meadows Lane

7-9am I 4-6pm

File Name : 37880004
Site Code : 37880004
Start Date : 1/20/2016
Page No : 3

	Northbound					Green Meadows Lane Southbound					Caldwell Rd Eastbound					Caldwell Rd Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	0	0	0	0	0	4	0	0	0	4	5	10	0	0	15	0	21	7	0	28	47
05:15 PM	0	0	0	0	0	4	0	**1**	0	**5**	**8**	11	0	0	19	0	**27**	6	0	**33**	**57**
05:30 PM	0	0	0	0	0	4	0	1	0	5	8	12	0	0	20	0	24	2	0	26	51
05:45 PM	0	0	0	0	0	1	0	0	0	1	7	**18**	0	0	**25**	0	13	6	0	19	45
Total Volume	0	0	0	0	0	13	0	2	0	15	28	51	0	0	79	0	85	21	0	106	200
% App. Total	0	0	0	0		86.7	0	13.3	0		35.4	64.6	0	0		0	80.2	19.8	0		
PHF	.000	.000	.000	.000	.000	.813	.000	.500	.000	.750	.875	.708	.000	.000	.790	.000	.787	.750	.000	.803	.877



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TMC Data
Dresden Dr @ Parking Deck at
1377 Dresden Dr
7-9am I 4-6pm

File Name : 37880005
Site Code : 37880005
Start Date : 2/25/2016
Page No : 1

Groups Printed- Cars, Trucks, Buses

	Parking Deck at 1377 Dresden Dr Northbound					Tax Commissioner Office Drwy Southbound					Dresden Dr Eastbound					Dresden Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	6	0	1	0	7	0	0	2	0	2	0	63	2	0	65	0	139	0	0	139	213
07:15 AM	8	0	1	0	9	0	0	0	0	0	0	62	1	0	63	1	151	0	0	152	224
07:30 AM	5	0	3	0	8	1	0	0	0	1	0	85	2	0	87	0	157	0	0	157	253
07:45 AM	10	0	1	0	11	0	0	0	0	0	0	85	1	0	86	1	190	0	0	191	288
Total	29	0	6	0	35	1	0	2	0	3	0	295	6	0	301	2	637	0	0	639	978
08:00 AM	12	0	2	0	14	2	0	2	0	4	0	88	1	0	89	0	189	0	0	189	296
08:15 AM	16	0	4	0	20	8	0	5	0	13	0	85	0	0	85	0	193	0	0	193	311
08:30 AM	12	0	5	0	17	3	0	9	0	12	0	77	0	0	77	0	180	0	0	180	286
08:45 AM	11	0	0	0	11	7	0	4	0	11	0	82	1	0	83	1	167	0	0	168	273
Total	51	0	11	0	62	20	0	20	0	40	0	332	2	0	334	1	729	0	0	730	1166
*** BREAK ***																					
04:00 PM	2	0	0	0	2	11	0	5	0	16	0	173	6	0	179	2	117	0	0	119	316
04:15 PM	3	0	3	0	6	3	0	4	0	7	1	170	3	0	174	1	114	0	0	115	302
04:30 PM	3	0	2	0	5	2	0	3	0	5	0	169	1	0	170	0	110	0	0	110	290
04:45 PM	1	0	2	0	3	1	0	2	0	3	0	163	7	0	170	0	104	1	0	105	281
Total	9	0	7	0	16	17	0	14	0	31	1	675	17	0	693	3	445	1	0	449	1189
05:00 PM	1	0	0	0	1	3	0	1	0	4	0	177	10	0	187	4	118	0	0	122	314
05:15 PM	3	0	0	0	3	2	0	1	0	3	0	186	7	0	193	1	115	0	0	116	315
05:30 PM	2	0	2	0	4	3	0	2	0	5	0	182	9	0	191	1	119	0	0	120	320
05:45 PM	3	0	1	0	4	0	0	1	0	1	0	185	10	0	195	5	116	0	0	121	321
Total	9	0	3	0	12	8	0	5	0	13	0	730	36	0	766	11	468	0	0	479	1270
Grand Total	98	0	27	0	125	46	0	41	0	87	1	2032	61	0	2094	17	2279	1	0	2297	4603
Apprch %	78.4	0	21.6	0		52.9	0	47.1	0		0	97	2.9	0		0.7	99.2	0	0		
Total %	2.1	0	0.6	0	2.7	1	0	0.9	0	1.9	0	44.1	1.3	0	45.5	0.4	49.5	0	0	49.9	

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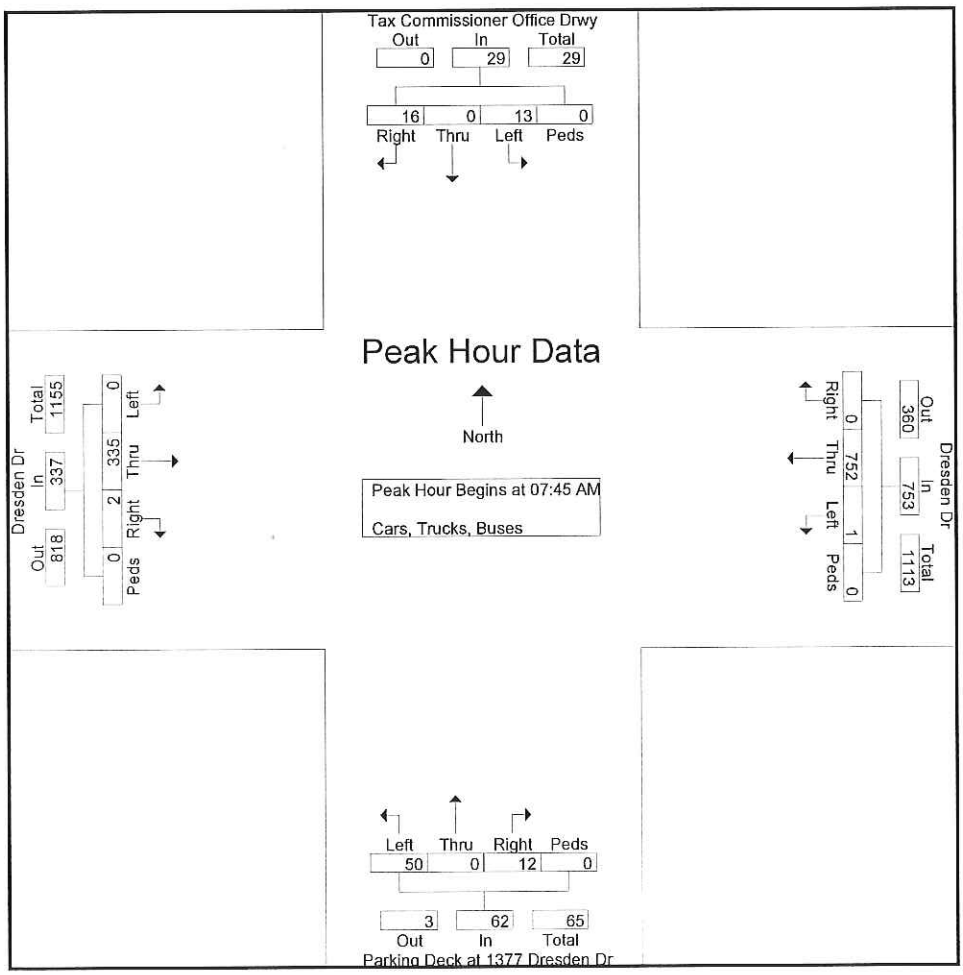
TMC Data
Dresden Dr @ Parking Deck at
1377 Dresden Dr
7-9am I 4-6pm

File Name : 37880005
Site Code : 37880005
Start Date : 2/25/2016
Page No : 2

	Parking Deck at 1377 Dresden Dr Northbound					Tax Commissioner Office Drwy Southbound					Dresden Dr Eastbound					Dresden Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	10	0	1	0	11	0	0	0	0	0	0	85	**1**	0	86	**1**	190	0	0	191	288
08:00 AM	12	0	2	0	14	2	0	2	0	4	0	**88**	1	0	**89**	0	189	0	0	189	296
08:15 AM	**16**	0	4	0	**20**	**8**	0	5	0	**13**	0	85	0	0	85	0	**193**	0	0	**193**	**311**
08:30 AM	12	0	**5**	0	17	3	0	**9**	0	12	0	77	0	0	77	0	180	0	0	180	286
Total Volume	50	0	12	0	62	13	0	16	0	29	0	335	2	0	337	1	752	0	0	753	1181
% App. Total	80.6	0	19.4	0		44.8	0	55.2	0		0	99.4	0.6	0		0.1	99.9	0	0		
PHF	.781	.000	.600	.000	.775	.406	.000	.444	.000	.558	.000	.952	.500	.000	.947	.250	.974	.000	.000	.975	.949



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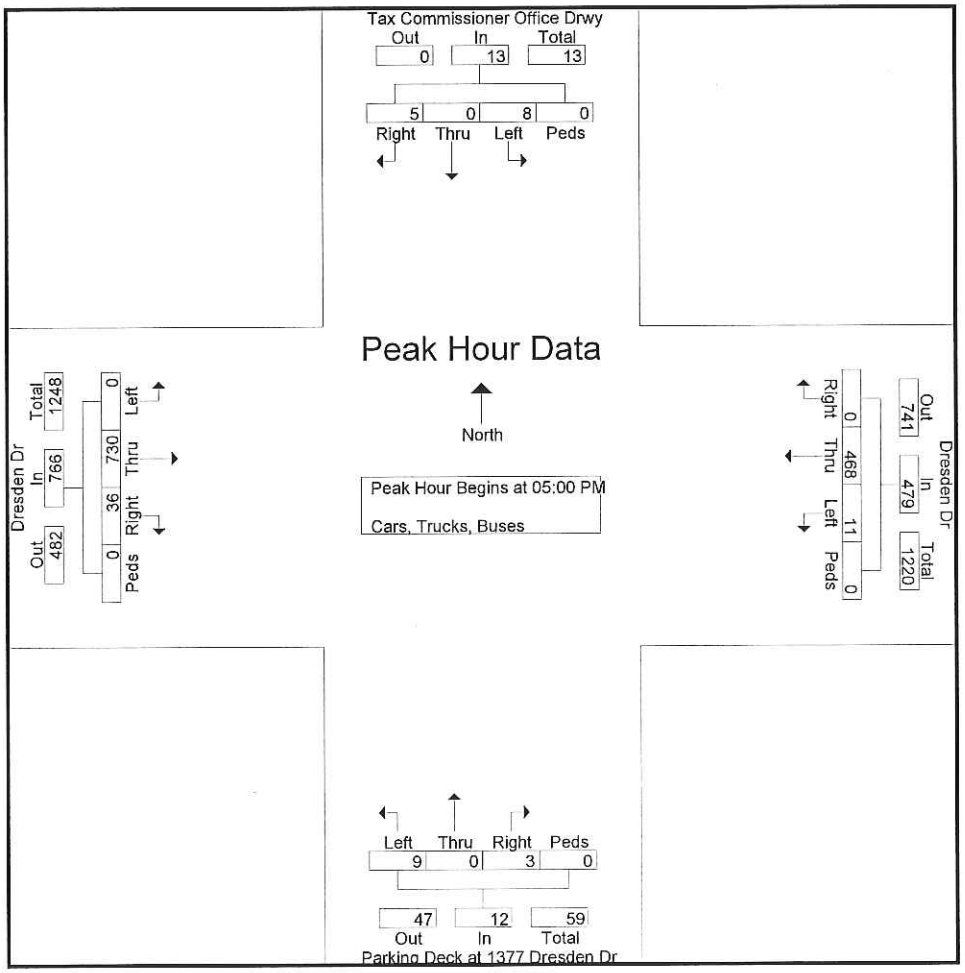
TMC Data
Dresden Dr @ Parking Deck at
1377 Dresden Dr
7-9am I 4-6pm

File Name : 37880005
Site Code : 37880005
Start Date : 2/25/2016
Page No : 3

	Parking Deck at 1377 Dresden Dr Northbound					Tax Commissioner Office Drwy Southbound					Dresden Dr Eastbound					Dresden Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	1	0	0	0	1	**3**	0	1	0	4	0	177	**10**	0	187	4	118	0	0	**122**	314
05:15 PM	**3**	0	0	0	3	2	0	1	0	3	0	**186**	7	0	193	1	115	0	0	116	315
05:30 PM	2	0	**2**	0	**4**	3	0	**2**	0	**5**	0	182	9	0	191	1	**119**	0	0	120	320
05:45 PM	3	0	1	0	4	0	0	1	0	1	0	185	10	0	**195**	**5**	116	0	0	121	**321**
Total Volume	9	0	3	0	12	8	0	5	0	13	0	730	36	0	766	11	468	0	0	479	1270
% App. Total	75	0	25	0		61.5	0	38.5	0		0	95.3	4.7	0		2.3	97.7	0	0		
PHF	.750	.000	.375	.000	.750	.667	.000	.625	.000	.650	.000	.981	.900	.000	.982	.550	.983	.000	.000	.982	.989



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TMC Data
Peachtree Rd (SR141) @ Dresden Dr/
Brookhaven Dr
7-9am I 4-6pm

File Name : 38020001
Site Code : 38020001
Start Date : 3/8/2016
Page No : 1

Groups Printed- Cars, Trucks, Buses

	Peachtree Rd (SR141) Northbound					Peachtree Rd (SR141) Southbound					Brookhaven Dr Eastbound					Dresden Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	19	136	23	0	178	42	282	12	0	336	13	10	15	0	38	82	19	68	0	169	721
07:15 AM	19	172	21	0	212	59	361	12	0	432	10	16	13	0	39	118	25	60	0	203	886
07:30 AM	20	141	27	0	188	79	333	12	0	424	12	16	20	0	48	136	35	62	0	233	893
07:45 AM	11	195	29	0	235	93	438	13	0	544	13	11	27	0	51	84	32	79	0	195	1025
Total	69	644	100	0	813	273	1414	49	0	1736	48	53	75	0	176	420	111	269	0	800	3525
08:00 AM	18	176	24	0	218	71	331	16	0	418	15	15	25	0	55	126	30	69	0	225	916
08:15 AM	19	189	23	0	231	70	344	13	0	427	16	15	22	0	53	121	35	84	0	240	951
08:30 AM	28	221	25	0	274	76	373	13	0	462	17	14	28	0	59	104	25	79	0	208	1003
08:45 AM	22	189	42	0	253	57	284	10	0	351	10	14	18	0	42	86	40	80	0	206	852
Total	87	775	114	0	976	274	1332	52	0	1658	58	58	93	0	209	437	130	312	0	879	3722
*** BREAK ***																					
04:00 PM	8	341	76	0	425	73	260	13	0	346	19	21	13	0	53	31	21	83	0	135	959
04:15 PM	7	391	74	0	472	71	276	10	0	357	14	27	12	0	53	44	16	86	0	146	1028
04:30 PM	9	361	71	0	441	73	250	9	0	332	31	27	12	0	70	32	14	98	0	144	987
04:45 PM	11	332	74	0	417	72	252	10	0	334	26	33	12	0	71	29	19	106	0	154	976
Total	35	1425	295	0	1755	289	1038	42	0	1369	90	108	49	0	247	136	70	373	0	579	3950
05:00 PM	8	375	71	0	454	68	276	7	0	351	30	38	11	0	79	43	15	120	0	178	1062
05:15 PM	10	357	69	0	436	75	282	12	0	369	32	44	14	0	90	43	17	113	0	173	1068
05:30 PM	13	415	76	0	504	72	286	8	0	366	26	30	15	0	71	43	19	134	0	196	1137
05:45 PM	13	375	94	0	482	80	292	9	0	381	30	35	8	0	73	51	17	125	0	193	1129
Total	44	1522	310	0	1876	295	1136	36	0	1467	118	147	48	0	313	180	68	492	0	740	4396
Grand Total	235	4366	819	0	5420	1131	4920	179	0	6230	314	366	265	0	945	1173	379	1446	0	2998	15593
Apprch %	4.3	80.6	15.1	0		18.2	79	2.9	0		33.2	38.7	28	0		39.1	12.6	48.2	0		
Total %	1.5	28	5.3	0	34.8	7.3	31.6	1.1	0	40	2	2.3	1.7	0	6.1	7.5	2.4	9.3	0	19.2	

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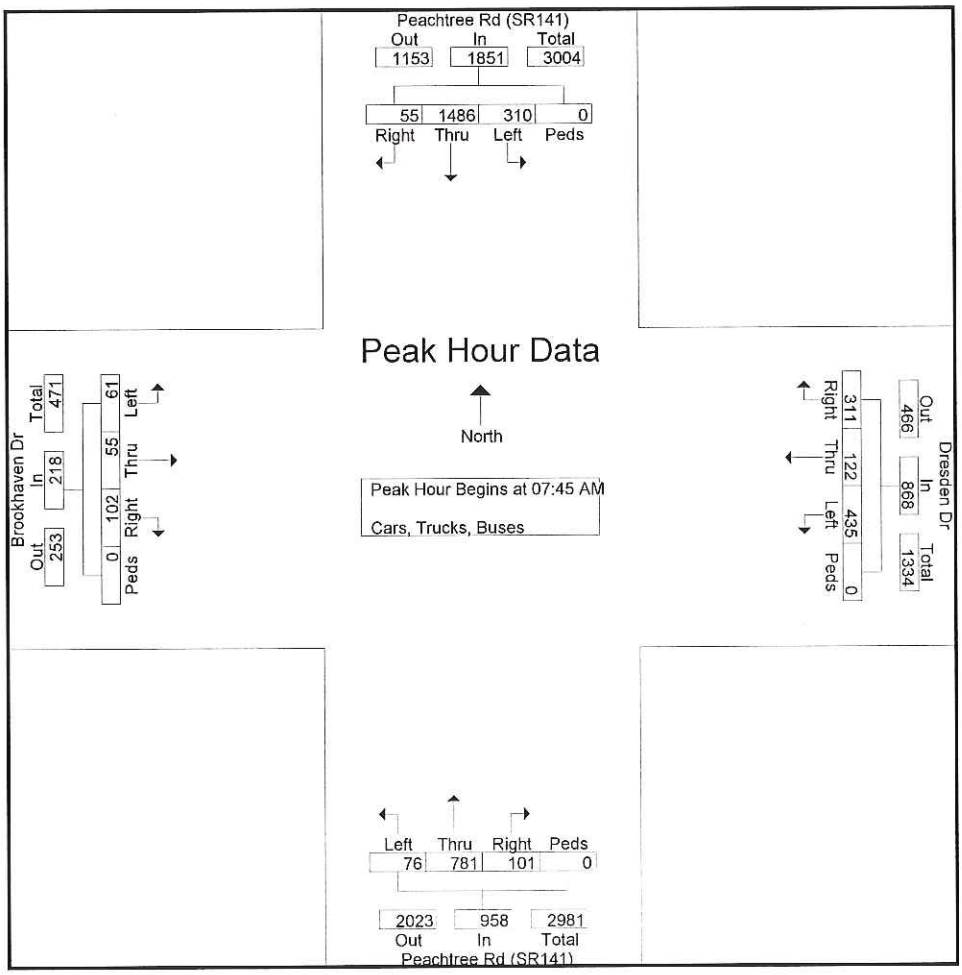
TMC Data
Peachtree Rd (SR141) @ Dresden Dr/
Brookhaven Dr
7-9am I 4-6pm

File Name : 38020001
Site Code : 38020001
Start Date : 3/8/2016
Page No : 2

	Peachtree Rd (SR141) Northbound					Peachtree Rd (SR141) Southbound					Brookhaven Dr Eastbound					Dresden Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
07:45 AM	11	195	**29**	0	235	**93**	**438**	13	0	**544**	13	11	27	0	51	84	32	79	0	195	**1025**
08:00 AM	18	176	24	0	218	71	331	**16**	0	418	15	**15**	25	0	55	**126**	30	69	0	225	916
08:15 AM	19	189	23	0	231	70	344	13	0	427	16	15	22	0	53	121	**35**	**84**	0	**240**	951
08:30 AM	**28**	**221**	25	0	**274**	76	373	13	0	462	**17**	14	**28**	0	**59**	104	25	79	0	208	1003
Total Volume	76	781	101	0	958	310	1486	55	0	1851	61	55	102	0	218	435	122	311	0	868	3895
% App. Total	7.9	81.5	10.5	0		16.7	80.3	3	0		28	25.2	46.8	0		50.1	14.1	35.8	0		
PHF	.679	.883	.871	.000	.874	.833	.848	.859	.000	.851	.897	.917	.911	.000	.924	.863	.871	.926	.000	.904	.950



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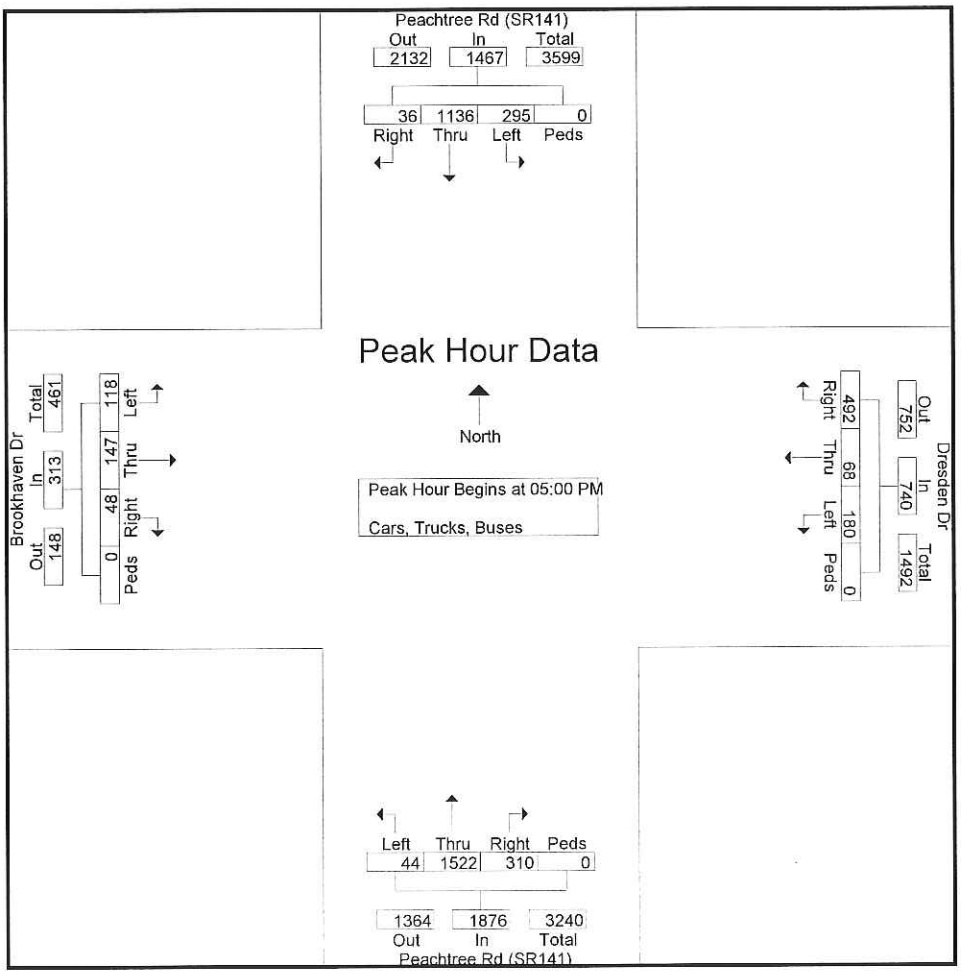
TMC Data
Peachtree Rd (SR141) @ Dresden Dr/
Brookhaven Dr
7-9am I 4-6pm

File Name : 38020001
Site Code : 38020001
Start Date : 3/8/2016
Page No : 3

	Peachtree Rd (SR141) Northbound					Peachtree Rd (SR141) Southbound					Brookhaven Dr Eastbound					Dresden Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	8	375	71	0	454	68	276	7	0	351	30	38	11	0	79	43	15	120	0	178	1062
05:15 PM	10	357	69	0	436	75	282	**12**	0	369	**32**	**44**	14	0	**90**	43	17	113	0	173	1068
05:30 PM	**13**	**415**	76	0	**504**	72	286	8	0	366	26	30	**15**	0	71	43	**19**	**134**	0	**196**	**1137**
05:45 PM	13	375	**94**	0	482	**80**	**292**	9	0	**381**	30	35	8	0	73	**51**	17	125	0	193	1129
Total Volume	44	1522	310	0	1876	295	1136	36	0	1467	118	147	48	0	313	180	68	492	0	740	4396
% App. Total	2.3	81.1	16.5	0		20.1	77.4	2.5	0		37.7	47	15.3	0		24.3	9.2	66.5	0		
PHF	.846	.917	.824	.000	.931	.922	.973	.750	.000	.963	.922	.835	.800	.000	.869	.882	.895	.918	.000	.944	.967



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TMC Data
Dresden Dr @ Apple Valley Rd

7-9am I 4-6pm

File Name : 38020002
Site Code : 38020002
Start Date : 3/8/2016
Page No : 1

Groups Printed- Cars, Trucks, Buses

	Apple Valley Rd Northbound					Apple Valley Rd Southbound					Dresden Dr Eastbound					Dresden Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
07:00 AM	10	4	8	0	22	2	12	16	0	30	4	39	32	0	75	20	124	0	0	144	271
07:15 AM	19	4	9	0	32	1	23	23	0	47	4	50	35	0	89	16	143	2	0	161	329
07:30 AM	22	5	7	0	34	1	31	41	0	73	5	56	48	0	109	19	164	1	0	184	400
07:45 AM	20	2	15	0	37	1	27	23	0	51	8	82	66	0	156	22	173	1	0	196	440
Total	71	15	39	0	125	5	93	103	0	201	21	227	181	0	429	77	604	4	0	685	1440
08:00 AM	26	2	11	0	39	2	31	29	0	62	6	74	56	0	136	30	168	0	0	198	435
08:15 AM	29	3	12	0	44	1	20	27	0	48	4	65	50	0	119	23	163	2	0	188	399
08:30 AM	22	3	11	0	36	1	22	17	0	40	3	55	38	0	96	32	168	2	0	202	374
08:45 AM	28	7	12	0	47	1	18	27	0	46	7	57	35	0	99	16	157	3	0	176	368
Total	105	15	46	0	166	5	91	100	0	196	20	251	179	0	450	101	656	7	0	764	1576
*** BREAK ***																					
04:00 PM	33	8	21	0	62	0	6	8	0	14	7	144	19	0	170	15	92	0	0	107	353
04:15 PM	37	5	18	0	60	2	8	9	0	19	8	147	24	0	179	14	96	1	0	111	369
04:30 PM	49	9	28	0	86	1	4	6	0	11	5	152	20	0	177	8	103	5	0	116	390
04:45 PM	47	9	39	0	95	1	4	15	0	20	12	158	19	0	189	15	107	0	0	122	426
Total	166	31	106	0	303	4	22	38	0	64	32	601	82	0	715	52	398	6	0	456	1538
05:00 PM	76	8	36	0	120	6	5	15	0	26	12	143	26	0	181	9	105	1	0	115	442
05:15 PM	72	8	39	0	119	2	6	9	0	17	10	140	29	0	179	11	99	2	0	112	427
05:30 PM	85	10	55	0	150	0	5	16	0	21	15	146	22	0	183	7	95	7	0	109	463
05:45 PM	82	14	47	0	143	1	6	12	0	19	12	142	27	0	181	12	93	3	0	108	451
Total	315	40	177	0	532	9	22	52	0	83	49	571	104	0	724	39	392	13	0	444	1783
Grand Total	657	101	368	0	1126	23	228	293	0	544	122	1650	546	0	2318	269	2050	30	0	2349	6337
Apprch %	58.3	9	32.7	0		4.2	41.9	53.9	0		5.3	71.2	23.6	0		11.5	87.3	1.3	0		
Total %	10.4	1.6	5.8	0	17.8	0.4	3.6	4.6	0	8.6	1.9	26	8.6	0	36.6	4.2	32.3	0.5	0	37.1	

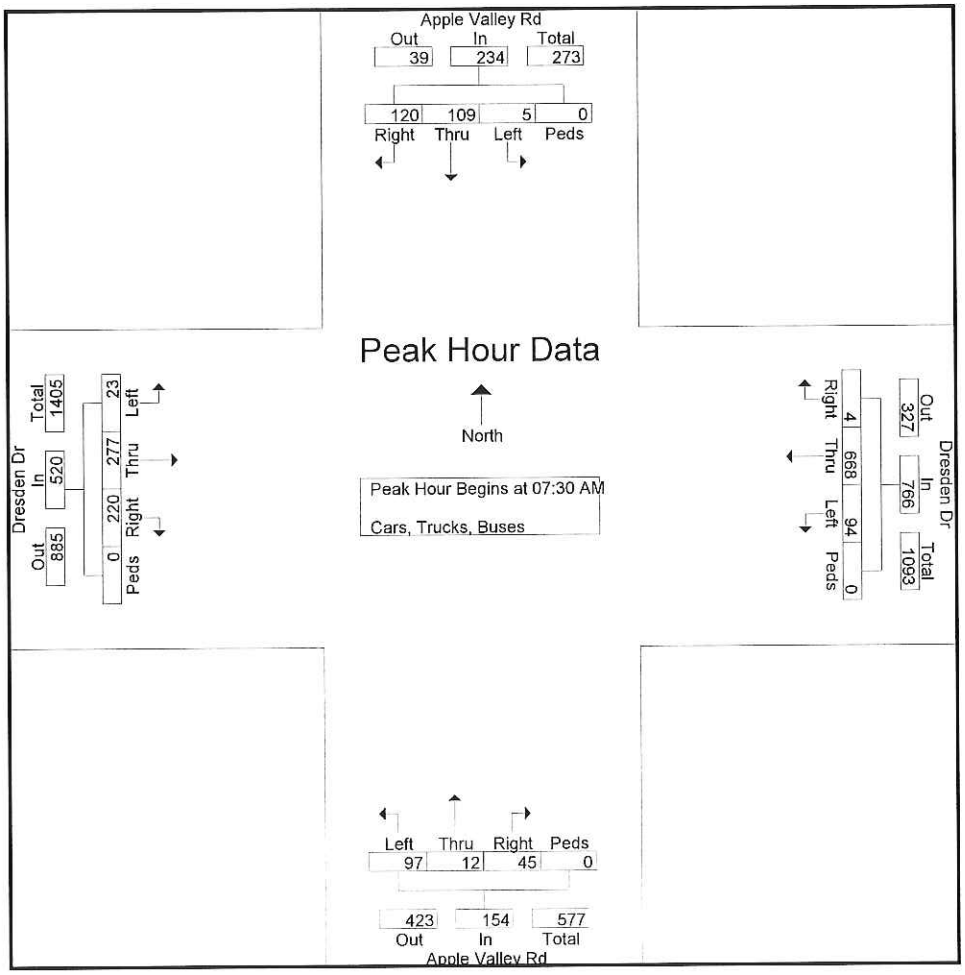
Reliable Traffic Data Services, LLC
Tel: (770) 578-8158 | Fax: (770) 578-8159
info@reliabletraffic.org | www.reliabletraffic.org

TMC Data
Dresden Dr @ Apple Valley Rd

7-9am I 4-6pm

File Name : 38020002
Site Code : 38020002
Start Date : 3/8/2016
Page No : 2

	Apple Valley Rd Northbound					Apple Valley Rd Southbound					Dresden Dr Eastbound					Dresden Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 07:00 AM to 08:45 AM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 07:30 AM																					
07:30 AM	22	**5**	7	0	34	1	**31**	**41**	0	**73**	5	56	48	0	109	19	164	1	0	184	400
07:45 AM	20	2	**15**	0	37	1	27	23	0	51	**8**	**82**	**66**	0	**156**	22	**173**	1	0	196	**440**
08:00 AM	26	2	11	0	39	**2**	31	29	0	62	6	74	56	0	136	**30**	168	0	0	**198**	435
08:15 AM	**29**	3	12	0	**44**	1	20	27	0	48	4	65	50	0	119	23	163	**2**	0	188	399
Total Volume	97	12	45	0	154	5	109	120	0	234	23	277	220	0	520	94	668	4	0	766	1674
% App. Total	63	7.8	29.2	0		2.1	46.6	51.3	0		4.4	53.3	42.3	0		12.3	87.2	0.5	0		
PHF	.836	.600	.750	.000	.875	.625	.879	.732	.000	.801	.719	.845	.833	.000	.833	.783	.965	.500	.000	.967	.951



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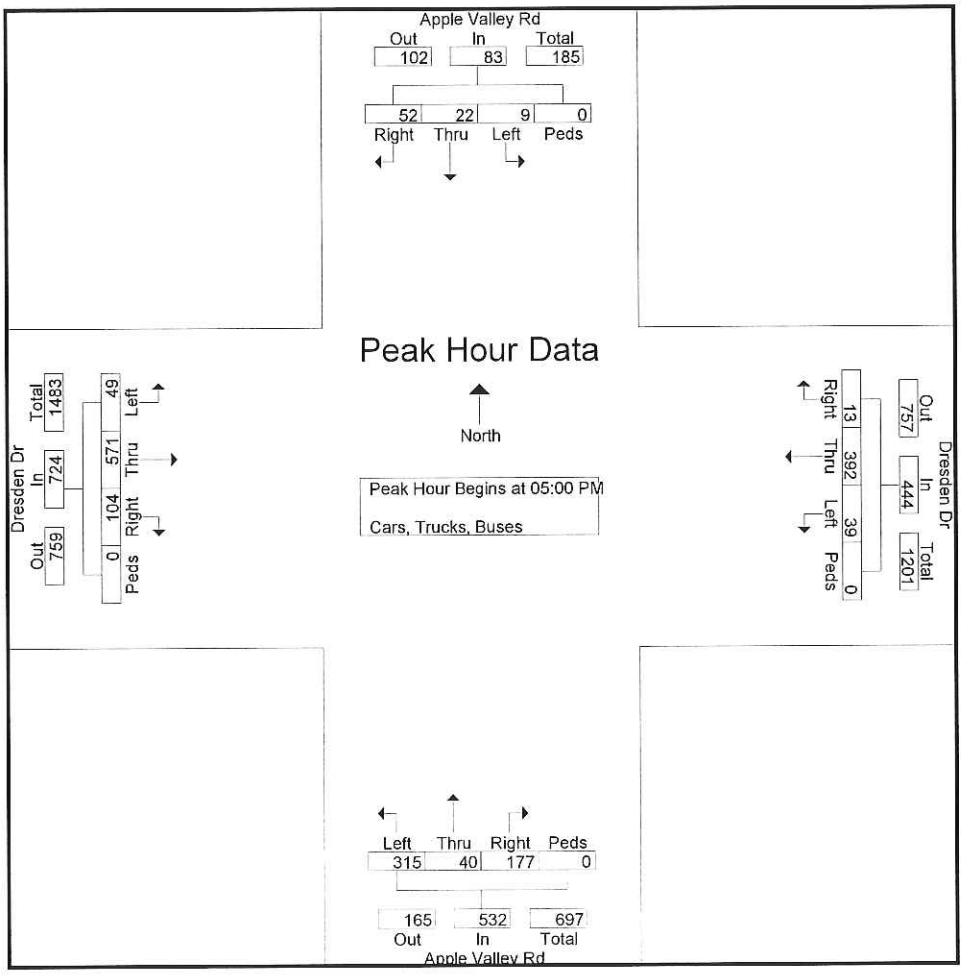
TMC Data
Dresden Dr @ Apple Valley Rd

