

Planning and Zoning
 1975 Lakeside Parkway, Suite 350
 Tucker, GA 30084
 Phone: 678-597-9040
 Email: permits@tuckerga.gov
 Website: www.tuckerga.gov

Land Use Petition Application

Type of Application: Rezoning Comprehensive Plan Amendment Special Land Use Permit
 Concurrent Variance Modification

APPLICANT INFORMATION

Applicant is the: Property Owner Owner's Agent Contract Purchaser

Name: AHS Residential, LLC c/o Dennis J. Webb, Jr., Smith, Gambrell & Russell, LLP

Address: 1105 W. Peachtree Street, NE, Suite 1000

City: Atlanta State: Georgia Zip: 30309

Contact Name: Dennis J. Webb, Jr.

Phone: 404.815.3620 Email: dwebb@sgrlaw.com

OWNER INFORMATION

Name: Tucker Exchange, LLC

Address: 1427 Mayson Street

City: Atlanta State: Georgia Zip: 30324

Contact Name: Gary Matthews

Phone: 678.672.1834 Email: gm@parksidepartners.com

PROPERTY INFORMATION

Property Address: 2059 Northlake Parkway

Present Zoning District(s): NL-2 Requested Zoning District(s): N/A

Present Land Use Category: Regional Activity Center Requested Land Use Category: N/A

Land District: 18 Land Lot(s): 188 and 189 Acreage: +/-13.0096

Proposed Development: Mixed-Use (Multifamily Residential and Office)

Concurrent Variance(s): See attached Statement of Intent for a list of Variances

RESIDENTIAL DEVELOPMENT

No. of Lots/Dwelling Units: 507* Dwelling Unit Size (Sq. Ft.): Density: 38.97 units/acre

NON-RESIDENTIAL DEVELOPMENT

No. of Buildings/Lots: 1 Total Building Sq. Ft.: 59,315 sf Density: .105 FAR
 (*378 Multifamily; 129 Live-Work) (total office space)

APPLICANT'S CERTIFICATION

THE UNDERSIGNED BELOW STATES UNDER OATH THAT THEY ARE AUTHORIZED TO MAKE THIS APPLICATION. THE UNDERSIGNED IS AWARE THAT NO APPLICATION OR REAPPLICATION AFFECTING THE SAME LAND SHALL BE ACTED UPON WITHIN 24 MONTHS FROM THE DATE OF LAST ACTION BY THE MAYOR AND CITY COUNCIL.

11.29.2021

Signature of Applicant

Date

Dennis J. Webb, Jr. - Smith, Gambrell & Russell, LLP

Type or Print Name and Title

11.29.2021

Signature of Notary Public

Date



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12/17/2021

PROPERTY OWNER'S CERTIFICATION

I do solemnly swear and attest, subject to criminal penalties for false swearing, that I am the legal owner, as reflected in the records of DeKalb County, Georgia, of the property identified below, which is the subject of the attached Land Use Petition before the City of Tucker, Georgia. As the legal owner of record of the subject property, I hereby authorize the individual named below to act as the applicant in the pursuit of the Application for Rezoning (RZ), Comprehensive Plan Amendment (CA), Special Land Use Permit (SLUP), Modification (M) & Concurrent Variance (CV) in request of the items indicated below.

I, Kyle Jenks, authorize, Dennis J. Webb, Jr., Smith, Gambrell & Russell, LLP
(Property Owner) (Applicant)

to file for SLUP and CV, at 2059 Northlake Parkway, Tucker, Georgia
(RZ, CA, SLUP, M, CV) (Address)

on this date December 13, 2021
(Month) (Day)

- I understand that if a rezoning is denied or assigned a zoning classification other than the classification requested in the application, then no portion of the same property may again be considered for rezoning for a period of twenty-four (24) months from the date of the mayor and city councils' final decision.
- I understand that if an application for a special land use permit affecting all or a portion of the same property for which an application for the same special land use was denied shall not be submitted before twenty-four (24) months have passed from the date of final decision by the mayor and city council on the previous special land use permit.
- I understand that failure to supply all required information (per the relevant Applicant Checklists and requirements of the Tucker Zoning Ordinance) will result in REJECTION OF THE APPLICATION.
- I understand that preliminary approval of my design plan does not authorize final approval of my zoning or signage request. I agree to arrange additional permitting separately, after approval is obtained.
- I understand that representation associated with this application on behalf of the property owner, project coordinator, potential property owner, agent or such other representative shall be binding.

Kyle Jenks 12.8.21
Signature of Property Owner Date

Tucker Exchange, LLC - Manager
Type or Print Name and Title

Christina Bickerton 12/8/2021
Signature of Notary Public Date



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DISCLOSURE REPORT FORM

WITHIN THE (2) YEARS IMMEDIATELY PRECEDING THE FILING OF THIS ZONING PETITION HAVE YOU, AS THE APPLICANT OR OPPONENT FOR THE REZONING PETITION, OR AN ATTORNEY OR AGENT OF THE APPLICANT OR OPPONENT FOR THE REZONING PETITION, MADE ANY CAMPAIGN CONTRIBUTIONS AGGREGATING \$250.00 OR MORE OR MADE GIFTS HAVING AN AGGREGATE VALUE OF \$250.00 TO THE MAYOR OR ANY MEMBER OF THE CITY COUNCIL.

CIRCLE ONE: **YES** (if YES, complete points 1 through 4); **NO** (if NO, complete only point 4)

1. CIRCLE ONE: **Party to Petition** (If party to petition, complete sections 2, 3 and 4 below)
 In Opposition to Petition (If in opposition, proceed to sections 3 and 4 below)

2. List all individuals or business entities which have an ownership interest in the property which is the subject of this rezoning petition:

1. _____	5. _____
2. _____	6. _____
3. _____	7. _____
4. _____	8. _____

3. CAMPAIGN CONTRIBUTIONS:

Name of Government Official	Total Dollar Amount	Date of Contribution	Enumeration and Description of Gift Valued at \$250.00 or more

4. The undersigned acknowledges that this disclosure is made in accordance with the Official Code of Georgia, Section 36-67A-1 et. seq. Conflict of interest in zoning actions, and that the information set forth herein is true to the undersigned's best knowledge, information and belief.

Name (print) Tucker Exchange, LLC

Signature:  Date: 12-8-21

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DISCLOSURE REPORT FORM

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Name (print) AHS Residential, LLC

Signature: 

Date: 12/06/2021

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Name (print) Kathryn M. Zickert

Signature: *Kathryn M Zickert*

Date: 11.29.2021

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SLUP-22-0001, CV-22-0001, CV-22-0002, CV-22-0003, CV-22-0004

LAND USE PETITION APPLICATION - REVISED DECEMBER 9, 2020

**PLANNING & ZONING
DEPARTMENT**

DISCLOSURE REPORT FORM

WITHIN THE (2) YEARS IMMEDIATELY PRECEDING THE FILING OF THIS ZONING PETITION HAVE YOU, AS THE APPLICANT OR OPPONENT FOR THE REZONING PETITION, OR AN ATTORNEY OR AGENT OF THE APPLICANT OR OPPONENT FOR THE REZONING PETITION, MADE ANY CAMPAIGN CONTRIBUTIONS AGGREGATING \$250.00 OR MORE OR MADE GIFTS HAVING AN AGGREGATE VALUE OF \$250.00 TO THE MAYOR OR ANY MEMBER OF THE CITY COUNCIL.

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Name (print) J. Alexander Brock

Signature:  Date: 11.29.2021

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WITHIN THE (2) YEARS IMMEDIATELY PRECEDING THE FILING OF THIS ZONING PETITION HAVE YOU, AS THE APPLICANT OR OPPONENT FOR THE REZONING PETITION, OR AN ATTORNEY OR AGENT OF THE APPLICANT OR OPPONENT FOR THE REZONING PETITION, MADE ANY CAMPAIGN CONTRIBUTIONS AGGREGATING \$250.00 OR MORE OR MADE GIFTS HAVING AN AGGREGATE VALUE OF \$250.00 TO THE MAYOR OR ANY MEMBER OF THE CITY COUNCIL.

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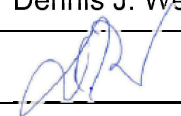
1.	5.
2.	6.
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Name (print) Dennis J. Webb, Jr.

Signature:  Date: 11.29.2021

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Pre-Application Meeting

From: Kylie Thomas <kthomas@tuckerga.gov>
Sent: Monday, December 6, 2021 4:56 PM
To: Brock, Alex; Courtney Smith; Jessica Echols
Cc: Webb, Dennis (Den)
Subject: Re: [External]Tucker Exchange - Pre-Application Form
Attachments: imagea7456e.JPG

CAUTION: This email is from an external source. Do not click links or attachments unless it's from a verified sender.

Hi Alex,

No pre-ap form or additional pre-ap meeting is necessary. You are welcome to email me the application when you are ready to submit!

Thanks!
Kylie

Get [Outlook for iOS](#)

From: Brock, Alex <jabrock@sgrlaw.com>
Sent: Monday, December 6, 2021 4:01 PM
To: Courtney Smith; Kylie Thomas; Jessica Echols
Cc: Webb, Dennis (Den)
Subject: [External]Tucker Exchange - Pre-Application Form

Courtney,

We are preparing the Special Land Use Permit application for on the Tucker Exchange development at 2059 Northlake Parkway. You met with Den several weeks ago to discuss the application and I wanted to see if you had a pre-application form from that meeting. If not, do we need to schedule another pre-app? Can it be scheduled this week?

We are preparing a submittal for the Monday 12/13 deadline and will need the pre-app form to include with it.

Thanks,
Alex

J. Alexander Brock
Attorney at Law

p | 404-815-3603
f | 404-685-6903
e | jabrock@sgrlaw.com
1105 W. Peachtree St. NE | Suite 1000 | Atlanta, GA 30309
www.sgrlaw.com | My Bio | vCard



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SLUP-22-0001, CV-22-0001, CV-22-0002, CV-22-0003, CV-22-0004

PLANNING & ZONING
DEPARTMENT

Public Participation Report



City of Tucker

Public Participation Plan Report

Project Name: Tucker Exchange Mixed-Use

Contact Name: Dennis J. Webb, Jr., Smith, Gambrell & Russell, LLP

Meeting Date: December 9, 2021

Meeting Location: The ground floor common area at 2059 Northlake Parkway, Tucker, Georgia

Meeting Start Time: 7:00 p.m.

Meeting End Time: 8:00 p.m.

Number of people in attendance: See attached sign-in sheets.

Date of Filing of Land Use Petition Application: December 13, 2021

General Introduction:

A community meetings was held at the location noted above on December 9, 2021. Notifications were sent to each property owner within 500' of the Subject Property (a copy of the letter is attached). At the meeting, the Applicant gave an overview of the proposed development as well as an explanation of the SLUP and concurrent variances requested. The Applicant then answered questions and concerns from the neighbors in attendance. A summary of the neighbors' questions are attached to this report.

Summary of concerns and issues raised at the meeting: (please list and respond to each one individually; include as many items that were discussed).

1. List question/concern/comment/request for changes to the proposed plans

Applicant Response: See attached list of questions and the Applicant's responses.

The following must be submitted at time of application submittal:

- Copy of the letter that was mailed to neighbors
- Copy of address list for mailing

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- o Meeting sign-in sheet
- o Meeting minutes
- o Copy of the plan that was presented at the neighborhood meeting

I, the undersigned, as the applicant or an authorized representative of the applicant do solemnly swear and attest that the information provided is true and accurate. I have included a complete record of the neighborhood meeting, as well as an honest response regarding the intentions for development.

[Handwritten Signature] 12/13/21
 Signature of Applicant or Authorized Representative Date

Dennis J. Webb, Jr.
 Type or Print Name of Applicant or Authorized Representative Date

[Handwritten Signature] 12.13.2021
 Signature of Notary Date



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AHS Residential, LLC - Community Meeting - 2059 Northlake Parkway, Tucker, GA
 December 9, 2021 - 7:00 pm

Name and Address	Email Address	Phone number
Andrea Bennet Tucker	andrea3577@gmail.com	404-231-4130
Logan Ritchie Decaturish/Tucker Observer	LCRitchie@decaturish.com	
Nelda Macintyre 3403 Northlake Ct	macnelda2022@yahoo.com	770-491-7576
Susan Pockepek	Sp.pockepek@bellsouth.net	
Keeley High	keehgh@gmail.com	
Peter Reby	rp713@gmail.com	
Charles Strauss Pine Grove Subdivision	chuckstrauss@hotmail.com	
Denell A. Davis Northlake	denell.davis@yahoo.com	
NEAL STUBBLEFIELD	NEALSTUBBLEFIELD@GMAIL.COM	404 595 6327
FOR MARY N. HARLAN By Linda Harlan Trotter, P.O.A	Lharlantrotter@gmail.com	678-200-0674
J. BARRY SCHRENK 3566 LAWR. HWY. TUCKER, GA 30084	JBARRY3566@YAHOO.COM	770-934-2141
Andrew Greenberg 1846 Hebron Way, Tucker	HDIAndrew@aol.com	
James Curtis 1887 Robin Hill Ct. Tucker 30084	421810@bellsouth.net	770-491-6198

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SLUP-22-0001, CV-22-0001, CV-22-0002, CV-22-0003, CV-22-0004

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AHS Residential, LLC - Community Meeting - 2059 Northlake Parkway, Tucker, GA
December 9, 2021 - 7:00 pm

Name and Address	Email Address	Phone number
Rod Gary	rodgary.com@gmail.com	
Matthew Lee	mlee@tuckernorthlake.com	

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AHS Tucker Exchange
12.09.2021 Community Meeting Questions and Responses

1. Architecture. Members of the community voiced opinions on the architectural design and asked for examples of other AHS developments. The community wanted a consistency of architectural styles between the proposed and existing building.
 - a. RESPONSE: Applicant will create an email group from the attendees and forward examples of AHS' other local projects. The Applicant does not intend the proposed building to reflect the architecture of the existing building. The Applicant will continue to work with the City and the community to refine the proposed architecture.
2. Members of the community asked about the amenities provided.
 - a. RESPONSE: Applicant noted the clubhouse, and surrounding nature.
3. There was a question regarding the number of elevators and if there is a back-up generator situation.
 - a. RESPONSE: Applicant will confirm the answer and get back to the attendees.
4. There was a question on whether or not covered parking or a parking deck will be provided.
 - a. RESPONSE: The proposed design does not include covered parking.
5. The community had questions regarding the unit sizes and the lease rates.
 - a. RESPONSE: These items are not yet finalized, but as we continue through the design we will get that information to the attendees.
6. There was a concern regarding the abundance of apartments in the area and available units.
 - a. RESPOSNE: The Applicant notes the few apartment complexes in the area and detailed the need for additional units.
7. There was a question regarding how the proposed development will impact local traffic.
 - a. RESPONSE: The Applicant noted that a traffic impact is being prepared and will be included in its SLUP application.
8. Members of the community voiced concerns over the impacts of allowing affordable housing. The community did not want affordable housing, but voiced support for workforce housing.
 - a. RESPONSE: The Applicant noted that the units will not be affordable according to the HUD and AMI requirements, however will entertain a workforce housing component if necessary.
9. Make sure plan is consistent with Tucker Master trail plan.
 - a. RESPONSE: The proposed site plan shows a 10-foot multi use trail along E. Exchange Place. The Applicant will discuss options with City Staff for locating trails on the other sides of the property.
10. There was a question regarding the number of AHS employees working in the building.
 - a. RESPONSE: The Applicant will determine the number of employees and respond via the email group.
11. There was a question about the proximity of the residential to the railroad tracks.
 - a. RESPONSE: The railroad tracks are approximately 120-feet from the closest point of the proposed building.
12. There were no site plan changes that were requested at the meeting and the site plan was not revised as a result of the meeting.



City of Tucker

Neighborhood Meeting Information

Information about your neighborhood meeting shall be provided to city staff at least 14 calendar days before the meeting. City staff will then post information about the meeting on the city website and the city facebook page. An email blast will also be sent through the city email list.

Project Name: Tucker Exchange - 2059 Northlake Parkway

Contact Name: Dennis J. Webb, Jr. - Smith, Gambrell & Russell, LLP
djwebb@sgrlaw.com
404.815.3500

Meeting Date: December 9, 2021

Meeting Time: 7:00pm

Meeting Location: In the ground floor common area at 2059 Northlake Parkway, Tucker, Georgia

Request: AHS will be seeking a Special Land Use Permit to permit a density above 24 units per acre and certain variances.

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Dear Neighbors of 2059 Northlake Parkway,

AHS Residential, LLC (“AHS”) is interested in developing the property at 2059 Northlake Parkway, known as “Tucker Exchange,” for a mixed-use development that will incorporate the existing five-story office structure and add two new, nine-story buildings. Among other things, the mixed-use development will include approximately 59,315 square feet of office and co-working space, 129 live-work units and 378 multi-family units. To allow for the development, AHS will be seeking a Special Land Use Permit to permit a density above 24 units per acre and certain variances.

AHS broke ground on its first development in the metropolitan Atlanta area in June of 2021 at Tributary in Douglasville, Georgia. AHS is committed to creating unique, high quality communities that include apartments with well-designed amenities like a business center, a multipurpose clubhouse with swimming pool and a fitness center. AHS is also committed to providing hard-working Americans with contemporary living options that will not break the bank. AHS owns and manages over 2,000 apartments units in Florida with more communities planned in Georgia and Texas.

The first step in the process is to hold a Public Participation (neighborhood) meeting with the community to discuss our proposal with you and receive your feedback. The meetings are required before we can submit our application for a Special Land Use Permit and variances to the City. You are receiving this letter as you own property within 500’ of our project. We hope you will be able to meet with us in the ground floor common area at 2059 Northlake Parkway, Tucker, Georgia on December 9th, 2021 at 7:00 pm.

We have included a site plan of our current proposal and look forward to discussing it with you and receiving your feedback on December 9, 2021. If you are unable to attend or wish to reach out beforehand, please feel free to contact us at djwebb@sgrlaw.com or 404.815.3500.

A flyer outlining the land use petition process in the City of Tucker is also included. Questions relating to city matters can be addressed to info@tuckerga.gov.

Sincerely,

AHS Residential, LLC

ahsresidential.com



Land Use Petition Process for Rezoning, Special Land Use Permits, and Comprehensive Plan Amendments

1

Before filing, the applicant must host a neighborhood meeting per our Public Participation Plan requirements. The point of this meeting is for the potential applicant to discuss the proposal with neighbors and get feedback or requests for changes. More information can be found here: tuckerga.gov/ppp

2

The applicant files an application with the City of Tucker. Deadlines are listed in the Land Use Petition Application.

3

Staff completes a technical analysis of the application based on the City of Tucker Zoning Ordinance and Comprehensive Plan. This report includes a staff recommendation.

4

The City holds Public Meetings

- Planning Commission
 - Staff presentation of the staff report and staff recommendation
 - Public Hearing, which includes the applicant's presentation and a chance for the public to speak for or against the application
 - The Planning Commission votes on a recommendation to forward to City Council
- Mayor & City Council – 1st Read
 - Staff presentation of the staff report and staff recommendation
 - Public Hearing, which includes the applicant's presentation and a chance for the public to speak for or against the application
- Mayor & City Council – 2nd Read
 - Staff presentation of the staff report and staff recommendation
 - Public Hearing, which includes the applicant's presentation and a chance for the public to speak for or against the application
 - City Council can take a vote for final action on the request

Decisions on applications are based on the criteria that is set forth in the zoning ordinance.

The criteria is located here: tuckerga.gov/landusecriteria

Please note that some applications, such as those that meet the Development of Regional Impact (DRI) standards, will have additional steps between filing an application and the Public Hearing.

For information about current land use petitions, including application information and public meeting dates, please visit: tuckerga.gov/landusepetitions



WATER AND SEWER NOTES:
 1. WATER SERVICES WILL BE PROVIDED BY OKALA COUNTY UTILIZING EXISTING WATER MAIN BY MAIN ROAD
 2. SEWER SERVICES WILL BE PROVIDED BY OKALA COUNTY UTILIZING EXISTING SEWER INFRASTRUCTURE CURRENTLY LOCATED ON SITE

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DEVELOPMENT SUMMARY

SITE SUMMARY:

CURRENT ZONING	NORTHLAKE OVERLAY (TER II)
PROPOSED ZONING	NORTHLAKE OVERLAY (TER II)
SITE AREA	53.05 ACRES
LOT COVERAGE	10.1 ACRES (17.7%)
OPEN SPACE	2.8 ACRES (23.3%)
REQUIRED BUILDING HEIGHT	135 FT 9 STORIES
PROPOSED BUILDING HEIGHT	89 FT 9 STORIES
EXISTING BUILDING HEIGHT	81.4 FT 5 STORIES

BUILDING SETBACK REQUIREMENTS:

FRONT (MIN)	0 FT
FRONT (MAX)	30 FT
SIDE (MIN)	20 FT
BACK (MIN)	20 FT

LANDSCAPE SETBACK:

FRONT (MIN)	6 FT
SIDE (MIN)	6 FT
BACK (MIN)	6 FT

ROOMED LAND USES & DENSITIES:

MULTIFAMILY RESIDENTIAL	378 UNITS
LIVE WORK	128 UNITS
OFFICE/WORKING SPACE	59,315 SF

TOTAL FLOOR SPACE: 570,332 SF
 RESIDENTIAL: 378 UNITS
 OFFICE: 59,315 SF
 PROPOSED DENSITY: 33 UNITS/ACRE

PARKING SUMMARY:

REQUIRED PARKING (MINIMUM)	626 SPACES (TOTAL)
MULTIFAMILY (28 UNITS)	278 SPACES (1,000 SF)
LIVE WORK (128 UNITS)	128 SPACES (1,000 SF)
OFFICE/WORKING (59,315 SF)	119 SPACES (1,000 SF)
REQUIRED PARKING (MAXIMUM)	1,738 SPACES (TOTAL)
MULTIFAMILY (28 UNITS)	134 SPACES (1,000 SF)
LIVE WORK (128 UNITS)	287 SPACES (1,000 SF)
OFFICE/WORKING (59,315 SF)	287 SPACES (1,000 SF)
PROPOSED PARKING:	785 SPACES (TOTAL)
STANDARD	743 SPACES
BIKEWAYS	14 SPACES
ALTERNATIVE VEHICLE	28 SPACES
UNDEVELOPED SPACES (FOR BULKING)	48 SPACES
PARKING LOT LANDSCAPING REQUIRED	10% MIN
PROPOSED	10%

SITE LOCATION MAP





Firm Mailing Book For Accountable Mail

Name and Address of Sender
 Alex Brock Ste 1000
 1105 W. Peachtree St NE
 Atlanta GA 30309

- Check type of mail or service
- Adult Signature Required Priority Mail Express
 - Adult Signature Restricted Delivery Registered Mail
 - Certified Mail Return Receipt for Merchandise
 - Certified Mail Restricted Delivery Signature Confirmation
 - Collect on Delivery (COD) Signature Confirmation Restricted Delivery
 - Insured Mail
 - Priority Mail

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Hisler
 11/24/2021
 USPS POSTAGE \$14.10⁰⁰
 ZIP 30301
 011D11636292

USPS Tracking/Article Number	Addressee (Name, Street, City, State, & ZIP Code™)	Postage	(Extra Service) Fee	Handling Charge	Actual Value if Registered	Insured Value	Due Sender if COD	ASR Fee	ASRD Fee	RD Fee	RR Fee	SC Fee	SCRD Fee	SH Fee
1.	30AIP NORTHLAKE LLC PO BOX 9456 MINNEAPOLIS, MN 55440	.53	.47											
2.	ANASTASIA PETKAS IRREVOCABLE GIFTING TRUST FOB 2062 LAVISTA CIR TUCKER, GA 30084	.53	.47											
3.	ASHIRWAD LLC 2081 NORTHLAKE PKWY TUCKER, GA 30084	.53	.47											
4.	BFS RETAIL COMMERCIAL OPERATI 9001 AIRPORT FWY # 700 FT WORTH, TX 76180	.53	.47											
5.	DEKALB COUNTY PUBLIC SAFETY & JUDICIAL FACILITIES AUTHORITY 1300 COMMERCE DR DECATUR, GA 30030	.53	.47											
6.	GEORGIA STUDENT FINANCE AUTH 2082 E EXCHANGE PL # 200 TUCKER, GA 30084	.53	.47											
7.	HUNG Q NGUYEN HUYNH HAOT 1619 STEPSTONE WAY LAWRENCEVILLE, GA 30043	.53	.47											



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8.	ALEJANDRO LOPEZ RAMOS ARELY LOPEZ 2070 LAVISTA CIR TUCKER, GA 30084	.53	.47																	
9.	ARC CAFEUSA001 LLC 3038 SIDCO DR 12FL NASHVILLE, TN 37204	.53	.47																	
10.	BFS RETAIL COMMERCIAL 333 E LAKE ST # 300 BLOOMINGDALE, IL 60108	.53	.47																	
11.	CRE LAKESIDE LLC 6500 CITY WEST PKWY STE 440 EDEN PRAIRIE, MN 55344	.53	.47																	
12.	DREPUNG LOSELING MONASTERY INC 1781 DRESDEN DR NE ATLANTA, GA 30319	.53	.47																	
13.	GHEBREYOHANNES TSEGA OBEDNGL 1935 CAMEO CT TUCKER, GA 30084	.53	.47																	
14.	JAMES C OSER BEVERLEY OSER 2078 LAVISTA CIR TUCKER, GA 30084	.53	.47																	
15.	JOHN G WRIGHT MARINA C WRIGHT 22641 BENNER AVE TORRANCE, CA 90505	.53	.47																	
16.	LANGFORD CEMETERY 1647 N PELHAM RD NE ATLANTA, GA 30324	.53	.47																	
17.	NORTHLAKE EQUITIES LLC NORTHLAKE CHELSEA LLC 14 STEUBEN LN JACKSON, NJ 8527	.53	.47																	



18.	O T A C DEVELOPMENT GROUP LLC 2077 NORTHLAKE PKWY TUCKER, GA 30084	53 . 47																		
19.	RODGER N BENNETT MARY L BENNETT 4950 GAIDREW JOHNS CREEK, GA 30022	53 . 47																		
20.	SAMMY P HARLAN MARY NASH HARLAN 2094 LAVISTA CIR TUCKER, GA 30084	.53 . 47																		
21.	STALLION INVESTMENTS LLC 3378 LAWRENCEVILLE HWY TUCKER, GA 30084	.53 . 47																		
22.	JOLLY FISHERMAN ASSOCIATES 1401 MCKINNEY ST # 1200 HOUSTON, TX 77010	53 . 47																		
23.	MANRY & HESTON INC PO BOX 49607 ATLANTA, GA 30359	.53 . 47																		
24.	NORTHLAKE REAL ESTATE LLC 5225 FIVE FORKS TRICKUM RD LILBURN, GA 30047	.53 . 47																		
25.	OGLETHORPE POWER CORP 2100 E EXCHANGE PL TUCKER, GA 30084	53 . 47																		
26.	RONALD LEE CORN 2086 LAVISTA CIR TUCKER, GA 30084	53 . 47																		
27.	SELIG ENTERPRISES INC 1110 SPRING ST NW # 550 ATLANTA, GA 30309	.53 . 47																		



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28.	TCW INC 1572 SPRING BROOK DR DECATUR, GA 30033	53 . 47																		
29.	TUCKER EXCHANGE LLC 1427 MAYSON ST ATLANTA, GA 30324	53 . 47																		
30.	WADE R TURLINGTON JR 1942 CAMEO CT TUCKER, GA 30084	53 . 47																		
31.																				
32.																				
33.																				
34.																				
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Legal Description

EXHIBIT "A"
Legal Description

ALL THAT TRACT OR PARCEL OF LAND LYING AND BEING IN LAND LOTS 188 AND 189 OF THE 18TH DISTRICT, CITY OF TUCKER, DEKALB COUNTY, GEORGIA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT AN IRON PIN PLACED (1/2" REBAR W/CAP) AT THE INTERSECTION FORMED BY THE NORTHEASTERLY RIGHT OF WAY OF NORTHLAKE PARKWAY (VARIABLE RIGHT OF WAY) AND THE NORTHWESTERLY RIGHT OF WAY OF THE SEABOARD COASTLINE RAILROAD (100' RIGHT OF WAY) AND RUNNING THENCE NORTHWESTERLY ALONG THE NORTHEASTERLY RIGHT OF WAY OF NORTHLAKE PARKWAY (VARIABLE RIGHT OF WAY) THE FOLLOWING COURSES AND DISTANCES:

- 1) THENCE NORTH 32°53'05" WEST FOR A DISTANCE OF 75.09 FEET TO A MAG NAIL PLACED;
- 2) THENCE 45.33 FEET ALONG THE ARC OF A CURVE TO THE LEFT, SAID CURVE HAVING A RADIUS OF 11544.16 FEET AND BEING SUBTENDED BY A CHORD OF NORTH 32°59'50" WEST, 45.33 FEET TO A MAG NAIL PLACED;
- 3) THENCE NORTH 38°24'48" WEST FOR A DISTANCE OF 176.82 FEET TO A MAG NAIL PLACED;
- 4) THENCE SOUTH 56°00'55" WEST FOR A DISTANCE OF 21.00 FEET TO AN IRON PIN PLACED (1/2" REBAR);
- 5) THENCE 175.75 FEET ALONG THE ARC OF A CURVE TO THE LEFT, SAID CURVE HAVING A RADIUS OF 11508.16 FEET AND BEING SUBTENDED BY A CHORD OF NORTH 34°25'20" WEST, 175.75 FEET TO A CONCRETE MONUMENT FOUND;
- 6) THENCE NORTH 56°01'19" EAST FOR A DISTANCE OF 16.55 FEET TO A CONCRETE MONUMENT FOUND;
- 7) THENCE NORTH 40°51'02" WEST FOR A DISTANCE OF 82.54 FEET TO A CONCRETE MONUMENT FOUND;

THENCE DEPARTING THE NORTHEASTERLY RIGHT OF WAY OF NORTHLAKE PARKWAY (VARIABLE RIGHT OF WAY) NORTH 60°29'14" EAST FOR A DISTANCE OF 219.40 FEET TO AN IRON PIN FOUND (1/2" REBAR); THENCE NORTH 33°01'25" WEST FOR A DISTANCE OF 266.85 FEET TO AN IRON PIN PLACED (1/2" REBAR WITH CAP) ON THE SOUTHERLY RIGHT OF WAY OF EAST EXCHANGE PLACE (70' RIGHT OF WAY); THENCE ALONG THE SOUTHERLY RIGHT OF WAY OF EAST EXCHANGE PLACE (70' RIGHT OF WAY) THE FOLLOWING COURSES AND DISTANCES:

- 1) 299.87 FEET ALONG THE ARC OF A CURVE TO THE RIGHT, SAID CURVE HAVING A RADIUS OF 655.00 FEET AND BEING SUBTENDED BY A CHORD OF NORTH 84°54'24" EAST, 297.26 FEET TO AN IRON PIN FOUND (1/2" REBAR);
- 2) THENCE SOUTH 81°58'40" EAST FOR A DISTANCE OF 60.00 FEET TO A POINT;
- 3) THENCE 360.76 FEET ALONG THE ARC OF A CURVE TO THE LEFT, SAID CURVE HAVING A RADIUS OF 795.00 FEET AND BEING SUBTENDED BY A CHORD OF NORTH 85°01'20" EAST, 357.67 FEET TO A POINT;
- 4) THENCE NORTH 72°01'20" EAST FOR A DISTANCE OF 89.91 FEET TO AN IRON PIN PLACED (1/2" REBAR W/CAP);

THENCE DEPARTING THE SOUTHERLY RIGHT OF WAY OF EAST EXCHANGE PLACE (70' RIGHT OF WAY) SOUTH 27°55'00" EAST FOR A DISTANCE OF 514.75 FEET TO AN IRON PIN PLACED (1/2" REBAR W/CAP) ON THE NORTHWESTERLY RIGHT OF WAY OF THE SEABOARD COASTLINE RAILROAD (100' RIGHT OF WAY); THENCE ALONG THE NORTHWESTERLY RIGHT OF WAY OF THE SEABOARD COASTLINE RAILROAD (100' RIGHT

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OF WAY) SOUTH 62°04'29" WEST FOR A DISTANCE OF 850.53 FEET TO THE POINT OF BEGINNING.

SAID TRACT OR PARCEL CONTAINING 13.00936 ACRES OR 566,688 SQUARE FEET.

