



Mayor & City Council  
Regular Meeting Agenda

Monday, May 9, 2022, 7:00 PM

Tucker City Hall

1975 Lakeside Pkwy, Ste 350B, Tucker, GA 30084

Members:

Frank Auman, Mayor  
Roger W. Orlando, Council Member District 1, Post 1  
Cara Schroeder, Council Member District 2, Post 1  
Alexis Weaver, Council Member District 3, Post 1  
Virginia Rece, Council Member District 1, Post 2  
Noelle Monferdini, Council Member District 2, Post 2  
Anne Lerner, Council Member District 3, Post 2

Zoom Link: <https://us02web.zoom.us/j/81846152827> or Telephone 877 853 5247 (Toll Free) ID: 818 4615 2827

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Pages

A. CALL TO ORDER

B. ROLL CALL

C. PLEDGE OF ALLEGIANCE

The pledge will be led by the new Tucker Middle School Principal

D. MAYOR'S OPENING REMARKS

D.1. Proclamation for Manufacturing Day 4

D.2. Proclamation for Municipal Clerks Week 6

E. PUBLIC COMMENTS

F. APPROVAL OF THE AGENDA

G. APPROVAL OF THE MINUTES

G.1. Special Called Meeting - April 11, 2022 5:00 PM 8

G.2. Regular Meeting - April 11, 2022 7:00 PM 10

G.3. Special Called Meeting - April 20, 2022 9:00 AM 16

G.4. Special Called Meeting - April 25, 2022 7:00 PM 18

G.5. Work Session - April 25, 2022 7:15 PM 20

H. STAFF REPORTS - None

I. OLD BUSINESS

I.1.	Ordinance O2022-02-36 Courtney.Smith	22
	Second Read and Public Hearing of an Ordinance to the Mayor and Council for a Special Land Use Permit (SLUP-22-0001) to allow a mixed-use, multi-family development at 2059 Northlake Parkway (Tucker Exchange) with a density greater than 24 units per acre, with four concurrent variances for increased front yard setbacks (CV-22-0001), parking in the front yard (CV-22-0002), the elimination of block and street stub-out requirements (CV-22-0003), and the elimination of inter parcel access requirements (CV-22-0004).	
I.2.	Ordinance O2022-04-39 Beverly.Ragland	32
	Second Read and Public Hearing of an Ordinance to the Mayor and Council for a Fiscal Year 2022 Budget Amendment.	
J.	<b>NEW BUSINESS</b>	
J.1.	Ordinance O2021-10-22 Courtney.Smith	39
	First Read and Public Hearing of an Ordinance to the Mayor and Council for a Special Land Use Permit (SLUP-21-0004) to allow a drive-through restaurant and four concurrent variances for drive-through locational requirements (CV-21-0002), setback requirements (CV-21-0003), inter-parcel access requirements (CV-21-0004), and transitional buffer requirements (CV-22-0006) at 4435 Hugh Howell Road and 2239 Dillard Street for Chick-fil-A, Inc., c/o Bridgette Ganter.	
J.2.	Ordinance O2022-05-40 Courtney.Smith	329
	First Read and Public Hearing of an Ordinance to the Mayor and Council for a Rezoning (RZ-22-0001) from R-75 to RSM to allow for a townhome development at 3207, 3217, 3227, 3259 Lawrenceville Highway and 3563 Bishop Drive for Embry Development Company, c/o Mike Embry.	
J.3.	Contract TO2019-037-017-ARPA Carlton.Robertson	411
	Award of Task Order Contract to provide schematic design, construction documents, permitting, bidding and construction administration for the Johns Homestead Park (JHP) Park and Dam Improvement Project	
J.4.	Resolution R2022-05-17 Beverly.Ragland	426
	Georgia Fund 1 Resolution to Authorize Investment	
J.5.	Resolution R2022-05-18 Councilmembers.Rece and Schroeder	431
	A Resolution to Designate the Days for which City Hall will be closed April 1, 2022 through December 31, 2022.	

**K. MAYOR AND COUNCIL COMMENTS**



**L. EXECUTIVE SESSION**

- If required for personnel, real estate or litigation

**M. ACTION AFTER EXECUTIVE SESSION**

- As needed

**N. ADJOURNMENT**



# City of Tucker

## MEMO

**To:** Honorable Mayor and City Council Members  
**From:** Sonja Szubski  
**CC:** Tami Hanlin, City Manager  
**Date:** May 9, 2022  
**RE:** Memo for Proclamation on Manufacturing Day

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### Proclamation In honor of Tucker Manufacturing Day

Whereas, the City of Tucker is home to thousands of licensed businesses; and

Whereas, the City of Tucker features two thriving Community Improvement Districts, the Tucker-Northlake and Tucker Summit CID; and

Whereas, these partners are coming together on May 12 to showcase Tucker's industrial and manufacturing corridors; and

Whereas, the City of Tucker continues to be a regional model for smart economic growth; and

Whereas, the role of our business community is pivotal in the success of our City;

Now, therefore let it be proclaimed, by the Mayor and City Council of the City of Tucker that May 12, 2022 will be Manufacturing Day in the City of Tucker.

In witness whereof, I have hereunto set my hand and caused the Seal of the City of Tucker to be affixed this 9<sup>th</sup> day of May.

# Proclamation

In honor of Tucker



Manufacturing Day

**Whereas**, the City of Tucker  
businesses; and

is home to thousands of licensed

**Whereas**, the City of Tucker features two thriving Community Improvement Districts, the  
Tucker-Northlake and Tucker Summit CID; and

**Whereas**, these partners are coming together on May 12 to showcase Tucker's industrial  
and manufacturing corridors; and

**Whereas**, the City of Tucker continues to be a regional model for smart economic growth;  
and

**Whereas**, the role of our business community is pivotal in the success of our City;

**Now, therefore let it be proclaimed**, by the Mayor and City Council of  
the City of Tucker that May 12, 2022 will be Manufacturing Day in the City of Tucker.

**In witness whereof**, I have hereunto set my hand and caused the Seal of the City of  
Tucker to be affixed this 9<sup>th</sup> day of May.

Attest:

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Frank Auman, Mayor

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Bonnie Warne, City Clerk



# City of Tucker

## MEMO

**To:** Honorable Mayor and City Council Members  
**From:** Sonja Szubski  
**CC:** Tami Hanlin, City Manager  
**Date:** May 9, 2022  
**RE:** Memo for Proclamation for Municipal Clerks Week

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### Proclamation

In recognition of 53<sup>rd</sup> Annual Professional Municipal Clerks Week May 1-7, 2022

Whereas, the Office of the Professional Municipal Clerk, a time honored and vital part of local government exists throughout the world, and

Whereas, the Office of the Professional Municipal Clerk is the oldest among public servants, and

Whereas, the Office of the Professional Municipal Clerk provides the professional link between the citizens, the local governing bodies and agencies of government at other levels, and

Whereas, professional Municipal Clerks have pledged to be ever mindful of their neutrality and impartiality, rendering equal service to all.

Whereas, the Professional Municipal Clerk serves as the information center on functions of local government and community.

Whereas, it is most appropriate that we recognize the accomplishments of our Office of the Professional Municipal Clerk and our Clerk, Bonnie Warne.

Now, therefore let it be proclaimed, by the Mayor and City Council of the City of Tucker that the week of May 1-7, 2022 was recognized as Municipal Clerk Week.

In witness whereof, I have hereunto set my hand and caused the Seal of the City of Tucker to be affixed this May 9, 2022.

# Proclamation

In recognition of 53<sup>rd</sup>  
Municipal Clerks Week



Annual Professional  
May 1-7, 2022

**Whereas**, the Office of the Professional Municipal Clerk, a time honored and vital part of local government exists throughout the world, and

**Whereas**, the Office of the Professional Municipal Clerk is the oldest among public servants, and

**Whereas**, the Office of the Professional Municipal Clerk provides the professional link between the citizens, the local governing bodies and agencies of government at other levels, and

**Whereas**, professional Municipal Clerks have pledged to be ever mindful of their neutrality and impartiality, rendering equal service to all.

**Whereas**, the Professional Municipal Clerk serves as the information center on functions of local government and community.

**Whereas**, it is most appropriate that we recognize the accomplishments of our Office of the Professional Municipal Clerk and our Clerk, Bonnie Warne.

**Now, therefore let it be proclaimed**, by the Mayor and City Council of the City of Tucker that the week of May 1-7, 2022 was recognized as Municipal Clerk Week.

**In witness whereof**, I have hereunto set my hand and caused the Seal of the City of Tucker to be affixed this May 9, 2022.

Attest:

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Frank Auman, Mayor

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Bonnie Warne, City Clerk



**MAYOR & CITY COUNCIL  
SPECIAL CALLED MEETING MINUTES**

**Monday, April 11, 2022, 5:00 PM  
Tucker City Hall  
1975 Lakeside Pkwy, Ste 350B, Tucker, GA 30084**

Members Present: Frank Auman, Mayor  
Roger W. Orlando, Council Member District 1, Post 1  
Cara Schroeder, Council Member District 2, Post 1  
Alexis Weaver, Council Member District 3, Post 1  
Virginia Rece, Council Member District 1, Post 2  
Anne Lerner, Council Member District 3, Post 2  
Noelle Monferdini, Council Member District 2, Post 2

ZOOM link: <https://us02web.zoom.us/j/85693825870>

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**A. CALL TO ORDER**

Mayor Auman called the meeting to order at 5:00 PM.

**B. ROLL CALL**

The above were in attendance for a quorum.

**C. EXECUTIVE SESSION**

MOVER: N. Monferdini

SECONDER: C. Schroeder

Motion to enter into Executive Session for the purpose of personnel at 5:00 PM passed unanimously.

AYES: (7): F. Auman, R. Orlando, C. Schroeder, A. Weaver, V. Rece, A. Lerner, and N. Monferdini

**APPROVED (7 to 0)**

MOVER: A. Weaver

SECONDER: C. Schroeder

Motion to exit Executive Session and return to the called meeting at 6:47 PM passed unanimously.

AYES: (7): F. Auman, R. Orlando, C. Schroeder, A. Weaver, V. Rece, A. Lerner, and N. Monferdini

**APPROVED (7 to 0)**

**D. ACTION AFTER EXECUTIVE SESSION**

None

**E. ADJOURNMENT**

MOVER: N. Monferdini

SECONDER: C. Schroeder

Motion to Adjourn at 6:50 PM passed unanimously.

AYES: (7): F. Auman, R. Orlando, C. Schroeder, A. Weaver, V. Rece, A. Lerner, and N. Monferdini

**APPROVED (7 to 0)**

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APPROVED: Frank Auman, Mayor

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ATTEST: Bonnie Warne, Clerk

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Date Approved



**MAYOR & CITY COUNCIL  
REGULAR MEETING MINUTES**

**Monday, April 11, 2022, 7:00 PM  
Tucker City Hall  
1975 Lakeside Pkwy, Ste 350B, Tucker, GA 30084**

Members Present: Frank Auman, Mayor  
Roger W. Orlando, Council Member District 1, Post 1  
Cara Schroeder, Council Member District 2, Post 1  
Alexis Weaver, Council Member District 3, Post 1  
Virginia Rece, Council Member District 1, Post 2  
Anne Lerner, Council Member District 3, Post 2  
Noelle Monferdini, Council Member District 2, Post 2

ZOOM link: <https://us02web.zoom.us/j/85693825870>

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**A. CALL TO ORDER**

Mayor Auman called the meeting to order at 7:00 PM.

**B. ROLL CALL**

The above were in attendance for a quorum.

**C. PLEDGE OF ALLEGIANCE**

The pledge was led by Cub Scout Pack 142.

**D. MAYOR'S OPENING REMARKS**

Mayor Auman introduced the Finance Team: Erich Krahn, Finance Manager and Beverly Ragland, Finance Director, mentioned that 15 new Occupational Tax Certificates were applied for, and that our meetings follow the Rules of Decorum and Robert's Rules of Order.

**E. PUBLIC COMMENTS**

Public comments were heard from 6 residents concerning the Chamblee-Tucker Road Lane Diet, AHS development opposed due to apartment cost too high and need more greenspace, playing in the park after closed, too many trees being destroyed, and rezoning.

**F. APPROVAL OF THE AGENDA**

Motion to approve the agenda as presented.

MOVER: N. Monferdini

SECONDER: C. Schroeder

AYES: (7): F. Auman, R. Orlando, C. Schroeder, A. Weaver, V. Rece, A. Lerner, and N. Monferdini



**APPROVED (7 to 0)**

**G. APPROVAL OF THE MINUTES**

**G.1 Special Called: March 5, 2022**

Motion to approve the minutes as presented.

MOVER: N. Monferdini

SECONDER: C. Schroeder

AYES: (7): F. Auman, R. Orlando, C. Schroeder, A. Weaver, V. Rece, A. Lerner, and N. Monferdini

**APPROVED (7 to 0)**

**G.2 Regular Meeting - March 14, 2022**

Motion to approve the minutes as presented.

MOVER: N. Monferdini

SECONDER: C. Schroeder

AYES: (7): F. Auman, R. Orlando, C. Schroeder, A. Weaver, V. Rece, A. Lerner, and N. Monferdini

**APPROVED (7 to 0)**

**G.3 Special Called - March 28, 2022**

Motion to approve the minutes as presented.

MOVER: N. Monferdini

SECONDER: C. Schroeder

AYES: (7): F. Auman, R. Orlando, C. Schroeder, A. Weaver, V. Rece, A. Lerner, and N. Monferdini

**APPROVED (7 to 0)**

**H. STAFF REPORTS**

**H.1 Distribution of Draft FY23 Budget**

Finance Director Beverly Ragland, in accordance with O.C.G.A § 36-81-5, presented a first draft of the Fiscal Year 2023 operating and capital budget to City Council. Budget Workshops are scheduled for April 25th at 7:00 pm and tentatively on May 2nd at 7:00 pm. The First Read and Public Hearing of the Fiscal Year 2023 budget will be held on May 23rd at 7:00 pm during a regular scheduled meeting. The Second Read and Public Hearing will be June 13th at 7:00 pm during a regular scheduled meeting. The City Council will consider adoption of the budget on June 13, 2022. A copy of the proposed budget will be available for review on the city website and in the City Clerk's Office.

**H.2 Update on Capital Transportation Projects**

City Engineer Ken Hildebrandt presented an update on Capital Transportation Projects:

Transportation Projects Under Contract - Spring, 2022

○ MARTA Bus Stops	\$60,815	
○ Church / Tucker Ind S/W	\$175,868	
○ Brockett / Montreal S/W	\$277,760	
○ Chamblee Tucker Lane Diet	\$2,243,251	
○ Resurfacing	\$3,145,027	
○ Full Depth Reclamation	\$547,492	
○ Segment 1A Trail	\$1,158,567	
○ Intersection Radii	\$74,890	
○ Hugh Howell Road Trail	\$363,570	
○ Cooledge Sidewalk	\$474,820	
○ Idlewood Rd @ Sarr Pkwy	\$8,650	Total \$8,522,060.00

Additional Projects:

- MIB @ Hugh Howell Road
- MIB @ US 78
- Tucker-Northlake Trail
- Old Norcross Rd Sidewalk
- MIB @ Tuckerstone Pkwy
- Henderson Rd Sidewalk
- Lavista Rd @ Chamblee Tucker Rd
- Lawrenceville Hwy @ Lynburn Dr
- Downtown RRFBS

**I. OLD BUSINESS**

**I.1 Ordinance O2022-02-36**

Kylie Thomas, City Planner, spoke on the second read for a Special Land Use Permit (SLUP-22-0001) to allow a mixed-use, multi-family development at 2059 Northlake Parkway (Tucker Exchange) with a density greater than 24 units per acre, with four concurrent variances for increased front yard setbacks (CV-22-0001), parking in the front yard (CV-22-0002), the elimination of block and street stub-out requirements (CV-22-0003), and the elimination of inter parcel access requirements (CV-22-0004). Staff is recommending deferring this application to the May 9, 2022 City Council meeting in order to continue to evaluate the proposed request and finalize conditions.

Mayor Auman held a public hearing which the applicant and one citizen spoke in favor and 3 citizens spoke in opposition.

Motion to defer the application until the May 9, 2022 City Council meeting.

MOVER: A. Lerner

SECONDER: A. Weaver

Motion to defer the application until the May 9, 2022 City Council Meeting.

AYES: (6): F. Auman, R. Orlando, C. Schroeder, A. Weaver, V. Rece, and A. Lerner

NAYES: (1): N. Monferdini

**APPROVED (6 to 1)**

**I.2 Ordinance O2021-11-29**

Kylie Thomas, City Planner, spoke on the second read on a City initiated Rezoning (RZ-21-0007) at 1220 Richardson Street.

Mayor Auman held a public hearing which the owner spoke in favor and nobody spoke in opposition.

Motion to defer to October 10, 2022 City Council meeting.

MOVER: N. Monferdini

SECONDER: R. Orlando

Motion to defer until October 10, 2022 City Council Meeting passed unanimously.

AYES: (7): F. Auman, R. Orlando, C. Schroeder, A. Weaver, V. Rece, A. Lerner, and N. Monferdini

**APPROVED (7 to 0)**

**I.3 Ordinance O2021-11-30**

Kylie Thomas, City Planner, spoke on the second read on a City initiated Rezoning (RZ-21-0008) at 1250 Richardson Street.

Mayor Auman held a public hearing which the owner spoke in favor and nobody spoke in opposition.

Motion to defer to October 10, 2022 City Council meeting.

MOVER: N. Monferdini

SECONDER: R. Orlando

Motion to defer until October 10, 2022 City Council Meeting passed unanimously.

AYES: (7): F. Auman, R. Orlando, C. Schroeder, A. Weaver, V. Rece, A. Lerner, and N. Monferdini

**APPROVED (7 to 0)**

**I.4 Resolution R2022-04-16 Moratorium**

Kylie Thomas, Planner, mentioned that an amended moratorium will need to be considered until October 10, 2022, which applies to all properties currently zoned M (Light Industrial) within the area bounded by E. Ponce De Leon Avenue, Juliette Road, US. 78 and Georgia 10, which the City's staff will not accept, process, or approve new applications for development of any property except for minor land improvements that bring the existing business into compliance.

Motion to adopt the moratorium by resolution R2022-04-16 passed unanimously.

MOVER: N. Monferdini

SECONDER: V. Rece

AYES: (7): F. Auman, R. Orlando, C. Schroeder, A. Weaver, V. Rece, A. Lerner, and N. Monferdini

**APPROVED (7 to 0)**

**J. NEW BUSINESS**

**J.1 Ordinance O2022-04-39**

Finance Director Beverly Ragland spoke on the first read of an ordinance for a Fiscal Year 2022 Budget Amendment. Mayor Auman held a public hearing, which nobody spoke in favor or opposition.

**FIRST READ**

**J.2 Contract C2022-007-SP2202 with Resolution R2022-04-13**

City Engineer Ken Hildebrandt spoke on the bid ITB 2022-007 for the Hugh Howell Road Multi-Use Trail Project. Motion to award Contract C2022-007-SP2202 to DAF Concrete by Resolution R2022-04-13 passed unanimously.

MOVER: V. Rece

SECONDER: R. Orlando

AYES: (7): F. Auman, R. Orlando, C. Schroeder, A. Weaver, V. Rece, A. Lerner, and N. Monferdini

**APPROVED (7 to 0)**

**J.3 Contract C2022-008-CE21,22/SP19,20,21,22 - Resolution R2022-04-14**

City Engineer Ken Hildebrandt spoke on the bid ITB 2022-008 for the Cooledge Road Sidewalk Project. Motion to award Contract C2022-008-CE21,22/SP19,20,21,22 to DAF Concrete by Resolution R2022-04-14 passed unanimously.

MOVER: C. Schroeder

SECONDER: N. Monferdini

AYES: (7): F. Auman, R. Orlando, C. Schroeder, A. Weaver, V. Rece, A. Lerner, and N. Monferdini

**APPROVED (7 to 0)**

**J.4 Contract SCO2022-012-SP2013**

Parks & Recreation Director Carlton Robertson spoke on the State Bid SCO2022-012 for the Fitzgerald Field 3 Bathroom/Dugout Improvements Project. Motion to award Contract SCO2022-012-SP2013 to JOC Construction in the amount of \$90,814.56 for the Fitzgerald Park field #3 Concession/Restroom Renovation passed unanimously.

MOVER: A. Lerner

SECONDER: A. Weaver

AYES: (7): F. Auman, R. Orlando, C. Schroeder, A. Weaver, V. Rece, A. Lerner, and N. Monferdini

**APPROVED (7 to 0)**

**J.5 Resolution R2022-04-15**

Motion to reappoint the Board Members to the Construction Board of Appeals for another 4 year term passed unanimously.

MOVER: F. Auman

SECONDER: A. Lerner

AYES: (7): F. Auman, R. Orlando, C. Schroeder, A. Weaver, V. Rece, A. Lerner, and N. Monferdini

**APPROVED (7 to 0)**

**K. MAYOR AND COUNCIL COMMENTS**

The Mayor and Council thanked everyone for attending.

**L. EXECUTIVE SESSION**

None

**M. ACTION AFTER EXECUTIVE SESSION**

None

**N. ADJOURNMENT**

MOVER: N. Monferdini

SECONDER: C. Schroeder

Motion to Adjourn at 9:34 PM passed unanimously.

AYES: (7): F. Auman, R. Orlando, C. Schroeder, A. Weaver, V. Rece, A. Lerner, and N. Monferdini

**APPROVED (7 to 0)**

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APPROVED: Frank Auman, Mayor

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ATTEST: Bonnie Warne, Clerk

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Date Approved



**MAYOR & CITY COUNCIL  
SPECIAL CALLED MEETING MINUTES**

**Wednesday, April 20, 2022, 9:00 AM  
Tucker City Hall  
1975 Lakeside Pkwy, Ste 350B, Tucker, GA 30084**

Members Present: Frank Auman, Mayor  
Roger W. Orlando, Council Member District 1, Post 1  
Cara Schroeder, Council Member District 2, Post 1  
Alexis Weaver, Council Member District 3, Post 1  
Virginia Rece, Council Member District 1, Post 2  
Noelle Monferdini, Council Member District 2, Post 2  
Anne Lerner, Council Member District 3, Post 2

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**A. CALL TO ORDER**

Mayor Auman called the meeting to order at 9:00 AM.

**B. ROLL CALL**

The above were in attendance for a quorum.

**C. EXECUTIVE SESSION**

MOVER: N. Monferdini

SECONDER: A. Weaver

Motion to enter into Executive Session for the purpose of personnel at 9:00 AM passed unanimously.

AYES: (7): F. Auman, R. Orlando, C. Schroeder, A. Weaver, V. Rece, N. Monferdini, and A. Lerner

**APPROVED (7 to 0)**

MOVER: A. Weaver

SECONDER: N. Monferdini

Motion to exit Executive Session and return to the called meeting at 4:49 PM passed unanimously.

AYES: (7): F. Auman, R. Orlando, C. Schroeder, A. Weaver, V. Rece, N. Monferdini, and A. Lerner

**APPROVED (7 to 0)**

**D. ACTION AFTER EXECUTIVE SESSION**

None

**E. ADJOURNMENT**

MOVER: A. Weaver

SECONDER: N. Monferdini

Motion to Adjourn at 4:49 PM passed unanimously.

AYES: (7): F. Auman, R. Orlando, C. Schroeder, A. Weaver, V. Rece, N. Monferdini, and A. Lerner

**APPROVED (7 to 0)**

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APPROVED: Frank Auman, Mayor

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ATTEST: Bonnie Warne, Clerk

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Date Approved



**MAYOR & CITY COUNCIL  
SPECIAL CALLED MEETING MINUTES**

**Monday, April 25, 2022, 7:00 PM  
Tucker City Hall  
1975 Lakeside Pkwy, Ste 350B, Tucker, GA 30084**

Members Present: Frank Auman, Mayor  
Roger W. Orlando, Council Member District 1, Post 1  
Cara Schroeder, Council Member District 2, Post 1  
Alexis Weaver, Council Member District 3, Post 1  
Virginia Rece, Council Member District 1, Post 2  
Noelle Monferdini, Council Member District 2, Post 2  
Anne Lerner, Council Member District 3, Post 2

Zoom Link: <https://us02web.zoom.us/j/810552171245>

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**A. CALL TO ORDER**

Mayor Auman called the meeting to order at 7:00 PM.

**B. ROLL CALL**

The above were in attendance for a quorum.

**C. EXECUTIVE SESSION**

MOVER: N. Monferdini

SECONDER: C. Schroeder

Motion to enter into Executive Session for the purpose of personnel at 7:00 PM passed unanimously.

AYES: (7): F. Auman, R. Orlando, C. Schroeder, A. Weaver, V. Rece, N. Monferdini, and A. Lerner

**APPROVED (7 to 0)**

MOVER: N. Monferdini

SECONDER: C. Schroeder

Motion to exit Executive Session and return to the called meeting at 7:13 PM passed unanimously.



AYES: (7): F. Auman, R. Orlando, C. Schroeder, A. Weaver, V. Rece, N. Monferdini, and A. Lerner

**APPROVED (7 to 0)**

**D. ACTION AFTER EXECUTIVE SESSION**

None

**E. ADJOURNMENT**

MOVER: A. Weaver

SECONDER: V. Rece

Motion to Adjourn at 7:18 PM passed unanimously.

AYES: (7): F. Auman, R. Orlando, C. Schroeder, A. Weaver, V. Rece, N. Monferdini, and A. Lerner

**APPROVED (7 to 0)**

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APPROVED: Frank Auman, Mayor

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ATTEST: Bonnie Warne, Clerk

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Date Approved



**MAYOR & CITY COUNCIL**

**WORK SESSION MINUTES**

**Monday, April 25, 2022, 7:15 PM**

**Tucker City Hall**

**1975 Lakeside Pkwy, Ste 350B, Tucker, GA 30084**

Members Present: Frank Auman, Mayor  
Roger W. Orlando, Council Member District 1, Post 1  
Cara Schroeder, Council Member District 2, Post 1  
Alexis Weaver, Council Member District 3, Post 1  
Virginia Rece, Council Member District 1, Post 2  
Noelle Monferdini, Council Member District 2, Post 2  
Anne Lerner, Council Member District 3, Post 2

Zoom Link: <https://us02web.zoom.us/j/81052171245>

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**A. CALL TO ORDER**

Mayor Auman called the meeting to order at 7:18 PM.

**B. ROLL CALL**

The above were in attendance for a quorum.

**C. MAYOR'S OPENING REMARKS**

Mayor Auman stated that this is a budget workshop which the City Manager presents the draft budget for discussion. The Finance Director along with Department Staff will answer any questions.

**D. APPROVAL OF THE AGENDA**

MOVER: A. Weaver

SECONDER: V. Rece

Motion to approve the agenda as presented passed unanimously.

AYES: (7): F. Auman, R. Orlando, C. Schroeder, A. Weaver, V. Rece, N. Monferdini, and A. Lerner

**APPROVED (7 to 0)**

**E. NEW BUSINESS**

**E.1 FY23 Budget Workshop**

Finance Director Beverly Ragland gave an overview of the proposed FY2023 Budget. The first draft of the FY2023 budget was distributed on April 11<sup>th</sup>. The budget will be reviewed at this workshop and on May 2<sup>nd</sup> if needed. The first reading/public hearing of the FY2023 Operating and Capital Budget is scheduled for May 23<sup>rd</sup>, and second reading/public hearing and proposed budget adoption is scheduled for June 13<sup>th</sup>.

**F. EXECUTIVE SESSION**

None

**G. ACTION AFTER EXECUTIVE SESSION**

None

**H. ADJOURNMENT**

MOVER: N. Monferdini

SECONDER: V. Rece

Motion to Adjourn at 9:46 PM passed unanimously.

AYES: (7): F. Auman, R. Orlando, C. Schroeder, A. Weaver, V. Rece, N. Monferdini, and A. Lerner

**APPROVED (7 to 0)**

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APPROVED: Frank Auman, Mayor

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ATTEST: Bonnie Warne, Clerk

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Date Approved



## MEMO

**To:** Honorable Mayor and City Council Members  
**From:** Kylie Thomas  
**CC:** Tami Hanlin, City Manager  
**Date:** April 6, 2022  
**RE:** O2022-02-036 SLUP-22-0001, CV-22-0001, CV-22-0002, CV-22-0003, CV-22-0004

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### UPDATE:

Staff is recommending deferring this application to the May 9, 2022 City Council meeting in order to continue to evaluate the proposed request and finalize conditions regarding the workforce housing component.

### Issue:

The applicant is requesting a Special Land Use Permit (SLUP) to allow for a mixed-use, multi-family development (office-residential) with a density greater than 24 units per acre (497 total residential units/38.2 units per acre). The applicant is also requesting four concurrent variances, CV-22-0001, CV-22-0002, CV-22-0003, and CV-22-0004, regarding increased front yard setbacks, parking in the front yard, the elimination of block and street stub-out requirements, and the elimination of inter parcel access requirements, in the NL-2 zoning district.

### Recommendation:

Staff recommends denial of the Special Land Use Permit and approval of the concurrent variances, should the SLUP be approved.

Planning Commission recommends approval of the Special Land Use Permit and concurrent variances, with amended staff conditions.

### Background:

2059 Northlake Parkway is developed as an office complex, known as the Tucker Exchange, with a 252,091 sq.ft., “Z” shaped office building, that was constructed in 1975. The property is fully developed and is accessed via three full-access drive aisles, two from East Exchange Place and one from Northlake Parkway. The subject property is bounded to the north by East Exchange Place and a rail line to the south. East of the subject property is Oglethorpe Power Corporation and west is Northlake Parkway. Hudson Grille is located to the northwest of the subject property.

The proposed development will contain a total of 497 residential units spread across three new residential buildings (368 units) and the existing office building (129 units). The two residential buildings shown along Northlake Parkway are proposed to be eight stories (approximately 83’ tall). The third residential building on the northeastern side of the property, is proposed to be nine-stories (approximately 89’ tall). The existing office building, which is located between the residential buildings, is five stories and 87.1’ tall.

A large, 32,000-square foot pocket park is located central to the development that will consist of a greenspace and pool. The clubhouse building shown on the site plan is actually an open-air bathroom building that includes no conditioned space. A 10-foot sidewalk/multiuse trail is shown along both Northlake Parkway and East Exchange Place. No trail connection is proposed through the site, but the applicant has shown a 15-foot wide easement for future trail connection that runs from the rail line through the development to East Exchange Place. The Trail Master Plan shows the trail running along the rail line and then cuts northwest to run along East Exchange Place. The applicant is proposing approximately 694 surface level parking spaces, which will consist of 651 standard, 10 compact, and 33 handicapped spaces dispersed throughout the site.

The developer has offered that a minimum of 15% of the units will qualify as workforce housing units, defined as housing that is affordable to households earning between 80 and 140 percent of area median income (AMI).

The intent of the NL-2 (Northlake Office Park) zoning district is to reflect established office, retail and multifamily areas and to allow residents to live close to employment and provide accessibility to shopping areas.

**Summary:**

Although the request meets the intent of the Comprehensive Plan in terms of primary land uses and development strategies, the massing, scale, and density of the proposed development does not comply with the surrounding area. A parking deck, reduced unit count, integrating work space into the 129 units in the existing office building, and improved architectural features would make the development more compatible with the character of the area. Smaller building massing would also be more appropriate to locate abutting the street, creating a more pedestrian oriented community.

However, the proposal would cater to a demographic who wants the option to live and work in the same location and provide an important workforce housing component in the city.

**Financial Impact:** NA

Orange = Planning Commission Edits

Green = Applicant Edits

Blue= Working Edits

If the SLUP is denied, the concurrent variances should be denied as well. However, if the SLUP is recommended for approval/approved, staff recommends approval of the four concurrent variances (CV-22-0001, CV-22-0002, CV-22-0003, & CV-22-0004).

Should the governing bodies choose to approve the Special Land Use Permit request, Staff recommends the request be approved subject to the following conditions:

1. The property shall be developed in general conformance with the site plan received by the City of Tucker Planning and Zoning Department on **May 4, 2022**, with changes to meet these conditions and other requirements of the code.
2. The use of the development shall be limited to office, **retail/restaurant**, co-working space, and multifamily residential, which shall consist of a maximum of **280** multi-family units in three residential buildings and a maximum of 129 residential units in the existing office building.
- ~~3. The 129 residential units in the existing office building shall be limited to one and two bedroom units with dedicated workspace within each unit.~~
4. The two apartment buildings closest to Northlake Parkway shall be limited to a maximum height of **6 stories or 63'** and the third apartment building, closest to East Exchange Place shall be limited to **7 stories or 72'**.
5. Building elevations shall be constructed in general conformance with the architectural designs received by the City of Tucker Planning and Zoning Department on **May 4, 2022**.
- 6. A minimum of 640 parking spaces shall be provided.**
- ~~6. Additional parking shall be provided, as well as additional parking lot landscaping that complies with the regulations of the Zoning Ordinance.~~
7. All ground floor units fronting Northlake Parkway shall have a patio with direct access to an internal sidewalk.
8. All ground floor units abutting the common amenity space shall have a patio with direct access to the amenity space.
9. All signage shall comply with the Sign Ordinance.
10. Utilities shall be located underground.

Orange = Planning Commission Edits

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11. The minimum lease term shall not be shorter than 6 months.
12. An on-site leasing office with property maintenance staff shall be provided to serve as a contact point for residents and local authorities.
13. All businesses operating at this location, including the office spaces ~~and in the~~ residential units, shall, **where required**, comply with the City of Tucker requirements for Occupational Tax Certificates.
14. **A minimum of** 15% of the units shall qualify as workforce housing units, defined as housing that is affordable to households earning between 80 and 140 percent of area median income (AMI). AMI shall be defined as the area median income for the area within a 3-mile radius of the subject property at the time of Certificate of Occupancy issuance, **and recalculated on each annual anniversary date. Owner shall submit proof of compliance with this condition by December 31 of each year, starting with the calendar year after the final Certificate of Occupancy issues, to the Planning and Zoning Director.**
  - a. **The breakdown of workforce housing units shall generally comply with the following ratios:**
    - i. **Studios: 20%;**
    - ii. **1-Bed: 65%;**
    - iii. **2-Bed: 10%; and**
    - iv. **3-Bed: 5%.**
  - b. **The workforce housing units shall generally be interspersed with all other dwelling units and shall be provided in all four buildings shown on the site plan submitted May 4, 2022.**
  - c. **The interior and exterior finish, durability, and quality of construction of the workforce housing units shall be compatible with and comparable in quality and durability to the rest of the dwelling units in the development and shall comply with the design standards of the NL-2 zoning district.**
  - d. **Renewal of an OTC for the entire development shall be required annually, contingent upon compliance with workforce housing requirements.**
15. Owner/Developer shall allow for future interparcel access to the adjacent properties to the east and west. **Traffic barriers** may be temporarily put in drive aisle radius to allow parking until the adjacent properties are redeveloped. Owner/Developer shall grant a construction easement to adjacent property owner when the future interparcel access to the east and/or west is constructed.
16. Owner/Developer shall construct a ten foot (10') wide concrete trail and a five foot (5') landscape strip along the entire frontage of Northlake and East Exchange Place, **as shown in the current version of the Trail Master Plan.** An additional five foot (5')

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Green = Applicant Edits

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wide street furniture zone shall be provided along Northlake Parkway.

17. Owner/Developer shall construct a ten foot (10') wide trail **constructed of pervious concrete, subject to review and approval of the City Engineer**, through the center of the development **as shown on the site plan and per the current version of the Trail Master Plan**. Owner/Developer shall provide the city with a permanent easement for the trail. The easement shall be dedicated at no cost to the City by time of ~~LDP~~ **Certificate of Occupancy** issuance.
18. Owner/Developer shall construct ADA compliant internal sidewalks with **pervious concrete, subject to review and approval of the City Engineer** and crosswalks that will provide pedestrian connectivity from all apartment buildings to the sidewalk along Northlake Parkway and East Exchange Place. A pedestrian circulation plan shall be subject to review and approval of the Planning and Zoning Director.
19. A maximum of twenty percent (20%) of parking spaces may be compact spaces. A compact space shall be defined as any space narrower than nine feet (9') in width. Compact spaces shall be identified with appropriate signage.
20. The Development shall be limited to a maximum of one (1) right/~~left~~ in / right out only curb cut on Northlake Parkway and two (2) full access curb cuts on East Exchange Place. **Further, Owner shall add a "No Left Turn" sign and a raised median at the Northlake Parkway curb cut to restrict left-turning movements onto Northlake Parkway.**
21. Owner/Developer shall construct a deceleration lane at the site entrance on Northlake Parkway.
22. Owner/Developer shall dedicate at no cost to the City of Tucker such additional right-of-way along the entire frontage of Northlake Parkway such that there is a minimum of seventy-five feet (75') from centerline, twelve feet (12') from back of curb, or two feet (2') from back of sidewalk, whichever is greater.
23. **Owner/Developer shall provide stormwater management in compliance with Tucker's Post Construction Stormwater Management Ordinance.**



**AN ORDINANCE FOR SPECIAL LAND USE PERMIT 22-0001 IN LAND LOT 189 OF THE 18<sup>th</sup>  
DISTRICT TO ALLOW FOR DENSITY OVER 24 UNITS PER ACRE FOR AHS AT 2059  
NORTHLAKE PARKWAY.**

**WHEREAS:** Notice to the public regarding said special land use permit and concurrent variances have been duly published in The Champion, the Official News Organ of Tucker; and

**WHEREAS:** A Public Hearing was held by the Mayor and City Council of Tucker on March 14, 2022 and May 9, 2022;

**WHEREAS:** The Mayor and City Council is the governing authority for the City of Tucker;

**WHEREAS:** The Mayor and City Council has reviewed the special land use request and concurrent variances based on the criteria found in Section 46-1594 and 46-1633 of the Zoning Ordinance of the City of Tucker;

**NOW THEREFORE,** the Mayor and City Council of the City of Tucker while in Regular Session on May 9, 2022 hereby ordains and approves Special Land Use Permit 22-0001 to allow for a mixed-use, multifamily development with a density over 24 units per acre, subject to the following conditions:

1. The property shall be developed in general conformance with the site plan received by the City of Tucker Planning and Zoning Department on May 4, 2022, with changes to meet these conditions and other requirements of the code.
2. The use of the development shall be limited to office, retail/restaurant, co-working space, and multifamily residential, which shall consist of a maximum of 280 multi-family units in three residential buildings and a maximum of 129 residential units in the existing office building.
3. The two apartment buildings closest to Northlake Parkway shall be limited to a maximum height of 6 stories or 63' and the third apartment building, closest to East Exchange Place shall be limited to 7 stories or 72'.
4. Building elevations shall be constructed in general conformance with the architectural designs received by the City of Tucker Planning and Zoning Department on May \_\_, 2022.
5. A minimum of 640 parking spaces shall be provided.
6. All ground floor units fronting Northlake Parkway shall have a patio with direct access to an internal sidewalk.
7. All ground floor units abutting the common amenity space shall have a patio with direct access to the amenity space.
8. All signage shall comply with the Sign Ordinance.

9. Utilities shall be located underground.
10. The minimum lease term shall not be shorter than 6 months.
11. An on-site leasing office with property maintenance staff shall be provided to serve as a contact point for residents and local authorities.
12. All businesses operating at this location, including the office spaces in the residential units, shall, where required, comply with the City of Tucker requirements for Occupational Tax Certificates.
13. A minimum of 15% of the units shall qualify as workforce housing units, defined as housing that is affordable to households earning between 80 and 140 percent of area median income (AMI). AMI shall be defined as the area median income for the area within a 3-mile radius of the subject property at the time of Certificate of Occupancy issuance and recalculated on each annual anniversary date. Owner shall submit proof of compliance with this condition by December 31 of each year, starting with the calendar year after the final Certificate of Occupancy issues, to the Planning and Zoning Director.
  - a. The breakdown of workforce housing units shall generally comply with the following ratios:
    - i. Studios: 20%;
    - ii. 1-Bed: 65%;
    - iii. 2-Bed: 10%; and
    - iv. 3-Bed: 5%.
  - b. The workforce housing units shall generally be interspersed with all other dwelling units and shall be provided in all four buildings shown on the site plan submitted May 4, 2022.
  - c. The interior and exterior finish, durability, and quality of construction of the workforce housing units shall be compatible with and comparable in quality and durability to the rest of the dwelling units in the development and shall comply with the design standards of the NL-2 zoning district.
  - d. Renewal of an OTC for the entire development shall be required annually, contingent upon compliance with workforce housing requirements.
14. Owner/Developer shall allow for future interparcel access to the adjacent properties to the east and west. Traffic barriers may be temporarily put in drive aisle radius to allow parking until the adjacent properties are redeveloped. Owner/Developer shall grant a construction easement to adjacent property owner when the future interparcel access to the east and/or west is constructed.
15. Owner/Developer shall construct a ten-foot (10') wide concrete trail and a five-foot (5') landscape strip along the entire frontage of Northlake and East Exchange Place, as shown in the current version of the Trail Master Plan. An additional five foot (5') wide street furniture zone shall be provided along Northlake Parkway.
16. Owner/Developer shall construct a ten-foot (10') wide trail constructed of pervious concrete, subject to review and approval of the City Engineer, through the center of the development as shown on the site plan and per the current version of the Trail Master Plan. Owner/Developer

shall provide the city with a permanent easement for the trail. The easement shall be dedicated at no cost to the City by time of Certificate of Occupancy issuance.

17. Owner/Developer shall construct ADA compliant internal sidewalks with pervious concrete, subject to review and approval of the City Engineer and crosswalks that will provide pedestrian connectivity from all apartment buildings to the sidewalk along Northlake Parkway and East Exchange Place. A pedestrian circulation plan shall be subject to review and approval of the Planning and Zoning Director.
18. A maximum of twenty percent (20%) of parking spaces may be compact spaces. A compact space shall be defined as any space narrower than nine feet (9') in width. Compact spaces shall be identified with appropriate signage.
19. The Development shall be limited to a maximum of one (1) right/left in / right out only curb cut on Northlake Parkway and two (2) full access curb cuts on East Exchange Place. Further, Owner shall add a "No Left Turn" sign and a raised median at the Northlake Parkway curb cut to restrict left-turning movements onto Northlake Parkway.
20. Owner/Developer shall construct a deceleration lane at the site entrance on Northlake Parkway.
21. Owner/Developer shall dedicate at no cost to the City of Tucker such additional right-of-way along the entire frontage of Northlake Parkway such that there is a minimum of seventy-five feet (75') from centerline, twelve feet (12') from back of curb, or two feet (2') from back of sidewalk, whichever is greater.
22. Owner/Developer shall provide stormwater management in compliance with Tucker's Post Construction Stormwater Management Ordinance.

So effective this 9<sup>th</sup> day of May 2022.

Approved by:

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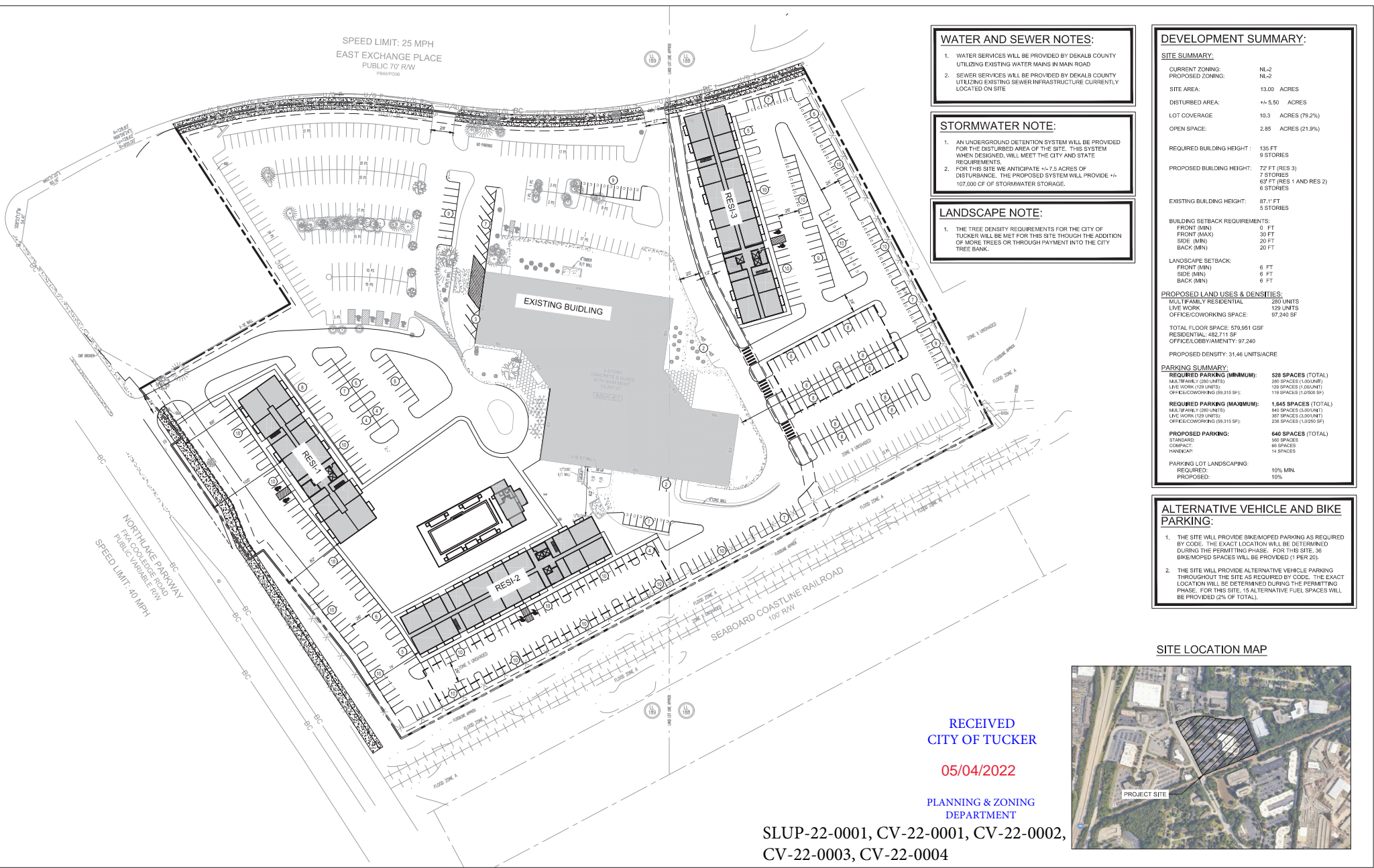
Frank Auman, Mayor

Attest:

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Bonnie Warne, City Clerk

SEAL



**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

**STORMWATER NOTE:**

1. AN UNDERGROUND DETENTION SYSTEM WILL BE PROVIDED FOR THE DISTURBED AREA OF THE SITE. THIS SYSTEM WHEN DESIGNED, WILL MEET THE CITY AND STATE REQUIREMENTS.
2. FOR THIS SITE WE ANTICIPATE +/- 5 ACRES OF DISTURBANCE. THE PROPOSED SYSTEM WILL PROVIDE +/- 107,000 CF OF STORMWATER STORAGE.

**LANDSCAPE NOTE:**

1. THE TREE DENSITY REQUIREMENTS FOR THE CITY OF TUCKER WILL BE MET FOR THIS SITE THROUGH THE ADDITION OF MORE TREES OR THROUGH PAYMENT INTO THE CITY TREE BANK.

DEVELOPMENT SUMMARY:	
<b>SITE SUMMARY:</b>	
CURRENT ZONING:	NL-2
PROPOSED ZONING:	NL-2
SITE AREA:	13.00 ACRES
DISTURBED AREA:	+/- 5.50 ACRES
LOT COVERAGE:	10.3 ACRES (79.2%)
OPEN SPACE:	2.85 ACRES (21.9%)
REQUIRED BUILDING HEIGHT:	135 FT 9 STORIES
PROPOSED BUILDING HEIGHT:	72 FT (RES 3) 7 STORIES 63 FT (RES 1 AND RES 2) 6 STORIES
EXISTING BUILDING HEIGHT:	87.1 FT 5 STORIES
<b>BUILDING SETBACK REQUIREMENTS:</b>	
FRONT (MIN)	0 FT
FRONT (MAX)	30 FT
SIDE (MIN)	20 FT
BACK (MIN)	20 FT
<b>LANDSCAPE SETBACK:</b>	
FRONT (MIN)	6 FT
SIDE (MIN)	6 FT
BACK (MIN)	6 FT
<b>PROPOSED LAND USES &amp; DENSITIES:</b>	
MULTIFAMILY RESIDENTIAL	280 UNITS
LIVE WORK	129 UNITS
OFFICE/COWORKING SPACE:	97,240 SF
TOTAL FLOOR SPACE:	579,951 CSF
RESIDENTIAL:	482,711 SF
OFFICE/LOBBY/AMENITY:	97,240
PROPOSED DENSITY:	31.46 UNITS/ACRE
<b>PARKING SUMMARY:</b>	
<b>REQUIRED PARKING (MINIMUM):</b>	
MULTIFAMILY (280 UNITS)	528 SPACES (TOTAL)
LIVE WORK (129 UNITS)	280 SPACES (1.00 UNIT)
OFFICE/COWORKING (97,315 SF)	129 SPACES (1.25 UNIT)
	119 SPACES (1.00 UNIT)
<b>REQUIRED PARKING (MAXIMUM):</b>	
MULTIFAMILY (280 UNITS)	1,645 SPACES (TOTAL)
LIVE WORK (129 UNITS)	940 SPACES (3.00 UNIT)
OFFICE/COWORKING (97,315 SF)	387 SPACES (3.00 UNIT)
	238 SPACES (1.00 UNIT)
<b>PROPOSED PARKING:</b>	
STANDARD:	640 SPACES (TOTAL)
COMPACT:	660 SPACES
HANDICAP:	86 SPACES
<b>PARKING LOT LANDSCAPING:</b>	
REQUIRED:	10% MIN.
PROPOSED:	10%

**ALTERNATIVE VEHICLE AND BIKE PARKING:**

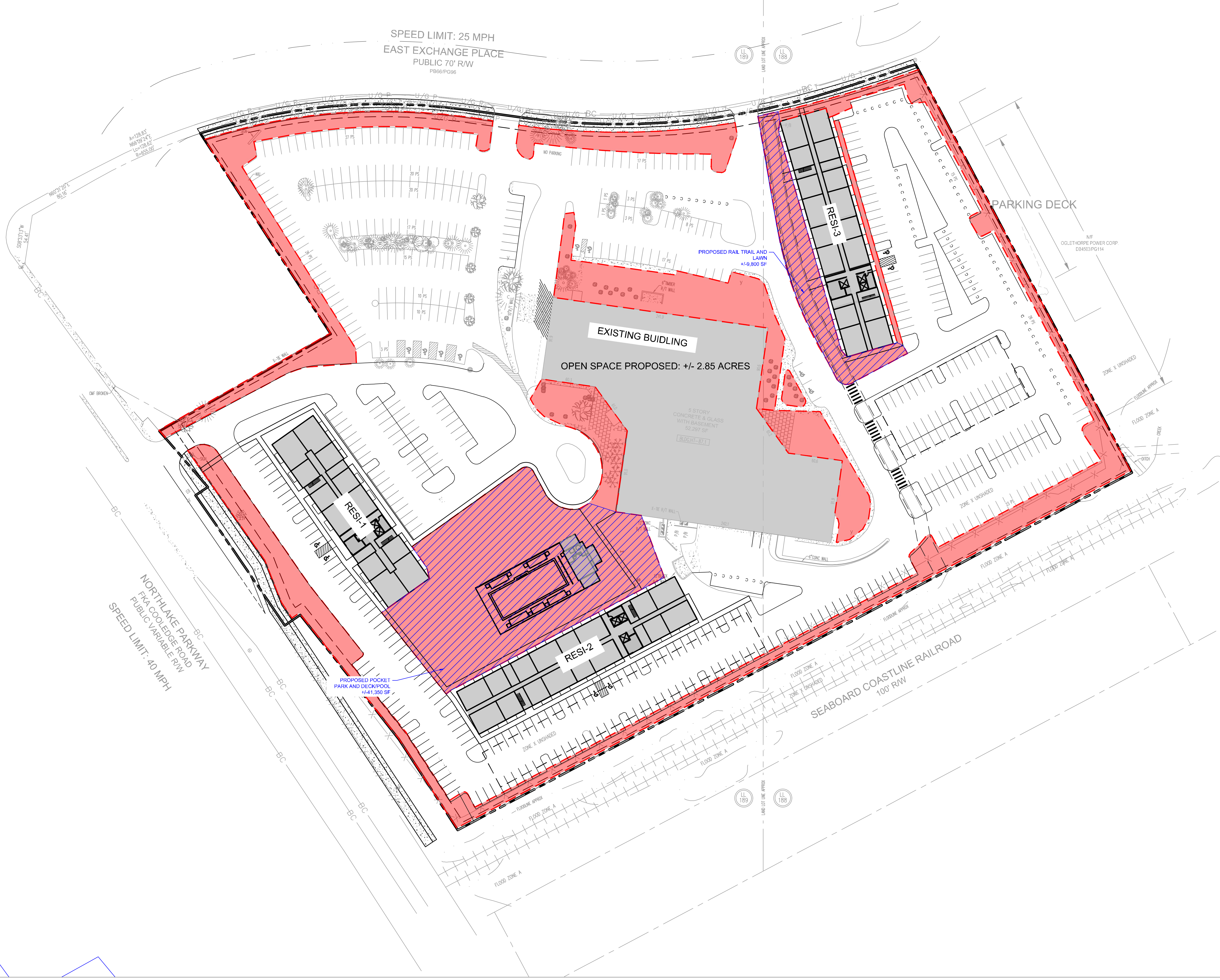
1. THE SITE WILL PROVIDE BIKE/MOPED PARKING AS REQUIRED BY CODE. THE EXACT LOCATION WILL BE DETERMINED DURING THE PERMITTING PHASE. FOR THIS SITE, 36 BIKE/MOPED SPACES WILL BE PROVIDED (1 PER 20).
2. THE SITE WILL PROVIDE ALTERNATIVE VEHICLE PARKING THROUGHOUT THE SITE AS REQUIRED BY CODE. THE EXACT LOCATION WILL BE DETERMINED DURING THE PERMITTING PHASE. FOR THIS SITE, 15 ALTERNATIVE FUEL SPACES WILL BE PROVIDED (2% OF TOTAL).



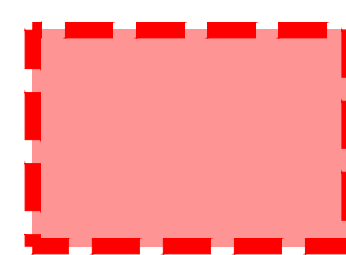
RECEIVED  
CITY OF TUCKER  
  
05/04/2022  
  
PLANNING & ZONING  
DEPARTMENT

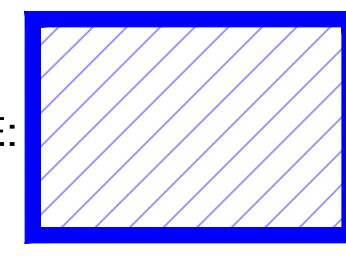
SLUP-22-0001, CV-22-0001, CV-22-0002,  
CV-22-0003, CV-22-0004





**LEGEND:**

OPEN SPACE: 

OUTDOOR SPACE: 

**DEVELOPMENT SUMMARY:**

**SITE SUMMARY:**

CURRENT ZONING:	NL-2
PROPOSED ZONING:	NL-2
SITE AREA:	13.00 ACRES
OPEN SPACE:	2.85 ACRES (21.9%)
OUTDOOR SPACE:	1.10 ACRES (8.4%)

RECEIVED  
CITY OF TUCKER  
05/04/2022  
PLANNING & ZONING  
DEPARTMENT  
SLUP-22-0001, CV-22-0001, CV-22-0002,  
CV-22-0003, CV-22-0004





## MEMO

**To:** Honorable Mayor and City Council Members  
**From:** Beverly Ragland, Finance Director  
**CC:** Tami Hanlin, City Manager  
**Date:** April 11, 2022  
**RE:** Memo for Budget Amendment FY2022 Operating and Capital Budgets

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### Issue:

1. 2022 Budget Amendment-Operating:

Staff has reviewed detail of each line item in the 2022 Operating Budget. Projections have been made and adjustments have been made within departments to reflect where staff feels the year will end relative to revenues and expenditures. A final budget amendment will be done at the conclusion of the annual audit.

### Recommendation:

An amendment of the FY2022 Operating Budget is not needed at this time. All departments are within budget.

### Background:

There have been two amendments to the FY2022 Operating Budget to date.

### Summary:

After three quarters of the fiscal year have passed, projections have been made to predict the final position of the budget more closely. A final budget amendment will be done at the conclusion of the audit. There is no current need to amend the Operating Budget.

**Financial Impact:** none

**Issue:****2. Approval of 2022 Budget Amendment-Capital:**

The Capital Budget involves Fund 300 and Fund 320. Projects in these funds can cross fiscal years. Revenue for Fund 300 comes from an interfund transfer from the general fund (Fund 100) and revenue for Fund 320 comes from SPLOST revenue received monthly from DeKalb County. Staff has reviewed detail of each line item in the 2022 Capital Budget. Projections were made for each project based upon staff recommendations. Line items have been adjusted accordingly and amounts have been transferred among projects as needed to balance budgets of the remaining projects. Projects that have a zero balance will be closed. Projects with a balance remaining at the end of Fiscal Year 2022 will be encumbered with a Purchase Order. Purchase orders have not been previously utilized. Using purchase orders for projects will move the funds from Fund Balance to Committed Fund Balance at the end of the fiscal year as well as provide an accurate and transparent use of funds. The Capital Fund (Fund 300) will not have a fund balance larger than the total of encumbered projects approved by Council. The SPLOST Fund (Fund 320) can have a fund balance if the amount of revenue received is larger than the amount of expenditures on Council approved projects.

**Recommendation:**

Approval of Amendment #3 of the FY2022 Capital Budget

**Background:**

This is the third amendment to the FY2022 Capital Budget.

**Summary:**

After three quarters of the fiscal year have passed, projections have been made to predict the final position of the Capital Budget Fund 300 and SPLOST Fund 320 more accurately. The final budget amendments will be done at the conclusion of the audit.

**Financial Impact:** Attachment shows projected position of projects with requested changes. Only line items with amendments are shown.

## BUDGET REPORT FOR CITY OF TUCKER

GL NUMBER	DESCRIPTION	2021-22 ORIGINAL BUDGET	2021-22 ACTIVITY YTD	2021-22 AMENDED BUDGET	2021-22 PROJECTED YTD ACTIVITY	AMENDMENT#3	NOTES
<b>FUND 300 - CAPITAL</b>							
<i>ESTIMATED REVENUES</i>							
<b>Dept 0000 - NON DEPARTMENTAL</b>							
USE OF FUND BALANCE		0.00	0.00	0.00	3,755,608.52	3,755,608.52	Use of Fund Balance from Prior Year
<b>Totals for dept 0000 - NON DEPARTMENTAL</b>		0.00	0.00	0.00	3,755,608.52		
<b>Dept 9000 - INTERFUND</b>							
300-9000-39.12000	TRANSFER FROM HOTEL	168,750.00	132,560.59	168,750.00	206,250.00	37,500.00	YTD is 6 months of Receipts
300-9000-39.30000	TRANSFER FROM GENERAL FUND	6,475,250.00	0.00	6,575,160.00	6,876,912.48	301,752.48	Increase from Original Budgeted
<b>Totals for dept 9000 - INTERFUND</b>		6,644,000.00	132,560.59	6,743,910.00	7,083,162.48		
<b>TOTAL ESTIMATED REVENUES</b>		<b>6,644,000.00</b>	<b>132,560.59</b>	<b>6,743,910.00</b>	<b>7,083,162.48</b>		
<i>APPROPRIATIONS</i>							
<b>Dept 1320 - CITY MANAGER</b>							
300-1320-54.11000-CM2003	LAND PURCHASES FY20	0.00	13,500.00	73,252.94	13,500.00	(59,752.94)	Will not use by FYE
300-1320-54.11000-CM2202	LAND ACQUISITION FY22	300,000.00	0.00	300,000.00	0.00	(300,000.00)	Will not use by FYE
300-1320-54.12000-CM2004	SITE IMPROVEMENTS FY20	0.00	18,684.61	57,042.61	18,684.61	(38,358.00)	Proj Complete
300-1320-54.12000-CM2201	OLD LIBRARY SITE IMPROVEMENTS FY22	200,000.00	175,834.50	200,000.00	175,834.50	(24,165.50)	Proj Complete
<b>Totals for dept 1320 - CITY MANAGER</b>		500,000.00	208,019.11	630,295.55	208,019.11		All Used in 4100
<b>Dept 1513 - OPERATING CONTINGENCIES</b>							
300-1513-57.90000-OC2001	CONTINGENCIES	0.00	0.00	435,850.15	0.00	(435,850.15)	Used in 4100
<b>Totals for dept 1513 - OPERATING CONTINGENCIES</b>		0.00	0.00	435,850.15	0.00		
<b>Dept 4100 - CITY ENGINEER</b>							
300-41000-57.9000-CE0000	CE CONTINGENCIES	0.00	0.00	0.00	326,380.02	326,380.02	Remainder needed to fund projects
300-4100-54.12000-CE2104	LAWRENCEVILLE HWY@I-285 LANDSCAPE	0.00	0.00	100,000.00	0.00	(100,000.00)	moved to CE2201
300-4100-54.12000-CE2105	TUCKER STREETSCAPES LANDSCAPING	0.00	0.00	137,900.00	0.00	(137,900.00)	moved to CE2201
300-4100-54.12000-CE2106	TUCKER STREETSCAPES STREETLIGHTS	0.00	0.00	16,498.00	0.00	(16,498.00)	moved to CE2201
300-4100-54.12000-CE2201	CHAMBLEE-TUCKER RD IMP FY22	1,500,000.00	0.00	1,500,000.00	2,300,000.00	800,000.00	Amt over budget
300-4100-54.12000-CE2209	ROSSER ROAD FY22	500,000.00	684,560.36	904,425.40	684,560.36	(219,865.04)	436K due from Dekalb Co (cost-share)
300-4100-54.14000-CE2109	SMOKERISE ELEMENTARY PROJECT	0.00	719,361.99	513,352.38	719,361.99	206,009.61	Amt over budget
<b>Totals for dept 4100 - CITY ENGINEER</b>		4,360,000.00	1,772,997.86	6,058,345.35	6,916,471.94		



GL NUMBER	DESCRIPTION	2021-22 ORIGINAL BUDGET	2021-22 ACTIVITY YTD	2021-22 AMENDED BUDGET	2021-22 PROJECTED YTD ACTIVITY	AMENDMENT#3	NOTES
<b>Dept 6210 - PARKS &amp; RECREATION</b>							
300-6210-54.12000-PR2006	TRAILS	0.00	0.00	0.01	0.00	(0.01)	moved to PR2201
300-6210-54.12000-PR2007	DOG PARK MONTREAL	0.00	0.00	46,805.00	0.00	(46,805.00)	moved to PR2110
300-6210-54.12000-PR2010	PARK IMPROVEMENTS	0.00	47,256.65	259,232.61	77,256.65	(181,975.96)	moved to PR2201
300-6210-54.20000-PR2012	PORTABLE GYMNASICS	0.00	6,367.08	33,984.06	33,893.78	(90.28)	moved to PR1911
300-6210-54.23000-PR1911	WEIGHTROOM EQUIPMENT	0.00	2,319.50	2,229.22	2,319.50	90.28	from PR2012
<b>Totals for dept 6210 - PARKS &amp; RECREATION</b>		0.00	165,426.87	451,734.54	222,953.57		
<b>Dept 6211 - PARKS</b>							
300-6211-52.12000-PR2104	PARKS & REC STUDIES	0.00	0.00	25,000.00	0.00	(25,000.00)	moved to PR2106
300-6211-52.12000-PR2106	PARK MASTER PLAN STUDIES	0.00	0.00	60,000.00	85,000.00	25,000.00	from PR2104
300-6211-54.12000-PR2101	PIER/DOCK REPAIR AND TRAILS	0.00	0.00	50,000.00	0.00	(50,000.00)	moved to PR2206
300-6211-54.12000-PR2109	TRAILS	0.00	29,800.00	71,604.00	29,800.00	(41,804.00)	moved to PR2206
300-6211-54.12000-PR2110	DOG PARKS	0.00	0.00	4,556.77	51,361.77	46,805.00	from PR2007
300-6211-54.12000-PR2201	FITZGERALD PARK IMPROVEMENTS FY22	500,000.00	62,919.99	500,000.00	711,975.97	211,975.97	frm PR2010, PR2006, PR2202
300-6211-54.12000-PR2202	GENERAL PARK IMPROVEMENTS FY22	30,000.00	0.00	30,000.00	0.00	(30,000.00)	moved to PR2201
300-6211-54.12000-PR2206	TRAIL IMPROVEMENTS FY22	90,000.00	0.00	90,000.00	181,804.00	91,804.00	from PR2109 & PR2101
<b>Totals for dept 6211 - PARKS</b>		1,110,000.00	439,926.75	2,028,010.47	2,256,791.44		
<b>Dept 7520 - ECONOMIC DEV</b>							
300-7520-52.12000-ED2001	PROFESSIONAL SERVICES	0.00	0.00	163,968.59	13,968.59	(150,000.00)	Move DDA funding out
<b>Totals for dept 7520 - ECONOMIC DEV</b>		0.00	4,633.50	173,968.59	23,968.59		
<b>Dept 7550 - DOWNTOWN DEVELOPMENT AUTHORITY</b>							
300-7550-52.12000-ED2001	PROFESSIONAL SERVICES	0.00	0.00	0.00	150,000.00	150,000.00	New Dept for DDA
<b>Totals for dept 7550 - DOWNTOWN DEVELOPMENT AUTHORITY</b>		0.00	0.00	0.00	150,000.00		
<b>TOTAL APPROPRIATIONS</b>		<b>6,644,000.00</b>	<b>2,916,644.45</b>	<b>10,838,771.00</b>	<b>10,838,771.00</b>	<b>0.00</b>	
NET OF REVENUES/APPROPRIATIONS - FUND 300		0.00	(2,784,083.86)	(4,094,861.00)	(3,755,608.52)	0.00	
BEGINNING FUND BALANCE		3,755,608.52	3,755,608.52	3,755,608.52	3,755,608.52		
ENDING FUND BALANCE		3,755,608.52	971,524.66	(339,252.48)	0.00	0.00	

GL NUMBER	DESCRIPTION	2021-22 ORIGINAL BUDGET	2021-22 ACTIVITY YTD	2021-22 AMENDED BUDGET	2021-22 PROJECTED YTD ACTIVITY	AMENDMENT#3	NOTES
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## Fund 320 - SPLOST FUND

### ESTIMATED REVENUES

#### Dept 0000 - NON DEPARTMENTAL

320-0000-31.32000	SPLOST - ROADS & DRAINAGE	3,380,000.00	2,425,384.81	3,380,000.00	3,625,000.00	245,000.00	YTD is Jul-Jan Rev
320-0000-31.32001	SPLOST - SIDEWALKS & TRAILS	1,040,000.00	746,272.24	1,040,000.00	1,150,000.00	110,000.00	YTD is Jul-Jan Rev
320-0000-31.32003	SPLOST - SITE IMPROVEMENTS PARKS	780,000.00	559,704.20	780,000.00	860,000.00	80,000.00	YTD is Jul-Jan Rev
<b>Totals for dept 0000 - NON DEPARTMENTAL</b>		<b>5,200,000.00</b>	<b>3,731,361.25</b>	<b>5,200,000.00</b>	<b>5,635,000.00</b>		

#### TOTAL ESTIMATED REVENUES

<b>5,200,000.00</b>	<b>3,731,361.25</b>	<b>5,200,000.00</b>	<b>5,635,000.00</b>
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### APPROPRIATIONS

#### Dept 0000 - NON DEPARTMENTAL

320-0000-57.90000-SP2016	CONTINGENCIES	0.00	0.00	97,208.46	0.00	(97,208.46)	Do not need
<b>Totals for dept 0000 - NON DEPARTMENTAL</b>		<b>0.00</b>	<b>0.00</b>	<b>97,208.46</b>	<b>0.00</b>		

#### Dept 4200 - HIGHWAYS AND STREETS

320-4200-54.14000-SP2006	INFRASTRUCTURE - RESURFACING	0.00	0.00	0.04	0.00	(0.04)	move to SP2007
320-4200-54.14000-SP2007	INFRASTRUCTURE - RESURFACING	0.00	0.00	6,247.60	6,247.64	0.04	from SP2006
<b>Totals for dept 4200 - HIGHWAYS AND STREETS</b>		<b>3,452,800.00</b>	<b>295,949.22</b>	<b>4,975,740.86</b>	<b>4,975,740.86</b>		

#### Dept 4224 - SIDEWALKS

320-4224-52.12000-SP1905	KAISEN-TRAIL MASTER PLAN	0.00	0.00	4,999.50	0.00	(4,999.50)	move to SP1906
320-4224-54.14000-SP1906	SIDEWALKS	0.00	0.00	4,801.00	9,800.50	4,999.50	from SP1905
<b>Totals for dept 4224 - SIDEWALKS</b>		<b>967,200.00</b>	<b>53,332.00</b>	<b>2,765,161.21</b>	<b>2,765,161.21</b>		

GL NUMBER	DESCRIPTION	2021-22 ORIGINAL BUDGET	2021-22 ACTIVITY YTD	2021-22 AMENDED BUDGET	2021-22 PROJECTED YTD ACTIVITY	AMENDMENT#3	NOTES
<b>Dept 6210 - PARKS &amp; RECREATION</b>							
320-6210-52.12000-SP2011	ENGINEERING SERVICES	0.00	0.00	8,460.00	0.00	(8,460.00)	move to SP2106
320-6210-52.12000-SP2106	ENGINEERING SERVICES - PARK CONST PROJ	0.00	20,911.40	25,000.00	33,460.00	8,460.00	from SP2011
320-6210-54.12000-SP1910	SITE IMPROVEMENTS	0.00	133,074.20	131,498.81	133,074.20	1,575.39	from SP1917
320-6210-54.12000-SP1911	RENOVATE GYMNASIUM	0.00	0.00	2,319.50	0.00	(2,319.50)	move to SP2206
320-6210-54.12000-SP1914	TRAILS PROGRAM	0.00	26,175.00	50,000.00	0.00	(50,000.00)	move to SP2109
320-6210-54.12000-SP1917	PRIORITY PROJECTS - MASTER PLAN	0.00	142,250.00	212,230.33	142,250.00	(69,980.33)	move to SP2206
320-6210-54.12000-SP2012	SPORTS FIELD LIGHTING	0.00	210,693.00	225,000.00	210,693.00	(14,307.00)	move to SP2206
<b>Totals for dept 6210 - PARKS &amp; RECREATION</b>		<b>150,000.00</b>	<b>661,437.31</b>	<b>1,125,358.64</b>	<b>992,646.70</b>		
<b>Dept 6211 - PARKS</b>							
320-6211-54.12000-SP2109	PARKING LOTS - PARKS	0.00	24,733.75	200,000.00	250,000.00	50,000.00	from SP1914
320-6211-54.12000-SP2111	SECURITY CAMERAS	0.00	0.00	25,000.00	0.00	(25,000.00)	move to SP2206
320-6211-54.12000-SP2206	FITZGERALD PARK IMP FY22	500,000.00	0.00	500,000.00	610,031.44	110,031.44	from SP1917, SP1911, SP1917, SP2012 & SP2111
<b>Totals for dept 6211 - PARKS</b>		<b>540,000.00</b>	<b>29,253.75</b>	<b>1,027,500.00</b>	<b>1,162,531.44</b>		
<b>TOTAL APPROPRIATIONS</b>		<b>5,200,000.00</b>	<b>1,090,953.31</b>	<b>10,176,678.72</b>	<b>10,081,789.76</b>		
<b>NET OF REVENUES/APPROPRIATIONS - FUND 320</b>							
BEGINNING FUND BALANCE		5,404,500.94	5,404,500.94	5,404,500.94	5,404,500.94		
ENDING FUND BALANCE		5,404,500.94	8,044,908.88	427,822.22	957,711.18		
Revenue (300 and 320)		11,844,000.00	3,863,921.84	11,943,910.00	8,962,553.96		
Expenditures (300 and 320)		11,844,000.00	4,007,597.76	21,015,449.72	20,920,560.76		
Fund Balance Beginning (300 and 320)		9,160,109.46	9,160,109.46	9,160,109.46	9,160,109.46		
Fund Balance Ending (300 and 320)		9,160,109.46	9,016,433.54	88,569.74	957,711.18		

**AN ORDINANCE TO AMEND THE 2022 FISCAL YEAR BUDGET**

**WHEREAS**, the City of Tucker may amend an operating and capital budget in accordance with Section 5.04 of the Charter;

**WHEREAS**, the Mayor and City Council held a public hearing on the amendment to the 2022 Operating and Capital Budget on April 11, 2022; and

**NOWTHEREFORE**, the Mayor and City Council while at a regular meeting on May 9, 2022 that the attached FY22 Budget Amendment #3 is hereby adopted for the fiscal year 2022 and becomes effective upon its adoption;

**SO ORDAINED AND ADPOTED** by the Mayor and City Council, this 9<sup>th</sup> day of May 2022.

Approved:

\_\_\_\_\_  
Frank Auman, Mayor

Attested:

\_\_\_\_\_  
Bonnie Warne, City Clerk

SEAL



## MEMO

**To:** Honorable Mayor and City Council Members  
**From:** Courtney Smith, Planning and Zoning Director  
**CC:** Tami Hanlin, City Manager  
**Date:** May 4, 2022  
**RE:** Memo for CFA SLUP and CVs

---

### **Issue:**

At the March 14, 2022 Mayor and City Council meeting, the applicant requested a full cycle deferral to go back through the Land Use process (Planning Commission and two reads before Mayor and City Council) due to a major change in the application. The major change included adding an additional parcel to their application (2239 Dillard), which would allow for two access points to the subject property, and an additional concurrent variance (CV-22-0006) to reduce the transitional buffer on the additional parcel.

The request now includes a SLUP to allow a drive-through restaurant with four concurrent variances for inter-parcel access, setbacks, drive-through location, and transitional buffer requirements

### **Recommendation:**

Staff and the applicant have not been able to agree on all elements of the submitted plan. Ultimately, council must vote on the application before them. Therefore, staff has drafted conditions should council wish to approve the application as submitted by the applicant (Document titled "Draft Conditions May 4 2022"). At this time, Staff recommends denial of the application as submitted.

### **Background:**

The application went before Planning Commission on April 21, 2022 where the case was deferred. It will go back before Planning Commission on May 19, 2022, in between the 1<sup>st</sup> and 2<sup>nd</sup> read.

Draft Conditions (May 4, 2022)  
to Approve Application as Presented by Applicant

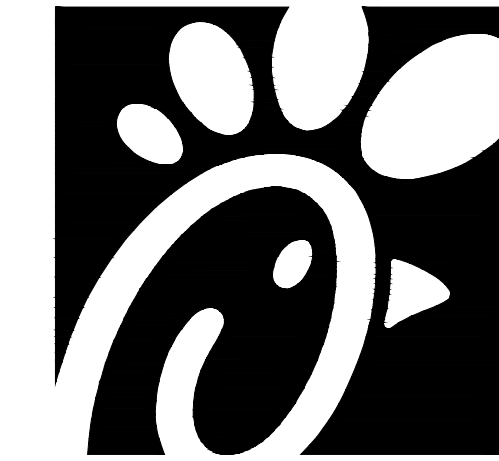
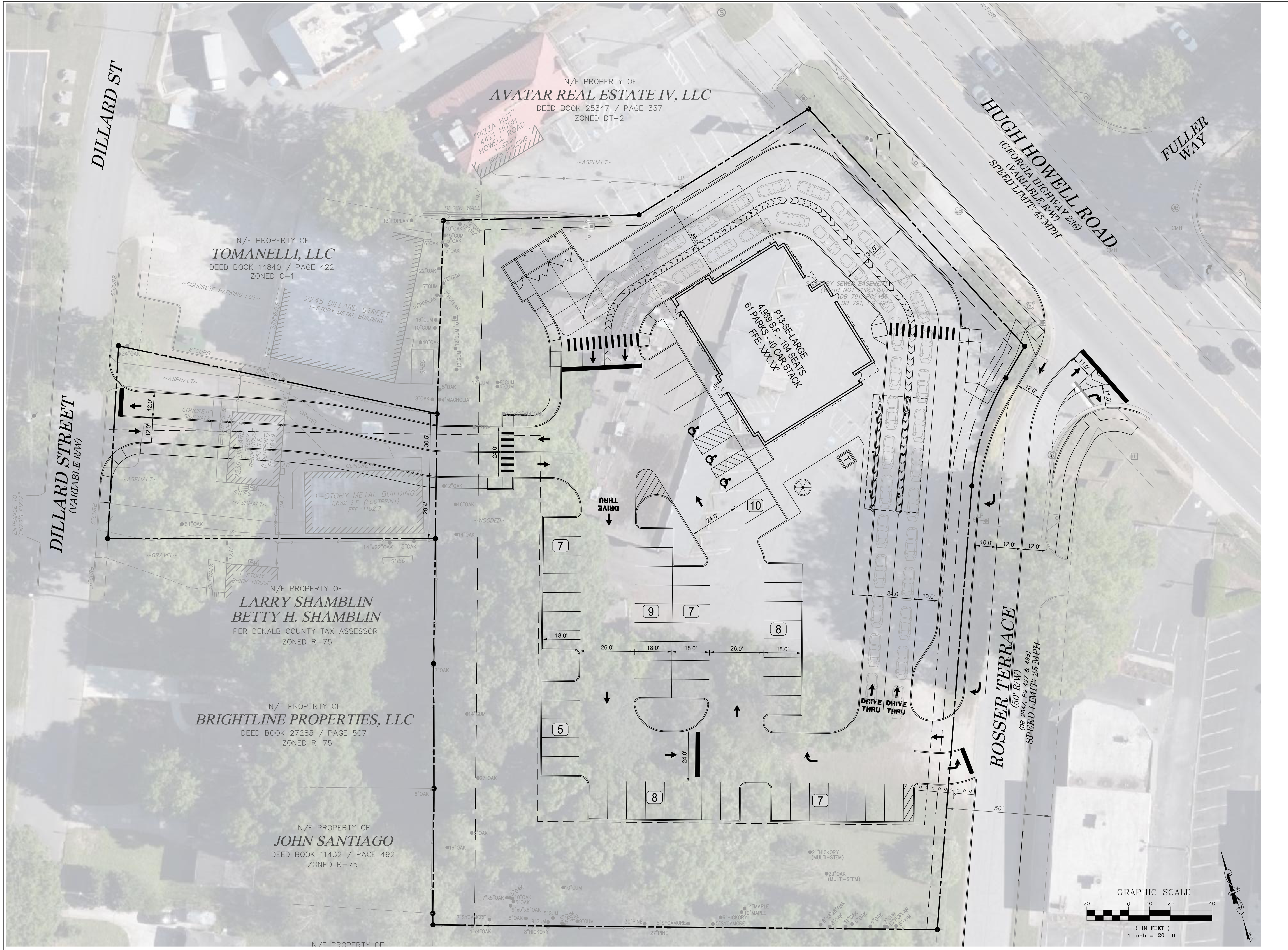
1. The property shall be developed in general conformance with the site plan submitted on May \_\_, 2022, with revisions to meet these conditions.
2. *The drive through facility may be located between the building and both Rosser Terrace and Hugh Howell, as shown on the May \_\_, 2022 site plan (CV-21-0002).*
3. A mix of trees, shrubs, and ground cover shall be planted in the landscape strip between the drive-through restaurant and both Hugh Howell Road and Rosser Terrace to screen the appearance of the drive-through lanes from the street.
4. *The maximum building setback along Rosser Terrace shall be 65', as shown on the May \_\_, 2022 site plan (CV-21-0003).*
5. Outdoor dining shall meet the requirements outlined in Section 46-998.
6. The drive-through establishment shall close no later than 10:00 p.m.
7. The Special Land Use Permit shall not be able to be transferred to another business.
8. Owner/ Developer shall provide direct pedestrian entrances from Hugh Howell Road and Rosser Terrace. The required pedestrian entrances must face the public street and provide ingress and egress.
9. Owner/Developer shall remove the existing billboard located on the northwestern portion of the property before/during the land development phase.
10. Inter-parcel access is not required (CV-21-0004).
11. *The transitional buffer along the southern property line of 2239 Dillard Street shall be reduced from 50' to 24.4' (CV-22-0006). A 6' tall wood fence shall be installed on or near the southern property line.*
12. *Owner/Developer shall install a sidewalk along the drive aisle on the Dillard Street parcel, as shown on the May \_\_, 2022 site plan.*
13. Owner/Developer shall install six foot (6') wide sidewalk with a five foot (5') wide landscape strip along the entire frontage of Rosser Terrace and Hugh Howell Road.
14. *The development shall be limited to one (1) limited access driveway on Rosser Terrace (right in/left out) and one (1) full access driveway on Dillard Street. Curb cut locations are*

*subject the sight distance requirements and the approval of the City Engineer. Signage and a raised median at the Rosser Terrace curb cut to restrict right turns out shall be constructed.*

15. Owner/Developer shall construct a southbound deceleration lane on Rosser Terrace at the new entrance, subject to the approval of the City Engineer.
16. Owner/Developer shall construct a northbound right turn lane on Rosser Terrace at the intersection of Hugh Howell Road, subject to the approval of the City Engineer and the Georgia Department of Transportation.
17. Owner/Developer shall dedicate at no cost to the City of Tucker such additional right-of-way as required to construct the above improvements and have a minimum of two feet (2') from the back of the future sidewalk.
18. Owner/Developer shall provide ADA compliant pedestrian connectivity between the sidewalks along both frontages and the building entrance.
19. Owner/Developer shall comply with Section 14-39 of the City of Tucker Code of Ordinances concerning tree protection and replacement. A minimum tree density of thirty (30) units/acre shall be required. Any specimen trees removed during the redevelopment shall require additional tree replacement units as required in the ordinance.
20. Owner/Developer shall provide stormwater management in compliance with Tucker's Post Construction Stormwater Management Ordinance.



20 April 2022 120005-01-049 (ENG) - Chick-fil-A\120005-01-049 (ENG) - Tucker, GA (Hugh Howell Rd) (04095) Engineering\Plan\Exhibits\ALT Entrance Exhibit\EX-1.3 - CFA, Tucker, GA (Hugh Howell Rd) - Rosser Terrace, Exhibit.dwg  
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Chick-fil-A

Chick-fil-A  
5200 BUFFINGTON RD  
Atlanta, Georgia 30349-2998

Bowman

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Atlanta, GA 30005  
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CHICK-FIL-A

RELO TUCKER FSU  
4435 HUGH HOWELL ROAD  
TUCKER, GA 30084

FSU#04959

BUILDING TYPE / SIZE: P13-SE-LRG

REVISION SCHEDULE  
NO. DATE DESCRIPTION

CONSULTANT PROJECT # 120005-01-049  
ISSUED FOR PERMIT  
DATE April 20, 2022  
DRAWN BY BCG

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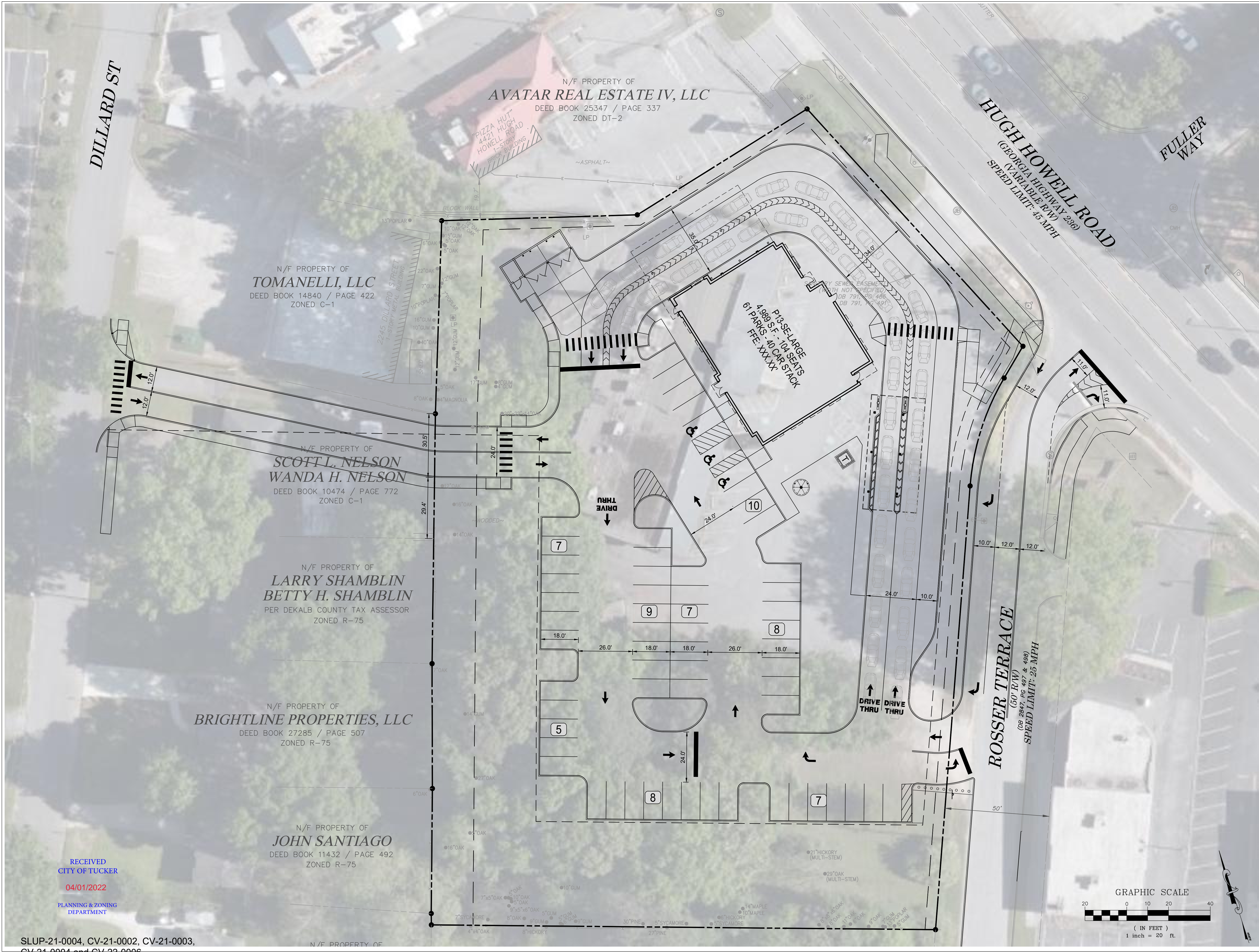
SHEET DILLARD ST  
ACCESS EXHIBIT

SHEET NUMBER

EX-1.3

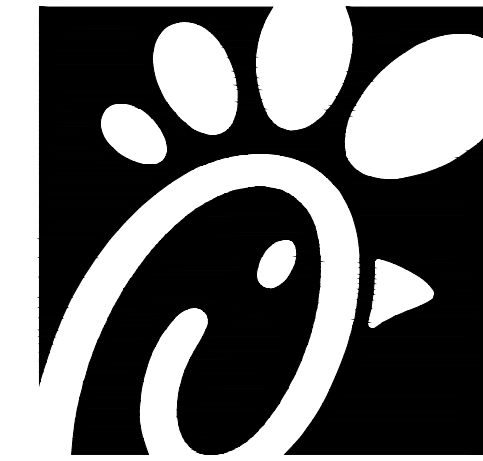


1 April 2022 120005-01-049 (ENG) - Chick-fil-A\120005-01-049 (ENG) - Tucker, GA (Hugh Howell Rd) (04095) Engineering\Engineering Plans\Exhibits\AT Entrance Exhibit\EX-1.2 - CFA, Tucker, GA (Hugh Howell Rd) - Reaser, Terence, Exhibit.dwg  
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DEPARTMENT

SLUP-21-0004, CV-21-0002, CV-21-0003,  
CV-21-0004 and CV-22-0006



Chick-fil-A

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5200 BUFFINGTON RD  
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2998

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CHICK-FIL-A  
RELO TUCKER FSU  
4435 HUGH HOWELL ROAD  
TUCKER, GA 30084

FSU#04959  
BUILDING TYPE / SIZE: P13-SE-LRG

REVISION SCHEDULE		
NO.	DATE	DESCRIPTION

CONSULTANT PROJECT #	120005-01-049
ISSUED FOR	PERMIT
DATE	April 1, 2022
DRAWN BY	BCG

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SHEET  
DILLARD ST  
ACCESS EXHIBIT  
SHEET NUMBER  
EX-1.2



# TRAFFIC IMPACT STUDY

Chick-fil-A # 04959 Tucker  
4431 Hugh Howell Rd,  
Tucker, Georgia

May 2, 2022

Prepared for:  
**Chick-fil-A, Inc.**

RECEIVED  
CITY OF TUCKER

05/03/2022

PLANNING & ZONING  
DEPARTMENT

**Bowman**

# Traffic Impact Study

## **Chick-fil-A # 04959 Tucker**

4431 Hugh Howell Rd,  
Tucker, Georgia

Prepared May 2, 2022

Prepared for:  
Chick-fil-A, Inc.  
5200 Buffington Road  
Atlanta, GA 30349  
Phone: 404.214.9934

Prepared by:

The logo for Bowman Consulting Group, featuring the word "Bowman" in a bold, green, sans-serif font.

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Rodrigo Meirelles

Project Manager: Andrew Petersen, PE

05/02/2022  
Bowman Job # 120005-01-049

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Appendix D: Traffic Volume and Traffic Distribution Exhibits
Appendix E: Chick-Fil-A Trip Generation Assessment
Appendix F: Capacity Analysis Reports

## Executive Summary

This report summarizes the findings of the Traffic Impact Study performed by Bowman Consulting (Bowman) for the proposed 4,989 SF Chick-fil-A development with 40 Car Stack Chick-fil-A development to be located at the Southwest corner of the intersection of Hugh Howell Rd and Rosser Terrace in the City of Tucker, Georgia.

Access to the site will be provided by (1) one right-in/left-out driveway along Rosser Terrace and (2) one full-access driveway along Dillard St.

The purpose of this study is threefold: (i) to determine the number of expected trips generated by the proposed site; (ii) to determine the potential impact, if any, of the proposed development on the surrounding roadway network; and (iii) to propose improvements to mitigate the impact of the proposed development, if required.

A Traffic Impact Analysis Methodology Statement was prepared and shared with representatives from the City of Tucker and the Georgia Department of Transportation.

Turning movement counts were collected for the morning and evening peak hours at the intersections of Hugh Howell Rd & Cowan Rd, Hugh Howell Rd & Rosser Terrace, Hugh Howell Rd & Tucker Industrial Rd, and Cowan Rd & Dillard St.

Based on the results of the trip generation assessment prepared by Bowman Consulting, the proposed development is expected to generate a total of 261 trips during the morning peak hour and 285 trips during the evening peak hour. It is anticipated that during the morning peak hour 128 of these are existing trips, the remaining 133 are expected to be primary trips. During the evening peak hour, it is anticipated that 143 are existing trips and 142 are new trips.

For the purposes of this analysis, it is anticipated that the proposed development will be constructed and fully operational by the year 2023.

The following scenarios were evaluated as part of this study: 2023 No Build, 2023 Build and 2023 Build with Improvements.

A Turn Lane Warrant Analysis was conducted based on the City of Tucker Code of Ordinances Sec. 22-284 - *Access Management*. The results show a right turn lane is warranted at the eastbound approach of the intersection of Hugh Howell Rd and Rosser Terrace under Existing, No Build and Build conditions. Based on discussion with the City of Tucker Traffic Review Staff, a southbound right turn lane on Rosser Terrace to access the site via Site Driveway 1 was requested to be included with the development of the project.

Capacity Analyses comparison No Build Vs Build conditions were conducted for the analysis intersections to identify areas impacted by the proposed development. The results indicate the following:

- During the morning peak hour: all intersections are projected to operate at an acceptable overall LOS B or better during the No Build and Build conditions. No changes in LOS and minimal increases in delays are expected on all approaches of the analysis intersections.
- During the evening peak hour: all intersections are projected to operate at an acceptable overall LOS C or better during the No Build and Build conditions. The intersection of Hugh Howell Rd with

Cowan Rd is expected to operate at LOS B under No Build conditions and LOS C under Build conditions, with an increase in delay of 3.7 seconds.

The following improvements for the signalized intersection of Cowan RD and Hugh Howell Rd were evaluated in order to verify the effectiveness of possible proposed improvements.

- **Improved Signal Optimization:** Optimize signal timings at Intersection of Hugh Howell Rd & Cowan Rd for evening Peak Hour.
- **Improved LT:** Provide a Northbound Left turn lane at the intersection of Hugh Howell Rd & Cowan Rd.
- **Improved RT CH:** Provide a channelized Northbound Right-turn Lane at the intersection of Hugh Howell Rd & Cowan Rd.

Capacity Analyses comparison No Build Vs Build Improved conditions were conducted to evaluate the proposed improvements. The results indicate the following:

- During the morning peak hour: The intersection of Hugh Howell Rd and Cowan Rd/The Centre Driveway is expected to experience acceptable overall LOS A under Build Improved conditions with minimal increase in the overall delay overall delay considering a northbound channelized right turn lane improvement. The northbound approach is anticipated to operate at LOS E under both No Build and Build Improved conditions with no increase in delay. All other approaches and turning movements are expected to maintain the existing LOS.
- During the evening peak hour: During the evening peak hour, the intersection of Hugh Howell Rd and Cowan Rd/The Centre Driveway is expected to experience acceptable overall LOS B under Build Improved conditions with minimal increase in the overall delay considering a northbound channelized right turn lane improvement. The northbound approach is anticipated to operate at LOS E under both No Build and Build Improved conditions with no increase in delay. All other approaches and turning movements are expected to maintain the existing LOS.

The 95<sup>th</sup> queue results show that, during the morning peak hour, no storage lengths are exceeded with the inclusion of the proposed development. During the evening peak hour, the storage length of the southbound left-turn lane of the intersection of Hugh Howell Rd & Cowan Rd/The Centre Driveway is expected to be exceeded under No Build, Build and Build Improved conditions. The westbound left-turn lane of the intersection of Hugh Howell Rd & Tucker Industrial Rd is expected to be exceeded under both No Build and Build conditions, with no increase in queue length under Build conditions.

Based on the results of the capacity, queuing and turn lane warrant analysis the following improvements are proposed:

- Provide a southbound right-turning lane at the intersection of Rosser Terrace & Site Driveway 1.
- Provide a northbound right-turn flare at the intersection of Hugh Howell Rd & Rosser Terrace.
- Provide a Northbound Right turn lane at the intersection of Hugh Howell Rd & Cowan Rd.

Based on the results of the capacity, turn lane, and queueing analysis, the proposed Chick-Fil-A at 4431 Hugh Howell Rd, Tucker, GA is not expected to adversely impact the surrounding roadway network provided the proposed improvements mentioned on this report.

## 1. Introduction

This report summarizes the findings of the Traffic Impact Study performed by Bowman Consulting (Bowman) for the proposed Chick-fil-A development to be located at the Southwest corner of the intersection of Hugh Howell Rd and Rosser Terrace in the City of Tucker, Georgia.

The purpose of this study is threefold: (i) to determine the number of expected trips generated by the proposed site; (ii) to determine the potential impact, if any, of the proposed development on the surrounding roadway network; and (iii) to propose improvements to mitigate the impact of the proposed development, if required.

## 2. Background Information

The proposed development entails a 4,989 SF Chick-fil-A development with 40-Car Stack to be constructed at 4431 Hugh Howell Rd, in the City of Tucker, Georgia. **Figure 1** depicts the site location.



**Figure 1.** Site location.

Access to the development will be provided by **(1)** one right-in/left-out driveway along Rosser Terrace and **(2)** one full-access driveway along Dillard St, no access driveways are proposed on Hugh Howell Rd. The latest Concept Plan is presented in **Appendix A**.

## Traffic Impact Analysis Methodology

A Traffic Impact Analysis Methodology Statement was prepared and shared with representatives from the City of Tucker and the GDOT DeKalb County Division. A copy of the approved Traffic Impact Analysis Methodology Statement and proof of the coordination is contained in **Appendix B**.

To assess the traffic operation at the study Intersections, the following tasks were undertaken:

- Turning movement counts were collected during an average weekday for the morning (7:00 AM – 9:00 AM) and evening (4:00 PM – 6:00 PM) peak periods.
- Trip generation Assessment for Chick-Fil-a (CFA) facilities.
- Trip Distribution for the proposed development.
- Capacity and queuing analyses at study intersections.

### 3. Roadway Network

*Hugh Howell Rd (GA 236):* Within the identified study area is a State-maintained four-lane Minor Arterial according to the Georgia Department of Transportation State Functional Classification Map Online. Hugh Howell Rd has a continuous two-way left-turn lane (TWLTL), a southeast-northwest alignment and a posted speed limit of 45 miles per hour.

*Rosser Terrace:* Within the identified study area is a city-maintained two-lane undivided roadway identified as a Local Road according to the City of Tucker 2019, Strategic Transportation Master Plan. Rosser Terrace has a north-south alignment and a posted speed limit of 25 miles per hour.

*Tucker Industrial Rd:* Within the identified study area is a city-maintained two-lane undivided roadway identified as a Local Road according to the City of Tucker Strategic 2019, Transportation Master Plan. Tucker Industrial Rd has a north-south alignment with a posted speed limit of 35 miles per hour.

*Cowan Rd:* Within the identified study area is a city-maintained two-lane undivided roadway identified as a Local Road according to the City of Tucker 2019, Strategic Transportation Master Plan. Cowan Rd has a northeast-southwest alignment with a posted speed limit of 25 miles per hour.

*Dillard St:* Within the identified study area is a city-maintained two-lane undivided roadway identified as a Local Road according to the City of Tucker 2019, Strategic Transportation Master Plan. Dillard St has a north-south alignment with a posted speed limit of 25 miles per hour.

## Intersection Characteristics

### 1. Intersection of Hugh Howell Rd and Rosser Terrace/Fuller Way

This intersection is currently a four-legged unsignalized intersection where Hugh Howell Rd has a southeast-northwest alignment and Rosser Terrace and Fuller way have a north-south alignment.



The northwest approach (Hugh Howell Road eastbound) consists of an exclusive through lane, one shared through/right-turn lane and a continuous TWLTL. The southeast approach (Hugh Howell Road westbound) consists of two exclusive through lanes, one exclusive right-turn lane and a continuous TWLTL. The northbound approach (Rosser Terrace) consists of one shared left-turn/through/right-turn lane. The southbound approach (Fuller Way) consists of one shared left-turn/through/right-turn lane.

## **2. Intersection of Hugh Howell Rd and Cowan Rd/The Centre Driveway**

This intersection is currently a four-legged signalized intersection where Hugh Howell Rd has a southeast-northwest alignment and Cowan Rd has a northeast-southwest alignment.

The northwest approach (Hugh Howell Road eastbound) consists of one exclusive left-turn lane, one exclusive through lane, and one shared through/right-turn lane. The southeast approach (Hugh Howell Road westbound) consists of one exclusive left-turn lane, two exclusive through lanes, and one exclusive right-turn lane. The southwest approach (Cowan Road Northbound) consists of one shared left-turn/through/right-turn lane. The northeast approach (Publix Driveway southbound) consists of one exclusive left-turn lane, and one shared through/right-turn lane.

## **3. Intersection of Hugh Howell Rd and Tucker Industrial Rd**

This intersection is currently a four-legged signalized intersection where Hugh Howell Rd has an east-west alignment and Tucker Industrial Rd has a north-south alignment.

The eastbound and westbound approaches consist of one exclusive left-turn lane, one exclusive through lane, and one shared through/right-turn lane. The northbound and southbound approaches have one shared left-turn/through/right-turn lane.

## **4. Intersection of Cowan Rd & Dillard St**

This intersection is currently a three-legged unsignalized intersection where Hugh Howell Rd has a northeast-southwest alignment and Dillard St has a north-south alignment.

The northeast approach consists of a single lane with left-turn and through movements allowed. The southwest approach consists of a single lane with through and right-turn movements allowed. The northbound approach consists of a single lane with left-turn and right-turn movements allowed.

### **Proposed Conditions**

As mentioned before, access to the development will be provided by (1) one right-in/left-out driveway along Rosser Terrace and (2) one full-access driveway along Dillard St. No access is proposed on Hugh Howell Road.

## 4. Data Collection

For the purposes of this study the following data was collected:

- Inspections were conducted to obtain an inventory of existing roadway geometry, traffic control devices, and location of existing and proposed driveways.
- Published GDOT AADT counts and functional classification information.
- Turning movement counts were collected at the following intersections:
  - Hugh Howell Rd and Cowan Rd
  - Hugh Howell Rd and Rosser Terrace
  - Hugh Howell Rd and Tucker Industrial Rd
  - Cowan Rd & Dillard St

The traffic counts were completed during an average weekday, Tuesday, June 15, 2021, for the intersections of Hugh Howell Rd with Cowan Rd, Rosser Terrace, and Tucker Industrial Rd, and on Tuesday, March 1, 2022, for the intersection of Cowan Rd with Dillard St for the morning (7:00 AM – 9:00 AM) and evening (4:00 PM – 6:00 PM) peak periods. The turning movement counts are presented in **Appendix C**.

## 5. Traffic Forecast and Background Traffic

For the purposes of this analysis, it is anticipated that the proposed development will be constructed and fully operational by the year 2023. The following scenarios were evaluated as part of this study:

- Future Conditions (2023) without the proposed development (No Build)
- Future Conditions (2023) with the proposed development (Build)
- Improved Future Conditions (2023) with the proposed development (Build with Improvements)

To develop the 2022 and the 2023 traffic volumes, the first step was to determine a background growth rate applicable for the study area roadway segments. For each roadway segment, the annual growth rate was calculated using the historical AADT information provided by the GDOT Average Annual Daily Traffic & Historical Counts 2015-2019 information. A 0.5% minimum average annual growth rate was used for all traffic in the study area.

The historical study area roadway AADT information, as well as the applied growth rates utilized for the analysis, are presented in **Table 1**.

**Table 1** Historical AADT and Annual Growth Rates

Roadway	From	to	2015	2016	2017	2018	2019	2016	2017	2018	2019	Avg Growth rate	Applied Growth rate
Hugh Howell Rd	Lawrenceville Hwy	Mountain Industrial Blvd	21,700	22,400	25,600	25,600	24,400	3.2%	14.3%	0.0%	-4.7%	3.2%	3.2%
Rosser Terrace	N/A	N/A	-	-	-	-	-	-	-	-	-	No Data	0.5%
Tucker Industrial Rd	N/A	N/A	-	-	-	-	-	-	-	-	-	No Data	0.5%
Cowan Rd	N/A	N/A	-	-	-	-	-	-	-	-	-	No Data	0.5%
Dillard St	N/A	N/A	-	-	-	-	-	-	-	-	-	No Data	0.5%

Source: GDOT Average Annual Daily Traffic & Historical Counts 2015-2019

The growth rates presented in **Table 1** were applied to the 2021 Turning Movement Counts to develop the 2022 Existing Volumes. The 2022 Existing Traffic Volumes are presented in **Appendix D, Exhibit 1**.

The 2023 No Build Traffic Volumes were developed applying one year growth to the 2022 Existing Traffic Volumes, see **Exhibit 2** in **Appendix D**.

## 6. Trip Generation

The applicant is proposing to develop the site with the following land uses generating site traffic:

- 4,989 SF Chick-fil-A Restaurant with drive-thru window (Proposed)

Considering Chick-fil-A fast-food restaurants generate larger number of trips than ITE comparable land uses. Bowman conducted a Trip Generation Assessment based on trip generation data provided by the Atlanta Department of Transportation for three similar Chick-fil-A facilities. The trip generation assessment is presented **Appendix E**.

**Table 2** displays the trip generation for the proposed development and includes the morning and evening peak hour.

**Table 2** Site Trip Generation

Land Use	Land Use Code <sup>(1)</sup>	AADT of Adjacent Street	Period	Peak Hour Trips <sup>(2)</sup>			Pass by <sup>(3)</sup>			Primary		
				In	Out	Total	In	Out	Total	In	Out	Total
Fast Food restaurant with Drive thru	934	24,400	AM	133	128	261	65	63	128	68	65	133
			PM	148	137	285	74	69	143	74	68	142

(1) Based on the Institute of Transportation Engineers Trip Generation, 10th Edition

(2) Based on Bowman 2021 Trip Generation Assessment for Chick-Fil-A facilities

(3) Pass-By rates of 49% were extracted from the Institute of Transportation Engineers Trip Generation Handbook, 3rd Edition

The proposed development is expected to generate a total of 261 trips during the morning peak hour and 285 trips during the evening peak hour. It is anticipated that during the morning peak hour 128 of these are existing trips, the remaining 133 are expected to be primary trips. During the evening peak hour, it is anticipated that 143 are existing trips and 142 are new trips.

## 7. Trip Distribution

The proposed trip distribution for the site was developed based on the AADT information of the surrounding roadway network, the population and employment centers in the area, and the access conditions of the site. The trip distribution for this site is presented in **Figure 2**.



**Figure 2.** Trip Distribution

The Primary and Pass-By trip distributions are presented in **Exhibits 3** and **4** in **Appendix D**.

The Primary and Pass-By trips are presented in **Exhibits 5** and **6** in **Appendix D**.

The CFA Site Trips are presented in **Exhibits 7** in **Appendix D**.

The CFA Site Trips were added to the 2022 No Build Traffic Volumes to yield the 2022 Build Traffic Volumes presented in **Exhibit 8** in **Appendix D**.

## 8. Turn Lane Warrant Analysis

A Turn Lane Warrant Analysis was conducted based on the City of Tucker Code of Ordinances. Per Sec. 22-284 - *Access Management*, a deceleration lane shall be required at each project driveway or subdivision street entrance, as applicable, that meets either the average daily traffic (ADT) or right turning volumes shown in **Table 3**.

**Table 3** Right Turn Lane Warrant Criteria

Main Road Speed Limit	2 Lanes on Main Road		>2 Lanes on Main Road	
	35-40 mph	>40 mph	35-40 mph	>40 mph
Main Road ADT	8000	4000	12000	10000
Daily Right Turning Volume	150	75	150	75
Peak Hour Right Turning Volumes	15	7	15	7

For driveways, right-turn lanes shall be required at all driveways where the right-turning volume exceeds 300 vehicles per day.

The following number of entering right turns are anticipated under 2023 Build Conditions:

- Hugh Howell Rd and Rosser Terrace
  - AM Peak Hour - 16
  - PM Peak Hour - 33
- Rosser Terrace and Site Driveway 1
  - AM Peak Hour - 76
  - PM Peak Hour - 85

Based on the thresholds for a right-turn lane provided on the City of Tucker Code of Ordinances, a right turn lane is warranted at the eastbound approach of the intersection of Hugh Howell Rd and Rosser Terrace. Note the 7 right-turning vehicle per hour threshold from the City of Tucker Code of Ordinances for a 40 mph or higher speed limit roadway is already exceeded under Existing and No Build conditions.

Based on the posted speed limit of Rosser Terrace (25 mph) a right-turn deceleration lane is not warranted as the threshold is not applicable for roads with speed limits smaller than 35 mph. Based on discussion with the City of Tucker Traffic Review Staff, a southbound right turn lane on Rosser Terrace to access the site via Site Driveway 1 was requested to be included with the development of the project.

## 9. Capacity Analysis

The study intersections were analyzed for each scenario following the Highway Capacity Manual (HCM 6<sup>th</sup> edition) methodologies using the computer software Synchro 10. The analysis uses capacity, Level of Service, and control delay as the criteria for the performance of the driveways and study intersections.

Capacity, as defined by the HCM, is a measure of the maximum number of vehicles in an hour that can travel through an intersection or section of roadway under typical conditions. Level of Service (LOS) is a marker of the driving conditions and perception of drivers while traveling during the given time period. LOS ranges from LOS A which represents free flow conditions, to LOS F which represents breakdown conditions.

**Table 4** shows the LOS for unsignalized intersections as defined by the HCM.

**Table 4** HCM Level of Service Criteria

Level of Service (LOS)	Unsignalized Intersections	Signalized Intersections
	Average Control Delay (sec/veh)	Average Control Delay (sec/veh)
A	≤10	≤10
B	10 - 15	10 - 20
C	15 - 25	20 - 35
D	25 - 35	35 - 55
E	35 - 50	55 - 80
F	>50	>80

Control delay is a measure of the total amount of delay experienced by an individual vehicle and includes delay related to deceleration, queue delay, stopped delay, and acceleration.

**Table 4** displays the amount of control delay (in seconds per vehicle) that corresponds to the LOS for signalized and unsignalized intersections.

## Capacity Analysis Comparison – No Build vs Build Conditions (2023)

Capacity Analyses comparison were conducted for the No Build Vs Build conditions (2023). The primary purpose for this approach was to compare the results to identify areas impacted by the proposed development. The capacity results are included in **Appendix F**.

The capacity results for morning peak hour are summarized in **Table 5**.