7-9am I 4-6pm

File Name : 38020002
Site Code : 38020002
Start Date : 3/8/2016
Page No : 3

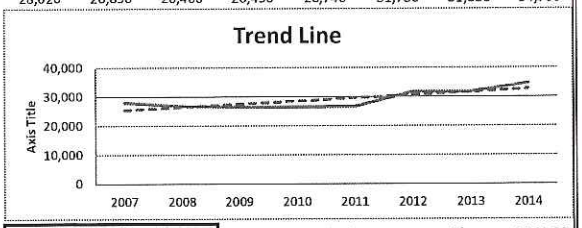
	Apple Valley Rd Northbound					Apple Valley Rd Southbound					Dresden Dr Eastbound					Dresden Dr Westbound					
Start Time	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Left	Thru	Right	Peds	App. Total	Int. Total
Peak Hour Analysis From 04:00 PM to 05:45 PM - Peak 1 of 1																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
05:00 PM	76	8	36	0	120	**6**	5	15	0	**26**	12	143	26	0	181	9	**105**	1	0	**115**	442
05:15 PM	72	8	39	0	119	2	**6**	9	0	17	10	140	**29**	0	179	11	99	2	0	112	427
05:30 PM	**85**	10	**55**	0	**150**	0	5	**16**	0	21	**15**	**146**	22	0	**183**	7	95	**7**	0	109	**463**
05:45 PM	82	**14**	47	0	143	1	6	12	0	19	12	142	27	0	181	**12**	93	3	0	108	451
Total Volume	315	40	177	0	532	9	22	52	0	83	49	571	104	0	724	39	392	13	0	444	1783
% App. Total	59.2	7.5	33.3	0		10.8	26.5	62.7	0		6.8	78.9	14.4	0		8.8	88.3	2.9	0		
PHF	.926	.714	.805	.000	.887	.375	.917	.813	.000	.798	.817	.978	.897	.000	.989	.813	.933	.464	.000	.965	.963



Linear Regression of Daily Traffic

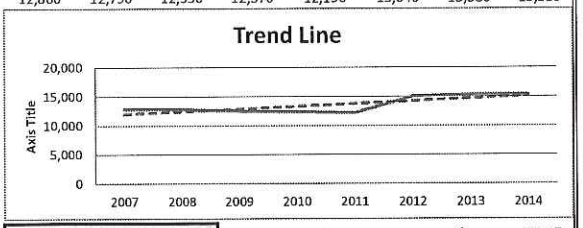
Location	Growth Rate	R Squared	Station ID	Route	2007	2008	2009	2010	2011	2012	2013	2014
SR 141 (Peachtree)	3.7%	0.64	0891365	014100	28,020	26,890	26,460	26,490	26,740	31,730	31,830	34,700
N Druid Hills Rd	3.4%	0.60	0893656	517000	12,860	12,790	12,530	12,370	12,190	15,040	15,380	15,380
Dresden Drive W	1.1%	0.10	0893625	517100	10,470	8,980	8,800	8,690	8,560	10,040	10,260	10,300
Dresden Drive E	-4.1%	0.78	0893627	517100	10,500	10,440	9,090	8,980	8,060	8,050	8,230	8,230
Clairmont Rd	3.0%	0.50	0893445	515600	19,680	18,520	18,000	18,040	18,020	22,180	22,290	22,300
Weighted Average	2.3%	0.42	Sum of Count Stations =		81,530	77,620	74,880	74,570	73,570	87,040	87,990	90,910

Location	Traffic Counter	RCLINK	2007	2008	2009	2010	2011	2012	2013	2014
SR 141 (Peachtree)	0891365	014100	28,020	26,890	26,460	26,490	26,740	31,730	31,830	34,700



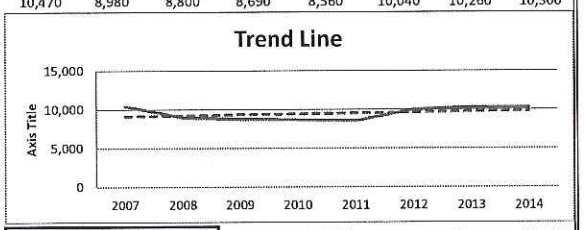
Growth Rate	3.7%	Intercept	-2,065,642	Slope	1,041.90				
Trend Line	25,461	26,503	27,545	28,587	29,628	30,670	31,712	32,754	

Location	Traffic Counter	RCLINK	2007	2008	2009	2010	2011	2012	2013	2014
N Druid Hills Rd	0893656	517000	12,860	12,790	12,530	12,370	12,190	15,040	15,380	15,380



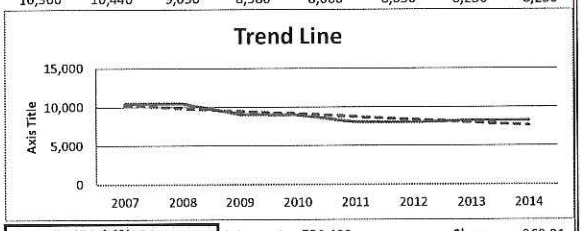
Growth Rate	3.4%	Intercept	-894,508	Slope	451.67				
Trend Line	11,987	12,438	12,890	13,342	13,793	14,245	14,697	15,148	

Location	Traffic Counter	RCLINK	2007	2008	2009	2010	2011	2012	2013	2014
Dresden Drive W	0893625	517100	10,470	8,980	8,800	8,690	8,560	10,040	10,260	10,300



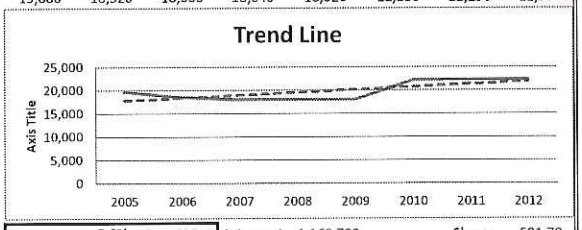
Growth Rate	1.1%	Intercept	-201,111	Slope	104.76				
Trend Line	9,146	9,251	9,355	9,460	9,565	9,670	9,774	9,879	

Location	Traffic Counter	RCLINK	2007	2008	2009	2010	2011	2012	2013	2014
Dresden Drive E	0893627	517100	10,500	10,440	9,090	8,980	8,060	8,050	8,230	8,230



Growth Rate	-4.1%	Intercept	750,439	Slope	-368.81				
Trend Line	10,238	9,870	9,501	9,132	8,763	8,394	8,025	7,657	

Location	Traffic Counter	RCLINK	2005	2006	2007	2008	2009	2010	2011	2012
Clairmont Rd	0893445	515600	19,680	18,520	18,000	18,040	18,020	22,180	22,290	22,300



Growth Rate	3.0%	Intercept	-1,168,723	Slope	591.79				
Trend Line	17,808	18,399	18,991	19,583	20,175	20,766	21,358	21,950	

EXISTING INTERSECTION ANALYSIS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	311	8	20	735	5	8	0	18	3	0	1
Future Volume (Veh/h)	0	311	8	20	735	5	8	0	18	3	0	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	311	8	20	735	5	8	0	18	3	0	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		898			541							
pX, platoon unblocked	0.78						0.78	0.78		0.78	0.78	0.78
vC, conflicting volume	740			319			1091	1095	315	1106	1096	738
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	522			319			974	979	315	994	981	519
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			95	100	98	98	100	100
cM capacity (veh/h)	812			1241			177	191	725	168	191	433

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	0	319	20	740	26	4
Volume Left	0	0	20	0	8	3
Volume Right	0	8	0	5	18	1
cSH	1700	1700	1241	1700	371	198
Volume to Capacity	0.00	0.19	0.02	0.44	0.07	0.02
Queue Length 95th (ft)	0	0	1	0	6	2
Control Delay (s)	0.0	0.0	7.9	0.0	15.4	23.5
Lane LOS			A		C	C
Approach Delay (s)	0.0		0.2		15.4	23.5
Approach LOS					C	C

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	49.0%	ICU Level of Service	A
Analysis Period (min)	60		

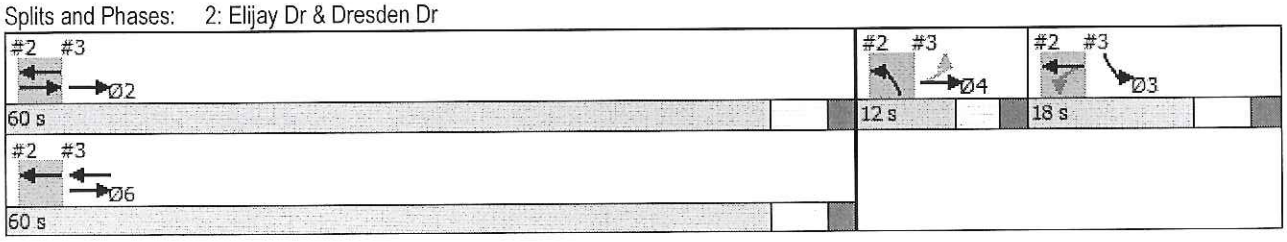
Lane Group	EBT	WBL	WBT	NBL	Ø6
Lane Configurations					
Traffic Volume (vph)	306	24	721	55	
Future Volume (vph)	306	24	721	55	
Lane Group Flow (vph)	340	24	721	74	
Turn Type	NA	custom	NA	Prot	
Protected Phases	2		2 3 6	4	6
Permitted Phases		3			
Detector Phase	2	3	2 3 6	4	
Switch Phase					
Minimum Initial (s)	17.0	5.0		5.0	8.0
Minimum Split (s)	27.0	31.3		30.0	27.0
Total Split (s)	60.0	18.0		12.0	60.0
Total Split (%)	66.7%	20.0%		13.3%	67%
Yellow Time (s)	4.0	4.0		3.0	4.0
All-Red Time (s)	2.0	2.3		2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	
Total Lost Time (s)	6.0	6.3		5.0	
Lead/Lag		Lag		Lead	
Lead-Lag Optimize?					
Recall Mode	Min	Max		Max	Min
v/c Ratio	0.42	0.11	0.55	0.20	
Control Delay	24.1	61.6	2.6	33.5	
Queue Delay	0.0	0.0	1.6	0.0	
Total Delay	24.1	61.6	4.2	33.5	
Queue Length 50th (ft)	171	19	30	38	
Queue Length 95th (ft)	289	m25	m47	93	
Internal Link Dist (ft)	204		81	237	
Turn Bay Length (ft)		50			
Base Capacity (vph)	829	215	1320	372	
Starvation Cap Reductn	0	0	398	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.41	0.11	0.78	0.20	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 120.4
Natural Cycle: 100
Control Type: Actuated-Uncoordinated

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

Splits and Phases: 2: Elijay Dr & Dresden Dr



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	306	34	24	721	55	19
Future Volume (vph)	306	34	24	721	55	19
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.3	6.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frt	0.99		1.00	1.00	0.97	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	1838		1770	1863	1734	
Flt Permitted	1.00		0.56	1.00	0.96	
Satd. Flow (perm)	1838		1036	1863	1734	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	306	34	24	721	55	19
RTOR Reduction (vph)	6	0	0	0	12	0
Lane Group Flow (vph)	334	0	24	721	62	0
Turn Type	NA		custom	NA	Prot	
Protected Phases	2			2 3 6	4	
Permitted Phases			3			
Actuated Green, G (s)	53.1		25.0	84.4	25.0	
Effective Green, g (s)	53.1		25.0	78.1	25.0	
Actuated g/C Ratio	0.44		0.21	0.65	0.21	
Clearance Time (s)	6.0		6.3		5.0	
Vehicle Extension (s)	8.0		2.0		3.0	
Lane Grp Cap (vph)	810		215	1208	360	
v/s Ratio Prot	0.18			c0.39	c0.04	
v/s Ratio Perm			0.02			
v/c Ratio	0.41		0.11	0.60	0.17	
Uniform Delay, d1	23.0		38.7	12.1	39.2	
Progression Factor	1.00		1.53	0.18	1.00	
Incremental Delay, d2	1.5		0.6	1.2	1.0	
Delay (s)	24.5		59.8	3.4	40.2	
Level of Service	C		E	A	D	
Approach Delay (s)	24.5			5.2	40.2	
Approach LOS	C			A	D	

Intersection Summary			
HCM 2000 Control Delay	13.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.49		
Actuated Cycle Length (s)	120.4	Sum of lost time (s)	17.3
Intersection Capacity Utilization	51.3%	ICU Level of Service	A
Analysis Period (min)	60		

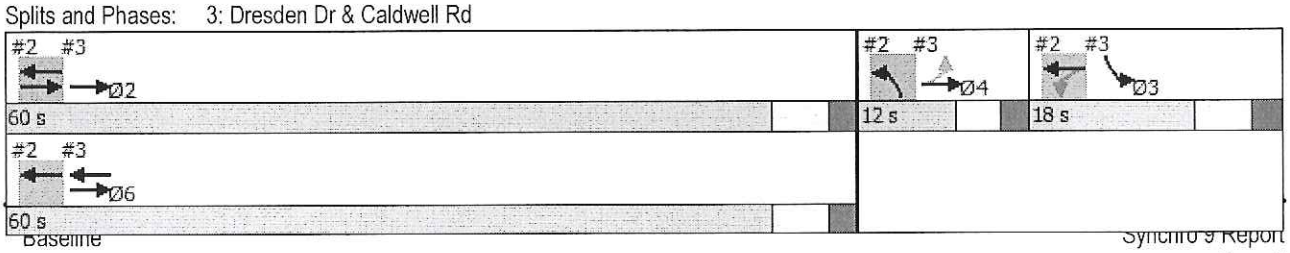
c Critical Lane Group

Lane Group	EBL	EBT	WBT	SBL	Ø2
Lane Configurations					
Traffic Volume (vph)	35	280	689	12	
Future Volume (vph)	35	280	689	12	
Lane Group Flow (vph)	35	280	712	85	
Turn Type	custom	NA	NA	Prot	
Protected Phases		2 4 6	6	3	2
Permitted Phases	4				
Detector Phase	4	2 4 6	6	3	
Switch Phase					
Minimum Initial (s)	5.0		8.0	5.0	17.0
Minimum Split (s)	30.0		27.0	31.3	27.0
Total Split (s)	12.0		60.0	18.0	60.0
Total Split (%)	13.3%		66.7%	20.0%	67%
Yellow Time (s)	3.0		4.0	4.0	4.0
All-Red Time (s)	2.0		2.0	2.3	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	
Total Lost Time (s)	5.0		6.0	6.3	
Lead/Lag	Lead			Lag	
Lead-Lag Optimize?					
Recall Mode	Max		Min	Max	Min
v/c Ratio	0.23	0.22	0.87	0.21	
Control Delay	45.1	0.7	44.9	13.1	
Queue Delay	0.0	0.7	0.0	0.0	
Total Delay	45.1	1.4	44.9	13.1	
Queue Length 50th (ft)	28	3	490	8	
Queue Length 95th (ft)	m70	4	#878	63	
Internal Link Dist (ft)		81	385	375	
Turn Bay Length (ft)	50				
Base Capacity (vph)	152	1280	833	396	
Starvation Cap Reductn	0	675	0	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.23	0.46	0.85	0.21	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 120.4
Natural Cycle: 100
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Dresden Dr & Caldwell Rd



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	35	280	689	23	12	73
Future Volume (vph)	35	280	689	23	12	73
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0	6.0		6.3	
Lane Util. Factor	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	1.00		0.88	
Flt Protected	0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1770	1863	1855		1635	
Flt Permitted	0.39	1.00	1.00		0.99	
Satd. Flow (perm)	735	1863	1855		1635	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	35	280	689	23	12	73
RTOR Reduction (vph)	0	0	2	0	58	0
Lane Group Flow (vph)	35	280	710	0	27	0
Turn Type	custom	NA	NA		Prot	
Protected Phases		2 4 6	6		3	
Permitted Phases	4					
Actuated Green, G (s)	25.0	84.1	53.1		25.0	
Effective Green, g (s)	25.0	84.1	53.1		25.0	
Actuated g/C Ratio	0.21	0.70	0.44		0.21	
Clearance Time (s)	5.0		6.0		6.3	
Vehicle Extension (s)	3.0		8.0		2.0	
Lane Grp Cap (vph)	152	1301	818		339	
v/s Ratio Prot		c0.15	c0.38		c0.02	
v/s Ratio Perm	0.05					
v/c Ratio	0.23	0.22	0.87		0.08	
Uniform Delay, d1	39.7	6.4	30.5		38.4	
Progression Factor	1.01	0.05	1.00		1.00	
Incremental Delay, d2	3.3	0.3	13.4		0.5	
Delay (s)	43.4	0.7	43.8		38.9	
Level of Service	D	A	D		D	
Approach Delay (s)		5.4	43.8		38.9	
Approach LOS		A	D		D	

Intersection Summary			
HCM 2000 Control Delay	32.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	120.4	Sum of lost time (s)	17.3
Intersection Capacity Utilization	53.1%	ICU Level of Service	A
Analysis Period (min)	60		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	1	59	51	8	24	1
Future Volume (Veh/h)	1	59	51	8	24	1
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1	59	51	8	24	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			455			
pX, platoon unblocked						
vC, conflicting volume	59				116	55
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	59				116	55
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				97	100
cM capacity (veh/h)	1545				880	1012

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	60	59	25
Volume Left	1	0	24
Volume Right	0	8	1
cSH	1545	1700	884
Volume to Capacity	0.00	0.03	0.03
Queue Length 95th (ft)	0	0	2
Control Delay (s)	0.1	0.0	9.2
Lane LOS	A		A
Approach Delay (s)	0.1	0.0	9.2
Approach LOS			A

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	13.9%	ICU Level of Service	A
Analysis Period (min)	60		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	335	2	1	752	0	50	0	12	14	0	20
Future Volume (Veh/h)	0	335	2	1	752	0	50	0	12	14	0	20
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	335	2	1	752	0	50	0	12	14	0	20
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			TWLTL							
Median storage veh)					2							
Upstream signal (ft)		1155			284							
pX, platoon unblocked	0.77						0.77	0.77		0.77	0.77	0.77
vC, conflicting volume	752			337			1110	1090	336	1102	1091	752
vC1, stage 1 conf vol							336	336		754	754	
vC2, stage 2 conf vol							774	754		348	337	
vCu, unblocked vol	528			337			993	967	336	983	969	528
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			86	100	98	96	100	95
cM capacity (veh/h)	800			1222			346	368	706	367	368	423

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total	337	1	752	62	34
Volume Left	0	1	0	50	14
Volume Right	2	0	0	12	20
cSH	1700	1222	1700	384	398
Volume to Capacity	0.20	0.00	0.44	0.16	0.09
Queue Length 95th (ft)	0	0	0	14	7
Control Delay (s)	0.0	7.9	0.0	16.2	14.9
Lane LOS		A		C	B
Approach Delay (s)	0.0	0.0		16.2	14.9
Approach LOS				C	B

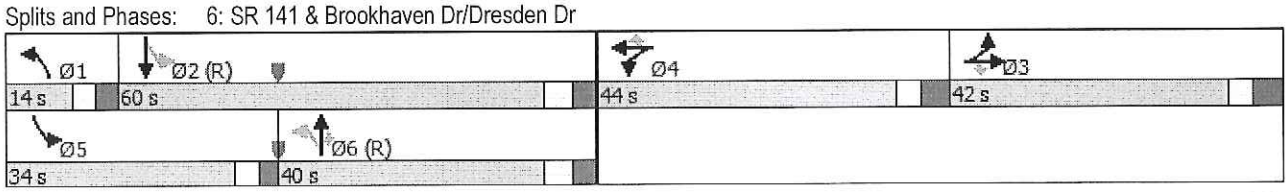
Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	52.6%	ICU Level of Service	A
Analysis Period (min)	60		

Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	55	102	435	122	311	76	781	101	310	1486
Future Volume (vph)	55	102	435	122	311	76	781	101	310	1486
Lane Group Flow (vph)	116	102	274	283	311	76	781	101	310	1541
Turn Type	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	3		4	4		1	6		5	2
Permitted Phases		3			4	6		6	2	
Detector Phase	3	3	4	4	4	1	6	6	5	2
Switch Phase										
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	39.1	39.1	41.5	41.5	41.5	10.7	31.6	31.6	10.4	31.6
Total Split (s)	42.0	42.0	44.0	44.0	44.0	14.0	40.0	40.0	34.0	60.0
Total Split (%)	26.3%	26.3%	27.5%	27.5%	27.5%	8.8%	25.0%	25.0%	21.3%	37.5%
Yellow Time (s)	3.0	3.0	3.1	3.1	3.1	3.0	3.6	3.6	3.0	3.6
All-Red Time (s)	4.1	4.1	3.4	3.4	3.4	2.7	3.0	3.0	2.4	3.0
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)	7.1	7.1	6.5	6.5	6.5	5.7	6.6	6.6	5.4	6.6
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min
v/c Ratio	0.69	0.37	0.85	0.86	0.58	0.61	0.54	0.14	0.70	0.86
Control Delay	93.4	6.0	85.3	86.1	11.3	52.7	40.6	1.5	26.8	41.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	93.4	6.0	85.3	86.1	11.3	52.7	40.6	1.5	26.8	41.6
Queue Length 50th (ft)	120	0	295	306	22	33	337	0	155	737
Queue Length 95th (ft)	208	34	#470	#487	119	#137	540	23	312	#1259
Internal Link Dist (ft)	293			663			464			725
Turn Bay Length (ft)		50	350		200	125		300		
Base Capacity (vph)	395	458	393	403	593	139	1447	735	489	1796
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.29	0.22	0.70	0.70	0.52	0.55	0.54	0.14	0.63	0.86

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 34 (21%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: SR 141 & Brookhaven Dr/Dresden Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	61	55	102	435	122	311	76	781	101	310	1486	55
Future Volume (vph)	61	55	102	435	122	311	76	781	101	310	1486	55
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.1	7.1	6.5	6.5	6.5	5.7	6.6	6.6	5.4	6.6	
Lane Util. Factor		1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.97	1.00	0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1815	1583	1681	1721	1583	1770	3539	1583	1770	3520	
Flt Permitted		0.97	1.00	0.95	0.97	1.00	0.06	1.00	1.00	0.22	1.00	
Satd. Flow (perm)		1815	1583	1681	1721	1583	114	3539	1583	413	3520	
Peak-hour factor, PHF	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. Flow (vph)	61	55	102	435	122	311	76	781	101	310	1486	55
RTOR Reduction (vph)	0	0	93	0	0	235	0	0	60	0	1	0
Lane Group Flow (vph)	0	116	9	274	283	76	76	781	41	310	1540	0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	3	3		4	4		1	6		5	2	
Permitted Phases			3			4	6		6	2		
Actuated Green, G (s)		14.7	14.7	30.7	30.7	30.7	72.6	65.5	65.5	94.4	81.6	
Effective Green, g (s)		14.7	14.7	30.7	30.7	30.7	72.6	65.5	65.5	94.4	81.6	
Actuated g/C Ratio		0.09	0.09	0.19	0.19	0.19	0.45	0.41	0.41	0.59	0.51	
Clearance Time (s)		7.1	7.1	6.5	6.5	6.5	5.7	6.6	6.6	5.4	6.6	
Vehicle Extension (s)		2.0	2.0	2.2	2.2	2.2	2.0	5.0	5.0	2.5	5.0	
Lane Grp Cap (vph)		166	145	322	330	303	125	1448	648	442	1795	
v/s Ratio Prot		c0.06		0.16	c0.16		0.03	0.22		c0.10	c0.44	
v/s Ratio Perm			0.01			0.05	0.25		0.03	0.31		
v/c Ratio		0.70	0.06	0.85	0.86	0.25	0.61	0.54	0.06	0.70	0.86	
Uniform Delay, d1		70.5	66.4	62.4	62.5	54.9	32.1	35.8	28.7	20.5	34.2	
Progression Factor		1.00	1.00	0.95	0.94	1.01	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		10.4	0.1	20.2	20.7	0.2	5.8	1.5	0.2	4.7	5.9	
Delay (s)		80.9	66.4	79.2	79.8	55.7	37.9	37.3	28.8	25.2	40.1	
Level of Service		F	E	E	E	E	D	D	C	C	D	
Approach Delay (s)		74.1			71.0			36.4			37.6	
Approach LOS		E			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	46.8	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	25.9
Intersection Capacity Utilization	90.1%	ICU Level of Service	E
Analysis Period (min)	60		

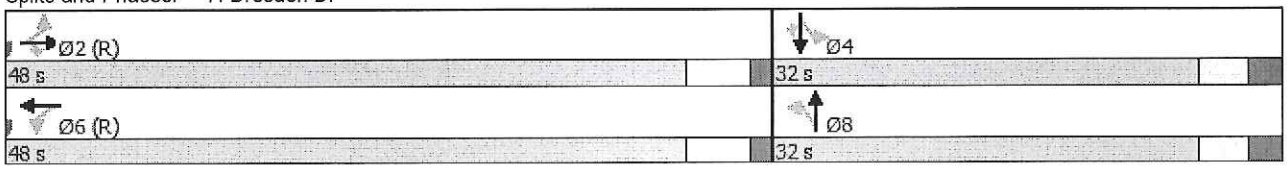
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	23	277	220	94	668	97	12	5	109	120
Future Volume (vph)	23	277	220	94	668	97	12	5	109	120
Lane Group Flow (vph)	23	277	220	94	672	97	57	0	114	120
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases		2			6		8		4	
Permitted Phases	2		2	6		8		4		4
Detector Phase	2	2	2	6	6	8	8	4	4	4
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
Minimum Split (s)	28.5	28.5	28.5	37.5	37.5	26.4	26.4	30.4	30.4	30.4
Total Split (s)	48.0	48.0	48.0	48.0	48.0	32.0	32.0	32.0	32.0	32.0
Total Split (%)	60.0%	60.0%	60.0%	60.0%	60.0%	40.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.1	3.1	3.1	3.1	3.1
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	2.3	2.3	2.3	2.3	2.3
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)	5.5	5.5	5.5	5.5	5.5	5.4	5.4		5.4	5.4
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.05	0.21	0.19	0.12	0.51	0.49	0.20		0.40	0.35
Control Delay	3.5	4.0	0.9	4.7	7.4	39.5	13.4		34.2	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	3.5	4.0	0.9	4.7	7.4	39.5	13.4		34.2	8.8
Queue Length 50th (ft)	3	40	6	12	119	46	5		53	0
Queue Length 95th (ft)	m7	69	13	37	296	98	40		106	52
Internal Link Dist (ft)		663			818		471		419	
Turn Bay Length (ft)	100			100		100				25
Base Capacity (vph)	461	1321	1186	778	1320	423	576		611	606
Starvation Cap Reductn	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.05	0.21	0.19	0.12	0.51	0.23	0.10		0.19	0.20

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 76 (95%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Dresden Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	23	277	220	94	668	4	97	12	45	5	109	120
Future Volume (vph)	23	277	220	94	668	4	97	12	45	5	109	120
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5	5.5	5.5		5.4	5.4			5.4	5.4
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.88			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1861		1770	1642			1859	1583
Flt Permitted	0.35	1.00	1.00	0.59	1.00		0.68	1.00			0.99	1.00
Satd. Flow (perm)	651	1863	1583	1098	1861		1273	1642			1839	1583
Peak-hour factor, PHF	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. Flow (vph)	23	277	220	94	668	4	97	12	45	5	109	120
RTOR Reduction (vph)	0	0	64	0	0	0	0	38	0	0	0	102
Lane Group Flow (vph)	23	277	156	94	672	0	97	19	0	0	114	18
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		4
Actuated Green, G (s)	56.8	56.8	56.8	56.8	56.8		12.3	12.3			12.3	12.3
Effective Green, g (s)	56.8	56.8	56.8	56.8	56.8		12.3	12.3			12.3	12.3
Actuated g/C Ratio	0.71	0.71	0.71	0.71	0.71		0.15	0.15			0.15	0.15
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5		5.4	5.4			5.4	5.4
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	462	1322	1123	779	1321		195	252			282	243
v/s Ratio Prot		0.15			c0.36			0.01				
v/s Ratio Perm	0.04		0.10	0.09			c0.08				0.06	0.01
v/c Ratio	0.05	0.21	0.14	0.12	0.51		0.50	0.08			0.40	0.08
Uniform Delay, d1	3.5	4.0	3.7	3.7	5.3		31.0	29.0			30.5	29.0
Progression Factor	0.79	0.86	1.11	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	0.2	0.3	0.2	0.3	1.4		2.0	0.1			1.0	0.1
Delay (s)	2.9	3.7	4.4	4.0	6.7		33.0	29.1			31.5	29.1
Level of Service	A	A	A	A	A		C	C			C	C
Approach Delay (s)		4.0			6.3			31.6			30.3	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	11.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.9
Intersection Capacity Utilization	69.4%	ICU Level of Service	C
Analysis Period (min)	60		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	719	17	14	462	1	11	0	19	1	0	0
Future Volume (Veh/h)	0	719	17	14	462	1	11	0	19	1	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	719	17	14	462	1	11	0	19	1	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		898			541							
pX, platoon unblocked	0.89			0.82			0.88	0.88	0.82	0.88	0.88	0.89
vC, conflicting volume	463			736			1218	1218	728	1228	1226	462
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	336			572			899	901	562	912	910	336
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			95	100	96	100	100	100
cM capacity (veh/h)	1090			824			225	240	434	211	237	629

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	0	736	14	463	30	1
Volume Left	0	0	14	0	11	1
Volume Right	0	17	0	1	19	0
cSH	1700	1700	824	1700	324	211
Volume to Capacity	0.00	0.43	0.02	0.27	0.09	0.00
Queue Length 95th (ft)	0	0	1	0	8	0
Control Delay (s)	0.0	0.0	9.4	0.0	17.3	22.1
Lane LOS			A		C	C
Approach Delay (s)	0.0		0.3		17.3	22.1
Approach LOS					C	C

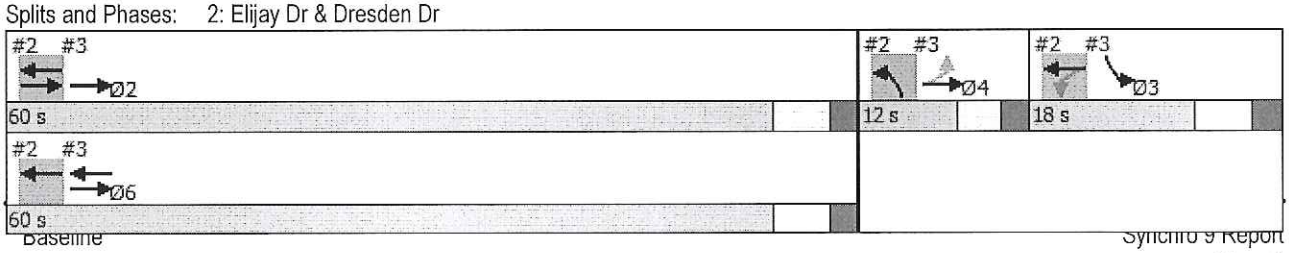
Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	48.9%	ICU Level of Service	A
Analysis Period (min)	60		

Lane Group	EBT	WBL	WBT	NBL	Ø6
Lane Configurations					
Traffic Volume (vph)	729	25	459	40	
Future Volume (vph)	729	25	459	40	
Lane Group Flow (vph)	767	25	459	72	
Turn Type	NA	custom	NA	Prot	
Protected Phases	2		2 3 6	4	6
Permitted Phases		3			
Detector Phase	2	3	2 3 6	4	
Switch Phase					
Minimum Initial (s)	17.0	5.0		5.0	8.0
Minimum Split (s)	27.0	31.3		30.0	27.0
Total Split (s)	60.0	18.0		12.0	60.0
Total Split (%)	66.7%	20.0%		13.3%	67%
Yellow Time (s)	4.0	4.0		3.0	4.0
All-Red Time (s)	2.0	2.3		2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	
Total Lost Time (s)	6.0	6.3		5.0	
Lead/Lag		Lag		Lead	
Lead-Lag Optimize?					
Recall Mode	Min	Max		Max	Min
v/c Ratio	0.93	0.17	0.35	0.19	
Control Delay	56.3	67.8	1.9	25.4	
Queue Delay	0.0	0.0	0.5	0.0	
Total Delay	56.3	67.8	2.4	25.4	
Queue Length 50th (ft)	554	20	18	26	
Queue Length 95th (ft)	#984	m37	20	78	
Internal Link Dist (ft)	204		81	237	
Turn Bay Length (ft)		50			
Base Capacity (vph)	826	144	1310	376	
Starvation Cap Reductn	0	0	450	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.93	0.17	0.53	0.19	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 121.3
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Elijay Dr & Dresden Dr



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	729	38	25	459	40	32
Future Volume (vph)	729	38	25	459	40	32
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.3	6.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frt	0.99		1.00	1.00	0.94	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	1850		1770	1863	1704	
Flt Permitted	1.00		0.37	1.00	0.97	
Satd. Flow (perm)	1850		698	1863	1704	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	729	38	25	459	40	32
RTOR Reduction (vph)	3	0	0	0	25	0
Lane Group Flow (vph)	764	0	25	459	47	0
Turn Type	NA		custom	NA	Prot	
Protected Phases	2			2 3 6	4	
Permitted Phases			3			
Actuated Green, G (s)	54.0		25.0	85.3	25.0	
Effective Green, g (s)	54.0		25.0	79.0	25.0	
Actuated g/C Ratio	0.45		0.21	0.65	0.21	
Clearance Time (s)	6.0		6.3		5.0	
Vehicle Extension (s)	8.0		2.0		3.0	
Lane Grp Cap (vph)	823		143	1213	351	
v/s Ratio Prot	c0.41			c0.25	c0.03	
v/s Ratio Perm			0.04			
v/c Ratio	0.93		0.17	0.38	0.13	
Uniform Delay, d1	31.8		39.7	9.8	39.3	
Progression Factor	1.00		1.61	0.18	1.00	
Incremental Delay, d2	24.0		2.3	0.7	0.8	
Delay (s)	55.8		66.1	2.5	40.1	
Level of Service	E		E	A	D	
Approach Delay (s)	55.8			5.8	40.1	
Approach LOS	E			A	D	

Intersection Summary			
HCM 2000 Control Delay	36.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	121.3	Sum of lost time (s)	17.3
Intersection Capacity Utilization	54.0%	ICU Level of Service	A
Analysis Period (min)	60		

c Critical Lane Group

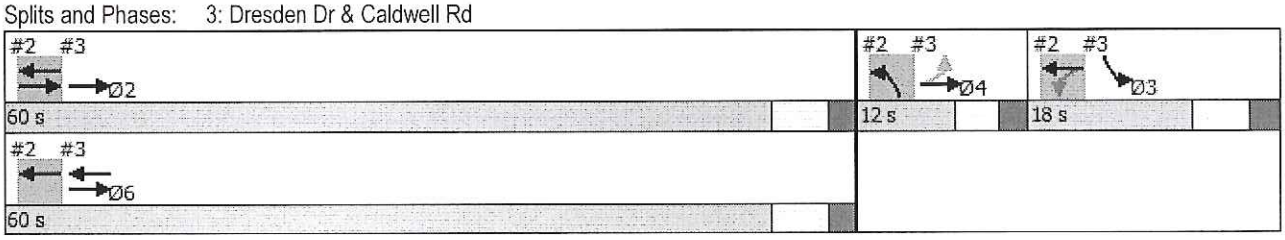
Lane Group	EBL	EBT	WBT	SBL	Ø2
Lane Configurations					
Traffic Volume (vph)	109	633	436	34	
Future Volume (vph)	109	633	436	34	
Lane Group Flow (vph)	109	633	459	95	
Turn Type	custom	NA	NA	Prot	
Protected Phases		2 4 6	6	3	2
Permitted Phases	4				
Detector Phase	4	2 4 6	6	3	
Switch Phase					
Minimum Initial (s)	5.0		8.0	5.0	17.0
Minimum Split (s)	30.0		27.0	31.3	27.0
Total Split (s)	12.0		60.0	18.0	60.0
Total Split (%)	13.3%		66.7%	20.0%	67%
Yellow Time (s)	3.0		4.0	4.0	4.0
All-Red Time (s)	2.0		2.0	2.3	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	
Total Lost Time (s)	5.0		6.0	6.3	
Lead/Lag	Lead			Lag	
Lead-Lag Optimize?					
Recall Mode	Max		Min	Max	Min
v/c Ratio	0.57	0.49	0.56	0.24	
Control Delay	44.8	1.0	27.7	18.7	
Queue Delay	0.0	3.2	0.0	0.0	
Total Delay	44.8	4.1	27.7	18.7	
Queue Length 50th (ft)	90	7	257	22	
Queue Length 95th (ft)	m103	m6	424	82	
Internal Link Dist (ft)		81	385	375	
Turn Bay Length (ft)	50				
Base Capacity (vph)	191	1290	826	392	
Starvation Cap Reductn	0	532	0	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.57	0.84	0.56	0.24	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 121.3
Natural Cycle: 110
Control Type: Actuated-Uncoordinated