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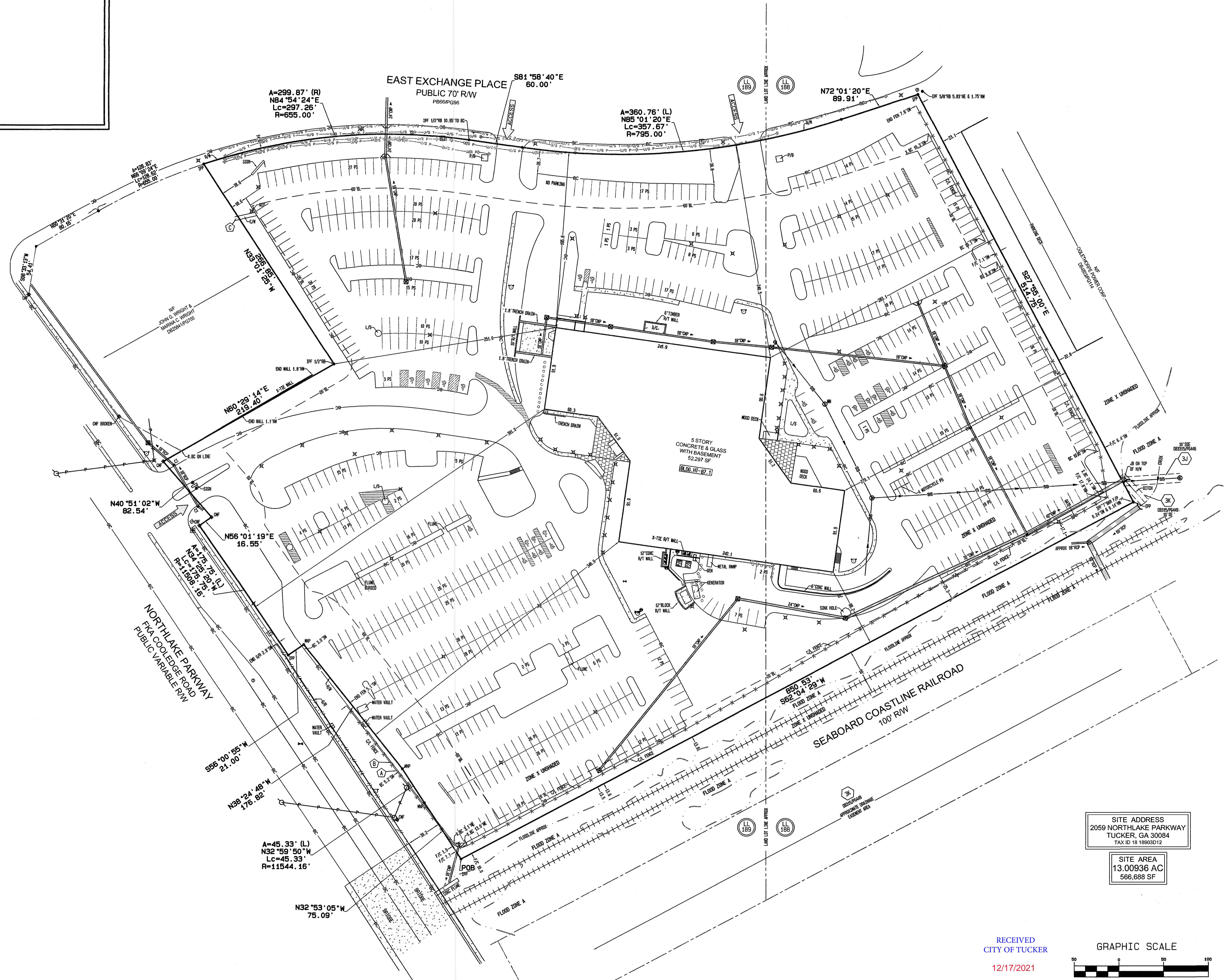
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EXHIBIT "B"
Permitted Exceptions

1. All taxes for the year 2019 and subsequent years, not yet due and payable.
2. Slope Easements as contained in that certain Condemnation being Civil Action File No. 40817, aforesaid Records.
3. Easement from Citizens & Southern National Bank to Georgia Power Company, dated September 6, 1974, recorded in Deed Book 3248, Page 364, aforesaid Records.
4. Terms, conditions and obligations as contained in that certain Sanitary Sewer Easement from Hiram S. Cochran to The Citizens and Southern National Bank, a national banking association, dated March 31, 1975, filed for record April 10, 1975 at 9:21 a.m., recorded in Deed Book 331 5, Page 446, aforesaid Records.
5. Terms, conditions and obligations as contained in that certain Storm Sewer Easement from Hiram S. Cochran to The Citizens and Southern National Bank, a national banking association, dated March 31, 1975, filed for record April 10, 1975 at 9:21 a.m., recorded in Deed Book 3315, Page 449, aforesaid Records.
6. Drainage rights as contained in that certain Right of Way Deed from Citizens and Southern Georgia Corporation to DeKalb County, a political subdivision of the State of Georgia, dated April 9, 1984, filed for record April 11, 1984 at 8:30 a.m., recorded in Deed Book 4956, Page 367, aforesaid Records.
7. Those matters as disclosed by that certain survey entitled "ALTA/NSPS Land Title Survey For ATPA Tucker Exchange, LLC, a Delaware limited liability company, its successors and assigns, Atlantic Capital Bank, N.A., Calloway Title and Escrow, LLC and Chicago Title Insurance Company", prepared by Watts & Browning Engineers, Inc., bearing the seal and certification of Virgil T. Hammond, Georgia Registered Land Surveyor No. 2554, dated April 1, 2019, last revised May 6, 2019, being designated as Job No. 190312, as follows:
 - (a) Eighteen (18") inch corrugated metal pipe crossing the southwesterly and northerly boundary lines of subject property;
 - (b) Fence crossing the southwesterly boundary line of subject property;
 - (c) Back of curb crossing the southwesterly and southerly boundary lines of subject property; and
 - (d) Underground power lines crossing the northerly boundary line of subject property.

Survey



A=299.87' (R)
N84°54'24"E
Lc=297.26'
R=655.00'

A=360.76' (L)
N85°01'20"E
Lc=357.67'
R=795.00'

N40°51'02"W
82.54'

N56°01'19"E
16.55'

S56°00'55"W
21.00'

N38°24'48"W
176.82'

A=45.33' (L)
N32°59'50"W
Lc=45.33'
R=11544.16'

N32°53'05"W
75.09'

EAST EXCHANGE PLACE
PUBLIC 70' R/W
P866/P096
S81°58'40"E
60.00'

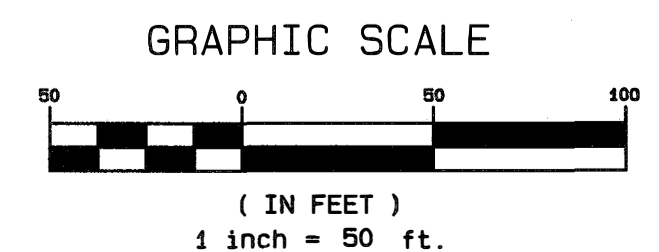
N72°01'20"E
89.91'

NORTHLAKE PARKWAY
FKA COOLEGE ROAD
PUBLIC VARIABLE R/W

SEABOARD COASTLINE RAILROAD
100' R/W

SITE ADDRESS
2059 NORTHLAKE PARKWAY
TUCKER, GA 30084
TAX ID 18 18903D12

SITE AREA
13.00936 AC
566,688 SF



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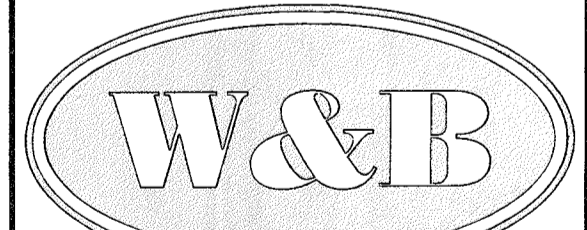
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ALTAIR'S LAND TITLE SURVEY FOR
ATPA TUCKER EXCHANGE, LLC
A DELAWARE LIMITED LIABILITY COMPANY,
ITS SUCCESSORS AND ASSIGNS
ATLANTIC CAPITAL BANK, N.A.
CALLOWAY TITLE AND ESCROW, LLC
AND CHICAGO TITLE INSURANCE COMPANY

LOCATED IN
LAND LOTS 188 & 189
18TH DISTRICT
CITY OF TUCKER
DEKALB COUNTY, GEORGIA



NO.	DATE	BY	DESCRIPTION
1	04/15/19	ANCH	ADDRESS ATTORNEY COMMENTS
2	04/25/19	ANCH	ADD ZONING NOTES; REVISE EXC L SCH B NOTE
3	05/06/19	ANCH	REVISE TITLE & CERTIFICATION



WATTS & BROWNING ENGINEERS, INC.
CIVIL ENGINEERS & LAND SURVEYORS
1349 OLD 41 HWY NW STE 225
MARIETTA, GEORGIA 30060
PHONE: (770) 854-2195
FAX: (770) 854-8476
WWW.WBENR.COM
LSF000429 - PEF000714

SCALE:	1" = 50'
DATE SURVEYED:	03/24/2019
DATE UPDATED:	N/A
SURVEYED BY:	ANCH
DATE DRAFTED:	04/01/2019
UPDATE DRAFTED:	N/A
DRAWN BY:	ANCH
CHECKED BY:	YTH
FIELD BOOK #:	2700
JOB NUMBER:	190312
FOLDER NUMBER:	190312
CADD FILE:	N/A
DISC FILE:	190312
COUNTY/LL/D/S:	DEKALB/188/18
PLAT FILE:	B
SHEET:	2 OF 2

Building Elevations



VIEW 1

TUCKER EXCHANGE

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EXISTING BUILDING IMAGES

TUCKER EXCHANGE

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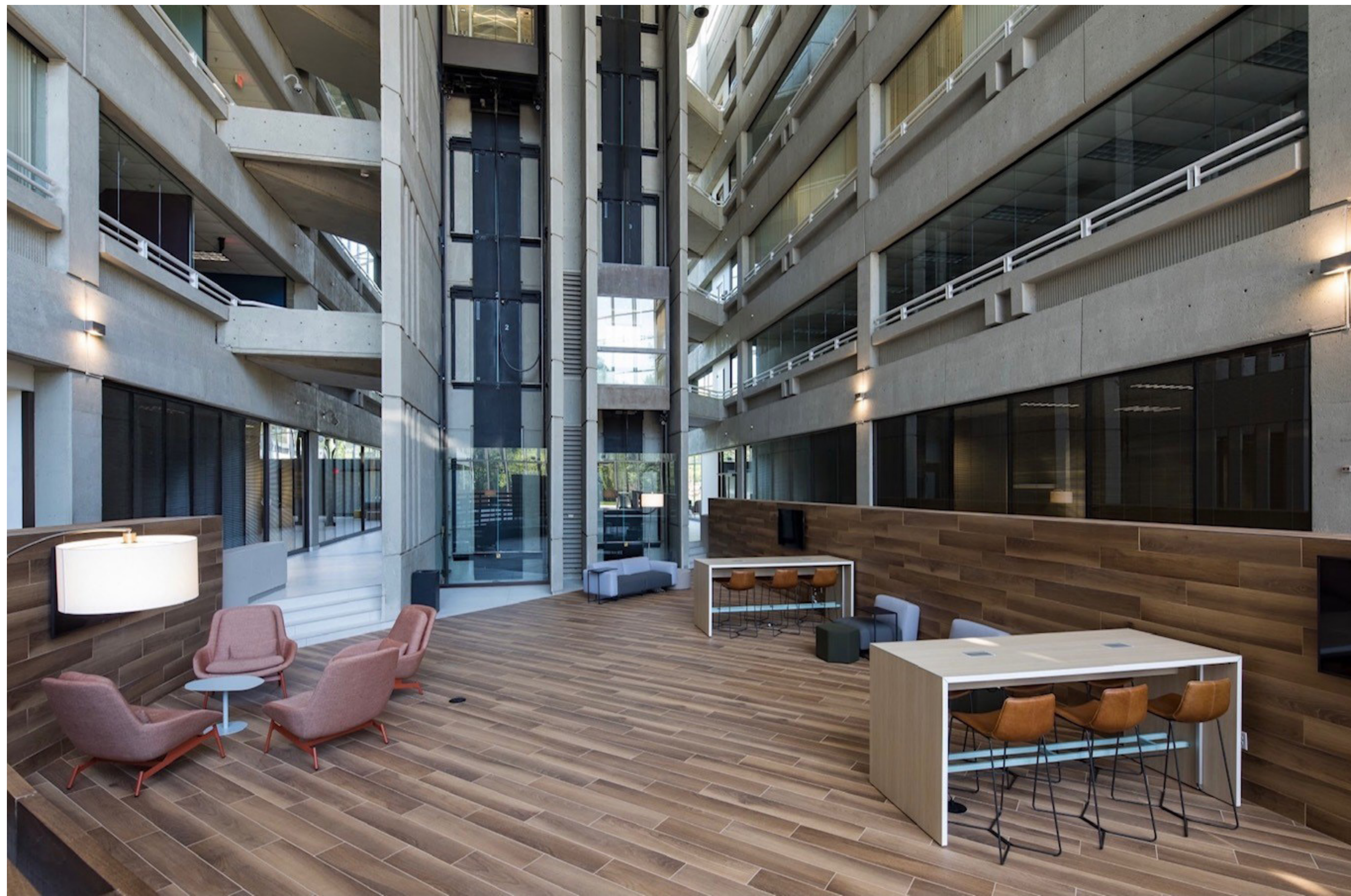
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Gensler



EXISTING AND AS IMPROVED BUILDING IMAGES



AS IMPROVED BUILDING IMAGES

Statement of Intent

STATEMENT OF INTENT

and

Other Material Required by
City of Tucker Zoning Ordinance
for the
Special Land Use Permit
And Concurrent Variance Application

of

AHS RESIDENTIAL, LLC

For

± 13.00 Acres of Land
located in
Land Lots 188 and 189, 18th District, DeKalb County
Address: 2059 Northlake Parkway, Tucker, GA 30084

Submitted for Applicant by:

Kathryn M. Zickert
Dennis J. Webb, Jr.
J. Alexander Brock
Smith, Gambrell & Russell, LLP
1105 W. Peachtree Street, NE
Suite 1000
Atlanta, Georgia 30309
404-815-3500

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I. INTRODUCTION

This Application seeks a Special Land Use Permit (“SLUP”) and concurrent variances to allow for the construction of a mixed-use project with ±378 residential apartment units, ±129 live-work units and ±59,315 square feet of office and co-working space on a 13-acre site on Northlake Parkway, Land Lots 188 and 189 of the 18th District of DeKalb County, Georgia (the “Subject Property”). The Subject Property is zoned NL-2 (Northlake Office Park), which would in general allow the mixed-use development proposed. It also is designated as being within a “Regional Activity Center” on the City’s Future Land Use map, a designation that fully supports this request. This SLUP application is being filed to allow a multifamily density over 24 units per acre.¹ The criteria for the SLUP and concurrent variance requests are considered in Sections II and III, respectively.

The development will incorporate an existing, five-story, ±252,091 square foot structure that will house the ±129 live-work units and the ±59,315 square feet of office and co-working space. The 378 apartment units will be divided among two nine-story structures with surface parking, which will be concealed from the street. The residential units facing Northlake Parkway will engage the street by providing direct sidewalk access. At least 20% open space will be provided and maintained by the multi-family owner management company. The amenities

¹ The proposed multifamily density is ±39 units per acre.

proposed and all residential building entrances will be connected by an internal sidewalk system, which will connect to the public sidewalk.

The Subject Property is located in an area that has seen growth and redevelopment. The Subject Property, which is bounded to the west by Northlake Parkway and the north by East Exchange Place, is surrounded by uses compatible to those proposed. For example, the Subject Property is in immediate proximity to a variety of office uses and Tucker Meridian, a ±200,000 square foot shopping center. Across I-285 from the Subject Property are offices, apartments, hotels and other commercial uses.

The office market in the Northlake commercial district is already heavily saturated. For that reason, the Subject Property would best serve the goals of the Northlake Zoning District by being redeveloped for commercial and residential uses, as proposed. The Applicant submits this document as a Statement of Intent with regard to its Application, a preservation of the Applicant's constitutional rights with respect to the Subject Property, and a written justification for the proposed SLUP as required by Tucker's Zoning Ordinance, Section 46-1589.

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II. CRITERIA TO BE APPLIED TO SPECIAL LAND USE PERMITS

A. Adequacy of the size of the site for the use contemplated and whether or not adequate land area is available for the proposed use including provision of all required yards, open space, off-street parking, and all other applicable requirements of the zoning district in which the use is proposed to be located.

The size of the Subject Property is adequate for the proposed use. The proposed residential units, which will be located on the ±13-acre Subject Property, will be within the allowed density once the SLUP issues. The proposed office and co-working space is modestly sized at 59,315 square feet. Adequate parking, landscaping, open space and sidewalks will be provided.

B. Compatibility of the proposed use with adjacent properties and land uses and with other properties and land uses in the district.

The proposed use is fully compatible with the adjacent properties and land uses as well as those in the larger surrounding area. The proposed multi-family units will add a much-needed housing option to the Northlake commercial area.

C. Adequacy of public services, public facilities, and utilities to serve the proposed use.

There are adequate public services, public facilities, and utilities to serve the proposed development. The vast majority of anticipated residents will be young professionals without children and empty nesters. For those residents with school-aged children, the proposed development will be served by Midvale Elementary

School, Tucker Middle School² and Tucker High School, all of which have capacity.³

D. Adequacy of the public street on which the use is proposed to be located and whether or not there is sufficient traffic-carrying capacity for the use proposed so as not to unduly increase traffic and create congestion in the area.

The proposed development should not unduly increase traffic or create congestion in the area. The Applicant's traffic impact study submitted with this application details the proposed development's vehicular trips and impacts to the surrounding roadways. Using the Institute of Transportation Engineers' (ITE) Trip Generation Manual, 10th Edition, 2017, the traffic study anticipates the 507 multifamily units (ITE Category 221) and 59,315 square feet of office (ITE Category 710) will generate a net of 3,390 total daily trips, 246 AM peak hour trips, and 271 PM peak hour trips.⁴ It is important to note, however, that the traffic study does not take into account the net trip reduction from repurposing the existing office use. When factoring the reduced office area from 259,091 sf (existing) to 59,315 sf (proposed), the proposed development will result in a net increase of 718 total daily trips, a net reduction⁵ of 24 AM peak hour trips, and a net reduction of 10 PM peak hour trips. The traffic study does not anticipate the

² Tucker Middle School is forecasted to be at capacity for the 2021-2022 school year, but enrollment has been declining, and will continue, so that it will be under capacity in the coming years.

³ Data obtained from the DeKalb County School District Enrollment & Capacity by School data on its website at: <https://www.dekalbschoolsga.org/operations/planning/> (last visited December 9, 2021 at 9:00 am).

⁴ The net calculation incorporates a reduction in trips for mixed-use.

⁵ The proposed trips will generate less than the existing office development.

proposed trips to overly burden the surrounding roadways or intersections.⁶ Refer to the Traffic Impact Study for AHS Tucker Exchange, prepared by Kimley-Horn and Associates, Inc. and dated December 2021, a copy of which is attached to this Application.

E. Whether or not existing land uses located along access routes to the site will be adversely affected by the character of the vehicles or the volume of traffic generated by the proposed use.

There should be no change in the character of vehicles visiting the Subject Property if this SLUP is approved. Additionally, while there may be some additional daily volume of traffic visiting the site, this increase will be minimal and the peak AM and PM trips are anticipated to decrease. The few additional daily trips are not anticipated to negatively impact the area in light of the Subject Property's access to major thoroughfares.

F. Adequacy of ingress and egress to the subject property and to all proposed buildings, structures, and uses thereon, with particular reference to pedestrian and automotive safety and convenience, traffic flow and control, and access in the event of fire or other emergency.

Adequate ingress and egress to the Subject Property will be provided, both for vehicular and pedestrian traffic. The proposed development will be served by three vehicular access points (one on Northlake Parkway, and two on East Exchange Place), in addition to internal sidewalks that connect to the public

⁶ The traffic study notes the intersection at Northlake Parkway and Lawrenceville Highway will require future improvements regardless of whether or not the proposed development is constructed.

sidewalk system. The proposed development will also provide for the required bicycle parking spaces.

G. Whether or not the proposed use will create adverse impacts upon any adjoining land use by reason of noise, smoke, odor, dust or vibration generated by the proposed use.

The Subject Property is surrounded by office and commercial uses that will not be adversely impacted by the proposed development.

H. Whether or not the proposed use will create adverse impacts upon any adjoin land use by reason of the hours of operation of the proposed use.

The proposed development's office component will maintain hours of operation similar to other uses in the surrounding area.

I. Whether or not the proposed use will create adverse impacts upon any adjoining land use by reason of the manner of operation of the proposed use.

The manner of operation of the development will be similar to that of the other uses in the area. Accordingly, the proposed use would not create adverse impacts upon any adjoining land use.

J. Whether or not the proposed use is otherwise consistent with the requirements of the zoning district classification in which the use is proposed to be located.

Due to the size, shape and topography of the Subject Property and the fact that it is already developed, the Applicant will be seeking certain variances to the NL-2 zoning district, as identified herein. The Applicant notes, however, that the

proposed use is compatible with the following purposes and goals of the NL-2 district:

- To encourage development and redevelopment of properties in order to achieve a mixed-use community;
- Provide for the development of sidewalks and walkways in order to promote safe and convenient pedestrian access and to reduce dependence on automobile travel;
- Promote a physically attractive, environmentally safe and economically sound mixed-use community;
- To enhance the long-term economic viability of the Northlake area by encouraging new commercial and residential developments that increase the tax base and provide jobs to the citizens of the City of Tucker;
- Permit and encourage mixed-use developments containing both commercial and residential uses to create a pedestrian oriented community in which people can live, work and play;
- To provide a balanced distribution of regional and community-focused commercial and mixed-use office centers;
- To support higher-density housing, office, and mixed-use centers which have appropriate access and infrastructure;
- Allow and encourage development densities and land use intensities that are capable of making productive use of alternative transportation modes such as bus transit, rail transit, ridesharing, bicycling and walking;
- Encourage the formation of a well-designed, pedestrian-friendly activity center with high-density commercial and residential development that increases vitality and choices in living environments for the citizens of City of Tucker;
- To protect nearby established single-family residential areas from the encroachment of commercial, retail, office, and industrial uses by providing for increased density of development within the NL districts.

K. Whether or not the proposed use is consistent with the policies of the comprehensive plan.

The Subject Property is designated as “Regional Activity Center” on Tucker’s Future Land Use Map. The Regional Activity Center character area

encourages a higher-density mix of uses including office and residential, such as those proposed. The proposed development is fully allowed within this character area, and promotes the following specific goals and strategies of the City’s Tucker Tomorrow Comprehensive Plan (the “Comprehensive Plan”):

- As Northlake is mostly developed, these strategies focus on redeveloping and retrofitting the area to include more residential uses, to “right-size” the amount of commercial space to meet expected demand and to enhance walkability.
- Encouraging relatively high-density mix of retail, office, services, and employment to serve a regional market area.
- Developing a diverse mix of higher-density housing types, including multi-family townhomes, apartments, lofts, and condominiums, including affordable and workforce housing.
- Designing the area’s streetscapes to be pedestrian-oriented, with strong, walkable connections.
- Promote the integration of pedestrian and bicycle enhancements into all investments in this area, designing streetscapes to be pedestrian-oriented, with strong, walkable connections.

L. Whether or not the proposed use provides for all required buffer zones and transitional buffer zones where required by the regulations of the zoning district in which the use is proposed to be located.

The proposed development provides for certain buffers and transitional zones, but seeks variations for others as indicated herein.

M. Whether or not there is adequate provision of refuse and service areas.

Adequate refuse and service areas will be provided.

N. Whether the length of time for which the special land use permit is granted should be limited in duration.

Because the proposed development is suitable for the Subject Property, there is no reason to limit the duration of the requested SLUP.

O. Whether or not the size, scale and massing of proposed buildings are appropriate in relation to the size of the subject property and in relation to the size, scale and massing of adjacent and nearby lots and buildings.

The size of the proposed two new multi-family buildings is appropriate in light of adjacent and nearby properties, which are of comparable heights. In addition, the proposed development will provide at least 20% of open space.

P. Whether the proposed use will adversely affect historic buildings, sites, districts, or archaeological resources.

The Applicant is not aware of any historic buildings, sites, districts, or archaeological resources in the nearby or surrounding area.

Q. Whether the proposed use satisfies the requirements contained within the supplemental regulations for such special land use permit.

There are no supplemental regulations applicable to the requested SLUP.

R. Whether or not the proposed use will create a negative shadow impact on any adjoining lot or building as a result of the proposed building height.

The proposed use will not create any negative shadow impacts on adjoining properties. The multi-family units will be within the allowed maximum height.

S. Whether the proposed use would result in a disproportionate proliferation of that or similar uses in the subject character area.

The proposed use would not result in a disproportionate proliferation of similar uses in the subject character area. The surrounding area consists of a

diverse mix of commercial, retail and residential uses, but has relatively few apartment options in relation to other uses.

T. Whether the proposed use would be consistent with the needs of the neighborhood or the community as a whole, be compatible with the neighborhood, and would not be in conflict with the overall objective of the comprehensive plan.

As mentioned in subsection S above, the proposed development will provide uses that are relatively lacking in the immediate area, contributing to the Northlake District's goals of creating a community where residents and workers can live, work and play. In sum, it would be consistent with the City's Zoning Ordinance and Comprehensive Plan's objectives for this area.

III. REQUESTED CONCURRENT VARIANCES

A. § 46-1036; Table 3-10: Increase minimum front yard setback to 100-feet

The Subject Property has a front yard along Northlake Parkway, which has a dramatic change in grade. The elevation of Northlake Parkway is over 20 feet higher at the Subject Property's frontage with steep slopes down to the property line. The NL-2 district requires buildings to be set back between 0 (min.) to 30 feet (max.) from the front property line. In comparison, the existing building on the Subject Property is setback ±347 feet from Northlake Parkway.

The intent of having the building located closer to the street is to promote an active street zone with residences engaging the street pedestrian area. Due to the topography, however, any development of the Subject Property will not result in

street-level uses. For example, a strict enforcement of the setback requirement to the Subject Property would result in the first two floors of the proposed multifamily building facing a graded slope or retaining wall. The result will be undesirable for the future residents and would serve no public benefit. Instead the Applicant intends to set the building back ± 100 feet from the right-of-way to allow room for views and daylighting of the ground floor units, creating a more attractive living space for the future residents. In addition, the Applicant is installing a 10-foot wide sidewalk along its Northlake Parkway frontage and providing direct pedestrian access from the development. As a result, the proposed grant of the variance to increase the setback will allow a beneficial design without any detrimental impacts to the public welfare.

B. § 46-1036(c)(2); § 46-1046; § 46-1419: Allow parking in front yard.⁷

The Applicant is proposing two rows of parking between the multifamily building and Northlake Parkway. The Subject Property is oddly-shaped with frontage on two streets and the existing office building located in the center of the property. The Subject Property's double-frontage and existing development restricts options for parking and prevents a layout where the parking is not in-between a building and a street. Moreover, the steep slope along Northlake Parkway dictates that the proposed building be located further from the right-of-

⁷ § 46-1036(c)(2) restricts parking in the front yard; §§ 46-1046 and 46-1419 limits the parking location to the side or rear a street-facing building;

way (refer to the paragraphs above). This results in an area with limited potential for development other than parking.

To mitigate the effects of the parking, the Applicant proposes additional landscaping along Northlake Parkway so that the parking area cannot be viewed from the right-of-way. Also, a majority of the parking will be substantially below the elevation of Northlake Parkway and out of view from the right-of-way. In fact, the existing parking is in generally in the same location as the proposed parking, and is currently hidden due to the existing vegetation and topography. Therefore, there will be no detriment to the public from allowing the parking in the front yard.

C. § 46-1037: Eliminate block and street stub-out requirements.

The block and street stub-out requirements would create undue hardship on the Applicant with no benefit to the public. The Subject Property has a ±555-foot frontage along Northlake Parkway and Tucker Code §47-1037 requires a maximum 300-foot block length. The block requirements would result in an additional curbcut along Northlake Parkway or relocation of the existing curbcut. As noted in the paragraphs above, there is a ±20-foot difference in elevation between Northlake Parkway and the Subject Property. Thus, the topography will not allow any additional drive entrances to create a 300-foot block.

Moreover, the surrounding properties' current development do not support a block layout and/or stub-out street connections. The Subject Property is bordered

by right-of-way to the north and west, as well as railroad right-of-way to the south. To the east, the Subject Property borders the Oglethorpe Power Corporation property (“Oglethorpe Property”). The Oglethorpe Property is currently developed with an office building and a large parking deck spanning most of the Subject Property’s eastern border. The small portion of the eastern property line that does not border the parking deck is in floodplain, thus leaving no room for a cross-street.

Waiving the stub-out street requirement will not frustrate the Code’s intent, however. The Subject Property is served by East Exchange Place, which is a short, local road terminating in a cul-de-sac at the Oglethorpe Property, with no through traffic and serving only the few office buildings and businesses fronting that road. In effect, East Exchange Place acts as a cross-parcel access for the Subject Property and the Oglethorpe Property to the east.

D. § 46-1039: Eliminate in-parcel access requirements

As noted in the paragraphs above, the Subject Property and the surrounding properties are already developed with established parking layouts, drive aisles and connections to the right-of-way. The Subject Property’s existing development and the development of the surrounding properties makes retrofitting inter-parcel connections impractical. In addition to the hardships mentioned in the previous paragraphs, there is no practical benefit in providing a connection between the

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properties. Inter-parcel connections encourage vehicular travel between properties. One of the benefits of placing multi-family residential in proximity to office uses is the benefit of being able to walk to work. In fact, by not providing the connection it encourages future residents to walk instead of using their cars for the short distance. The Applicant's proposed design incorporates a number of internal sidewalks, as well as the construction of a multiuse trail along East Exchange Parkway and a 10-foot sidewalk along Northlake Parkway to promote pedestrian activity in and around the development.

Pursuant to Tucker Code of Ordinances § 46-1633, the criteria for each variance is met. First, there are extraordinary and exceptional conditions pertaining to the particular property in question because of its size, shape, or topography that were not created by the owner and a strict application of the requirements would deprive the owner of rights and privileges enjoyed by other owners in the same zoning district. Second, the requested variances do not go beyond the minimum necessary to afford relief, and does not constitute a grant of special privilege inconsistent with the limitations upon other properties in the same zoning district. Third, the grant of the variances will not be materially detrimental to the public welfare or injurious to the property or improvements in the zoning district. Fourth, the literal interpretation and strict application of the applicable provision to requirements of this chapter would cause undue and unnecessary hardship.

Finally, the requested variance would be consistent with the spirit and purpose of the Zoning Code and the Comprehensive Plan text.

IV. PRESERVATION OF CONSTITUTIONAL RIGHTS

The Applicant respectfully submits that a refusal to approve the proposed SLUP and variances would be unconstitutional and would be an unlawful, arbitrary, capricious, irrational and a manifest abuse of discretion; all in violation of the Fifth Amendment and Fourteenth Amendment of the Constitution of the United States, and Article I, Section I, Paragraph I and Article I, Section III, Paragraph I of the Constitution of the State of Georgia.

A refusal to approve the proposed SLUP and variances would amount to a taking of property, in violation of the Fifth Amendment and Fourteenth Amendment of the Constitution of the United States, and Article I, Section I, Paragraph I and Article I, Section III, Paragraph I of the Constitution of the State of Georgia.

A refusal to approve the proposed SLUP and variances would be in violation of the Dormant Commerce Clause of the Constitution of the United States.

A refusal to approve the proposed SLUP and variances would be unjustified from a fact-based standpoint and instead would result only from constituent opposition, which would be an unlawful delegation of authority in violation of Article IX, Section II, Paragraph IV of the Constitution of the State of Georgia.

A refusal to approve the proposed SLUP and variances would be invalid inasmuch as the Zoning Ordinance of the City of Tucker is unlawful, null and void because its adoption and map adoption/maintenance did not and does not comply with the requirements of its predecessor ordinance and/or the Zoning Procedures Law, O.C.G.A. § 36-66-1, *et seq.*

Tucker's Zoning Ordinance lacks adequate standards for the City Council to exercise its power to review this Application. Specifically, some of the "criteria" set out in Section 46-1589 are not sufficient to contain the discretion of the City Council and to provide the Courts with a reasonable basis for judicial review. Because the stated criteria (individually and collectively) are too vague and uncertain to provide reasonable guidance, the Zoning Ordinance is unlawful and violates, among other things, the Fifth Amendment and Fourteenth Amendment of the Constitution of the United States and Article I, Section I, Paragraphs I and II of the Constitution of the State of Georgia.

Any limitation on the time for presentation of the issues before the City Council that has the power to zone and grant SLUPs and variances is a violation of the guarantees of free speech under the First Amendment of the Constitution of the United States and Article I, Section I, Paragraph V of the Constitution of the State of Georgia. Further, said limitations are in violation of the right to petition and assemble, in violation of the First Amendment of the Constitution of the United

States and Article I, Section I, Paragraph IX of the Constitution of Georgia, as well as the due process clauses of the U.S. and Georgia Constitutions.

The practical effect of a denial of this application will be to drive up the cost of housing which will have the effect of discriminating on the basis of age and/or race in violation of the Fair Housing Act of the United States and Georgia.

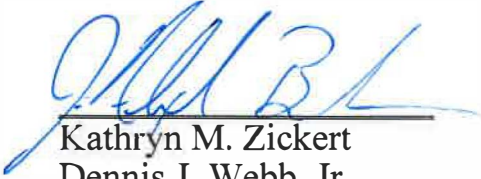
Opponents to this request, if any, lack standing; have failed to exhaust administrative remedies; and have waived their rights to appeal by failing to assert legal and constitutional objections.

V. CONCLUSION

For the foregoing reasons, the Applicant respectfully asks that the proposed SLUP and variances be approved. The Applicant also invites and welcomes any comments from City staff, officials, and other interested parties so that such recommendations or input may be considered as conditions of approval of this Application.

This 13th day of December, 2021.

Smith, Gambrell & Russell, LLP
1105 W. Peachtree Street, NE
Suite 1000
Atlanta, Georgia 30309
404-815-3500


Kathryn M. Zickert
Dennis J. Webb, Jr.
J. Alexander Brock
Attorneys For Applicant

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Environmental Site Analysis

MEMORANDUM

TO: City of Tucker, Department of Community Development

FROM: J. Alexander Brock, P.E. Smith, Gambrell & Russell, LLP (GA P.E. 031209)
Dennis J. Webb, Jr., Smith, Gambrell & Russell, LLP

DATE: December 13, 2021

RE: Environmental Site Analysis – 2059 Northlake Parkway

1) CONFORMANCE WITH THE COMPREHENSIVE PLAN.

The property is a ±13.00 acre tract located in Land Lots 188 and 189 of the 18th District of DeKalb County on the east side of Northlake Parkway, approximately 300-feet south of its intersection with East Exchange Place (Parcel ID 18 214 10 026) (“Subject Property”). The Subject Property is zoned Northlake Office Park (NL-2) and the currently contains a ±259,091 square foot (sf) office building and associated site improvements. The Applicant seeks a Special Land Use Permit (SLUP) to allow the redevelopment of the Subject Property into an office and residential mixed-use. The Proposed Development will include the conversion of a portion of the existing building into residential units and the construction of two new 9-story multifamily buildings. A ±59,315 sf portion of the existing office building will remain as an office use.

The City of Tucker’s Tucker Tomorrow Comprehensive Plan (the “Comprehensive Plan”) and Land Use Maps identify the Subject Property as being within the Regional Activity Center (RAC) character area. The proposed mixed-use is consistent with the Comprehensive Plan and the RAC character area. The Comprehensive Plan’s stated policy and intent for the RAC character area is for a higher intensity mix of office and housing, among other uses, including higher density multi-family.