**Table 5** 2023 AM Peak Hour Capacity Analysis

2023 CONDITIONS - (AM)			No Build		Build	
Intersection	Approach	Movement	DELAY (S)	LOS	DELAY (S)	LOS
1 Hugh Howell Rd & Rosser Terrace/Fuller Way	EB	L	8.3	A	8.2	A
		T	0.0	A	0.0	A
		TR	0.0	A	0.0	A
		Approach	0.5	A	0.5	A
	WB	L	0.0	A	7.8	A
		T	0.0	A	0.0	A
		R	0.0	A	0.0	A
		Approach	0.0	A	0.6	A
	NB	LT	-	-	12.3	B
		R	-	-	9.1	A
		Approach	10.7	B	10.0	A
	SB	Approach	9.7	A	9.7	A
2 Hugh Howell Rd & Cowan Rd/The Centre Driveway	EB	L	4.4	A	6.2	A
		T	5.7	A	8.0	A
		TR	5.7	A	8.0	A
		Approach	5.6	A	7.8	A
	WB	L	4.9	A	6.8	A
		T	0.3	A	0.4	A
		R	0.0	A	0.1	A
		Approach	0.4	A	0.5	A
	NB	Approach	78.7	E	75.5	E
	SB	L	68.2	E	61.7	E
		TR	65.2	E	58.7	E
3 Hugh Howell Rd & Tucker Industrial Rd	EB	L	100.8	F	96.0	F
		T	0.3	A	0.3	A
		TR	0.3	A	0.3	A
		Approach	1.6	A	2.1	A
	WB	L	102.5	F	102.5	F
		T	5.2	A	5.6	A
		TR	5.2	A	5.6	A
		Approach	9.7	A	9.9	A
	NB	Approach	74.8	E	74.6	E
	SB	Approach	67.0	E	66.7	E
	Intersection	-	13.2	B	13.5	B
4 Cowan Rd & Dillard St	EB	Approach	0.0	A	0.0	A
	WB	Approach	0.9	A	3.6	A
	NB	Approach	8.9	A	9.7	A
	Intersection	-	1.7	A	4.9	A

Extracted from Synchro HCM 6th Edition

Based on the results of the capacity analysis during the morning peak hour, all intersections are projected to operate at an acceptable overall LOS B or better during the No Build and Build conditions.

The northbound and southbound approaches of the intersection of Hugh Howell Rd and Cowan Rd are expected to operate at LOS E under both No Build and Build conditions. The northbound and southbound approaches of the intersection of Hugh Howell Rd and Tucker Industrial Rd are expected to operate at LOS E under both No Build and Build conditions. The eastbound and westbound left-turning movements of the intersection of Hugh Howell Rd with Tucker Industrial Rd are expected to operate at a LOS F during both No Build and Build conditions, minimal increases in delays are expected at the above-mentioned turning movements and approaches.

The capacity results for evening peak hour are summarized in **Table 6**.

**Table 6** 2023 PM Peak Hour Capacity Analysis

2023 CONDITIONS - (PM)			No Build		Build		
Intersection		Approach	Movement	DELAY (S)	LOS	DELAY (S)	LOS
1	Hugh Howell Rd & Rosser Terrace/Fuller Way	EB	L	8.3	A	8.2	A
			T	0.0	A	0.0	A
			TR	0.0	A	0.0	A
			Approach	0.2	A	0.2	A
		WB	L	9.1	A	9.5	A
			T	0.0	A	0.0	A
			R	0.0	A	0.0	A
			Approach	0.0	A	0.7	A
		NB	LT	-	-	17.9	C
			R	-	-	11.7	B
			Approach	15.2	C	13.7	B
		SB	Approach	10.2	B	10.1	B
		Intersection	-	0.5	A	1.1	A
2	Hugh Howell Rd & Cowan Rd/The Centre Driveway	EB	L	9.3	A	12.0	B
			T	16.7	B	21.6	C
			TR	16.7	B	21.5	C
			Approach	15.9	B	20.6	C
		WB	L	12.1	B	15.8	B
			T	0.4	A	0.5	A
			R	0.2	A	0.2	A
			Approach	1.1	A	1.4	A
		NB	Approach	74.2	E	78.1	E
		SB	L	57.6	E	51.5	D
			TR	56.1	E	49.9	D
			Approach	56.7	E	50.5	D
		Intersection	-	17.6	B	21.3	C
3	Hugh Howell Rd & Tucker Industrial Rd	EB	L	117.2	F	108.3	F
			T	1.7	A	1.8	A
			TR	1.7	A	1.8	A
			Approach	2.1	A	2.4	A
		WB	L	104.4	F	104.4	F
			T	8.0	A	8.4	A
			TR	8.0	A	8.4	A
			Approach	15.0	B	15.3	B
		NB	Approach	77.6	E	77.9	E
		SB	Approach	59.6	E	59.2	E
		Intersection	-	14.6	B	14.9	B
4	Cowan Rd & Dillard St	EB	Approach	0.0	A	0.0	A
		WB	Approach	1.7	A	3.3	A
		NB	Approach	9.4	A	10.5	B
		Intersection	-	1.7	A	3.9	A

Extracted from Synchro HCM 6th Edition



Based on the results of the capacity analysis during the evening peak hour, all intersections are projected to operate at an acceptable overall LOS C or better during the No Build and Build conditions. An increase in delay of 3.7 seconds is expected at the intersection of Hugh Howell Rd with Cowan Rd under Build conditions.

The northbound and southbound approaches of the intersection of Hugh Howell Rd and Tucker Industrial Rd are expected to operate at LOS E under both No Build and Build conditions; the eastbound and westbound left-turning movements of the intersection of Hugh Howell Rd with Tucker Industrial Rd are expected to operate at LOS F during both No Build and Build conditions.

## Proposed Improvements

Based on the results of the turn lane warrant analysis and the capacity analysis comparison between No Build and Build conditions, the following improvements are proposed:

- Provide a southbound right-turning lane at the intersection of Rosser Terrace & Site Driveway 1.
- Provide a northbound right-turn flare at the intersection of Hugh Howell Rd & Rosser Terrace.

Additionally, the following improvements for the signalized intersection of Cowan Rd and Hugh Howell Rd were evaluated in order to verify the effectiveness of possible proposed improvements.

- **Improved Opt:** Optimize signal timings at Intersection of Hugh Howell Rd & Cowan Rd for evening Peak Hour.
- **Improved LT:** Provide a Northbound Left-turn Lane at the intersection of Hugh Howell Rd & Cowan Rd.
- **Improved RT CH:** Provide a channelized Northbound Right-turn Lane at the intersection of Hugh Howell Rd & Cowan Rd.

## Capacity Analysis Comparison – No Build vs Build Improved Conditions

A Capacity Analyses comparison was conducted for the No Build and Build Improved conditions (year 2023). The primary purpose for this approach was to compare the results in order to evaluate the effect of the proposed improvements. The capacity results are included in **Appendix F**.

The capacity results for morning peak hour are summarized in **Table 7**.



**Table 7** 2023 Morning Peak Hour Capacity Analysis Comparison No Build vs Improved Conditions

2023 CONDITIONS - (AM)			No Build		Build Improved LT		Build Improved RTch	
Intersection	Approach	Movement	DELAY (S)	LOS	DELAY (S)	LOS	DELAY (S)	LOS
2 Hugh Howell Rd & Cowan Rd/The Centre Driveway	EB	L	4.4	A	4.8	A	4.8	A
		T	5.7	A	6.3	A	6.5	A
		TR	5.7	A	6.3	A	6.4	A
		Approach	5.6	A	6.2	A	6.4	A
	WB	L	4.9	A	5.4	A	5.5	A
		T	0.3	A	0.3	A	0.3	A
		R	0.0	A	0.1	A	0.1	A
		Approach	0.4	A	0.4	A	0.4	A
	NB	L/TL*			76.7	E	76.9	E
		TR/R*			76.0	E	-	-
		Approach	78.7	E	76.4	E	76.9	E
	SB	L	68.2	E	67.0	E	65.9	E
		TR	65.2	E	63.5	E	63.0	E
		Approach	66.3	E	64.8	E	64.1	E
	Intersection	-	8.3	A	11.0	B	9.1	A

Extracted from Synchro HCM 6th Edition

During the morning peak hour, the intersection of Hugh Howell Rd and Cowan Rd/The Centre Driveway is expected to experience acceptable overall LOS A under Build Improved conditions with minimal increase in the overall delay considering a northbound channelized right turn lane improvement. The northbound approach is anticipated to operate at LOS E under both No Build and Build Improved conditions with no increase in delay. All other approaches and turning movements are expected to maintain the existing LOS.

The capacity results for evening peak hour are summarized in **Table 7**.

**Table 8** 2023 Evening Peak Hour Capacity Analysis Comparison No Build vs Improved Conditions

2023 CONDITIONS - (PM)			No Build		Build Improved Opt		Build Improved LT		Build Improved RTch	
Intersection	Approach	Movement	DELAY (S)	LOS	DELAY (S)	LOS	DELAY (S)	LOS	DELAY (S)	LOS
2 Hugh Howell Rd & Cowan Rd/The Centre Driveway	EB	L	9.3	A	11.1	B	8.7	A	9.5	A
		T	16.7	B	20.0	B	16.0	B	17.4	B
		TR	16.7	B	20.0	B	16.0	B	17.4	B
		Approach	15.9	B	19.1	B	15.3	B	16.6	B
	WB	L	12.1	B	14.6	B	11.6	B	12.6	B
		T	0.4	A	0.5	A	0.4	A	0.4	A
		R	0.2	A	0.2	A	0.2	A	0.2	A
		Approach	1.1	A	1.3	A	1.1	A	1.2	A
	NB	L/TL*					73.7	E	73.6	E
		TR/R*					72.5	E	-	-
		Approach	74.2	E	71.7	E	73.1	E	73.6	E
	SB	L	57.6	E	53.5	D	60.3	E	56.7	E
		TR	56.1	E	51.8	D	57.7	E	55.5	E
		Approach	56.7	E	52.5	D	58.7	E	56.0	E
	Intersection	-	17.6	B	20.2	C	18.7	B	17.8	B

Extracted from Synchro HCM 6th Edition

During the evening peak hour, the intersection of Hugh Howell Rd and Cowan Rd/The Centre Driveway is expected to experience acceptable overall LOS B under Build Improved conditions with minimal increase in the overall delay considering a northbound right turn lane improvement. The northbound approach is anticipated to operate at LOS E under both No Build and Build Improved conditions with no increase in delay. All other approaches and turning movements are expected to maintain the existing LOS.

## Queueing Analysis

The queue lengths were evaluated to determine if the available storage length of the turn lanes was exceeded. The 95<sup>th</sup> Percentile queue lengths are presented in **Appendix F. Table 9** summarizes the queue results.

**Table 9** Queueing Analysis Comparison

2023 PM PEAK HOUR CONDITIONS				Available Storage (ft)	No Build		Build		Build Imp - Signal Opt		Build Imp - Left Turn		Build Imp - Right Turn									
					AM	PM	AM	PM	AM	PM	AM	PM	AM	PM								
Intersection			Approach		Movement	Queue (ft)	Queue (ft)	Queue (ft)	Queue (ft)	Queue (ft)	Queue (ft)	Queue (ft)	Queue (ft)	Queue (ft)	Queue (ft)							
1	Hugh Howell Rd & Rosser Terrace (Unsignalized)			EB	L	100	3	3	3	3	N/A - No AM Signal Opt Required											
				WB	L	100	0	0	5	8												
2	Hugh Howell Rd & Cowan Rd/The Centre Driveway (Signalized)			EB	L	125	25	85	33	89												
				WB	L	115	12	m27	16	m28												
				NB	Approach	-	88	201	178	#323												
				SB	L	100	48	127	44	125												
3	Hugh Howell Rd & Tucker Industrial Rd (Signalized)			EB	L	150	20	m11	m26	m17												
				WB	L	100	79	#124	79	#124												
4	Cowan Rd & Dillard St (Unsignalized)			NB	Approach	-	3	3	13	15												

Extracted from Synchro10 HCM 6th Edition

Intersections 3 & 4 have Non-NEMA Phasing therefore were extracted from Synchro10 HCM 2000 Edition

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

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

For queue given in terms of vehicles one vehicle was assumed equal to 25 ft (Including space in between vehicles).

Based on the 95<sup>th</sup>% queue results, during the morning peak hour, no storage lengths are exceeded with the inclusion of the proposed development.

Based on the 95<sup>th</sup>% queue results, during the evening peak hour the storage length of the southbound left-turn lane of the intersection of Hugh Howell Rd & Cowan Rd/The Centre Driveway is expected to be exceeded under No Build, Build and Build Improved conditions. The westbound left-turn lane of the intersection of Hugh Howell Rd & Tucker Industrial Rd is expected to be exceeded under both No Build and Build conditions, with no increase in queue length under Build conditions.

## 10. Conclusions and Recommendations

Based on the results of the trip generation assessment prepared by Bowman Consulting, the proposed development is expected to generate a total of 261 trips during the morning peak hour and 285 trips during the evening peak hour. It is anticipated that during the morning peak hour 128 of these are existing trips, the remaining 133 are expected to be primary trips. During the evening peak hour, it is anticipated that 143 are existing trips and 142 are new trips.

The study found that based on the City of Tucker Code of Ordinances, a right turn lane is warranted at the eastbound approach of the intersection of Hugh Howell Rd and Rosser Terrace under Existing, No Build and Build conditions. Based on discussion with the City of Tucker Traffic Review Staff, a southbound right turn lane on Rosser Terrace to access the site via Site Driveway 1 was requested to be included with the development of the project.

The results of the No Build Vs Build conditions capacity analysis comparison indicate the following:

- During the morning peak hour:  
All intersections are projected to operate at an acceptable overall LOS B or better during the No Build and Build conditions. No changes in LOS and minimal increases in delays are expected on all approaches of the analysis intersection.
- During the evening peak hour:  
All intersections are projected to operate at an acceptable overall LOS C or better during the No Build and Build conditions.

The intersection of Hugh Howell Rd with Cowan Rd is expected to operate at LOS B under No Build conditions and LOS C under Build conditions, with an increase in delay of 3.7 seconds.

The following improvements for the signalized intersection of Cowan RD and Hugh Howell Rd were evaluated in order to verify the effectiveness of possible proposed improvements.

- **Improved Signal Optimization:** Optimize signal timings at Intersection of Hugh Howell Rd & Cowan Rd for evening Peak Hour.
- **Improved LT:** Provide a Northbound Left turn lane at the intersection of Hugh Howell Rd & Cowan Rd.
- **Improved RT CH:** Provide a channelized Northbound Right-turn Lane at the intersection of Hugh Howell Rd & Cowan Rd.

Capacity Analyses comparison No Build Vs Build Improved conditions were conducted to evaluate the proposed improvements. The results indicate the following:

- During the morning peak hour: The intersection of Hugh Howell Rd and Cowan Rd/The Centre Driveway is expected to experience acceptable overall LOS A under Build Improved conditions with minimal increase in the overall delay considering a northbound channelized right turn lane improvement. The northbound approach is anticipated to operate at LOS E under both No Build and Build Improved conditions with no increase in delay. All other approaches and turning movements are expected to maintain the existing LOS.
- During the evening peak hour: During the evening peak hour, the intersection of Hugh Howell Rd and Cowan Rd/The Centre Driveway is expected to experience acceptable overall LOS B under Build Improved conditions with minimal increase in the overall delay overall delay considering a northbound channelized right turn lane improvement. The northbound approach is anticipated to

operate at LOS E under both No Build and Build Improved conditions with no increase in delay. All other approaches and turning movements are expected to maintain the existing LOS.

The 95<sup>th</sup> queue results show that, during the morning peak hour, no storage lengths are exceeded with the inclusion of the proposed development. During the evening peak hour, the storage length of the southbound left-turn lane of the intersection of Hugh Howell Rd & Cowan Rd/The Centre Driveway is expected to be exceeded under No Build, Build and Build Improved conditions. The westbound left-turn lane of the intersection of Hugh Howell Rd & Tucker Industrial Rd is expected to be exceeded under both No Build and Build conditions, with no increase in queue length under Build conditions.

Based on the results of the capacity, queuing and turn lane warrant analysis the following improvements are proposed:

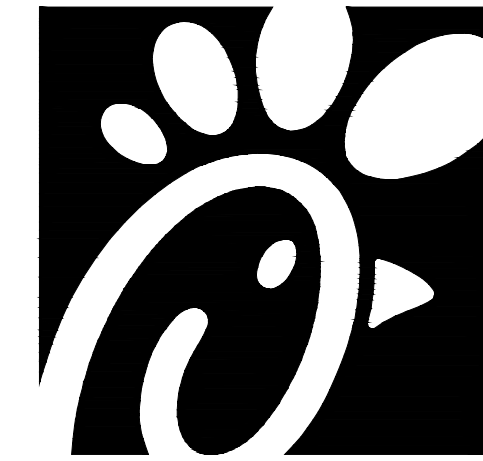
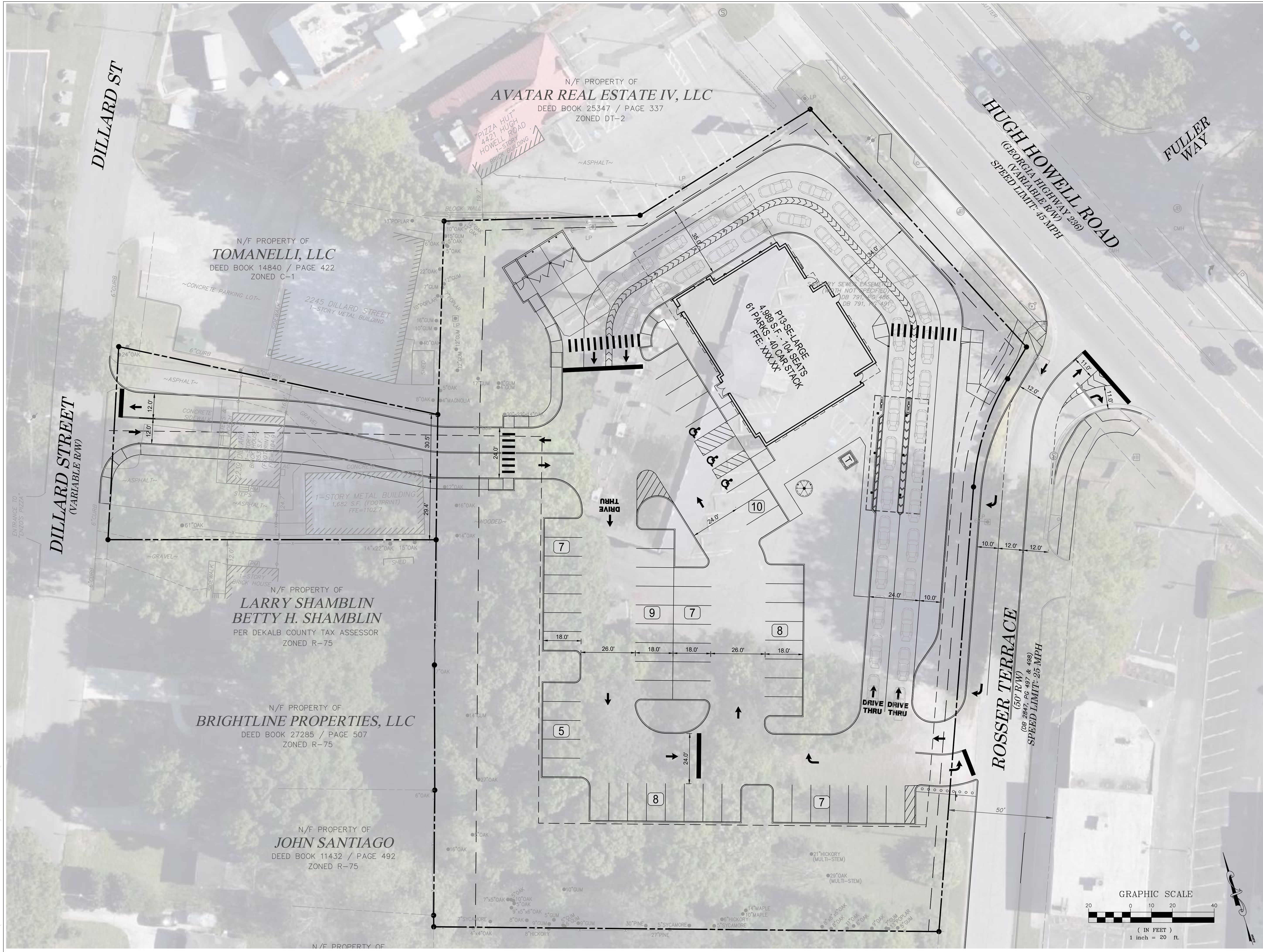
- Provide a southbound right-turning lane at the intersection of Rosser Terrace & Site Driveway 1.
- Provide a northbound right-turn flare at the intersection of Hugh Howell Rd & Rosser Terrace.
- Provide a northbound right turn lane at the intersection of Hugh Howell Rd & Cowan Rd.

Based on the results of the capacity, turn lane, and queueing analysis, the proposed Chick-Fil-A at 4431 Hugh Howell Rd, Tucker, GA is not expected to adversely impact the surrounding roadway network provided the proposed improvements mentioned on this report.

# **APPENDIX A**



20 April 2022 120005-01-049 (ENG) - Chick-fil-A\120005-01-049 (ENG) - Tucker, GA (Hugh Howell Rd) (04095) Engineering\Engineering Plans\Exhibits\AT Entrance Exhibit\EX-1.3 - CFA, Tucker, GA (Hugh Howell Rd) - Rosser Terrace, Exhibit.dwg  
THIS DOCUMENT, TOGETHER WITH THE CONCEPTS AND DESIGN PRESENTED HEREIN, IS AN INSTRUMENT OF SERVICE. IT IS LIMITED IN SCOPE AND INTENT TO THE SPECIFIC PURPOSE AND CLIENT FOR WHICH IT WAS PREPARED. NO OTHER REUSE OR ADAPTATION OF THIS DOCUMENT WITHOUT WRITTEN AUTHORIZATION AND APPROVAL OF BOWMAN CONSULTING SHALL BE WITHOUT LIABILITY TO BOWMAN CONSULTING.



Chick-fil-A

Chick-fil-A  
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Atlanta, Georgia 30349-2998

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Atlanta, GA 30005  
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© Bowman Consulting Group, Ltd.

CHICK-FIL-A

RELO TUCKER FSU  
4435 HUGH HOWELL ROAD  
TUCKER, GA 30084

FSU#04959

BUILDING TYPE / SIZE: P13-SE-LRG

REVISION SCHEDULE		
NO.	DATE	DESCRIPTION

CONSULTANT PROJECT #	120005-01-049
ISSUED FOR	PERMIT
DATE	April 20, 2022
DRAWN BY	BCG

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SHEET  
DILLARD ST  
ACCESS EXHIBIT

SHEET NUMBER

EX-1.3



## **APPENDIX B**



**TRAFFIC IMPACT STUDY CHICK-FIL-A, TUCKER, GA  
SCOPING/METHODOLOGY STATEMENT**

**Scoping Meeting Date:** Electronic Coordination

**Applicant's Consultant:** Bowman Consulting Group

**Applicant's Contact information:** Andrew J Petersen (321 -270 - 8987 / apetersen@bowman.com)

Daniela Jurado (321 -270 - 8977 / djurado@bowman.com)

**(1) LOCATION OF PROPOSED PROJECT:** **4431 Hugh Howell Rd, Tucker, GA 30084, See Figure 1.**

**Municipality:** City of Tucker, GA

**County** DeKalb County

**(2) DESCRIPTION OF PROPOSED PROJECT:**

The proposed development comprises a 4,989 square feet Fast-food restaurant with drive-thru window with 44 car stack, located at 4431 Hugh Howell Rd in the city of Tucker, Georgia. Access to the development will be provided by one (1) full-access driveway along Rosser Terrace.

Trip generation rates were extracted from the Institute of Transportation Engineers 10th Edition. The trip generation is presented in **Table 1**. The proposed Trip Distribution is presented in **Figure 2**.

**(3) PURPOSE OF THE ASSESSMENT:**

The purpose for the study is threefold: to determine the number of trips generated by the proposed site; to determine the potential impact, if any, of the proposed development on the roadway network; to propose improvements, if required.

Capacity analyses will be prepared for the No Build, Build conditions, and Build Conditions with Improvements (if required). Turn lane warrant analyses will be completed at the intersection of Hugh Howell Rd and Rosser Terrace. The results of the study will be summarized in a report document with graphics and back up data.

**(4) DEVELOPMENT SCHEDULE:**

Anticipated Opening Date: 2022

Analysis Date: 2022

**(5) STUDY INTERSECTIONS (See Figure 2):**

- Hugh Howell Rd and Rosser Terrace (Unsignalized Intersection)
- Hugh Howell Rd and Tucker Industrial Rd (Signalized Intersection)
- Hugh Howell Rd and Cowan Rd (Signalized Intersection)

**(6) STUDY AREA TYPE:** Urban:   x   Rural:           

**(7) ANALYSIS PERIODS AND TIMES:**

**AM Peak hour** 7:00 AM - 09:00 AM  
**PM Peak hour** 4:00 PM - 06:00 PM

**(8) TRAFFIC ADJUSTMENT FACTORS:**

(a) Seasonal Adjustment:	<u>To be determined upon coordination</u>	
(b) Annual Base Traffic Growth:	<u>See Table 2</u>	Source: Approximate Growth average from AADT's GDOT Traffic Count Data online

**(9) OTHER PROJECTS WITHIN STUDY AREA TO BE ADDED TO BASE TRAFFIC:**

To be determined upon coordination

**(10) APPROVAL OF DATA COLLECTION ELEMENTS AND METHODOLOGIES:**

<u>Proposed Location</u>	<u>Period (Avg Day)</u>	<u>Type</u>
-Hugh Howell Rd and Rosser Terrace	AM/PM	Turning Movement Counts
-Hugh Howell Rd and Tucker Industrial Rd	AM/PM	Turning Movement Counts
-Hugh Howell Rd and Cowan Rd	AM/PM	Turning Movement Counts

**(11) CAPACITY/LOS ANALYSIS**

<u>Location</u>	<u>Period (Avg Day)</u>	<u>Type</u>
-Hugh Howell Rd and Rosser Terrace	AM/PM	Synchro (HCS)
-Hugh Howell Rd and Tucker Industrial Rd	AM/PM	Synchro (HCS)
-Hugh Howell Rd and Cowan Rd	AM/PM	Synchro (HCS)

**(12) ROADWAY IMPROVEMENTS/MODIFICATIONS BY OTHERS TO BE INCLUDED:**

To be determine upon coordination

**(13) OTHER NEEDED ANALYSES:**

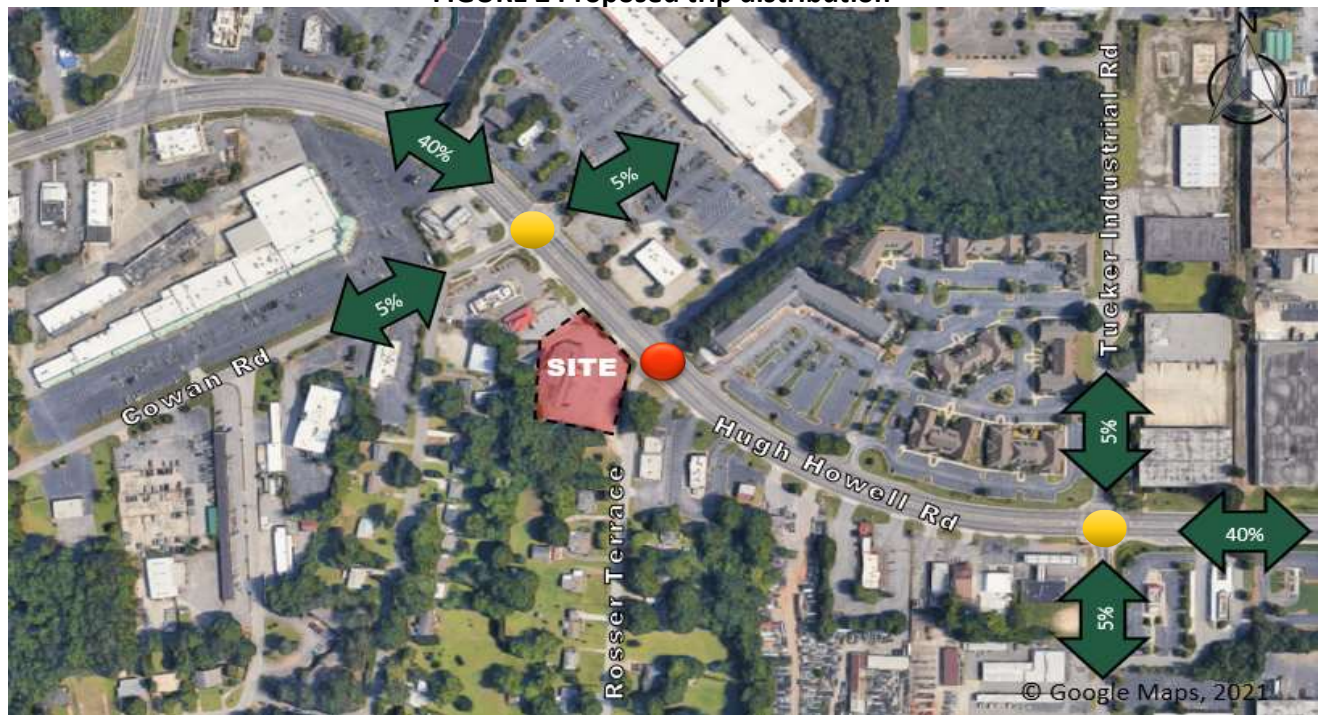
- (a) Signal Warrant Analysis:  
No
- (b) Required Signal Phasing/Timing Modifications:  
TBD
- (c) Analysis of the Need for Turning Lanes:  
-Hugh Howell Rd and Rosser Terrace (Unsignalized Intersection)
- (d) Turning Lane Lengths:  
95th Percentile Synchro Queue

**(14) ADDITIONAL COMMENTS OR RECOMMENDATIONS RELATIVE TO THE SCOPE OF THIS PROJECT:**

TRAFFIC IMPACT STUDY  
SCOPING/METHODOLOGY STATEMENT



FIGURE 2 Proposed trip distribution



# **TRAFFIC IMPACT STUDY** **SCOPING/METHODOLOGY STATEMENT**

**TABLE 1**

Land Use	Land Use Code <sup>(1)</sup>	Size	Daily Trips	Period	Peak Hour Trips			Pass by <sup>(2)</sup>			Primary		
					In	Out	Total	In	Out	Total	In	Out	Total
Fast Food restaurant with Drive thru	934	4,989 SF	2,350	AM	102	99	201	50	49	99	52	50	102
				PM	85	78	163	43	39	82	42	39	81

(1) Based on the Institute of Transportation Engineers Trip Generation, 10th Edition

(1) Pass-By rates of 49% for the AM Peak Hour and 50% for the PM Peak Hour were extracted from the ITE Trip Generation Handbook, 3rd Edition

**TABLE 2**

Roadway	From	to	2015	2016	2017	2018	2019	2016	2017	2018	2019	Avg Growth rate	Applied Growth rate
<b>Hugh Howell Rd</b>	Lawrenceville Hwy	Mountain Industrial Blvd	21,700	22,400	25,600	25,600	24,400	3.2%	14.3%	0.0%	-4.7%	3.2%	3.2%
<b>Rosser Terrace</b>	N/A	N/A	-	-	-	-	-	-	-	-	-	No Data	0.5%
<b>Tucker Industrial Rd</b>	N/A	N/A	-	-	-	-	-	-	-	-	-	No Data	0.5%
<b>Cowan Rd</b>	N/A	N/A	-	-	-	-	-	-	-	-	-	No Data	0.5%

Source: Approximate Growth average from 2015-2019 AADT's GDOT Traffic Count Database System (TCDS).

<https://gdottrafficdata.drakewell.com/publicmultinodemap.asp>

A 0.5% minimum growth rate for the roads was assumed based on the City of Tucker population growth rate.



## Rodrigo Meirelles

---

**From:** Ken Hildebrandt <KHildebrandt@Tuckerga.gov>  
**Sent:** Wednesday, June 9, 2021 5:23 PM  
**To:** Daniela Jurado  
**Cc:** Andrew Petersen; Rodrigo Meirelles  
**Subject:** [EXTERNAL] RE: [External]RE: [External]RE: Chick-fil-A Tucker Methodology Coordination

Yes, these will be a good representation.



**City of  
Tucker**

---

**KEN HILDEBRANDT, PE, PTOE**  
**CITY ENGINEER**

**M: 770-865-5645**

**E: [khildebrandt@tuckerga.gov](mailto:khildebrandt@tuckerga.gov) W: [tuckerga.gov](http://tuckerga.gov)**



---

**From:** Daniela Jurado <djurado@bowman.com>  
**Sent:** Wednesday, June 9, 2021 4:15 PM  
**To:** Ken Hildebrandt <KHildebrandt@Tuckerga.gov>  
**Cc:** Andrew Petersen <apetersen@bowman.com>; Rodrigo Meirelles <rmeirelles@bowman.com>  
**Subject:** [External]RE: [External]RE: Chick-fil-A Tucker Methodology Coordination

Good Afternoon Ken,

We received some trip generation information today of some CFA locations in the Great Atlanta area, average weekday (M-Th) information from 2 months in 2019 and February 2021 when school was in session. The locations are the following:

- 1- 2580 Piedmont Rd
- 2- 2340 N Druid Hills Rd
- 3- 1100 Northside Dr

Sincerely,

### **DANIELA JURADO**

Project Manager | **BOWMAN**

4450 W Eau Gallie Boulevard, Suite 144, Melbourne, FL 32934

O: (321) 270-8905 | D: (321) 270-8977 | M: (786) 370-2762

[djurado@bowman.com](mailto:djurado@bowman.com) | [bowman.com](http://bowman.com)



---

**From:** Ken Hildebrandt <[KHildebrandt@Tuckerga.gov](mailto:KHildebrandt@Tuckerga.gov)>  
**Sent:** Wednesday, June 9, 2021 8:23 AM  
**To:** Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>

**Cc:** Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>; Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>

**Subject:** [EXTERNAL] RE: [External]RE: Chick-fil-A Tucker Methodology Coordination

What is the ADT on the street in Miami?

Is it a comparable site?



**KEN HILDEBRANDT, PE, PTOE**

**CITY ENGINEER**

**M: 770-865-5645**

**E: [khildebrandt@tuckerga.gov](mailto:khildebrandt@tuckerga.gov) W: [tuckerga.gov](http://tuckerga.gov)**



---

**From:** Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>

**Sent:** Tuesday, June 8, 2021 2:21 PM

**To:** Ken Hildebrandt <[KHildebrandt@Tuckerga.gov](mailto:KHildebrandt@Tuckerga.gov)>

**Cc:** Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>; Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>

**Subject:** [External]RE: Chick-fil-A Tucker Methodology Coordination

Good Afternoon Ken,

For the trip generation of the CFA we have conducted a trip generation study for a CFA in the Miami Dade area. Is it possible for us to use this trip generation study results to evaluate the trip generation for this site?

Thank you,

**DANIELA JURADO**

Project Manager | **BOWMAN**

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---

**From:** Daniela Jurado

**Sent:** Tuesday, June 8, 2021 8:47 AM

**To:** Ken Hildebrandt <[KHildebrandt@Tuckerga.gov](mailto:KHildebrandt@Tuckerga.gov)>

**Subject:** RE: Chick-fil-A Tucker Methodology Coordination

Thank you,

**DANIELA JURADO**

Project Manager | **BOWMAN**

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---

**From:** Ken Hildebrandt <[KHildebrandt@Tuckerga.gov](mailto:KHildebrandt@Tuckerga.gov)>  
**Sent:** Tuesday, June 8, 2021 8:36 AM  
**To:** Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>  
**Subject:** [EXTERNAL] Chick-fil-A Tucker Methodology Coordination

DeKalb County maintains our traffic signals. You may be able to get this information from Demetria Allen.  
[dfchambliss@dekalbcountyga.gov](mailto:dfchambliss@dekalbcountyga.gov)



---

**KEN HILDEBRANDT, PE, PTOE**  
**CITY ENGINEER**  
**M: 770-865-5645**  
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---

---

**From:** Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>  
**Sent:** Tuesday, June 8, 2021 8:28 AM  
**To:** Ken Hildebrandt <[KHildebrandt@Tuckerga.gov](mailto:KHildebrandt@Tuckerga.gov)>; Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>; Courtney Smith <[CSmith@Tuckerga.gov](mailto:CSmith@Tuckerga.gov)>; Kylie Thomas <[kthomas@tuckerga.gov](mailto:kthomas@tuckerga.gov)>  
**Cc:** Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>  
**Subject:** [External]RE: [External]RE: [External]RE: Chick-fil-A Tucker Methodology Coordination

Good Morning Ken,

Is there a way we can get the signal phasing and timings for the intersections of Hugh Howell Rd and Tucker Industrial Rd and Hugh Howell Rd and Cowan Rd?

Thank you,

## DANIELA JURADO

Project Manager | **BOWMAN**

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---

**From:** Ken Hildebrandt <[KHildebrandt@Tuckerga.gov](mailto:KHildebrandt@Tuckerga.gov)>  
**Sent:** Monday, June 7, 2021 3:21 PM  
**To:** Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>; Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>; Courtney Smith <[CSmith@Tuckerga.gov](mailto:CSmith@Tuckerga.gov)>; Kylie Thomas <[kthomas@tuckerga.gov](mailto:kthomas@tuckerga.gov)>  
**Cc:** Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>  
**Subject:** [EXTERNAL] RE: [External]RE: [External]RE: Chick-fil-A Tucker Methodology Coordination

No further comments at this time.



**KEN HILDEBRANDT, PE, PTOE**  
CITY ENGINEER

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---

**From:** Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>

**Sent:** Monday, June 7, 2021 3:18 PM

**To:** Ken Hildebrandt <[KHildebrandt@Tuckerga.gov](mailto:KHildebrandt@Tuckerga.gov)>; Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>; Courtney Smith <[CSmith@Tuckerga.gov](mailto:CSmith@Tuckerga.gov)>; Kylie Thomas <[kthomas@tuckerga.gov](mailto:kthomas@tuckerga.gov)>

**Cc:** Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>

**Subject:** [External]RE: [External]RE: Chick-fil-A Tucker Methodology Coordination

Thank you Ken,

We will start working on the best locations to get this data collected. Besides the trip generation, is there any other comments on the proposed methodology?

Sincerely,

**DANIELA JURADO**

Project Manager | **BOWMAN**

4450 W Eau Gallie Boulevard, Suite 144, Melbourne, FL 32934

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---

**From:** Ken Hildebrandt <[KHildebrandt@Tuckerga.gov](mailto:KHildebrandt@Tuckerga.gov)>

**Sent:** Monday, June 7, 2021 12:46 PM

**To:** Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>; Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>; Courtney Smith <[CSmith@Tuckerga.gov](mailto:CSmith@Tuckerga.gov)>; Kylie Thomas <[kthomas@tuckerga.gov](mailto:kthomas@tuckerga.gov)>

**Cc:** Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>

**Subject:** [EXTERNAL] RE: [External]RE: Chick-fil-A Tucker Methodology Coordination

Again, I think that a Chick fil-A is a different animal and is not accurately represented in this trip generation category.



**KEN HILDEBRANDT, PE, PTOE**  
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**From:** Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>

**Sent:** Monday, June 7, 2021 9:53 AM

**To:** Ken Hildebrandt <[KHildebrandt@Tuckerga.gov](mailto:KHildebrandt@Tuckerga.gov)>; Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>; Courtney Smith <[CSmith@Tuckerga.gov](mailto:CSmith@Tuckerga.gov)>; Kylie Thomas <[kthomas@tuckerga.gov](mailto:kthomas@tuckerga.gov)>

**Cc:** Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>

**Subject:** [External]RE: Chick-fil-A Tucker Methodology Coordination

Good Morning Ken,

Would it be possible for us to use the ITE mean values plus one standard deviation. That would leave the following trip generation:

## Mean

Land Use	Land Use Code <sup>(1)</sup>	Size	Daily Trips	Period	Peak Hour Trips			Pass. by <sup>(2)</sup>		
					In	Out	Total	In	Out	Total
Fast Food restaurant with Drive thru	934	4,989	1,893	AM	103	98	201	50	48	99
				PM	85	78	163	42	38	80

(1) Based on the Institute of Transportation Engineers Trip Generation, 10th Edition

(1) Pass-By rates of 49% were extracted from the Institute of Transportation Engineers Trip Generation Handbook, 3rd Edition

## Mean +1 std dev

Land Use	Land Use Code <sup>(1)</sup>	Size	Daily Trips	Period	Peak Hour Trips			Pass. by <sup>(2)</sup>		
					In	Out	Total	In	Out	Total
Fast Food restaurant with Drive thru	934	4,989	1,893	AM	175	169	344	86	83	169
				PM	131	121	252	64	59	123

(1) Based on the Institute of Transportation Engineers Trip Generation, 10th Edition

(1) Pass-By rates of 49% were extracted from the Institute of Transportation Engineers Trip Generation Handbook, 3rd Edition

Would you agree with this approach?

Thank you,

## DANIELA JURADO

Project Manager | **BOWMAN**

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**From:** Ken Hildebrandt <[KHildebrandt@Tuckerga.gov](mailto:KHildebrandt@Tuckerga.gov)>

**Sent:** Monday, June 7, 2021 8:18 AM

**To:** Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>; Courtney Smith <[CSmith@Tuckerga.gov](mailto:CSmith@Tuckerga.gov)>; Kylie Thomas <[kthomas@tuckerga.gov](mailto:kthomas@tuckerga.gov)>

**Cc:** Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>; Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>

**Subject:** [EXTERNAL] Chick-fil-A Tucker Methodology Coordination

Rodrigo,

A Chick fil-A restaurant is rather unique and does not fit in the mold of Code 934 for a Fast Food Restaurant. Actual trip generation will be significantly higher. A more accurate estimate would be to provide counts at an existing comparably sized Chick fil-A.

You can call me at the number below with any questions.



**KEN HILDEBRANDT, PE, PTOE**  
**CITY ENGINEER**

**M: 770-865-5645**

**E: [khildebrandt@tuckerga.gov](mailto:khildebrandt@tuckerga.gov) W: [tuckerga.gov](http://tuckerga.gov)**



---

**From:** Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>

**Sent:** Thursday, June 3, 2021 10:18 AM

**To:** Ken Hildebrandt <[KHildebrandt@Tuckerga.gov](mailto:KHildebrandt@Tuckerga.gov)>; Courtney Smith <[CSmith@Tuckerga.gov](mailto:CSmith@Tuckerga.gov)>; Kylie Thomas <[kthomas@tuckerga.gov](mailto:kthomas@tuckerga.gov)>

**Cc:** Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>; Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>

**Subject:** [External]Chick-fil-A Tucker Methodology Coordination

Good Morning Ken, Courtney, and Kylie,

I am contacting you regarding a Chick-fil-A project at 4431 Hugh Howell Rd, Tucker, GA. The site will be replacing the existing Presbyterian Church. Attached you will find a Methodology Statement with the Trip Generation for this site and a Current Site Plan.

We want to schedule a meeting with the City of Tucker to verify that our methodology for this Traffic Impact Study is acceptable. Could you reply to this email with the best time for you to discuss this project?

Thank you in advance.

Sincerely,

**RODRIGO MEIRELLES VAN VLIET**

Engineer I | **BOWMAN**

4450 W Eau Gallie Boulevard, Suite 144, Melbourne, FL 32934

O: (321) 270-8905

[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com) | [bowman.com](http://bowman.com)



## Rodrigo Meirelles

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**From:** Rodrigo Meirelles  
**Sent:** Wednesday, June 9, 2021 10:48 AM  
**To:** Mathis, Renaldo M  
**Cc:** Daniela Jurado; Andrew Petersen  
**Subject:** RE: Chick-fil-A Tucker Methodology Coordination - GDOT

That will work, thank you very much Renaldo. Can you please include Daniela Jurado ([djurado@bowman.com](mailto:djurado@bowman.com)) and Andrew Petersen ([apetersen@bowman.com](mailto:apetersen@bowman.com)) to the meeting invite as well?

Sincerely,

### RODRIGO MEIRELLES VAN VLIET

Engineer I | **BOWMAN**  
O: (321) 270-8905  
[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)

---

**From:** Mathis, Renaldo M <[RMathis@dot.ga.gov](mailto:RMathis@dot.ga.gov)>  
**Sent:** Wednesday, June 9, 2021 10:35 AM  
**To:** Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>  
**Subject:** [EXTERNAL] RE: Chick-fil-A Tucker Methodology Coordination - GDOT

I will set the meeting on Microsoft teams for Tuesday at 1.

Thanks,

### Renaldo M. Mathis

*Civil Engineer II*  
*Serving City of Atlanta & DeKalb County*



District 7 Office of *Traffic Operations*  
5025 New Peachtree Road  
Chamblee, GA, 30341  
770.216.3993 office  
404.655.8946 mobile

---

**From:** Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>  
**Sent:** Wednesday, June 9, 2021 10:20 AM  
**To:** Mathis, Renaldo M <[RMathis@dot.ga.gov](mailto:RMathis@dot.ga.gov)>  
**Cc:** Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>; Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>  
**Subject:** RE: Chick-fil-A Tucker Methodology Coordination - GDOT

Hello Renaldo,

Sorry for misspelling your name at first. Either one of these days will work for us. Let us know what time works best for you and your manager.

Thank you,

**RODRIGO MEIRELLES VAN VLIET**

Engineer I | **BOWMAN**

O: (321) 270-8905

[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)

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**From:** Mathis, Renaldo M <[RMathis@dot.ga.gov](mailto:RMathis@dot.ga.gov)>

**Sent:** Wednesday, June 9, 2021 9:35 AM

**To:** Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>

**Subject:** [EXTERNAL] RE: Chick-fil-A Tucker Methodology Coordination - GDOT

Good morning Rodrigo,

I can set a meeting for sometime early next week if that works for you. I m going to speak with my manager to see what times work best based on the day you prefer. I'm thinking sometime Monday or Tuesday. How does these dates sound to you?

Thanks,

**Renaldo M. Mathis**

*Civil Engineer II*

*Serving City of Atlanta & DeKalb County*



District 7 Office of *Traffic Operations*

5025 New Peachtree Road

Chamblee, GA, 30341

770.216.3993 office

404.655.8946 mobile

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**From:** Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>

**Sent:** Wednesday, June 9, 2021 9:12 AM

**To:** Mathis, Renaldo M <[RMathis@dot.ga.gov](mailto:RMathis@dot.ga.gov)>

**Cc:** Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>; Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>

**Subject:** RE: Chick-fil-A Tucker Methodology Coordination - GDOT

Good Morning Ronaldo,

I wanted to follow up on my previous email and see if you received my previous email with the attached methodology for this project, and if there is any additional information you require for the TIA of this project.

Please do not hesitate to contact us.

Thank you in advance,

**RODRIGO MEIRELLES VAN VLIET**Engineer I | **BOWMAN**

O: (321) 270-8905

[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)

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**From:** Rodrigo Meirelles**Sent:** Thursday, June 3, 2021 2:06 PM**To:** [rmathis@dot.ga.gov](mailto:rmathis@dot.ga.gov)**Cc:** Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>; Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>**Subject:** Chick-fil-A Tucker Methodology Coordination - GDOT

Good Morning Ronaldo,

I am contacting you regarding a Chick-fil-A project at 4431 Hugh Howell Rd, Tucker, GA. The site will be replacing the existing Presbyterian Church. Attached you will find a Methodology Statement with the Trip Generation for this site and the most recent Site Plan.

We want to schedule a meeting with the GDOT to verify that our methodology for this Traffic Impact Study is acceptable. Could you reply to this email with the best time for you to discuss this project?

Thank you in advance.

Sincerely,

**RODRIGO MEIRELLES VAN VLIET**Engineer I | **BOWMAN**

4450 W Eau Gallie Boulevard, Suite 144, Melbourne, FL 32934

O: (321) 270-8905

[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com) | [bowman.com](http://bowman.com)

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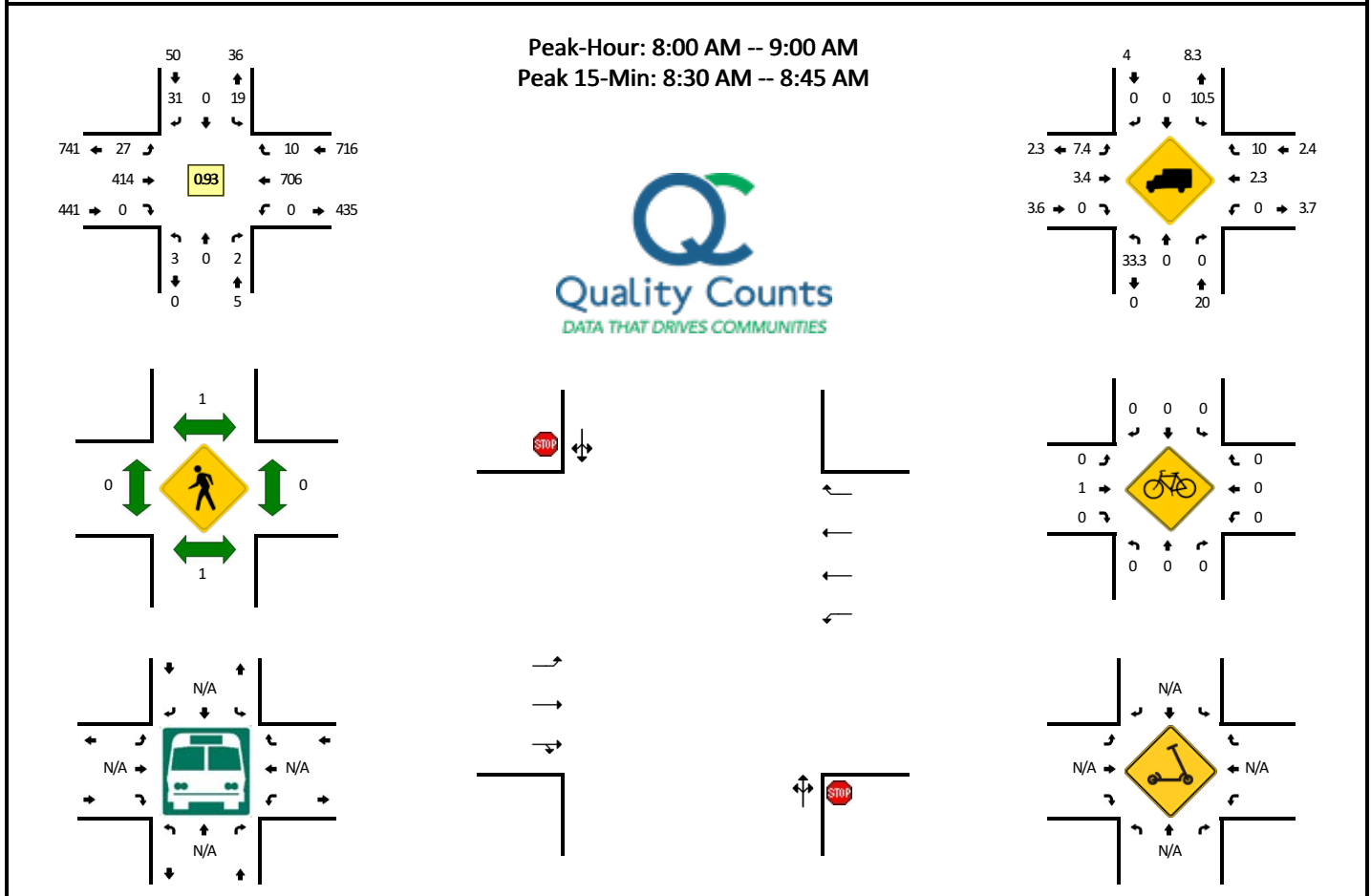
Georgia is a state of natural beauty. And it's a state that spends millions each year cleaning up litter that not only mars that beauty, but also affects road safety, the environment and the economy. Do your part – don't litter. How can you play an active role in protecting the splendor of the Peach State? Find out at <http://keepgaclean.com/>.

## **APPENDIX C**



**LOCATION:** Rosser Ter -- Hugh Howell Rd  
**CITY/STATE:** Tucker, GA

**QC JOB #:** 15488401  
**DATE:** Tue, Jun 15 2021

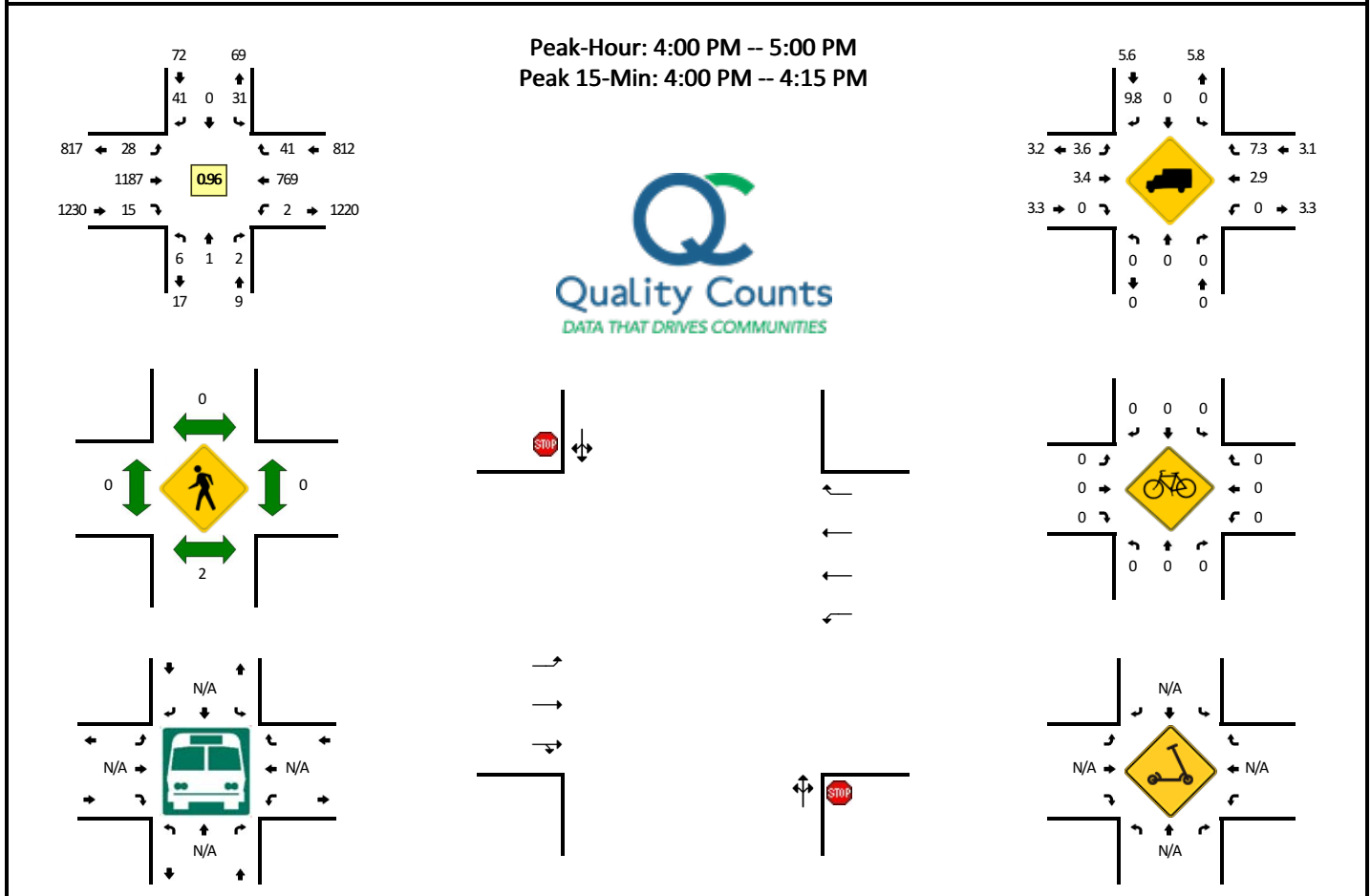


15-Min Count Period Beginning At	Rosser Ter (Northbound)				Rosser Ter (Southbound)				Hugh Howell Rd (Eastbound)				Hugh Howell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	2	0	0	0	2	0	7	0	1	59	0	0	0	118	5	0	194	
7:15 AM	2	0	0	0	5	0	5	0	1	87	0	0	0	124	2	0	226	
7:30 AM	2	0	0	0	3	1	4	0	11	60	0	0	1	167	3	0	252	
7:45 AM	4	0	1	0	5	0	12	0	2	98	1	0	0	165	3	0	291	963
8:00 AM	0	0	0	0	3	0	7	0	4	100	0	0	0	170	2	0	286	1055
8:15 AM	1	0	1	0	4	0	8	0	6	103	0	0	0	168	4	0	295	1124
8:30 AM	1	0	0	0	7	0	8	0	5	107	0	0	0	196	2	0	326	1198
8:45 AM	1	0	1	0	5	0	8	0	11	104	0	1	0	172	2	0	305	1212
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	4	0	0	0	28	0	32	0	20	428	0	0	0	784	8	0	1304	
Heavy Trucks	0	0	0	0	0	0	0	0	0	20	0	0	0	4	0	0	24	
Buses																		
Pedestrians		4				0				0				0			4	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																		

Comments:

**LOCATION:** Rosser Ter -- Hugh Howell Rd  
**CITY/STATE:** Tucker, GA

**QC JOB #:** 15488402  
**DATE:** Tue, Jun 15 2021

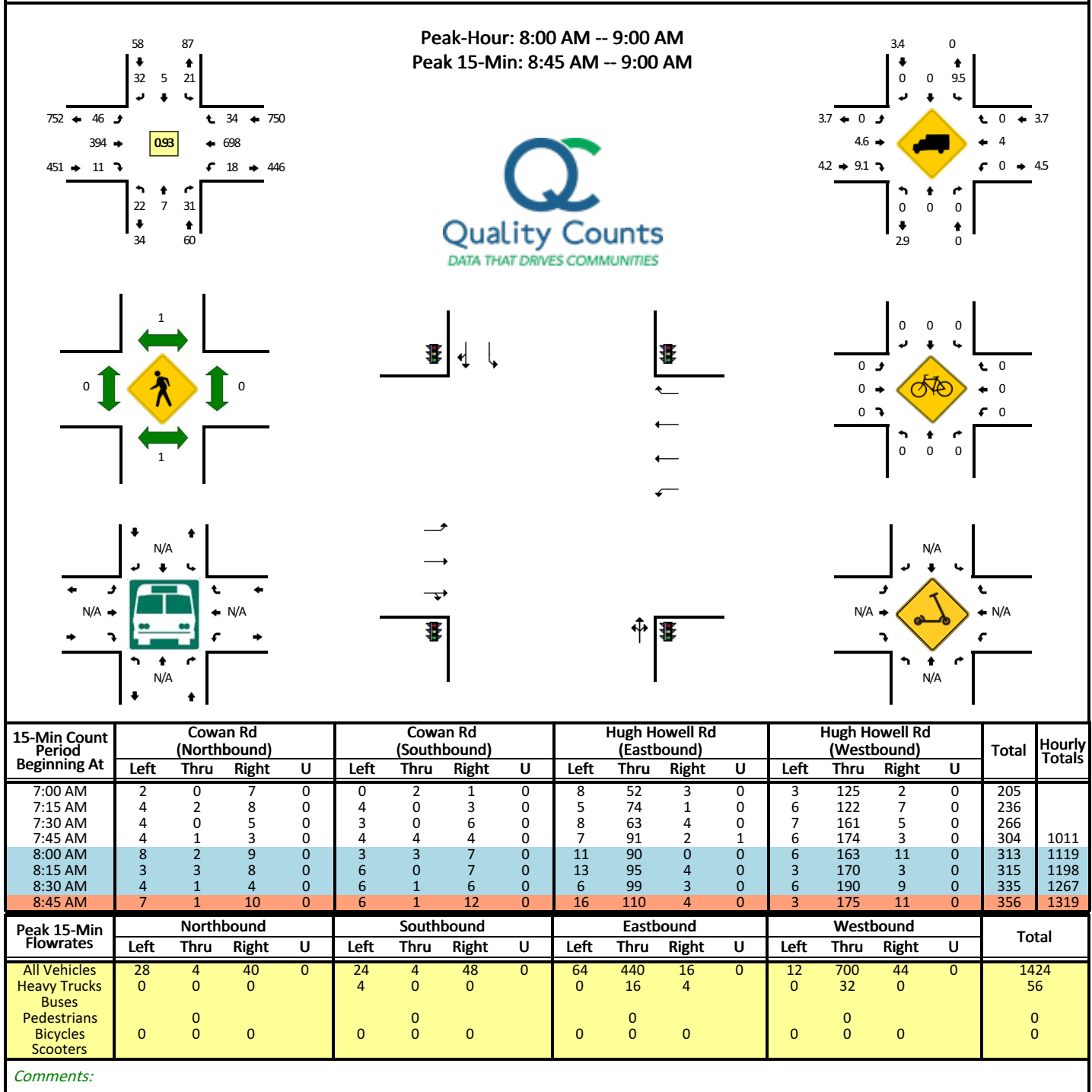


15-Min Count Period Beginning At	Rosser Ter (Northbound)				Rosser Ter (Southbound)				Hugh Howell Rd (Eastbound)				Hugh Howell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	9	0	11	0	3	315	3	0	0	203	8	0	552	
4:15 PM	2	0	0	0	9	0	6	0	12	294	3	0	1	196	12	0	535	
4:30 PM	3	0	1	0	6	0	11	0	4	329	6	0	0	169	11	0	540	
4:45 PM	1	1	1	0	7	0	13	0	8	249	3	1	1	201	10	0	496	2123
5:00 PM	0	0	1	0	6	0	11	0	2	285	6	0	0	187	9	0	507	2078
5:15 PM	3	0	0	0	9	0	9	0	7	332	2	0	1	193	11	0	567	2110
5:30 PM	2	0	0	0	2	0	11	0	7	302	2	0	0	165	9	0	500	2070
5:45 PM	1	0	1	0	1	1	7	0	9	316	7	0	0	189	5	0	537	2111
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	0	0	0	36	0	44	0	12	1260	12	0	0	812	32	0	2208	
Heavy Trucks	0	0	0	0	0	0	4	0	0	32	0	0	0	32	4	0	72	
Buses																		
Pedestrians		4				0				0				0			4	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scooters																		

**Comments:**

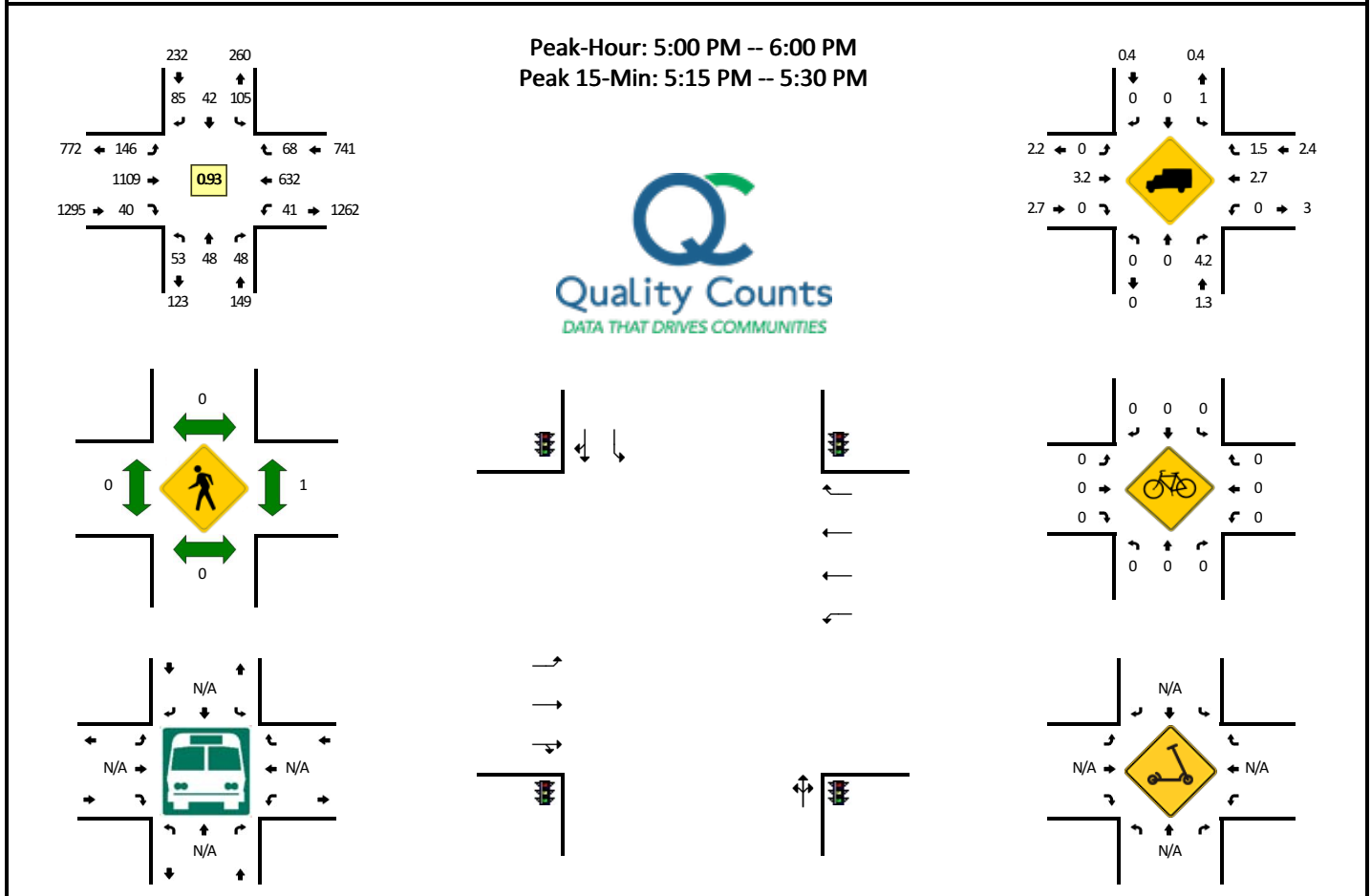
**LOCATION:** Cowan Rd -- Hugh Howell Rd  
**CITY/STATE:** Tucker, GA

**QC JOB #:** 15488403  
**DATE:** Tue, Jun 15 2021



**LOCATION:** Cowan Rd -- Hugh Howell Rd  
**CITY/STATE:** Tucker, GA

**QC JOB #:** 15488404  
**DATE:** Tue, Jun 15 2021

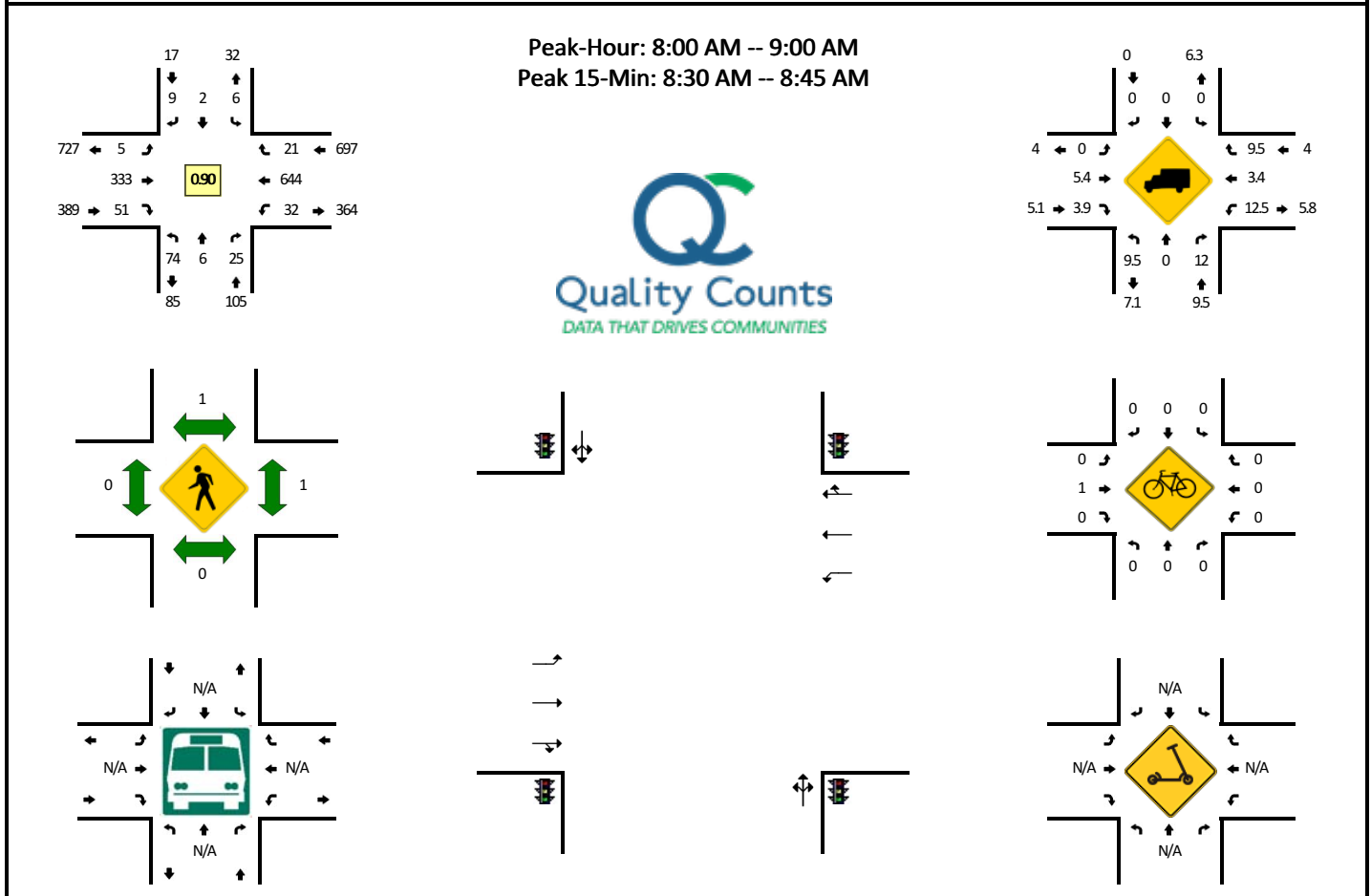


15-Min Count Period Beginning At	Cowan Rd (Northbound)				Cowan Rd (Southbound)				Hugh Howell Rd (Eastbound)				Hugh Howell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	11	6	13	0	18	7	29	0	37	291	18	0	15	181	17	0	643	
4:15 PM	18	5	19	0	23	14	29	0	37	260	7	0	9	159	22	0	602	
4:30 PM	9	11	11	0	19	5	15	0	35	301	5	0	14	159	13	0	597	
4:45 PM	13	7	11	0	26	9	25	0	29	228	10	0	11	175	24	0	568	2410
5:00 PM	11	13	8	0	24	6	15	0	46	268	16	0	8	153	17	0	585	2352
5:15 PM	15	12	15	0	22	10	24	0	36	296	9	1	10	183	16	0	649	2399
5:30 PM	13	8	17	0	25	14	19	0	37	258	8	1	12	144	17	0	573	2375
5:45 PM	14	15	8	0	34	12	27	0	25	287	7	0	11	152	18	0	610	2417
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	60	48	60	0	88	40	96	0	144	1184	36	4	40	732	64	0	2596	
Heavy Trucks	0	0	4	0	0	0	0	0	0	36	0	0	0	4	0	0	44	
Buses	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
Pedestrians	0	0	0	0	0	0	0	0	0	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	0	
Scoters	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

**Comments:**

**LOCATION:** Tucker Industrial Rd -- Hugh Howell Rd  
**CITY/STATE:** Tucker, GA

**QC JOB #:** 15488405  
**DATE:** Tue, Jun 15 2021

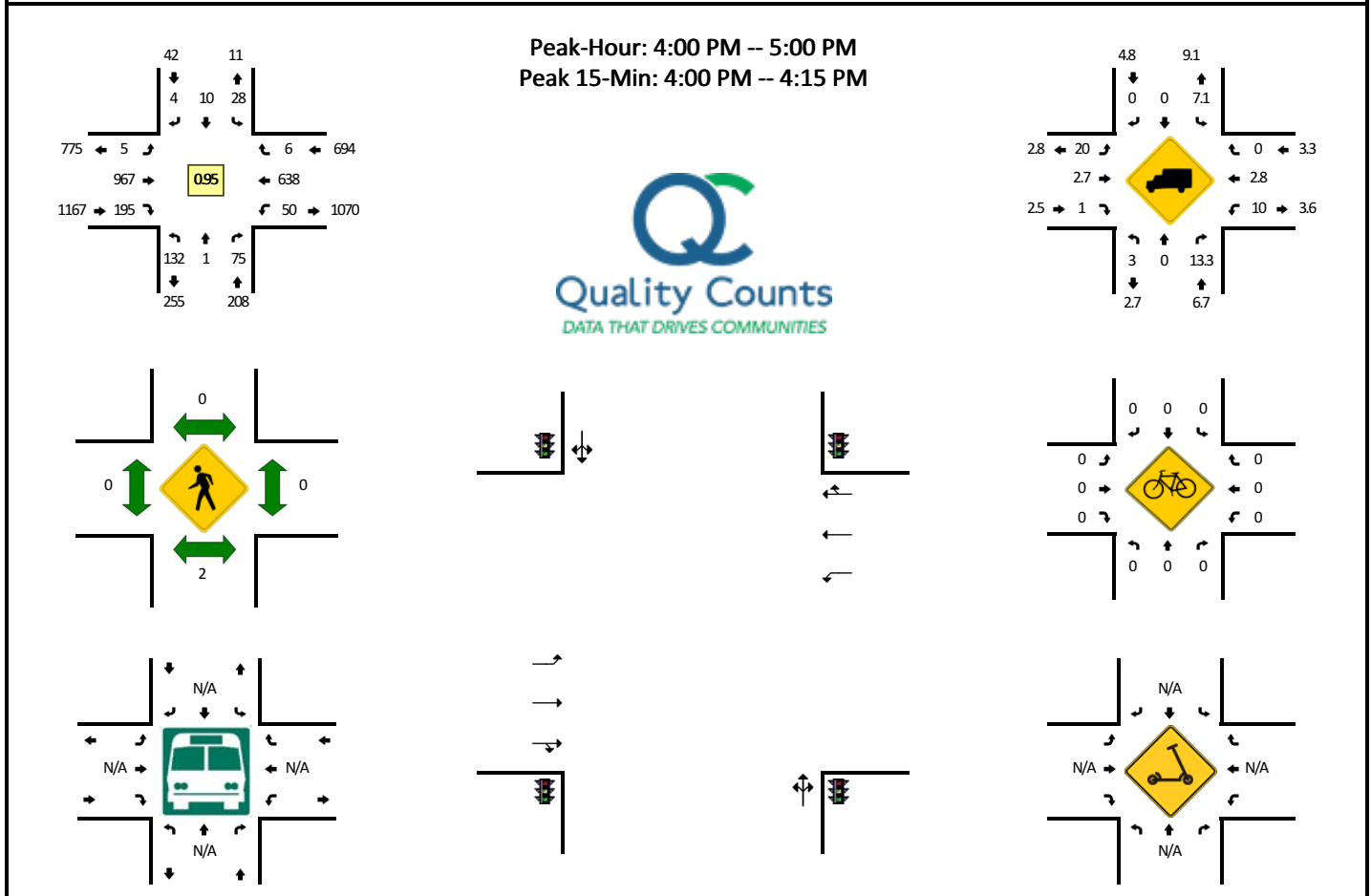


15-Min Count Period Beginning At	Tucker Industrial Rd (Northbound)				Tucker Industrial Rd (Southbound)				Hugh Howell Rd (Eastbound)				Hugh Howell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	10	1	8	0	0	0	0	0	0	46	17	0	16	115	1	0	214	
7:15 AM	11	1	8	0	0	0	1	0	2	68	11	0	13	124	2	0	241	
7:30 AM	29	0	6	0	1	1	0	0	2	50	11	0	10	133	5	0	248	
7:45 AM	13	3	2	0	0	1	0	0	0	89	10	0	19	162	4	0	303	1006
8:00 AM	19	2	2	0	3	0	0	0	3	80	11	0	10	156	3	0	289	1081
8:15 AM	21	0	4	0	2	0	2	0	1	89	5	0	8	145	4	0	281	1121
8:30 AM	14	3	10	0	0	1	4	0	1	81	19	0	6	184	11	0	334	1207
8:45 AM	20	1	9	0	1	1	3	0	0	83	16	0	8	159	3	0	304	1208
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	56	12	40	0	0	4	16	0	4	324	76	0	24	736	44	0	1336	
Heavy Trucks	4	0	4	0	0	0	0	0	0	32	0	0	4	8	4	0	56	
Buses																		
Pedestrians	0	0	0	0	0	0	0	0	0	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	0	
Scooters																		

**Comments:**

**LOCATION:** Tucker Industrial Rd -- Hugh Howell Rd  
**CITY/STATE:** Tucker, GA

**QC JOB #:** 15488406  
**DATE:** Tue, Jun 15 2021



15-Min Count Period Beginning At	Tucker Industrial Rd (Northbound)				Tucker Industrial Rd (Southbound)				Hugh Howell Rd (Eastbound)				Hugh Howell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	41	0	21	0	11	3	0	0	2	240	51	1	16	164	3	0	553	
4:15 PM	33	0	18	0	3	4	0	0	1	248	54	0	15	160	2	0	538	
4:30 PM	31	1	20	0	3	2	3	0	0	262	40	0	8	148	0	0	518	
4:45 PM	27	0	16	0	11	1	1	0	1	217	50	0	11	166	1	0	502	2111
5:00 PM	27	1	15	0	4	2	1	0	0	259	48	0	11	160	2	0	530	2088
5:15 PM	38	1	10	0	4	5	2	0	2	247	62	0	11	142	1	0	525	2075
5:30 PM	30	1	14	0	7	5	2	0	3	250	51	0	8	134	3	0	508	2065
5:45 PM	26	0	11	0	3	3	0	0	0	249	59	0	8	162	2	0	523	2086
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	164	0	84	0	44	12	0	0	8	960	204	4	64	656	12	0	2212	
Heavy Trucks	4	0	12	0	4	0	0	0	0	28	0	0	4	24	0	0	76	
Buses																		
Pedestrians		4				0				0				0			4	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																		

**Comments:**



Project ID: 22-180036-001  
Location: Dillard St & Cowan Rd  
City: Tucker

Day: Tuesday  
Date: 3/1/2022

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Dillard St Northbound						Dillard St Southbound						Cowan Rd Eastbound						Cowan Rd Westbound							
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total	
7:00 AM	1	0	5	0	1	6	0	0	0	0	0	0	0	13	0	0	0	0	13	2	3	0	0	0	5	24
7:15 AM	0	0	14	0	0	14	0	0	0	0	0	0	0	9	0	0	0	0	9	1	8	0	0	0	9	32
7:30 AM	0	0	7	0	1	7	0	0	0	0	0	0	0	8	0	0	0	0	8	4	7	0	0	0	11	26
7:45 AM	5	0	6	0	0	11	0	0	0	0	0	0	0	27	0	0	0	0	27	4	10	0	0	0	14	52
Total	6	0	32	0	2	38	0	0	0	0	0	0	0	57	0	0	0	0	57	11	28	0	0	0	39	134
8:00 AM	2	0	5	0	0	7	0	0	0	0	0	0	0	13	1	0	0	0	14	3	9	0	0	0	12	33
8:15 AM	2	0	4	0	0	6	0	0	0	0	0	0	0	14	0	0	0	0	14	1	20	0	0	0	21	41
8:30 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	16	1	0	1	17	1	9	0	0	0	10	29	
8:45 AM	0	0	4	0	0	4	0	0	0	0	0	0	0	10	0	0	0	10	2	13	0	0	0	15	29	
Total	4	0	15	0	0	19	0	0	0	0	0	0	0	53	2	0	1	55	7	51	0	0	0	58	132	
***BREAK***																										
4:00 PM	2	0	7	0	0	9	0	0	0	0	0	0	0	43	2	0	0	45	4	20	0	0	0	24	78	
4:15 PM	0	0	6	0	1	6	0	0	0	0	0	0	0	44	1	0	1	45	3	15	0	0	0	18	69	
4:30 PM	0	0	8	0	2	8	0	0	0	0	0	0	0	38	2	0	1	40	3	28	0	0	0	31	79	
4:45 PM	1	0	10	0	0	11	0	0	0	0	0	0	0	23	1	0	0	24	5	26	0	1	0	32	67	
Total	3	0	31	0	3	34	0	0	0	0	0	0	0	148	6	0	2	154	15	89	0	1	0	105	293	
5:00 PM	0	0	5	0	1	5	0	0	0	0	0	0	0	26	1	0	0	27	7	28	0	0	2	35	67	
5:15 PM	2	0	6	0	0	8	0	0	0	0	0	0	0	36	0	0	0	36	6	30	0	0	0	36	80	
5:30 PM	0	0	12	0	0	12	0	0	0	0	0	0	0	35	2	0	0	37	7	20	0	0	0	27	76	
5:45 PM	0	0	6	0	0	6	0	0	0	0	0	0	0	37	1	0	0	38	7	19	0	0	0	26	70	
Total	2	0	29	0	1	31	0	0	0	0	0	0	0	134	4	0	0	138	27	97	0	0	2	124	293	
Grand Total	15	0	107	0	6	122	0	0	0	0	0	0	0	392	12	0	3	404	60	265	0	1	2	326	852	
Apprch %	12.3	0.0	87.7	0.0	4.9		0.0	0.0	0.0	0.0	0.0		0.0	97.0	3.0	0.0	0.7		18.4	81.3	0.0	0.3	0.6			
Total %	1.8	0.0	12.6	0.0	0.7	14.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46.0	1.4	0.0	0.4	47.4	7.0	31.1	0.0	0.1	0.2	38.3		
Cars, PU, Vans	15	0	105	0		120	0	0	0	0		0	0	382	10	0		392	60	255	0	1		316	828	
% Cars, PU, Vans	100.0	0.0	98.1	0.0		98.4	0.0	0.0	0.0	0.0		0.0	0.0	97.4	83.3	0.0		97.0	100.0	96.2	0.0	100.0		96.9	97.2	
Heavy trucks	0	0	2	0		2	0	0	0	0		0	0	10	2	0		12	0	10	0	0		10	24	
%Heavy trucks	0.0	0.0	1.9	0.0		1.6	0.0	0.0	0.0	0.0		0.0	0.0	2.6	16.7	0.0		3.0	0.0	3.8	0.0	0.0		3.1	2.8	

Project ID: 22-180036-001  
Location: Dillard St & Cowan Rd  
City: Tucker

## PEAK HOURS

Day: Tuesday  
Date: 3/1/2022

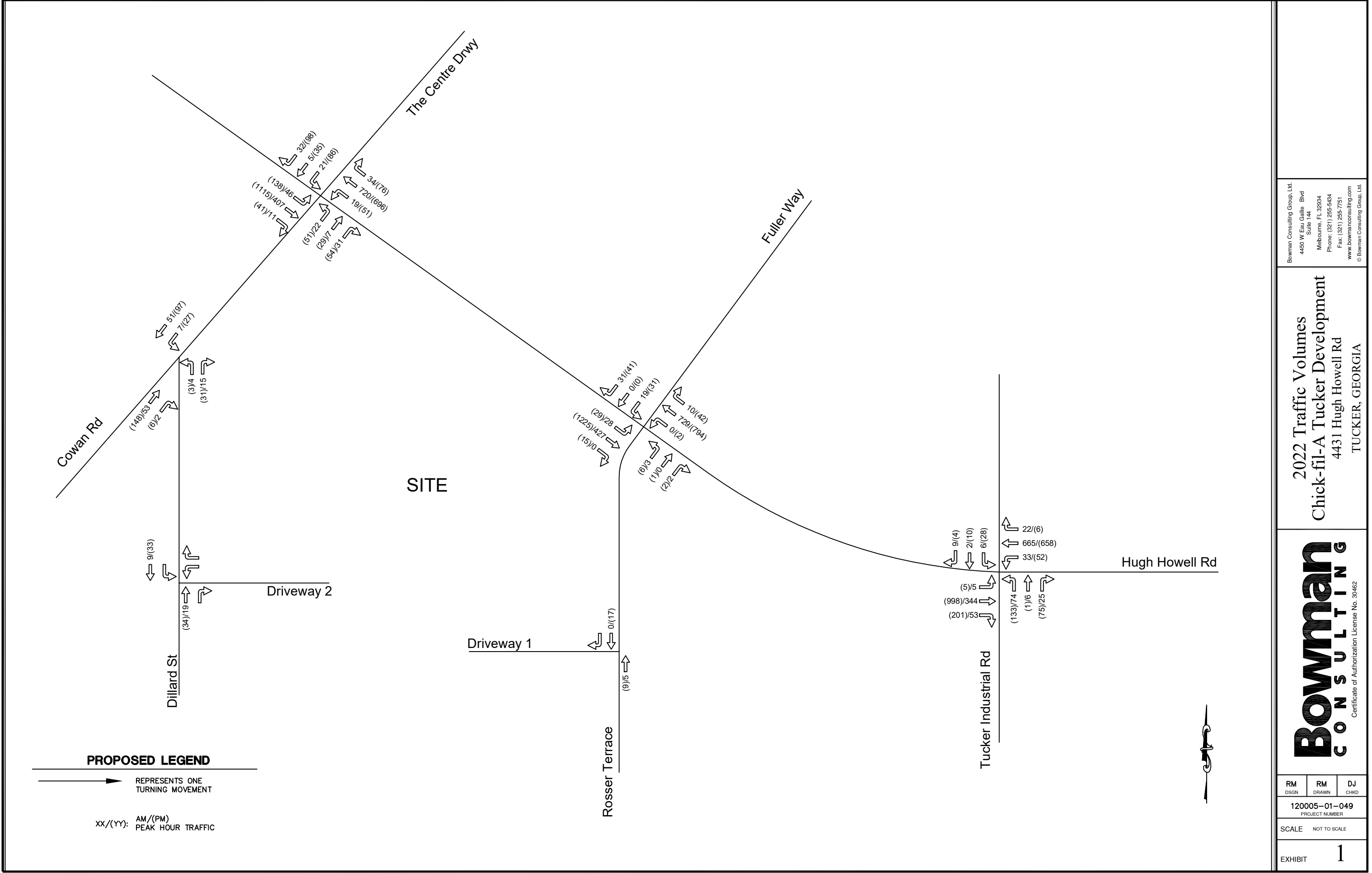
### AM

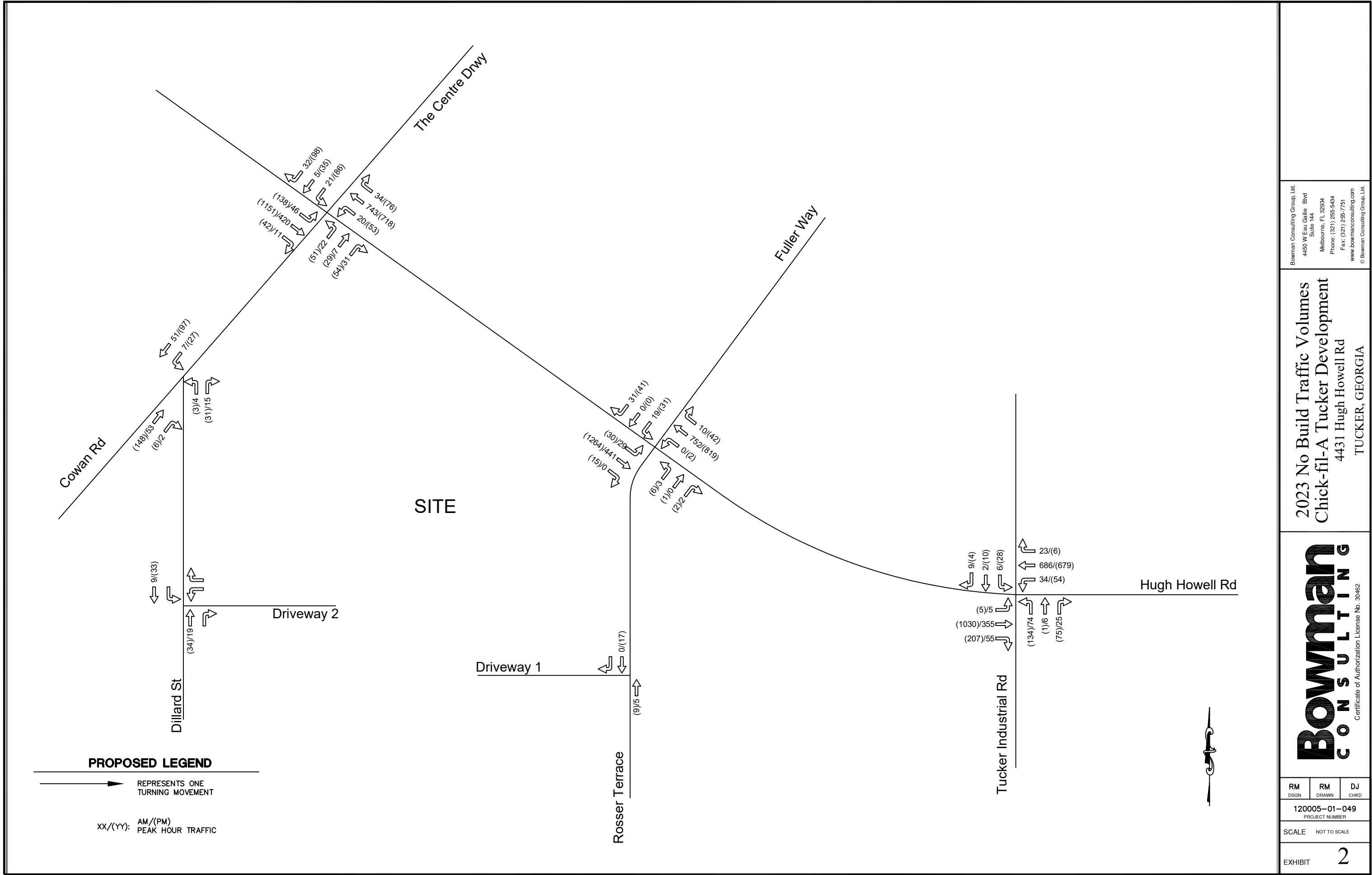
	Dillard St Northbound					Dillard St Southbound					Cowan Rd Eastbound					Cowan Rd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM - 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
7:45 AM	5	0	6	0	11	0	0	0	0	0	0	27	0	0	27	4	10	0	0	14	52
8:00 AM	2	0	5	0	7	0	0	0	0	0	0	13	1	0	14	3	9	0	0	12	33
8:15 AM	2	0	4	0	6	0	0	0	0	0	0	14	0	0	14	1	20	0	0	21	41
8:30 AM	0	0	2	0	2	0	0	0	0	0	0	16	1	0	17	1	9	0	0	10	29
Total Volume	9	0	17	0	26	0	0	0	0	0	0	70	2	0	72	9	48	0	0	57	155
% App. Total	34.6	0.0	65.4	0.0	100	0.0	0.0	0.0	0.0	0	0.0	97.2	2.8	0.0	100	15.8	84.2	0.0	0.0	100	
PHF	0.591										0.667					0.679					0.745
Cars, PU, Vans	9	0	17	0	26	0	0	0	0	0	0	67	1	0	68	9	44	0	0	53	147
% Cars, PU, Vans	100.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	95.7	50.0	0.0	94.4	100.0	91.7	0.0	0.0	93.0	94.8
Heavy trucks	0	0	0	0	0	0	0	0	0	0	0	3	1	0	4	0	4	0	0	4	8
% Heavy trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	50.0	0.0	5.6	0.0	8.3	0.0	0.0	7.0	5.2

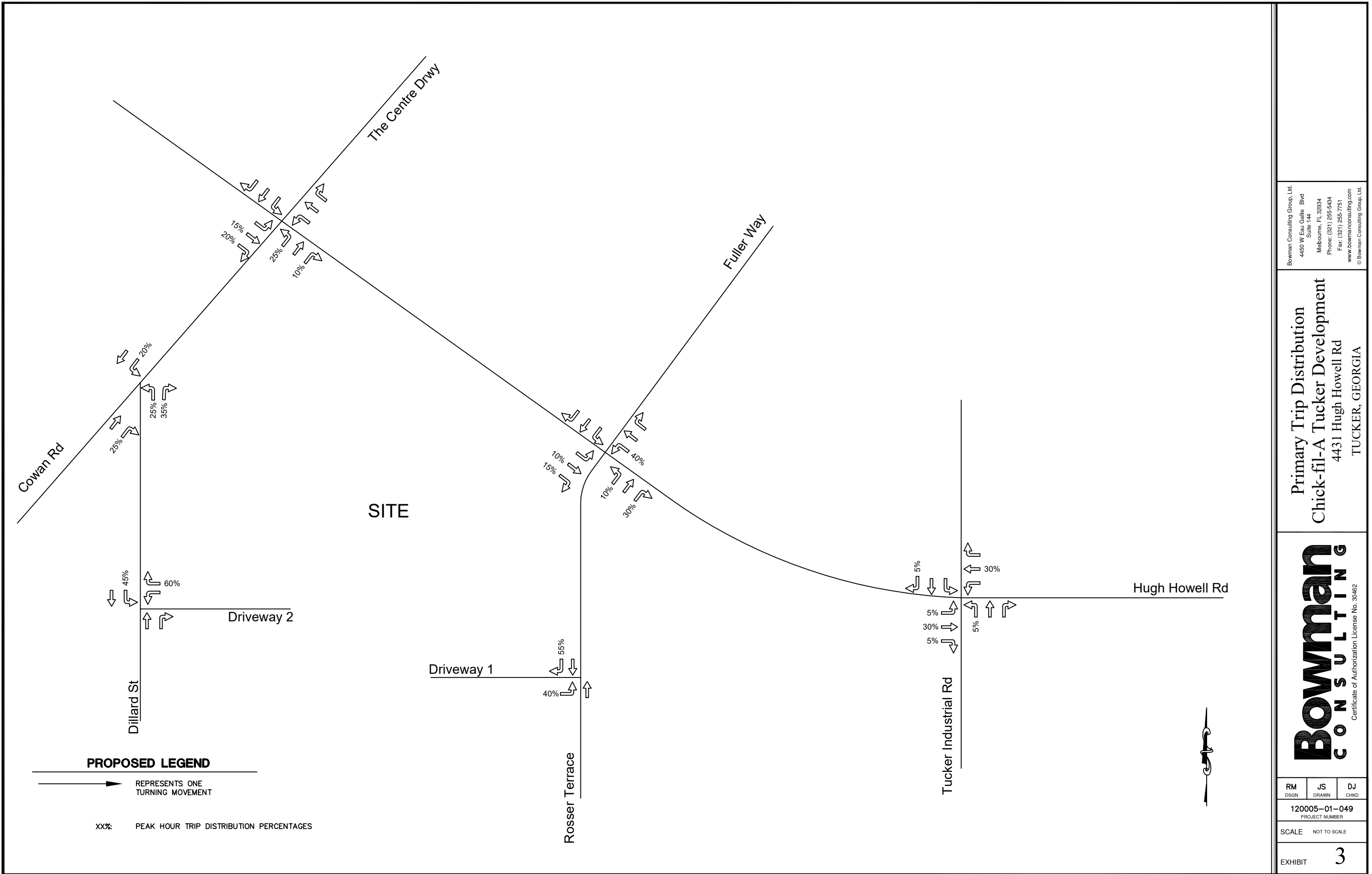
### PM

	Dillard St Northbound					Dillard St Southbound					Cowan Rd Eastbound					Cowan Rd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM - 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	0	0	5	0	5	0	0	0	0	0	0	26	1	0	27	7	28	0	0	35	67
5:15 PM	2	0	6	0	8	0	0	0	0	0	0	36	0	0	36	6	30	0	0	36	80
5:30 PM	0	0	12	0	12	0	0	0	0	0	0	35	2	0	37	7	20	0	0	27	76
5:45 PM	0	0	6	0	6	0	0	0	0	0	0	37	1	0	38	7	19	0	0	26	70
Total Volume	2	0	29	0	31	0	0	0	0	0	0	134	4	0	138	27	97	0	0	124	293
% App. Total	6.5	0.0	93.5	0.0	100	0.0	0.0	0.0	0.0	0	0.0	97.1	2.9	0.0	100	21.8	78.2	0.0	0.0	100	
PHF	0.646										0.908					0.861					0.916
Cars, PU, Vans	2	0	29	0	31	0	0	0	0	0	0	134	3	0	137	27	97	0	0	124	292
% Cars, PU, Vans	100.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	75.0	0.0	99.3	100.0	100.0	0.0	0.0	100.0	99.7
Heavy trucks	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
% Heavy trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.3

## **APPENDIX D**







Primary Trip Distribution  
Chick-fil-A Tucker Development  
4431 Hugh Howell Rd  
TUCKER, GEORGIA

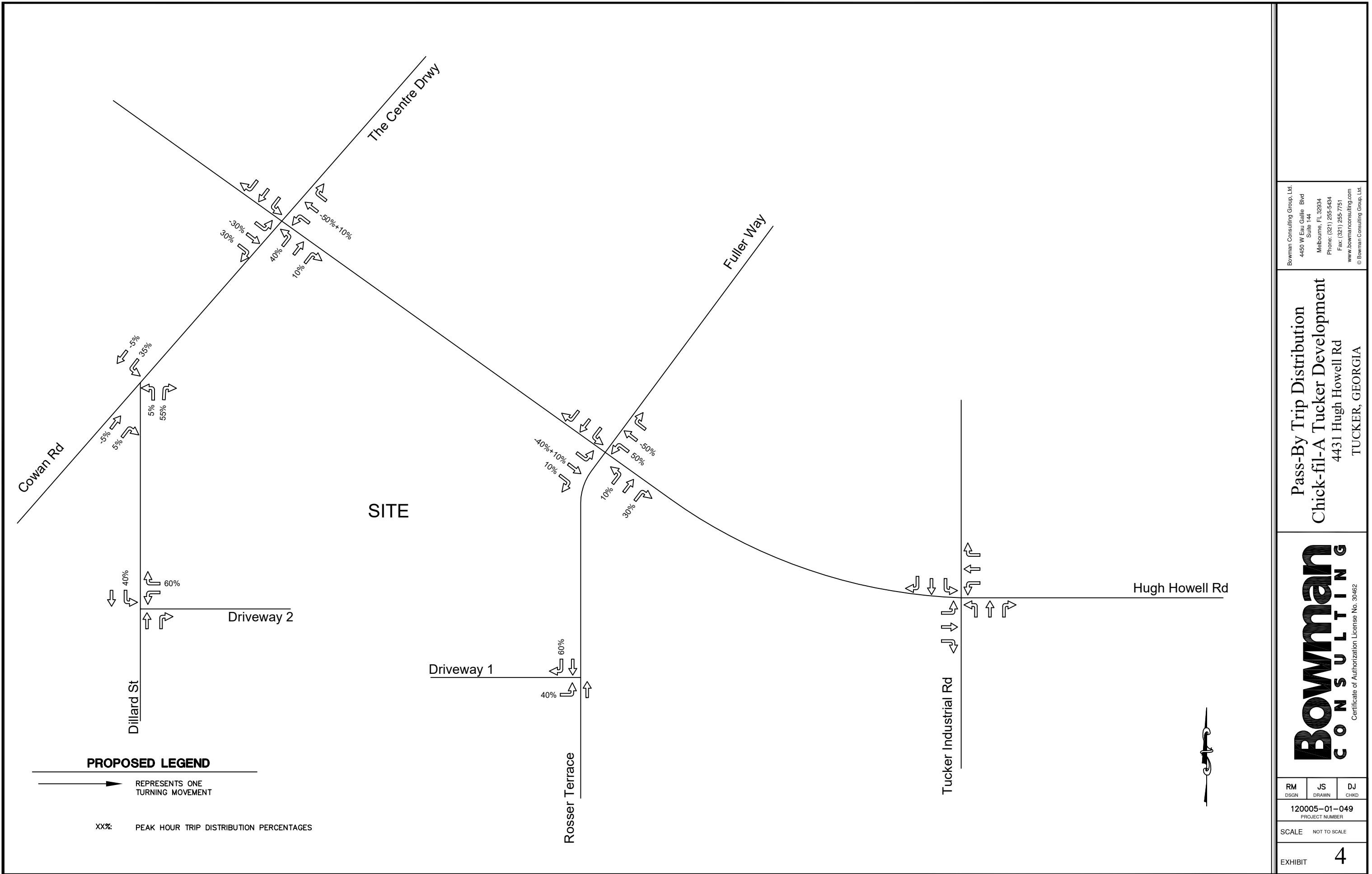
**Bowman**  
CONSULTING

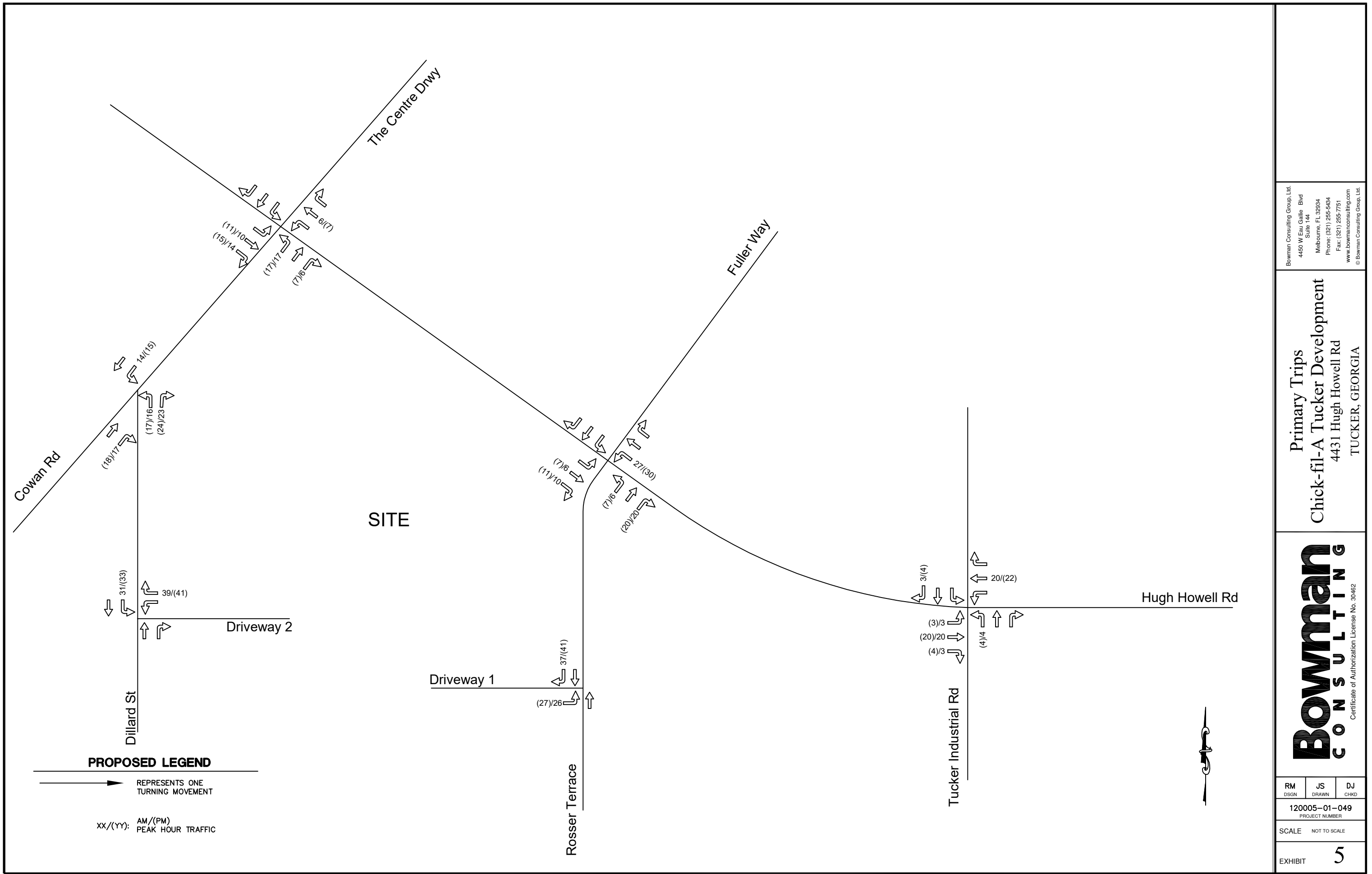
Certificate of Authorization License No. 30462

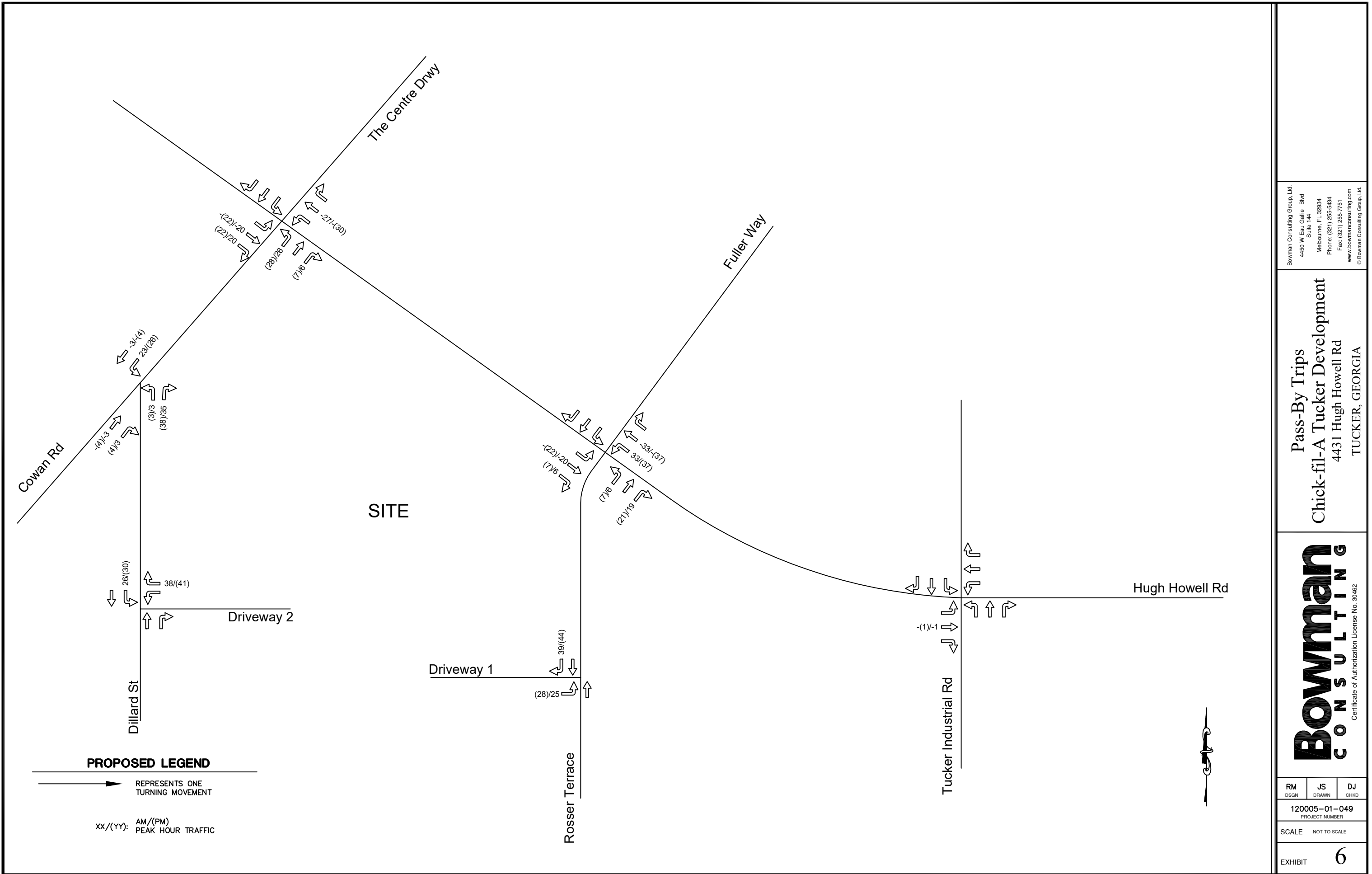
RM DSGN	JS DRAWN	DJ CHKD
120005-01-049 PROJECT NUMBER		
SCALE NOT TO SCALE		
EXHIBIT		3

Bowman Consulting Group, Ltd.  
4450 W Eau Gallie Blvd  
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Melbourne, FL 32934  
Phone: (321) 255-5434  
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© Bowman Consulting Group, Ltd.