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

Splits and Phases: 3: Dresden Dr & Caldwell Rd



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	109	633	436	23	34	61
Future Volume (vph)	109	633	436	23	34	61
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0	6.0		6.3	
Lane Util. Factor	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.99		0.91	
Flt Protected	0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1770	1863	1850		1671	
Flt Permitted	0.50	1.00	1.00		0.98	
Satd. Flow (perm)	929	1863	1850		1671	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	109	633	436	23	34	61
RTOR Reduction (vph)	0	0	3	0	48	0
Lane Group Flow (vph)	109	633	456	0	47	0
Turn Type	custom	NA	NA		Prot	
Protected Phases		2 4 6	6		3	
Permitted Phases	4					
Actuated Green, G (s)	25.0	85.0	54.0		25.0	
Effective Green, g (s)	25.0	85.0	54.0		25.0	
Actuated g/C Ratio	0.21	0.70	0.45		0.21	
Clearance Time (s)	5.0		6.0		6.3	
Vehicle Extension (s)	3.0		8.0		2.0	
Lane Grp Cap (vph)	191	1305	823		344	
v/s Ratio Prot		0.34	c0.25		c0.03	
v/s Ratio Perm	c0.12					
v/c Ratio	0.57	0.49	0.55		0.14	
Uniform Delay, d1	43.3	8.2	24.8		39.3	
Progression Factor	0.87	0.04	1.00		1.00	
Incremental Delay, d2	5.8	0.6	2.5		0.8	
Delay (s)	43.6	0.9	27.3		40.1	
Level of Service	D	A	C		D	
Approach Delay (s)		7.2	27.3		40.1	
Approach LOS		A	C		D	

Intersection Summary			
HCM 2000 Control Delay	16.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.46		
Actuated Cycle Length (s)	121.3	Sum of lost time (s)	17.3
Intersection Capacity Utilization	50.4%	ICU Level of Service	A
Analysis Period (min)	60		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	28	51	85	21	13	2
Future Volume (Veh/h)	28	51	85	21	13	2
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	28	51	85	21	13	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			455			
pX, platoon unblocked						
vC, conflicting volume	106				202	96
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	106				202	96
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				98	100
cM capacity (veh/h)	1485				771	961

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	79	106	15
Volume Left	28	0	13
Volume Right	0	21	2
cSH	1485	1700	792
Volume to Capacity	0.02	0.06	0.02
Queue Length 95th (ft)	1	0	1
Control Delay (s)	2.7	0.0	9.6
Lane LOS	A		A
Approach Delay (s)	2.7	0.0	9.6
Approach LOS			A

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	20.9%	ICU Level of Service	A
Analysis Period (min)	60		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	730	36	11	468	0	9	0	3	5	0	8
Future Volume (Veh/h)	0	730	36	11	468	0	9	0	3	5	0	8
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	730	36	11	468	0	9	0	3	5	0	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			TWLTL							
Median storage veh)					2							
Upstream signal (ft)		1155			284							
pX, platoon unblocked	0.89			0.83			0.89	0.89	0.83	0.89	0.89	0.89
vC, conflicting volume	468			766			1246	1238	748	1241	1256	468
vC1, stage 1 conf vol							748	748		490	490	
vC2, stage 2 conf vol							498	490		751	766	
vCu, unblocked vol	335			620			927	918	598	922	939	335
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			98	100	99	99	100	99
cM capacity (veh/h)	1085			801			367	372	419	360	358	626

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total	766	11	468	12	13
Volume Left	0	11	0	9	5
Volume Right	36	0	0	3	8
cSH	1700	801	1700	379	487
Volume to Capacity	0.45	0.01	0.28	0.03	0.03
Queue Length 95th (ft)	0	1	0	2	2
Control Delay (s)	0.0	9.6	0.0	14.8	12.6
Lane LOS		A		B	B
Approach Delay (s)	0.0	0.2		14.8	12.6
Approach LOS				B	B

Intersection Summary			
Average Delay	0.4		
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	60		

Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	147	48	180	68	492	44	1522	310	295	1136
Future Volume (vph)	147	48	180	68	492	44	1522	310	295	1136
Lane Group Flow (vph)	265	48	122	126	492	44	1522	310	295	1172
Turn Type	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	3		4	4		1	6		5	2
Permitted Phases		3			4	6		6	2	
Detector Phase	3	3	4	4	4	1	6	6	5	2
Switch Phase										
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	39.1	39.1	41.5	41.5	41.5	10.7	31.6	31.6	10.4	31.6
Total Split (s)	42.0	42.0	44.0	44.0	44.0	14.0	62.0	62.0	32.0	80.0
Total Split (%)	23.3%	23.3%	24.4%	24.4%	24.4%	7.8%	34.4%	34.4%	17.8%	44.4%
Yellow Time (s)	3.0	3.0	3.1	3.1	3.1	3.0	3.6	3.6	3.0	3.6
All-Red Time (s)	4.1	4.1	3.4	3.4	3.4	2.7	3.0	3.0	2.4	3.0
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)	7.1	7.1	6.5	6.5	6.5	5.7	6.6	6.6	5.4	6.6
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min
v/c Ratio	0.88	0.13	0.54	0.54	0.94	0.21	1.04	0.42	0.99	0.63
Control Delay	111.1	0.7	73.1	73.0	51.8	24.0	146.5	23.8	153.6	35.1
Queue Delay	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0
Total Delay	111.1	0.7	73.1	73.0	53.2	24.0	146.5	23.8	153.6	35.1
Queue Length 50th (ft)	309	0	144	149	201	21	~1033	136	301	518
Queue Length 95th (ft)	#510	0	m187	m192	m#410	58	#1627	328	#634	877
Internal Link Dist (ft)	293			663			464			725
Turn Bay Length (ft)		50	350		200	125		300		
Base Capacity (vph)	353	410	350	360	616	224	1462	739	303	1874
Starvation Cap Reductn	0	0	0	0	32	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.75	0.12	0.35	0.35	0.84	0.20	1.04	0.42	0.97	0.63

Intersection Summary

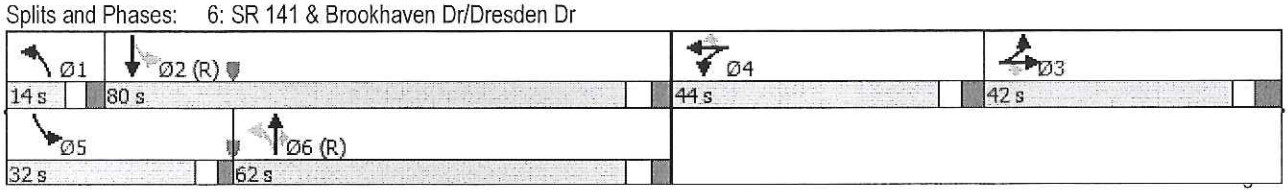
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 96 (53%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated

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

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

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

Splits and Phases: 6: SR 141 & Brookhaven Dr/Dresden Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	118	147	48	180	68	492	44	1522	310	295	1136	36
Future Volume (vph)	118	147	48	180	68	492	44	1522	310	295	1136	36
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.1	7.1	6.5	6.5	6.5	5.7	6.6	6.6	5.4	6.6	
Lane Util. Factor		1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98	1.00	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1822	1583	1681	1730	1583	1770	3539	1583	1770	3523	
Flt Permitted		0.98	1.00	0.95	0.98	1.00	0.18	1.00	1.00	0.05	1.00	
Satd. Flow (perm)		1822	1583	1681	1730	1583	343	3539	1583	93	3523	
Peak-hour factor, PHF	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. Flow (vph)	118	147	48	180	68	492	44	1522	310	295	1136	36
RTOR Reduction (vph)	0	0	40	0	0	313	0	0	85	0	1	0
Lane Group Flow (vph)	0	265	8	122	126	179	44	1522	225	295	1171	0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	3	3		4	4		1	6		5	2	
Permitted Phases			3			4	6		6	2		
Actuated Green, G (s)		29.7	29.7	24.3	24.3	24.3	79.8	74.3	74.3	105.8	94.6	
Effective Green, g (s)		29.7	29.7	24.3	24.3	24.3	79.8	74.3	74.3	105.8	94.6	
Actuated g/C Ratio		0.16	0.16	0.14	0.14	0.14	0.44	0.41	0.41	0.59	0.53	
Clearance Time (s)		7.1	7.1	6.5	6.5	6.5	5.7	6.6	6.6	5.4	6.6	
Vehicle Extension (s)		2.0	2.0	2.2	2.2	2.2	2.0	5.0	5.0	2.5	5.0	
Lane Grp Cap (vph)		300	261	226	233	213	195	1460	653	297	1851	
v/s Ratio Prot		c0.15		0.07	0.07		0.01	c0.43		c0.14	0.33	
v/s Ratio Perm			0.01			c0.11	0.09		0.14	0.44		
v/c Ratio		0.88	0.03	0.54	0.54	0.84	0.23	1.04	0.34	0.99	0.63	
Uniform Delay, d1		73.5	63.1	72.6	72.6	76.0	29.6	52.9	36.2	64.3	30.4	
Progression Factor		1.00	1.00	0.93	0.93	0.97	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		31.0	0.0	1.3	1.4	24.5	0.2	99.7	1.4	97.4	1.7	
Delay (s)		104.5	63.1	68.8	68.9	98.2	29.8	152.5	37.6	161.7	32.0	
Level of Service		F	E	E	E	F	C	F	D	F	C	
Approach Delay (s)		98.1			88.4			130.6			58.1	
Approach LOS		F			F			F			E	

Intersection Summary			
HCM 2000 Control Delay	97.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	0.97		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	25.9
Intersection Capacity Utilization	103.6%	ICU Level of Service	G
Analysis Period (min)	60		

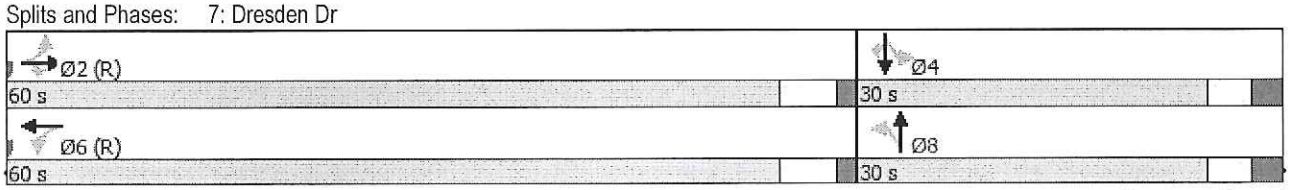
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	49	571	104	39	392	315	40	9	22	52
Future Volume (vph)	49	571	104	39	392	315	40	9	22	52
Lane Group Flow (vph)	49	571	104	39	405	315	217	0	31	52
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases		2			6		8		4	
Permitted Phases	2		2	6		8		4		4
Detector Phase	2	2	2	6	6	8	8	4	4	4
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
Minimum Split (s)	28.5	28.5	28.5	37.5	37.5	26.4	26.4	30.4	30.4	30.4
Total Split (s)	60.0	60.0	60.0	60.0	60.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	66.7%	66.7%	66.7%	66.7%	66.7%	33.3%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.1	3.1	3.1	3.1	3.1
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	2.3	2.3	2.3	2.3	2.3
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)	5.5	5.5	5.5	5.5	5.5	5.4	5.4		5.4	5.4
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.09	0.49	0.10	0.09	0.35	0.89	0.39		0.07	0.12
Control Delay	7.7	13.5	2.3	8.2	9.6	67.1	9.0		24.9	8.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	7.7	13.5	2.3	8.2	9.6	67.1	9.0		24.9	8.1
Queue Length 50th (ft)	15	376	10	9	105	169	17		13	0
Queue Length 95th (ft)	m19	m486	m12	25	188	#373	93		39	33
Internal Link Dist (ft)		663			818		471		419	
Turn Bay Length (ft)	100			100		100				25
Base Capacity (vph)	556	1154	1020	422	1149	375	575		463	470
Starvation Cap Reductn	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.09	0.49	0.10	0.09	0.35	0.84	0.38		0.07	0.11

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 76 (84%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Dresden Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	49	571	104	39	392	13	315	40	177	9	22	52
Future Volume (vph)	49	571	104	39	392	13	315	40	177	9	22	52
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5	5.5	5.5		5.4	5.4			5.4	5.4
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.88			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.99	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1854		1770	1635			1836	1583
Flt Permitted	0.48	1.00	1.00	0.37	1.00		0.74	1.00			0.91	1.00
Satd. Flow (perm)	899	1863	1583	682	1854		1373	1635			1694	1583
Peak-hour factor, PHF	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. Flow (vph)	49	571	104	39	392	13	315	40	177	9	22	52
RTOR Reduction (vph)	0	0	40	0	1	0	0	131	0	0	0	39
Lane Group Flow (vph)	49	571	64	39	404	0	315	86	0	0	31	13
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		4
Actuated Green, G (s)	55.8	55.8	55.8	55.8	55.8		23.3	23.3			23.3	23.3
Effective Green, g (s)	55.8	55.8	55.8	55.8	55.8		23.3	23.3			23.3	23.3
Actuated g/C Ratio	0.62	0.62	0.62	0.62	0.62		0.26	0.26			0.26	0.26
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5		5.4	5.4			5.4	5.4
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	557	1155	981	422	1149		355	423			438	409
v/s Ratio Prot		c0.31			0.22			0.05				
v/s Ratio Perm	0.05		0.04	0.06			c0.23				0.02	0.01
v/c Ratio	0.09	0.49	0.07	0.09	0.35		0.89	0.20			0.07	0.03
Uniform Delay, d1	6.9	9.4	6.8	6.9	8.3		32.1	26.1			25.2	24.9
Progression Factor	1.01	1.27	1.88	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	0.2	1.1	0.1	0.4	0.8		28.3	0.2			0.1	0.0
Delay (s)	7.2	13.0	12.8	7.3	9.2		60.4	26.3			25.2	25.0
Level of Service	A	B	B	A	A		E	C			C	C
Approach Delay (s)		12.6			9.0			46.5			25.1	
Approach LOS		B			A			D			C	

Intersection Summary			
HCM 2000 Control Delay	22.4	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.61		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.9
Intersection Capacity Utilization	73.9%	ICU Level of Service	D
Analysis Period (min)	60		

c Critical Lane Group

Future "No-Build" Intersection Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	324	8	21	765	5	8	0	19	3	0	1
Future Volume (Veh/h)	0	324	8	21	765	5	8	0	19	3	0	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	324	8	21	765	5	8	0	19	3	0	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		897			541							
pX, platoon unblocked	0.76						0.76	0.76		0.76	0.76	0.76
vC, conflicting volume	770			332			1136	1140	328	1152	1142	768
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	542			332			1023	1028	328	1044	1030	539
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			95	100	97	98	100	100
cM capacity (veh/h)	782			1227			161	175	713	152	175	413

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	0	332	21	770	27	4
Volume Left	0	0	21	0	8	3
Volume Right	0	8	0	5	19	1
cSH	1700	1700	1227	1700	353	180
Volume to Capacity	0.00	0.20	0.02	0.45	0.08	0.02
Queue Length 95th (ft)	0	0	1	0	6	2
Control Delay (s)	0.0	0.0	8.0	0.0	16.0	25.4
Lane LOS			A		C	D
Approach Delay (s)	0.0		0.2		16.0	25.4
Approach LOS					C	D

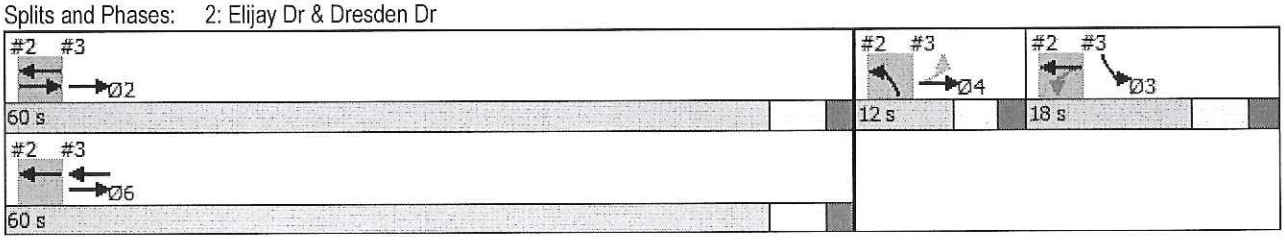
Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	60		

Lane Group	EBT	WBL	WBT	NBL	Ø6
Lane Configurations					
Traffic Volume (vph)	318	25	750	57	
Future Volume (vph)	318	25	750	57	
Lane Group Flow (vph)	353	25	750	77	
Turn Type	NA	custom	NA	Prot	
Protected Phases	2		2 3 6	4	6
Permitted Phases		3			
Detector Phase	2	3	2 3 6	4	
Switch Phase					
Minimum Initial (s)	17.0	5.0		5.0	8.0
Minimum Split (s)	27.0	31.3		30.0	27.0
Total Split (s)	60.0	18.0		12.0	60.0
Total Split (%)	66.7%	20.0%		13.3%	67%
Yellow Time (s)	4.0	4.0		3.0	4.0
All-Red Time (s)	2.0	2.3		2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	
Total Lost Time (s)	6.0	6.3		5.0	
Lead/Lag		Lag		Lead	
Lead-Lag Optimize?					
Recall Mode	Min	Max		Max	Min
v/c Ratio	0.43	0.12	0.57	0.21	
Control Delay	24.3	61.2	3.3	33.8	
Queue Delay	0.0	0.0	2.1	0.0	
Total Delay	24.3	61.2	5.4	33.8	
Queue Length 50th (ft)	180	20	31	40	
Queue Length 95th (ft)	303	m26	m48	97	
Internal Link Dist (ft)	204		81	237	
Turn Bay Length (ft)		50			
Base Capacity (vph)	824	211	1310	369	
Starvation Cap Reductn	0	0	393	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.43	0.12	0.82	0.21	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 121.3
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Elijay Dr & Dresden Dr



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	318	35	25	750	57	20
Future Volume (vph)	318	35	25	750	57	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.3	6.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frt	0.99		1.00	1.00	0.96	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	1838		1770	1863	1733	
Flt Permitted	1.00		0.55	1.00	0.96	
Satd. Flow (perm)	1838		1024	1863	1733	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	318	35	25	750	57	20
RTOR Reduction (vph)	6	0	0	0	12	0
Lane Group Flow (vph)	347	0	25	750	65	0
Turn Type	NA		custom	NA	Prot	
Protected Phases	2			2 3 6	4	
Permitted Phases			3			
Actuated Green, G (s)	54.0		25.0	85.3	25.0	
Effective Green, g (s)	54.0		25.0	79.0	25.0	
Actuated g/C Ratio	0.45		0.21	0.65	0.21	
Clearance Time (s)	6.0		6.3		5.0	
Vehicle Extension (s)	8.0		2.0		3.0	
Lane Grp Cap (vph)	818		211	1213	357	
v/s Ratio Prot	0.19			c0.40	c0.04	
v/s Ratio Perm			0.02			
v/c Ratio	0.42		0.12	0.62	0.18	
Uniform Delay, d1	23.0		39.2	12.3	39.7	
Progression Factor	1.00		1.52	0.25	1.00	
Incremental Delay, d2	1.5		0.6	1.2	1.1	
Delay (s)	24.5		60.1	4.3	40.8	
Level of Service	C		E	A	D	
Approach Delay (s)	24.5			6.1	40.8	
Approach LOS	C			A	D	

Intersection Summary			
HCM 2000 Control Delay	13.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.51		
Actuated Cycle Length (s)	121.3	Sum of lost time (s)	17.3
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	60		

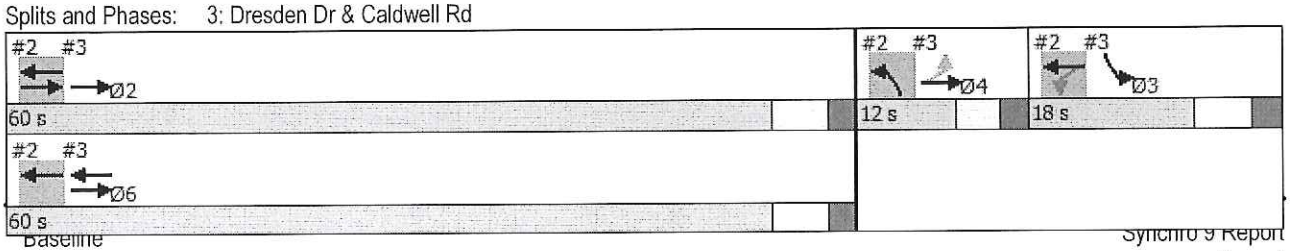
c Critical Lane Group

Lane Group	EBL	EBT	WBT	SBL	Ø2
Lane Configurations					
Traffic Volume (vph)	36	291	717	12	
Future Volume (vph)	36	291	717	12	
Lane Group Flow (vph)	36	291	741	88	
Turn Type	custom	NA	NA	Prot	
Protected Phases		2 4 6	6	3	2
Permitted Phases	4				
Detector Phase	4	2 4 6	6	3	
Switch Phase					
Minimum Initial (s)	5.0		8.0	5.0	17.0
Minimum Split (s)	30.0		27.0	31.3	27.0
Total Split (s)	12.0		60.0	18.0	60.0
Total Split (%)	13.3%		66.7%	20.0%	67%
Yellow Time (s)	3.0		4.0	4.0	4.0
All-Red Time (s)	2.0		2.0	2.3	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	
Total Lost Time (s)	5.0		6.0	6.3	
Lead/Lag	Lead			Lag	
Lead-Lag Optimize?					
Recall Mode	Max		Min	Max	Min
v/c Ratio	0.24	0.23	0.90	0.22	
Control Delay	45.3	0.7	49.0	12.9	
Queue Delay	0.0	0.6	0.0	0.0	
Total Delay	45.3	1.3	49.0	13.0	
Queue Length 50th (ft)	28	3	523	8	
Queue Length 95th (ft)	m69	4	#934	64	
Internal Link Dist (ft)		81	385	375	
Turn Bay Length (ft)	50				
Base Capacity (vph)	147	1290	827	396	
Starvation Cap Reductn	0	654	0	0	
Spillback Cap Reductn	0	0	0	14	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.24	0.46	0.90	0.23	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 121.3
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Dresden Dr & Caldwell Rd



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	36	291	717	24	12	76
Future Volume (vph)	36	291	717	24	12	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0	6.0		6.3	
Lane Util. Factor	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	1.00		0.88	
Flt Protected	0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1770	1863	1855		1634	
Flt Permitted	0.38	1.00	1.00		0.99	
Satd. Flow (perm)	715	1863	1855		1634	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	36	291	717	24	12	76
RTOR Reduction (vph)	0	0	2	0	60	0
Lane Group Flow (vph)	36	291	739	0	28	0
Turn Type	custom	NA	NA		Prot	
Protected Phases		2 4 6	6		3	
Permitted Phases	4					
Actuated Green, G (s)	25.0	85.0	54.0		25.0	
Effective Green, g (s)	25.0	85.0	54.0		25.0	
Actuated g/C Ratio	0.21	0.70	0.45		0.21	
Clearance Time (s)	5.0		6.0		6.3	
Vehicle Extension (s)	3.0		8.0		2.0	
Lane Grp Cap (vph)	147	1305	825		336	
v/s Ratio Prot		c0.16	c0.40		c0.02	
v/s Ratio Perm	0.05					
v/c Ratio	0.24	0.22	0.90		0.08	
Uniform Delay, d1	40.3	6.4	31.1		38.9	
Progression Factor	1.00	0.05	1.00		1.00	
Incremental Delay, d2	3.7	0.3	17.2		0.5	
Delay (s)	44.0	0.7	48.3		39.4	
Level of Service	D	A	D		D	
Approach Delay (s)		5.5	48.3		39.4	
Approach LOS		A	D		D	

Intersection Summary			
HCM 2000 Control Delay	35.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	121.3	Sum of lost time (s)	17.3
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	60		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	1	61	53	8	25	1
Future Volume (Veh/h)	1	61	53	8	25	1
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1	61	53	8	25	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			455			
pX, platoon unblocked						
vC, conflicting volume	61				120	57
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	61				120	57
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				97	100
cM capacity (veh/h)	1542				875	1009

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	62	61	26
Volume Left	1	0	25
Volume Right	0	8	1
cSH	1542	1700	879
Volume to Capacity	0.00	0.04	0.03
Queue Length 95th (ft)	0	0	2
Control Delay (s)	0.1	0.0	9.2
Lane LOS	A		A
Approach Delay (s)	0.1	0.0	9.2
Approach LOS			A

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	14.0%	ICU Level of Service	A
Analysis Period (min)	60		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	349	2	1	782	0	50	0	12	14	0	20
Future Volume (Veh/h)	0	349	2	1	782	0	50	0	12	14	0	20
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	349	2	1	782	0	50	0	12	14	0	20
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			TWLTL							
Median storage veh)					2							
Upstream signal (ft)		1154			284							
pX, platoon unblocked	0.76						0.76	0.76		0.76	0.76	0.76
vC, conflicting volume	782			351			1154	1134	350	1146	1135	782
vC1, stage 1 conf vol							350	350		784	784	
vC2, stage 2 conf vol							804	784		362	351	
vCu, unblocked vol	550			351			1042	1016	350	1031	1017	550
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			85	100	98	96	100	95
cM capacity (veh/h)	771			1208			329	353	693	351	353	404

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total	351	1	782	62	34
Volume Left	0	1	0	50	14
Volume Right	2	0	0	12	20
cSH	1700	1208	1700	367	380
Volume to Capacity	0.21	0.00	0.46	0.17	0.09
Queue Length 95th (ft)	0	0	0	15	7
Control Delay (s)	0.0	8.0	0.0	16.8	15.4
Lane LOS		A		C	C
Approach Delay (s)	0.0	0.0		16.8	15.4
Approach LOS				C	C

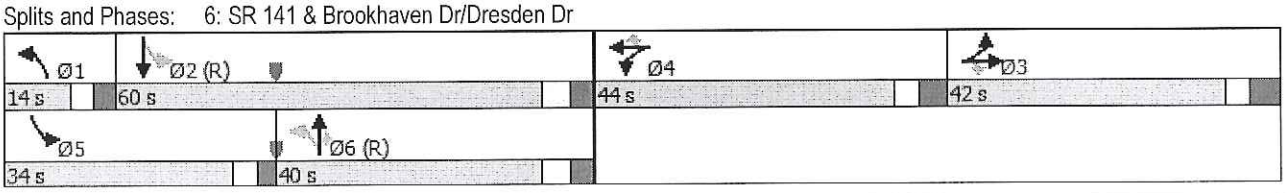
Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	60		

Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	57	106	453	127	324	79	813	105	323	1546
Future Volume (vph)	57	106	453	127	324	79	813	105	323	1546
Lane Group Flow (vph)	120	106	285	295	324	79	813	105	323	1603
Turn Type	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	3		4	4		1	6		5	2
Permitted Phases		3			4	6		6	2	
Detector Phase	3	3	4	4	4	1	6	6	5	2
Switch Phase										
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	39.1	39.1	41.5	41.5	41.5	10.7	31.6	31.6	10.4	31.6
Total Split (s)	42.0	42.0	44.0	44.0	44.0	14.0	40.0	40.0	34.0	60.0
Total Split (%)	26.3%	26.3%	27.5%	27.5%	27.5%	8.8%	25.0%	25.0%	21.3%	37.5%
Yellow Time (s)	3.0	3.0	3.1	3.1	3.1	3.0	3.6	3.6	3.0	3.6
All-Red Time (s)	4.1	4.1	3.4	3.4	3.4	2.7	3.0	3.0	2.4	3.0
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)	7.1	7.1	6.5	6.5	6.5	5.7	6.6	6.6	5.4	6.6
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min
v/c Ratio	0.70	0.38	0.86	0.87	0.60	0.63	0.58	0.15	0.74	0.91
Control Delay	93.3	6.7	86.6	88.1	12.6	54.8	43.2	1.9	31.7	46.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	93.3	6.7	86.6	88.1	12.6	54.8	43.2	1.9	31.7	46.6
Queue Length 50th (ft)	124	0	309	320	26	35	370	0	167	810
Queue Length 95th (ft)	213	39	#505	#525	132	#143	570	28	#388	#1344
Internal Link Dist (ft)	293			663			464			725
Turn Bay Length (ft)		50	350		200	125		300		
Base Capacity (vph)	395	458	393	403	593	139	1390	712	468	1769
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.23	0.73	0.73	0.55	0.57	0.58	0.15	0.69	0.91

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 38 (24%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: SR 141 & Brookhaven Dr/Dresden Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	57	106	453	127	324	79	813	105	323	1546	57
Future Volume (vph)	63	57	106	453	127	324	79	813	105	323	1546	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.1	7.1	6.5	6.5	6.5	5.7	6.6	6.6	5.4	6.6	
Lane Util. Factor		1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.97	1.00	0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1815	1583	1681	1721	1583	1770	3539	1583	1770	3520	
Flt Permitted		0.97	1.00	0.95	0.97	1.00	0.06	1.00	1.00	0.20	1.00	
Satd. Flow (perm)		1815	1583	1681	1721	1583	118	3539	1583	369	3520	
Peak-hour factor, PHF	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. Flow (vph)	63	57	106	453	127	324	79	813	105	323	1546	57
RTOR Reduction (vph)	0	0	96	0	0	233	0	0	64	0	1	0
Lane Group Flow (vph)	0	120	10	285	295	91	79	813	41	323	1602	0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	3	3		4	4		1	6		5	2	
Permitted Phases			3			4	6		6	2		
Actuated Green, G (s)		15.1	15.1	31.5	31.5	31.5	70.1	62.9	62.9	93.2	80.3	
Effective Green, g (s)		15.1	15.1	31.5	31.5	31.5	70.1	62.9	62.9	93.2	80.3	
Actuated g/C Ratio		0.09	0.09	0.20	0.20	0.20	0.44	0.39	0.39	0.58	0.50	
Clearance Time (s)		7.1	7.1	6.5	6.5	6.5	5.7	6.6	6.6	5.4	6.6	
Vehicle Extension (s)		2.0	2.0	2.2	2.2	2.2	2.0	5.0	5.0	2.5	5.0	
Lane Grp Cap (vph)		171	149	330	338	311	126	1391	622	432	1766	
v/s Ratio Prot		c0.07		0.17	c0.17		0.03	0.23		c0.12	c0.46	
v/s Ratio Perm			0.01			0.06	0.25		0.03	0.32		
v/c Ratio		0.70	0.07	0.86	0.87	0.29	0.63	0.58	0.07	0.75	0.91	
Uniform Delay, d1		70.3	66.0	62.2	62.3	54.8	34.6	38.3	30.3	22.4	36.4	
Progression Factor		1.00	1.00	0.95	0.95	1.00	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		10.7	0.1	21.9	23.4	0.2	7.0	1.8	0.2	6.9	9.4	
Delay (s)		81.0	66.1	81.0	82.7	54.8	41.6	40.1	30.5	29.2	45.9	
Level of Service		F	E	F	F	D	D	D	C	C	D	
Approach Delay (s)		74.0			72.1			39.2			43.1	
Approach LOS		E			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	50.3	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.88		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	25.9
Intersection Capacity Utilization	92.9%	ICU Level of Service	F
Analysis Period (min)	60		

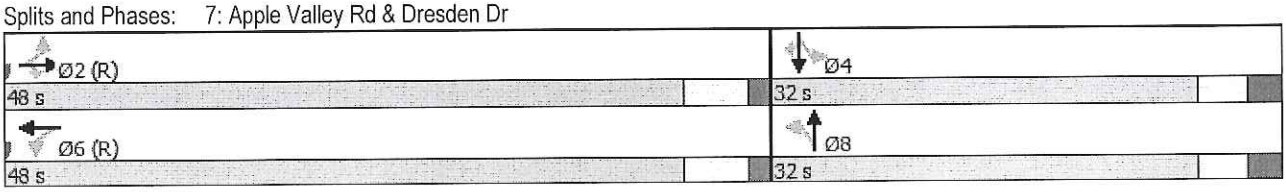
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	24	288	229	98	695	101	12	5	113	125
Future Volume (vph)	24	288	229	98	695	101	12	5	113	125
Lane Group Flow (vph)	24	288	229	98	699	101	59	0	118	125
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases		2			6		8		4	
Permitted Phases	2		2	6		8		4		4
Detector Phase	2	2	2	6	6	8	8	4	4	4
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
Minimum Split (s)	28.5	28.5	28.5	37.5	37.5	26.4	26.4	30.4	30.4	30.4
Total Split (s)	48.0	48.0	48.0	48.0	48.0	32.0	32.0	32.0	32.0	32.0
Total Split (%)	60.0%	60.0%	60.0%	60.0%	60.0%	40.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.1	3.1	3.1	3.1	3.1
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	2.3	2.3	2.3	2.3	2.3
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)	5.5	5.5	5.5	5.5	5.5	5.4	5.4		5.4	5.4
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.06	0.22	0.19	0.13	0.53	0.50	0.20		0.41	0.35
Control Delay	3.4	3.8	0.8	4.9	8.0	39.3	12.9		33.8	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	3.4	3.8	0.8	4.9	8.0	39.3	12.9		33.8	8.5
Queue Length 50th (ft)	3	35	5	13	130	47	5		54	0
Queue Length 95th (ft)	m7	m74	m13	40	328	100	41		107	52
Internal Link Dist (ft)		663			817		471		419	
Turn Bay Length (ft)	100			100		100				25
Base Capacity (vph)	435	1313	1184	765	1312	421	577		611	609
Starvation Cap Reductn	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.06	0.22	0.19	0.13	0.53	0.24	0.10		0.19	0.21

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 76 (95%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Apple Valley Rd & Dresden Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	288	229	98	695	4	101	12	47	5	113	125
Future Volume (vph)	24	288	229	98	695	4	101	12	47	5	113	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5	5.5	5.5		5.4	5.4			5.4	5.4
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.88			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1861		1770	1640			1859	1583
Flt Permitted	0.33	1.00	1.00	0.58	1.00		0.68	1.00			0.99	1.00
Satd. Flow (perm)	619	1863	1583	1087	1861		1269	1640			1840	1583
Peak-hour factor, PHF	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. Flow (vph)	24	288	229	98	695	4	101	12	47	5	113	125
RTOR Reduction (vph)	0	0	68	0	0	0	0	40	0	0	0	105
Lane Group Flow (vph)	24	288	161	98	699	0	101	19	0	0	118	20
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		4
Actuated Green, G (s)	56.4	56.4	56.4	56.4	56.4		12.7	12.7			12.7	12.7
Effective Green, g (s)	56.4	56.4	56.4	56.4	56.4		12.7	12.7			12.7	12.7
Actuated g/C Ratio	0.70	0.70	0.70	0.70	0.70		0.16	0.16			0.16	0.16
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5		5.4	5.4			5.4	5.4
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	436	1313	1116	766	1312		201	260			292	251
v/s Ratio Prot		0.15			c0.38			0.01				
v/s Ratio Perm	0.04		0.10	0.09			c0.08				0.06	0.01
v/c Ratio	0.06	0.22	0.14	0.13	0.53		0.50	0.07			0.40	0.08
Uniform Delay, d1	3.6	4.1	3.9	3.8	5.6		30.8	28.6			30.2	28.7
Progression Factor	0.71	0.76	0.81	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	0.2	0.3	0.2	0.3	1.6		2.0	0.1			0.9	0.1
Delay (s)	2.8	3.5	3.4	4.2	7.1		32.7	28.8			31.2	28.8
Level of Service	A	A	A	A	A		C	C			C	C
Approach Delay (s)		3.4			6.8			31.3			30.0	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	11.2	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.9
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	60		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	748	18	15	481	1	11	0	20	1	0	0
Future Volume (Veh/h)	0	748	18	15	481	1	11	0	20	1	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	748	18	15	481	1	11	0	20	1	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		902			537							
pX, platoon unblocked	0.88			0.81			0.87	0.87	0.81	0.87	0.87	0.88
vC, conflicting volume	482			766			1268	1269	757	1280	1278	482
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	349			592			931	932	581	945	942	348
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			95	100	95	99	100	100
cM capacity (veh/h)	1070			795			211	226	415	197	223	615

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	0	766	15	482	31	1
Volume Left	0	0	15	0	11	1
Volume Right	0	18	0	1	20	0
cSH	1700	1700	795	1700	309	197
Volume to Capacity	0.00	0.45	0.02	0.28	0.10	0.01
Queue Length 95th (ft)	0	0	1	0	8	0
Control Delay (s)	0.0	0.0	9.6	0.0	17.9	23.4
Lane LOS			A		C	C
Approach Delay (s)	0.0		0.3		17.9	23.4
Approach LOS					C	C