2) ENVIRONMENTAL IMPACTS OF THE PROPOSED PROJECT.

a) Wetlands

There are no wetlands on the Subject Property as indicated by the U. S. Fish and Wildlife Service, National Wetlands Inventory Maps. There are riverine and freshwater emergent wetlands on adjacent properties, however these will not be affected by the Proposed Development. The Proposed Development will have no impacts to any wetlands.

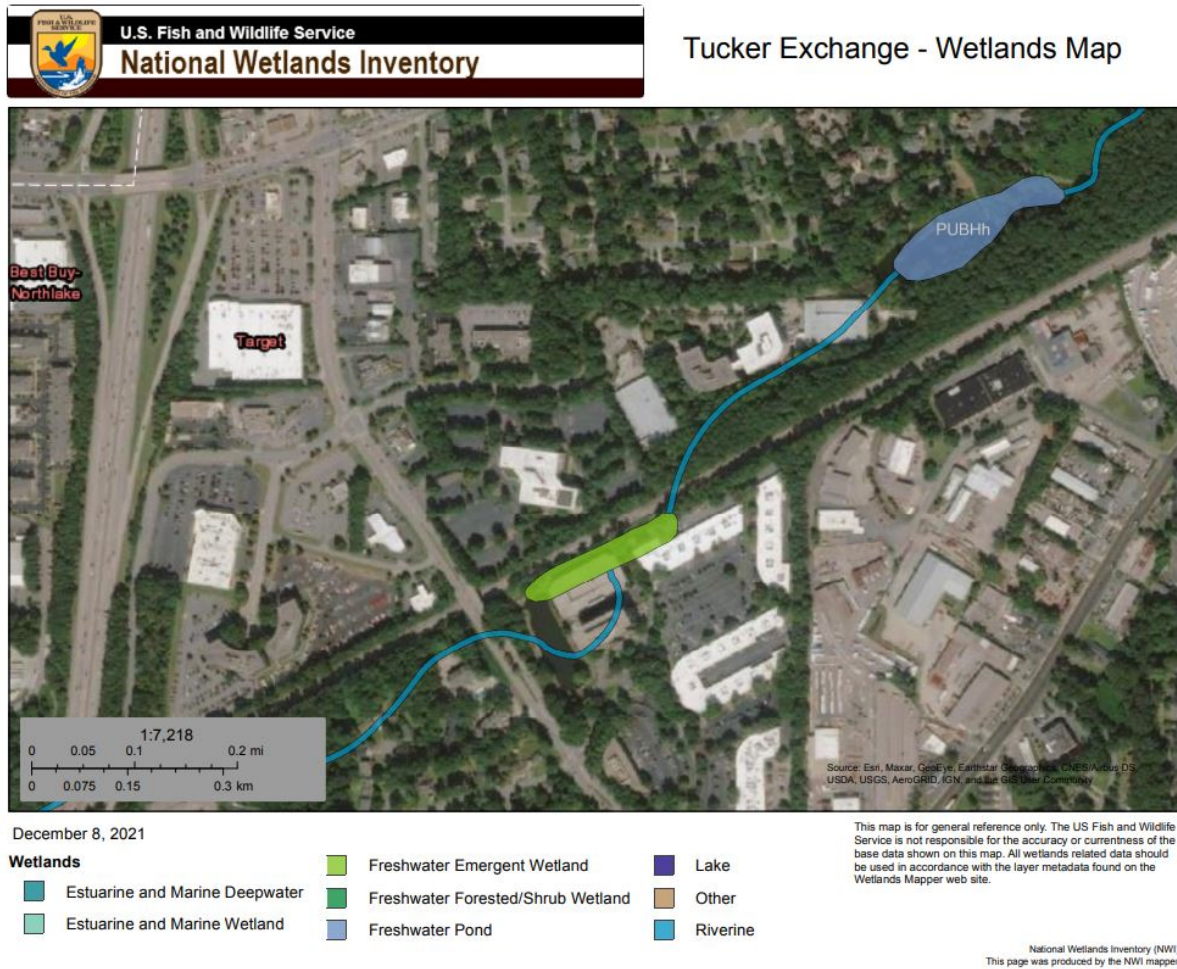


Figure 2. National Wetlands Inventory Map

b) Floodplain

A small portion of the Subject Property's southern boundary is within a Zone AE floodplain as designated on the FEMA FIRM Map, Panel numbers 13089C0076K, effective August 15, 2019 and 13089C0078K, effective August 15, 2019. The Proposed Development, however, will not encroach into any portion of the floodplain.

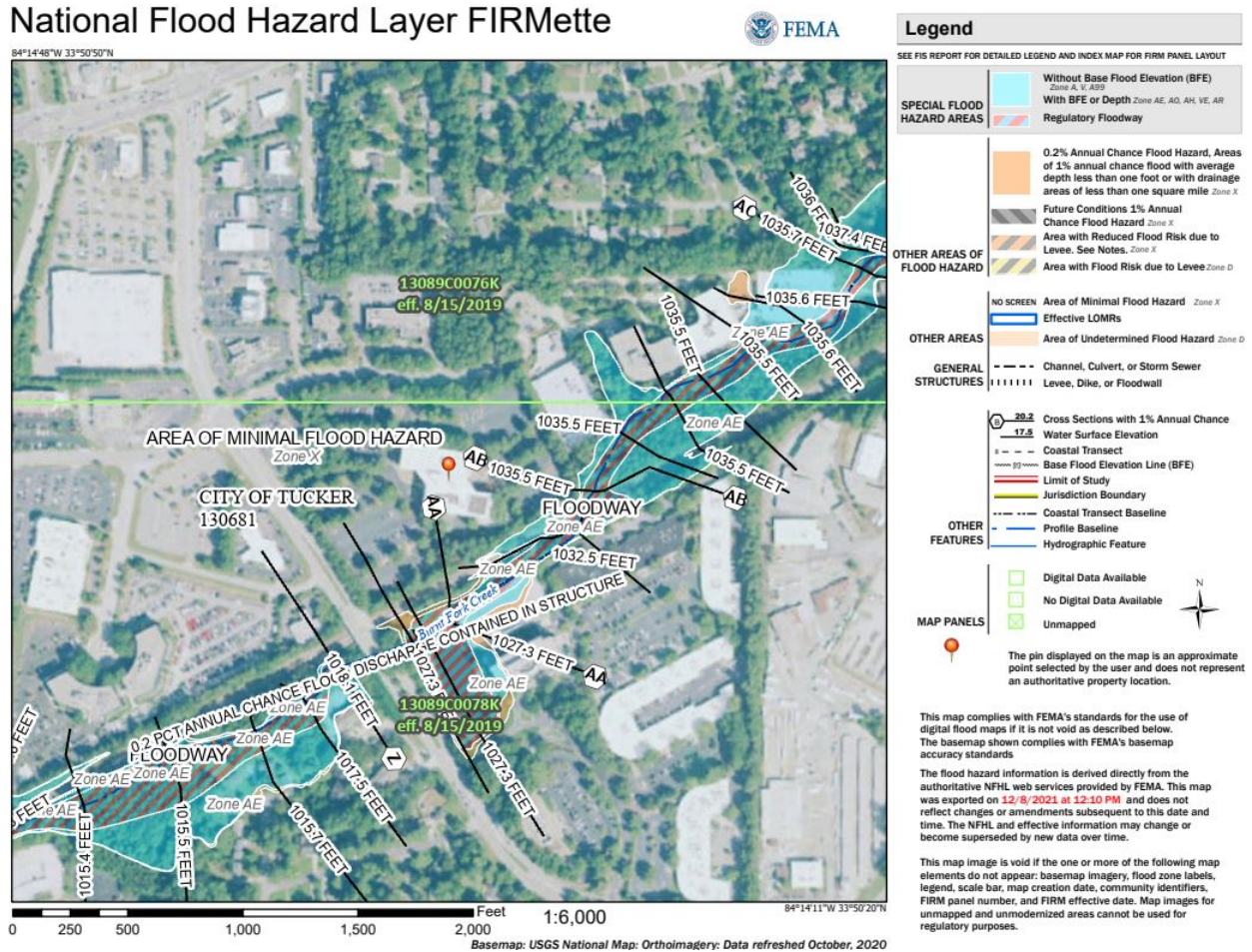


Figure 3. FEMA FIRM Panel

c) Streams/stream buffers

There are no state waters present on the Subject Property based on site observations and as reflected in the ALTA survey prepared by Watts & Browning Engineers, Inc., dated April 1, 2019.

d) Slopes exceeding 25 percent over a 10-foot rise in elevation

Based on topographic maps and site observation there are no slopes in excess of 25% over a 10-feet in rise on the Subject Property.

e) Vegetation

The project site is currently developed and the remaining vegetation consists primarily of well maintained landscaping. An IPaC Trust Resource Report was generated from the U.S. Fish and Wildlife Service. The report revealed one plant native to the region that is endangered (Michaux's Sumac). This species was not found during the site visit conducted on December 12, 2021.

f) Wildlife Species (including fish)

An IPaC Trust Resource Report was generated from the U.S. Fish and Wildlife Service. The report revealed one animal (Monarch Butterfly) and one plant (Michaux's Sumac) native to the region that are endangered. None were found to be present or nesting at the project location during the site visit on December 12, 2021.

g) Archeological/Historical Sites

According Georgia's Natural, Archaeological and Historic Resources GIS (GNAHRGIS) maps, the project site is not on a historic or archaeological registry. The site is currently developed with a ±259,091 square foot (sf) office building and appurtenant site improvements.

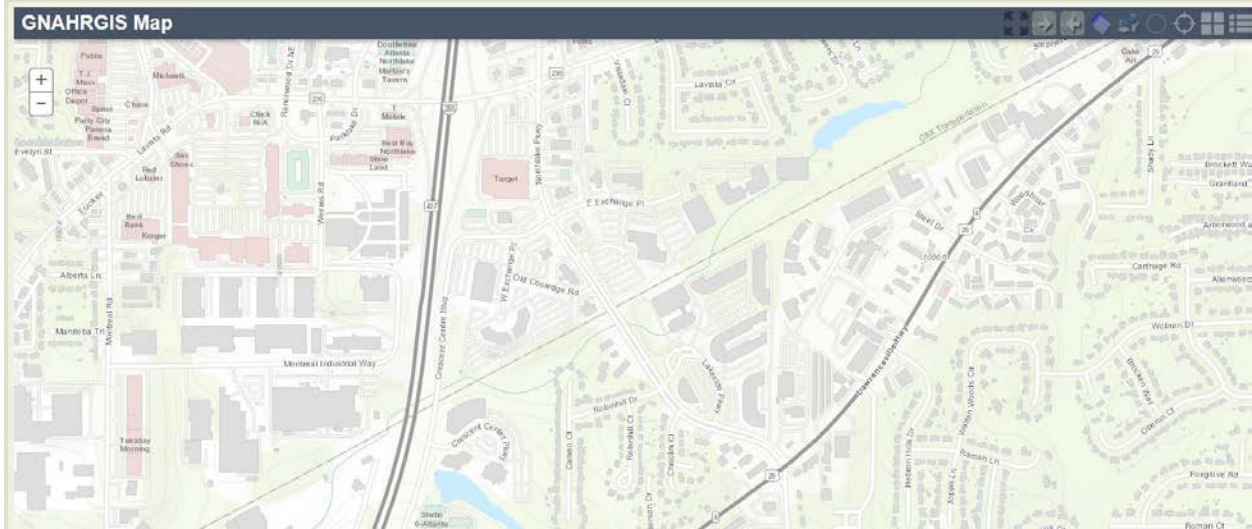


Figure 4. GNAHRGIS Map

3) **PROJECT IMPLEMENTATION MEASURES.**

a) Protection of environmentally sensitive areas, i.e., floodplain, slopes exceeding 25 percent, river corridors.

There are environmentally sensitive areas identified along the Subject Property's southern border. The environmentally sensitive areas consist of existing floodplain.

b) Protection of water quality

The Proposed Development will treat stormwater for pollutants prior to discharge from the site. The overall impact to the downstream stormwater infrastructure will be positive and an improvement over existing conditions.

c) Minimization of negative impacts on existing infrastructure

The Proposed Development has access to existing utilities with sufficient capacity to support the proposed use. The proposed use is not anticipated to overly burden existing utilities.

d) Minimization on archeological/historically significant areas

No archeological/historically significant areas were identified on or adjacent to the site and as a result no impacts are anticipated.

e) Minimization of negative impacts on environmentally stressed communities where environmentally stressed communities are defined 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.

There are no environmentally adverse conditions (waste treatment facilities, airports, landfills, etc.) and therefore, the Subject Property is not in an environmentally stressed area.

f) Creation and preservation of green space and open space

The proposed development will incorporate portions of the overall site for open space areas.

g) Protection of citizens from the negative impacts of noise and lighting

The Proposed Development will not have negative impacts on the surrounding uses. The proposed design, however, is incorporating the use of certain setbacks and buffers along the property lines which will minimize noise and lighting impacts to/from nearby properties along the other property lines.

h) Protection of parks and recreational green space

No existing parks will be impacted.

i) Minimization of impacts to wildlife habitats

No sensitive wildlife areas were observed during the December 12, 2021 site visit and as a result no impacts are anticipated.

Trip Generation Memo



MEMORANDUM

TO: City of Tucker
FROM: J. Alexander Brock
DATE: December 13, 2021
RE: Trip Generation Report – 2059 Northlake Parkway

The property is located on the east side of Northlake Parkway, approximately 300-feet south of its intersection with East Exchange Place and more particularly located at 4260 Lawrenceville Highway, (Parcel ID 18 214 10 026) (the “Subject Property”). The Subject Property is zoned Northlake Tier 2 (NL-2) and the currently contains a ±259,091 square foot (sf) office building and associated site improvements.

This application seeks a Special Land Use Permit to allow the conversion of a portion of the existing building into residential and the construction of two 9-story multifamily buildings. The result will be the reduction of the existing office space from ±259,091 sf to ±59,315 sf and the addition of ±507 residential units in a combination of multifamily flats and live-work units.

Attached to this application is a Traffic Impact Study for AHS Tucker Exchange, prepared by Kimley-Horn and Associates, Inc. and dated December 2021. The traffic study anticipates that the Proposed Development will not unduly increase traffic or created congestion in the area. The Subject Property is located on Northlake Parkway, a four lane road. Using the Institute of Transportation Engineers’ (ITE) Trip Generation Manual, 10th Edition, 2017, the traffic study anticipates the 507 multifamily units (ITE Category 221) and 59,315 square feet of office (ITE Category 710) will generate a net of 3,390 total daily trips, 246 AM peak hour trips, and 271 PM peak hour trips. It is important to note, however, that the traffic study does not take into account the net trip reduction from repurposing the existing office use. When factoring the reduced office area from 259,091 sf (existing) to 59,315 sf (proposed), the proposed development will result in a net increase of 718 total daily trips, a net reduction of 24 AM peak hour trips, and a net reduction of 10 PM peak hour trips. The traffic study concludes that the proposed trips will not overly burden the surrounding roadways or intersections.¹

¹ The traffic study notes the intersection at Northlake Parkway and Lawrenceville Highway will require future improvements regardless of whether or not the proposed development is constructed.

Traffic Impact Study



Traffic Impact Study

AHS Tucker Exchange

DeKalb County, Georgia

Report Prepared:

December 2021

Prepared for:

AHS Residential, LLC

Prepared by:

Kimley»»Horn

Kimley-Horn and Associates, Inc.
3930 East Jones Bridge Road, Suite 350
Peachtree Corners, Georgia 30092
KHA Project #013504019

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Traffic Impact Study

AHS Tucker Exchange

DeKalb County, Georgia

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- Appendix B: Traffic Count Data
- Appendix C: Volume Development (Trip Generation and Growth Rate Calculations)
- Appendix D: Intersection Volume Worksheets
- Appendix E: *Synchro* Analysis Reports
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1.0 INTRODUCTION

This report presents the analysis of the anticipated traffic impacts associated with the *AHS Tucker Exchange* development, which is expected to be completed in 2024 (referred to herein as “build-out year”). As currently envisioned, the existing office building of approximately 259,000 SF will be repurposed, and the site will be redeveloped to consist of 507 residential units (378 multifamily and 129 live work) and approximately 59,000 SF office. The project site is currently zoned Northlake Overlay (Tier 2). The 13-acre site is located southeast of the intersection of Northlake Parkway and East Exchange Place located in DeKalb County, Georgia.

The proposed development will be served by three (3) existing full-movement driveways: one (1) along Northlake Parkway and two (2) along East Exchange Place.

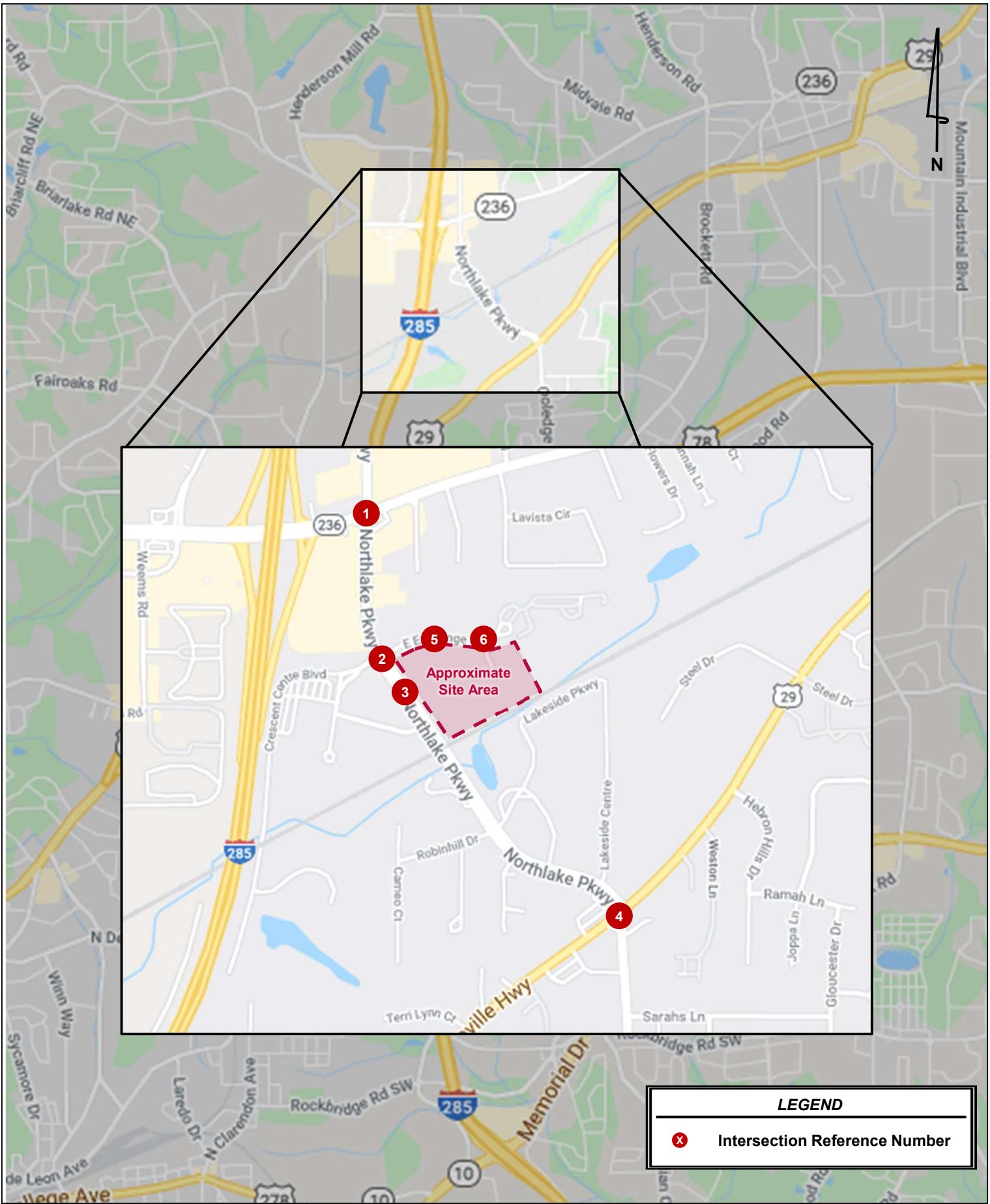
Figure 1 provides a location map of the project site. **Figure 2** provides an aerial image that captures the project site and the study roadway network. A site plan is also included in **Appendix A**.

2.0 STUDY AREA DETERMINATION

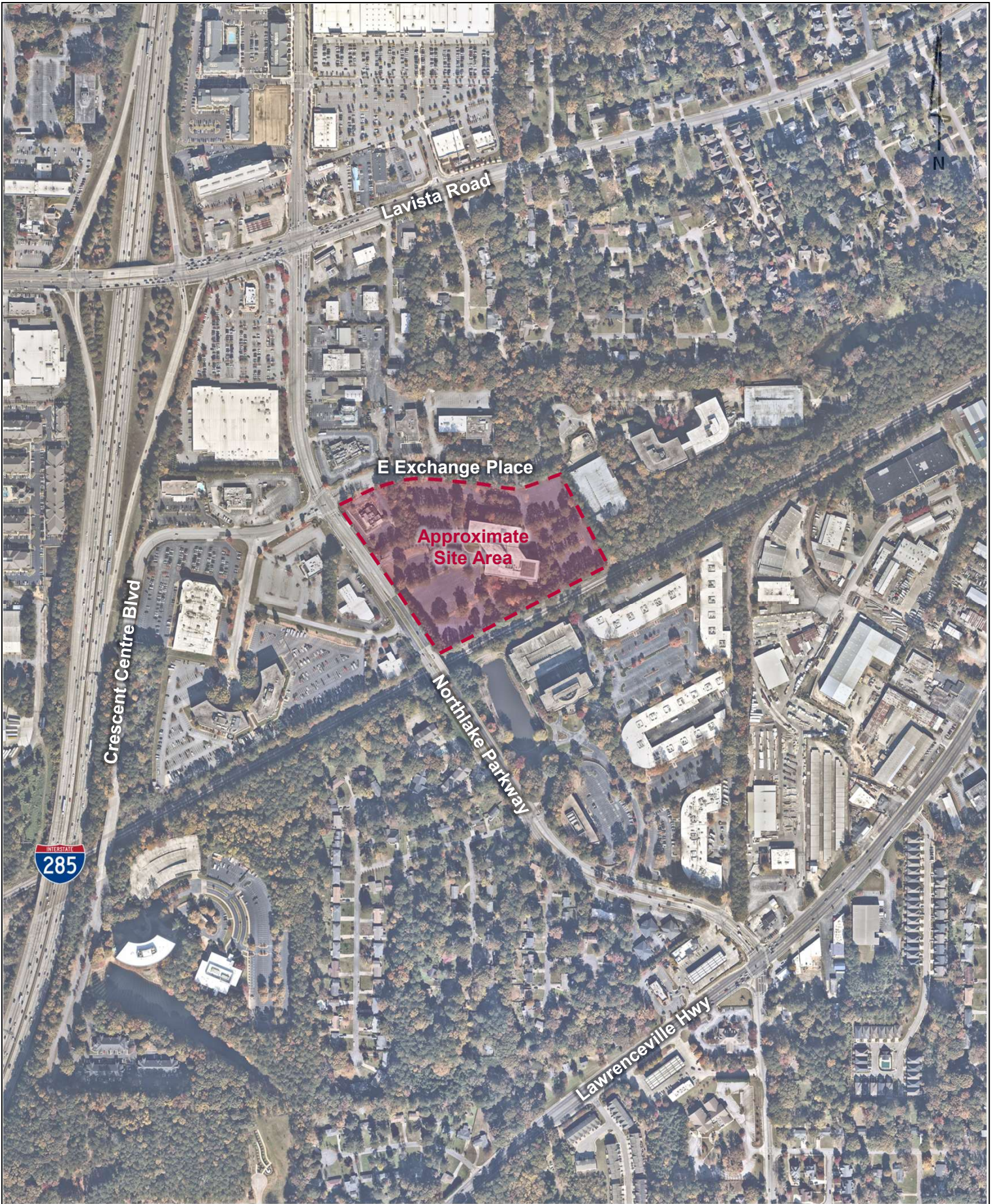
The study area consists of the following existing intersections:

1. SR 236 (Lavista Road) at Northlake Parkway (Signalized)
2. Northlake Parkway at East Exchange Place / Crescent Centre Boulevard (Signalized)
3. Northlake Parkway at Site Driveway A (Unsignalized)
4. SR 8 (Lawrenceville Highway) at Northlake Parkway / Cooledge Road

For purposes of the traffic impact study, Northlake Parkway is considered to have north-south orientation. SR 236 (Lavista Road), East Exchange Place, and SR 8 (Lawrenceville Highway) are considered to have east-west orientations.



LEGEND	
x	Intersection Reference Number



3.0 EXISTING TRAFFIC CONDITIONS

3.1 ROADWAY CONDITIONS

The roadways within the study network have the following characteristics:

SR 236 (Lavista Road) is a four-lane, minor arterial with a posted speed limit of 45 MPH in the vicinity of the study network. GDOT counts taken along SR 236 (Lavista Road) east of Northlake Parkway indicate an annual average daily traffic (AADT) of approximately 23,500 vehicles per day in 2020.

SR 8 (Lawrenceville Highway) is a four-lane, principal arterial with a center two-way left-turn lane (TWLTL) and a posted speed limit of 45 MPH in the vicinity of the study network. GDOT counts taken along SR 8 (Lawrenceville Highway) west of Northlake Parkway indicate an annual average daily traffic (AADT) of approximately 20,900 vehicles per day in 2020.

Northlake Parkway is a four-lane, major collector with a center two-way left-turn lane (TWLTL) and a posted speed limit of 30 MPH in the vicinity of the study network. GDOT counts taken along Northlake Parkway south of SR 236 (Lavista Road) indicate an annual average daily traffic (AADT) of approximately 17,500 vehicles per day in 2020.

East Exchange Place is a two-lane, local road with a posted speed limit of 25 MPH in the vicinity of the study network.

Crescent Centre Boulevard is a four-lane, local road with a posted speed limit of 30 MPH in the vicinity of the study network.

3.2 VEHICULAR VOLUMES

Vehicle peak hour turning movement counts were performed at all four (4) existing study intersections.

The vehicle peak turning movement counts were collected on Wednesday, November 10, 2021. The AM peak period was collected from 7:00 AM to 9:00 AM, and the PM peak period was collected from 4:00 PM to 6:00 PM. The AM and PM peak hours for each intersection are listed below in **Table 1**. The peak hour traffic counts were used to perform the analysis presented in this report. The complete traffic count data is provided in **Appendix B**.

Table 1: Intersection Peak Hours		
Intersection	AM Peak Hour	PM Peak Hour
1. SR 236 (Lavista Road) @ Northlake Parkway (Signalized)	7:45 AM – 8:45 AM	4:45 PM – 5:45 PM
2. Northlake Parkway @ East Exchange Place / Crescent Centre Boulevard (Signalized)	8:00 AM – 9:00 AM	4:30 PM – 5:30 PM
3. Northlake Parkway @ Site Driveway A (Unsignalized)	8:00 AM – 9:00 AM	4:30 PM – 5:30 PM
4. SR 8 (Lawrenceville Highway) @ Northlake Parkway / Cooledge Road (Signalized)	7:45 AM – 8:45 AM	4:30 PM – 5:30 PM

3.3 EXISTING VOLUME ADJUSTMENT

Due to COVID-19's impact on traffic, historical data was used to develop the Estimated 2021 traffic conditions. Average Daily Traffic (ADT) volumes collected in 2021 and Annual Average Daily Traffic (AADT) volumes from GDOT's Traffic Analysis & Data Application (TADA) were used to compare typical traffic volumes in the vicinity of the project site.

Table 2: Traffic Count Comparison and Adjustment Calculations										
Count Station	Location	GDOT					Collected			
		2018 AADT	ADT Date	ADT	AM Peak	PM Peak	2021 ADT	AM Peak	PM Peak	
089-3021	SR 8 (Lawrenceville Highway) (s/o Northlake Parkway)	26,600	October 2018	28,893	1,897	2,744	27,800	1,836	2,360	
<i>Plus 2.0% per year background growth between 2018 and 2021</i>				30,661	2,013	2,912				
Difference Calculations										
Count Station	Location	ADT			AM Peak			PM Peak		
		Vol	Percent	Factor	Vol	Percent	Factor	Vol	Percent	Factor
089-3021	SR 8 (Lawrenceville Highway) (s/o Northlake Parkway)	-2,861	-9%	1.1	-177	-9%	1.1	-552	-19%	1.2

The volume comparison is shown in a tabular format in **Table 2**. **Figure 3** illustrates the comparison between the October 2018 GDOT AADT grown at 2.0% to year 2021 (3 years) and the November 2021 collected ADT. As a result of the volume comparison, an adjustment factor of 1.1 and 1.2 will be used for the existing AM and PM peak hours, respectively. The adjustment factors take into account the potential impacts of COVID-19 to typical traffic patterns.

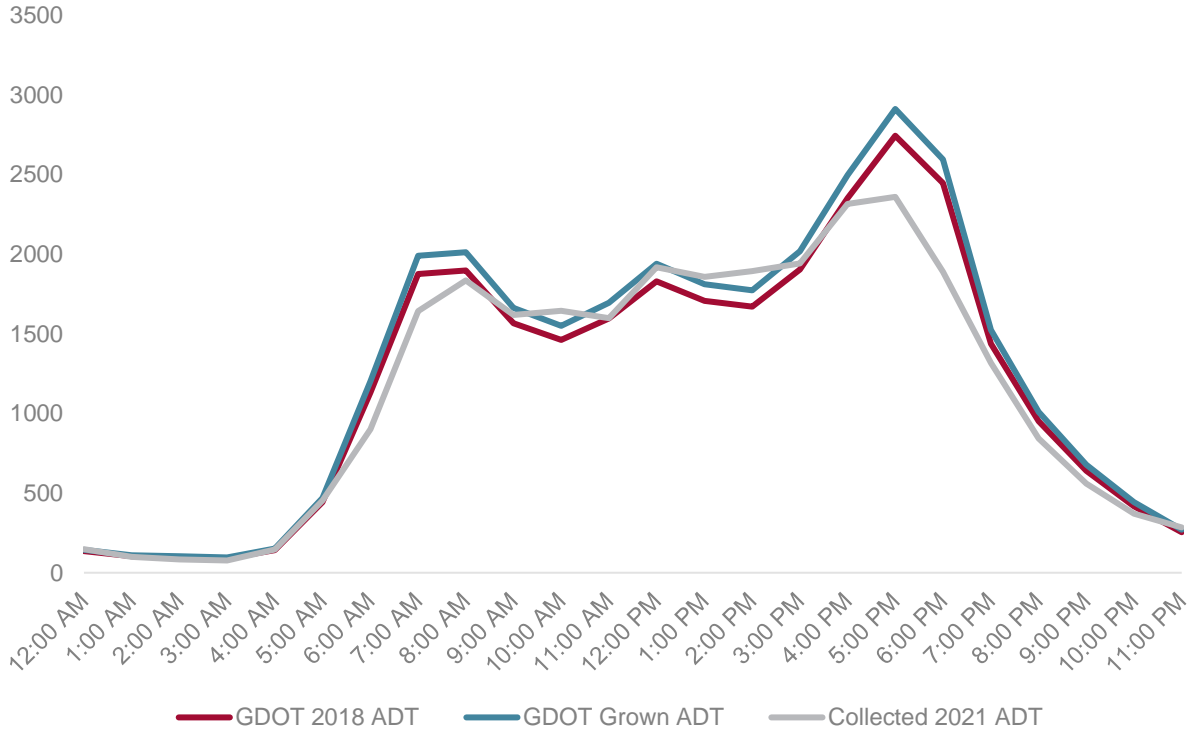
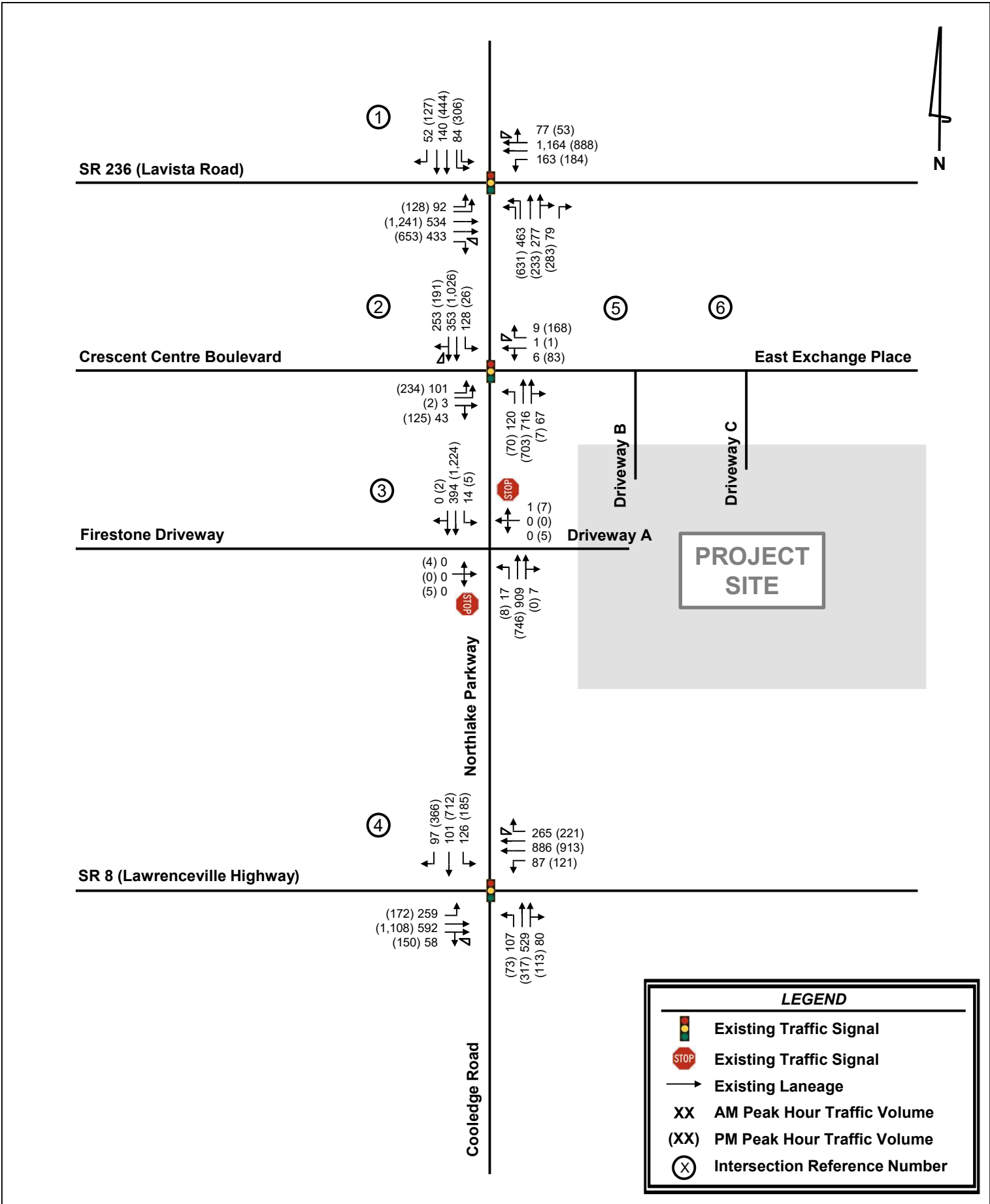


Figure 3: ADT Comparison

Figure 4 illustrates the Estimated 2021 peak hour traffic volumes at the study intersections and the existing roadway geometry (intersection layout). The complete traffic count data is provided in **Appendix C**.