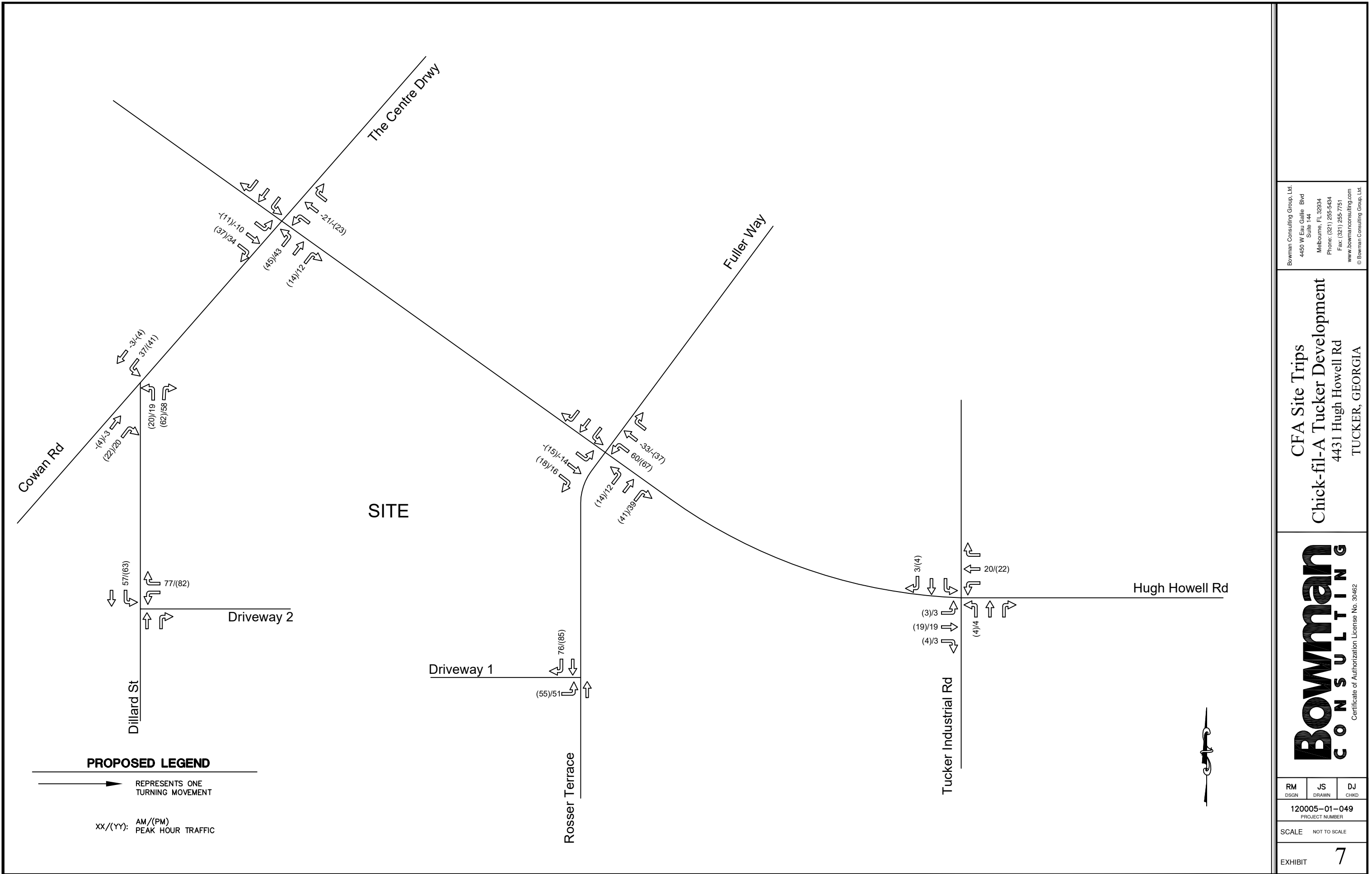
Pass-By Trips  
Chick-fil-A Tucker Development  
4431 Hugh Howell Rd  
TUCKER, GEORGIA

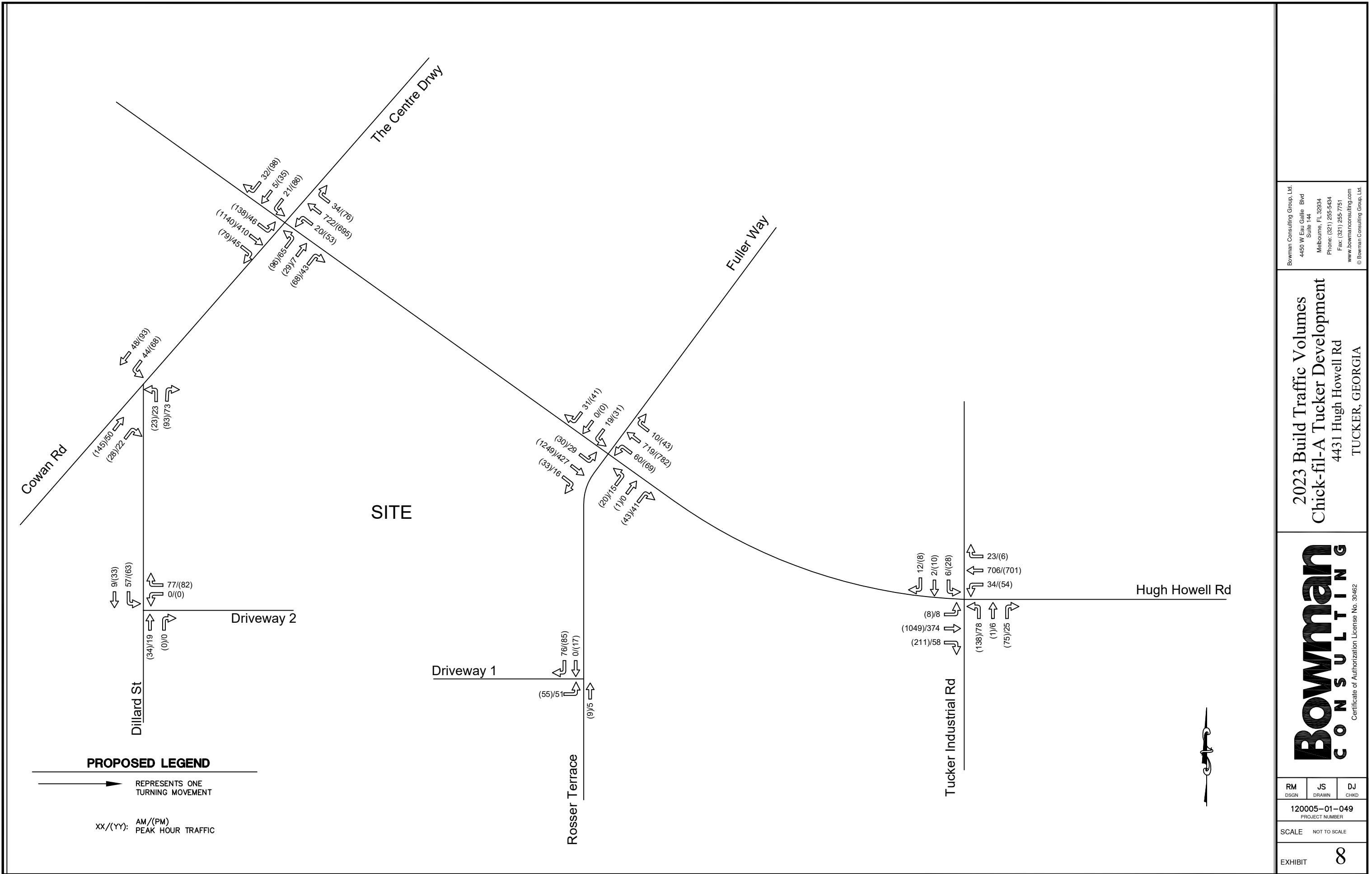
**Bowman**  
CONSULTING

Certificate of Authorization License No. 30462

RM DSGN	JS DRAWN	DJ CHKD
120005-01-049 PROJECT NUMBER		
SCALE NOT TO SCALE		
EXHIBIT		6

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## **APPENDIX E**



## Memorandum

**To:** Chick-fil-A, Inc.

**From:** Andrew J. Petersen, P.E. - Director  
Daniela Jurado – Analyst  
Rodrigo Meirelles -Analyst

**Date:** 06/18/2021

**Re:** Chick-Fil-A – Trip Generation Memorandum

---

Bowman Consulting has been retained by Chick-fil-A, Inc. to perform a Trip Generation at three fully operational Chick-Fil-A (CFA) Restaurants to determine the expected morning and evening peak hour trip generation rates for this facilities.

The purposes of the trip generation and stacking assessment are as follows:

- Determine the appropriate independent variable to assess the applicable CFA trip generation rates.
- Determine the expected trip generation rates for the CFA based on data collected from three existing CFA Sites.
- Determine if the Institute of Transportation Engineers (ITE) trip generation rates are consistent with calculated expected number of vehicular trips on the proposed CFA.
- Select the appropriate trip generation rates for the proposed CFA.

### Selected Sites

For the preparation of this assessment, three Chick-Fil-A sites have been evaluated. The following criteria has been considered for the site selection:

- Type of Facility (Chick-Fil-A Restaurant)
- Operation (Drive-thru and Indoor sitting)
- Location of the facilities

The following sites were selected for the data collection.

<b>Location 1</b>	<ul style="list-style-type: none"><li>• <b>Chick-Fil A Piedmont</b></li><li>• <b>Address:</b> 2580 Piedmont Rd NE, Atlanta, GA 30324</li><li>• <b>Surveyed Site Intensity:</b> 5,200 SF</li><li>• <b>AADT of Adjacent Street:</b> 44,100</li></ul>
<b>Location 2</b>	<ul style="list-style-type: none"><li>• <b>Chick-Fil A Druid Hills</b></li><li>• <b>Address:</b> 2340 N Druid Hills Rd NE, Atlanta, GA 30329</li><li>• <b>Surveyed Site Intensity:</b> 4,550 SF</li><li>• <b>AADT of Adjacent Street:</b> 56,300</li></ul>

## Location 3

- **Chick-Fil A Northside Dr**
- **Address:** 1100 Northside Dr NW, Atlanta, GA 30318
- **Surveyed Site Intensity:** 4,450SF
- **AADT of Adjacent Street:** 30,300

## Study Methodology

The study was based on average weekday entering/exiting volumes at each one of the selected Chick-Fil-A locations provided by the Atlanta Department of Transportation. The information corresponds to the average weekday data from two months in 2019 and February 2021 while school was in session.

The procedures and evaluation for this assessment are in accordance with the Institute of Traffic Engineers (ITE) Trip Generation Manual Handbook, 3<sup>rd</sup> Edition. The ITE is the leading resource for such data and provides traffic and parking related data for numerous land use and building types. Additionally, ITE provides trip and parking generation procedures to determine site specific trip and parking generation rates.

## Data Collection

For the purposes of this study the following data was collected:

- Site specific data for existing Chick Fil A sites: Square Footage and location.
- Published GDOT AADT counts.
- ITE Trip Generation information and variables.
- Average trips generated by the surveyed Chick Fil A sites provided by the Atlanta Department of Transportation, see **Attachment A**.

## Trip Generation Data

**Table 1** displays the trip generation data collected on the three existing sites.

**Table 1. Collected Trip Generation Data**

Facility	Location	Square Footage	Adjacent Street ADTs	Time	In	Out	Total
CFA	2580 Piedmont Rd NE, Atlanta, GA 30324	5,200	44,100	AM	221	221	442
				PM	202	202	404
CFA	2340 N Druid Hills Rd NE Atlanta, GA 30329	4,550	56,300	AM	184	248	432
				Noon	306	412	718
				PM	192	308	500
CFA	1100 Northside Dr NW Atlanta, GA 30318	4,450	30,300	AM	262	262	524
				Noon	263	263	526
				PM	164	164	328

To assess the trip generation rates for the Chick-Fil-A two independent variables were evaluated: Gross Floor Area (GFA), AADT Adjacent Street.

To select the independent variables, the best fitted curve models were evaluated based on the conceptual validity of signs of the equations and goodness of fit. The results of these evaluation are presented in **Table 2**.

**Table 2. Trip Generation Model evaluation**

Model	Independent Variable	Equation	R <sup>2</sup>	Signs Conceptually Valid	Acceptable Goodness of FIT
AM Models	1,000 SF GFA	$y = -64.523x + 771.41$	0.271	No	No
	AADT of Adjacent Street	$y = -0.0036x + 622.44$	0.8563	No	Yes
PM Models	1,000 SF GFA	$y = 11.859x + 354.53$	0.0031	Yes	No
	AADT of Adjacent Street	$y = 0.0066x + 123.51$	0.9895	Yes	Yes

Models containing the GFA variable were found to be not conceptually valid, with equations that reflect an inverse relationship between the GFA and the number of trips generated by the site and unacceptable goodness of fit.

Models using AADT of Adjacent Street as independent variable show acceptable goodness of fit. However, the AM model Based on AADT of adjacent street shows signs non conceptually valid, therefore, the weighted average was evaluated for this time period.

Based on the results presented in **Table 2** the Adjacent Street Traffic was selected as independent variable for both the morning and evening peak hours.

Following the procedures presented on the ITE *trip generation Handbook*, Chapter 9 and Appendix J, the use of the weighted average rate for the Morning peak was validated by comparing the weighted standard deviation with the weighted Average trip rate. **Table 3** presents the validation for the use of weighted average for the morning peak hour trip rate.

**Table 3. Validation of AM Weighted average trip generation**

Location	AADT of adjacent Steet	Peak Hour AM	Trip rate	Value	Value Squared	weight	Value Squared *weight
2580 Piedmont Rd	44,100	442	0.01002	0.00	0.0000005	0.34	0.00000015
2340 N Druid Hills Rd	56,300	432	0.00767	0.00	0.0000091	0.43	0.00000394
1100 Northside Dr	30,300	524	0.01729	0.01	0.0000435	0.23	0.00001009
Total	130,700.00	1,398.00	0.01070	-	Variance		0.00001418
Weighted Sample Variance							0.00001773
Weighted Std Dev							0.00
Percentage of W StdDev							39%
Acceptable (less than 55% Trip Rate)							Yes

As presented in **Table 3** the standard deviation of the data falls in the allowable 55% threshold according to the procedures presented on the ITE trip generation Handbook, Chapter 9 and Appendix J, therefore, the use of weighted average trip generation rate is acceptable.

The selected trip generation equations for CFA facilities are presented in **Table 4**.

**Table 4. Trip Generation equations for CFA facilities**

Model	Independent Variable	Equation
AM	AADT of Adjacent Street	$Total\ AM\ CFA\ trips = 0.0107 \times AADT\ of\ Adjacent\ Street$
PM	AADT of Adjacent Street	$Total\ PM\ CFA\ trips = 0.0066 \times AADT\ of\ Adjacent\ Street + 123.51$

The evening peak hour model is the resulting fitted curve with AADT of adjacent street as independent variable. The trip generation rate for the morning peak hour is 0.0107 trips/AADT of Adjacent Street Traffic.

## Conclusions and Recommendations

- Both, the morning and evening models containing the GFA variable were found to have unacceptable goodness of fit, the morning models is not conceptually valid, with an

equation that reflects an inverse relationship between the GFA, and the number of trips generated by the site.

- Models using AADT of Adjacent Street as independent variable show acceptable goodness of fit.
- The evening peak hour model is fitted curve with AADT of adjacent street as independent variable.
- The AM model Based on AADT of adjacent street shows signs non conceptually valid therefore, the weighted average was evaluated for this time period.
- The evaluation of the data for the morning peak hour shows that the standard deviation of the data falls in the allowable 55% threshold according to the procedures presented on the ITE trip generation Handbook, Chapter 9 and Appendix J, therefore, the use of weighted average trip generation rate is acceptable.
- The trip generation rate for the morning peak hour is 0.0107 trips/AADT of Adjacent Street Traffic.

## ATTACHMENT A

**From:** Rome, Christopher <crome@AtlantaGa.Gov>  
**Sent:** Wednesday, June 9, 2021 10:32 AM  
**To:** Daniela Jurado; Rodriguez, Juan C.; Moore, Clyde  
**Cc:** Rodrigo Meirelles; Andrew Petersen; Bridgette Ganter; Smoot-Madison, Betty; Brown, Barrington G.  
**Subject:** [EXTERNAL] RE: Traffic Impact Study Methodology Chick-Fil-A Cheshire Bridge Rd & Sheridan Rd

1100 Northside Dr

- AM Peak – 262 trips in, assume 262 trips out– 524 total trips
- Noon Peak – 263 trips in, assume 263 trips out – 526 total trips
- PM Peak – 164 trips in, assume 164 trips out – 328 total trips

Have you contacted GDOT's RTOP program or collected TMC's already at the I-85 ramps? That data will be more accurate than StreetLight Insight TMCs which are still in beta.

**Chris Rome, PE, PTOE**

Senior Multimodal Transportation Engineer  
City of Atlanta Department of Transportation  
470-653-3016  
[crome@atlantaga.gov](mailto:crome@atlantaga.gov)

---

**From:** Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>  
**Sent:** Wednesday, June 9, 2021 8:39 AM  
**To:** Rome, Christopher <[crome@AtlantaGa.Gov](mailto:crome@AtlantaGa.Gov)>; Rodriguez, Juan C. <[JCRodriguez@AtlantaGa.Gov](mailto:JCRodriguez@AtlantaGa.Gov)>; Moore, Clyde <[CMoore@AtlantaGa.Gov](mailto:CMoore@AtlantaGa.Gov)>  
**Cc:** Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>; Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>; Bridgette Ganter <[bganter@bowman.com](mailto:bganter@bowman.com)>; Smoot-Madison, Betty <[bsmoot-madison@AtlantaGa.Gov](mailto:bsmoot-madison@AtlantaGa.Gov)>; Brown, Barrington G. <[BGBrown@AtlantaGa.Gov](mailto:BGBrown@AtlantaGa.Gov)>  
**Subject:** [EXTERNAL] RE: Traffic Impact Study Methodology Chick-Fil-A Cheshire Bridge Rd & Sheridan Rd

Good Morning Chris,

Would it be possible to also pull out the Turning movements for Cheshire Bridge at I-85 ramps for the am noon and pm?

Thank you,

**DANIELA JURADO**

Project Manager | **BOWMAN**  
4450 W Eau Gallie Boulevard, Suite 144, Melbourne, FL 32934  
O: (321) 270-8905 | D: (321) 270-8977 | M: (786) 370-2762  
[djurado@bowman.com](mailto:djurado@bowman.com) | [bowman.com](http://bowman.com)





---

**From:** Rome, Christopher <[crome@AtlantaGa.Gov](mailto:crome@AtlantaGa.Gov)>  
**Sent:** Tuesday, June 8, 2021 7:09 PM  
**To:** Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>; Rodriguez, Juan C. <[JCRodriguez@AtlantaGa.Gov](mailto:JCRodriguez@AtlantaGa.Gov)>; Moore, Clyde <[CMoore@AtlantaGa.Gov](mailto:CMoore@AtlantaGa.Gov)>  
**Cc:** Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>; Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>; Bridgette Ganter <[bganter@bowman.com](mailto:bganter@bowman.com)>; Smoot-Madison, Betty <[bsmoot-madison@AtlantaGa.Gov](mailto:bsmoot-madison@AtlantaGa.Gov)>; Brown, Barrington G. <[BGBrown@AtlantaGa.Gov](mailto:BGBrown@AtlantaGa.Gov)>  
**Subject:** [EXTERNAL] RE: Traffic Impact Study Methodology Chick-Fil-A Cheshire Bridge Rd & Sheridan Rd

Tucker is outside of our data licensing geographic limits.  
I'll pull the data from the Northside Dr site tomorrow.

**Chris Rome, PE, PTOE**  
Senior Multimodal Transportation Engineer  
City of Atlanta Department of Transportation  
470-653-3016  
[crome@atlantaga.gov](mailto:crome@atlantaga.gov)

---

**From:** Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>  
**Sent:** Tuesday, June 8, 2021 7:00 PM  
**To:** Rome, Christopher <[crome@AtlantaGa.Gov](mailto:crome@AtlantaGa.Gov)>; Rodriguez, Juan C. <[JCRodriguez@AtlantaGa.Gov](mailto:JCRodriguez@AtlantaGa.Gov)>; Moore, Clyde <[CMoore@AtlantaGa.Gov](mailto:CMoore@AtlantaGa.Gov)>  
**Cc:** Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>; Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>; Bridgette Ganter <[bganter@bowman.com](mailto:bganter@bowman.com)>; Smoot-Madison, Betty <[bsmoot-madison@AtlantaGa.Gov](mailto:bsmoot-madison@AtlantaGa.Gov)>; Brown, Barrington G. <[BGBrown@AtlantaGa.Gov](mailto:BGBrown@AtlantaGa.Gov)>  
**Subject:** [EXTERNAL] RE: Traffic Impact Study Methodology Chick-Fil-A Cheshire Bridge Rd & Sheridan Rd

Thank you for the information. We would like to have the information for the following sites:

<b>Location</b>	<b>AADT</b>
1100 Northside Dr NW	30,300
4340 Hugh Howell Rd, Tucker, GA 30084	25,300

The reason is, we also want to evaluate the trip generation based on the AADT of adjacent street.

Thank you in advance.

Sincerely,

**DANIELA JURADO**  
Project Manager | **BOWMAN**  
4450 W Eau Gallie Boulevard, Suite 144, Melbourne, FL 32934  
O: (321) 270-8905 | D: (321) 270-8977 | M: (786) 370-2762  
[djurado@bowman.com](mailto:djurado@bowman.com) | [bowman.com](http://bowman.com)



---

**From:** Rome, Christopher <[crome@AtlantaGa.Gov](mailto:crome@AtlantaGa.Gov)>

**Sent:** Tuesday, June 8, 2021 5:21 PM

**To:** Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>; Rodriguez, Juan C. <[JCRodriguez@AtlantaGa.Gov](mailto:JCRodriguez@AtlantaGa.Gov)>;

Moore, Clyde <[CMoore@AtlantaGa.Gov](mailto:CMoore@AtlantaGa.Gov)>

**Cc:** Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>; Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>;

Bridgette Ganter <[bganter@bowman.com](mailto:bganter@bowman.com)>; Smoot-Madison, Betty <[bsmoot-madison@AtlantaGa.Gov](mailto:bsmoot-madison@AtlantaGa.Gov)>;

Brown, Barrington G. <[BGBrown@AtlantaGa.Gov](mailto:BGBrown@AtlantaGa.Gov)>

**Subject:** [EXTERNAL] RE: Traffic Impact Study Methodology Chick-Fil-A Cheshire Bridge Rd & Sheridan Rd

I think it depends on the site characteristics if the Miami site is similar.

I used our StreetLight Data Insight platform access to look at the number of trips entering two Chick-fil-A locations in Atlanta. This is average weekday (M-Th) information from 2 months in 2019 and February 2021 when school was in session. The 1 standard deviation from the ITE land use code trip generation seems too low for an accurate assessment of site impact. If you have a specific site location in Atlanta that you think will be more representative of the conditions for the proposed site at Cheshire Bridge and Sheridan Rd, let me know and I can pull data for those locations.

2580 Piedmont Rd

- AM Peak – 221 trips in, assume 221 trips out– 442 total trips
- Noon Peak – 332 trips in, assume 332 trips out – 664 total trips
- PM Peak – 202 trips in, assume 202 trips out – 404 total trips

2340 N Druid Hills Rd

- AM Peak – 184 trips in, 248 trips out– 432 total trips
- Noon Peak – 306 trips in, 412 trips out – 718 total trips
- PM Peak – 192 trips in, 308 trips out – 500 total trips

**Chris Rome, PE, PTOE**

Senior Multimodal Transportation Engineer

City of Atlanta Department of Transportation

470-653-3016

[crome@atlantaga.gov](mailto:crome@atlantaga.gov)

---

**From:** Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>

**Sent:** Tuesday, June 8, 2021 2:36 PM

**To:** Rome, Christopher <[crome@AtlantaGa.Gov](mailto:crome@AtlantaGa.Gov)>; Rodriguez, Juan C. <[JCRodriguez@AtlantaGa.Gov](mailto:JCRodriguez@AtlantaGa.Gov)>;

Moore, Clyde <[CMoore@AtlantaGa.Gov](mailto:CMoore@AtlantaGa.Gov)>

**Cc:** Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>; Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>;

Bridgette Ganter <[bganter@bowman.com](mailto:bganter@bowman.com)>; Smoot-Madison, Betty <[bsmoot-madison@AtlantaGa.Gov](mailto:bsmoot-madison@AtlantaGa.Gov)>;

Brown, Barrington G. <[BGBrown@AtlantaGa.Gov](mailto:BGBrown@AtlantaGa.Gov)>




















**Subject:** [EXTERNAL] RE: Traffic Impact Study Methodology Chick-Fil-A Cheshire Bridge Rd & Sheridan Rd








Good Afternoon Chris,

## **APPENDIX F**





















## 2023 NO BUILD CONDITIONS Capacity Analysis

## 1: Rosser Terrace/Fuller Way &amp; Hugh Howell Rd

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	441	0	0	752	10	3	0	2	19	0	31
Future Volume (vph)	29	441	0	0	752	10	3	0	2	19	0	31
Adj. Flow (vph)	31	474	0	0	809	11	3	0	2	20	0	33
Lane Group Flow (vph)	31	474	0	0	809	11	0	5	0	0	53	0
Sign Control	Free			Free			Stop			Stop		
Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 34.1%						ICU Level of Service A						
Analysis Period (min) 15												

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	441	0	0	752	10	3	0	2	19	0	31
Future Vol, veh/h	29	441	0	0	752	10	3	0	2	19	0	31
Conflicting Peds, #/hr	1	0	1	1	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	100	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	7	3	0	0	2	10	33	0	0	10	0	0
Mvmt Flow	31	474	0	0	809	11	3	0	2	20	0	33
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	821	0	0	475	0	0	942	1358	238	1109	1347	406
Stage 1	-	-	-	-	-	-	537	537	-	810	810	-
Stage 2	-	-	-	-	-	-	405	821	-	299	537	-
Critical Hdwy	4.24	-	-	4.1	-	-	8.16	6.5	6.9	7.7	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	7.16	5.5	-	6.7	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.16	5.5	-	6.7	5.5	-
Follow-up Hdwy	2.27	-	-	2.2	-	-	3.83	4	3.3	3.6	4	3.3
Pot Cap-1 Maneuver	1139	-	-	*1369	-	-	*533	444	*912	*568	455	*796
Stage 1	-	-	-	-	-	-	*723	712	-	*726	655	-
Stage 2	-	-	-	-	-	-	*687	645	-	*837	712	-
Platoon blocked, %	1	-	-	1	-	-	1	1	1	1	1	1
Mov Cap-1 Maneuver	1138	-	-	*1368	-	-	*500	431	*911	*554	442	*796
Mov Cap-2 Maneuver	-	-	-	-	-	-	*528	491	-	*593	508	-
Stage 1	-	-	-	-	-	-	*702	692	-	*706	654	-
Stage 2	-	-	-	-	-	-	*658	644	-	*812	692	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0			10.7			9.7		
HCM LOS							B			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	635	1138	-	-	*1368	-	-	796				
HCM Lane V/C Ratio	0.008	0.027	-	-	-	-	-	0.042				
HCM Control Delay (s)	10.7	8.3	-	-	0	-	-	9.7				
HCM Lane LOS	B	A	-	-	A	-	-	A				
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.1				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s				+: Computation Not Defined				*: All major volume in platoon		

## 2: Cowan Rd/The Centre Driveway &amp; Hugh Howell Rd

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	420	11	20	743	34	22	7	31	21	5	32
Future Volume (vph)	46	420	11	20	743	34	22	7	31	21	5	32
Adj. Flow (vph)	49	452	12	22	799	37	24	8	33	23	5	34
Lane Group Flow (vph)	49	464	0	22	799	37	0	65	0	23	39	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	2	8	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		5.0	10.0	10.0	7.0	7.0		5.0	7.0	
Minimum Split (s)	13.2	27.4		10.3	32.1	32.1	35.5	35.5		11.1	35.5	
Total Split (s)	26.0	85.0		17.0	76.0	76.0	42.0	42.0		16.0	58.0	
Total Split (%)	16.3%	53.1%		10.6%	47.5%	47.5%	26.3%	26.3%		10.0%	36.3%	
Maximum Green (s)	19.8	78.9		11.7	69.9	69.9	35.5	35.5		9.9	51.5	
Yellow Time (s)	3.4	4.6		3.1	4.6	4.6	3.5	3.5		3.1	3.5	
All-Red Time (s)	2.8	1.5		2.2	1.5	1.5	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.1		5.3	6.1	6.1		6.5		6.1	6.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		
Vehicle Extension (s)	3.0	5.0		3.0	5.0	5.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	0.2	3.0		0.2	3.0	3.0	0.2	0.2		0.2	0.2	
Time Before Reduce (s)	0.0	20.0		0.0	20.0	20.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	10.0		0.0	10.0	10.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0			7.0	7.0	7.0	7.0			7.0	
Flash Dont Walk (s)		10.0			19.0	19.0	22.0	22.0			22.0	
Pedestrian Calls (#/hr)		0			0	0	0	0			0	
Act Effct Green (s)	126.1	121.8		123.8	118.1	118.1		9.6		19.0	18.6	
Actuated g/C Ratio	0.79	0.76		0.77	0.74	0.74		0.06		0.12	0.12	
v/c Ratio	0.09	0.18		0.03	0.31	0.03		0.55		0.17	0.19	
Control Delay	5.0	7.1		4.5	8.0	0.1		58.3		60.5	21.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	5.0	7.1		4.5	8.0	0.1		58.3		60.5	21.6	
LOS	A	A		A	A	A		E		E	C	
Approach Delay		6.9			7.6			58.3			36.0	
Approach LOS		A			A			E			D	
Queue Length 50th (ft)	10	79		4	144	0		36		21	5	
Queue Length 95th (ft)	25	120		12	202	0		88		48	40	
Internal Link Dist (ft)		969			335			119			430	
Turn Bay Length (ft)	125			115								
Base Capacity (vph)	634	2603		801	2561	1202		361		147	519	
Starvation Cap Reductn	0	0		0	0	0		0		0	0	
Spillback Cap Reductn	0	0		0	0	0		0		0	0	
Storage Cap Reductn	0	0		0	0	0		0		0	0	
Reduced v/c Ratio	0.08	0.18		0.03	0.31	0.03		0.18		0.16	0.08	
Intersection Summary												



**2: Cowan Rd/The Centre Driveway & Hugh Howell Rd**

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 148.9 (93%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 10.7

Intersection LOS: B

Intersection Capacity Utilization 53.3%

ICU Level of Service A

Analysis Period (min) 15





















Splits and Phases: 2: Cowan Rd/The Centre Driveway &amp; Hugh Howell Rd



# HCM 6th Signalized Intersection Summary



















## 2: Cowan Rd/The Centre Driveway & Hugh Howell Rd

2023 NO BUILD - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	420	11	20	743	34	22	7	31	21	5	32
Future Volume (veh/h)	46	420	11	20	743	34	22	7	31	21	5	32
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	1900	1826	1826	1900	1841	1900	1900	1900	1900	1752	1900	1900
Adj Flow Rate, veh/h	49	452	12	22	799	37	24	8	33	23	5	34
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, %	0	5	5	0	4	0	0	0	0	10	0	0
Cap, veh/h	603	2612	69	759	2558	1177	56	17	43	148	24	161
Arrive On Green	0.04	0.76	0.76	0.04	1.00	1.00	0.05	0.05	0.05	0.02	0.11	0.11
Sat Flow, veh/h	1810	3452	92	1810	3497	1609	471	309	804	1668	211	1432
Grp Volume(v), veh/h	49	227	237	22	799	37	65	0	0	23	0	39
Grp Sat Flow(s),veh/h/ln	1810	1735	1809	1810	1749	1609	1583	0	0	1668	0	1642
Q Serve(g_s), s	1.0	5.9	5.9	0.5	0.0	0.0	4.9	0.0	0.0	2.0	0.0	3.5
Cycle Q Clear(g_c), s	1.0	5.9	5.9	0.5	0.0	0.0	6.4	0.0	0.0	2.0	0.0	3.5
Prop In Lane	1.00		0.05	1.00		1.00	0.37		0.51	1.00		0.87
Lane Grp Cap(c), veh/h	603	1312	1369	759	2558	1177	116	0	0	148	0	184
V/C Ratio(X)	0.08	0.17	0.17	0.03	0.31	0.03	0.56	0.00	0.00	0.16	0.00	0.21
Avail Cap(c_a), veh/h	757	1312	1369	856	2558	1177	376	0	0	218	0	529
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.3	5.5	5.5	4.9	0.0	0.0	74.6	0.0	0.0	67.7	0.0	64.6
Incr Delay (d2), s/veh	0.1	0.3	0.3	0.0	0.3	0.0	4.1	0.0	0.0	0.5	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.0	2.1	0.2	0.1	0.0	2.8	0.0	0.0	0.9	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.4	5.7	5.7	4.9	0.3	0.0	78.7	0.0	0.0	68.2	0.0	65.2
LnGrp LOS	A	A	A	A	A	A	E	A	A	E	A	E
Approach Vol, veh/h	513			858			65			62		
Approach Delay, s/veh	5.6			0.4			78.7			66.3		
Approach LOS	A			A			E			E		
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.4	123.1		24.4	8.4	127.1	9.3	15.1				
Change Period (Y+Rc), s	* 6.2	6.1		6.5	* 5.3	6.1	6.1	6.5				
Max Green Setting (Gmax), s	* 20	69.9		51.5	* 12	78.9	9.9	35.5				
Max Q Clear Time (g_c+I1), s	3.0	2.0		5.5	2.5	7.9	4.0	8.4				
Green Ext Time (p_c), s	0.1	13.6		0.2	0.0	5.9	0.0	0.3				
Intersection Summary												
HCM 6th Ctrl Delay	8.3											
HCM 6th LOS	A											
Notes												

Lanes, Volumes, Timings  
3: Tucker Industrial Rd & Hugh Howell Rd

2023 NO BUILD - AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	355	55	34	686	23	74	6	25	6	2	9
Future Volume (vph)	5	355	55	34	686	23	74	6	25	6	2	9
Adj. Flow (vph)	6	394	61	38	762	26	82	7	28	7	2	10
Lane Group Flow (vph)	6	455	0	38	788	0	0	117	0	0	19	0
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases							4			8		
Detector Phase	1	6		5	2		4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	11.1	31.4		10.9	31.4		31.1	31.1		33.9	33.9	
Total Split (s)	15.0	89.0		15.0	89.0		56.0	56.0		56.0	56.0	
Total Split (%)	9.4%	55.6%		9.4%	55.6%		35.0%	35.0%		35.0%	35.0%	
Maximum Green (s)	8.9	82.6		9.1	82.6		49.9	49.9		50.1	50.1	
Yellow Time (s)	3.5	4.7		3.3	4.7		3.3	3.3		3.0	3.0	
All-Red Time (s)	2.6	1.7		2.6	1.7		2.8	2.8		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.1	6.4		5.9	6.4			6.1			5.9	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	0.2	3.0		0.2	3.0		0.2	0.2		0.2	0.2	
Time Before Reduce (s)	0.0	20.0		0.0	20.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	15.0		0.0	15.0		0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		18.0			18.0		18.0	18.0		21.0	21.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	6.2	116.9		9.1	127.0			17.8			18.0	
Actuated g/C Ratio	0.04	0.73		0.06	0.79			0.11			0.11	
v/c Ratio	0.09	0.18		0.42	0.29			0.72			0.10	
Control Delay	67.4	9.2		85.4	5.6			85.2			38.4	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	67.4	9.2		85.4	5.6			85.2			38.4	
LOS	E	A		F	A			F			D	
Approach Delay		9.9			9.3			85.2			38.4	
Approach LOS		A			A			F			D	
Queue Length 50th (ft)	5	108		39	90			110			9	
Queue Length 95th (ft)	20	171		79	203			175			35	
Internal Link Dist (ft)		1068			568			739			1148	
Turn Bay Length (ft)	150			100								
Base Capacity (vph)	100	2462		101	2760			439			539	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.06	0.18		0.38	0.29			0.27			0.04	
Intersection Summary												

Baseline

Synchro 10 Report  
Page 6

# Lanes, Volumes, Timings 3: Tucker Industrial Rd & Hugh Howell Rd

2023 NO BUILD - AM

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 38.6 (24%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 16.1

Intersection LOS: B

Intersection Capacity Utilization 50.1%

ICU Level of Service A

Analysis Period (min) 15



















Splits and Phases: 3: Tucker Industrial Rd & Hugh Howell Rd
















# HCM 6th Signalized Intersection Summary

## 3: Tucker Industrial Rd & Hugh Howell Rd

2023 NO BUILD - AM























												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	355	55	34	686	23	74	6	25	6	2	9
Future Volume (veh/h)	5	355	55	34	686	23	74	6	25	6	2	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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	1900	1826	1826	1722	1856	1856	1900	1976	1900	1900	1976	1900
Adj Flow Rate, veh/h	6	394	61	38	762	26	82	7	28	7	2	10
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	5	5	12	3	3	0	0	0	0	0	0
Cap, veh/h	13	2297	353	48	2730	93	139	10	35	76	30	83
Arrive On Green	0.01	1.00	1.00	0.03	0.78	0.78	0.09	0.09	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1810	3005	461	1640	3478	119	1099	104	378	489	333	913
Grp Volume(v), veh/h	6	226	229	38	386	402	117	0	0	19	0	0
Grp Sat Flow(s),veh/h/ln	1810	1735	1731	1640	1763	1834	1581	0	0	1735	0	0
Q Serve(g_s), s	0.5	0.0	0.0	3.7	9.6	9.7	10.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.5	0.0	0.0	3.7	9.6	9.7	11.5	0.0	0.0	1.5	0.0	0.0
Prop In Lane	1.00		0.27	1.00		0.06	0.70		0.24	0.37		0.53
Lane Grp Cap(c), veh/h	13	1326	1324	48	1384	1440	183	0	0	189	0	0
V/C Ratio(X)	0.45	0.17	0.17	0.80	0.28	0.28	0.64	0.00	0.00	0.10	0.00	0.00
Avail Cap(c_a), veh/h	101	1326	1324	93	1384	1440	523	0	0	545	0	0
HCM Platoon Ratio	2.00	2.00	2.00	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	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	78.5	0.0	0.0	77.2	4.7	4.7	71.1	0.0	0.0	66.7	0.0	0.0
Incr Delay (d2), s/veh	22.3	0.3	0.3	25.3	0.5	0.5	3.7	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.1	0.1	1.9	3.2	3.3	4.9	0.0	0.0	0.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	100.8	0.3	0.3	102.5	5.2	5.2	74.8	0.0	0.0	67.0	0.0	0.0
LnGrp LOS	F	A	A	F	A	A	E	A	A	E	A	A
Approach Vol, veh/h	461			826			117			19		
Approach Delay, s/veh	1.6			9.7			74.8			67.0		
Approach LOS	A			A			E			E		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.3	132.0		20.7	10.5	128.7		20.7				
Change Period (Y+Rc), s	6.1	* 6.4		6.1	* 5.9	* 6.4		* 6.1				
Max Green Setting (Gmax), s	8.9	* 83		49.9	* 9.1	* 83		* 50				
Max Q Clear Time (g_c+I1), s	2.5	11.7		13.5	5.7	2.0		3.5				
Green Ext Time (p_c), s	0.0	11.8		0.6	0.0	5.8		0.1				
Intersection Summary												
HCM 6th Ctrl Delay	13.2											
HCM 6th LOS	B											
Notes												








						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations					 	
Traffic Volume (vph)	53	2	7	51	4	15
Future Volume (vph)	53	2	7	51	4	15
Adj. Flow (vph)	72	3	9	69	5	20
Lane Group Flow (vph)	75	0	0	78	25	0
Sign Control	Free			Free	Stop	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 18.6%				ICU Level of Service A		
Analysis Period (min) 15						

Intersection						
Int Delay, s/veh	1.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	53	2	7	51	4	15
Future Vol, veh/h	53	2	7	51	4	15
Conflicting Peds, #/hr	0	0	0	0	1	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	74	74	74	74	74	74
Heavy Vehicles, %	4	50	0	8	0	0
Mvmt Flow	72	3	9	69	5	20
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	75	0	162	74
Stage 1	-	-	-	-	74	-
Stage 2	-	-	-	-	88	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1537	-	834	993
Stage 1	-	-	-	-	954	-
Stage 2	-	-	-	-	940	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1537	-	828	993
Mov Cap-2 Maneuver	-	-	-	-	828	-
Stage 1	-	-	-	-	954	-
Stage 2	-	-	-	-	933	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.9		8.9	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	953	-	-	1537	-	
HCM Lane V/C Ratio	0.027	-	-	0.006	-	
HCM Control Delay (s)	8.9	-	-	7.4	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.1	-	-	0	-	



## 1: Rosser Terrace/Fuller Way &amp; Hugh Howell Rd

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 				
Traffic Volume (vph)	30	1264	15	2	819	43	6	1	2	31	0	41
Future Volume (vph)	30	1264	15	2	819	43	6	1	2	31	0	41
Adj. Flow (vph)	31	1317	16	2	853	45	6	1	2	32	0	43
Lane Group Flow (vph)	31	1333	0	2	853	45	0	9	0	0	75	0
Sign Control	Free				Free				Stop		Stop	
Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 46.5%												
ICU Level of Service A												
Analysis Period (min) 15												

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	30	1264	15	2	819	43	6	1	2	31	0	41
Future Vol, veh/h	30	1264	15	2	819	43	6	1	2	31	0	41
Conflicting Peds, #/hr	0	0	2	2	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	100	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	4	3	0	0	3	7	0	0	0	0	0	10
Mvmt Flow	31	1317	16	2	853	45	6	1	2	32	0	43

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	898	0	0	1335	0	0	1820	2291	669	1578	2254	427
Stage 1	-	-	-	-	-	-	1389	1389	-	857	857	-
Stage 2	-	-	-	-	-	-	431	902	-	721	1397	-
Critical Hdwy	4.18	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.24	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.4
Pot Cap-1 Maneuver	*1118	-	-	*878	-	-	*187	*56	*585	*412	*62	*736
Stage 1	-	-	-	-	-	-	*551	*483	-	*715	*626	-
Stage 2	-	-	-	-	-	-	*715	*626	-	*551	*477	-
Platoon blocked, %	1	-	-	1	-	-	1	1	1	1	1	1
Mov Cap-1 Maneuver	*1118	-	-	*876	-	-	*171	*54	*583	*400	*60	*736
Mov Cap-2 Maneuver	-	-	-	-	-	-	*343	*263	-	*448	*268	-
Stage 1	-	-	-	-	-	-	*535	*468	-	*695	*624	-
Stage 2	-	-	-	-	-	-	*672	*624	-	*533	*462	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0			15.2			10.2		
HCM LOS							C			B		





















  

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	364	* 1118	-	-	* 876	-	-	736
HCM Lane V/C Ratio	0.026	0.028	-	-	0.002	-	-	0.058
HCM Control Delay (s)	15.2	8.3	-	-	9.1	-	-	10.2
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.2

Notes												
~: Volume exceeds capacity	\$: Delay exceeds 300s			+: Computation Not Defined			*: All major volume in platoon					

## 2: Cowan Rd/The Centre Driveway &amp; Hugh Howell Rd

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	138	1151	42	53	718	76	51	29	54	86	35	98
Future Volume (vph)	138	1151	42	53	718	76	51	29	54	86	35	98
Adj. Flow (vph)	148	1238	45	57	772	82	55	31	58	92	38	105
Lane Group Flow (vph)	148	1283	0	57	772	82	0	144	0	92	143	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	2	8	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		5.0	10.0	10.0	7.0	7.0		5.0	7.0	
Minimum Split (s)	13.2	27.4		10.3	32.1	32.1	35.5	35.5		11.1	35.5	
Total Split (s)	16.0	94.0		15.0	93.0	93.0	36.0	36.0		15.0	51.0	
Total Split (%)	10.0%	58.8%		9.4%	58.1%	58.1%	22.5%	22.5%		9.4%	31.9%	
Maximum Green (s)	9.8	87.9		9.7	86.9	86.9	29.5	29.5		8.9	44.5	
Yellow Time (s)	3.4	4.6		3.1	4.6	4.6	3.5	3.5		3.1	3.5	
All-Red Time (s)	2.8	1.5		2.2	1.5	1.5	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.1		5.3	6.1	6.1		6.5		6.1	6.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		
Vehicle Extension (s)	3.0	5.0		3.0	5.0	5.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	0.2	3.0		0.2	3.0	3.0	0.2	0.2		0.2	0.2	
Time Before Reduce (s)	0.0	20.0		0.0	20.0	20.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	10.0		0.0	10.0	10.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0			7.0	7.0	7.0	7.0			7.0	
Flash Dont Walk (s)		10.0			19.0	19.0	22.0	22.0			22.0	
Pedestrian Calls (#/hr)		0			0	0	0	0			0	
Act Effct Green (s)	111.0	102.9		105.1	97.2	97.2		19.4		34.8	34.4	
Actuated g/C Ratio	0.69	0.64		0.66	0.61	0.61		0.12		0.22	0.22	
v/c Ratio	0.32	0.57		0.21	0.36	0.08		0.76		0.41	0.35	
Control Delay	10.2	18.8		8.7	13.6	0.5		82.2		55.8	23.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	10.2	18.8		8.7	13.6	0.5		82.2		55.8	23.1	
LOS	B	B		A	B	A		F		E	C	
Approach Delay		17.9			12.1			82.2			35.9	
Approach LOS		B			B			F			D	
Queue Length 50th (ft)	46	394		13	166	0		129		81	49	
Queue Length 95th (ft)	85	541		m27	199	m3		201		127	109	
Internal Link Dist (ft)		969			335			94			430	
Turn Bay Length (ft)	125			115								
Base Capacity (vph)	476	2245		298	2129	1001		279		228	500	
Starvation Cap Reductn	0	0		0	0	0		0		0	0	
Spillback Cap Reductn	0	0		0	0	0		0		0	0	
Storage Cap Reductn	0	0		0	0	0		0		0	0	
Reduced v/c Ratio	0.31	0.57		0.19	0.36	0.08		0.52		0.40	0.29	
Intersection Summary												

**2: Cowan Rd/The Centre Driveway & Hugh Howell Rd**

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 102.9 (64%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 20.9

Intersection LOS: C

Intersection Capacity Utilization 73.8%

ICU Level of Service D

Analysis Period (min) 15

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





















Splits and Phases: 2: Cowan Rd/The Centre Driveway &amp; Hugh Howell Rd



# HCM 6th Signalized Intersection Summary



















## 2: Cowan Rd/The Centre Driveway & Hugh Howell Rd

2023 NO BUILD - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	1151	42	53	718	76	51	29	54	86	35	98
Future Volume (veh/h)	138	1151	42	53	718	76	51	29	54	86	35	98
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	1900	1856	1856	1900	1856	1870	1900	1900	1900	1885	1900	1900
Adj Flow Rate, veh/h	148	1238	45	57	772	82	55	31	58	92	38	105
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, %	0	3	3	0	3	2	0	0	0	1	0	0
Cap, veh/h	540	2270	82	299	2234	1004	88	45	69	255	91	252
Arrive On Green	0.04	0.65	0.65	0.06	1.00	1.00	0.11	0.11	0.11	0.06	0.21	0.21
Sat Flow, veh/h	1810	3470	126	1810	3526	1585	510	403	616	1795	445	1231
Grp Volume(v), veh/h	148	629	654	57	772	82	144	0	0	92	0	143
Grp Sat Flow(s),veh/h/ln	1810	1763	1833	1810	1763	1585	1529	0	0	1795	0	1676
Q Serve(g_s), s	4.6	30.7	30.7	1.8	0.0	0.0	12.8	0.0	0.0	7.1	0.0	11.9
Cycle Q Clear(g_c), s	4.6	30.7	30.7	1.8	0.0	0.0	14.7	0.0	0.0	7.1	0.0	11.9
Prop In Lane	1.00		0.07	1.00		1.00	0.38		0.40	1.00		0.73
Lane Grp Cap(c), veh/h	540	1153	1199	299	2234	1004	201	0	0	255	0	344
V/C Ratio(X)	0.27	0.55	0.55	0.19	0.35	0.08	0.71	0.00	0.00	0.36	0.00	0.42
Avail Cap(c_a), veh/h	572	1153	1199	357	2234	1004	311	0	0	255	0	466
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.1	14.9	14.9	11.7	0.0	0.0	69.6	0.0	0.0	56.8	0.0	55.3
Incr Delay (d2), s/veh	0.3	1.9	1.8	0.3	0.4	0.2	4.7	0.0	0.0	0.9	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	12.2	12.6	0.7	0.1	0.0	6.1	0.0	0.0	3.3	0.0	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.3	16.7	16.7	12.1	0.4	0.2	74.2	0.0	0.0	57.6	0.0	56.1
LnGrp LOS	A	B	B	B	A	A	E	A	A	E	A	E
Approach Vol, veh/h	1431				911				144			
Approach Delay, s/veh	15.9				1.1				74.2			
Approach LOS	B				A				E			
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.2	107.5		39.3	9.9	110.8	15.0	24.3				
Change Period (Y+Rc), s	* 6.2	6.1		6.5	* 5.3	6.1	6.1	6.5				
Max Green Setting (Gmax), s	* 9.8	86.9		44.5	* 9.7	87.9	8.9	29.5				
Max Q Clear Time (g_c+I1), s	6.6	2.0		13.9	3.8	32.7	9.1	16.7				
Green Ext Time (p_c), s	0.1	13.8		0.9	0.0	24.7	0.0	0.6				
Intersection Summary												
HCM 6th Ctrl Delay	17.6											
HCM 6th LOS	B											
Notes												

Lanes, Volumes, Timings  
3: Tucker Industrial Rd & Hugh Howell Rd

2023 NO BUILD - PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1030	207	54	679	6	134	1	75	28	10	4
Future Volume (vph)	5	1030	207	54	679	6	134	1	75	28	10	4
Adj. Flow (vph)	5	1084	218	57	715	6	141	1	79	29	11	4
Lane Group Flow (vph)	5	1302	0	57	721	0	0	221	0	0	44	0
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases							4			8		
Detector Phase	1	6		5	2		4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	11.1	31.4		10.9	31.4		31.1	31.1		33.9	33.9	
Total Split (s)	15.0	110.0		15.0	110.0		35.0	35.0		35.0	35.0	
Total Split (%)	9.4%	68.8%		9.4%	68.8%		21.9%	21.9%		21.9%	21.9%	
Maximum Green (s)	8.9	103.6		9.1	103.6		28.9	28.9		29.1	29.1	
Yellow Time (s)	3.5	4.7		3.3	4.7		3.3	3.3		3.0	3.0	
All-Red Time (s)	2.6	1.7		2.6	1.7		2.8	2.8		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.1	6.4		5.9	6.4			6.1			5.9	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	0.2	3.0		0.2	3.0		0.2	0.2		0.2	0.2	
Time Before Reduce (s)	0.0	20.0		0.0	20.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	15.0		0.0	15.0		0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		18.0			18.0		18.0	18.0		21.0	21.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effect Green (s)	6.2	109.2		8.7	118.6			26.2			26.4	
Actuated g/C Ratio	0.04	0.68		0.05	0.74			0.16			0.16	
v/c Ratio	0.09	0.56		0.65	0.28			0.89			0.18	
Control Delay	90.8	6.2		104.9	7.8			94.3			54.1	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	90.8	6.2		104.9	7.8			94.3			54.1	
LOS	F	A		F	A			F			D	
Approach Delay		6.5			14.9			94.3			54.1	
Approach LOS		A			B			F			D	
Queue Length 50th (ft)	5	113		59	117			211			37	
Queue Length 95th (ft)	m11	124		#124	196			#347			76	
Internal Link Dist (ft)		1068			568			739			1148	
Turn Bay Length (ft)	150			100								
Base Capacity (vph)	83	2339		93	2595			273			262	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.06	0.56		0.61	0.28			0.81			0.17	
Intersection Summary												

Baseline

Synchro 10 Report  
Page 6

# Lanes, Volumes, Timings

## 3: Tucker Industrial Rd & Hugh Howell Rd

2023 NO BUILD - PM

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 118.6 (74%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 18.4

Intersection LOS: B

Intersection Capacity Utilization 68.5%

ICU Level of Service C

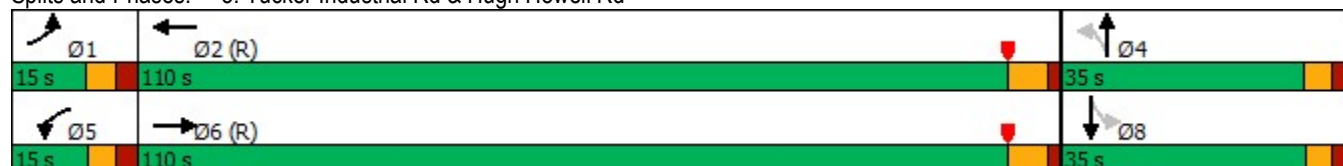
Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 3: Tucker Industrial Rd & Hugh Howell Rd

































# HCM 6th Signalized Intersection Summary

## 3: Tucker Industrial Rd & Hugh Howell Rd

2023 NO BUILD - PM





















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1030	207	54	679	6	134	1	75	28	10	4
Future Volume (veh/h)	5	1030	207	54	679	6	134	1	75	28	10	4
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	1604	1856	1856	1752	1856	1856	1900	1976	1900	1900	1976	1900
Adj Flow Rate, veh/h	5	1084	218	57	715	6	141	1	79	29	11	4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	20	3	3	10	3	3	0	0	0	0	0	0
Cap, veh/h	10	2023	405	71	2604	22	191	1	86	175	64	20
Arrive On Green	0.01	1.00	1.00	0.04	0.73	0.73	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1527	2926	586	1668	3583	30	1024	7	573	915	423	134
Grp Volume(v), veh/h	5	651	651	57	352	369	221	0	0	44	0	0
Grp Sat Flow(s),veh/h/ln	1527	1763	1749	1668	1763	1850	1604	0	0	1472	0	0
Q Serve(g_s), s	0.5	0.0	0.0	5.4	10.9	10.9	17.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.5	0.0	0.0	5.4	10.9	10.9	21.6	0.0	0.0	3.9	0.0	0.0
Prop In Lane	1.00		0.34	1.00		0.02	0.64		0.36	0.66		0.09
Lane Grp Cap(c), veh/h	10	1219	1210	71	1281	1345	279	0	0	259	0	0
V/C Ratio(X)	0.53	0.53	0.54	0.80	0.27	0.27	0.79	0.00	0.00	0.17	0.00	0.00
Avail Cap(c_a), veh/h	85	1219	1210	95	1281	1345	325	0	0	307	0	0
HCM Platoon Ratio	2.00	2.00	2.00	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	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	78.8	0.0	0.0	75.9	7.5	7.5	66.5	0.0	0.0	59.3	0.0	0.0
Incr Delay (d2), s/veh	38.4	1.7	1.7	28.5	0.5	0.5	11.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.6	0.6	2.9	4.0	4.1	9.7	0.0	0.0	1.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	117.2	1.7	1.7	104.4	8.0	8.0	77.6	0.0	0.0	59.6	0.0	0.0
LnGrp LOS	F	A	A	F	A	A	E	A	A	E	A	A
Approach Vol, veh/h	1307				778				221			
Approach Delay, s/veh	2.1				15.0				77.6			
Approach LOS	A				B				E			
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.1	122.7		30.2	12.7	117.0		30.2				
Change Period (Y+Rc), s	6.1	* 6.4		6.1	* 5.9	* 6.4		* 6.1				
Max Green Setting (Gmax), s	8.9	* 1E2		28.9	* 9.1	* 1E2		* 29				
Max Q Clear Time (g_c+I1), s	2.5	12.9		23.6	7.4	2.0		5.9				
Green Ext Time (p_c), s	0.0	10.4		0.5	0.0	30.9		0.2				
Intersection Summary												
HCM 6th Ctrl Delay	14.6											
HCM 6th LOS	B											
Notes												









						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations					 	
Traffic Volume (vph)	149	6	27	97	3	31
Future Volume (vph)	149	6	27	97	3	31
Adj. Flow (vph)	162	7	29	105	3	34
Lane Group Flow (vph)	169	0	0	134	37	0
Sign Control	Free			Free	Stop	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 29.0%				ICU Level of Service A		
Analysis Period (min) 15						

Intersection						
Int Delay, s/veh	1.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↕	
Traffic Vol, veh/h	149	6	27	97	3	31
Future Vol, veh/h	149	6	27	97	3	31
Conflicting Peds, #/hr	0	1	1	0	1	2
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	25	0	0	0	0
Mvmt Flow	162	7	29	105	3	34
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	170	0	331	169
Stage 1	-	-	-	-	167	-
Stage 2	-	-	-	-	164	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1420	-	668	880
Stage 1	-	-	-	-	867	-
Stage 2	-	-	-	-	870	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1419	-	652	877
Mov Cap-2 Maneuver	-	-	-	-	652	-
Stage 1	-	-	-	-	866	-
Stage 2	-	-	-	-	850	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.7		9.4	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	851	-	-	1419	-	
HCM Lane V/C Ratio	0.043	-	-	0.021	-	
HCM Control Delay (s)	9.4	-	-	7.6	-	
HCM Lane LOS	A	-	-	A	-	
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-	





















## 2023 BUILD CONDITIONS Capacity Analysis

## 1: Rosser Terrace/Fuller Way &amp; Hugh Howell Rd

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	427	16	60	719	10	15	0	41	19	0	31
Future Volume (vph)	29	427	16	60	719	10	15	0	41	19	0	31
Adj. Flow (vph)	31	459	17	65	773	11	16	0	44	20	0	33
Lane Group Flow (vph)	31	476	0	65	773	11	0	16	44	0	53	0
Sign Control	Free			Free			Stop			Stop		
Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 42.8%						ICU Level of Service A						
Analysis Period (min) 15												

Intersection												
Int Delay, s/veh	1.3											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	427	16	60	719	10	15	0	41	19	0	31
Future Vol, veh/h	29	427	16	60	719	10	15	0	41	19	0	31
Conflicting Peds, #/hr	1	0	1	1	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	100	-	-	10	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	7	3	0	0	2	10	33	0	0	10	0	0
Mvmt Flow	31	459	17	65	773	11	16	0	44	20	0	33
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	785	0	0	477	0	0	1048	1446	239	1196	1443	388
Stage 1	-	-	-	-	-	-	531	531	-	904	904	-
Stage 2	-	-	-	-	-	-	517	915	-	292	539	-
Critical Hdwy	4.24	-	-	4.1	-	-	8.16	6.5	6.9	7.7	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	7.16	5.5	-	6.7	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.16	5.5	-	6.7	5.5	-
Follow-up Hdwy	2.27	-	-	2.2	-	-	3.83	4	3.3	3.6	4	3.3
Pot Cap-1 Maneuver	*1159	-	-	1342	-	-	*550	338	*931	*585	341	*796
Stage 1	-	-	-	-	-	-	*682	689	-	*609	577	-
Stage 2	-	-	-	-	-	-	*687	569	-	*854	683	-
Platoon blocked, %	1	-	-	1	-	-	1	1	1	1	1	1
Mov Cap-1 Maneuver	*1158	-	-	1341	-	-	*497	313	*930	*526	315	*796
Mov Cap-2 Maneuver	-	-	-	-	-	-	*510	402	-	*525	405	-
Stage 1	-	-	-	-	-	-	*662	670	-	*592	549	-
Stage 2	-	-	-	-	-	-	*626	541	-	*792	664	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0.6			10			9.7		
HCM LOS							B			A		
Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1			
Capacity (veh/h)	510	930	*1158	-	-	1341	-	-	796			
HCM Lane V/C Ratio	0.032	0.047	0.027	-	-	0.048	-	-	0.042			
HCM Control Delay (s)	12.3	9.1	8.2	-	-	7.8	-	-	9.7			
HCM Lane LOS	B	A	A	-	-	A	-	-	A			
HCM 95th %tile Q(veh)	0.1	0.1	0.1	-	-	0.2	-	-	0.1			
Notes												
~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    *: All major volume in platoon												

## 2: Cowan Rd/The Centre Driveway &amp; Hugh Howell Rd

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	410	45	20	722	34	65	7	43	21	5	32
Future Volume (vph)	46	410	45	20	722	34	65	7	43	21	5	32
Adj. Flow (vph)	49	441	48	22	776	37	70	8	46	23	5	34
Lane Group Flow (vph)	49	489	0	22	776	37	0	124	0	23	39	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	2	8	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		5.0	10.0	10.0	7.0	7.0		5.0	7.0	
Minimum Split (s)	13.2	27.4		10.3	32.1	32.1	35.5	35.5		11.1	35.5	
Total Split (s)	26.0	85.0		17.0	76.0	76.0	42.0	42.0		16.0	58.0	
Total Split (%)	16.3%	53.1%		10.6%	47.5%	47.5%	26.3%	26.3%		10.0%	36.3%	
Maximum Green (s)	19.8	78.9		11.7	69.9	69.9	35.5	35.5		9.9	51.5	
Yellow Time (s)	3.4	4.6		3.1	4.6	4.6	3.5	3.5		3.1	3.5	
All-Red Time (s)	2.8	1.5		2.2	1.5	1.5	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.1		5.3	6.1	6.1		6.5		6.1	6.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		
Vehicle Extension (s)	3.0	5.0		3.0	5.0	5.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	0.2	3.0		0.2	3.0	3.0	0.2	0.2		0.2	0.2	
Time Before Reduce (s)	0.0	20.0		0.0	20.0	20.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	10.0		0.0	10.0	10.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0			7.0	7.0	7.0	7.0			7.0	
Flash Dont Walk (s)		10.0			19.0	19.0	22.0	22.0			22.0	
Pedestrian Calls (#/hr)		0			0	0	0	0			0	
Act Effct Green (s)	118.5	114.0		116.0	110.2	110.2		17.3		26.7	26.3	
Actuated g/C Ratio	0.74	0.71		0.72	0.69	0.69		0.11		0.17	0.16	
v/c Ratio	0.10	0.20		0.03	0.32	0.03		0.73		0.12	0.14	
Control Delay	7.6	10.1		7.0	11.1	0.1		81.6		51.1	17.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	7.6	10.1		7.0	11.1	0.1		81.6		51.1	17.7	
LOS	A	B		A	B	A		F		D	B	
Approach Delay		9.9			10.5			81.6			30.1	
Approach LOS		A			B			F			C	
Queue Length 50th (ft)	13	100		5	166	0		110		20	4	
Queue Length 95th (ft)	33	155		16	218	0		178		44	36	
Internal Link Dist (ft)		969			335			119			430	
Turn Bay Length (ft)	125			115								
Base Capacity (vph)	604	2401		741	2391	1131		334		196	519	
Starvation Cap Reductn	0	0		0	0	0		0		0	0	
Spillback Cap Reductn	0	0		0	0	0		0		0	0	
Storage Cap Reductn	0	0		0	0	0		0		0	0	
Reduced v/c Ratio	0.08	0.20		0.03	0.32	0.03		0.37		0.12	0.08	
Intersection Summary												



**2: Cowan Rd/The Centre Driveway & Hugh Howell Rd**

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 148.9 (93%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 16.7

Intersection LOS: B

Intersection Capacity Utilization 56.4%

ICU Level of Service B

Analysis Period (min) 15





















Splits and Phases: 2: Cowan Rd/The Centre Driveway &amp; Hugh Howell Rd



# HCM 6th Signalized Intersection Summary



















## 2: Cowan Rd/The Centre Driveway & Hugh Howell Rd

2023 BUILD - AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	410	45	20	722	34	65	7	43	21	5	32
Future Volume (veh/h)	46	410	45	20	722	34	65	7	43	21	5	32
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	1900	1826	1826	1900	1841	1900	1900	1900	1900	1752	1900	1900
Adj Flow Rate, veh/h	49	441	48	22	776	37	70	8	46	23	5	34
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, %	0	5	5	0	4	0	0	0	0	10	0	0
Cap, veh/h	585	2252	244	694	2408	1108	113	14	54	194	33	222
Arrive On Green	0.04	0.71	0.71	0.04	1.00	1.00	0.10	0.10	0.10	0.02	0.16	0.16
Sat Flow, veh/h	1810	3157	342	1810	3497	1609	805	141	558	1668	211	1432
Grp Volume(v), veh/h	49	241	248	22	776	37	124	0	0	23	0	39
Grp Sat Flow(s),veh/h/ln	1810	1735	1764	1810	1749	1609	1504	0	0	1668	0	1642
Q Serve(g_s), s	1.2	7.4	7.5	0.6	0.0	0.0	12.3	0.0	0.0	1.9	0.0	3.3
Cycle Q Clear(g_c), s	1.2	7.4	7.5	0.6	0.0	0.0	13.0	0.0	0.0	1.9	0.0	3.3
Prop In Lane	1.00		0.19	1.00		1.00	0.56		0.37	1.00		0.87
Lane Grp Cap(c), veh/h	585	1237	1258	694	2408	1108	181	0	0	194	0	255
V/C Ratio(X)	0.08	0.20	0.20	0.03	0.32	0.03	0.68	0.00	0.00	0.12	0.00	0.15
Avail Cap(c_a), veh/h	738	1237	1258	791	2408	1108	367	0	0	264	0	529
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	6.1	7.6	7.6	6.8	0.0	0.0	71.0	0.0	0.0	61.4	0.0	58.5
Incr Delay (d2), s/veh	0.1	0.4	0.4	0.0	0.4	0.1	4.5	0.0	0.0	0.3	0.0	0.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.7	2.8	0.2	0.1	0.0	5.3	0.0	0.0	0.8	0.0	1.4
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	6.2	8.0	8.0	6.8	0.4	0.1	75.5	0.0	0.0	61.7	0.0	58.7
LnGrp LOS	A	A	A	A	A	A	E	A	A	E	A	E
Approach Vol, veh/h		538			835			124			62	
Approach Delay, s/veh		7.8			0.5			75.5			59.8	
Approach LOS		A			A			E			E	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.4	116.2		31.3	8.4	120.2	9.3	22.0				
Change Period (Y+Rc), s	* 6.2	6.1		6.5	* 5.3	6.1	6.1	6.5				
Max Green Setting (Gmax), s	* 20	69.9		51.5	* 12	78.9	9.9	35.5				
Max Q Clear Time (g_c+I1), s	3.2	2.0		5.3	2.6	9.5	3.9	15.0				
Green Ext Time (p_c), s	0.1	13.1		0.2	0.0	6.3	0.0	0.6				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay				11.4								
HCM 6th LOS				B								
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings  
3: Tucker Industrial Rd & Hugh Howell Rd

2023 BUILD - AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	374	58	34	706	23	78	6	25	6	2	12
Future Volume (vph)	8	374	58	34	706	23	78	6	25	6	2	12
Adj. Flow (vph)	9	416	64	38	784	26	87	7	28	7	2	13
Lane Group Flow (vph)	9	480	0	38	810	0	0	122	0	0	22	0
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases							4			8		
Detector Phase	1	6		5	2		4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	11.1	31.4		10.9	31.4		31.1	31.1		33.9	33.9	
Total Split (s)	15.0	89.0		15.0	89.0		56.0	56.0		56.0	56.0	
Total Split (%)	9.4%	55.6%		9.4%	55.6%		35.0%	35.0%		35.0%	35.0%	
Maximum Green (s)	8.9	82.6		9.1	82.6		49.9	49.9		50.1	50.1	
Yellow Time (s)	3.5	4.7		3.3	4.7		3.3	3.3		3.0	3.0	
All-Red Time (s)	2.6	1.7		2.6	1.7		2.8	2.8		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.1	6.4		5.9	6.4			6.1			5.9	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	0.2	3.0		0.2	3.0		0.2	0.2		0.2	0.2	
Time Before Reduce (s)	0.0	20.0		0.0	20.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	15.0		0.0	15.0		0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		18.0			18.0		18.0	18.0		21.0	21.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effect Green (s)	6.4	116.2		9.1	126.2			18.5			18.7	
Actuated g/C Ratio	0.04	0.73		0.06	0.79			0.12			0.12	
v/c Ratio	0.13	0.20		0.42	0.30			0.73			0.10	
Control Delay	85.8	9.4		85.4	5.9			85.2			35.0	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	85.8	9.4		85.4	5.9			85.2			35.0	
LOS	F	A		F	A			F			D	
Approach Delay		10.8			9.5			85.2			35.0	
Approach LOS		B			A			F			D	
Queue Length 50th (ft)	7	119		39	95			115			9	
Queue Length 95th (ft)	m26	187		79	216			181			36	
Internal Link Dist (ft)		1068			568			739			1148	
Turn Bay Length (ft)	150			100								
Base Capacity (vph)	100	2447		101	2743			437			543	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.09	0.20		0.38	0.30			0.28			0.04	
Intersection Summary												

Baseline

Synchro 10 Report  
Page 6

# Lanes, Volumes, Timings 3: Tucker Industrial Rd & Hugh Howell Rd

2023 BUILD - AM

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 38.6 (24%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 16.5

Intersection LOS: B

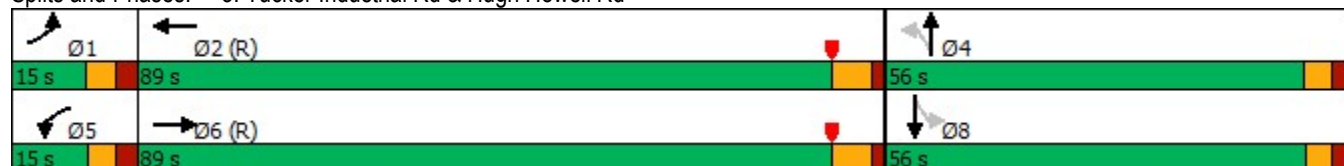
Intersection Capacity Utilization 51.8%

ICU Level of Service A

Analysis Period (min) 15

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



















Splits and Phases: 3: Tucker Industrial Rd & Hugh Howell Rd















# HCM 6th Signalized Intersection Summary

## 3: Tucker Industrial Rd & Hugh Howell Rd

2023 BUILD - AM





















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	374	58	34	706	23	78	6	25	6	2	12
Future Volume (veh/h)	8	374	58	34	706	23	78	6	25	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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	1900	1826	1826	1722	1856	1856	1900	1976	1900	1900	1976	1900
Adj Flow Rate, veh/h	9	416	64	38	784	26	87	7	28	7	2	13
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	5	5	12	3	3	0	0	0	0	0	0
Cap, veh/h	19	2290	350	48	2712	90	145	9	34	68	29	98
Arrive On Green	0.02	1.00	1.00	0.03	0.78	0.78	0.09	0.09	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1810	3007	459	1640	3482	115	1126	93	363	406	311	1037
Grp Volume(v), veh/h	9	239	241	38	397	413	122	0	0	22	0	0
Grp Sat Flow(s),veh/h/ln	1810	1735	1732	1640	1763	1835	1581	0	0	1755	0	0
Q Serve(g_s), s	0.8	0.0	0.0	3.7	10.3	10.3	10.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.8	0.0	0.0	3.7	10.3	10.3	12.0	0.0	0.0	1.8	0.0	0.0
Prop In Lane	1.00		0.27	1.00		0.06	0.71		0.23	0.32		0.59
Lane Grp Cap(c), veh/h	19	1321	1318	48	1373	1429	188	0	0	196	0	0
V/C Ratio(X)	0.48	0.18	0.18	0.80	0.29	0.29	0.65	0.00	0.00	0.11	0.00	0.00
Avail Cap(c_a), veh/h	101	1321	1318	93	1373	1429	522	0	0	548	0	0
HCM Platoon Ratio	2.00	2.00	2.00	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	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	77.9	0.0	0.0	77.2	5.0	5.0	70.9	0.0	0.0	66.4	0.0	0.0
Incr Delay (d2), s/veh	18.1	0.3	0.3	25.3	0.5	0.5	3.7	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.1	0.1	1.9	3.4	3.5	5.1	0.0	0.0	0.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	96.0	0.3	0.3	102.5	5.6	5.6	74.6	0.0	0.0	66.7	0.0	0.0
LnGrp LOS	F	A	A	F	A	A	E	A	A	E	A	A
Approach Vol, veh/h		489			848			122			22	
Approach Delay, s/veh		2.1			9.9			74.6			66.7	
Approach LOS		A			A			E			E	
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.7	131.0		21.2	10.5	128.2		21.2				
Change Period (Y+Rc), s	6.1	* 6.4		6.1	* 5.9	* 6.4		* 6.1				
Max Green Setting (Gmax), s	8.9	* 83		49.9	* 9.1	* 83		* 50				
Max Q Clear Time (g_c+I1), s	2.8	12.3		14.0	5.7	2.0		3.8				
Green Ext Time (p_c), s	0.0	12.3		0.7	0.0	6.2		0.1				
<b>Intersection Summary</b>												
HCM 6th Ctrl Delay			13.5									
HCM 6th LOS			B									
<b>Notes</b>												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	50	22	44	48	23	73
Future Volume (vph)	50	22	44	48	23	73
Adj. Flow (vph)	68	30	59	65	31	99
Lane Group Flow (vph)	98	0	0	124	130	0
Sign Control	Free			Free	Stop	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 24.1%				ICU Level of Service A		
Analysis Period (min) 15						

Intersection						
Int Delay, s/veh	4.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	50	22	44	48	23	73
Future Vol, veh/h	50	22	44	48	23	73
Conflicting Peds, #/hr	0	0	0	0	1	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	74	74	74	74	74	74
Heavy Vehicles, %	4	50	0	8	0	0
Mvmt Flow	68	30	59	65	31	99
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	98	0	267	83
Stage 1	-	-	-	-	83	-
Stage 2	-	-	-	-	184	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1508	-	727	982
Stage 1	-	-	-	-	945	-
Stage 2	-	-	-	-	852	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1508	-	696	982
Mov Cap-2 Maneuver	-	-	-	-	696	-
Stage 1	-	-	-	-	945	-
Stage 2	-	-	-	-	816	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		3.6		9.7	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	894	-	-	1508	-	
HCM Lane V/C Ratio	0.145	-	-	0.039	-	
HCM Control Delay (s)	9.7	-	-	7.5	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.5	-	-	0.1	-	











## 1: Rosser Terrace/Fuller Way &amp; Hugh Howell Rd

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	1249	33	69	782	43	20	1	43	31	0	41
Future Volume (vph)	30	1249	33	69	782	43	20	1	43	31	0	41
Adj. Flow (vph)	31	1301	34	72	815	45	21	1	45	32	0	43
Lane Group Flow (vph)	31	1335	0	72	815	45	0	22	45	0	75	0
Sign Control	Free				Free				Stop			
Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 60.3%						ICU Level of Service B						
Analysis Period (min) 15												

## 1: Rosser Terrace/Fuller Way &amp; Hugh Howell Rd

## Intersection

Int Delay, s/veh 1.1

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	1249	33	69	782	43	20	1	43	31	0	41
Future Vol, veh/h	30	1249	33	69	782	43	20	1	43	31	0	41
Conflicting Peds, #/hr	0	0	2	2	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	100	-	-	10	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	4	3	0	0	3	7	0	0	0	0	0	10
Mvmt Flow	31	1301	34	72	815	45	21	1	45	32	0	43

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	860	0	0	1337	0	0	1934	2386	670	1672	2358	408
Stage 1	-	-	-	-	-	-	1382	1382	-	959	959	-
Stage 2	-	-	-	-	-	-	552	1004	-	713	1399	-
Critical Hdwy	4.18	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.24	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.4
Pot Cap-1 Maneuver	1145	-	-	*878	-	-	*117	*41	*585	*271	45	*754
Stage 1	-	-	-	-	-	-	*551	*483	-	*609	560	-
Stage 2	-	-	-	-	-	-	*733	*526	-	*551	475	-
Platoon blocked, %	1	-	-	1	-	-	1	1	1	1	1	1
Mov Cap-1 Maneuver	1145	-	-	*876	-	-	*101	*37	*583	*229	40	*754
Mov Cap-2 Maneuver	-	-	-	-	-	-	*305	*227	-	*324	220	-
Stage 1	-	-	-	-	-	-	*535	*469	-	*593	514	-
Stage 2	-	-	-	-	-	-	*635	*483	-	*494	461	-





















Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.7			13.7			10.1		
HCM LOS							B			B		

Minor Lane/Major Mvmt	NBLn1	NBLn2	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	300	583	1145	-	-	*876	-	-	754
HCM Lane V/C Ratio	0.073	0.077	0.027	-	-	0.082	-	-	0.057
HCM Control Delay (s)	17.9	11.7	8.2	-	-	9.5	-	-	10.1
HCM Lane LOS	C	B	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.2	0.2	0.1	-	-	0.3	-	-	0.2

## Notes

~: Volume exceeds capacity    \$: Delay exceeds 300s    +: Computation Not Defined    \*: All major volume in platoon

## 2: Cowan Rd/The Centre Driveway &amp; Hugh Howell Rd

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	138	1140	79	53	695	76	96	29	68	86	35	98
Future Volume (vph)	138	1140	79	53	695	76	96	29	68	86	35	98
Adj. Flow (vph)	148	1226	85	57	747	82	103	31	73	92	38	105
Lane Group Flow (vph)	148	1311	0	57	747	82	0	207	0	92	143	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	2	8	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		5.0	10.0	10.0	7.0	7.0		5.0	7.0	
Minimum Split (s)	13.2	27.4		10.3	32.1	32.1	35.5	35.5		11.1	35.5	
Total Split (s)	16.0	94.0		15.0	93.0	93.0	36.0	36.0		15.0	51.0	
Total Split (%)	10.0%	58.8%		9.4%	58.1%	58.1%	22.5%	22.5%		9.4%	31.9%	
Maximum Green (s)	9.8	87.9		9.7	86.9	86.9	29.5	29.5		8.9	44.5	
Yellow Time (s)	3.4	4.6		3.1	4.6	4.6	3.5	3.5		3.1	3.5	
All-Red Time (s)	2.8	1.5		2.2	1.5	1.5	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.1		5.3	6.1	6.1		6.5		6.1	6.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		
Vehicle Extension (s)	3.0	5.0		3.0	5.0	5.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	0.2	3.0		0.2	3.0	3.0	0.2	0.2		0.2	0.2	
Time Before Reduce (s)	0.0	20.0		0.0	20.0	20.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	10.0		0.0	10.0	10.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0			7.0	7.0	7.0	7.0			7.0	
Flash Dont Walk (s)		10.0			19.0	19.0	22.0	22.0			22.0	
Pedestrian Calls (#/hr)		0			0	0	0	0			0	
Act Effect Green (s)	103.7	95.9		98.9	90.8	90.8		26.2		41.5	41.1	
Actuated g/C Ratio	0.65	0.60		0.62	0.57	0.57		0.16		0.26	0.26	
v/c Ratio	0.33	0.63		0.24	0.38	0.09		0.88		0.32	0.30	
Control Delay	12.6	23.5		11.0	16.4	0.6		93.7		48.7	20.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	12.6	23.5		11.0	16.4	0.6		93.7		48.7	20.6	
LOS	B	C		B	B	A		F		D	C	
Approach Delay		22.4			14.6			93.7			31.6	
Approach LOS		C			B			F			C	
Queue Length 50th (ft)	57	481		16	167	0		196		74	45	
Queue Length 95th (ft)	89	580		m28	194	m3		#323		125	107	
Internal Link Dist (ft)		969			335			94			430	
Turn Bay Length (ft)	125			115								
Base Capacity (vph)	447	2086		261	1988	942		264		285	500	
Starvation Cap Reductn	0	0		0	0	0		0		0	0	
Spillback Cap Reductn	0	0		0	0	0		0		0	0	
Storage Cap Reductn	0	0		0	0	0		0		0	0	
Reduced v/c Ratio	0.33	0.63		0.22	0.38	0.09		0.78		0.32	0.29	
Intersection Summary												

**2: Cowan Rd/The Centre Driveway & Hugh Howell Rd**

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 102.9 (64%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 26.0

Intersection LOS: C

Intersection Capacity Utilization 77.9%

ICU Level of Service D

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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





















Splits and Phases: 2: Cowan Rd/The Centre Driveway &amp; Hugh Howell Rd



# HCM 6th Signalized Intersection Summary



















## 2: Cowan Rd/The Centre Driveway & Hugh Howell Rd

2023 BUILD - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	1140	79	53	695	76	96	29	68	86	35	98
Future Volume (veh/h)	138	1140	79	53	695	76	96	29	68	86	35	98
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	1900	1856	1856	1900	1856	1870	1900	1900	1900	1885	1900	1900
Adj Flow Rate, veh/h	148	1226	85	57	747	82	103	31	73	92	38	105
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, %	0	3	3	0	3	2	0	0	0	1	0	0
Cap, veh/h	523	2044	141	261	2075	933	143	38	80	307	111	306
Arrive On Green	0.05	0.61	0.61	0.06	1.00	1.00	0.16	0.16	0.16	0.05	0.25	0.25
Sat Flow, veh/h	1810	3345	232	1810	3526	1585	700	241	513	1795	446	1231
Grp Volume(v), veh/h	148	645	666	57	747	82	207	0	0	92	0	143
Grp Sat Flow(s),veh/h/ln	1810	1763	1814	1810	1763	1585	1454	0	0	1795	0	1677
Q Serve(g_s), s	5.2	35.9	36.1	2.0	0.0	0.0	21.7	0.0	0.0	6.7	0.0	11.2
Cycle Q Clear(g_c), s	5.2	35.9	36.1	2.0	0.0	0.0	22.4	0.0	0.0	6.7	0.0	11.2
Prop In Lane	1.00		0.13	1.00		1.00	0.50		0.35	1.00		0.73
Lane Grp Cap(c), veh/h	523	1077	1108	261	2075	933	261	0	0	307	0	416
V/C Ratio(X)	0.28	0.60	0.60	0.22	0.36	0.09	0.79	0.00	0.00	0.30	0.00	0.34
Avail Cap(c_a), veh/h	551	1077	1108	319	2075	933	301	0	0	311	0	466
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	11.7	19.1	19.1	15.4	0.0	0.0	66.3	0.0	0.0	50.9	0.0	49.4
Incr Delay (d2), s/veh	0.3	2.5	2.4	0.4	0.5	0.2	11.8	0.0	0.0	0.5	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.1	14.7	15.2	0.8	0.1	0.0	9.2	0.0	0.0	3.1	0.0	4.8
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	12.0	21.6	21.5	15.8	0.5	0.2	78.1	0.0	0.0	51.5	0.0	49.9
LnGrp LOS	B	C	C	B	A	A	E	A	A	D	A	D
Approach Vol, veh/h	1459				886				207			
Approach Delay, s/veh	20.6				1.4				78.1			
Approach LOS	C				A				E			
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.5	100.3		46.2	9.9	103.9	14.7	31.6				
Change Period (Y+Rc), s	* 6.2	6.1		6.5	* 5.3	6.1	6.1	6.5				
Max Green Setting (Gmax), s	* 9.8	86.9		44.5	* 9.7	87.9	8.9	29.5				
Max Q Clear Time (g_c+I1), s	7.2	2.0		13.2	4.0	38.1	8.7	24.4				
Green Ext Time (p_c), s	0.1	13.2		0.9	0.0	24.5	0.0	0.5				
Intersection Summary												
HCM 6th Ctrl Delay	21.3											
HCM 6th LOS	C											
Notes												

Lanes, Volumes, Timings  
3: Tucker Industrial Rd & Hugh Howell Rd

2023 BUILD - PM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	1049	211	54	701	6	138	1	75	28	10	8
Future Volume (vph)	8	1049	211	54	701	6	138	1	75	28	10	8
Adj. Flow (vph)	8	1104	222	57	738	6	145	1	79	29	11	8
Lane Group Flow (vph)	8	1326	0	57	744	0	0	225	0	0	48	0
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases							4			8		
Detector Phase	1	6		5	2		4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	11.1	31.4		10.9	31.4		31.1	31.1		33.9	33.9	
Total Split (s)	15.0	110.0		15.0	110.0		35.0	35.0		35.0	35.0	
Total Split (%)	9.4%	68.8%		9.4%	68.8%		21.9%	21.9%		21.9%	21.9%	
Maximum Green (s)	8.9	103.6		9.1	103.6		28.9	28.9		29.1	29.1	
Yellow Time (s)	3.5	4.7		3.3	4.7		3.3	3.3		3.0	3.0	
All-Red Time (s)	2.6	1.7		2.6	1.7		2.8	2.8		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.1	6.4		5.9	6.4			6.1			5.9	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	0.2	3.0		0.2	3.0		0.2	0.2		0.2	0.2	
Time Before Reduce (s)	0.0	20.0		0.0	20.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	15.0		0.0	15.0		0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		18.0			18.0		18.0	18.0		21.0	21.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effect Green (s)	6.5	109.0		8.7	118.2			26.5			26.7	
Actuated g/C Ratio	0.04	0.68		0.05	0.74			0.17			0.17	
v/c Ratio	0.13	0.57		0.65	0.29			0.90			0.19	
Control Delay	90.4	6.4		104.9	8.0			95.4			51.0	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	90.4	6.4		104.9	8.0			95.4			51.0	
LOS	F	A		F	A			F			D	
Approach Delay		6.9			14.9			95.4			51.0	
Approach LOS		A			B			F			D	
Queue Length 50th (ft)	8	128		59	122			215			38	
Queue Length 95th (ft)	m17	142		#124	206			#359			79	
Internal Link Dist (ft)		1068			568			739			1148	
Turn Bay Length (ft)	150			100								
Base Capacity (vph)	83	2334		93	2587			273			269	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.10	0.57		0.61	0.29			0.82			0.18	
Intersection Summary												

Baseline

Synchro 10 Report  
Page 6

# Lanes, Volumes, Timings

## 3: Tucker Industrial Rd & Hugh Howell Rd

2023 BUILD - PM

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 118.6 (74%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 18.7

Intersection LOS: B

Intersection Capacity Utilization 70.3%

ICU Level of Service C

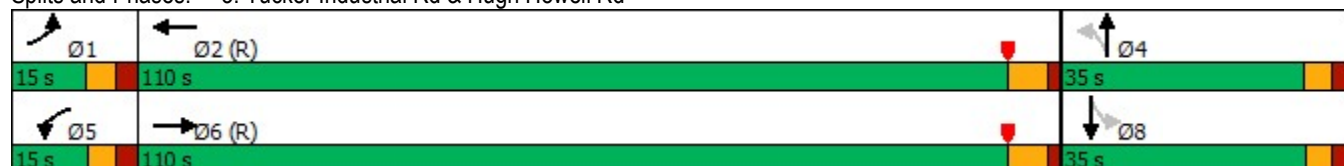
Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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



















Splits and Phases: 3: Tucker Industrial Rd & Hugh Howell Rd















# HCM 6th Signalized Intersection Summary 3: Tucker Industrial Rd & Hugh Howell Rd

2023 BUILD - PM





















												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	1049	211	54	701	6	138	1	75	28	10	8
Future Volume (veh/h)	8	1049	211	54	701	6	138	1	75	28	10	8
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	1604	1856	1856	1752	1856	1856	1900	1976	1900	1900	1976	1900
Adj Flow Rate, veh/h	8	1104	222	57	738	6	145	1	79	29	11	8
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	20	3	3	10	3	3	0	0	0	0	0	0
Cap, veh/h	14	2015	403	71	2583	21	195	1	86	167	63	39
Arrive On Green	0.02	1.00	1.00	0.04	0.72	0.72	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1527	2926	586	1668	3584	29	1028	7	560	853	409	252
Grp Volume(v), veh/h	8	663	663	57	363	381	225	0	0	48	0	0
Grp Sat Flow(s),veh/h/ln	1527	1763	1749	1668	1763	1850	1596	0	0	1513	0	0
Q Serve(g_s), s	0.8	0.0	0.0	5.4	11.6	11.6	18.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.8	0.0	0.0	5.4	11.6	11.6	22.1	0.0	0.0	4.1	0.0	0.0
Prop In Lane	1.00		0.33	1.00		0.02	0.64		0.35	0.60		0.17
Lane Grp Cap(c), veh/h	14	1214	1204	71	1270	1333	282	0	0	269	0	0
V/C Ratio(X)	0.56	0.55	0.55	0.80	0.29	0.29	0.80	0.00	0.00	0.18	0.00	0.00
Avail Cap(c_a), veh/h	85	1214	1204	95	1270	1333	324	0	0	312	0	0
HCM Platoon Ratio	2.00	2.00	2.00	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	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	78.2	0.0	0.0	75.9	7.9	7.9	66.3	0.0	0.0	58.9	0.0	0.0
Incr Delay (d2), s/veh	30.1	1.8	1.8	28.5	0.6	0.5	11.6	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.6	0.6	2.9	4.2	4.4	9.9	0.0	0.0	1.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	108.3	1.8	1.8	104.4	8.4	8.4	77.9	0.0	0.0	59.2	0.0	0.0
LnGrp LOS	F	A	A	F	A	A	E	A	A	E	A	A
Approach Vol, veh/h	1334		801				225		48			
Approach Delay, s/veh	2.4		15.3				77.9		59.2			
Approach LOS	A		B				E		E			
Timer - Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+Rc), s	7.6	121.7	30.7		12.7	116.6	30.7					
Change Period (Y+Rc), s	6.1	* 6.4	6.1		* 5.9	* 6.4	* 6.1					
Max Green Setting (Gmax), s	8.9	* 1E2	28.9		* 9.1	* 1E2	* 29					
Max Q Clear Time (g_c+I1), s	2.8	13.6	24.1		7.4	2.0	6.1					
Green Ext Time (p_c), s	0.0	10.9	0.5		0.0	32.2	0.2					
Intersection Summary												
HCM 6th Ctrl Delay	14.9											
HCM 6th LOS	B											
Notes												

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations					 	
Traffic Volume (vph)	145	28	68	93	23	93
Future Volume (vph)	145	28	68	93	23	93
Adj. Flow (vph)	158	30	74	101	25	101
Lane Group Flow (vph)	188	0	0	175	126	0
Sign Control	Free			Free	Stop	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 35.7%				ICU Level of Service A		
Analysis Period (min) 15						

Intersection						
Int Delay, s/veh	3.9					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↕	
Traffic Vol, veh/h	145	28	68	93	23	93
Future Vol, veh/h	145	28	68	93	23	93
Conflicting Peds, #/hr	0	1	1	0	1	2
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	25	0	0	0	0
Mvmt Flow	158	30	74	101	25	101
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	189	0	424	176
Stage 1	-	-	-	-	174	-
Stage 2	-	-	-	-	250	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1397	-	591	872
Stage 1	-	-	-	-	861	-
Stage 2	-	-	-	-	796	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1396	-	557	870
Mov Cap-2 Maneuver	-	-	-	-	557	-
Stage 1	-	-	-	-	860	-
Stage 2	-	-	-	-	751	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		3.3		10.5	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	783	-	-	1396	-	
HCM Lane V/C Ratio	0.161	-	-	0.053	-	
HCM Control Delay (s)	10.5	-	-	7.7	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	0.6	-	-	0.2	-	

# 2023 BUILD IMPROVED CONDITIONS Capacity Analysis

## 2: Cowan Rd/The Centre Driveway &amp; Hugh Howell Rd

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	138	1140	79	53	695	76	96	29	68	86	35	98
Future Volume (vph)	138	1140	79	53	695	76	96	29	68	86	35	98
Adj. Flow (vph)	148	1226	85	57	747	82	103	31	73	92	38	105
Lane Group Flow (vph)	148	1311	0	57	747	82	0	207	0	92	143	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	2	8	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		5.0	10.0	10.0	7.0	7.0		5.0	7.0	
Minimum Split (s)	13.2	27.4		10.3	32.1	32.1	35.5	35.5		11.1	35.5	
Total Split (s)	16.0	87.0		15.0	86.0	86.0	46.0	46.0		12.0	58.0	
Total Split (%)	10.0%	54.4%		9.4%	53.8%	53.8%	28.8%	28.8%		7.5%	36.3%	
Maximum Green (s)	9.8	80.9		9.7	79.9	79.9	39.5	39.5		5.9	51.5	
Yellow Time (s)	3.4	4.6		3.1	4.6	4.6	3.5	3.5		3.1	3.5	
All-Red Time (s)	2.8	1.5		2.2	1.5	1.5	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.1		5.3	6.1	6.1		6.5		6.1	6.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		
Vehicle Extension (s)	3.0	5.0		3.0	5.0	5.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	0.2	3.0		0.2	3.0	3.0	0.2	0.2		0.2	0.2	
Time Before Reduce (s)	0.0	20.0		0.0	20.0	20.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	10.0		0.0	10.0	10.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0			7.0	7.0	7.0	7.0			7.0	
Flash Dont Walk (s)		10.0			19.0	19.0	22.0	22.0			22.0	
Pedestrian Calls (#/hr)		0			0	0	0	0			0	
Act Effct Green (s)	105.5	97.1		99.5	91.4	91.4		27.9		40.3	39.9	
Actuated g/C Ratio	0.66	0.61		0.62	0.57	0.57		0.17		0.25	0.25	
v/c Ratio	0.33	0.62		0.24	0.37	0.09		0.82		0.34	0.31	
Control Delay	12.6	23.3		11.1	16.3	0.6		83.0		49.4	18.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	12.6	23.3		11.1	16.3	0.6		83.0		49.4	18.7	
LOS	B	C		B	B	A		F		D	B	
Approach Delay		22.2			14.5			83.0			30.7	
Approach LOS		C			B			F			C	
Queue Length 50th (ft)	52	451		15	165	0		196		77	42	
Queue Length 95th (ft)	98	631		m32	197	m3		276		119	96	
Internal Link Dist (ft)		969			335			94			430	
Turn Bay Length (ft)	125			115								
Base Capacity (vph)	458	2112		266	2003	948		349		267	570	
Starvation Cap Reductn	0	0		0	0	0		0		0	0	
Spillback Cap Reductn	0	0		0	0	0		0		0	0	
Storage Cap Reductn	0	0		0	0	0		0		0	0	
Reduced v/c Ratio	0.32	0.62		0.21	0.37	0.09		0.59		0.34	0.25	
Intersection Summary												

**2: Cowan Rd/The Centre Driveway & Hugh Howell Rd**

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 102.9 (64%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.82

Intersection Signal Delay: 25.0

Intersection LOS: C

Intersection Capacity Utilization 77.9%

ICU Level of Service D

Analysis Period (min) 15





















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

Splits and Phases: 2: Cowan Rd/The Centre Driveway &amp; Hugh Howell Rd
























# HCM 6th Signalized Intersection Summary 2: Cowan Rd/The Centre Driveway & Hugh Howell Rd

2023 BUILD IMP - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	1140	79	53	695	76	96	29	68	86	35	98
Future Volume (veh/h)	138	1140	79	53	695	76	96	29	68	86	35	98
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	1900	1856	1856	1900	1856	1870	1900	1900	1900	1885	1900	1900
Adj Flow Rate, veh/h	148	1226	85	57	747	82	103	31	73	92	38	105
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, %	0	3	3	0	3	2	0	0	0	1	0	0
Cap, veh/h	531	2090	145	271	2129	957	145	39	82	281	104	289
Arrive On Green	0.04	0.62	0.62	0.06	1.00	1.00	0.16	0.16	0.16	0.04	0.23	0.23
Sat Flow, veh/h	1810	3345	232	1810	3526	1585	699	243	513	1795	446	1231
Grp Volume(v), veh/h	148	645	666	57	747	82	207	0	0	92	0	143
Grp Sat Flow(s),veh/h/ln	1810	1763	1814	1810	1763	1585	1454	0	0	1795	0	1677
Q Serve(g_s), s	5.0	34.6	34.8	1.9	0.0	0.0	21.6	0.0	0.0	5.9	0.0	11.4
Cycle Q Clear(g_c), s	5.0	34.6	34.8	1.9	0.0	0.0	22.3	0.0	0.0	5.9	0.0	11.4
Prop In Lane	1.00		0.13	1.00		1.00	0.50		0.35	1.00		0.73
Lane Grp Cap(c), veh/h	531	1102	1134	271	2129	957	266	0	0	281	0	393
V/C Ratio(X)	0.28	0.59	0.59	0.21	0.35	0.09	0.78	0.00	0.00	0.33	0.00	0.36
Avail Cap(c_a), veh/h	562	1102	1134	328	2129	957	392	0	0	281	0	540
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	10.8	17.8	17.8	14.3	0.0	0.0	65.8	0.0	0.0	52.8	0.0	51.3
Incr Delay (d2), s/veh	0.3	2.3	2.2	0.4	0.5	0.2	5.9	0.0	0.0	0.7	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.0	14.1	14.5	0.8	0.1	0.0	8.7	0.0	0.0	3.2	0.0	4.9
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	11.1	20.0	20.0	14.6	0.5	0.2	71.7	0.0	0.0	53.5	0.0	51.8
LnGrp LOS	B	C	C	B	A	A	E	A	A	D	A	D
Approach Vol, veh/h	1459				886				207		235	
Approach Delay, s/veh	19.1				1.3				71.7		52.5	
Approach LOS	B				A				E		D	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.3	102.7		44.0	9.9	106.1	12.0	32.0				
Change Period (Y+Rc), s	* 6.2	6.1		6.5	* 5.3	6.1	6.1	6.5				
Max Green Setting (Gmax), s	* 9.8	79.9		51.5	* 9.7	80.9	5.9	39.5				
Max Q Clear Time (g_c+l1), s	7.0	2.0		13.4	3.9	36.8	7.9	24.3				
Green Ext Time (p_c), s	0.1	13.1		0.9	0.0	23.0	0.0	1.0				
Intersection Summary												
HCM 6th Ctrl Delay	20.2											
HCM 6th LOS	C											
Notes												
User approved pedestrian interval to be less than phase max green.												
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.												

Lanes, Volumes, Timings  
2: Cowan Rd/The Centre Driveway & Hugh Howell Rd

2023 BUILD I LT- AM

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	410	45	20	722	34	65	7	43	21	5	32
Future Volume (vph)	46	410	45	20	722	34	65	7	43	21	5	32
Adj. Flow (vph)	49	441	48	22	776	37	70	8	46	23	5	34
Lane Group Flow (vph)	49	489	0	22	776	37	70	54	0	23	39	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	2	8	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		5.0	10.0	10.0	7.0	7.0		5.0	7.0	
Minimum Split (s)	13.2	27.4		10.3	32.1	32.1	35.5	35.5		11.1	35.5	
Total Split (s)	26.0	85.0		17.0	76.0	76.0	42.0	42.0		16.0	58.0	
Total Split (%)	16.3%	53.1%		10.6%	47.5%	47.5%	26.3%	26.3%		10.0%	36.3%	
Maximum Green (s)	19.8	78.9		11.7	69.9	69.9	35.5	35.5		9.9	51.5	
Yellow Time (s)	3.4	4.6		3.1	4.6	4.6	3.5	3.5		3.1	3.5	
All-Red Time (s)	2.8	1.5		2.2	1.5	1.5	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.1		5.3	6.1	6.1	6.5	6.5		6.1	6.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		
Vehicle Extension (s)	3.0	5.0		3.0	5.0	5.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	0.2	3.0		0.2	3.0	3.0	0.2	0.2		0.2	0.2	
Time Before Reduce (s)	0.0	20.0		0.0	20.0	20.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	10.0		0.0	10.0	10.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0			7.0	7.0	7.0	7.0			7.0	
Flash Dont Walk (s)		10.0			19.0	19.0	22.0	22.0			22.0	
Pedestrian Calls (#/hr)		0			0	0	0	0			0	
Act Effect Green (s)	122.3	118.0		119.9	114.2	114.2	13.4	13.4		22.8	22.4	
Actuated g/C Ratio	0.76	0.74		0.75	0.71	0.71	0.08	0.08		0.14	0.14	
v/c Ratio	0.09	0.20		0.03	0.31	0.03	0.60	0.30		0.15	0.16	
Control Delay	6.2	8.5		5.7	9.5	0.1	90.7	25.1		55.9	19.5	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	6.2	8.5		5.7	9.5	0.1	90.7	25.1		55.9	19.5	
LOS	A	A		A	A	A	F	C		E	B	
Approach Delay		8.3			9.0			62.1			33.0	
Approach LOS		A			A			E			C	
Queue Length 50th (ft)	12	92		5	153	0	72	8		21	4	
Queue Length 95th (ft)	29	140		14	215	0	125	52		46	38	
Internal Link Dist (ft)		969			335			119			430	
Turn Bay Length (ft)	125			115								
Base Capacity (vph)	625	2485		764	2477	1167	308	403		161	519	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.08	0.20		0.03	0.31	0.03	0.23	0.13		0.14	0.08	
Intersection Summary												

Baseline

Synchro 10 Report  
Page 1



**2: Cowan Rd/The Centre Driveway & Hugh Howell Rd**

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 148.9 (93%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.60

Intersection Signal Delay: 13.9

Intersection LOS: B

Intersection Capacity Utilization 53.4%

ICU Level of Service A

Analysis Period (min) 15






















Splits and Phases: 2: Cowan Rd/The Centre Driveway &amp; Hugh Howell Rd
























# HCM 6th Signalized Intersection Summary

## 2: Cowan Rd/The Centre Driveway & Hugh Howell Rd

2023 BUILD I LT- AM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	410	45	20	722	34	65	7	43	21	5	32
Future Volume (veh/h)	46	410	45	20	722	34	65	7	43	21	5	32
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	1900	1826	1767	1900	1841	1900	1900	1900	1900	1752	1900	1900
Adj Flow Rate, veh/h	49	441	48	22	776	37	70	8	46	23	5	34
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, %	0	5	9	0	4	0	0	0	0	10	0	0
Cap, veh/h	607	2354	255	729	2520	1160	135	16	91	120	26	176
Arrive On Green	0.04	0.75	0.75	0.04	1.00	1.00	0.06	0.06	0.06	0.02	0.12	0.12
Sat Flow, veh/h	1810	3157	342	1810	3497	1609	1390	244	1403	1668	211	1432
Grp Volume(v), veh/h	49	241	248	22	776	37	70	0	54	23	0	39
Grp Sat Flow(s),veh/h/ln	1810	1735	1764	1810	1749	1609	1390	0	1647	1668	0	1642
Q Serve(g_s), s	1.1	6.6	6.6	0.5	0.0	0.0	7.9	0.0	5.1	2.0	0.0	3.4
Cycle Q Clear(g_c), s	1.1	6.6	6.6	0.5	0.0	0.0	7.9	0.0	5.1	2.0	0.0	3.4
Prop In Lane	1.00		0.19	1.00		1.00	1.00		0.85	1.00		0.87
Lane Grp Cap(c), veh/h	607	1293	1315	729	2520	1160	135	0	107	120	0	202
V/C Ratio(X)	0.08	0.19	0.19	0.03	0.31	0.03	0.52	0.00	0.51	0.19	0.00	0.19
Avail Cap(c_a), veh/h	760	1293	1315	826	2520	1160	353	0	366	190	0	529
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.8	6.0	6.0	5.4	0.0	0.0	73.7	0.0	72.3	66.2	0.0	63.0
Incr Delay (d2), s/veh	0.1	0.3	0.3	0.0	0.3	0.1	3.0	0.0	3.7	0.8	0.0	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	2.3	2.3	0.2	0.1	0.0	3.0	0.0	2.3	0.9	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.8	6.3	6.3	5.4	0.3	0.1	76.7	0.0	76.0	67.0	0.0	63.5
LnGrp LOS	A	A	A	A	A	A	E	A	E	E	A	E
Approach Vol, veh/h	538			835			124			62		
Approach Delay, s/veh	6.2			0.4			76.4			64.8		
Approach LOS	A			A			E			E		
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.4	121.4		26.2	8.4	125.4	9.3	16.9				
Change Period (Y+Rc), s	* 6.2	6.1		6.5	* 5.3	6.1	6.1	6.5				
Max Green Setting (Gmax), s	* 20	69.9		51.5	* 12	78.9	9.9	35.5				
Max Q Clear Time (g_c+I1), s	3.1	2.0		5.4	2.5	8.6	4.0	9.9				
Green Ext Time (p_c), s	0.1	13.1		0.2	0.0	6.3	0.0	0.5				
Intersection Summary												
HCM 6th Ctrl Delay	11.0											
HCM 6th LOS	B											
Notes												

## 2: Cowan Rd/The Centre Driveway &amp; Hugh Howell Rd

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	138	1140	79	53	695	76	96	29	68	86	35	98
Future Volume (vph)	138	1140	79	53	695	76	96	29	68	86	35	98
Adj. Flow (vph)	148	1226	85	57	747	82	103	31	73	92	38	105
Lane Group Flow (vph)	148	1311	0	57	747	82	103	104	0	92	143	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	2	8	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		5.0	10.0	10.0	7.0	7.0		5.0	7.0	
Minimum Split (s)	13.2	27.4		10.3	32.1	32.1	35.5	35.5		11.1	35.5	
Total Split (s)	16.0	94.0		15.0	93.0	93.0	36.0	36.0		15.0	51.0	
Total Split (%)	10.0%	58.8%		9.4%	58.1%	58.1%	22.5%	22.5%		9.4%	31.9%	
Maximum Green (s)	9.8	87.9		9.7	86.9	86.9	29.5	29.5		8.9	44.5	
Yellow Time (s)	3.4	4.6		3.1	4.6	4.6	3.5	3.5		3.1	3.5	
All-Red Time (s)	2.8	1.5		2.2	1.5	1.5	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.1		5.3	6.1	6.1	6.5	6.5		6.1	6.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		
Vehicle Extension (s)	3.0	5.0		3.0	5.0	5.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	0.2	3.0		0.2	3.0	3.0	0.2	0.2		0.2	0.2	
Time Before Reduce (s)	0.0	20.0		0.0	20.0	20.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	10.0		0.0	10.0	10.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0			7.0	7.0	7.0	7.0			7.0	
Flash Dont Walk (s)		10.0			19.0	19.0	22.0	22.0			22.0	
Pedestrian Calls (#/hr)		0			0	0	0	0			0	
Act Effect Green (s)	112.3	104.0		106.0	98.2	98.2	18.3	18.3		33.6	33.2	
Actuated g/C Ratio	0.70	0.65		0.66	0.61	0.61	0.11	0.11		0.21	0.21	
v/c Ratio	0.30	0.58		0.22	0.35	0.08	0.72	0.43		0.43	0.36	
Control Delay	9.6	18.3		8.6	13.1	0.6	93.2	31.3		57.7	23.7	
Queue Delay	0.0	0.0		0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Total Delay	9.6	18.3		8.6	13.1	0.6	93.2	31.3		57.7	23.7	
LOS	A	B		A	B	A	F	C		E	C	
Approach Delay		17.4			11.7			62.1			37.0	
Approach LOS		B			B			E			D	
Queue Length 50th (ft)	45	398		13	160	0	106	38		81	50	
Queue Length 95th (ft)	83	546		m26	194	m3	167	97		129	110	
Internal Link Dist (ft)		969			335			94			430	
Turn Bay Length (ft)	125			115								
Base Capacity (vph)	496	2262		293	2150	1010	233	355		216	500	
Starvation Cap Reductn	0	0		0	0	0	0	0		0	0	
Spillback Cap Reductn	0	0		0	0	0	0	0		0	0	
Storage Cap Reductn	0	0		0	0	0	0	0		0	0	
Reduced v/c Ratio	0.30	0.58		0.19	0.35	0.08	0.44	0.29		0.43	0.29	
Intersection Summary												

**2: Cowan Rd/The Centre Driveway & Hugh Howell Rd**

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 102.9 (64%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 20.6

Intersection LOS: C

Intersection Capacity Utilization 72.2%

ICU Level of Service C

Analysis Period (min) 15






















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

Splits and Phases: 2: Cowan Rd/The Centre Driveway &amp; Hugh Howell Rd
























# HCM 6th Signalized Intersection Summary 2: Cowan Rd/The Centre Driveway & Hugh Howell Rd

2023 BUILD I LT- PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	1140	79	53	695	76	96	29	68	86	35	98
Future Volume (veh/h)	138	1140	79	53	695	76	96	29	68	86	35	98
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	1900	1856	1900	1900	1856	1870	1900	1900	1841	1885	1900	1900
Adj Flow Rate, veh/h	148	1226	85	57	747	82	103	31	73	92	38	105
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, %	0	3	0	0	3	2	0	0	4	1	0	0
Cap, veh/h	557	2224	154	297	2271	1021	172	51	119	199	87	239
Arrive On Green	0.04	0.66	0.66	0.06	1.00	1.00	0.10	0.10	0.10	0.06	0.19	0.19
Sat Flow, veh/h	1810	3345	232	1810	3526	1585	1262	502	1181	1795	445	1231
Grp Volume(v), veh/h	148	645	666	57	747	82	103	0	104	92	0	143
Grp Sat Flow(s),veh/h/ln	1810	1763	1814	1810	1763	1585	1262	0	1683	1795	0	1676
Q Serve(g_s), s	4.4	31.0	31.1	1.7	0.0	0.0	12.8	0.0	9.5	7.2	0.0	12.0
Cycle Q Clear(g_c), s	4.4	31.0	31.1	1.7	0.0	0.0	12.8	0.0	9.5	7.2	0.0	12.0
Prop In Lane	1.00		0.13	1.00		1.00	1.00		0.70	1.00		0.73
Lane Grp Cap(c), veh/h	557	1172	1206	297	2271	1021	172	0	170	199	0	326
V/C Ratio(X)	0.27	0.55	0.55	0.19	0.33	0.08	0.60	0.00	0.61	0.46	0.00	0.44
Avail Cap(c_a), veh/h	589	1172	1206	355	2271	1021	278	0	310	199	0	466
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	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	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	8.5	14.2	14.2	11.3	0.0	0.0	70.4	0.0	68.9	58.7	0.0	56.7
Incr Delay (d2), s/veh	0.3	1.9	1.8	0.3	0.4	0.2	3.3	0.0	3.6	1.7	0.0	0.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	12.1	12.6	0.6	0.1	0.0	4.3	0.0	4.3	3.4	0.0	5.2
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	8.7	16.0	16.0	11.6	0.4	0.2	73.7	0.0	72.5	60.3	0.0	57.7
LnGrp LOS	A	B	B	B	A	A	E	A	E	E	A	E
Approach Vol, veh/h	1459			886			207			235		
Approach Delay, s/veh	15.3			1.1			73.1			58.7		
Approach LOS	B			A			E			E		
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.2	109.2		37.6	9.9	112.5	15.0	22.6				
Change Period (Y+Rc), s	* 6.2	6.1		6.5	* 5.3	6.1	6.1	6.5				
Max Green Setting (Gmax), s	* 9.8	86.9		44.5	* 9.7	87.9	8.9	29.5				
Max Q Clear Time (g_c+I1), s	6.4	2.0		14.0	3.7	33.1	9.2	14.8				
Green Ext Time (p_c), s	0.1	13.2		0.9	0.0	25.5	0.0	0.8				
Intersection Summary												
HCM 6th Ctrl Delay			18.7									
HCM 6th LOS			B									
Notes												

## 2: Cowan Rd/The Centre Driveway &amp; Hugh Howell Rd

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	410	45	20	722	34	65	7	43	21	5	32
Future Volume (vph)	46	410	45	20	722	34	65	7	43	21	5	32
Adj. Flow (vph)	49	441	48	22	776	37	70	8	46	23	5	34
Lane Group Flow (vph)	49	489	0	22	776	37	0	78	46	23	39	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA	
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6			2		2	8		8	4		
Detector Phase	1	6		5	2	2	8	8	8	7	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		5.0	10.0	10.0	7.0	7.0	7.0	5.0	7.0	
Minimum Split (s)	13.2	27.4		10.3	32.1	32.1	35.5	35.5	35.5	11.1	35.5	
Total Split (s)	26.0	85.0		17.0	76.0	76.0	42.0	42.0	42.0	16.0	58.0	
Total Split (%)	16.3%	53.1%		10.6%	47.5%	47.5%	26.3%	26.3%	26.3%	10.0%	36.3%	
Maximum Green (s)	19.8	78.9		11.7	69.9	69.9	35.5	35.5	35.5	9.9	51.5	
Yellow Time (s)	3.4	4.6		3.1	4.6	4.6	3.5	3.5	3.5	3.1	3.5	
All-Red Time (s)	2.8	1.5		2.2	1.5	1.5	3.0	3.0	3.0	3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.2	6.1		5.3	6.1	6.1		6.5	6.5	6.1	6.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	5.0		3.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	
Minimum Gap (s)	0.2	3.0		0.2	3.0	3.0	0.2	0.2	0.2	0.2	0.2	
Time Before Reduce (s)	0.0	20.0		0.0	20.0	20.0	0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	10.0		0.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None	None	None	None	
Walk Time (s)		7.0			7.0	7.0	7.0	7.0	7.0		7.0	
Flash Dont Walk (s)		10.0			19.0	19.0	22.0	22.0	22.0		22.0	
Pedestrian Calls (#/hr)		0			0	0	0	0	0		0	
Act Effect Green (s)	121.3	116.9		118.8	113.1	113.1		14.5	14.5	23.9	23.5	
Actuated g/C Ratio	0.76	0.73		0.74	0.71	0.71		0.09	0.09	0.15	0.15	
v/c Ratio	0.10	0.20		0.03	0.32	0.03		0.63	0.17	0.15	0.15	
Control Delay	6.6	8.9		6.0	9.9	0.1		91.4	1.3	54.6	19.0	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Total Delay	6.6	8.9		6.0	9.9	0.1		91.4	1.3	54.6	19.0	
LOS	A	A		A	A	A		F	A	D	B	
Approach Delay		8.7			9.4			58.0			32.2	
Approach LOS		A			A			E			C	
Queue Length 50th (ft)	12	94		5	157	0		80	0	20	4	
Queue Length 95th (ft)	30	144		15	217	0		135	0	45	38	
Internal Link Dist (ft)		969			335			119			430	
Turn Bay Length (ft)	125			115								
Base Capacity (vph)	618	2462		758	2453	1157		303	468	165	519	
Starvation Cap Reductn	0	0		0	0	0		0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0		0	0	0	0	
Storage Cap Reductn	0	0		0	0	0		0	0	0	0	
Reduced v/c Ratio	0.08	0.20		0.03	0.32	0.03		0.26	0.10	0.14	0.08	
Intersection Summary												

**2: Cowan Rd/The Centre Driveway & Hugh Howell Rd**

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 148.9 (93%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.63

Intersection Signal Delay: 13.9

Intersection LOS: B

Intersection Capacity Utilization 53.8%

ICU Level of Service A






















Analysis Period (min) 15

Splits and Phases: 2: Cowan Rd/The Centre Driveway &amp; Hugh Howell Rd
























# HCM 6th Signalized Intersection Summary 2: Cowan Rd/The Centre Driveway & Hugh Howell Rd

2023 BUILD I RT- AM

													
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR	
Lane Configurations													
Traffic Volume (veh/h)	46	410	45	20	722	34	65	7	43	21	5	32	
Future Volume (veh/h)	46	410	45	20	722	34	65	7	43	21	5	32	
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	1900	1826	1767	1900	1841	1900	1900	1900	1900	1752	1900	1900	
Adj Flow Rate, veh/h	49	441	48	22	776	37	70	8	0	23	5	34	
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, %	0	5	9	0	4	0	0	0	0	10	0	0	
Cap, veh/h	604	2343	254	726	2509	1154	130	10		202	27	181	
Arrive On Green	0.04	0.74	0.74	0.04	1.00	1.00	0.07	0.07	0.00	0.02	0.13	0.13	
Sat Flow, veh/h	1810	3157	342	1810	3497	1609	1283	147	1610	1668	211	1432	
Grp Volume(v), veh/h	49	241	248	22	776	37	78	0	0	23	0	39	
Grp Sat Flow(s),veh/h/ln	1810	1735	1764	1810	1749	1609	1429	0	1610	1668	0	1642	
Q Serve(g_s), s	1.1	6.7	6.7	0.5	0.0	0.0	8.6	0.0	0.0	2.0	0.0	3.4	
Cycle Q Clear(g_c), s	1.1	6.7	6.7	0.5	0.0	0.0	8.6	0.0	0.0	2.0	0.0	3.4	
Prop In Lane	1.00		0.19	1.00		1.00	0.90		1.00	1.00		0.87	
Lane Grp Cap(c), veh/h	604	1288	1310	726	2509	1154	140	0		202	0	207	
V/C Ratio(X)	0.08	0.19	0.19	0.03	0.31	0.03	0.56	0.00		0.11	0.00	0.19	
Avail Cap(c_a), veh/h	758	1288	1310	823	2509	1154	360	0		271	0	529	
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	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	0.00	0.00	1.00	0.00	1.00	
Uniform Delay (d), s/veh	4.9	6.2	6.2	5.5	0.0	0.0	73.5	0.0	0.0	65.6	0.0	62.6	
Incr Delay (d2), s/veh	0.1	0.3	0.3	0.0	0.3	0.1	3.4	0.0	0.0	0.2	0.0	0.4	
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
%ile BackOfQ(50%),veh/ln	0.4	2.3	2.4	0.2	0.1	0.0	3.3	0.0	0.0	0.9	0.0	1.5	
Unsig. Movement Delay, s/veh													
LnGrp Delay(d),s/veh	4.9	6.5	6.5	5.5	0.3	0.1	76.9	0.0	0.0	65.9	0.0	63.0	
LnGrp LOS	A	A	A	A	A	A	E	A		E	A	E	
Approach Vol, veh/h	538			835			78			A			62
Approach Delay, s/veh	6.4			0.4			76.9						64.1
Approach LOS	A			A			E						E
Timer - Assigned Phs	1	2		4	5	6	7	8					
Phs Duration (G+Y+Rc), s	12.4	120.9		26.7	8.4	124.9	9.3	17.4					
Change Period (Y+Rc), s	* 6.2	6.1		6.5	* 5.3	6.1	6.1	6.5					
Max Green Setting (Gmax), s	* 20	69.9		51.5	* 12	78.9	9.9	35.5					
Max Q Clear Time (g_c+I1), s	3.1	2.0		5.4	2.5	8.7	4.0	10.6					
Green Ext Time (p_c), s	0.1	13.1		0.2	0.0	6.3	0.0	0.4					
Intersection Summary													
HCM 6th Ctrl Delay	9.1												
HCM 6th LOS	A												
Notes													
* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.													
Unsignalized Delay for [NBR] is excluded from calculations of the approach delay and intersection delay.													