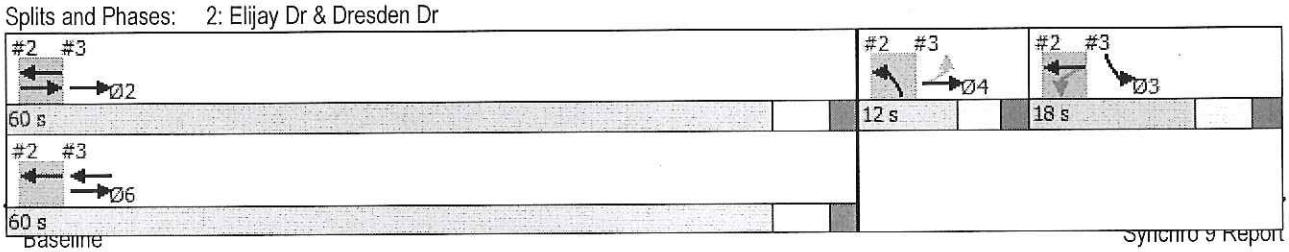
Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	50.5%	ICU Level of Service	A
Analysis Period (min)	60		

Lane Group	EBT	WBL	WBT	NBL	Ø6
Lane Configurations					
Traffic Volume (vph)	758	26	478	42	
Future Volume (vph)	758	26	478	42	
Lane Group Flow (vph)	798	26	478	75	
Turn Type	NA	custom	NA	Prot	
Protected Phases	2		2 3 6	4	6
Permitted Phases		3			
Detector Phase	2	3	2 3 6	4	
Switch Phase					
Minimum Initial (s)	17.0	5.0		5.0	8.0
Minimum Split (s)	27.0	31.3		30.0	27.0
Total Split (s)	60.0	18.0		12.0	60.0
Total Split (%)	66.7%	20.0%		13.3%	67%
Yellow Time (s)	4.0	4.0		3.0	4.0
All-Red Time (s)	2.0	2.3		2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	
Total Lost Time (s)	6.0	6.3		5.0	
Lead/Lag		Lag		Lead	
Lead-Lag Optimize?					
Recall Mode	Min	Max		Max	Min
v/c Ratio	0.97	0.19	0.36	0.20	
Control Delay	71.4	68.0	2.0	25.5	
Queue Delay	0.0	0.0	0.5	0.0	
Total Delay	71.4	68.0	2.5	25.5	
Queue Length 50th (ft)	594	20	19	27	
Queue Length 95th (ft)	#1043	m37	21	81	
Internal Link Dist (ft)	204		81	237	
Turn Bay Length (ft)		50			
Base Capacity (vph)	826	139	1310	377	
Starvation Cap Reductn	0	0	447	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.97	0.19	0.55	0.20	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 121.3
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Elijay Dr & Dresden Dr



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	758	40	26	478	42	33
Future Volume (vph)	758	40	26	478	42	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.3	6.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frt	0.99		1.00	1.00	0.94	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	1850		1770	1863	1704	
Flt Permitted	1.00		0.36	1.00	0.97	
Satd. Flow (perm)	1850		678	1863	1704	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	758	40	26	478	42	33
RTOR Reduction (vph)	3	0	0	0	26	0
Lane Group Flow (vph)	795	0	26	478	49	0
Turn Type	NA		custom	NA	Prot	
Protected Phases	2			2 3 6	4	
Permitted Phases			3			
Actuated Green, G (s)	54.0		25.0	85.3	25.0	
Effective Green, g (s)	54.0		25.0	79.0	25.0	
Actuated g/C Ratio	0.45		0.21	0.65	0.21	
Clearance Time (s)	6.0		6.3		5.0	
Vehicle Extension (s)	8.0		2.0		3.0	
Lane Grp Cap (vph)	823		139	1213	351	
v/s Ratio Prot	c0.43			c0.26	c0.03	
v/s Ratio Perm			0.04			
v/c Ratio	0.97		0.19	0.39	0.14	
Uniform Delay, d1	32.8		39.8	9.9	39.4	
Progression Factor	1.00		1.60	0.18	1.00	
Incremental Delay, d2	38.4		2.5	0.8	0.8	
Delay (s)	71.1		66.1	2.5	40.2	
Level of Service	E		E	A	D	
Approach Delay (s)	71.1			5.8	40.2	
Approach LOS	E			A	D	

Intersection Summary			
HCM 2000 Control Delay	45.5	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	121.3	Sum of lost time (s)	17.3
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	60		

c Critical Lane Group

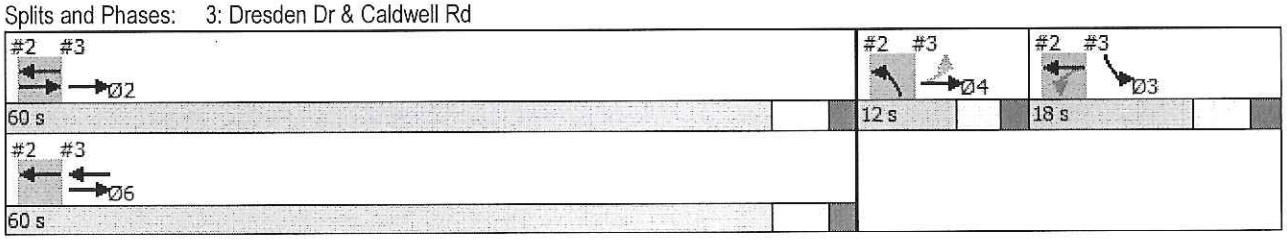
Lane Group	EBL	EBT	WBT	SBL	Ø2
Lane Configurations					
Traffic Volume (vph)	113	659	454	35	
Future Volume (vph)	113	659	454	35	
Lane Group Flow (vph)	113	659	478	98	
Turn Type	custom	NA	NA	Prot	
Protected Phases		2 4 6	6	3	2
Permitted Phases	4				
Detector Phase	4	2 4 6	6	3	
Switch Phase					
Minimum Initial (s)	5.0		8.0	5.0	17.0
Minimum Split (s)	30.0		27.0	31.3	27.0
Total Split (s)	12.0		60.0	18.0	60.0
Total Split (%)	13.3%		66.7%	20.0%	67%
Yellow Time (s)	3.0		4.0	4.0	4.0
All-Red Time (s)	2.0		2.0	2.3	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	
Total Lost Time (s)	5.0		6.0	6.3	
Lead/Lag	Lead			Lag	
Lead-Lag Optimize?					
Recall Mode	Max		Min	Max	Min
v/c Ratio	0.60	0.51	0.58	0.25	
Control Delay	44.9	0.9	28.4	18.6	
Queue Delay	0.0	4.1	0.0	0.0	
Total Delay	44.9	5.0	28.4	18.6	
Queue Length 50th (ft)	94	8	271	22	
Queue Length 95th (ft)	m103	m6	448	85	
Internal Link Dist (ft)		81	385	375	
Turn Bay Length (ft)	50				
Base Capacity (vph)	188	1290	826	394	
Starvation Cap Reductn	0	529	0	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.60	0.87	0.58	0.25	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 121.3
Natural Cycle: 110
Control Type: Actuated-Uncoordinated

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

Splits and Phases: 3: Dresden Dr & Caldwell Rd



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	113	659	454	24	35	63
Future Volume (vph)	113	659	454	24	35	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0	6.0		6.3	
Lane Util. Factor	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.99		0.91	
Flt Protected	0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1770	1863	1850		1671	
Flt Permitted	0.49	1.00	1.00		0.98	
Satd. Flow (perm)	913	1863	1850		1671	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	113	659	454	24	35	63
RTOR Reduction (vph)	0	0	3	0	50	0
Lane Group Flow (vph)	113	659	475	0	48	0
Turn Type	custom	NA	NA		Prot	
Protected Phases		2 4 6	6		3	
Permitted Phases	4					
Actuated Green, G (s)	25.0	85.0	54.0		25.0	
Effective Green, g (s)	25.0	85.0	54.0		25.0	
Actuated g/C Ratio	0.21	0.70	0.45		0.21	
Clearance Time (s)	5.0		6.0		6.3	
Vehicle Extension (s)	3.0		8.0		2.0	
Lane Grp Cap (vph)	188	1305	823		344	
v/s Ratio Prot		0.35	c0.26		c0.03	
v/s Ratio Perm	c0.12					
v/c Ratio	0.60	0.50	0.58		0.14	
Uniform Delay, d1	43.6	8.4	25.1		39.4	
Progression Factor	0.87	0.04	1.00		1.00	
Incremental Delay, d2	5.9	0.5	2.8		0.8	
Delay (s)	43.7	0.9	27.9		40.2	
Level of Service	D	A	C		D	
Approach Delay (s)		7.1	27.9		40.2	
Approach LOS		A	C		D	

Intersection Summary			
HCM 2000 Control Delay	16.9	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	121.3	Sum of lost time (s)	17.3
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	60		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	29	53	88	22	14	2
Future Volume (Veh/h)	29	53	88	22	14	2
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	29	53	88	22	14	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			455			
pX, platoon unblocked						
vC, conflicting volume	110				210	99
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	110				210	99
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				98	100
cM capacity (veh/h)	1480				763	957

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	82	110	16
Volume Left	29	0	14
Volume Right	0	22	2
cSH	1480	1700	783
Volume to Capacity	0.02	0.06	0.02
Queue Length 95th (ft)	1	0	2
Control Delay (s)	2.7	0.0	9.7
Lane LOS	A		A
Approach Delay (s)	2.7	0.0	9.7
Approach LOS			A

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	21.1%	ICU Level of Service	A
Analysis Period (min)	60		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	759	37	11	487	0	9	0	3	5	0	8
Future Volume (Veh/h)	0	759	37	11	487	0	9	0	3	5	0	8
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	759	37	11	487	0	9	0	3	5	0	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			TWLTL							
Median storage veh)					2							
Upstream signal (ft)		1155			284							
pX, platoon unblocked	0.88			0.82			0.88	0.88	0.82	0.88	0.88	0.88
vC, conflicting volume	487			796			1294	1286	778	1290	1305	487
vC1, stage 1 conf vol							778	778		509	509	
vC2, stage 2 conf vol							517	509		780	796	
vCu, unblocked vol	348			639			957	948	616	951	969	348
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			97	100	99	99	100	99
cM capacity (veh/h)	1065			773			352	358	401	344	344	611

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total	796	11	487	12	13
Volume Left	0	11	0	9	5
Volume Right	37	0	0	3	8
cSH	1700	773	1700	363	471
Volume to Capacity	0.47	0.01	0.29	0.03	0.03
Queue Length 95th (ft)	0	1	0	3	2
Control Delay (s)	0.0	9.7	0.0	15.3	12.9
Lane LOS		A		C	B
Approach Delay (s)	0.0	0.2		15.3	12.9
Approach LOS				C	B

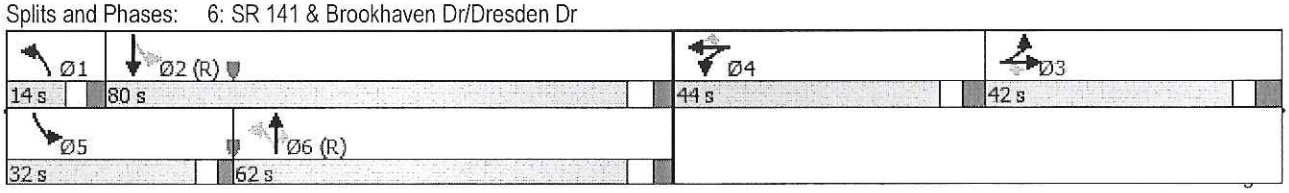
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	52.2%	ICU Level of Service	A
Analysis Period (min)	60		

Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	153	50	187	71	512	46	1583	323	307	1182
Future Volume (vph)	153	50	187	71	512	46	1583	323	307	1182
Lane Group Flow (vph)	276	50	127	131	512	46	1583	323	307	1219
Turn Type	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	3		4	4		1	6		5	2
Permitted Phases		3			4	6		6	2	
Detector Phase	3	3	4	4	4	1	6	6	5	2
Switch Phase										
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	39.1	39.1	41.5	41.5	41.5	10.7	31.6	31.6	10.4	31.6
Total Split (s)	42.0	42.0	44.0	44.0	44.0	14.0	62.0	62.0	32.0	80.0
Total Split (%)	23.3%	23.3%	24.4%	24.4%	24.4%	7.8%	34.4%	34.4%	17.8%	44.4%
Yellow Time (s)	3.0	3.0	3.1	3.1	3.1	3.0	3.6	3.6	3.0	3.6
All-Red Time (s)	4.1	4.1	3.4	3.4	3.4	2.7	3.0	3.0	2.4	3.0
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)	7.1	7.1	6.5	6.5	6.5	5.7	6.6	6.6	5.4	6.6
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min
v/c Ratio	0.89	0.13	0.50	0.50	0.95	0.26	1.15	0.46	1.01	0.68
Control Delay	112.7	0.7	69.3	69.2	55.9	26.7	321.7	26.3	171.8	39.0
Queue Delay	0.0	0.0	0.0	0.0	2.2	0.0	0.0	0.0	0.0	0.0
Total Delay	112.7	0.7	69.3	69.2	58.1	26.7	321.7	26.3	171.8	39.0
Queue Length 50th (ft)	321	0	141	144	217	24	~1185	157	~331	592
Queue Length 95th (ft)	#541	0	m192	m198	m#457	60	#1713	349	#666	#974
Internal Link Dist (ft)	293			663			464			725
Turn Bay Length (ft)		50	350		200	125		300		
Base Capacity (vph)	353	410	350	360	612	196	1380	706	303	1800
Starvation Cap Reductn	0	0	0	0	31	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.12	0.36	0.36	0.88	0.23	1.15	0.46	1.01	0.68

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 3 (2%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
~ Volume exceeds capacity, queue is theoretically infinite.
Queue shown is maximum after two cycles.
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: SR 141 & Brookhaven Dr/Dresden Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	123	153	50	187	71	512	46	1583	323	307	1182	37
Future Volume (vph)	123	153	50	187	71	512	46	1583	323	307	1182	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.1	7.1	6.5	6.5	6.5	5.7	6.6	6.6	5.4	6.6	
Lane Util. Factor		1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98	1.00	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1822	1583	1681	1730	1583	1770	3539	1583	1770	3523	
Flt Permitted		0.98	1.00	0.95	0.98	1.00	0.16	1.00	1.00	0.05	1.00	
Satd. Flow (perm)		1822	1583	1681	1730	1583	293	3539	1583	99	3523	
Peak-hour factor, PHF	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. Flow (vph)	123	153	50	187	71	512	46	1583	323	307	1182	37
RTOR Reduction (vph)	0	0	42	0	0	303	0	0	89	0	1	0
Lane Group Flow (vph)	0	276	9	127	131	209	46	1583	234	307	1218	0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	3	3		4	4		1	6		5	2	
Permitted Phases			3			4	6		6	2		
Actuated Green, G (s)		30.6	30.6	27.0	27.0	27.0	75.9	70.2	70.2	102.2	90.8	
Effective Green, g (s)		30.6	30.6	27.0	27.0	27.0	75.9	70.2	70.2	102.2	90.8	
Actuated g/C Ratio		0.17	0.17	0.15	0.15	0.15	0.42	0.39	0.39	0.57	0.50	
Clearance Time (s)		7.1	7.1	6.5	6.5	6.5	5.7	6.6	6.6	5.4	6.6	
Vehicle Extension (s)		2.0	2.0	2.2	2.2	2.2	2.0	5.0	5.0	2.5	5.0	
Lane Grp Cap (vph)		309	269	252	259	237	170	1380	617	303	1777	
v/s Ratio Prot		c0.15		0.08	0.08		0.01	c0.45		c0.15	0.35	
v/s Ratio Perm			0.01			c0.13	0.11		0.15	0.43		
v/c Ratio		0.89	0.03	0.50	0.51	0.88	0.27	1.15	0.38	1.01	0.69	
Uniform Delay, d1		73.1	62.3	70.3	70.4	74.9	32.4	54.9	39.3	64.0	33.8	
Progression Factor		1.00	1.00	0.93	0.93	0.91	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		33.3	0.0	0.7	0.7	31.5	0.3	274.6	1.8	116.6	2.2	
Delay (s)		106.4	62.4	66.2	66.1	99.9	32.8	329.5	41.1	180.6	36.0	
Level of Service		F	E	E	E	F	C	F	D	F	D	
Approach Delay (s)		99.6			88.6			274.8			65.1	
Approach LOS		F			F			F			E	

Intersection Summary			
HCM 2000 Control Delay	161.0	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.03		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	25.9
Intersection Capacity Utilization	107.2%	ICU Level of Service	G
Analysis Period (min)	60		

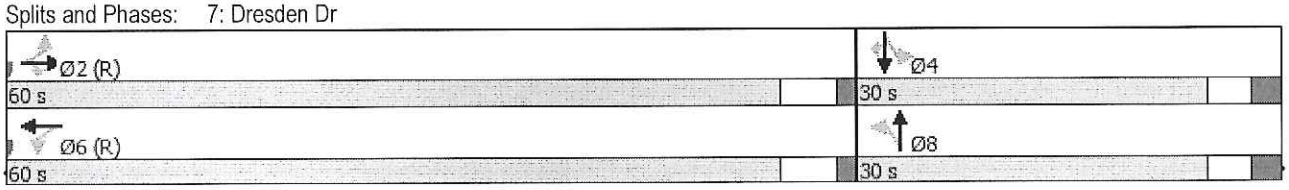
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	51	594	108	41	408	328	42	9	23	54
Future Volume (vph)	51	594	108	41	408	328	42	9	23	54
Lane Group Flow (vph)	51	594	108	41	422	328	226	0	32	54
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases		2			6		8		4	
Permitted Phases	2		2	6		8		4		4
Detector Phase	2	2	2	6	6	8	8	4	4	4
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
Minimum Split (s)	28.5	28.5	28.5	37.5	37.5	26.4	26.4	30.4	30.4	30.4
Total Split (s)	60.0	60.0	60.0	60.0	60.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	66.7%	66.7%	66.7%	66.7%	66.7%	33.3%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.1	3.1	3.1	3.1	3.1
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	2.3	2.3	2.3	2.3	2.3
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)	5.5	5.5	5.5	5.5	5.5	5.4	5.4		5.4	5.4
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.09	0.52	0.11	0.10	0.37	0.91	0.40		0.07	0.12
Control Delay	7.5	13.6	2.0	8.3	9.9	74.5	9.0		24.9	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	7.5	13.6	2.0	8.3	9.9	74.5	9.0		24.9	8.0
Queue Length 50th (ft)	14	378	7	9	111	178	18		13	0
Queue Length 95th (ft)	m18	m477	m11	27	197	#393	97		40	33
Internal Link Dist (ft)		663			822		471		419	
Turn Bay Length (ft)	100			100		100				25
Base Capacity (vph)	537	1147	1016	399	1142	374	580		463	471
Starvation Cap Reductn	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.09	0.52	0.11	0.10	0.37	0.88	0.39		0.07	0.11

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 76 (84%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Dresden Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	594	108	41	408	14	328	42	184	9	23	54
Future Volume (vph)	51	594	108	41	408	14	328	42	184	9	23	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5	5.5	5.5		5.4	5.4			5.4	5.4
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.88			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.99	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1853		1770	1635			1837	1583
Flt Permitted	0.47	1.00	1.00	0.35	1.00		0.74	1.00			0.91	1.00
Satd. Flow (perm)	873	1863	1583	649	1853		1372	1635			1697	1583
Peak-hour factor, PHF	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. Flow (vph)	51	594	108	41	408	14	328	42	184	9	23	54
RTOR Reduction (vph)	0	0	42	0	1	0	0	136	0	0	0	40
Lane Group Flow (vph)	51	594	66	41	421	0	328	90	0	0	32	14
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		4
Actuated Green, G (s)	55.4	55.4	55.4	55.4	55.4		23.7	23.7			23.7	23.7
Effective Green, g (s)	55.4	55.4	55.4	55.4	55.4		23.7	23.7			23.7	23.7
Actuated g/C Ratio	0.62	0.62	0.62	0.62	0.62		0.26	0.26			0.26	0.26
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5		5.4	5.4			5.4	5.4
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	537	1146	974	399	1140		361	430			446	416
v/s Ratio Prot		c0.32			0.23			0.06				
v/s Ratio Perm	0.06		0.04	0.06			c0.24				0.02	0.01
v/c Ratio	0.09	0.52	0.07	0.10	0.37		0.91	0.21			0.07	0.03
Uniform Delay, d1	7.1	9.8	6.9	7.1	8.6		32.1	25.9			24.9	24.6
Progression Factor	0.97	1.23	1.66	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	0.2	1.1	0.1	0.5	0.9		34.4	0.2			0.1	0.0
Delay (s)	7.1	13.2	11.6	7.6	9.5		66.5	26.1			25.0	24.7
Level of Service	A	B	B	A	A		E	C			C	C
Approach Delay (s)		12.5			9.4			50.0			24.8	
Approach LOS		B			A			D			C	

Intersection Summary			
HCM 2000 Control Delay	23.5	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.9
Intersection Capacity Utilization	76.3%	ICU Level of Service	D
Analysis Period (min)	60		

c Critical Lane Group

Future "No-Build" Improved Intersection Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	324	8	21	765	5	8	0	19	3	0	1
Future Volume (Veh/h)	0	324	8	21	765	5	8	0	19	3	0	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	324	8	21	765	5	8	0	19	3	0	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		897			541							
pX, platoon unblocked	0.73						0.73	0.73		0.73	0.73	0.73
vC, conflicting volume	770			332			1136	1140	328	1152	1142	768
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	501			332			1002	1008	328	1025	1010	498
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			95	100	97	98	100	100
cM capacity (veh/h)	777			1227			159	173	713	150	172	418

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	0	332	21	770	27	4
Volume Left	0	0	21	0	8	3
Volume Right	0	8	0	5	19	1
cSH	1700	1700	1227	1700	351	179
Volume to Capacity	0.00	0.20	0.02	0.45	0.08	0.02
Queue Length 95th (ft)	0	0	1	0	6	2
Control Delay (s)	0.0	0.0	8.0	0.0	16.1	25.6
Lane LOS			A		C	D
Approach Delay (s)	0.0		0.2		16.1	25.6
Approach LOS					C	D

Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	50.6%	ICU Level of Service	A
Analysis Period (min)	60		

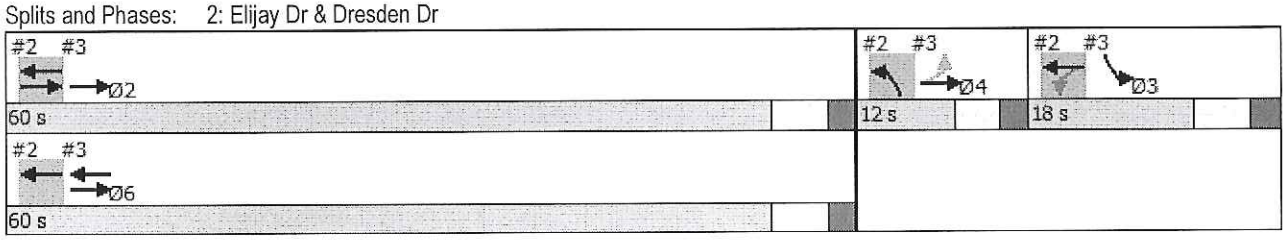
Lane Group	EBT	WBL	WBT	NBL	Ø6
Lane Configurations					
Traffic Volume (vph)	318	25	750	57	
Future Volume (vph)	318	25	750	57	
Lane Group Flow (vph)	353	25	750	77	
Turn Type	NA	custom	NA	Prot	
Protected Phases	2		2 3 6	4	6
Permitted Phases		3			
Detector Phase	2	3	2 3 6	4	
Switch Phase					
Minimum Initial (s)	17.0	5.0		5.0	8.0
Minimum Split (s)	27.0	31.3		30.0	27.0
Total Split (s)	60.0	18.0		12.0	60.0
Total Split (%)	66.7%	20.0%		13.3%	67%
Yellow Time (s)	4.0	4.0		3.0	4.0
All-Red Time (s)	2.0	2.3		2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	
Total Lost Time (s)	6.0	6.3		5.0	
Lead/Lag		Lag		Lead	
Lead-Lag Optimize?					
Recall Mode	Min	Min		Max	Min
v/c Ratio	0.38	0.22	0.61	0.19	
Control Delay	17.7	64.3	3.1	28.5	
Queue Delay	0.0	0.0	0.9	0.0	
Total Delay	17.7	64.3	4.0	28.5	
Queue Length 50th (ft)	141	18	29	34	
Queue Length 95th (ft)	243	m26	m48	85	
Internal Link Dist (ft)	204		81	237	
Turn Bay Length (ft)		50			
Base Capacity (vph)	932	112	1251	415	
Starvation Cap Reductn	0	0	247	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.38	0.22	0.75	0.19	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 107.2
Natural Cycle: 110
Control Type: Actuated-Uncoordinated

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

Splits and Phases: 2: Elijay Dr & Dresden Dr



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	318	35	25	750	57	20
Future Volume (vph)	318	35	25	750	57	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.3	6.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frt	0.99		1.00	1.00	0.96	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	1838		1770	1863	1733	
Flt Permitted	1.00		0.55	1.00	0.96	
Satd. Flow (perm)	1838		1024	1863	1733	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	318	35	25	750	57	20
RTOR Reduction (vph)	6	0	0	0	12	0
Lane Group Flow (vph)	347	0	25	750	65	0
Turn Type	NA		custom	NA	Prot	
Protected Phases	2			2 3 6	4	
Permitted Phases			3			
Actuated Green, G (s)	53.2		11.7	71.2	25.0	
Effective Green, g (s)	53.2		11.7	64.9	25.0	
Actuated g/C Ratio	0.50		0.11	0.61	0.23	
Clearance Time (s)	6.0		6.3		5.0	
Vehicle Extension (s)	8.0		2.0		3.0	
Lane Grp Cap (vph)	912		111	1127	404	
v/s Ratio Prot	0.19			c0.40	c0.04	
v/s Ratio Perm			0.02			
v/c Ratio	0.38		0.23	0.67	0.16	
Uniform Delay, d1	16.8		43.6	14.0	32.8	
Progression Factor	1.00		1.37	0.16	1.00	
Incremental Delay, d2	1.1		0.2	2.0	0.9	
Delay (s)	17.9		59.8	4.2	33.6	
Level of Service	B		E	A	C	
Approach Delay (s)	17.9			6.0	33.6	
Approach LOS	B			A	C	

Intersection Summary			
HCM 2000 Control Delay	11.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	107.2	Sum of lost time (s)	17.3
Intersection Capacity Utilization	53.0%	ICU Level of Service	A
Analysis Period (min)	60		

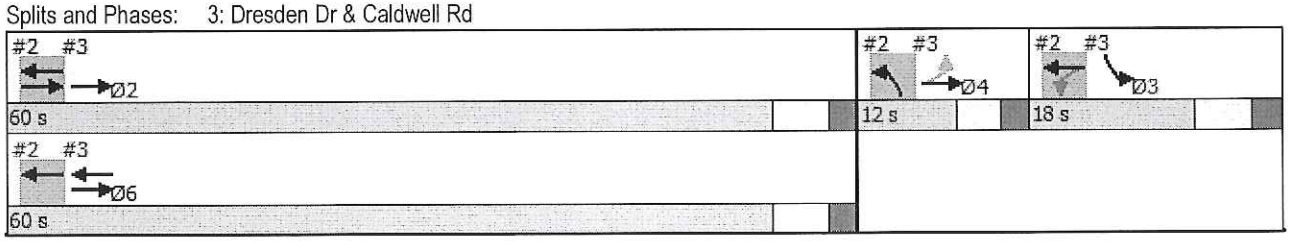
c Critical Lane Group

Lane Group	EBL	EBT	WBT	SBL	Ø2
Lane Configurations					
Traffic Volume (vph)	36	291	717	12	
Future Volume (vph)	36	291	717	12	
Lane Group Flow (vph)	36	291	741	88	
Turn Type	custom	NA	NA	Prot	
Protected Phases		2 4 6	6	3	2
Permitted Phases	4				
Detector Phase	4	2 4 6	6	3	
Switch Phase					
Minimum Initial (s)	5.0		8.0	5.0	17.0
Minimum Split (s)	30.0		27.0	31.3	27.0
Total Split (s)	12.0		60.0	18.0	60.0
Total Split (%)	13.3%		66.7%	20.0%	67%
Yellow Time (s)	3.0		4.0	4.0	4.0
All-Red Time (s)	2.0		2.0	2.3	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	
Total Lost Time (s)	5.0		6.0	6.3	
Lead/Lag	Lead			Lag	
Lead-Lag Optimize?					
Recall Mode	Max		Min	Min	Min
v/c Ratio	0.22	0.20	0.80	0.36	
Control Delay	44.9	0.5	31.1	17.7	
Queue Delay	0.0	0.6	0.0	0.0	
Total Delay	44.9	1.1	31.1	17.7	
Queue Length 50th (ft)	25	2	410	8	
Queue Length 95th (ft)	68	2	#775	68	
Internal Link Dist (ft)		81	385	375	
Turn Bay Length (ft)	50				
Base Capacity (vph)	166	1438	936	245	
Starvation Cap Reductn	0	798	0	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.22	0.45	0.79	0.36	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 107.2
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Dresden Dr & Caldwell Rd



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	36	291	717	24	12	76
Future Volume (vph)	36	291	717	24	12	76
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0	6.0		6.3	
Lane Util. Factor	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	1.00		0.88	
Flt Protected	0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1770	1863	1855		1634	
Flt Permitted	0.38	1.00	1.00		0.99	
Satd. Flow (perm)	715	1863	1855		1634	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	36	291	717	24	12	76
RTOR Reduction (vph)	0	0	2	0	68	0
Lane Group Flow (vph)	36	291	739	0	20	0
Turn Type	custom	NA	NA		Prot	
Protected Phases		2 4 6	6		3	
Permitted Phases	4					
Actuated Green, G (s)	25.0	84.2	53.2		11.7	
Effective Green, g (s)	25.0	84.2	53.2		11.7	
Actuated g/C Ratio	0.23	0.79	0.50		0.11	
Clearance Time (s)	5.0		6.0		6.3	
Vehicle Extension (s)	3.0		8.0		2.0	
Lane Grp Cap (vph)	166	1463	920		178	
v/s Ratio Prot		c0.16	c0.40		c0.01	
v/s Ratio Perm	0.05					
v/c Ratio	0.22	0.20	0.80		0.11	
Uniform Delay, d1	33.2	2.9	22.6		43.1	
Progression Factor	1.21	0.05	1.00		1.00	
Incremental Delay, d2	2.8	0.3	7.1		0.1	
Delay (s)	43.0	0.4	29.7		43.2	
Level of Service	D	A	C		D	
Approach Delay (s)		5.1	29.7		43.2	
Approach LOS		A	C		D	

Intersection Summary			
HCM 2000 Control Delay	23.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	107.2	Sum of lost time (s)	17.3
Intersection Capacity Utilization	54.8%	ICU Level of Service	A
Analysis Period (min)	60		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	1	61	53	8	25	1
Future Volume (Veh/h)	1	61	53	8	25	1
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1	61	53	8	25	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			455			
pX, platoon unblocked						
vC, conflicting volume	61				120	57
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	61				120	57
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				97	100
cM capacity (veh/h)	1542				875	1009

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	62	61	26
Volume Left	1	0	25
Volume Right	0	8	1
cSH	1542	1700	879
Volume to Capacity	0.00	0.04	0.03
Queue Length 95th (ft)	0	0	2
Control Delay (s)	0.1	0.0	9.2
Lane LOS	A		A
Approach Delay (s)	0.1	0.0	9.2
Approach LOS			A

Intersection Summary			
Average Delay	1.7		
Intersection Capacity Utilization	14.0%	ICU Level of Service	A
Analysis Period (min)	60		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	349	2	1	782	0	50	0	12	14	0	20
Future Volume (Veh/h)	0	349	2	1	782	0	50	0	12	14	0	20
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	349	2	1	782	0	50	0	12	14	0	20
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			TWLTL							
Median storage veh)					2							
Upstream signal (ft)		1154			284							
pX, platoon unblocked	0.72						0.72	0.72		0.72	0.72	0.72
vC, conflicting volume	782			351			1154	1134	350	1146	1135	782
vC1, stage 1 conf vol							350	350		784	784	
vC2, stage 2 conf vol							804	784		362	351	
vCu, unblocked vol	507			351			1022	994	350	1011	995	507
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			100			85	100	98	96	100	95
cM capacity (veh/h)	765			1208			331	353	693	353	353	409

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total	351	1	782	62	34
Volume Left	0	1	0	50	14
Volume Right	2	0	0	12	20
cSH	1700	1208	1700	368	384
Volume to Capacity	0.21	0.00	0.46	0.17	0.09
Queue Length 95th (ft)	0	0	0	15	7
Control Delay (s)	0.0	8.0	0.0	16.7	15.3
Lane LOS		A		C	C
Approach Delay (s)	0.0	0.0		16.7	15.3
Approach LOS				C	C

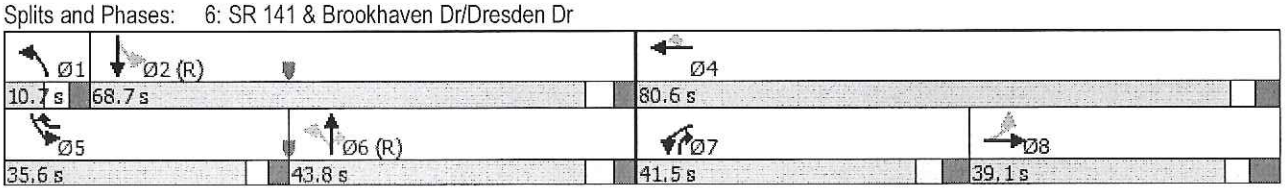
Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	54.2%	ICU Level of Service	A
Analysis Period (min)	60		

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	63	57	453	127	324	79	813	105	323	1546
Future Volume (vph)	63	57	453	127	324	79	813	105	323	1546
Lane Group Flow (vph)	63	163	453	127	324	79	813	105	323	1603
Turn Type	Perm	NA	Prot	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA
Protected Phases		8	7	4	5	1	6	7	5	2
Permitted Phases	8				4	6		6	2	
Detector Phase	8	8	7	4	5	1	6	7	5	2
Switch Phase										
Minimum Initial (s)	7.0	7.0	7.0	7.0	5.0	5.0	10.0	7.0	5.0	10.0
Minimum Split (s)	39.1	39.1	41.5	41.5	10.4	10.7	31.6	41.5	10.4	31.6
Total Split (s)	39.1	39.1	41.5	80.6	35.6	10.7	43.8	41.5	35.6	68.7
Total Split (%)	24.4%	24.4%	25.9%	50.4%	22.3%	6.7%	27.4%	25.9%	22.3%	42.9%
Yellow Time (s)	3.0	3.0	3.1	3.1	3.0	3.0	3.6	3.1	3.0	3.6
All-Red Time (s)	4.1	4.1	3.4	3.4	2.4	2.7	3.0	3.4	2.4	3.0
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)	7.1	7.1	6.5	6.5	5.4	5.7	6.6	6.5	5.4	6.6
Lead/Lag	Lag	Lag	Lead		Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	None	C-Min
v/c Ratio	0.52	0.78	0.89	0.24	0.43	0.71	0.38	0.11	0.70	0.87
Control Delay	83.1	75.6	87.3	43.4	24.2	64.4	32.5	3.0	23.7	37.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	83.1	75.6	87.3	43.4	24.2	64.4	32.5	3.0	23.7	37.6
Queue Length 50th (ft)	64	116	244	110	196	30	206	0	146	732
Queue Length 95th (ft)	126	225	340	165	247	#173	345	39	296	#1292
Internal Link Dist (ft)		293		663			464			725
Turn Bay Length (ft)			350		200	125		300		
Base Capacity (vph)	251	377	750	862	832	111	2141	1081	517	1849
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.43	0.60	0.15	0.39	0.71	0.38	0.10	0.62	0.87