LEGEND

- Existing Traffic Signal
- Existing Traffic Signal
- Existing Laneage
- XX AM Peak Hour Traffic Volume
- (XX) PM Peak Hour Traffic Volume
- (X) Intersection Reference Number

4.0 PROJECTED BACKGROUND (NON-PROJECT) TRAFFIC

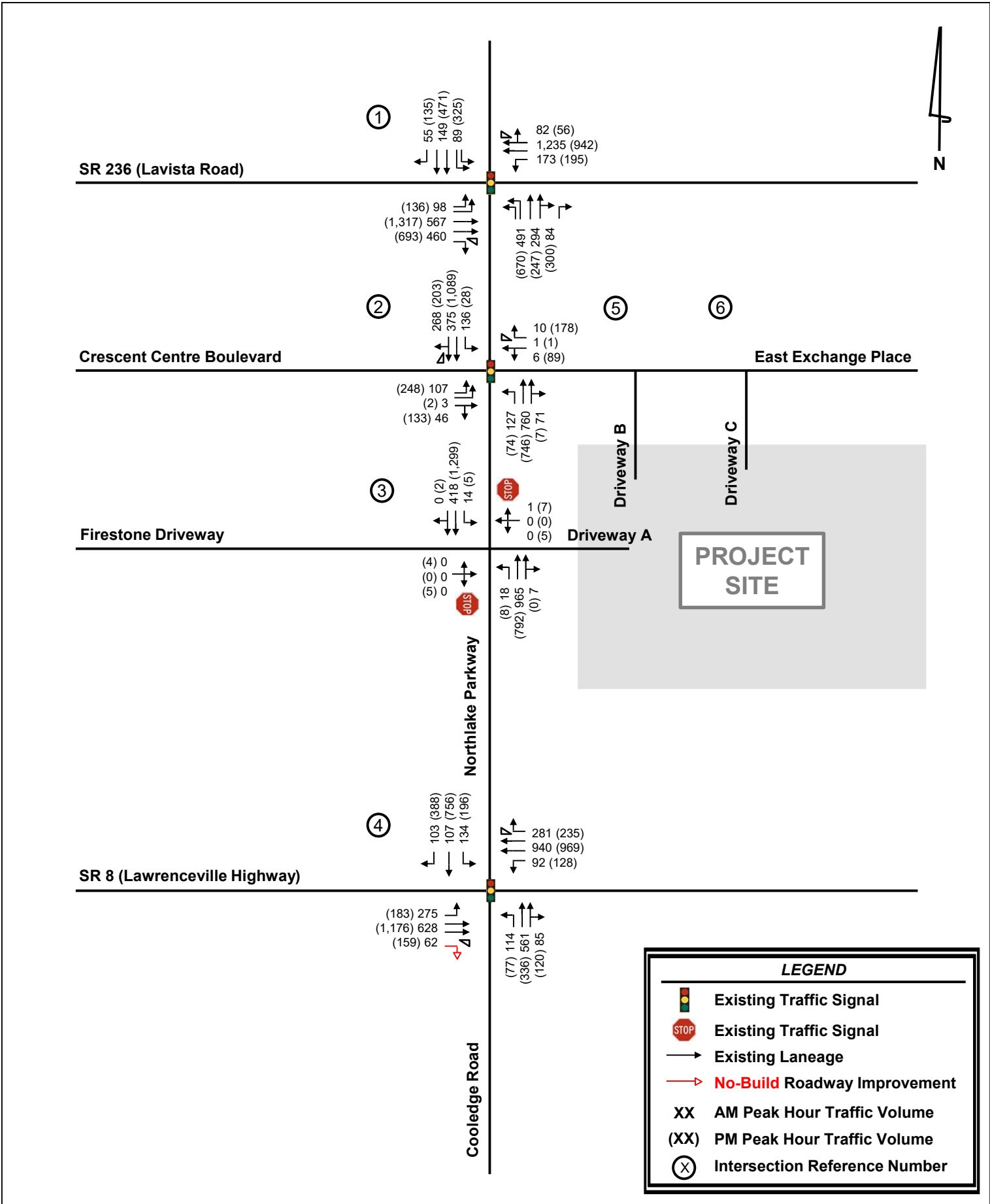
Projected background (non-project) traffic is defined as the expected traffic on the roadway network in the future year(s) absent the *AHS Tucker Exchange* development. The Estimated 2021 peak hour traffic volumes were increased by 2.0% per year for three (3) years to account for the expected background growth in traffic through year 2024 build-out of the project. **Figure 5** illustrates the Projected 2024 No-Build traffic volumes for the AM and PM peak hours.

4.1 FUTURE ROADWAY / INTERSECTION PROJECTS

ARC's Atlanta Region's Plan, GDOT Statewide TIP (STIP), and DeKalb County transportation projects were researched to identify any currently programmed transportation projects within the vicinity of the proposed development that may impact the study network during the analysis period:

1. **DK-160:** This project adds two lanes in each direction on Cooleage Road between SR 8 (Lawrenceville Highway) and SR 78 (Stone Mountain Parkway). As of November 2021, the estimated construction year is 2030.

This project is not programmed to be complete by the build-out year, therefore the project was not included in this study. The fact sheet for the programmed project is included in **Appendix F**.



5.0 PROJECT TRAFFIC

Project traffic used in this analysis is defined as the vehicle trips expected to be generated by the proposed development and the distribution and assignment of that traffic through the study roadway network. This traffic impact study evaluated the impacts of adding the new trips generated by the proposed *AHS Tucker Exchange* development.

5.1 PROJECT SITE ACCESS

Access to the site will be provided via three (3) existing site driveways, which are shown on the site plan in **Appendix A**. Brief description of the site driveways are as follows:

- Site Driveway A – existing full-movement driveway, located along Northlake Parkway, approximately 280 feet south of East Exchange Place.
- Site Driveway B – existing full movement, located along East Exchange Place, approximately 580 feet east of Northlake Parkway.
- Site Driveway C – existing full movement, located along East Exchange Place, approximately 850 feet east of Northlake Parkway.

The site driveways provide vehicular access to the entire development. Internal, private roadways throughout the site provide access to all buildings. Refer to the site plan in **Appendix A** for a visual representation of vehicular access and circulation throughout the proposed development.

5.2 TRIP GENERATION

Gross trips associated with the proposed development were estimated using the *Institute of Transportation Engineers' (ITE) Trip Generation Manual, 10th Edition, 2017*, using equations where available. Trip generation for the proposed development was calculated based upon the following land uses:

- Land Use 221: Multi-Family Housing (Mid-Rise)
- Land Use 710: General Office Building

Table 3 summarizes the anticipated trip generation for the proposed development upon full build-out (2024). **Appendix C** provides the detailed trip generation worksheet for the proposed development.

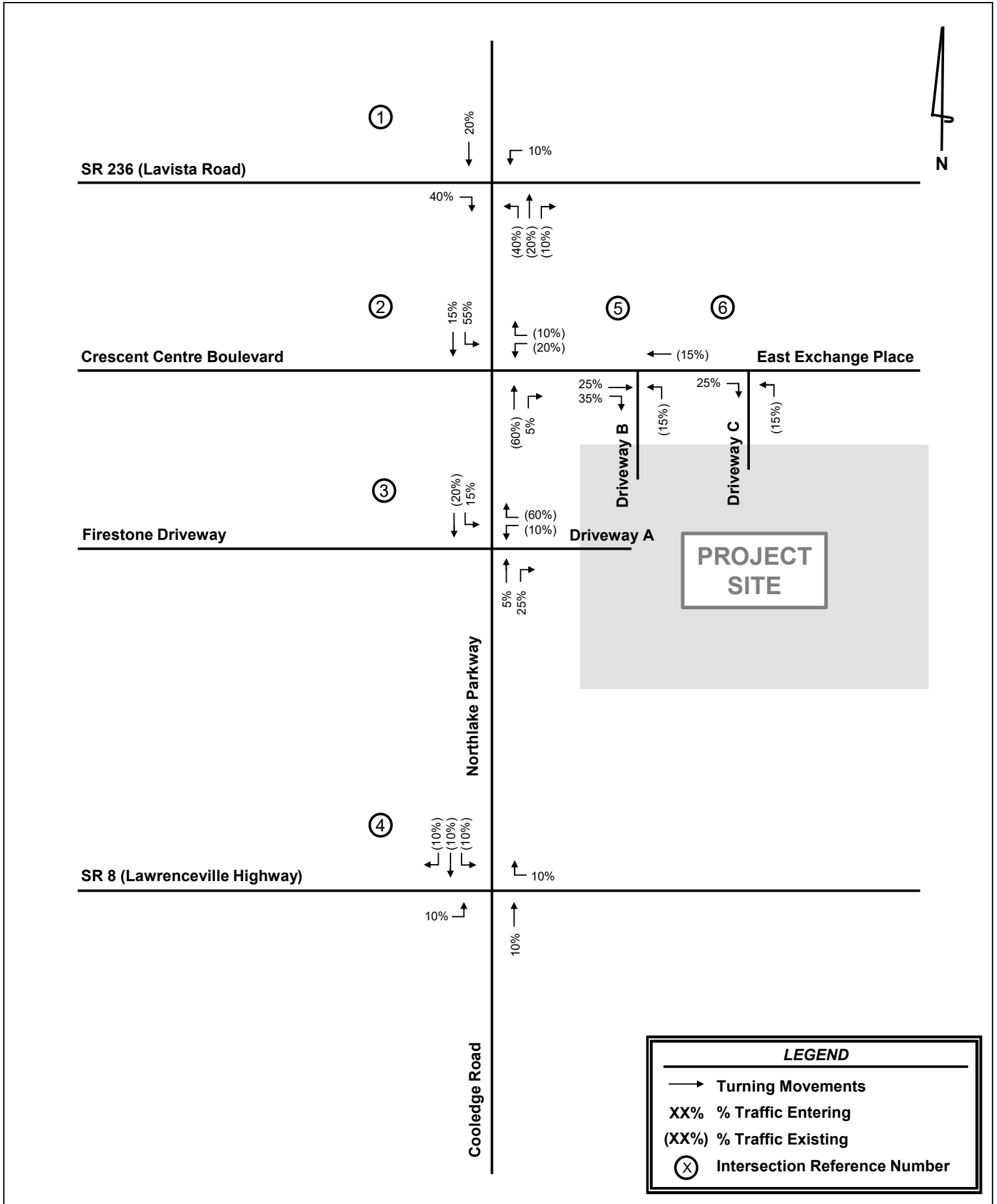
It should be noted that no reductions to gross trips from repurposing the existing office were considered in the analysis.

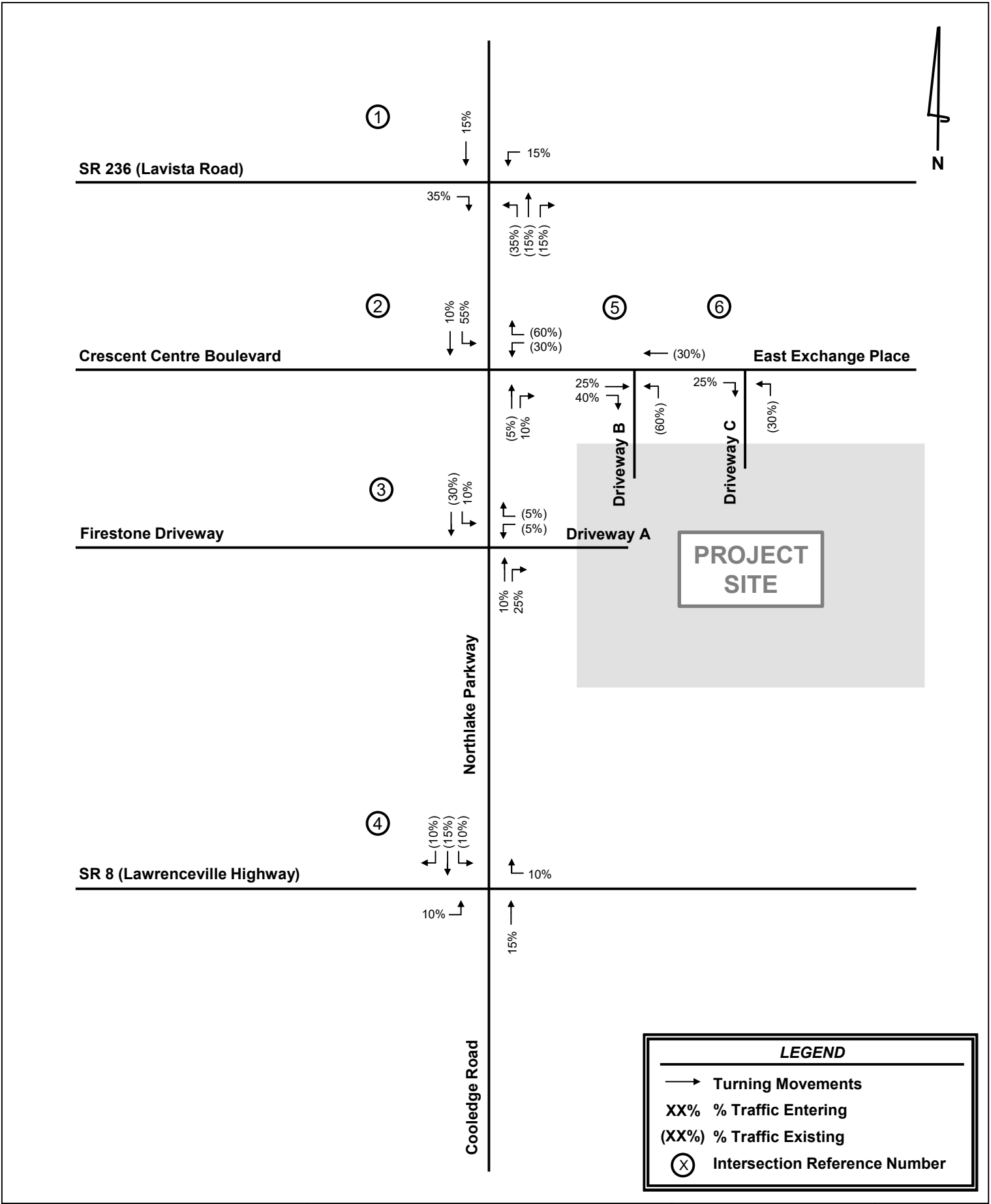
Table 3: Trip Generation Summary

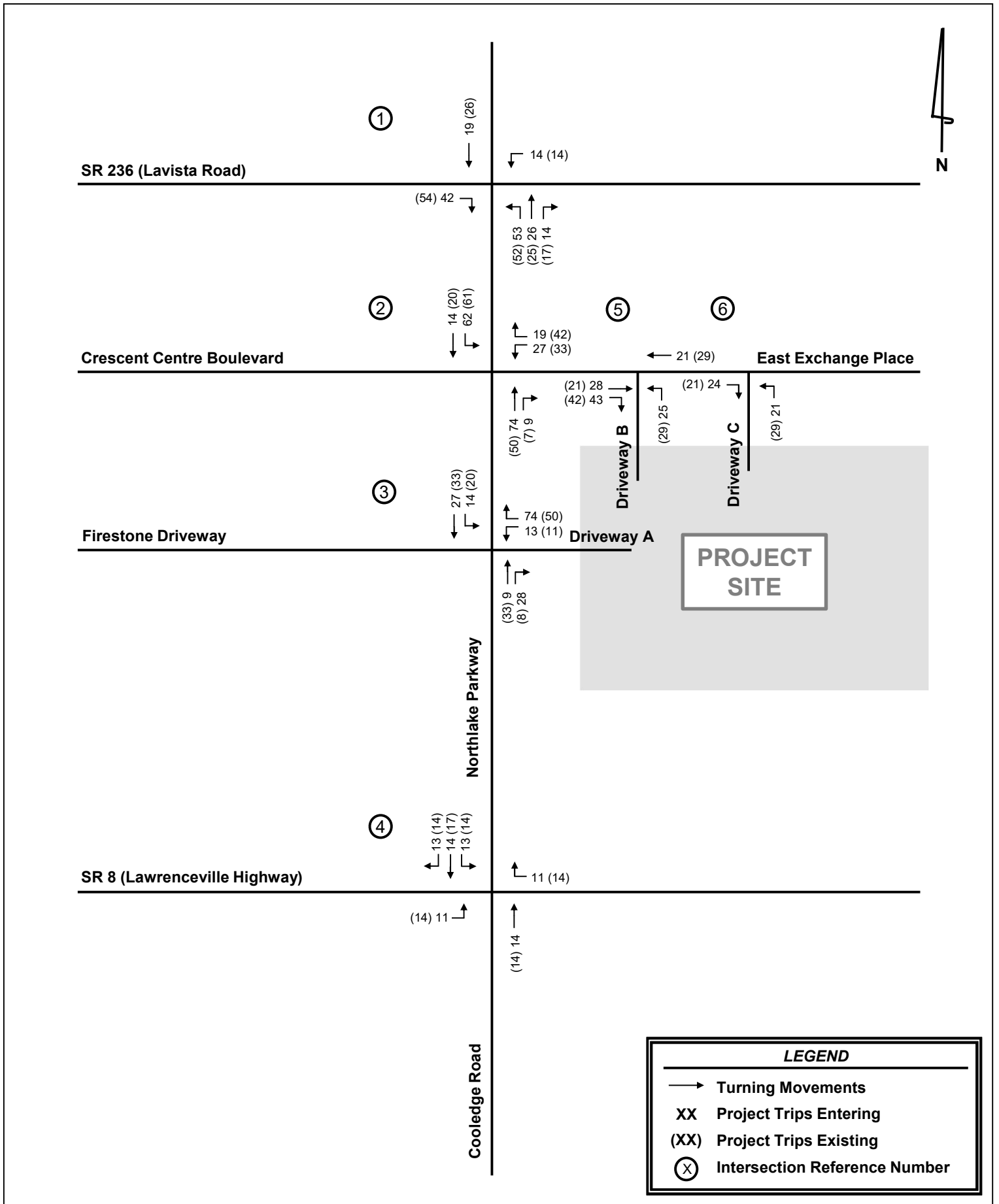
ITE Code	Land Use	Density	Daily Traffic			AM Peak Hour			PM Peak Hour		
			Total	Enter	Exit	Total	Enter	Exit	Total	Enter	Exit
221	Multi-Family Housing (Mid-Rise)	507 units	2,762	1,381	1,381	168	44	124	210	128	82
710	General Office Building	59,315 SF	640	320	320	82	71	11	69	11	58
Gross Project Trips			3,402	1,701	1,701	250	115	135	279	139	140
<i>Mixed-Use Reduction</i>			<i>-12</i>	<i>-6</i>	<i>-6</i>	<i>-4</i>	<i>-2</i>	<i>-2</i>	<i>-8</i>	<i>-4</i>	<i>-4</i>
Net New Trips			3,390	1,695	1,695	246	113	113	271	135	136

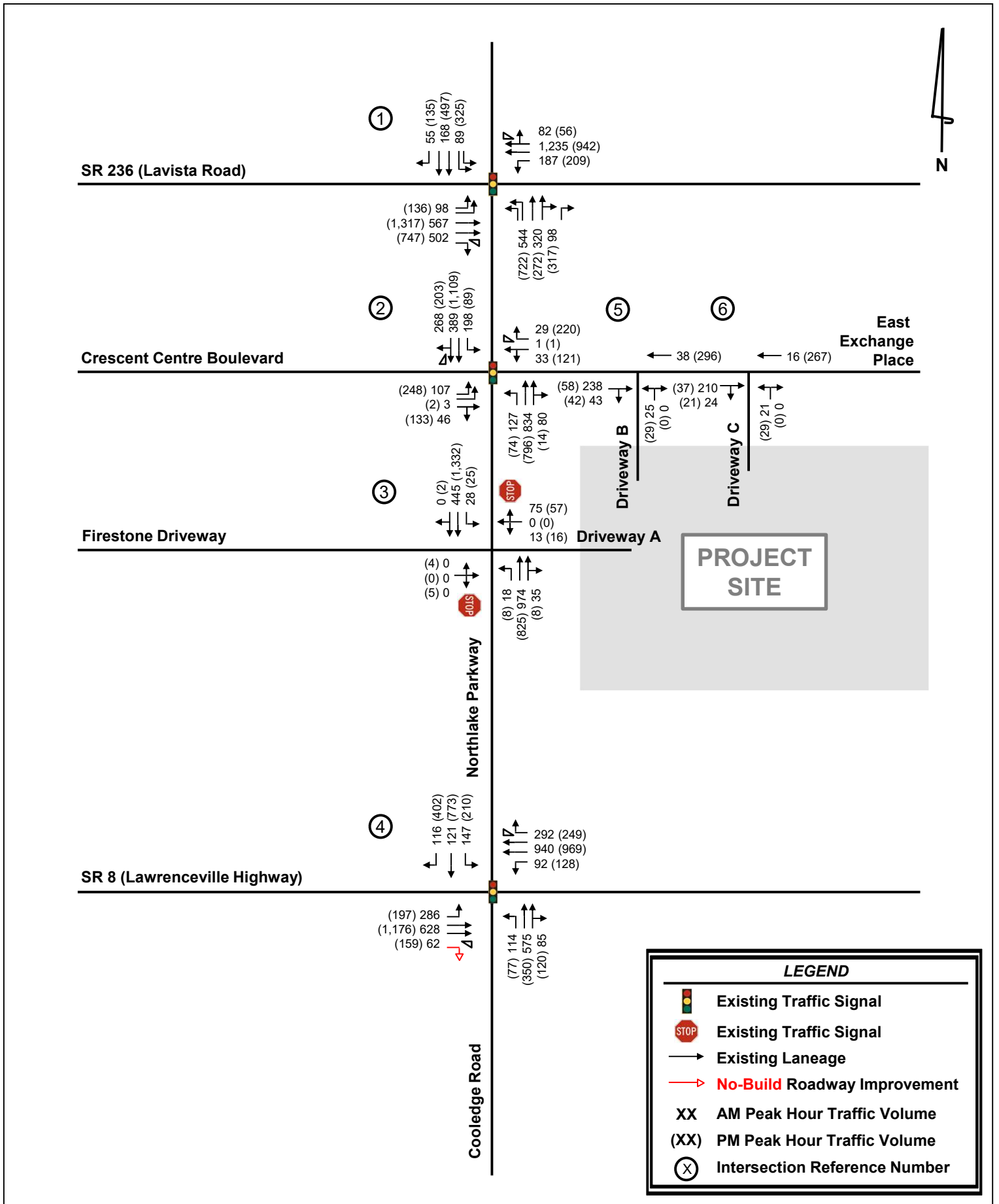
5.3 TRIP DISTRIBUTION AND ASSIGNMENT

The directional distribution and assignment of new trips (project trips) related to the proposed development was based on a review of land uses and population densities in the area, existing travel patterns in the area, and engineering judgement. A detailed trip distribution and assignment are shown in **Figure 6** and **Figure 7**. Based on trip generation from **Table 3** and the anticipated trip distribution, new project trips were assigned to the study roadway network. **Figure 8** illustrates the new project trips distributed throughout the study network. **Figure 9** illustrates the Projected 2024 Build traffic volumes for the AM and PM peak hours. **Appendix D** provides intersection volume worksheets for all study intersections.









6.0 LEVEL-OF-SERVICE ANALYSIS

Level-of-service (LOS) determinations were made for the weekday AM and PM peak hours for the study network intersections using *Synchro, Version 11*. The program uses methodologies contained in the *6th Edition Highway Capacity Manual* to determine the operating characteristics of an intersection. Capacity is defined as the maximum number of vehicles that can pass over a particular road segment or through a particular intersection within a specified period under prevailing roadway, traffic, and control conditions.

LOS is used to describe the operating characteristics of a road segment or intersection in relation to its capacity. LOS is defined as a qualitative measure that describes operational conditions and motorists' perceptions of a traffic stream. The *Highway Capacity Manual* defines six levels of service, LOS A through LOS F, with A being the best and F the worst.

LOS for signalized intersections are reported for the intersection as a whole. One or more movements at an intersection experience a low LOS, while the intersection as a whole may operate acceptably. LOS for unsignalized intersections with stop control on the minor streets only are reported for the side-street approaches and major street left-turns. Low levels-of-service for side street approaches are not uncommon, as vehicles often experience significant delay turning onto a major roadway.

LOS analyses were performed for the AM and PM peak hours under the Estimated 2021 conditions, Projected 2024 No-Build conditions, and Projected 2024 Build conditions. The results of each analysis are summarized in **Table 4**. *Synchro* analysis reports are included in **Appendix E**.

Intersection	Approach/ Movement	Estimated 2021		Projected 2024 No-Build		Projected 2024 Build	
		AM Peak	PM Peak	AM Peak	PM Peak	AM Peak	PM Peak
1. SR 236 (Lavista Road) @ Northlake Parkway	Overall	D (41.3)	E (62.5)	D (43.4)	E (68.8)	D (45.8)	E (74.8)
2. Northlake Parkway @ E Exchange Place / Crescent Centre Blvd	Overall	B (14.2)	D (35.8)	B (14.5)	D (38.6)	C (28.7)	D (48.4)
3. Northlake Parkway @ Site Driveway A	SBL	B (10.1)	A (9.6)	B (10.4)	A (9.8)	B (10.7)	B (10.2)
	EB	A (0.0)	F (51.8)	A (0.0)	F (61.3)	A (0.0)	F (84.8)
	WB	B (11.8)	D (32.4)	B (12.0)	E (36.7)	C (21.0)	E (45.3)
4. SR 8 (Lawrenceville Hwy) @ Northlake Pkwy / Cooledge Rd	Overall	D (40.0)	E (69.1)	D (43.1)	F (82.0)	D (45.7)	F (84.6)
5. East Exchange Place @ Site Driveway B	NB	-	-	-	-	B (10.5)	B (10.1)
6. East Exchange Place @ Site Driveway C	NB	-	-	-	-	B (10.1)	A (9.8)

As shown in **Table 4**, all but one (1) intersection are projected to operate at acceptable LOS under all conditions. The signalized intersection of SR 8 (Lawrenceville Highway) at Northlake Parkway / Cooledge Road (Intersection 4) is projected to operate at LOS F during the PM peak hour under the Projected 2024 No-Build and Projected 2024 Build conditions.

For the above intersections to operate at acceptable LOS, the following system (no-build) improvement should be considered:

- Intersection 4: SR 8 (Lawrenceville Highway) at Northlake Parkway / Cooledge Road
 - Provide a separate eastbound right-turn lane along SR 8 (Lawrenceville Highway) turning onto Cooledge Road.

Table 5 provides results for the No-Build Improved and the Build Improved traffic conditions.

Table 5: Improved Level-of-Service Summary					
<i>LOS (Delay in Seconds)</i>					
Intersection	Approach/ Movement	Projected 2024 No-Build Improved		Projected 2024 Build Improved	
		AM Peak	PM Peak	AM Peak	PM Peak
4. SR 8 (Lawrenceville Hwy) @ Northlake Pkwy / Cooledge Rd	Overall	D (42.9)	E (68.8)	D (45.4)	E (71.7)

As shown in **Table 5**, the intersection of SR 8 (Lawrenceville Highway) at Northlake Parkway / Cooledge Road (Intersection 4) is projected to operate at acceptable LOS after the system (no-build) improvements under all scenarios.

7.0 CONCLUSION

This traffic study evaluated the traffic impacts associated with the *AHS Tucker Exchange* development. The approximate 13-acre site is located southeast of the intersection of Northlake Parkway and East Exchange Place located in DeKalb County, Georgia. As currently envisioned, the existing office building of approximately 259,000 SF will be repurposed, and the site will be redeveloped to consist of 507 residential units (378 multifamily and 129 live work) and approximately 59,000 SF office. The project site is currently zoned Northlake Overlay (Tier 2).

The proposed development will be served by three (3) existing full-movement driveways: one (1) along Northlake Parkway and two (2) along East Exchange Place.

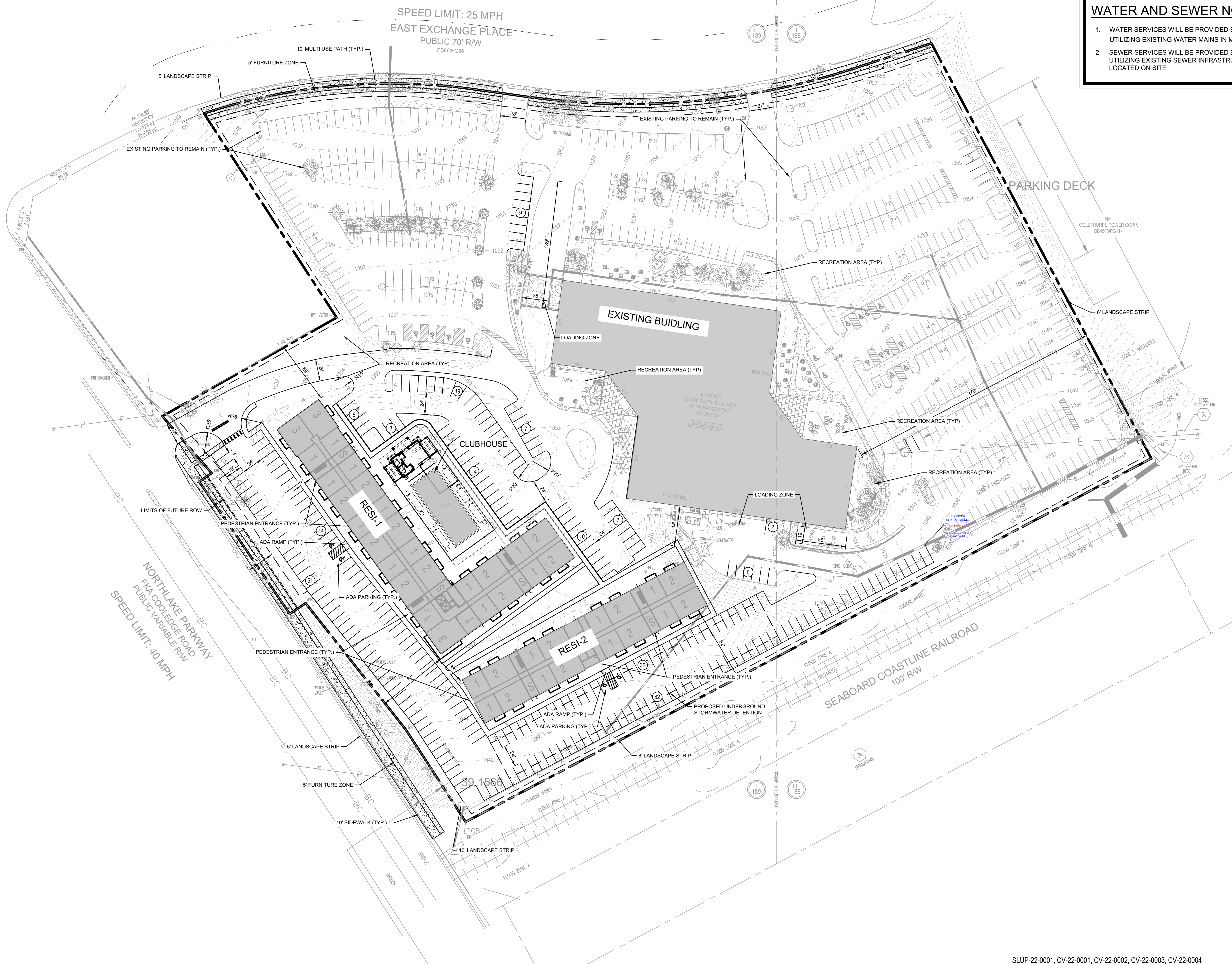
The analyses indicate that all but one (1) intersection are projected to operate at acceptable LOS under all conditions. SR 8 (Lawrenceville Highway) at Northlake Parkway / Cooledge Road (Intersection 4) is projected to operate at LOS F during the PM peak hour under the Projected 2024 No-Build and Projected 2024 Build conditions.

7.1 SYSTEM IMPROVEMENT RECOMMENDATIONS

Based on the results of this traffic impact study, the following improvement is recommended to serve the No-Build traffic conditions (note: this would be the improvement needed to serve the traffic based on the existing conditions plus background growth).

- Intersection 4: SR 8 (Lawrenceville Highway) at Northlake Parkway / Cooledge Road
 - Provide a separate eastbound right-turn lane along SR 8 (Lawrenceville Highway) turning onto Cooledge Road.