## 2: Cowan Rd/The Centre Driveway &amp; Hugh Howell Rd

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	138	1140	79	53	695	76	96	29	68	86	35	98
Future Volume (vph)	138	1140	79	53	695	76	96	29	68	86	35	98
Adj. Flow (vph)	148	1226	85	57	747	82	103	31	73	92	38	105
Lane Group Flow (vph)	148	1311	0	57	747	82	0	134	73	92	143	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA	Perm	pm+pt	NA	
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6			2		2	8		8	4		
Detector Phase	1	6		5	2	2	8	8	8	7	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		5.0	10.0	10.0	7.0	7.0	7.0	5.0	7.0	
Minimum Split (s)	13.2	27.4		10.3	32.1	32.1	35.5	35.5	35.5	11.1	35.5	
Total Split (s)	16.0	94.0		15.0	93.0	93.0	36.0	36.0	36.0	15.0	51.0	
Total Split (%)	10.0%	58.8%		9.4%	58.1%	58.1%	22.5%	22.5%	22.5%	9.4%	31.9%	
Maximum Green (s)	9.8	87.9		9.7	86.9	86.9	29.5	29.5	29.5	8.9	44.5	
Yellow Time (s)	3.4	4.6		3.1	4.6	4.6	3.5	3.5	3.5	3.1	3.5	
All-Red Time (s)	2.8	1.5		2.2	1.5	1.5	3.0	3.0	3.0	3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Total Lost Time (s)	6.2	6.1		5.3	6.1	6.1		6.5	6.5	6.1	6.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag	Lag	Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	5.0		3.0	5.0	5.0	3.0	3.0	3.0	3.0	3.0	
Minimum Gap (s)	0.2	3.0		0.2	3.0	3.0	0.2	0.2	0.2	0.2	0.2	
Time Before Reduce (s)	0.0	20.0		0.0	20.0	20.0	0.0	0.0	0.0	0.0	0.0	
Time To Reduce (s)	0.0	10.0		0.0	10.0	10.0	0.0	0.0	0.0	0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None	None	None	None	
Walk Time (s)		7.0			7.0	7.0	7.0	7.0	7.0		7.0	
Flash Dont Walk (s)		10.0			19.0	19.0	22.0	22.0	22.0		22.0	
Pedestrian Calls (#/hr)		0			0	0	0	0	0		0	
Act Effect Green (s)	108.5	100.7		103.3	95.3	95.3		21.6	21.6	36.9	36.5	
Actuated g/C Ratio	0.68	0.63		0.65	0.60	0.60		0.14	0.14	0.23	0.23	
v/c Ratio	0.32	0.60		0.23	0.36	0.08		0.77	0.25	0.42	0.34	
Control Delay	11.0	20.6		9.6	14.3	0.6		92.8	5.9	54.7	22.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0	0.0	0.0	0.0	
Total Delay	11.0	20.6		9.6	14.3	0.6		92.8	5.9	54.7	22.1	
LOS	B	C		A	B	A		F	A	D	C	
Approach Delay		19.6			12.7			62.2			34.8	
Approach LOS		B			B			E			C	
Queue Length 50th (ft)	49	425		14	163	0		137	0	79	48	
Queue Length 95th (ft)	89	580		m28	194	m3		207	24	125	107	
Internal Link Dist (ft)		969			335			94			430	
Turn Bay Length (ft)	125			115								
Base Capacity (vph)	474	2189		280	2088	984		239	363	219	500	
Starvation Cap Reductn	0	0		0	0	0		0	0	0	0	
Spillback Cap Reductn	0	0		0	0	0		0	0	0	0	
Storage Cap Reductn	0	0		0	0	0		0	0	0	0	
Reduced v/c Ratio	0.31	0.60		0.20	0.36	0.08		0.56	0.20	0.42	0.29	
Intersection Summary												

**2: Cowan Rd/The Centre Driveway & Hugh Howell Rd**

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 102.9 (64%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.77

Intersection Signal Delay: 21.9

Intersection LOS: C

Intersection Capacity Utilization 73.8%

ICU Level of Service D

Analysis Period (min) 15

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






















Splits and Phases: 2: Cowan Rd/The Centre Driveway &amp; Hugh Howell Rd



# HCM 6th Signalized Intersection Summary

## 2: Cowan Rd/The Centre Driveway & Hugh Howell Rd

2023 BUILD RT CH - PM

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	1140	79	53	695	76	96	29	68	86	35	98
Future Volume (veh/h)	138	1140	79	53	695	76	96	29	68	86	35	98
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	1900	1856	1900	1900	1856	1870	1900	1900	1841	1885	1900	1900
Adj Flow Rate, veh/h	148	1226	85	57	747	82	103	31	0	92	38	105
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, %	0	3	0	0	3	2	0	0	4	1	0	0
Cap, veh/h	548	2177	151	288	2222	999	161	36		328	93	257
Arrive On Green	0.04	0.65	0.65	0.06	1.00	1.00	0.11	0.11	0.00	0.06	0.21	0.21
Sat Flow, veh/h	1810	3345	232	1810	3526	1585	1052	317	1560	1795	445	1231
Grp Volume(v), veh/h	148	645	666	57	747	82	134	0	0	92	0	143
Grp Sat Flow(s),veh/h/ln	1810	1763	1814	1810	1763	1585	1369	0	1560	1795	0	1676
Q Serve(g_s), s	4.6	32.3	32.4	1.8	0.0	0.0	15.4	0.0	0.0	7.1	0.0	11.8
Cycle Q Clear(g_c), s	4.6	32.3	32.4	1.8	0.0	0.0	15.4	0.0	0.0	7.1	0.0	11.8
Prop In Lane	1.00		0.13	1.00		1.00	0.77		1.00	1.00		0.73
Lane Grp Cap(c), veh/h	548	1147	1180	288	2222	999	197	0		328	0	350
V/C Ratio(X)	0.27	0.56	0.56	0.20	0.34	0.08	0.68	0.00		0.28	0.00	0.41
Avail Cap(c_a), veh/h	579	1147	1180	346	2222	999	292	0		328	0	466
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.3	15.4	15.4	12.3	0.0	0.0	69.5	0.0	0.0	56.3	0.0	54.8
Incr Delay (d2), s/veh	0.3	2.0	2.0	0.3	0.4	0.2	4.1	0.0	0.0	0.5	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	12.8	13.2	0.7	0.1	0.0	5.6	0.0	0.0	3.3	0.0	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.5	17.4	17.4	12.6	0.4	0.2	73.6	0.0	0.0	56.7	0.0	55.5
LnGrp LOS	A	B	B	B	A	A	E	A		E	A	E
Approach Vol, veh/h	1459				886				134		235	
Approach Delay, s/veh	16.6				1.2				73.6		56.0	
Approach LOS	B				A				E		E	
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.2	106.9		39.9	9.9	110.2	15.0	24.9				
Change Period (Y+Rc), s	* 6.2	6.1		6.5	* 5.3	6.1	6.1	6.5				
Max Green Setting (Gmax), s	* 9.8	86.9		44.5	* 9.7	87.9	8.9	29.5				
Max Q Clear Time (g_c+I1), s	6.6	2.0		13.8	3.8	34.4	9.1	17.4				
Green Ext Time (p_c), s	0.1	13.2		0.9	0.0	25.3	0.0	0.5				

### Intersection Summary

HCM 6th Ctrl Delay 17.8

HCM 6th LOS B

### Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

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



**Land Use Petitions:** SLUP-21-0004, CV-21-0002, CV-21-0003, CV-21-0004, & CV-22-0006

**Date of Revised Staff Recommendation Preparation:** April 13, 2022

**Full Cycle Deferral - Planning Commission:** April 21, 2022

**Full Cycle Deferral - Mayor and City Council, 1<sup>st</sup> Read:** May 9, 2022

**Full Cycle Deferral - Mayor and City Council, 2<sup>nd</sup> Read:** June 13, 2022

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<b>PROJECT LOCATION:</b>	4435 Hugh Howell Road and 2239 Dillard Street
<b>DISTRICT/LANDLOT(S):</b>	18 <sup>th</sup> District, Land Lot 214
<b>ACREAGE:</b>	±2.33
<b>EXISTING ZONING</b>	DT-2 (Downtown Corridor Zone) and C-1 ( <i>Local Commercial</i> )
<b>EXISTING LAND USE</b>	Former Restaurant and <i>existing contractor's office</i>
<b>CURRENT FUTURE LAND USE DESIGNATION:</b>	Downtown and <i>Suburban</i>
<b>OVERLAY DISTRICT:</b>	N/A
<b>APPLICANT:</b>	Chick-fil-A, Inc. c/o Jennifer Santelli
<b>OWNER:</b>	John Poulakis; <i>Scott and Wanda Nelson</i>
<b>PROPOSED DEVELOPMENT:</b>	SLUP to allow a drive-through restaurant with four concurrent variances for inter-parcel access, setbacks, drive-through location, <i>and transitional buffer requirements</i>
<b>STAFF RECOMMENDATION:</b>	<b>APPROVAL with conditions of SLUP-21-0004</b> (restaurant with drive-through) <b>DENIAL of CV-21-0002</b> (drive-through locational requirements) <b>DENIAL of CV-21-0003</b> (setback requirements) <b>APPROVAL of CV-21-0004</b> (inter-parcel access requirements) <b>APPROVAL of CV-22-0006</b> ( <i>transitional buffer requirements</i> )

**UPDATE*****April 13, 2022 Update:***

*At the March 14, 2022 Mayor and City Council meeting, the applicant requested a full cycle deferral to go back through the Land Use process (Planning Commission and two reads before Mayor and City Council) due to a major change in the application. The major change included adding an additional parcel to their application (2239 Dillard), which would allow for two access points to the subject property, and an additional concurrent variance (CV-22-0006) to reduce the transitional buffer on the additional parcel. A revised application was submitted on March 15, 2022. New information and analysis are in italics.*

*The original SLUP and three concurrent variances went to Planning Commission on September 16, 2021, where the Board recommended approval of SLUP-21-0004, denial of CV-21-0002, denial of CV-21-0003, and approval of CV-21-0004, subject to amended staff recommended conditions. The amended conditions addressed the Planning Commission concerns regarding transportation related elements of traffic safety. The application then went before Mayor and City Council several times:*

- *October 12, 2021 MCC: 1<sup>st</sup> read*
- *November 8, 2021 MCC: deferral*
- *December 13, 2021 MCC: deferral (exploration of closing Rosser Terrace begun)*
- *January 18, 2022 Public Information Meeting: Rosser Terrace Road Closure meeting*
- *January 24, 2022 MCC: 1<sup>st</sup> read*
- *February 15, 2022 MCC: deferral*
- *February 28, 2022 MCC: deferral (applicant working to add adjacent parcel to the request)*
- *March 14, 2022: full cycle deferral granted*

*Staff will note that the full cycle deferral did not require a new neighborhood meeting to be held. However, it did require new advertising of the case (new public notice signs, letters to a revised 500' mailing list, new legal ads).*

**BACKGROUND**

The applicant, Chick-fil-A, Inc., is requesting a Special Land Use Permit (SLUP) with *four* concurrent variances for the properties located at 4435 Hugh Howell Road and 2239 Dillard Street, for a restaurant with a drive-through configuration. *The subject site consists of two parcels, totaling approximately 2.33 acres and is developed with several buildings.* 4435 Hugh Howell contains a building previously occupied by The Greater Good BBQ. 2239 Dillard Road contains a single-story building and accessory structure, associated parking, and is used as a contractor's office for Southland Electric Inc.

**PROJECT DATA**

The *larger of the two parcels*, is located at the southwestern intersection of Hugh Howell and Rosser Terrace, across from 'The Centre on Hugh Howell' shopping center. *The additional parcel is a smaller, wide, but short, trapezoid shaped parcel. This property is approximately .28 acres and adjacent and to the west of the original 2.05-acre parcel, and is accessed from Dillard Street.* The 2.05-acre tract is zoned

DT-2 (Downtown Corridor Zone) and the .28 acre parcel is zoned C-1 (Local Commercial), both of which allow restaurants without drive-throughs by right, however restaurants with a drive-through configuration require a SLUP in the DT-2 zoning district.

The applicant is requesting relief from the requirement prohibiting drive-through facilities between the public street and building (CV-21-0002), relief from the maximum building setback along Rosser Terrace (CV-21-0003), relief from the requirement to provide inter-parcel access (CV-21-0004), and *relief from transitional buffer requirements on south property line of the 2239 Dillard parcel, where it abuts R-75 zoning (CV-22-0006)*. The proposed drive-through restaurant will be a relocation of the existing Chick-fil-A, which is currently located at 4340 Hugh Howell Road. The applicant is proposing a relocation to a larger site that provides adequate space for Chick-fil-A's new design standards for drive-through facilities.

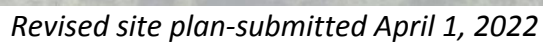
The applicant is proposing removing the existing buildings and billboard from *both properties* and constructing a new ±4,978-square foot restaurant with three lanes, two drive-through lanes and one bypass lane, as well as order and pick up canopies. *The submitted site plan shows two full-access points from Rosser Terrace and Dillard Street and the proposed restaurant located in the northeastern corner of the larger 2.05-acre parcel.* The submitted site plan shows that the proposed drive-through lanes would be constructed in front of the building. Pursuant to Section 46-1166, supplemental regulations for restaurants with drive-through facilities, drive-through lanes shall be located to the side or rear of the building. The applicant is asking for a variance for this requirement (CV-21-0002). *It should be noted that the additional commercially zoned parcel along Dillard Street is being proposed only as a full-access drive aisle, which will connect to the parking lot of the proposed restaurant on the 2.05-acre parcel. No structures are proposed for the 2239 Dillard parcel.*

The submitted site plan shows 62 proposed parking spaces, which meets the minimum off-street parking requirements for restaurants with seating for patrons of one space per 250 sq.ft. of floor area. The site plan also allows room for 32 stacking spaces across the two drive-through lanes. The existing Chick-fil-A at 4340 Hugh Howell Road has stacking for 18 vehicles and the existing Chick-fil-A at 4071 Lavista has stacking for 17 spaces. While our code only requires stacking for 10 vehicles, Chick-fil-A generates more traffic than the majority of other drive-through facilities. The peak stacking for Chick-fil-A during COVID has averaged around 20-25 cars. Pre-COVID stacking numbers were closer to 18-20.

The Downtown Tucker Zoning Districts transitional buffer regulations require that any DT district adjoining an RE, RLG, R-100, R-85, R-75, or R-60 district, must have a 50-foot transitional buffer zone. The subject property abuts residentially zoned properties to the south and west and the site plan shows the proposed 50-foot buffers along the property lines will be maintained. *Like the transitional buffer regulations for any DT zoning district adjacent to residentially zoned properties, commercially zoned parcels have similar requirements when adjacent to residential properties. The applicant is requesting a variance (CV-22-0006) to reduce the required 50' transitional buffer to 29', a reduction of 21'. This request is to allow for a full-access drive aisle into the site from Dillard Street as opposed to just an access point from Rosser Terrace.*

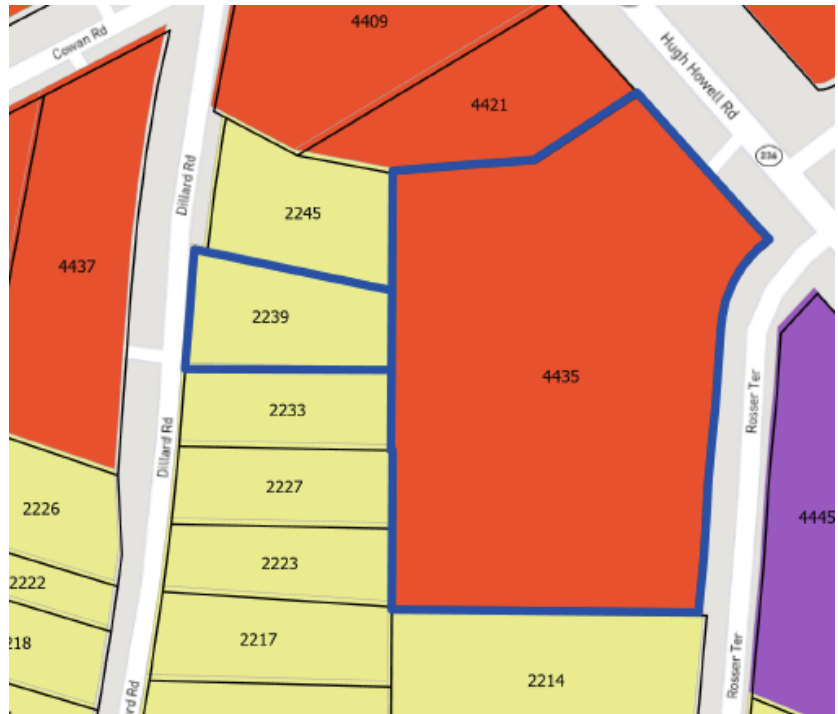
The site plan also shows a 6-foot sidewalk and 5-foot landscape strip along Hugh Howell Road, which complies with the regulations in *Section 46-994 Streets and sidewalks* for the Downtown Tucker Zoning Districts. These improvements are not shown along Rosser Terrace but are required by code.





**CHARACTER AREA (Future Land Use)**

*The subject parcels are located within the Downtown Character Area and Suburban Character Area on the future land use map. It should be noted that although an access point and drive aisle are proposed on the Dillard parcel, the requested SLUP only pertains to the larger parcel, zoned DT-2, at the intersection of Rosser Terrace and Hugh Howell Road. While a SLUP is not required for 2239 Dillard, it had to be added to the application as it is part of the overall development/site plan. That said, the parcel located at 2239 Dillard Street is within the Suburban Character Area, and is proposed to contain a drive-aisle for the neighboring property.*



Character Areas are generally used as a visioning guide for an area that identifies items such as primary land uses, development strategies, and design considerations. Character Areas speak to the adopted vision of the community as it continues to grow and develop over time.

The Downtown Character Area encourages the following commercial land uses: various residential uses, retail and service commercial, office, vertical mixed use, incubator start-ups and shared tenant spaces, and civic uses. One of the development strategies of the Downtown Character Area is to “encourage new development and redevelopment that preserves downtown’s special small-town qualities, keeps Main Street wide and open, and is designed to complement the size and style of Tucker’s older buildings.”

*One of the development strategies of the Suburban Character Area is to prevent the encroachment of higher density residential development and non-residential uses within existing neighborhoods. Although the parcel along Dillard Street is within the Suburban Character Area, the property is zoned commercially and will help to meet the goal of this strategy, to allow traffic to move and be routed by the existing, more intense uses, as opposed to enabling all traffic to inundate Rosser Terrace, a relatively residential road. The removal of the structures and the restricted use of a drive-aisle will make the property more compatible with regards to the Suburban Character Area and the adjacent parcels.*

Staff finds the special land use request for a drive-through is not consistent with the comprehensive plan, however, it will not cause a disproportionate proliferation of drive throughs in the Downtown Character Area, as the proposed development would be a relocation of an existing Chick-fil-A northwest of the subject property. *Additionally, the applicant is proposing two access points for the property, furthering Goal 2 of the City of Tucker’s Comprehensive Plan to improve transportation connections. The access on*



*Dillard will allow customers to travel to the light at Cowen and Hugh Howell in order to make safer left turns than having to turn left onto Hugh Howell from Rosser Terrace.*

### **PUBLIC PARTICIPATION PLAN REPORT**

The applicant hosted a community meeting at the subject property on May 25, 2021 after mailing a letter and site plan explaining the proposed project to all property owners within 500 feet of the subject parcel. There were 25 people in attendance including the applicant, owner, representatives of Chick-fil-A, and community members. The applicant's report listed concerns and questions regarding traffic, access, trash, a traffic signal, speed bumps, and Rosser Terrace being a cut through to Hwy 78. It does not appear that any changes were made to the site plan as a result of the Public Participation Meeting.

### **NEARBY/SURROUNDING LAND ANALYSIS & ZONING**

Adjacent & Surrounding Properties	Zoning	Existing Land Use
Nearby: North	DT-2 (Downtown Corridor Zone); and C-1 (Local Commercial)	Tucker Plaza Shopping Center and commercial
Adjacent: Northwest	DT-2 (Downtown Corridor Zone)	Drive-through Zaxby's and empty commercial space (formerly Pizza Hut)
Adjacent: South	R-75	Single-family detached homes
Adjacent: East (across Rosser Terrace)	C-1 (Local Commercial)	Commercial & drive-through Wendy's
Adjacent: West and west across Dillard Street	R-75 (Residential Medium Lot – 75); and DT-2 (Downtown Corridor Zone)	residential single-family detached homes and Enzo's Pizza



*Zoning and Aerial Exhibits showing surrounding land uses.*

## SLUP-21-0004: Restaurant with drive through

### CRITERIA TO BE APPLIED – SPECIAL LAND USE PERMIT

Criteria (standards and factors) for special land use decisions are provided in Section 46-1594 of the City of Tucker Zoning Ordinance. The applicant is required to address these criteria (see application); below are staff's findings which are independent of the applicant's responses to these criteria.

- 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 subject site is approximately 2.33 acres. The applicant meets the requirements for off-street parking based on the submitted site plan. Additionally, the applicant meets the required 20-foot rear setback; however, they are seeking a variance for the required side corner setback along Rosser Terrace. While the applicant is requesting *four* concurrent variances, none are a direct impact of the size of the site. *It should also be noted that the applicant is requesting a variance for the Dillard Street parcel, to allow for a reduction in the required transitional buffer located along the southern property line of this tract, adjacent to a residentially zoned property to accommodate an additional drive aisle to the site.*

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

The proposed development is compatible with the commercial land uses and commercial development of adjacent properties as there are two other drive-through restaurants within 500 feet of the subject property, however, it is not compatible with the adjacent residential zoning to the west and south. *While the 50' transitional buffer is being maintained completely along all property lines adjacent to residentially zoned parcels on the larger of the two parcels within this request, which helps to minimize the impact to these residential properties, relief is being requested for the transitional buffer required, adjacent to the southern property line of the Dillard Street parcel. However, no structures are being proposed on this parcel – only a drive aisle.*

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

**Schools.** There will be no impact on public school facilities.

**Stormwater management.** No comments.

**Water and sewer.** No comments. Sewer capacity approval has already been obtained for this project.

**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 project site is located at the southwestern intersection of Hugh Howell Road and Rosser Terrace *and along Dillard Street*. Hugh Howell, a major arterial road, has four travel lanes and a center turn lane. Rosser Terrace *and Dillard Street* are two-lane local roads. The applicant provided a Traffic Impact Study that was conducted in June 2021 *and later revised in March of 2022 when 2239 Dillard Street was added to the application.*

The previous traffic study found that the site would benefit from a right turn lane from northbound Rosser Terrace onto eastbound Hugh Howell Road. *However, this is no longer needed with the restricted access into the development as staff is recommending that the curb cut be right in only (no exit).*

While the drive-through lanes begin immediately to the north when you enter the site from Rosser Terrace, stacking for 32 cars has been provided across two lanes which should limit any cars queuing on Rosser Terrace. The deceleration lane on Rosser Terrace further limits any impact to vehicles traveling Rosser Terrace.

*The addition of 2239 Dillard Street provides a second access point for the development and allows vehicles to safely get to the signalized intersection at Cowan and Hugh Howell. This will reduce the impact to Rosser Terrace and provide safer left turning movements onto Hugh Howell. The additional parcel also removes the potential need to close Rosser Terrace, as previously discussed at the January 18, 2022, public information meeting. Staff recommends that a northbound left turn lane onto Cowan Road at Hugh Howell be added, as well as construct the corresponding traffic signal improvements, due to the large increase in vehicle trips that will use this intersection.*

No curb cuts are shown along Hugh Howell due to GDOT restrictions. This also minimizes impact to a major arterial as the consolidation of curb cuts on major roads helps to reduce potential traffic accidents.

A traffic signal at the intersection of Hugh Howell and Rosser Terrace would not be permitted by GDOT due to the close proximity of the signal at Hugh Howell and Cowan Road.

**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.**

The subject property abuts residential lots along the southern and western property lines. During their neighborhood meeting, residents who live along Rosser Terrace expressed concern that the introduction of a Chick-fil-A would increase the traffic queue to turn onto Hugh Howell Road from Rosser Terrace. The applicant conducted a traffic study that found the addition of a right turn lane from northbound Rosser Terrace on to eastbound Hugh Howell Road would help mitigate some of the traffic. The study also found that the intersection of Hugh Howell Road and Rosser Terrace would experience an overall increase in delay, even with the addition of the right turn lane. *As a result of the concerns expressed by neighbors and the city, the applicant has added an additional parcel to the request. This parcel, with frontage on Dillard Street, is being proposed as a full access point and drive aisle to accommodate and help mitigate the influx of traffic that may access the site from Rosser Terrace. However, some traffic improvements will need to be made at the intersection of Cowan and Hugh Howell in order to avoid adversely affecting other areas.*

**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.**

The applicant is proposing one right in/left out curb cut being on Rosser Terrace and *one full access curb cut and associated drive aisle being proposed from Dillard Street. The City Engineer has recommended that the access point along Rosser Terrace be a restricted access point (right-in only/no exit).*

The applicant is requesting a concurrent variance for relief from the requirement to have inter-parcel access due to the limited options for connectivity from the shape of the parcel at the north and the residential uses to the west and south. The submitted site plan shows that the only pedestrian access being provided is from an ADA ramp that connects to the proposed sidewalk on Rosser Terrace. A sidewalk on Rosser Terrace will be required for the proposed development to meet the districts streetscape dimensional requirements. Dekalb Fire Department has no comments for the proposed project.

**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 proposed development will not generate excessive noise, nor will it emit smoke, odor, dust or vibration. The proposed use includes a restaurant with a drive-through facility. No adverse

impacts by reason of noise, smoke, odor, dust, or vibration are anticipated. The ordering canopy and pick up canopy are located at the north of the site, away from the residential properties.

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

The application states the restaurant will operate Monday through Saturday from 6 AM – 10 PM. The hours of operation are consistent with the other commercial uses along Hugh Howell.

**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.**

If developed in accordance with the recommended conditions, including transportation improvements, land uses along Rosser Terrace, *Dillard Street*, and Hugh Howell Road should not be adversely affected by the manner or operation of the development.

**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.**

The drive-through restaurant does not specifically comply with the downtown zoning district classification, as it does not add to the Main Street atmosphere, create a dynamic development, or add to the walkability of the area. However, it should be noted that this is the relocation of an existing Chick-fil-A, also located in the DT-2 zoning classification, rather than a new fast-food restaurant with a drive-through configuration. The proposed location is located on the far eastern edge of the Downtown Districts.

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

The proposed development is not entirely consistent with the adopted comprehensive plan. The subject property is located within the Downtown and *Suburban Character* Areas on the Future Land Use Map. Downtown primary land uses include retail and service commercial uses provided to the community. *Suburban primary land uses include single family residential, townhomes, lower density multi-family, and institutional. While the proposed use is not compatible with the Suburban Character area, the property currently does not comply with its current use and C-1 zoning designation. The change to a drive aisle would be an improvement. Additionally, the proposed use is permitted in C-1.* The proposed drive-through does not comply with all of the relevant development strategy and design considerations as it does not preserve the downtown's special small-town qualities, complement the style of Tucker's older buildings, transform parking, or promote walkability. It should be noted that although this use is not specifically referenced in the Comprehensive Plan, the proposed development would be a relocation of an existing Chick-fil-A with a drive-through configuration that is also designated Downtown on the Future Land Use Map.

**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 submitted site plan shows the existing 50-foot transitional buffers along the southern and western property lines, *of the parcel along Rosser Terrace*, adjacent to residentially zoned properties, as being maintained. *A variance has been requested for the required 50-foot transitional buffer adjacent to the south of the Dillard Street parcel, from 50' to 29'.*

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

The site plan shows a proposed dumpster and its enclosure in the southwestern corner of the parking lot, at the rear of the site. Section 46-1339 requires all dumpster must be screened from view on all four sides so as to not be visible from adjacent properties and the public street.

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

Staff does not recommend any limits on the length of time of the special land use permit (if granted), so long as the applicant obtains all local licensing requirements including compliance with approved conditions and annual occupational tax certificate renewal.

**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.**

It is staff's opinion that the building size, mass, and scale will be appropriate in relation to surrounding land uses.

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

The proposed site is not near any historic buildings, sites, districts, or archaeological resources.

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

The applicant does not meet all of the requirements in the supplemental regulations, Sec. 46-1166 - Drive-through facility restaurant, as shown below.

**Restaurants with drive-through services shall meet the following requirements:**

**A. Drive-through facilities shall not be located within sixty (60) feet of a residentially zoned property, as measured from any menu or speaker box to the property line of adjacent residential property.**

Although the property abuts residentially zoned properties, the drive-through facilities are not located within sixty feet of them.

**B. No drive-through facility shall be located on a property less than ten thousand**

**(10,000) square feet in area. Stacking spaces for queuing of cars shall be provided for the drive-through area as required in Article 6.**

The property is  $\pm 2.33$  acres. There is stacking for approximately 32 cars in the queue, which complies with Article 6 of the Zoning Ordinance.

- C. Drive-through lanes and service windows shall be located to the side or rear of buildings. If on a corner lot, only the pickup window may be located on the side between the principal structure and a public street.**

The subject property is an *assemblage of two parcels, with frontage along Rosser Terrace, Dillard Street and Hugh Howell Road*. The submitted site plan shows the proposed drive-through lanes along both Rosser Terrace and Hugh Howell and located in front of the building. A requirement of a drive-through facility is that its lanes and service windows should be located to the side or rear of the building. While corner lots may have the pickup window located on the side of the building, between the principal structure and a public street, the proposal is for the menu/ordering canopy and drive through lanes to be located between the building and the public street. A concurrent variance has been requested.

- D. Drive-through canopies and other structures, where present, shall be constructed from the same materials as the primary building and with a similar level of architectural quality and detailing.**

A full review to ensure compliance of the drive-through canopy, building, and other structures will be conducted by staff when building permits are submitted.

- E. Speaker boxes shall be pointed away from adjacent residential properties. Speaker boxes shall not play music but shall only be used for communication for placing orders.**

The speaker box is pointed towards Rosser Terrace, away from adjacent residential properties. A full review to ensure compliance of the drive-through speaker box(es) will be conducted by staff when building permits and sign permits are submitted.

- F. Stacking spaces shall be provided for any use having a drive-through facility or areas having drop-off and pick-up areas in accordance with the following requirements. Stacking spaces shall be a minimum of ten (10) feet wide and twenty-five (25) feet long. Stacking spaces shall begin at the last service window for the drive-through lane (typically the "pick-up" window).**

The proposed stacking spaces appear to be in compliance.

- G. Financial institutions with drive-through windows, car washes (automated or staffed facilities), drive-through coffee sales facilities, and any other uses with drive-through facilities with the exception of restaurants with drive-through facilities, shall provide three stacking spaces for each window or drive-through service facility.**

Not applicable.

- H. Restaurants with drive-through facilities shall provide ten (10) stacking spaces per lane for each window or drive-through service facility.**

The application is in compliance. 32 stacking spaces are provided.

- I. The following general standards shall apply to all stacking spaces and drive-through**

**facilities:**

- a. **Drive-through lanes shall not impede on and off-site traffic movements, shall not cross or pass through off-street parking areas, and shall not create a potentially unsafe condition where crossed by pedestrian access to a public entrance of a building.**

The drive-through lanes being located in front of the building creates a potentially unsafe condition for pedestrians. The site plan illustrates an ADA ramp that gives pedestrians access from the sidewalk on Hugh Howell Road to the building's front entrance. Pedestrians will have to cross three lanes of traffic in order to reach the building.

- b. **Drive-through lanes shall be separated by striping or curbing from off-street parking areas. Individual lanes shall be striped, marked or otherwise distinctly delineated.**

The application is in compliance.

- c. **All drive-through facilities shall include a bypass lane with a minimum width of ten (10) feet, by which traffic may navigate around the drive-through facility without traveling in the drive-through lane. The bypass lane may share space with a parking access aisle.**

The application is in compliance.

- J. **Drive-through lanes must be set back five (5) feet from all lot lines and roadway right-of-way lines.**

The application is in compliance.

- 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 produce an adverse shadow effect.

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

The proposed development will be a relocation of the existing Chick-fil-A, located at 4340 Hugh Howell Road. The applicant has stated the current location will close when the proposed Chick-fil-A (4435 Hugh Howell Road) opens. The proposed use will not increase the number restaurants with drive-through configurations being offered in the vicinity, however, there are three other drive-through facilities in the area. Zaxby's is located approximately 90' to the northwest; Wendy's is located approximately 135' to the southeast; and Cook Out is located approximately 535' to the southeast. The applicant has stated the existing Chick-fil-A at 4340 Hugh Howell will be demolished if this SLUP is approved, resulting in no net increase in drive-through facilities.

- 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.**



**Downtown Character Area.** While the proposal is in conflict with the intent of the Downtown Character Area to create a more walkable downtown core and enhance downtown's special small-town qualities, it does comply with the other standards as this is the relocation of an existing drive-through facility and thus would not be in conflict with the strategies of the Downtown Character Area to encourage redevelopment or improve transportation connections.

## **CONCLUSION**

While the proposed use is not completely consistent with the Downtown or Suburban Character Areas, staff does not believe this use would cause a disproportionate proliferation of drive-through facilities, as the proposed Chick-fil-A would be a relocation of an existing Chick-fil-A located just north of the subject property. Potential impacts can be mitigated by transportation improvements.

## **CONCURRENT VARIANCE (CV-21-0002) – LOCATIONAL REQUIREMENTS**

The City of Tucker Zoning Ordinance includes Supplemental Regulations for restaurants with drive-through facilities. Section 46-1166(3) states "drive-through lanes and service windows shall be located to the side or rear of buildings. If on a corner lot, only the pickup window may be located on the side between the principal structure and a public street." The site plan shows the menu/ordering canopy between the building and Rosser Terrace and the drive-through lanes are located between the building and Hugh Howell. **A concurrent variance has been requested to allow a drive-through facility to be located between two public streets and the building.**

Criteria for variance approval are provided in Section 46-1633 of the City of Tucker Zoning Ordinance.

### **CRITERIA TO BE APPLIED – CONCURRENT VARIANCE**

1. **By reason of exceptional narrowness, shallowness, or shape of a specific lot, or by reason of exceptional topographic and other site conditions (such as, but not limited to, floodplain, major stand of trees, steep slopes), which were not created by the owner or applicant, the strict application of the requirements of this chapter would deprive the property owner of rights and privileges enjoyed by other property owners in the same zoning district.**

While the subject property is not unusual in size, narrowness, or shallowness, it is somewhat unusual in shape. Development options are limited with the corner lot and the high number of stacking spaces required by Chick-fil-A. The applicant has made modifications to their standard menu/ordering canopy to improve aesthetics along the frontage.

2. **The requested variance does 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 zoning district in which the subject property is located.**

The requested variance does go beyond the minimum necessary to afford relief by allowing the drive-through to be located in front of the building. The other drive-through restaurants located along Hugh Howell, including the existing Chick-fil-A at 4340 Hugh Howell Road, have their drive-through facilities located on the side and rear of the buildings. Section 46-1166 (3) states that drive-through lanes and service windows shall be located to the side or rear of the buildings.

**3. The grant of the variance will not be materially detrimental to the public welfare or injurious to the property or improvements in the zoning district in which the subject property is located.**

The granting of the variance may be detrimental to the public welfare, per Section 46-1166(9)a which states, “drive-through lanes shall not create a potentially unsafe condition where crossed by pedestrian access to a public entrance of a building.”

**4. The literal interpretation and strict application of the applicable provisions or requirements of this chapter would cause undue and unnecessary hardship.**

The literal interpretation and strict application of the applicable provisions or requirements of this chapter would not cause undue and unnecessary hardship as there is space to locate the drive-through lanes behind the building, however, it would push the building back away from Hugh Howell which is not in line with the Downtown Zoning District.

**5. The requested variance would be consistent with the spirit and purpose of this chapter and the Comprehensive Plan text.**

The proposed variance would not be in line with the Downtown Character Area’s intent to promote walkability with design elements that privilege pedestrian and bicyclist over the automobile and incentivize new walkway connectivity. The proposed location of the drive-through in front of the building does not privilege pedestrians and bicyclists over the automobile. The submitted site plan shows only one pedestrian access from Hugh Howell Road. Pedestrians would then have to cross three lanes to enter the building. However, the installation of streetscape requirements along both frontages does improve pedestrian elements within the city.

**Conclusion:** Staff recommends **DENIAL of CV-19-0002.**

## CONCURRENT VARIANCE (CV-21-0003) – SETBACK REQUIREMENTS

The City of Tucker Zoning Ordinance includes dimensional requirements for the Downtown Districts which includes a 5’ minimum setback/no maximum setback along Hugh Howell and a 0’ minimum/20’ maximum along Rosser Terrace. Section 46-986 *Dimensional requirements* for Downtown Districts explains that a maximum front setback can be increased when an open space, such as a park or plaza, is provided between the respective building and the adjacent street. The applicant’s submitted site plan does not meet this provision for an increased setback.

**A concurrent variance has been requested to increase the maximum building setbacks along Rosser Terrace to 65’.**

Criteria for variance approval are provided in Section 46-1633 of the City of Tucker Zoning Ordinance.

**CRITERIA TO BE APPLIED – CONCURRENT VARIANCE**

- 1. By reason of exceptional narrowness, shallowness, or shape of a specific lot, or by reason of exceptional topographic and other site conditions (such as, but not limited to, floodplain, major stand of trees, steep slopes), which were not created by the owner or applicant, the strict application of the requirements of this chapter would deprive the property owner of rights and privileges enjoyed by other property owners in the same zoning district.**

While the subject property is not unusual in size, narrowness, or shallowness, it is somewhat unusual in shape; however, the parcel could be developed with the building pushed closer to Rosser Terrace. The need for two drive-through lanes and a by-pass lane pushes the building past the 20’ maximum front building setback along Rosser Terrace.

- 2. The requested variance does 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 zoning district in which the subject property is located.**

The requested variance does not go beyond the minimum necessary to afford relief by allowing the proposed restaurant to be setback more than the maximum along Rosser Terrace as the applicant is only asking to increase the maximum setback to 65’.

- 3. The grant of the variance will not be materially detrimental to the public welfare or injurious to the property or improvements in the zoning district in which the subject property is located.**

The granting of the variance may be detrimental to improvements in the zoning district. The Downtown Character Area encourages developments be built closer to the street to create a better pedestrian experience. The applicant is asking for this variance in order to place drive-through lanes between the building and Rosser Terrace. This creates a potential unsafe condition for pedestrians.

- 4. The literal interpretation and strict application of the applicable provisions or requirements of this chapter would cause undue and unnecessary hardship.**

The literal interpretation and strict application of the applicable provisions or requirements of this chapter would not cause undue and unnecessary hardship as Section 46-986 states that when a maximum front setback applies it may be increased when an open space, such as park or plaza, is provided between the respective building and the adjacent street. The applicant is requesting to increase the maximum setback in order to locate drive-through lanes between the building and street. It should be noted that there is no setback maximum for Hugh Howell Road.

**5. The requested variance would be consistent with the spirit and purpose of this chapter and the Comprehensive Plan text.**

The intent for the Downtown Character Area of the Comprehensive Plan is to encourage greater density, including allowances for zero-lot line development for both commercial and residential uses. The design considerations for the Downtown Character Area encourage buildings to be closer to street frontage and require parking in the rear. While the proposed site plan meets the parking standards, the requested variance for increased setbacks would not be in line with the Comprehensive Plan.

**Conclusion:** Staff recommends **DENIAL of CV-19-0003.**

### **CONCURRENT VARIANCE (CV-21-0004) – REQUIRED INTER-PARCEL ACCESS**

The City of Tucker Zoning Ordinance requires inter-parcel access for all new developments in the Downtown Tucker Zoning Districts. Section 46-989 (b) states “Inter-parcel access for vehicles between abutting and nearby properties must be provided so that access to individual properties can be achieved between abutting and nearby developments as an alternative to forcing all movement onto highways and public roads, unless the community development director during the land disturbance permitting process determines that it is unnecessary to provide inter-parcel access due to the unlikelihood of patrons traveling among abutting or nearby sites, or due to inability after reasonable efforts by the property owner to obtain legal permission.” **A concurrent variance has been requested for relief from the requirement to provide inter-parcel access.**

Criteria for variance approval are provided in Section 46-1633 of the City of Tucker Zoning Ordinance.

#### **CRITERIA TO BE APPLIED – CONCURRENT VARIANCE**

- 1. By reason of exceptional narrowness, shallowness, or shape of a specific lot, or by reason of exceptional topographic and other site conditions (such as, but not limited to, floodplain, major stand of trees, steep slopes), which were not created by the owner or applicant, the strict application of the requirements of this chapter would deprive the property owner of rights and privileges enjoyed by other property owners in the same zoning district.**

While the subject property is not unusual in size, narrowness, or shallowness, it is somewhat unusual in shape. Inter-parcel access to the west is not possible because of how the properties are developed with buildings at the rear. Connectivity to the northwest is challenged due to the shape and limited size of the parcel.

2. **The requested variance does 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 zoning district in which the subject property is located.**

The requested variance does not go beyond the minimum necessary to afford relief by allowing the parcel to be developed without inter-parcel access due to the challenges with the commercial properties to the northwest and west and the remaining residential properties.

3. **The grant of the variance will not be materially detrimental to the public welfare or injurious to the property or improvements in the zoning district in which the subject property is located.**

The granting of the variance may be detrimental to the public welfare, as it will force all movements onto Hugh Howell and Rosser Terrace. However, transportation improvements such as a deceleration lane and right turn lane will help limit the impact.

4. **The literal interpretation and strict application of the applicable provisions or requirements of this chapter would cause undue and unnecessary hardship.**

The literal interpretation and strict application of the applicable provisions or requirements of this chapter could cause undue and unnecessary hardship given the challenges with interparcel connectivity with the surrounding parcels.

5. **The requested variance would be consistent with the spirit and purpose of this chapter and the Comprehensive Plan text.**

While the spirit and purpose of the proposal may be consistent with much of the comprehensive plan text, the regulation regarding inter-parcel access is to allow access for vehicles between properties as an alternative to forcing all movement onto highways.

**Conclusion:** Staff recommends **APPROVAL** of CV-19-0004.

## **CONCURRENT VARIANCE (CV-22-0006) –TRANSITIONAL BUFFER REQUIREMENTS**

Section 46-1338 requires transitional buffers when nonresidential, mixed use, or higher intensity residential developments are adjacent to single-family residential land uses. These transitional buffers create a visual screen and help diminish the potential negative impacts of the adjacent use. Buffer widths are established in Table 5.2. When C-1 abuts residential, such as the case of 2239 Dillard abutting 2233 Dillard, a 50' transitional buffer is required.

**A concurrent variance has been requested to reduce the 50' transitional buffer to 29' in order to construct a drive aisle Chick-fil-A. Staff will note that no transitional buffer exists today between the two properties. If this application and concurrent variances are approved, the existing principal**

**structure and large warehouse building on 2239 Dillard will be demolished and 29' of planted buffer will be installed adjacent to the drive aisle.**

Criteria for variance approval are provided in Section 46-1633 of the City of Tucker Zoning Ordinance.

**CRITERIA TO BE APPLIED – CONCURRENT VARIANCE**

- 1. By reason of exceptional narrowness, shallowness, or shape of a specific lot, or by reason of exceptional topographic and other site conditions (such as, but not limited to, floodplain, major stand of trees, steep slopes), which were not created by the owner or applicant, the strict application of the requirements of this chapter would deprive the property owner of rights and privileges enjoyed by other property owners in the same zoning district.**

*The subject property (2239 Dillard Street) is exceptionally narrow. The rear property line is approximately 69', which would only leave 19' of width outside of the 50' transitional buffer area. Additionally, while a drive aisle does not have to comply with building setbacks, the side interior setback in C-1 is 20'. These dimensional requirements make the lot undevelopable, and therefore, some relief has to be granted. The lot is currently nonconforming with no transitional buffer. If approved, the lot will improve with 29' of transitional buffer installed.*

- 2. The requested variance does 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 zoning district in which the subject property is located.**

*The requested variance does not go beyond the minimum necessary to afford relief by allowing the parcel to be developed with a full access drive and a reduction of 21' of the required transitional buffer adjacent to the residential property to the south. If improved, the lot will gain more compliance than it has now.*

- 3. The grant of the variance will not be materially detrimental to the public welfare or injurious to the property or improvements in the zoning district in which the subject property is located.**

*The granting of the variance would not be detrimental to the public welfare as only a drive aisle is proposed for this parcel. Additional mitigation will be provided by a fence, as required by the code.*

- 4. The literal interpretation and strict application of the applicable provisions or requirements of this chapter would cause undue and unnecessary hardship.**

*The literal interpretation and strict application of the applicable provisions or requirements of this chapter would cause undue and unnecessary hardship given the challenges with the narrowness of the subject property.*

5. **The requested variance would be consistent with the spirit and purpose of this chapter and the Comprehensive Plan text.**

*The proposed access point and reduction of the required transitional buffer, while not entirely consistent with the comprehensive plan text will help to improve traffic connections by allowing customers to get to a traffic signal.*

**Conclusion:** Staff recommends **APPROVAL** of CV-22-0006.

## Staff Recommendation

Based on the findings and conclusions herein, Staff recommends **APPROVAL** of Land Use Petition **SLUP-21-0004**, **DENIAL** of **CV-21-0002**, **DENIAL** of **CV-21-0003**, **APPROVAL** of **CV-21-0004**, and **APPROVAL** of **CV-22-0006** subject to the following conditions.

Should the board(s) want to approve the request as submitted, all concurrent variances would need to be approved. Additional conditions would be needed for CV-21-0002 and CV-21-0003.

1. The property should be developed in general conformance with the site plan submitted on *April 1, 2022*, with revisions to meet these conditions.
2. A landscape plan shall be submitted with the Land Disturbance Permit, subject to the review and approval of the Planning and Zoning Director.
3. A mix of trees, shrubs, and ground cover shall be planted in the landscape strip between the drive-through restaurant and both Hugh Howell Road and Rosser Terrace to screen the appearance of the drive-through lanes from the street.
4. The drive-through canopies, windows, and lanes shall comply with the requirements of Section 46-995 and Section 46-1166.
5. Outdoor dining shall meet the requirements outlined in Section 46-998.
6. The drive-through establishment shall close no later than 10:00 p.m.
7. The Special Land Use Permit shall not be able to be transferred to another business.
8. Owner/ Developer shall provide direct pedestrian entrances from Hugh Howell Road and Rosser Terrace. The required pedestrian entrances must face the public street and provide ingress and egress.
9. Owner/Developer shall remove the existing billboard located on the northwestern portion of the property.
10. Inter-parcel access is not required (CV-21-0004).
11. *The transitional buffer along the southern property line of 2239 Dillard Street shall be reduced from 50' to 29' (CV-22-0006). A 6' tall wood fence shall be installed on or near the southern property line.*
12. Owner/Developer shall install six foot (6') wide sidewalk with a five foot (5') wide landscape strip along the entire frontage of Rosser Terrace and Hugh Howell Road.
13. *The development shall be limited to one (1) limited access driveway on Rosser Terrace (right in only/no exit) and one (1) full access driveway on Dillard Street. Curb cut locations are subject the*



*sight distance requirements and the approval of the City Engineer. Further, Owner/Developer shall add a "No Left Turn" sign and a raised median at the Rosser Terrace curb cut to restrict all turning movements except a right turn in.*

- 14. Owner/Developer shall construct a southbound deceleration lane on Rosser Terrace at the new entrance, subject to the approval of the City Engineer.*
- 15. Owner/Developer shall construct a northbound left turn lane on Cowan Road at Hugh Howell Road, and construct the corresponding traffic signal improvements, subject to the approval of the City Engineer. Said improvements will be at no cost to the City of Tucker.*
16. Owner/Developer shall dedicate at no cost to the City of Tucker such additional right-of-way as required to construct the above improvements and have a minimum of two feet (2') from the back of the future sidewalk.
17. Owner/Developer shall provide ADA compliant pedestrian connectivity between the sidewalks along both frontages and the building entrance.
18. Owner/Developer shall comply with Section 14-39 of the City of Tucker Code of Ordinances concerning tree protection and replacement. A minimum tree density of thirty (30) units/acre shall be required. Any specimen trees removed during the redevelopment shall require additional tree replacement units as required in the ordinance.
19. Owner/Developer shall provide stormwater management in compliance with Tucker's Post Construction Stormwater Management Ordinance.

**DEPARTMENT COMMENTS**

**DEKALB COUNTY DEPARTMENT OF WATERSHED MANAGEMENT**

No comments. Sewer capacity approval has already been obtained for this project.

**DEKALB COUNTY FIRE MARSHAL OFFICE**

No comments.

**DEKALB COUNTY SCHOOL SYSTEM**

Not applicable.

**CITY ENGINEER**

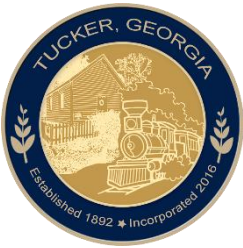
**Traffic Study Comments**

1. The traffic study should be signed by a registered engineer.
2. The 35% trip distribution from Dillard turning left onto Cowan seems high.
3. Cowan Rd @ Hugh Howell Rd – the Build volumes on the northbound approach are double the 2022 volumes. However, Table 8 shows no change in Level of Service or Delay with no improvements to the intersection.

**Recommended Conditions**

1. The development shall be limited to one (1) limited access driveway on Rosser Terrace (right in only) and one (1) full access driveway on Dillard Street. Curb cut locations are subject the sight distance requirements and the approval of the City Engineer. Further, Owner/Developer shall add a “No Left Turn” sign and a raised median at the Rosser Terrace curb cut to restrict all turning movements except a right turn in.
2. Owner/Developer shall install a 5’ sidewalk along the entire frontage of Rosser Terrace.
3. Owner/Developer shall construct a right turn lane from Hugh Howell Road onto Rosser Terrace, subject to the approval of the City Engineer and the Georgia Department of Transportation.
4. Owner/Developer shall construct a northbound left turn lane on Cowan Road at Hugh Howell Road, and construct the corresponding traffic signal improvements, subject to the approval of the City Engineer. Said improvements will be at no cost to the City of Tucker.
5. Owner/Developer shall dedicate at no cost to the City of Tucker such additional right-of-way as required to construct the above improvements and have a minimum of two feet (2’) from the back of the future sidewalk.
6. Owner/Developer shall provide ADA compliant pedestrian connectivity between the sidewalks along both frontages and the building entrance.
7. Owner/Developer shall comply with Section 14-39 of the City of Tucker Code of Ordinances concerning tree protection and replacement. A minimum tree density of thirty (30) units/acre shall be required. Any specimen trees removed during the redevelopment shall require additional tree replacement units as required in the ordinance.

8. Owner/Developer shall provide stormwater management in compliance with Tucker's Post Construction Stormwater Management Ordinance.



Planning and Zoning  
1975 Lakeside Parkway, Suite 350  
Tucker, GA 30084  
Phone: 678-597-9040  
Email: [permits@tuckerga.gov](mailto:permits@tuckerga.gov)  
Website: [www.tuckerga.gov](http://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: **Chick-fil-A, Inc.**

Address: **5200 Buffington Road**

City: **Atlanta**

State: **GA**

Zip: **30349**

Contact Name: **Jennifer Santelli**

Phone: **770-324-5282**

Email: **jenn.santelli@cfacorp.com**

## OWNER INFORMATION

Name: **John Poulakis**

Address: **1610 DeKalb Avenue**

City: **Atlanta**

State: **GA**

Zip: **30307**

Contact Name: **John Poulakis**

Phone: **404-536-7601**

Email: **cookiepoulakis@hotmail.com**

## PROPERTY INFORMATION

Property Address: **4435 Hugh Howell Road Tucker, GA 30084**

Present Zoning District(s): **DT-2**

Requested Zoning District(s):

Present Land Use Category: **Downtown Corridor**

Requested Land Use Category:

Land District: **18**

Land Lot(s): **214**

Acreage: **2.05**

Proposed Development: **Chick-fil-A Restaurant**

Concurrent Variance(s): **N/A**

## RESIDENTIAL DEVELOPMENT

No. of Lots/Dwelling Units:

Dwelling Unit Size (Sq. Ft.):

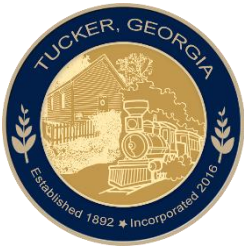
Density:

## NON-RESIDENTIAL DEVELOPMENT

No. of Buildings/Lots: **1**

Total Building Sq. Ft.: **4,989**

Density: **.056**



Planning and Zoning  
1975 Lakeside Parkway, Suite 350  
Tucker, GA 30084  
Phone: 678-597-9040  
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: **Chick-fil-A, Inc**

Address: **5200 Buffington Road**

City: **Atlanta**

State: **GA**

Zip: **30349**

Contact Name: **Jennifer Santelli**

Phone: **770-324-5282**

Email: **jenn.santelli@cfacorp.com**

## OWNER INFORMATION

Name: **Scott and Wanda Nelson**

Address: **4874 Five Forks Trickum Rd SW**

City: **Lilburn**

State: **GA**

Zip: **30047**

Contact Name: **Wanda Nelson**

Phone: **(770) 493-7068**

Email: **Seinc1@bellsouth.net**

## PROPERTY INFORMATION

Property Address: **2239 Dillard St**

Present Zoning District(s): **C-1**

Requested Zoning District(s):

Present Land Use Category: **Local Commercial**

Requested Land Use Category:

Land District:

Land Lot(s):

Acreage: **0.28**

Proposed Development: **Chick-fil-A restaurant**

Concurrent Variance(s): **CV-21-0002, CV-21-0003, and CV-21-0004, plus added variance for residential buffer**

## RESIDENTIAL DEVELOPMENT

No. of Lots/Dwelling Units:

Dwelling Unit Size (Sq. Ft.):

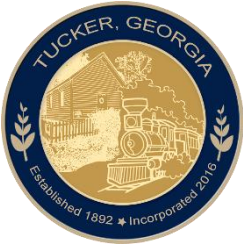
Density:

## NON-RESIDENTIAL DEVELOPMENT

No. of Buildings/Lots: **1**

Total Building Sq. Ft.: **2,500 SF**

Density: **.205**



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

# Land Use Petition Application Checklist

## FOR ALL REZONINGS, COMPREHENSIVE PLAN AMENDMENTS, SPECIAL LAND USE PERMITS, MODIFICATIONS, AND CONCURRENT VARIANCES

REQUIRED ITEMS	NUMBER OF COPIES	CHECK <input checked="" type="checkbox"/>
One (1) digital copy of all submitted materials	• One (1) flash drive or CD in .JPEG, .PDF format	<input checked="" type="checkbox"/>
Pre-Application Meeting Form	• One (1) Copy	<input type="checkbox"/>
Public Participation Report	• One (1) Copy	<input checked="" type="checkbox"/>
Application, Signature Pages, Disclosure Form	• One (1) Copy each	<input checked="" type="checkbox"/>
Written Legal Description	• One (1) 8 ½" x 11" Legal Description	<input checked="" type="checkbox"/>
Boundary Survey and Proposed Site Plan (See Page 9 for Requirements)	• Five (5) Full-Size (24" x 36") Copies of each • One (1) 8 ½" x 11" or 11x17 Site Plan of each	<input checked="" type="checkbox"/>
Building Elevations (renderings or architectural drawings to show compliance with Article 5)	• One (1) Copy	<input checked="" type="checkbox"/>
Letter of Intent	• One (1) Copy	<input checked="" type="checkbox"/>
Analysis of Standards/Criteria (See page 5)	• One (1) Copy	<input checked="" type="checkbox"/>
Environmental Site Analysis Form	• One (1) Copy	<input checked="" type="checkbox"/>
Trip Generation Letter (ITE Trip Generation Manual)	• One (1) Copy	<input checked="" type="checkbox"/>

### THE FOLLOWING ITEMS MAY BE REQUIRED

Traffic Impact Study (See Sec. 46-1309)	• Three (3) Copies	<input checked="" type="checkbox"/>
Development of Regional Impact Review Form	• Three (3) Copies	<input type="checkbox"/>
Environmental Impact Report	• Three (3) Copies	<input type="checkbox"/>
Noise Study Report	• Three (3) Copies	<input type="checkbox"/>
Other items required per the Zoning Ordinance	• Three (3) Copies	<input type="checkbox"/>

### LAND USE PETITION FEE SCHEDULE

Residential Rezoning	\$500	<input type="checkbox"/>
Multifamily Rezoning	\$750	<input type="checkbox"/>
Non-Residential Rezoning	\$750	<input type="checkbox"/>
Special Land Use Permit	\$400	<input checked="" type="checkbox"/>
Comprehensive Plan Amendment	\$1000	<input type="checkbox"/>
Modification	\$250	<input checked="" type="checkbox"/>
Variance (includes Concurrent Variance)	\$300	<input checked="" type="checkbox"/>
Public Notice Sign Fee	\$80 (per required sign)	<input checked="" type="checkbox"/>

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DEPARTMENT



## 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.

Public Participation Plan Report  
Project Name:

Jennifer Santelli  
Signature of Applicant

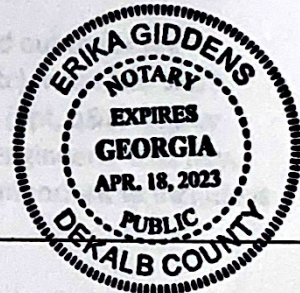
August 5, 2021  
(Date)

Jennifer Santelli, Principal Development Lead  
Type or Print Name and Title

Erika Giddens  
Signature of Notary Public

August 5, 2021  
Date

Notary Seal



1. Was question/concern/comment/request for change to the proposed plans?

Applicant Response:

2. Was question/concern/comment/request for change to the proposed plans?

Applicant Response:

3. Was question/concern/comment/request for change to the proposed plans?

Applicant Response:

Applicant Response:

## APPLICANT'S CERTIFICATION

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*Bridgette Ganker*

*8/13/21*

Signature of Applicant

Date

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PLANNING & ZONING  
DEPARTMENT

*Bridgette Ganker, Branch Manager*

Type or Print Name and Title

*Matthew Roberts*

*8-13-21*

Signature of Notary Public

Date

Notary Seal

**MATTHEW ROBERTS**  
NOTARY PUBLIC  
Cherokee County  
State of Georgia  
My Comm. Expires July 29, 2022



## 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, John Poulakis, authorize, Chick-fil-A, Inc.  
(Property Owner) (Applicant)

to file for SLUP, at 4435 Hugh Howell Road  
(RZ, CA, SLUP, M, CV) (Address)

on this date 8, 11, 20 21  
(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.

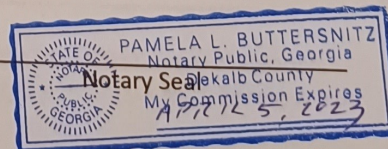
[Signature]  
Signature of Property Owner

8/11/21  
Date

John Poulakis  
Type or Print Name and Title

[Signature]  
Signature of Notary Public

08-11-2021  
Date



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## 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, Scott Nelson, authorize, Chick-fil-A, Inc.,  
(Property Owner) (Applicant)  
to file for SLUP at 4435 Hugh Howell Rd and 2239 Dillard St  
(RZ, CA, SLUP, M, CV) (Address)  
on this date \_\_\_\_\_, 20\_\_\_\_\_  
(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.
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Scott Nelson  
Signature of Property Owner

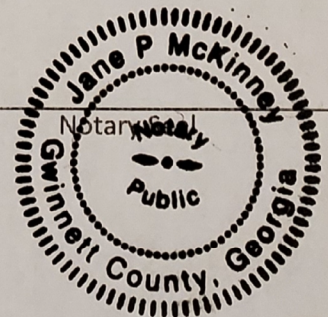
3/14/22  
Date

Scott Nelson

Type or Print Name and Title

Jane P. McKinney  
Signature of Notary Public

3/14/22  
Date





## **ANALYSIS OF STANDARDS/CRITERIA**

### **ZONING MAP AMENDMENT CRITERIA**

Section 46-1560 of the City of Tucker Zoning Ordinance lists standards and factors that are found to be relevant to the exercise of the city's zoning powers and shall govern the review of all proposed amendments to the Official Zoning Map. The applicant shall write a detailed written analysis of each standard and factor as it relates to their proposed project.

### **COMPREHENSIVE PLAN MAP AMENDMENT CRITERIA**

Section Sec. 46-1559 of the City of Tucker Zoning Ordinance lists standards and factors that are found to be relevant for evaluating applications for amendments to the comprehensive plan map and shall govern the review of all proposed amendments to the comprehensive plan map. The applicant shall write a detailed written analysis of each standard and factor as it relates to their proposed project.

### **SPECIAL LAND USE PERMIT CRITERIA**

Section 46-1594 and 46-1595 of the City of Tucker Zoning Ordinance lists specific criteria that shall be considered by the planning and zoning department, the planning commission, and the mayor and city council in evaluating and deciding any application for a special land use permit. No application for a special land use permit shall be granted by the mayor and city council unless satisfactory provisions and arrangements have been made concerning each of the following factors, all of which are applicable to each application, and the application is in compliance with all applicable regulations in Article 4. The applicant shall write a detailed written analysis of criteria as it relates to their proposed project.

### **CONCURRENT VARIANCE CRITERIA**

Section 46-1633 of the City of Tucker Zoning Ordinance lists specific criteria the board shall use in determining whether or not to grant a variance. The applicant shall provide a written analysis of how the request complies with this criteria, if they are requesting a concurrent variance.

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## **ENVIRONMENTAL SITE ANALYSIS FORM**

Analyze the impact of the proposed rezoning and provide a written point-by-point response to Points 1 through 3:

1. **CONFORMANCE WITH THE COMPREHENSIVE PLAN**. Describe the proposed project and the existing environmental conditions on the site. Describe adjacent properties. Include a site plan that depicts the proposed project.

Describe how the project conforms to the Comprehensive Land Use Plan. Include the portion of the Comprehensive Plan Land Use Map which supports the project's conformity to the Plan. Evaluate the proposed project with respect to the land use suggestion of the Comprehensive Plan as well as any pertinent Plan policies.

2. **ENVIRONMENTAL IMPACTS OF THE PROPOSED PROJECT**. For each environmental site feature listed below, indicate the presence or absence of that feature on the property. Describe how the proposed project may encroach or adversely affect an environmental site feature. Information on environmental site features may be obtained from the indicated source(s).

- a. Wetlands
  - U. S. Fish and Wildlife Service, National Wetlands Inventory (<http://wetlands.fws.gov/downloads.htm>)
  - Georgia Geologic Survey (404-656-3214)
  - Field observation and subsequent wetlands delineation/survey if applicable
- b. Floodplain
  - Federal Emergency Management Agency (<http://www.fema.org>)
  - Field observation and verification
- c. Streams/stream buffers
  - Field observation and verification
- d. Slopes exceeding 25 percent over a 10-foot rise in elevation
  - United States Geologic Survey Topographic Quadrangle Map
  - Field observation and verification
- e. Vegetation
  - United States Department of Agriculture, Nature Resource Conservation Service
  - Field observation
- f. Wildlife Species (including fish)
  - United States Fish and Wildlife Service
  - Georgia Department of Natural Services, Wildlife Resources Division, Natural Heritage Program
  - Field observation
- g. Archeological/Historical Sites
  - Historic Resources Survey
  - Georgia Department of Natural Resources, Historic Preservation Division
  - Field observation and verification

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## **ENVIRONMENTAL SITE ANALYSIS FORM (CONTINUED)**

3. **PROJECT IMPLEMENTATION MEASURES**. Describe how the project implements each of the measures listed below as applicable. Indicate specific implementation measures required to protect environmental site feature(s) that may be impacted.
- a. Protection of environmentally sensitive areas, i.e., floodplain, slopes exceeding 25 percent, river corridors.
  - b. Protection of water quality
  - c. Minimization of negative impacts on existing infrastructure
  - d. Minimization on archeological/historically significant areas
  - 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.
  - f. Creation and preservation of green space and open space
  - g. Protection of citizens from the negative impacts of noise and lighting
  - h. Protection of parks and recreational green space
  - i. Minimization of impacts to wildlife habitats

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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.**

**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) Jennifer Santelli

Signature: \_\_\_\_\_

Date: August 5, 2021



## 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:

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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) Bridgette Ganter

Signature: Bridgette Ganter Date: 8/13/21

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CITY OF TUCKER

03/18/2022

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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**NO** (if NO, complete only point 4)

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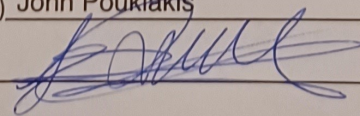
1.	5.
2.	6.
3.	7.
4.	8.

3. CAMPAIGN CONTRIBUTIONS:

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

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Name (print) John Pouklakis

Signature: 

Date: 8/11/21

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03/18/2022  
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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**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.

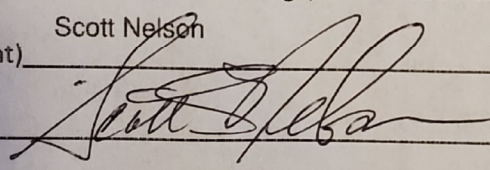
8.

**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) Scott Nelson

Signature: 

Date: 3/14/22



## 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, Scott Nelson, authorize, Chick-fil-A, Inc.,  
(Property Owner) (Applicant)  
to file for SLUP, at 4435 Hugh Howell Rd and 2239 Dillard St  
(RZ, CA, SLUP, M, CV) (Address)  
on this date \_\_\_\_\_, 20\_\_\_\_\_  
(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.
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- 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.

Signature of Property Owner

3/14/22  
Date

Scott Nelson

Type or Print Name and Title

Signature of Notary Public

3/14/22  
Date



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## **SITE PLAN CHECKLIST**

All items must be included on the Site Plan; separate Site Plans may be necessary to address all items

1. Key and/or legend and site location map with North arrow
2. Boundary survey of subject property which includes dimensions along property lines that match the metes and bounds of the property's written legal description and clearly indicates the point of beginning
3. Acreage of subject property
4. Location of land lot lines and identification of land lots
5. Existing, proposed new dedicated and future reserved rights-of-way of all streets, roads, and railroads adjacent to and on the subject property
6. Proposed streets on the subject site
7. Posted speed limits on all adjoining roads
8. Current zoning of the subject site and adjoining property
9. Existing buildings with square footages and heights (stories), wells, driveways, fences, cell towers, and any other structures or improvements on the subject property
10. Existing buildings with square footages and heights (stories), wells, driveways, fences, cell towers, and any other structures or improvement or adjacent properties within 400 feet of the subject site based on the City's aerial photography or an acceptable substitute as approved by the Director
11. Location of proposed buildings (except single family residential lots) with total square footage
12. Layout and minimum lot size of proposed single family residential lots
13. Topography (surveyed or City) on subject site and adjacent property within 200 feet as required to assess runoff effects
14. Location of overhead and underground electrical and pipeline transmission/conveyance lines
15. Required and/or proposed setbacks
16. 100 year flood plain horizontal limits and flood zone designations as shown on survey or FEMA FIRM maps
17. Required landscape strips, undisturbed buffers, and any other natural areas as required or proposed
18. Required and proposed parking spaces; Loading and unloading facilities
19. Lakes, streams, and waters on the state and associated buffers
20. Proposed stormwater management facilities
21. Community wastewater facilities including preliminary areas reserved for septic drain fields and points of access
22. Availability of water system and sanitary sewer system
23. Tree lines, woodlands and open fields on subject site
24. Entrance site distance profile assuming the driver's eye at a height of 3.5 feet
25. Wetlands shown on the County's GIS maps or survey.
26. Mail kiosk location.

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## **LAND USE PETITION CALENDAR**

<b>*Application Deadline</b>	<b>Planning Commission</b>	<b>M&amp;CC 1<sup>st</sup> Read</b>	<b>M&amp;CC 2<sup>nd</sup> Read</b>
11/9/2020	12/17/2020	1/11/2021	2/8/2021
12/14/2020	1/21/2021	2/8/2021	3/8/2021
1/11/2021	2/18/2021	3/8/2021	4/12/2021
2/8/2021	3/18/2021	4/12/2021	5/10/2021
3/8/2021	4/15/2021	5/10/2021	6/14/2021
4/12/2021	5/20/2021	6/14/2021	7/12/2021
5/10/2021	6/17/2021	7/12/2021	8/9/2021
6/14/2021	7/15/2021	8/9/2021	9/13/2021
7/12/2021	8/19/2021	9/13/2021	10/12/2021
8/9/2021	9/16/2021	10/12/2021	11/8/2021
9/13/2021	10/21/2021	11/8/2021	12/13/2021
10/12/2021	11/18/2021	12/13/2021	TBD
11/8/2021	12/16/2021	TBD	TBD

\*Incomplete applications will not be accepted.

## **PUBLIC PARTICIPATION PLAN AND REPORT**

See separate document.

## **PUBLIC NOTICE REQUIREMENTS**

Sec. 46-1526 details the public notice requirements for land use petitions, which include public notice sign(s), advertisement in The Champion newspaper, and written notice to everyone within 500'.

- The applicant is responsible for posting the public notice sign(s). City of Tucker Staff will order the signs(s) and provide the required timeframe for posting.
- The City of Tucker is responsible for placing the legal ad in The Champion newspaper
- The City of Tucker is responsible for mailing the written notification to surrounding property owners.

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## **PROPERTY COMPLIANCE**

All Occupational Tax payments must be paid in-full and any and all outstanding code violations on the property must be rectified prior to the public hearing.

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## Concurrent Variance Criteria

**Chick-fil-A Tucker  
4435 Hugh Howell Road  
Tucker, GA 30084**

VARIANCE #1 REQUEST: ALLOW DRIVE-THROUGH FACILITY BETWEEN STREET AND BUILDING

Section 46-1166 of the City of Tucker municipal code prohibits the locations of drive-through restaurant facilities between the building and the street in the DT-2 Downtown Corridor zoning district.

Criteria in support of Chick-fil-A's site layout, which locates drive-through facilities between the building and Hugh Howell Road, as well as Rosser Terrace Road:

- a. *By reason of exceptional narrowness, shallowness, or shape of a specific lot, or by reason of exceptional topographic and other site conditions (such as, but not limited to, floodplain, major stand of trees, steep slope), which were not created by the owner or applicant, the strict application of the requirements of this division would deprive the property owner of rights and privileges enjoyed by other property owners in the same zoning district.*

The subject parcel abuts Hugh Howell Road to the north, Rosser Terrace to the east and residentially zoned properties to the west and south. Section 46-1166 requires that drive-through restaurant facilities be located a minimum of 60 feet from residentially zoned parcels. Since the lot is rectangular, the available area for the drive-through is confined to a narrow section in the center of the parcel. This configuration does not provide adequate space for vehicles to circulate and greatly diminishes the available length for drive-through queue. The geometry of the parcel and the zoning designation of the adjacent parcels were not created by the owner or applicant. Strict application of these requirements will deprive Chick-fil-A of an efficient drive-through operation, which is enjoyed by nearby property owners whose businesses are not located at street intersections and do not abut residential properties.

- b. *The requested variance does 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 zoning district in which the subject property is located.*

Request of this variance does not go beyond the minimum necessary to afford relief since drive-through design is adhering to City of Tucker ordinance requirements as much as possible. The proposed drive-through facilities are a minimum of 60 feet from residentially zoned adjacent properties and provide a bypass lane, in addition to the extra lane design employed by Chick-fil-A. Chick-fil-A will provide a vegetative screen designed to block vehicles from view, while keeping the building visible. Special privilege is not being granted.

- c. *The grant of the variance will not be materially detrimental to the public welfare or injurious to the property or improvements in the zoning district in which the subject property is located.*

Grant of this variance to allow drive-through facilities between the building and streets will not be detrimental to the public, however it will allow drive-through operations to proceed expediently according to the design principles Chick-fil-A has researched and is implementing across the country to ensure that adequate stack is provided in drive-through lanes and that vehicles may enter, be served, and exit as quickly as possible without queue spill over into adjacent roadways. Chick-fil-A has a history and reputation for maintaining properties to very high standards and will be an asset to the community.

- d. *The literal interpretation and strict application of the applicable provisions or requirements of this division would cause undue and unnecessary hardship.*

Literal interpretation and strict application of the requirement that prohibits drive-through facilities between the building and street would prohibit Chick-fil-A from operating a drive-through on this parcel.

- e. *The requested variance would be consistent with the spirit and purpose of this division and the comprehensive plan text.*

The requested variance is the minimum necessary to afford relief, while maintaining the spirit and purpose of the DT-2 zoning district intent to provide a mixed-use community, with a focus on walkability and pedestrian access. Chick-fil-A proposes to locate drive-through facilities as far as possible from adjacent residential parcels and is proposing two patio areas near the street with sidewalk connectivity to the street to promote community and walkability.



VARIANCE #2 REQUEST: RELIEF FROM MAXIMUM BUILDING SETBACKS FROM HUGH HOWELL ROAD AND  
ROSSER TERRACE

Section 46-986 and Table 3.2 of the City of Tucker municipal code require a maximum building setback of 20 feet from Hugh Howell Road and Rosser Terrace in the DT-2 Downtown Corridor zoning district.

Criteria in support of Chick-fil-A's site layout proposing a building setback of 45 feet from Hugh Howell Road and 65 feet from Rosser Terrace:

- a. *By reason of exceptional narrowness, shallowness, or shape of a specific lot, or by reason of exceptional topographic and other site conditions (such as, but not limited to, floodplain, major stand of trees, steep slope), which were not created by the owner or applicant, the strict application of the requirements of this division would deprive the property owner of rights and privileges enjoyed by other property owners in the same zoning district.*

Due to the geometry of the parcel and adjacent residential parcels, the proposed drive-through is located between the building and both Hugh Howell Road and Rosser Terrace. Chick-fil-A's dual lane drive-through design serves customers efficiently and prevents queue spill on to adjacent roadways. The dual lane drive-throughs are a minimum of 20 feet in width. In addition, Section 46-1166 requires that all drive-through restaurant facilities provide an additional bypass lane. The extra lane, in addition to a 5 feet landscape buffer prohibit movement of the building closer to Hugh Howell Road.

Likewise, the same drive-through lanes travel between the building and Rosser Terrace. The building setback is greater in this instance because a patio and sidewalk are provided for street connectivity.

The geometry of the parcel and the zoning designation of the adjacent parcels were not created by the owner or applicant. Strict application of these requirements will deprive Chick-fil-A of an efficient drive-through operation, which is enjoyed by nearby property owners who do have locations at street intersections and abut residential properties.

- b. *The requested variance does 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 zoning district in which the subject property is located.*

Request of this variance does not go beyond the minimum necessary to afford relief as drive-through design is adhering to City of Tucker ordinance requirements as much as possible. The proposed drive-through facilities are a minimum of 60 feet from residentially zoned adjacent properties and provide a bypass lane, in addition to the extra lane design employed by Chick-fil-A. Chick-fil-A is proposing two patios near the streets in keeping with the spirit and intent of the ordinance to promote community, walkability, and connection to the City streets.

- c. *The grant of the variance will not be materially detrimental to the public welfare or injurious to the property or improvements in the zoning district in which the subject property is located.*

Granting of this variance to exceed the maximum building setbacks will not be detrimental to the public, however it will allow drive-through operations to proceed expediently according to the design

principles Chick-fil-A has researched and is implementing across the country to ensure that adequate stack is provided in drive-through lanes and that vehicles may enter, be served, and exit as quickly as possible to avoid queue spill over into adjacent roadways. Chick-fil-A is providing two outdoor dining patios with sidewalk connectivity to the Hugh Howell streetscape to promote community and walkability.

- d. *The literal interpretation and strict application of the applicable provisions or requirements of this division would cause undue and unnecessary hardship.*

Literal interpretation and strict application of the requirement would severely diminish drive-through efficiency due to decreased stack length if the drive-through lanes were to be located at the interior of the site. Spatially, two drive-through lanes, a bypass lane, and landscape buffer will not fit into a 25 feet setback, so strict adherence would force diminished drive-through efficiency.

- e. *The requested variance would be consistent with the spirit and purpose of this division and the comprehensive plan text.*

The requested variance is the minimum necessary to afford relief, while maintaining the spirit and purpose of the DT-2 zoning district intent to provide a mixed-use community, with a focus on walkability and pedestrian access. Chick-fil-A proposes to locate drive-through facilities as far as possible from adjacent residential parcels and is proposing two patio areas near the street with sidewalk connectivity to the street to promote community and walkability.

### VARIANCE #3 REQUEST: RELIEF FROM INTERPARCEL ACCESS

Section 46-989 of the City of Tucker municipal code requires inter-parcel access between abutting properties in the DT-2 Downtown Corridor zoning district

Criteria in support of Chick-fil-A's site layout, which does not provide inter-parcel access with abutting parcel.

- a. *By reason of exceptional narrowness, shallowness, or shape of a specific lot, or by reason of exceptional topographic and other site conditions (such as, but not limited to, floodplain, major stand of trees, steep slope), which were not created by the owner or applicant, the strict application of the requirements of this division would deprive the property owner of rights and privileges enjoyed by other property owners in the same zoning district.*

Due to the geometry of the parcel and adjacent residential parcels, the proposed drive-through is located between the building and both Hugh Howell Road and Rosser Terrace. Chick-fil-A's dual lane, isolated drive-through design serves customers efficiently and prevents queue spill on to adjacent roadways. Since the parcel is rectangular with the smallest length frontage along Hugh Howell Road, space does not exist for a drive to provide inter-parcel access outside of the drive-through lanes. Due to the geometry of the parcel, inter-parcel access would need to be achieved by allowing vehicles to enter the drive-through near the order pick up point, which would greatly diminish drive-through efficiency. Inter-parcel access currently does not exist on this site. The constraints of the lot were not created by the owner or the applicant. Strict adherence to the requirement for inter-parcel access deprives Chick-fil-A of an efficient drive-through.

- b. *The requested variance does 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 zoning district in which the subject property is located.*

Request of this variance does not go beyond the minimum necessary to afford relief as drive-through design is adhering to City of Tucker ordinance requirements as much as possible. The proposed drive-through facilities are a minimum of 60 feet from residentially zoned adjacent properties and provide a bypass lane, in addition to the extra lane design employed by Chick-fil-A.

- c. *The grant of the variance will not be materially detrimental to the public welfare or injurious to the property or improvements in the zoning district in which the subject property is located.*

Granting of this variance for relief from inter-parcel access will not be detrimental to the public, however it will allow drive-through operations to proceed expediently according to the design principles Chick-fil-A has researched and is implementing across the country to ensure that adequate stack is provided in drive-through lanes and that vehicles may enter, be served, and exit as quickly as possible to avoid queue spill over into adjacent roadways. Inter-parcel access does not currently exist. Additionally, the current access off Rosser Terrace moves Chick-fil-A trips off Hugh Howell Road. If inter-parcel access were provided at the west adjacent parcel, vehicles bound for Chick-fil-A could enter the site from Hugh Howell Road through the adjacent parcel.

- d. *The literal interpretation and strict application of the applicable provisions or requirements of this division would cause undue and unnecessary hardship.*

Literal interpretation and strict application of the requirement would severely diminish drive-through efficiency due to decreased stack length if the drive-through lanes were to be located at the interior of the site. Spatially, two drive-through lanes, a bypass lane, and landscape buffer will not fit into the frontage provided on Hugh Howell Road, so strict adherence would force diminished drive-through efficiency.

- e. *The requested variance would be consistent with the spirit and purpose of this division and the comprehensive plan text.*

The requested variance maintains the spirit and purpose of the DT-2 zoning district intent through proposed patio areas and sidewalk and street connectivity for pedestrians. Relief from the requirement to provide inter-parcel access allows Chick-fil-A to operate an efficient drive-through that avoids queue migration to adjacent parcels and roadways.

#### VARIANCE #4 REQUEST: RELIEF FROM RESIDENTIAL TRANSITIONAL BUFFER

Section 46-1338 of the City of Tucker municipal code requires a 50 feet transitional buffer between residentially zoned properties and commercially zoned properties. The buffer must consist of natural or planted screening material. Chick-fil-A is requesting a variance to reduce the required buffer to 29 feet.

Criteria in support of Chick-fil-A's site layout, which reduces the required transitional buffer from 50 feet to 29 feet:

- a. *By reason of exceptional narrowness, shallowness, or shape of a specific lot, or by reason of exceptional topographic and other site conditions (such as, but not limited to, floodplain, major stand of trees, steep slope), which were not created by the owner or applicant, the strict application of the requirements of this division would deprive the property owner of rights and privileges enjoyed by other property owners in the same zoning district.*

The parcel width is only 50.9 feet where it is adjacent to a residentially zoned property at 2233 Dillard St. The 50 feet transitional buffer requirement precludes any use or improvement. The constraints of the lot were not created by the owner or the applicant. Strict adherence to the requirement for a 50 feet transitional buffer deprives Chick-fil-A of use of this portion of property, including a proposed access on Dillard St.

- b. *The requested variance does 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 zoning district in which the subject property is located.*

Request of this variance does not go beyond the minimum necessary as the minimum width needed for a driveway, 25 feet (with curb), is placed as far from the residential zoned property as possible, allowing a transitional buffer of 29 feet.

- c. *The grant of the variance will not be materially detrimental to the public welfare or injurious to the property or improvements in the zoning district in which the subject property is located.*

Granting partial relief from the transitional buffer requirement will not be detrimental to the public, as Chick-fil-A's building and drive-through operations are not located within 50 feet of residentially zoned properties. Additionally, Chick-fil-A will provide and maintain professional landscaping and screening according to City of Tucker municipal code Section 46-1338.

- d. *The literal interpretation and strict application of the applicable provisions or requirements of this division would cause undue and unnecessary hardship.*

Literal interpretation and strict application of the requirement would severely diminish use of the property to allow an access to Dillard St and the traffic signal at Cowan Rd.

- e. *The requested variance would be consistent with the spirit and purpose of this division and the comprehensive plan text.*

The requested variance maintains the spirit and purpose of the ordinance by providing a substantial residential buffer and locating the commercial building, drive-through facilities, and parking at least 50 feet from residentially zoned properties.

# TRAFFIC IMPACT STUDY

Chick-fil-A # 04959 Tucker  
4431 Hugh Howell Rd,  
Tucker, Georgia

March 15, 2022

Prepared for:  
**Chick-fil-A, Inc.**

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Bowman



# TRAFFIC IMPACT STUDY

Chick-fil-A # 04959 Tucker  
4431 Hugh Howell Rd,  
Tucker, Georgia

March 15, 2022

Prepared for:  
**Chick-fil-A, Inc.**

# Traffic Impact Study

## Chick-fil-A # 04959 Tucker

4431 Hugh Howell Rd,  
Tucker, Georgia

Prepared March 15, 2022

Prepared for:  
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5200 Buffington Road  
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03/15/2022  
Bowman Job # 120005-01-049

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Appendix E: Chick-Fil-A Trip Generation Assessment
Appendix F: Capacity Analysis Reports

## Executive Summary

This report summarizes the findings of the Traffic Impact Study performed by Bowman Consulting (Bowman) for the proposed 4,989 SF Chick-fil-A development with 40 Car Stack Chick-fil-A development to be located at the Southwest corner of the intersection of Hugh Howell Rd and Rosser Terrace in the City of Tucker, Georgia.

Access to the site will be provided by one (1) right-in only driveway along Rosser Terrace and one (1) full-access driveway along Dillard St.

The purpose of this study is threefold: (i) to determine the number of expected trips generated by the proposed site; (ii) to determine the potential impact, if any, of the proposed development on the surrounding roadway network; and (iii) to propose improvements to mitigate the impact of the proposed development, if required.

A Traffic Impact Analysis Methodology Statement was prepared and shared with representatives from the City of Tucker and the Georgia Department of Transportation.

Turning movement counts were collected for the morning and evening peak hours at the intersections of Hugh Howell Rd & Cowan Rd, Hugh Howell Rd & Rosser Terrace, Hugh Howell Rd & Tucker Industrial Rd, and Cowan Rd & Dillard St.

Based on the results of the trip generation assessment prepared by Bowman Consulting, the proposed development is expected to generate a total of 261 trips during the morning peak hour and 285 trips during the evening peak hour. It is anticipated that during the morning peak hour 128 of these are existing trips, the remaining 133 are expected to be primary trips. During the evening peak hour, it is anticipated that 143 are existing trips and 142 are new trips.

For the purposes of this analysis, it is anticipated that the proposed development will be constructed and fully operational by the year 2023.

The following scenarios were evaluated as part of this study: 2023 No Build, 2023 Build and 2023 Build with Improvements.

A Turn Lane Warrant Analysis was conducted based on the City of Tucker Code of Ordinances Sec. 22-284 - *Access Management*. The results show a right turn lane is warranted at the eastbound approach of the intersection of Hugh Howell Rd and Rosser Terrace.

Capacity Analyses comparison No Build Vs Build conditions were conducted for the analysis intersections to identify areas impacted by the proposed development. The results indicate the following:

- During the morning peak hour: all intersections are projected to operate at an acceptable overall LOS B or better during the No Build and Build Conditions. No changes in LOS and minimal increases in delays are expected on all approaches of the analysis intersection.
- During the evening peak hour: all intersections are projected to operate at an acceptable overall LOS C or better during the No Build and Build Conditions.

The northbound approach of the intersection of Hugh Howell Rd with Cowan Rd is expected to degrade from LOS E under No Build Conditions to LOS F under Build Conditions, with an increase in delay of 10.6 seconds.

Based on the results of the capacity and turn lane warrant analysis the following improvements are proposed:

- Optimize signal timings at Intersection of Hugh Howell Rd & Cowan Rd during evening Peak Hour.
- Provide an eastbound right-turning lane at the intersection of Hugh Howell Rd & Rosser Terrace.

Capacity Analyses comparison No Build Vs Build Improved conditions were conducted for the analysis intersections to evaluate the proposed improvements. The results indicate the following:

- During the morning peak hour: The intersection of Hugh Howell Rd and Rosser Terrace is expected to experience acceptable overall LOS A under Build Improved conditions. All approaches and turning movements are expected to maintain acceptable LOS.
- During the evening peak hour: The intersection of Hugh Howell Rd and Rosser Terrace is expected to experience acceptable overall LOS A under Build Improved conditions. All approaches and turning movements are expected to maintain acceptable LOS.

The intersection of Hugh Howell Rd and Cowan Rd/The Centre Driveway is expected to experience acceptable overall LOS C under Build Improved conditions. The northbound approach is anticipated to operate at LOS E under both No Build and Build Improved Conditions with no increase in delay. All other approaches and movements in this intersection are anticipated to operate at acceptable LOS D or better under Build Improved Conditions.

Based on the results of the capacity, turn lane and queueing analysis, the proposed Chick-Fil-A at 4431 Hugh Howell Rd, Tucker, GA is not expected to adversely impact the surrounding roadway network provided the proposed improvements mentioned on this report.

## 1. Introduction

This report summarizes the findings of the Traffic Impact Study performed by Bowman Consulting (Bowman) for the proposed Chick-fil-A development to be located at the Southwest corner of the intersection of Hugh Howell Rd and Rosser Terrace in the City of Tucker, Georgia.

The purpose of this study is threefold: (i) to determine the number of expected trips generated by the proposed site; (ii) to determine the potential impact, if any, of the proposed development on the surrounding roadway network; and (iii) to propose improvements to mitigate the impact of the proposed development, if required.

## 2. Background Information

The proposed development entails a 4,989 SF Chick-fil-A development with 40 Car Stack to be constructed at 4431 Hugh Howell Rd, in the City of Tucker, Georgia. **Figure 1** depicts the site location.



**Figure 1.** Site location.

Access to the development will be provided by one (1) right-in only driveway along Rosser Terrace and one (1) full-access driveway along Dillard St, no access driveways are proposed on Hugh Howell Rd. The latest Concept Plan is presented in **Appendix A**.

## Traffic Impact Analysis Methodology

A Traffic Impact Analysis Methodology Statement was prepared and shared with representatives from the City of Tucker and the GDOT DeKalb County Division. A copy of the approved Traffic Impact Analysis Methodology Statement and proof of the coordination is contained in **Appendix B**.

To assess the traffic operation at the study Intersections, the following tasks were undertaken:

- Turning movement counts were collected during an average weekday for the morning (7:00 AM – 9:00 AM) and evening (4:00 PM – 6:00 PM) peak periods.
- Trip generation Assessment for Chick-Fil-a (CFA) facilities.
- Trip Distribution for the proposed development.
- Capacity and queuing analyses at study intersections.

## 3. Roadway Network

*Hugh Howell Rd (GA 236):* Within the identified study area is a State-maintained four-lane Minor Arterial according to the Georgia Department of Transportation State Functional Classification Map Online. Hugh Howell Rd has a continuous two-way left-turn lane (TWLTL), a southeast-northwest alignment and a posted speed limit of 45 miles per hour.

*Rosser Terrace:* Within the identified study area is a city-maintained two-lane undivided roadway identified as a Local Road according to the City of Tucker 2019, Strategic Transportation Master Plan. Rosser Terrace has a north-south alignment and a posted speed limit of 25 miles per hour.

*Tucker Industrial Rd:* Within the identified study area is a city-maintained two-lane undivided roadway identified as a Local Road according to the City of Tucker Strategic 2019, Transportation Master Plan. Tucker Industrial Rd has a north-south alignment with a posted speed limit of 35 miles per hour.

*Cowan Rd:* Within the identified study area is a city-maintained two-lane undivided roadway identified as a Local Road according to the City of Tucker 2019, Strategic Transportation Master Plan. Cowan Rd has a northeast-southwest alignment with a posted speed limit of 25 miles per hour.

*Dillard St:* Within the identified study area is a city-maintained two-lane undivided roadway identified as a Local Road according to the City of Tucker 2019, Strategic Transportation Master Plan. Dillard St has a north-south alignment with a posted speed limit of 25 miles per hour.

## Intersection Characteristics

### 1. Intersection of Hugh Howell Rd and Rosser Terrace/Fuller Way

This intersection is currently a four-legged unsignalized intersection where Hugh Howell Rd has a southeast-northwest alignment and Rosser Terrace and Fuller way have a north-south alignment.



The northwest approach (Hugh Howell Road eastbound) consists of an exclusive through lane, one shared through/right-turn lane and a continuous TWLTL. The southeast approach (Hugh Howell Road westbound) consists of two exclusive through lanes, one exclusive right-turn lane and a continuous TWLTL. The northbound approach (Rosser Terrace) consists of one shared left-turn/through/right-turn lane. The southbound approach (Fuller Way) consists of one shared left-turn/through/right-turn lane.

## **2. Intersection of Hugh Howell Rd and Cowan Rd/The Centre Driveway**

This intersection is currently a four-legged signalized intersection where Hugh Howell Rd has a southeast-northwest alignment and Cowan Rd has a northeast-southwest alignment.

The northwest approach (Hugh Howell Road eastbound) consists of one exclusive left-turn lane, one exclusive through lane, and one shared through/right-turn lane. The southeast approach (Hugh Howell Road westbound) consists of one exclusive left-turn lane, two exclusive through lanes, and one exclusive right-turn lane. The southwest approach (Cowan Road Northbound) consists of one shared left-turn/through/right-turn lane. The northeast approach (Publix Driveway southbound) consists of one exclusive left-turn lane, and one shared through/right-turn lane.

## **3. Intersection of Hugh Howell Rd and Tucker Industrial Rd**

This intersection is currently a four-legged signalized intersection where Hugh Howell Rd has an east-west alignment and Tucker Industrial Rd has a north-south alignment.

The eastbound and westbound approaches consist of one exclusive left-turn lane, one exclusive through lane, and one shared through/right-turn lane. The northbound and southbound approaches have one shared left-turn/through/right-turn lane.

## **4. Intersection of Cowan Rd & Dillard St**

This intersection is currently a three-legged unsignalized intersection where Hugh Howell Rd has a northeast-southwest alignment and Dillard St has a north-south alignment.

The northeast approach consists of a single lane with left-turn and through movements allowed. The southwest approach consists of a single lane with through and right-turn movements allowed. The northbound approach consists of a single lane with left-turn and right-turn movements allowed.

### **Proposed conditions.**

As mentioned before, access to the development will be provided by one (1) right-in driveway along Rosser Terrace and one (1) full-access driveway along Dillard St. No access is proposed on Hugh Howell Road.

## 4. Data Collection

For the purposes of this study the following data was collected:

- Inspections were conducted to obtain an inventory of existing roadway geometry, traffic control devices, and location of existing and proposed driveways.
- Published GDOT AADT counts and functional classification information.
- Turning movement counts were collected at the following intersections:
  - Hugh Howell Rd and Cowan Rd
  - Hugh Howell Rd and Rosser Terrace
  - Hugh Howell Rd and Tucker Industrial Rd
  - Cowan Rd & Dillard St

The traffic counts were completed during an average weekday, Tuesday, June 15, 2021, for the intersections of Hugh Howell Rd with Cowan Rd, Rosser Terrace, and Tucker Industrial Rd, and on Tuesday, March 1, 2022, for the intersection of Cowan Rd with Dillard St for the morning (7:00 AM – 9:00 AM) and evening (4:00 PM – 6:00 PM) peak periods. The turning movement counts are presented in **Appendix C**.

## 5. Traffic Forecast and Background Traffic

For the purposes of this analysis, it is anticipated that the proposed development will be constructed and fully operational by the year 2023. The following scenarios were evaluated as part of this study:

- Future Conditions (2023) without the proposed development (No Build)
- Future Conditions (2023) with the proposed development (Build)
- Improved Future Conditions (2023) with the proposed development (Build with Improvements)

To develop the 2022 and the 2023 traffic volumes, the first step was to determine a background growth rate applicable for the study area roadway segments. For each roadway segment, the annual growth rate was calculated using the historical AADT information provided by the GDOT Average Annual Daily Traffic & Historical Counts 2015-2019 information. A 0.5% minimum average annual growth rate was used for all traffic in the study area.

The historical study area roadway AADT information, as well as the applied growth rates utilized for the analysis, are presented in **Table 1**.

**Table 1** Historical AADT and Annual Growth Rates

Roadway	From	to	2015	2016	2017	2018	2019	2016	2017	2018	2019	Avg Growth rate	Applied Growth rate
Hugh Howell Rd	Lawrenceville Hwy	Mountain Industrial Blvd	21,700	22,400	25,600	25,600	24,400	3.2%	14.3%	0.0%	-4.7%	3.2%	3.2%
Rosser Terrace	N/A	N/A	-	-	-	-	-	-	-	-	-	No Data	0.5%
Tucker Industrial Rd	N/A	N/A	-	-	-	-	-	-	-	-	-	No Data	0.5%
Cowan Rd	N/A	N/A	-	-	-	-	-	-	-	-	-	No Data	0.5%
Dillard St	N/A	N/A	-	-	-	-	-	-	-	-	-	No Data	0.5%

Source: GDOT Average Annual Daily Traffic & Historical Counts 2015-2019

The growth rates presented in **Table 1** were applied to the 2021 Turning Movement Counts to develop the 2022 Existing Volumes. The 2022 Existing Traffic Volumes are presented in **Appendix D, Exhibit 1**.

The 2023 No Build Traffic Volumes were developed applying one year growth to the 2022 Existing Traffic Volumes, see **Exhibit 2** in **Appendix D**.

## 6. Trip Generation

The applicant is proposing to develop the site with the following land uses generating site traffic:

- 4,989 SF Chick-fil-A Restaurant with drive-thru window (Proposed)

Considering Chick-fil-A fast-food restaurants generate larger number of trips than ITE comparable land uses. Bowman conducted a Trip Generation Assessment based on trip generation data provided by the Atlanta Department of Transportation for three similar Chick-fil-A facilities. The trip generation assessment is presented **Appendix E**.

**Table 2** displays the trip generation for the proposed development and includes the morning and evening peak hour.

**Table 2** Site Trip Generation

Land Use	Land Use Code <sup>(1)</sup>	AADT of Adjacent Street	Daily Trips <sup>(1)</sup>	Period	Peak Hour Trips <sup>(2)</sup>			Pass by <sup>(3)</sup>			Primary		
					In	Out	Total	In	Out	Total	In	Out	Total
Fast Food restaurant with Drive thru	934	24,400	2,350	AM	133	128	261	65	63	128	68	65	133
				PM	148	137	285	74	69	143	74	68	142

(1) Based on the Institute of Transportation Engineers Trip Generation, 10th Edition

(2) Based on Bowman 2021 Trip Generation Assessment for Chick-Fil-A facilities

(3) Pass-By rates of 49% were extracted from the Institute of Transportation Engineers Trip Generation Handbook, 3rd Edition

The proposed development is expected to generate a total of 261 trips during the morning peak hour and 285 trips during the evening peak hour. It is anticipated that during the morning peak hour 128 of these are existing trips, the remaining 133 are expected to be primary trips. During the evening peak hour, it is anticipated that 143 are existing trips and 142 are new trips.

## 7. Trip Distribution

The proposed trip distribution for the site was developed based on the AADT information of the surrounding roadway network, the population and employment centers in the area, and the access conditions of the site. The trip distribution for this site is presented in **Figure 2**.



**Figure 2.** Trip Distribution

The Primary and Pass-By trip distributions are presented in **Exhibits 3** and **4** in **Appendix D**.

The Primary and Pass-By trips are presented in **Exhibits 5** and **6** in **Appendix D**.

The CFA Site Trips are presented in **Exhibits 7** in **Appendix D**.

The CFA Site Trips were added to the 2022 No Build Traffic Volumes to yield the 2022 Build Traffic Volumes presented in **Exhibit 8** in **Appendix D**.

## 8. Turn Lane Warrant Analysis

A Turn Lane Warrant Analysis was conducted based on the City of Tucker Code of Ordinances. Per Sec. 22-284 - *Access Management*, a deceleration lane shall be required at each project driveway or subdivision street entrance, as applicable, that meets either the average daily traffic (ADT) or right turning volumes shown in **Table 3**.

**Table 3** Right Turn Lane Warrant Criteria

Main Road Speed Limit	2 Lanes on Main Road		>2 Lanes on Main Road	
	35-40 mph	>40 mph	35-40 mph	>40 mph
Main Road ADT	8000	4000	12000	10000
Daily Right Turning Volume	150	75	150	75
Peak Hour Right Turning Volumes	15	7	15	7

For driveways, right-turn lanes shall be required at all driveways where the right-turning volume exceeds 300 vehicles per day.

The following number of entering right turns are anticipated at each unsignalized intersection/driveway under 2023 Build Conditions:

- Hugh Howell Rd and Rosser Terrace
  - AM Peak Hour - 13
  - PM Peak Hour - 29
- Cowan Rd and Dillard St
  - AM Peak Hour - 29
  - PM Peak Hour - 35
- Rosser Terrace and Site Driveway 1
  - AM Peak Hour - 73
  - PM Peak Hour - 81

Based on the thresholds for a right-turn lane provided on the City of Tucker Code of Ordinances, a right turn lane is warranted at the eastbound approach of the intersection of Hugh Howell Rd and Rosser Terrace.

Based on the posted speed limit of Cowan Rd, Dillard St and Rosser Terrace (25 mph) a right-turn deceleration lane is not warranted as the threshold is not applicable for roads with speed limits smaller than 35 mph.

## 9. Capacity Analysis

The study intersections were analyzed for each scenario following the Highway Capacity Manual (HCM 6<sup>th</sup> edition) methodologies using the computer software Synchro 10. The analysis uses capacity, Level of Service, and control delay as the criteria for the performance of the driveways.

Capacity, as defined by the HCM, is a measure of the maximum number of vehicles in an hour that can travel through an intersection or section of roadway under typical conditions. Level of Service (LOS) is a marker of the driving conditions and perception of drivers while traveling during the given time period. LOS ranges from LOS A which represents free flow conditions, to LOS F which represents breakdown conditions.

**Table 4** shows the LOS for unsignalized intersections as defined by the HCM.

**Table 4** HCM Level of Service Criteria

Level of Service (LOS)	Unsignalized Intersections	Signalized Intersections
	Average Control Delay (sec/veh)	Average Control Delay (sec/veh)
A	≤10	≤10
B	10 - 15	10 - 20
C	15 - 25	20 - 35
D	25 - 35	35 - 55
E	35 - 50	55 - 80
F	>50	>80

Control delay is a measure of the total amount of delay experienced by an individual vehicle and includes delay related to deceleration, queue delay, stopped delay, and acceleration.

**Table 4** displays the amount of control delay (in seconds per vehicle) that corresponds to the LOS for signalized and unsignalized intersections.

## Capacity Analysis Comparison – No Build vs Build Conditions (Year 2023)

Capacity Analyses were conducted for the No Build and Build conditions (year 2023). The primary purpose for this approach was to compare the results to identify areas impacted by the proposed development. The capacity results are included in **Appendix F**.

The capacity results for morning peak hour are summarized in **Table 5**.