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 38 (24%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: SR 141 & Brookhaven Dr/Dresden Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	57	106	453	127	324	79	813	105	323	1546	57
Future Volume (vph)	63	57	106	453	127	324	79	813	105	323	1546	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	10	10	10	10	10	10
Total Lost time (s)	7.1	7.1		6.5	6.5	5.4	5.7	6.6	6.5	5.4	6.6	
Lane Util. Factor	1.00	1.00		0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.95	
Frt	1.00	0.90		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1681		3433	1863	1583	1652	4746	1478	1652	3286	
Flt Permitted	0.68	1.00		0.95	1.00	1.00	0.08	1.00	1.00	0.26	1.00	
Satd. Flow (perm)	1258	1681		3433	1863	1583	131	4746	1478	458	3286	
Peak-hour factor, PHF	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. Flow (vph)	63	57	106	453	127	324	79	813	105	323	1546	57
RTOR Reduction (vph)	0	47	0	0	0	14	0	0	42	0	1	0
Lane Group Flow (vph)	63	116	0	453	127	310	79	813	63	323	1602	0
Turn Type	Perm	NA		Prot	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases		8		7	4	5	1	6	7	5	2	
Permitted Phases	8					4	6		6	2		
Actuated Green, G (s)	15.4	15.4		23.7	46.2	69.2	77.3	72.3	96.0	100.7	90.0	
Effective Green, g (s)	15.4	15.4		23.7	46.2	69.2	77.3	72.3	96.0	100.7	90.0	
Actuated g/C Ratio	0.10	0.10		0.15	0.29	0.43	0.48	0.45	0.60	0.63	0.56	
Clearance Time (s)	7.1	7.1		6.5	6.5	5.4	5.7	6.6	6.5	5.4	6.6	
Vehicle Extension (s)	2.0	2.0		2.2	2.2	2.5	2.0	5.0	2.2	2.5	5.0	
Lane Grp Cap (vph)	121	161		508	537	684	110	2144	886	459	1848	
v/s Ratio Prot		c0.07		c0.13	0.07	0.07	0.02	0.17	0.01	c0.10	c0.49	
v/s Ratio Perm	0.05					0.13	0.32		0.03	0.34		
v/c Ratio	0.52	0.72		0.89	0.24	0.45	0.72	0.38	0.07	0.70	0.87	
Uniform Delay, d1	68.8	70.2		66.9	43.4	32.0	28.6	29.0	13.4	15.5	29.9	
Progression Factor	1.00	1.00		0.96	1.03	0.96	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	1.9	13.5		19.4	0.1	0.3	18.5	0.5	0.0	4.6	6.2	
Delay (s)	70.7	83.7		83.7	44.7	30.9	47.1	29.5	13.4	20.1	36.1	
Level of Service	E	F		F	D	C	D	C	B	C	D	
Approach Delay (s)		80.1			59.3			29.2			33.4	
Approach LOS		F			E			C			C	

Intersection Summary			
HCM 2000 Control Delay	40.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.86		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	25.9
Intersection Capacity Utilization	92.9%	ICU Level of Service	F
Analysis Period (min)	60		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	24	288	229	98	695	101	12	5	113	125
Future Volume (vph)	24	288	229	98	695	101	12	5	113	125
Lane Group Flow (vph)	24	288	229	98	699	101	59	0	118	125
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases		2			6		8		4	
Permitted Phases	2		2	6		8		4		4
Detector Phase	2	2	2	6	6	8	8	4	4	4
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
Minimum Split (s)	28.5	28.5	28.5	37.5	37.5	26.4	26.4	30.4	30.4	30.4
Total Split (s)	49.4	49.4	49.4	49.4	49.4	30.6	30.6	30.6	30.6	30.6
Total Split (%)	61.8%	61.8%	61.8%	61.8%	61.8%	38.3%	38.3%	38.3%	38.3%	38.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.1	3.1	3.1	3.1	3.1
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	2.3	2.3	2.3	2.3	2.3
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)	5.5	5.5	5.5	5.5	5.5	5.4	5.4		5.4	5.4
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.05	0.22	0.19	0.13	0.53	0.51	0.20		0.41	0.35
Control Delay	3.3	3.4	0.7	4.9	7.9	39.6	13.0		34.0	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	3.3	3.4	0.7	4.9	7.9	39.6	13.0		34.0	8.6
Queue Length 50th (ft)	3	36	0	12	130	47	5		55	0
Queue Length 95th (ft)	m9	91	26	39	324	101	41		108	53
Internal Link Dist (ft)		663			817		471		419	
Turn Bay Length (ft)	100		160	100		100				25
Base Capacity (vph)	438	1316	1185	767	1315	399	549		579	584
Starvation Cap Reductn	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.05	0.22	0.19	0.13	0.53	0.25	0.11		0.20	0.21

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 64 (80%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Apple Valley Rd & Dresden Dr

Ø2 (R)	Ø4
49.4 s	30.6 s
Ø6 (R)	Ø8
49.4 s	30.6 s

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	288	229	98	695	4	101	12	47	5	113	125
Future Volume (vph)	24	288	229	98	695	4	101	12	47	5	113	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5	5.5	5.5		5.4	5.4			5.4	5.4
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.88			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1861		1770	1640			1859	1583
Flt Permitted	0.33	1.00	1.00	0.58	1.00		0.68	1.00			0.99	1.00
Satd. Flow (perm)	620	1863	1583	1087	1861		1269	1640			1840	1583
Peak-hour factor, PHF	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. Flow (vph)	24	288	229	98	695	4	101	12	47	5	113	125
RTOR Reduction (vph)	0	0	67	0	0	0	0	40	0	0	0	105
Lane Group Flow (vph)	24	288	162	98	699	0	101	19	0	0	118	20
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		4
Actuated Green, G (s)	56.5	56.5	56.5	56.5	56.5		12.6	12.6			12.6	12.6
Effective Green, g (s)	56.5	56.5	56.5	56.5	56.5		12.6	12.6			12.6	12.6
Actuated g/C Ratio	0.71	0.71	0.71	0.71	0.71		0.16	0.16			0.16	0.16
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5		5.4	5.4			5.4	5.4
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	437	1315	1117	767	1314		199	258			289	249
v/s Ratio Prot		0.15			c0.38			0.01				
v/s Ratio Perm	0.04		0.10	0.09			c0.08				0.06	0.01
v/c Ratio	0.05	0.22	0.14	0.13	0.53		0.51	0.08			0.41	0.08
Uniform Delay, d1	3.6	4.1	3.8	3.8	5.5		30.9	28.7			30.3	28.8
Progression Factor	0.71	0.69	0.75	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	0.2	0.4	0.2	0.3	1.6		2.0	0.1			0.9	0.1
Delay (s)	2.8	3.2	3.1	4.1	7.1		32.9	28.9			31.3	28.9
Level of Service	A	A	A	A	A		C	C			C	C
Approach Delay (s)		3.1			6.7			31.4			30.1	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	11.1	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.9
Intersection Capacity Utilization	71.1%	ICU Level of Service	C
Analysis Period (min)	60		

c Critical Lane Group

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	748	18	15	481	1	11	0	20	1	0	0
Future Volume (Veh/h)	0	748	18	15	481	1	11	0	20	1	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	748	18	15	481	1	11	0	20	1	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		902			537							
pX, platoon unblocked	0.87			0.81			0.87	0.87	0.81	0.87	0.87	0.87
vC, conflicting volume	482			766			1268	1269	757	1280	1278	482
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	330			593			900	901	581	913	910	329
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			95	100	95	100	100	100
cM capacity (veh/h)	1070			795			224	238	415	208	235	620

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	0	766	15	482	31	1
Volume Left	0	0	15	0	11	1
Volume Right	0	18	0	1	20	0
cSH	1700	1700	795	1700	318	208
Volume to Capacity	0.00	0.45	0.02	0.28	0.10	0.00
Queue Length 95th (ft)	0	0	1	0	8	0
Control Delay (s)	0.0	0.0	9.6	0.0	17.5	22.3
Lane LOS			A		C	C
Approach Delay (s)	0.0		0.3		17.5	22.3
Approach LOS					C	C

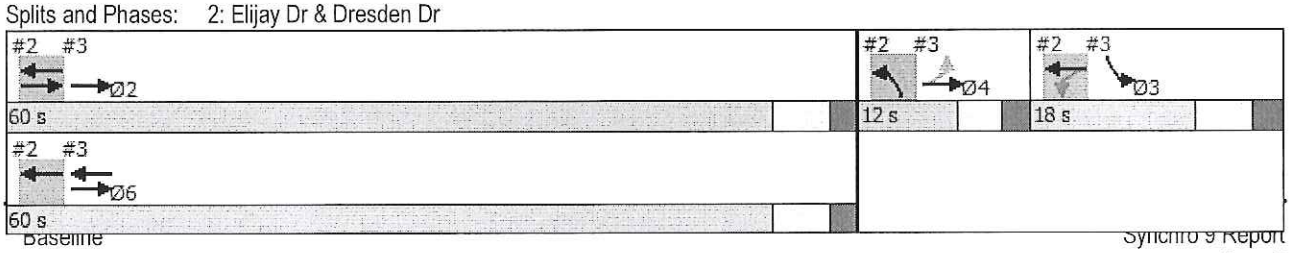
Intersection Summary			
Average Delay	0.5		
Intersection Capacity Utilization	50.5%	ICU Level of Service	A
Analysis Period (min)	60		

Lane Group	EBT	WBL	WBT	NBL	Ø6
Lane Configurations					
Traffic Volume (vph)	758	26	478	42	
Future Volume (vph)	758	26	478	42	
Lane Group Flow (vph)	798	26	478	75	
Turn Type	NA	custom	NA	Prot	
Protected Phases	2		2 3 6	4	6
Permitted Phases		3			
Detector Phase	2	3	2 3 6	4	
Switch Phase					
Minimum Initial (s)	17.0	5.0		5.0	8.0
Minimum Split (s)	27.0	31.3		30.0	27.0
Total Split (s)	60.0	18.0		12.0	60.0
Total Split (%)	66.7%	20.0%		13.3%	67%
Yellow Time (s)	4.0	4.0		3.0	4.0
All-Red Time (s)	2.0	2.3		2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	
Total Lost Time (s)	6.0	6.3		5.0	
Lead/Lag		Lag		Lead	
Lead-Lag Optimize?					
Recall Mode	Min	Min		Max	Min
v/c Ratio	0.86	0.36	0.38	0.18	
Control Delay	36.0	78.1	2.2	21.6	
Queue Delay	0.0	0.0	0.3	0.0	
Total Delay	36.0	78.1	2.6	21.6	
Queue Length 50th (ft)	465	18	19	23	
Queue Length 95th (ft)	#872	m36	21	72	
Internal Link Dist (ft)	204		81	237	
Turn Bay Length (ft)		50			
Base Capacity (vph)	927	73	1222	420	
Starvation Cap Reductn	0	0	299	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.86	0.36	0.52	0.18	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 108
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Elijay Dr & Dresden Dr



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	758	40	26	478	42	33
Future Volume (vph)	758	40	26	478	42	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.3	6.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frt	0.99		1.00	1.00	0.94	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	1850		1770	1863	1704	
Flt Permitted	1.00		0.36	1.00	0.97	
Satd. Flow (perm)	1850		678	1863	1704	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	758	40	26	478	42	33
RTOR Reduction (vph)	3	0	0	0	25	0
Lane Group Flow (vph)	796	0	26	478	50	0
Turn Type	NA		custom	NA	Prot	
Protected Phases	2			2 3 6	4	
Permitted Phases			3			
Actuated Green, G (s)	54.0		11.7	72.0	25.0	
Effective Green, g (s)	54.0		11.7	65.7	25.0	
Actuated g/C Ratio	0.50		0.11	0.61	0.23	
Clearance Time (s)	6.0		6.3		5.0	
Vehicle Extension (s)	8.0		2.0		3.0	
Lane Grp Cap (vph)	925		73	1133	394	
v/s Ratio Prot	c0.43			c0.26	c0.03	
v/s Ratio Perm			0.04			
v/c Ratio	0.86		0.36	0.42	0.13	
Uniform Delay, d1	23.7		44.7	11.1	32.9	
Progression Factor	1.00		1.44	0.17	1.00	
Incremental Delay, d2	11.0		1.0	1.0	0.7	
Delay (s)	34.7		65.1	2.9	33.5	
Level of Service	C		E	A	C	
Approach Delay (s)	34.7			6.1	33.5	
Approach LOS	C			A	C	

Intersection Summary			
HCM 2000 Control Delay	24.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.60		
Actuated Cycle Length (s)	108.0	Sum of lost time (s)	17.3
Intersection Capacity Utilization	55.8%	ICU Level of Service	B
Analysis Period (min)	60		

c Critical Lane Group

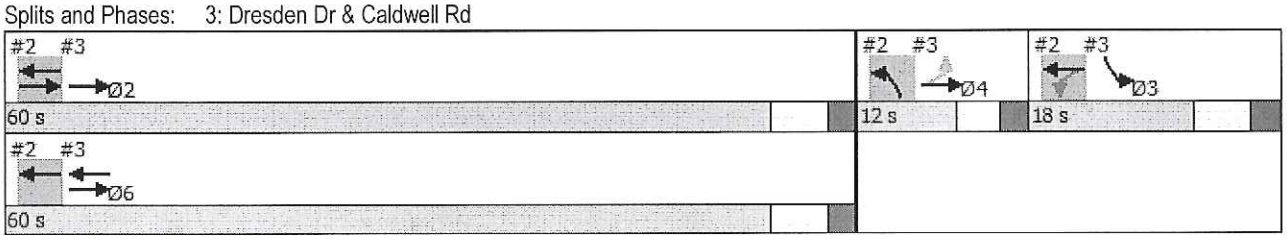
Lane Group	EBL	EBT	WBT	SBL	Ø2
Lane Configurations					
Traffic Volume (vph)	113	659	454	35	
Future Volume (vph)	113	659	454	35	
Lane Group Flow (vph)	113	659	478	98	
Turn Type	custom	NA	NA	Prot	
Protected Phases		2 4 6	6	3	2
Permitted Phases	4				
Detector Phase	4	2 4 6	6	3	
Switch Phase					
Minimum Initial (s)	5.0		8.0	5.0	17.0
Minimum Split (s)	30.0		27.0	31.3	27.0
Total Split (s)	12.0		60.0	18.0	60.0
Total Split (%)	13.3%		66.7%	20.0%	67%
Yellow Time (s)	3.0		4.0	4.0	4.0
All-Red Time (s)	2.0		2.0	2.3	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	
Total Lost Time (s)	5.0		6.0	6.3	
Lead/Lag	Lead			Lag	
Lead-Lag Optimize?					
Recall Mode	Max		Min	Min	Min
v/c Ratio	0.54	0.45	0.52	0.42	
Control Delay	44.4	0.8	20.5	25.0	
Queue Delay	0.0	1.9	0.0	0.0	
Total Delay	44.4	2.7	20.5	25.0	
Queue Length 50th (ft)	83	5	212	22	
Queue Length 95th (ft)	m102	m4	360	88	
Internal Link Dist (ft)		81	385	375	
Turn Bay Length (ft)	50				
Base Capacity (vph)	211	1449	927	237	
Starvation Cap Reductn	0	601	0	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.54	0.78	0.52	0.41	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 108
Natural Cycle: 110
Control Type: Actuated-Uncoordinated

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

Splits and Phases: 3: Dresden Dr & Caldwell Rd



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	113	659	454	24	35	63
Future Volume (vph)	113	659	454	24	35	63
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0	6.0		6.3	
Lane Util. Factor	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.99		0.91	
Flt Protected	0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1770	1863	1850		1671	
Flt Permitted	0.49	1.00	1.00		0.98	
Satd. Flow (perm)	913	1863	1850		1671	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	113	659	454	24	35	63
RTOR Reduction (vph)	0	0	3	0	56	0
Lane Group Flow (vph)	113	659	476	0	42	0
Turn Type	custom	NA	NA		Prot	
Protected Phases		2 4 6	6		3	
Permitted Phases	4					
Actuated Green, G (s)	25.0	85.0	54.0		11.7	
Effective Green, g (s)	25.0	85.0	54.0		11.7	
Actuated g/C Ratio	0.23	0.79	0.50		0.11	
Clearance Time (s)	5.0		6.0		6.3	
Vehicle Extension (s)	3.0		8.0		2.0	
Lane Grp Cap (vph)	211	1466	925		181	
v/s Ratio Prot		0.35	c0.26		c0.03	
v/s Ratio Perm	c0.12					
v/c Ratio	0.54	0.45	0.51		0.23	
Uniform Delay, d1	36.4	3.8	18.2		44.0	
Progression Factor	1.03	0.04	1.00		1.00	
Incremental Delay, d2	5.5	0.5	1.9		0.2	
Delay (s)	43.0	0.7	20.1		44.3	
Level of Service	D	A	C		D	
Approach Delay (s)		6.9	20.1		44.3	
Approach LOS		A	C		D	

Intersection Summary			
HCM 2000 Control Delay	14.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.48		
Actuated Cycle Length (s)	108.0	Sum of lost time (s)	17.3
Intersection Capacity Utilization	51.8%	ICU Level of Service	A
Analysis Period (min)	60		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	29	53	88	22	14	2
Future Volume (Veh/h)	29	53	88	22	14	2
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	29	53	88	22	14	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			455			
pX, platoon unblocked						
vC, conflicting volume	110				210	99
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	110				210	99
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				98	100
cM capacity (veh/h)	1480				763	957

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	82	110	16
Volume Left	29	0	14
Volume Right	0	22	2
cSH	1480	1700	783
Volume to Capacity	0.02	0.06	0.02
Queue Length 95th (ft)	1	0	2
Control Delay (s)	2.7	0.0	9.7
Lane LOS	A		A
Approach Delay (s)	2.7	0.0	9.7
Approach LOS			A

Intersection Summary			
Average Delay	1.8		
Intersection Capacity Utilization	21.1%	ICU Level of Service	A
Analysis Period (min)	60		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	759	37	11	487	0	9	0	3	5	0	8
Future Volume (Veh/h)	0	759	37	11	487	0	9	0	3	5	0	8
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	759	37	11	487	0	9	0	3	5	0	8
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			TWLTL							
Median storage veh)					2							
Upstream signal (ft)		1155			284							
pX, platoon unblocked	0.86			0.82			0.89	0.89	0.82	0.89	0.89	0.86
vC, conflicting volume	487			796			1294	1286	778	1290	1305	487
vC1, stage 1 conf vol							778	778		509	509	
vC2, stage 2 conf vol							517	509		780	796	
vCu, unblocked vol	329			639			924	915	617	919	936	329
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			99			97	100	99	99	100	99
cM capacity (veh/h)	1064			773			356	361	401	347	347	616

Direction, Lane #	EB 1	WB 1	WB 2	NB 1	SB 1
Volume Total	796	11	487	12	13
Volume Left	0	11	0	9	5
Volume Right	37	0	0	3	8
cSH	1700	773	1700	366	475
Volume to Capacity	0.47	0.01	0.29	0.03	0.03
Queue Length 95th (ft)	0	1	0	3	2
Control Delay (s)	0.0	9.7	0.0	15.2	12.8
Lane LOS		A		C	B
Approach Delay (s)	0.0	0.2		15.2	12.8
Approach LOS				C	B

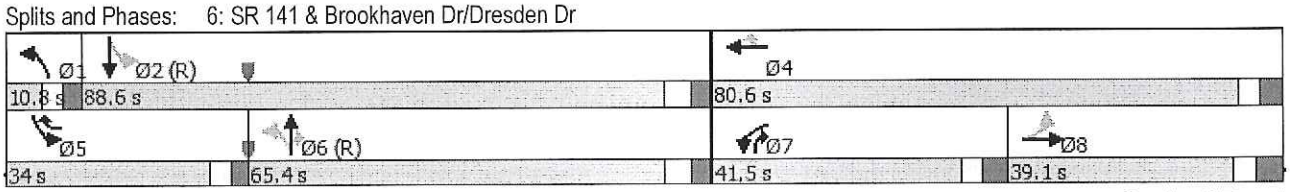
Intersection Summary			
Average Delay	0.3		
Intersection Capacity Utilization	52.2%	ICU Level of Service	A
Analysis Period (min)	60		

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	123	153	187	71	512	46	1583	323	307	1182
Future Volume (vph)	123	153	187	71	512	46	1583	323	307	1182
Lane Group Flow (vph)	123	203	187	71	512	46	1583	323	307	1219
Turn Type	Perm	NA	Prot	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA
Protected Phases		8	7	4	5	1	6	7	5	2
Permitted Phases	8				4	6		6	2	
Detector Phase	8	8	7	4	5	1	6	7	5	2
Switch Phase										
Minimum Initial (s)	7.0	7.0	7.0	7.0	5.0	5.0	10.0	7.0	5.0	10.0
Minimum Split (s)	39.1	39.1	41.5	41.5	10.4	10.7	31.6	41.5	10.4	31.6
Total Split (s)	39.1	39.1	41.5	80.6	34.0	10.8	65.4	41.5	34.0	88.6
Total Split (%)	21.7%	21.7%	23.1%	44.8%	18.9%	6.0%	36.3%	23.1%	18.9%	49.2%
Yellow Time (s)	3.0	3.0	3.1	3.1	3.0	3.0	3.6	3.1	3.0	3.6
All-Red Time (s)	4.1	4.1	3.4	3.4	2.4	2.7	3.0	3.4	2.4	3.0
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)	7.1	7.1	6.5	6.5	5.4	5.7	6.6	6.5	5.4	6.6
Lead/Lag	Lag	Lag	Lead		Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?										
Recall Mode	None	None	None	None	None	None	C-Min	None	None	C-Min
v/c Ratio	0.70	0.83	0.80	0.16	0.73	0.20	0.67	0.32	0.91	0.58
Control Delay	96.2	103.5	108.0	56.3	37.5	15.3	37.1	4.7	85.2	21.8
Queue Delay	0.0	0.0	0.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0
Total Delay	96.2	103.5	108.0	56.3	41.8	15.3	37.1	4.7	85.2	21.8
Queue Length 50th (ft)	141	229	117	73	391	16	510	29	263	433
Queue Length 95th (ft)	239	357	m161	m101	m500	44	762	127	#582	717
Internal Link Dist (ft)		293		663			464			725
Turn Bay Length (ft)			350		200	125		300		
Base Capacity (vph)	235	325	667	766	702	234	2360	1147	339	2098
Starvation Cap Reductn	0	0	0	0	118	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.62	0.28	0.09	0.88	0.20	0.67	0.28	0.91	0.58

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 37 (21%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: SR 141 & Brookhaven Dr/Dresden Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	123	153	50	187	71	512	46	1583	323	307	1182	37
Future Volume (vph)	123	153	50	187	71	512	46	1583	323	307	1182	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	10	10	10	10	10	10
Total Lost time (s)	7.1	7.1		6.5	6.5	5.4	5.7	6.6	6.5	5.4	6.6	
Lane Util. Factor	1.00	1.00		0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.95	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1794		3433	1863	1583	1652	4746	1478	1652	3288	
Flt Permitted	0.71	1.00		0.95	1.00	1.00	0.22	1.00	1.00	0.08	1.00	
Satd. Flow (perm)	1324	1794		3433	1863	1583	374	4746	1478	144	3288	
Peak-hour factor, PHF	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. Flow (vph)	123	153	50	187	71	512	46	1583	323	307	1182	37
RTOR Reduction (vph)	0	7	0	0	0	13	0	0	114	0	1	0
Lane Group Flow (vph)	123	196	0	187	71	499	46	1583	209	307	1218	0
Turn Type	Perm	NA		Prot	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases		8		7	4	5	1	6	7	5	2	
Permitted Phases	8					4	6		6	2		
Actuated Green, G (s)	24.1	24.1		12.2	43.4	72.0	93.6	89.5	101.7	123.5	113.7	
Effective Green, g (s)	24.1	24.1		12.2	43.4	72.0	93.6	89.5	101.7	123.5	113.7	
Actuated g/C Ratio	0.13	0.13		0.07	0.24	0.40	0.52	0.50	0.57	0.69	0.63	
Clearance Time (s)	7.1	7.1		6.5	6.5	5.4	5.7	6.6	6.5	5.4	6.6	
Vehicle Extension (s)	2.0	2.0		2.2	2.2	2.5	2.0	5.0	2.2	2.5	5.0	
Lane Grp Cap (vph)	177	240		232	449	633	223	2359	835	338	2076	
v/s Ratio Prot		0.11		0.05	0.04	c0.13	0.00	0.33	0.02	c0.14	0.37	
v/s Ratio Perm	0.09					0.19	0.10		0.12	c0.48		
v/c Ratio	0.69	0.82		0.81	0.16	0.79	0.21	0.67	0.25	0.91	0.59	
Uniform Delay, d1	74.4	75.8		82.7	53.9	47.3	21.4	34.1	19.8	50.3	19.4	
Progression Factor	1.00	1.00		1.01	1.08	0.81	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	9.6	20.7		16.6	0.1	5.5	0.2	1.6	0.1	36.3	1.2	
Delay (s)	84.0	96.5		100.3	58.4	43.7	21.6	35.7	19.9	86.6	20.6	
Level of Service	F	F		F	E	D	C	D	B	F	C	
Approach Delay (s)		91.8			58.8			32.8			33.9	
Approach LOS		F			E			C			C	

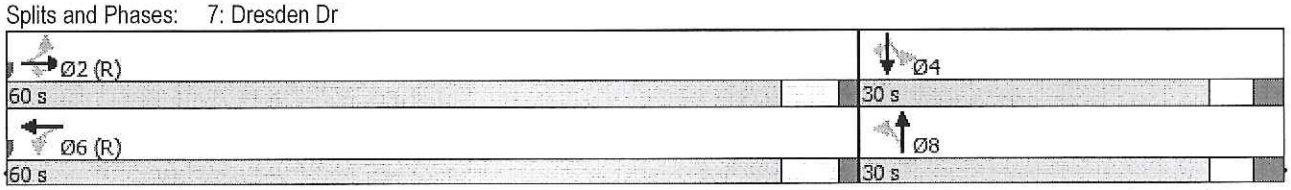
Intersection Summary			
HCM 2000 Control Delay	41.7	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.93		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	25.9
Intersection Capacity Utilization	85.9%	ICU Level of Service	E
Analysis Period (min)	60		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	51	594	108	41	408	328	42	9	23	54
Future Volume (vph)	51	594	108	41	408	328	42	9	23	54
Lane Group Flow (vph)	51	594	108	41	422	328	226	0	32	54
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases		2			6		8		4	
Permitted Phases	2		2	6		8		4		4
Detector Phase	2	2	2	6	6	8	8	4	4	4
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
Minimum Split (s)	28.5	28.5	28.5	37.5	37.5	26.4	26.4	30.4	30.4	30.4
Total Split (s)	60.0	60.0	60.0	60.0	60.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	66.7%	66.7%	66.7%	66.7%	66.7%	33.3%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.1	3.1	3.1	3.1	3.1
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	2.3	2.3	2.3	2.3	2.3
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)	5.5	5.5	5.5	5.5	5.5	5.4	5.4		5.4	5.4
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.09	0.52	0.11	0.10	0.37	0.91	0.40		0.07	0.12
Control Delay	6.2	9.9	1.5	8.3	9.9	75.7	9.0		24.9	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	6.2	9.9	1.5	8.3	9.9	75.7	9.0		24.9	8.0
Queue Length 50th (ft)	12	208	10	9	111	178	18		13	0
Queue Length 95th (ft)	m17	m229	m7	27	197	#393	97		40	33
Internal Link Dist (ft)		663			822		471		419	
Turn Bay Length (ft)	100		160	100		100				25
Base Capacity (vph)	539	1149	1017	400	1144	374	580		463	471
Starvation Cap Reductn	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.09	0.52	0.11	0.10	0.37	0.88	0.39		0.07	0.11

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 63 (70%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Dresden Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	594	108	41	408	14	328	42	184	9	23	54
Future Volume (vph)	51	594	108	41	408	14	328	42	184	9	23	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5	5.5	5.5		5.4	5.4			5.4	5.4
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.88			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.99	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1853		1770	1635			1837	1583
Flt Permitted	0.47	1.00	1.00	0.35	1.00		0.74	1.00			0.91	1.00
Satd. Flow (perm)	873	1863	1583	650	1853		1372	1635			1697	1583
Peak-hour factor, PHF	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. Flow (vph)	51	594	108	41	408	14	328	42	184	9	23	54
RTOR Reduction (vph)	0	0	41	0	1	0	0	136	0	0	0	40
Lane Group Flow (vph)	51	594	67	41	421	0	328	90	0	0	32	14
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		4
Actuated Green, G (s)	55.5	55.5	55.5	55.5	55.5		23.6	23.6			23.6	23.6
Effective Green, g (s)	55.5	55.5	55.5	55.5	55.5		23.6	23.6			23.6	23.6
Actuated g/C Ratio	0.62	0.62	0.62	0.62	0.62		0.26	0.26			0.26	0.26
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5		5.4	5.4			5.4	5.4
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	538	1148	976	400	1142		359	428			444	415
v/s Ratio Prot		c0.32			0.23			0.06				
v/s Ratio Perm	0.06		0.04	0.06			c0.24				0.02	0.01
v/c Ratio	0.09	0.52	0.07	0.10	0.37		0.91	0.21			0.07	0.03
Uniform Delay, d1	7.0	9.7	6.9	7.1	8.6		32.2	25.9			25.0	24.7
Progression Factor	0.79	0.85	1.19	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	0.3	1.4	0.1	0.5	0.9		36.7	0.2			0.1	0.0
Delay (s)	5.8	9.6	8.3	7.6	9.5		68.9	26.2			25.0	24.7
Level of Service	A	A	A	A	A		E	C			C	C
Approach Delay (s)		9.2			9.3			51.5			24.9	
Approach LOS		A			A			D			C	

Intersection Summary			
HCM 2000 Control Delay	22.6	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.9
Intersection Capacity Utilization	76.3%	ICU Level of Service	D
Analysis Period (min)	60		

c Critical Lane Group

FUTURE "BUILD" INTERSECTION ANALYSIS

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	335	8	21	807	5	8	0	18	3	0	1
Future Volume (Veh/h)	0	335	8	21	807	5	8	0	18	3	0	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	335	8	21	807	5	8	0	18	3	0	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		904			534							
pX, platoon unblocked	0.75			1.00			0.75	0.75	1.00	0.75	0.75	0.75
vC, conflicting volume	812			343			1189	1193	339	1204	1194	810
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	583			340			1080	1085	336	1100	1087	580
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			94	100	97	98	100	100
cM capacity (veh/h)	744			1216			145	160	704	137	159	386

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	0	343	21	812	26	4
Volume Left	0	0	21	0	8	3
Volume Right	0	8	0	5	18	1
cSH	1700	1700	1216	1700	322	163
Volume to Capacity	0.00	0.20	0.02	0.48	0.08	0.02
Queue Length 95th (ft)	0	0	1	0	7	2
Control Delay (s)	0.0	0.0	8.0	0.0	17.2	27.6
Lane LOS			A		C	D
Approach Delay (s)	0.0		0.2		17.2	27.6
Approach LOS					C	D

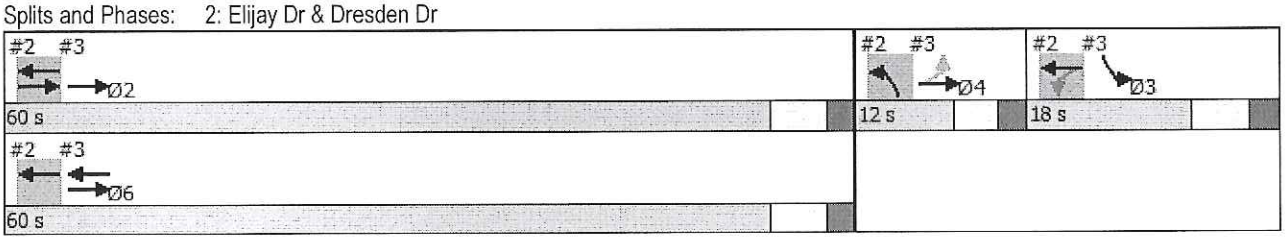
Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	60		

Lane Group	EBT	WBL	WBT	NBL	Ø6
Lane Configurations					
Traffic Volume (vph)	327	27	769	59	
Future Volume (vph)	327	27	769	59	
Lane Group Flow (vph)	364	27	769	79	
Turn Type	NA	custom	NA	Prot	
Protected Phases	2		2 3 6	4	6
Permitted Phases		3			
Detector Phase	2	3	2 3 6	4	
Switch Phase					
Minimum Initial (s)	17.0	5.0		5.0	8.0
Minimum Split (s)	27.0	31.3		30.0	27.0
Total Split (s)	60.0	18.0		12.0	60.0
Total Split (%)	66.7%	20.0%		13.3%	67%
Yellow Time (s)	4.0	4.0		3.0	4.0
All-Red Time (s)	2.0	2.3		2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	
Total Lost Time (s)	6.0	6.3		5.0	
Lead/Lag		Lag		Lead	
Lead-Lag Optimize?					
Recall Mode	Min	Max		Max	Min
v/c Ratio	0.44	0.13	0.59	0.21	
Control Delay	24.6	60.1	3.5	34.1	
Queue Delay	0.0	0.0	1.8	0.0	
Total Delay	24.6	60.1	5.3	34.1	
Queue Length 50th (ft)	187	22	33	42	
Queue Length 95th (ft)	314	m28	m51	99	
Internal Link Dist (ft)	204		81	237	
Turn Bay Length (ft)		50			
Base Capacity (vph)	823	208	1310	369	
Starvation Cap Reductn	0	0	360	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.44	0.13	0.81	0.21	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 121.3
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Elijay Dr & Dresden Dr



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	327	37	27	769	59	20
Future Volume (vph)	327	37	27	769	59	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.3	6.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frt	0.99		1.00	1.00	0.97	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	1837		1770	1863	1734	
Flt Permitted	1.00		0.54	1.00	0.96	
Satd. Flow (perm)	1837		1014	1863	1734	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	327	37	27	769	59	20
RTOR Reduction (vph)	6	0	0	0	12	0
Lane Group Flow (vph)	358	0	27	769	67	0
Turn Type	NA		custom	NA	Prot	
Protected Phases	2			2 3 6	4	
Permitted Phases			3			
Actuated Green, G (s)	54.0		25.0	85.3	25.0	
Effective Green, g (s)	54.0		25.0	79.0	25.0	
Actuated g/C Ratio	0.45		0.21	0.65	0.21	
Clearance Time (s)	6.0		6.3		5.0	
Vehicle Extension (s)	8.0		2.0		3.0	
Lane Grp Cap (vph)	817		208	1213	357	
v/s Ratio Prot	0.19			c0.41	c0.04	
v/s Ratio Perm			0.03			
v/c Ratio	0.44		0.13	0.63	0.19	
Uniform Delay, d1	23.2		39.3	12.6	39.8	
Progression Factor	1.00		1.48	0.26	1.00	
Incremental Delay, d2	1.6		0.7	1.4	1.2	
Delay (s)	24.8		59.0	4.6	40.9	
Level of Service	C		E	A	D	
Approach Delay (s)	24.8			6.4	40.9	
Approach LOS	C			A	D	

Intersection Summary			
HCM 2000 Control Delay	14.0	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.53		
Actuated Cycle Length (s)	121.3	Sum of lost time (s)	17.3
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	60		

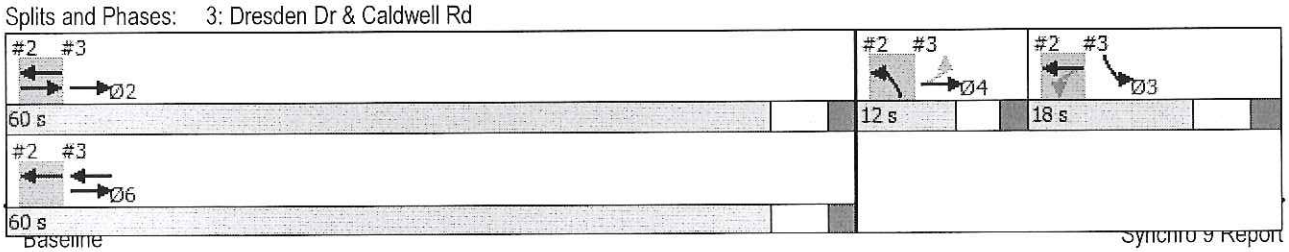
c Critical Lane Group

Lane Group	EBL	EBT	WBT	SBL	Ø2
Lane Configurations					
Traffic Volume (vph)	43	295	711	22	
Future Volume (vph)	43	295	711	22	
Lane Group Flow (vph)	43	295	735	125	
Turn Type	custom	NA	NA	Prot	
Protected Phases		2 4 6	6	3	2
Permitted Phases	4				
Detector Phase	4	2 4 6	6	3	
Switch Phase					
Minimum Initial (s)	5.0		8.0	5.0	17.0
Minimum Split (s)	30.0		27.0	31.3	27.0
Total Split (s)	12.0		60.0	18.0	60.0
Total Split (%)	13.3%		66.7%	20.0%	67%
Yellow Time (s)	3.0		4.0	4.0	4.0
All-Red Time (s)	2.0		2.0	2.3	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	
Total Lost Time (s)	5.0		6.0	6.3	
Lead/Lag	Lead			Lag	
Lead-Lag Optimize?					
Recall Mode	Max		Min	Max	Min
v/c Ratio	0.29	0.23	0.89	0.30	
Control Delay	47.8	0.7	47.7	13.1	
Queue Delay	0.0	0.6	0.0	0.1	
Total Delay	47.8	1.3	47.7	13.2	
Queue Length 50th (ft)	34	3	516	14	
Queue Length 95th (ft)	m82	3	#922	84	
Internal Link Dist (ft)		81	385	375	
Turn Bay Length (ft)	50				
Base Capacity (vph)	148	1290	827	419	
Starvation Cap Reductn	0	643	0	0	
Spillback Cap Reductn	0	0	0	20	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.29	0.46	0.89	0.31	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 121.3
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Dresden Dr & Caldwell Rd