Site Plan



WATER AND SEWER NOTES:

1. WATER SERVICES WILL BE PROVIDED BY DEKALB COUNTY UTILIZING EXISTING WATER MAINS IN MAIN ROAD
2. SEWER SERVICES WILL BE PROVIDED BY DEKALB COUNTY UTILIZING EXISTING SEWER INFRASTRUCTURE CURRENTLY LOCATED ON SITE

DEVELOPMENT SUMMARY:

SITE SUMMARY:

CURRENT ZONING:	NORTHLAKE OVERLAY (TIER 2)
PROPOSED ZONING:	NORTHLAKE OVERLAY (TIER 2)
SITE AREA:	13.00 ACRES
LOT COVERAGE:	10.1 ACRES (77.7%)
OPEN SPACE:	2.9 ACRES (22.3%)
REQUIRED BUILDING HEIGHT:	135 FT 9 STORIES
PROPOSED BUILDING HEIGHT:	89' FT 9 STORIES
EXISTING BUILDING HEIGHT:	87.1' FT 5 STORIES

BUILDING SETBACK REQUIREMENTS:

FRONT (MIN)	0 FT
FRONT (MAX)	30 FT
SIDE (MIN)	20 FT
BACK (MIN)	20 FT

LANDSCAPE SETBACK:

FRONT (MIN)	6 FT
SIDE (MIN)	6 FT
BACK (MIN)	6 FT

PROPOSED LAND USES & DENSITIES:

MULTIFAMILY RESIDENTIAL	378 UNITS
LIVE WORK	129 UNITS
OFFICE/COWORKING SPACE:	59,315 SF

TOTAL FLOOR SPACE: 570,332 SF
RESIDENTIAL: 511,197 SF
OFFICE: 59,315

PROPOSED DENSITY: 39 UNITS/ACRE

PARKING SUMMARY:

REQUIRED PARKING (MINIMUM):	626 SPACES (TOTAL)
MULTIFAMILY (378 UNITS):	378 SPACES (1.00/UNIT)
LIVE WORK (129 UNITS):	129 SPACES (1.00/UNIT)
OFFICE/COWORKING (59,315 SF):	119 SPACES (1.0/500 SF)
REQUIRED PARKING (MAXIMUM):	1,759 SPACES (TOTAL)
MULTIFAMILY (378 UNITS):	1,134 SPACES (3.00/UNIT)
LIVE WORK (129 UNITS):	387 SPACES (3.00/UNIT)
OFFICE/COWORKING (59,315 SF):	238 SPACES (1.0/500 SF)
PROPOSED PARKING:	785 SPACES (TOTAL)
STANDARD:	753 SPACES
HANDICAP:	16 SPACES
ALTERNATIVE VEHICLE:	16 SPACES
BIKE/MOPED SPACES:	40 SPACES
LOADING/UNLOADING:	4 SPACES

PARKING LOT LANDSCAPING:

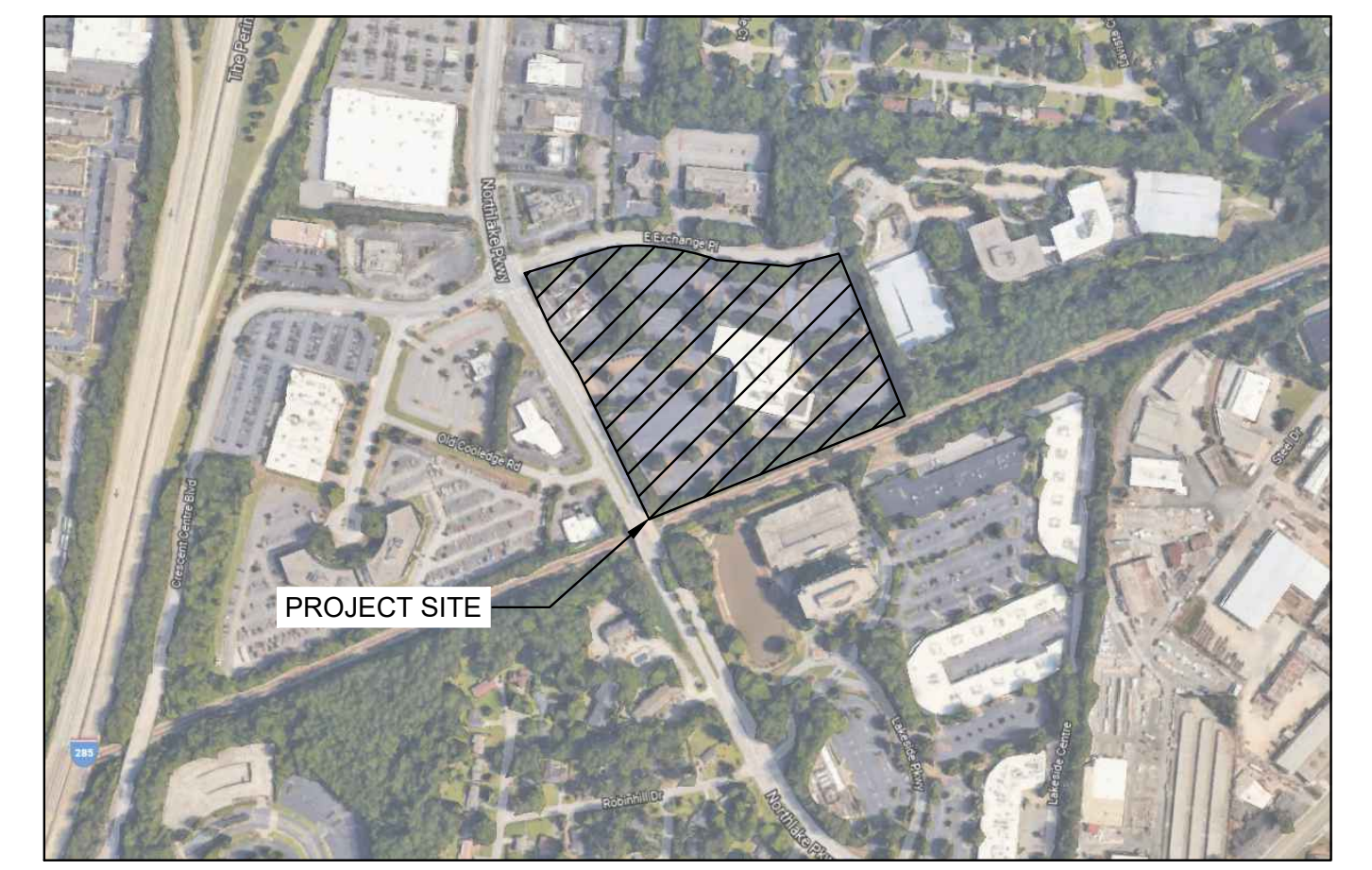
REQUIRED:	10% MIN.
PROPOSED:	10%

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DEPARTMENT

SITE LOCATION MAP



SLUP-22-0001, CV-22-0001, CV-22-0002, CV-22-0003, CV-22-0004

Traffic Count Data



[Click here for Map](#)

Peak Hour Turning Movement Count

Tucker, GA



www.marrtraffic.com

Wednesday, November 10, 2021	
Period	0700 - 0900
Peak Hour	0745 - 0845

Session Parameters

(Drop Down Menu)

Peak Hour

Volume



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Wednesday, November 10, 2021	
Period	1600 - 1800
Peak Hour	1645 - 1745

Session Parameters

(Drop Down Menu)



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Peak Hour Turning Movement Count

Tucker, GA

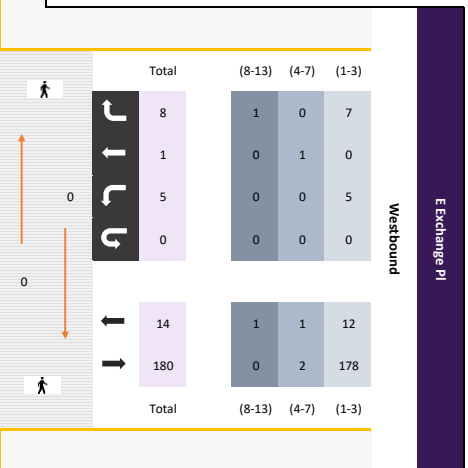
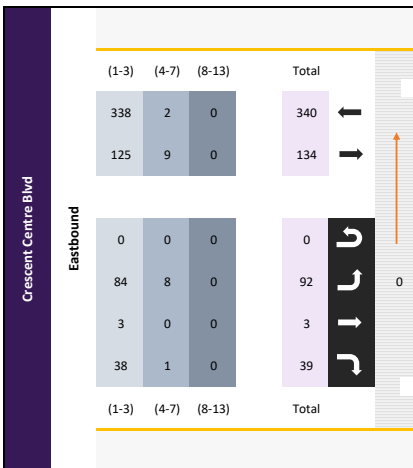
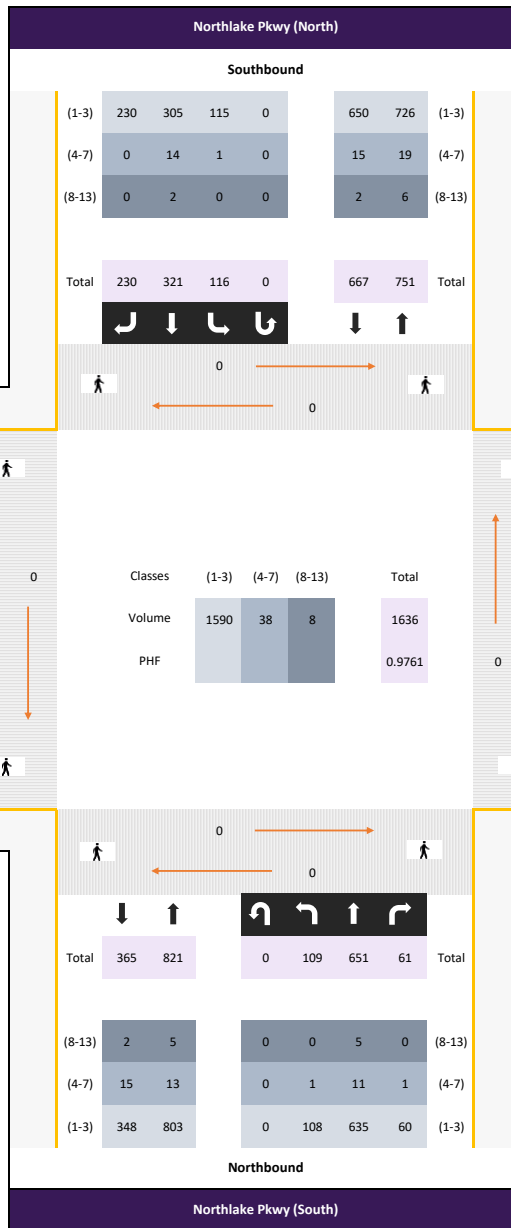


www.marrtraffic.com

Wednesday, November 10, 2021	
Period	0700 - 0900
Peak Hour	0800 - 0900

Session Parameters

(Drop Down Menu)



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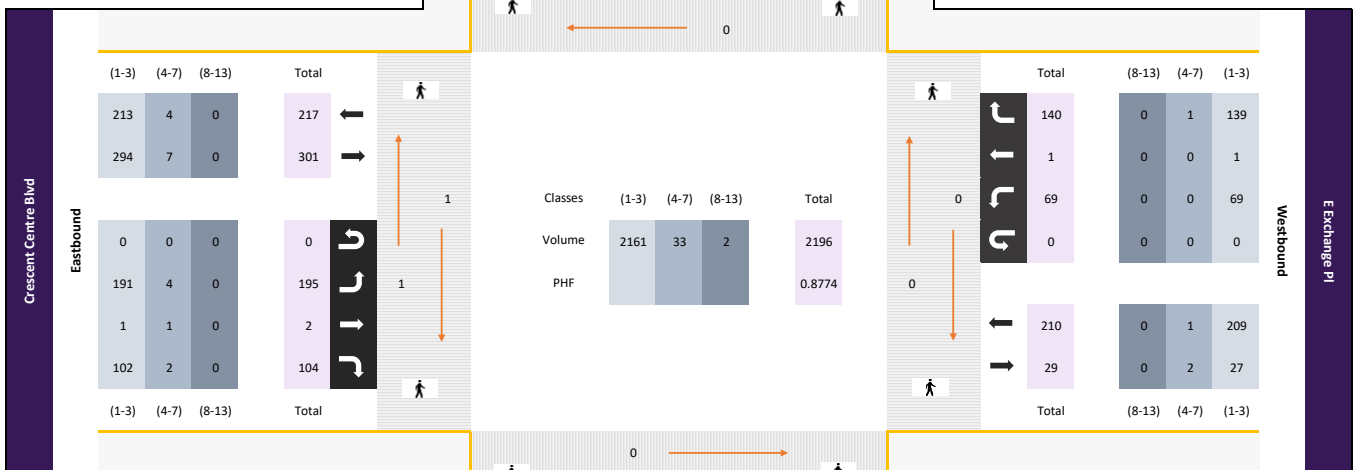
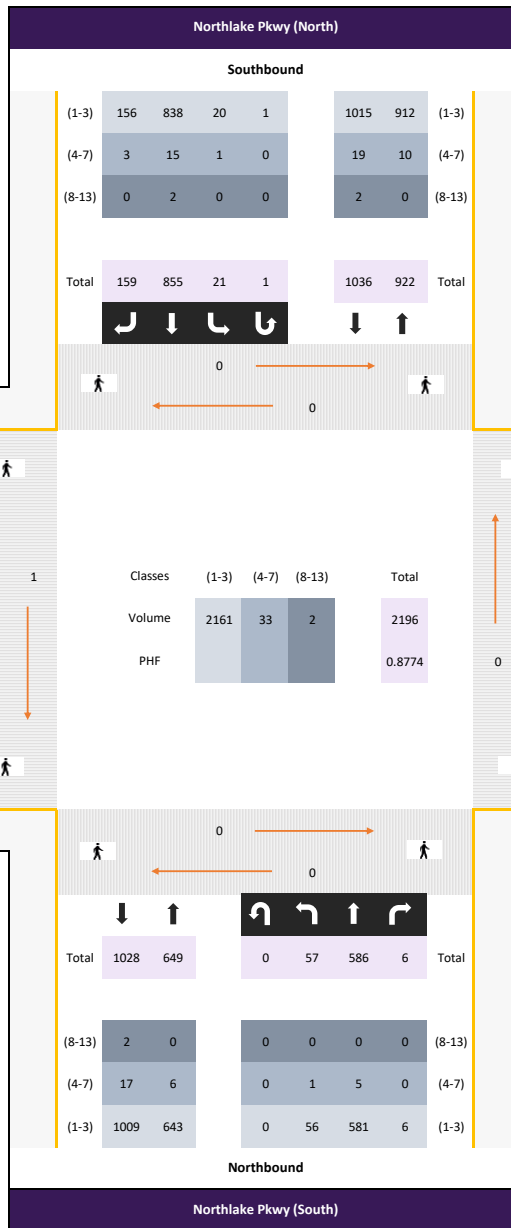


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Wednesday, November 10, 2021	
Period	1600 - 1800
Peak Hour	1630 - 1730

Session Parameters

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Wednesday, November 10, 2021	
Period	0700 - 0900
Peak Hour	0800 - 0900

Session Parameters

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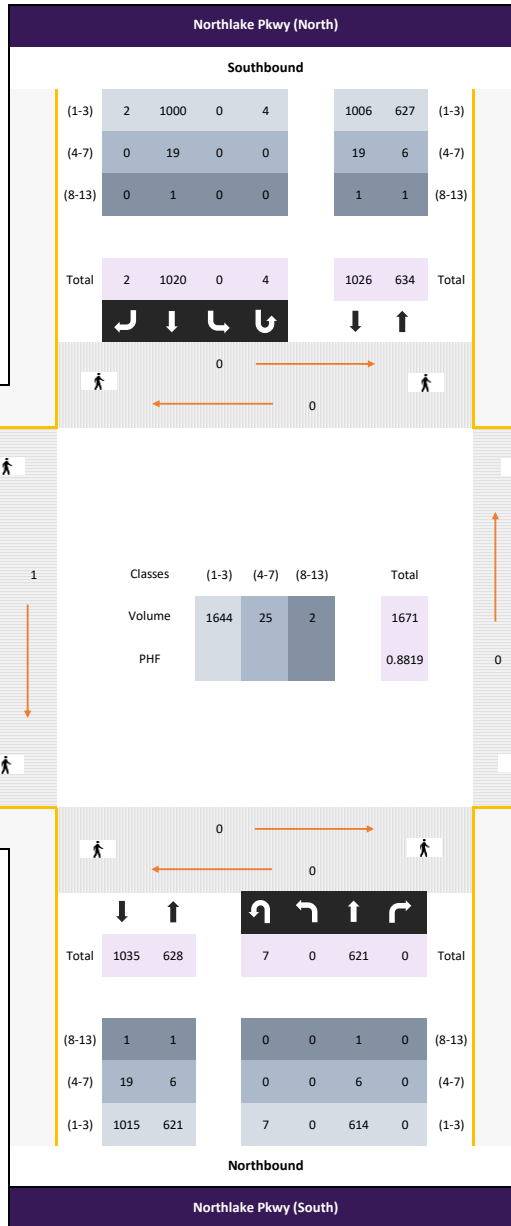


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Wednesday, November 10, 2021	
Period	1600 - 1800
Peak Hour	1630 - 1730

Session Parameters

(Drop Down Menu)



Eastbound			
(1-3)	(4-7)	(8-13)	Total
2	0	0	2
7	0	0	7
0	0	0	0
3	0	0	3
0	0	0	0
4	0	0	4
(1-3)	(4-7)	(8-13)	Total

Classes	(1-3)	(4-7)	(8-13)	Total
Volume	1644	25	2	1671
PHF				0.8819

Westbound			
(8-13)	(4-7)	(1-3)	Total
0	0	6	6
0	0	0	0
0	0	4	4
0	0	0	0
0	0	10	10
0	0	0	0
(8-13)	(4-7)	(1-3)	Total

Northbound			
(8-13)	(4-7)	(1-3)	Total
1	1	0	2
19	6	0	25
1015	621	7	1022
(8-13)	(4-7)	(1-3)	Total

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Peak Hour Turning Movement Count

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Wednesday, November 10, 2021	
Period	0700 - 0900
Peak Hour	0745 - 0845

Session Parameters

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Peak Hour Turning Movement Count

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Wednesday, November 10, 2021	
Period	1600 - 1800
Peak Hour	1630 - 1730

Session Parameters

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Bi-Directional Class Count || Bi-Directional 60min



Tucker, GA

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Site 5

GA-8 Lawrenceville Hwy,
east of Lovely Ln

Date

Wednesday, November 10, 2021

Weather

Mostly Cloudy
61°F

Lat/Long

33.831965°, -84.245692°

0000 - 2400 (24h Session) (11-10-2021)

Bi-Directional 60min

Bi-Directional 60min														
TIME	Class 1	Class 2	Class 3	Class 4	Class 5	Class 6	Class 7	Class 8	Class 9	Class 10	Class 11	Class 12	Class 13	Total
0000 - 0100	0	129	11	3	3	0	0	1	0	0	0	0	0	147
0100 - 0200	0	86	11	0	0	1	0	0	1	0	0	0	0	99
0200 - 0300	0	75	4	0	2	0	0	0	3	0	0	0	0	84
0300 - 0400	0	69	4	0	0	1	2	0	1	0	0	0	0	77
0400 - 0500	1	125	12	1	2	1	0	0	3	0	0	0	0	145
0500 - 0600	0	399	31	5	11	4	0	1	3	0	0	0	0	454
0600 - 0700	0	672	143	14	52	7	0	1	12	1	0	0	0	902
0700 - 0800	2	1171	359	30	44	16	0	8	11	2	0	0	0	1643
0800 - 0900	2	1406	322	26	49	8	0	3	20	0	0	0	0	1836
0900 - 1000	2	1212	296	22	39	11	3	15	18	0	0	1	0	1619
1000 - 1100	1	1249	273	11	48	27	0	5	31	0	0	0	0	1645
1100 - 1200	4	1206	278	9	43	23	0	9	26	0	0	0	0	1598
1200 - 1300	6	1542	263	8	52	12	0	19	16	0	0	0	0	1918
1300 - 1400	4	1520	218	11	44	14	3	11	29	3	0	0	0	1857
1400 - 1500	0	1566	215	13	51	19	1	9	18	2	0	0	0	1894
1500 - 1600	6	1630	211	19	43	9	0	10	13	1	0	0	0	1942
1600 - 1700	6	1969	235	19	48	11	0	11	16	0	0	0	0	2315
1700 - 1800	2	2061	211	10	28	17	0	13	18	0	0	0	0	2360
1800 - 1900	0	1623	223	8	17	2	1	0	16	0	0	0	0	1890
1900 - 2000	1	1122	160	7	14	4	0	1	8	0	0	0	0	1317
2000 - 2100	2	756	64	5	8	1	0	2	6	0	0	0	0	844
2100 - 2200	1	478	73	5	0	0	0	0	2	0	0	0	0	559
2200 - 2300	1	326	37	3	3	0	0	0	0	0	0	0	0	370
2300 - 2400	2	250	24	5	0	1	0	0	3	0	0	0	0	285

Session Total	43	22642	3678	234	601	189	10	119	274	9	0	1	0	27800
Session Average	1.79	943.42	153.25	9.75	25.04	7.88	0.42	4.96	11.42	0.38	0.00	0.04	0.00	1158.33
Session Percentage	0.15	81.45	13.23	0.84	2.16	0.68	0.04	0.43	0.99	0.03	0.00	0.00	0.00	

AM Peak Hour	0700 - 0800	0800 - 0900	0700 - 0800	0700 - 0800	0600 - 0700	0700 - 0800	0900 - 1000	0900 - 1000	0800 - 0900	0700 - 0800	-	0900 - 1000	-	0800 - 0900
AM Peak Volume	2	1406	359	30	52	16	3	15	20	2	0	1	0	1836

Noon Peak Hour	1200 - 1300	1400 - 1500	1100 - 1200	1400 - 1500	1200 - 1300	1000 - 1100	1300 - 1400	1200 - 1300	1000 - 1100	1300 - 1400	-	-	-	1200 - 1300
Noon Peak Volume	6	1566	278	13	52	27	3	19	31	3	0	0	0	1918

PM Peak Hour	1500 - 1600	1700 - 1800	1600 - 1700	1500 - 1600	1600 - 1700	1700 - 1800	1800 - 1900	1700 - 1800	1700 - 1800	1500 - 1600	-	-	-	1700 - 1800
PM Peak Volume	6	2061	235	19	48	17	1	13	18	1	0	0	0	2360

Volume Development (Trip Generation and Growth Rate Calculations)

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Trip Generation Analysis (10th Ed. With 2nd Edition Handbook Daily IC & 3rd Edition AM/PM IC)												
AHS Tucker Exchange DeKalb County, GA												
Land Use	Density		Daily Trips			AM Peak Hour			PM Peak Hour			
			Total	In	Out	Total	In	Out	Total	In	Out	
Proposed Project Trips												
221	Multifamily Housing (Mid-Rise)	507	dwelling units	2,762	1,381	1,381	168	44	124	210	128	82
710	General Office Building	59,315	Sq. Ft. GFA	640	320	320	82	71	11	69	11	58
Gross Project Trips				3,402	1,701	1,701	250	115	135	279	139	140
Residential Trips				2,762	1,381	1,381	168	44	124	210	128	82
Mixed-Use Reductions				-6	-3	-3	-2	0	-2	-4	-1	-3
Alternative Mode Reductions				0	0	0	0	0	0	0	0	0
Adjusted Residential Trips				2,756	1,378	1,378	166	44	122	206	127	79
Office Trips				640	320	320	82	71	11	69	11	58
Mixed-Use Reductions				-6	-3	-3	-2	-2	0	-4	-3	-1
Alternative Mode Reductions				0	0	0	0	0	0	0	0	0
Adjusted Office Trips				634	317	317	80	69	11	65	8	57
Mixed-Use Reductions - TOTAL				-12	-6	-6	-4	-2	-2	-8	-4	-4
Alternative Mode Reductions - TOTAL				0	0	0	0	0	0	0	0	0
Pass-By Reductions - TOTAL				0	0	0	0	0	0	0	0	0
New Trips				3,390	1,695	1,695	246	113	133	271	135	136
Driveway Volumes												

Growth Rate Considerations

Chosen Growth Rate	2.0%
--------------------	------

Population Data

County (ARC) Population Annual Growth Projection (2015-2050)	0.94%
County (Census) Population Annual Growth (2010-2019)	1.04%
City (Census) Population Annual Growth (2010-2019)	3.13%

Nearby Developments

No nearby developments with known growth rates were identified.

Historical ADT Count Data

Source:	GDOT
Location:	Northlake Parkway s/o East Exchange Place
Route #:	00515300
Route Type:	Minor Collector (Urban)
Station:	089-3685

Count Type	Count Year	Volume	Growth Rate
EST	2014	16,700	
EST	2015	17,400	4.19%
EST	2016	17,800	2.30%
ACT	2017	18,200	2.25%
EST	2018	18,500	1.65%
EST	2019	18,900	2.16%

5 Year Growth Rate	2.51%
Avg. 1 Year Growth Rate	2.51%
Actual Count Growth Rate	1.90%

Source:	GDOT
Location:	Lawrenceville Highway w/o Northlake Parkway
Route #:	00000800
Route Type:	Principal Arterial - Other (Urban)
Station:	089-3021

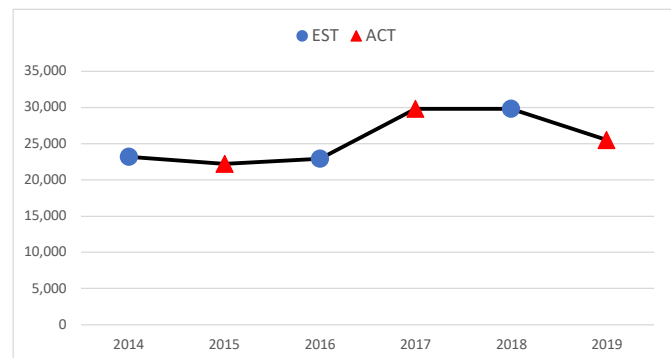
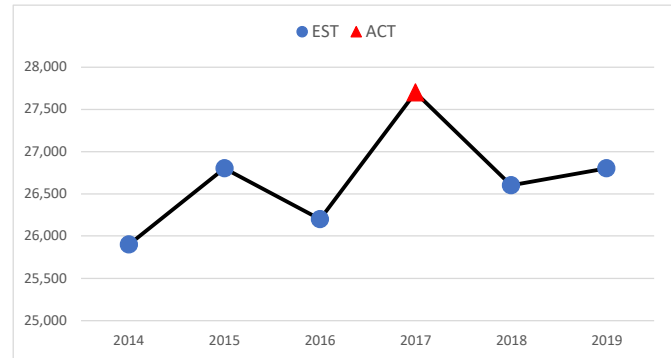
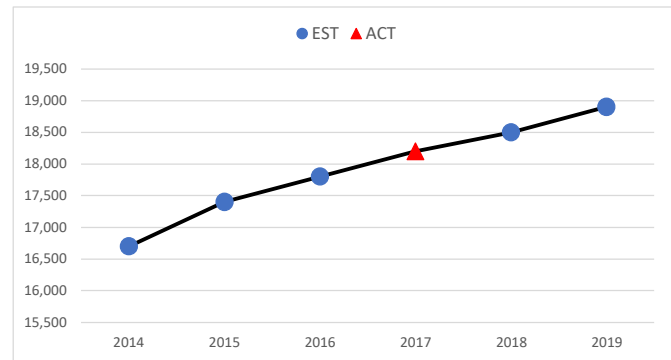
Count Type	Count Year	Volume	Growth Rate
EST	2014	25,900	
EST	2015	26,800	3.47%
EST	2016	26,200	-2.24%
ACT	2017	27,700	5.73%
EST	2018	26,600	-3.97%
EST	2019	26,800	0.75%

5 Year Growth Rate	0.69%
Avg. 1 Year Growth Rate	0.75%
Actual Count Growth Rate	-1.64%

Source:	GDOT
Location:	Lavista Road e/o Northlake Parkway
Route #:	00023600
Route Type:	Minor Arterial (Urban)
Station:	089-3269

Count Type	Count Year	Volume	Growth Rate
EST	2014	23,200	
ACT	2015	22,200	-4.31%
EST	2016	22,900	3.15%
ACT	2017	29,800	30.13%
EST	2018	29,800	0.00%
ACT	2019	25,500	-14.43%

5 Year Growth Rate	1.91%
Avg. 1 Year Growth Rate	2.91%
Actual Count Growth Rate	-7.50%



Intersection Volume Worksheets

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INTERSECTION VOLUME DEVELOPMENT

INTERSECTION #1
Northlake Pkwy at Lavista Rd

AM PEAK HOUR

	Northlake Pkwy Northbound				Northlake Pkwy Southbound				Lavista Rd Eastbound				Lavista Rd Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2021 Traffic Volumes	0	421	252	72	0	76	127	47	1	83	485	394	1	147	1,058	70
Count Balancing																
Pedestrians	0				0				0				0			
Conflicting Pedestrians	0			0	0			0	0			0	0			0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bicycles				0				0				0				0
Heavy Vehicles	0	16	5	3	0	1	2	3	0	1	9	13	0	2	50	1
Heavy Vehicle %	2%	4%	2%	4%	2%	2%	2%	6%	2%	2%	2%	3%	2%	2%	5%	2%
Peak Hour Factor	0.94				0.94				0.94				0.94			
Adjustment Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Adjusted 2021 Volumes	0	463	277	79	0	84	140	52	1	91	534	433	1	162	1,164	77
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Annual Growth Rate (Design Year)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Growth Factor (Design Year)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Background Growth Trips	0	491	294	84	0	89	149	55	1	97	567	460	1	172	1235	82
Background Growth Trips (Design Year)	0	463	277	79	0	84	140	52	1	91	534	433	1	162	1164	77
New Road Adjustment																
Approved Development Trips 1																
Approved Development Trips 2																
Approved Development Trips 3																
Total Approved Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2024 No-Build Traffic	0	491	294	84	0	89	149	55	1	97	567	460	1	172	1,235	82
Trip Distribution IN							20%					40%		10%		
Trip Distribution OUT		(40%)	(20%)	(10%)												
Residential Trips	0	49	24	12	0	0	9	0	0	0	0	18	0	4	0	0
Trip Distribution IN							15%					35%		15%		
Trip Distribution OUT		(35%)	(15%)	(15%)												
Office Trips	0	4	2	2	0	0	10	0	0	0	0	24	0	10	0	0
Project Trips (Unbalanced)	0	53	26	14	0	0	19	0	0	0	0	42	0	14	0	0
Balancing Adjustment																
Total Vehicular Project Trips	0	53	26	14	0	0	19	0	0	0	0	42	0	14	0	0
2024 Build Traffic	0	544	320	98	0	89	168	55	1	97	567	502	1	186	1,235	82

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INTERSECTION VOLUME DEVELOPMENT

INTERSECTION #1
Northlake Pkwy at Lavista Rd

	PM PEAK HOUR															
	Northlake Pkwy Northbound				Northlake Pkwy Southbound				Lavista Rd Eastbound				Lavista Rd Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2021 Traffic Volumes	0	526	194	236	0	255	370	106	0	107	1,034	544	0	153	740	44
Count Balancing																
Pedestrians	0				0				0				0			
Conflicting Pedestrians	0			0	0			0	0			0	0			0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bicycles				0				0				0				0
Heavy Vehicles	0	7	3	6	0	7	7	0	0	1	23	14	0	4	12	1
Heavy Vehicle %	2%	2%	2%	3%	2%	3%	2%	2%	2%	2%	2%	3%	2%	3%	2%	2%
Peak Hour Factor	0.964				0.96				0.96				0.96			
Adjustment Factor	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Adjusted 2021 Volumes	0	631	233	283	0	306	444	127	0	128	1,241	653	0	184	888	53
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Annual Growth Rate (Design Year)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Growth Factor (Design Year)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Background Growth Trips	0	670	247	300	0	325	471	135	0	136	1317	693	0	195	942	56
Background Growth Trips (Design Year)	0	631	233	283	0	306	444	127	0	128	1241	653	0	184	888	53
New Road Adjustment																
Approved Development Trips 1																
Approved Development Trips 2																
Approved Development Trips 3																
Total Approved Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2024 No-Build Traffic	0	670	247	300	0	325	471	135	0	136	1,317	693	0	195	942	56
Trip Distribution IN							20%					40%		10%		
Trip Distribution OUT		(40%)	(20%)	(10%)												
Residential Trips	0	32	16	8	0	0	25	0	0	0	0	51	0	13	0	0
Trip Distribution IN							15%					35%		15%		
Trip Distribution OUT		(35%)	(15%)	(15%)												
Office Trips	0	20	9	9	0	0	1	0	0	0	0	3	0	1	0	0
Project Trips (Unbalanced)	0	52	25	17	0	0	26	0	0	0	0	54	0	14	0	0
Balancing Adjustment																
Total Vehicular Project Trips	0	52	25	17	0	0	26	0	0	0	0	54	0	14	0	0
2024 Build Traffic	0	722	272	317	0	325	497	135	0	136	1,317	747	0	209	942	56

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INTERSECTION VOLUME DEVELOPMENT

INTERSECTION #2
Northlake Pkwy at Crescent Centre Blvd/E Exchange Pl

	AM PEAK HOUR															
	Northlake Pkwy Northbound				Northlake Pkwy Southbound				Crescent Centre Blvd Eastbound				E Exchange Pl Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2021 Traffic Volumes	0	109	651	61	0	116	321	230	0	92	3	39	0	5	1	8
Count Balancing																
Pedestrians	0				0				0				0			
Conflicting Pedestrians	0			0	0			0	0			0	0			0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bicycles				0				0				0				0
Heavy Vehicles	0	1	16	1	0	1	16	0	0	8	0	1	0	0	1	1
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	5%	2%	2%	9%	2%	3%	2%	2%	100%	13%
Peak Hour Factor	0.98				0.98				0.98				0.98			
Adjustment Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Adjusted 2021 Volumes	0	120	716	67	0	128	353	253	0	101	3	43	0	6	1	9
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Annual Growth Rate (Design Year)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Growth Factor (Design Year)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Background Growth Trips	0	127	760	71	0	136	375	268	0	107	3	46	0	6	1	10
Background Growth Trips (Design Year)	0	120	716	67	0	128	353	253	0	101	3	43	0	6	1	9
New Road Adjustment																
Approved Development Trips 1																
Approved Development Trips 2																
Approved Development Trips 3																
Total Approved Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2024 No-Build Traffic	0	127	760	71	0	136	375	268	0	107	3	46	0	6	1	10
Trip Distribution IN				5%		55%	15%									
Trip Distribution OUT			(60%)										(20%)		(10%)	
Residential Trips	0	0	73	2	0	24	7	0	0	0	0	0	0	24	0	12
Trip Distribution IN				10%		55%	10%									
Trip Distribution OUT			(5%)										(30%)		(60%)	
Office Trips	0	0	1	7	0	38	7	0	0	0	0	0	0	3	0	7
Project Trips (Unbalanced)	0	0	74	9	0	62	14	0	0	0	0	0	0	27	0	19
Balancing Adjustment																
Total Vehicular Project Trips	0	0	74	9	0	62	14	0	0	0	0	0	0	27	0	19
2024 Build Traffic	0	127	834	80	0	198	389	268	0	107	3	46	0	33	1	29