**Table 5** 2022 AM Peak Hour Capacity Analysis

2023 CONDITIONS - (AM)			No Build		Build	
Intersection	Approach	Movement	DELAY (S)	LOS	DELAY (S)	LOS
1 Hugh Howell Rd & Rosser Terrace/Fuller Way	EB	L	8.3	A	8.2	A
		T	0.0	A	0.0	A
		TR	0.0	A	0.0	A
		Approach	0.5	A	0.5	A
	WB	L	0.0	A	7.8	A
		T	0.0	A	0.0	A
		R	0.0	A	0.0	A
		Approach	0.0	A	0.6	A
	NB	Approach	10.7	B	10.9	B
	SB	Approach	9.7	A	9.7	A
	Intersection	-	0.6	A	0.9	A
2 Hugh Howell Rd & Cowan Rd/The Centre Driveway	EB	L	4.4	A	7.6	A
		T	5.7	A	9.7	A
		TR	5.7	A	9.7	A
		Approach	5.6	A	9.5	A
	WB	L	4.9	A	8.3	A
		T	0.3	A	0.4	A
		R	0.0	A	0.1	A
		Approach	0.4	A	0.6	A
	NB	Approach	78.7	E	73.5	E
	SB	L	68.2	E	57.5	E
		TR	65.2	E	54.6	D
	SB	Approach	66.3	E	55.7	E
	Intersection	-	8.3	A	13.6	B
3 Hugh Howell Rd & Tucker Industrial Rd	EB	L	100.8	F	96.0	F
		T	0.3	A	0.3	A
		TR	0.3	A	0.3	A
		Approach	1.6	A	2.1	A
	WB	L	102.5	F	102.5	F
		T	5.2	A	5.6	A
		TR	5.2	A	5.6	A
		Approach	9.7	A	9.9	A
	NB	Approach	74.8	E	74.6	E
	SB	Approach	67.0	E	66.7	E
	Intersection	-	13.2	B	13.5	B
4 Cowan Rd & Dillard St	EB	Approach	0.0	A	0.0	A
	WB	Approach	0.9	A	3.4	A
	NB	Approach	8.9	A	10.1	B
	Intersection	-	1.7	A	5.7	A

Extracted from Synchro HCM 6th Edition

Based on the results of the capacity analysis during the morning peak hour, all intersections are projected to operate at an acceptable overall LOS B or better during the No Build and Build Conditions.

The northbound and southbound approaches of the intersection of Hugh Howell Rd and Cowan Rd are expected to operate at LOS E under both No Build and Build Conditions. The northbound and southbound approaches of the intersection of Hugh Howell Rd and Tucker Industrial Rd are expected to operate at LOS E under both No Build and Build Conditions. The eastbound and westbound left-turning movements of the intersection of Hugh Howell Rd with Tucker Industrial Rd are expected to operate at a LOS F during both No Build and Build Conditions, minimal increases in delays are expected at the above-mentioned turning movements and approaches.

The capacity results for evening peak hour are summarized in **Table 6**.

**Table 6** 2023 PM Peak Hour Capacity Analysis

2023 CONDITIONS - (PM)			No Build		Build	
Intersection	Approach	Movement	DELAY (S)	LOS	DELAY (S)	LOS
1 Hugh Howell Rd & Rosser Terrace/Fuller Way	EB	L	8.3	A	8.2	A
		T	0.0	A	0.0	A
		TR	0.0	A	0.0	A
		Approach	0.2	A	0.2	A
	WB	L	9.1	A	9.6	A
		T	0.0	A	0.0	A
		R	0.0	A	0.0	A
		Approach	0.0	A	0.7	A
	NB	Approach	15.2	C	16.7	C
	SB	Approach	10.2	B	10.1	B
2 Hugh Howell Rd & Cowan Rd/The Centre Driveway	Intersection -		0.5	A	0.8	A
	EB	L	9.3	A	13.7	B
		T	16.7	B	24.5	C
		TR	16.7	B	24.5	C
		Approach	15.9	B	23.4	C
	WB	L	12.1	B	18.1	B
		T	0.4	A	0.5	A
		R	0.2	A	0.2	A
		Approach	1.1	A	1.7	A
	NB	Approach	74.2	E	84.8	F
	SB	L	57.6	E	48.1	D
		TR	56.1	E	46.4	D
		Approach	56.7	E	47.1	D
3 Hugh Howell Rd & Tucker Industrial Rd	Intersection -		17.6	B	24.3	C
	EB	L	117.2	F	108.3	F
		T	1.7	A	1.8	A
		TR	1.7	A	1.8	A
		Approach	2.1	A	2.4	A
	WB	L	104.4	F	104.4	F
		T	8.0	A	8.4	A
		TR	8.0	A	8.4	A
		Approach	15.0	B	15.3	B
	NB	Approach	77.6	E	77.9	E
	SB	Approach	59.6	E	59.2	E
4 Cowan Rd & Dillard St	Intersection -		14.6	B	14.8	B
	EB	Approach	0.0	A	0.0	A
	WB	Approach	1.7	A	3.2	A
	NB	Approach	9.4	A	11.0	B
	Intersection -		1.7	A	4.7	A

Extracted from Synchro HCM 6th Edition



Based on the results of the capacity analysis during the evening peak hour, all intersections are projected to operate at an acceptable overall LOS C or better during the No Build and Build Conditions.

The northbound approach of the intersection of Hugh Howell Rd with Cowan Rd is expected to degrade from LOS E under No Build Conditions to LOS F under Build Conditions, with an increase in delay of 10.6 seconds.

The northbound and southbound approaches of the intersection of Hugh Howell Rd and Tucker Industrial Rd are expected to operate at LOS E under both No Build and Build Conditions; the eastbound and westbound left-turning movements of the intersection of Hugh Howell Rd with Tucker Industrial Rd are expected to operate at a LOS F during both No Build and Build Conditions, minimal increases in delays are expected at the above-mentioned turning movements and approaches.

## Proposed Improvements

Based on the results of the capacity analysis comparison between No Build and Build Conditions, the following improvements are proposed:

- Optimize signal timings at Intersection of Hugh Howell Rd & Cowan Rd during evening Peak Hour.
- Provide an eastbound right-turning lane at the intersection of Hugh Howell Rd & Rosser Terrace.

## Capacity Analysis Comparison – No Build vs Build Improved Conditions

A Capacity Analyses comparison was conducted for the No Build and Build Improved conditions (year 2023). The primary purpose for this approach was to compare the results in order to evaluate the effect of the proposed improvements. The capacity results are included in **Appendix F**.

The capacity results for morning peak hour are summarized in **Table 7**.

**Table 7** 2022 Morning Peak Hour Capacity Analysis Comparison No Build vs Improved Conditions

2023 CONDITIONS - (AM)			No Build		Build Improved	
Intersection	Approach	Movement	DELAY (S)	LOS	DELAY (S)	LOS
1 Hugh Howell Rd & Rosser Terrace/Fuller Way	EB	L	8.3	A	8.2	A
		T	0.0	A	0.0	A
		TR	0.0	A	0.0	A
		Approach	0.5	A	0.6	A
	WB	L	0.0	A	7.8	A
		T	0.0	A	0.0	A
		R	0.0	A	0.0	A
		Approach	0.0	A	0.6	A
	NB	Approach	10.7	B	10.9	B
	SB	Approach	9.7	A	9.7	A
	Intersection	-	0.6	A	0.9	A

Extracted from Synchro HCM 6th Edition

Based on the results of the capacity analysis, during the morning peak hour, the intersection of Hugh Howell Rd and Rosser Terrace is expected to experience acceptable overall LOS A under

Build Improved conditions. All approaches and turning movements are expected to maintain acceptable LOS.

The capacity results for evening peak hour are summarized in **Table 8**.

**Table 8** 2022 Evening Peak Hour Capacity Analysis Comparison No Build vs Improved Conditions

2023 CONDITIONS - (PM)			No Build		Build Improved	
Intersection	Approach	Movement	DELAY (S)	LOS	DELAY (S)	LOS
1 Hugh Howell Rd & Rosser Terrace/Fuller Way	EB	L	8.3	A	8.2	A
		T	0.0	A	0.0	A
		TR	0.0	A	0.0	A
		Approach	0.2	A	0.2	A
	WB	L	9.1	A	9.6	A
		T	0.0	A	0.0	A
		R	0.0	A	0.0	A
		Approach	0.0	A	0.7	A
	NB	Approach	15.2	C	16.7	C
	SB	Approach	10.2	B	10.1	B
	Intersection	-	0.5	A	0.8	A
2 Hugh Howell Rd & Cowan Rd/The Centre Driveway	EB	L	9.3	A	13.2	B
		T	16.7	B	23.6	C
		TR	16.7	B	23.5	C
		Approach	15.9	B	22.5	C
	WB	L	12.1	B	17.4	B
		T	0.4	A	0.5	A
		R	0.2	A	0.2	A
		Approach	1.1	A	1.6	A
	NB	Approach	74.2	E	74.1	E
	SB	L	57.6	E	49.2	D
		TR	56.1	E	47.4	D
		Approach	56.7	E	48.1	D
	Intersection	-	17.6	B	22.9	C

Extracted from Synchro HCM 6th Edition

Based on the results of the capacity analysis, during the evening peak hour, the intersection of Hugh Howell Rd and Rosser Terrace is expected to experience acceptable overall LOS A under Build Improved conditions. All approaches and turning movements are expected to maintain acceptable LOS.

During the evening peak hour, the intersection of Hugh Howell Rd and Cowan Rd/The Centre Driveway is expected to experience acceptable overall LOS C under Build Improved conditions. The northbound approach is anticipated to operate at LOS E under both No Build and Build Improved Conditions with no increase in delay. All approaches and turning movements are expected to maintain acceptable LOS.

## Queueing Analysis

The queue length of the turn lanes was analyzed to observe if it exceeded the storage length of the turn lanes. The queue length was extracted from the Synchro 10 HCM 6<sup>th</sup> Edition Reports

using the 95<sup>th</sup> Percentile Queue. The queue lengths are presented in **Appendix F. Table 9** summarizes the queue results.

**Table 9** Queueing Analysis Comparison

2023 PM PEAK HOUR CONDITIONS				Available Storage (ft)	NO BUILD AM	NO BUILD PM	BUILD AM	BUILD PM	BUILD IMP AM	BUILD IMP PM
Intersection	Approach	Movement			Queue (ft)	Queue (ft)	Queue (ft)	Queue (ft)	Queue (ft)	Queue (ft)
1	Hugh Howell Rd & Rosser Terrace (Unsignalized)	EB	L	100	3	3	3	3	3	3
		WB	L	100	0	0	5	8	5	8
2	Hugh Howell Rd & Cowan Rd/The Centre Driveway (Signalized)	EB	L	125	25	83	38	89		101
		WB	L	115	12	m26	17	m28		m33
		SB	L	100	48	128	42	125		117
3	Hugh Howell Rd & Tucker Industrial Rd (Signalized)	EB	L	150	20	m11	m28	m15		
		WB	L	100	79	#124	79	#124		
4	Cowan Rd & Dillard St (Unsignalized)	NB	Approach	-	3	3	20	23		

Extracted from Synchro10 HCM 6th Edition

Intersections 3 & 4 have Non-NEMA Phasing therefore were extracted from Synchro10 HCM 2000 Edition

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

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

For queue given in term of vehicles one vehicle was assumed equal to 25 ft (Including space in between vehicles).

Based on the 95<sup>th</sup>% queue results, for the morning peak hour, no storage lengths are exceeded with the inclusion of the proposed development.

Based on the 95<sup>th</sup>% queue results, for the evening peak hour the storage length of the southbound left-turn lane of the intersection of Hugh Howell Rd & Cowan Rd/The Centre Driveway is expected to be exceeded under No Build, Build and Build Improved Conditions, with no increase in queue length. During the evening peak hour, the westbound left-turn lane of the intersection of Hugh Howell Rd & Tucker Industrial Rd is expected to be exceeded under both No Build and Build Conditions, with no increase in queue length under Build Conditions.

## 10. Conclusions and Recommendations

Based on the results of the trip generation assessment prepared by Bowman Consulting, the proposed development is expected to generate a total of 261 trips during the morning peak hour and 285 trips during the evening peak hour. It is anticipated that during the morning peak hour 128 of these are existing trips, the remaining 133 are expected to be primary trips. During the evening peak hour, it is anticipated that 143 are existing trips and 142 are new trips.

The study found that based on the City of Tucker Code of Ordinances, a right turn lane is warranted at the eastbound approach of the intersection of Hugh Howell Rd and Rosser Terrace.

The results of the No Build Vs Build conditions capacity analysis comparison indicate the following:

- During the morning peak hour:  
All intersections are projected to operate at an acceptable overall LOS B or better during the No Build and Build Conditions. No changes in LOS and minimal increases in delays are expected on all approaches of the analysis intersection.
- During the evening peak hour:

All intersections are projected to operate at an acceptable overall LOS C or better during the No Build and Build Conditions.

The northbound approach of the intersection of Hugh Howell Rd with Cowan Rd is expected to degrade from LOS E under No Build Conditions to LOS F under Build Conditions, with an increase in delay of 10.6 seconds.

The following improvements are proposed:

- Optimize signal timings at Intersection of Hugh Howell Rd & Cowan Rd during evening Peak Hour.
- Provide an eastbound right-turning lane at the intersection of Hugh Howell Rd & Rosser Terrace.

The results of the No Build Vs Build Improved conditions capacity analysis indicate the following:

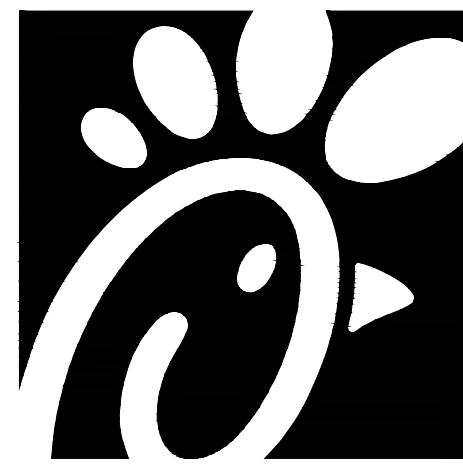
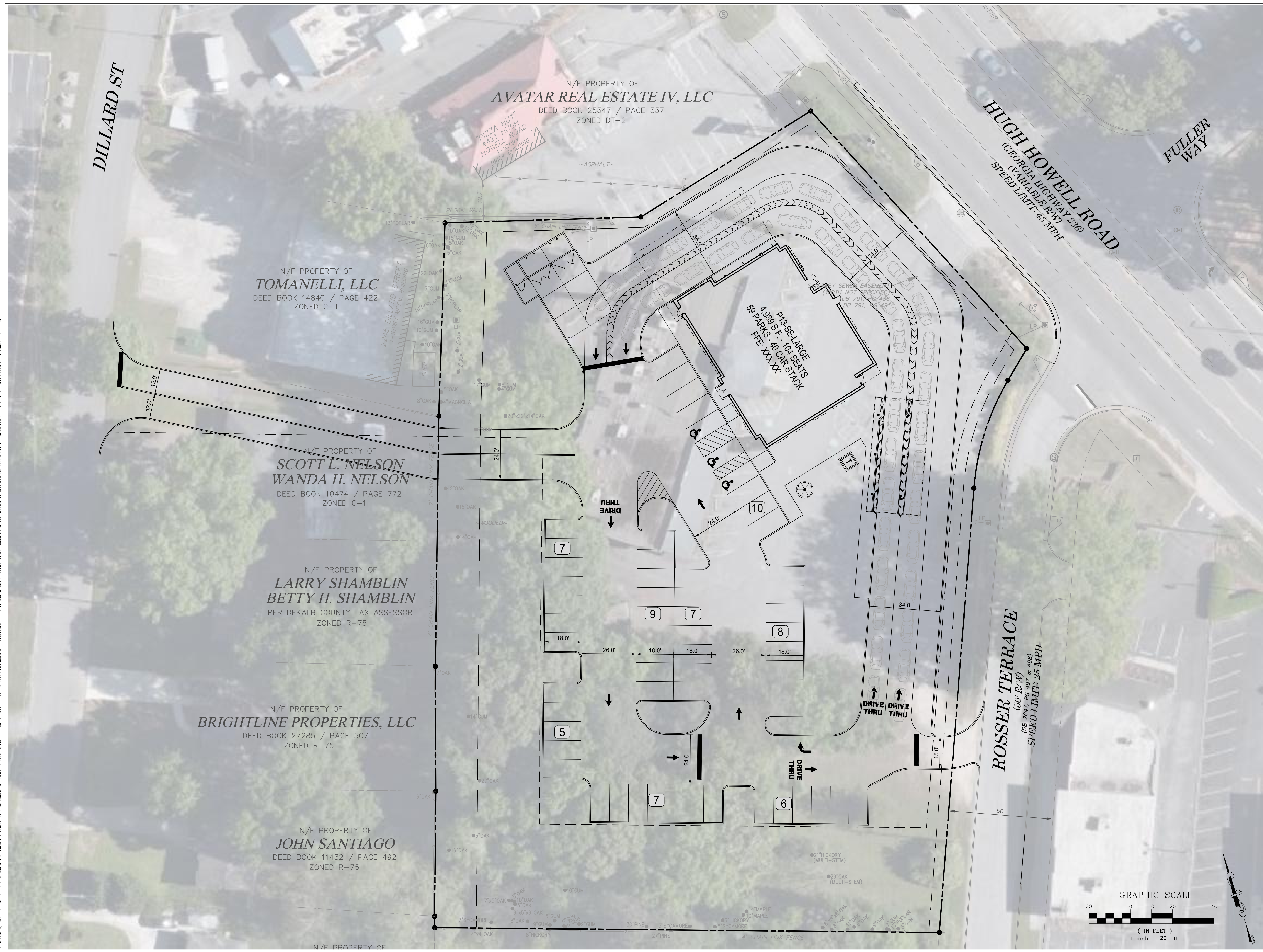
- During the morning peak hour:  
The intersection of Hugh Howell Rd and Rosser Terrace is expected to experience acceptable overall LOS A under Build Improved conditions. All approaches and turning movements are expected to maintain acceptable LOS.
- During the evening peak hour:  
The intersection of Hugh Howell Rd and Rosser Terrace is expected to experience acceptable overall LOS A under Build Improved conditions. All approaches and turning movements are expected to maintain acceptable LOS.

The intersection of Hugh Howell Rd and Cowan Rd/The Centre Driveway is expected to experience acceptable overall LOS C under Build Improved conditions. The northbound approach is anticipated to operate at LOS E under both No Build and Build Improved Conditions with no increase in delay. All other approaches and movements in this intersection are anticipated to operate at acceptable LOS D or better under Build Improved Conditions.

Based on the results of the capacity, turn lane and queueing analysis, the proposed Chick-Fil-A at 4431 Hugh Howell Rd, Tucker, GA is not expected to adversely impact the surrounding roadway network provided the proposed improvements mentioned on this report.

## **APPENDIX A**





**Chick-fil-A**  
**5200 BUFFINGTON RD**  
**Atlanta, Georgia 30349-**  
**2998**

# Bowman

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# CHICK-FIL-A

**RELO TUCKER FSU**

4435 HUGH HOWELL ROAD  
TUCKER, GA 30084

**FSU#04959**

BUILDING TYPE / SIZE: P13-SE-LRG

### REVISION SCHEDULE

<u>NO.</u>	<u>DATE</u>	<u>DESCRIPTION</u>
------------	-------------	--------------------

CONSULTANT PROJECT # 120005-01-049

ISSUED FOR	PERMIT
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ISSUED FOR	PERMIT
DATE	11-20-2005

DATE February 14, 2022

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SHEET

DILLARD ST  
ACCESS EXHIBIT

SHEET NUMBER \_\_\_\_\_

## EX-1.1



## **APPENDIX B**



**TRAFFIC IMPACT STUDY CHICK-FIL-A, TUCKER, GA**  
**SCOPING/METHODOLOGY STATEMENT**

**Scoping Meeting Date:** Electronic Coordination

**Applicant's Consultant:** Bowman Consulting Group

**Applicant's Contact information:** Andrew J Petersen (321 -270 - 8987 / apetersen@bowman.com)

Daniela Jurado (321 -270 - 8977 / djurado@bowman.com)

**(1) LOCATION OF PROPOSED PROJECT:** **4431 Hugh Howell Rd, Tucker, GA 30084, See Figure 1.**

**Municipality:** City of Tucker, GA

**County** DeKalb County

**(2) DESCRIPTION OF PROPOSED PROJECT:**

The proposed development comprises a 4,989 square feet Fast-food restaurant with drive-thru window with 44 car stack, located at 4431 Hugh Howell Rd in the city of Tucker, Georgia. Access to the development will be provided by one (1) full-access driveway along Rosser Terrace.

Trip generation rates were extracted from the Institute of Transportation Engineers 10th Edition. The trip generation is presented in **Table 1**. The proposed Trip Distribution is presented in **Figure 2**.

**(3) PURPOSE OF THE ASSESSMENT:**

The purpose for the study is threefold: to determine the number of trips generated by the proposed site; to determine the potential impact, if any, of the proposed development on the roadway network; to propose improvements, if required.

Capacity analyses will be prepared for the No Build, Build conditions, and Build Conditions with Improvements (if required). Turn lane warrant analyses will be completed at the intersection of Hugh Howell Rd and Rosser Terrace. The results of the study will be summarized in a report document with graphics and back up data.

**(4) DEVELOPMENT SCHEDULE:**

Anticipated Opening Date: 2022

Analysis Date: 2022

**(5) STUDY INTERSECTIONS (See Figure 2):**

- Hugh Howell Rd and Rosser Terrace (Unsignalized Intersection)
- Hugh Howell Rd and Tucker Industrial Rd (Signalized Intersection)
- Hugh Howell Rd and Cowan Rd (Signalized Intersection)

**(6) STUDY AREA TYPE:** Urban:   x   Rural:           

**(7) ANALYSIS PERIODS AND TIMES:**

**AM Peak hour** 7:00 AM - 09:00 AM  
**PM Peak hour** 4:00 PM - 06:00 PM

**(8) TRAFFIC ADJUSTMENT FACTORS:**

(a) Seasonal Adjustment:	<u>To be determined upon coordination</u>	
(b) Annual Base Traffic Growth:	<u>See Table 2</u>	Source: Approximate Growth average from AADT's GDOT Traffic Count Data online

**(9) OTHER PROJECTS WITHIN STUDY AREA TO BE ADDED TO BASE TRAFFIC:**

To be determined upon coordination

**(10) APPROVAL OF DATA COLLECTION ELEMENTS AND METHODOLOGIES:**

<u>Proposed Location</u>	<u>Period (Avg Day)</u>	<u>Type</u>
-Hugh Howell Rd and Rosser Terrace	AM/PM	Turning Movement Counts
-Hugh Howell Rd and Tucker Industrial Rd	AM/PM	Turning Movement Counts
-Hugh Howell Rd and Cowan Rd	AM/PM	Turning Movement Counts

**(11) CAPACITY/LOS ANALYSIS**

<u>Location</u>	<u>Period (Avg Day)</u>	<u>Type</u>
-Hugh Howell Rd and Rosser Terrace	AM/PM	Synchro (HCS)
-Hugh Howell Rd and Tucker Industrial Rd	AM/PM	Synchro (HCS)
-Hugh Howell Rd and Cowan Rd	AM/PM	Synchro (HCS)

**(12) ROADWAY IMPROVEMENTS/MODIFICATIONS BY OTHERS TO BE INCLUDED:**

To be determine upon coordination

**(13) OTHER NEEDED ANALYSES:**

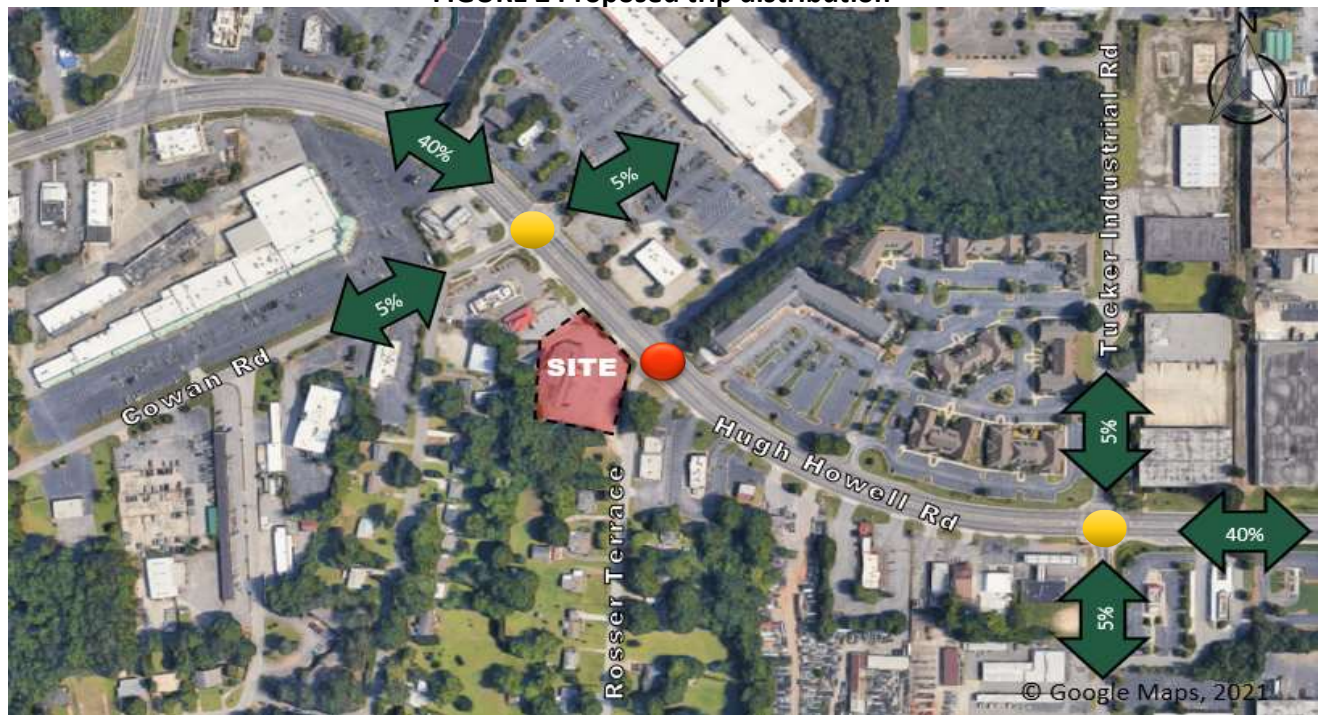
- (a) Signal Warrant Analysis:  
No
- (b) Required Signal Phasing/Timing Modifications:  
TBD
- (c) Analysis of the Need for Turning Lanes:  
-Hugh Howell Rd and Rosser Terrace (Unsignalized Intersection)
- (d) Turning Lane Lengths:  
95th Percentile Synchro Queue

**(14) ADDITIONAL COMMENTS OR RECOMMENDATIONS RELATIVE TO THE SCOPE OF THIS PROJECT:**

TRAFFIC IMPACT STUDY  
SCOPING/METHODOLOGY STATEMENT



FIGURE 2 Proposed trip distribution



## TRAFFIC IMPACT STUDY SCOPING/METHODOLOGY STATEMENT

**TABLE 1**

Land Use	Land Use Code <sup>(1)</sup>	Size	Daily Trips	Period	Peak Hour Trips			Pass by <sup>(2)</sup>			Primary		
					In	Out	Total	In	Out	Total	In	Out	Total
Fast Food restaurant with Drive thru	934	4,989 SF	2,350	AM	102	99	201	50	49	99	52	50	102
				PM	85	78	163	43	39	82	42	39	81

(1) Based on the Institute of Transportation Engineers Trip Generation, 10th Edition

(1) Pass-By rates of 49% for the AM Peak Hour and 50% for the PM Peak Hour were extracted from the ITE Trip Generation Handbook, 3rd Edition

**TABLE 2**

Roadway	From	to	2015	2016	2017	2018	2019	2016	2017	2018	2019	Avg Growth rate	Applied Growth rate
Hugh Howell Rd	Lawrenceville Hwy	Mountain Industrial Blvd	21,700	22,400	25,600	25,600	24,400	3.2%	14.3%	0.0%	-4.7%	3.2%	3.2%
Rosser Terrace	N/A	N/A	-	-	-	-	-	-	-	-	-	No Data	0.5%
Tucker Industrial Rd	N/A	N/A	-	-	-	-	-	-	-	-	-	No Data	0.5%
Cowan Rd	N/A	N/A	-	-	-	-	-	-	-	-	-	No Data	0.5%

Source: Approximate Growth average from 2015-2019 AADT's GDOT Traffic Count Database System (TCDS).

<https://gdottrafficdata.drakewell.com/publicmultinodemap.asp>

A 0.5% minimum growth rate for the roads was assumed based on the City of Tucker population growth rate.



## Rodrigo Meirelles

---

**From:** Ken Hildebrandt <KHildebrandt@Tuckerga.gov>  
**Sent:** Wednesday, June 9, 2021 5:23 PM  
**To:** Daniela Jurado  
**Cc:** Andrew Petersen; Rodrigo Meirelles  
**Subject:** [EXTERNAL] RE: [External]RE: [External]RE: Chick-fil-A Tucker Methodology Coordination

Yes, these will be a good representation.



**City of  
Tucker**

---

**KEN HILDEBRANDT, PE, PTOE**

**CITY ENGINEER**

**M: 770-865-5645**

**E: [khildebrandt@tuckerga.gov](mailto:khildebrandt@tuckerga.gov) W: [tuckerga.gov](http://tuckerga.gov)**



---

**From:** Daniela Jurado <djurado@bowman.com>  
**Sent:** Wednesday, June 9, 2021 4:15 PM  
**To:** Ken Hildebrandt <KHildebrandt@Tuckerga.gov>  
**Cc:** Andrew Petersen <apetersen@bowman.com>; Rodrigo Meirelles <rmeirelles@bowman.com>  
**Subject:** [External]RE: [External]RE: Chick-fil-A Tucker Methodology Coordination

Good Afternoon Ken,

We received some trip generation information today of some CFA locations in the Great Atlanta area, average weekday (M-Th) information from 2 months in 2019 and February 2021 when school was in session. The locations are the following:

- 1- 2580 Piedmont Rd
- 2- 2340 N Druid Hills Rd
- 3- 1100 Northside Dr

Sincerely,

### **DANIELA JURADO**

Project Manager | **BOWMAN**

4450 W Eau Gallie Boulevard, Suite 144, Melbourne, FL 32934

O: (321) 270-8905 | D: (321) 270-8977 | M: (786) 370-2762

[djurado@bowman.com](mailto:djurado@bowman.com) | [bowman.com](http://bowman.com)



---

**From:** Ken Hildebrandt <[KHildebrandt@Tuckerga.gov](mailto:KHildebrandt@Tuckerga.gov)>  
**Sent:** Wednesday, June 9, 2021 8:23 AM  
**To:** Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>

**Cc:** Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>; Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>

**Subject:** [EXTERNAL] RE: [External]RE: Chick-fil-A Tucker Methodology Coordination

What is the ADT on the street in Miami?

Is it a comparable site?



**KEN HILDEBRANDT, PE, PTOE**

**CITY ENGINEER**

**M: 770-865-5645**

**E: [khildebrandt@tuckerga.gov](mailto:khildebrandt@tuckerga.gov) W: [tuckerga.gov](http://tuckerga.gov)**



---

**From:** Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>

**Sent:** Tuesday, June 8, 2021 2:21 PM

**To:** Ken Hildebrandt <[KHildebrandt@Tuckerga.gov](mailto:KHildebrandt@Tuckerga.gov)>

**Cc:** Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>; Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>

**Subject:** [External]RE: Chick-fil-A Tucker Methodology Coordination

Good Afternoon Ken,

For the trip generation of the CFA we have conducted a trip generation study for a CFA in the Miami Dade area. Is it possible for us to use this trip generation study results to evaluate the trip generation for this site?

Thank you,

**DANIELA JURADO**

Project Manager | **BOWMAN**

4450 W Eau Gallie Boulevard, Suite 144, Melbourne, FL 32934

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[djurado@bowman.com](mailto:djurado@bowman.com) | [bowman.com](http://bowman.com)



---

**From:** Daniela Jurado

**Sent:** Tuesday, June 8, 2021 8:47 AM

**To:** Ken Hildebrandt <[KHildebrandt@Tuckerga.gov](mailto:KHildebrandt@Tuckerga.gov)>

**Subject:** RE: Chick-fil-A Tucker Methodology Coordination

Thank you,

**DANIELA JURADO**

Project Manager | **BOWMAN**

4450 W Eau Gallie Boulevard, Suite 144, Melbourne, FL 32934

O: (321) 270-8905 | D: (321) 270-8977 | M: (786) 370-2762

[djurado@bowman.com](mailto:djurado@bowman.com) | [bowman.com](http://bowman.com)



---

**From:** Ken Hildebrandt <[KHildebrandt@Tuckerga.gov](mailto:KHildebrandt@Tuckerga.gov)>  
**Sent:** Tuesday, June 8, 2021 8:36 AM  
**To:** Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>  
**Subject:** [EXTERNAL] Chick-fil-A Tucker Methodology Coordination

DeKalb County maintains our traffic signals. You may be able to get this information from Demetria Allen.  
[dfchambliss@dekalbcountyga.gov](mailto:dfchambliss@dekalbcountyga.gov)



---

**KEN HILDEBRANDT, PE, PTOE**  
**CITY ENGINEER**

**M: 770-865-5645**

**E: [khildebrandt@tuckerga.gov](mailto:khildebrandt@tuckerga.gov) W: [tuckerga.gov](http://tuckerga.gov)**



---

**From:** Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>  
**Sent:** Tuesday, June 8, 2021 8:28 AM  
**To:** Ken Hildebrandt <[KHildebrandt@Tuckerga.gov](mailto:KHildebrandt@Tuckerga.gov)>; Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>; Courtney Smith <[CSmith@Tuckerga.gov](mailto:CSmith@Tuckerga.gov)>; Kylie Thomas <[kthomas@tuckerga.gov](mailto:kthomas@tuckerga.gov)>  
**Cc:** Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>  
**Subject:** [External]RE: [External]RE: [External]RE: Chick-fil-A Tucker Methodology Coordination

Good Morning Ken,

Is there a way we can get the signal phasing and timings for the intersections of Hugh Howell Rd and Tucker Industrial Rd and Hugh Howell Rd and Cowan Rd?

Thank you,

## **DANIELA JURADO**

Project Manager | **BOWMAN**

4450 W Eau Gallie Boulevard, Suite 144, Melbourne, FL 32934

O: (321) 270-8905 | D: (321) 270-8977 | M: (786) 370-2762

[djurado@bowman.com](mailto:djurado@bowman.com) | [bowman.com](http://bowman.com)



---

**From:** Ken Hildebrandt <[KHildebrandt@Tuckerga.gov](mailto:KHildebrandt@Tuckerga.gov)>  
**Sent:** Monday, June 7, 2021 3:21 PM  
**To:** Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>; Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>; Courtney Smith <[CSmith@Tuckerga.gov](mailto:CSmith@Tuckerga.gov)>; Kylie Thomas <[kthomas@tuckerga.gov](mailto:kthomas@tuckerga.gov)>  
**Cc:** Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>  
**Subject:** [EXTERNAL] RE: [External]RE: [External]RE: Chick-fil-A Tucker Methodology Coordination

No further comments at this time.





**KEN HILDEBRANDT, PE, PTOE**  
CITY ENGINEER

M: 770-865-5645

E: [khildebrandt@tuckerga.gov](mailto:khildebrandt@tuckerga.gov) W: [tuckerga.gov](http://tuckerga.gov)



---

**From:** Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>

**Sent:** Monday, June 7, 2021 3:18 PM

**To:** Ken Hildebrandt <[KHildebrandt@Tuckerga.gov](mailto:KHildebrandt@Tuckerga.gov)>; Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>; Courtney Smith <[CSmith@Tuckerga.gov](mailto:CSmith@Tuckerga.gov)>; Kylie Thomas <[kthomas@tuckerga.gov](mailto:kthomas@tuckerga.gov)>

**Cc:** Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>

**Subject:** [External]RE: [External]RE: Chick-fil-A Tucker Methodology Coordination

Thank you Ken,

We will start working on the best locations to get this data collected. Besides the trip generation, is there any other comments on the proposed methodology?

Sincerely,

**DANIELA JURADO**

Project Manager | **BOWMAN**

4450 W Eau Gallie Boulevard, Suite 144, Melbourne, FL 32934

O: (321) 270-8905 | D: (321) 270-8977 | M: (786) 370-2762

[djurado@bowman.com](mailto:djurado@bowman.com) | [bowman.com](http://bowman.com)



---

**From:** Ken Hildebrandt <[KHildebrandt@Tuckerga.gov](mailto:KHildebrandt@Tuckerga.gov)>

**Sent:** Monday, June 7, 2021 12:46 PM

**To:** Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>; Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>; Courtney Smith <[CSmith@Tuckerga.gov](mailto:CSmith@Tuckerga.gov)>; Kylie Thomas <[kthomas@tuckerga.gov](mailto:kthomas@tuckerga.gov)>

**Cc:** Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>

**Subject:** [EXTERNAL] RE: [External]RE: Chick-fil-A Tucker Methodology Coordination

Again, I think that a Chick fil-A is a different animal and is not accurately represented in this trip generation category.



**KEN HILDEBRANDT, PE, PTOE**  
CITY ENGINEER

M: 770-865-5645

E: [khildebrandt@tuckerga.gov](mailto:khildebrandt@tuckerga.gov) W: [tuckerga.gov](http://tuckerga.gov)



**From:** Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>

**Sent:** Monday, June 7, 2021 9:53 AM

**To:** Ken Hildebrandt <[KHildebrandt@Tuckerga.gov](mailto:KHildebrandt@Tuckerga.gov)>; Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>; Courtney Smith <[CSmith@Tuckerga.gov](mailto:CSmith@Tuckerga.gov)>; Kylie Thomas <[kthomas@tuckerga.gov](mailto:kthomas@tuckerga.gov)>

**Cc:** Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>

**Subject:** [External]RE: Chick-fil-A Tucker Methodology Coordination

Good Morning Ken,

Would it be possible for us to use the ITE mean values plus one standard deviation. That would leave the following trip generation:

## Mean

Land Use	Land Use Code <sup>(1)</sup>	Size	Daily Trips	Period	Peak Hour Trips			Pass. by <sup>(2)</sup>		
					In	Out	Total	In	Out	Total
Fast Food restaurant with Drive thru	934	4,989	1,893	AM	103	98	201	50	48	99
				PM	85	78	163	42	38	80

(1) Based on the Institute of Transportation Engineers Trip Generation, 10th Edition

(1) Pass-By rates of 49% were extracted from the Institute of Transportation Engineers Trip Generation Handbook, 3rd Edition

## Mean +1 std dev

Land Use	Land Use Code <sup>(1)</sup>	Size	Daily Trips	Period	Peak Hour Trips			Pass. by <sup>(2)</sup>		
					In	Out	Total	In	Out	Total
Fast Food restaurant with Drive thru	934	4,989	1,893	AM	175	169	344	86	83	169
				PM	131	121	252	64	59	123

(1) Based on the Institute of Transportation Engineers Trip Generation, 10th Edition

(1) Pass-By rates of 49% were extracted from the Institute of Transportation Engineers Trip Generation Handbook, 3rd Edition

Would you agree with this approach?

Thank you,

## DANIELA JURADO

Project Manager | **BOWMAN**

4450 W Eau Gallie Boulevard, Suite 144, Melbourne, FL 32934

O: (321) 270-8905 | D: (321) 270-8977 | M: (786) 370-2762

[djurado@bowman.com](mailto:djurado@bowman.com) | [bowman.com](http://bowman.com)



**From:** Ken Hildebrandt <[KHildebrandt@Tuckerga.gov](mailto:KHildebrandt@Tuckerga.gov)>

**Sent:** Monday, June 7, 2021 8:18 AM

**To:** Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>; Courtney Smith <[CSmith@Tuckerga.gov](mailto:CSmith@Tuckerga.gov)>; Kylie Thomas <[kthomas@tuckerga.gov](mailto:kthomas@tuckerga.gov)>

**Cc:** Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>; Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>

**Subject:** [EXTERNAL] Chick-fil-A Tucker Methodology Coordination

Rodrigo,

A Chick fil-A restaurant is rather unique and does not fit in the mold of Code 934 for a Fast Food Restaurant. Actual trip generation will be significantly higher. A more accurate estimate would be to provide counts at an existing comparably sized Chick fil-A.

You can call me at the number below with any questions.



**KEN HILDEBRANDT, PE, PTOE**  
**CITY ENGINEER**

**M: 770-865-5645**

**E: [khildebrandt@tuckerga.gov](mailto:khildebrandt@tuckerga.gov) W: [tuckerga.gov](http://tuckerga.gov)**



---

**From:** Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>

**Sent:** Thursday, June 3, 2021 10:18 AM

**To:** Ken Hildebrandt <[KHildebrandt@Tuckerga.gov](mailto:KHildebrandt@Tuckerga.gov)>; Courtney Smith <[CSmith@Tuckerga.gov](mailto:CSmith@Tuckerga.gov)>; Kylie Thomas <[kthomas@tuckerga.gov](mailto:kthomas@tuckerga.gov)>

**Cc:** Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>; Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>

**Subject:** [External]Chick-fil-A Tucker Methodology Coordination

Good Morning Ken, Courtney, and Kylie,

I am contacting you regarding a Chick-fil-A project at 4431 Hugh Howell Rd, Tucker, GA. The site will be replacing the existing Presbyterian Church. Attached you will find a Methodology Statement with the Trip Generation for this site and a Current Site Plan.

We want to schedule a meeting with the City of Tucker to verify that our methodology for this Traffic Impact Study is acceptable. Could you reply to this email with the best time for you to discuss this project?

Thank you in advance.

Sincerely,

**RODRIGO MEIRELLES VAN VLIET**

Engineer I | **BOWMAN**

4450 W Eau Gallie Boulevard, Suite 144, Melbourne, FL 32934

O: (321) 270-8905

[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com) | [bowman.com](http://bowman.com)



## Rodrigo Meirelles

---

**From:** Rodrigo Meirelles  
**Sent:** Wednesday, June 9, 2021 10:48 AM  
**To:** Mathis, Renaldo M  
**Cc:** Daniela Jurado; Andrew Petersen  
**Subject:** RE: Chick-fil-A Tucker Methodology Coordination - GDOT

That will work, thank you very much Renaldo. Can you please include Daniela Jurado ([djurado@bowman.com](mailto:djurado@bowman.com)) and Andrew Petersen ([apetersen@bowman.com](mailto:apetersen@bowman.com)) to the meeting invite as well?

Sincerely,

### RODRIGO MEIRELLES VAN VLIET

Engineer I | **BOWMAN**

O: (321) 270-8905

[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)

---

**From:** Mathis, Renaldo M <[RMathis@dot.ga.gov](mailto:RMathis@dot.ga.gov)>  
**Sent:** Wednesday, June 9, 2021 10:35 AM  
**To:** Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>  
**Subject:** [EXTERNAL] RE: Chick-fil-A Tucker Methodology Coordination - GDOT

I will set the meeting on Microsoft teams for Tuesday at 1.

Thanks,

### Renaldo M. Mathis

*Civil Engineer II*

*Serving City of Atlanta & DeKalb County*



District 7 Office of *Traffic Operations*  
5025 New Peachtree Road  
Chamblee, GA, 30341  
770.216.3993 office  
404.655.8946 mobile

---

**From:** Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>  
**Sent:** Wednesday, June 9, 2021 10:20 AM  
**To:** Mathis, Renaldo M <[RMathis@dot.ga.gov](mailto:RMathis@dot.ga.gov)>  
**Cc:** Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>; Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>  
**Subject:** RE: Chick-fil-A Tucker Methodology Coordination - GDOT

Hello Renaldo,

Sorry for misspelling your name at first. Either one of these days will work for us. Let us know what time works best for you and your manager.

Thank you,

**RODRIGO MEIRELLES VAN VLIET**

Engineer I | **BOWMAN**

O: (321) 270-8905

[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)

---

**From:** Mathis, Renaldo M <[RMathis@dot.ga.gov](mailto:RMathis@dot.ga.gov)>

**Sent:** Wednesday, June 9, 2021 9:35 AM

**To:** Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>

**Subject:** [EXTERNAL] RE: Chick-fil-A Tucker Methodology Coordination - GDOT

Good morning Rodrigo,

I can set a meeting for sometime early next week if that works for you. I m going to speak with my manager to see what times work best based on the day you prefer. I'm thinking sometime Monday or Tuesday. How does these dates sound to you?

Thanks,

**Renaldo M. Mathis**

*Civil Engineer II*

*Serving City of Atlanta & DeKalb County*



District 7 Office of *Traffic Operations*

5025 New Peachtree Road

Chamblee, GA, 30341

770.216.3993 office

404.655.8946 mobile

---

**From:** Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>

**Sent:** Wednesday, June 9, 2021 9:12 AM

**To:** Mathis, Renaldo M <[RMathis@dot.ga.gov](mailto:RMathis@dot.ga.gov)>

**Cc:** Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>; Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>

**Subject:** RE: Chick-fil-A Tucker Methodology Coordination - GDOT

Good Morning Ronaldo,

I wanted to follow up on my previous email and see if you received my previous email with the attached methodology for this project, and if there is any additional information you require for the TIA of this project.

Please do not hesitate to contact us.

Thank you in advance,

## RODRIGO MEIRELLES VAN VLIET

Engineer I | **BOWMAN**

O: (321) 270-8905

[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)

---

**From:** Rodrigo Meirelles

**Sent:** Thursday, June 3, 2021 2:06 PM

**To:** [rmathis@dot.ga.gov](mailto:rmathis@dot.ga.gov)

**Cc:** Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>; Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>

**Subject:** Chick-fil-A Tucker Methodology Coordination - GDOT

Good Morning Ronaldo,

I am contacting you regarding a Chick-fil-A project at 4431 Hugh Howell Rd, Tucker, GA. The site will be replacing the existing Presbyterian Church. Attached you will find a Methodology Statement with the Trip Generation for this site and the most recent Site Plan.

We want to schedule a meeting with the GDOT to verify that our methodology for this Traffic Impact Study is acceptable. Could you reply to this email with the best time for you to discuss this project?

Thank you in advance.

Sincerely,

**RODRIGO MEIRELLES VAN VLIET**

Engineer I | **BOWMAN**

4450 W Eau Gallie Boulevard, Suite 144, Melbourne, FL 32934

O: (321) 270-8905

[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com) | [bowman.com](http://bowman.com)



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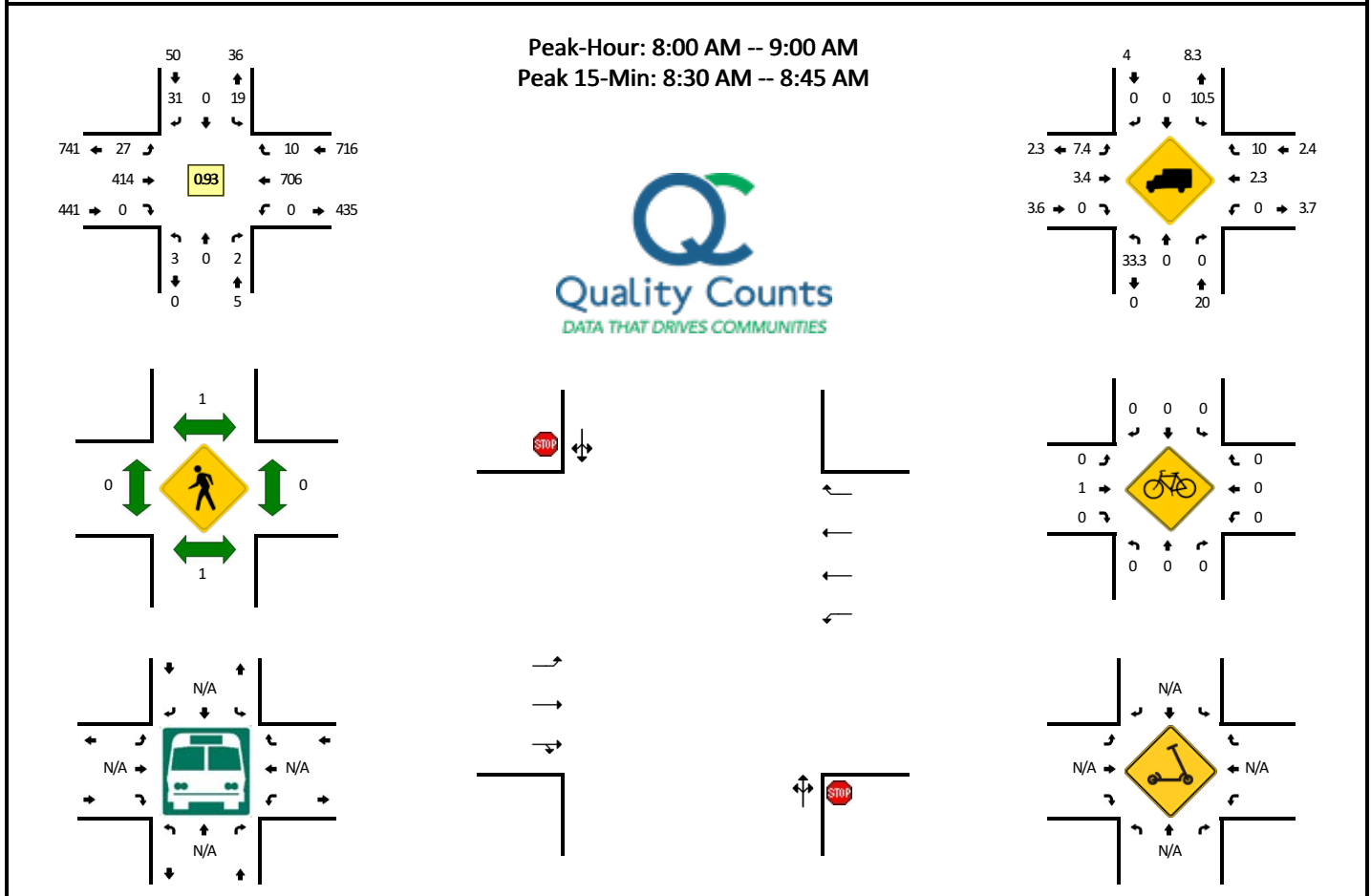
Georgia is a state of natural beauty. And it's a state that spends millions each year cleaning up litter that not only mars that beauty, but also affects road safety, the environment and the economy. Do your part – don't litter. How can you play an active role in protecting the splendor of the Peach State? Find out at <http://keepgaclean.com/>.

## **APPENDIX C**



**LOCATION:** Rosser Ter -- Hugh Howell Rd  
**CITY/STATE:** Tucker, GA

**QC JOB #:** 15488401  
**DATE:** Tue, Jun 15 2021



15-Min Count Period Beginning At	Rosser Ter (Northbound)				Rosser Ter (Southbound)				Hugh Howell Rd (Eastbound)				Hugh Howell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	2	0	0	0	2	0	7	0	1	59	0	0	0	118	5	0	194	
7:15 AM	2	0	0	0	5	0	5	0	1	87	0	0	0	124	2	0	226	
7:30 AM	2	0	0	0	3	1	4	0	11	60	0	0	1	167	3	0	252	
7:45 AM	4	0	1	0	5	0	12	0	2	98	1	0	0	165	3	0	291	963
8:00 AM	0	0	0	0	3	0	7	0	4	100	0	0	0	170	2	0	286	1055
8:15 AM	1	0	1	0	4	0	8	0	6	103	0	0	0	168	4	0	295	1124
8:30 AM	1	0	0	0	7	0	8	0	5	107	0	0	0	196	2	0	326	1198
8:45 AM	1	0	1	0	5	0	8	0	11	104	0	1	0	172	2	0	305	1212
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	4	0	0	0	28	0	32	0	20	428	0	0	0	784	8	0	1304	
Heavy Trucks	0	0	0	0	0	0	0	0	0	20	0	0	0	4	0	0	24	
Buses																		
Pedestrians		4				0				0				0			4	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scooters																		

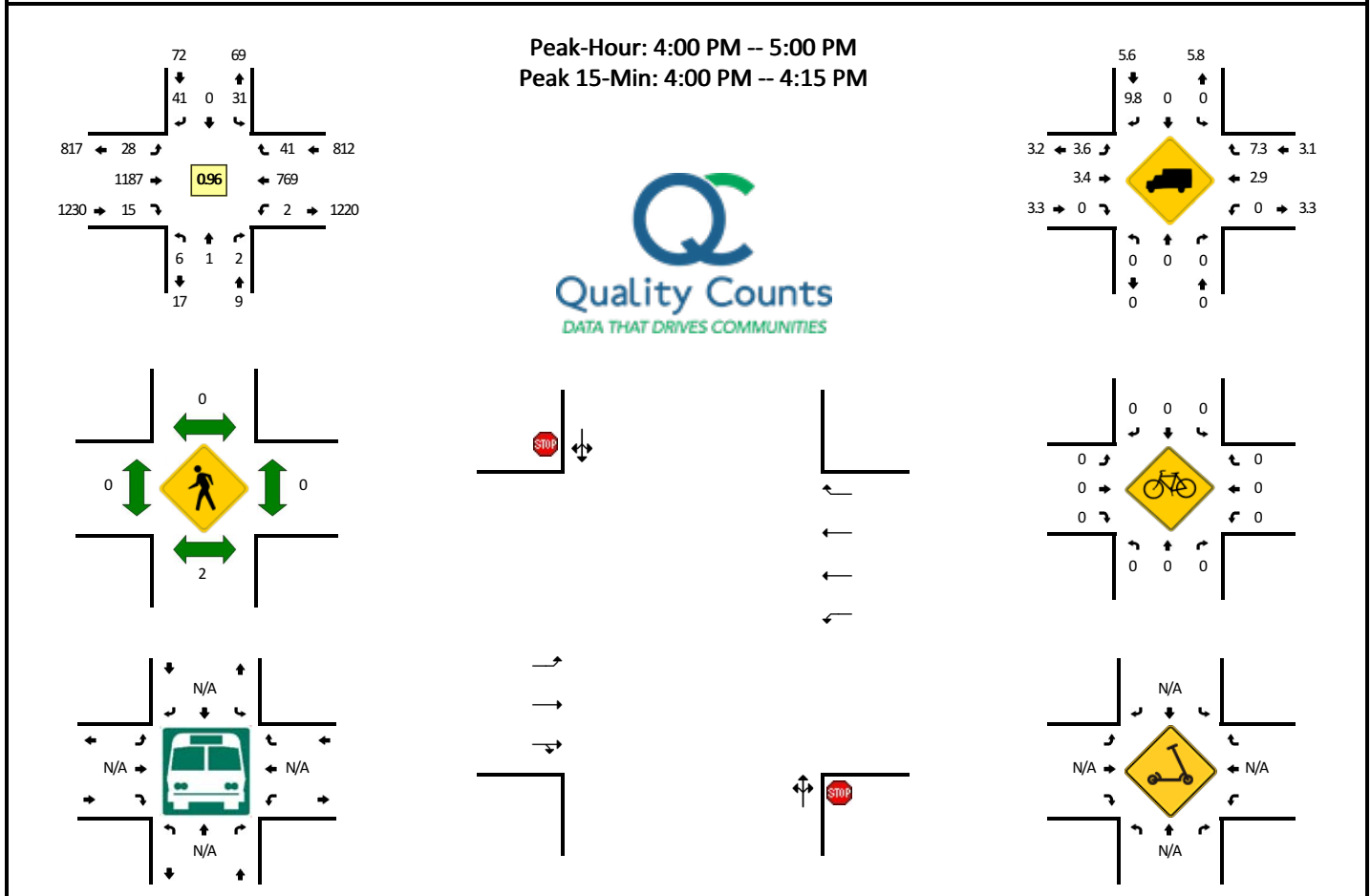
Comments:

Report generated on 6/21/2021 10:17 AM

SOURCE: Quality Counts, LLC (<http://www.qualitycounts.net>) 1-877-580-2212

**LOCATION:** Rosser Ter -- Hugh Howell Rd  
**CITY/STATE:** Tucker, GA

**QC JOB #:** 15488402  
**DATE:** Tue, Jun 15 2021

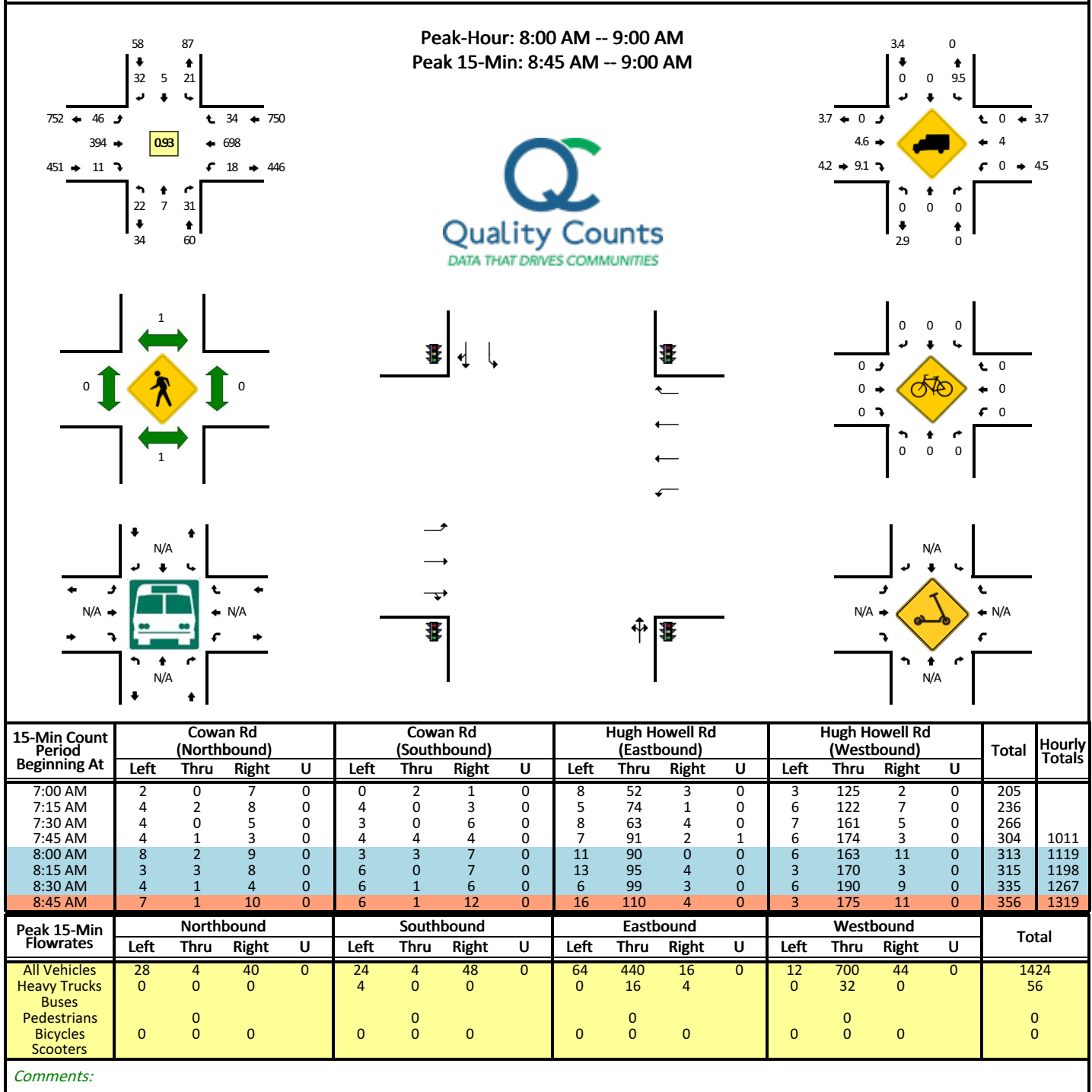


15-Min Count Period Beginning At	Rosser Ter (Northbound)				Rosser Ter (Southbound)				Hugh Howell Rd (Eastbound)				Hugh Howell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	0	0	9	0	11	0	3	315	3	0	0	203	8	0	552	
4:15 PM	2	0	0	0	9	0	6	0	12	294	3	0	1	196	12	0	535	
4:30 PM	3	0	1	0	6	0	11	0	4	329	6	0	0	169	11	0	540	
4:45 PM	1	1	1	0	7	0	13	0	8	249	3	1	1	201	10	0	496	2123
5:00 PM	0	0	1	0	6	0	11	0	2	285	6	0	0	187	9	0	507	2078
5:15 PM	3	0	0	0	9	0	9	0	7	332	2	0	1	193	11	0	567	2110
5:30 PM	2	0	0	0	2	0	11	0	7	302	2	0	0	165	9	0	500	2070
5:45 PM	1	0	1	0	1	1	7	0	9	316	7	0	0	189	5	0	537	2111
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	0	0	0	0	36	0	44	0	12	1260	12	0	0	812	32	0	2208	
Heavy Trucks	0	0	0	0	0	0	4	0	0	32	0	0	0	32	4	0	72	
Buses																		
Pedestrians		4				0				0				0			4	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scooters																		

**Comments:**

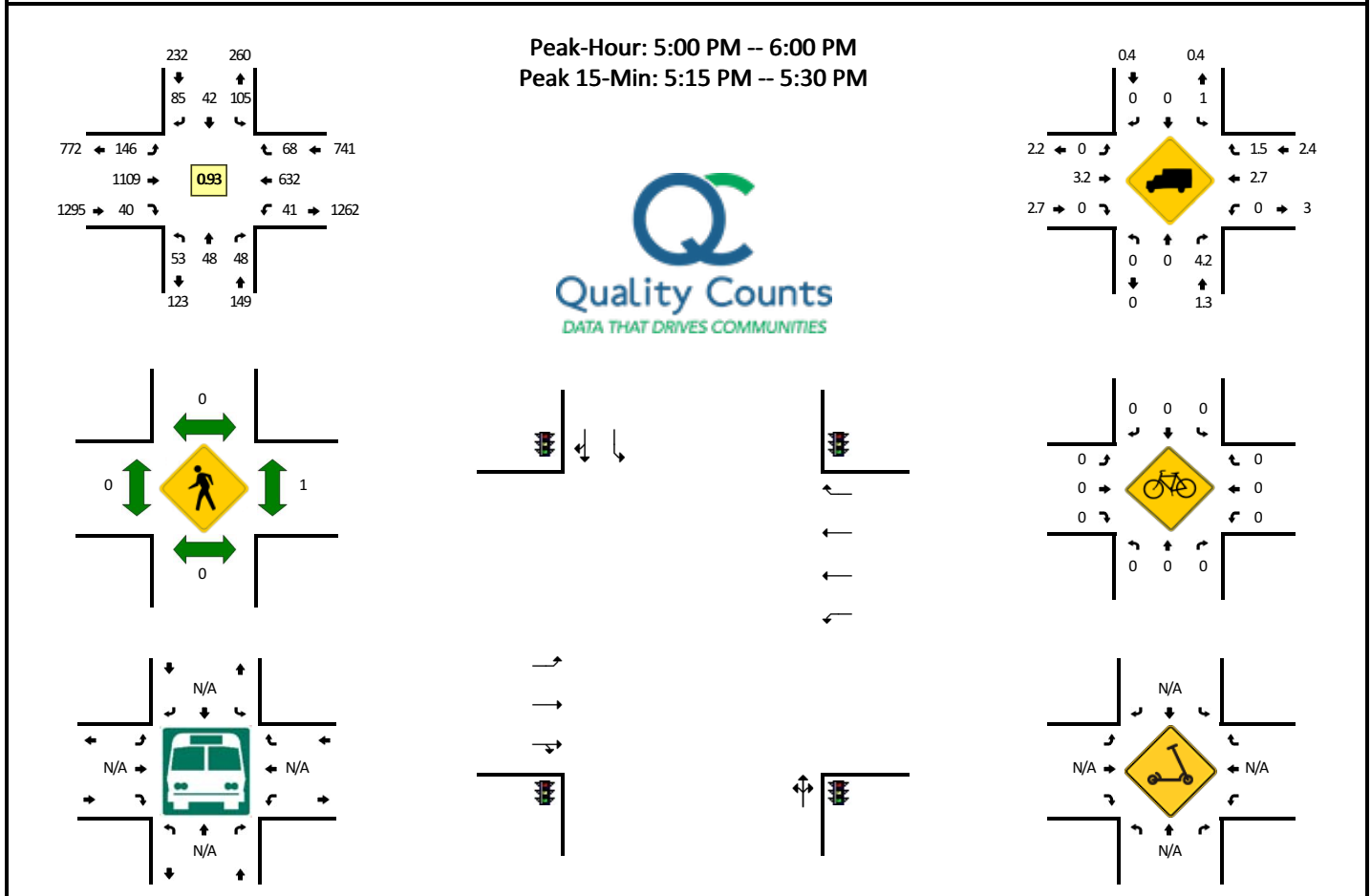
**LOCATION:** Cowan Rd -- Hugh Howell Rd  
**CITY/STATE:** Tucker, GA

**QC JOB #:** 15488403  
**DATE:** Tue, Jun 15 2021



**LOCATION:** Cowan Rd -- Hugh Howell Rd  
**CITY/STATE:** Tucker, GA

**QC JOB #:** 15488404  
**DATE:** Tue, Jun 15 2021

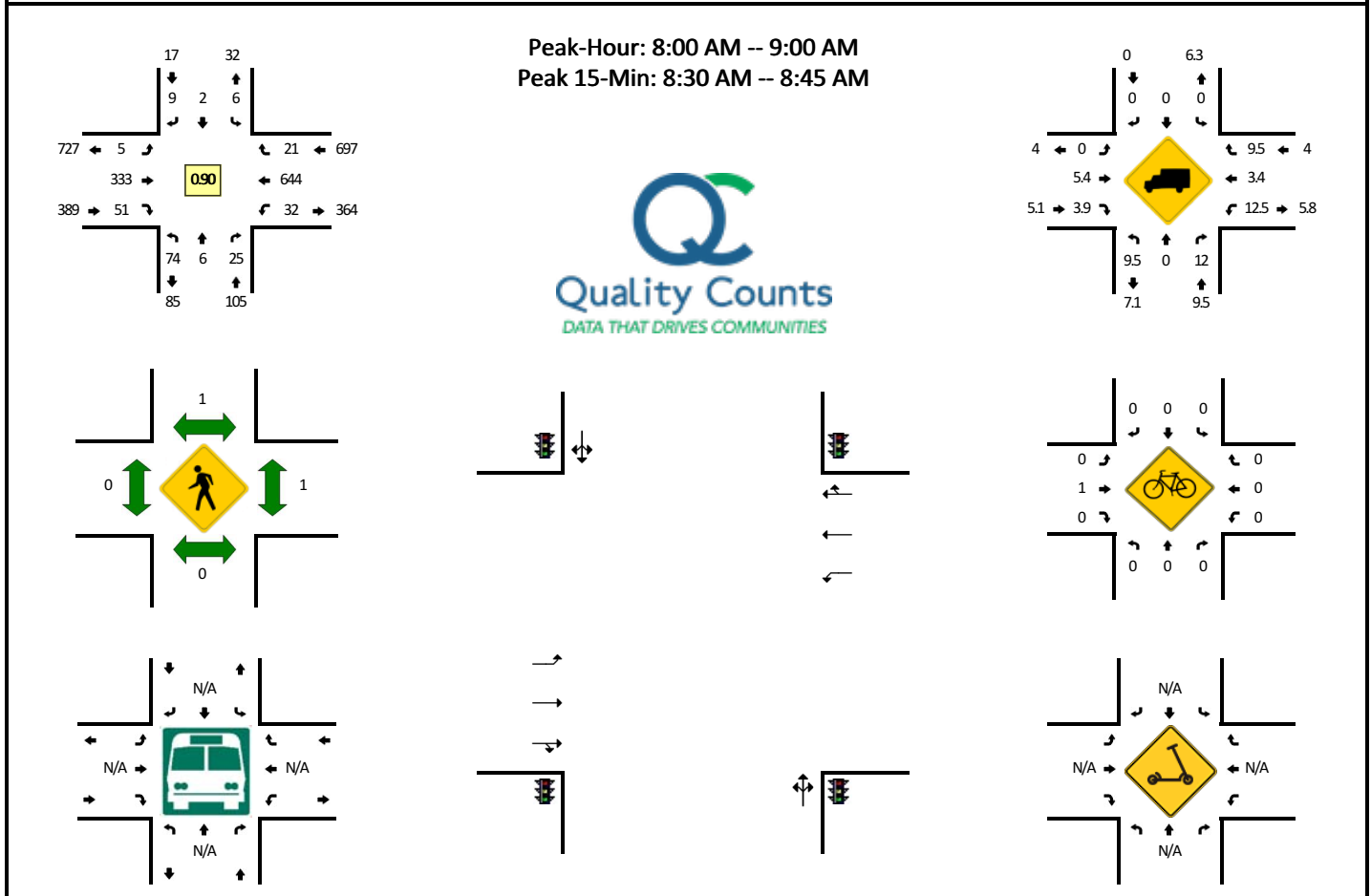


15-Min Count Period Beginning At	Cowan Rd (Northbound)				Cowan Rd (Southbound)				Hugh Howell Rd (Eastbound)				Hugh Howell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	11	6	13	0	18	7	29	0	37	291	18	0	15	181	17	0	643	
4:15 PM	18	5	19	0	23	14	29	0	37	260	7	0	9	159	22	0	602	
4:30 PM	9	11	11	0	19	5	15	0	35	301	5	0	14	159	13	0	597	
4:45 PM	13	7	11	0	26	9	25	0	29	228	10	0	11	175	24	0	568	2410
5:00 PM	11	13	8	0	24	6	15	0	46	268	16	0	8	153	17	0	585	2352
5:15 PM	15	12	15	0	22	10	24	0	36	296	9	1	10	183	16	0	649	2399
5:30 PM	13	8	17	0	25	14	19	0	37	258	8	1	12	144	17	0	573	2375
5:45 PM	14	15	8	0	34	12	27	0	25	287	7	0	11	152	18	0	610	2417
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	60	48	60	0	88	40	96	0	144	1184	36	4	40	732	64	0	2596	
Heavy Trucks	0	0	4	0	0	0	0	0	0	36	0	0	0	4	0	0	44	
Buses																		
Pedestrians	0	0			0	0			0	0			0	0			0	
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0	
Scoters																		

**Comments:**

**LOCATION:** Tucker Industrial Rd -- Hugh Howell Rd  
**CITY/STATE:** Tucker, GA

**QC JOB #:** 15488405  
**DATE:** Tue, Jun 15 2021

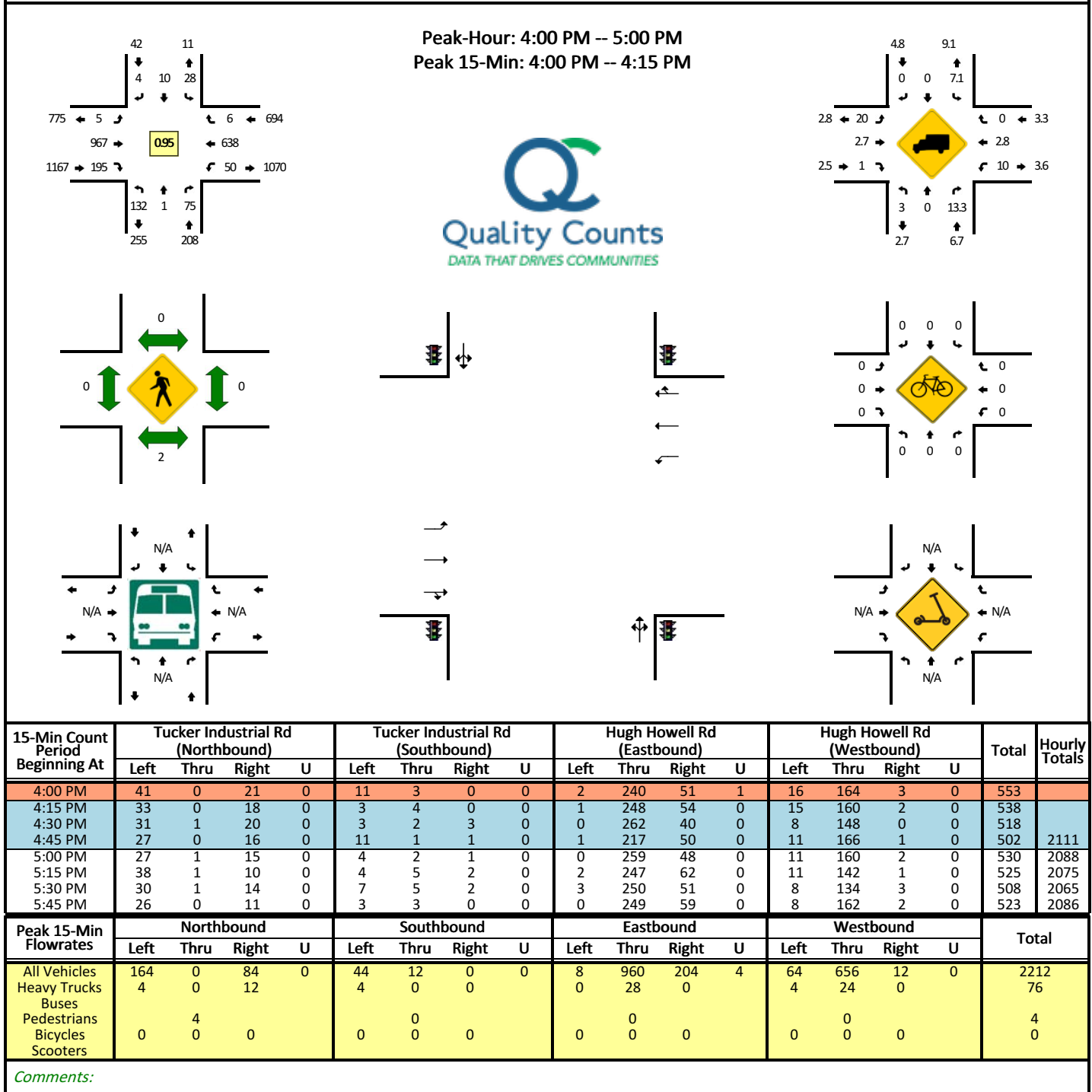


15-Min Count Period Beginning At	Tucker Industrial Rd (Northbound)				Tucker Industrial Rd (Southbound)				Hugh Howell Rd (Eastbound)				Hugh Howell Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	10	1	8	0	0	0	0	0	0	46	17	0	16	115	1	0	214	
7:15 AM	11	1	8	0	0	0	1	0	2	68	11	0	13	124	2	0	241	
7:30 AM	29	0	6	0	1	1	0	0	2	50	11	0	10	133	5	0	248	
7:45 AM	13	3	2	0	0	1	0	0	0	89	10	0	19	162	4	0	303	1006
8:00 AM	19	2	2	0	3	0	0	0	3	80	11	0	10	156	3	0	289	1081
8:15 AM	21	0	4	0	2	0	2	0	1	89	5	0	8	145	4	0	281	1121
8:30 AM	14	3	10	0	0	1	4	0	1	81	19	0	6	184	11	0	334	1207
8:45 AM	20	1	9	0	1	1	3	0	0	83	16	0	8	159	3	0	304	1208
Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total	
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
All Vehicles	56	12	40	0	0	4	16	0	4	324	76	0	24	736	44	0	1336	
Heavy Trucks	4	0	4	0	0	0	0	0	0	32	0	0	4	8	4	0	56	
Buses																		
Pedestrians	0	0	0	0	0	0	0	0	0	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	0	
Scooters																		

**Comments:**

**LOCATION:** Tucker Industrial Rd -- Hugh Howell Rd  
**CITY/STATE:** Tucker, GA

**QC JOB #:** 15488406  
**DATE:** Tue, Jun 15 2021



Project ID: 22-180036-001  
Location: Dillard St & Cowan Rd  
City: Tucker

Day: Tuesday  
Date: 3/1/2022

Groups Printed - Cars, PU, Vans - Heavy Trucks

	Dillard St Northbound						Dillard St Southbound						Cowan Rd Eastbound						Cowan Rd Westbound							
Start Time	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Left	Thru	Rgt	Uturn	Peds	App. Total	Int. Total	
7:00 AM	1	0	5	0	1	6	0	0	0	0	0	0	0	13	0	0	0	0	13	2	3	0	0	0	5	24
7:15 AM	0	0	14	0	0	14	0	0	0	0	0	0	0	9	0	0	0	0	9	1	8	0	0	0	9	32
7:30 AM	0	0	7	0	1	7	0	0	0	0	0	0	0	8	0	0	0	0	8	4	7	0	0	0	11	26
7:45 AM	5	0	6	0	0	11	0	0	0	0	0	0	0	27	0	0	0	0	27	4	10	0	0	0	14	52
Total	6	0	32	0	2	38	0	0	0	0	0	0	0	57	0	0	0	0	57	11	28	0	0	0	39	134
8:00 AM	2	0	5	0	0	7	0	0	0	0	0	0	0	13	1	0	0	0	14	3	9	0	0	0	12	33
8:15 AM	2	0	4	0	0	6	0	0	0	0	0	0	0	14	0	0	0	0	14	1	20	0	0	0	21	41
8:30 AM	0	0	2	0	0	2	0	0	0	0	0	0	0	16	1	0	1	17	1	9	0	0	0	10	29	
8:45 AM	0	0	4	0	0	4	0	0	0	0	0	0	0	10	0	0	0	10	2	13	0	0	0	15	29	
Total	4	0	15	0	0	19	0	0	0	0	0	0	0	53	2	0	1	55	7	51	0	0	0	58	132	
***BREAK***																										
4:00 PM	2	0	7	0	0	9	0	0	0	0	0	0	0	43	2	0	0	45	4	20	0	0	0	24	78	
4:15 PM	0	0	6	0	1	6	0	0	0	0	0	0	0	44	1	0	1	45	3	15	0	0	0	18	69	
4:30 PM	0	0	8	0	2	8	0	0	0	0	0	0	0	38	2	0	1	40	3	28	0	0	0	31	79	
4:45 PM	1	0	10	0	0	11	0	0	0	0	0	0	0	23	1	0	0	24	5	26	0	1	0	32	67	
Total	3	0	31	0	3	34	0	0	0	0	0	0	0	148	6	0	2	154	15	89	0	1	0	105	293	
5:00 PM	0	0	5	0	1	5	0	0	0	0	0	0	0	26	1	0	0	27	7	28	0	0	2	35	67	
5:15 PM	2	0	6	0	0	8	0	0	0	0	0	0	0	36	0	0	0	36	6	30	0	0	0	36	80	
5:30 PM	0	0	12	0	0	12	0	0	0	0	0	0	0	35	2	0	0	37	7	20	0	0	0	27	76	
5:45 PM	0	0	6	0	0	6	0	0	0	0	0	0	0	37	1	0	0	38	7	19	0	0	0	26	70	
Total	2	0	29	0	1	31	0	0	0	0	0	0	0	134	4	0	0	138	27	97	0	0	2	124	293	
Grand Total	15	0	107	0	6	122	0	0	0	0	0	0	0	392	12	0	3	404	60	265	0	1	2	326	852	
Apprch %	12.3	0.0	87.7	0.0	4.9		0.0	0.0	0.0	0.0	0.0		0.0	97.0	3.0	0.0	0.7		18.4	81.3	0.0	0.3	0.6			
Total %	1.8	0.0	12.6	0.0	0.7	14.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	46.0	1.4	0.0	0.4	47.4	7.0	31.1	0.0	0.1	0.2	38.3		
Cars, PU, Vans	15	0	105	0		120	0	0	0	0		0	0	382	10	0		392	60	255	0	1		316	828	
% Cars, PU, Vans	100.0	0.0	98.1	0.0		98.4	0.0	0.0	0.0	0.0		0.0	0.0	97.4	83.3	0.0		97.0	100.0	96.2	0.0	100.0		96.9	97.2	
Heavy trucks	0	0	2	0		2	0	0	0	0		0	0	10	2	0		12	0	10	0	0		10	24	
%Heavy trucks	0.0	0.0	1.9	0.0		1.6	0.0	0.0	0.0	0.0		0.0	0.0	2.6	16.7	0.0		3.0	0.0	3.8	0.0	0.0		3.1	2.8	



Project ID: 22-180036-001  
Location: Dillard St & Cowan Rd  
City: Tucker

## PEAK HOURS

Day: Tuesday  
Date: 3/1/2022

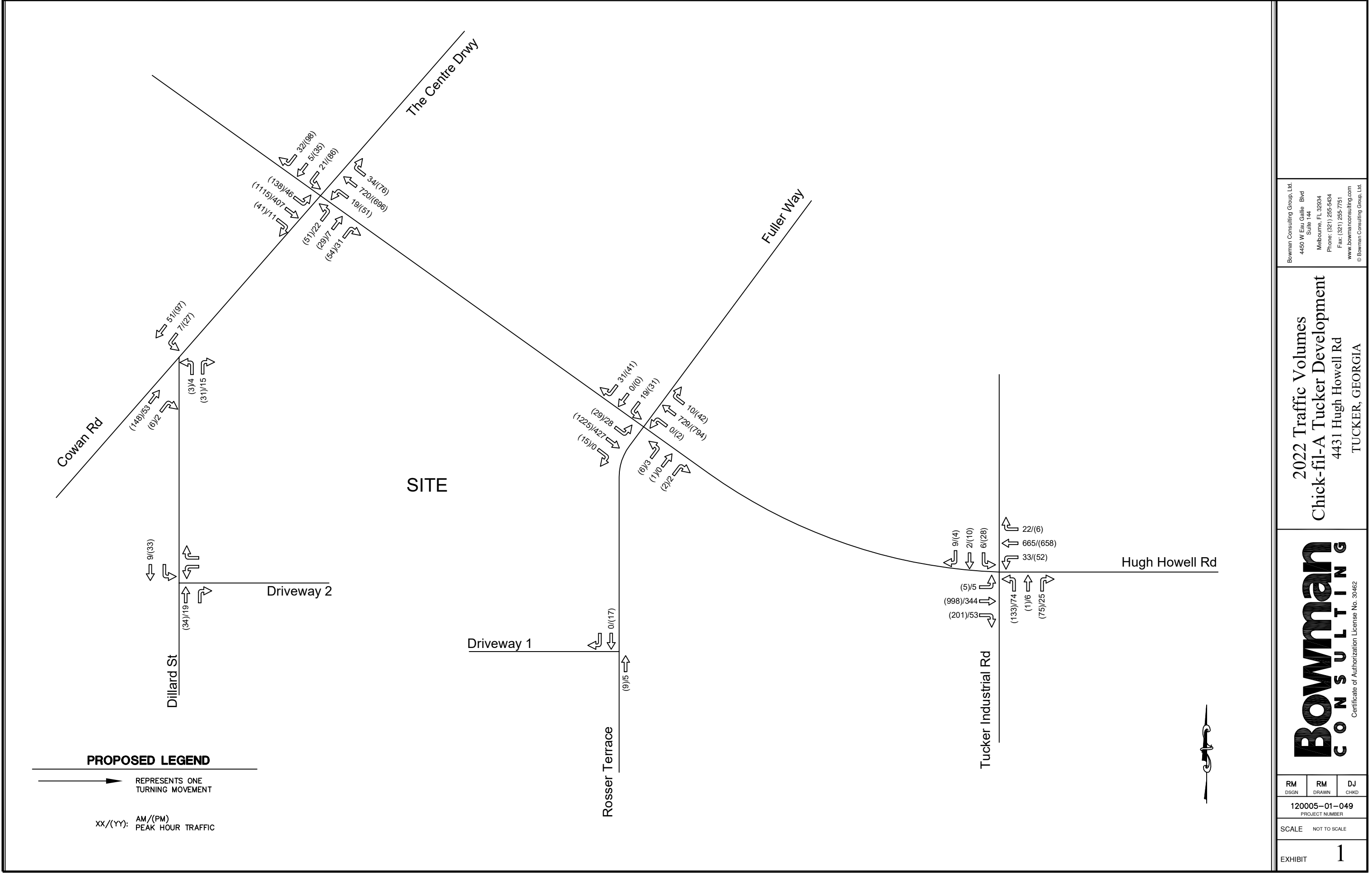
### AM

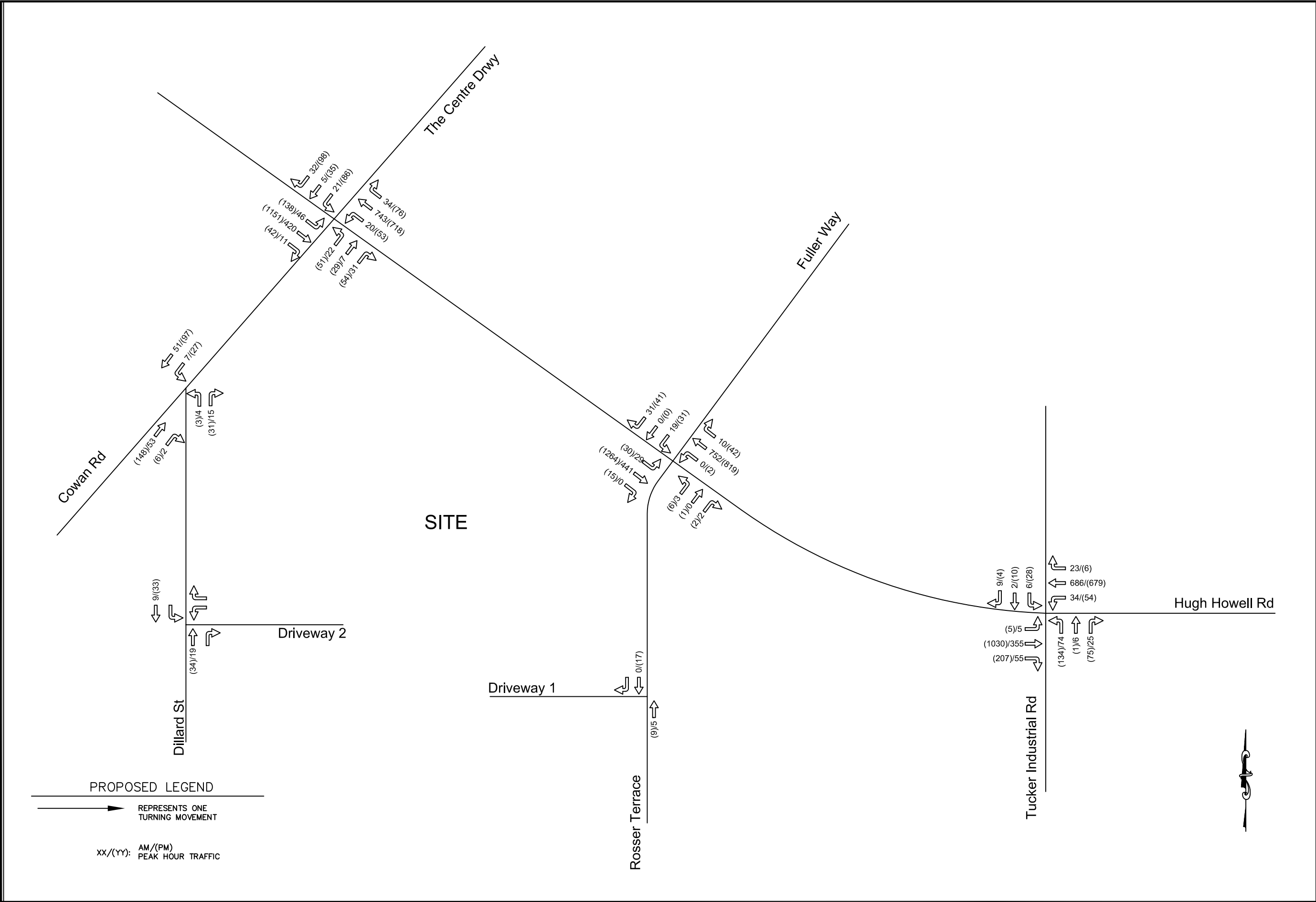
	Dillard St Northbound					Dillard St Southbound					Cowan Rd Eastbound					Cowan Rd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 07:00 AM - 09:00 AM																					
Peak Hour for Entire Intersection Begins at 07:45 AM																					
7:45 AM	5	0	6	0	11	0	0	0	0	0	0	27	0	0	27	4	10	0	0	14	52
8:00 AM	2	0	5	0	7	0	0	0	0	0	0	13	1	0	14	3	9	0	0	12	33
8:15 AM	2	0	4	0	6	0	0	0	0	0	0	14	0	0	14	1	20	0	0	21	41
8:30 AM	0	0	2	0	2	0	0	0	0	0	0	16	1	0	17	1	9	0	0	10	29
Total Volume	9	0	17	0	26	0	0	0	0	0	0	70	2	0	72	9	48	0	0	57	155
% App. Total	34.6	0.0	65.4	0.0	100	0.0	0.0	0.0	0.0	0	0.0	97.2	2.8	0.0	100	15.8	84.2	0.0	0.0	100	
PHF	0.591										0.667					0.679					0.745
Cars, PU, Vans	9	0	17	0	26	0	0	0	0	0	0	67	1	0	68	9	44	0	0	53	147
% Cars, PU, Vans	100.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	95.7	50.0	0.0	94.4	100.0	91.7	0.0	0.0	93.0	94.8
Heavy trucks	0	0	0	0	0	0	0	0	0	0	0	3	1	0	4	0	4	0	0	4	8
% Heavy trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.3	50.0	0.0	5.6	0.0	8.3	0.0	0.0	7.0	5.2

### PM

	Dillard St Northbound					Dillard St Southbound					Cowan Rd Eastbound					Cowan Rd Westbound					
Start Time	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Left	Thru	Rgt	Uturn	App. Total	Int. Total
Peak Hour Analysis from 04:00 PM - 06:00 PM																					
Peak Hour for Entire Intersection Begins at 05:00 PM																					
5:00 PM	0	0	5	0	5	0	0	0	0	0	0	26	1	0	27	7	28	0	0	35	67
5:15 PM	2	0	6	0	8	0	0	0	0	0	0	36	0	0	36	6	30	0	0	36	80
5:30 PM	0	0	12	0	12	0	0	0	0	0	0	35	2	0	37	7	20	0	0	27	76
5:45 PM	0	0	6	0	6	0	0	0	0	0	0	37	1	0	38	7	19	0	0	26	70
Total Volume	2	0	29	0	31	0	0	0	0	0	0	134	4	0	138	27	97	0	0	124	293
% App. Total	6.5	0.0	93.5	0.0	100	0.0	0.0	0.0	0.0	0	0.0	97.1	2.9	0.0	100	21.8	78.2	0.0	0.0	100	
PHF	0.646										0.908					0.861					0.916
Cars, PU, Vans	2	0	29	0	31	0	0	0	0	0	0	134	3	0	137	27	97	0	0	124	292
% Cars, PU, Vans	100.0	0.0	100.0	0.0	100.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	75.0	0.0	99.3	100.0	100.0	0.0	0.0	100.0	99.7
Heavy trucks	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	1
% Heavy trucks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	25.0	0.0	0.7	0.0	0.0	0.0	0.0	0.0	0.3

## **APPENDIX D**



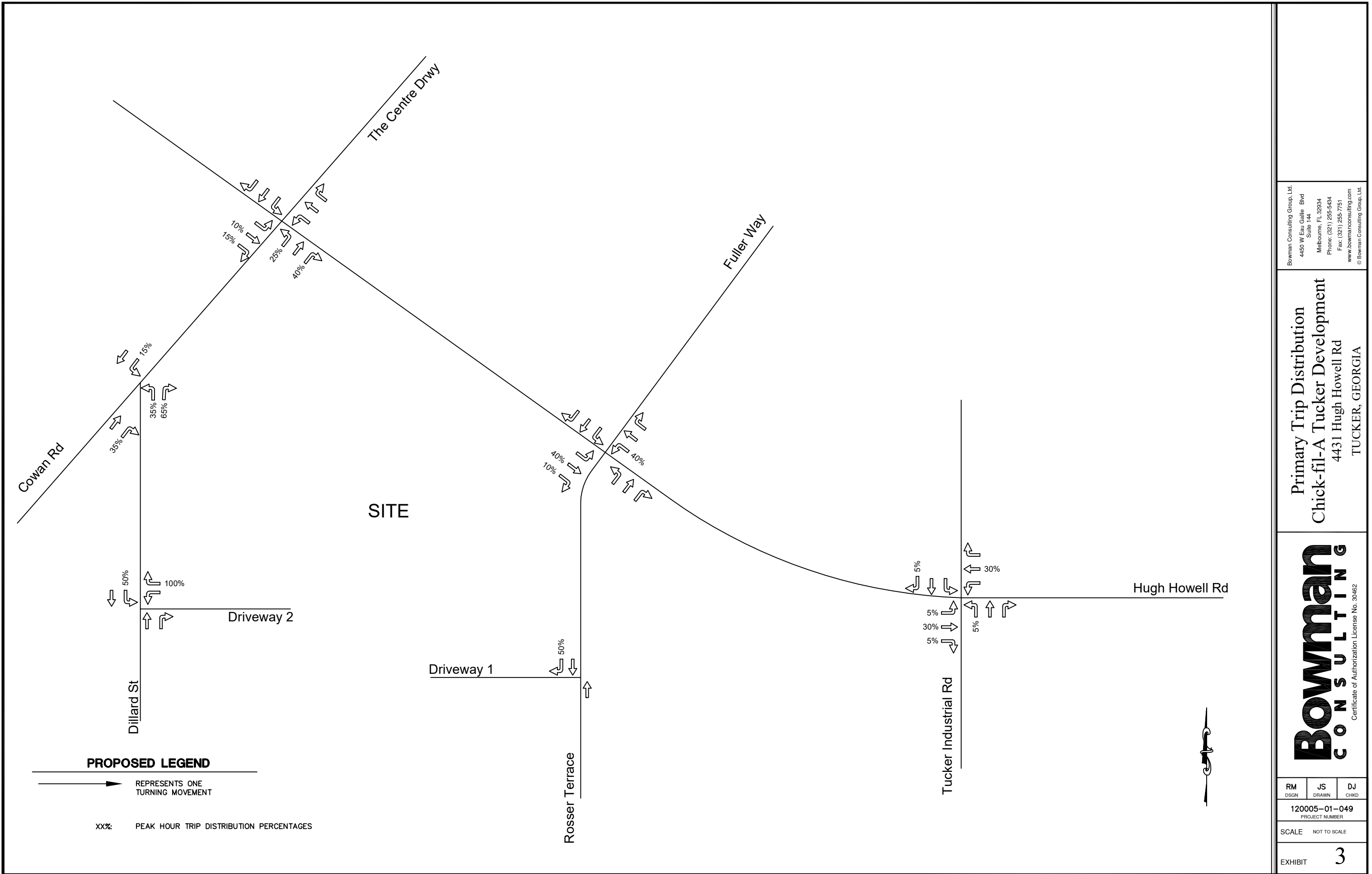


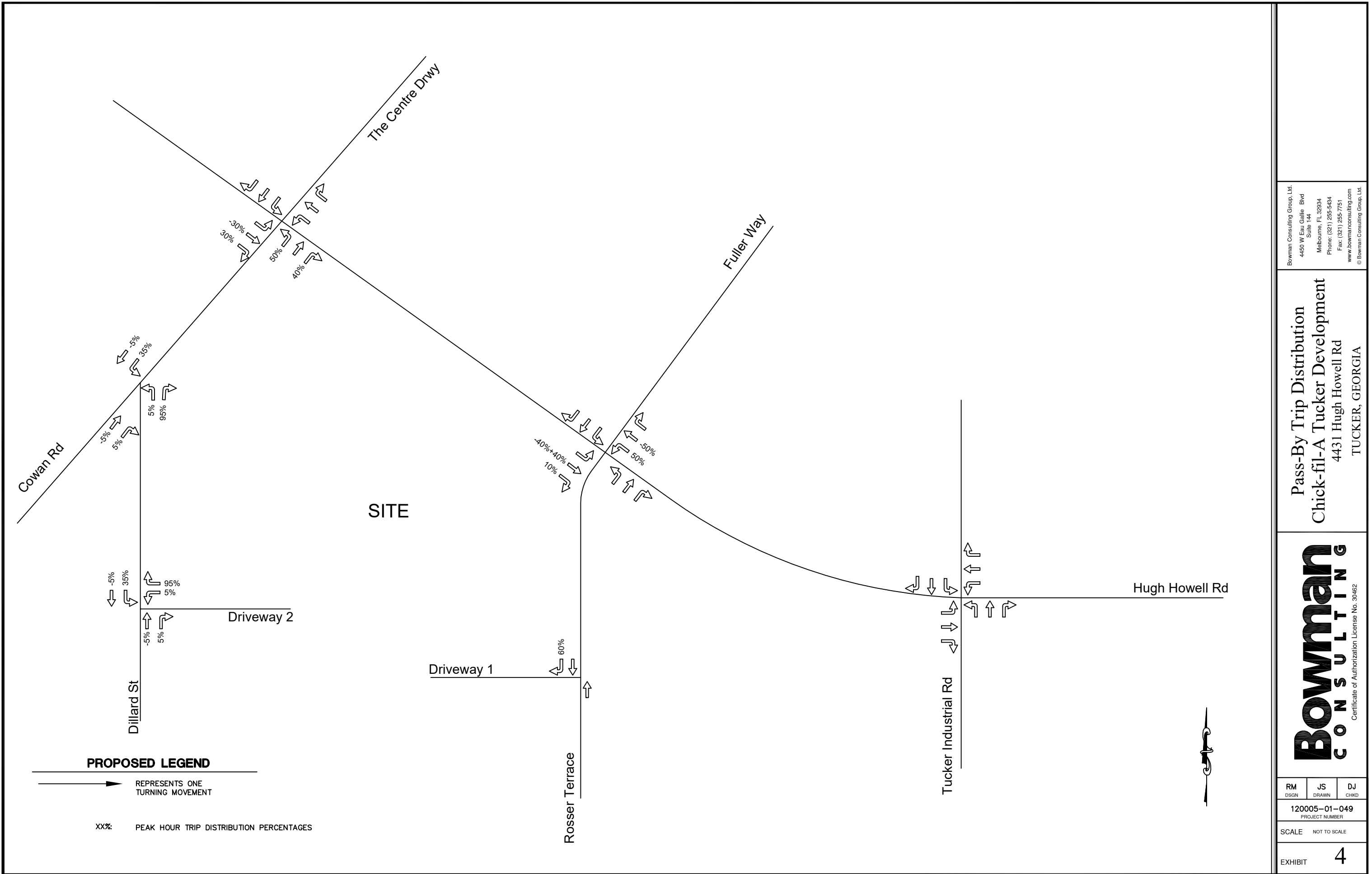
**Bowman**  
CONSULTING  
Certificate of Authorization License No. 30462

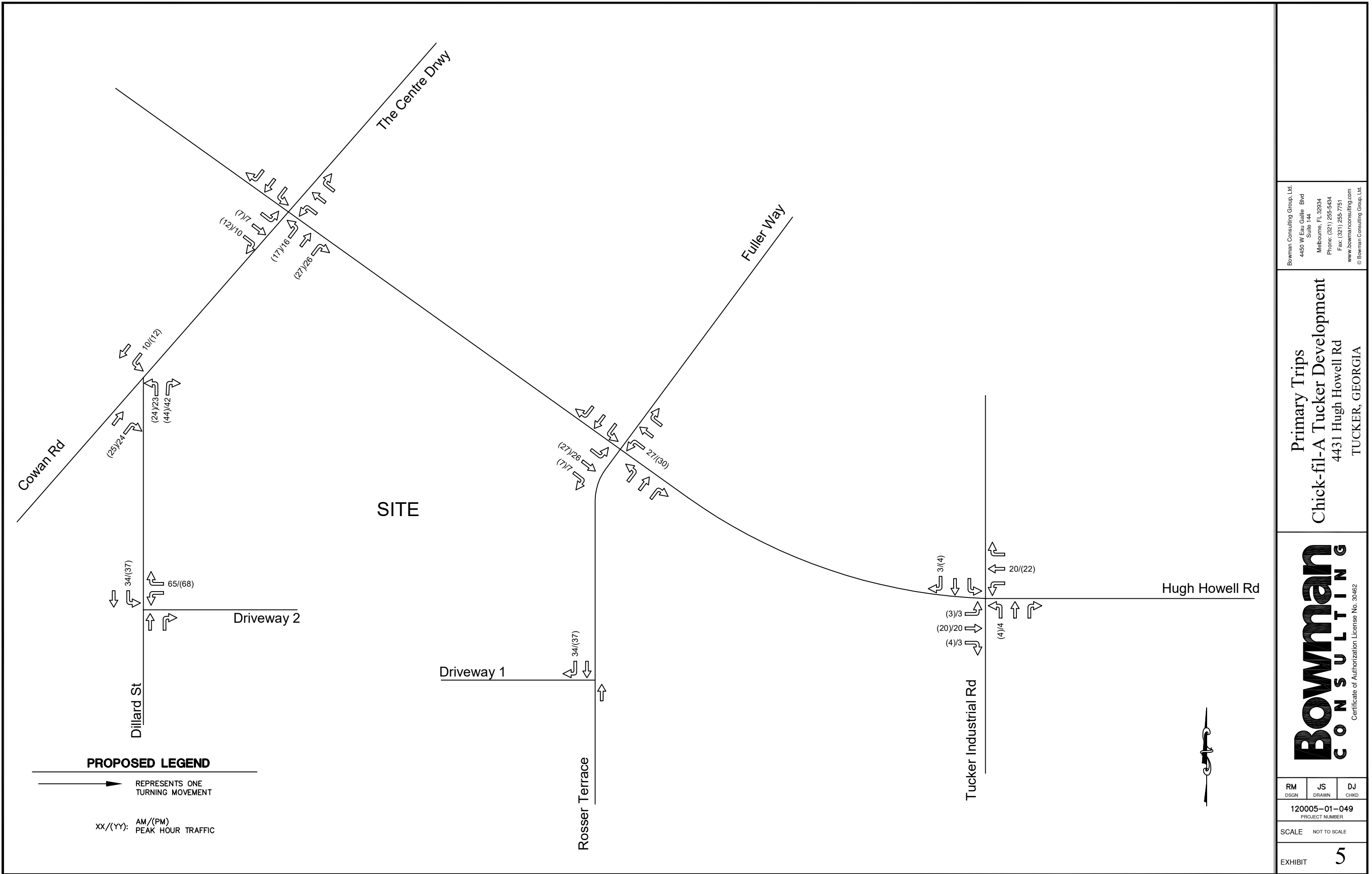
RM DSGN	RM DRAWN	DJ CHKD
120005-01-049 PROJECT NUMBER		
SCALE NOT TO SCALE		
EXHIBIT 2		

2023 No Build Traffic Volumes  
Chick-fil-A Tucker Development  
4431 Hugh Howell Rd  
TUCKER, GEORGIA

Bowman Consulting Group, Ltd.  
4450 W Eau Gallie Blvd  
Suite 144  
Melbourne, FL 32934  
Phone: (321) 255-5434  
Fax: (321) 255-7751  
www.bowmanconsulting.com  
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Primary Trips  
Chick-fil-A Tucker Development  
4431 Hugh Howell Rd  
TUCKER, GEORGIA

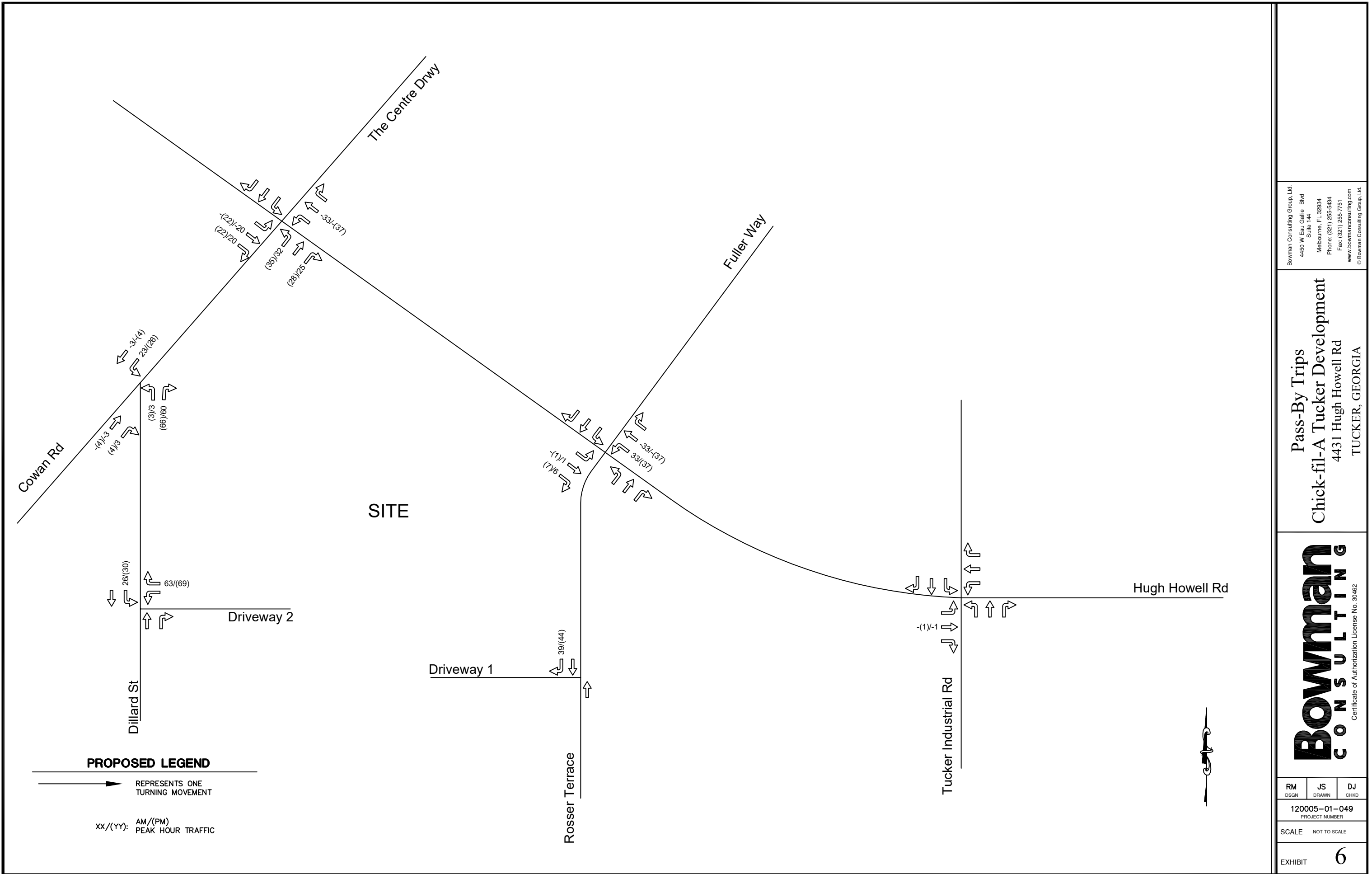
Bowman Consulting Group, Ltd.  
4450 W Eau Gallie Blvd  
Suite 144  
Melbourne, FL 32934  
Phone: (321) 255-5434  
Fax: (321) 255-7751  
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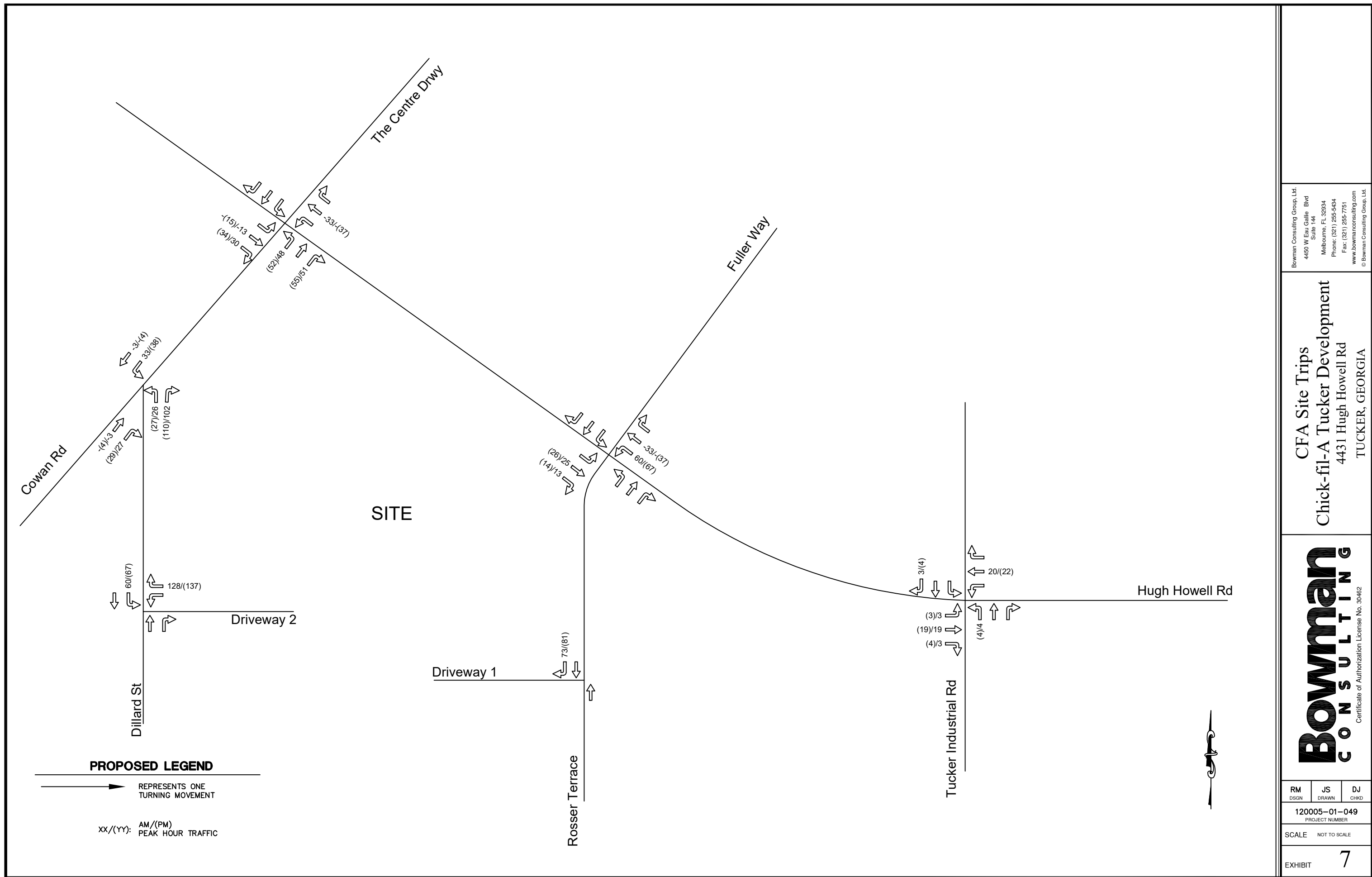
Certificate of Authorization License No. 30462

RM DSGN	JS DRAWN	DJ CHKD
120005-01-049 PROJECT NUMBER		
SCALE NOT TO SCALE		
EXHIBIT		5





<b>Bowman</b> CONSULTING Certificate of Authorization License No. 30462			<b>Pass-By Trips</b> <b>Chick-fil-A Tucker Development</b> 4431 Hugh Howell Rd TUCKER, GEORGIA			Bowman Consulting Group, Ltd. 4450 W Eau Gallie Blvd Suite 144 Melbourne, FL 32934 Phone: (321) 255-5434 Fax: (321) 255-7751 www.bowmanconsulting.com © Bowman Consulting Group, Ltd.		
RM DSGN	JS DRAWN	DJ CHKD	120005-01-049 PROJECT NUMBER				SCALE NOT TO SCALE	
EXHIBIT		6						

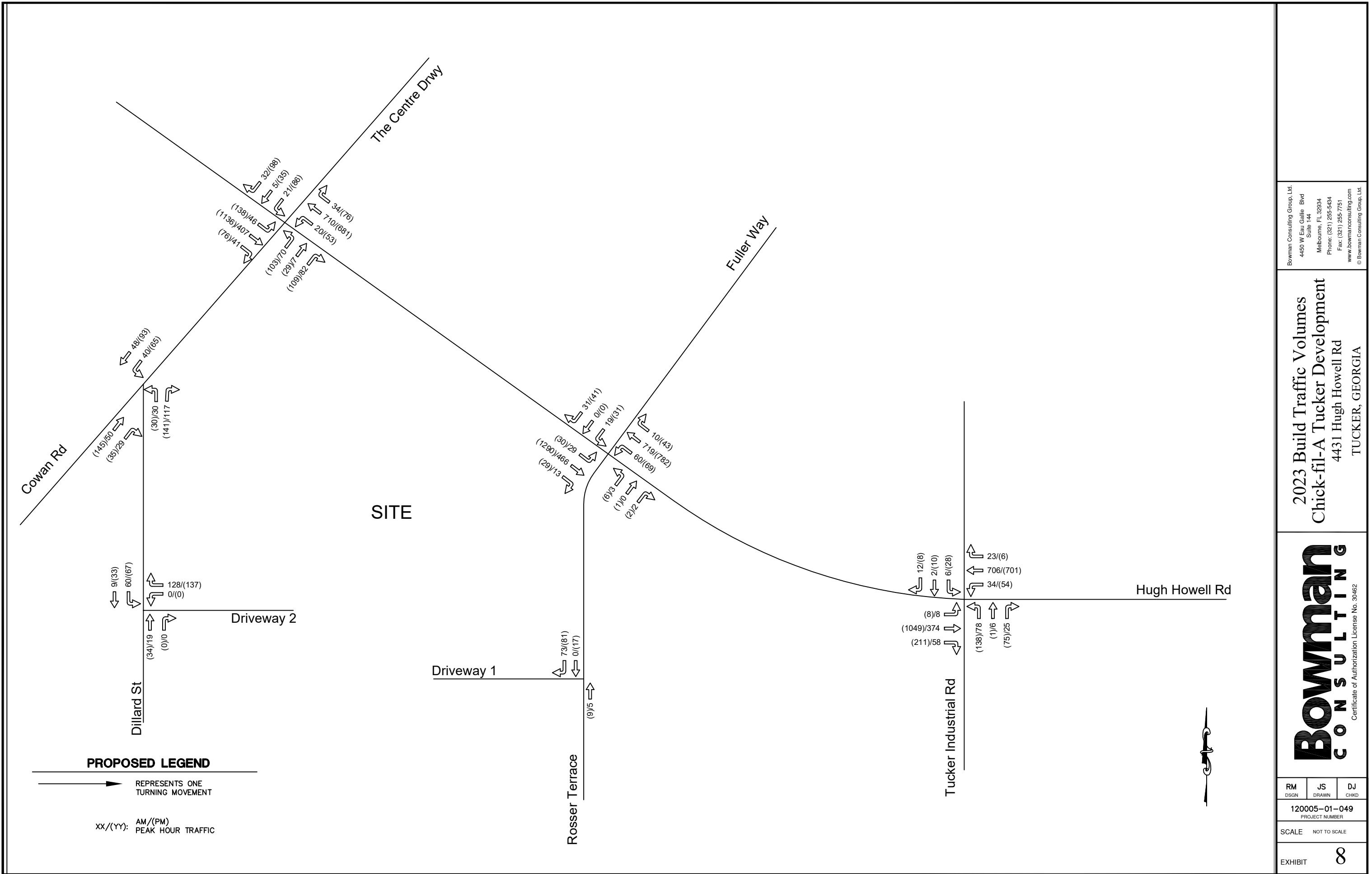


CFA Site Trips  
Chick-fil-A Tucker Development  
4431 Hugh Howell Rd  
TUCKER, GEORGIA



RM	JS	DJ
DSGN	DRAWN	CHKD
120005-01-049		
PROJECT NUMBER		
SCALE NOT TO SCALE		
EXHIBIT 7		

Bowman Consulting Group, Ltd.  
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Melbourne, FL 32934  
Phone: (321) 255-5434  
Fax: (321) 255-7751  
www.bowmanconsulting.com  
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## **APPENDIX E**

## Memorandum

**To:** Chick-fil-A, Inc.

**From:** Andrew J. Petersen, P.E. - Director  
Daniela Jurado – Analyst  
Rodrigo Meirelles -Analyst

**Date:** 06/18/2021

**Re:** Chick-Fil-A – Trip Generation Memorandum

---

Bowman Consulting has been retained by Chick-fil-A, Inc. to perform a Trip Generation at three fully operational Chick-Fil-A (CFA) Restaurants to determine the expected morning and evening peak hour trip generation rates for this facilities.