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	43	295	711	24	22	103
Future Volume (vph)	43	295	711	24	22	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0	6.0		6.3	
Lane Util. Factor	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	1.00		0.89	
Flt Protected	0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1770	1863	1855		1641	
Flt Permitted	0.39	1.00	1.00		0.99	
Satd. Flow (perm)	719	1863	1855		1641	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	43	295	711	24	22	103
RTOR Reduction (vph)	0	0	2	0	82	0
Lane Group Flow (vph)	43	295	733	0	43	0
Turn Type	custom	NA	NA		Prot	
Protected Phases		2 4 6	6		3	
Permitted Phases	4					
Actuated Green, G (s)	25.0	85.0	54.0		25.0	
Effective Green, g (s)	25.0	85.0	54.0		25.0	
Actuated g/C Ratio	0.21	0.70	0.45		0.21	
Clearance Time (s)	5.0		6.0		6.3	
Vehicle Extension (s)	3.0		8.0		2.0	
Lane Grp Cap (vph)	148	1305	825		338	
v/s Ratio Prot		0.16	c0.40		c0.03	
v/s Ratio Perm	c0.06					
v/c Ratio	0.29	0.23	0.89		0.13	
Uniform Delay, d1	40.7	6.5	30.9		39.3	
Progression Factor	1.03	0.04	1.00		1.00	
Incremental Delay, d2	4.6	0.3	16.1		0.8	
Delay (s)	46.4	0.6	47.0		40.0	
Level of Service	D	A	D		D	
Approach Delay (s)		6.4	47.0		40.0	
Approach LOS		A	D		D	

Intersection Summary			
HCM 2000 Control Delay	34.8	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.56		
Actuated Cycle Length (s)	121.3	Sum of lost time (s)	17.3
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	60		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	1	98	60	8	25	1
Future Volume (Veh/h)	1	98	60	8	25	1
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1	98	60	8	25	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			455			
pX, platoon unblocked						
vC, conflicting volume	68				164	64
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	68				164	64
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				97	100
cM capacity (veh/h)	1533				826	1000

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	99	68	26
Volume Left	1	0	25
Volume Right	0	8	1
cSH	1533	1700	832
Volume to Capacity	0.00	0.04	0.03
Queue Length 95th (ft)	0	0	2
Control Delay (s)	0.1	0.0	9.5
Lane LOS	A		A
Approach Delay (s)	0.1	0.0	9.5
Approach LOS			A

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	16.0%	ICU Level of Service	A
Analysis Period (min)	60		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	349	2	1	804	21	50	0	12	25	0	39
Future Volume (Veh/h)	32	349	2	1	804	21	50	0	12	25	0	39
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	32	349	2	1	804	21	50	0	12	25	0	39
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			TWLTL							
Median storage veh)					2							
Upstream signal (ft)		1154			284							
pX, platoon unblocked	0.74						0.74	0.74		0.74	0.74	0.74
vC, conflicting volume	825			351			1259	1241	350	1242	1232	814
vC1, stage 1 conf vol							414	414		816	816	
vC2, stage 2 conf vol							845	827		425	415	
vCu, unblocked vol	590			351			1175	1151	350	1152	1138	576
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			100			81	100	98	92	100	90
cM capacity (veh/h)	731			1208			263	302	693	322	327	383

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	32	351	1	825	62	25	39
Volume Left	32	0	1	0	50	25	0
Volume Right	0	2	0	21	12	0	39
cSH	731	1700	1208	1700	299	322	383
Volume to Capacity	0.04	0.21	0.00	0.49	0.21	0.08	0.10
Queue Length 95th (ft)	3	0	0	0	19	6	8
Control Delay (s)	10.1	0.0	8.0	0.0	20.2	17.1	15.5
Lane LOS	B		A		C	C	C
Approach Delay (s)	0.8		0.0		20.2	16.1	
Approach LOS					C	C	

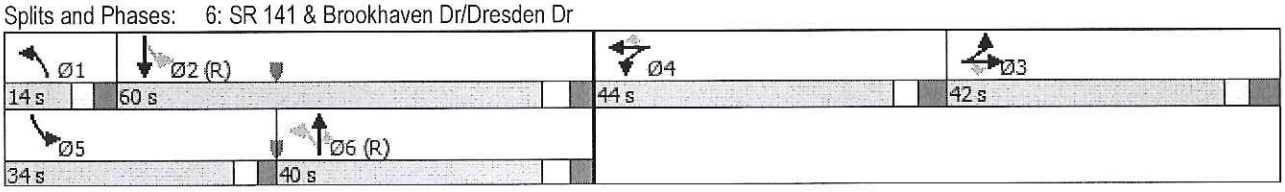
Intersection Summary			
Average Delay	2.0		
Intersection Capacity Utilization	60.4%	ICU Level of Service	B
Analysis Period (min)	60		

Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	55	106	470	126	343	79	813	115	325	1546
Future Volume (vph)	55	106	470	126	343	79	813	115	325	1546
Lane Group Flow (vph)	118	106	296	300	343	79	813	115	325	1603
Turn Type	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	3		4	4		1	6		5	2
Permitted Phases		3			4	6		6	2	
Detector Phase	3	3	4	4	4	1	6	6	5	2
Switch Phase										
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	39.1	39.1	41.5	41.5	41.5	10.7	31.6	31.6	10.4	31.6
Total Split (s)	42.0	42.0	44.0	44.0	44.0	14.0	40.0	40.0	34.0	60.0
Total Split (%)	26.3%	26.3%	27.5%	27.5%	27.5%	8.8%	25.0%	25.0%	21.3%	37.5%
Yellow Time (s)	3.0	3.0	3.1	3.1	3.1	3.0	3.6	3.6	3.0	3.6
All-Red Time (s)	4.1	4.1	3.4	3.4	3.4	2.7	3.0	3.0	2.4	3.0
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)	7.1	7.1	6.5	6.5	6.5	5.7	6.6	6.6	5.4	6.6
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min
v/c Ratio	0.70	0.38	0.88	0.87	0.61	0.63	0.59	0.16	0.75	0.91
Control Delay	93.5	6.8	87.4	84.8	12.8	54.9	43.7	2.7	32.8	47.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	93.5	6.8	87.4	84.8	12.8	54.9	43.7	2.7	32.8	47.6
Queue Length 50th (ft)	122	0	320	323	43	36	373	0	171	817
Queue Length 95th (ft)	212	39	#525	#526	137	#143	568	39	#398	#1340
Internal Link Dist (ft)	293			663			464			725
Turn Bay Length (ft)		50	350		200	125		300		
Base Capacity (vph)	395	458	393	403	602	138	1377	706	464	1759
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.30	0.23	0.75	0.74	0.57	0.57	0.59	0.16	0.70	0.91

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 34 (21%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: SR 141 & Brookhaven Dr/Dresden Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	55	106	470	126	343	79	813	115	325	1546	57
Future Volume (vph)	63	55	106	470	126	343	79	813	115	325	1546	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.1	7.1	6.5	6.5	6.5	5.7	6.6	6.6	5.4	6.6	
Lane Util. Factor		1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected		0.97	1.00	0.95	0.97	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1814	1583	1681	1720	1583	1770	3539	1583	1770	3520	
Flt Permitted		0.97	1.00	0.95	0.97	1.00	0.06	1.00	1.00	0.20	1.00	
Satd. Flow (perm)		1814	1583	1681	1720	1583	120	3539	1583	364	3520	
Peak-hour factor, PHF	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. Flow (vph)	63	55	106	470	126	343	79	813	115	325	1546	57
RTOR Reduction (vph)	0	0	96	0	0	241	0	0	70	0	1	0
Lane Group Flow (vph)	0	118	10	296	300	102	79	813	45	325	1602	0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	3	3		4	4		1	6		5	2	
Permitted Phases			3			4	6		6	2		
Actuated Green, G (s)		14.9	14.9	32.2	32.2	32.2	69.4	62.2	62.2	92.7	79.8	
Effective Green, g (s)		14.9	14.9	32.2	32.2	32.2	69.4	62.2	62.2	92.7	79.8	
Actuated g/C Ratio		0.09	0.09	0.20	0.20	0.20	0.43	0.39	0.39	0.58	0.50	
Clearance Time (s)		7.1	7.1	6.5	6.5	6.5	5.7	6.6	6.6	5.4	6.6	
Vehicle Extension (s)		2.0	2.0	2.2	2.2	2.2	2.0	5.0	5.0	2.5	5.0	
Lane Grp Cap (vph)		168	147	338	346	318	126	1375	615	431	1755	
v/s Ratio Prot		c0.07		c0.18	0.17		0.03	0.23		c0.12	c0.46	
v/s Ratio Perm			0.01			0.06	0.24		0.03	0.32		
v/c Ratio		0.70	0.07	0.88	0.87	0.32	0.63	0.59	0.07	0.75	0.91	
Uniform Delay, d1		70.4	66.2	62.0	61.8	54.6	35.0	38.8	30.8	22.8	36.9	
Progression Factor		1.00	1.00	0.93	0.93	0.96	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		10.9	0.1	23.4	21.0	0.3	7.0	1.9	0.2	7.3	10.1	
Delay (s)		81.3	66.3	81.2	78.7	52.8	42.0	40.7	31.0	30.1	47.0	
Level of Service		F	E	F	E	D	D	D	C	C	D	
Approach Delay (s)		74.2			70.0			39.7			44.1	
Approach LOS		E			E			D			D	

Intersection Summary			
HCM 2000 Control Delay	50.6	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.89		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	25.9
Intersection Capacity Utilization	93.2%	ICU Level of Service	F
Analysis Period (min)	60		

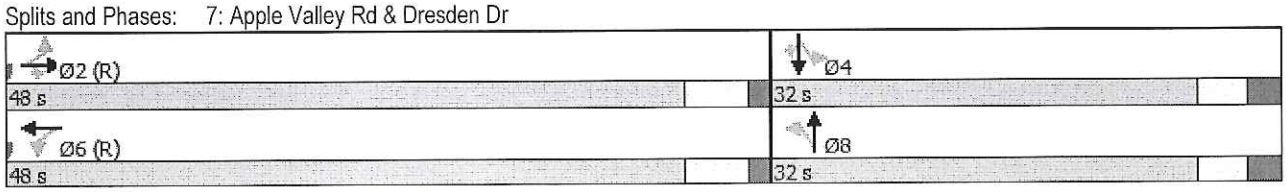
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	24	298	229	101	730	101	12	6	113	125
Future Volume (vph)	24	298	229	101	730	101	12	6	113	125
Lane Group Flow (vph)	24	298	229	101	739	101	59	0	119	125
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases		2			6		8		4	
Permitted Phases	2		2	6		8		4		4
Detector Phase	2	2	2	6	6	8	8	4	4	4
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
Minimum Split (s)	28.5	28.5	28.5	37.5	37.5	26.4	26.4	30.4	30.4	30.4
Total Split (s)	48.0	48.0	48.0	48.0	48.0	32.0	32.0	32.0	32.0	32.0
Total Split (%)	60.0%	60.0%	60.0%	60.0%	60.0%	40.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.1	3.1	3.1	3.1	3.1
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	2.3	2.3	2.3	2.3	2.3
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)	5.5	5.5	5.5	5.5	5.5	5.4	5.4		5.4	5.4
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.06	0.23	0.19	0.13	0.56	0.51	0.20		0.41	0.35
Control Delay	3.5	4.1	0.8	4.9	8.4	39.5	12.9		34.1	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	3.5	4.1	0.8	4.9	8.4	39.5	12.9		34.1	8.6
Queue Length 50th (ft)	3	45	6	13	142	47	5		55	0
Queue Length 95th (ft)	m6	m66	m12	41	362	100	41		109	53
Internal Link Dist (ft)		663			824		471		419	
Turn Bay Length (ft)	100			100		100				25
Base Capacity (vph)	408	1315	1185	760	1313	421	577		610	609
Starvation Cap Reductn	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.06	0.23	0.19	0.13	0.56	0.24	0.10		0.20	0.21

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 76 (95%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Apple Valley Rd & Dresden Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	298	229	101	730	9	101	12	47	6	113	125
Future Volume (vph)	24	298	229	101	730	9	101	12	47	6	113	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5	5.5	5.5		5.4	5.4			5.4	5.4
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.88			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1859		1770	1640			1858	1583
Flt Permitted	0.31	1.00	1.00	0.58	1.00		0.68	1.00			0.99	1.00
Satd. Flow (perm)	579	1863	1583	1077	1859		1268	1640			1835	1583
Peak-hour factor, PHF	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. Flow (vph)	24	298	229	101	730	9	101	12	47	6	113	125
RTOR Reduction (vph)	0	0	67	0	0	0	0	40	0	0	0	105
Lane Group Flow (vph)	24	298	162	101	739	0	101	19	0	0	119	20
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		4
Actuated Green, G (s)	56.5	56.5	56.5	56.5	56.5		12.6	12.6			12.6	12.6
Effective Green, g (s)	56.5	56.5	56.5	56.5	56.5		12.6	12.6			12.6	12.6
Actuated g/C Ratio	0.71	0.71	0.71	0.71	0.71		0.16	0.16			0.16	0.16
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5		5.4	5.4			5.4	5.4
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	408	1315	1117	760	1312		199	258			289	249
v/s Ratio Prot		0.16			c0.40			0.01				
v/s Ratio Perm	0.04		0.10	0.09			c0.08				0.06	0.01
v/c Ratio	0.06	0.23	0.14	0.13	0.56		0.51	0.08			0.41	0.08
Uniform Delay, d1	3.6	4.1	3.8	3.8	5.7		30.9	28.7			30.4	28.8
Progression Factor	0.74	0.83	0.92	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	0.2	0.4	0.2	0.4	1.8		2.0	0.1			1.0	0.1
Delay (s)	2.9	3.8	3.8	4.2	7.5		32.9	28.9			31.3	28.9
Level of Service	A	A	A	A	A		C	C			C	C
Approach Delay (s)		3.7			7.1			31.4			30.1	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	11.4	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.9
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	60		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	64	0	0	60	0	34
Future Volume (Veh/h)	64	0	0	60	0	34
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	64	0	0	60	0	34
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				754		
pX, platoon unblocked						
vC, conflicting volume			64		124	64
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			64		124	64
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	97
cM capacity (veh/h)			1538		871	1000

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	64	60	34
Volume Left	0	0	0
Volume Right	0	0	34
cSH	1700	1700	1000
Volume to Capacity	0.04	0.04	0.03
Queue Length 95th (ft)	0	0	3
Control Delay (s)	0.0	0.0	8.7
Lane LOS			A
Approach Delay (s)	0.0	0.0	8.7
Approach LOS			A

Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	13.4%	ICU Level of Service	A
Analysis Period (min)	60		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	817	18	15	530	1	11	0	20	1	0	0
Future Volume (Veh/h)	0	817	18	15	530	1	11	0	20	1	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	817	18	15	530	1	11	0	20	1	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		897			541							
pX, platoon unblocked	0.88			0.77			0.83	0.83	0.77	0.83	0.83	0.88
vC, conflicting volume	531			835			1386	1387	826	1398	1396	530
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	395			639			1031	1033	627	1045	1043	395
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			94	100	95	99	100	100
cM capacity (veh/h)	1020			730			173	190	373	161	187	574

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	0	835	15	531	31	1
Volume Left	0	0	15	0	11	1
Volume Right	0	18	0	1	20	0
cSH	1700	1700	730	1700	265	161
Volume to Capacity	0.00	0.49	0.02	0.31	0.12	0.01
Queue Length 95th (ft)	0	0	2	0	10	0
Control Delay (s)	0.0	0.0	10.0	0.0	20.4	27.6
Lane LOS			B		C	D
Approach Delay (s)	0.0		0.3		20.4	27.6
Approach LOS					C	D

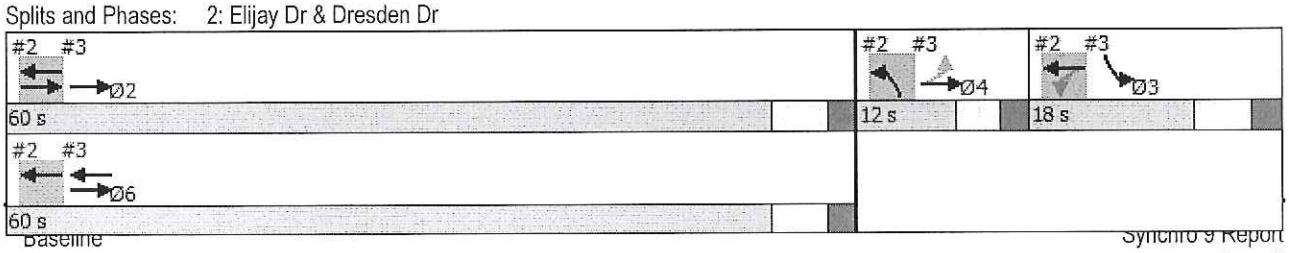
Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	60		

Lane Group	EBT	WBL	WBT	NBL	Ø6
Lane Configurations					
Traffic Volume (vph)	782	27	527	48	
Future Volume (vph)	782	27	527	48	
Lane Group Flow (vph)	826	27	527	81	
Turn Type	NA	custom	NA	Prot	
Protected Phases	2		2 3 6	4	6
Permitted Phases		3			
Detector Phase	2	3	2 3 6	4	
Switch Phase					
Minimum Initial (s)	17.0	5.0		5.0	8.0
Minimum Split (s)	27.0	31.3		30.0	27.0
Total Split (s)	60.0	18.0		12.0	60.0
Total Split (%)	66.7%	20.0%		13.3%	67%
Yellow Time (s)	4.0	4.0		3.0	4.0
All-Red Time (s)	2.0	2.3		2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	
Total Lost Time (s)	6.0	6.3		5.0	
Lead/Lag		Lag		Lead	
Lead-Lag Optimize?					
Recall Mode	Min	Max		Max	Min
v/c Ratio	1.00	0.20	0.40	0.22	
Control Delay	96.5	66.7	2.1	27.8	
Queue Delay	0.0	0.0	0.6	0.0	
Total Delay	96.5	66.7	2.7	27.8	
Queue Length 50th (ft)	630	21	22	33	
Queue Length 95th (ft)	#1097	m36	25	90	
Internal Link Dist (ft)	204		81	237	
Turn Bay Length (ft)		50			
Base Capacity (vph)	826	136	1310	376	
Starvation Cap Reductn	0	0	411	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	1.00	0.20	0.59	0.22	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 121.3
Natural Cycle: 120
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Elijay Dr & Dresden Dr



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	782	44	27	527	48	33
Future Volume (vph)	782	44	27	527	48	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.3	6.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frt	0.99		1.00	1.00	0.94	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	1849		1770	1863	1710	
Flt Permitted	1.00		0.35	1.00	0.97	
Satd. Flow (perm)	1849		661	1863	1710	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	782	44	27	527	48	33
RTOR Reduction (vph)	3	0	0	0	24	0
Lane Group Flow (vph)	823	0	27	527	57	0
Turn Type	NA		custom	NA	Prot	
Protected Phases	2			2 3 6	4	
Permitted Phases			3			
Actuated Green, G (s)	54.0		25.0	85.3	25.0	
Effective Green, g (s)	54.0		25.0	79.0	25.0	
Actuated g/C Ratio	0.45		0.21	0.65	0.21	
Clearance Time (s)	6.0		6.3		5.0	
Vehicle Extension (s)	8.0		2.0		3.0	
Lane Grp Cap (vph)	823		136	1213	352	
v/s Ratio Prot	c0.44			c0.28	c0.03	
v/s Ratio Perm			0.04			
v/c Ratio	1.00		0.20	0.43	0.16	
Uniform Delay, d1	33.6		39.9	10.3	39.6	
Progression Factor	1.00		1.56	0.18	1.00	
Incremental Delay, d2	62.4		2.7	0.9	1.0	
Delay (s)	96.0		64.8	2.7	40.5	
Level of Service	F		E	A	D	
Approach Delay (s)	96.0			5.8	40.5	
Approach LOS	F			A	D	

Intersection Summary			
HCM 2000 Control Delay	58.7	HCM 2000 Level of Service	E
HCM 2000 Volume to Capacity ratio	0.66		
Actuated Cycle Length (s)	121.3	Sum of lost time (s)	17.3
Intersection Capacity Utilization	57.7%	ICU Level of Service	B
Analysis Period (min)	60		

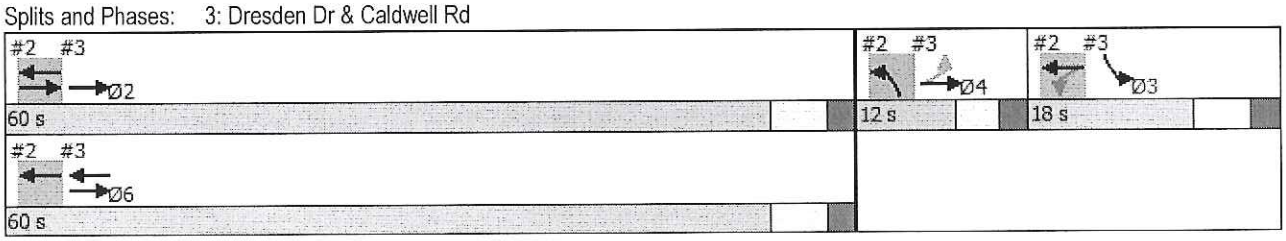
c Critical Lane Group

Lane Group	EBL	EBT	WBT	SBL	Ø2
Lane Configurations					
Traffic Volume (vph)	121	674	483	39	
Future Volume (vph)	121	674	483	39	
Lane Group Flow (vph)	121	674	507	124	
Turn Type	custom	NA	NA	Prot	
Protected Phases		2 4 6	6	3	2
Permitted Phases	4				
Detector Phase	4	2 4 6	6	3	
Switch Phase					
Minimum Initial (s)	5.0		8.0	5.0	17.0
Minimum Split (s)	30.0		27.0	31.3	27.0
Total Split (s)	12.0		60.0	18.0	60.0
Total Split (%)	13.3%		66.7%	20.0%	67%
Yellow Time (s)	3.0		4.0	4.0	4.0
All-Red Time (s)	2.0		2.0	2.3	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	
Total Lost Time (s)	5.0		6.0	6.3	
Lead/Lag	Lead			Lag	
Lead-Lag Optimize?					
Recall Mode	Max		Min	Max	Min
v/c Ratio	0.66	0.52	0.61	0.30	
Control Delay	45.6	0.6	29.4	17.2	
Queue Delay	0.0	6.0	0.0	0.0	
Total Delay	45.6	6.6	29.4	17.2	
Queue Length 50th (ft)	101	4	294	25	
Queue Length 95th (ft)	m105	m3	485	97	
Internal Link Dist (ft)		81	385	375	
Turn Bay Length (ft)	50				
Base Capacity (vph)	183	1290	827	410	
Starvation Cap Reductn	0	543	0	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.66	0.90	0.61	0.30	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 121.3
Natural Cycle: 120
Control Type: Actuated-Uncoordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Dresden Dr & Caldwell Rd



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	121	674	483	24	39	85
Future Volume (vph)	121	674	483	24	39	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0	6.0		6.3	
Lane Util. Factor	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.99		0.91	
Flt Protected	0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1770	1863	1851		1664	
Flt Permitted	0.48	1.00	1.00		0.98	
Satd. Flow (perm)	889	1863	1851		1664	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	121	674	483	24	39	85
RTOR Reduction (vph)	0	0	3	0	67	0
Lane Group Flow (vph)	121	674	504	0	57	0
Turn Type	custom	NA	NA		Prot	
Protected Phases		2 4 6	6		3	
Permitted Phases	4					
Actuated Green, G (s)	25.0	85.0	54.0		25.0	
Effective Green, g (s)	25.0	85.0	54.0		25.0	
Actuated g/C Ratio	0.21	0.70	0.45		0.21	
Clearance Time (s)	5.0		6.0		6.3	
Vehicle Extension (s)	3.0		8.0		2.0	
Lane Grp Cap (vph)	183	1305	824		342	
v/s Ratio Prot		0.36	c0.27		c0.03	
v/s Ratio Perm	c0.14					
v/c Ratio	0.66	0.52	0.61		0.17	
Uniform Delay, d1	44.3	8.5	25.7		39.6	
Progression Factor	0.87	0.02	1.00		1.00	
Incremental Delay, d2	5.5	0.4	3.2		1.0	
Delay (s)	44.1	0.6	28.9		40.6	
Level of Service	D	A	C		D	
Approach Delay (s)		7.2	28.9		40.6	
Approach LOS		A	C		D	

Intersection Summary			
HCM 2000 Control Delay	17.8	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	121.3	Sum of lost time (s)	17.3
Intersection Capacity Utilization	55.4%	ICU Level of Service	B
Analysis Period (min)	60		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	29	79	96	22	14	2
Future Volume (Veh/h)	29	79	96	22	14	2
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	29	79	96	22	14	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			455			
pX, platoon unblocked						
vC, conflicting volume	118				244	107
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	118				244	107
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				98	100
cM capacity (veh/h)	1470				730	947

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	108	118	16
Volume Left	29	0	14
Volume Right	0	22	2
cSH	1470	1700	751
Volume to Capacity	0.02	0.07	0.02
Queue Length 95th (ft)	2	0	2
Control Delay (s)	2.1	0.0	9.9
Lane LOS	A		A
Approach Delay (s)	2.1	0.0	9.9
Approach LOS			A

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	22.4%	ICU Level of Service	A
Analysis Period (min)	60		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	746	37	11	480	66	9	0	3	47	0	65
Future Volume (Veh/h)	91	746	37	11	480	66	9	0	3	47	0	65
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	91	746	37	11	480	66	9	0	3	47	0	65
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			TWLTL							
Median storage veh)					2							
Upstream signal (ft)		1154			284							
pX, platoon unblocked	0.86			0.81			0.88	0.88	0.81	0.88	0.88	0.86
vC, conflicting volume	546			783			1514	1514	764	1466	1500	513
vC1, stage 1 conf vol							946	946		535	535	
vC2, stage 2 conf vol							567	568		931	965	
vCu, unblocked vol	392			616			1160	1161	593	1106	1144	353
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	91			99			96	100	99	81	100	89
cM capacity (veh/h)	1004			782			240	261	410	253	256	594

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	91	783	11	546	12	47	65
Volume Left	91	0	11	0	9	47	0
Volume Right	0	37	0	66	3	0	65
cSH	1004	1700	782	1700	268	253	594
Volume to Capacity	0.09	0.46	0.01	0.32	0.04	0.19	0.11
Queue Length 95th (ft)	7	0	1	0	4	17	9
Control Delay (s)	8.9	0.0	9.7	0.0	19.1	22.4	11.8
Lane LOS	A		A		C	C	B
Approach Delay (s)	0.9		0.2		19.1	16.3	
Approach LOS					C	C	

Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	60		

Lane Group	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	154	50	210	71	532	46	1583	353	337	1182
Future Volume (vph)	154	50	210	71	532	46	1583	353	337	1182
Lane Group Flow (vph)	277	50	139	142	532	46	1583	353	337	1219
Turn Type	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA
Protected Phases	3		4	4		1	6		5	2
Permitted Phases		3			4	6		6	2	
Detector Phase	3	3	4	4	4	1	6	6	5	2
Switch Phase										
Minimum Initial (s)	7.0	7.0	7.0	7.0	7.0	5.0	10.0	10.0	5.0	10.0
Minimum Split (s)	39.1	39.1	41.5	41.5	41.5	10.7	31.6	31.6	10.4	31.6
Total Split (s)	42.0	42.0	44.0	44.0	44.0	14.0	62.0	62.0	32.0	80.0
Total Split (%)	23.3%	23.3%	24.4%	24.4%	24.4%	7.8%	34.4%	34.4%	17.8%	44.4%
Yellow Time (s)	3.0	3.0	3.1	3.1	3.1	3.0	3.6	3.6	3.0	3.6
All-Red Time (s)	4.1	4.1	3.4	3.4	3.4	2.7	3.0	3.0	2.4	3.0
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)	7.1	7.1	6.5	6.5	6.5	5.7	6.6	6.6	5.4	6.6
Lead/Lag	Lag	Lag	Lead	Lead	Lead	Lead	Lag	Lag	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	C-Min	None	C-Min
v/c Ratio	0.89	0.13	0.52	0.51	0.96	0.26	1.18	0.51	1.11	0.69
Control Delay	112.8	0.7	67.7	67.6	61.9	27.6	379.4	27.8	301.4	40.6
Queue Delay	0.0	0.0	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0
Total Delay	112.8	0.7	67.7	67.6	65.6	27.6	379.4	27.8	301.4	40.6
Queue Length 50th (ft)	322	0	146	149	223	25	~1235	183	~408	619
Queue Length 95th (ft)	#544	0	m214	m220	m#488	60	#1713	387	#753	#974
Internal Link Dist (ft)	293			663			464			725
Turn Bay Length (ft)		50	350		200	125		300		
Base Capacity (vph)	353	410	350	359	612	190	1341	698	303	1761
Starvation Cap Reductn	0	0	0	0	31	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.78	0.12	0.40	0.40	0.92	0.24	1.18	0.51	1.11	0.69

Intersection Summary

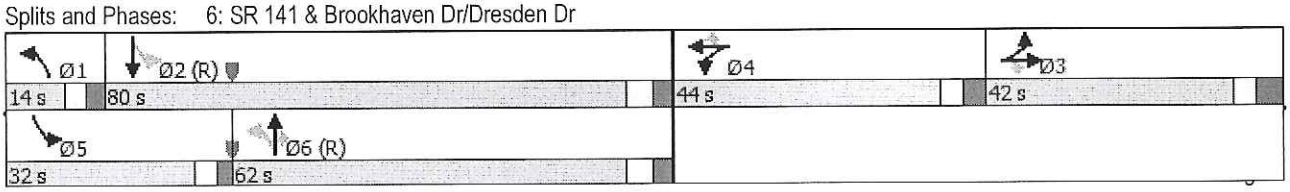
Cycle Length: 180
Actuated Cycle Length: 180
Offset: 96 (53%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated

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

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

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

Splits and Phases: 6: SR 141 & Brookhaven Dr/Dresden Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	123	154	50	210	71	532	46	1583	353	337	1182	37
Future Volume (vph)	123	154	50	210	71	532	46	1583	353	337	1182	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)		7.1	7.1	6.5	6.5	6.5	5.7	6.6	6.6	5.4	6.6	
Lane Util. Factor		1.00	1.00	0.95	0.95	1.00	1.00	0.95	1.00	1.00	0.95	
Frt		1.00	0.85	1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected		0.98	1.00	0.95	0.98	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)		1822	1583	1681	1726	1583	1770	3539	1583	1770	3523	
Flt Permitted		0.98	1.00	0.95	0.98	1.00	0.15	1.00	1.00	0.05	1.00	
Satd. Flow (perm)		1822	1583	1681	1726	1583	282	3539	1583	101	3523	
Peak-hour factor, PHF	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. Flow (vph)	123	154	50	210	71	532	46	1583	353	337	1182	37
RTOR Reduction (vph)	0	0	41	0	0	300	0	0	99	0	1	0
Lane Group Flow (vph)	0	277	9	139	142	232	46	1583	254	337	1218	0
Turn Type	Split	NA	Perm	Split	NA	Perm	pm+pt	NA	Perm	pm+pt	NA	
Protected Phases	3	3		4	4		1	6		5	2	
Permitted Phases			3			4	6		6	2		
Actuated Green, G (s)		30.7	30.7	28.9	28.9	28.9	73.9	68.2	68.2	100.2	88.8	
Effective Green, g (s)		30.7	30.7	28.9	28.9	28.9	73.9	68.2	68.2	100.2	88.8	
Actuated g/C Ratio		0.17	0.17	0.16	0.16	0.16	0.41	0.38	0.38	0.56	0.49	
Clearance Time (s)		7.1	7.1	6.5	6.5	6.5	5.7	6.6	6.6	5.4	6.6	
Vehicle Extension (s)		2.0	2.0	2.2	2.2	2.2	2.0	5.0	5.0	2.5	5.0	
Lane Grp Cap (vph)		310	269	269	277	254	162	1340	599	302	1738	
v/s Ratio Prot		c0.15		0.08	0.08		0.01	c0.45		c0.16	0.35	
v/s Ratio Perm			0.01			c0.15	0.11		0.16	0.45		
v/c Ratio		0.89	0.03	0.52	0.51	0.91	0.28	1.18	0.42	1.12	0.70	
Uniform Delay, d1		73.1	62.3	69.2	69.1	74.3	33.8	55.9	41.4	63.6	35.3	
Progression Factor		1.00	1.00	0.92	0.92	0.86	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2		33.3	0.0	0.8	0.7	41.6	0.4	334.9	2.2	255.5	2.4	
Delay (s)		106.4	62.3	64.4	64.4	105.4	34.1	390.8	43.6	319.1	37.7	
Level of Service		F	E	E	E	F	C	F	D	F	D	
Approach Delay (s)		99.6			91.2			320.7			98.7	
Approach LOS		F			F			F			F	

Intersection Summary			
HCM 2000 Control Delay	191.5	HCM 2000 Level of Service	F
HCM 2000 Volume to Capacity ratio	1.06		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	25.9
Intersection Capacity Utilization	108.4%	ICU Level of Service	G
Analysis Period (min)	60		

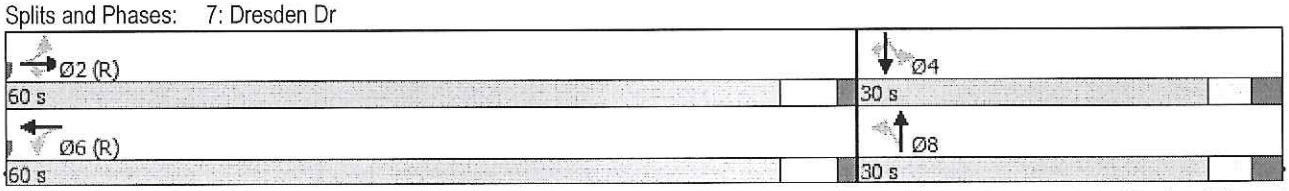
c Critical Lane Group

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	51	654	108	45	451	328	42	13	23	54
Future Volume (vph)	51	654	108	45	451	328	42	13	23	54
Lane Group Flow (vph)	51	654	108	45	467	328	230	0	36	54
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases		2			6		8		4	
Permitted Phases	2		2	6		8		4		4
Detector Phase	2	2	2	6	6	8	8	4	4	4
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
Minimum Split (s)	28.5	28.5	28.5	37.5	37.5	26.4	26.4	30.4	30.4	30.4
Total Split (s)	60.0	60.0	60.0	60.0	60.0	30.0	30.0	30.0	30.0	30.0
Total Split (%)	66.7%	66.7%	66.7%	66.7%	66.7%	33.3%	33.3%	33.3%	33.3%	33.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.1	3.1	3.1	3.1	3.1
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	2.3	2.3	2.3	2.3	2.3
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)	5.5	5.5	5.5	5.5	5.5	5.4	5.4		5.4	5.4
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.10	0.57	0.11	0.13	0.41	0.92	0.41		0.08	0.12
Control Delay	8.0	16.1	2.0	8.8	10.4	76.3	8.9		25.1	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	8.0	16.1	2.0	8.8	10.4	76.3	8.9		25.1	8.0
Queue Length 50th (ft)	11	486	3	10	127	178	18		15	0
Queue Length 95th (ft)	m17	m546	m8	29	225	#393	98		43	33
Internal Link Dist (ft)		663			817		471		419	
Turn Bay Length (ft)	100			100		100				25
Base Capacity (vph)	500	1148	1017	355	1143	373	583		446	471
Starvation Cap Reductn	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.10	0.57	0.11	0.13	0.41	0.88	0.39		0.08	0.11