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INTERSECTION VOLUME DEVELOPMENT

INTERSECTION #2
Northlake Pkwy at Crescent Centre Blvd/E Exchange Pl

	PM PEAK HOUR															
	Northlake Pkwy Northbound				Northlake Pkwy Southbound				Crescent Centre Blvd Eastbound				E Exchange Pl Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2021 Traffic Volumes	0	58	586	6	1	21	855	159	0	195	2	104	0	69	1	140
Count Balancing																
Pedestrians	0				0				0				0			
Conflicting Pedestrians	0			0	0			0	0			0	0			0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bicycles				0				0				0				0
Heavy Vehicles	0	1	5	0	0	1	17	3	0	4	1	2	0	0	0	1
Heavy Vehicle %	2%	2%	2%	2%	2%	5%	2%	2%	2%	2%	50%	2%	2%	2%	2%	2%
Peak Hour Factor	0.877				0.88				0.88				0.88			
Adjustment Factor	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Adjusted 2021 Volumes	0	70	703	7	1	25	1,026	191	0	234	2	125	0	83	1	168
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Annual Growth Rate (Design Year)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Growth Factor (Design Year)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Background Growth Trips	0	74	746	7	1	27	1089	203	0	248	2	133	0	88	1	178
Background Growth Trips (Design Year)	0	70	703	7	1	25	1026	191	0	234	2	125	0	83	1	168
New Road Adjustment																
Approved Development Trips 1																
Approved Development Trips 2																
Approved Development Trips 3																
Total Approved Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2024 No-Build Traffic	0	74	746	7	1	27	1,089	203	0	248	2	133	0	88	1	178
Trip Distribution IN				5%		45%	15%									
Trip Distribution OUT			(60%)											(20%)		(10%)
Residential Trips	0	0	47	6	0	57	19	0	0	0	0	0	0	16	0	8
Trip Distribution IN				10%		55%	10%									
Trip Distribution OUT			(5%)											(30%)		(60%)
Office Trips	0	0	3	1	0	4	1	0	0	0	0	0	0	17	0	34
Project Trips (Unbalanced)	0	0	50	7	0	61	20	0	0	0	0	0	0	33	0	42
Balancing Adjustment																
Total Vehicular Project Trips	0	0	50	7	0	61	20	0	0	0	0	0	0	33	0	42
2024 Build Traffic	0	74	796	14	1	88	1,109	203	0	248	2	133	0	121	1	220

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INTERSECTION VOLUME DEVELOPMENT

INTERSECTION #3
Northlake Pkwy at Firestone Driveway/Driveway A

AM PEAK HOUR

	Northlake Pkwy Northbound				Northlake Pkwy Southbound				Firestone Driveway Eastbound				Driveway A Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2021 Traffic Volumes	15	0	826	6	5	7	358	0	0	0	0	0	0	0	0	1
Count Balancing																
Pedestrians	0				0				0				0			
Conflicting Pedestrians	0				0				0				0			
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bicycles	0				0				0				0			
Heavy Vehicles	0	0	18	0	0	0	17	0	0	0	0	0	0	0	0	0
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	5%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Peak Hour Factor	0.96				0.96				0.96				0.96			
Adjustment Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Adjusted 2021 Volumes	17	0	909	7	6	8	394	0	0	0	0	0	0	0	0	1
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Annual Growth Rate (Design Year)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Growth Factor (Design Year)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Background Growth Trips	18	0	965	7	6	8	418	0	0	0	0	0	0	0	0	1
Background Growth Trips (Design Year)	17	0	909	7	6	8	394	0	0	0	0	0	0	0	0	1
New Road Adjustment																
Approved Development Trips 1																
Approved Development Trips 2																
Approved Development Trips 3																
Total Approved Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2024 No-Build Traffic	18	0	965	7	6	8	418	0	0	0	0	0	0	0	0	1
Trip Distribution IN			5%	25%		15%										
Trip Distribution OUT							(20%)							(10%)		(60%)
Residential Trips	0	0	2	11	0	7	24	0	0	0	0	0	0	12	0	73
Trip Distribution IN			10%	25%		10%										
Trip Distribution OUT							(30%)							(5%)		(5%)
Office Trips	0	0	7	17	0	7	3	0	0	0	0	0	0	1	0	1
Project Trips (Unbalanced)	0	0	9	28	0	14	27	0	0	0	0	0	0	13	0	74
Balancing Adjustment																
Total Vehicular Project Trips	0	0	9	28	0	14	27	0	0	0	0	0	0	13	0	74
2024 Build Traffic	18	0	974	35	6	22	445	0	0	0	0	0	0	13	0	75

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INTERSECTION VOLUME DEVELOPMENT

INTERSECTION #3
Northlake Pkwy at Firestone Driveway/Driveway A

	PM PEAK HOUR															
	Northlake Pkwy Northbound				Northlake Pkwy Southbound				Firestone Driveway Eastbound				Driveway A Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2021 Traffic Volumes	7	0	622	0	4	0	1,020	2	0	3	0	4	0	4	0	6
Count Balancing																
Pedestrians	0				0				0				0			
Conflicting Pedestrians	0				0				0				0			
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bicycles	0				0				0				0			
Heavy Vehicles	0	0	7	0	0	0	20	0	0	0	0	0	0	0	0	0
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Peak Hour Factor	0.882				0.88				0.88				0.88			
Adjustment Factor	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Adjusted 2021 Volumes	8	0	746	0	5	0	1,224	2	0	4	0	5	0	5	0	7
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Annual Growth Rate (Design Year)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Growth Factor (Design Year)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Background Growth Trips	8	0	792	0	5	0	1299	2	0	4	0	5	0	5	0	7
Background Growth Trips (Design Year)	8	0	746	0	5	0	1224	2	0	4	0	5	0	5	0	7
New Road Adjustment																
Approved Development Trips 1																
Approved Development Trips 2																
Approved Development Trips 3																
Total Approved Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2024 No-Build Traffic	8	0	792	0	5	0	1,299	2	0	4	0	5	0	5	0	7
Trip Distribution IN			25%	5%			15%									
Trip Distribution OUT							(20%)							(10%)		(60%)
Residential Trips	0	0	32	6	0	19	16	0	0	0	0	0	0	8	0	47
Trip Distribution IN			10%	25%			10%									
Trip Distribution OUT							(30%)							(5%)		(5%)
Office Trips	0	0	1	2	0	1	17	0	0	0	0	0	0	3	0	3
Project Trips (Unbalanced)	0	0	33	8	0	20	33	0	0	0	0	0	0	11	0	50
Balancing Adjustment																
Total Vehicular Project Trips	0	0	33	8	0	20	33	0	0	0	0	0	0	11	0	50
2024 Build Traffic	8	0	825	8	5	20	1,332	2	0	4	0	5	0	16	0	57

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INTERSECTION VOLUME DEVELOPMENT

INTERSECTION #4
Lawrenceville Hwy at Cooledge Rd/Northlake Pkwy

	AM PEAK HOUR															
	Cooledge Rd Northbound				Northlake Pkwy Southbound				Lawrenceville Hwy Eastbound				Lawrenceville Hwy Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2021 Traffic Volumes	0	97	481	73	1	114	92	88	0	235	538	53	0	79	805	241
Count Balancing																
Pedestrians	0				0				0				0			
Conflicting Pedestrians	0			0	0			0	0			0	0			0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bicycles				0				0				0				0
Heavy Vehicles	0	5	6	4	0	9	2	5	0	5	40	4	0	3	50	10
Heavy Vehicle %	2%	5%	2%	5%	2%	8%	2%	6%	2%	2%	7%	8%	2%	4%	6%	4%
Peak Hour Factor	0.91				0.91				0.91				0.91			
Adjustment Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Adjusted 2021 Volumes	0	107	529	80	1	125	101	97	0	259	592	58	0	87	886	265
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Annual Growth Rate (Design Year)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Growth Factor (Design Year)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Background Growth Trips	0	114	561	85	1	133	107	103	0	275	628	62	0	92	940	281
Background Growth Trips (Design Year)	0	107	529	80	1	125	101	97	0	259	592	58	0	87	886	265
New Road Adjustment																
Approved Development Trips 1																
Approved Development Trips 2																
Approved Development Trips 3																
Total Approved Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2024 No-Build Traffic	0	114	561	85	1	133	107	103	0	275	628	62	0	92	940	281
Trip Distribution IN			10%							10%						10%
Trip Distribution OUT						(10%)	(10%)	(10%)								
Residential Trips	0	0	4	0	0	12	12	12	0	4	0	0	0	0	0	4
Trip Distribution IN			15%							10%						10%
Trip Distribution OUT						(10%)	(15%)	(10%)								
Office Trips	0	0	10	0	0	1	2	1	0	7	0	0	0	0	0	7
Project Trips (Unbalanced)	0	0	14	0	0	13	14	13	0	11	0	0	0	0	0	11
Balancing Adjustment																
Total Vehicular Project Trips	0	0	14	0	0	13	14	13	0	11	0	0	0	0	0	11
2024 Build Traffic	0	114	575	85	1	146	121	116	0	286	628	62	0	92	940	292

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INTERSECTION VOLUME DEVELOPMENT

INTERSECTION #4
Lawrenceville Hwy at Cooledge Rd/Northlake Pkwy

	PM PEAK HOUR															
	Cooledge Rd Northbound				Northlake Pkwy Southbound				Lawrenceville Hwy Eastbound				Lawrenceville Hwy Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2021 Traffic Volumes	0	61	264	94	0	154	593	305	0	143	923	125	0	101	761	184
Count Balancing																
Pedestrians	0				0				0				0			
Conflicting Pedestrians	0			0	0			0	0			0	0			0
Bicycles	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Conflicting Bicycles				0				0				0				0
Heavy Vehicles	0	0	1	10	0	9	11	4	0	1	38	1	0	1	49	4
Heavy Vehicle %	2%	2%	2%	11%	2%	6%	2%	2%	2%	2%	4%	2%	2%	2%	6%	2%
Peak Hour Factor	0.932				0.93				0.93				0.93			
Adjustment Factor	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Adjusted 2021 Volumes	0	73	317	113	0	185	712	366	0	172	1,108	150	0	121	913	221
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Annual Growth Rate (Design Year)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Growth Factor (Design Year)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Background Growth Trips	0	77	336	120	0	196	756	388	0	183	1176	159	0	128	969	235
Background Growth Trips (Design Year)	0	73	317	113	0	185	712	366	0	172	1108	150	0	121	913	221
New Road Adjustment																
Approved Development Trips 1																
Approved Development Trips 2																
Approved Development Trips 3																
Total Approved Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2024 No-Build Traffic	0	77	336	120	0	196	756	388	0	183	1,176	159	0	128	969	235
Trip Distribution IN			10%							10%						10%
Trip Distribution OUT						(10%)	(10%)	(10%)								
Residential Trips	0	0	13	0	0	8	8	8	0	13	0	0	0	0	0	13
Trip Distribution IN			15%							10%						10%
Trip Distribution OUT						(10%)	(15%)	(10%)								
Office Trips	0	0	1	0	0	6	9	6	0	1	0	0	0	0	0	1
Project Trips (Unbalanced)	0	0	14	0	0	14	17	14	0	14	0	0	0	0	0	14
Balancing Adjustment																
Total Vehicular Project Trips	0	0	14	0	0	14	17	14	0	14	0	0	0	0	0	14
2024 Build Traffic	0	77	350	120	0	210	773	402	0	197	1,176	159	0	128	969	249

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INTERSECTION VOLUME DEVELOPMENT

INTERSECTION #5
E Exchange Pl @ Driveway B

AM PEAK HOUR

	Northbound				Southbound				Eastbound				Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2021 Traffic Volumes											180				14	
Count Balancing																
Pedestrians																
Conflicting Pedestrians																
Bicycles																
Conflicting Bicycles																
Heavy Vehicles																
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Peak Hour Factor																
Adjustment Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Adjusted 2021 Volumes											198				15	
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Annual Growth Rate (Design Year)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Growth Factor (Design Year)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Background Growth Trips	0	0	0	0	0	0	0	0	0	0	210	0	0	0	16	0
Background Growth Trips (Design Year)	0	0	0	0	0	0	0	0	0	0	198	0	0	0	15	0
New Road Adjustment																
Approved Development Trips 1																
Approved Development Trips 2																
Approved Development Trips 3																
Total Approved Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2024 No-Build Traffic	0	0	0	0	0	0	0	0	0	0	210	0	0	0	16	0
Trip Distribution IN											25%	35%				
Trip Distribution OUT		(15%)													(15%)	
Residential Trips	0	18	0	0	0	0	0	0	0	0	11	15	0	0	18	0
Trip Distribution IN											25%	40%				
Trip Distribution OUT		(60%)													(30%)	
Office Trips	0	7	0	0	0	0	0	0	0	0	17	28	0	0	3	0
Project Trips (Unbalanced)	0	25	0	0	0	0	0	0	0	0	28	43	0	0	21	0
Balancing Adjustment																
Total Vehicular Project Trips	0	25	0	0	0	0	0	0	0	0	28	43	0	0	21	0
2024 Build Traffic	0	25	0	0	0	0	0	0	0	0	238	43	0	0	37	0

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INTERSECTION VOLUME DEVELOPMENT

INTERSECTION #5
E Exchange Pl @ Driveway B

PM PEAK HOUR																
	Northbound				Southbound				Eastbound				Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2021 Traffic Volumes											29				210	
Count Balancing																
Pedestrians																
Conflicting Pedestrians																
Bicycles																
Conflicting Bicycles																
Heavy Vehicles																
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Peak Hour Factor																
Adjustment Factor	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Adjusted 2021 Volumes											35				252	
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Annual Growth Rate (Design Year)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Growth Factor (Design Year)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Background Growth Trips	0	0	0	0	0	0	0	0	0	0	37	0	0	0	267	0
Background Growth Trips (Design Year)	0	0	0	0	0	0	0	0	0	0	35	0	0	0	252	0
New Road Adjustment																
Approved Development Trips 1																
Approved Development Trips 2																
Approved Development Trips 3																
Total Approved Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2024 No-Build Traffic	0	0	0	0	0	0	0	0	0	0	37	0	0	0	267	0
Trip Distribution IN											15%	30%				
Trip Distribution OUT		(15%)													(15%)	
Residential Trips	0	12	0	0	0	0	0	0	0	0	19	38	0	0	12	0
Trip Distribution IN											25%	45%				
Trip Distribution OUT		(30%)													(30%)	
Office Trips	0	17	0	0	0	0	0	0	0	0	2	4	0	0	17	0
Project Trips (Unbalanced)	0	29	0	0	0	0	0	0	0	0	21	42	0	0	29	0
Balancing Adjustment																
Total Vehicular Project Trips	0	29	0	0	0	0	0	0	0	0	21	42	0	0	29	0
2024 Build Traffic	0	29	0	0	0	0	0	0	0	0	58	42	0	0	296	0

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INTERSECTION VOLUME DEVELOPMENT

INTERSECTION #6
E Exchange Pl @ Driveway C

AM PEAK HOUR																
	Northbound				Southbound				Eastbound				Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2021 Traffic Volumes											180				14	
Count Balancing																
Pedestrians																
Conflicting Pedestrians																
Bicycles																
Conflicting Bicycles																
Heavy Vehicles																
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Peak Hour Factor																
Adjustment Factor	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
Adjusted 2021 Volumes											198				15	
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Annual Growth Rate (Design Year)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Growth Factor (Design Year)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Background Growth Trips	0	0	0	0	0	0	0	0	0	0	210	0	0	0	16	0
Background Growth Trips (Design Year)	0	0	0	0	0	0	0	0	0	0	198	0	0	0	15	0
New Road Adjustment																
Approved Development Trips 1																
Approved Development Trips 2																
Approved Development Trips 3																
Total Approved Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2024 No-Build Traffic	0	0	0	0	0	0	0	0	0	0	210	0	0	0	16	0
Trip Distribution IN												15%				
Trip Distribution OUT		(15%)														
Residential Trips	0	18	0	0	0	0	0	0	0	0	0	7	0	0	0	0
Trip Distribution IN												25%				
Trip Distribution OUT		(30%)														
Office Trips	0	3	0	0	0	0	0	0	0	0	0	17	0	0	0	0
Project Trips (Unbalanced)	0	21	0	0	0	0	0	0	0	0	0	24	0	0	0	0
Balancing Adjustment																
Total Vehicular Project Trips	0	21	0	0	0	0	0	0	0	0	0	24	0	0	0	0
2024 Build Traffic	0	21	0	0	0	0	0	0	0	0	210	24	0	0	16	0

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INTERSECTION VOLUME DEVELOPMENT

INTERSECTION #6
E Exchange PI @ Driveway C

PM PEAK HOUR																
	Northbound				Southbound				Eastbound				Westbound			
	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right	U-Turn	Left	Through	Right
Observed 2021 Traffic Volumes											29				210	
Count Balancing																
Pedestrians																
Conflicting Pedestrians																
Bicycles																
Conflicting Bicycles																
Heavy Vehicles																
Heavy Vehicle %	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%	2%
Peak Hour Factor																
Adjustment Factor	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Adjusted 2021 Volumes											35				252	
Annual Growth Rate	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%	2.0%
Growth Factor	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06	1.06
Annual Growth Rate (Design Year)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Growth Factor (Design Year)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Background Growth Trips	0	0	0	0	0	0	0	0	0	0	37	0	0	0	267	0
Background Growth Trips (Design Year)	0	0	0	0	0	0	0	0	0	0	35	0	0	0	252	0
New Road Adjustment																
Approved Development Trips 1																
Approved Development Trips 2																
Approved Development Trips 3																
Total Approved Development Trips	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2024 No-Build Traffic	0	0	0	0	0	0	0	0	0	0	37	0	0	0	267	0
Trip Distribution IN												15%				
Trip Distribution OUT		(15%)														
Residential Trips	0	12	0	0	0	0	0	0	0	0	0	19	0	0	0	0
Trip Distribution IN												25%				
Trip Distribution OUT		(30%)														
Office Trips	0	17	0	0	0	0	0	0	0	0	0	2	0	0	0	0
Project Trips (Unbalanced)	0	29	0	0	0	0	0	0	0	0	0	21	0	0	0	0
Balancing Adjustment																
Total Vehicular Project Trips	0	29	0	0	0	0	0	0	0	0	0	21	0	0	0	0
2024 Build Traffic	0	29	0	0	0	0	0	0	0	0	37	21	0	0	267	0

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Synchro Analysis Reports

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HCM 6th Signalized Intersection Summary
1: Northlake Pkwy & Lavista Rd

Tucker Exchange TIA
AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↑↑	↗	↖	↕↕		↖↖	↕↕	↗	↖↖	↑↑	↗
Traffic Volume (veh/h)	92	534	433	163	1164	77	463	277	79	84	140	52
Future Volume (veh/h)	92	534	433	163	1164	77	463	277	79	84	140	52
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1856	1870	1826	1870	1841	1870	1841	1870	1870	1811
Adj Flow Rate, veh/h	98	568	296	173	1238	81	493	295	19	89	149	2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	3	2	5	2	4	2	4	2	2	6
Cap, veh/h	144	1821	806	198	1923	126	552	664	277	135	210	91
Arrive On Green	0.04	0.51	0.51	0.11	0.58	0.58	0.16	0.18	0.18	0.04	0.06	0.06
Sat Flow, veh/h	3456	3554	1572	1781	3306	216	3506	3741	1560	3456	3554	1535
Grp Volume(v), veh/h	98	568	296	173	649	670	493	295	19	89	149	2
Grp Sat Flow(s),veh/h/ln	1728	1777	1572	1781	1735	1787	1753	1870	1560	1728	1777	1535
Q Serve(g_s), s	4.2	13.9	17.0	14.3	37.5	37.7	20.7	10.6	1.5	3.8	6.2	0.2
Cycle Q Clear(g_c), s	4.2	13.9	17.0	14.3	37.5	37.7	20.7	10.6	1.5	3.8	6.2	0.2
Prop In Lane	1.00		1.00	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	144	1821	806	198	1009	1040	552	664	277	135	210	91
V/C Ratio(X)	0.68	0.31	0.37	0.88	0.64	0.64	0.89	0.44	0.07	0.66	0.71	0.02
Avail Cap(c_a), veh/h	207	1821	806	309	1009	1040	654	1097	458	207	592	256
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.93	0.93	0.93	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.9	21.2	22.0	65.7	21.0	21.0	62.0	55.1	51.4	71.1	69.3	66.5
Incr Delay (d2), s/veh	5.5	0.4	1.3	15.6	3.2	3.1	12.4	0.4	0.1	5.4	4.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	5.9	6.6	7.3	15.3	15.8	10.2	5.1	0.6	1.8	2.9	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.4	21.7	23.2	81.3	24.1	24.1	74.3	55.5	51.4	76.5	73.6	66.6
LnGrp LOS	E	C	C	F	C	C	E	E	D	E	E	E
Approach Vol, veh/h		962			1492			807			240	
Approach Delay, s/veh		27.7			30.7			66.9			74.6	
Approach LOS		C			C			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.3	93.3	29.6	14.9	22.6	82.9	11.9	32.6				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	9.0	64.0	28.0	25.0	26.0	47.0	9.0	44.0				
Max Q Clear Time (g_c+11), s	6.2	39.7	22.7	8.2	16.3	19.0	5.8	12.6				
Green Ext Time (p_c), s	0.1	9.2	0.9	0.7	0.3	5.1	0.1	2.1				

Intersection Summary

HCM 6th Ctrl Delay	41.3
HCM 6th LOS	D

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
 2: Northlake Pkwy & Crescent Centre Blvd/E Exchange Pl

Tucker Exchange TIA
 AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	RT	LT			RT	LT	RT	LT		RT	LT	
Traffic Volume (veh/h)	101	3	43	6	1	9	120	716	67	128	353	253
Future Volume (veh/h)	101	3	43	6	1	9	120	716	67	128	353	253
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1870	1856	1870	418	1707	1870	1870	1870	1870	1826	1870
Adj Flow Rate, veh/h	103	3	44	6	1	9	122	731	68	131	360	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	9	2	3	2	100	13	2	2	2	2	5	2
Cap, veh/h	265	8	122	10	2	42	727	1910	178	496	2010	
Arrive On Green	0.08	0.08	0.08	0.03	0.03	0.03	0.06	0.58	0.58	0.06	0.58	0.00
Sat Flow, veh/h	3264	102	1498	344	57	1447	1781	3287	306	1781	3561	0
Grp Volume(v), veh/h	103	0	47	7	0	9	122	395	404	131	360	0
Grp Sat Flow(s),veh/h/ln	1632	0	1601	401	0	1447	1781	1777	1815	1781	1735	0
Q Serve(g_s), s	2.9	0.0	2.7	1.7	0.0	0.6	2.5	11.6	11.6	2.8	4.7	0.0
Cycle Q Clear(g_c), s	2.9	0.0	2.7	1.7	0.0	0.6	2.5	11.6	11.6	2.8	4.7	0.0
Prop In Lane	1.00		0.94	0.86		1.00	1.00		0.17	1.00		0.00
Lane Grp Cap(c), veh/h	265	0	130	12	0	42	727	1033	1055	496	2010	
V/C Ratio(X)	0.39	0.00	0.36	0.60	0.00	0.22	0.17	0.38	0.38	0.26	0.18	
Avail Cap(c_a), veh/h	1013	0	497	124	0	449	801	1033	1055	665	2010	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	42.1	0.0	42.0	46.4	0.0	45.9	6.8	10.9	10.9	7.6	9.5	0.0
Incr Delay (d2), s/veh	0.9	0.0	1.7	41.5	0.0	2.5	0.1	1.1	1.1	0.3	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	1.1	0.3	0.0	0.2	0.8	4.3	4.4	1.0	1.7	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.0	0.0	43.7	87.9	0.0	48.4	6.9	12.0	12.0	7.9	9.7	0.0
LnGrp LOS	D	A	D	F	A	D	A	B	B	A	A	
Approach Vol, veh/h		150			16			921			491	A
Approach Delay, s/veh		43.2			65.7			11.3			9.2	
Approach LOS		D			E			B			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	2.0	62.0		8.8	11.8	62.2		13.9				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	1.0	56.0		30.0	15.0	51.0		30.0				
Max Q Clear Time (g_c+14), s	1.5	6.7		3.7	4.8	13.6		4.9				
Green Ext Time (p_c), s	0.1	2.7		0.0	0.2	5.3		0.6				

Intersection Summary

HCM 6th Ctrl Delay	14.2
HCM 6th LOS	B

Notes

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

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	0	0	0	0	0	1	17	909	7	14	394	0
Future Vol, veh/h	0	0	0	0	0	1	17	909	7	14	394	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	80	-	-	90	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	5	2
Mvmt Flow	0	0	0	0	0	1	18	947	7	15	410	0
























Major/Minor	Minor2		Minor1		Major1			Major2				
Conflicting Flow All	950	1430	205	1222	1427	477	410	0	0	954	0	0
Stage 1	440	440	-	987	987	-	-	-	-	-	-	-
Stage 2	510	990	-	235	440	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	215	133	802	136	134	534	1145	-	-	716	-	-
Stage 1	566	576	-	265	324	-	-	-	-	-	-	-
Stage 2	514	323	-	747	576	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	209	128	802	132	129	534	1145	-	-	716	-	-
Mov Cap-2 Maneuver	209	128	-	132	129	-	-	-	-	-	-	-
Stage 1	557	564	-	261	319	-	-	-	-	-	-	-
Stage 2	505	318	-	731	564	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	0		11.8		0.1		0.3	
HCM LOS	A		B					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1145	-	-	-	534	716	-
HCM Lane V/C Ratio	0.015	-	-	-	0.002	0.02	-
HCM Control Delay (s)	8.2	-	-	0	11.8	10.1	-
HCM Lane LOS	A	-	-	A	B	B	-
HCM 95th %tile Q(veh)	0	-	-	-	0	0.1	-

HCM 6th Signalized Intersection Summary
 4: Cooledge Rd/Northlake Pkwy & Lawrenceville Hwy

Tucker Exchange TIA
 AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	259	592	58	87	886	265	107	529	80	126	101	97
Future Volume (veh/h)	259	592	58	87	886	265	107	529	80	126	101	97
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1796	1781	1841	1811	1841	1826	1870	1826	1781	1870	1811
Adj Flow Rate, veh/h	285	651	62	96	974	220	118	581	84	138	111	19
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	7	8	4	6	4	5	2	5	8	2	6
Cap, veh/h	338	1635	156	398	1572	713	377	676	97	200	427	350
Arrive On Green	0.10	0.52	0.52	0.04	0.46	0.46	0.06	0.22	0.22	0.08	0.23	0.23
Sat Flow, veh/h	1781	3149	300	1753	3441	1560	1739	3117	450	1697	1870	1535
Grp Volume(v), veh/h	285	352	361	96	974	220	118	331	334	138	111	19
Grp Sat Flow(s),veh/h/ln	1781	1706	1742	1753	1721	1560	1739	1777	1789	1697	1870	1535
Q Serve(g_s), s	13.5	20.0	20.1	4.1	34.3	14.3	8.2	28.6	28.8	10.0	7.8	1.5
Cycle Q Clear(g_c), s	13.5	20.0	20.1	4.1	34.3	14.3	8.2	28.6	28.8	10.0	7.8	1.5
Prop In Lane	1.00		0.17	1.00		1.00	1.00		0.25	1.00		1.00
Lane Grp Cap(c), veh/h	338	886	904	398	1572	713	377	385	388	200	427	350
V/C Ratio(X)	0.84	0.40	0.40	0.24	0.62	0.31	0.31	0.86	0.86	0.69	0.26	0.05
Avail Cap(c_a), veh/h	482	886	904	462	1572	713	418	600	604	221	631	518
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	27.6	23.3	23.3	18.0	32.9	27.5	43.2	60.3	60.3	46.8	50.7	48.3
Incr Delay (d2), s/veh	9.1	0.3	0.3	0.3	1.8	1.1	0.5	7.5	7.7	7.8	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.3	8.0	8.2	1.7	14.4	5.5	3.6	13.6	13.8	4.7	3.7	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	36.7	23.6	23.6	18.3	34.8	28.6	43.7	67.8	68.1	54.6	51.0	48.3
LnGrp LOS	D	C	C	B	C	C	D	E	E	D	D	D
Approach Vol, veh/h		998			1290			783			268	
Approach Delay, s/veh		27.3			32.5			64.3			52.7	
Approach LOS		C			C			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	22.1	79.1	16.3	42.5	12.2	89.1	18.1	40.7				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	29.0	39.0	14.0	54.0	12.0	56.0	14.0	54.0				
Max Q Clear Time (g_c+I1), s	15.5	36.3	10.2	9.8	6.1	22.1	12.0	30.8				
Green Ext Time (p_c), s	0.7	1.7	0.1	0.6	0.1	4.4	0.1	3.9				
Intersection Summary												
HCM 6th Ctrl Delay			40.0									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary
1: Northlake Pkwy & Lavista Rd

Tucker Exchange TIA
PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	128	1241	653	184	888	53	631	233	283	306	444	127
Future Volume (veh/h)	128	1241	653	184	888	53	631	233	283	306	444	127
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1856	1856	1870	1870	1870	1870	1856	1856	1870	1870
Adj Flow Rate, veh/h	133	1293	423	192	925	52	657	254	125	319	462	13
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	3	3	2	2	2	2	3	3	2	2
Cap, veh/h	177	1466	649	188	1599	90	690	836	351	370	489	218
Arrive On Green	0.05	0.41	0.41	0.11	0.47	0.47	0.19	0.22	0.22	0.11	0.14	0.14
Sat Flow, veh/h	3456	3554	1572	1767	3420	192	3563	3741	1572	3428	3554	1585
Grp Volume(v), veh/h	133	1293	423	192	481	496	657	254	125	319	462	13
Grp Sat Flow(s),veh/h/ln	1728	1777	1572	1767	1777	1836	1781	1870	1572	1714	1777	1585
Q Serve(g_s), s	6.1	53.8	34.6	17.0	31.6	31.6	29.2	9.1	10.7	14.6	20.6	1.1
Cycle Q Clear(g_c), s	6.1	53.8	34.6	17.0	31.6	31.6	29.2	9.1	10.7	14.6	20.6	1.1
Prop In Lane	1.00		1.00	1.00		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	177	1466	649	188	831	858	690	836	351	370	489	218
V/C Ratio(X)	0.75	0.88	0.65	1.02	0.58	0.58	0.95	0.30	0.36	0.86	0.95	0.06
Avail Cap(c_a), veh/h	259	1466	649	188	831	858	690	836	351	493	489	218
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.87	0.87	0.87	1.00	1.00	1.00
Uniform Delay (d), s/veh	74.9	43.4	37.8	71.5	31.1	31.1	63.8	51.8	52.4	70.2	68.4	60.0
Incr Delay (d2), s/veh	6.8	8.0	5.0	71.7	2.9	2.8	21.0	0.2	0.5	11.6	27.5	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.9	25.0	14.3	11.3	13.9	14.3	15.3	4.3	4.3	7.0	11.2	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	81.7	51.4	42.8	143.2	34.0	33.9	84.8	51.9	52.9	81.8	95.9	60.1
LnGrp LOS	F	D	D	F	C	C	F	D	D	F	F	E
Approach Vol, veh/h		1849			1169			1036			794	
Approach Delay, s/veh		51.6			51.9			72.9			89.7	
Approach LOS		D			D			E			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.2	80.8	37.0	28.0	23.0	72.0	23.2	41.8				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	12.0	71.0	31.0	22.0	17.0	66.0	23.0	30.0				
Max Q Clear Time (g_c+I1), s	8.1	33.6	31.2	22.6	19.0	55.8	16.6	12.7				
Green Ext Time (p_c), s	0.1	6.6	0.0	0.0	0.0	7.0	0.6	1.8				

Intersection Summary

HCM 6th Ctrl Delay	62.5
HCM 6th LOS	E

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
 2: Northlake Pkwy & Crescent Centre Blvd/E Exchange Pl

Tucker Exchange TIA
 PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	RT	LT			RT	LT	RT	LT		RT	LT	
Traffic Volume (veh/h)	234	2	125	83	1	168	70	703	7	26	1026	191
Future Volume (veh/h)	234	2	125	83	1	168	70	703	7	26	1026	191
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1159	1870	1870	1870	1870	1870	1870	1870	1826	1870	1870
Adj Flow Rate, veh/h	266	2	142	94	1	191	80	799	8	30	1166	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	50	2	2	2	2	2	2	2	5	2	2
Cap, veh/h	581	2	163	247	3	222	233	1718	17	324	1639	
Arrive On Green	0.17	0.17	0.17	0.14	0.14	0.14	0.05	0.48	0.48	0.03	0.46	0.00
Sat Flow, veh/h	3456	14	971	1763	19	1585	1781	3605	36	1739	3647	0
Grp Volume(v), veh/h	266	0	144	95	0	191	80	394	413	30	1166	0
Grp Sat Flow(s),veh/h/ln	1728	0	984	1782	0	1585	1781	1777	1864	1739	1777	0
Q Serve(g_s), s	9.0	0.0	18.6	6.3	0.0	15.3	3.0	19.4	19.4	1.2	34.2	0.0
Cycle Q Clear(g_c), s	9.0	0.0	18.6	6.3	0.0	15.3	3.0	19.4	19.4	1.2	34.2	0.0
Prop In Lane	1.00		0.99	0.99		1.00	1.00		0.02	1.00		0.00
Lane Grp Cap(c), veh/h	581	0	165	250	0	222	233	847	888	324	1639	
V/C Ratio(X)	0.46	0.00	0.87	0.38	0.00	0.86	0.34	0.46	0.47	0.09	0.71	
Avail Cap(c_a), veh/h	797	0	227	411	0	365	233	847	888	351	1639	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	48.8	0.0	52.7	50.8	0.0	54.7	21.9	22.9	22.9	18.3	28.1	0.0
Incr Delay (d2), s/veh	0.6	0.0	22.5	1.0	0.0	10.6	0.9	1.8	1.7	0.1	2.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	0.0	5.6	2.9	0.0	6.8	1.3	8.3	8.7	0.5	15.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.3	0.0	75.2	51.8	0.0	65.3	22.8	24.7	24.6	18.4	30.8	0.0
LnGrp LOS	D	A	E	D	A	E	C	C	C	B	C	
Approach Vol, veh/h		410			286			887			1196	A
Approach Delay, s/veh		58.4			60.8			24.5			30.5	
Approach LOS		E			E			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	66.0			24.2	10.0	68.0		27.9				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	60.0			30.0	6.0	60.0		30.0				
Max Q Clear Time (g_c+15), s	36.2			17.3	3.2	21.4		20.6				
Green Ext Time (p_c), s	0.0	9.5		0.9	0.0	5.3		1.3				