The purposes of the trip generation and stacking assessment are as follows:

- Determine the appropriate independent variable to assess the applicable CFA trip generation rates.
- Determine the expected trip generation rates for the CFA based on data collected from three existing CFA Sites.
- Determine if the Institute of Transportation Engineers (ITE) trip generation rates are consistent with calculated expected number of vehicular trips on the proposed CFA.
- Select the appropriate trip generation rates for the proposed CFA.

### Selected Sites

For the preparation of this assessment, three Chick-Fil-A sites have been evaluated. The following criteria has been considered for the site selection:

- Type of Facility (Chick-Fil-A Restaurant)
- Operation (Drive-thru and Indoor sitting)
- Location of the facilities

The following sites were selected for the data collection.

<b>Location 1</b>	<ul style="list-style-type: none"><li>• <b>Chick-Fil A Piedmont</b></li><li>• <b>Address:</b> 2580 Piedmont Rd NE, Atlanta, GA 30324</li><li>• <b>Surveyed Site Intensity:</b> 5,200 SF</li><li>• <b>AADT of Adjacent Street:</b> 44,100</li></ul>
<b>Location 2</b>	<ul style="list-style-type: none"><li>• <b>Chick-Fil A Druid Hills</b></li><li>• <b>Address:</b> 2340 N Druid Hills Rd NE, Atlanta, GA 30329</li><li>• <b>Surveyed Site Intensity:</b> 4,550 SF</li><li>• <b>AADT of Adjacent Street:</b> 56,300</li></ul>

## Location 3

- **Chick-Fil A Northside Dr**
- **Address:** 1100 Northside Dr NW, Atlanta, GA 30318
- **Surveyed Site Intensity:** 4,450SF
- **AADT of Adjacent Street:** 30,300

## Study Methodology

The study was based on average weekday entering/exiting volumes at each one of the selected Chick-Fil-A locations provided by the Atlanta Department of Transportation. The information corresponds to the average weekday data from two months in 2019 and February 2021 while school was in session.

The procedures and evaluation for this assessment are in accordance with the Institute of Traffic Engineers (ITE) Trip Generation Manual Handbook, 3<sup>rd</sup> Edition. The ITE is the leading resource for such data and provides traffic and parking related data for numerous land use and building types. Additionally, ITE provides trip and parking generation procedures to determine site specific trip and parking generation rates.

## Data Collection

For the purposes of this study the following data was collected:

- Site specific data for existing Chick Fil A sites: Square Footage and location.
- Published GDOT AADT counts.
- ITE Trip Generation information and variables.
- Average trips generated by the surveyed Chick Fil A sites provided by the Atlanta Department of Transportation, see **Attachment A**.

## Trip Generation Data

**Table 1** displays the trip generation data collected on the three existing sites.

**Table 1. Collected Trip Generation Data**

Facility	Location	Square Footage	Adjacent Street ADTs	Time	In	Out	Total
CFA	2580 Piedmont Rd NE, Atlanta, GA 30324	5,200	44,100	AM	221	221	442
				PM	202	202	404
CFA	2340 N Druid Hills Rd NE Atlanta, GA 30329	4,550	56,300	AM	184	248	432
				Noon	306	412	718
				PM	192	308	500
CFA	1100 Northside Dr NW Atlanta, GA 30318	4,450	30,300	AM	262	262	524
				Noon	263	263	526
				PM	164	164	328

To assess the trip generation rates for the Chick-Fil-A two independent variables were evaluated: Gross Floor Area (GFA), AADT Adjacent Street.

To select the independent variables, the best fitted curve models were evaluated based on the conceptual validity of signs of the equations and goodness of fit. The results of these evaluation are presented in **Table 2**.

**Table 2. Trip Generation Model evaluation**

Model	Independent Variable	Equation	R <sup>2</sup>	Signs Conceptually Valid	Acceptable Goodness of FIT
AM Models	1,000 SF GFA	$y = -64.523x + 771.41$	0.271	No	No
	AADT of Adjacent Street	$y = -0.0036x + 622.44$	0.8563	No	Yes
PM Models	1,000 SF GFA	$y = 11.859x + 354.53$	0.0031	Yes	No
	AADT of Adjacent Street	$y = 0.0066x + 123.51$	0.9895	Yes	Yes

Models containing the GFA variable were found to be not conceptually valid, with equations that reflect an inverse relationship between the GFA and the number of trips generated by the site and unacceptable goodness of fit.

Models using AADT of Adjacent Street as independent variable show acceptable goodness of fit. However, the AM model Based on AADT of adjacent street shows signs non conceptually valid, therefore, the weighted average was evaluated for this time period.

Based on the results presented in **Table 2** the Adjacent Street Traffic was selected as independent variable for both the morning and evening peak hours.

Following the procedures presented on the ITE *trip generation Handbook*, Chapter 9 and Appendix J, the use of the weighted average rate for the Morning peak was validated by comparing the weighted standard deviation with the weighted Average trip rate. **Table 3** presents the validation for the use of weighted average for the morning peak hour trip rate.

**Table 3. Validation of AM Weighted average trip generation**

Location	AADT of adjacent Steet	Peak Hour AM	Trip rate	Value	Value Squared	weight	Value Squared *weight
2580 Piedmont Rd	44,100	442	0.01002	0.00	0.0000005	0.34	0.00000015
2340 N Druid Hills Rd	56,300	432	0.00767	0.00	0.0000091	0.43	0.00000394
1100 Northside Dr	30,300	524	0.01729	0.01	0.0000435	0.23	0.00001009
Total	130,700.00	1,398.00	0.01070	-	Variance		0.00001418
					Weighted Sample Variance		0.00001773
					Weighted Std Dev		0.00
					Percentage of W StdDev		39%
					Acceptable (less than 55% Trip Rate)		Yes

As presented in **Table 3** the standard deviation of the data falls in the allowable 55% threshold according to the procedures presented on the ITE trip generation Handbook, Chapter 9 and Appendix J, therefore, the use of weighted average trip generation rate is acceptable.

The selected trip generation equations for CFA facilities are presented in **Table 4**.

**Table 4. Trip Generation equations for CFA facilities**

Model	Independent Variable	Equation
AM	AADT of Adjacent Street	$Total\ AM\ CFA\ trips = 0.0107 \times AADT\ of\ Adjacent\ Street$
PM	AADT of Adjacent Street	$Total\ PM\ CFA\ trips = 0.0066 \times AADT\ of\ Adjacent\ Street + 123.51$

The evening peak hour model is the resulting fitted curve with AADT of adjacent street as independent variable. The trip generation rate for the morning peak hour is 0.0107 trips/AADT of Adjacent Street Traffic.

## Conclusions and Recommendations

- Both, the morning and evening models containing the GFA variable were found to have unacceptable goodness of fit, the morning models is not conceptually valid, with an



equation that reflects an inverse relationship between the GFA, and the number of trips generated by the site.

- Models using AADT of Adjacent Street as independent variable show acceptable goodness of fit.
- The evening peak hour model is fitted curve with AADT of adjacent street as independent variable.
- The AM model Based on AADT of adjacent street shows signs non conceptually valid therefore, the weighted average was evaluated for this time period.
- The evaluation of the data for the morning peak hour shows that the standard deviation of the data falls in the allowable 55% threshold according to the procedures presented on the ITE trip generation Handbook, Chapter 9 and Appendix J, therefore, the use of weighted average trip generation rate is acceptable.
- The trip generation rate for the morning peak hour is 0.0107 trips/AADT of Adjacent Street Traffic.

## ATTACHMENT A

**From:** Rome, Christopher <crome@AtlantaGa.Gov>  
**Sent:** Wednesday, June 9, 2021 10:32 AM  
**To:** Daniela Jurado; Rodriguez, Juan C.; Moore, Clyde  
**Cc:** Rodrigo Meirelles; Andrew Petersen; Bridgette Ganter; Smoot-Madison, Betty; Brown, Barrington G.  
**Subject:** [EXTERNAL] RE: Traffic Impact Study Methodology Chick-Fil-A Cheshire Bridge Rd & Sheridan Rd

1100 Northside Dr

- AM Peak – 262 trips in, assume 262 trips out– 524 total trips
- Noon Peak – 263 trips in, assume 263 trips out – 526 total trips
- PM Peak – 164 trips in, assume 164 trips out – 328 total trips

Have you contacted GDOT's RTOP program or collected TMC's already at the I-85 ramps? That data will be more accurate than StreetLight Insight TMCs which are still in beta.

**Chris Rome, PE, PTOE**

Senior Multimodal Transportation Engineer  
City of Atlanta Department of Transportation  
470-653-3016  
[crome@atlantaga.gov](mailto:crome@atlantaga.gov)

---

**From:** Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>  
**Sent:** Wednesday, June 9, 2021 8:39 AM  
**To:** Rome, Christopher <[crome@AtlantaGa.Gov](mailto:crome@AtlantaGa.Gov)>; Rodriguez, Juan C. <[JCRodriguez@AtlantaGa.Gov](mailto:JCRodriguez@AtlantaGa.Gov)>; Moore, Clyde <[CMoore@AtlantaGa.Gov](mailto:CMoore@AtlantaGa.Gov)>  
**Cc:** Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>; Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>; Bridgette Ganter <[bganter@bowman.com](mailto:bganter@bowman.com)>; Smoot-Madison, Betty <[bsmoot-madison@AtlantaGa.Gov](mailto:bsmoot-madison@AtlantaGa.Gov)>; Brown, Barrington G. <[BGBrown@AtlantaGa.Gov](mailto:BGBrown@AtlantaGa.Gov)>  
**Subject:** [EXTERNAL] RE: Traffic Impact Study Methodology Chick-Fil-A Cheshire Bridge Rd & Sheridan Rd

Good Morning Chris,

Would it be possible to also pull out the Turning movements for Cheshire Bridge at I-85 ramps for the am noon and pm?

Thank you,

**DANIELA JURADO**

Project Manager | **BOWMAN**  
4450 W Eau Gallie Boulevard, Suite 144, Melbourne, FL 32934  
O: (321) 270-8905 | D: (321) 270-8977 | M: (786) 370-2762  
[djurado@bowman.com](mailto:djurado@bowman.com) | [bowman.com](http://bowman.com)



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**From:** Rome, Christopher <[crome@AtlantaGa.Gov](mailto:crome@AtlantaGa.Gov)>  
**Sent:** Tuesday, June 8, 2021 7:09 PM  
**To:** Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>; Rodriguez, Juan C. <[JCRodriguez@AtlantaGa.Gov](mailto:JCRodriguez@AtlantaGa.Gov)>; Moore, Clyde <[CMoore@AtlantaGa.Gov](mailto:CMoore@AtlantaGa.Gov)>  
**Cc:** Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>; Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>; Bridgette Ganter <[bganter@bowman.com](mailto:bganter@bowman.com)>; Smoot-Madison, Betty <[bsmoot-madison@AtlantaGa.Gov](mailto:bsmoot-madison@AtlantaGa.Gov)>; Brown, Barrington G. <[BGBrown@AtlantaGa.Gov](mailto:BGBrown@AtlantaGa.Gov)>  
**Subject:** [EXTERNAL] RE: Traffic Impact Study Methodology Chick-Fil-A Cheshire Bridge Rd & Sheridan Rd

Tucker is outside of our data licensing geographic limits.  
I'll pull the data from the Northside Dr site tomorrow.

**Chris Rome, PE, PTOE**

Senior Multimodal Transportation Engineer  
City of Atlanta Department of Transportation  
470-653-3016  
[crome@atlantaga.gov](mailto:crome@atlantaga.gov)

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**From:** Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>  
**Sent:** Tuesday, June 8, 2021 7:00 PM  
**To:** Rome, Christopher <[crome@AtlantaGa.Gov](mailto:crome@AtlantaGa.Gov)>; Rodriguez, Juan C. <[JCRodriguez@AtlantaGa.Gov](mailto:JCRodriguez@AtlantaGa.Gov)>; Moore, Clyde <[CMoore@AtlantaGa.Gov](mailto:CMoore@AtlantaGa.Gov)>  
**Cc:** Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>; Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>; Bridgette Ganter <[bganter@bowman.com](mailto:bganter@bowman.com)>; Smoot-Madison, Betty <[bsmoot-madison@AtlantaGa.Gov](mailto:bsmoot-madison@AtlantaGa.Gov)>; Brown, Barrington G. <[BGBrown@AtlantaGa.Gov](mailto:BGBrown@AtlantaGa.Gov)>  
**Subject:** [EXTERNAL] RE: Traffic Impact Study Methodology Chick-Fil-A Cheshire Bridge Rd & Sheridan Rd

Thank you for the information. We would like to have the information for the following sites:

<b>Location</b>	<b>AADT</b>
1100 Northside Dr NW	30,300
4340 Hugh Howell Rd, Tucker, GA 30084	25,300

The reason is, we also want to evaluate the trip generation based on the AADT of adjacent street.

Thank you in advance.

Sincerely,

**DANIELA JURADO**

Project Manager | **BOWMAN**  
4450 W Eau Gallie Boulevard, Suite 144, Melbourne, FL 32934  
O: (321) 270-8905 | D: (321) 270-8977 | M: (786) 370-2762  
[djurado@bowman.com](mailto:djurado@bowman.com) | [bowman.com](http://bowman.com)



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**From:** Rome, Christopher <[crome@AtlantaGa.Gov](mailto:crome@AtlantaGa.Gov)>

**Sent:** Tuesday, June 8, 2021 5:21 PM

**To:** Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>; Rodriguez, Juan C. <[JCRodriguez@AtlantaGa.Gov](mailto:JCRodriguez@AtlantaGa.Gov)>;

Moore, Clyde <[CMoore@AtlantaGa.Gov](mailto:CMoore@AtlantaGa.Gov)>

**Cc:** Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>; Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>;

Bridgette Ganter <[bganter@bowman.com](mailto:bganter@bowman.com)>; Smoot-Madison, Betty <[bsmoot-madison@AtlantaGa.Gov](mailto:bsmoot-madison@AtlantaGa.Gov)>;

Brown, Barrington G. <[BGBrown@AtlantaGa.Gov](mailto:BGBrown@AtlantaGa.Gov)>

**Subject:** [EXTERNAL] RE: Traffic Impact Study Methodology Chick-Fil-A Cheshire Bridge Rd & Sheridan Rd

I think it depends on the site characteristics if the Miami site is similar.

I used our StreetLight Data Insight platform access to look at the number of trips entering two Chick-fil-A locations in Atlanta. This is average weekday (M-Th) information from 2 months in 2019 and February 2021 when school was in session. The 1 standard deviation from the ITE land use code trip generation seems too low for an accurate assessment of site impact. If you have a specific site location in Atlanta that you think will be more representative of the conditions for the proposed site at Cheshire Bridge and Sheridan Rd, let me know and I can pull data for those locations.

2580 Piedmont Rd

- AM Peak – 221 trips in, assume 221 trips out– 442 total trips
- Noon Peak – 332 trips in, assume 332 trips out – 664 total trips
- PM Peak – 202 trips in, assume 202 trips out – 404 total trips

2340 N Druid Hills Rd

- AM Peak – 184 trips in, 248 trips out– 432 total trips
- Noon Peak – 306 trips in, 412 trips out – 718 total trips
- PM Peak – 192 trips in, 308 trips out – 500 total trips

**Chris Rome, PE, PTOE**

Senior Multimodal Transportation Engineer

City of Atlanta Department of Transportation

470-653-3016

[crome@atlantaga.gov](mailto:crome@atlantaga.gov)

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**From:** Daniela Jurado <[djurado@bowman.com](mailto:djurado@bowman.com)>

**Sent:** Tuesday, June 8, 2021 2:36 PM

**To:** Rome, Christopher <[crome@AtlantaGa.Gov](mailto:crome@AtlantaGa.Gov)>; Rodriguez, Juan C. <[JCRodriguez@AtlantaGa.Gov](mailto:JCRodriguez@AtlantaGa.Gov)>;

Moore, Clyde <[CMoore@AtlantaGa.Gov](mailto:CMoore@AtlantaGa.Gov)>

**Cc:** Rodrigo Meirelles <[rmeirelles@bowman.com](mailto:rmeirelles@bowman.com)>; Andrew Petersen <[apetersen@bowman.com](mailto:apetersen@bowman.com)>;

Bridgette Ganter <[bganter@bowman.com](mailto:bganter@bowman.com)>; Smoot-Madison, Betty <[bsmoot-madison@AtlantaGa.Gov](mailto:bsmoot-madison@AtlantaGa.Gov)>;

Brown, Barrington G. <[BGBrown@AtlantaGa.Gov](mailto:BGBrown@AtlantaGa.Gov)>




















**Subject:** [EXTERNAL] RE: Traffic Impact Study Methodology Chick-Fil-A Cheshire Bridge Rd & Sheridan Rd








Good Afternoon Chris,

## **APPENDIX F**

## 2023 NO BUILD CONDITIONS Capacity Analysis



												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	441	0	0	752	10	3	0	2	19	0	31
Future Volume (vph)	29	441	0	0	752	10	3	0	2	19	0	31
Adj. Flow (vph)	31	474	0	0	809	11	3	0	2	20	0	33
Lane Group Flow (vph)	31	474	0	0	809	11	0	5	0	0	53	0
Sign Control	Free			Free			Stop			Stop		
Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 34.1%						ICU Level of Service A						
Analysis Period (min) 15												

Intersection												
Int Delay, s/veh	0.6											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	441	0	0	752	10	3	0	2	19	0	31
Future Vol, veh/h	29	441	0	0	752	10	3	0	2	19	0	31
Conflicting Peds, #/hr	1	0	1	1	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	100	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	7	3	0	0	2	10	33	0	0	10	0	0
Mvmt Flow	31	474	0	0	809	11	3	0	2	20	0	33

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	821	0	0	475	0	0	942	1358	238	1109	1347	406
Stage 1	-	-	-	-	-	-	537	537	-	810	810	-
Stage 2	-	-	-	-	-	-	405	821	-	299	537	-
Critical Hdwy	4.24	-	-	4.1	-	-	8.16	6.5	6.9	7.7	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	7.16	5.5	-	6.7	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.16	5.5	-	6.7	5.5	-
Follow-up Hdwy	2.27	-	-	2.2	-	-	3.83	4	3.3	3.6	4	3.3
Pot Cap-1 Maneuver	1139	-	-	*1369	-	-	*533	444	*912	*568	455	*796
Stage 1	-	-	-	-	-	-	*723	712	-	*726	655	-
Stage 2	-	-	-	-	-	-	*687	645	-	*837	712	-
Platoon blocked, %	1	-	-	1	-	-	1	1	1	1	1	1
Mov Cap-1 Maneuver	1138	-	-	*1368	-	-	*500	431	*911	*554	442	*796
Mov Cap-2 Maneuver	-	-	-	-	-	-	*528	491	-	*593	508	-
Stage 1	-	-	-	-	-	-	*702	692	-	*706	654	-
Stage 2	-	-	-	-	-	-	*658	644	-	*812	692	-

Approach	EB	WB	NB	SB
HCM Control Delay, s	0.5	0	10.7	9.7
HCM LOS			B	A





















Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	635	1138	-	-	*1368	-	-	796
HCM Lane V/C Ratio	0.008	0.027	-	-	-	-	-	0.042
HCM Control Delay (s)	10.7	8.3	-	-	0	-	-	9.7
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0.1	-	-	0	-	-	0.1

Notes			
~: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

Lanes, Volumes, Timings  
2: Cowan Rd/The Centre Driveway & Hugh Howell Rd

2023 NO BUILD - AM

03/09/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	420	11	20	743	34	22	7	31	21	5	32
Future Volume (vph)	46	420	11	20	743	34	22	7	31	21	5	32
Adj. Flow (vph)	49	452	12	22	799	37	24	8	33	23	5	34
Lane Group Flow (vph)	49	464	0	22	799	37	0	65	0	23	39	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	2	8	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		5.0	10.0	10.0	7.0	7.0		5.0	7.0	
Minimum Split (s)	13.2	27.4		10.3	32.1	32.1	35.5	35.5		11.1	35.5	
Total Split (s)	26.0	85.0		17.0	76.0	76.0	42.0	42.0		16.0	58.0	
Total Split (%)	16.3%	53.1%		10.6%	47.5%	47.5%	26.3%	26.3%		10.0%	36.3%	
Maximum Green (s)	19.8	78.9		11.7	69.9	69.9	35.5	35.5		9.9	51.5	
Yellow Time (s)	3.4	4.6		3.1	4.6	4.6	3.5	3.5		3.1	3.5	
All-Red Time (s)	2.8	1.5		2.2	1.5	1.5	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.1		5.3	6.1	6.1		6.5		6.1	6.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		
Vehicle Extension (s)	3.0	5.0		3.0	5.0	5.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	0.2	3.0		0.2	3.0	3.0	0.2	0.2		0.2	0.2	
Time Before Reduce (s)	0.0	20.0		0.0	20.0	20.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	10.0		0.0	10.0	10.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0			7.0	7.0	7.0	7.0			7.0	
Flash Dont Walk (s)		10.0			19.0	19.0	22.0	22.0			22.0	
Pedestrian Calls (#/hr)		0			0	0	0	0			0	
Act Effct Green (s)	126.1	121.8		123.8	118.1	118.1		9.6		19.0	18.6	
Actuated g/C Ratio	0.79	0.76		0.77	0.74	0.74		0.06		0.12	0.12	
v/c Ratio	0.09	0.18		0.03	0.31	0.03		0.55		0.17	0.19	
Control Delay	5.0	7.1		4.5	8.0	0.1		58.3		60.5	21.6	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	5.0	7.1		4.5	8.0	0.1		58.3		60.5	21.6	
LOS	A	A		A	A	A		E		E	C	
Approach Delay		6.9			7.6			58.3			36.0	
Approach LOS		A			A			E			D	
Queue Length 50th (ft)	10	79		4	144	0		36		21	5	
Queue Length 95th (ft)	25	120		12	202	0		88		48	40	
Internal Link Dist (ft)		969			335			119			430	
Turn Bay Length (ft)	125			115								
Base Capacity (vph)	634	2603		801	2561	1202		361		147	519	
Starvation Cap Reductn	0	0		0	0	0		0		0	0	
Spillback Cap Reductn	0	0		0	0	0		0		0	0	
Storage Cap Reductn	0	0		0	0	0		0		0	0	
Reduced v/c Ratio	0.08	0.18		0.03	0.31	0.03		0.18		0.16	0.08	
Intersection Summary												

Baseline

Synchro 10 Report  
Page 3

# Lanes, Volumes, Timings 2: Cowan Rd/The Centre Driveway & Hugh Howell Rd

2023 NO BUILD - AM  
03/09/2022

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 148.9 (93%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.55

Intersection Signal Delay: 10.7

Intersection LOS: B

Intersection Capacity Utilization 53.3%

ICU Level of Service A

Analysis Period (min) 15





















Splits and Phases: 2: Cowan Rd/The Centre Driveway & Hugh Howell Rd



HCM 6th Signalized Intersection Summary  
2: Cowan Rd/The Centre Driveway & Hugh Howell Rd

2023 NO BUILD - AM




















03/09/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	420	11	20	743	34	22	7	31	21	5	32
Future Volume (veh/h)	46	420	11	20	743	34	22	7	31	21	5	32
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	1900	1826	1826	1900	1841	1900	1900	1900	1900	1752	1900	1900
Adj Flow Rate, veh/h	49	452	12	22	799	37	24	8	33	23	5	34
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, %	0	5	5	0	4	0	0	0	0	10	0	0
Cap, veh/h	603	2612	69	759	2558	1177	56	17	43	148	24	161
Arrive On Green	0.04	0.76	0.76	0.04	1.00	1.00	0.05	0.05	0.05	0.02	0.11	0.11
Sat Flow, veh/h	1810	3452	92	1810	3497	1609	471	309	804	1668	211	1432
Grp Volume(v), veh/h	49	227	237	22	799	37	65	0	0	23	0	39
Grp Sat Flow(s),veh/h/ln	1810	1735	1809	1810	1749	1609	1583	0	0	1668	0	1642
Q Serve(g_s), s	1.0	5.9	5.9	0.5	0.0	0.0	4.9	0.0	0.0	2.0	0.0	3.5
Cycle Q Clear(g_c), s	1.0	5.9	5.9	0.5	0.0	0.0	6.4	0.0	0.0	2.0	0.0	3.5
Prop In Lane	1.00		0.05	1.00		1.00	0.37		0.51	1.00		0.87
Lane Grp Cap(c), veh/h	603	1312	1369	759	2558	1177	116	0	0	148	0	184
V/C Ratio(X)	0.08	0.17	0.17	0.03	0.31	0.03	0.56	0.00	0.00	0.16	0.00	0.21
Avail Cap(c_a), veh/h	757	1312	1369	856	2558	1177	376	0	0	218	0	529
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	4.3	5.5	5.5	4.9	0.0	0.0	74.6	0.0	0.0	67.7	0.0	64.6
Incr Delay (d2), s/veh	0.1	0.3	0.3	0.0	0.3	0.0	4.1	0.0	0.0	0.5	0.0	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	2.0	2.1	0.2	0.1	0.0	2.8	0.0	0.0	0.9	0.0	1.5
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	4.4	5.7	5.7	4.9	0.3	0.0	78.7	0.0	0.0	68.2	0.0	65.2
LnGrp LOS	A	A	A	A	A	A	E	A	A	E	A	E
Approach Vol, veh/h	513		858				65		62			
Approach Delay, s/veh	5.6		0.4				78.7		66.3			
Approach LOS	A		A				E		E			
Timer - Assigned Phs	1	2	4		5	6	7	8				
Phs Duration (G+Y+Rc), s	12.4	123.1	24.4		8.4	127.1	9.3	15.1				
Change Period (Y+Rc), s	* 6.2	6.1	6.5		* 5.3	6.1	6.1	6.5				
Max Green Setting (Gmax), s	* 20	69.9	51.5		* 12	78.9	9.9	35.5				
Max Q Clear Time (g_c+I1), s	3.0	2.0	5.5		2.5	7.9	4.0	8.4				
Green Ext Time (p_c), s	0.1	13.6	0.2		0.0	5.9	0.0	0.3				
Intersection Summary												
HCM 6th Ctrl Delay	8.3											
HCM 6th LOS	A											
Notes												

Lanes, Volumes, Timings  
3: Tucker Industrial Rd & Hugh Howell Rd

2023 NO BUILD - AM

03/09/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	355	55	34	686	23	74	6	25	6	2	9
Future Volume (vph)	5	355	55	34	686	23	74	6	25	6	2	9
Adj. Flow (vph)	6	394	61	38	762	26	82	7	28	7	2	10
Lane Group Flow (vph)	6	455	0	38	788	0	0	117	0	0	19	0
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases							4			8		
Detector Phase	1	6		5	2		4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	11.1	31.4		10.9	31.4		31.1	31.1		33.9	33.9	
Total Split (s)	15.0	89.0		15.0	89.0		56.0	56.0		56.0	56.0	
Total Split (%)	9.4%	55.6%		9.4%	55.6%		35.0%	35.0%		35.0%	35.0%	
Maximum Green (s)	8.9	82.6		9.1	82.6		49.9	49.9		50.1	50.1	
Yellow Time (s)	3.5	4.7		3.3	4.7		3.3	3.3		3.0	3.0	
All-Red Time (s)	2.6	1.7		2.6	1.7		2.8	2.8		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.1	6.4		5.9	6.4			6.1			5.9	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	0.2	3.0		0.2	3.0		0.2	0.2		0.2	0.2	
Time Before Reduce (s)	0.0	20.0		0.0	20.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	15.0		0.0	15.0		0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		18.0			18.0		18.0	18.0		21.0	21.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effct Green (s)	6.2	116.9		9.1	127.0			17.8			18.0	
Actuated g/C Ratio	0.04	0.73		0.06	0.79			0.11			0.11	
v/c Ratio	0.09	0.18		0.42	0.29			0.72			0.10	
Control Delay	67.4	9.2		85.4	5.6			85.2			38.4	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	67.4	9.2		85.4	5.6			85.2			38.4	
LOS	E	A		F	A			F			D	
Approach Delay		9.9			9.3			85.2			38.4	
Approach LOS		A			A			F			D	
Queue Length 50th (ft)	5	108		39	90			110			9	
Queue Length 95th (ft)	20	171		79	203			175			35	
Internal Link Dist (ft)		1068			568			739			1148	
Turn Bay Length (ft)	150			100								
Base Capacity (vph)	100	2462		101	2760			439			539	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.06	0.18		0.38	0.29			0.27			0.04	
Intersection Summary												

Baseline

Synchro 10 Report  
Page 6

# Lanes, Volumes, Timings 3: Tucker Industrial Rd & Hugh Howell Rd

2023 NO BUILD - AM  
03/09/2022

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 38.6 (24%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.72

Intersection Signal Delay: 16.1

Intersection LOS: B

Intersection Capacity Utilization 50.1%

ICU Level of Service A

Analysis Period (min) 15

Splits and Phases: 3: Tucker Industrial Rd & Hugh Howell Rd

































# HCM 6th Signalized Intersection Summary




## 3: Tucker Industrial Rd & Hugh Howell Rd

2023 NO BUILD - AM

03/09/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	355	55	34	686	23	74	6	25	6	2	9
Future Volume (veh/h)	5	355	55	34	686	23	74	6	25	6	2	9
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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	1900	1826	1826	1722	1856	1856	1900	1976	1900	1900	1976	1900
Adj Flow Rate, veh/h	6	394	61	38	762	26	82	7	28	7	2	10
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	5	5	12	3	3	0	0	0	0	0	0
Cap, veh/h	13	2297	353	48	2730	93	139	10	35	76	30	83
Arrive On Green	0.01	1.00	1.00	0.03	0.78	0.78	0.09	0.09	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1810	3005	461	1640	3478	119	1099	104	378	489	333	913
Grp Volume(v), veh/h	6	226	229	38	386	402	117	0	0	19	0	0
Grp Sat Flow(s),veh/h/ln	1810	1735	1731	1640	1763	1834	1581	0	0	1735	0	0
Q Serve(g_s), s	0.5	0.0	0.0	3.7	9.6	9.7	10.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.5	0.0	0.0	3.7	9.6	9.7	11.5	0.0	0.0	1.5	0.0	0.0
Prop In Lane	1.00		0.27	1.00		0.06	0.70		0.24	0.37		0.53
Lane Grp Cap(c), veh/h	13	1326	1324	48	1384	1440	183	0	0	189	0	0
V/C Ratio(X)	0.45	0.17	0.17	0.80	0.28	0.28	0.64	0.00	0.00	0.10	0.00	0.00
Avail Cap(c_a), veh/h	101	1326	1324	93	1384	1440	523	0	0	545	0	0
HCM Platoon Ratio	2.00	2.00	2.00	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	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	78.5	0.0	0.0	77.2	4.7	4.7	71.1	0.0	0.0	66.7	0.0	0.0
Incr Delay (d2), s/veh	22.3	0.3	0.3	25.3	0.5	0.5	3.7	0.0	0.0	0.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.1	0.1	1.9	3.2	3.3	4.9	0.0	0.0	0.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	100.8	0.3	0.3	102.5	5.2	5.2	74.8	0.0	0.0	67.0	0.0	0.0
LnGrp LOS	F	A	A	F	A	A	E	A	A	E	A	A
Approach Vol, veh/h	461		826				117			19		
Approach Delay, s/veh	1.6		9.7				74.8			67.0		
Approach LOS	A		A				E			E		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.3	132.0		20.7	10.5	128.7		20.7				
Change Period (Y+Rc), s	6.1	* 6.4		6.1	* 5.9	* 6.4		* 6.1				
Max Green Setting (Gmax), s	8.9	* 83		49.9	* 9.1	* 83		* 50				
Max Q Clear Time (g_c+I1), s	2.5	11.7		13.5	5.7	2.0		3.5				
Green Ext Time (p_c), s	0.0	11.8		0.6	0.0	5.8		0.1				
Intersection Summary												
HCM 6th Ctrl Delay	13.2											
HCM 6th LOS	B											
Notes												




















						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	53	2	7	51	4	15
Future Volume (vph)	53	2	7	51	4	15
Adj. Flow (vph)	72	3	9	69	5	20
Lane Group Flow (vph)	75	0	0	78	25	0
Sign Control	Free			Free	Stop	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 18.6%				ICU Level of Service A		
Analysis Period (min) 15						








Intersection						
Int Delay, s/veh	1.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	53	2	7	51	4	15
Future Vol, veh/h	53	2	7	51	4	15
Conflicting Peds, #/hr	0	0	0	0	1	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	74	74	74	74	74	74
Heavy Vehicles, %	4	50	0	8	0	0
Mvmt Flow	72	3	9	69	5	20
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	75	0	162	74
Stage 1	-	-	-	-	74	-
Stage 2	-	-	-	-	88	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1537	-	834	993
Stage 1	-	-	-	-	954	-
Stage 2	-	-	-	-	940	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1537	-	828	993
Mov Cap-2 Maneuver	-	-	-	-	828	-
Stage 1	-	-	-	-	954	-
Stage 2	-	-	-	-	933	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		0.9		8.9	
HCM LOS	A					
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	953	-	-	1537	-	
HCM Lane V/C Ratio	0.027	-	-	0.006	-	
HCM Control Delay (s)	8.9	-	-	7.4	0	
HCM Lane LOS	A	-	-	A	A	
HCM 95th %tile Q(veh)	0.1	-	-	0	-	

Lanes, Volumes, Timings  
1: Rosser Terrace/Fuller Way & Hugh Howell Rd

2023 NO BUILD - PM

03/09/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	1264	15	2	819	43	6	1	2	31	0	41
Future Volume (vph)	30	1264	15	2	819	43	6	1	2	31	0	41
Adj. Flow (vph)	31	1317	16	2	853	45	6	1	2	32	0	43
Lane Group Flow (vph)	31	1333	0	2	853	45	0	9	0	0	75	0
Sign Control	Free		Free				Stop			Stop		
Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 46.5%						ICU Level of Service A						
Analysis Period (min) 15												

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	30	1264	15	2	819	43	6	1	2	31	0	41
Future Vol, veh/h	30	1264	15	2	819	43	6	1	2	31	0	41
Conflicting Peds, #/hr	0	0	2	2	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	100	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	4	3	0	0	3	7	0	0	0	0	0	10
Mvmt Flow	31	1317	16	2	853	45	6	1	2	32	0	43

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	898	0	0	1335	0	0	1820	2291	669	1578	2254	427
Stage 1	-	-	-	-	-	-	1389	1389	-	857	857	-
Stage 2	-	-	-	-	-	-	431	902	-	721	1397	-
Critical Hdwy	4.18	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.24	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.4
Pot Cap-1 Maneuver	*1118	-	-	*878	-	-	*187	*56	*585	*412	*62	*736
Stage 1	-	-	-	-	-	-	*551	*483	-	*715	*626	-
Stage 2	-	-	-	-	-	-	*715	*626	-	*551	*477	-
Platoon blocked, %	1	-	-	1	-	-	1	1	1	1	1	1
Mov Cap-1 Maneuver	*1118	-	-	*876	-	-	*171	*54	*583	*400	*60	*736
Mov Cap-2 Maneuver	-	-	-	-	-	-	*343	*263	-	*448	*268	-
Stage 1	-	-	-	-	-	-	*535	*468	-	*695	*624	-
Stage 2	-	-	-	-	-	-	*672	*624	-	*533	*462	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0			15.2			10.2		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	364	* 1118	-	-	* 876	-	-	736
HCM Lane V/C Ratio	0.026	0.028	-	-	0.002	-	-	0.058
HCM Control Delay (s)	15.2	8.3	-	-	9.1	-	-	10.2
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0	-	-	0.2





















  

Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon						

Lanes, Volumes, Timings  
2: Cowan Rd/The Centre Driveway & Hugh Howell Rd

2023 NO BUILD - PM

03/09/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	138	1151	42	53	718	76	51	29	54	86	35	98
Future Volume (vph)	138	1151	42	53	718	76	51	29	54	86	35	98
Adj. Flow (vph)	148	1238	45	57	772	82	55	31	58	92	38	105
Lane Group Flow (vph)	148	1283	0	57	772	82	0	144	0	92	143	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	2	8	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		5.0	10.0	10.0	7.0	7.0		5.0	7.0	
Minimum Split (s)	13.2	27.4		10.3	32.1	32.1	35.5	35.5		11.1	35.5	
Total Split (s)	16.0	94.0		15.0	93.0	93.0	36.0	36.0		15.0	51.0	
Total Split (%)	10.0%	58.8%		9.4%	58.1%	58.1%	22.5%	22.5%		9.4%	31.9%	
Maximum Green (s)	9.8	87.9		9.7	86.9	86.9	29.5	29.5		8.9	44.5	
Yellow Time (s)	3.4	4.6		3.1	4.6	4.6	3.5	3.5		3.1	3.5	
All-Red Time (s)	2.8	1.5		2.2	1.5	1.5	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.1		5.3	6.1	6.1		6.5		6.1	6.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		
Vehicle Extension (s)	3.0	5.0		3.0	5.0	5.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	0.2	3.0		0.2	3.0	3.0	0.2	0.2		0.2	0.2	
Time Before Reduce (s)	0.0	20.0		0.0	20.0	20.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	10.0		0.0	10.0	10.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0			7.0	7.0	7.0	7.0			7.0	
Flash Dont Walk (s)		10.0			19.0	19.0	22.0	22.0			22.0	
Pedestrian Calls (#/hr)		0			0	0	0	0			0	
Act Effct Green (s)	111.0	102.9		105.1	97.2	97.2		19.4		34.8	34.4	
Actuated g/C Ratio	0.69	0.64		0.66	0.61	0.61		0.12		0.22	0.22	
v/c Ratio	0.32	0.57		0.21	0.36	0.08		0.76		0.41	0.35	
Control Delay	10.2	18.8		8.7	13.6	0.5		82.2		55.8	23.1	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	10.2	18.8		8.7	13.6	0.5		82.2		55.8	23.1	
LOS	B	B		A	B	A		F		E	C	
Approach Delay		17.9			12.1			82.2			35.9	
Approach LOS		B			B			F			D	
Queue Length 50th (ft)	46	394		13	166	0		129		81	49	
Queue Length 95th (ft)	85	541		m27	199	m3		201		127	109	
Internal Link Dist (ft)		969			335			94			430	
Turn Bay Length (ft)	125			115								
Base Capacity (vph)	476	2245		298	2129	1001		279		228	500	
Starvation Cap Reductn	0	0		0	0	0		0		0	0	
Spillback Cap Reductn	0	0		0	0	0		0		0	0	
Storage Cap Reductn	0	0		0	0	0		0		0	0	
Reduced v/c Ratio	0.31	0.57		0.19	0.36	0.08		0.52		0.40	0.29	
Intersection Summary												

Baseline

Synchro 10 Report  
Page 3

# Lanes, Volumes, Timings 2: Cowan Rd/The Centre Driveway & Hugh Howell Rd

2023 NO BUILD - PM

03/09/2022

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 102.9 (64%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.76

Intersection Signal Delay: 20.9

Intersection LOS: C

Intersection Capacity Utilization 73.8%

ICU Level of Service D

Analysis Period (min) 15

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

Splits and Phases: 2: Cowan Rd/The Centre Driveway & Hugh Howell Rd

























# HCM 6th Signalized Intersection Summary

## 2: Cowan Rd/The Centre Driveway & Hugh Howell Rd

2023 NO BUILD - PM

03/09/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	1151	42	53	718	76	51	29	54	86	35	98
Future Volume (veh/h)	138	1151	42	53	718	76	51	29	54	86	35	98
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	1900	1856	1856	1900	1856	1870	1900	1900	1900	1885	1900	1900
Adj Flow Rate, veh/h	148	1238	45	57	772	82	55	31	58	92	38	105
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, %	0	3	3	0	3	2	0	0	0	1	0	0
Cap, veh/h	540	2270	82	299	2234	1004	88	45	69	255	91	252
Arrive On Green	0.04	0.65	0.65	0.06	1.00	1.00	0.11	0.11	0.11	0.06	0.21	0.21
Sat Flow, veh/h	1810	3470	126	1810	3526	1585	510	403	616	1795	445	1231
Grp Volume(v), veh/h	148	629	654	57	772	82	144	0	0	92	0	143
Grp Sat Flow(s),veh/h/ln	1810	1763	1833	1810	1763	1585	1529	0	0	1795	0	1676
Q Serve(g_s), s	4.6	30.7	30.7	1.8	0.0	0.0	12.8	0.0	0.0	7.1	0.0	11.9
Cycle Q Clear(g_c), s	4.6	30.7	30.7	1.8	0.0	0.0	14.7	0.0	0.0	7.1	0.0	11.9
Prop In Lane	1.00		0.07	1.00		1.00	0.38		0.40	1.00		0.73
Lane Grp Cap(c), veh/h	540	1153	1199	299	2234	1004	201	0	0	255	0	344
V/C Ratio(X)	0.27	0.55	0.55	0.19	0.35	0.08	0.71	0.00	0.00	0.36	0.00	0.42
Avail Cap(c_a), veh/h	572	1153	1199	357	2234	1004	311	0	0	255	0	466
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	9.1	14.9	14.9	11.7	0.0	0.0	69.6	0.0	0.0	56.8	0.0	55.3
Incr Delay (d2), s/veh	0.3	1.9	1.8	0.3	0.4	0.2	4.7	0.0	0.0	0.9	0.0	0.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.8	12.2	12.6	0.7	0.1	0.0	6.1	0.0	0.0	3.3	0.0	5.1
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	9.3	16.7	16.7	12.1	0.4	0.2	74.2	0.0	0.0	57.6	0.0	56.1
LnGrp LOS	A	B	B	B	A	A	E	A	A	E	A	E
Approach Vol, veh/h	1431				911				144			
Approach Delay, s/veh	15.9				1.1				74.2			
Approach LOS	B				A				E			
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.2	107.5		39.3	9.9	110.8	15.0	24.3				
Change Period (Y+Rc), s	* 6.2	6.1		6.5	* 5.3	6.1	6.1	6.5				
Max Green Setting (Gmax), s	* 9.8	86.9		44.5	* 9.7	87.9	8.9	29.5				
Max Q Clear Time (g_c+I1), s	6.6	2.0		13.9	3.8	32.7	9.1	16.7				
Green Ext Time (p_c), s	0.1	13.8		0.9	0.0	24.7	0.0	0.6				

### Intersection Summary

HCM 6th Ctrl Delay 17.6

HCM 6th LOS B



















### Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings  
3: Tucker Industrial Rd & Hugh Howell Rd

2023 NO BUILD - PM

03/09/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	5	1030	207	54	679	6	134	1	75	28	10	4
Future Volume (vph)	5	1030	207	54	679	6	134	1	75	28	10	4
Adj. Flow (vph)	5	1084	218	57	715	6	141	1	79	29	11	4
Lane Group Flow (vph)	5	1302	0	57	721	0	0	221	0	0	44	0
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases							4			8		
Detector Phase	1	6		5	2		4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	11.1	31.4		10.9	31.4		31.1	31.1		33.9	33.9	
Total Split (s)	15.0	110.0		15.0	110.0		35.0	35.0		35.0	35.0	
Total Split (%)	9.4%	68.8%		9.4%	68.8%		21.9%	21.9%		21.9%	21.9%	
Maximum Green (s)	8.9	103.6		9.1	103.6		28.9	28.9		29.1	29.1	
Yellow Time (s)	3.5	4.7		3.3	4.7		3.3	3.3		3.0	3.0	
All-Red Time (s)	2.6	1.7		2.6	1.7		2.8	2.8		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.1	6.4		5.9	6.4			6.1			5.9	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	0.2	3.0		0.2	3.0		0.2	0.2		0.2	0.2	
Time Before Reduce (s)	0.0	20.0		0.0	20.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	15.0		0.0	15.0		0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		18.0			18.0		18.0	18.0		21.0	21.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effect Green (s)	6.2	109.2		8.7	118.6			26.2			26.4	
Actuated g/C Ratio	0.04	0.68		0.05	0.74			0.16			0.16	
v/c Ratio	0.09	0.56		0.65	0.28			0.89			0.18	
Control Delay	90.8	6.2		104.9	7.8			94.3			54.1	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	90.8	6.2		104.9	7.8			94.3			54.1	
LOS	F	A		F	A			F			D	
Approach Delay		6.5			14.9			94.3			54.1	
Approach LOS		A			B			F			D	
Queue Length 50th (ft)	5	113		59	117			211			37	
Queue Length 95th (ft)	m11	124		#124	196			#347			76	
Internal Link Dist (ft)		1068			568			739			1148	
Turn Bay Length (ft)	150			100								
Base Capacity (vph)	83	2339		93	2595			273			262	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.06	0.56		0.61	0.28			0.81			0.17	
Intersection Summary												

Baseline

Synchro 10 Report  
Page 6

Lanes, Volumes, Timings  
 3: Tucker Industrial Rd & Hugh Howell Rd

2023 NO BUILD - PM

03/09/2022

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 118.6 (74%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.89

Intersection Signal Delay: 18.4

Intersection LOS: B

Intersection Capacity Utilization 68.5%

ICU Level of Service C

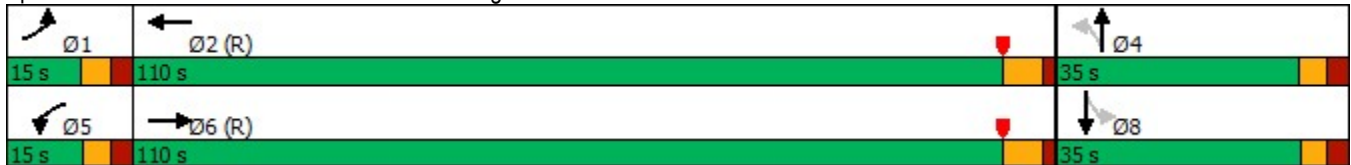
Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 3: Tucker Industrial Rd & Hugh Howell Rd































# HCM 6th Signalized Intersection Summary

## 3: Tucker Industrial Rd & Hugh Howell Rd

2023 NO BUILD - PM

03/09/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	5	1030	207	54	679	6	134	1	75	28	10	4
Future Volume (veh/h)	5	1030	207	54	679	6	134	1	75	28	10	4
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	1604	1856	1856	1752	1856	1856	1900	1976	1900	1900	1976	1900
Adj Flow Rate, veh/h	5	1084	218	57	715	6	141	1	79	29	11	4
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	20	3	3	10	3	3	0	0	0	0	0	0
Cap, veh/h	10	2023	405	71	2604	22	191	1	86	175	64	20
Arrive On Green	0.01	1.00	1.00	0.04	0.73	0.73	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1527	2926	586	1668	3583	30	1024	7	573	915	423	134
Grp Volume(v), veh/h	5	651	651	57	352	369	221	0	0	44	0	0
Grp Sat Flow(s),veh/h/ln	1527	1763	1749	1668	1763	1850	1604	0	0	1472	0	0
Q Serve(g_s), s	0.5	0.0	0.0	5.4	10.9	10.9	17.7	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.5	0.0	0.0	5.4	10.9	10.9	21.6	0.0	0.0	3.9	0.0	0.0
Prop In Lane	1.00		0.34	1.00		0.02	0.64		0.36	0.66		0.09
Lane Grp Cap(c), veh/h	10	1219	1210	71	1281	1345	279	0	0	259	0	0
V/C Ratio(X)	0.53	0.53	0.54	0.80	0.27	0.27	0.79	0.00	0.00	0.17	0.00	0.00
Avail Cap(c_a), veh/h	85	1219	1210	95	1281	1345	325	0	0	307	0	0
HCM Platoon Ratio	2.00	2.00	2.00	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	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	78.8	0.0	0.0	75.9	7.5	7.5	66.5	0.0	0.0	59.3	0.0	0.0
Incr Delay (d2), s/veh	38.4	1.7	1.7	28.5	0.5	0.5	11.0	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.3	0.6	0.6	2.9	4.0	4.1	9.7	0.0	0.0	1.6	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	117.2	1.7	1.7	104.4	8.0	8.0	77.6	0.0	0.0	59.6	0.0	0.0
LnGrp LOS	F	A	A	F	A	A	E	A	A	E	A	A
Approach Vol, veh/h	1307			778			221			44		
Approach Delay, s/veh	2.1			15.0			77.6			59.6		
Approach LOS	A			B			E			E		
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.1	122.7		30.2	12.7	117.0		30.2				
Change Period (Y+Rc), s	6.1	* 6.4		6.1	* 5.9	* 6.4		* 6.1				
Max Green Setting (Gmax), s	8.9	* 1E2		28.9	* 9.1	* 1E2		* 29				
Max Q Clear Time (g_c+I1), s	2.5	12.9		23.6	7.4	2.0		5.9				
Green Ext Time (p_c), s	0.0	10.4		0.5	0.0	30.9		0.2				
Intersection Summary												
HCM 6th Ctrl Delay	14.6											
HCM 6th LOS	B											
Notes												

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations					 	
Traffic Volume (vph)	149	6	27	97	3	31
Future Volume (vph)	149	6	27	97	3	31
Adj. Flow (vph)	162	7	29	105	3	34
Lane Group Flow (vph)	169	0	0	134	37	0
Sign Control	Free			Free	Stop	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 29.0%				ICU Level of Service A		
Analysis Period (min) 15						




















Intersection						
Int Delay, s/veh	1.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↕	
Traffic Vol, veh/h	149	6	27	97	3	31
Future Vol, veh/h	149	6	27	97	3	31
Conflicting Peds, #/hr	0	1	1	0	1	2
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	25	0	0	0	0
Mvmt Flow	162	7	29	105	3	34
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	170	0	331	169
Stage 1	-	-	-	-	167	-
Stage 2	-	-	-	-	164	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1420	-	668	880
Stage 1	-	-	-	-	867	-
Stage 2	-	-	-	-	870	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1419	-	652	877
Mov Cap-2 Maneuver	-	-	-	-	652	-
Stage 1	-	-	-	-	866	-
Stage 2	-	-	-	-	850	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		1.7		9.4	
HCM LOS					A	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	851	-	-	1419	-	
HCM Lane V/C Ratio	0.043	-	-	0.021	-	
HCM Control Delay (s)	9.4	-	-	7.6	-	
HCM Lane LOS	A	-	-	A	-	
HCM 95th %tile Q(veh)	0.1	-	-	0.1	-	








## 2023 BUILD CONDITIONS Capacity Analysis



Lanes, Volumes, Timings  
1: Rosser Terrace/Fuller Way & Hugh Howell Rd

2023 BUILD - AM  
03/09/2022





















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	29	466	13	60	719	10	3	0	2	19	0	31
Future Volume (vph)	29	466	13	60	719	10	3	0	2	19	0	31
Adj. Flow (vph)	31	501	14	65	773	11	3	0	2	20	0	33
Lane Group Flow (vph)	31	515	0	65	773	11	0	5	0	0	53	0
Sign Control	Free			Free			Stop			Stop		
Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 36.5%						ICU Level of Service A						
Analysis Period (min) 15												

Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	466	13	60	719	10	3	0	2	19	0	31
Future Vol, veh/h	29	466	13	60	719	10	3	0	2	19	0	31
Conflicting Peds, #/hr	1	0	1	1	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	100	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	7	3	0	0	2	10	33	0	0	10	0	0
Mvmt Flow	31	501	14	65	773	11	3	0	2	20	0	33
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	785	0	0	516	0	0	1088	1486	259	1217	1482	388
Stage 1	-	-	-	-	-	-	571	571	-	904	904	-
Stage 2	-	-	-	-	-	-	517	915	-	313	578	-
Critical Hdwy	4.24	-	-	4.1	-	-	8.16	6.5	6.9	7.7	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	7.16	5.5	-	6.7	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.16	5.5	-	6.7	5.5	-
Follow-up Hdwy	2.27	-	-	2.2	-	-	3.83	4	3.3	3.6	4	3.3
Pot Cap-1 Maneuver	*1159	-	-	1332	-	-	*533	333	*912	*568	337	*796
Stage 1	-	-	-	-	-	-	*681	684	-	*609	577	-
Stage 2	-	-	-	-	-	-	*687	569	-	*837	678	-
Platoon blocked, %	1	-	-	1	-	-	1	1	1	1	1	1
Mov Cap-1 Maneuver	*1158	-	-	1331	-	-	*482	308	*911	*534	311	*796
Mov Cap-2 Maneuver	-	-	-	-	-	-	*503	399	-	*529	402	-
Stage 1	-	-	-	-	-	-	*662	665	-	*592	548	-
Stage 2	-	-	-	-	-	-	*626	541	-	*812	659	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0.6			10.9			9.7		
HCM LOS							B			A		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	613	* 1158	-	-	1331	-	-	796				
HCM Lane V/C Ratio	0.009	0.027	-	-	0.048	-	-	0.042				
HCM Control Delay (s)	10.9	8.2	-	-	7.8	-	-	9.7				
HCM Lane LOS	B	A	-	-	A	-	-	A				
HCM 95th %tile Q(veh)	0	0.1	-	-	0.2	-	-	0.1				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s				+: Computation Not Defined				*: All major volume in platoon		

Lanes, Volumes, Timings  
2: Cowan Rd/The Centre Driveway & Hugh Howell Rd

2023 BUILD - AM

03/09/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	46	407	45	20	710	34	70	7	82	21	5	32
Future Volume (vph)	46	407	45	20	710	34	70	7	82	21	5	32
Adj. Flow (vph)	49	438	48	22	763	37	75	8	88	23	5	34
Lane Group Flow (vph)	49	486	0	22	763	37	0	171	0	23	39	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	2	8	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		5.0	10.0	10.0	7.0	7.0		5.0	7.0	
Minimum Split (s)	13.2	27.4		10.3	32.1	32.1	35.5	35.5		11.1	35.5	
Total Split (s)	26.0	85.0		17.0	76.0	76.0	42.0	42.0		16.0	58.0	
Total Split (%)	16.3%	53.1%		10.6%	47.5%	47.5%	26.3%	26.3%		10.0%	36.3%	
Maximum Green (s)	19.8	78.9		11.7	69.9	69.9	35.5	35.5		9.9	51.5	
Yellow Time (s)	3.4	4.6		3.1	4.6	4.6	3.5	3.5		3.1	3.5	
All-Red Time (s)	2.8	1.5		2.2	1.5	1.5	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.1		5.3	6.1	6.1		6.5		6.1	6.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		
Vehicle Extension (s)	3.0	5.0		3.0	5.0	5.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	0.2	3.0		0.2	3.0	3.0	0.2	0.2		0.2	0.2	
Time Before Reduce (s)	0.0	20.0		0.0	20.0	20.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	10.0		0.0	10.0	10.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0			7.0	7.0	7.0	7.0			7.0	
Flash Dont Walk (s)		10.0			19.0	19.0	22.0	22.0			22.0	
Pedestrian Calls (#/hr)		0			0	0	0	0			0	
Act Effct Green (s)	115.1	110.6		112.6	106.7	106.7		20.7		30.1	29.7	
Actuated g/C Ratio	0.72	0.69		0.70	0.67	0.67		0.13		0.19	0.19	
v/c Ratio	0.10	0.21		0.03	0.33	0.03		0.78		0.12	0.12	
Control Delay	8.8	11.5		8.1	12.5	0.1		77.7		48.1	16.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	8.8	11.5		8.1	12.5	0.1		77.7		48.1	16.4	
LOS	A	B		A	B	A		E		D	B	
Approach Delay		11.3			11.8			77.7			28.1	
Approach LOS		B			B			E			C	
Queue Length 50th (ft)	14	106		5	173	0		145		19	4	
Queue Length 95th (ft)	36	165		17	232	0		221		42	35	
Internal Link Dist (ft)		969			335			119			430	
Turn Bay Length (ft)	125			115								
Base Capacity (vph)	591	2330		723	2315	1100		353		195	519	
Starvation Cap Reductn	0	0		0	0	0		0		0	0	
Spillback Cap Reductn	0	0		0	0	0		0		0	0	
Storage Cap Reductn	0	0		0	0	0		0		0	0	
Reduced v/c Ratio	0.08	0.21		0.03	0.33	0.03		0.48		0.12	0.08	
Intersection Summary												

Baseline

Synchro 10 Report  
Page 3

# Lanes, Volumes, Timings 2: Cowan Rd/The Centre Driveway & Hugh Howell Rd

2023 BUILD - AM  
03/09/2022

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 148.9 (93%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.78

Intersection Signal Delay: 19.4

Intersection LOS: B

Intersection Capacity Utilization 59.1%

ICU Level of Service B

Analysis Period (min) 15

Splits and Phases: 2: Cowan Rd/The Centre Driveway & Hugh Howell Rd























# HCM 6th Signalized Intersection Summary

## 2: Cowan Rd/The Centre Driveway & Hugh Howell Rd

2023 BUILD - AM

03/09/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	46	407	45	20	710	34	70	7	82	21	5	32
Future Volume (veh/h)	46	407	45	20	710	34	70	7	82	21	5	32
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	1900	1826	1826	1900	1841	1900	1900	1900	1900	1752	1900	1900
Adj Flow Rate, veh/h	49	438	48	22	763	37	75	8	88	23	5	34
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, %	0	5	5	0	4	0	0	0	0	10	0	0
Cap, veh/h	570	2155	235	664	2302	1059	112	15	100	198	39	265
Arrive On Green	0.04	0.68	0.68	0.04	1.00	1.00	0.13	0.13	0.13	0.02	0.19	0.19
Sat Flow, veh/h	1810	3154	344	1810	3497	1609	624	119	787	1668	211	1432
Grp Volume(v), veh/h	49	240	246	22	763	37	171	0	0	23	0	39
Grp Sat Flow(s),veh/h/ln	1810	1735	1764	1810	1749	1609	1530	0	0	1668	0	1642
Q Serve(g_s), s	1.3	8.1	8.2	0.6	0.0	0.0	16.3	0.0	0.0	1.9	0.0	3.2
Cycle Q Clear(g_c), s	1.3	8.1	8.2	0.6	0.0	0.0	17.5	0.0	0.0	1.9	0.0	3.2
Prop In Lane	1.00		0.20	1.00		1.00	0.44		0.51	1.00		0.87
Lane Grp Cap(c), veh/h	570	1185	1205	664	2302	1059	227	0	0	198	0	304
V/C Ratio(X)	0.09	0.20	0.20	0.03	0.33	0.03	0.75	0.00	0.00	0.12	0.00	0.13
Avail Cap(c_a), veh/h	723	1185	1205	761	2302	1059	370	0	0	268	0	529
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	7.5	9.3	9.3	8.3	0.0	0.0	68.5	0.0	0.0	57.3	0.0	54.4
Incr Delay (d2), s/veh	0.1	0.4	0.4	0.0	0.4	0.1	5.0	0.0	0.0	0.3	0.0	0.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	3.0	3.1	0.2	0.1	0.0	7.2	0.0	0.0	0.8	0.0	1.3
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	7.6	9.7	9.7	8.3	0.4	0.1	73.5	0.0	0.0	57.5	0.0	54.6
LnGrp LOS	A	A	A	A	A	A	E	A	A	E	A	D
Approach Vol, veh/h	535			822			171			62		
Approach Delay, s/veh	9.5			0.6			73.5			55.7		
Approach LOS	A			A			E			E		
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	12.4	111.4		36.2	8.4	115.4	9.3	26.9				
Change Period (Y+Rc), s	* 6.2	6.1		6.5	* 5.3	6.1	6.1	6.5				
Max Green Setting (Gmax), s	* 20	69.9		51.5	* 12	78.9	9.9	35.5				
Max Q Clear Time (g_c+I1), s	3.3	2.0		5.2	2.6	10.2	3.9	19.5				
Green Ext Time (p_c), s	0.1	12.8		0.2	0.0	6.2	0.0	0.8				

### Intersection Summary

HCM 6th Ctrl Delay 13.6

HCM 6th LOS B



















### Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.

Lanes, Volumes, Timings  
3: Tucker Industrial Rd & Hugh Howell Rd

2023 BUILD - AM

03/09/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	374	58	34	706	23	78	6	25	6	2	12
Future Volume (vph)	8	374	58	34	706	23	78	6	25	6	2	12
Adj. Flow (vph)	9	416	64	38	784	26	87	7	28	7	2	13
Lane Group Flow (vph)	9	480	0	38	810	0	0	122	0	0	22	0
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases							4			8		
Detector Phase	1	6		5	2		4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	11.1	31.4		10.9	31.4		31.1	31.1		33.9	33.9	
Total Split (s)	15.0	89.0		15.0	89.0		56.0	56.0		56.0	56.0	
Total Split (%)	9.4%	55.6%		9.4%	55.6%		35.0%	35.0%		35.0%	35.0%	
Maximum Green (s)	8.9	82.6		9.1	82.6		49.9	49.9		50.1	50.1	
Yellow Time (s)	3.5	4.7		3.3	4.7		3.3	3.3		3.0	3.0	
All-Red Time (s)	2.6	1.7		2.6	1.7		2.8	2.8		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.1	6.4		5.9	6.4			6.1			5.9	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	0.2	3.0		0.2	3.0		0.2	0.2		0.2	0.2	
Time Before Reduce (s)	0.0	20.0		0.0	20.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	15.0		0.0	15.0		0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		18.0			18.0		18.0	18.0		21.0	21.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effect Green (s)	6.4	116.2		9.1	126.2			18.5			18.7	
Actuated g/C Ratio	0.04	0.73		0.06	0.79			0.12			0.12	
v/c Ratio	0.13	0.20		0.42	0.30			0.73			0.10	
Control Delay	98.6	9.8		85.4	5.9			85.2			35.0	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	98.6	9.8		85.4	5.9			85.2			35.0	
LOS	F	A		F	A			F			D	
Approach Delay		11.5			9.5			85.2			35.0	
Approach LOS		B			A			F			D	
Queue Length 50th (ft)	8	127		39	95			115			9	
Queue Length 95th (ft)	m28	199		79	216			181			36	
Internal Link Dist (ft)		1068			568			739			1148	
Turn Bay Length (ft)	150			100								
Base Capacity (vph)	100	2447		101	2743			437			543	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.09	0.20		0.38	0.30			0.28			0.04	
Intersection Summary												

Baseline

Synchro 10 Report  
Page 6

# Lanes, Volumes, Timings 3: Tucker Industrial Rd & Hugh Howell Rd

2023 BUILD - AM  
03/09/2022

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 38.6 (24%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow

Natural Cycle: 80

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.73

Intersection Signal Delay: 16.8

Intersection LOS: B

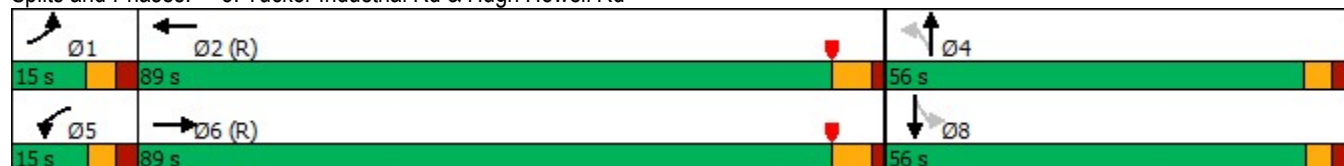
Intersection Capacity Utilization 51.8%

ICU Level of Service A

Analysis Period (min) 15

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

Splits and Phases: 3: Tucker Industrial Rd & Hugh Howell Rd

































# HCM 6th Signalized Intersection Summary




## 3: Tucker Industrial Rd & Hugh Howell Rd




















2023 BUILD - AM








03/09/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	374	58	34	706	23	78	6	25	6	2	12
Future Volume (veh/h)	8	374	58	34	706	23	78	6	25	6	2	12
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		0.98	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	1900	1826	1826	1722	1856	1856	1900	1976	1900	1900	1976	1900
Adj Flow Rate, veh/h	9	416	64	38	784	26	87	7	28	7	2	13
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	0	5	5	12	3	3	0	0	0	0	0	0
Cap, veh/h	19	2290	350	48	2712	90	145	9	34	68	29	98
Arrive On Green	0.02	1.00	1.00	0.03	0.78	0.78	0.09	0.09	0.09	0.09	0.09	0.09
Sat Flow, veh/h	1810	3007	459	1640	3482	115	1126	93	363	406	311	1037
Grp Volume(v), veh/h	9	239	241	38	397	413	122	0	0	22	0	0
Grp Sat Flow(s),veh/h/ln	1810	1735	1732	1640	1763	1835	1581	0	0	1755	0	0
Q Serve(g_s), s	0.8	0.0	0.0	3.7	10.3	10.3	10.2	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.8	0.0	0.0	3.7	10.3	10.3	12.0	0.0	0.0	1.8	0.0	0.0
Prop In Lane	1.00		0.27	1.00		0.06	0.71		0.23	0.32		0.59
Lane Grp Cap(c), veh/h	19	1321	1318	48	1373	1429	188	0	0	196	0	0
V/C Ratio(X)	0.48	0.18	0.18	0.80	0.29	0.29	0.65	0.00	0.00	0.11	0.00	0.00
Avail Cap(c_a), veh/h	101	1321	1318	93	1373	1429	522	0	0	548	0	0
HCM Platoon Ratio	2.00	2.00	2.00	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	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	77.9	0.0	0.0	77.2	5.0	5.0	70.9	0.0	0.0	66.4	0.0	0.0
Incr Delay (d2), s/veh	18.1	0.3	0.3	25.3	0.5	0.5	3.7	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.1	0.1	1.9	3.4	3.5	5.1	0.0	0.0	0.8	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	96.0	0.3	0.3	102.5	5.6	5.6	74.6	0.0	0.0	66.7	0.0	0.0
LnGrp LOS	F	A	A	F	A	A	E	A	A	E	A	A
Approach Vol, veh/h	489		848				122		22			
Approach Delay, s/veh	2.1		9.9				74.6		66.7			
Approach LOS	A		A				E		E			
Timer - Assigned Phs	1	2		4	5	6		8				
Phs Duration (G+Y+Rc), s	7.7	131.0		21.2	10.5	128.2		21.2				
Change Period (Y+Rc), s	6.1	* 6.4		6.1	* 5.9	* 6.4		* 6.1				
Max Green Setting (Gmax), s	8.9	* 83		49.9	* 9.1	* 83		* 50				
Max Q Clear Time (g_c+I1), s	2.8	12.3		14.0	5.7	2.0		3.8				
Green Ext Time (p_c), s	0.0	12.3		0.7	0.0	6.2		0.1				
Intersection Summary												
HCM 6th Ctrl Delay			13.5									
HCM 6th LOS			B									
Notes												

						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Volume (vph)	50	29	40	48	30	117
Future Volume (vph)	50	29	40	48	30	117
Adj. Flow (vph)	68	39	54	65	41	158
Lane Group Flow (vph)	107	0	0	119	199	0
Sign Control	Free			Free	Stop	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 26.9%				ICU Level of Service A		
Analysis Period (min) 15						

Intersection						
Int Delay, s/veh	5.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations						
Traffic Vol, veh/h	50	29	40	48	30	117
Future Vol, veh/h	50	29	40	48	30	117
Conflicting Peds, #/hr	0	0	0	0	1	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	74	74	74	74	74	74
Heavy Vehicles, %	4	50	0	8	0	0
Mvmt Flow	68	39	54	65	41	158
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	107	0	262	88
Stage 1	-	-	-	-	88	-
Stage 2	-	-	-	-	174	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1497	-	731	976
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	861	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1497	-	703	976
Mov Cap-2 Maneuver	-	-	-	-	703	-
Stage 1	-	-	-	-	940	-
Stage 2	-	-	-	-	828	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		3.4		10.1	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	904	-	-	1497	-	
HCM Lane V/C Ratio	0.22	-	-	0.036	-	
HCM Control Delay (s)	10.1	-	-	7.5	0	
HCM Lane LOS	B	-	-	A	A	
HCM 95th %tile Q(veh)	0.8	-	-	0.1	-	





















												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	30	1290	29	69	782	43	6	1	2	31	0	41
Future Volume (vph)	30	1290	29	69	782	43	6	1	2	31	0	41
Adj. Flow (vph)	31	1344	30	72	815	45	6	1	2	32	0	43
Lane Group Flow (vph)	31	1374	0	72	815	45	0	9	0	0	75	0
Sign Control	Free			Free			Stop			Stop		
Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 54.8%						ICU Level of Service A						
Analysis Period (min) 15												

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	1290	29	69	782	43	6	1	2	31	0	41
Future Vol, veh/h	30	1290	29	69	782	43	6	1	2	31	0	41
Conflicting Peds, #/hr	0	0	2	2	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	-	100	-	100	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	4	3	0	0	3	7	0	0	0	0	0	10
Mvmt Flow	31	1344	30	72	815	45	6	1	2	32	0	43
Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	860	0	0	1376	0	0	1975	2427	689	1694	2397	408
Stage 1	-	-	-	-	-	-	1423	1423	-	959	959	-
Stage 2	-	-	-	-	-	-	552	1004	-	735	1438	-
Critical Hdwy	4.18	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.24	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.4
Pot Cap-1 Maneuver	1145	-	-	*849	-	-	*102	*37	*565	*252	*40	*754
Stage 1	-	-	-	-	-	-	*533	*467	-	*609	*560	-
Stage 2	-	-	-	-	-	-	*733	*526	-	*533	*467	-
Platoon blocked, %	1	-	-	1	-	-	1	1	1	1	1	1
Mov Cap-1 Maneuver	1145	-	-	*847	-	-	*88	*33	*564	*229	*36	*754
Mov Cap-2 Maneuver	-	-	-	-	-	-	*294	*221	-	*332	*216	-
Stage 1	-	-	-	-	-	-	*518	*453	-	*593	*513	-
Stage 2	-	-	-	-	-	-	*633	*481	-	*516	*453	-
Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.7			16.7			10.1		
HCM LOS							C			B		
Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1				
Capacity (veh/h)	316	1145	-	-	* 847	-	-	754				
HCM Lane V/C Ratio	0.03	0.027	-	-	0.085	-	-	0.057				
HCM Control Delay (s)	16.7	8.2	-	-	9.6	-	-	10.1				
HCM Lane LOS	C	A	-	-	A	-	-	B				
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0.3	-	-	0.2				
Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon						

Lanes, Volumes, Timings  
2: Cowan Rd/The Centre Driveway & Hugh Howell Rd

2023 BUILD - PM

03/09/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	138	1136	76	53	681	76	103	29	109	86	35	98
Future Volume (vph)	138	1136	76	53	681	76	103	29	109	86	35	98
Adj. Flow (vph)	148	1222	82	57	732	82	111	31	117	92	38	105
Lane Group Flow (vph)	148	1304	0	57	732	82	0	259	0	92	143	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	2	8	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		5.0	10.0	10.0	7.0	7.0		5.0	7.0	
Minimum Split (s)	13.2	27.4		10.3	32.1	32.1	35.5	35.5		11.1	35.5	
Total Split (s)	16.0	94.0		15.0	93.0	93.0	36.0	36.0		15.0	51.0	
Total Split (%)	10.0%	58.8%		9.4%	58.1%	58.1%	22.5%	22.5%		9.4%	31.9%	
Maximum Green (s)	9.8	87.9		9.7	86.9	86.9	29.5	29.5		8.9	44.5	
Yellow Time (s)	3.4	4.6		3.1	4.6	4.6	3.5	3.5		3.1	3.5	
All-Red Time (s)	2.8	1.5		2.2	1.5	1.5	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.1		5.3	6.1	6.1		6.5		6.1	6.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		
Vehicle Extension (s)	3.0	5.0		3.0	5.0	5.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	0.2	3.0		0.2	3.0	3.0	0.2	0.2		0.2	0.2	
Time Before Reduce (s)	0.0	20.0		0.0	20.0	20.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	10.0		0.0	10.0	10.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0			7.0	7.0	7.0	7.0			7.0	
Flash Dont Walk (s)		10.0			19.0	19.0	22.0	22.0			22.0	
Pedestrian Calls (#/hr)		0			0	0	0	0			0	
Act Effct Green (s)	100.8	93.1		96.1	87.9	87.9		29.0		44.3	43.9	
Actuated g/C Ratio	0.63	0.58		0.60	0.55	0.55		0.18		0.28	0.27	
v/c Ratio	0.34	0.64		0.25	0.38	0.09		0.96		0.33	0.29	
Control Delay	13.4	24.9		11.5	17.5	0.6		103.8		47.8	20.2	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	13.4	24.9		11.5	17.5	0.6		103.8		47.8	20.2	
LOS	B	C		B	B	A		F		D	C	
Approach Delay		23.7			15.5			103.8			31.0	
Approach LOS		C			B			F			C	
Queue Length 50th (ft)	57	482		16	162	0		250		74	45	
Queue Length 95th (ft)	89	574		m28	190	m3		#436		125	107	
Internal Link Dist (ft)		969			335			94			430	
Turn Bay Length (ft)	125			115								
Base Capacity (vph)	437	2027		251	1926	916		274		277	500	
Starvation Cap Reductn	0	0		0	0	0		0		0	0	
Spillback Cap Reductn	0	0		0	0	0		0		0	0	
Storage Cap Reductn	0	0		0	0	0		0		0	0	
Reduced v/c Ratio	0.34	0.64		0.23	0.38	0.09		0.95		0.33	0.29	
Intersection Summary												

Baseline

Synchro 10 Report  
Page 3

# Lanes, Volumes, Timings 2: Cowan Rd/The Centre Driveway & Hugh Howell Rd

2023 BUILD - PM  
03/09/2022

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 102.9 (64%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.96

Intersection Signal Delay: 29.1

Intersection LOS: C

Intersection Capacity Utilization 80.5%

ICU Level of Service D

Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 2: Cowan Rd/The Centre Driveway & Hugh Howell Rd

























# HCM 6th Signalized Intersection Summary

## 2: Cowan Rd/The Centre Driveway & Hugh Howell Rd

2023 BUILD - PM



















03/09/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	1136	76	53	681	76	103	29	109	86	35	98
Future Volume (veh/h)	138	1136	76	53	681	76	103	29	109	86	35	98
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	1900	1856	1856	1900	1856	1870	1900	1900	1900	1885	1900	1900
Adj Flow Rate, veh/h	148	1222	82	57	732	82	111	31	117	92	38	105
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, %	0	3	3	0	3	2	0	0	0	1	0	0
Cap, veh/h	513	1960	131	245	1974	888	145	36	123	304	122	338
Arrive On Green	0.05	0.58	0.58	0.06	1.00	1.00	0.18	0.18	0.18	0.05	0.27	0.27
Sat Flow, veh/h	1810	3353	225	1810	3526	1585	610	197	665	1795	446	1231
Grp Volume(v), veh/h	148	642	662	57	732	82	259	0	0	92	0	143
Grp Sat Flow(s),veh/h/ln	1810	1763	1815	1810	1763	1585	1472	0	0	1795	0	1677
Q Serve(g_s), s	5.6	38.0	38.2	2.1	0.0	0.0	27.0	0.0	0.0	6.5	0.0	10.8
Cycle Q Clear(g_c), s	5.6	38.0	38.2	2.1	0.0	0.0	27.9	0.0	0.0	6.5	0.0	10.8
Prop In Lane	1.00		0.12	1.00		1.00	0.43		0.45	1.00		0.73
Lane Grp Cap(c), veh/h	513	1031	1061	245	1974	888	304	0	0	304	0	461
V/C Ratio(X)	0.29	0.62	0.62	0.23	0.37	0.09	0.85	0.00	0.00	0.30	0.00	0.31
Avail Cap(c_a), veh/h	537	1031	1061	303	1974	888	304	0	0	310	0	466
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	13.4	21.7	21.7	17.6	0.0	0.0	64.5	0.0	0.0	47.5	0.0	46.0
Incr Delay (d2), s/veh	0.3	2.8	2.8	0.5	0.5	0.2	20.3	0.0	0.0	0.6	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	15.9	16.3	0.9	0.1	0.1	12.2	0.0	0.0	3.0	0.0	4.6
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.7	24.5	24.5	18.1	0.5	0.2	84.8	0.0	0.0	48.1	0.0	46.4
LnGrp LOS	B	C	C	B	A	A	F	A	A	D	A	D
Approach Vol, veh/h	1452			871			259			235		
Approach Delay, s/veh	23.4			1.7			84.8			47.1		
Approach LOS	C			A			F			D		
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.9	95.7		50.5	9.9	99.6	14.5	36.0				
Change Period (Y+Rc), s	* 6.2	6.1		6.5	* 5.3	6.1	6.1	6.5				
Max Green Setting (Gmax), s	* 9.8	86.9		44.5	* 9.7	87.9	8.9	29.5				
Max Q Clear Time (g_c+I1), s	7.6	2.0		12.8	4.1	40.2	8.5	29.9				
Green Ext Time (p_c), s	0.1	12.8		0.9	0.0	23.8	0.0	0.0				
Intersection Summary												
HCM 6th Ctrl Delay			24.3									
HCM 6th LOS			C									
Notes												

Lanes, Volumes, Timings  
3: Tucker Industrial Rd & Hugh Howell Rd

2023 BUILD - PM

03/09/2022

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	8	1049	211	54	701	6	138	1	75	28	10	8
Future Volume (vph)	8	1049	211	54	701	6	138	1	75	28	10	8
Adj. Flow (vph)	8	1104	222	57	738	6	145	1	79	29	11	8
Lane Group Flow (vph)	8	1326	0	57	744	0	0	225	0	0	48	0
Turn Type	Prot	NA		Prot	NA		Perm	NA		Perm	NA	
Protected Phases	1	6		5	2			4			8	
Permitted Phases							4			8		
Detector Phase	1	6		5	2		4	4		8	8	
Switch Phase												
Minimum Initial (s)	5.0	10.0		5.0	10.0		7.0	7.0		7.0	7.0	
Minimum Split (s)	11.1	31.4		10.9	31.4		31.1	31.1		33.9	33.9	
Total Split (s)	15.0	110.0		15.0	110.0		35.0	35.0		35.0	35.0	
Total Split (%)	9.4%	68.8%		9.4%	68.8%		21.9%	21.9%		21.9%	21.9%	
Maximum Green (s)	8.9	103.6		9.1	103.6		28.9	28.9		29.1	29.1	
Yellow Time (s)	3.5	4.7		3.3	4.7		3.3	3.3		3.0	3.0	
All-Red Time (s)	2.6	1.7		2.6	1.7		2.8	2.8		2.9	2.9	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0			0.0			0.0	
Total Lost Time (s)	6.1	6.4		5.9	6.4			6.1			5.9	
Lead/Lag	Lead	Lag		Lead	Lag							
Lead-Lag Optimize?	Yes	Yes		Yes	Yes							
Vehicle Extension (s)	3.0	5.0		3.0	5.0		3.0	3.0		3.0	3.0	
Minimum Gap (s)	0.2	3.0		0.2	3.0		0.2	0.2		0.2	0.2	
Time Before Reduce (s)	0.0	20.0		0.0	20.0		0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	15.0		0.0	15.0		0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max		None	None		None	None	
Walk Time (s)		7.0			7.0		7.0	7.0		7.0	7.0	
Flash Dont Walk (s)		18.0			18.0		18.0	18.0		21.0	21.0	
Pedestrian Calls (#/hr)		0			0		0	0		0	0	
Act Effect Green (s)	6.5	109.0		8.7	118.2			26.5			26.7	
Actuated g/C Ratio	0.04	0.68		0.05	0.74			0.17			0.17	
v/c Ratio	0.13	0.57		0.65	0.29			0.90			0.19	
Control Delay	89.2	6.5		104.9	8.0			95.4			51.0	
Queue Delay	0.0	0.0		0.0	0.0			0.0			0.0	
Total Delay	89.2	6.5		104.9	8.0			95.4			51.0	
LOS	F	A		F	A			F			D	
Approach Delay		7.0			14.9			95.4			51.0	
Approach LOS		A			B			F			D	
Queue Length 50th (ft)	9	142		59	122			215			38	
Queue Length 95th (ft)	m15	m155		#124	206			#359			79	
Internal Link Dist (ft)		1068			568			739			1148	
Turn Bay Length (ft)	150			100								
Base Capacity (vph)	83	2334		93	2587			273			269	
Starvation Cap Reductn	0	0		0	0			0			0	
Spillback Cap Reductn	0	0		0	0			0			0	
Storage Cap Reductn	0	0		0	0			0			0	
Reduced v/c Ratio	0.10	0.57		0.61	0.29			0.82			0.18	
Intersection Summary												

Baseline

Synchro 10 Report  
Page 6

# Lanes, Volumes, Timings

## 3: Tucker Industrial Rd & Hugh Howell Rd

2023 BUILD - PM

03/09/2022

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 118.6 (74%), Referenced to phase 2:WBT and 6:EBT, Start of Yellow

Natural Cycle: 90

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.90

Intersection Signal Delay: 18.8

Intersection LOS: B

Intersection Capacity Utilization 70.3%

ICU Level of Service C

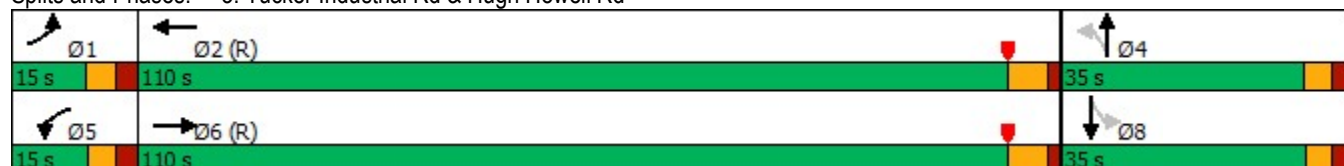
Analysis Period (min) 15

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

Queue shown is maximum after two cycles.

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

Splits and Phases: 3: Tucker Industrial Rd & Hugh Howell Rd





















# HCM 6th Signalized Intersection Summary











## 3: Tucker Industrial Rd & Hugh Howell Rd

2023 BUILD - PM

03/09/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	8	1049	211	54	701	6	138	1	75	28	10	8
Future Volume (veh/h)	8	1049	211	54	701	6	138	1	75	28	10	8
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	1604	1856	1856	1752	1856	1856	1900	1976	1900	1900	1976	1900
Adj Flow Rate, veh/h	8	1104	222	57	738	6	145	1	79	29	11	8
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	20	3	3	10	3	3	0	0	0	0	0	0
Cap, veh/h	14	2015	403	71	2583	21	195	1	86	167	63	39
Arrive On Green	0.02	1.00	1.00	0.04	0.72	0.72	0.15	0.15	0.15	0.15	0.15	0.15
Sat Flow, veh/h	1527	2926	586	1668	3584	29	1028	7	560	853	409	252
Grp Volume(v), veh/h	8	663	663	57	363	381	225	0	0	48	0	0
Grp Sat Flow(s),veh/h/ln	1527	1763	1749	1668	1763	1850	1596	0	0	1513	0	0
Q Serve(g_s), s	0.8	0.0	0.0	5.4	11.6	11.6	18.0	0.0	0.0	0.0	0.0	0.0
Cycle Q Clear(g_c), s	0.8	0.0	0.0	5.4	11.6	11.6	22.1	0.0	0.0	4.1	0.0	0.0
Prop In Lane	1.00		0.33	1.00		0.02	0.64		0.35	0.60		0.17
Lane Grp Cap(c), veh/h	14	1214	1204	71	1270	1333	282	0	0	269	0	0
V/C Ratio(X)	0.56	0.55	0.55	0.80	0.29	0.29	0.80	0.00	0.00	0.18	0.00	0.00
Avail Cap(c_a), veh/h	85	1214	1204	95	1270	1333	324	0	0	312	0	0
HCM Platoon Ratio	2.00	2.00	2.00	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	0.00	0.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	78.2	0.0	0.0	75.9	7.9	7.9	66.3	0.0	0.0	58.9	0.0	0.0
Incr Delay (d2), s/veh	30.1	1.8	1.8	28.5	0.6	0.5	11.6	0.0	0.0	0.3	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.4	0.6	0.6	2.9	4.2	4.4	9.9	0.0	0.0	1.7	0.0	0.0
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	108.3	1.8	1.8	104.4	8.4	8.4	77.9	0.0	0.0	59.2	0.0	0.0
LnGrp LOS	F	A	A	F	A	A	E	A	A	E	A	A
Approach Vol, veh/h	1334		801				225		48			
Approach Delay, s/veh	2.4		15.3				77.9		59.2			
Approach LOS	A		B				E		E			
Timer - Assigned Phs	1	2	4		5	6	8					
Phs Duration (G+Y+Rc), s	7.6	121.7	30.7		12.7	116.6	30.7					
Change Period (Y+Rc), s	6.1	* 6.4	6.1		* 5.9	* 6.4	* 6.1					
Max Green Setting (Gmax), s	8.9	* 1E2	28.9		* 9.1	* 1E2	* 29					
Max Q Clear Time (g_c+I1), s	2.8	13.6	24.1		7.4	2.0	6.1					
Green Ext Time (p_c), s	0.0	10.9	0.5		0.0	32.2	0.2					
Intersection Summary												
HCM 6th Ctrl Delay			14.9									
HCM 6th LOS			B									
Notes												
























\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.









						
Lane Group	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations					 	
Traffic Volume (vph)	145	35	65	93	30	141
Future Volume (vph)	145	35	65	93	30	141
Adj. Flow (vph)	158	38	71	101	33	153
Lane Group Flow (vph)	196	0	0	172	186	0
Sign Control	Free			Free	Stop	
Intersection Summary						
Control Type: Unsignalized						
Intersection Capacity Utilization 39.1%				ICU Level of Service A		
Analysis Period (min) 15						

Intersection						
Int Delay, s/veh	4.7					
Movement	EBT	EBR	WBL	WBT	NBL	NBR
Lane Configurations	↑			↑	↕	
Traffic Vol, veh/h	145	35	65	93	30	141
Future Vol, veh/h	145	35	65	93	30	141
Conflicting Peds, #/hr	0	1	1	0	1	2
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	25	0	0	0	0
Mvmt Flow	158	38	71	101	33	153
Major/Minor	Major1		Major2		Minor1	
Conflicting Flow All	0	0	197	0	422	180
Stage 1	-	-	-	-	178	-
Stage 2	-	-	-	-	244	-
Critical Hdwy	-	-	4.1	-	6.4	6.2
Critical Hdwy Stg 1	-	-	-	-	5.4	-
Critical Hdwy Stg 2	-	-	-	-	5.4	-
Follow-up Hdwy	-	-	2.2	-	3.5	3.3
Pot Cap-1 Maneuver	-	-	1388	-	592	868
Stage 1	-	-	-	-	858	-
Stage 2	-	-	-	-	801	-
Platoon blocked, %	-	-		-		
Mov Cap-1 Maneuver	-	-	1387	-	559	866
Mov Cap-2 Maneuver	-	-	-	-	559	-
Stage 1	-	-	-	-	857	-
Stage 2	-	-	-	-	757	-
Approach	EB		WB		NB	
HCM Control Delay, s	0		3.2		11	
HCM LOS					B	
Minor Lane/Major Mvmt	NBLn1	EBT	EBR	WBL	WBT	
Capacity (veh/h)	790	-	-	1387	-	
HCM Lane V/C Ratio	0.235	-	-	0.051	-	
HCM Control Delay (s)	11	-	-	7.7	-	
HCM Lane LOS	B	-	-	A	-	
HCM 95th %tile Q(veh)	0.9	-	-	0.2	-	

# 2023 BUILD IMPROVED CONDITIONS Capacity Analysis



												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 				
Traffic Volume (vph)	29	466	13	60	719	10	3	0	2	19	0	31
Future Volume (vph)	29	466	13	60	719	10	3	0	2	19	0	31
Adj. Flow (vph)	31	501	14	65	773	11	3	0	2	20	0	33
Lane Group Flow (vph)	31	501	14	65	773	11	0	5	0	0	53	0
Sign Control	Free			Free			Stop			Stop		
Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 36.5%						ICU Level of Service A						
Analysis Period (min) 15												
























Intersection												
Int Delay, s/veh	0.9											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	29	466	13	60	719	10	3	0	2	19	0	31
Future Vol, veh/h	29	466	13	60	719	10	3	0	2	19	0	31
Conflicting Peds, #/hr	1	0	1	1	0	1	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	100	100	-	100	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	93	93	93	93	93	93	93	93	93	93	93	93
Heavy Vehicles, %	7	3	0	0	2	10	33	0	0	10	0	0
Mvmt Flow	31	501	14	65	773	11	3	0	2	20	0	33









Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	785	0	0	516	0	0	1081	1479	252	1217	1482	388
Stage 1	-	-	-	-	-	-	564	564	-	904	904	-
Stage 2	-	-	-	-	-	-	517	915	-	313	578	-
Critical Hdwy	4.24	-	-	4.1	-	-	8.16	6.5	6.9	7.7	6.5	6.9
Critical Hdwy Stg 1	-	-	-	-	-	-	7.16	5.5	-	6.7	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	7.16	5.5	-	6.7	5.5	-
Follow-up Hdwy	2.27	-	-	2.2	-	-	3.83	4	3.3	3.6	4	3.3
Pot Cap-1 Maneuver	*1159	-	-	1332	-	-	*533	339	*912	*568	337	*796
Stage 1	-	-	-	-	-	-	*689	689	-	*609	577	-
Stage 2	-	-	-	-	-	-	*687	569	-	*837	678	-
Platoon blocked, %	1	-	-	1	-	-	1	1	1	1	1	1
Mov Cap-1 Maneuver	*1158	-	-	1331	-	-	*482	313	*911	*534	311	*796
Mov Cap-2 Maneuver	-	-	-	-	-	-	*504	402	-	*529	402	-
Stage 1	-	-	-	-	-	-	*670	670	-	*592	548	-
Stage 2	-	-	-	-	-	-	*626	541	-	*812	659	-

Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.5			0.6			10.9			9.7		
HCM LOS							B			A		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	614	* 1158	-	-	1331	-	-	796
HCM Lane V/C Ratio	0.009	0.027	-	-	0.048	-	-	0.042
HCM Control Delay (s)	10.9	8.2	-	-	7.8	-	-	9.7
HCM Lane LOS	B	A	-	-	A	-	-	A
HCM 95th %tile Q(veh)	0	0.1	-	-	0.2	-	-	0.1

Notes			
~: Volume exceeds capacity	\$: Delay exceeds 300s	+: Computation Not Defined	*: All major volume in platoon

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations		 			 			 				
Traffic Volume (vph)	30	1290	29	69	782	43	6	1	2	31	0	41
Future Volume (vph)	30	1290	29	69	782	43	6	1	2	31	0	41
Adj. Flow (vph)	31	1344	30	72	815	45	6	1	2	32	0	43
Lane Group Flow (vph)	31	1344	30	72	815	45	0	9	0	0	75	0
Sign Control	Free				Free		Stop				Stop	
Intersection Summary												
Control Type: Unsignalized												
Intersection Capacity Utilization 53.9%												
ICU Level of Service A												
Analysis Period (min) 15												

Intersection												
Int Delay, s/veh	0.8											
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Vol, veh/h	30	1290	29	69	782	43	6	1	2	31	0	41
Future Vol, veh/h	30	1290	29	69	782	43	6	1	2	31	0	41
Conflicting Peds, #/hr	0	0	2	2	0	0	0	0	0	0	0	0
Sign Control	Free	Free	Free	Free	Free	Free	Stop	Stop	Stop	Stop	Stop	Stop
RT Channelized	-	-	None	-	-	None	-	-	None	-	-	None
Storage Length	100	-	100	100	-	100	-	-	-	-	-	-
Veh in Median Storage, #	-	0	-	-	0	-	-	1	-	-	1	-
Grade, %	-	0	-	-	0	-	-	0	-	-	0	-
Peak Hour Factor	96	96	96	96	96	96	96	96	96	96	96	96
Heavy Vehicles, %	4	3	0	0	3	7	0	0	0	0	0	10
Mvmt Flow	31	1344	30	72	815	45	6	1	2	32	0	43

Major/Minor	Major1			Major2			Minor1			Minor2		
Conflicting Flow All	860	0	0	1376	0	0	1960	2412	674	1694	2397	408
Stage 1	-	-	-	-	-	-	1408	1408	-	959	959	-
Stage 2	-	-	-	-	-	-	552	1004	-	735	1438	-
Critical Hdwy	4.18	-	-	4.1	-	-	7.5	6.5	6.9	7.5	6.5	7.1
Critical Hdwy Stg 1	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Critical Hdwy Stg 2	-	-	-	-	-	-	6.5	5.5	-	6.5	5.5	-
Follow-up Hdwy	2.24	-	-	2.2	-	-	3.5	4	3.3	3.5	4	3.4
Pot Cap-1 Maneuver	1145	-	-	*849	-	-	*107	*39	*565	*252	*40	*754
Stage 1	-	-	-	-	-	-	*533	*467	-	*609	*560	-
Stage 2	-	-	-	-	-	-	*733	*526	-	*533	*467	-
Platoon blocked, %	1	-	-	1	-	-	1	1	1	1	1	1
Mov Cap-1 Maneuver	1145	-	-	*847	-	-	*93	*34	*564	*229	*36	*754
Mov Cap-2 Maneuver	-	-	-	-	-	-	*296	*222	-	*332	*216	-
Stage 1	-	-	-	-	-	-	*518	*453	-	*593	*513	-
Stage 2	-	-	-	-	-	-	*633	*481	-	*516	*453	-





















Approach	EB			WB			NB			SB		
HCM Control Delay, s	0.2			0.7			16.7			10.1		
HCM LOS							C			B		

Minor Lane/Major Mvmt	NBLn1	EBL	EBT	EBR	WBL	WBT	WBR	SBLn1
Capacity (veh/h)	318	1145	-	-	* 847	-	-	754
HCM Lane V/C Ratio	0.029	0.027	-	-	0.085	-	-	0.057
HCM Control Delay (s)	16.7	8.2	-	-	9.6	-	-	10.1
HCM Lane LOS	C	A	-	-	A	-	-	B
HCM 95th %tile Q(veh)	0.1	0.1	-	-	0.3	-	-	0.2

Notes												
~: Volume exceeds capacity		\$: Delay exceeds 300s		+: Computation Not Defined		*: All major volume in platoon						

												
Lane Group	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	138	1136	76	53	681	76	103	29	109	86	35	98
Future Volume (vph)	138	1136	76	53	681	76	103	29	109	86	35	98
Adj. Flow (vph)	148	1222	82	57	732	82	111	31	117	92	38	105
Lane Group Flow (vph)	148	1304	0	57	732	82	0	259	0	92	143	0
Turn Type	pm+pt	NA		pm+pt	NA	Perm	Perm	NA		pm+pt	NA	
Protected Phases	1	6		5	2			8		7	4	
Permitted Phases	6			2		2	8			4		
Detector Phase	1	6		5	2	2	8	8		7	4	
Switch Phase												
Minimum Initial (s)	7.0	10.0		5.0	10.0	10.0	7.0	7.0		5.0	7.0	
Minimum Split (s)	13.2	27.4		10.3	32.1	32.1	35.5	35.5		11.1	35.5	
Total Split (s)	16.0	87.0		15.0	86.0	86.0	46.0	46.0		12.0	58.0	
Total Split (%)	10.0%	54.4%		9.4%	53.8%	53.8%	28.8%	28.8%		7.5%	36.3%	
Maximum Green (s)	9.8	80.9		9.7	79.9	79.9	39.5	39.5		5.9	51.5	
Yellow Time (s)	3.4	4.6		3.1	4.6	4.6	3.5	3.5		3.1	3.5	
All-Red Time (s)	2.8	1.5		2.2	1.5	1.5	3.0	3.0		3.0	3.0	
Lost Time Adjust (s)	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Lost Time (s)	6.2	6.1		5.3	6.1	6.1		6.5		6.1	6.5	
Lead/Lag	Lead	Lag		Lead	Lag	Lag	Lag	Lag		Lead		
Lead-Lag Optimize?	Yes	Yes		Yes	Yes	Yes	Yes	Yes		Yes		
Vehicle Extension (s)	3.0	5.0		3.0	5.0	5.0	3.0	3.0		3.0	3.0	
Minimum Gap (s)	0.2	3.0		0.2	3.0	3.0	0.2	0.2		0.2	0.2	
Time Before Reduce (s)	0.0	20.0		0.0	20.0	20.0	0.0	0.0		0.0	0.0	
Time To Reduce (s)	0.0	10.0		0.0	10.0	10.0	0.0	0.0		0.0	0.0	
Recall Mode	None	C-Max		None	C-Max	C-Max	None	None		None	None	
Walk Time (s)		7.0			7.0	7.0	7.0	7.0			7.0	
Flash Dont Walk (s)		10.0			19.0	19.0	22.0	22.0			22.0	
Pedestrian Calls (#/hr)		0			0	0	0	0			0	
Act Effct Green (s)	101.3	93.1		95.8	87.6	87.6		31.8		44.2	43.8	
Actuated g/C Ratio	0.63	0.58		0.60	0.55	0.55		0.20		0.28	0.27	
v/c Ratio	0.34	0.64		0.25	0.38	0.09		0.88		0.35	0.29	
Control Delay	14.2	26.0		12.5	18.2	0.6		84.3		46.6	17.4	
Queue Delay	0.0	0.0		0.0	0.0	0.0		0.0		0.0	0.0	
Total Delay	14.2	26.0		12.5	18.2	0.6		84.3		46.6	17.4	
LOS	B	C		B	B	A		F		D	B	
Approach Delay		24.8			16.2			84.3			28.8	
Approach LOS		C			B			F			C	
Queue Length 50th (ft)	58	485		16	170	0		241		74	40	
Queue Length 95th (ft)	101	640		m33	192	m3		340		117	94	
Internal Link Dist (ft)		969			335			94			430	
Turn Bay Length (ft)	125			115								
Base Capacity (vph)	441	2027		251	1918	912		360		266	570	
Starvation Cap Reductn	0	0		0	0	0		0		0	0	
Spillback Cap Reductn	0	0		0	0	0		0		0	0	
Storage Cap Reductn	0	0		0	0	0		0		0	0	
Reduced v/c Ratio	0.34	0.64		0.23	0.38	0.09		0.72		0.35	0.25	
Intersection Summary												

Cycle Length: 160

Actuated Cycle Length: 160

Offset: 102.9 (64%), Referenced to phase 2:WBTL and 6:EBTL, Start of Yellow

Natural Cycle: 95

Control Type: Actuated-Coordinated

Maximum v/c Ratio: 0.88

Intersection Signal Delay: 27.9

Intersection LOS: C

Intersection Capacity Utilization 80.5%

ICU Level of Service D

Analysis Period (min) 15

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





















Splits and Phases: 2: Cowan Rd/The Centre Driveway & Hugh Howell Rd



HCM 6th Signalized Intersection Summary  
2: Cowan Rd/The Centre Driveway & Hugh Howell Rd

2023 BUILD IMPROVED - PM

03/09/2022

												
Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	138	1136	76	53	681	76	103	29	109	86	35	98
Future Volume (veh/h)	138	1136	76	53	681	76	103	29	109	86	35	98
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	1900	1856	1856	1900	1856	1870	1900	1900	1900	1885	1900	1900
Adj Flow Rate, veh/h	148	1222	82	57	732	82	111	31	117	92	38	105
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, %	0	3	3	0	3	2	0	0	0	1	0	0
Cap, veh/h	518	1987	133	251	2005	901	149	38	128	286	119	328
Arrive On Green	0.05	0.59	0.59	0.06	1.00	1.00	0.19	0.19	0.19	0.04	0.27	0.27
Sat Flow, veh/h	1810	3353	225	1810	3526	1585	608	199	665	1795	446	1231
Grp Volume(v), veh/h	148	642	662	57	732	82	259	0	0	92	0	143
Grp Sat Flow(s),veh/h/ln	1810	1763	1815	1810	1763	1585	1473	0	0	1795	0	1677
Q Serve(g_s), s	5.5	37.3	37.4	2.1	0.0	0.0	26.6	0.0	0.0	5.9	0.0	10.9
Cycle Q Clear(g_c), s	5.5	37.3	37.4	2.1	0.0	0.0	27.6	0.0	0.0	5.9	0.0	10.9
Prop In Lane	1.00		0.12	1.00		1.00	0.43		0.45	1.00		0.73
Lane Grp Cap(c), veh/h	518	1045	1076	251	2005	901	314	0	0	286	0	447
V/C Ratio(X)	0.29	0.61	0.62	0.23	0.37	0.09	0.82	0.00	0.00	0.32	0.00	0.32
Avail Cap(c_a), veh/h	543	1045	1076	309	2005	901	395	0	0	286	0	540
HCM Platoon Ratio	1.00	1.00	1.00	2.00	2.00	2.00	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	0.00	0.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	12.9	20.9	20.9	16.9	0.0	0.0	63.3	0.0	0.0	48.6	0.0	47.0
Incr Delay (d2), s/veh	0.3	2.7	2.6	0.5	0.5	0.2	10.8	0.0	0.0	0.6	0.0	0.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.2	15.5	15.9	0.8	0.1	0.1	11.3	0.0	0.0	3.0	0.0	4.7
Unsig. Movement Delay, s/veh												
LnGrp Delay(d),s/veh	13.2	23.6	23.5	17.4	0.5	0.2	74.1	0.0	0.0	49.2	0.0	47.4
LnGrp LOS	B	C	C	B	A	A	E	A	A	D	A	D
Approach Vol, veh/h	1452				871				259			
Approach Delay, s/veh	22.5				1.6				74.1			
Approach LOS	C				A				E			
Timer - Assigned Phs	1	2		4	5	6	7	8				
Phs Duration (G+Y+Rc), s	13.7	97.1		49.2	9.9	100.9	12.0	37.2				
Change Period (Y+Rc), s	* 6.2	6.1		6.5	* 5.3	6.1	6.1	6.5				
Max Green Setting (Gmax), s	* 9.8	79.9		51.5	* 9.7	80.9	5.9	39.5				
Max Q Clear Time (g_c+I1), s	7.5	2.0		12.9	4.1	39.4	7.9	29.6				
Green Ext Time (p_c), s	0.1	12.8		0.9	0.0	22.1	0.0	1.1				

Intersection Summary

HCM 6th Ctrl Delay	22.9
HCM 6th LOS	C

Notes

\* HCM 6th computational engine requires equal clearance times for the phases crossing the barrier.





## MEMO

**To:** Honorable Mayor and City Council Members  
**From:** Courtney Smith, Planning and Zoning Director  
**CC:** Tami Hanlin, City Manager  
**Date:** May 4, 2022  
**RE:** RZ-22-0001

---

### Issue:

The applicant is requesting to rezone five parcels from R-75 (Residential Medium Lot – 75) to RSM (Small Lot Residential Mix) in order to construct a 52-unit single-family attached (townhome) development on approximately 8.7 acres, which will yield a density of 5.9 units per acre. Twenty (20) rear-loaded units are shown fronting Lawrenceville Highway and the remaining thirty-two (32) units are front-loaded and spread throughout the site.

### Recommendation:

Staff recommends approval of the Rezoning, with conditions.

Planning Commission recommends approval of the Rezoning, with staff conditions.

### Background:

The subject property is located on the south side of Lawrenceville Highway and contains single-family homes and a former real estate office, most of which are set close to Lawrenceville Highway. The remaining land is heavily wooded with a stream and its buffers located in the southeastern corner of the property. The assemblage of these five parcels would result in an oddly shaped property.

The maximum height allowed within the RSM zoning district is 45' or 3 stories, whichever is less. While exact heights of the proposed townhomes were not submitted with the application, the applicant has stated the townhomes will comply with the City's requirements. From submitted elevations, the proposed townhomes appear to be 3 stories and will be constructed of a mixture of brick, board and batten, and shake, in a neutral palate.

Access is shown via one full-access drive from Lawrenceville Highway, that would line up with Terri Lynn Court when constructed. There are 13 guest parking spaces throughout the site, with three adjacent to the proposed mail kiosk. DeKalb Fire will require the townhome units to be sprinkled since only one vehicle access point is provided.