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 76 (84%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Dresden Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	654	108	45	451	16	328	42	188	13	23	54
Future Volume (vph)	51	654	108	45	451	16	328	42	188	13	23	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5	5.5	5.5		5.4	5.4			5.4	5.4
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.88			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.98	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1853		1770	1634			1830	1583
Flt Permitted	0.44	1.00	1.00	0.31	1.00		0.73	1.00			0.88	1.00
Satd. Flow (perm)	813	1863	1583	577	1853		1367	1634			1634	1583
Peak-hour factor, PHF	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. Flow (vph)	51	654	108	45	451	16	328	42	188	13	23	54
RTOR Reduction (vph)	0	0	41	0	2	0	0	139	0	0	0	40
Lane Group Flow (vph)	51	654	67	45	465	0	328	91	0	0	36	14
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		4
Actuated Green, G (s)	55.5	55.5	55.5	55.5	55.5		23.6	23.6			23.6	23.6
Effective Green, g (s)	55.5	55.5	55.5	55.5	55.5		23.6	23.6			23.6	23.6
Actuated g/C Ratio	0.62	0.62	0.62	0.62	0.62		0.26	0.26			0.26	0.26
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5		5.4	5.4			5.4	5.4
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	501	1148	976	355	1142		358	428			428	415
v/s Ratio Prot		c0.35			0.25			0.06				
v/s Ratio Perm	0.06		0.04	0.08			c0.24				0.02	0.01
v/c Ratio	0.10	0.57	0.07	0.13	0.41		0.92	0.21			0.08	0.03
Uniform Delay, d1	7.1	10.2	6.9	7.2	8.8		32.2	25.9			25.0	24.7
Progression Factor	1.02	1.41	1.69	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	0.2	1.2	0.1	0.7	1.1		37.7	0.3			0.1	0.0
Delay (s)	7.4	15.6	11.8	7.9	9.9		69.9	26.2			25.1	24.7
Level of Service	A	B	B	A	A		E	C			C	C
Approach Delay (s)		14.5			9.7			51.9			24.9	
Approach LOS		B			A			D			C	

Intersection Summary			
HCM 2000 Control Delay	24.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.9
Intersection Capacity Utilization	76.3%	ICU Level of Service	D
Analysis Period (min)	60		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	64	0	0	96	0	15
Future Volume (Veh/h)	64	0	0	96	0	15
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	64	0	0	96	0	15
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				754		
pX, platoon unblocked						
vC, conflicting volume			64		160	64
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			64		160	64
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			1538		831	1000

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	64	96	15
Volume Left	0	0	0
Volume Right	0	0	15
cSH	1700	1700	1000
Volume to Capacity	0.04	0.06	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.0	0.0	8.7
Lane LOS			A
Approach Delay (s)	0.0	0.0	8.7
Approach LOS			A

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	13.4%	ICU Level of Service	A
Analysis Period (min)	60		

Future "Build" Improved Intersection Analysis

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	335	8	21	807	5	8	0	18	3	0	1
Future Volume (Veh/h)	0	335	8	21	807	5	8	0	18	3	0	1
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	335	8	21	807	5	8	0	18	3	0	1
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		904			534							
pX, platoon unblocked	0.72			1.00			0.72	0.72	1.00	0.72	0.72	0.72
vC, conflicting volume	812			343			1189	1193	339	1204	1194	810
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	541			340			1060	1066	336	1082	1068	537
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			94	100	97	98	100	100
cM capacity (veh/h)	737			1216			143	157	704	135	156	390

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	0	343	21	812	26	4
Volume Left	0	0	21	0	8	3
Volume Right	0	8	0	5	18	1
cSH	1700	1700	1216	1700	319	161
Volume to Capacity	0.00	0.20	0.02	0.48	0.08	0.02
Queue Length 95th (ft)	0	0	1	0	7	2
Control Delay (s)	0.0	0.0	8.0	0.0	17.3	27.9
Lane LOS			A		C	D
Approach Delay (s)	0.0		0.2		17.3	27.9
Approach LOS					C	D

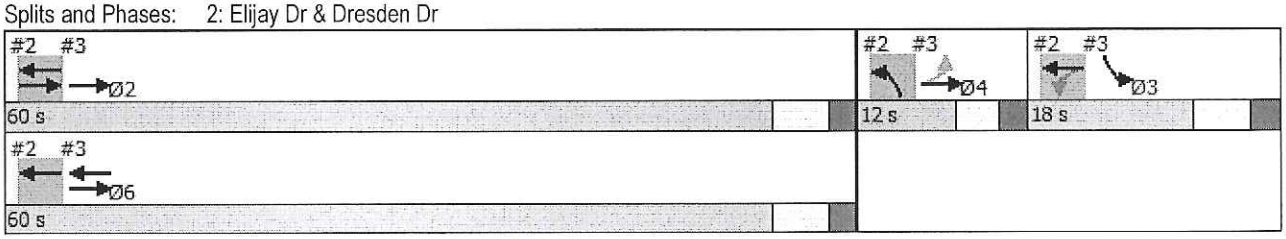
Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	52.8%	ICU Level of Service	A
Analysis Period (min)	60		

Lane Group	EBT	WBL	WBT	NBL	Ø6
Lane Configurations					
Traffic Volume (vph)	327	27	769	59	
Future Volume (vph)	327	27	769	59	
Lane Group Flow (vph)	364	27	769	79	
Turn Type	NA	custom	NA	Prot	
Protected Phases	2		2 3 6	4	6
Permitted Phases		3			
Detector Phase	2	3	2 3 6	4	
Switch Phase					
Minimum Initial (s)	17.0	5.0		5.0	8.0
Minimum Split (s)	27.0	31.3		30.0	27.0
Total Split (s)	60.0	18.0		12.0	60.0
Total Split (%)	66.7%	20.0%		13.3%	67%
Yellow Time (s)	4.0	4.0		3.0	4.0
All-Red Time (s)	2.0	2.3		2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	
Total Lost Time (s)	6.0	6.3		5.0	
Lead/Lag		Lag		Lead	
Lead-Lag Optimize?					
Recall Mode	Min	Min		Max	Min
v/c Ratio	0.40	0.25	0.62	0.19	
Control Delay	17.9	64.2	3.3	28.6	
Queue Delay	0.0	0.0	0.8	0.0	
Total Delay	17.9	64.2	4.1	28.6	
Queue Length 50th (ft)	146	20	33	36	
Queue Length 95th (ft)	253	m26	m52	87	
Internal Link Dist (ft)	204		81	237	
Turn Bay Length (ft)		50			
Base Capacity (vph)	931	110	1252	416	
Starvation Cap Reductn	0	0	216	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.39	0.25	0.74	0.19	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 107.2
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Elijay Dr & Dresden Dr



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	327	37	27	769	59	20
Future Volume (vph)	327	37	27	769	59	20
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.3	6.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frt	0.99		1.00	1.00	0.97	
Flt Protected	1.00		0.95	1.00	0.96	
Satd. Flow (prot)	1837		1770	1863	1734	
Flt Permitted	1.00		0.54	1.00	0.96	
Satd. Flow (perm)	1837		1014	1863	1734	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	327	37	27	769	59	20
RTOR Reduction (vph)	6	0	0	0	12	0
Lane Group Flow (vph)	358	0	27	769	67	0
Turn Type	NA		custom	NA	Prot	
Protected Phases	2			2 3 6	4	
Permitted Phases			3			
Actuated Green, G (s)	53.2		11.7	71.2	25.0	
Effective Green, g (s)	53.2		11.7	64.9	25.0	
Actuated g/C Ratio	0.50		0.11	0.61	0.23	
Clearance Time (s)	6.0		6.3		5.0	
Vehicle Extension (s)	8.0		2.0		3.0	
Lane Grp Cap (vph)	911		110	1127	404	
v/s Ratio Prot	0.20			c0.41	c0.04	
v/s Ratio Perm			0.03			
v/c Ratio	0.39		0.25	0.68	0.17	
Uniform Delay, d1	16.9		43.7	14.2	32.8	
Progression Factor	1.00		1.35	0.17	1.00	
Incremental Delay, d2	1.2		0.3	2.2	0.9	
Delay (s)	18.1		59.3	4.6	33.7	
Level of Service	B		E	A	C	
Approach Delay (s)	18.1			6.5	33.7	
Approach LOS	B			A	C	

Intersection Summary			
HCM 2000 Control Delay	11.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.54		
Actuated Cycle Length (s)	107.2	Sum of lost time (s)	17.3
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	60		

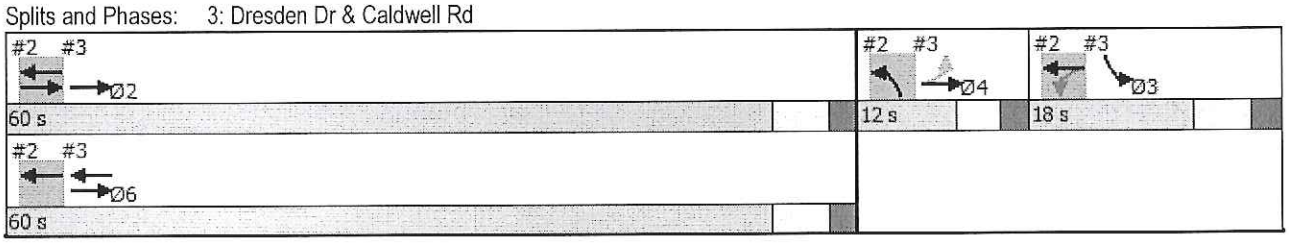
c Critical Lane Group

Lane Group	EBL	EBT	WBT	SBL	Ø2
Lane Configurations					
Traffic Volume (vph)	43	295	711	22	
Future Volume (vph)	43	295	711	22	
Lane Group Flow (vph)	43	295	735	125	
Turn Type	custom	NA	NA	Prot	
Protected Phases		2 4 6	6	3	2
Permitted Phases	4				
Detector Phase	4	2 4 6	6	3	
Switch Phase					
Minimum Initial (s)	5.0		8.0	5.0	17.0
Minimum Split (s)	30.0		27.0	31.3	27.0
Total Split (s)	12.0		60.0	18.0	60.0
Total Split (%)	13.3%		66.7%	20.0%	67%
Yellow Time (s)	3.0		4.0	4.0	4.0
All-Red Time (s)	2.0		2.0	2.3	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	
Total Lost Time (s)	5.0		6.0	6.3	
Lead/Lag	Lead			Lag	
Lead-Lag Optimize?					
Recall Mode	Max		Min	Min	Min
v/c Ratio	0.26	0.20	0.80	0.46	
Control Delay	46.0	0.5	30.7	19.0	
Queue Delay	0.0	0.6	0.0	0.0	
Total Delay	46.0	1.1	30.7	19.0	
Queue Length 50th (ft)	30	2	404	14	
Queue Length 95th (ft)	78	2	#763	88	
Internal Link Dist (ft)		81	385	375	
Turn Bay Length (ft)	50				
Base Capacity (vph)	167	1439	936	270	
Starvation Cap Reductn	0	790	0	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.26	0.45	0.79	0.46	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 107.2
Natural Cycle: 110
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 3: Dresden Dr & Caldwell Rd



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	43	295	711	24	22	103
Future Volume (vph)	43	295	711	24	22	103
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0	6.0		6.3	
Lane Util. Factor	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	1.00		0.89	
Flt Protected	0.95	1.00	1.00		0.99	
Satd. Flow (prot)	1770	1863	1855		1641	
Flt Permitted	0.39	1.00	1.00		0.99	
Satd. Flow (perm)	719	1863	1855		1641	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	43	295	711	24	22	103
RTOR Reduction (vph)	0	0	2	0	92	0
Lane Group Flow (vph)	43	295	733	0	33	0
Turn Type	custom	NA	NA		Prot	
Protected Phases		2 4 6	6		3	
Permitted Phases	4					
Actuated Green, G (s)	25.0	84.2	53.2		11.7	
Effective Green, g (s)	25.0	84.2	53.2		11.7	
Actuated g/C Ratio	0.23	0.79	0.50		0.11	
Clearance Time (s)	5.0		6.0		6.3	
Vehicle Extension (s)	3.0		8.0		2.0	
Lane Grp Cap (vph)	167	1463	920		179	
v/s Ratio Prot		0.16	c0.40		c0.02	
v/s Ratio Perm	c0.06					
v/c Ratio	0.26	0.20	0.80		0.19	
Uniform Delay, d1	33.5	2.9	22.5		43.4	
Progression Factor	1.21	0.05	1.00		1.00	
Incremental Delay, d2	3.5	0.3	6.9		0.2	
Delay (s)	44.0	0.4	29.4		43.6	
Level of Service	D	A	C		D	
Approach Delay (s)		6.0	29.4		43.6	
Approach LOS		A	C		D	

Intersection Summary			
HCM 2000 Control Delay	24.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.57		
Actuated Cycle Length (s)	107.2	Sum of lost time (s)	17.3
Intersection Capacity Utilization	56.7%	ICU Level of Service	B
Analysis Period (min)	60		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	1	98	60	8	25	1
Future Volume (Veh/h)	1	98	60	8	25	1
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	1	98	60	8	25	1
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			455			
pX, platoon unblocked						
vC, conflicting volume	68				164	64
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	68				164	64
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	100				97	100
cM capacity (veh/h)	1533				826	1000

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	99	68	26
Volume Left	1	0	25
Volume Right	0	8	1
cSH	1533	1700	832
Volume to Capacity	0.00	0.04	0.03
Queue Length 95th (ft)	0	0	2
Control Delay (s)	0.1	0.0	9.5
Lane LOS	A		A
Approach Delay (s)	0.1	0.0	9.5
Approach LOS			A

Intersection Summary			
Average Delay	1.3		
Intersection Capacity Utilization	16.0%	ICU Level of Service	A
Analysis Period (min)	60		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	32	349	2	1	804	21	50	0	12	25	0	39
Future Volume (Veh/h)	32	349	2	1	804	21	50	0	12	25	0	39
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	32	349	2	1	804	21	50	0	12	25	0	39
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			TWLTL							
Median storage veh)					2							
Upstream signal (ft)		1154			284							
pX, platoon unblocked	0.71						0.71	0.71		0.71	0.71	0.71
vC, conflicting volume	825			351			1259	1241	350	1242	1232	814
vC1, stage 1 conf vol							414	414		816	816	
vC2, stage 2 conf vol							845	827		425	415	
vCu, unblocked vol	547			351			1160	1134	350	1135	1121	532
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	96			100			81	100	98	92	100	90
cM capacity (veh/h)	724			1208			265	301	693	324	326	388

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	32	351	1	825	62	25	39
Volume Left	32	0	1	0	50	25	0
Volume Right	0	2	0	21	12	0	39
cSH	724	1700	1208	1700	301	324	388
Volume to Capacity	0.04	0.21	0.00	0.49	0.21	0.08	0.10
Queue Length 95th (ft)	3	0	0	0	19	6	8
Control Delay (s)	10.2	0.0	8.0	0.0	20.1	17.1	15.3
Lane LOS	B		A		C	C	C
Approach Delay (s)	0.9		0.0		20.1	16.0	
Approach LOS					C	C	

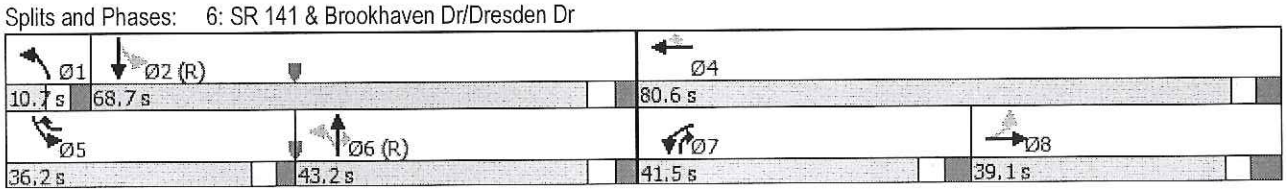
Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	60.4%	ICU Level of Service	B
Analysis Period (min)	60		

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	63	55	470	126	343	79	813	115	325	1546
Future Volume (vph)	63	55	470	126	343	79	813	115	325	1546
Lane Group Flow (vph)	63	161	470	126	343	79	813	115	325	1603
Turn Type	Perm	NA	Prot	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA
Protected Phases		8	7	4	5	1	6	7	5	2
Permitted Phases	8				4	6		6	2	
Detector Phase	8	8	7	4	5	1	6	7	5	2
Switch Phase										
Minimum Initial (s)	7.0	7.0	7.0	7.0	5.0	5.0	10.0	7.0	5.0	10.0
Minimum Split (s)	39.1	39.1	41.5	41.5	10.4	10.7	31.6	41.5	10.4	31.6
Total Split (s)	39.1	39.1	41.5	80.6	36.2	10.7	43.2	41.5	36.2	68.7
Total Split (%)	24.4%	24.4%	25.9%	50.4%	22.6%	6.7%	27.0%	25.9%	22.6%	42.9%
Yellow Time (s)	3.0	3.0	3.1	3.1	3.0	3.0	3.6	3.1	3.0	3.6
All-Red Time (s)	4.1	4.1	3.4	3.4	2.4	2.7	3.0	3.4	2.4	3.0
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)	7.1	7.1	6.5	6.5	5.4	5.7	6.6	6.5	5.4	6.6
Lead/Lag	Lag	Lag	Lead		Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	None	C-Min
v/c Ratio	0.53	0.78	0.90	0.23	0.44	0.72	0.38	0.12	0.70	0.87
Control Delay	84.7	74.8	86.4	43.0	24.3	66.0	33.2	2.9	24.0	38.1
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	84.7	74.8	86.4	43.0	24.3	66.0	33.2	2.9	24.0	38.1
Queue Length 50th (ft)	64	112	254	108	209	30	209	0	147	734
Queue Length 95th (ft)	127	220	350	163	262	#175	348	41	304	#1298
Internal Link Dist (ft)		293		663			464			725
Turn Bay Length (ft)			350		200	125		300		
Base Capacity (vph)	251	378	750	862	842	110	2115	1076	519	1841
Starvation Cap Reductn	0	0	0	0	0	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.25	0.43	0.63	0.15	0.41	0.72	0.38	0.11	0.63	0.87

Intersection Summary

Cycle Length: 160
Actuated Cycle Length: 160
Offset: 41 (26%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.

Splits and Phases: 6: SR 141 & Brookhaven Dr/Dresden Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	63	55	106	470	126	343	79	813	115	325	1546	57
Future Volume (vph)	63	55	106	470	126	343	79	813	115	325	1546	57
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	10	10	10	10	10	10
Total Lost time (s)	7.1	7.1		6.5	6.5	5.4	5.7	6.6	6.5	5.4	6.6	
Lane Util. Factor	1.00	1.00		0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.95	
Frt	1.00	0.90		1.00	1.00	0.85	1.00	1.00	0.85	1.00	0.99	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1679		3433	1863	1583	1652	4746	1478	1652	3286	
Flt Permitted	0.68	1.00		0.95	1.00	1.00	0.07	1.00	1.00	0.26	1.00	
Satd. Flow (perm)	1260	1679		3433	1863	1583	130	4746	1478	456	3286	
Peak-hour factor, PHF	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. Flow (vph)	63	55	106	470	126	343	79	813	115	325	1546	57
RTOR Reduction (vph)	0	49	0	0	0	14	0	0	46	0	1	0
Lane Group Flow (vph)	63	112	0	470	126	329	79	813	69	325	1602	0
Turn Type	Perm	NA		Prot	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases		8		7	4	5	1	6	7	5	2	
Permitted Phases	8					4	6		6	2		
Actuated Green, G (s)	15.0	15.0		24.5	46.6	70.1	76.4	71.4	95.9	100.3	89.6	
Effective Green, g (s)	15.0	15.0		24.5	46.6	70.1	76.4	71.4	95.9	100.3	89.6	
Actuated g/C Ratio	0.09	0.09		0.15	0.29	0.44	0.48	0.45	0.60	0.63	0.56	
Clearance Time (s)	7.1	7.1		6.5	6.5	5.4	5.7	6.6	6.5	5.4	6.6	
Vehicle Extension (s)	2.0	2.0		2.2	2.2	2.5	2.0	5.0	2.2	2.5	5.0	
Lane Grp Cap (vph)	118	157		525	542	693	109	2117	885	461	1840	
v/s Ratio Prot		c0.07		c0.14	0.07	0.07	0.02	0.17	0.01	c0.10	c0.49	
v/s Ratio Perm	0.05					0.14	0.32		0.03	0.34		
v/c Ratio	0.53	0.71		0.90	0.23	0.47	0.72	0.38	0.08	0.70	0.87	
Uniform Delay, d1	69.2	70.4		66.5	43.1	31.9	29.1	29.6	13.5	15.8	30.2	
Progression Factor	1.00	1.00		0.96	1.03	0.96	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	2.3	12.8		19.1	0.1	0.3	20.1	0.5	0.0	4.6	6.4	
Delay (s)	71.5	83.2		82.8	44.4	30.8	49.1	30.1	13.5	20.4	36.6	
Level of Service	E	F		F	D	C	D	C	B	C	D	
Approach Delay (s)		79.9			58.7			29.7			33.9	
Approach LOS		E			E			C			C	

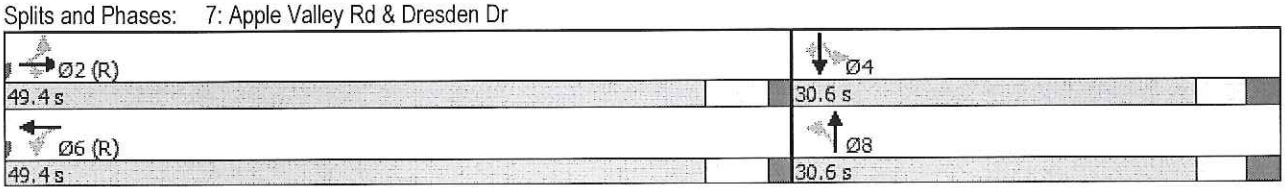
Intersection Summary			
HCM 2000 Control Delay	41.1	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.87		
Actuated Cycle Length (s)	160.0	Sum of lost time (s)	25.9
Intersection Capacity Utilization	93.3%	ICU Level of Service	F
Analysis Period (min)	60		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	24	298	229	101	730	101	12	6	113	125
Future Volume (vph)	24	298	229	101	730	101	12	6	113	125
Lane Group Flow (vph)	24	298	229	101	739	101	59	0	119	125
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases		2			6		8		4	
Permitted Phases	2		2	6		8		4		4
Detector Phase	2	2	2	6	6	8	8	4	4	4
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
Minimum Split (s)	28.5	28.5	28.5	37.5	37.5	26.4	26.4	30.4	30.4	30.4
Total Split (s)	49.4	49.4	49.4	49.4	49.4	30.6	30.6	30.6	30.6	30.6
Total Split (%)	61.8%	61.8%	61.8%	61.8%	61.8%	38.3%	38.3%	38.3%	38.3%	38.3%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.1	3.1	3.1	3.1	3.1
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	2.3	2.3	2.3	2.3	2.3
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)	5.5	5.5	5.5	5.5	5.5	5.4	5.4		5.4	5.4
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.06	0.23	0.19	0.13	0.56	0.51	0.20		0.41	0.35
Control Delay	3.5	3.6	0.8	4.9	8.3	39.6	13.0		34.1	8.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	3.5	3.6	0.8	4.9	8.3	39.6	13.0		34.1	8.6
Queue Length 50th (ft)	3	38	0	13	142	47	5		55	0
Queue Length 95th (ft)	m10	104	33	40	360	101	41		109	53
Internal Link Dist (ft)		663			824		471		419	
Turn Bay Length (ft)	100		160	100		100				25
Base Capacity (vph)	408	1316	1185	760	1313	399	549		578	584
Starvation Cap Reductn	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.06	0.23	0.19	0.13	0.56	0.25	0.11		0.21	0.21

Intersection Summary

Cycle Length: 80
Actuated Cycle Length: 80
Offset: 66 (83%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Apple Valley Rd & Dresden Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	24	298	229	101	730	9	101	12	47	6	113	125
Future Volume (vph)	24	298	229	101	730	9	101	12	47	6	113	125
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5	5.5	5.5		5.4	5.4			5.4	5.4
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	1.00		1.00	0.88			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			1.00	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1859		1770	1640			1858	1583
Flt Permitted	0.31	1.00	1.00	0.58	1.00		0.68	1.00			0.99	1.00
Satd. Flow (perm)	579	1863	1583	1077	1859		1268	1640			1835	1583
Peak-hour factor, PHF	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. Flow (vph)	24	298	229	101	730	9	101	12	47	6	113	125
RTOR Reduction (vph)	0	0	67	0	0	0	0	40	0	0	0	105
Lane Group Flow (vph)	24	298	162	101	739	0	101	19	0	0	119	20
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		4
Actuated Green, G (s)	56.5	56.5	56.5	56.5	56.5		12.6	12.6			12.6	12.6
Effective Green, g (s)	56.5	56.5	56.5	56.5	56.5		12.6	12.6			12.6	12.6
Actuated g/C Ratio	0.71	0.71	0.71	0.71	0.71		0.16	0.16			0.16	0.16
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5		5.4	5.4			5.4	5.4
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	408	1315	1117	760	1312		199	258			289	249
v/s Ratio Prot		0.16			c0.40			0.01				
v/s Ratio Perm	0.04		0.10	0.09			c0.08				0.06	0.01
v/c Ratio	0.06	0.23	0.14	0.13	0.56		0.51	0.08			0.41	0.08
Uniform Delay, d1	3.6	4.1	3.8	3.8	5.7		30.9	28.7			30.4	28.8
Progression Factor	0.75	0.71	0.92	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	0.3	0.4	0.3	0.4	1.8		2.0	0.1			1.0	0.1
Delay (s)	2.9	3.3	3.8	4.2	7.5		32.9	28.9			31.3	28.9
Level of Service	A	A	A	A	A		C	C			C	C
Approach Delay (s)		3.5			7.1			31.4			30.1	
Approach LOS		A			A			C			C	

Intersection Summary			
HCM 2000 Control Delay	11.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.55		
Actuated Cycle Length (s)	80.0	Sum of lost time (s)	10.9
Intersection Capacity Utilization	73.2%	ICU Level of Service	D
Analysis Period (min)	60		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	64	0	0	60	0	34
Future Volume (Veh/h)	64	0	0	60	0	34
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	64	0	0	60	0	34
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				754		
pX, platoon unblocked						
vC, conflicting volume			64		124	64
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			64		124	64
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	97
cM capacity (veh/h)			1538		871	1000

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	64	60	34
Volume Left	0	0	0
Volume Right	0	0	34
cSH	1700	1700	1000
Volume to Capacity	0.04	0.04	0.03
Queue Length 95th (ft)	0	0	3
Control Delay (s)	0.0	0.0	8.7
Lane LOS			A
Approach Delay (s)	0.0	0.0	8.7
Approach LOS			A

Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	13.4%	ICU Level of Service	A
Analysis Period (min)	60		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	0	817	18	15	530	1	11	0	20	1	0	0
Future Volume (Veh/h)	0	817	18	15	530	1	11	0	20	1	0	0
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	0	817	18	15	530	1	11	0	20	1	0	0
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			None							
Median storage veh)												
Upstream signal (ft)		904			534							
pX, platoon unblocked	0.86			0.76			0.82	0.82	0.76	0.82	0.82	0.86
vC, conflicting volume	531			835			1386	1387	826	1398	1396	530
vC1, stage 1 conf vol												
vC2, stage 2 conf vol												
vCu, unblocked vol	376			619			984	986	608	998	996	375
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)												
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	100			98			94	100	95	99	100	100
cM capacity (veh/h)	1019			726			185	200	375	171	197	579

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1
Volume Total	0	835	15	531	31	1
Volume Left	0	0	15	0	11	1
Volume Right	0	18	0	1	20	0
cSH	1700	1700	726	1700	274	171
Volume to Capacity	0.00	0.49	0.02	0.31	0.11	0.01
Queue Length 95th (ft)	0	0	2	0	10	0
Control Delay (s)	0.0	0.0	10.1	0.0	19.8	26.2
Lane LOS			B		C	D
Approach Delay (s)	0.0		0.3		19.8	26.2
Approach LOS					C	D

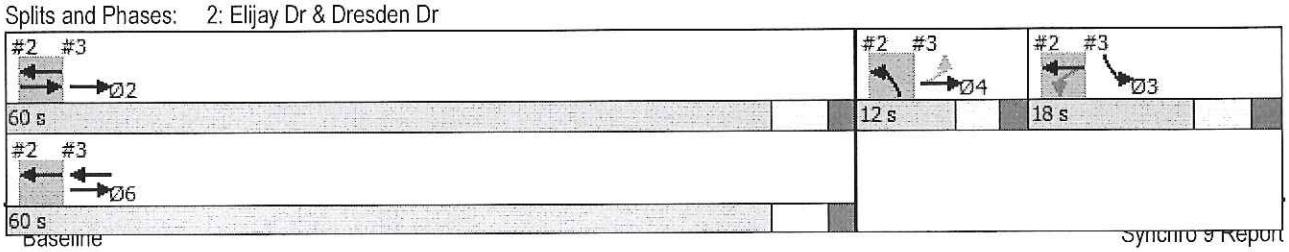
Intersection Summary			
Average Delay	0.6		
Intersection Capacity Utilization	54.1%	ICU Level of Service	A
Analysis Period (min)	60		

Lane Group	EBT	WBL	WBT	NBL	Ø6
Lane Configurations					
Traffic Volume (vph)	782	27	527	48	
Future Volume (vph)	782	27	527	48	
Lane Group Flow (vph)	826	27	527	81	
Turn Type	NA	custom	NA	Prot	
Protected Phases	2		2 3 6	4	6
Permitted Phases		3			
Detector Phase	2	3	2 3 6	4	
Switch Phase					
Minimum Initial (s)	17.0	5.0		5.0	8.0
Minimum Split (s)	27.0	31.3		30.0	27.0
Total Split (s)	60.0	18.0		12.0	60.0
Total Split (%)	66.7%	20.0%		13.3%	67%
Yellow Time (s)	4.0	4.0		3.0	4.0
All-Red Time (s)	2.0	2.3		2.0	2.0
Lost Time Adjust (s)	0.0	0.0		0.0	
Total Lost Time (s)	6.0	6.3		5.0	
Lead/Lag		Lag		Lead	
Lead-Lag Optimize?					
Recall Mode	Min	Min		Max	Min
v/c Ratio	0.89	0.38	0.42	0.19	
Control Delay	39.9	77.8	2.4	23.5	
Queue Delay	0.0	0.0	0.3	0.0	
Total Delay	39.9	77.8	2.8	23.5	
Queue Length 50th (ft)	494	19	22	28	
Queue Length 95th (ft)	#920	m34	25	79	
Internal Link Dist (ft)	204		81	237	
Turn Bay Length (ft)		50			
Base Capacity (vph)	928	71	1242	418	
Starvation Cap Reductn	0	0	265	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.89	0.38	0.54	0.19	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 108
Natural Cycle: 120
Control Type: Actuated-Uncoordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 2: Elijay Dr & Dresden Dr



Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	782	44	27	527	48	33
Future Volume (vph)	782	44	27	527	48	33
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	6.0		6.3	6.0	5.0	
Lane Util. Factor	1.00		1.00	1.00	1.00	
Frt	0.99		1.00	1.00	0.94	
Flt Protected	1.00		0.95	1.00	0.97	
Satd. Flow (prot)	1849		1770	1863	1710	
Flt Permitted	1.00		0.35	1.00	0.97	
Satd. Flow (perm)	1849		661	1863	1710	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	782	44	27	527	48	33
RTOR Reduction (vph)	3	0	0	0	23	0
Lane Group Flow (vph)	823	0	27	527	58	0
Turn Type	NA		custom	NA	Prot	
Protected Phases	2			2 3 6	4	
Permitted Phases			3			
Actuated Green, G (s)	54.0		11.7	72.0	25.0	
Effective Green, g (s)	54.0		11.7	65.7	25.0	
Actuated g/C Ratio	0.50		0.11	0.61	0.23	
Clearance Time (s)	6.0		6.3		5.0	
Vehicle Extension (s)	8.0		2.0		3.0	
Lane Grp Cap (vph)	924		71	1133	395	
v/s Ratio Prot	c0.45			c0.28	c0.03	
v/s Ratio Perm			0.04			
v/c Ratio	0.89		0.38	0.47	0.15	
Uniform Delay, d1	24.3		44.8	11.6	33.0	
Progression Factor	1.00		1.40	0.18	1.00	
Incremental Delay, d2	14.8		1.1	1.1	0.8	
Delay (s)	39.1		63.6	3.2	33.8	
Level of Service	D		E	A	C	
Approach Delay (s)	39.1			6.1	33.8	
Approach LOS	D			A	C	

Intersection Summary			
HCM 2000 Control Delay	26.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.63		
Actuated Cycle Length (s)	108.0	Sum of lost time (s)	17.3
Intersection Capacity Utilization	57.7%	ICU Level of Service	B
Analysis Period (min)	60		

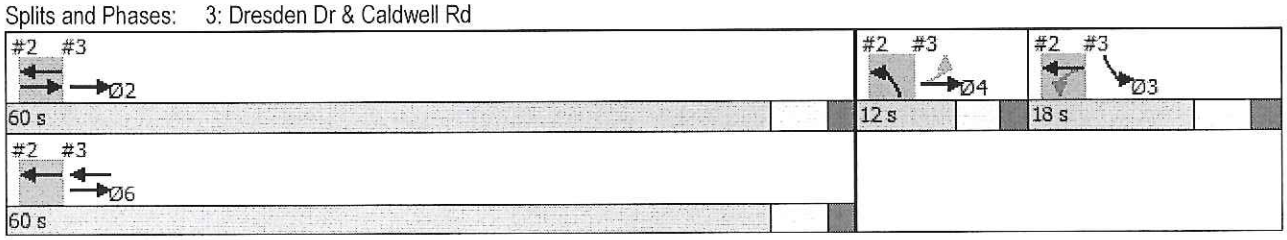
c Critical Lane Group

Lane Group	EBL	EBT	WBT	SBL	Ø2
Lane Configurations					
Traffic Volume (vph)	121	674	483	39	
Future Volume (vph)	121	674	483	39	
Lane Group Flow (vph)	121	674	507	124	
Turn Type	custom	NA	NA	Prot	
Protected Phases		2 4 6	6	3	2
Permitted Phases	4				
Detector Phase	4	2 4 6	6	3	
Switch Phase					
Minimum Initial (s)	5.0		8.0	5.0	17.0
Minimum Split (s)	30.0		27.0	31.3	27.0
Total Split (s)	12.0		60.0	18.0	60.0
Total Split (%)	13.3%		66.7%	20.0%	67%
Yellow Time (s)	3.0		4.0	4.0	4.0
All-Red Time (s)	2.0		2.0	2.3	2.0
Lost Time Adjust (s)	0.0		0.0	0.0	
Total Lost Time (s)	5.0		6.0	6.3	
Lead/Lag	Lead			Lag	
Lead-Lag Optimize?					
Recall Mode	Max		Min	Min	Min
v/c Ratio	0.59	0.47	0.55	0.48	
Control Delay	45.7	0.6	21.2	24.0	
Queue Delay	0.0	2.3	0.0	0.0	
Total Delay	45.7	2.9	21.2	24.0	
Queue Length 50th (ft)	90	2	230	25	
Queue Length 95th (ft)	m104	m2	390	102	
Internal Link Dist (ft)		81	385	375	
Turn Bay Length (ft)	50				
Base Capacity (vph)	205	1449	928	256	
Starvation Cap Reductn	0	613	0	0	
Spillback Cap Reductn	0	0	0	0	
Storage Cap Reductn	0	0	0	0	
Reduced v/c Ratio	0.59	0.81	0.55	0.48	