Intersection Summary

HCM 6th Ctrl Delay	35.8
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
 Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	4	0	5	5	0	7	8	746	0	5	1224	2
Future Vol, veh/h	4	0	5	5	0	7	8	746	0	5	1224	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	80	-	-	90	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	6	6	0	8	9	848	0	6	1391	2























Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1846	2270	697	1574	2271	424	1393	0	0	848	0	0
Stage 1	1404	1404	-	866	866	-	-	-	-	-	-	-
Stage 2	442	866	-	708	1405	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	46	40	383	74	40	579	487	-	-	785	-	-
Stage 1	147	204	-	314	369	-	-	-	-	-	-	-
Stage 2	564	369	-	392	204	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	44	39	383	71	39	579	487	-	-	785	-	-
Mov Cap-2 Maneuver	44	39	-	71	39	-	-	-	-	-	-	-
Stage 1	144	202	-	308	362	-	-	-	-	-	-	-
Stage 2	546	362	-	383	202	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	51.8		32.4		0.1		0	
HCM LOS	F		D					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	487	-	-	87	145	785	-
HCM Lane V/C Ratio	0.019	-	-	0.118	0.094	0.007	-
HCM Control Delay (s)	12.5	-	-	51.8	32.4	9.6	-
HCM Lane LOS	B	-	-	F	D	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.4	0.3	0	-

HCM 6th Signalized Intersection Summary
 4: Coolege Rd/Northlake Pkwy & Lawrenceville Hwy

Tucker Exchange TIA
 PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	172	1108	150	121	913	221	73	317	113	185	712	366
Future Volume (veh/h)	172	1108	150	121	913	221	73	317	113	185	712	366
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1841	1870	1870	1811	1870	1870	1870	1737	1811	1870	1870
Adj Flow Rate, veh/h	185	1191	156	130	982	134	78	341	105	199	766	294
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	4	2	2	6	2	2	2	11	6	2	2
Cap, veh/h	217	1202	157	147	1330	612	114	849	258	399	690	584
Arrive On Green	0.06	0.39	0.39	0.06	0.39	0.39	0.04	0.32	0.32	0.09	0.37	0.37
Sat Flow, veh/h	1781	3110	406	1781	3441	1585	1781	2686	815	1725	1870	1585
Grp Volume(v), veh/h	185	668	679	130	982	134	78	224	222	199	766	294
Grp Sat Flow(s),veh/h/ln	1781	1749	1768	1781	1721	1585	1781	1777	1724	1725	1870	1585
Q Serve(g_s), s	9.0	60.7	61.2	7.4	39.2	9.1	4.3	15.8	16.2	12.4	59.0	23.0
Cycle Q Clear(g_c), s	9.0	60.7	61.2	7.4	39.2	9.1	4.3	15.8	16.2	12.4	59.0	23.0
Prop In Lane	1.00		0.23	1.00		1.00	1.00		0.47	1.00		1.00
Lane Grp Cap(c), veh/h	217	676	683	147	1330	612	114	562	545	399	690	584
V/C Ratio(X)	0.85	0.99	0.99	0.89	0.74	0.22	0.69	0.40	0.41	0.50	1.11	0.50
Avail Cap(c_a), veh/h	217	676	683	147	1330	612	145	562	545	446	690	584
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	39.7	48.7	48.9	41.5	42.1	32.9	40.3	42.8	42.9	32.8	50.5	39.1
Incr Delay (d2), s/veh	26.7	31.6	32.9	42.8	3.7	0.8	8.9	0.5	0.5	1.0	68.8	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.0	31.6	32.4	4.9	17.0	3.6	2.2	7.0	7.0	5.3	40.1	9.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	66.4	80.3	81.8	84.4	45.9	33.7	49.2	43.3	43.4	33.8	119.3	39.8
LnGrp LOS	E	F	F	F	D	C	D	D	D	C	F	D
Approach Vol, veh/h		1532			1246			524			1259	
Approach Delay, s/veh		79.3			48.6			44.2			87.2	
Approach LOS		E			D			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	67.8	12.2	65.0	15.0	67.8	20.6	56.6				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	9.0	59.0	9.0	59.0	9.0	59.0	19.0	49.0				
Max Q Clear Time (g_c+I1), s	11.0	41.2	6.3	61.0	9.4	63.2	14.4	18.2				
Green Ext Time (p_c), s	0.0	6.5	0.0	0.0	0.0	0.0	0.2	2.6				
Intersection Summary												
HCM 6th Ctrl Delay				69.1								
HCM 6th LOS				E								

HCM 6th Signalized Intersection Summary
1: Northlake Pkwy & Lavista Rd

Tucker Exchange TIA
AM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	98	567	460	173	1235	82	491	294	84	89	149	55
Future Volume (veh/h)	98	567	460	173	1235	82	491	294	84	89	149	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1856	1870	1826	1870	1841	1870	1841	1870	1870	1811
Adj Flow Rate, veh/h	104	603	200	184	1314	84	522	313	19	95	159	2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	3	2	5	2	4	2	4	2	2	6
Cap, veh/h	150	1762	780	208	1886	120	578	700	292	138	221	96
Arrive On Green	0.04	0.50	0.50	0.12	0.57	0.57	0.16	0.19	0.19	0.04	0.06	0.06
Sat Flow, veh/h	3456	3554	1572	1781	3311	211	3506	3741	1560	3456	3554	1535
Grp Volume(v), veh/h	104	603	200	184	687	711	522	313	19	95	159	2
Grp Sat Flow(s),veh/h/ln	1728	1777	1572	1781	1735	1788	1753	1870	1560	1728	1777	1535
Q Serve(g_s), s	4.5	15.5	11.0	15.3	42.4	42.6	21.9	11.1	1.5	4.1	6.6	0.2
Cycle Q Clear(g_c), s	4.5	15.5	11.0	15.3	42.4	42.6	21.9	11.1	1.5	4.1	6.6	0.2
Prop In Lane	1.00		1.00	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	150	1762	780	208	988	1018	578	700	292	138	221	96
V/C Ratio(X)	0.69	0.34	0.26	0.88	0.70	0.70	0.90	0.45	0.07	0.69	0.72	0.02
Avail Cap(c_a), veh/h	207	1762	780	309	988	1018	654	1097	458	207	592	256
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.92	0.92	0.92	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.8	23.0	21.8	65.2	23.0	23.1	61.5	54.1	50.2	71.1	69.0	66.0
Incr Delay (d2), s/veh	5.7	0.5	0.8	17.8	4.0	4.0	13.8	0.4	0.1	5.9	4.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	6.6	4.3	7.8	17.5	18.1	10.9	5.3	0.6	1.9	3.1	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.5	23.5	22.6	83.0	27.1	27.1	75.3	54.5	50.3	77.0	73.4	66.1
LnGrp LOS	E	C	C	F	C	C	E	D	D	E	E	E
Approach Vol, veh/h		907			1582			854			256	
Approach Delay, s/veh		29.4			33.6			67.1			74.7	
Approach LOS		C			C			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.5	91.4	30.7	15.3	23.6	80.4	12.0	34.1				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	9.0	64.0	28.0	25.0	26.0	47.0	9.0	44.0				
Max Q Clear Time (g_c+I1), s	6.5	44.6	23.9	8.6	17.3	17.5	6.1	13.1				
Green Ext Time (p_c), s	0.1	9.0	0.8	0.8	0.3	5.1	0.1	2.2				

Intersection Summary

HCM 6th Ctrl Delay	43.4
HCM 6th LOS	D

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
 2: Northlake Pkwy & Crescent Centre Blvd/E Exchange Pl

Tucker Exchange TIA
 AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔			↔	↔	↔	↔		↔	↔	
Traffic Volume (veh/h)	107	3	46	6	1	10	127	760	71	136	375	268
Future Volume (veh/h)	107	3	46	6	1	10	127	760	71	136	375	268
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1870	1856	1870	418	1707	1870	1870	1870	1870	1826	1870
Adj Flow Rate, veh/h	109	3	47	6	1	10	130	776	72	139	383	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	9	2	3	2	100	13	2	2	2	2	5	2
Cap, veh/h	266	8	123	10	2	44	711	1906	177	475	2006	
Arrive On Green	0.08	0.08	0.08	0.03	0.03	0.03	0.06	0.58	0.58	0.06	0.58	0.00
Sat Flow, veh/h	3264	96	1504	344	57	1447	1781	3287	305	1781	3561	0
Grp Volume(v), veh/h	109	0	50	7	0	10	130	419	429	139	383	0
Grp Sat Flow(s),veh/h/ln	1632	0	1600	401	0	1447	1781	1777	1815	1781	1735	0
Q Serve(g_s), s	3.1	0.0	2.9	1.7	0.0	0.7	2.7	12.6	12.6	3.0	5.1	0.0
Cycle Q Clear(g_c), s	3.1	0.0	2.9	1.7	0.0	0.7	2.7	12.6	12.6	3.0	5.1	0.0
Prop In Lane	1.00		0.94	0.86		1.00	1.00		0.17	1.00		0.00
Lane Grp Cap(c), veh/h	266	0	130	12	0	44	711	1030	1053	475	2006	
V/C Ratio(X)	0.41	0.00	0.38	0.58	0.00	0.23	0.18	0.41	0.41	0.29	0.19	
Avail Cap(c_a), veh/h	1011	0	496	124	0	448	784	1030	1053	643	2006	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	42.3	0.0	42.2	46.3	0.0	45.8	6.9	11.2	11.2	7.9	9.7	0.0
Incr Delay (d2), s/veh	1.0	0.0	1.8	36.5	0.0	2.6	0.1	1.2	1.2	0.3	0.2	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.3	0.0	1.2	0.3	0.0	0.3	0.9	4.7	4.8	1.1	1.9	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	43.3	0.0	44.0	82.8	0.0	48.4	7.0	12.4	12.4	8.2	9.9	0.0
LnGrp LOS	D	A	D	F	A	D	A	B	B	A	A	
Approach Vol, veh/h		159			17			978			522	A
Approach Delay, s/veh		43.5			62.6			11.7			9.4	
Approach LOS		D			E			B			A	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	2.0	62.0		8.9	11.9	62.1		13.9				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	60.0	56.0		30.0	15.0	51.0		30.0				
Max Q Clear Time (g_c+14), s	14.0	7.1		3.7	5.0	14.6		5.1				
Green Ext Time (p_c), s	0.1	2.8		0.0	0.2	5.7		0.6				

Intersection Summary

HCM 6th Ctrl Delay	14.5
HCM 6th LOS	B

Notes

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

Intersection												
Int Delay, s/veh	0.2											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	0	0	0	0	0	1	18	965	7	14	418	0
Future Vol, veh/h	0	0	0	0	0	1	18	965	7	14	418	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	80	-	-	90	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	5	2
Mvmt Flow	0	0	0	0	0	1	19	1005	7	15	435	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1006	1515	218	1295	1512	506	435	0	0	1012	0	0
Stage 1	465	465	-	1047	1047	-	-	-	-	-	-	-
Stage 2	541	1050	-	248	465	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	195	118	786	120	119	512	1121	-	-	681	-	-
Stage 1	547	561	-	244	303	-	-	-	-	-	-	-
Stage 2	493	302	-	734	561	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	189	113	786	117	114	512	1121	-	-	681	-	-
Mov Cap-2 Maneuver	189	113	-	117	114	-	-	-	-	-	-	-
Stage 1	538	549	-	240	298	-	-	-	-	-	-	-
Stage 2	484	297	-	718	549	-	-	-	-	-	-	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0	12	0.2	0.3
HCM LOS	A	B		

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1121	-	-	-	512	681	-
HCM Lane V/C Ratio	0.017	-	-	-	0.002	0.021	-
HCM Control Delay (s)	8.3	-	-	0	12	10.4	-
HCM Lane LOS	A	-	-	A	B	B	-
HCM 95th %tile Q(veh)	0.1	-	-	-	0	0.1	-

HCM 6th Signalized Intersection Summary
 4: Cooledge Rd/Northlake Pkwy & Lawrenceville Hwy

Tucker Exchange TIA
 AM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	275	628	62	92	940	281	114	561	85	134	107	103
Future Volume (veh/h)	275	628	62	92	940	281	114	561	85	134	107	103
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1796	1781	1841	1811	1841	1826	1870	1826	1781	1870	1811
Adj Flow Rate, veh/h	302	690	65	101	1033	174	125	616	86	147	118	18
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	7	8	4	6	4	5	2	5	8	2	6
Cap, veh/h	329	1586	149	370	1494	677	391	713	99	205	448	368
Arrive On Green	0.11	0.50	0.50	0.04	0.43	0.43	0.07	0.23	0.23	0.08	0.24	0.24
Sat Flow, veh/h	1781	3153	297	1753	3441	1560	1739	3132	436	1697	1870	1535
Grp Volume(v), veh/h	302	373	382	101	1033	174	125	349	353	147	118	18
Grp Sat Flow(s),veh/h/ln	1781	1706	1743	1753	1721	1560	1739	1777	1792	1697	1870	1535
Q Serve(g_s), s	14.9	22.3	22.3	4.5	38.8	11.4	8.6	30.2	30.3	10.5	8.2	1.4
Cycle Q Clear(g_c), s	14.9	22.3	22.3	4.5	38.8	11.4	8.6	30.2	30.3	10.5	8.2	1.4
Prop In Lane	1.00		0.17	1.00		1.00	1.00		0.24	1.00		1.00
Lane Grp Cap(c), veh/h	329	858	877	370	1494	677	391	404	408	205	448	368
V/C Ratio(X)	0.92	0.43	0.44	0.27	0.69	0.26	0.32	0.86	0.87	0.72	0.26	0.05
Avail Cap(c_a), veh/h	456	858	877	430	1494	677	428	600	605	220	631	518
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.6	25.3	25.3	19.5	36.6	28.8	41.7	59.4	59.4	45.8	49.4	46.8
Incr Delay (d2), s/veh	18.9	0.3	0.3	0.4	2.7	0.9	0.5	8.5	8.6	9.8	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	8.9	9.1	1.8	16.5	4.4	3.7	14.4	14.6	5.0	3.9	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.5	25.6	25.7	19.9	39.3	29.8	42.2	67.9	68.1	55.6	49.7	46.9
LnGrp LOS	D	C	C	B	D	C	D	E	E	E	D	D
Approach Vol, veh/h		1057			1308			827			283	
Approach Delay, s/veh		32.5			36.5			64.1			52.6	
Approach LOS		C			D			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.6	75.4	16.6	44.3	12.6	86.5	18.6	42.4				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	29.0	39.0	14.0	54.0	12.0	56.0	14.0	54.0				
Max Q Clear Time (g_c+I1), s	16.9	40.8	10.6	10.2	6.5	24.3	12.5	32.3				
Green Ext Time (p_c), s	0.7	0.0	0.1	0.7	0.1	4.6	0.0	4.1				
Intersection Summary												
HCM 6th Ctrl Delay			43.1									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary
1: Northlake Pkwy & Lavista Rd

Tucker Exchange TIA
PM Peak

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	136	1317	693	195	942	56	670	247	300	325	471	135
Future Volume (veh/h)	136	1317	693	195	942	56	670	247	300	325	471	135
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1856	1856	1870	1870	1870	1870	1856	1856	1870	1870
Adj Flow Rate, veh/h	142	1372	465	203	981	55	698	280	136	339	491	14
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	3	3	2	2	2	2	3	3	2	2
Cap, veh/h	186	1466	649	188	1591	89	690	815	343	389	489	218
Arrive On Green	0.05	0.41	0.41	0.11	0.46	0.46	0.19	0.22	0.22	0.11	0.14	0.14
Sat Flow, veh/h	3456	3554	1572	1767	3421	192	3563	3741	1572	3428	3554	1585
Grp Volume(v), veh/h	142	1372	465	203	510	526	698	280	136	339	491	14
Grp Sat Flow(s),veh/h/ln	1728	1777	1572	1767	1777	1836	1781	1870	1572	1714	1777	1585
Q Serve(g_s), s	6.5	59.1	39.5	17.0	34.4	34.4	31.0	10.1	11.8	15.6	22.0	1.2
Cycle Q Clear(g_c), s	6.5	59.1	39.5	17.0	34.4	34.4	31.0	10.1	11.8	15.6	22.0	1.2
Prop In Lane	1.00		1.00	1.00		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	186	1466	649	188	826	854	690	815	343	389	489	218
V/C Ratio(X)	0.76	0.94	0.72	1.08	0.62	0.62	1.01	0.34	0.40	0.87	1.00	0.06
Avail Cap(c_a), veh/h	259	1466	649	188	826	854	690	815	343	493	489	218
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.85	0.85	0.85	1.00	1.00	1.00
Uniform Delay (d), s/veh	74.7	45.0	39.2	71.5	32.1	32.1	64.5	52.9	53.6	69.8	69.0	60.0
Incr Delay (d2), s/veh	8.4	12.5	6.7	89.0	3.4	3.3	34.4	0.2	0.6	13.1	41.9	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	5.6	36.9	23.2	18.6	21.6	22.2	23.9	8.2	8.1	12.0	18.7	0.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	83.1	57.5	45.9	160.5	35.5	35.4	98.9	53.1	54.2	82.9	110.9	60.2
LnGrp LOS	F	E	D	F	D	D	F	D	D	F	F	E
Approach Vol, veh/h		1979			1239			1114			844	
Approach Delay, s/veh		56.6			56.0			81.9			98.8	
Approach LOS		E			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.6	80.4	37.0	28.0	23.0	72.0	24.1	40.9				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	12.0	71.0	31.0	22.0	17.0	66.0	23.0	30.0				
Max Q Clear Time (g_c+I1), s	8.5	36.4	33.0	24.0	19.0	61.1	17.6	13.8				
Green Ext Time (p_c), s	0.1	7.1	0.0	0.0	0.0	3.9	0.6	2.0				

Intersection Summary

HCM 6th Ctrl Delay	68.8
HCM 6th LOS	E

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
 2: Northlake Pkwy & Crescent Centre Blvd/E Exchange Pl

Tucker Exchange TIA
 PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔↔	↔			↔	↔	↔	↔↔		↔	↔↔	
Traffic Volume (veh/h)	248	2	133	88	1	178	74	746	7	28	1089	203
Future Volume (veh/h)	248	2	133	88	1	178	74	746	7	28	1089	203
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1159	1870	1870	1870	1870	1870	1870	1870	1826	1870	1870
Adj Flow Rate, veh/h	282	2	151	100	1	202	84	848	8	32	1238	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	50	2	2	2	2	2	2	2	5	2	2
Cap, veh/h	609	2	171	259	3	233	206	1678	16	298	1604	
Arrive On Green	0.18	0.18	0.18	0.15	0.15	0.15	0.05	0.47	0.47	0.03	0.45	0.00
Sat Flow, veh/h	3456	13	971	1764	18	1585	1781	3607	34	1739	3647	0
Grp Volume(v), veh/h	282	0	153	101	0	202	84	418	438	32	1238	0
Grp Sat Flow(s),veh/h/ln	1728	0	984	1782	0	1585	1781	1777	1864	1739	1777	0
Q Serve(g_s), s	9.7	0.0	20.2	6.8	0.0	16.6	3.3	21.9	21.9	1.3	39.0	0.0
Cycle Q Clear(g_c), s	9.7	0.0	20.2	6.8	0.0	16.6	3.3	21.9	21.9	1.3	39.0	0.0
Prop In Lane	1.00		0.99	0.99		1.00	1.00		0.02	1.00		0.00
Lane Grp Cap(c), veh/h	609	0	173	262	0	233	206	827	867	298	1604	
V/C Ratio(X)	0.46	0.00	0.88	0.39	0.00	0.87	0.41	0.51	0.51	0.11	0.77	
Avail Cap(c_a), veh/h	780	0	222	402	0	358	206	827	867	322	1604	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	49.1	0.0	53.4	51.3	0.0	55.5	24.7	24.9	24.9	19.7	30.7	0.0
Incr Delay (d2), s/veh	0.5	0.0	26.5	0.9	0.0	13.3	1.3	2.2	2.1	0.2	3.7	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	7.7	0.0	10.4	5.6	0.0	12.0	2.5	14.5	15.1	1.0	24.1	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.7	0.0	79.9	52.2	0.0	68.7	26.0	27.1	27.0	19.9	34.4	0.0
LnGrp LOS	D	A	E	D	A	E	C	C	C	B	C	
Approach Vol, veh/h		435			303			940			1270	A
Approach Delay, s/veh		60.3			63.2			26.9			34.0	
Approach LOS		E			E			C			C	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	2.0	66.0		25.5	10.2	67.8		29.4				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	6.0	60.0		30.0	6.0	60.0		30.0				
Max Q Clear Time (g_c+1), s	6.0	41.0		18.6	3.3	23.9		22.2				
Green Ext Time (p_c), s	0.0	9.1		0.9	0.0	5.7		1.3				

Intersection Summary

HCM 6th Ctrl Delay	38.6
HCM 6th LOS	D

Notes

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

Intersection												
Int Delay, s/veh	0.5											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	4	0	5	5	0	7	8	792	0	5	1299	2
Future Vol, veh/h	4	0	5	5	0	7	8	792	0	5	1299	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	80	-	-	90	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	6	6	0	8	9	900	0	6	1476	2























Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1957	2407	739	1668	2408	450	1478	0	0	900	0	0
Stage 1	1489	1489	-	918	918	-	-	-	-	-	-	-
Stage 2	468	918	-	750	1490	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	38	33	360	63	33	556	452	-	-	751	-	-
Stage 1	130	186	-	292	349	-	-	-	-	-	-	-
Stage 2	545	349	-	369	186	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	37	32	360	61	32	556	452	-	-	751	-	-
Mov Cap-2 Maneuver	37	32	-	61	32	-	-	-	-	-	-	-
Stage 1	127	185	-	286	342	-	-	-	-	-	-	-
Stage 2	527	342	-	360	185	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	61.3		36.7		0.1		0	
HCM LOS	F		E					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	452	-	-	74	127	751	-
HCM Lane V/C Ratio	0.02	-	-	0.138	0.107	0.008	-
HCM Control Delay (s)	13.1	-	-	61.3	36.7	9.8	-
HCM Lane LOS	B	-	-	F	E	A	-
HCM 95th %tile Q(veh)	0.1	-	-	0.5	0.4	0	-

HCM 6th Signalized Intersection Summary
 4: Cooledge Rd/Northlake Pkwy & Lawrenceville Hwy

Tucker Exchange TIA
 PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	183	1176	159	128	969	235	77	336	120	196	756	388
Future Volume (veh/h)	183	1176	159	128	969	235	77	336	120	196	756	388
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1841	1870	1870	1811	1870	1870	1870	1737	1811	1870	1870
Adj Flow Rate, veh/h	197	1265	165	138	1042	116	83	361	112	211	813	317
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	4	2	2	6	2	2	2	11	6	2	2
Cap, veh/h	202	1197	155	145	1323	609	117	839	257	393	690	584
Arrive On Green	0.06	0.38	0.38	0.06	0.38	0.38	0.04	0.31	0.31	0.10	0.37	0.37
Sat Flow, veh/h	1781	3113	404	1781	3441	1585	1781	2680	820	1725	1870	1585
Grp Volume(v), veh/h	197	708	722	138	1042	116	83	238	235	211	813	317
Grp Sat Flow(s),veh/h/ln	1781	1749	1768	1781	1721	1585	1781	1777	1723	1725	1870	1585
Q Serve(g_s), s	9.0	61.5	61.5	8.3	42.8	7.8	4.6	17.0	17.4	13.2	59.0	25.2
Cycle Q Clear(g_c), s	9.0	61.5	61.5	8.3	42.8	7.8	4.6	17.0	17.4	13.2	59.0	25.2
Prop In Lane	1.00		0.23	1.00		1.00	1.00		0.48	1.00		1.00
Lane Grp Cap(c), veh/h	202	672	680	145	1323	609	117	557	540	393	690	584
V/C Ratio(X)	0.98	1.05	1.06	0.95	0.79	0.19	0.71	0.43	0.44	0.54	1.18	0.54
Avail Cap(c_a), veh/h	202	672	680	145	1323	609	145	557	540	432	690	584
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.7	49.2	49.2	44.6	43.5	32.7	40.2	43.6	43.7	33.0	50.5	39.8
Incr Delay (d2), s/veh	56.0	49.5	52.2	59.7	4.8	0.7	11.3	0.5	0.6	1.1	95.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.0	46.7	48.1	10.0	25.8	5.6	4.2	12.0	12.0	9.5	62.8	15.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	99.7	98.7	101.5	104.3	48.3	33.4	51.4	44.1	44.3	34.2	145.5	40.9
LnGrp LOS	F	F	F	F	D	C	D	D	D	C	F	D
Approach Vol, veh/h		1627			1296			556			1341	
Approach Delay, s/veh		100.1			52.9			45.3			103.3	
Approach LOS		F			D			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	67.5	12.5	65.0	15.0	67.5	21.4	56.1				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	9.0	59.0	9.0	59.0	9.0	59.0	19.0	49.0				
Max Q Clear Time (g_c+I1), s	11.0	44.8	6.6	61.0	10.3	63.5	15.2	19.4				
Green Ext Time (p_c), s	0.0	6.2	0.0	0.0	0.0	0.0	0.2	2.8				
Intersection Summary												
HCM 6th Ctrl Delay			82.0									
HCM 6th LOS			F									

HCM 6th Signalized Intersection Summary
4: Cooledge Rd/Northlake Pkwy & Lawrenceville Hwy

AHS Tucker Exchange TIA
AM Peak



























Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↖	↗	↘	↖	↗	↘	↖	↗	↘	↖	↗	↘
Traffic Volume (veh/h)	275	628	62	92	940	281	114	561	85	134	107	103
Future Volume (veh/h)	275	628	62	92	940	281	114	561	85	134	107	103
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1796	1781	1841	1811	1841	1826	1870	1826	1781	1870	1811
Adj Flow Rate, veh/h	302	690	65	101	1033	174	125	616	86	147	118	18
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	7	8	4	6	4	5	2	5	8	2	6
Cap, veh/h	329	1717	759	380	1494	677	391	713	99	205	448	368
Arrive On Green	0.11	0.50	0.50	0.04	0.43	0.43	0.07	0.23	0.23	0.08	0.24	0.24
Sat Flow, veh/h	1781	3413	1510	1753	3441	1560	1739	3132	436	1697	1870	1535
Grp Volume(v), veh/h	302	690	65	101	1033	174	125	349	353	147	118	18
Grp Sat Flow(s),veh/h/ln	1781	1706	1510	1753	1721	1560	1739	1777	1792	1697	1870	1535
Q Serve(g_s), s	14.9	20.2	3.6	4.5	38.8	11.4	8.6	30.2	30.3	10.5	8.2	1.4
Cycle Q Clear(g_c), s	14.9	20.2	3.6	4.5	38.8	11.4	8.6	30.2	30.3	10.5	8.2	1.4
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.24	1.00		1.00
Lane Grp Cap(c), veh/h	329	1717	759	380	1494	677	391	404	408	205	448	368
V/C Ratio(X)	0.92	0.40	0.09	0.27	0.69	0.26	0.32	0.86	0.87	0.72	0.26	0.05
Avail Cap(c_a), veh/h	456	1717	759	439	1494	677	428	600	605	220	631	518
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	30.6	24.8	20.7	19.1	36.6	28.8	41.7	59.4	59.4	45.8	49.4	46.8
Incr Delay (d2), s/veh	18.9	0.2	0.0	0.4	2.7	0.9	0.5	8.5	8.6	9.8	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	7.8	8.1	1.3	1.8	16.5	4.4	3.7	14.4	14.6	5.0	3.9	0.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	49.5	24.9	20.7	19.5	39.3	29.8	42.2	67.9	68.1	55.6	49.7	46.9
LnGrp LOS	D	C	C	B	D	C	D	E	E	E	D	D
Approach Vol, veh/h		1057			1308			827			283	
Approach Delay, s/veh		31.7			36.5			64.1			52.6	
Approach LOS		C			D			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	23.6	75.4	16.6	44.3	12.6	86.5	18.6	42.4				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	29.0	39.0	14.0	54.0	12.0	56.0	14.0	54.0				
Max Q Clear Time (g_c+I1), s	16.9	40.8	10.6	10.2	6.5	22.2	12.5	32.3				
Green Ext Time (p_c), s	0.7	0.0	0.1	0.7	0.1	5.0	0.0	4.1				

Intersection Summary												
HCM 6th Ctrl Delay											42.9	
HCM 6th LOS											D	































HCM 6th Signalized Intersection Summary
 4: Cooledge Rd/Northlake Pkwy & Lawrenceville Hwy

Tucker Exchange TIA
 PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	183	1176	159	128	969	235	77	336	120	196	756	388
Future Volume (veh/h)	183	1176	159	128	969	235	77	336	120	196	756	388
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1841	1870	1870	1811	1870	1870	1870	1737	1811	1870	1870
Adj Flow Rate, veh/h	197	1265	165	138	1042	116	83	361	112	211	813	317
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	4	2	2	6	2	2	2	11	6	2	2
Cap, veh/h	202	1345	609	159	1323	609	117	839	257	393	690	584
Arrive On Green	0.06	0.38	0.38	0.06	0.38	0.38	0.04	0.31	0.31	0.10	0.37	0.37
Sat Flow, veh/h	1781	3497	1585	1781	3441	1585	1781	2680	820	1725	1870	1585
Grp Volume(v), veh/h	197	1265	165	138	1042	116	83	238	235	211	813	317
Grp Sat Flow(s),veh/h/ln	1781	1749	1585	1781	1721	1585	1781	1777	1723	1725	1870	1585
Q Serve(g_s), s	9.0	55.8	11.4	7.5	42.8	7.8	4.6	17.0	17.4	13.2	59.0	25.2
Cycle Q Clear(g_c), s	9.0	55.8	11.4	7.5	42.8	7.8	4.6	17.0	17.4	13.2	59.0	25.2
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.48	1.00		1.00
Lane Grp Cap(c), veh/h	202	1345	609	159	1323	609	117	557	540	393	690	584
V/C Ratio(X)	0.98	0.94	0.27	0.87	0.79	0.19	0.71	0.43	0.44	0.54	1.18	0.54
Avail Cap(c_a), veh/h	202	1345	609	159	1323	609	145	557	540	432	690	584
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	43.7	47.5	33.8	38.7	43.5	32.7	40.2	43.6	43.7	33.0	50.5	39.8
Incr Delay (d2), s/veh	56.0	14.0	1.1	37.1	4.8	0.7	11.3	0.5	0.6	1.1	95.0	1.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	11.0	34.6	8.1	8.4	25.8	5.6	4.2	12.0	12.0	9.5	62.8	15.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	99.7	61.4	34.9	75.8	48.3	33.4	51.4	44.1	44.3	34.2	145.5	40.9
LnGrp LOS	F	E	C	E	D	C	D	D	D	C	F	D
Approach Vol, veh/h		1627			1296			556			1341	
Approach Delay, s/veh		63.4			49.9			45.3			103.3	
Approach LOS		E			D			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	67.5	12.5	65.0	15.0	67.5	21.4	56.1				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	9.0	59.0	9.0	59.0	9.0	59.0	19.0	49.0				
Max Q Clear Time (g_c+I1), s	11.0	44.8	6.6	61.0	9.5	57.8	15.2	19.4				
Green Ext Time (p_c), s	0.0	6.2	0.0	0.0	0.0	0.9	0.2	2.8				
Intersection Summary												
HCM 6th Ctrl Delay				68.8								
HCM 6th LOS				E								

HCM 6th Signalized Intersection Summary
1: Northlake Pkwy & Lavista Rd

AHS Tucker Exchange TIA
AM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	 	 			 		 	 		 	 	
Traffic Volume (veh/h)	98	567	502	187	1235	82	544	320	98	89	168	55
Future Volume (veh/h)	98	567	502	187	1235	82	544	320	98	89	168	55
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1856	1870	1826	1870	1856	1870	1841	1870	1870	1811
Adj Flow Rate, veh/h	104	603	208	199	1314	84	579	340	23	95	179	2
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	2	3	2	5	2	3	2	4	2	2	6
Cap, veh/h	150	1665	737	223	1823	116	628	770	321	138	243	105
Arrive On Green	0.04	0.47	0.47	0.13	0.55	0.55	0.18	0.21	0.21	0.04	0.07	0.07
Sat Flow, veh/h	3456	3554	1572	1781	3311	211	3534	3741	1560	3456	3554	1535
Grp Volume(v), veh/h	104	603	208	199	687	711	579	340	23	95	179	2
Grp Sat Flow(s),veh/h/ln	1728	1777	1572	1781	1735	1788	1767	1870	1560	1728	1777	1535
Q Serve(g_s), s	4.5	16.3	12.1	16.5	44.2	44.5	24.2	11.9	1.8	4.1	7.4	0.2
Cycle Q Clear(g_c), s	4.5	16.3	12.1	16.5	44.2	44.5	24.2	11.9	1.8	4.1	7.4	0.2
Prop In Lane	1.00		1.00	1.00		0.12	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	150	1665	737	223	955	984	628	770	321	138	243	105
V/C Ratio(X)	0.69	0.36	0.28	0.89	0.72	0.72	0.92	0.44	0.07	0.69	0.74	0.02
Avail Cap(c_a), veh/h	207	1665	737	309	955	984	660	1097	458	207	592	256
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.86	0.86	0.86	1.00	1.00	1.00
Uniform Delay (d), s/veh	70.8	25.5	24.4	64.6	25.1	25.2	60.7	52.0	48.0	71.1	68.5	65.2
Incr Delay (d2), s/veh	5.7	0.1	0.2	20.6	4.7	4.6	16.2	0.3	0.1	5.9	4.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	6.9	4.7	8.7	18.5	19.2	12.3	5.7	0.7	1.9	3.5	0.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	76.5	25.6	24.6	85.2	29.7	29.7	76.8	52.4	48.1	77.0	72.9	65.2
LnGrp LOS	E	C	C	F	C	C	E	D	D	E	E	E
Approach Vol, veh/h		915			1597			942			276	
Approach Delay, s/veh		31.2			36.7			67.3			74.2	
Approach LOS		C			D			E			E	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.5	88.6	32.6	16.3	24.8	76.3	12.0	36.9				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	9.0	64.0	28.0	25.0	26.0	47.0	9.0	44.0				
Max Q Clear Time (g_c+I1), s	6.5	46.5	26.2	9.4	18.5	18.3	6.1	13.9				
Green Ext Time (p_c), s	0.1	8.5	0.5	0.8	0.3	5.1	0.1	2.4				