The site plan also shows a transitional buffer along the eastern, western, and southern sides of the development. Transitional buffers in residential neighborhoods are intended to diminish the potential negative impacts of higher intensity residential development on adjacent single-family residential land uses. The applicant has proposed a 30' transitional buffer along the southern and a majority of the western property lines, which exceeds the City's 20' transitional buffer requirement for the RSM zoning district.

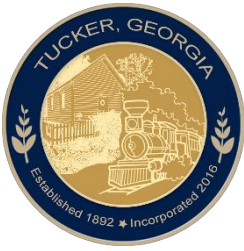
While only 20% of the site is required to be reserved for open space, the submitted site plan shows several open space areas, totaling 4.5 acres (52% of the site), including a pocket park, in the southern portion of the property, adjacent to the St. Lawrence Cove subdivision and residential dwellings along Bishop Drive; a community garden, central to the development; and a bark park, along the eastern property line, north of the stream on the property. The submitted site plan shows full compliance with the dimensional requirements of the RSM zoning district.

A revised site plan was submitted to staff this week, which included a shift in the units at the southwest corner of the property.

**Summary:**

The requested land use petition to rezone five parcels along Lawrenceville Highway from R-75 to RSM is consistent with the recommendations of the Comprehensive Plan and would be compatible with the surrounding residential neighborhoods at the proposed density of 5.9 units per acre. As currently proposed, the development would not pose significant adverse impacts to the environment or adjacent or nearby properties. However, there are ways to further reduce the density and provide better transition by reducing the unit count or reconfiguring the southwest corner of the site to include a mix of product types, such as single-family detached dwellings.

**Financial Impact:** NA



Planning and Zoning  
1975 Lakeside Parkway, Suite 350  
Tucker, GA 30084  
Phone: 678-597-9040  
Email: [permits@tuckerga.gov](mailto:permits@tuckerga.gov)  
Website: [www.tuckerga.gov](http://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: Embry Development Company

Address: P.O. Box 2789

City: Suwanee

State: GA

Zip: 30024

Contact Name: Mike Embry

Phone: 404-569-9756

Email: [mike@embrycompanies.com](mailto:mike@embrycompanies.com)

## OWNER INFORMATION

Name: See Attached

Address:

City:

State:

Zip:

Contact Name:

Phone:

Email:

## PROPERTY INFORMATION

Property Address: 3207, 3217, 3259, 3227 Lawrenceville Highway ; 3563 Bishop Drive

Present Zoning District(s): R-75

Requested Zoning District(s): RSM

Present Land Use Category:

Requested Land Use Category:

Land District: 18th

Land Lot(s): 165 & 166

Acreage: 8.727

Proposed Development: Townhome Community

Concurrent Variance(s):

## RESIDENTIAL DEVELOPMENT

No. of Lots/Dwelling Units: 52

Dwelling Unit Size (Sq. Ft.):

Density: 5.95

## NON-RESIDENTIAL DEVELOPMENT

No. of Buildings/Lots:

Total Building Sq. Ft.:

Density: .

Owner List:

- St. Sophia LLC  
2672 Brickell Sq  
Atlanta, GA 30341
- St. Jolie LLC  
2672 Brickell Sq  
Atlanta, GA 30341
- Robert McDonald  
3563 Bishop Dr  
Tucker, GA 30084
- Estate of M. Frances McDonald (Donald McDonald)  
3563 Bishop Dr  
Tucker, GA 30084

RECEIVED  
CITY OF TUCKER  
03/17/2022  
PLANNING & ZONING  
DEPARTMENT



## PROPERTY OWNER'S CERTIFICATION

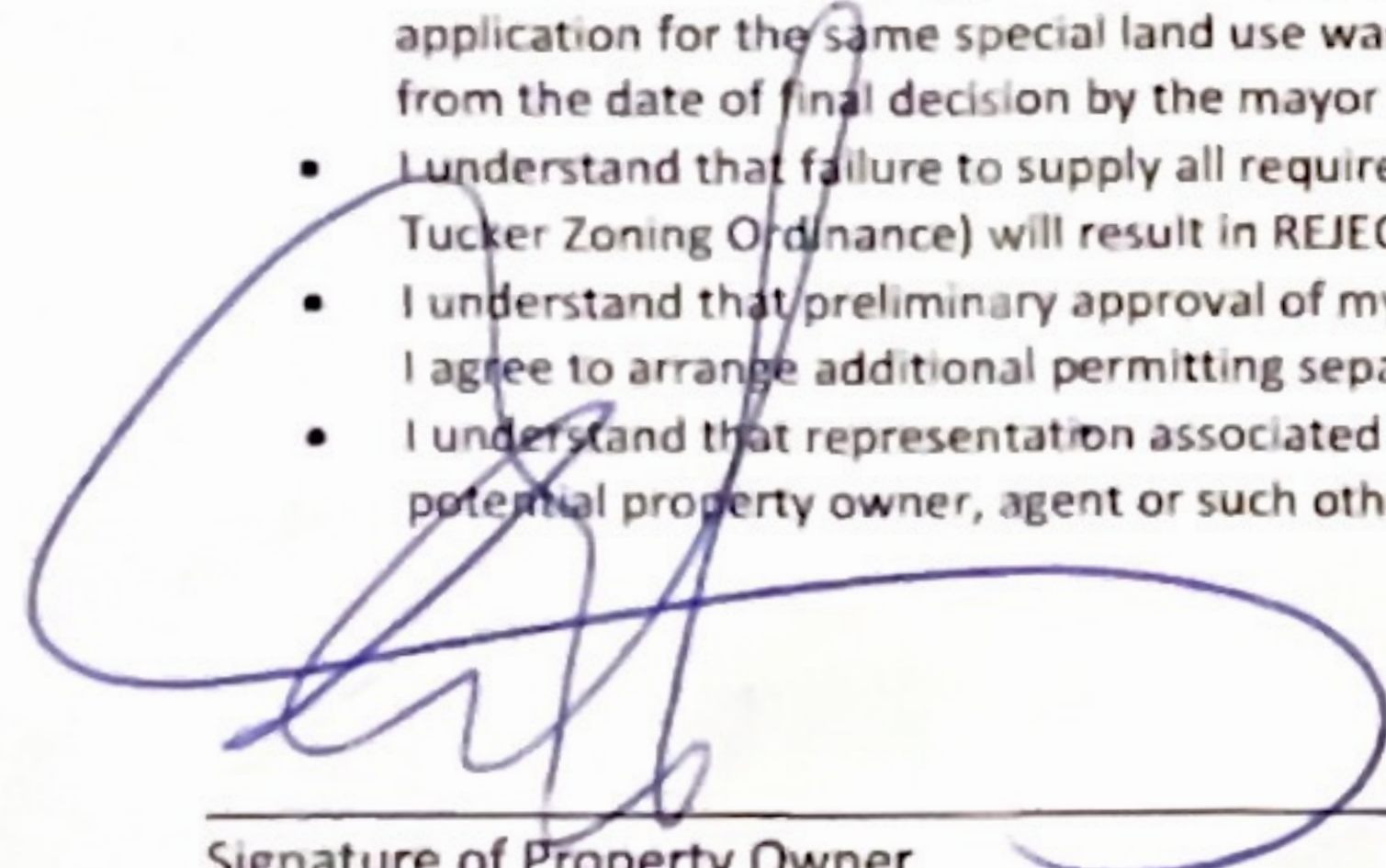
I do solemnly swear and attest, subject to criminal penalties for false swearing, that I am the legal owner, as reflected in the records of DeKalb County, Georgia, of the property identified below, which is the subject of the attached Land Use Petition before the City of Tucker, Georgia. As the legal 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, St. Jolie, LLC, authorize, Embry Development Company LLC,  
(Property Owner) (Applicant)

to file for Rezoning, at 3207 Lawrenceville Highway  
(RZ, CA, SLUP, M, CV) (Address)

on this date \_\_\_\_\_, 20\_\_\_\_  
(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.


  
Signature of Property Owner

2/15/22

Date

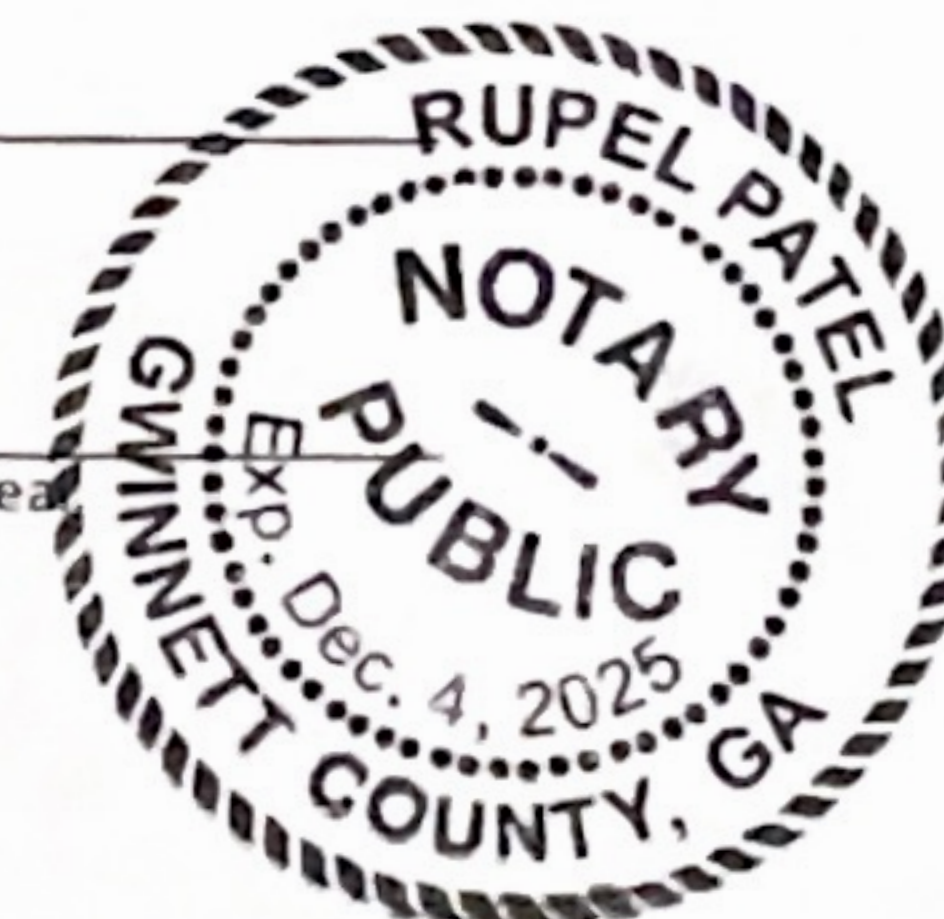
Charles Sachsenmaier, Senior Manager & Secretary

Type or Print Name and Title

  
Signature of Notary Public

2-15-22  
Date

Notary Seal



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CITY OF TUCKER  
03/17/2022

PLANNING & ZONING  
DEPARTMENT

RZ-22-0001



## PROPERTY OWNER'S CERTIFICATION

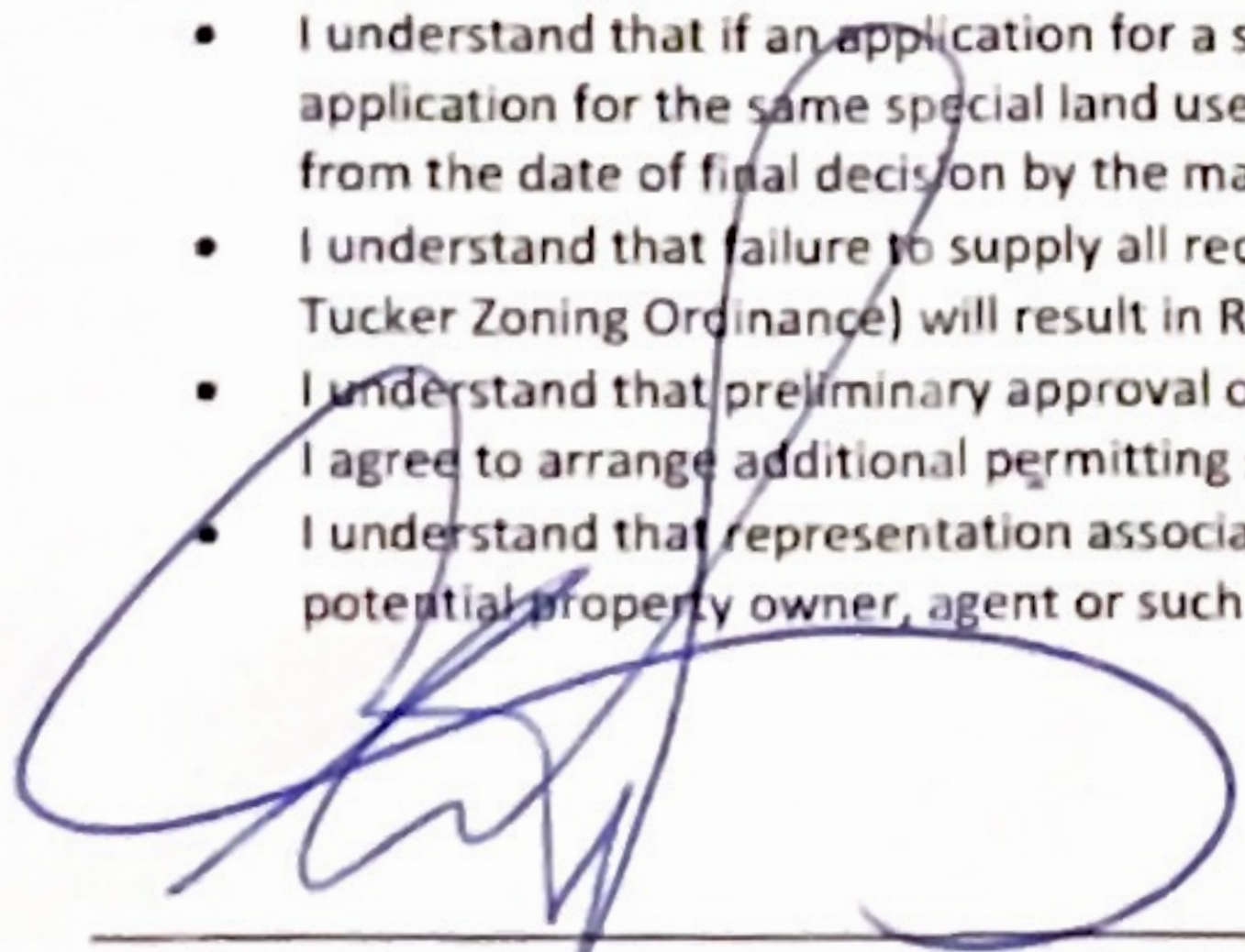
I do solemnly swear and attest, subject to criminal penalties for false swearing, that I am the legal owner, as reflected in the records of DeKalb County, Georgia, of the property identified below, which is the subject of the attached Land Use Petition before the City of Tucker, Georgia. As the legal 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, St. Sophia, LLC, authorize, Embry Development Company LLC,  
(Property Owner) (Applicant)

to file for Rezoning, at 3217 & 3227 Lawrenceville Highway  
(RZ, CA, SLUP, M, CV) (Address)

on this date \_\_\_\_\_, 20\_\_\_\_  
(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.

  
\_\_\_\_\_  
Signature of Property Owner

2/15/22  
\_\_\_\_\_  
Date

Charles Sachsenmaier, Senior Manager & Secretary

\_\_\_\_\_  
Type or Print Name and Title

  
\_\_\_\_\_  
Signature of Notary Public

2-15-22  
\_\_\_\_\_  
Date

Notary Seal





## 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, Donald McDonald, authorize, Embry Development Company LLC  
(Property Owner) (Applicant)

to file for Rezoning, at 3259 Lawrenceville Highway  
(RZ, CA, SLUP, M, CV) (Address)

on this date \_\_\_\_\_, 20\_\_\_\_\_  
(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.
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- 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.

ESTATE OF M. FRANCES McDonald

Donald W. McDonald EXTRA.

Feb. 21, 2022

Signature of Property Owner

Date

Donald W. McDonald EXTRA

Feb. 21, 2022

Type or Print Name and Title

Signature of Notary Public

Date



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03/17/2022



## 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, Robert McDonald, authorize, Embry Development Company LLC  
(Property Owner) (Applicant)

to file for Rezoning, at 3563 Bishop Dr  
(RZ, CA, SLUP, M, CV) (Address)

on this date \_\_\_\_\_, 20\_\_\_\_\_  
(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.
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- 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.

Robert McDonald 2-21-2022  
Signature of Property Owner Date

Robert A. McDonald  
Type or Print Name and Title

[Signature] 2-21-2022  
Signature of Notary Public Date

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PLANNING & ZONING  
DEPARTMENT


LAND USE PETITION APPLICATION - REVISED DECEMBER 2021

RZ-22-0001  
Page 336 of 433

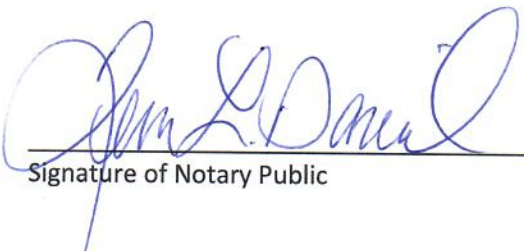


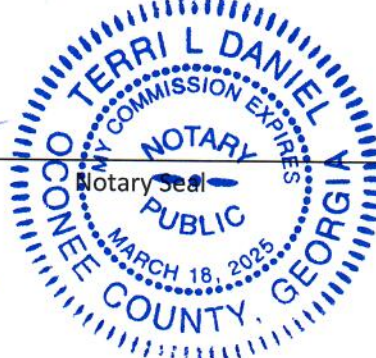
## APPLICANT'S CERTIFICATION

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.

 Manager 3-11-2022  
Signature of Applicant Date

J. Michael Embry Manager  
Type or Print Name and Title

 3/11/22  
Signature of Notary Public Date



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

# Land Use Petition Application Checklist

## FOR ALL REZONINGS, COMPREHENSIVE PLAN AMENDMENTS, SPECIAL LAND USE PERMITS, MODIFICATIONS, AND CONCURRENT VARIANCES

REQUIRED ITEMS	NUMBER OF COPIES	CHECK <input type="checkbox"/>
One (1) digital copy of all submitted materials	• One (1) flash drive or CD in .JPEG, .PDF format	<input type="checkbox"/>
Pre-Application Meeting Form	• One (1) Copy	<input type="checkbox"/>
Public Participation Report	• One (1) Copy	<input type="checkbox"/>
Application, Signature Pages, Disclosure Form	• One (1) Copy each	<input type="checkbox"/>
Written Legal Description	• One (1) 8 ½" x 11" Legal Description	<input type="checkbox"/>
Boundary Survey and Proposed Site Plan (See Page 9 for Requirements)	• Five (5) Full-Size (24" x 36") Copies of each • One (1) 8 ½" x 11" or 11x17 Site Plan of each	<input type="checkbox"/>
Building Elevations (renderings or architectural drawings to show compliance with Article 5)	• One (1) Copy	<input type="checkbox"/>
Letter of Intent	• One (1) Copy	<input type="checkbox"/>
Analysis of Standards/Criteria (See page 5)	• One (1) Copy	<input type="checkbox"/>
Environmental Site Analysis Form	• One (1) Copy	<input type="checkbox"/>
Trip Generation Letter (ITE Trip Generation Manual)	• One (1) Copy	<input type="checkbox"/>

### THE FOLLOWING ITEMS MAY BE REQUIRED

Traffic Impact Study (See Sec. 46-1309)	• Three (3) Copies	<input type="checkbox"/>
Development of Regional Impact Review Form	• Three (3) Copies	<input type="checkbox"/>
Environmental Impact Report	• Three (3) Copies	<input type="checkbox"/>
Noise Study Report	• Three (3) Copies	<input type="checkbox"/>
Other items required per the Zoning Ordinance	• Three (3) Copies	<input type="checkbox"/>

### LAND USE PETITION FEE SCHEDULE

Residential Rezoning	\$500	<input type="checkbox"/>
Multifamily Rezoning	\$750	<input type="checkbox"/>
Non-Residential Rezoning	\$750	<input type="checkbox"/>
Special Land Use Permit	\$400	<input type="checkbox"/>
Comprehensive Plan Amendment	\$1000	<input type="checkbox"/>
Modification	\$250	<input type="checkbox"/>
Variance (includes Concurrent Variance)	\$300	<input type="checkbox"/>
Public Notice Sign Fee	\$80 (per required sign)	<input type="checkbox"/>

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1807 JEFFERSON

**STATEMENT OF INTENT**

and

Other Material Required by  
City of Tucker Zoning Ordinance  
for the  
Rezoning Application

of

EMBRY DEVELOPMENT COMPANY, LLC

for

+/- 8.727 Acres of Land  
located in  
Land Lot 165 and 166, 18<sup>th</sup> District, Dekalb County

Address:

3207, 3217, 3227, and 3259 Lawrenceville Highway and 3563 Bishop Drive

Submitted by:

Mike Embry  
Embry Development Company, LLC  
P.O. Box 2789  
Suwanee, GA 30024  
404-569-9756

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## **I. INTRODUCTION**

This Application seeks to rezone± 8.727 acres of land located in Land Lot 165 and 166, 18th District of DeKalb County (the "Subject Property") from Residential Medium Lot (R-75) to Small Lot Residential Mix (RSM). The Subject Property is located on the south-east side of Lawrenceville Highway, approximately 190 feet north of its intersection with St. Lawrence Cove. The Subject Property is comprised of five (5) parcels located at 3207 Lawrenceville Highway (Parcel ID: 18-165-03-002); 3217 Lawrenceville Highway (Parcel ID: 18-165-03-021); 3227 Lawrenceville Highway (Parcel ID: 18-165-03-001); 3259 Lawrenceville Highway (Parcel ID: 18-166-02-014); and 3563 Bishop Drive (Parcel ID: 18-166-02-015). All five parcels of the Subject Property are currently zoned R-75.

At present, the Subject Property is occupied by three single-family structures and undeveloped land. The Applicant intends to redevelop the Subject Property for fifty-two (52) townhomes and appurtenant site improvements (the "Proposed Development"). The City of Tucker's Comprehensive Land Use Plan designates the Subject Property as Suburban (SUB) which fully allows the proposed RSM zoning and townhome use.

The Applicant submits this document as a Statement of Intent with regard to this Application, a preservation of the Applicant's constitutional rights, and a written justification for the Application as required by the City of Tucker Zoning Ordinance, § 7.3.5. A Site Plan has been filed with the original Application, along with the other required materials.

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## **II. HISTORY**

The Applicant is aware of the previous rezoning application in 2017, filed by Ardent Companies. They filed for 64 townhomes and were denied by City Council.

## **III. IMPACT ANALYSIS**

### **A. WHETHER THE ZONING PROPOSAL IS IN CONFORMITY WITH THE POLICY AND INTENT OF THE COMPREHENSIVE PLAN.**

The City of Tucker has adopted the DeKalb County 2025 Comprehensive Plan (the "Plan") and its associated land use designations pending the development and adoption of its own Comprehensive Plan. The Plan consists of a text and series of maps. The Plan is accompanied by a procedure to link changes in zoning with corresponding changes in the Plan to avoid repeating the situation in which a static land use plan and an evolving zoning map become increasingly out of step with each other. The Subject Property falls entirely within the Suburban land use designation, which is fully consistent and commensurate with the proposed use.

The proposed development of the Subject Property fosters a number of general policies and strategies of the County's Comprehensive Plan, including:

**HP3:** Enhance the County's existing supply of housing.

**SPP2:** Create pedestrian scale communities that focus on the relationship between the street, buildings, and people.

**SPS2:** Create neighborhood focal points through the use of existing pockets parks, dog parks, and squares for community activities.

**SPSS:** Develop and consider corridors and gateways that promote sense of place.

**TP14:** Improve the use and accessibility mass transit.

**TSI:** Encourage the construction of sidewalks in new developments.

**LUP6:** Ensure that new development and redevelopment is compatible with existing residential areas.

**LUP8:** Improve the aesthetic appearance of developments along major corridors.

**SCAPI:** Protect stable neighborhoods from incompatible development that could alter established residential development patterns and density.

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**SCAP9:** Density increases shall be evaluated for their impact on county facilities and shall not degrade the overall quality of service delivery and quality of life for the surrounding established neighborhood.

**SCAS17:** Create neighborhood focal points through the use of existing pockets parks and squares for community activities.

**SCAS25:** Provide an appropriate mix of housing styles and choices, allowing citizens of different economic levels to reside together.

In summary, the proposed development serves to implement specific goals, objectives and policies of the City's Comprehensive Plan. The project at issue represents a consistent use commensurate with other existing uses on adjacent and nearby properties, in an area which is convenient to shopping and office uses, transportation and recreational facilities. The proposed use, therefore, is suitable vis-a-vis the policies of the Comprehensive Plan.

**B. WHETHER THE ZONING PROPOSAL WILL PERMIT A USE THAT IS SUITABLE IN VIEW OF THE USE AND DEVELOPMENT OF ADJACENT AND NEARBY PROPERTY OR PROPERTIES.**

Yes. The proposed RSM zoning will allow a use that is complementary to the adjacent uses and the areas as a whole. The site abuts residential properties to the east, south and west, and the right-of-way of Lawrenceville Highway to the north. To the east of the Subject Property along Lawrenceville Highway is the Avery Hills townhomes, zoned RSM, as well as several single-family residential lots on Bishop Drive, zoned R-75. To the south and west of the Subject Property are single-family residential lots on Saint Lawrence Cove, zoned R-75. To the north, across the right-of-way of Lawrenceville Highway is property zoned R-75 and the Loring Byers Funeral Home property (d/b/a Floral Hills Funeral Home), zoned Office Institutional (01). The RSM zoning will allow a medium density attached townhome development that will complement and enhance the surrounding uses.

In addition, the proposed townhomes will be in line with the other recent higher-density development in the area. Abutting the Subject Property to the east are the Avery Hills Townhomes which are of a similar nature and similar zoning (RSM) as the Proposed Development. The Avery Hills development contains approximately 57 attached townhomes and replaced older single-family residences that were situated directly on



Lawrenceville Highway. The Avery Hills property was rezoned from R-75 and C-1 to R-A8 (i.e. RSM) under DeKalb County zoning case CZ-02047 to support the development of higher-density townhomes. The current application is analogous to the Avery Hills development in that the nature of the development is substantially similar and the rezoning is the exact same as the Applicant now requests. The Applicant, parallel to the Avery Hills development, seeks to rezone R-75 property to RSM to remove the underdeveloped and impractical single-family parcels that are situated directly on Lawrenceville Highway, to create higher-density, upscale townhomes that are in accord with the trending development in the area. The requested zoning district is therefore entirely consistent with and suitable in light of the current and future development plans and patterns.

Additionally, the intended final appearance of this development will include appropriate attention to scale, buffering, setbacks, and landscaping so that this development will blend harmoniously with its surroundings. The proposed townhomes will provide an elegant and attractive design that will provide much needed upscale housing stock to the surrounding area.

**C.WHETHER THE PROPERTY TO BE AFFECTED BY THE ZONING PROPOSAL HAS A  
REASONABLE ECONOMIC USE AS CURRENTLY ZONED.**

No. The current economic conditions and the development trends in the immediate area are higher-density residential developments, making it highly unlikely that the Subject Property can be redeveloped at the current density. Moreover, the Subject Property's location on the heavily traveled Lawrenceville Highway severely limits the ability to develop it under the current R-75 zoning, which primarily allows detached single-family residences. The site abuts the right-of-way of Lawrenceville Highway which is designated as a major arterial per the DeKalb County 2014 Transportation Plan. The development of detached single-family residences on a highly traveled, five-lane highway is not practical, and it is doubtful that the property will be used as single-family residences in the future.

The recent residential development in the area consists of higher density uses, such as the neighboring Avery Hills Townhome development, zoned RSM with a density of  $\pm 7.92$  units per acre, and the Weston development at 3423 Lawrenceville Highway, which is also zoned RSM with a density of  $\pm 5.34$  units per acre. The Proposed Development and its corresponding RSM zoning fall directly in line with these other recent residential developments.

**D.WHETHER THE ZONING PROPOSAL WILL ADVERSELY AFFECT THE EXISTING USE OR  
USABILITY OF ADJACENT OR NEARBY PROPERTY OR PROPERTIES.**

No. The primary goal of land use planning is to eliminate or minimize the potential adverse effect of the dissimilar uses of adjacent tracts of land by establishing a harmonious transition between them. The traditional method of achieving this goal is through both "off-site" and "on-site" transition. Off-site transition consists of avoiding the placement of dissimilar uses next to each other by placing uses of intermediate density between them. On-site transition, which might either supplement or replace off-site transition, consists of measures imposed on or adjacent to the more intensive use to protect neighborhoods from adverse effects. Thus, this method of land use planning includes measures such as maintenance of buffers; walls, fences or berms; lighting control; noise control; aesthetic control; limitations on building location and orientation; location of or restrictions upon accessory uses; and prohibition of certain uses or hours of use normally permitted for that district. Many of these devices have been or will be utilized in this application.

The Proposed Development will pay careful attention to scale, buffering, setbacks, and landscaping so that it will blend and complement the adjacent developments. The development will include twenty (30) foot transitional buffers along the sides that abut the R-75 properties to the south, east and west. This transitional buffer will include appropriate landscaping to help mitigate any impacts from the Proposed Development. Accordingly, rezoning the Subject Property to RSM will not adversely affect the nearby existing uses and will enhance the adjacent properties.

**E. WHETHER THERE ARE OTHER EXISTING OR CHANGING CONDITIONS AFFECTING THE  
USE AND DEVELOPMENT OF THE PROPERTY WHICH GIVE SUPPORTING GROUNDS FOR  
EITHER APPROVAL OR DISAPPROVAL OF THE ZONING PROPOSAL.**

Its location on a major roadway, coupled with the actual development that has occurred in the area, make the Subject Property an ideal location for this type of redevelopment. The current zoning limits development to low-density single-family residential, but the trend in the surrounding area has been toward higher-density residential and commercial development. The existing single-family structures on the Subject Property are some of the last remaining vestiges of a time when Lawrenceville Highway was less heavily traveled, and the surrounding area was closer to a semi-rural environment. In fact, the structures on the Subject

Property were constructed 60 to 80 years ago when low-density single-family residential parcels and farms lined a much smaller Lawrenceville Highway. Today, however, scarcely any single-family residences remain directly on the 5-lane major arterial and many that do are used for commercial purposes. Evidence that low-density single-family residences make little sense on a road that has evolved into a major highway. As a result, development of the Subject Property under its current R-75 zoning is not practical and it is highly unlikely that it will continue to be a low-density residential use in the future.

Indeed, Lawrenceville Highway's existence as a major roadway in the area has helped facilitate the growth of commercial and higher-density residential development in the area. This can be seen in the highly commercial area to the north of the Subject Property near Lawrenceville Highway's intersection with Northlake Parkway. Moreover, the recent residential construction in the area has been higher density uses found under the RSM zoning. The Avery Hills Townhomes, zoned RSM, are located immediately east of the Subject Property and were developed in 2005. In addition, the Weston development is also zoned RSM and is currently under construction for 45 small lot single-family residences. As evidenced by the recent residential construction in the area, the RSM zoning is fitting with the trend toward higher density residential developments. Hence, the zoning requested here conforms to the ideals and spirit of the City of Tucker's Zoning Ordinance, as well as fitting with the recent progress of the area, while developing a practical, useful, and marketable development that will redevelop an underutilized property into an asset for the immediate area and the city as a whole.

**F. WHETHER THE ZONING PROPOSAL WILL ADVERSELY AFFECT HISTORIC BUILDINGS, SITES, DISTRICTS, OR ARCHAEOLOGICAL RESOURCES.**

The Applicant is not aware of any historic buildings, sites, districts, or archaeological resources either on the Subject Property or located in the immediate vicinity that would suffer adverse impacts from the rezoning requested.

**G. WHETHER THE REQUESTED REZONING WILL NOT RESULT IN A USE WHICH WILL OR COULD CAUSE EXCESSIVE OR BURDENSOME USE OF EXISTING STREETS, TRANSPORTATION FACILITIES, UTILITIES, OR SCHOOLS.**

No. The proposed development will not overly burden existing streets or transportation facilities. According to the ITE Trip Generation Manual, the fifty-two (52) residential townhomes will generate 302.12

generate 302.12 total trips on a weekday, 22.88 trips during the A.M. peak hour, and 27.04 trips during the P.M. peak hour. This will be a net increase of 278.915 weekday trips, 21.003 A.M. peak trips, and 24.55 P.M. peak trips above the existing use. The Subject Property is located on Lawrenceville Highway, a five-lane state highway classified as a major arterial, which indicates that the road is intended to carry large volumes of traffic. This major roadway is more than adequate to accommodate the minor number of additional trips the proposed development will generate. Further, the project is served by mass transit with excellent access to two MARTA bus routes (Bus Route 75 and 125), which will help mitigate any impacts from the Proposed Development. Additionally, the proposed design calls for the addition of a covered MARTA bus stop directly in front of the Subject Property, making access to MARTA very convenient.

As for utilities, the Subject Property has access to water and sewer. Finally, the proposed development will not create an excessive or burdensome use of the community's schools. The Subject Property is served by Brockett Elementary School, Tucker Middle School, and Tucker High School service area, all of which are listed as below capacity according to DeKalb County Schools' FTE Enrolment Report, dated 2021. As a result, the proposed development is not anticipated to have a significant impact on local schools.

#### **H. WHETHER THE ZONING PROPOSAL ADVERSELY IMPACTS THE ENVIRONMENT OR SURROUNDING NATURAL RESOURCES.**

The Applicant will comply with all federal, state, and City regulations relating to environmental protection to ensure that the proposed development will not adversely affect the environment.

#### **IV. DENSITY**

The medium and high-density residential zoning districts allow cottage housing, attached, multifamily and mixed residential developments at the densities. Summary of Density Ranges for Medium and High-Density Residential Zoning Districts. Under RSM zoning the project is asking for 5.95 units per acre.

<i>Zoning District Name</i>	<i>Density (units/acre)</i>	<i>Eligible Character Areas</i>
Small Lot Residential Mix RSM	4-6	Suburban, Downtown, Medical area, Regional activity center, Commercial redevelopment corridor

**V. NOTICE OF CONSTITUTIONAL CHALLENGES AND PRESERVATION OF  
CONSTITUTIONAL RIGHTS**

The zoning on the Subject Property (and any intervening zoning district other than that requested) is unconstitutional. Further, the Zoning Ordinance of the City of Tucker, Georgia lacks adequate standards for the Mayor and City Council to exercise their power to zone and rezone. In essence, the standards are not sufficient to contain the discretion of the Mayor and City Council and to provide the Courts with a reasonable basis for judicial review. Because the stated standards (individually and collectively) are too vague and uncertain to provide reasonable guidance to the Mayor and City Council, the Zoning Ordinance violates the Fifth and Fourteenth Amendments of the Constitution of the United States in matters of zoning. The Zoning Ordinance also violates Article I, Section III, Paragraph 1; and Article I, Paragraphs 1 and 2 of the Constitution of State of Georgia, 1983.

The Board of County Commissioners is granted the power to zone pursuant to Article IX, Section II, Paragraph 4 of the Constitution of the State of Georgia, 1983. It is a power which must be fairly exercised. Based on this element of fairness, the Zoning Ordinance of the City of Tucker, Georgia violates Article IX, Section II, Paragraph 4 of the Constitution of the State of Georgia, 1983.

The Zoning Ordinance presently in effect is contrary to the best interest of the health and welfare of the citizens of the City of Tucker, Georgia, and constitutes an arbitrary and capricious act. As a result, the Zoning Ordinance is in violation of Article I, Section I, Paragraphs 1 and 2 of the Constitution of the State of Georgia 1983; Article I, Section III, Paragraph 1 of the

Constitution of the State of Georgia; and Article I, Section II, Paragraph 3 of the Constitution of the State of Georgia, 1983. Furthermore, the Zoning Ordinance violates the due process clause and equal protection clauses of the Fifth and Fourteenth Amendments to the Constitution of the United States of America.

In addition, the Zoning Ordinance presently in effect is unconstitutional in that it renders this property unusable and destroys its marketability. Therefore, the Zoning Ordinance constitutes a taking of applicant's property without just and adequate compensation and without due process of law in violation of the Fifth and

Fourteenth Amendments to the United States Constitutional and in violation of Article I, Section I, Paragraph 1 and Article I, Section III, Paragraph 1 (a) of the Constitution of Georgia.

The failure to rezone the subject property as requested, would constitute the taking of property without due process and without the payment of adequate compensation in violation of Article I, Section I, Paragraph 1 of the Constitution of the State of Georgia, 1983; and the Fifth and Fourteenth Amendments of the Constitution of the United States.

Failure to grant the application for rezoning or to zone the property to any other classification including other intervening classifications, would be contrary to the best interest of the health and welfare of the citizens of the City of Tucker, Georgia, and would further constitute an arbitrary and capricious act. As such, failure to grant the application would constitute a Violation of Article I, Section I, Paragraph 1 of the Constitution of the State of Georgia, 1983; and Article I, Section III, Paragraph 1 of the Constitution of the State of Georgia; and Article I, Section II, Paragraph 3 of the Constitution of the State of Georgia, 1983, together with the due process clause and equal protection clauses of Fifth and Fourteenth Amendments to the Constitution of the United States of America.

Any limitation on the time for presentation of the issues before the Mayor and City Council who have the power to zone and rezone is a violation of the guarantees of free speech under Article I, Section I, Paragraph 5 of the Constitution of the State of Georgia, 1983 and the First Amendment of the Constitution of the United States of America. Further, said limitations are in violation of the right to petition and assemble, in violation of Article I, Section I, Paragraph IX of the Constitution of Georgia, 1983 and the First Amendment of the Constitution of the United States of America as well as the due process clauses of the Constitution of Georgia, 1983 and the Constitution of the United States of America.

The Zoning Ordinance of the City of Tucker is unlawful, null and void in that its adoption and map adoption/maintenance did not comply with the requirements of its predecessor ordinance and/or the Zoning Procedures Law, O.C.G.A. § 36-66-1, et seq.

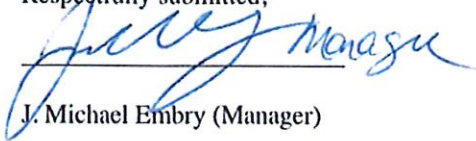
## **VI. CONCLUSION**

For the foregoing reasons, the Applicant respectfully requests that the Rezoning Application at issue be approved. The Applicant also invites and welcomes any comments from Staff or other officials of the City of

Tucker so that such recommendations or input might be incorporated as conditions of approval of this Application.

This 1<sup>st</sup> day of March, 2022.

Respectfully submitted,



J. Michael Embry (Manager)

Embry Development Company, LLC  
P.O. Box 2789  
Suwanee, GA 30024



## MEMORANDUM

TO: City of Tucker, Department of Community Development

FROM: Embry Development Company, LLC (J. Michael Embry)

DATE: March 1, 2022

RE: Environment Site Analysis – 3207, 3207 3227, and 3259 Lawrenceville Highway  
and 3563 Bishop Drive

### 1) CONFORMANCE WITH THE COMPREHENSIVE PLAN.

The Subject Property is located on the south-east side of Lawrenceville Highway, approximately 190 feet north of its intersection with St. Lawrence Cove. More particularly, the Subject Property is comprised of five (5) parcels located at 3207 Lawrenceville Highway (Parcel ID: 18-165-03-002); 3217 Lawrenceville Highway (Parcel ID: 18-165-03-021); 3227 Lawrenceville Highway (Parcel ID: 18-165-03-001); 3259 Lawrenceville Highway (Parcel ID: 18-166-02-014); and 3563 Bishop Drive (Parcel ID: 18-166-02-015). All five parcels of the Subject Property are currently zoned R-75.

At present, the Subject Property is occupied by 3 single family residences, a commercial real estate office, and undeveloped land. The applicant seeks to rezone the Subject Property to Small Lot Residential Mix (RSM) to develop fifty-two (52) townhomes and appurtenant site improvements. The City of Tucker's Comprehensive Land Use Plan designates the Subject Property as Suburban (SUB) which fully allows the proposed RSM zoning and townhome use.

The City of Tucker has adopted the Dekalb County 2025 Comprehensive Plan ("The Plan") and its associated land use designations pending the development and adoption of its own Comprehensive Plan. The Plan identifies the Suburban character area as:

"The Suburban (SUB) Character Areas include those areas that have developed traditional suburban land use patterns and are developed (built out) and those under development pressures. These areas are characterized by low pedestrian orientation, limited transit access, scattered civic buildings and curvilinear street patterns.

The primary Land uses include: Single Family Detached Residential, **Townhomes**, Apartments, Assisted Living Facilities, Neighborhood retail, Schools, Libraries, Townhomes, Health Care Facilities, Parks and Recreational Facilities, Public and Civic Facilities, and Religious Institutions with **a density of 0 to 8 dwelling units per acre.**" (emphasis added)

[illegible]

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2) ENVIRONMENTAL IMPACTS OF THE PROPOSED PROJECT.  
a) Wetlands

There are no wetlands on the property as indicated by the U. S. Fish and Wildlife Service, National Wetlands Inventory Maps.





Figure 2. National Wetlands Inventory Map

b) Floodplain

No portion of the site is located in the Special Flood Hazard Area according to FEMA FIRM Map, Panel number

National Flood Hazard Layer FIRMette

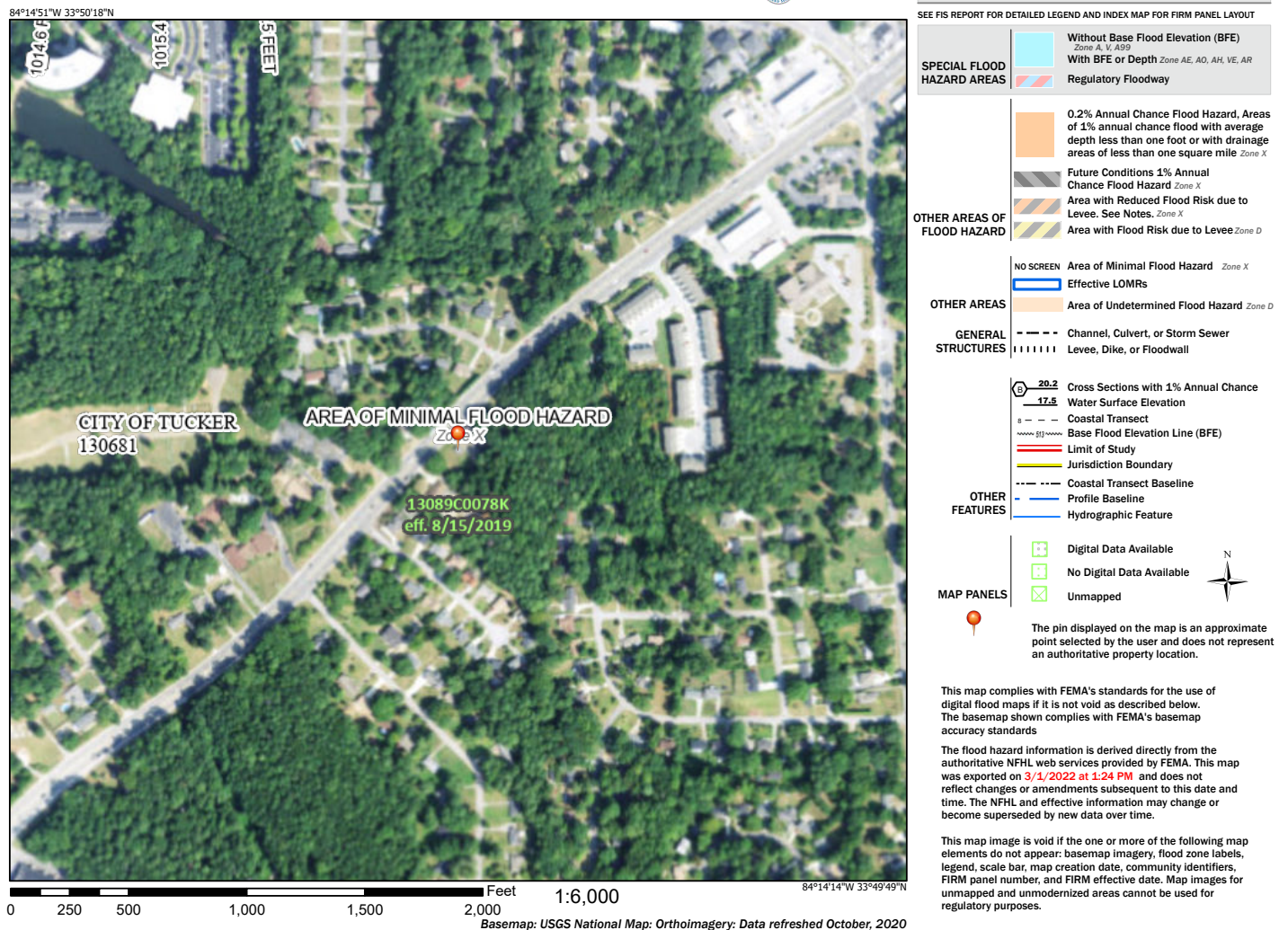


Figure 3. FEMA FIRM Panel

**c) Streams/stream buffers**

There are state waters present on the Subject Property based on site observations and as indicated by the boundary survey performed by Planners and Engineers Collaborative. The stream enters the site from an existing 42-inch headwall due east of the Subject Property and flows south through the easternmost tract of the Subject Property before discharging onto the adjacent parcel located at 3568 Bishop Lane.

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

Based on topographic survey 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 consists of parcels with existing single-family homes with typical residential landscaping. The existing vegetation on the undeveloped portions of the site consists primarily of trees and low-lying brush.

An IPaC Trust Resource Report was generated from the U.S. Fish and Wildlife Service. The report revealed that there is one plant native to the region (Michaux's Sumac) that is endangered. This species was not found onsite.

**f) Wildlife Species (including fish)**

An IPaC Trust Resource Report was generated from the U.S. Fish and Wildlife Service, which did not indicate any endangered species in the area. The report did reveal that there are several species of migratory birds in the region. None were found to be present or nesting at the project location during the site visit.

### g) Archeological/Historical Sites

According to Georgia's Natural, Archaeological and Historic Resources GIS (GNAHRGIS) maps, the project site is not on a historic or archaeological registry. The site consists of several existing single-family homes constructed between 1930's and 1950's.

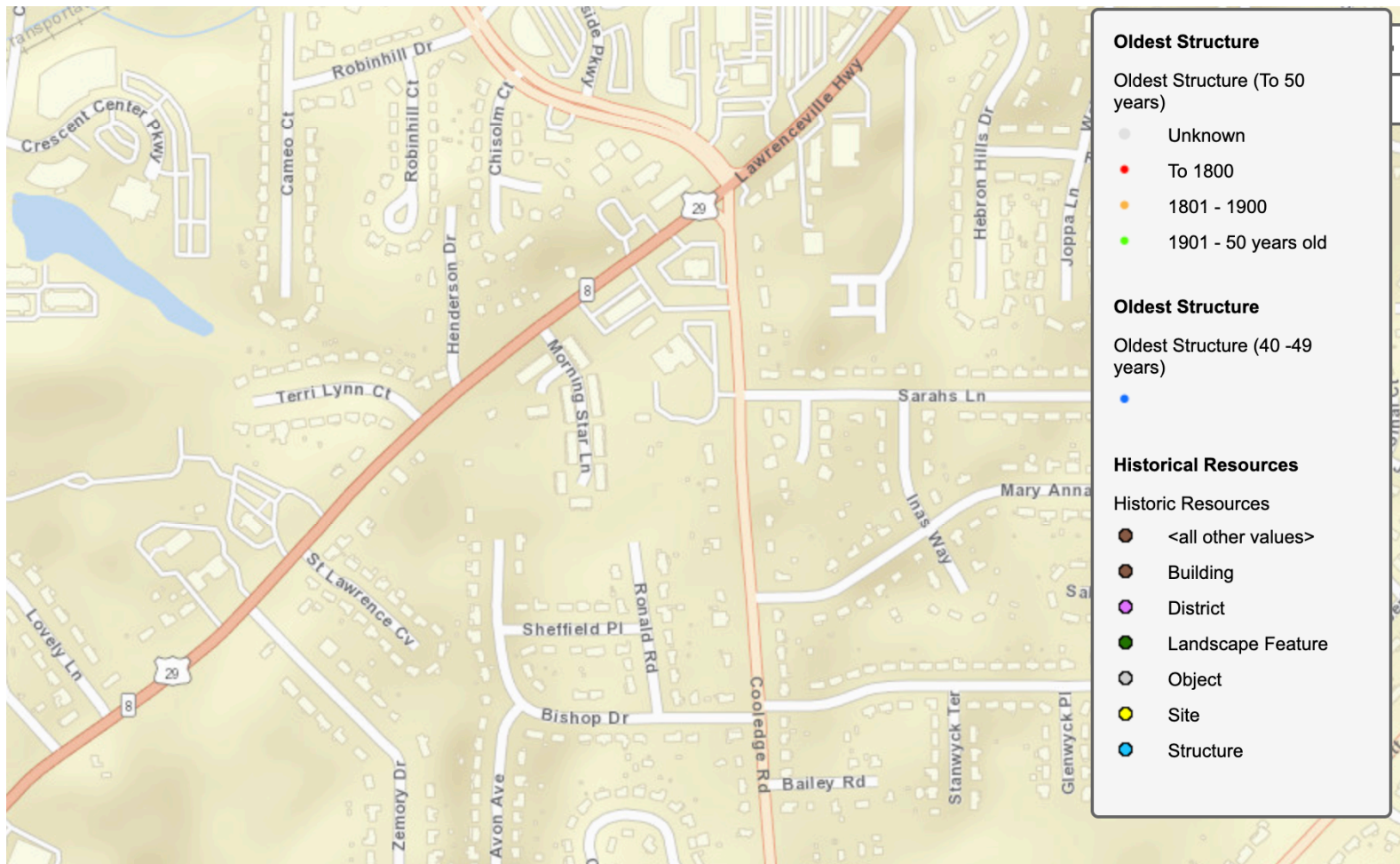


Figure 4. GNAHRGIS Map

## **2) PROJECT IMPLEMENTATION MEASURES.**

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

The project is a redevelopment of several individual parcels containing single family homes. The Subject Property contains an environmentally sensitive stream corridor in a portion of the site. The proposed site design by Planners and Engineers Collaborative (the "site plan") shows the appropriate City and State buffers. The site plan shows the proposed development and land disturbing activities will remain out of the environmentally sensitive state waters buffers.

There are no other environmentally sensitive areas such as wetlands, steep slopes or floodplain. The surrounding areas have been developed since the early to mid-1900's.

### **b) Protection of water quality**

The proposed project will treat stormwater for pollutants and release runoff at a 'wooded' condition flow rate. The overall impact to the downstream stormwater infrastructure will be positive, as no stormwater treatment currently exists.

### **c) Minimization of negative impacts on existing infrastructure**

The proposed development has access to existing utilities with sufficient capacity to support the proposed development. The proposed development 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.**

No environmentally stressed areas exist in the immediate vicinity (waste treatment facilities, airports, railroads, landfills, etc.).



**f) Creation and preservation of green space and open space**

The proposed development will incorporate 52% (4.6 acres) of the overall site for open space areas.

**f) Protection of citizens from the negative impacts of noise and lighting**

A 20' transitional buffer will separate the proposed development from the adjacent single-family homes. The buffer will include landscaping designed to minimize noise and lighting impacts to nearby properties.

**g) Protection of parks and recreational green space**

No existing parks will be impacted.

**h) Minimization of impacts to wildlife habitats**

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



## **Public Participation Plan Report**

### **Project Name:**

**Contact Name:** Mike Embry

**Meeting Date:** 2/03/2022

**Meeting Location:** Lawrenceville Road Methodist Church

**Meeting Start Time:** 6:30 pm

**Meeting End Time:** 8:30 pm

**Number of people in attendance:** 53

**Date of Filing of Land Use Petition Application:** 3/14/2022

**General Introduction:** We reached out to everyone who lives in .05 of the subject property. We sent a letter and posted on the City of Tucker Facebook page. The site plan brought to the meeting is attached, along with the new site plan that includes changes made so that the neighbors feel more comfortable with the development. The meeting was in person and also streamed for Zoom. The developer brought display boards and held a Q&A.

**Summary of concerns and issues raised at the meeting:** Attached on separate sheet.

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

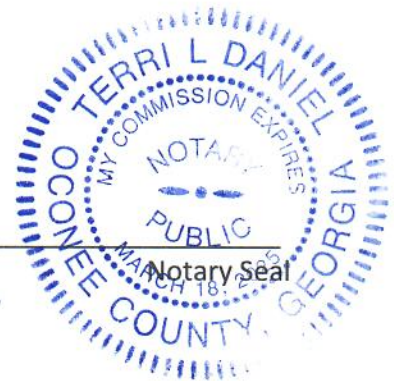
- Meeting sign-in sheet
- Meeting minutes
- Copy of the plan that was presented at the neighborhood meeting

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.

*[Signature]* *mangan* *3-14-22*  
 Signature of Applicant or Authorized Representative Date

*J. Michael Embry* *3-14-22*  
 Type or Print Name of Applicant or Authorized Representative Date

*[Signature]* *3/14/22*  
 Signature of Notary Date



Tucker Community Meeting Minutes: 2/3/2022

Question: How will they benefit from this development?

- The price point will make it so younger people can move to Tucker, add value to the community.

Question: How can we guarantee that all the townhomes won't turn into rentals? (asked x4)

- By implementing conditions, rental restrictions, and having an HOA.

Question: Can the detention pond be changed?

- Possibly make the detention pond underground, water pond, and/or increase buffer.

Question: Moved to Tucker because the Dekalb / Decatur prices were too high and there was a lot of townhomes being built (x3)

- People want to move to Tucker now to be part of the tight knit community.

Question: Beverly Williams does not want any change to happen to Tucker. No change to the character of the streets, and that townhomes will add more traffic.

- Change is inevitable, especially in a town growing as fast as tucker the ARC said 2.5 million people moving here by 2050 and they will need somewhere to live.

Question: Is there a height limit on the townhomes?

- We will be addressing those in the zoning conditions.

Question: Will all the storm water go into the detention pond, or will it run onto their property? (x3)

- We will meet and exceed the storm water guidelines of Dekalb/ Tucker. Most storm quality guidelines are 110% retention of all storm water.

Questions: Townhomes interfere with quality of the neighborhood. People who buy townhomes are not welcome in Tucker. They should be buying a single-family home, and if they can't afford one, we don't want them in Tucker.

- The people who will be moving into this project are people who want to be a part of this community, but do not necessarily want to buy and renovate an older home or their lifestyle leans towards a lower maintenance type of product.

Question: Thomas Jacobs – Worried about the traffic on Cooledge Road.

- Traffic will get worse regardless of the project with the amount of people moving to Atlanta.

Question: Worried the people who move into the townhomes won't add any value to their community.

- Just because these people want to buy a townhome doesn't mean that they are a detriment to society, it means that have a different lifestyle choice that requires a lower maintenance property.

Question: They don't want any townhomes to be built. They want single family only. (x6)

- People live in all different types of product, and having townhomes lowers the price point to make buying a more affordable for younger families.

Minutes:

Started at 6:40pm

Ended at 8:05pm

A lot of other dialogue were not questions, they were statements on how they don't want change in their community, and they only want people moving into the city to be buying single family homes. This was said by numerous people. Some time was also spent on the zoom projector scrolling through comments.

The numbers outside the questions with an 'x' by it was how many times it was asked during the meeting.

Some people came and spoke to us after the meeting was over to speak off the record in support and against the project. They didn't want to speak in front of the group.

As a result of the community meeting the site plan was changed to reflect the concerns from the neighbors.

Items changed:

- Took 2 buildings and adjoined them into 1 and moved them closer to Lawrenceville Highway, so that they were farther away from the neighbors on Bishop.
- Moved the building that backs up to St. Lawrence closer to Lawrenceville Highway
- Increased the buffers by 50%
- All of these changes resulted in the project giving more room between the units and the residents of Bishop Dr and St. Lawrence

Hello Neighbors,

Our company Embry Development Company has developed real estate for 30 years in Atlanta and Metro Atlanta.

We are interested in rezoning 8.727 acres on Lawrenceville Highway for a 52 unit townhomes community near Cooledge Road in Tucker. This land was previously proposed for redevelopment in 2017 under case # RZ-17-0005.

We are proposing two phases if approved. The first phase South of Lawrenceville Highway, and the second phase North of Lawrenceville Highway. The first step in the rezoning process is to host a neighborhood meeting to discuss the proposed site plan. We will be bringing a site plan (enclosed) for you all to look at and give feedback.

The address for the North Phase are 4350 Henderson Dr, 3298, 5254, 3304, 3320 Lawrenceville Highway

The addresses for the South Phase are 3207, 3217, 3227 & 3259 Lawrenceville Highway. 3563 Bishop Drive.

This meeting is planned to take place on February 3, 2022 at 6:30pm at the Lawrenceville Road United Methodist church.

The church is located at 3142 Lawrenceville Highway, Tucker, GA 30084.

Regards,

Mike Embry

404-569-9756

[mike@embrycompanies.com](mailto:mike@embrycompanies.com)



Sign in sheet Tucker Community Meeting Feb 3<sup>rd</sup>, 2022

Janet Curtis 1887 Robin Hill Ct. Tucker Ga.

Tommy Lupo 3542 Terri Lynn Ct. Tucker Ga.

Sylvia G. Maldonado 1609 Avon Ave. Tucker Ga. [smstripes@gmail.com](mailto:smstripes@gmail.com)

Richard Kelly 3434 Montreal Way, Tucker Ga.

Dorothy Patterson 3298 Lawrenceville Highway

Jim & Barbara Nall 1901 Waldon Wood Circle, Tucker Ga.

Doug Smith 1829 Sarvaris (?) Trail, Tucker Ga.

Karen & Wes Spooner 1598 Avon Ave, Tucker Ga.

Mary Iris Mull 1889 Cameo Court, Tucker Ga.

Johnny Smith 3246 Lawrenceville Highway

Joe Kilpatrick 1346 Drayton Woods Drive

Kay & Roy Delafosse 1785 Samaria Trail, Tucker Ga.

Vince Latigus 3633 Bishop Drive, Tucker Ga.

Steve Hagem 4640 Imperial Hill Court

David & Avery Sebben 1621 Zemory Drive, Tucker Ga.

Pat Jollay 3593 Bishop Drive, Tucker Ga.

Andrew Greenberg 1841 Hebron Hills, Tucker Ga.

Anna Ruth & Russell Gregory 1666 Cody Circle, Tucker Ga.

SFC Beverly Williams 1896 Cameo Court, Tucker Ga.

Herman Munster

Sara & Sam Henderson 3826 ? Lane

John Larose 3577 Bishop Drive

Verene Rubert 1699 Zemory Drive

Diane Robinson 3750 Marlborough Drive

Carol Jones 3777 Marlborough Drive

Rod Gary 2906 Templar Knight Drive

Nan Scroeder? 4009 Allenwood Way  
 Russell Sites & Laura Joseph 1693 Zemory Drive  
 Debbie Namer 1707 Saint Lawrence Cove  
 Patty Green 1719 Saint Lawrence Cove  
 Rodney McHugh 3630 Sheffield Place  
 Mary Jean Selby ? 3956 Bishop Drive  
 Herrera Rios 3626 Bishop Drive  
 Anna Kershaw 1552 Edinburgh Drive  
 Ed Nicholson 1400 Mackenzie Court  
 Tom Jenkins 3785 Sarahs Lane  
 Mary Seedlock 1627 Edinburgh Drive  
 Marian Woods 1823 Morning ? Ave  
 Cara Mai & Alex Hall 3576 Bishop Drive  
 Virginia Rece 2316 Grail Meadow Lane  
 Logan Ritchie Decaturish/Tucker Observer  
 Kathie Crater 1660 Cody Circle  
 ? 1213 ?  
 Pam & Frank Sapp 4107 Hughes Lea?  
 Lois Ricci 4030 Brockett Creek Drive  
 Stephen Jones/Lightbox Homes 2830 Sylvan Ramble/1956 Montreal Road NE  
 Laurel Jackson 1606 Brockett Road  
 Chima Ikewezunma 3574 Robwhill ? Drive Tucker  
 Carl Gonzales II & Tochikwu 1750 Ronald Road Tucker Ga.  
 Palma Hampton 3623 Marlborough Drive  
 Emory Clements 1456 Halifax Court Tucker  
 Jody Steinberg [jody@jodysteinberg.com](mailto:jody@jodysteinberg.com)  
 Jeff Wiggs jjww811@gmail.com

**MAILING LIST FOR NEIGHBOR LETTER**

Name street Address	DEVEREAUX ZACHARY T 3587 Terri Lynn Court Tucker, GA 30084	CHANG HUIYUN KO 3185 Lawrenceville Highway Tucker, GA 30084
KOULOURIS DIMITRIOS 1749 Saint Lawrence Cove Tucker, GA 30084	PATEL DIMPLE 1737 Saint Lawrence Cove Tucker, GA 30084	HAGERMAN KAREN MAE REVOCABLE LIVING TRUS 3568 Bishop Drive Tucker, GA 30084
LAROSE JOHN STEPHEN 3577 Bishop Drive Tucker, GA 30084	GONZALEZ LIZ BRENE 3607 Bishop Drive Tucker, GA 30084	JOLLAY PATRICIA FAYE BALL 3593 Bishop Drive Tucker, GA 30084
BUNTING GRADEN JENNIFER 1785 Morning Star Lane Tucker, GA 30084	THOMPSON BRITTANY 1781 Morning Star Lane Tucker, GA 30084	SPEARMAN MYRIAM LISA 1780 Morning Star Lane Tucker, GA 30084
DESAI USHMA 1784 Morning Star Lane Tucker, GA 30084	YASEEN AVRAZ 3610 Wind River Court Tucker, GA 30084	OLIVER ANTHONY JOHN 3606 Wind River Court Tucker, GA 30084
BEGUM SHAMIM ARA 1850 Chisholm Court Tucker, GA 30084	LAUDER MARTHA LEE 4530 Henderson Drive Tucker, GA 30084	PENAFIEL MIGUEL CESAR 3202 Lawrenceville Highway Tucker, GA 30084
TRUONG THANHTAN THI 3539 Terri Lynn Court Tucker, GA 30084	TRINH HUYNH HOA THI 3584 Terri Lynn Court Tucker, GA 30084	WILLIAMS ESTHER B 1723 Zemory Drive Tucker, GA 30084
THA MUANG 1743 Saint Lawrence Cove Tucker, GA 30084	JACKSON STANLEY 1700 Saint Lawrence Cove Tucker, GA 30084	SFR XII OWNER 2 LP 1744 Saint Lawrence Cove Tucker, GA 30084
ST JOLIE LLC 3254 Lawrenceville Highway Tucker, GA 30084	MCDONALD MARY FRANCES 3259 Lawrenceville Highway Tucker, GA 30084	MAI CARA TUYET 3576 Bishop Drive Tucker, GA 30084
KAMI MAN 3613 Bishop Drive Tucker, GA 30084	MADDLONE TERRY G 3616 Bishop Drive Tucker, GA 30084	SHERROD DEREK 1829 Morning Star Lane Tucker, GA 30084

CHIEFTAIN ATLANTA LP  
1813 Morning Star Lane  
Tucker, GA 30084

BROOKS TASHA LEE N  
1787 Morning Star Lane  
Tucker, GA 30084

TESFAY SOLOMON M  
1786 Morning Star Lane  
Tucker, GA 30084

REID CAROLYN D  
1814 Morning Star Lane  
Tucker, GA 30084

HEARN JACQUELINE D  
1848 Morning Star Lane  
Tucker, GA 30084

AVERY HILLS HOMEOWNERS  
ASSOCIATION INC  
1849 Morning Star Lane  
Tucker, GA 30084

ZHENG SONG  
3212 Lawrenceville Highway  
Tucker, GA 30084

BRAND JOAN M  
3554 Terri Lynn Court  
Tucker, GA 30084

MACLEOD WILLIAM STEVE  
3161 Lawrenceville Highway  
Tucker, GA 30084

ST SOPHIA LLC  
3217 Lawrenceville Highway  
Tucker, GA 30084

LATINO INC  
1730 Saint Lawrence Cove  
Tucker, GA 30084

WANG XIAONAN  
1738 Saint Lawrence Cove  
Tucker, GA 30084

DUBIN RHONDA  
3644 Sheffield Place  
Tucker, GA 30084

NEUMAN MICHAEL S  
3650 Sheffield Place  
Tucker, GA 30084

KANE ABIGAIL TAYLOR  
1740 Ronald Road  
Tucker, GA 30084

MENDOZA ELMER A  
3621 Bishop Drive  
Tucker, GA 30084

ZAM PETER D  
3625 Sheffield Place  
Tucker, GA 30084

ZA PAUL  
3633 Sheffield Place  
Tucker, GA 30084

WASHINGTON ODESSA Y  
1827 Morning Star Lane  
Tucker, GA 30084

GOLDMAN JESSICA BOYCE  
1825 Morning Star Lane  
Tucker, GA 30084

THARPE KRISTI  
1762 Morning Star Lane  
Tucker, GA 30084

GERBI YEMESRACH  
1764 Morning Star Lane  
Tucker, GA 30084

CRANE VINCENT WILLIAM  
1824 Morning Star Lane  
Tucker, GA 30084

BOLDS CLIFTON L  
1826 Morning Star Lane  
Tucker, GA 30084

AVERY HILLS HOMEOWNERS  
ASSOCIATION INC  
3604 Wind River Court  
Tucker, GA 30084

AVERY HILLS HOMEOWNERS ASSO  
3630 Wind River Court  
Tucker, GA 30084

PHILLIPS STEVEN KEITH  
1855 Chisholm Court  
Tucker, GA 30084

MOE GERALD A  
3557 Terri Lynn Court  
Tucker, GA 30084

WILSON DENNIS H  
3545 Terri Lynn Court  
Tucker, GA 30084

MARTIN TIFFANY M  
3590 Terri Lynn Court  
Tucker, GA 30084

RICKETT VERENE STANLEY  
1699 Zemory Drive  
Tucker, GA 30084

MACLEOD H L  
1685 Zemory Drive  
Tucker, GA 30084

TRAN LUONG VAN  
1731 Saint Lawrence Cove  
Tucker, GA 30084

GREEN NARRIS L  
1719 Saint Lawrence Cove  
Tucker, GA 30084

TRAN DAT TIEN  
1776 Cooledge Road  
Tucker, GA 30084

BLAKELY ANDREW L  
3585 Bishop Drive  
Tucker, GA 30084

DUVAL DAVID LAURIER  
1690 Avon Avenue  
Tucker, GA 30084

KANE ROBERT  
1747 Ronald Road  
Tucker, GA 30084

CHOATE STEPHANIE L  
1845 Morning Star Lane  
Tucker, GA 30084

DIXON TAMIKA S  
1841 Morning Star Lane  
Tucker, GA 30084

MADDOX JUNE OLIVIA  
1807 Morning Star Lane  
Tucker, GA 30084

PATTERSON KATRINA  
1803 Morning Star Lane  
Tucker, GA 30084

NEYOR GAMALIEL MARCUS  
1802 Morning Star Lane  
Tucker, GA 30084

HAWKINS CAMERON  
1806 Morning Star Lane  
Tucker, GA 30084

ELMOR RIAD  
3618 Wind River Court  
Tucker, GA 30084

KING TERESA A  
3612 Wind River Court  
Tucker, GA 30084

TAM ANNA  
3565 Terri Lynn Court  
Tucker, GA 30084

SLADE SHERRI  
3551 Terri Lynn Court  
Tucker, GA 30084

SMITH JOHNNY E  
3246 Lawrenceville Highway  
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SITES RUSSELL T  
1693 Zemory Drive  
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HAMBALEK JOANNE G  
1725 Saint Lawrence Cove  
Tucker, GA 30084

BEGUM MUHSINA  
1713 Saint Lawrence Cove  
Tucker, GA 30084

OCONNOR BARBARA ROSE  
1745 Ronald Road  
Tucker, GA 30084

WIGGS JEFFREY W  
1774 Cooledge Road  
Tucker, GA 30084

BASEN RICHARD FRANK III  
1684 Avon Avenue  
Tucker, GA 30084

LIVING GRACE EVANGELICAL  
1812 Cooledge Road  
Tucker, GA 30084

BRAWLEY JANE PALMER  
1843 Morning Star Lane  
Tucker, GA 30084

VARGAS MANUEL C  
1839 Morning Star Lane  
Tucker, GA 30084

RICHARDSON CATHERINE A  
1805 Morning Star Lane  
Tucker, GA 30084

GRILL JOSEPH  
1801 Morning Star Lane  
Tucker, GA 30084

ALEMU MICHAEL  
1800 Morning Star Lane  
Tucker, GA 30084

NELSON CYNTHIA M  
1804 Morning Star Lane  
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MCELHANNON JAMES M  
3620 Wind River Court  
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HANSBERRY KAREN A  
3616 Wind River Court  
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IJUIN COLLEEN  
1857 Robinhill Court  
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FOWLER DANIEL E  
3560 Terri Lynn Court  
Tucker, GA 30084

CALDER REBECCA A  
3527 Terri Lynn Court  
Tucker, GA 30084

ST SOPHIA LLC  
3227 Lawrenceville Highway  
Tucker, GA 30084

ST JOLIE LLC  
3207 Lawrenceville Highway  
Tucker, GA 30084

HOANG TRINH LE  
3193 Lawrenceville Highway  
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OUNG MICHELLE MUYLENG  
1718 Saint Lawrence Cove  
Tucker, GA 30084

BRITTAIN MARTHA ANN LAST WILL  
1724 Saint Lawrence Cove  
Tucker, GA 30084

HAKEEM WAEL  
3638 Sheffield Place  
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BAYAN IDRIS  
1734 Ronald Road  
Tucker, GA 30084

RUSNAK JOHN A JR  
1739 Ronald Road  
Tucker, GA 30084

GONZALES CARL  
1750 Ronald Road  
Tucker, GA 30084

RITTGERS JERRY L  
1786 Cooledge Road  
Tucker, GA 30084

PRESTON BENJAMIN  
3641 Sheffield Place  
Tucker, GA 30084

REGAN PATRICIA R  
3647 Sheffield Place  
Tucker, GA 30084

WOODS MARIAN L  
1823 Morning Star Lane  
Tucker, GA 30084

ROGERS CHERYL  
1821 Morning Star Lane  
Tucker, GA 30084

NINO LOUIS  
1760 Morning Star Lane  
Tucker, GA 30084

ANNAN MAXWELL  
1766 Morning Star Lane  
Tucker, GA 30084

MARTIN MICHAEL E  
1820 Morning Star Lane  
Tucker, GA 30084

REESE YVETTE M  
1822 Morning Star Lane  
Tucker, GA 30084

MILLER JOSEPH W  
1851 Chisholm Court  
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HARRIS JUSTIN A  
3575 Terri Lynn Court  
Tucker, GA 30084

DALTON ETHAN PROPERTIES LLC  
3572 Terri Lynn Court  
Tucker, GA 30084

LORING BYERS FUNERAL DIRECTORS  
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JONES CARLENE  
1707 Zemory Drive  
Tucker, GA 30084

BERDUO FELICIANO  
1755 Saint Lawrence Cove  
Tucker, GA 30084

ZEIGER SAMARA R  
1712 Saint Lawrence Cove  
Tucker, GA 30084

MCMAHAN CHRISTIE  
3624 Sheffield Place  
Tucker, GA 30084

VERLARE CAROL  
3569 Bishop Drive  
Tucker, GA 30084

TRAN ANGELINA KRISTIE  
3601 Bishop Drive  
Tucker, GA 30084

DEKALB COUNTY  
3636 Bishop Drive  
Tucker, GA 30084

CHOWDHURY RASHEDA  
1720 Ronald Road  
Tucker, GA 30084

LATIGUE VINCENT  
3633 Bishop Drive  
Tucker, GA 30084

WAUGH CRYSTAL I  
1835 Morning Star Lane  
Tucker, GA 30084

WANG XU  
1819 Morning Star Lane  
Tucker, GA 30084

FETTENE FISEHA M  
1809 Morning Star Lane  
Tucker, GA 30084

TOURE MOHAMED  
1783 Morning Star Lane  
Tucker, GA 30084

JOSEPH FOTTOU MICHAEL  
1782 Morning Star Lane  
Tucker, GA 30084

HOLMAN ALEXIS T  
1808 Morning Star Lane  
Tucker, GA 30084

FINS VIKARY E  
1818 Morning Star Lane  
Tucker, GA 30084

NASH TAMARA S  
3624 Wind River Court  
Tucker, GA 30084

ANDANI AKBER  
3608 Wind River Court  
Tucker, GA 30084

TIN THANG L  
1854 Chisholm Court  
Tucker, GA 30084

HUMPHREYS FUND I REIT LLC  
3317 Lawrenceville Highway  
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JACKSON ELIZABETH CHRISTIAN  
4448 Henderson Drive  
Tucker, GA 30084

CHIARI GUERRERO GUILLERMINA  
3533 Terri Lynn Court  
Tucker, GA 30084

GALLAVAN JOSEPH M  
3566 Terri Lynn Court  
Tucker, GA 30084

WEATHERFORD BENJAMIN B  
3578 Terri Lynn Court  
Tucker, GA 30084

MACLEOD BETTY D  
3153 Lawrenceville Highway  
Tucker, GA 30084

HUGHES W SCOTT  
1715 Zemory Drive  
Tucker, GA 30084

NAMER MOISES W  
1707 Saint Lawrence Cove  
Tucker, GA 30084

ABUBAKR FOREAH  
1706 Saint Lawrence Cove  
Tucker, GA 30084

TESFAMICHAEL ARON B  
1752 Saint Lawrence Cove  
Tucker, GA 30084

MCDONALD ROBERT A  
3563 Bishop Drive  
Tucker, GA 30084

MCHUGH RODNEY MARTIN  
3630 Sheffield Place  
Tucker, GA 30084



HERRERA RIOS URIEL ENRIQUE  
3626 Bishop Drive  
Tucker, GA 30084

YOUNG DONALEIGH  
1837 Morning Star Lane  
Tucker, GA 30084

JONES RODRICK V  
1831 Morning Star Lane  
Tucker, GA 30084

CHIEN CHUAN C  
1817 Morning Star Lane  
Tucker, GA 30084

POE DONNA L  
1811 Morning Star Lane  
Tucker, GA 30084

HERNDON RASHEEDAH  
1812 Morning Star Lane  
Tucker, GA 30084

DEROSEN FABIOLA  
1816 Morning Star Lane  
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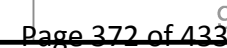
BARKSDALE ANTHONY  
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Tucker, GA 30084

DUKES SANDRA  
3622 Wind River Court  
Tucker, GA 30084

ST JOLIE LLC  
3298 Lawrenceville Highway  
Tucker, GA 30084

RZ-22-0001





24 HOUR CONTACT:  
MIKE EMBRY



C5

SHEET



## 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:

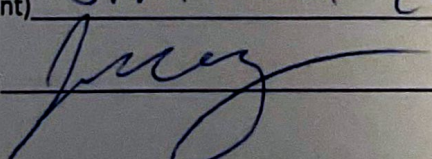
1.	5.
2.	6.
3.	7.
4.	8.

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) J. Michael Embry

Signature: 

Date: 3-11-2022

RECEIVED  
CITY OF TUCKER

03/17/2022



LEGAL DESCRIPTION – TRACT I

ALL THAT TRACT OR PARCEL OF LAND lying and being in Land Lot 165, 18th District, DeKalb County, Georgia and being more particularly described as follows:

To find the True Point of Beginning, COMMENCE at point located at the intersection of the southerly right of way of Lawrenceville Highway (aka US Hwy 29) (aka GA Hwy 8) (variable right of way) and the southwesterly right of way of Morning Star Lane (55 foot right of way), said point being the POINT OF COMMENCEMENT;

THENCE along said southerly right of way of Lawrenceville Highway (aka US Hwy 29) (aka GA Hwy 8) (variable right of way) the following courses and distances: South 52 degrees 33 minutes 21 seconds West, a distance of 73.78 feet to a point; South 38 degrees 10 minutes 27 seconds East, a distance of 3.50 feet to a point; South 51 degrees 58 minutes 03 seconds West, a distance of 8.59 feet to a point; South 52 degrees 09 minutes 06 seconds, a distance of 21.34 feet to a point; North 38 degrees 03 minutes 45 seconds West, a distance of 3.40 feet a point; South 51 degrees 52 minutes 58 seconds West, a distance of 12.56 feet to a point; South 67 degrees 11 minutes 43 seconds West, a distance of 24.10 feet to a point; South 51 degrees 45 minutes 23 seconds West, a distance of 15.94 feet to a point; South 52 degrees 12 minutes 32 seconds West, a distance of 23.14 feet to a point; South 50 degrees 36 minutes 41 seconds West, a distance of 16.29 feet to a point; North 18 degrees 48 minutes 57 seconds West, a distance of 11.12 feet to a point; South 50 degrees 43 minutes 00 seconds West, a distance of 110.70 feet to a point; South 48 degrees 57 minutes 33 seconds West, a distance of 113.50 feet to a point; South 49 degrees 14 minutes 49 seconds West, a distance of 80.90 feet to a point; South 42 degrees 36 minutes 51 seconds East, a distance of 4.00 feet to a point; South 47 degrees 23 minutes 09 seconds West, a distance of 4.00 feet to a point; North 42 degrees 36 minutes 51 seconds West, a distance of 4.00 feet to a point; 247.03 feet along an arc of a curve to the left, said curve having a radius of 4692.58 feet and a chord bearing of South 46 degrees 44 minutes 00 seconds West, a distance of 247.00 feet to a point; South 45 degrees 16 minutes 40 seconds West, a distance of 82.90 feet to a point, said point being the TRUE POINT OF BEGINNING;

With the TRUE POINT OF BEGINNING thus established, thence leaving said southerly right of way of Lawrenceville Highway South 44 degrees 45 minutes 41 seconds East, a distance of 183.49 feet to a point; thence North 44 degrees 41 minutes 25 seconds East, a distance of 85.00 feet to a point; thence South 42 degrees 56 minutes 32 seconds East, a distance of 168.74 feet to a point; thence South 00 degrees 02 minutes 33 seconds West, a distance of 43.85 feet to a 1 inch crimp top pipe found; thence South 00 degrees 41 minutes 38 seconds East, a distance of 99.45 feet and iron pin found; thence South 00 degrees 18 minutes 39 seconds West, a distance of 100.10 feet to a 1 inch crimp top pipe found; thence South 00 degrees 12 minutes 10 seconds West, a distance of 99.56 feet an iron pin found; thence South 00 degrees 20 minutes 25 seconds West, a distance of 102.05 feet a 1 inch open top pipe found; thence North 47 degrees 58 minutes 27 seconds West, a distance of 438.77 feet to a point; thence North 42 degrees 02 minutes 06 seconds East, a distance of 126.00 feet to a point; thence North 48 degrees 06 minutes 57 seconds West, a distance of 219.45 feet a point on the southerly right of way of Lawrenceville Highway (aka US Hwy 29) (aka GA Hwy 8) (variable right of way); thence along said right of way of Lawrenceville Highway North 44 degrees 06 minutes 21 seconds East, a distance of 145.60 feet to a point, said point being the TRUE POINT OF BEGINNING.

Containing 2.977 acres.

LEGAL DESCRIPTION – TRACT II

ALL THAT TRACT OR PARCEL OF LAND lying and being in Land Lot 165, 18th District, DeKalb County, Georgia and being more particularly described as follows:

To find the True Point of Beginning, COMMENCE at point located at the intersection of the southerly right of way of Lawrenceville Highway (aka US Hwy 29) (aka GA Hwy 8) (variable right of way) and the southwesterly right of way of Morning Star Lane (55 foot right of way), said point being the POINT OF COMMENCEMENT;

THENCE along said southerly right of way of Lawrenceville Highway (aka US Hwy 29) (aka GA Hwy 8) (variable right of way) the following courses and distances: South 52 degrees 33 minutes 21 seconds West, a distance of 73.78 feet to a point; South 38 degrees 10 minutes 27 seconds East, a distance of 3.50 feet to a point; South 51 degrees 58 minutes 03 seconds West, a distance of 8.59 feet to a point; South 52 degrees 09 minutes 06 seconds, a distance of 21.34 feet to a point; North 38 degrees 03 minutes 45 seconds West, a distance of 3.40 feet a point; South 51 degrees 52 minutes 58 seconds West, a distance of 12.56 feet to a point; South 67 degrees 11 minutes 43 seconds West, a distance of 24.10 feet to a point; South 51 degrees 45 minutes 23 seconds West, a distance of 15.94 feet to a point; South 52 degrees 12 minutes 32 seconds West, a distance of 23.14 feet to a point; South 50 degrees 36 minutes 41 seconds West, a distance of 16.29 feet to a point; North 18 degrees 48 minutes 57 seconds West, a distance of 11.12 feet to a point; South 50 degrees 43 minutes 00 seconds West, a distance of 110.70 feet to a point; South 48 degrees 57 minutes 33 seconds West, a distance of 113.50 feet to a point; South 49 degrees 14 minutes 49 seconds West, a distance of 80.90 feet to a point; South 42 degrees 36 minutes 51 seconds East, a distance of 4.00 feet to a point; South 47 degrees 23 minutes 09 seconds West, a distance of 4.00 feet to a point; North 42 degrees 36 minutes 51 seconds West, a distance of 4.00 feet to a point; 247.03 feet along an arc of a curve to the left, said curve having a radius of 4692.58 feet and a chord bearing of South 46 degrees 44 minutes 00 seconds West, a distance of 247.00 feet to a point, said point being the TRUE POINT OF BEGINNING;

With the TRUE POINT OF BEGINNING thus established, thence leaving said southerly right of way of Lawrenceville Highway South 45 degrees 25 minutes 08 seconds East, a distance of 182.63 feet to a point; thence South 44 degrees 41 minutes 25 seconds West, a distance of 85.00 feet to a point; thence North 44 degrees 45 minutes 41 seconds West, a distance of 183.49 feet to a point on southerly right of way of Lawrenceville Highway; thence along said southerly right of way of Lawrenceville Highway North 45 degrees 16 minutes 40 seconds East, a distance of 82.90 feet to a point, said point being the TRUE POINT OF BEGINNING.

Containing 0.353 acres, more or less.

LEGAL DESCRIPTION – TRACT III

ALL THAT TRACT OR PARCEL OF LAND lying and being in Land Lot 165, 18th District, DeKalb County, Georgia and being more particularly described as follows:

To find the True Point of Beginning, COMMENCE at point located at the intersection of the southerly right of way of Lawrenceville Highway (aka US Hwy 29) (aka GA Hwy 8) (variable right of way) and the southwesterly right of way of Morning Star Lane (55 foot right of way), said point being the POINT OF COMMENCEMENT;

THENCE along said southerly right of way of Lawrenceville Highway (aka US Hwy 29) (aka GA Hwy 8) (variable right of way) the following courses and distances: South 52 degrees 33 minutes 21 seconds West, a distance of 73.78 feet to a point; South 38 degrees 10 minutes 27 seconds East, a distance of 3.50 feet to a point; South 51 degrees 58 minutes 03 seconds West, a distance of 8.59 feet to a point; South 52 degrees 09 minutes 06 seconds, a distance of 21.34 feet to a point; North 38 degrees 03 minutes 45 seconds West, a distance of 3.40 feet a point; South 51 degrees 52 minutes 58 seconds West, a distance of 12.56 feet to a point; South 67 degrees 11 minutes 43 seconds West, a distance of 24.10 feet to a point; South 51 degrees 45 minutes 23 seconds West, a distance of 15.94 feet to a point; South 52 degrees 12 minutes 32 seconds West, a distance of 23.14 feet to a point; South 50 degrees 36 minutes 41 seconds West, a distance of 16.29 feet to a point; North 18 degrees 48 minutes 57 seconds West, a distance of 11.12 feet to a point; South 50 degrees 43 minutes 00 seconds West, a distance of 110.70 feet to a point; South 48 degrees 57 minutes 33 seconds West, a distance of 113.50 feet to a point, said point being the TRUE POINT OF BEGINNING;

With the TRUE POINT OF BEGINNING thus established, thence leaving said southerly right of way of Lawrenceville Highway South 00 degrees 06 minutes 53 seconds East, a distance of 476.53 feet to a point; thence North 42 degrees 56 minutes 32 seconds West, a distance of 168.74 feet to a point; thence North 45 degrees 25 minutes 08 seconds West, a distance of 182.63 feet to the point on the southerly right of way of Lawrenceville Highway; thence proceed along said southerly right of way of Lawrenceville Highway the following courses and distances: 247.03 feet along an arc of a curve to the left, said curve having a radius of 4692.58 feet and a chord bearing of North 46 degrees 44 minutes 00 seconds East, a distance of 247.00 feet to a point; South 42 degrees 36 minutes 51 seconds East, a distance of 4.00 feet to a point; thence North 47 degrees 23 minutes 09 seconds East, a distance of 4.00 feet to a point; thence North 42 degrees 36 minutes 51 seconds West, a distance of 4.00 feet to a point; thence North 49 degrees 14 minutes 49 seconds East, a distance of 80.90 feet to a point, said point being the TRUE POINT OF BEGINNING.

Containing 1.338 acres.

LEGAL DESCRIPTION – TRACT IV

ALL THAT TRACT OR PARCEL OF LAND lying and being in Land Lots 165 and 166, 18th District, DeKalb County, Georgia and being more particularly described as follows:

To find the True Point of Beginning, COMMENCE at point located at the intersection of the southerly right of way of Lawrenceville Highway (aka US Hwy 29) (aka GA Hwy 8) (variable right of way) and the southwesterly right of way of Morning Star Lane (55 foot right of way), said point being the POINT OF COMMENCEMENT;

THENCE along said southerly right of way of Lawrenceville Highway (aka US Hwy 29) (aka GA Hwy 8) (variable right of way) the following courses and distances: South 52 degrees 33 minutes 21 seconds West, a distance of 73.78 feet to a point; South 38 degrees 10 minutes 27 seconds East, a distance of 3.50 feet to a point; South 51 degrees 58 minutes 03 seconds West, a distance of 8.59 feet to a point; South 52 degrees 09 minutes 06 seconds, a distance of 21.34 feet to a point; North 38 degrees 03 minutes 45 seconds West, a distance of 3.40 feet a point; South 51 degrees 52 minutes 58 seconds West, a distance of 12.56 feet to a point; South 67 degrees 11 minutes 43 seconds West, a distance of 24.10 feet to a point; South 51 degrees 45 minutes 23 seconds West, a distance of 15.94 feet to a point; South 52 degrees 12 minutes 32 seconds West, a distance of 23.14 feet to a point; South 50 degrees 36 minutes 41 seconds West, a distance of 16.29 feet to a point; North 18 degrees 48 minutes 57 seconds West, a distance of 11.12 feet to a point; South 50 degrees 43 minutes 00 seconds West, a distance of 110.70 feet to a point, said point being the TRUE POINT OF BEGINNING;

With the TRUE POINT OF BEGINNING thus established, thence leaving said southerly right of way of Lawrenceville Highway South 10 degrees 49 minutes 44 seconds East, a distance of 605.70 feet to a point; thence North 89 degrees 59 minutes 53 seconds West, a distance of 198.48 feet to a 1 inch crimp top pipe found; thence North 00 degrees 02 minutes 33 seconds East, a distance of 43.85 feet to a point; thence North 00 degrees 06 minutes 53 seconds West, a distance of 476.53 feet to a point on southerly right of way of Lawrenceville Highway; thence along said southerly right of way of Lawrenceville Highway North 48 degrees 57 minutes 33 seconds East, a distance of 113.50 feet to a point, said point being the TRUE POINT OF BEGINNING.

Containing 1.867 acres.

LEGAL DESCRIPTION – TRACT V

ALL THAT TRACT OR PARCEL OF LAND lying and being in Land Lots 165 and 166, 18th District, DeKalb County, Georgia and being more particularly described as follows:

To find the True Point of Beginning, COMMENCE at point located at the intersection of the southerly right of way of Lawrenceville Highway (aka US Hwy 29) (aka GA Hwy 8) (variable right of way) and the southwesterly right of way of Morning Star Lane (55 foot right of way), said point being the POINT OF COMMENCEMENT;

THENCE along said southerly right of way of Lawrenceville Highway (aka US Hwy 29) (aka GA Hwy 8) (variable right of way) the following courses and distances: South 52 degrees 33 minutes 21 seconds West, a distance of 73.78 feet to a point; South 38 degrees 10 minutes 27 seconds East, a distance of 3.50 feet to a point; South 51 degrees 58 minutes 03 seconds West, a distance of 8.59 feet to a point; South 52 degrees 09 minutes 06 seconds, a distance of 21.34 feet to a point; North 38 degrees 03 minutes 45 seconds West, a distance of 3.40 feet; South 51 degrees 52 minutes 58 seconds West, a distance of 12.56 feet to a point; South 67 degrees 11 minutes 43 seconds West, a distance of 24.10 feet to a point; South 51 degrees 45 minutes 23 seconds West, a distance of 15.94 feet to a point; South 52 degrees 12 minutes 32 seconds West, a distance of 23.14 feet to a point; South 50 degrees 36 minutes 41 seconds West, a distance of 16.29 feet to a point, said point being the TRUE POINT OF BEGINNING;

With the TRUE POINT OF BEGINNING thus established, thence leaving said southerly right of way of Lawrenceville Highway South 18 degrees 48 minutes 57 seconds East, a distance of 691.44 feet a 1 inch open top pipe found; thence North 89 degrees 59 minutes 53 seconds West, a distance of 198.48 feet to a point; thence North 10 degrees 49 minutes 44 seconds West, a distance of 605.70 feet to a point on the southerly right of way of Lawrenceville Highway; thence proceed along said southerly right of way of Lawrenceville Highway North 50 degrees 43 minutes 00 seconds East, a distance of 110.70 feet to a point; South 18 degrees 48 minutes 57 seconds East, a distance of 11.12 feet to a point, said point being the TRUE POINT OF BEGINNING.

Containing 2.192 acres.

LEGAL DESCRIPTION – OVERALL TRACT

ALL THAT TRACT OR PARCEL OF LAND LYING AND BEING IN LAND LOT 165 AND 166, 18TH DISTRICT, DEKALB COUNTY, GEORGIA AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

TO FIND THE TRUE POINT OF BEGINNING, COMMENCE AT POINT LOCATED AT THE INTERSECTION OF THE SOUTHERLY RIGHT OF WAY OF LAWRENCEVILLE HIGHWAY (AKA US HWY 29) (AKA GA HWY 8) (VARIABLE RIGHT OF WAY) AND THE SOUTHWESTERLY RIGHT OF WAY OF MORNING STAR LANE (55 FOOT RIGHT OF WAY), SAID POINT BEING THE POINT OF COMMENCEMENT;

THENCE ALONG SAID SOUTHERLY RIGHT OF WAY OF LAWRENCEVILLE HIGHWAY (AKA US HWY 29) (AKA GA HWY 8) (VARIABLE RIGHT OF WAY) THE FOLLOWING COURSES AND DISTANCES: SOUTH 52 DEGREES 33 MINUTES 21 SECONDS WEST, A DISTANCE OF 73.78 FEET TO A POINT; SOUTH 38 DEGREES 10 MINUTES 27 SECONDS EAST, A DISTANCE OF 3.50 FEET TO A POINT; SOUTH 51 DEGREES 58 MINUTES 03 SECONDS WEST, A DISTANCE OF 8.59 FEET TO A POINT; SOUTH 52 DEGREES 09 MINUTES 06 SECONDS, A DISTANCE OF 21.34 FEET TO A POINT; NORTH 38 DEGREES 03 MINUTES 45 SECONDS WEST, A DISTANCE OF 3.40 FEET TO A POINT; SOUTH 51 DEGREES 52 MINUTES 58 SECONDS WEST, A DISTANCE OF 12.56 FEET TO A POINT; SOUTH 67 DEGREES 11 MINUTES 43 SECONDS WEST, A DISTANCE OF 24.10 FEET TO A POINT; SOUTH 51 DEGREES 45 MINUTES 23 SECONDS WEST, A DISTANCE OF 15.94 FEET TO A POINT; SOUTH 52 DEGREES 12 MINUTES 32 SECONDS WEST, A DISTANCE OF 23.14 FEET TO A POINT; SOUTH 50 DEGREES 36 MINUTES 41 SECONDS WEST, A DISTANCE OF 16.29 FEET TO A POINT, SAID POINT BEING THE TRUE POINT OF BEGINNING;

WITH THE TRUE POINT OF BEGINNING THUS ESTABLISHED, THENCE LEAVING SAID SOUTHERLY RIGHT OF WAY OF LAWRENCEVILLE HIGHWAY SOUTH 18 DEGREES 48 MINUTES 57 SECONDS EAST, A DISTANCE OF 691.44 FEET A 1 INCH OPEN TOP PIPE FOUND; THENCE NORTH 89 DEGREES 59 MINUTES 53 SECONDS WEST, A DISTANCE OF 198.48 FEET TO A POINT; THENCE NORTH 89 DEGREES 59 MINUTES 53 SECONDS WEST, A DISTANCE OF 198.48 FEET TO A 1 INCH CRIMP TOP PIPE FOUND; ; THENCE SOUTH 00 DEGREES 41 MINUTES 38 SECONDS EAST, A DISTANCE OF 99.45 FEET AND IRON PIN FOUND; THENCE SOUTH 00 DEGREES 18 MINUTES 39 SECONDS WEST, A DISTANCE OF 100.10 FEET TO A 1 INCH CRIMP TOP PIPE FOUND; THENCE SOUTH 00 DEGREES 12 MINUTES 10 SECONDS WEST, A DISTANCE OF 99.56 FEET AN IRON PIN FOUND; THENCE SOUTH 00 DEGREES 20 MINUTES 25 SECONDS WEST, A DISTANCE OF 102.05 FEET A 1 INCH OPEN TOP PIPE FOUND; THENCE NORTH 47 DEGREES 58 MINUTES 27 SECONDS WEST, A DISTANCE OF 438.77 FEET TO A POINT;

THENCE NORTH 42 DEGREES 02 MINUTES 06 SECONDS EAST, A DISTANCE OF 126.00 FEET TO APPPOINT; THENCE NORTH 48 DEGREES 06 MINUTES 57 SECONDS WEST A DISTANCE OF 219.45 FEET TO A POINT ON THE SOUTHERLY RIGHT OF WAY OF LAWRENCEVILLE HIGHWAY (AKA US HWY 29) (AKA GA HWY 8) (VARIABLE RIGHT OF WAY); THENCE ALONG SAID RIGHT OF WAY OF LAWRENCEVILLE HIGHWAY; NORTH 44 DEGREES 06 MINUTES 21 SECONDS EAST, A DISTANCE OF 145.60 FEET TO A POINT; NORTH 45 DEGREES 16 MINUTES 40 SECONDS EAST, A DISTANCE OF 82.90 FEET TO A POINT; 247.03 FEET ALONG AN ARC OF A CURVE TO THE RIGHT, SAID CURVE HAVING A RADIUS OF 4692.58 FEET AND A CHORD BEARING OF NORTH 46 DEGREES 44 MINUTES 00 SECONDS EAST, A DISTANCE OF 247.00 FEET TO A POINT; SOUTH 42 DEGREES 36 MINUTES 51 SECONDS EAST, A DISTANCE OF 4.00 FEET TO A POINT; NORTH 47 DEGREES 23 MINUTES 09 SECONDS EAST, A DISTANCE OF 4.00 FEET TO A POINT; NORTH 42 DEGREES 36 MINUTES 51 SECONDS WEST, A DISTANCE OF 4.00 FEET TO A POINT; NORTH 49 DEGREES 14 MINUTES 49 SECONDS EAST, A DISTANCE OF 80.90 FEET TO A POINT; NORTH 48 DEGREES 57 MINUTES 33 SECONDS EAST, A DISTANCE OF 113.50 FEET TO A POINT; NORTH 50 DEGREES 43 MINUTES 00 SECONDS EAST, A DISTANCE OF 110.70 FEET TO A 1/2 INCH REBAR WITH CAP SET; SOUTH 18 DEGREES 48 MINUTES 57 SECONDS EAST, A DISTANCE OF 11.12 FEET TO A POINT, SAID POINT BEING THE TRUE POINT OF BEGINNING.

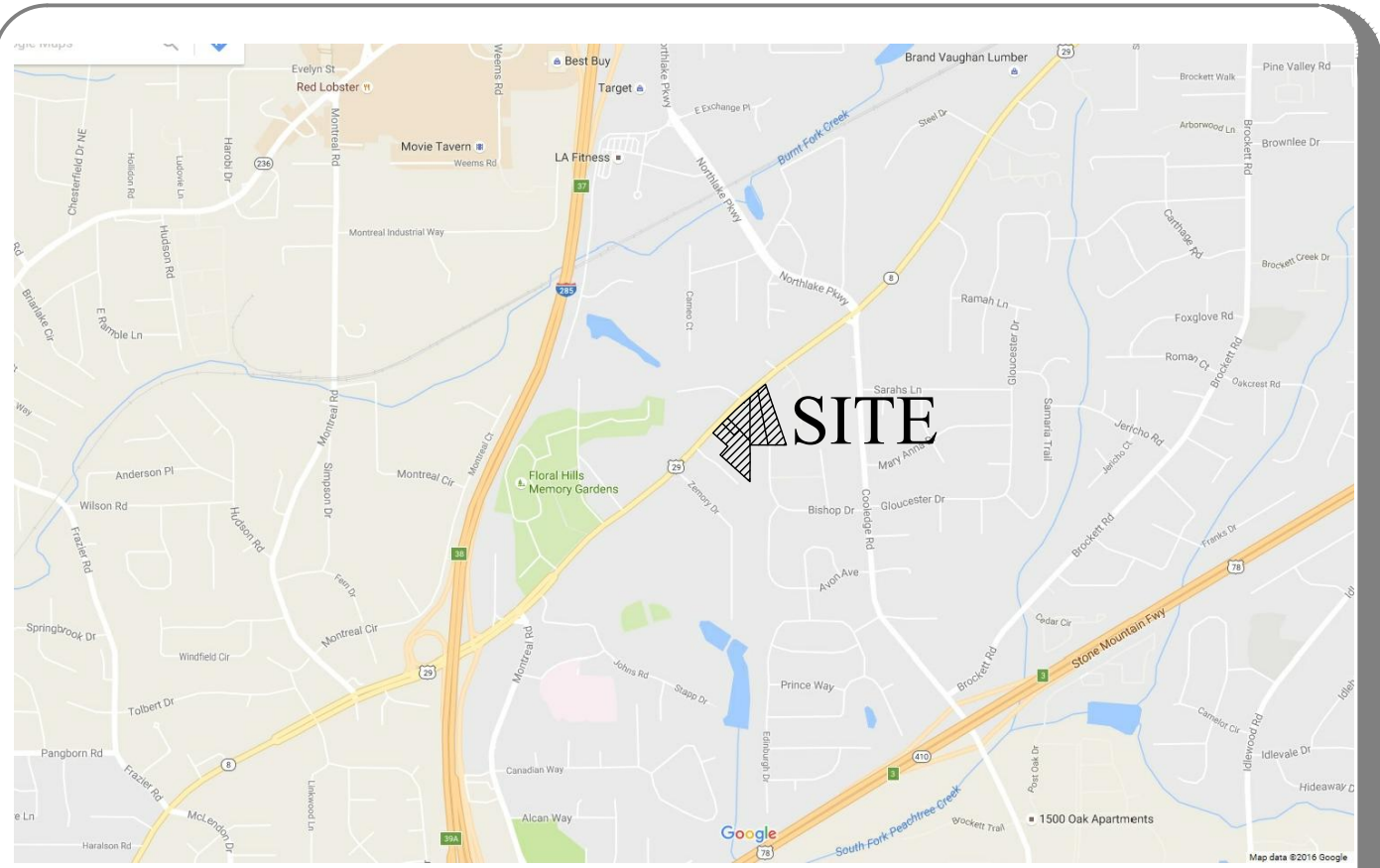
CONTAINS 8.727 ACRES.

RECEIVED  
CITY OF TUCKER

03/17/2022

PLANNING & ZONING  
DEPARTMENT

RZ-22-0001



SITE MAP (NTS)

NOTES

1. The underground utilities shown have been located from field survey information and existing drawings. This surveyor makes no guarantee that the underground utilities shown comprise all such utilities in the area, either in service or abandoned. The surveyor further does not warrant that the underground utilities shown are in the exact location indicated although he does certify that they are located as accurately as possible from information supplied and to the surveyor's best knowledge are approximately as shown. The surveyor has not physically located the underground utilities.

2. I have examined the Federal Emergency Management Agency Flood Insurance Rate Map for DeKalb County, Georgia and Incorporated Areas, Community Panel Number 13089C0078J, Panel 78 of 201, effective date May 16, 2013 and found NO portion of the property shown hereon to fall within a designated Flood Zone "A" (areas of 100 Year flood).

3. The orthometric heights (elevations) shown hereon were determined by GPS observations and were adjusted by Planners and Engineers Collaborative in September 2016. North American Datum of 1983 (NAD83), North American Vertical Datum of 1988 (NAVD88), Georgia West Zone State Plane Coordinates.

4. The term "Certification" relating to professional engineering and land surveying services shall mean a signed statement based upon facts and knowledge known to the registrant and is not a guarantee or warranty, either expressed or implied.

5. This survey has been prepared without the benefit of a current title inspection report. Easements or other encumbrances may exist on public record but not be shown hereon.

6. No zoning information provided for building setbacks.

7. Evidence of recent earth moving work, building construction, or building additions observed in the process of conducting the fieldwork.

8. The underground utilities shown hereon were determined by locating point markings created by Subsurface Utility Investigations, LLC. – Phone 770–557–4142.

REFERENCES

1. Department of Transportation State of Georgia, right of way proposed, Lawrenceville Highway widening, DeKalb County, federal aid project U–003–2 (19).

2. Final plat of Avery Hills Subdivision (f.k.a. Cooledge Hills), recorded in plat book 201, page 73, dated February 22, 2006, Prepared by Clark Design Group, p.c., signed and sealed by H. Lanier Dunn, Registered Land Surveyor in the State of Georgia, license number 2243.

3. Final plat of St. Lawrence Cove, recorded in plat book 65 page 72, dated April 8, 1973, prepared by R. R. Shermann, Registered Land Surveyor in the State of Georgia, license number 1607.

4. Subdivision Record Plat of Winchester Heights, recorded in plat book 40, page 87, prepared by R. C. Hensley, Registered Land Surveyor in the State of Georgia, license number 1135.

The field data upon which this map or plat is based has a closure precision of one foot in 16,319 feet and an angular error of 00° 00' 02" per angle point and was adjusted using the compass adjustment rule.

This map or plat has been calculated for closure and is found to be accurate to within one foot in 336,223 feet.

EQUIPMENT USED:

ANGULAR: TOPCON TOTAL STATION

LINEAR: TOPCON TOTAL STATION

SURVEYOR CERTIFICATION

To Arrowhead Real Estate Partners:

This is to certify that this map or plat and the survey on which it is based were made in accordance with the 2016 Minimum Standard Detail Requirements for ALTA/NSPS Land Title Surveys, jointly established and adopted by ALTA and NSPS, and includes Items 1 – 4, 8–10, 13 and 16 of Table A thereof. The field work was completed on: September 19, 2016.

16. Evidence of recent earth moving work, building construction, or building additions observed in the process of conducting the fieldwork.