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 108
Natural Cycle: 120
Control Type: Actuated-Uncoordinated
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 3: Dresden Dr & Caldwell Rd



Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (vph)	121	674	483	24	39	85
Future Volume (vph)	121	674	483	24	39	85
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.0	6.0	6.0		6.3	
Lane Util. Factor	1.00	1.00	1.00		1.00	
Frt	1.00	1.00	0.99		0.91	
Flt Protected	0.95	1.00	1.00		0.98	
Satd. Flow (prot)	1770	1863	1851		1664	
Flt Permitted	0.48	1.00	1.00		0.98	
Satd. Flow (perm)	889	1863	1851		1664	
Peak-hour factor, PHF	1.00	1.00	1.00	1.00	1.00	1.00
Adj. Flow (vph)	121	674	483	24	39	85
RTOR Reduction (vph)	0	0	3	0	76	0
Lane Group Flow (vph)	121	674	505	0	48	0
Turn Type	custom	NA	NA		Prot	
Protected Phases		2 4 6	6		3	
Permitted Phases	4					
Actuated Green, G (s)	25.0	85.0	54.0		11.7	
Effective Green, g (s)	25.0	85.0	54.0		11.7	
Actuated g/C Ratio	0.23	0.79	0.50		0.11	
Clearance Time (s)	5.0		6.0		6.3	
Vehicle Extension (s)	3.0		8.0		2.0	
Lane Grp Cap (vph)	205	1466	925		180	
v/s Ratio Prot		0.36	c0.27		c0.03	
v/s Ratio Perm	c0.14					
v/c Ratio	0.59	0.46	0.55		0.27	
Uniform Delay, d1	36.9	3.8	18.6		44.2	
Progression Factor	1.04	0.02	1.00		1.00	
Incremental Delay, d2	6.0	0.5	2.2		0.3	
Delay (s)	44.3	0.5	20.7		44.5	
Level of Service	D	A	C		D	
Approach Delay (s)		7.2	20.7		44.5	
Approach LOS		A	C		D	

Intersection Summary			
HCM 2000 Control Delay	15.3	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.52		
Actuated Cycle Length (s)	108.0	Sum of lost time (s)	17.3
Intersection Capacity Utilization	55.4%	ICU Level of Service	B
Analysis Period (min)	60		

c Critical Lane Group

Movement	EBL	EBT	WBT	WBR	SBL	SBR
Lane Configurations						
Traffic Volume (veh/h)	29	79	96	22	14	2
Future Volume (Veh/h)	29	79	96	22	14	2
Sign Control		Free	Free		Stop	
Grade		0%	0%		0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	29	79	96	22	14	2
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type		None	None			
Median storage veh)						
Upstream signal (ft)			455			
pX, platoon unblocked						
vC, conflicting volume	118				244	107
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol	118				244	107
tC, single (s)	4.1				6.4	6.2
tC, 2 stage (s)						
tF (s)	2.2				3.5	3.3
p0 queue free %	98				98	100
cM capacity (veh/h)	1470				730	947

Direction, Lane #	EB 1	WB 1	SB 1
Volume Total	108	118	16
Volume Left	29	0	14
Volume Right	0	22	2
cSH	1470	1700	751
Volume to Capacity	0.02	0.07	0.02
Queue Length 95th (ft)	2	0	2
Control Delay (s)	2.1	0.0	9.9
Lane LOS	A		A
Approach Delay (s)	2.1	0.0	9.9
Approach LOS			A

Intersection Summary			
Average Delay	1.6		
Intersection Capacity Utilization	22.4%	ICU Level of Service	A
Analysis Period (min)	60		

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	91	746	37	11	480	66	9	0	3	47	0	65
Future Volume (Veh/h)	91	746	37	11	480	66	9	0	3	47	0	65
Sign Control		Free			Free			Stop			Stop	
Grade		0%			0%			0%			0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	91	746	37	11	480	66	9	0	3	47	0	65
Pedestrians												
Lane Width (ft)												
Walking Speed (ft/s)												
Percent Blockage												
Right turn flare (veh)												
Median type		None			TWLTL							
Median storage veh)					2							
Upstream signal (ft)		1154			284							
pX, platoon unblocked	0.84			0.79			0.87	0.87	0.79	0.87	0.87	0.84
vC, conflicting volume	546			783			1514	1514	764	1466	1500	513
vC1, stage 1 conf vol							946	946		535	535	
vC2, stage 2 conf vol							567	568		931	965	
vCu, unblocked vol	369			596			1112	1113	573	1057	1096	330
tC, single (s)	4.1			4.1			7.1	6.5	6.2	7.1	6.5	6.2
tC, 2 stage (s)							6.1	5.5		6.1	5.5	
tF (s)	2.2			2.2			3.5	4.0	3.3	3.5	4.0	3.3
p0 queue free %	91			99			96	100	99	82	100	89
cM capacity (veh/h)	1003			778			242	262	412	254	256	600

Direction, Lane #	EB 1	EB 2	WB 1	WB 2	NB 1	SB 1	SB 2
Volume Total	91	783	11	546	12	47	65
Volume Left	91	0	11	0	9	47	0
Volume Right	0	37	0	66	3	0	65
cSH	1003	1700	778	1700	270	254	600
Volume to Capacity	0.09	0.46	0.01	0.32	0.04	0.18	0.11
Queue Length 95th (ft)	7	0	1	0	3	17	9
Control Delay (s)	8.9	0.0	9.7	0.0	18.9	22.4	11.7
Lane LOS	A		A		C	C	B
Approach Delay (s)	0.9		0.2		18.9	16.2	
Approach LOS					C	C	

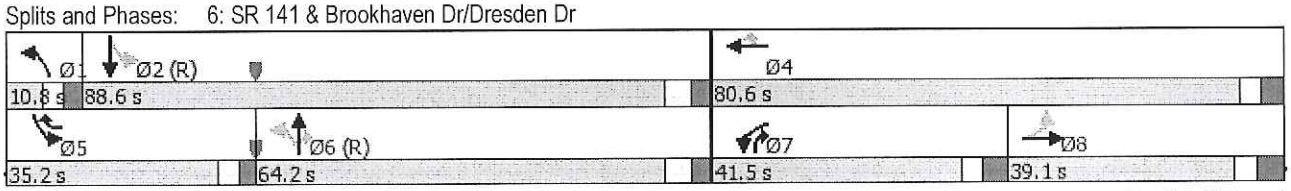
Intersection Summary			
Average Delay	1.9		
Intersection Capacity Utilization	62.2%	ICU Level of Service	B
Analysis Period (min)	60		

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT
Lane Configurations										
Traffic Volume (vph)	123	154	210	71	532	46	1583	353	337	1182
Future Volume (vph)	123	154	210	71	532	46	1583	353	337	1182
Lane Group Flow (vph)	123	204	210	71	532	46	1583	353	337	1219
Turn Type	Perm	NA	Prot	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA
Protected Phases		8	7	4	5	1	6	7	5	2
Permitted Phases	8				4	6		6	2	
Detector Phase	8	8	7	4	5	1	6	7	5	2
Switch Phase										
Minimum Initial (s)	7.0	7.0	7.0	7.0	5.0	5.0	10.0	7.0	5.0	10.0
Minimum Split (s)	39.1	39.1	41.5	41.5	10.4	10.7	31.6	41.5	10.4	31.6
Total Split (s)	39.1	39.1	41.5	80.6	35.2	10.8	64.2	41.5	35.2	88.6
Total Split (%)	21.7%	21.7%	23.1%	44.8%	19.6%	6.0%	35.7%	23.1%	19.6%	49.2%
Yellow Time (s)	3.0	3.0	3.1	3.1	3.0	3.0	3.6	3.1	3.0	3.6
All-Red Time (s)	4.1	4.1	3.4	3.4	2.4	2.7	3.0	3.4	2.4	3.0
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)	7.1	7.1	6.5	6.5	5.4	5.7	6.6	6.5	5.4	6.6
Lead/Lag	Lag	Lag	Lead		Lead	Lead	Lag	Lead	Lead	Lag
Lead-Lag Optimize?	Yes	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	None	None	None	None	None	C-Min	None	None	C-Min
v/c Ratio	0.69	0.83	0.82	0.15	0.73	0.20	0.69	0.36	0.98	0.59
Control Delay	95.7	103.7	107.3	53.5	37.0	16.2	39.3	6.6	126.9	22.7
Queue Delay	0.0	0.0	0.0	0.0	3.5	0.0	0.0	0.0	0.0	0.0
Total Delay	95.7	103.7	107.3	53.5	40.6	16.2	39.3	6.6	126.9	22.7
Queue Length 50th (ft)	141	230	131	70	399	17	526	52	312	443
Queue Length 95th (ft)	239	358	200	m115	593	45	783	172	#670	732
Internal Link Dist (ft)		293		663			464			725
Turn Bay Length (ft)			350		200	125		300		
Base Capacity (vph)	235	325	667	766	724	230	2293	1127	344	2074
Starvation Cap Reductn	0	0	0	0	110	0	0	0	0	0
Spillback Cap Reductn	0	0	0	0	0	0	0	0	0	0
Storage Cap Reductn	0	0	0	0	0	0	0	0	0	0
Reduced v/c Ratio	0.52	0.63	0.31	0.09	0.87	0.20	0.69	0.31	0.98	0.59

Intersection Summary

Cycle Length: 180
Actuated Cycle Length: 180
Offset: 96 (53%), Referenced to phase 2:SBTL and 6:NBTL, Start of Green
Natural Cycle: 145
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 6: SR 141 & Brookhaven Dr/Dresden Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	123	154	50	210	71	532	46	1583	353	337	1182	37
Future Volume (vph)	123	154	50	210	71	532	46	1583	353	337	1182	37
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Lane Width	12	12	12	12	12	12	10	10	10	10	10	10
Total Lost time (s)	7.1	7.1		6.5	6.5	5.4	5.7	6.6	6.5	5.4	6.6	
Lane Util. Factor	1.00	1.00		0.97	1.00	1.00	1.00	0.91	1.00	1.00	0.95	
Frt	1.00	0.96		1.00	1.00	0.85	1.00	1.00	0.85	1.00	1.00	
Flt Protected	0.95	1.00		0.95	1.00	1.00	0.95	1.00	1.00	0.95	1.00	
Satd. Flow (prot)	1770	1794		3433	1863	1583	1652	4746	1478	1652	3288	
Flt Permitted	0.71	1.00		0.95	1.00	1.00	0.22	1.00	1.00	0.08	1.00	
Satd. Flow (perm)	1324	1794		3433	1863	1583	375	4746	1478	138	3288	
Peak-hour factor, PHF	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. Flow (vph)	123	154	50	210	71	532	46	1583	353	337	1182	37
RTOR Reduction (vph)	0	7	0	0	0	13	0	0	110	0	1	0
Lane Group Flow (vph)	123	197	0	210	71	519	46	1583	243	337	1218	0
Turn Type	Perm	NA		Prot	NA	pm+ov	pm+pt	NA	pm+ov	pm+pt	NA	
Protected Phases		8		7	4	5	1	6	7	5	2	
Permitted Phases	8					4	6		6	2		
Actuated Green, G (s)	24.1	24.1		13.5	44.7	74.5	91.1	87.0	100.5	122.2	112.4	
Effective Green, g (s)	24.1	24.1		13.5	44.7	74.5	91.1	87.0	100.5	122.2	112.4	
Actuated g/C Ratio	0.13	0.13		0.08	0.25	0.41	0.51	0.48	0.56	0.68	0.62	
Clearance Time (s)	7.1	7.1		6.5	6.5	5.4	5.7	6.6	6.5	5.4	6.6	
Vehicle Extension (s)	2.0	2.0		2.2	2.2	2.5	2.0	5.0	2.2	2.5	5.0	
Lane Grp Cap (vph)	177	240		257	462	655	218	2293	825	344	2053	
v/s Ratio Prot		0.11		0.06	0.04	c0.13	0.00	0.33	0.02	c0.16	0.37	
v/s Ratio Perm	0.09					0.20	0.10		0.14	c0.50		
v/c Ratio	0.69	0.82		0.82	0.15	0.79	0.21	0.69	0.29	0.98	0.59	
Uniform Delay, d1	74.4	75.9		82.0	52.9	46.0	22.7	36.1	21.0	54.3	20.2	
Progression Factor	1.00	1.00		1.00	1.05	0.81	1.00	1.00	1.00	1.00	1.00	
Incremental Delay, d2	9.6	21.8		17.4	0.1	5.9	0.2	1.7	0.1	77.2	1.3	
Delay (s)	84.0	97.7		99.6	55.7	43.3	22.9	37.8	21.1	131.5	21.4	
Level of Service	F	F		F	E	D	C	D	C	F	C	
Approach Delay (s)		92.5			58.9			34.5			45.3	
Approach LOS		F			E			C			D	

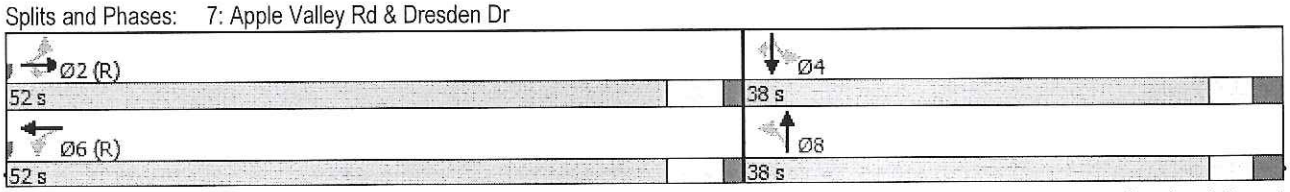
Intersection Summary			
HCM 2000 Control Delay	46.4	HCM 2000 Level of Service	D
HCM 2000 Volume to Capacity ratio	0.99		
Actuated Cycle Length (s)	180.0	Sum of lost time (s)	25.9
Intersection Capacity Utilization	87.7%	ICU Level of Service	E
Analysis Period (min)	60		
c Critical Lane Group			

Lane Group	EBL	EBT	EBR	WBL	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	51	654	108	45	451	328	42	13	23	54
Future Volume (vph)	51	654	108	45	451	328	42	13	23	54
Lane Group Flow (vph)	51	654	108	45	467	328	230	0	36	54
Turn Type	Perm	NA	Perm	Perm	NA	Perm	NA	Perm	NA	Perm
Protected Phases		2			6		8		4	
Permitted Phases	2		2	6		8		4		4
Detector Phase	2	2	2	6	6	8	8	4	4	4
Switch Phase										
Minimum Initial (s)	10.0	10.0	10.0	10.0	10.0	10.0	10.0	7.0	7.0	7.0
Minimum Split (s)	28.5	28.5	28.5	37.5	37.5	26.4	26.4	30.4	30.4	30.4
Total Split (s)	52.0	52.0	52.0	52.0	52.0	38.0	38.0	38.0	38.0	38.0
Total Split (%)	57.8%	57.8%	57.8%	57.8%	57.8%	42.2%	42.2%	42.2%	42.2%	42.2%
Yellow Time (s)	4.0	4.0	4.0	4.0	4.0	3.1	3.1	3.1	3.1	3.1
All-Red Time (s)	1.5	1.5	1.5	1.5	1.5	2.3	2.3	2.3	2.3	2.3
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)	5.5	5.5	5.5	5.5	5.5	5.4	5.4		5.4	5.4
Lead/Lag										
Lead-Lag Optimize?										
Recall Mode	C-Min	C-Min	C-Min	C-Min	C-Min	None	None	None	None	None
v/c Ratio	0.11	0.60	0.11	0.14	0.43	0.82	0.38		0.08	0.11
Control Delay	8.8	12.5	2.5	11.9	13.0	48.7	7.2		20.8	6.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0
Total Delay	8.8	12.5	2.5	11.9	13.0	48.7	7.2		20.8	6.3
Queue Length 50th (ft)	11	220	8	11	137	171	17		15	0
Queue Length 95th (ft)	m26	m321	m16	38	286	#321	84		37	29
Internal Link Dist (ft)		663			824		471		419	
Turn Bay Length (ft)	100		160	100		100				25
Base Capacity (vph)	463	1093	970	319	1088	495	711		595	607
Starvation Cap Reductn	0	0	0	0	0	0	0		0	0
Spillback Cap Reductn	0	0	0	0	0	0	0		0	0
Storage Cap Reductn	0	0	0	0	0	0	0		0	0
Reduced v/c Ratio	0.11	0.60	0.11	0.14	0.43	0.66	0.32		0.06	0.09

Intersection Summary

Cycle Length: 90
Actuated Cycle Length: 90
Offset: 36 (40%), Referenced to phase 2:EBTL and 6:WBTL, Start of Green
Natural Cycle: 70
Control Type: Actuated-Coordinated
95th percentile volume exceeds capacity, queue may be longer.
Queue shown is maximum after two cycles.
m Volume for 95th percentile queue is metered by upstream signal.

Splits and Phases: 7: Apple Valley Rd & Dresden Dr



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	51	654	108	45	451	16	328	42	188	13	23	54
Future Volume (vph)	51	654	108	45	451	16	328	42	188	13	23	54
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	5.5	5.5	5.5	5.5	5.5		5.4	5.4			5.4	5.4
Lane Util. Factor	1.00	1.00	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Frt	1.00	1.00	0.85	1.00	0.99		1.00	0.88			1.00	0.85
Flt Protected	0.95	1.00	1.00	0.95	1.00		0.95	1.00			0.98	1.00
Satd. Flow (prot)	1770	1863	1583	1770	1853		1770	1634			1830	1583
Flt Permitted	0.42	1.00	1.00	0.29	1.00		0.73	1.00			0.88	1.00
Satd. Flow (perm)	791	1863	1583	545	1853		1367	1634			1644	1583
Peak-hour factor, PHF	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. Flow (vph)	51	654	108	45	451	16	328	42	188	13	23	54
RTOR Reduction (vph)	0	0	42	0	1	0	0	133	0	0	0	38
Lane Group Flow (vph)	51	654	66	45	466	0	328	97	0	0	36	16
Turn Type	Perm	NA	Perm	Perm	NA		Perm	NA		Perm	NA	Perm
Protected Phases		2			6			8			4	
Permitted Phases	2		2	6			8			4		4
Actuated Green, G (s)	52.8	52.8	52.8	52.8	52.8		26.3	26.3			26.3	26.3
Effective Green, g (s)	52.8	52.8	52.8	52.8	52.8		26.3	26.3			26.3	26.3
Actuated g/C Ratio	0.59	0.59	0.59	0.59	0.59		0.29	0.29			0.29	0.29
Clearance Time (s)	5.5	5.5	5.5	5.5	5.5		5.4	5.4			5.4	5.4
Vehicle Extension (s)	5.0	5.0	5.0	5.0	5.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	464	1092	928	319	1087		399	477			480	462
v/s Ratio Prot		c0.35			0.25			0.06				
v/s Ratio Perm	0.06		0.04	0.08			c0.24				0.02	0.01
v/c Ratio	0.11	0.60	0.07	0.14	0.43		0.82	0.20			0.07	0.03
Uniform Delay, d1	8.2	11.9	8.0	8.4	10.3		29.7	24.0			23.0	22.8
Progression Factor	0.85	0.81	1.14	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	0.4	1.9	0.1	0.9	1.2		14.2	0.2			0.1	0.0
Delay (s)	7.4	11.4	9.3	9.3	11.5		43.9	24.2			23.1	22.8
Level of Service	A	B	A	A	B		D	C			C	C
Approach Delay (s)		10.9			11.3			35.8			22.9	
Approach LOS		B			B			D			C	

Intersection Summary			
HCM 2000 Control Delay	18.6	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.67		
Actuated Cycle Length (s)	90.0	Sum of lost time (s)	10.9
Intersection Capacity Utilization	76.3%	ICU Level of Service	D
Analysis Period (min)	60		

c Critical Lane Group

Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (veh/h)	64	0	0	96	0	15
Future Volume (Veh/h)	64	0	0	96	0	15
Sign Control	Free			Free	Stop	
Grade	0%			0%	0%	
Peak Hour Factor	1.00	1.00	1.00	1.00	1.00	1.00
Hourly flow rate (vph)	64	0	0	96	0	15
Pedestrians						
Lane Width (ft)						
Walking Speed (ft/s)						
Percent Blockage						
Right turn flare (veh)						
Median type	None			None		
Median storage veh)						
Upstream signal (ft)				754		
pX, platoon unblocked						
vC, conflicting volume			64		160	64
vC1, stage 1 conf vol						
vC2, stage 2 conf vol						
vCu, unblocked vol			64		160	64
tC, single (s)			4.1		6.4	6.2
tC, 2 stage (s)						
tF (s)			2.2		3.5	3.3
p0 queue free %			100		100	99
cM capacity (veh/h)			1538		831	1000

Direction, Lane #	EB 1	WB 1	NB 1
Volume Total	64	96	15
Volume Left	0	0	0
Volume Right	0	0	15
cSH	1700	1700	1000
Volume to Capacity	0.04	0.06	0.01
Queue Length 95th (ft)	0	0	1
Control Delay (s)	0.0	0.0	8.7
Lane LOS			A
Approach Delay (s)	0.0	0.0	8.7
Approach LOS			A

Intersection Summary			
Average Delay	0.7		
Intersection Capacity Utilization	13.4%	ICU Level of Service	A
Analysis Period (min)	60		

Traffic Volume Worksheets

16-006 Fairfield Dresden Drive- Brookhaven GA

Traffic Volumes
Future Conditions

A&R Engineering
June 2016

1. Dresden Dr @ Parkside Dr

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	8	0	18	26	3	0	1	4	0	311	8	319	20	735	5	760
Growth Factor (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition:	8	0	19	27	3	0	1	4	0	324	8	332	21	765	5	791
Removed Tag Office Trips:	0	0	-1	-1	0	0	0	0	0	-21	0	-21	0	-19	0	-19
New Retail Trips:	0	0	0	0	0	0	0	0	0	20	0	20	0	12	0	12
New Rez Trips:	0	0	0	0	0	0	0	0	0	12	0	12	0	49	0	49
Total New Trips:	0	0	0	0	0	0	0	0	0	32	0	32	0	61	0	61
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes:	8	0	18	26	3	0	1	4	0	335	8	343	21	807	5	833

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	11	0	19	30	1	0	0	1	0	719	17	736	14	462	1	477
Growth Factor (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition:	11	0	20	31	1	0	0	1	0	748	18	766	15	481	1	497
Removed Tag Office Trips:	0	0	0	0	0	0	0	0	0	-9	0	-9	0	-8	0	-8
New Retail Trips:	0	0	0	0	0	0	0	0	0	34	0	34	0	35	0	35
New Rez Trips:	0	0	0	0	0	0	0	0	0	44	0	44	0	22	0	22
Total New Trips:	0	0	0	0	0	0	0	0	0	78	0	78	0	57	0	57
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes:	11	0	20	31	1	0	0	1	0	817	18	835	15	530	1	546

16-006 Fairfield Dresden Drive- Brookhaven GA

Traffic Volumes
Future Conditions

A&R Engineering
June 2016

2. Dresden Dr @ Ellijay Dr

A.M. Peak Hour

Condition	Northbound L	Northbound T	Northbound R	Northbound Tot	Southbound L	Southbound T	Southbound R	Southbound Tot	Eastbound L	Eastbound T	Eastbound R	Eastbound Tot	Westbound L	Westbound T	Westbound R	Westbound Tot
Existing:	55	0	19	74	0	0	0	0	0	306	34	340	24	721	0	745
Growth Factor (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition:	57	0	20	77	0	0	0	0	0	318	35	353	25	750	0	775
Removed Tag Office Trips:	-1	0	0	-1	0	0	0	0	0	-13	-1	-14	0	-22	0	-22
New Retail Trips:	2	0	0	2	0	0	0	0	0	8	1	9	0	13	0	13
New Rez Trips:	1	0	0	1	0	0	0	0	0	14	2	16	2	28	0	30
Total New Trips:	3	0	0	3	0	0	0	0	0	22	3	25	2	41	0	43
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes:	59	0	20	79	0	0	0	0	0	327	37	364	27	769	0	796

P.M. Peak Hour

Condition	Northbound L	Northbound T	Northbound R	Northbound Tot	Southbound L	Southbound T	Southbound R	Southbound Tot	Eastbound L	Eastbound T	Eastbound R	Eastbound Tot	Westbound L	Westbound T	Westbound R	Westbound Tot
Existing:	40	0	32	72	0	0	0	0	0	729	38	767	25	459	0	484
Growth Factor (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition:	42	0	33	75	0	0	0	0	0	758	40	798	26	478	0	504
Removed Tag Office Trips:	0	0	0	0	0	0	0	0	0	-5	0	-5	0	-4	0	-4
New Retail Trips:	3	0	0	3	0	0	0	0	0	23	3	26	0	22	0	22
New Rez Trips:	3	0	0	3	0	0	0	0	0	6	1	7	1	31	0	32
Total New Trips:	6	0	0	6	0	0	0	0	0	29	4	33	1	53	0	54
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes:	48	0	33	81	0	0	0	0	0	782	44	826	27	527	0	554

16-006 Fairfield Dresden Drive- Brookhaven GA

Traffic Volumes
Future Conditions

A&R Engineering
June 2016

3. Dresden Dr @ Caldwell Rd

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	2	1	1	4	12	0	73	85	35	280	8	323	1	689	23	713
Growth Factor (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition:	2	1	1	4	12	0	76	88	36	291	8	335	1	717	24	742
Removed Tag Office Trips:	0	0	0	0	0	0	-2	-2	-1	-11	0	-12	0	-20	0	-20
New Retail Trips:	0	0	0	0	0	0	4	4	3	5	0	8	0	9	0	9
New Rez Trips:	0	0	0	0	10	0	25	35	5	10	0	15	0	5	0	5
Total New Trips:	0	0	0	0	10	0	29	39	8	15	0	23	0	14	0	14
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes:	2	1	1	4	22	0	103	125	43	295	8	346	1	711	24	736

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	2	0	3	5	34	0	61	95	109	633	3	745	0	436	23	459
Growth Factor (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition:	2	0	3	5	35	0	63	98	113	659	3	775	0	454	24	478
Removed Tag Office Trips:	0	0	0	0	0	0	0	0	-1	-4	0	-5	0	-3	0	-3
New Retail Trips:	0	0	0	0	0	0	7	7	7	15	0	22	0	15	0	15
New Rez Trips:	0	0	0	0	4	0	15	19	2	4	0	6	0	17	0	17
Total New Trips:	0	0	0	0	4	0	22	26	9	19	0	28	0	32	0	32
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes:	2	0	3	5	39	0	85	124	121	674	3	798	0	483	24	507

16-006 Fairfield Dresden Drive- Brookhaven GA

Traffic Volumes
Future Conditions

A&R Engineering
June 2016

4. Caldwell Rd @ Green Meadows

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	24	0	1	25	1	59	0	60	0	51	8	59
Growth Factor (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition:	0	0	0	0	25	0	1	26	1	61	0	62	0	53	8	61
Removed Tag Office Trips:	0	0	0	0	0	0	0	0	0	-2	0	-2	0	-1	0	-1
New Retail Trips:	0	0	0	0	0	0	0	0	0	4	0	4	0	3	0	3
New Rez Trips:	0	0	0	0	0	0	0	0	0	35	0	35	0	5	0	5
Total New Trips:	0	0	0	0	0	0	0	0	0	39	0	39	0	8	0	8
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes:	0	0	0	0	25	0	1	26	1	98	0	99	0	60	8	68

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	0	0	0	0	13	0	2	15	28	51	0	79	0	85	21	106
Growth Factor (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition:	0	0	0	0	14	0	2	16	29	53	0	82	0	88	22	110
Removed Tag Office Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0	-1
New Retail Trips:	0	0	0	0	0	0	0	0	0	7	0	7	0	7	0	7
New Rez Trips:	0	0	0	0	0	0	0	0	0	19	0	19	0	2	0	2
Total New Trips:	0	0	0	0	0	0	0	0	0	26	0	26	0	9	0	9
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes:	0	0	0	0	14	0	2	16	29	79	0	108	0	96	22	118

16-006 Fairfield Dresden Drive- Brookhaven GA

Traffic Volumes
Future Conditions

A&R Engineering
June 2016

5. Dresden Dr @ Apartments Drwy

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	50	0	12	62	14	0	20	34	0	335	2	337	1	752	0	753
Growth Factor (%):	0	0	0		0	0	0		0	2	2		2	2	0	
Base Condition:	50	0	12	62	14	0	20	34	0	349	2	351	1	782	0	783
Removed Tag Office Trips:	0	0	0	0	-14	0	-20	-34	0	0	0	0	0	0	0	0
New Retail Trips:	0	0	0	0	9	0	12	21	20	0	0	20	0	0	14	14
New Rez Trips:	0	0	0	0	16	0	27	43	12	0	0	12	0	22	7	29
Total New Trips:	0	0	0	0	25	0	39	64	32	0	0	32	0	22	21	43
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes:	50	0	12	62	25	0	39	64	32	349	2	383	1	804	21	826

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	9	0	3	12	5	0	8	13	0	730	36	766	11	468	0	479
Growth Factor (%):	0	0	0		0	0	0		0	2	2		2	2	0	
Base Condition:	9	0	3	12	5	0	8	13	0	759	37	796	11	487	0	498
Removed Tag Office Trips:	0	0	0	0	-5	0	-8	-13	0	0	0	0	0	0	0	0
New Retail Trips:	0	0	0	0	26	0	35	61	34	0	0	34	0	0	25	25
New Rez Trips:	0	0	0	0	7	0	12	19	44	0	0	44	0	10	24	34
Total New Trips:	0	0	0	0	33	0	47	80	78	0	0	78	0	10	49	59
Pass-by Trips:	0	0	0	0	14	0	18	32	13	-13	0	0	0	-17	17	0
Future Traffic Volumes:	9	0	3	12	47	0	65	112	91	746	37	874	11	480	66	557

16-006 Fairfield Dresden Drive- Brookhaven GA

Traffic Volumes
Future Conditions

A&R Engineering
June 2016

6. SR 141 @ Dresden Dr

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	76	781	101	958	310	1486	55	1851	61	55	102	218	435	122	311	868
Growth Factor (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition:	79	813	105	997	323	1546	57	1926	63	57	106	226	453	127	324	904
Removed Tag Office Trips:	0	0	-4	-4	-12	0	0	-12	0	-2	0	-2	-8	-2	-6	-16
New Retail Trips:	0	0	9	9	9	0	0	9	0	0	0	0	5	0	5	10
New Rez Trips:	0	0	5	5	5	0	0	5	0	0	0	0	20	1	20	41
Total New Trips:	0	0	14	14	14	0	0	14	0	0	0	0	25	1	25	51
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes:	79	813	115	1007	325	1546	57	1928	63	55	106	224	470	126	343	939

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	44	1522	310	1876	295	1136	36	1467	118	147	48	313	180	68	492	740
Growth Factor (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition:	46	1583	323	1952	307	1182	37	1526	123	153	50	326	187	71	512	770
Removed Tag Office Trips:	0	0	-3	-3	-3	0	0	-3	0	-1	0	-1	-2	-1	-5	-8
New Retail Trips:	0	0	15	15	15	0	0	15	0	1	0	1	16	1	16	33
New Rez Trips:	0	0	18	18	18	0	0	18	0	1	0	1	9	0	9	18
Total New Trips:	0	0	33	33	33	0	0	33	0	2	0	2	25	1	25	51
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes:	46	1583	353	1982	337	1182	37	1556	123	154	50	327	210	71	532	813

16-006 Fairfield Dresden Drive- Brookhaven GA

Traffic Volumes
Future Conditions

A&R Engineering
June 2016

7. Dresden Dr @ Apple Valley Rd

A.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	97	12	45	154	5	109	120	234	23	277	220	520	94	668	4	766
Growth Factor (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition:	101	12	47	160	5	113	125	243	24	288	229	541	98	695	4	797
Removed Tag Office Trips:	0	0	-3	-3	0	0	0	0	0	-18	0	-18	-2	-17	0	-19
New Retail Trips:	0	0	2	2	0	0	0	0	0	18	0	18	1	11	0	12
New Rez Trips:	0	0	1	1	1	0	0	1	0	10	0	10	4	41	5	50
Total New Trips:	0	0	3	3	1	0	0	1	0	28	0	28	5	52	5	62
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes:	101	12	47	160	6	113	125	244	24	298	229	551	101	730	9	840

P.M. Peak Hour

Condition	Northbound				Southbound				Eastbound				Westbound			
	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot	L	T	R	Tot
Existing:	315	40	177	532	9	22	52	83	49	571	104	724	39	392	13	444
Growth Factor (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition:	328	42	184	554	9	23	54	86	51	594	108	753	41	408	14	463
Removed Tag Office Trips:	0	0	-2	-2	0	0	0	0	0	-7	0	-7	-1	-7	0	-8
New Retail Trips:	0	0	3	3	0	0	0	0	0	31	0	31	3	32	0	35
New Rez Trips:	0	0	3	3	4	0	0	4	0	36	0	36	2	18	2	22
Total New Trips:	0	0	6	6	4	0	0	4	0	67	0	67	5	50	2	57
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes:	328	42	188	558	13	23	54	90	51	654	108	813	45	451	16	512

16-006 Fairfield Dresden Drive- Brookhaven GA

Traffic Volumes
Future Conditions

A&R Engineering
June 2016

8. Caldwell Rd @ Res Entrance

A.M. Peak Hour

Condition	Northbound L	Northbound T	Northbound R	Northbound Tot	Southbound L	Southbound T	Southbound R	Southbound Tot	Eastbound L	Eastbound T	Eastbound R	Eastbound Tot	Westbound L	Westbound T	Westbound R	Westbound Tot
Existing:	0	0	0	0	24	0	1	25	1	59	0	60	0	51	8	59
Growth Factor (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition:	0	0	0	0	25	0	1	26	1	61	0	62	0	53	8	61
Removed Tag Office Trips:	0	0	0	0	0	0	0	0	0	-2	0	-2	0	-1	0	-1
New Retail Trips:	0	0	0	0	0	0	0	0	0	4	0	4	0	3	0	3
New Rez Trips:	0	0	34	34	0	0	0	0	0	1	0	1	0	5	0	5
Total New Trips:	0	0	34	34	0	0	0	0	0	5	0	5	0	8	0	8
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes:	0	0	34	34	25	0	1	26	1	64	0	65	0	60	8	68

P.M. Peak Hour

Condition	Northbound L	Northbound T	Northbound R	Northbound Tot	Southbound L	Southbound T	Southbound R	Southbound Tot	Eastbound L	Eastbound T	Eastbound R	Eastbound Tot	Westbound L	Westbound T	Westbound R	Westbound Tot
Existing:	0	0	0	0	13	0	2	15	28	51	0	79	0	85	21	106
Growth Factor (%):	2	2	2		2	2	2		2	2	2		2	2	2	
Base Condition:	0	0	0	0	14	0	2	16	29	53	0	82	0	88	22	110
Removed Tag Office Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	-1	0	-1
New Retail Trips:	0	0	0	0	0	0	0	0	0	7	0	7	0	7	0	7
New Rez Trips:	0	0	15	15	0	0	0	0	0	4	0	4	0	2	0	2
Total New Trips:	0	0	15	15	0	0	0	0	0	11	0	11	0	9	0	9
Pass-by Trips:	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Future Traffic Volumes:	0	0	15	15	14	0	2	16	29	64	0	93	0	96	22	118

RECEIPT

Receipt #: 09025

City of Brookhaven
BUILDING DIVISION
4362 Peachtree Rd
404-637-0500 Fax 404-637-0501

Payment Method:	CHECK
Reference No.:	700335
Amount Paid:	$1165.00
Payment Date:	4/6/2016 11:48:58 AM
Payment From:	FF REALTY
Fund Transfer To:	16BH-VAR00027
Cashier:	Karen Bottoms
Comments:	

Permit #:	16BH-VAR00027
Application Type:	Misc./One Stop / Variances / Miscellaneous
Address:	1954 AIRPORT RD Brookhaven, GA
Owner Info:	SSP DRESDEN LLC 1954 AIRPORT RD STE 270 Brookhaven, GA 30341
Work Description:	REZONING 4/6/16 ACCEPTED BY PATRICE
Valuation:	$0.00

Fee Item	Account Code	Amount
Rezoning/Major Modification		$1165.00
Total Fee Amount:		**$1,165.00**

Other Payment(s):	$0.00
Balance:	$0.00