Intersection Summary

HCM 6th Ctrl Delay	45.8
HCM 6th LOS	D

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
 2: Northlake Pkwy & Crescent Centre Blvd/E Exchange Pl

AHS Tucker Exchange TIA
 AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔			↔	↔	↔	↔		↔	↔	
Traffic Volume (veh/h)	107	3	46	33	1	29	127	834	80	198	389	268
Future Volume (veh/h)	107	3	46	33	1	29	127	834	80	198	389	268
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1767	1870	1856	1870	166	1841	1870	1870	1870	1870	1826	1870
Adj Flow Rate, veh/h	109	3	47	34	1	30	130	851	82	202	397	0
Peak Hour Factor	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98	0.98
Percent Heavy Veh, %	9	2	3	2	117	4	2	2	2	2	5	2
Cap, veh/h	235	7	108	23	1	231	601	1590	153	385	1760	
Arrive On Green	0.07	0.07	0.07	0.15	0.15	0.15	0.06	0.49	0.49	0.08	0.51	0.00
Sat Flow, veh/h	3264	96	1504	154	5	1560	1781	3275	316	1781	3561	0
Grp Volume(v), veh/h	109	0	50	35	0	30	130	462	471	202	397	0
Grp Sat Flow(s),veh/h/ln	1632	0	1600	158	0	1560	1781	1777	1814	1781	1735	0
Q Serve(g_s), s	3.5	0.0	3.3	16.3	0.0	1.8	4.0	19.9	19.9	6.2	7.0	0.0
Cycle Q Clear(g_c), s	3.5	0.0	3.3	16.3	0.0	1.8	4.0	19.9	19.9	6.2	7.0	0.0
Prop In Lane	1.00		0.94	0.97		1.00	1.00		0.17	1.00		0.00
Lane Grp Cap(c), veh/h	235	0	115	23	0	231	601	863	881	385	1760	
V/C Ratio(X)	0.46	0.00	0.43	1.49	0.00	0.13	0.22	0.54	0.54	0.53	0.23	
Avail Cap(c_a), veh/h	887	0	435	43	0	424	664	863	881	489	1760	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	49.2	0.0	49.1	47.0	0.0	40.9	12.7	19.7	19.7	14.7	15.1	0.0
Incr Delay (d2), s/veh	1.4	0.0	2.6	331.8	0.0	0.3	0.2	2.4	2.3	1.1	0.3	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.5	0.0	1.4	2.8	0.0	0.7	1.5	8.3	8.5	2.5	2.8	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.6	0.0	51.7	378.8	0.0	41.1	12.8	22.1	22.1	15.8	15.4	0.0
LnGrp LOS	D	A	D	F	A	D	B	C	C	B	B	
Approach Vol, veh/h		159			65			1063			599	A
Approach Delay, s/veh		50.9			222.9			21.0			15.6	
Approach LOS		D			F			C			B	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	2.1	62.0		22.2	14.5	59.6		13.9				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	60.0	56.0		30.0	15.0	51.0		30.0				
Max Q Clear Time (g_c+10), s	9.0	9.0		18.3	8.2	21.9		5.5				
Green Ext Time (p_c), s	0.1	3.0		0.1	0.3	6.3		0.6				

Intersection Summary

HCM 6th Ctrl Delay	28.7
HCM 6th LOS	C

Notes

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

Intersection												
Int Delay, s/veh	1.4											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	0	0	0	13	0	75	18	974	35	28	445	0
Future Vol, veh/h	0	0	0	13	0	75	18	974	35	28	445	0
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	80	-	-	90	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	4	2
Mvmt Flow	0	0	0	14	0	78	19	1015	36	29	464	0

Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	1068	1611	232	1361	1593	526	464	0	0	1051	0	0
Stage 1	522	522	-	1071	1071	-	-	-	-	-	-	-
Stage 2	546	1089	-	290	522	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	176	103	770	107	106	496	1094	-	-	658	-	-
Stage 1	506	529	-	236	295	-	-	-	-	-	-	-
Stage 2	490	290	-	694	529	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	141	97	770	102	100	496	1094	-	-	658	-	-
Mov Cap-2 Maneuver	141	97	-	102	100	-	-	-	-	-	-	-
Stage 1	497	506	-	232	290	-	-	-	-	-	-	-
Stage 2	406	285	-	663	506	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	0		21		0.1		0.6	
HCM LOS	A		C					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1WBLn1	SBL	SBT	SBR
Capacity (veh/h)	1094	-	-	-	316	658	-
HCM Lane V/C Ratio	0.017	-	-	-	0.29	0.044	-
HCM Control Delay (s)	8.3	-	-	0	21	10.7	-
HCM Lane LOS	A	-	-	A	C	B	-
HCM 95th %tile Q(veh)	0.1	-	-	-	1.2	0.1	-

HCM 6th Signalized Intersection Summary
4: Cooledge Rd/Northlake Pkwy & Lawrenceville Hwy

AHS Tucker Exchange TIA
AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↕		↖	↕	↗	↖	↕		↗	↕	↖
Traffic Volume (veh/h)	286	628	62	92	940	292	114	575	85	147	121	116
Future Volume (veh/h)	286	628	62	92	940	292	114	575	85	147	121	116
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1796	1781	1841	1811	1841	1826	1870	1826	1796	1870	1826
Adj Flow Rate, veh/h	314	690	65	101	1033	181	125	632	86	162	133	22
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	7	8	4	6	4	5	2	5	7	2	5
Cap, veh/h	338	1552	146	362	1409	639	392	730	99	216	469	388
Arrive On Green	0.12	0.49	0.49	0.04	0.41	0.41	0.07	0.23	0.23	0.08	0.25	0.25
Sat Flow, veh/h	1781	3153	297	1753	3441	1560	1739	3143	427	1711	1870	1547
Grp Volume(v), veh/h	314	373	382	101	1033	181	125	357	361	162	133	22
Grp Sat Flow(s),veh/h/ln	1781	1706	1743	1753	1721	1560	1739	1777	1793	1711	1870	1547
Q Serve(g_s), s	17.2	22.7	22.8	4.6	40.5	12.4	8.5	30.9	31.0	11.4	9.2	1.7
Cycle Q Clear(g_c), s	17.2	22.7	22.8	4.6	40.5	12.4	8.5	30.9	31.0	11.4	9.2	1.7
Prop In Lane	1.00		0.17	1.00		1.00	1.00		0.24	1.00		1.00
Lane Grp Cap(c), veh/h	338	840	858	362	1409	639	392	412	416	216	469	388
V/C Ratio(X)	0.93	0.44	0.45	0.28	0.73	0.28	0.32	0.87	0.87	0.75	0.28	0.06
Avail Cap(c_a), veh/h	440	840	858	420	1409	639	429	600	605	222	631	522
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.1	26.4	26.4	20.4	39.9	31.6	40.6	59.0	59.1	45.1	48.4	45.6
Incr Delay (d2), s/veh	22.4	0.4	0.4	0.4	3.4	1.1	0.5	8.9	9.0	12.9	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.3	9.2	9.4	1.9	17.4	4.9	3.7	14.8	15.0	5.6	4.3	0.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.5	26.8	26.8	20.8	43.3	32.7	41.1	67.9	68.1	58.0	48.7	45.6
LnGrp LOS	E	C	C	C	D	C	D	E	E	E	D	D
Approach Vol, veh/h		1069			1315			843			317	
Approach Delay, s/veh		35.8			40.1			64.0			53.3	
Approach LOS		D			D			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	25.9	71.5	16.5	46.1	12.6	84.8	19.5	43.1				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	29.0	39.0	14.0	54.0	12.0	56.0	14.0	54.0				
Max Q Clear Time (g_c+I1), s	19.2	42.5	10.5	11.2	6.6	24.8	13.4	33.0				
Green Ext Time (p_c), s	0.6	0.0	0.1	0.8	0.1	4.6	0.0	4.2				

Intersection Summary												
HCM 6th Ctrl Delay											45.7	
HCM 6th LOS											D	

Intersection						
Int Delay, s/veh	0.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↶			↷	↷	
Traffic Vol, veh/h	238	43	0	38	25	0
Future Vol, veh/h	238	43	0	38	25	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	0	0	2
Mvmt Flow	259	47	0	41	27	0

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	-	-	304 283
Stage 1	-	-	-	-	283 -
Stage 2	-	-	-	-	21 -
Critical Hdwy	-	-	-	-	6.6 6.23
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	-	-	-	-	3.5 3.319
Pot Cap-1 Maneuver	-	-	0	-	680 755
Stage 1	-	-	0	-	770 -
Stage 2	-	-	0	-	1005 -
Platoon blocked, %	-	-	-	-	
Mov Cap-1 Maneuver	-	-	-	-	680 755
Mov Cap-2 Maneuver	-	-	-	-	680 -
Stage 1	-	-	-	-	770 -
Stage 2	-	-	-	-	1005 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.5
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	680	-	-	-
HCM Lane V/C Ratio	0.04	-	-	-
HCM Control Delay (s)	10.5	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

Intersection						
Int Delay, s/veh	0.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↑↑	↔	
Traffic Vol, veh/h	210	24	0	17	21	0
Future Vol, veh/h	210	24	0	17	21	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	0	0	2
Mvmt Flow	228	26	0	18	23	0
























Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	-	-	250 241
Stage 1	-	-	-	-	241 -
Stage 2	-	-	-	-	9 -
Critical Hdwy	-	-	-	-	6.6 6.23
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	-	-	-	-	3.5 3.319
Pot Cap-1 Maneuver	-	-	0	-	733 797
Stage 1	-	-	0	-	804 -
Stage 2	-	-	0	-	1018 -
Platoon blocked, %	-	-	-	-	
Mov Cap-1 Maneuver	-	-	-	-	733 797
Mov Cap-2 Maneuver	-	-	-	-	733 -
Stage 1	-	-	-	-	804 -
Stage 2	-	-	-	-	1018 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	733	-	-	-
HCM Lane V/C Ratio	0.031	-	-	-
HCM Control Delay (s)	10.1	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

HCM 6th Signalized Intersection Summary
1: Northlake Pkwy & Lavista Rd

AHS Tucker Exchange TIA
PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	136	1317	747	209	942	56	722	272	317	325	497	135
Future Volume (veh/h)	136	1317	747	209	942	56	722	272	317	325	497	135
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1870	1870	1870	1870	1870	1870	1870	1870	1856	1870	1870
Adj Flow Rate, veh/h	142	1372	500	218	981	55	752	315	152	339	518	14
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	2	2	2	2	2	2	2	2	3	2	2
Cap, veh/h	186	1466	654	189	1591	89	690	815	345	389	489	218
Arrive On Green	0.05	0.41	0.41	0.11	0.46	0.46	0.19	0.22	0.22	0.11	0.14	0.14
Sat Flow, veh/h	3456	3554	1585	1781	3421	192	3563	3741	1585	3428	3554	1585
Grp Volume(v), veh/h	142	1372	500	218	510	526	752	315	152	339	518	14
Grp Sat Flow(s),veh/h/ln	1728	1777	1585	1781	1777	1836	1781	1870	1585	1714	1777	1585
Q Serve(g_s), s	6.5	59.1	43.3	17.0	34.4	34.4	31.0	11.5	13.3	15.6	22.0	1.2
Cycle Q Clear(g_c), s	6.5	59.1	43.3	17.0	34.4	34.4	31.0	11.5	13.3	15.6	22.0	1.2
Prop In Lane	1.00		1.00	1.00		0.10	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	186	1466	654	189	826	854	690	815	345	389	489	218
V/C Ratio(X)	0.76	0.94	0.76	1.15	0.62	0.62	1.09	0.39	0.44	0.87	1.06	0.06
Avail Cap(c_a), veh/h	259	1466	654	189	826	854	690	815	345	493	489	218
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	0.78	0.78	0.78	1.00	1.00	1.00
Uniform Delay (d), s/veh	74.7	45.0	40.3	71.5	32.1	32.1	64.5	53.4	54.1	69.8	69.0	60.0
Incr Delay (d2), s/veh	8.4	11.5	5.4	112.2	3.4	3.3	57.6	0.2	0.7	13.1	57.6	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.1	28.0	17.9	13.6	15.2	15.7	19.6	5.5	5.4	7.5	13.9	0.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	83.1	56.5	45.7	183.7	35.5	35.4	122.1	53.7	54.8	82.9	126.6	60.2
LnGrp LOS	F	E	D	F	D	D	F	D	D	F	F	E
Approach Vol, veh/h		2014			1254			1219			871	
Approach Delay, s/veh		55.7			61.3			96.0			108.5	
Approach LOS		E			E			F			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	14.6	80.4	37.0	28.0	23.0	72.0	24.1	40.9				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	12.0	71.0	31.0	22.0	17.0	66.0	23.0	30.0				
Max Q Clear Time (g_c+I1), s	8.5	36.4	33.0	24.0	19.0	61.1	17.6	15.3				
Green Ext Time (p_c), s	0.1	7.1	0.0	0.0	0.0	3.9	0.6	2.2				

Intersection Summary

HCM 6th Ctrl Delay	74.8
HCM 6th LOS	E

Notes

- User approved pedestrian interval to be less than phase max green.
- User approved volume balancing among the lanes for turning movement.

HCM 6th Signalized Intersection Summary
 2: Northlake Pkwy & Crescent Centre Blvd/E Exchange Pl

AHS Tucker Exchange TIA
 PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↔	↔			↔	↔	↔	↔		↔	↔	
Traffic Volume (veh/h)	248	2	133	121	1	220	74	796	14	89	1109	203
Future Volume (veh/h)	248	2	133	121	1	220	74	796	14	89	1109	203
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	952	1870	1870	1870	1870	1870	1870	1870	1870	1870	1870
Adj Flow Rate, veh/h	282	2	151	138	1	250	84	905	16	101	1260	0
Peak Hour Factor	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88	0.88
Percent Heavy Veh, %	2	64	2	2	2	2	2	2	2	2	2	2
Cap, veh/h	698	2	161	308	2	276	166	1485	26	256	1478	
Arrive On Green	0.20	0.20	0.20	0.17	0.17	0.17	0.04	0.42	0.42	0.04	0.42	0.00
Sat Flow, veh/h	3456	11	797	1769	13	1585	1781	3573	63	1781	3647	0
Grp Volume(v), veh/h	282	0	153	139	0	250	84	450	471	101	1260	0
Grp Sat Flow(s),veh/h/ln	1728	0	808	1782	0	1585	1781	1777	1859	1781	1777	0
Q Serve(g_s), s	10.2	0.0	26.9	10.1	0.0	22.3	3.9	28.6	28.6	4.7	46.3	0.0
Cycle Q Clear(g_c), s	10.2	0.0	26.9	10.1	0.0	22.3	3.9	28.6	28.6	4.7	46.3	0.0
Prop In Lane	1.00		0.99	0.99		1.00	1.00		0.03	1.00		0.00
Lane Grp Cap(c), veh/h	698	0	163	311	0	276	166	739	773	256	1478	
V/C Ratio(X)	0.40	0.00	0.94	0.45	0.00	0.90	0.51	0.61	0.61	0.39	0.85	
Avail Cap(c_a), veh/h	718	0	168	370	0	330	166	739	773	256	1478	
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	50.0	0.0	56.7	53.4	0.0	58.4	31.5	33.0	33.0	25.9	38.2	0.0
Incr Delay (d2), s/veh	0.4	0.0	50.7	1.0	0.0	24.5	2.5	3.7	3.6	1.0	6.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.5	0.0	7.8	4.6	0.0	10.8	1.7	12.9	13.4	2.1	21.4	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	50.4	0.0	107.4	54.4	0.0	82.9	34.0	36.7	36.5	26.9	44.6	0.0
LnGrp LOS	D	A	F	D	A	F	C	D	D	C	D	
Approach Vol, veh/h		435			389			1005			1361	A
Approach Delay, s/veh		70.4			72.7			36.4			43.3	
Approach LOS		E			E			D			D	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	2.0	66.0		31.2	12.0	66.0		35.2				
Change Period (Y+Rc), s	6.0	6.0		6.0	6.0	6.0		6.0				
Max Green Setting (Gmax), s	6.0	60.0		30.0	6.0	60.0		30.0				
Max Q Clear Time (g_c+15), s	6.0	48.3		24.3	6.7	30.6		28.9				
Green Ext Time (p_c), s	0.0	6.8		0.8	0.0	6.1		0.3				

Intersection Summary

HCM 6th Ctrl Delay	48.4
HCM 6th LOS	D

Notes

User approved pedestrian interval to be less than phase max green.
 Unsignalized Delay for [SBR] is excluded from calculations of the approach delay and intersection delay.

Intersection												
Int Delay, s/veh	1.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		↕			↕		↕	↕		↕	↕	
Traffic Vol, veh/h	4	0	5	16	0	57	8	825	8	25	1332	2
Future Vol, veh/h	4	0	5	16	0	57	8	825	8	25	1332	2
Conflicting Peds, #/hr	0	0	0	0	0	0	0	0	0	0	0	0
Sign Control	Stop	Stop	Stop	Stop	Stop	Stop	Free	Free	Free	Free	Free	Free
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	-	-	-	-	-	-	80	-	-	90	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	0	-	-	0	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	88	88	88	88	88	88	88	88	88	88	88	88
Heavy Vehicles, %	2	2	2	2	2	2	2	2	2	2	2	2
Mvmt Flow	5	0	6	18	0	65	9	938	9	28	1514	2
























Major/Minor	Minor2		Minor1		Major1		Major2					
Conflicting Flow All	2058	2536	758	1774	2533	474	1516	0	0	947	0	0
Stage 1	1571	1571	-	961	961	-	-	-	-	-	-	-
Stage 2	487	965	-	813	1572	-	-	-	-	-	-	-
Critical Hdwy	7.54	6.54	6.94	7.54	6.54	6.94	4.14	-	-	4.14	-	-
Critical Hdwy Stg 1	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Critical Hdwy Stg 2	6.54	5.54	-	6.54	5.54	-	-	-	-	-	-	-
Follow-up Hdwy	3.52	4.02	3.32	3.52	4.02	3.32	2.22	-	-	2.22	-	-
Pot Cap-1 Maneuver	32	27	350	52	27	537	437	-	-	721	-	-
Stage 1	115	169	-	275	333	-	-	-	-	-	-	-
Stage 2	531	331	-	339	169	-	-	-	-	-	-	-
Platoon blocked, %								-	-	-	-	-
Mov Cap-1 Maneuver	27	25	350	49	25	537	437	-	-	721	-	-
Mov Cap-2 Maneuver	27	25	-	49	25	-	-	-	-	-	-	-
Stage 1	113	162	-	269	326	-	-	-	-	-	-	-
Stage 2	457	324	-	321	162	-	-	-	-	-	-	-

Approach	EB		WB		NB		SB	
HCM Control Delay, s	84.8		45.3		0.1		0.2	
HCM LOS	F		E					

Minor Lane/Major Mvmt	NBL	NBT	NBR	EBLn1	WBLn1	SBL	SBT	SBR
Capacity (veh/h)	437	-	-	55	169	721	-	-
HCM Lane V/C Ratio	0.021	-	-	0.186	0.491	0.039	-	-
HCM Control Delay (s)	13.4	-	-	84.8	45.3	10.2	-	-
HCM Lane LOS	B	-	-	F	E	B	-	-
HCM 95th %tile Q(veh)	0.1	-	-	0.6	2.4	0.1	-	-

HCM 6th Signalized Intersection Summary
 4: Cooledge Rd/Northlake Pkwy & Lawrenceville Hwy

AHS Tucker Exchange TIA
 PM Peak

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	197	1176	159	128	969	249	77	350	120	210	773	402
Future Volume (veh/h)	197	1176	159	128	969	249	77	350	120	210	773	402
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1841	1870	1870	1811	1870	1870	1870	1737	1826	1870	1870
Adj Flow Rate, veh/h	212	1265	166	138	1042	156	83	376	113	226	831	331
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	4	2	2	6	2	2	2	11	5	2	2
Cap, veh/h	200	1196	156	145	1323	609	117	831	246	394	690	584
Arrive On Green	0.06	0.38	0.38	0.06	0.38	0.38	0.04	0.31	0.31	0.10	0.37	0.37
Sat Flow, veh/h	1781	3110	406	1781	3441	1585	1781	2701	802	1739	1870	1585
Grp Volume(v), veh/h	212	708	723	138	1042	156	83	246	243	226	831	331
Grp Sat Flow(s),veh/h/ln	1781	1749	1768	1781	1721	1585	1781	1777	1726	1739	1870	1585
Q Serve(g_s), s	9.0	61.5	61.5	8.3	42.8	10.8	4.6	17.8	18.2	14.1	59.0	26.7
Cycle Q Clear(g_c), s	9.0	61.5	61.5	8.3	42.8	10.8	4.6	17.8	18.2	14.1	59.0	26.7
Prop In Lane	1.00		0.23	1.00		1.00	1.00		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	200	672	680	145	1323	609	117	546	531	394	690	584
V/C Ratio(X)	1.06	1.05	1.06	0.95	0.79	0.26	0.71	0.45	0.46	0.57	1.20	0.57
Avail Cap(c_a), veh/h	200	672	680	145	1323	609	145	546	531	423	690	584
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.3	49.2	49.2	44.6	43.5	33.6	40.2	44.5	44.7	33.5	50.5	40.3
Incr Delay (d2), s/veh	80.6	49.7	52.5	59.7	4.8	1.0	11.3	0.6	0.6	1.6	105.6	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.2	35.3	36.2	6.0	18.7	4.3	2.4	7.9	7.9	6.1	47.2	10.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	124.9	99.0	101.8	104.3	48.3	34.6	51.4	45.1	45.3	35.1	156.1	41.6
LnGrp LOS	F	F	F	F	D	C	D	D	D	D	F	D
Approach Vol, veh/h		1643			1336			572			1388	
Approach Delay, s/veh		103.6			52.5			46.1			109.1	
Approach LOS		F			D			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	67.5	12.5	65.0	15.0	67.5	22.3	55.2				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	9.0	59.0	9.0	59.0	9.0	59.0	19.0	49.0				
Max Q Clear Time (g_c+I1), s	11.0	44.8	6.6	61.0	10.3	63.5	16.1	20.2				
Green Ext Time (p_c), s	0.0	6.3	0.0	0.0	0.0	0.0	0.2	2.9				
Intersection Summary												
HCM 6th Ctrl Delay			84.6									
HCM 6th LOS			F									

Intersection						
Int Delay, s/veh	0.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑↑	↑↑	
Traffic Vol, veh/h	57	42	0	296	29	0
Future Vol, veh/h	57	42	0	296	29	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	0	0	2
Mvmt Flow	62	46	0	322	32	0

Major/Minor	Major1	Major2	Minor1		
Conflicting Flow All	0	0	-	-	246 85
Stage 1	-	-	-	-	85 -
Stage 2	-	-	-	-	161 -
Critical Hdwy	-	-	-	-	6.6 6.23
Critical Hdwy Stg 1	-	-	-	-	5.4 -
Critical Hdwy Stg 2	-	-	-	-	5.8 -
Follow-up Hdwy	-	-	-	-	3.5 3.319
Pot Cap-1 Maneuver	-	-	0	-	737 973
Stage 1	-	-	0	-	943 -
Stage 2	-	-	0	-	857 -
Platoon blocked, %	-	-	-	-	
Mov Cap-1 Maneuver	-	-	-	-	737 973
Mov Cap-2 Maneuver	-	-	-	-	737 -
Stage 1	-	-	-	-	943 -
Stage 2	-	-	-	-	857 -

Approach	EB	WB	NB
HCM Control Delay, s	0	0	10.1
HCM LOS			B

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	737	-	-	-
HCM Lane V/C Ratio	0.043	-	-	-
HCM Control Delay (s)	10.1	-	-	-
HCM Lane LOS	B	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

Intersection						
Int Delay, s/veh	0.8					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↔			↑↑	↔	
Traffic Vol, veh/h	36	21	0	267	29	0
Future Vol, veh/h	36	21	0	267	29	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Stop	Stop
RT Channelized	-	None	-	None	-	None
Storage Length	-	-	-	-	0	-
Veh in Median Storage, #	0	-	-	0	0	-
Grade, %	0	-	-	0	0	-
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	0	0	2
Mvmt Flow	39	23	0	290	32	0

Major/Minor	Major1	Major2	Minor1	Minor2
Conflicting Flow All	0	0	-	196
Stage 1	-	-	-	51
Stage 2	-	-	-	145
Critical Hdwy	-	-	-	6.6
Critical Hdwy Stg 1	-	-	-	5.4
Critical Hdwy Stg 2	-	-	-	5.8
Follow-up Hdwy	-	-	-	3.5
Pot Cap-1 Maneuver	-	0	-	789
Stage 1	-	0	-	977
Stage 2	-	0	-	873
Platoon blocked, %	-	-	-	-
Mov Cap-1 Maneuver	-	-	-	789
Mov Cap-2 Maneuver	-	-	-	789
Stage 1	-	-	-	977
Stage 2	-	-	-	873

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

Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBT
Capacity (veh/h)	789	-	-	-
HCM Lane V/C Ratio	0.04	-	-	-
HCM Control Delay (s)	9.8	-	-	-
HCM Lane LOS	A	-	-	-
HCM 95th %tile Q(veh)	0.1	-	-	-

HCM 6th Signalized Intersection Summary
 4: Cooledge Rd/Northlake Pkwy & Lawrenceville Hwy

AHS Tucker Exchange TIA
 AM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↗	↗↗	↗	↗	↗↗	↗	↗	↗↗		↗	↗	↗
Traffic Volume (veh/h)	286	628	62	92	940	292	114	575	85	147	121	116
Future Volume (veh/h)	286	628	62	92	940	292	114	575	85	147	121	116
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1796	1781	1841	1811	1841	1826	1870	1826	1796	1870	1826
Adj Flow Rate, veh/h	314	690	65	101	1033	186	125	632	86	162	133	32
Peak Hour Factor	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
Percent Heavy Veh, %	2	7	8	4	6	4	5	2	5	7	2	5
Cap, veh/h	338	1680	743	371	1408	638	389	730	99	216	469	388
Arrive On Green	0.12	0.49	0.49	0.04	0.41	0.41	0.07	0.23	0.23	0.08	0.25	0.25
Sat Flow, veh/h	1781	3413	1510	1753	3441	1560	1739	3143	427	1711	1870	1547
Grp Volume(v), veh/h	314	690	65	101	1033	186	125	357	361	162	133	32
Grp Sat Flow(s),veh/h/ln	1781	1706	1510	1753	1721	1560	1739	1777	1793	1711	1870	1547
Q Serve(g_s), s	17.3	20.6	3.7	4.6	40.6	12.8	8.5	30.9	31.0	11.4	9.2	2.5
Cycle Q Clear(g_c), s	17.3	20.6	3.7	4.6	40.6	12.8	8.5	30.9	31.0	11.4	9.2	2.5
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.24	1.00		1.00
Lane Grp Cap(c), veh/h	338	1680	743	371	1408	638	389	412	416	216	469	388
V/C Ratio(X)	0.93	0.41	0.09	0.27	0.73	0.29	0.32	0.87	0.87	0.75	0.28	0.08
Avail Cap(c_a), veh/h	439	1680	743	430	1408	638	427	600	605	222	631	522
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	35.2	25.9	21.6	20.0	39.9	31.7	40.6	59.0	59.1	45.1	48.4	45.9
Incr Delay (d2), s/veh	22.5	0.2	0.1	0.4	3.4	1.2	0.5	8.9	9.0	12.9	0.3	0.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	9.3	8.3	1.3	1.9	17.4	5.0	3.7	14.8	15.0	5.6	4.3	1.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	57.7	26.0	21.6	20.4	43.3	32.9	41.1	67.9	68.1	58.0	48.7	46.0
LnGrp LOS	E	C	C	C	D	C	D	E	E	E	D	D
Approach Vol, veh/h		1069			1320			843			327	
Approach Delay, s/veh		35.1			40.1			64.0			53.1	
Approach LOS		D			D			E			D	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	25.9	71.5	16.5	46.1	12.6	84.8	19.5	43.1				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	29.0	39.0	14.0	54.0	12.0	56.0	14.0	54.0				
Max Q Clear Time (g_c+I1), s	19.3	42.6	10.5	11.2	6.6	22.6	13.4	33.0				
Green Ext Time (p_c), s	0.6	0.0	0.1	0.8	0.1	5.0	0.0	4.2				
Intersection Summary												
HCM 6th Ctrl Delay			45.4									
HCM 6th LOS			D									

HCM 6th Signalized Intersection Summary
 4: Cooledge Rd/Northlake Pkwy & Lawrenceville Hwy

AHS Tucker Exchange TIA
 PM Peak



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations	↘	↑↑	↗	↘	↑↑	↗	↘	↑↑		↘	↑	↗
Traffic Volume (veh/h)	197	1176	159	128	969	249	77	350	120	210	773	402
Future Volume (veh/h)	197	1176	159	128	969	249	77	350	120	210	773	402
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Work Zone On Approach		No			No			No			No	
Adj Sat Flow, veh/h/ln	1870	1841	1870	1870	1811	1870	1870	1870	1737	1826	1870	1870
Adj Flow Rate, veh/h	212	1265	165	138	1042	131	83	376	112	226	831	332
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	2	4	2	2	6	2	2	2	11	5	2	2
Cap, veh/h	201	1345	609	159	1323	609	117	832	245	394	690	584
Arrive On Green	0.06	0.38	0.38	0.06	0.38	0.38	0.04	0.31	0.31	0.10	0.37	0.37
Sat Flow, veh/h	1781	3497	1585	1781	3441	1585	1781	2707	796	1739	1870	1585
Grp Volume(v), veh/h	212	1265	165	138	1042	131	83	245	243	226	831	332
Grp Sat Flow(s),veh/h/ln	1781	1749	1585	1781	1721	1585	1781	1777	1727	1739	1870	1585
Q Serve(g_s), s	9.0	55.8	11.4	7.5	42.8	8.9	4.6	17.7	18.1	14.1	59.0	26.8
Cycle Q Clear(g_c), s	9.0	55.8	11.4	7.5	42.8	8.9	4.6	17.7	18.1	14.1	59.0	26.8
Prop In Lane	1.00		1.00	1.00		1.00	1.00		0.46	1.00		1.00
Lane Grp Cap(c), veh/h	201	1345	609	159	1323	609	117	546	531	394	690	584
V/C Ratio(X)	1.05	0.94	0.27	0.87	0.79	0.21	0.71	0.45	0.46	0.57	1.20	0.57
Avail Cap(c_a), veh/h	201	1345	609	159	1323	609	145	546	531	424	690	584
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	44.5	47.5	33.8	38.7	43.5	33.0	40.2	44.5	44.6	33.5	50.5	40.3
Incr Delay (d2), s/veh	78.3	14.0	1.1	37.1	4.8	0.8	11.3	0.6	0.6	1.6	105.6	1.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(95%),veh/ln	13.1	34.6	8.1	8.4	25.8	6.4	4.2	12.5	12.4	10.2	66.2	15.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	122.8	61.4	34.9	75.8	48.3	33.8	51.4	45.1	45.3	35.1	156.1	41.6
LnGrp LOS	F	E	C	E	D	C	D	D	D	D	F	D
Approach Vol, veh/h		1642			1311			571			1389	
Approach Delay, s/veh		66.7			49.7			46.1			109.0	
Approach LOS		E			D			D			F	
Timer - Assigned Phs	1	2	3	4	5	6	7	8				
Phs Duration (G+Y+Rc), s	15.0	67.5	12.5	65.0	15.0	67.5	22.3	55.2				
Change Period (Y+Rc), s	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0				
Max Green Setting (Gmax), s	9.0	59.0	9.0	59.0	9.0	59.0	19.0	49.0				
Max Q Clear Time (g_c+I1), s	11.0	44.8	6.6	61.0	9.5	57.8	16.1	20.1				
Green Ext Time (p_c), s	0.0	6.2	0.0	0.0	0.0	0.9	0.2	2.9				

Intersection Summary												
HCM 6th Ctrl Delay											71.7	
HCM 6th LOS											E	

Programmed Projects

Short Title COOLEGE ROAD WIDENING FROM US 78 (STONE MOUNTAIN FREEWAY) TO US 29 (LAWRENCEVILLE HIGHWAY)

GDOT Project No. N/A

Federal ID No. N/A

Status Long Range

Service Type Roadway / General Purpose Capacity

Sponsor City of Tucker

Jurisdiction DeKalb County

Analysis Level In the Region's Air Quality Conformity Analysis



Existing Thru Lane **LCI**

Planned Thru Lane **Flex**

Network Year

Corridor Length miles

Detailed Description and Justification

This project will widen Cooledge Road to 4 lanes from US 78 to US 29.

Phase Status & Funding Information		Status	FISCAL YEAR	TOTAL PHASE COST	BREAKDOWN OF TOTAL PHASE COST BY FUNDING SOURCE			
					FEDERAL	STATE	BONDS	LOCAL/PRIVATE
ALL	Local Jurisdiction/Municipality Funds		LR 2026-2030	\$15,000,000	\$0,000	\$0,000	\$0,000	\$15,000,000
				\$15,000,000	\$0,000	\$0,000	\$0,000	\$15,000,000

SCP: Scoping PE: Preliminary engineering / engineering / design / planning PE-OV: GDOT oversight services for engineering ROW: Right-of-way Acquisition
 UTL: Utility relocation CST: Construction / Implementation ALL: Total estimated cost, inclusive of all phases

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 CITY OF TUCKER
 12/17/2021

PLANNING & ZONING
 DEPARTMENT

SLUP-22-0001, CV-22-0001, CV-22-0002, CV-22-0003, CV-22-0004