Date of Map or Plat: MARCH 1, 2020



ALTA/NSPS LAND TITLE SURVEY

DRAWN BY: MS  
CHECKED BY: MS  
DATE: SEPTEMBER 29, 2016  
SCALE: 1"=50'

DEKALB COUNTY  
GEORGIA

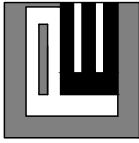
FOR  
ARROWHEAD REAL ESTATE PARTNERS

LAND LOT(S) 165 & 166  
DISTRICT 18th

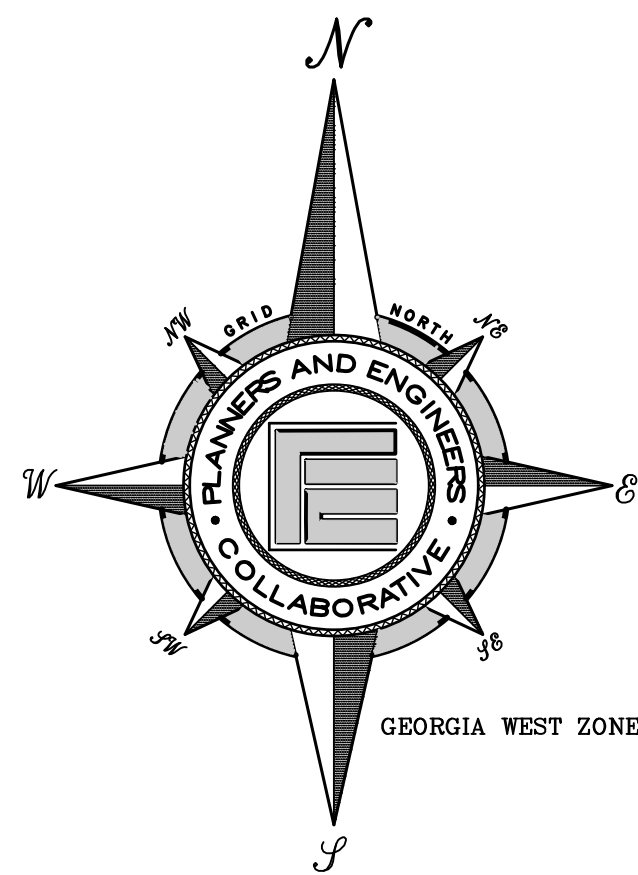
PLANNERS AND ENGINEERS COLLABORATIVE

"WE PROVIDE SOLUTIONS"

■ SITE PLANNING ■ LANDSCAPE ARCHITECTURE  
■ CIVIL ENGINEERING ■ LAND SURVEYING  
350 RESEARCH COURT PEACHTREE CORNERS, GEORGIA 30092  
(770)451-9241 ■ WWW.PECALC.COM





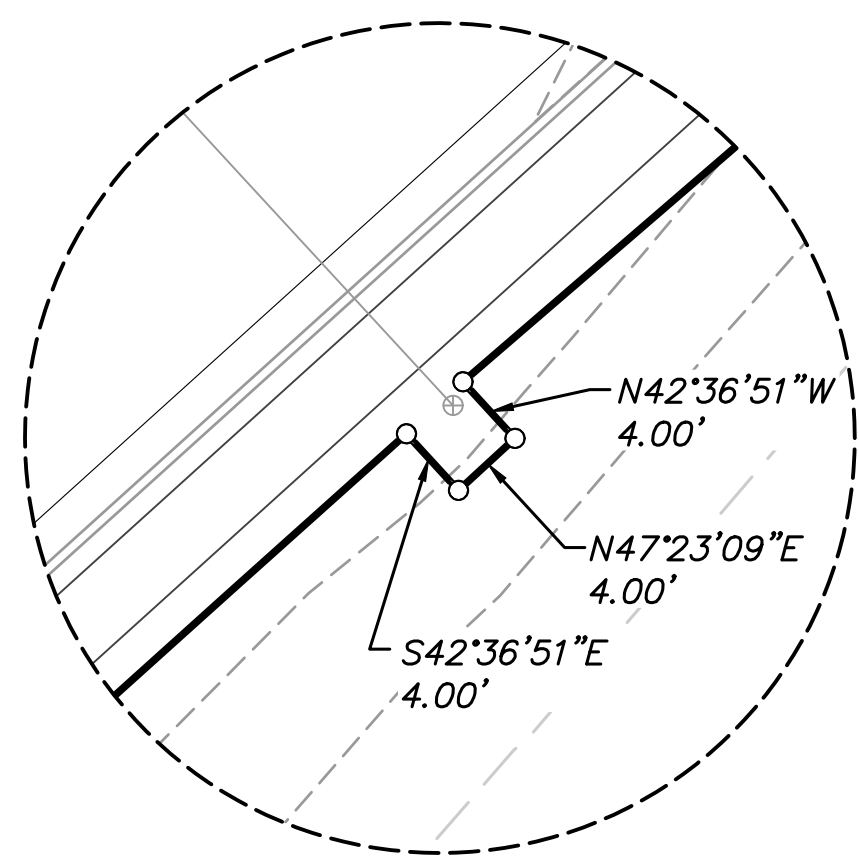


# LEGEND

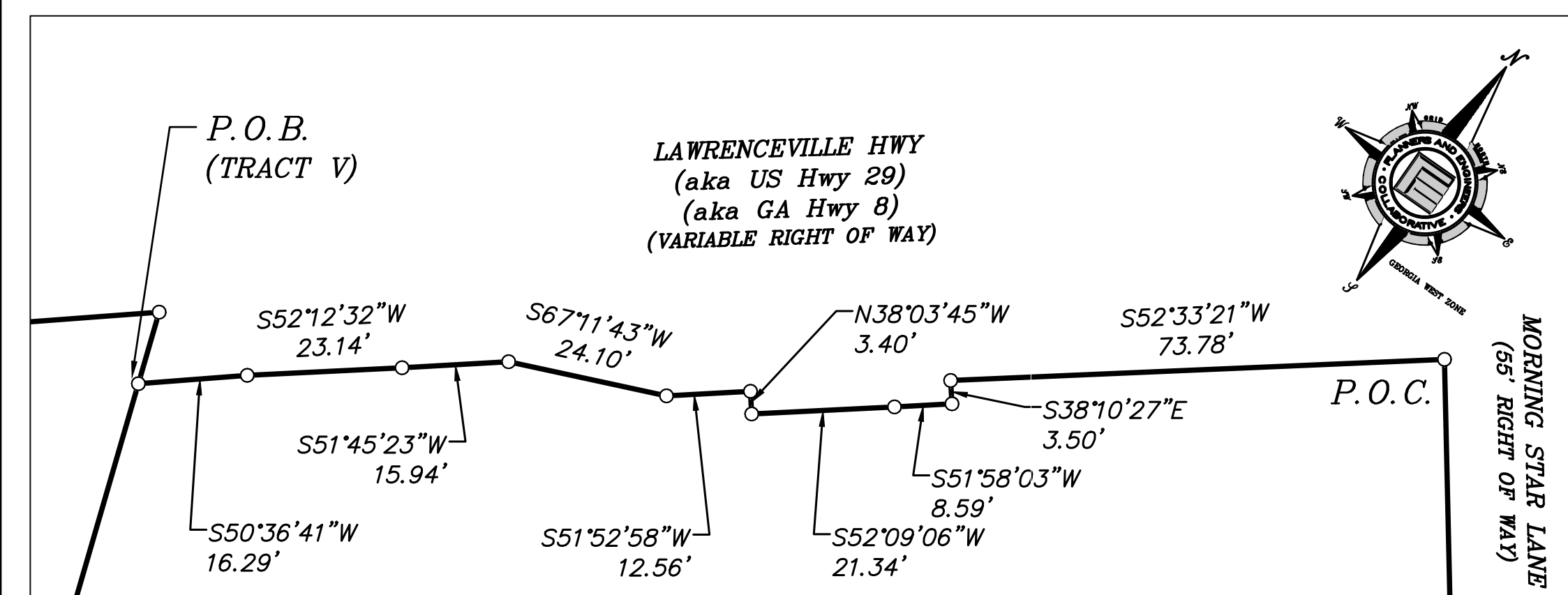
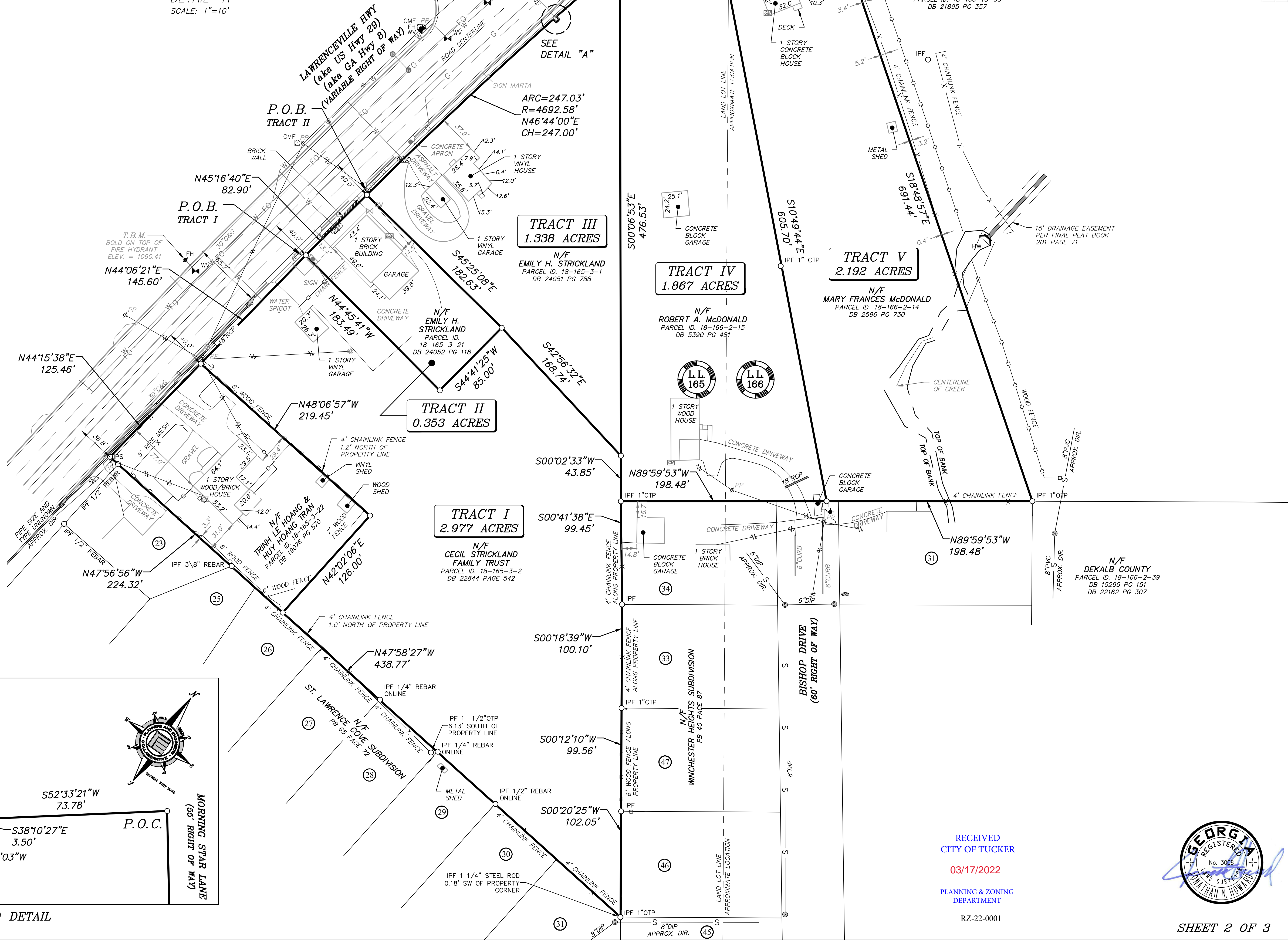
- IRON PIN FOUND (#4 Re-Rod unless noted otherwise)
- IRON PIN SET (#4 Re-Rod unless noted otherwise)
- IRON PIN WITH CAP FOUND
- POINT
- POWER POLE
- POWER POLE W/ GUY WIRE
- OVERHEAD POWER / TELEPHONE LINE
- ELECTRIC METER
- WATER VALVE
- FIRE HYDRANT
- GAS METER
- STORM SEWER LINE
- SINGLE WING CATCH BASIN
- DOUBLE WING CATCH BASIN
- SANITARY SEWER LINE
- SANITARY SEWER CLEANOUT
- SANITARY SEWER MANHOLE
- TELEPHONE BOX
- TELEPHONE MANHOLE
- MONITORING WELL

# ABBREVIATIONS

- APPROX. APPROXIMATE
- C&G CURB & GUTTER
- CMP CORRUGATED METAL PIPE
- CL CENTERLINE
- DB DEED BOOK
- DIP DUCTILE IRON PIPE
- DIR DIRECTION
- DWCB DOUBLE WING CATCH BASIN
- INV INVERT
- N/F NOW OR FORMALLY
- PB PLAT BOOK
- P.O.B. POINT OF BEGINNING
- P.O.C. POINT OF COMMENCEMENT
- RCP REINFORCED CONCRETE PIPE
- R/R RAIL ROAD
- SWCB SINGLE WING CATCH BASIN



DETAIL "A"  
SCALE: 1"=10'



POINT OF COMMENCEMENT (P.O.C.) DETAIL  
(PER REFERENCE #2)

RECEIVED  
CITY OF TUCKER  
03/17/2022  
PLANNING & ZONING  
DEPARTMENT  
RZ-22-0001



SHEET 2 OF 3

PLANNERS AND ENGINEERS COLLABORATIVE  
"WE PROVIDE SOLUTIONS"

- SITE PLANNING ■ LANDSCAPE ARCHITECTURE
- CIVIL ENGINEERING ■ LAND SURVEYING

350 RESEARCH COURT PEACHTREE CORNERS, GEORGIA 30092  
(770) 451-9241 ■ WWW.PECAL.COM

FOR  
ARROWHEAD REAL ESTATE PARTNERS

LAND LOT(S) 165 & 166  
DISTRICT 18th

DEKALB COUNTY  
GEORGIA

ALTA/NSPS LAND TITLE SURVEY

DRAWN BY: MS  
CHECKED BY: BLS  
DATE: SEPTEMBER 29, 2016  
SCALE: 1"=50'

REV	DATE	DESCRIPTION	BY
1	03/01/22	REMOVE TRACT VI	JNH



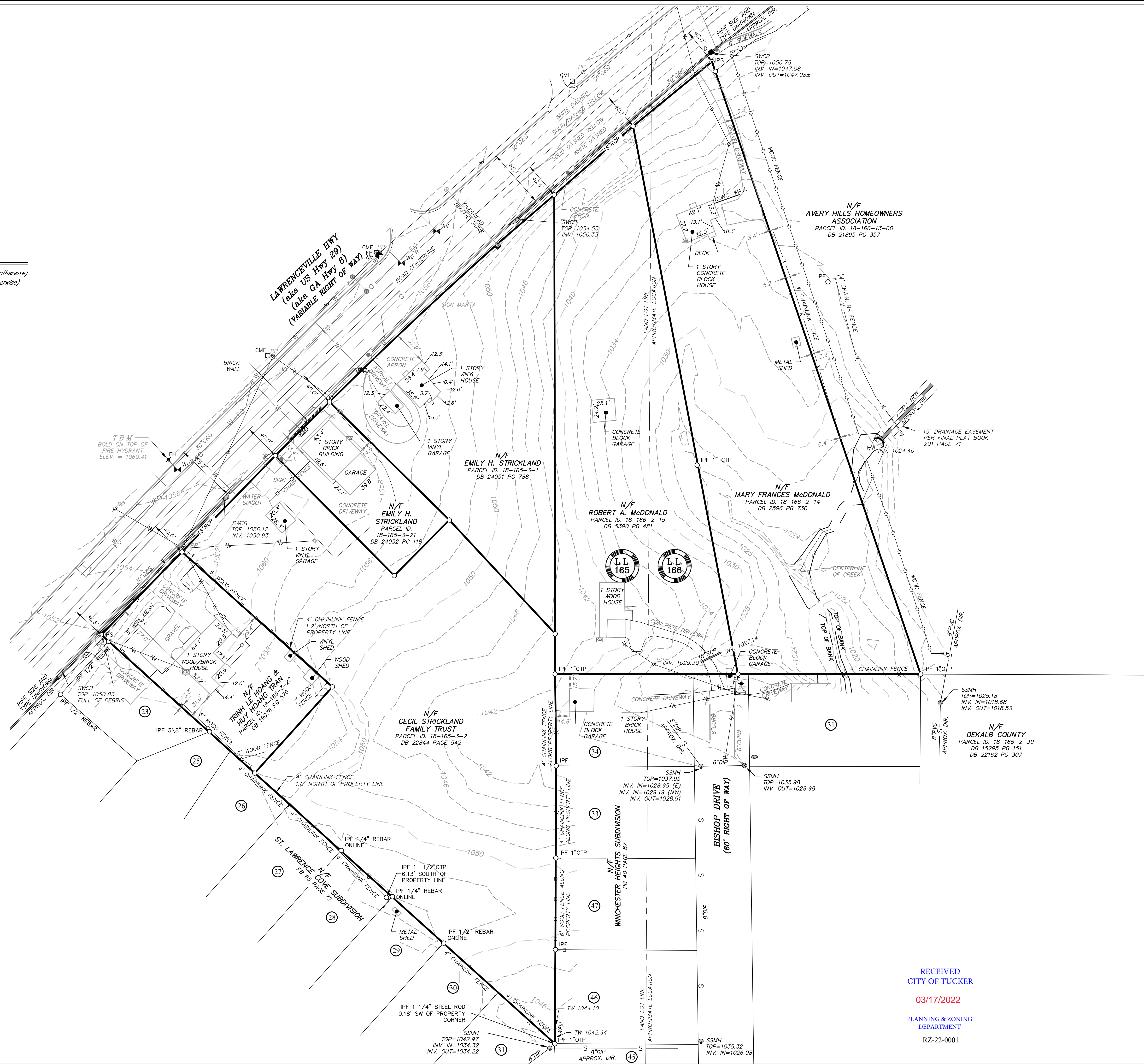


## LEGEND

- IF IRON PIN FOUND (#4 Re-Rod unless noted otherwise)
- PS IRON PIN SET (#4 Re-Rod unless noted otherwise)
- PC IRON PIN WITH CAP FOUND
- POINT
- POWER POLE
- POWER POLE W/ GUY WIRE
- OVERHEAD POWER / TELEPHONE LINE
- ELECTRIC METER
- WATER VALVE
- FH FIRE HYDRANT
- GAS METER
- STORM SEWER LINE
- SINGLE WING CATCH BASIN
- DOUBLE WING CATCH BASIN
- SANITARY SEWER LINE
- SANITARY SEWER CLEANOUT
- SANITARY SEWER MANHOLE
- TELEPHONE BOY
- TELEPHONE MANHOLE
- MONITORING WELL

## ABBREVIATIONS

- APPROX. APPROXIMATE
- C&G CURB & GUTTER
- CMP CORRUGATED METAL PIPE
- CL CENTERLINE
- DB DEED BOOK
- DIP DUCTILE IRON PIPE
- DIR. DIRECTION
- DWCB DOUBLE WING CATCH BASIN
- INV. INVERT
- N/F NOW OR FORMALLY
- PB PLAT BOOK
- P.O.B. POINT OF BEGINNING
- P.O.C. POINT OF COMMENCEMENT
- RCP REINFORCED CONCRETE PIPE
- R/R RAIL ROAD
- SWCB SINGLE WING CATCH BASIN



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PLANNING & ZONING  
DEPARTMENT

RZ-22-0001



SHEET 3 OF 3

REV	DATE	DESCRIPTION	BY
1	03/01/22	REMOVE TRACT V1	JNH

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350 RESEARCH COURT PEACHTREE CORNERS, GEORGIA 30092  
(770) 451-9241 ■ WWW.PECCAL.COM

FOR  
ARROWHEAD REAL ESTATE PARTNERS

DEKALB COUNTY  
GEORGIA

ALTA/NSPS LAND TITLE SURVEY

DRAWN BY: MS  
CHECKED BY: JNH  
DATE: SEPTEMBER 29, 2016  
SCALE: 1"=50'

100  
50  
25  
0



ALL THAT TRACT OR PARCEL OF LAND lying and being in Land Lot 165 and 166, 18th District, DeKalb County, Georgia and being more particularly described as follows:

To find the True Point of Beginning, COMMENCE at point located at the intersection of the southerly right of way of Lawrenceville Highway (aka US Hwy 29) (aka GA Hwy 8) (variable right of way) and the southwesterly right of way of Morning Star Lane (55 foot right of way), said point being the POINT OF COMMENCEMENT;

THENCE along said southerly right of way of Lawrenceville Highway (aka US Hwy 29) (aka GA Hwy 8) (variable right of way) the following courses and distances: South 52 degrees 33 minutes 21 seconds West, a distance of 73.78 feet to a point; South 38 degrees 10 minutes 27 seconds East, a distance of 3.50 feet to a point; South 51 degrees 58 minutes 03 seconds West, a distance of 8.59 feet to a point; South 52 degrees 09 minutes 06 seconds, a distance of 21.34 feet to a point; North 38 degrees 03 minutes 45 seconds West, a distance of 3.40 feet to a point; South 51 degrees 52 minutes 58 seconds West, a distance of 12.56 feet to a point; South 67 degrees 11 minutes 43 seconds West, a distance of 24.10 feet to a point; South 51 degrees 45 minutes 23 seconds West, a distance of 15.94 feet to a point; South 52 degrees 12 minutes 32 seconds West, a distance of 23.14 feet to a point; South 50 degrees 36 minutes 41 seconds West, a distance of 16.29 feet to a point, said point being the TRUE POINT OF BEGINNING;

With the TRUE POINT OF BEGINNING thus established, thence leaving said southerly right of way of Lawrenceville Highway South 18 degrees 48 minutes 57 seconds East, a distance of 691.44 feet a 1 inch open top pipe found; thence North 89 degrees 59 minutes 53 seconds West, a distance of 198.48 feet to a point; thence North 89 degrees 59 minutes 53 seconds West, a distance of 198.48 feet to a 1 inch crimp top pipe found; ; thence South 00 degrees 41 minutes 38 seconds East, a distance of 99.45 feet and iron pin found; thence South 00 degrees 18 minutes 39 seconds West, a distance of 100.10 feet to a 1 inch crimp top pipe found; thence South 00 degrees 12 minutes 10 seconds West, a distance of 99.56 feet an iron pin found; thence South 00 degrees 20 minutes 25 seconds West, a distance of 102.05 feet a 1 inch open top pipe found; thence North 47 degrees 58 minutes 27 seconds West, a distance of 438.77 feet to a point;

thence North 42 degrees 02 minutes 06 seconds East, a distance of 126.00 feet to appoint; thence North 48 degrees 06 minutes 57 seconds West a distance of 219.45 feet to a point on the southerly right of way of Lawrenceville Highway (aka US Hwy 29) (aka GA Hwy 8) (variable right of way); thence along said right of way of Lawrenceville Highway; North 44 degrees 06 minutes 21

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seconds East, a distance of 145.60 feet to a point; North 45 degrees 16 minutes 40 seconds East, a distance of 82.90 feet to a point; 247.03 feet along an arc of a curve to the right, said curve having a radius of 4692.58 feet and a chord bearing of North 46 degrees 44 minutes 00 seconds East, a distance of 247.00 feet to a point; South 42 degrees 36 minutes 51 seconds East, a distance of 4.00 feet to a point; North 47 degrees 23 minutes 09 seconds East, a distance of 4.00 feet a point; North 42 degrees 36 minutes 51 seconds West, a distance of 4.00 feet to a point; North 49 degrees 14 minutes 49 seconds East, a distance of 80.90 feet to a point; North 48 degrees 57 minutes 33 seconds East, a distance of 113.50 feet to a point; North 50 degrees 43 minutes 00 seconds East, a distance of 110.70 feet to a 1/2 inch rebar with cap set; South 18 degrees 48 minutes 57 seconds East, a distance of 11.12 feet to a point, said point being the TRUE POINT OF BEGINNING.

Contains 8.727 acres.







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Ashton T201 & Brayton T202 Front Load 24'

RZ-22-0001





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RZ-22-0001

# LAWRENCEVILLE HWY AT BISHOP DRIVE

THE CITY OF TUCKER

Page 387 of 433

0' 60' 120' 180'  
SCALE: 1" = 60'



**EMBRY**  
DEVELOPMENT COMPANY





24 HOUR CONTACT:  
MIKE EMBRY



Planners &amp; Engineers Collaborative+

LAND PLANNING + LANDSCAPE ARCHITECTURE + CIVIL ENGINEERING  
ARBORISTS + SURVEYING & CONSTRUCTION + WATER RESOURCES

350 RESEARCH COURT STE 200  
PEACHTREE CORNERS, GA 30092

PROJECT

# LAWRENCEVILLE HWY @ BISHOP DR

A MASTER PLANNED RESIDENTIAL  
DEVELOPMENT

AT  
3207, 3217, 3227, 3193, 3259  
LAWRENCEVILL HWY  
3563 BISHOP DR  
TUCKER, GA 30084

CITY OF TUCKER JURISDICTION

FOR

**EMBRY COMPANIES**

MUNICIPALITY PROJECT #

## REVISIONS

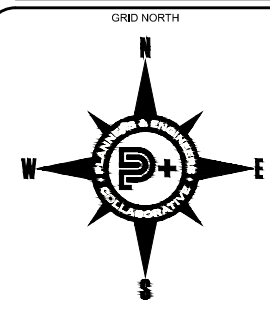
THIS SEAL IS ONLY VALID IF COUNTER SIGNED  
AND DATED WITH AN ORIGINAL SIGNATURE.

PRELIMINARY  
NOT TO BE RELEASED FOR CONSTRUCTION

## CONCEPTUAL MASTER PLAN



SCALE: 1" = 50'  
DATE: 02/08/2022  
PROJECT: 16156.00B



# C6

SHEET





**Land Use Petition:** RZ-22-0001

**Date of Staff Recommendation Preparation:** April 7, 2022

**Planning Commission:** April 21, 2022

**Mayor and City Council, 1<sup>st</sup> Read:** May 9, 2022

**Mayor and City Council, 2<sup>nd</sup> Read:** June 13, 2022

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<b>PROJECT LOCATION:</b>	3207, 3217, 3227, 3259 Lawrenceville Highway and 3563 Bishop Drive
<b>APPLICATION NUMBER</b>	RZ-22-0001
<b>DISTRICT/LANDLOT(S):</b>	Land District 18, Land Lots 165 & 166
<b>ACREAGE:</b>	8.72 acres
<b>EXISTING ZONING</b>	R-75 (Residential Medium Lot - 75)
<b>EXISTING LAND USE</b>	Single-family homes
<b>FUTURE LAND USE MAP DESIGNATION:</b>	Suburban
<b>OVERLAY DISTRICT:</b>	N/A
<b>APPLICANT:</b>	Embry Development Company
<b>OWNER:</b>	St. Sophia, LLC., St. Jolie, LLC., Robert McDonald, Estate of M. Frances McDonald (Donald McDonald)
<b>PROPOSED DEVELOPMENT:</b>	Rezoning from R-75 to RSM to allow for the development of 52 townhomes.
<b>STAFF RECOMMENDATION:</b>	<b>APPROVAL WITH CONDITIONS of RZ-22-0001</b>



**PROJECT DATA**

The applicant is requesting to rezone five parcels from R-75 (Residential Medium Lot – 75) to RSM (Small Lot Residential Mix) in order to construct a 52-unit single-family attached (townhome) development on approximately 8.7 acres, which will yield a density of 5.9 units per acre. Twenty (20) rear-loaded units are shown fronting Lawrenceville Highway and the remaining thirty-two (32) units are front-loaded and spread throughout the site. The townhome blocks range from five units to eight units.

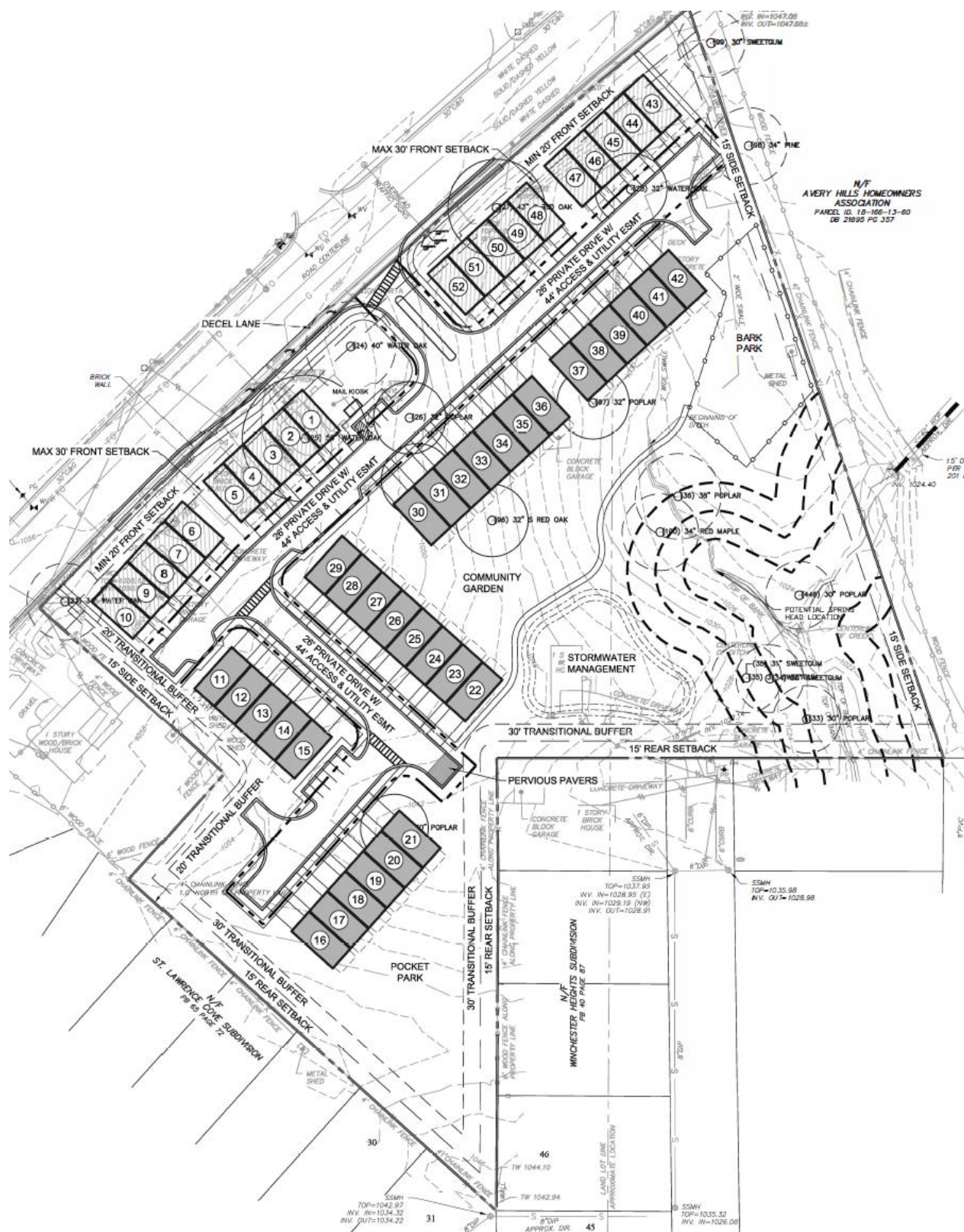
The subject property is located on the south side of Lawrenceville Highway and contains single-family homes and a former real estate office, most of which are set close to Lawrenceville Highway. The remaining land is heavily wooded with a stream and its buffers located in the southeastern corner of the property. The assemblage of these five parcels would result in an oddly shaped property.

The maximum height allowed within the RSM zoning district is 45' or 3 stories, whichever is less. While exact heights of the proposed townhomes were not submitted with the application, the applicant has stated the townhomes will comply with the City's requirements. From submitted elevations, the proposed townhomes appear to be 3 stories and will be constructed of a mixture of brick, board and batten, and shake, in a neutral palate.

Access is shown via one full-access drive from Lawrenceville Highway, that would line up with Terri Lynn Court when constructed. There are 13 guest parking spaces throughout the site, with three adjacent to the proposed mail kiosk. DeKalb Fire will require the townhome units to be sprinkled since only one vehicle access point is provided.

The site plan also shows a transitional buffer along the eastern, western, and southern sides of the development. Transitional buffers in residential neighborhoods are intended to diminish the potential negative impacts of higher intensity residential development on adjacent single-family residential land uses. The applicant has proposed a 30' transitional buffer along the southern and a majority of the western property lines, which exceeds the City's 20' transitional buffer requirement for the RSM zoning district.

While only 20% of the site is required to be reserved for open space, the submitted site plan shows several open space areas, totaling 4.5 acres (52% of the site), including a pocket park, in the southern portion of the property, adjacent to the St. Lawrence Cove subdivision and residential dwellings along Bishop Drive; a community garden, central to the development; and a bark park, along the eastern property line, north of the stream on the property. The submitted site plan shows full compliance with the dimensional requirements of the RSM zoning district.



## **PREVIOUS ZONING CASE BACKGROUND**

**RZ-17-0005 (Lawrenceville South):** The Ardent Companies submitted a rezoning application in October of 2017 to rezone 3193, 3207, 3217, 3227, 3259 Lawrenceville Highway and 3563 Bishop Drive (approximately 9.36 acres) from R-75 (Residential Medium Lot – 75) to RSM (Small Lot Residential Mix) for the development of a 64-unit townhome development at a density of approximately 6.83 units per acre.

In 2017, the maximum allowable density in the RSM zoning district was four units per acre. However, this density could be increased to up to eight units per acre with the use of density bonuses. Ardent proposed the following density bonuses in order to reach 6.83 units per acre: a bus shelter at the front of the property, on-site public art, and enhanced open space. This application was also submitted before the adoption of the Tucker Tomorrow Comprehensive Plan. The Comprehensive Plan at the time RZ-17-005 was submitted allowed up to eight units per acre in the Suburban Character area.

In February of 2018, RZ-17-005 was amended to reduce the number of townhomes in the proposed development from 64 units to 56 units, reducing the density from 6.83 dwelling units per acre to 5.98 dwelling units per acre. On April 4, 2018, the site plan was changed to include a mix of 25 townhomes and 23 urban single-family detached homes for a total of 48 units at 5.12 units per acre. The final site plan was submitted on April 9, 2018, which included 25 townhomes and 20 urban single-family detached homes for a total of 45 units at 4.81 units per acre.

Planning Commission recommended denial of the application on December 28, 2017 with a 4-1 vote. City Council voted 5-2 to deny the application on April 23, 2018.

**RZ-17-004 (Lawrenceville North):** Ardent submitted a second application in October of 2017 to rezone 3254, 3298, 3304, 3320 Lawrenceville Highway and 4448, 4530 Henderson Drive from R-75 (Residential Medium Lot – 75) to RSM (Small Lot Residential Mix) for the development of a 37-unit urban single family detached development at 5.13 units per acre. This request was also amended in February of 2018 to reduce the proposed development from 37 units to 24 units, reducing the density to 3.32 units per acre. Density bonuses were initially proposed for this rezoning as well, but were no longer needed when the density dropped below 4 units per acre.

Planning Commission recommended denial of the application on December 28, 2017 with a 4-1 vote. City Council voted 6-1 to approve RZ-17-004 with 23 conditions on March 26, 2018. While entitled, the properties have not been redeveloped.

Staff will note that the density bonus system and the urban single family detached housing type were removed from the zoning ordinance on April 8, 2018 per O2018-03-7.

## **CHARACTER AREA (Future Land Use)**

The subject parcels are located within the Suburban Character Area on the Future Land Use Map. Development strategies of the Suburban designation include ensuring that the expansion or improvement of single-family homes are compatible with the existing housing stock, preserving the character of single family neighborhoods by preventing encroachment of higher density residential development within existing neighborhoods, and managing land use transitions along the periphery of

residential neighborhoods to ensure that new development does not diminish the character of existing neighborhoods.

Design considerations for the Suburban Character Area include more traditional development patterns with up to four units per acre in the majority of places. However, along major corridors, in areas of commercial development, or with the redevelopment of existing multifamily developments, up to six units per acre may be allowed. Higher density developments should incorporate suburban-aesthetic of increased greenspace and transitions should be incorporated from more intense densities and uses to existing residential uses. The design considerations for the Suburban Character Area also note incorporating design features, such as greater setbacks/buffers, to mitigate impacts on adjacent residential properties, and to manage massing, by taking into consideration the smaller footprints and total square footage of existing housing stock.

### **PUBLIC PARTICIPATION PLAN REPORT**

The applicant hosted a public participation meeting on February 3, 2022. The meeting was held at the Lawrenceville Road Methodist Church, located at 3142 Lawrenceville Highway, south of the subject property and lasted approximately two hours. In addition to meeting in person, a zoom streaming was made available by a member of the public. Prior to the meeting, the applicant mailed a letter and site plan explaining the proposed project to all property owners within 500 feet of the subject parcel. 53 people were in attendance.

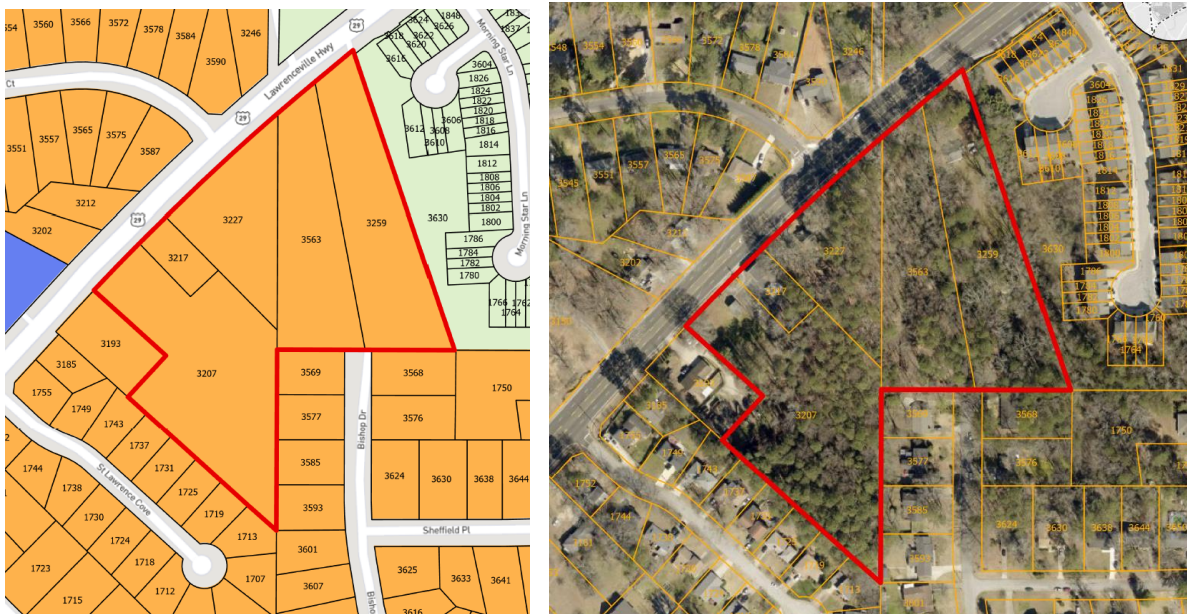
During the meeting the project and site plan were explained to the audience, and the applicant gave an overview of the proposed development. Several concerns were raised regarding the location of the proposed detention pond, traffic along Cooledge Road, and height limitations on townhomes. As a result of the Public Participation Meeting, several changes to the site plan were made including:

- locating the townhomes closer to Lawrenceville Highway to provide more of a buffer between the proposed development and existing single-family detached homes along Bishop Drive
- moving the buildings that are adjacent to St. Lawrence Cove closer to Lawrenceville Highway
- increasing the required buffers by 50% (from 20' to 30')

### **NEARBY/SURROUNDING LAND ANALYSIS**

Adjacent & Surrounding Properties	Zoning	Existing Land Use
Adjacent: North (across Lawrenceville Highway)	R-75 (Residential Medium Lot – 75)	Single-family homes on Terri Lynn Court
Adjacent: Northeast (across Lawrenceville Highway)	RSM (Small Lot Residential Mix)	Single-family homes; entitled per RZ-17-004
Adjacent: East	RSM (Small Lot Residential Mix)	Townhome development – Avery Hills
Adjacent: West	R-75 (Residential Medium Lot – 75)	Single-family detached homes along Saint Lawrence Cove
Adjacent: South	R-75 (Residential Medium Lot – 75)	Single-family detached homes along Bishop Drive





*Zoning and Aerial Exhibits showing surrounding land uses.*

## RZ-22-0001

### **CRITERIA TO BE APPLIED**

Criteria (standards and factors) for rezoning decisions are provided in for rezoning decisions are provided in Section 46-1560 of the City of Tucker Zoning Ordinance. The applicant is required to address these criteria (see application); below are staff's findings which are independent of the applicant's responses to these criteria.

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

The proposed development fronts a 5-lane state highway and is not within an existing neighborhood. It is located adjacent to another RSM townhome development (Avery Hills), which has a density of 7.9 units per acre. Adjacent to Avery Hills is a Quick Trip gas station. This location makes the development eligible for up to 6 units per acre of density.

Goal 3 of the comprehensive plan calls for new development, in close proximity to neighborhoods, to provide adequate transition through setbacks, buffering and other measures. The proposed plan provides transitional buffers along the west and south property lines as well as increased greenspace that helps transition with the part of the adjacent neighborhood to the south.

The applicant could do more with regards to the goal of managing massing, by taking into consideration the smaller footprints and total square footage of existing housing stock. This could be achieved with a mix of product types, specifically within the southwest corner of the development where it abuts both St. Lawrence Cove and Bishop Drive residences.

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

Rezoning to RSM could permit a use that is suitable in view of the use and development of adjacent and nearby properties. The proposed development is located approximately 1,200 from the intersection of Northlake Parkway/Cooledge Road and Lawrenceville Highway. While the surrounding neighborhoods are zoned R-75, the eastern edge of the property is adjacent to an existing single-family attached (townhome) development zoned RSM. The proposed open space in the southern portion of the property creates a natural buffer between the existing single-family detached homes and proposed townhomes.

Avery Hills, the existing townhome development located to the east of the proposed project is developed at approximately 7.9 units per acre. To the west, the 19 single-family detached homes, located along Saint Lawrence Cove, on the western edge of the proposed development are developed at approximately 3.2 units per acre. The applicant has proposed a transitional density, at 5.9 units per acre, between the higher density development of Avery Hills and the moderate density of the existing homes within Saint Lawrence Cove. Staff will note that while the previous application for these parcels (RZ-17-005) initially requested 6.83 units per acre, the final site plan/request showed 4.81 units per acre, which would provide a softer transition from the 5.9 units per acre that is proposed with RZ-22-0001. A reconfiguration of the southwest corner of the site would provide a more suitable development in both total density and transition.

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

The subject properties have a reasonable economic use as currently zoned for residential uses.

**4. Whether the zoning proposal will adversely affect the existing use or usability of adjacent or nearby property or properties.**

Rezoning the subject parcel to RSM should not adversely affect the existing use or usability of adjacent or nearby properties. The existing townhomes to the east are developed at a density of approximately 7.9 units per acre and the single-family detached homes to the west are developed at a density of approximately 3.2 units per acre. With a proposed density of 5.9 units per acre this development, with single-family attached units, would be an appropriate transition between the lower density to the west and higher density to the east, as you move north along Lawrenceville Highway, towards the commercial node at the intersection of Lawrenceville Highway and Cooledge Road. No connections are proposed within existing neighborhoods that could adversely affect them.

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

There are no known existing or changing conditions that affect the use and development of the five parcels that are a part of this rezoning application.



**6. Whether the zoning proposal will adversely affect historic buildings, site, districts, or archaeological resources.**

There are no known historic buildings, sites, districts or archaeological resources on the subject properties.

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

The proposed rezoning will not cause an excessive and burdensome use of existing streets, transportation facilities, and utilities. The proposed development did not trigger the requirement for any kind of traffic impact study as 52 new homes will not create a major impact on the existing 5-lane state highway. However, the applicant provided a proposed traffic count within their letter of intent based on the ITE Trip Generation Manual. The information submitted states the proposed 52 townhomes would create approximately 302 weekday trips, with 22 during the AM peak hour and 27 during the PM peak hour.

The report from DeKalb County Schools stated that this proposed development is expected to generate 13 students. 3 at Brockett Elementary, 2 at Tucker Middle, 4 at Tucker High, 3 at other DCSD schools, and 1 at private schools. DCSD stated that “although enrollment at Tucker MS is already over capacity, the development is expected to have minimal impact.”

If approved, a sewer action plan shall be submitted to DeKalb County before the proposed development could move forward.

**8. Whether the zoning proposal adversely impacts the environment or surrounding natural resources.**

The proposed zoning request will not adversely impact the environment and surrounding natural resources. The site plan shows townhomes located outside of the existing stream located on the property and its buffers.

### **CONCLUSION**

The requested land use petition to rezone five parcels along Lawrenceville Highway from R-75 to RSM is consistent with the recommendations of the Comprehensive Plan and would be compatible with the surrounding residential neighborhoods at the proposed density of 5.9 units per acre. As currently proposed, the development would not pose significant adverse impacts to the environment or adjacent or nearby properties. However, there are ways to further reduce the density and provide better transition by reducing the unit count or reconfiguring the southwest corner of the site to include a mix of product types, such as single-family detached dwellings.

Therefore, Staff recommends **APPROVAL WITH CONDITIONS** of Land Use Petition **RZ-22-0001**.

## Staff Recommendation

Based upon the findings and conclusions herein, Staff recommends **APPROVAL WITH CONDITIONS** of Land Use Petition **RZ-22-0001**.

1. Use of the subject property shall be limited to up to a 52-unit townhome development.
2. The property shall be developed in general conformance with the site plan submitted on March 28, 2022 to the Planning and Zoning Department, with revisions to meet these conditions.
3. The twenty units along Lawrenceville Highway shall be rear-loaded and designed so that their front façade/entry faces Lawrenceville Highway.
4. Dwellings shall have a minimum heated floor area of 1,500-square feet.
5. Each unit shall provide a minimum two-car garage.
6. The subject property shall have a mandatory homeowner's association, created by the Developer, that will require, among other things, maintenance of the common open space areas, the transitional buffer(s), stream and stream buffers, and stormwater management.
7. A mail kiosk and two parking spaces shall be provided on site.
8. Architectural detailing on townhouses shall include:
  - a. The front and rear elevations shall vary from unit to unit to avoid a monotone style and/or color palette.
  - b. Rear and side windows shall be trimmed similar to the front windows.
  - c. If units contain cantilevered balconies on the rear, they shall be painted or stained in a color that is complimentary to the individual unit colors and shall not be left as unfinished wood nor stained to appear as natural wood.
  - d. The units shall have an 8" or greater frieze board (top of wall, abutting the soffit) to accentuate the trim details.
  - e. Windows shall be a color to match the color palette of the surrounding townhome veneer (for example: not white windows in a brown colored unit).
  - f. Architectural detailing shall occur consistently on all facades.
  - g. The rear elevation of each set of townhome units shall have at least two distinguishing features which shall include, but are not limited to, enclosed sunrooms, enclosed porches, rear entry door overhangs with decorative brackets, metal decorative railings, and brick privacy walls.
9. The side elevations of units 1, 5, 6, 10, 43, 47, 48, and 52 shall be clad in the primary building material of the front façades and designed with windows and other architectural features in order to provide a consistent design appearance along Lawrenceville Highway.

10. Each townhome shall have a defined walkway and/or porch/stoop from the sidewalk to the front doors.
11. All healthy specimen trees located in the common area/open space shall be preserved.
12. All invasive shrubs and vines shall be removed.
13. At least 25% of the units shall be stubbed for elevators.
14. The declarant's declaration of covenants, conditions, and restrictions shall include a clause to restrict the number of rental units to a maximum of 25%.
15. No units shall encroach into any storm drain or sanitary sewer easements.
16. No units shall encroach into the stream buffers located on the property.
17. The detention pond shall be located on a separate lot of record.
18. The development shall be limited to a single full-access curb cut on Lawrenceville Highway. The location of said curb cut should align with Terri Lynn Court, is dependent on sight distance, and subject to the approval of the Tucker City Engineer and the Georgia Department of Transportation.
19. Owner/Developer shall construct a deceleration lane on Lawrenceville Highway into the proposed entrance. Said deceleration shall be one hundred-fifty feet (150') in length with a fifty foot (50') taper.
20. Owner/Developer shall install a six foot (6') wide sidewalk along the entire frontage of Lawrenceville Highway.
21. Owner/Developer shall install a five foot (5') wide sidewalk along both sides of the proposed private streets.
22. A minimum of twenty feet (20') is required as from the back of the sidewalk on interior streets to the face of structure to allow for the parking of a vehicle in the driveway.
23. Owner/Developer shall dedicate along the entire frontage of Lawrenceville Highway such additional right-of-way to provide fifty feet (50') from the centerline or sixteen feet (16') from the back of curb, whichever is greater.
24. Owner/Developer shall provide stormwater management in compliance with Tucker's Post Construction Stormwater Management Ordinance.
25. Owner/Developer shall work with MARTA to relocate the existing bus stop on Lawrenceville Highway at the project entrance and install a bus shelter per MARTA specifications.

26. Owner/Developer shall comply with Section 14-39 of the City of Tucker Code of Ordinances concerning tree protection and replacement. A minimum on-site tree density of fifteen (15) units/acre shall be required. Any specimen trees removed during the redevelopment shall require additional tree recompense units as required in the ordinance.
27. The development of the property is contingent upon approval from DeKalb County Department of Watershed Management.

## PLANNING COMMISSION RECOMMENDATION

Based upon the findings and conclusions herein, at its April 21, 2022 public hearing, the Planning Commission recommends **APPROVAL WITH CONDITIONS** of Land Use Petition **RZ-22-0001**, subject to the following staff conditions:

1. Use of the subject property shall be limited to up to a 52-unit townhome development.
2. The property shall be developed in general conformance with the site plan submitted on March 28, 2022 to the Planning and Zoning Department, with revisions to meet these conditions.
3. The twenty units along Lawrenceville Highway shall be rear-loaded and designed so that their front façade/entry faces Lawrenceville Highway.
4. Dwellings shall have a minimum heated floor area of 1,500-square feet.
5. Each unit shall provide a minimum two-car garage.
6. The subject property shall have a mandatory homeowner's association, created by the Developer, that will require, among other things, maintenance of the common open space areas, the transitional buffer(s), stream and stream buffers, and stormwater management.
7. A mail kiosk and two parking spaces shall be provided on site.
8. Architectural detailing on townhouses shall include:
  - a. The front and rear elevations shall vary from unit to unit to avoid a monotone style and/or color palette.
  - b. Rear and side windows shall be trimmed similar to the front windows.
  - c. If units contain cantilevered balconies on the rear, they shall be painted or stained in a color that is complimentary to the individual unit colors and shall not be left as unfinished wood nor stained to appear as natural wood.
  - d. The units shall have an 8" or greater frieze board (top of wall, abutting the soffit) to accentuate the trim details.
  - e. Windows shall be a color to match the color palette of the surrounding townhome veneer (for example: not white windows in a brown colored unit).

- f. Architectural detailing shall occur consistently on all facades.
  - g. The rear elevation of each set of townhome units shall have at least two distinguishing features which shall include, but are not limited to, enclosed sunrooms, enclosed porches, rear entry door overhangs with decorative brackets, metal decorative railings, and brick privacy walls.
9. The side elevations of units 1, 5, 6, 10, 43, 47, 48, and 52 shall be clad in the primary building material of the front façades and designed with windows and other architectural features in order to provide a consistent design appearance along Lawrenceville Highway.
  10. Each townhome shall have a defined walkway and/or porch/stoop from the sidewalk to the front doors.
  11. All healthy specimen trees located in the common area/open space shall be preserved.
  12. All invasive shrubs and vines shall be removed.
  13. At least 25% of the units shall be stubbed for elevators.
  14. The declarant's declaration of covenants, conditions, and restrictions shall include a clause to restrict the number of rental units to a maximum of 25%.
  15. No units shall encroach into any storm drain or sanitary sewer easements.
  16. No units shall encroach into the stream buffers located on the property.
  17. The detention pond shall be located on a separate lot of record.
  18. The development shall be limited to a single full-access curb cut on Lawrenceville Highway. The location of said curb cut should align with Terri Lynn Court, is dependent on sight distance, and subject to the approval of the Tucker City Engineer and the Georgia Department of Transportation.
  19. Owner/Developer shall construct a deceleration lane on Lawrenceville Highway into the proposed entrance. Said deceleration shall be one hundred-fifty feet (150') in length with a fifty foot (50') taper.
  20. Owner/Developer shall install a six foot (6') wide sidewalk along the entire frontage of Lawrenceville Highway.
  21. Owner/Developer shall install a five foot (5') wide sidewalk along both sides of the proposed private streets.
  22. A minimum of twenty feet (20') is required as from the back of the sidewalk on interior streets to the face of structure to allow for the parking of a vehicle in the driveway.



23. Owner/Developer shall dedicate along the entire frontage of Lawrenceville Highway such additional right-of-way to provide fifty feet (50') from the centerline or sixteen feet (16') from the back of curb, whichever is greater.
24. Owner/Developer shall provide stormwater management in compliance with Tucker's Post Construction Stormwater Management Ordinance.
25. Owner/Developer shall work with MARTA to relocate the existing bus stop on Lawrenceville Highway at the project entrance and install a bus shelter per MARTA specifications.
26. Owner/Developer shall comply with Section 14-39 of the City of Tucker Code of Ordinances concerning tree protection and replacement. A minimum on-site tree density of fifteen (15) units/acre shall be required. Any specimen trees removed during the redevelopment shall require additional tree recompense units as required in the ordinance.
27. The development of the property is contingent upon approval from DeKalb County Department of Watershed Management.

## Department Comments

### DEKALB COUNTY DEPARTMENT OF WATERSHED MANAGEMENT

- Sewer capacity approval is needed.

### DEKALB COUNTY FIRE MARSHAL OFFICE

- Based on the proposed site plan, because there are more than 30 units on a single access road, there would need to be a second access point for fire apparatus access.
- Alternatively, each unit shall be equipped with an approved fire sprinkler system per International Fire Code Appendix D Section D107.

### DEKALB COUNTY SCHOOL SYSTEM

When fully constructed, this development would be expected to generate 13 students: 3 at Brockett Elementary, 2 at Tucker Middle School, 4 at Tucker High School, 3 at other DCSD schools, and 1 at private schools. Although enrollment at Tucker MS is over capacity, the development is expected to have minimal impact.

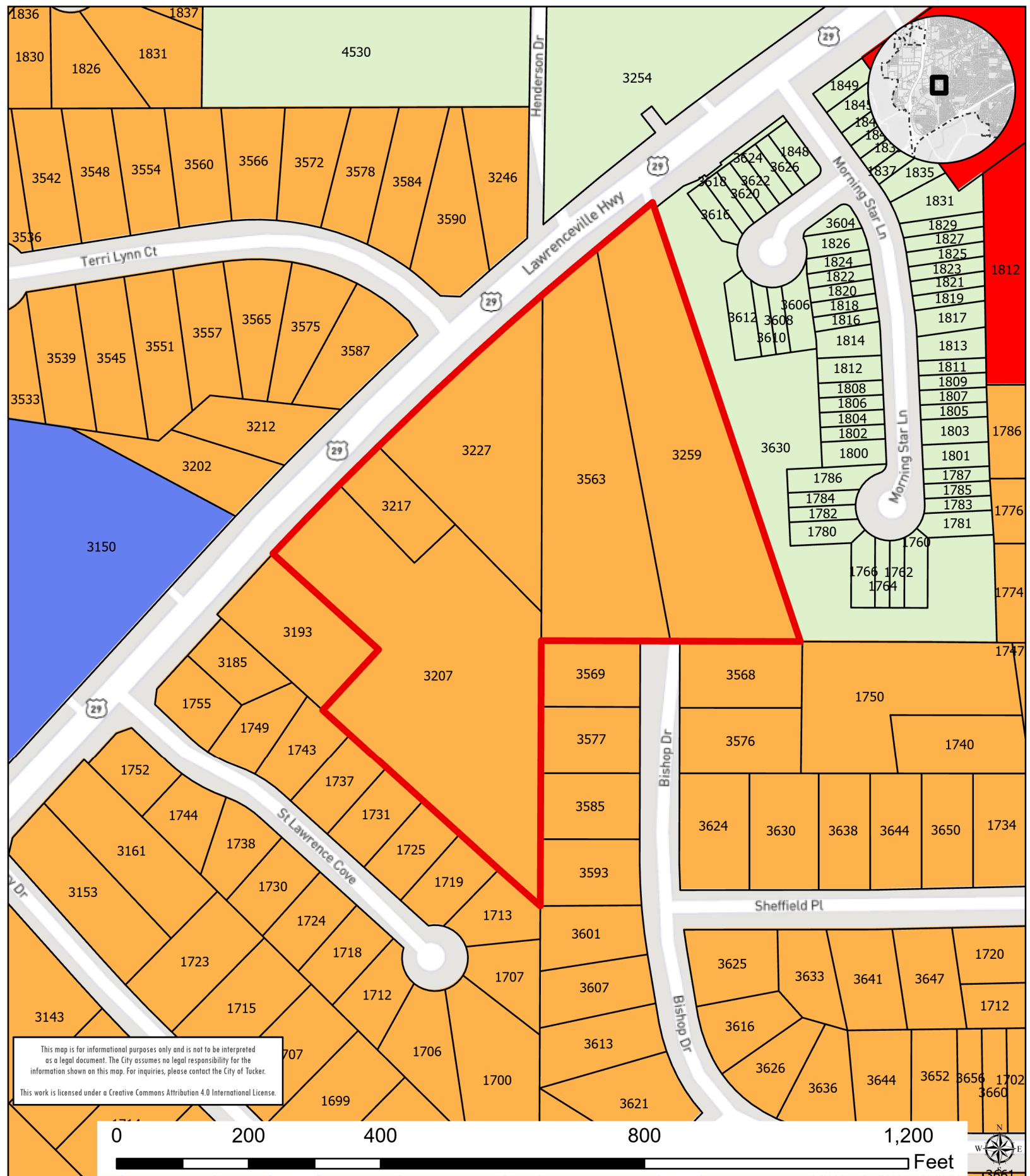
### CITY ENGINEER

1. The development shall be limited to a single full-access curb cut on Lawrenceville Highway. The location of said curb cut should align with Terri Lynn Court, is dependent on sight distance, and subject to the approval of the Tucker City Engineer and the Georgia Department of Transportation.

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10. Water and sewer approval is required by the DeKalb County Department of Watershed Management.

#### LAND DEVELOPMENT

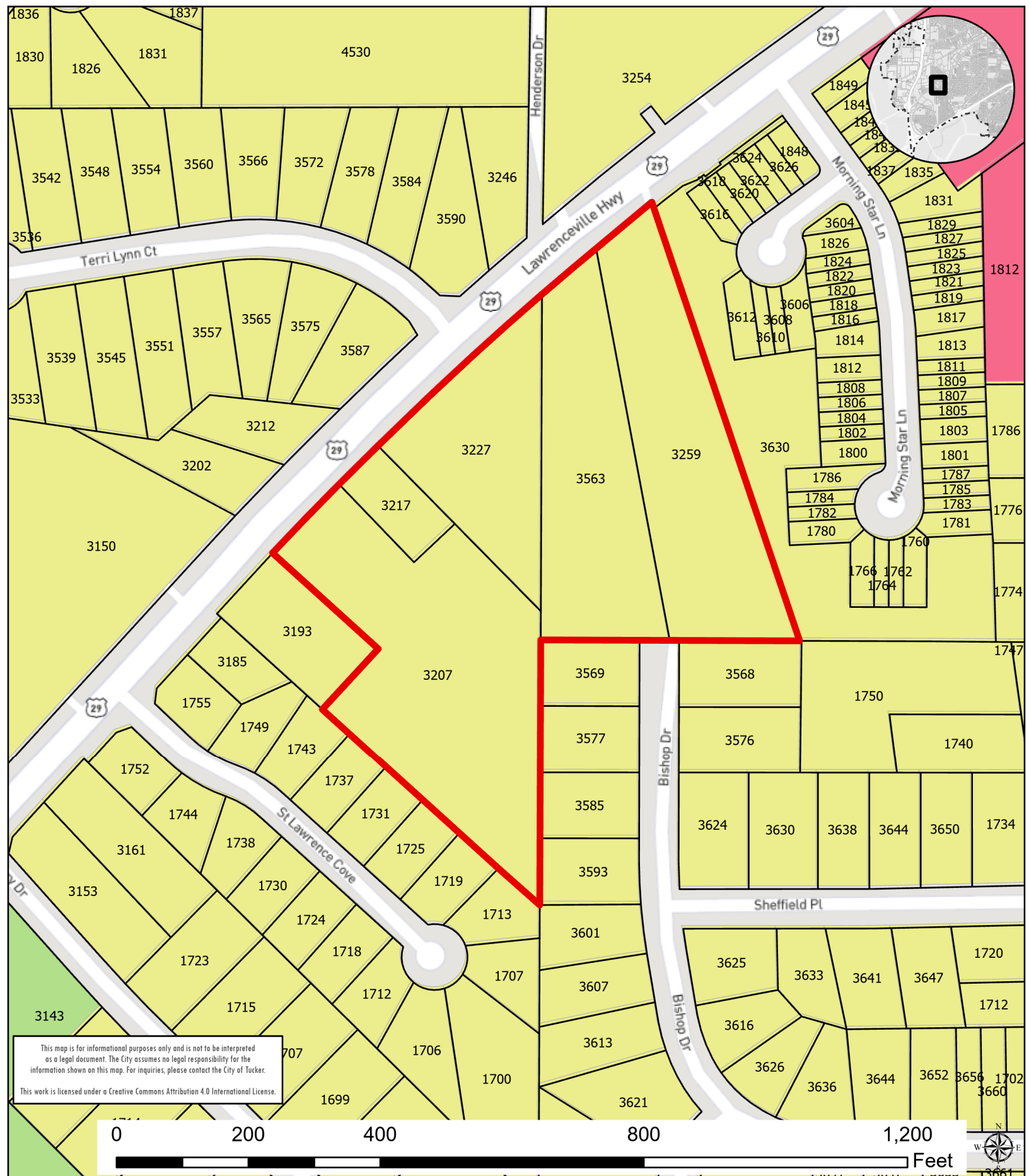
- LDP will be required, including landscape plans, tree density calculations, and a hydrology report.
- Detention will need to be vetted as it is unclear if the proposed underground detention will be tied to the existing system.
- Compliance with private roads meeting DeKalb Fire standards will be required.



**City of  
Tucker**

**Rezoning  
RZ-22-0001  
3207, 3217, 3259, 3227  
Lawrenceville Hwy  
3563 Bishop Dr**

- Rezoning**
- R-75 (Residential Medium Lot -75)
- RSM (Small Lot Residential Mix)
- C-1 (Local Commercial)
- O-I (Office-Institution)



**City of  
Tucker**

**Rezoning  
RZ-22-0001  
3207, 3217, 3259, 3227  
Lawrenceville Hwy  
3563 Bishop Dr**

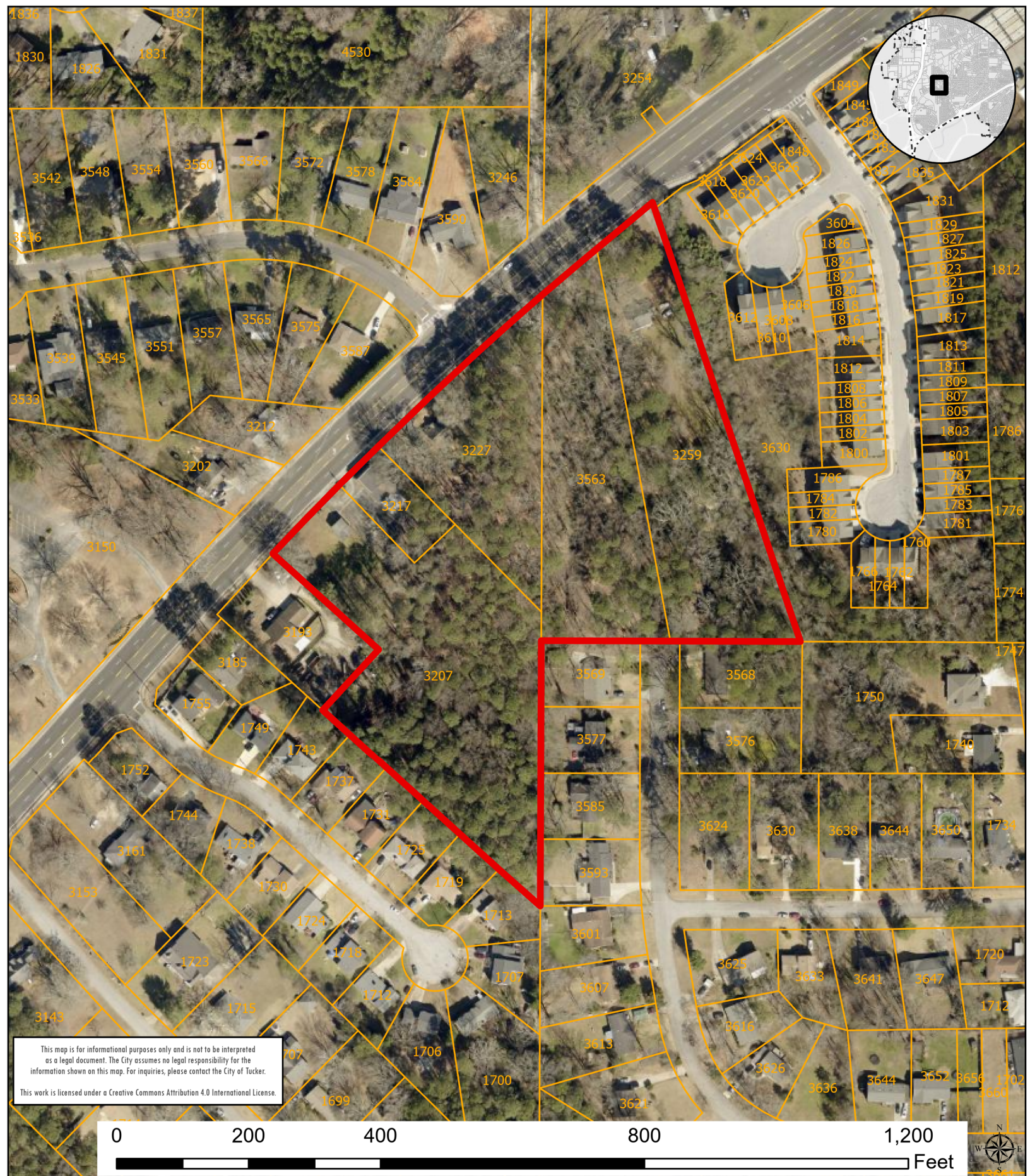
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- Rezoning
- Conservation and Open Space
- Commercial Redevelopment Corridor
- Suburban

Credit: City of Tucker, DeKalb County, OpenStreetMap, Mapbox, Atlanta Regional Commission


Date Produced: 3/25/2022 4:35 PM



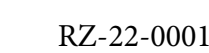


**City of  
Tucker**

**Rezoning  
RZ-22-0001  
3207, 3217, 3259, 3227  
Lawrenceville Hwy  
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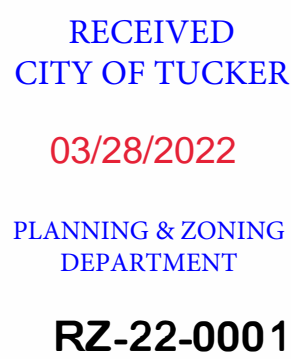
 **Rezoning**





**Z1**  
SHEET





**P: (770) 451-2741 F: (770) 451-3915**

**DEC+**

LAND PLANNING + LANDSCAPE ARCHITECTURE + CIVIL ENGINEERING  
ARBORISTS + SURVEYING & CONSTRUCTION + WATER RESOURCES

350 RESEARCH COURT STE 200  
PEACHTREE CORNERS, GA 30092

PROJECT

**LAWRENCEVILLE  
HWY @ BISHOP DR**  
A MASTER PLANNED RESIDENTIAL  
DEVELOPMENT

AT

3207, 3217, 3227, 3193, 3259  
LAWRENCEVILL HWY  
3563 BISHOP DR  
TUCKER, GA 30084

CITY OF TUCKER JURISDICTION

FOR

## EMBRY COMPANIES

MUNICIPALITY PROJECT #

## REVISIONS

THIS SEAL IS ONLY VALID IF COUNTER SIGNED  
AND DATED WITH AN ORIGINAL SIGNATURE.

# PRELIMINARY

NOT TO BE RELEASED FOR CONSTRUCTION

# CONCEPTUAL MASTER PLAN



SCALE: 1" = 50'  
DATE: 02/11/2022  
PROJECT: 16156.00B



# C8

SHEET

24 HOUR CONTACT:  
MIKE EMBRY





**AN ORDINANCE TO AMEND THE OFFICIAL ZONING MAP FROM R-75 to RSM (RZ-22-0001) IN LAND LOTS 165 & 166 OF THE 18<sup>th</sup> DISTRICT TO ALLOW FOR FIFTY-TWO SINGLE FAMILY ATTACHED DWELLINGS.**

**WHEREAS:** Notice to the public regarding said rezoning have been duly published in The Champion, the Official News Organ of Tucker; and

**WHEREAS:** A Public Hearing was held by the Mayor and City Council of Tucker on May 9, 2022 and June 13, 2022;

**WHEREAS:** The Mayor and City Council is the governing authority for the City of Tucker;

**WHEREAS:** The Mayor and City Council has reviewed the rezoning request based on the criteria found in Section 46-1560 of the Zoning Ordinance of the City of Tucker;

**NOW THEREFORE,** the Mayor and City Council of the City of Tucker while in Regular Session on June 13, 2022 hereby ordains and approves Rezoning 22-0001 to allow for fifty-two single family attached dwellings, subject to the following conditions:

1. Use of the subject property shall be limited to up to a 52-unit townhome development.
2. The property shall be developed in general conformance with the site plan submitted on *May 4, 2022* to the Planning and Zoning Department, with revisions to meet these conditions.
3. The twenty units along Lawrenceville Highway shall be rear-loaded and designed so that their front façade/entry faces Lawrenceville Highway.
4. Dwellings shall have a minimum heated floor area of 1,500-square feet.
5. Each unit shall provide a minimum two-car garage.
6. The subject property shall have a mandatory homeowner's association, created by the Developer, that will require, among other things, maintenance of the common open space areas, the transitional buffer(s), stream and stream buffers, and stormwater management.
7. A mail kiosk and two parking spaces shall be provided on site.
8. Architectural detailing on townhouses shall include:
  - a. The front and rear elevations shall vary from unit to unit to avoid a monotone style and/or color palette.
  - b. Rear and side windows shall be trimmed similar to the front windows.
  - c. If units contain cantilevered balconies on the rear, they shall be painted or stained in a color that is complimentary to the individual unit colors and shall not be left as unfinished wood nor stained to appear as natural wood.
  - d. The units shall have an 8" or greater frieze board (top of wall, abutting the soffit) to accentuate the trim details.

- e. Windows shall be a color to match the color palette of the surrounding townhome veneer (for example: not white windows in a brown colored unit).
  - f. Architectural detailing shall occur consistently on all facades.
  - g. The rear elevation of each set of townhome units shall have at least two distinguishing features which shall include, but are not limited to, enclosed sunrooms, enclosed porches, rear entry door overhangs with decorative brackets, metal decorative railings, and brick privacy walls.
9. The side elevations of units 1, 5, 6, 10, 43, 47, 48, and 52 shall be clad in the primary building material of the front façades and designed with windows and other architectural features in order to provide a consistent design appearance along Lawrenceville Highway.
10. Each townhome shall have a defined walkway and/or porch/stoop from the sidewalk to the front doors.
11. All healthy specimen trees located in the common area/open space shall be preserved.
12. All invasive shrubs and vines shall be removed.
13. At least 25% of the units shall be stubbed for elevators.
14. The declarant's declaration of covenants, conditions, and restrictions shall include a clause to restrict the number of rental units to a maximum of 25%.
15. No units shall encroach into any storm drain or sanitary sewer easements.
16. No units shall encroach into the stream buffers located on the property.
17. The detention pond shall be located on a separate lot of record.
18. The development shall be limited to a single full-access curb cut on Lawrenceville Highway. The location of said curb cut should align with Terri Lynn Court, is dependent on sight distance, and subject to the approval of the Tucker City Engineer and the Georgia Department of Transportation.
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26. Owner/Developer shall comply with Section 14-39 of the City of Tucker Code of Ordinances concerning tree protection and replacement. A minimum on-site tree density of fifteen (15) units/acre shall be required. Any specimen trees removed during the redevelopment shall require additional tree recompense units as required in the ordinance.
27. The development of the property is contingent upon approval from DeKalb County Department of Watershed Management.

So effective this 13<sup>th</sup> day of June 2022.

Approved by:

---

Frank Auman, Mayor

Attest:

---

Bonnie Warne, City Clerk

SEAL





## MEMO

**To:** Honorable Mayor and City Council Members  
**From:** Rip Robertson, Director, Parks & Recreation  
**CC:** Tami Hanlin, City Manager  
**Date:** May 9, 2022  
**RE:** Memo for Johns Homestead Park (JHP) Park and Dam Improvement Project

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### Issue:

Because of the history associated with the John's Homestead Park (JHP) and the City of Tucker's commitment to preserving this vital park, it is necessary to replace the failing dams at Twin Brothers Lake. Along with the Friends of JHP, the City and County conducted a lengthy study to understand the issues and propose solutions. The city applied for and was awarded a Georgia Outdoor Stewardship Program (GOSP) grant. This grant will provide funding for the rehabilitation of both dams and a complete renovation of the park. (This does not include any work on the homestead site.)

### Recommendation:

Staff recommends approving an agreement with Root Design Studio, LLC in the amount of \$208,500.00 to provide schematic design, construction documents, permitting, bidding and construction administration for this vital park project. Root Design is a Tucker business and one of our "on-call" Landscape Architects. They have completed many projects for the Department, including the JHP Master Plan that was adopted as part of the City's Parks and Recreation Master Plan.

### Background:

There is a history of issues with the lakes and dams at JHP. These issues prompted DeKalb County to conduct a study in 2020 with AECOM to determine the causes of these issues and any possible solutions. With the results of this study, the City and County began a search to provide funding for the proposed solutions. Along with addressing the solutions, it was decided to also renovate the park with new trails, bridges/boardwalks, family/community features and to restore native plantings and improve the overall environment within the park. The GOSP was a program designed to provide funding for these types of projects and the city was successful in acquiring full funding.

### Summary:

This project will restore proper drainage from the lakes heading downstream, which will provide an improved environment for the wildlife in and around this historic park. It will also provide exciting new features for the surrounding communities as well as the whole of Tucker. The dam replacement/rebuild portion of this project will also protect surrounding homes and property from possible dam breaches, lake failures (channel) and flooding.

**Financial Impact:**

This item will be funded with \$2.5M GOSP funds with the City providing the required 25% matching funds through CIP and ARPA funding.



**PROFESSIONAL PARK DESIGN SERVICES  
CONTRACT AGREEMENT (RFP #2019-037)  
TASK ORDER #2019-037-009**

**John's Homestead Dam and Park Improvement Project**

This TASK ORDER between the parties is entered pursuant to the CONTRACT AGREEMENT (RFP #2019-037) and shall serve as authorization by the City of Tucker to Root Design Studio, LLC ("CONSULTANT") to perform the services described herein pursuant to the terms and conditions, mutual covenants and promises provided herein and in the CONTRACT AGREEMENT (RFP #2019-037). Now therefore, the parties agree as follows:

**Location of Project:**

John Homestead Park, 3071 Lawrenceville Hwy, Tucker, Georgia.

**Description of Services:** The services to be performed by the CONSULTANT pursuant to this TASK ORDER (the "WORK"), include, but are not limited to, the following:

**Tasks:**

- Numbers 1 – 7 as listed in attached proposal.

**Information to be provided by the CITY:**

- As listed in the attached proposal.

**CONSULTANT Deliverables to CITY:**

- As describe in attached proposal.

**Design Specifications and Guidelines:**

- Meet all required standards and procedures for state and federal guidelines for a GOSP funded project.

**Total Not to Exceed Fee**

**\$208,500.00**

This TASK ORDER is subject to the terms and conditions of the original CONTRACT agreement (RFP #2019-037) entered between the parties.

**General Scope of Service:** The WORK under this TASK ORDER is to be commenced upon receipt of "Notice to Proceed" (NTP). The WORK will be completed within 180 calendar days after Notice to Proceed.

The CONSULTANT shall prepare a schedule showing milestone completion dates based on completing the WORK within 30 calendar days (hereinafter referred to as the "Schedule for Completion"), excluding City review time. The Schedule for Completion will be revised to reflect the actual NTP date and will be updated as required throughout the project duration.

Every 30 days commencing with the execution of the TASK ORDER, the CONSULTANT shall submit a report which shall include, but not be limited to, a narrative describing actual work accomplished during the reporting period, a description of problem areas, current and anticipated delaying factors and their impact, explanations of corrective actions taken or planned, and any newly planned activities or changes in sequence (hereinafter referred to as "Narrative Report"). No invoice for payment shall be submitted and no payment whatsoever will be made to the CONSULTANT until the Schedule for Completion, and the completion of Narrative Reports are updated and submitted to the City. In no event shall payment be made more often than once every 30 days.

The CONSULTANT shall coordinate and attend periodic meetings with the City regarding the status of the TASK ORDER. The CONSULTANT shall submit transmittals of all correspondence, telephone conversations, and minutes of project meetings.

The CONSULTANT agrees that all reports, plans, drawings studies, specifications, estimates, maps, computations, computer diskettes, and printouts and other data prepared under the terms of this TASK ORDER shall become the property of the City. This data shall be organized, indexed, bound, and delivered to the CITY no later than the advertisement of the project for letting. The City shall have the right to use this material without restriction or limitation and without compensation to the CONSULTANT.

The CONSULTANT shall be responsible for the professional quality, technical accuracy, and the coordination of interpreting all designs, drawings, specifications, and other services furnished by or on behalf of the City pursuant to this TASK ORDER. The CONSULTANT shall correct or revise, or cause to be corrected or revised, any errors or deficiencies in the designs, drawings, specifications, and other services furnished for this TASK ORDER. All revisions shall be coordinated with the CITY prior to issuance. The CONSULTANT shall also be responsible for any claim, damage, loss or expense resulting from the incorrect interpretation of provided designs, drawings, and specifications pursuant to this TASK ORDER.



For each "Phase" enumerated in "Description of Services," the fees shall be paid for such phase as provided however, CONSULTANT agrees that fees are earned pursuant to the WORK performed, which in no event shall exceed the amount set forth in the Attached Fee Schedule and which hourly rate shall in no event exceed that provided in the Contract Agreement. Accordingly, invoices shall be submitted pursuant to completion of the Work performed based upon percentage completion of the relevant Phase.

**Attachments:**

Proposal

CITY OF TUCKER:

CONSULTANT:

By: \_\_\_\_\_

By: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_

Attest: \_\_\_\_\_

Bonnie Warne, City Clerk

(Seal)



April 4, 2022

City of Tucker Parks and Recreation  
Mr. Rip Robertson, Director  
4898 Lavista Rd  
Tucker, GA 30084

**RE: John Homestead Park and Dam Improvements – Proposal for Consulting Services**

Dear Mr. Robertson,

We appreciate the opportunity to provide this Proposal for Consulting Services for the **John Homestead Park and Dam Improvements** Project, and we look forward to working with you.

This Agreement for consulting services is made between the **City of Tucker** (Client) and **Root Design Studio, LLC** (Consultant) for the Scope of Services as provided herein.

**CLIENT**

City of Tucker  
Parks & Recreation Department  
Tucker, GA 30084

Contact:

Mr. Rip Robertson  
4898 Lavista Rd  
(678) 951-2175  
rrobertson@tuckerga.gov

**LANDSCAPE ARCHITECT**

Root Design Studio (RDS)  
3469 Lawrenceville Hwy, STE 204  
Tucker, Georgia, 30084

Contact:

Mr. Michael Kidd, RLA  
(404) 895-2253  
mkidd@RootDStudio.com

**PROJECT UNDERSTANDING & ASSUMPTIONS**

- The project is located at 3071 Lawrenceville Hwy, Tucker, GA 30084. The local permitting authority is City of Tucker and Dekalb County.
- The project will consist of schematic design, construction documents, permitting, bidding and construction administration for the:
  - Repair and enhancement of the park's stormwater management system. This includes the rehabilitation of the two dams on site to return to hydraulic functionality and compliance with

current dam safety regulations, make the park safer for users, improve stormwater mitigation and reduce sediment flow downstream.

- Provision of recreational amenities throughout the park, including:
  - Interpretive educational signage (up to 5 signs)
  - Trail wayfinding signage (up to 10 signs)
  - ADA Accessible Fishing Pier
  - Benches
  - Bird blind
  - Orienteering course
  - Trail kiosks
  - Trash receptacles
  - Boardwalks as needed
  - New permeable surface parking lot on Stapp Road
  - Safety cameras as needed
- Design recommendations will reference the July 9, 2020 AECOM Twin Brothers Lake Dam Alternatives Analysis, the City's GOSP Grant Application, and the City of Tucker Recreation & Parks Plan from 2019.
- It is assumed that the Client will provide a survey of the project area performed by a Registered Land Surveyor licensed in the State of Georgia. RDS will provide the Client with a scope of work and assist with procuring the survey.
- It is assumed that any proposed stream modifications will be covered under the Nationwide Permit with the United States Army Corps of Engineers (USACE), and that an Individual Permit will not be required. The USACE cannot authorize impacts to waters of the United States if there is a less damaging environmental alternative that satisfies the project purpose. There are usually less damaging environmental alternatives for recreational lakes/ponds. *If it is determined that an Individual Permit would be required, this can be provided as an additional service per the Terms & Conditions below.*
- EcoAddendum will be creating an invasive removal and revegetation plan for the park. RDS will coordinate work with EcoAddendum to ensure their work is synchronized with the dam and related improvements and new amenity areas.
- RDS will employ the following subconsultants to assist in performing the work under this contract:
  - Technical Advisor & Quality Control  
**Freedman Engineering Group**  
1000 Whitlock Avenue, Suite 320, #218  
Marietta, GA 30064  
www.FreedmanEngineering.com
  - Dam Engineering, Civil Engineering  
**Walden Ashworth & Associates, Inc.**

1827 Powers Ferry Road  
Bldg. 23, Suite 300  
Atlanta, GA 30339  
www.waldenashworth.com

- Environmental Permitting

**Campbell Environmental, Inc.**

2328 Sanford Road  
Decatur, GA 30033  
lornacamp@aol.com

- Geotechnical Services

**ATLAS, Inc.**

3000 Northfield Place, Suite 1100  
Roswell, GA 300376

## SCOPE OF WORK

RDS will provide the following consulting services:

### TASK 1:

#### PRE-DESIGN

- 1.1 Attend a kick-off meeting with the Client, to confirm the project scope, schedule, and budget and discuss any design challenges and opportunities.
- 1.2 Review applicable development codes and prepare a summary of relevant information.
- 1.3 Review permitting procedures with applicable Federal, State and Local agencies.
- 1.4 Hold a meeting with Dekalb County Stormwater to review their requirements for the stormwater system.
- 1.5 Hold a preliminary meeting with the United States Army Corps of Engineers (USACE).
- 1.6 Facilitate a public meeting within the City of Tucker to inform the public of the proposed scope and schedule for park design, permitting and construction and potential amenity additions to the park.
- 1.7 Perform a geotechnical subsurface soil investigation for the dams and other structures as needed.
- 1.8 Perform wetland and stream delineations for permitting.
- 1.9 Assist the City with procuring a topographic survey for the project area.

### TASK 2:

#### SCHEMATIC DESIGN

- 2.1 Prepare 30% construction plans for park and dam improvements.
- 2.2 Prepare a preliminary budget estimate.
- 2.3 Hold review meeting with client to discuss plans and estimate and receive feedback.



- 2.4 Submit schematic design to the USACE for preliminary permitting review.

**TASK 3:  
DESIGN DEVELOPMENT**

- 3.1 Prepare 60% construction plans for park and dam improvements.
- 3.2 Prepare revised budget estimate.
- 3.3 Hold review meeting with client to discuss plans and estimate and receive feedback.
- 3.4 Address comments provided by the USACE and resubmit plans for the stream permit.

**TASK 4:  
CONSTRUCTION DOCUMENTS**

- 4.1 Prepare construction documents to include the following:
  - 4.1.1 Cover Sheet: including relevant project and contact information as required;
  - 4.1.2 General Notes;
  - 4.1.3 Existing Conditions (survey provided by Client);
  - 4.1.4 Site Plan: including location, layout and description of all proposed design elements with dimensions, labels and notes;
  - 4.1.5 Erosion Control Plan, Notes and Details: This proposal includes a three-phase erosion control plan as required by the National Pollution Discharge Elimination System (NPDES);
  - 4.1.6 Demolition Plan: including location and description of all existing elements to be removed, relocated and/or reused;
  - 4.1.7 Grading & Drainage Plan: including existing and proposed contours, critical spot grades, proposed drainage structures, storm pipes with inverts and slopes, and headwalls;
  - 4.1.8 Construction Details: including pavement sections, curbs, drainage structures, boardwalks, dam and hydraulic structure rehabilitation, signage; and other details as needed to construct the project. Details will be based on applicable jurisdictional standards as well as acceptable industry standards;
  - 4.1.9 Landscape Plans, Details & Notes: including graphic symbols and callouts indicating the location and type of specific plant material, a plant schedule with botanical names, common names, quantities, sizes, spacing and special characteristics, and planting instructions and specifications;
- 4.2 Construction Documents will be suitable for pricing and will provide for complete installation, maintenance during construction, and warranty of the work.
- 4.3 90% Plans will be provided to the City for final review and comment.
- 4.4 Final plans and specifications will incorporate feedback from the 90% review.

**TASK 5:  
PERMITTING**

- 5.1 Prepare necessary permit applications and submit the plans to the permitting authorities for review (including Land Disturbance Permit, Stream Buffer Variance and DeKalb County Dam Construction Permit).
- 5.2 Address comments from the permitting authorities, as needed, to secure permit approvals.
- 5.3 The Client will be responsible for any and all permit or application fees, connection fees, tap fees, impact fees, etc.

**TASK 6:  
BIDDING & AWARD**

- 6.1 Assist the Client with drafting an advertisement for competitive bids.
- 6.2 Assist the Client with preparation of bid documents.
- 6.3 *The Client will be responsible for posting the advertisement, as required by state and local law.*
- 6.4 Attend a pre-bid conference to review the bidding instructions and project requirements.
- 6.5 Review and respond to RFI's and questions for clarification.
- 6.6 Review bids for accuracy and completeness, tabulate and make a recommendation for award.
- 6.7 Assist the Client with executing the construction contract with the General Contractor.

**TASK 7:  
CONSTRUCTION ADMINISTRATION  
(Anticipated construction duration is 12 months)**

- 7.1 Attend a pre-construction conference with the Client and the Contractor to review the scope and schedule.
- 7.2 Assist the City with filing a Notice of Intent (NOI) and Notice of Termination (NOT) as required by the National Pollution Discharge Elimination System (NPDES).
- 7.3 Conduct 7-day NPDES Erosion Control Inspection.
- 7.4 Review and respond to Contractor RFI's, submittals and shop drawings.
- 7.5 Attend one (1) monthly OAC meeting during construction to review the work completed, resolve outstanding issues, review schedule and critical path, and review payment applications.
- 7.6 Attend intermediate site visits to review layout and observe and document construction progress. Intermediate site visits will be scheduled, as needed, depending on the sequencing and progression of construction. Includes one visit per month, on average.
- 7.7 If required by the County, the design team can provide an on-site inspector during dam construction.
- 7.8 Perform a punch list inspection, upon substantial completion, and issue a punch list report to the Client and the Contractor.
- 7.9 Perform a final inspection and closeout of the project.

## COMPENSATION

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### Fee Schedule:

Task 1: Pre-Design	\$41,150.00
Task 2: Schematic Design	\$36,150.00
Task 3: Design Development	\$49,800.00
Task 4: Construction Documents	\$66,400.00
Task 5: Permitting	\$7,500.00
Task 6: Bidding & Award	\$7,500.00
Task 7: Construction Administration	(TBD <sup>1</sup> )
<b>Total Lump Sum Fee</b>	<b>\$208,500.00</b>

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### Notes:

1. CA will be provided at a negotiated lump sum not-to-exceed 3% of proposed construction costs based on final design.

## EXCLUSIONS

- The following items are not included in the scope of services:
  - Land Surveying (provided by Client, RDS will assist and coordinate);
  - Environmental Assessments and Reports (other than those described in the Scope of Work above);
  - Individual Permit for stream modifications, under the USACE;
  - Irrigation design;
  - Lighting design, photometrics, or electrical engineering;
  - Stocking lakes with fish;
  - LEED or other third-party certification program documentation and calculations;
  - Fees related to obtaining permits (i.e. processing fees, impact fees, permit fees, etc.);
  - Ecological restoration plan including invasive plant removal, detailed restoration plan and vegetative restoration of streambank (provided by EcoAddendum, RDS will assist and coordinate);
  - Owner requested revisions to the contract documents after submittal to permitting authorities;
  - Extensive value engineering and/or re-design if bid prices come in over budget;
  - Revisions to the plans during construction due to unforeseen conditions;
  - Provision of on-site inspector during construction (if required by the County, this can be provided as an additional service per the Terms & Conditions below);
  - Certified as-built drawings.

## **TERMS & CONDITIONS**

### **ARTICLE 1: CONSULTING SERVICES**

#### **1.1 Definitions**

“Client” shall refer to the person or organization who has signed this Agreement with the intent of utilizing the services of the Consultant.

“Consultant” shall refer to Root Design Studio, LLC., serving as the Project Landscape Architect.

“Consulting Services” or “Services” shall refer to any work required and performed by the Consultant and its Sub-Consultants in the spirit and execution of this Agreement.

“Sub-Consultant” shall refer to any individual or organization hired by Root Design Studio, LLC. to perform a portion of the Scope of Services.

#### **1.2 Standard of Care**

Landscape Architectural Services shall be performed with care and diligence in accordance with the professional standards applicable at the time and in the location of the Project and appropriate for a project of the nature and scope of this Project.

#### **1.3 Sub-Consultants**

The sub-consultant is an independent contractor for their portion of the Project. The sub-consultant is responsible for methods and means used in performing its services under this Agreement and is not an employee, agent, or partner of the Consultant. The sub-consultant shall be bound to the provisions of this Agreement to the extent that these provisions apply to sub-consultant’s portion of the Project.

#### **1.4 Schedule of Performance**

The Client’s signature on this Agreement shall be the basis for the Landscape Architect to begin providing services for the Project. The Landscape Architect shall perform the Services as expeditiously as is consistent with the standard of care described above.

### **ARTICLE 2: CLIENT’S RESPONSIBILITIES**

#### **3.1 Information**

The Client shall provide data about the site and other information on which the work is to be based as well as the Client’s budget parameters for the Project. The Landscape Architect shall be entitled to rely on the accuracy and completeness of the information provided by the Client

#### **3.2 Budget**

The Landscape Architect shall reasonably strive to propose designs and prepare documents consistent with the Client’s budget parameters. If provided by the Landscape Architect as part of the Scope of Services, opinions of probable construction costs are based on the Landscape Architect’s familiarity with the landscape construction industry and are provided only to assist with the Client’s budget planning. Such opinions shall not be construed to provide a guarantee or warranty that the actual construction costs will be within the Project budget parameters at the time construction bids are solicited or construction contracts are negotiated.

#### **3.3 Approvals**

The Client’s reviews, responses, approvals and decisions shall be communicated to the Landscape Architect in a timely manner so as not to delay the performance of the Services.



### 3.4 Project Permit and Review Fees

The Client or Owner shall be responsible for paying all fees required to secure jurisdictional approvals for the Project.

## ARTICLE 3: OWNERSHIP OF DOCUMENTS

- 3.1 The Landscape Architect shall be deemed the author and owner of all deliverables developed pursuant to this Agreement and provided to the Client by the Landscape Architect (collectively known as the "Design Materials"). Subject to payment by the Client of all Compensation and Reimbursable Expenses owed to the Landscape Architect, the Landscape Architect grants to the Client an irrevocable, non-exclusive license to reproduce the Design Materials solely for the construction of the Project and for information and reference with respect to the use of the Project.
- 3.2 The Client, to the fullest extent permitted by law, shall indemnify and hold harmless the Landscape Architect for costs, including legal fees and defense costs, liability or loss, which result from unauthorized modification of the Design Materials, if any, or the use of the Design Materials for any purpose other than the Project.
- 3.3 In the event this Agreement is terminated prior to the completion of the Project, the Landscape Architect shall have no liability to the Client or to anyone claiming through the Client for any claims, liabilities or damages resulting from the use, misuse or modification of the Design Materials without the Landscape Architect's written approval. The Client agrees to indemnify and defend the Landscape Architect against such claims.

## ARTICLE 4: COMPENSATION

- 4.1 Compensation for the Professional Consulting Services performed under this Agreement shall be as indicated in the proposal above.
- 4.2 Invoices will be submitted monthly for the percentage of services completed through the invoice date as well as any Reimbursable Expenses and/or Additional Services. Payments are due and payable 30 days from the date of the invoice.
- 4.3 Additional Services shall refer to any work that is not explicitly or implicitly required to execute the original Scope of Services; any substantial changes to the Scope of Services ordered by the Client after the execution of this Agreement; Client-requested changes to the previously approved drawings or other documents, or any work related to Client changes to the previously approved Project budget parameters or Project programming or design requirements. Additional services, which have been requested by the Client, shall entitle the Consultant to additional payment beyond the original compensation stated in this Agreement and shall be compensated either on the hourly basis stated below, or on the basis of a negotiated lump sum.
- 4.4 Hourly services will be billed at the following rates:

Principal.....\$150.00/hr.

Project Manager.....\$125.00/hr.

Landscape Architect.....\$110.00/hr.

Designer/Draftsman.....\$87.00/hr.

Admin Staff .....\$75.00/hr.

### SUBCONSULTANTS

Civil Engineer.....\$150.00/hr.

Structural Engineer.....\$160.00/hr.

Environmental Permitting .....\$150.00/hr.

4.5 Reimbursable expenses are expenditures as made by the Consultant, its employees and consultants in the interest of the Project. Reimbursable expenses will be billed at cost plus ten percent and shall include the following:

- 4.5.1 Cost of postage and handling of documents and/or courier services;
- 4.5.2 Cost of renderings, models or mockups requested by the Client;
- 4.5.3 Cost of printing permit and/or bid packages.

#### **ARTICLE 5: INDEMNIFICATION**

5.1 The Client and Landscape Architect, to the fullest extent of the law, each agree to indemnify and hold harmless the other, and their respective officers, employees and representatives from and against liability for losses, damages and expenses, including reasonable attorney's fees, to the extent such losses, damages or expenses are caused by the indemnifying party's negligent acts, errors or omissions.

#### **ARTICLE 6: DISPUTE RESOLUTION**

6.1 If a dispute arises out of or relates to the Agreement, the parties shall endeavor to resolve their differences first through direct discussions, followed by mediation, and finally by binding arbitration. The location of mediation and arbitration shall be the location of the Project unless otherwise agreed to by both parties. The cost of mediation shall be born equally by both parties. Any award rendered through arbitration shall be final, and judgment may be entered upon it in accordance with applicable law in any court having jurisdiction thereof.

#### **ARTICLE 7: TERMINATION**

7.1 This Agreement may be terminated by either party upon seven (7) days' written notice should the other party fail to substantially perform in accordance with the terms of this Agreement through no fault of the initiating party, except that the offending party upon such notice has cured or in good faith diligently commenced to cure the breach.

#### **ARTICLE 8: MISCELLANEOUS PROVISIONS**

##### **8.1 Assignment**

Neither party shall assign their interest in this Agreement without the express written consent of the other, except as to the assignment of proceeds

##### **8.2 Governing Law**

The Law in effect at the Landscape Architect's principal place of business shall govern this agreement.

##### **8.3 Complete Agreement**

This agreement represents the entire understanding between the Client and the Landscape Architect and supersedes all prior negotiations, representations or agreements, whether written or oral with respect to its subject matter. The person(s) signing this Agreement on behalf of the parties hereby individually warrant that they have full legal power to execute this Agreement on behalf of the respective parties and to bind and obligate the parties with respect to all provisions contained herein. This Agreement may be amended only in writing signed by both the Client and the Landscape Architect.

If the scope and terms of this Agreement are acceptable, please return a signed copy.

Sincerely,

Michael Kidd, President  
Root Design Studio, LLC

**CLIENT: City of Tucker**

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

\_\_\_\_\_  
Printed Name

\_\_\_\_\_  
Title



## MEMO

**To:** Honorable Mayor and City Council Members  
**From:** Beverly Ragland, Finance Director  
**CC:** Tami Hanlin, City Manager  
**Date:** May 9, 2022  
**RE:** Memo for Ga Fund 1 Resolution Update

---

### **Issue:**

The City of Tucker has funds in Georgia Fund 1 which is a LGIP (local government investment pool). Before I can obtain a login to access the account, the resolution needs to be updated. The current resolution has the previous Finance Director and Senior Accountant.

### **Recommendation:**

Approval of updated resolution for Ga Fund 1 that replaces Robert Porche with Beverly Ragland and Angela Branigan with Erich Krahn.

### **Background:**

Our Ga Fund 1 investment account currently has a significant balance. The only access Finance has to this account is with a login and password issued to the previous Finance Director, Robert Porche. Updating the resolution with current staff will enable the ability to make previous login identification inactive.

### **Summary:**

Approval of the resolution will enable staff to inactivate current login of previous Finance Director and obtain new login so monthly statements can be viewed and interest journalized.

### **Financial Impact:**

Ability to access investment account that contains



For Customer Use:	
<input type="checkbox"/>	I have an existing Acct. # _____
<input type="checkbox"/>	This resolution is for:
<input type="checkbox"/>	New Account
<input checked="" type="checkbox"/>	Change to Existing Acct. # 6886-196180

For OTFS Use Only:	
<input type="checkbox"/>	Acct Approved _____
<input type="checkbox"/>	Audit _____
<input type="checkbox"/>	Addr Entered _____
<input type="checkbox"/>	Auth Entered _____
<input type="checkbox"/>	Wire Instructions _____
<input type="checkbox"/>	Wire Templates _____
Approval: _____	
<input type="checkbox"/>	AD1 _____
<input type="checkbox"/>	AD2 _____
Res. form 2000A	

**GEORGIA FUND 1**  
(local government investment pool)  
**RESOLUTION TO AUTHORIZE INVESTMENT**

*WHEREAS*, Ga. Code Ann. §§36-83-1 to 36-83-8 authorizes Georgia local governments and other authorized entities to invest funds through the local government investment pool, and  
*WHEREAS*, from time to time it may be advantageous to the \_\_\_\_\_

**CITY OF TUCKER, GEORGIA** \_\_\_\_\_ to deposit funds available for

(Name of Local Government, Political Subdivision or State Agency)  
investment in Georgia Fund 1 (hereinafter referred to as the local government investment pool) as it may deem appropriate; and

*WHEREAS*, to provide for the safety of such funds deposited in the local government investment pool, investments are restricted to those enumerated by Ga. Code Ann. §36-83-8 under the direction of the State Depository Board, considering first the probable safety of capital and then the probable income to be derived; and *WHEREAS*, such deposits must first be duly authorized by the governing body of the local government or authorized entity and a certified copy of the resolution authorizing such investment filed with the Treasurer of the Office of the State Treasurer; and

*WHEREAS*, such resolution must name the official(s) authorized to make deposits or withdrawals of funds in the local government investment pool; and

*WHEREAS*, Ga. Code Ann. §36-83-8 requires a statement of the approximate cash flow requirements of the participating government pertaining to the funds to accompany the authorization to invest such funds at the time such deposits are duly authorized;

*NOW, THEREFORE BE IT RESOLVED* by the **COUNCIL** \_\_\_\_\_

(Board, Council or other Governing Body)

that funds of the **CITY OF TUCKER, GEORGIA** \_\_\_\_\_ may be deposited from time to

(Local Government, Political Subdivision, or State Agency)

time in the manner prescribed by law and the applicable policies and procedures for the local government investment pool.

**BE IT FURTHER RESOLVED THAT:**

- Any one of the following individuals shall be authorized to deposit and/or withdraw funds from the local government investment pool on behalf of such government or other authorized entity (if a listed individual is employed by an entity other than the depositor, indicate employer):

<b>ROBERT PORCHE, FINANCE DIRECTOR</b>	<b>470</b>	<b>481-0206</b>
Name, Title, (Employer, if applicable)	(Area Code) Phone Number	
Email: <u>RPORCHE@TUCKERGA.GOV</u>		
<b>TAMI HANLIN, CITY MANAGER</b>	<b>470</b>	<b>273-3102</b>
Email: <u>THANLIN@TUCKERGA.GOV</u>		
<b>FRANK AUMAN, MAYOR</b>	<b>678</b>	<b>597-9040</b>
Email: <u>FAUMAN@TUCKERGA.GOV</u>		
<b>ANGELA BRANIGAN, SENIOR ACCOUNTANT</b>	<b>470</b>	<b>359-9607</b>
Email: <u>ABRANIGAN@TUCKERGA.GOV</u>		
Email: _____		

All withdrawals from the local government investment pool shall be wired to the following participant's demand deposit account: *(Many banks have separate instructions for wires and ACH deposits. Please verify both sets of instructions with your bank and provide them below. This will ensure accurate delivery of your funds to the designated bank account).*

(For ACH)	<b>SYNOVUS</b>	<b>GENERAL FUND</b>
	(Local Bank Name)	(Account Title)
<b>261170290</b>	<b>1008203455</b>	<b>COLUMBUS, GA.</b>
(ABA Number)	(Account Number)	(City, State)
(For WIRE)	(Local Bank Name)	(Account Title)
	(ABA Number)	(Account Number)
		(City, State)

(If applicable) Our local bank prefers to receive credit for wire transfers at the following Correspondent Bank:

(Bank Name) (City) (ABA Number) (Account Number)

**Additional Bank Account (if applicable):**

(For ACH) (Local Bank Name) (Account Title)

(ABA Number) (Account Number) (City, State)

(For WIRE) (Local Bank Name) (Account Title)

(ABA Number) (Account Number) (City, State)

**Correspondent Bank (if applicable):**

(Bank Name) (City) (ABA Number) (Account Number)

3. The local government investment pool monthly statements of account to:

CITY OF TUCKER ATTN: FINANCE

(Attention)

1975 LAKESIDE PKWY. SUITE 350

(Address)

TUCKER, GA. 30084

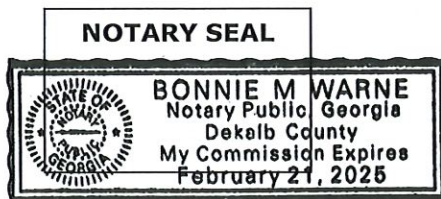
(City, State & Zip Code)

4. Changes in the above authorization shall be made by cancellation or replacement resolution delivered to the Office of the State Treasurer. Until such a replacement resolution is received by the Office of the State Treasurer, the above authorized individuals, local government demand account instructions and statement mailing address(es) shall remain in full force and effect.

5. The following schedule represents the period in which existing balances are currently expected to remain invested in the local government investment pool:

% 30 days or less;  
% more than 30 days but less than 90 days;  
100 % 90 days or longer.  
100 %

Entered at Tucker, Georgia this 7 day of April 2021.



(Signature of Head of Governing Authority)

FRANK AUMAN

(Please Print or Type - Head of Governing Authority)

MAYOR FRANK AUMAN

(Title)

Sworn to and subscribed before me this 7 day of April 2021.

(Notary Public)

Please complete and return an original copy to:

Georgia Fund 1  
Office of the State Treasurer  
200 Piedmont Avenue  
Suite 1204, West Tower  
Atlanta, GA 30334-5527

Telephone: (404) 656-2993  
Toll Free: (800) 222-6748  
Fax: (404) 656-9048

*Georgia Fund 1 (local government investment pool) deposits are not guaranteed or insured by any bank, the Federal Deposit Insurance Corporation (FDIC), the Federal Reserve Board, the State of Georgia or any other agency.*

For Customer Use:

X

I have an existing Acct. # 6886-196180

This resolution is for:

New Account

X

Change to Existing Acct. # 6886-196180

For OTFS Use Only:

Acct Approved

Auth Entered

Audit

Wire Instructions

Addr Entered

Wire Templates

Approval:

AD1

AD2

Res. form 2000A

GEORGIA FUND 1  
(local government investment pool)  
RESOLUTION TO AUTHORIZE INVESTMENT

WHEREAS, Ga. Code Ann. §§36-83-1 to 36-83-8 authorizes Georgia local governments and other authorized entities to invest funds through the local government investment pool, and  
WHEREAS, from time to time it may be advantageous to the

City of Tucker, Georgia to deposit funds available for  
(Name of Local Government, Political Subdivision or State Agency)  
investment in Georgia Fund 1 (hereinafter referred to as the local government investment pool) as it may deem appropriate; and

WHEREAS, to provide for the safety of such funds deposited in the local government investment pool, investments are restricted to those enumerated by Ga. Code Ann. §36-83-8 under the direction of the State Depository Board, considering first the probable safety of capital and then the probable income to be derived; and WHEREAS, such deposits must first be duly authorized by the governing body of the local government or authorized entity and a certified copy of the resolution authorizing such investment filed with the Treasurer of the Office of the State Treasurer; and

WHEREAS, such resolution must name the official(s) authorized to make deposits or withdrawals of funds in the local government investment pool; and

WHEREAS, Ga. Code Ann. §36-83-8 requires a statement of the approximate cash flow requirements of the participating government pertaining to the funds to accompany the authorization to invest such funds at the time such deposits are duly authorized;

NOW, THEREFORE BE IT RESOLVED by the Council  
(Board, Council or other Governing Body)  
that funds of the City of Tucker, Georgia may be deposited from time to time  
(Local Government, Political Subdivision, or State Agency)  
time in the manner prescribed by law and the applicable policies and procedures for the local government investment pool.

BE IT FURTHER RESOLVED THAT:

1. Any one of the following individuals shall be authorized to deposit and/or withdraw funds from the local government investment pool on behalf of such government or other authorized entity (if a listed individual is employed by an entity other than the depositor, indicate employer):

Beverly Ragland, Finance Director 470-481-0206  
Name, Title, (Employer, if applicable) (Area Code) Phone Number  
Email: bragland@tuckerga.gov

Tami Hanlin, City Manager 470-273-3102  
Email: thanlin@tuckerga.gov

Frank Auman, Mayor 678-597-9040  
Email: fauman@tuckerga.gov

Erich Krahn, Finance Manager 470-359-9607  
Email: ekrahn@tuckerga.gov

Email:

All withdrawals from the local government investment pool shall be wired to the following participant's demand deposit account: (Many banks have separate instructions for wires and ACH deposits. Please verify both sets of instructions with your bank and provide them below. This will ensure accurate delivery of your funds to the designated bank account).

(For ACH) Synovus General Fund  
(Local Bank Name) (Account Title)  
261170290 1008203455 Columbus, GA  
(ABA Number) (Account Number) (City, State)

(For WIRE) (Local Bank Name) (Account Title)  
(ABA Number) (Account Number) (City, State)

\_\_\_\_\_  
(Bank Name) (City) (ABA Number) (Account Number)

**Additional Bank Account (if applicable):**

**(For ACH)** \_\_\_\_\_  
(Local Bank Name) (Account Title)  
\_\_\_\_\_  
(ABA Number) (Account Number) (City, State)

**(For WIRE)** \_\_\_\_\_  
(Local Bank Name) (Account Title)  
\_\_\_\_\_  
(ABA Number) (Account Number) (City, State)

**Correspondent Bank (if applicable):**

\_\_\_\_\_  
(Bank Name) (City) (ABA Number) (Account Number)

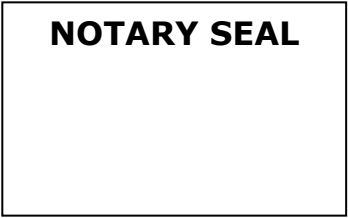
3. The local government investment pool monthly statements of account to:  
\_\_City of Tucker Attn: Finance\_\_\_\_\_  
(Attention)  
\_\_1975 Lakeside Pkwy. Suite 350\_\_\_\_\_  
(Attention)  
\_\_Tucker, GA 30084\_\_\_\_\_  
(Attention)

4. Changes in the above authorization shall be made by cancellation or replacement resolution delivered to the Office of the State Treasurer. Until such a replacement resolution is received by the Office of the State Treasurer, the above authorized individuals, local government demand account instructions and statement mailing address(es) shall remain in full force and effect.

5. The following schedule represents the period in which existing balances are currently expected to remain invested in the local government investment pool:

\_\_\_\_\_% 30 days or less;  
\_\_\_\_\_% more than 30 days but less than 90 days;  
100\_\_\_\_\_% 90 days or longer.  
\_\_100\_\_%

Entered at \_\_Tucker\_\_\_\_\_, Georgia this \_\_8\_\_\_\_ day of April\_\_\_\_ 20\_\_22\_\_.



\_\_\_\_\_  
(Signature of Head of Governing Authority)  
Frank Auman \_\_\_\_\_  
(Please Print or Type - Head of Governing Authority)  
Mayor\_\_\_\_\_  
(Title)

Sworn to and subscribed before me this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_.

\_\_\_\_\_  
(Notary Public)

Please complete and return an original copy to:  
**Georgia Fund 1**  
**Office of the State Treasurer**  
**200 Piedmont Avenue**  
**Suite 1204, West Tower**  
**Atlanta, GA 30334-5527**

**Telephone: (404) 651-8964 or (404) 656-2993**  
**Toll Free: (800) 222-6748**  
**Fax: (404) 656-9048**

*Georgia Fund 1 (local government investment pool) deposits are not guaranteed or insured by any bank, the Federal Deposit Insurance Corporation (FDIC), the Federal Reserve Board, the State of Georgia or any other agency.*





## MEMO

**To:** Honorable Mayor and City Council Members  
**From:** Councilmember Rece and Councilmember Schroeder  
**CC:** Tami Hanlin, City Manager  
**Date:** May 3, 2022  
**RE:** Memo for Agenda Item to Observe the Juneteenth Holiday

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Per City of Tucker Charter Section 3.01 – Powers and duties of council, which states:

*The Mayor shall:*

*Set the agenda of the city council after receiving input from members of the city council, city manager, and the public; provided, however, that an additional item shall be added to the agenda upon written request of two members of the city council, and the name of the mayor or councilmember placing the item on the agenda shall be noted on the agenda;*

I respectfully request (along with Councilwoman Schroeder) adding to our council meeting agenda dated, May 9<sup>th</sup>, 2022. an amendment to Resolution R2022-02-09 to designate and observe the Juneteenth Holiday on the designated day recognize by the State of Georgia, or as date specified in City Code if the date falls on a weekend.

Best Regards,

Virginia Rece

Cara Schroeder

Tucker City Council

..

**A RESOLUTION TO DESIGNATE THE DAYS FOR WHICH CITY HALL WILL BE  
CLOSED APRIL 1, 2022 THROUGH DECEMBER 31, 2022**

**WHEREAS**, the Mayor and Council of the City of Tucker are authorized by the City Charter to adopt rules to govern the governance of its business; and

**WHEREAS**, the Mayor and Council previously set the 2022 holidays for its employees and designated the days for which City Hall will be closed for business April 1, 2022 through December 31, 2022 by Resolution R2022-02-09 on February 15, 2022; and

**WHEREAS**, the Mayor and Council desire to recognize Juneteenth as a City holiday for its employees and closure of City Hall; and

**NOW THEREFORE BE IT RESOLVED** by the Mayor and Council of the City of Tucker while at a regular meeting on May 9, 2022, adopt the attached amended Exhibit A with the dates City Hall will be closed to the operations of business for scheduled holidays April 1 through December 31, 2022. The attached Exhibit A shall be effective upon its adoption;

**SO RESOLVED**, this the 9<sup>th</sup> day of May, 2022.

APPROVED:

---

Frank Auman, Mayor

ATTEST:

---

Bonnie Warne, City Clerk

(seal)

January							July						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
					31	1						1	2
2	3	4	5	6	7	8	3	4	5	6	7	8	9
9	10	11	12	13	14	15	10	11	12	13	14	15	16
16	17	18	19	20	21	22	17	18	19	20	21	22	23
23	24	25	26	27	28	29	24	25	26	27	28	29	30
30	31						31						
February							August						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
		1	2	3	4	5		1	2	3	4	5	6
6	7	8	9	10	11	12	7	8	9	10	11	12	13
13	14	15	16	17	18	19	14	15	16	17	18	19	20
20	21	22	23	24	25	26	21	22	23	24	25	26	27
27	28						28	29	30	31			
March							September						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
		1	2	3	4	5					1	2	3
6	7	8	9	10	11	12	4	5	6	7	8	9	10
13	14	15	16	17	18	19	11	12	13	14	15	16	17
20	21	22	23	24	25	26	18	19	20	21	22	23	24
27	28	29	30	31			25	26	27	28	29	30	
April							October						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
					1	2							1
3	4	5	6	7	8	9	2	3	4	5	6	7	8
10	11	12	13	14	15	16	9	10	11	12	13	14	15
17	18	19	20	21	22	23	16	17	18	19	20	21	22
24	25	26	27	28	29	30	23	24	25	26	27	28	29
							30	31					
May							November						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
1	2	3	4	5	6	7			1	2	3	4	5
8	9	10	11	12	13	14	6	7	8	9	10	11	12
15	16	17	18	19	20	21	13	14	15	16	17	18	19
22	23	24	25	26	27	28	20	21	22	23	24	25	26
29	30	31					27	28	29	30			
June							December						
S	M	T	W	T	F	S	S	M	T	W	T	F	S
			1	2	3	4					1	2	3
5	6	7	8	9	10	11	4	5	6	7	8	9	10
12	13	14	15	16	17	18	11	12	13	14	15	16	17
19	20	21	22	23	24	25	18	19	20	21	22	23	24
26	27	28	29	30			25	26	27	28	29	30	31

# EXHIBIT A

# 2022

# MEETING CALENDAR

(PROPOSED 5/9/2022)

- Council Meeting – 7:00 PM (JAN 11 6PM)
- Planning Commission – 7:00 (3<sup>rd</sup> Thu)
- Zoning Board of Appeals – 7:00 (1<sup>st</sup> Tue)
- DDA – 6:30 (1<sup>st</sup> Mon)

## Holidays 2022

- DEC 31, 2021\* New Year's Day
- JAN 17 MLK Day
- FEB 21 Presidents Day
- MAY 30 Memorial Day
- JUN 20 Juneteenth**
- JUL 4 Independence Day
- SEP 5 Labor Day
- NOV 11 Veteran's Day
- NOV 24 Thanksgiving Day
- NOV 25 Day after Thanksgiving
- DEC 23\* Christmas Eve
- DEC 26\* Christmas Day

\* observed